THE CENTURY DICTIONARY AND CYCLOPEDIA

A WORK OF UNIVERSAL REFERENCE
IN ALL DEPARTMENTS OF KNOWLEDGE
WITH A NEW ATLAS OF THE WORLD

VOLUME XI

PUBLISHED BY
The Century Co.
NEW YORK

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PUBLISHERS' NOTE ON THE COMPLETED WORK

The publication of the Atlas, which is incorporated in the present edition, completed the plan of The Century Dictionary and Cyclopedia. As the Cyclopedia of Names grew out of the Dictionary and supplemented it on its encyclopedic side, so the Atlas grew out of the Cyclopedia, and serves as an extension of its geographical material. Each of these works deals with a different part of the great field of words,—common words and names,—while the three, in their unity, constitute a work of reference which practically covers the whole of that field. The two new volumes now issued make the material of the Dictionary and Cyclopedia complete. The total number of words and names defined or otherwise described in the completed work is over 500,000.

The special features of each of these several parts of the book are described in the Prefaces which will be found in the first, ninth, tenth, and eleventh volumes. It need only be said that the definitions of the common words of the language are for the most part stated encyclopedically, with a vast amount of technical, historical, and practical information in addition to a wealth of purely philological material; that the same encyclopedic method is applied to proper names—names of persons, places, characters in fiction, books—in short, of everything to which a name is given; and that in the Atlas geographical names, and much besides, are exhibited with a completeness and serviceableness seldom equaled. Of the Century Dictionary and Cyclopedia as a whole, therefore, it may be said that it is in its own field the most complete presentation of human knowledge—scientific, historical, and practical—that exists.

Moreover, the method of distributing this encyclopedic material under a large number of headings, which has been followed throughout, makes each item of this great store of information far more accessible than in works in which a different system is adopted.

The first edition of The Century Dictionary was completed in 1891, that of the Century Cyclopedia of Names in 1894, that of the Atlas in 1897, and that of the two new volumes in 1909. Each of the works published at the earlier dates has been subjected to repeated careful revisions, and the results of this scrutiny are comprised in this edition.

THE DE VINNE PRESS

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PUBLISHED BY
The Century Co.
NEW YORK

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PREFATORY NOTE.

THE CENTURY DICTIONARY (1889–91) was much the largest collection of the words of the English language that had been published. In it the number of words and 'phrases' at that time defined in general dictionaries of English was increased by upward of one hundred and twenty thousand. This additional collection included not a few words which had appeared in special glossaries and technical dictionaries, but much the greater part of it was obtained by a systematic search through English literature, especially the literature of science and the arts. The labor and cost of effecting this very notable enlargement of the recorded English vocabulary have amply been justified by its utility to the many thousands of users of the book during the past twenty years.

The compilers of the CENTURY were, however, aware that a dictionary record, whatever might be its degree of completeness at the date of publication, would in the future need to be enlarged on account of the continuous and rapid increase of the vocabulary of English, both common and technical. It was, in particular, very obvious that in many branches of science and technology the coinage of new terms and the development of new meanings would proceed — as they have in fact done — at a greatly accelerated pace. Accordingly, the work of collection was not ended by the publication of the dictionary, but has been continued ever since.

The result of this labor is presented in these two volumes, which supplement the original work. They contain additional words, senses, and defined 'phrases' representing the increase in scientific and technological terminology, as well as in the 'common' vocabulary, during the past twenty-five years, and possessing a high degree of technical importance and general interest. During this period — a period probably more productive of neologisms than any other of the same length in the history of the language — not only have many special sciences, or branches of sciences, been created, and remarkable extensions of the older sciences been effected, but the practical arts also (with commerce, exploration, and the like) have found innumerable new applications, methods, and objects; and with all of these advances have come new vocabularies, often of great extent, or new uses of old terms, which the dictionary must record. It is necessary to mention only such topics as radioactivity, aëronautics, immunity and serumtherapy, experimental psychology, the recent studies in heredity and organic development, the advances in cytology and embryology, and the progress in telegraphy and electrical technology in general, in order to indicate the extent and importance of these accretions. Much the same is true of the increase in the vocabularies of scientific and practical agriculture, of physiological chemistry, of medicine, and of many other subjects, scientific or practical. It should also be noted that a very considerable number of foreign (Spanish, French, etc.) words (names of plants, fabrics, materials, implements, institutions, and so on), especially terms in use in Hawaii, the Philippines, Porto Rico, and Spanish America generally, have of late acquired a quasi-English value (or, at least, interest) which the dictionary must recognize. In addition to this superabundant new growth there have also been included many words and senses of earlier origin, and also extensions of many encyclopedic articles and definitions. The total number of words, senses, and 'phrases' thus collected and here defined is about one hundred thousand — an addition comparable to that made by the original edition of the dictionary. It should be added, however, that the words and forms included, great as their number is, are still a selection, made under the

general rules stated in the preface to the original edition (Vol. I.), to which for this and other prefatory matter the reader is referred. Many chemical and mineralogical terms, for example, have been added, but, of course, not all; important New Latin names in zoölogy and botany have been admitted, but (relatively) only a few; the obvious derivatives (which — actual and possible — are many thousands in number) from names of families, orders, etc., in zoölogy and botany are, with a few exceptions, not given; and provincialisms (except Americanisms and Australianisms) and obsolete words and expressions have, as a rule, been excluded.

As regards method of treatment and typographical style, it is enough to say that in these matters the plan of the main work has been closely followed. The various definitions and articles are designed to fit into the text of the earlier volumes without diversity of form, interruption of continuity, or repetition of matter. In accordance with this plan the fact that a given *word* in the supplementary vocabulary is additional or 'new' is indicated simply by the fact that it is followed by the respelling for pronunciation and, generally, by an etymological note; in the case of an additional *sense* or *phrase*, on the other hand, the title-word is not followed by the pronunciation and derivation; and the same is true of mere additions to articles in the main text. Cross-references to material in the supplementary volumes are distinguished by a star (*) placed before the word under which the material will be found. References not so distinguished are to the original volumes.

The various definitions and articles have been written by the contributors whose names are given in the list of collaborators and in the second paragraph below. Of the etymologies it should be said that in only a few cases has more than a brief explanatory statement been necessary, since most of the words are scientific coinages or other terms of simple and often obvious formation, or are foreign words (introduced into English in some special sense) of which, as a rule, in accordance with the custom of the dictionary, only the proximate source (as French or Italian or Spanish, etc.) is indicated.

During the progress of the work upon these volumes, but after the completion of their portions of it, several of the contributors have been removed by death. Dr. Richard Garnett, keeper of printed books of the British Museum, an early friend of the dictionary, died on April 12, 1906. On January 6, 1907, the eminent astronomer Professor Charles A. Young, also a kind and helpful friend of the CENTURY from its earliest days, passed away. The death of Professor William K. Brooks, of the Johns Hopkins University, long distinguished for his services to biology, followed on November 12, 1908. On February 11, 1909, came the announcement of the death of Mr. Russell Sturgis, a learned student of architecture and connoisseur of art, one of the earliest and most important contributors to the dictionary. Mr. Henry G. Kittredge, an authority upon the textile industries, died on June 5, 1909. They were men eminent for scientific and scholarly attainments and all that makes for nobility of character.

It remains only to thank the very numerous helpers who have contributed special items of information or material, or have aided in the work of the editorial office or the press. Without the assistance of all, such completeness and accuracy as may have been attained would have been impossible. Special mention should be made of the assistance of Professor John Dewey, of Columbia University, in the defining of *pragmatism* and related terms; of the Bureau of Forestry and the Society of American Foresters, in granting through Mr. Gifford Pinchot the use of the manuscript of their glossary of terms in forestry and lumbering; of Dr. Robert Lilley, in contributing many definitions of Oriental (especially Chinese and Japanese) and other terms, and in aiding editorially in putting a part of the first volume through the press; of Mr. David White, of the United States Geological Survey, and Dr. Herbert J. Webber, of the United States Department of Agriculture, in defining various botanical terms; of Professor J. Bishop Tingle, of McMaster University, and Dr. Campbell E. Waters, of the United States Bureau of Standards, in assisting in the work on organic chemistry; of Dr. Whitman Cross, of the United States Geological Survey, in writing certain of the earlier definitions in petrography; of Professor Pierre A. Fish, of Cornell University, in defining various neurological terms; of Dr. Frank H. Chittenden, of the United States Department of Agriculture, in giving valued aid in the work on the entomological terms and illustrations; of Professor Harold Jacoby, of Columbia University; of Mr. H. C. Cassell, in contributing the definitions

relating to chess; of the late Mr. W. N. Fitzgerald, editor of "The Hub," in defining a large number of terms relating to vehicles and harness; of Mr. Benjamin Garno, in supplying definitions in billiards; of Mr. Charles De Kay, in defining terms in fencing; of Professor Edmund K. Alden, of the Packer Institute, in the definition of terms in general and political history; of Mr. Herbert H. Smith, in contributing, with definitions, a number of West Indian words; of Mr. E. C. Hinckley, in supplying the definitions of terms relating to tanning and leather-making; of Professor J. O. Schlotterbeck, of the University of Michigan, in defining a number of pharmaceutical terms; of Miss Edith M. Greer, of Pratt Institute, in defining terms in cooking; of Mrs. C. A. M. Hall of the Drexel Institute, in furnishing information with regard to needlework and embroidery; of Mr. James Means and Mr. Augustus Post, in furnishing valuable material relating to aëronautics; of Mr. Philip S. Smith, in the subject of physiography; of Miss Katharine B. Wood, in collecting much valuable material relating to common words; and of Miss Margaret Jackson and Miss Florence Gilmour, in most efficiently aiding in the work of the editorial office.

In the selection and criticism of the illustrations, which are about one thousand nine hundred in number, aid has been given by nearly all of the collaborators and also by many others. For the use of valuable material especial acknowledgment is due to Macmillan and Company, who have granted the use of cuts from their English edition of von Zittel's "Palæontology"; to the Metropolitan Museum of Art; to the American Museum of Natural History; to the Mount Wilson Solar Observatory; to the New York Institute for the Blind; to the Westinghouse Company; to the Forest Service, Washington; to the British School at Athens; to the British Museum; and to the Journal of Hellenic Studies.

To the second volume has been added a supplement to the Cyclopedia of Names (Vol. IX. of the Dictionary and Cyclopedia) of ninety-two pages, comprising a large number of new articles and also of additions to the articles contained in the various editions of that work.

BENJAMIN E. SMITH.

November 1, 1909.

ABBREVIATIONS

USED IN THE ETYMOLOGIES AND DEFINITIONS.

a., adj. ..... adjective.
abbr. ..... abbreviation
abl. ..... ablative.
acc. ..... accusative.
accom. ..... accommodated, accommodation.
act. ..... active
adv. ..... adverb.
AF. ..... Anglo-French.
agri. ..... agriculture.
AL. ..... Anglo-Latin.
alg. ..... algebra.
Amer. ..... American.
anat. ..... anatomy.
anc. ..... ancient.
antiq. ..... antiquity.
aor. ..... aorist.
appar. ..... apparently.
Ar. ..... Arabic.
arch. ..... architecture.
archæol. ..... archæology.
arith. ..... arithmetic.
art. ..... article.
AS. ..... Anglo-Saxon.
astrol. ..... astrology.
astron. ..... astronomy.
attrib. ..... attributive.
aug. ..... augmentative.
Bav. ..... Bavarian.
Beng. ..... Bengali.
biol. ..... biology.
Bohem. ..... Bohemian.
bot. ..... botany.
Braz. ..... Brazilian.
Bret. ..... Breton.
bryol. ..... bryology.
Bulg. ..... Bulgarian.
carp. ..... carpentry.
Cat. ..... Catalan.
Cath. ..... Catholic.
caus. ..... causative.
ceram. ..... ceramics.
cf. ..... L. *confer*, compare.
ch. ..... church.
Chal. ..... Chaldee.
chem. ..... chemical, chemistry.
Chin. ..... Chinese.
chron. ..... chronology.
colloq. ..... colloquial, colloquially.
com. ..... commerce, commercial.
comp. ..... composition, compound.
compar. ..... comparative.
conch. ..... conchology.
conj. ..... conjunction.
contr. ..... contracted, contraction.
Corn. ..... Cornish.
craniol. ..... craniology.
craniom. ..... craniometry.
crystal. ..... crystallography.
D. ..... Dutch.
Dan. ..... Danish.
dat. ..... dative.
def. ..... definite, definition.
deriv. ..... derivative, derivation.
dial. ..... dialect, dialectal.
diff. ..... different.
dim. ..... diminutive.
distrib. ..... distributive.
dram. ..... dramatic.
dynam. ..... dynamics.
E. ..... East.
E. ..... English (*usually meaning* modern English).
eccl., eccles. ..... ecclesiastical.
econ. ..... economy.
e. g. ..... L. *exempli gratia*, for example.
Egypt. ..... Egyptian.
E. Ind. ..... East Indian.
elect. ..... electricity.
embryol. ..... embryology.
Eng. ..... English.
engin. ..... engineering.
entom. ..... entomology.
Epis. ..... Episcopal.
equiv. ..... equivalent.
esp. ..... especially.
Eth. ..... Ethiopic.
ethnog. ..... ethnography.
ethnol. ..... ethnology.
etym. ..... etymology.
Eur. ..... European.
exclam. ..... exclamation.
f., fem. ..... feminine.
F. ..... French (*usually meaning* modern French).
Flem. ..... Flemish.
fort. ..... fortification.
freq. ..... frequentative.
Fries. ..... Friesic.
fut. ..... future.
G. ..... German (*usually meaning* New High German).
Gael. ..... Gaelic.
galv. ..... galvanism.
gen. ..... genitive.
geog. ..... geography.
geol. ..... geology.
geom. ..... geometry.
Goth. ..... Gothic (Mœsogothic).
Gr. ..... Greek.
gram. ..... grammar.
gun. ..... gunnery.
Heb. ..... Hebrew.
her. ..... heraldry.
herpet. ..... herpetology.
Hind. ..... Hindustani.
hist. ..... history.
horol. ..... horology.
hort. ..... horticulture.
Hung. ..... Hungarian.
hydraul. ..... hydraulics.
hydros. ..... hydrostatics.
Icel. ..... Icelandic (*usually meaning* Old Icelandic, *otherwise called* Old Norse).
ichth. ..... ichthyology.
i. e. ..... L. *id est*, that is.
impers. ..... impersonal.
impf. ..... imperfect.
impv. ..... imperative.
improp. ..... improperly.
Ind. ..... Indian.
ind. ..... indicative.
Indo-Eur. ..... Indo-European.
indef. ..... indefinite.
inf. ..... infinitive.
instr. ..... instrumental.
interj. ..... interjection.
intr., intrans. ..... intransitive.
Ir. ..... Irish.
irreg. ..... irregular, irregularly.
It. ..... Italian.
Jap. ..... Japanese.
L. ..... Latin (*usually meaning* classical Latin).
Lett. ..... Lettish.
LG. ..... Low German.
lichenol. ..... lichenology.
lit. ..... literal, literally.
lit. ..... literature.
Lith. ..... Lithuanian.
lithog. ..... lithography.
lithol. ..... lithology.
LL. ..... Late Latin.
m., masc. ..... masculine.
M. ..... Middle.
mach. ..... machinery.
mammal. ..... mammalogy.
manuf. ..... manufacturing.
math. ..... mathematics.
MD. ..... Middle Dutch.
ME. ..... Middle English (*otherwise called* Old English).
mech. ..... mechanics, mechanical.
med. ..... medicine.
mensur. ..... mensuration.
metal. ..... metallurgy.
metaph. ..... metaphysics.
meteor. ..... meteorology.
Mex. ..... Mexican.
MGr. ..... Middle Greek, mediæval Greek.
MHG. ..... Middle High German.
milit. ..... military.
mineral. ..... mineralogy.
ML. ..... Middle Latin, mediæval Latin.
MLG. ..... Middle Low German.
mod. ..... modern.
mycol. ..... mycology.
myth. ..... mythology.
n. ..... noun.
n., neut. ..... neuter.
N. ..... New.
N. ..... North.
N. Amer. ..... North America.
nat. ..... natural.
naut. ..... nautical.
nav. ..... navigation.
NGr. ..... New Greek, modern Greek.
NHG. ..... New High German (*usually simply* G., German).
NL. ..... New Latin, modern Latin.
nom. ..... nominative.
Norm. ..... Norman.
north. ..... northern.
Norw. ..... Norwegian.
numis. ..... numismatics.
O. ..... Old.
obs. ..... obsolete.
obstet. ..... obstetrics.
OBulg. ..... Old Bulgarian (*otherwise called* Church Slavonic, Old Slavic, Old Slavonic).
OCat. ..... Old Catalan.
OD. ..... Old Dutch.
ODan. ..... Old Danish.
odontog. ..... odontography.
odontol. ..... odontology.
OF. ..... Old French.
OFlem. ..... Old Flemish.
OGael. ..... Old Gaelic.
OHG. ..... Old High German.
OIr. ..... Old Irish.
OIt. ..... Old Italian.
OL. ..... Old Latin.
OLG. ..... Old Low German.
ONorth. ..... Old Northumbrian.
OPruss. ..... Old Prussian.
orig. ..... original, originally.
ornith. ..... ornithology.
OS. ..... Old Saxon.
OSp. ..... Old Spanish.
osteol. ..... osteology.
OSw. ..... Old Swedish.
OTeut. ..... Old Teutonic.
p. a. ..... participial adjective.
paleon. ..... paleontology.
part. ..... participle.
pass. ..... passive.
pathol. ..... pathology.
perf. ..... perfect.
Pers. ..... Persian.
pers. ..... person.
persp. ..... perspective.
Peruv. ..... Peruvian.
petrog. ..... petrography.
Pg. ..... Portuguese.
phar. ..... pharmacy.
Phen. ..... Phenician.
philol. ..... philology.
philos. ..... philosophy.
phonog. ..... phonography.
photog. ..... photography.
phren. ..... phrenology.
phys. ..... physical.
physiol. ..... physiology.
pl., plur. ..... plural.
poet. ..... poetical.
polit. ..... political.
Pol. ..... Polish.
poss. ..... possessive.
pp. ..... past participle.
ppr. ..... present participle.
Pr. ..... Provençal (*usually meaning* Old Provençal).
pref. ..... prefix.
prep. ..... preposition.
pres. ..... present.
pret. ..... preterit.
priv. ..... privative.
prob. ..... probably, probable.
pron. ..... pronoun.
pron. ..... pronounced, pronunciation.
prop. ..... properly.
pros. ..... prosody.
Prot. ..... Protestant.
prov. ..... provincial.
psychol. ..... psychology.
q. v. ..... L. *quod* (or pl. *quæ*) *vide*, which see.
refl. ..... reflexive.
reg. ..... regular, regularly.
repr. ..... representing.
rhet. ..... rhetoric.
Rom. ..... Roman.
Rom. ..... Romanic, Romance (languages).
Russ. ..... Russian.
S. ..... South.
S. Amer. ..... South American.
sc. ..... L. *scilicet*, understand, supply.
Sc. ..... Scotch.
Scand. ..... Scandinavian.
Scrip. ..... Scripture.
sculp. ..... sculpture.
Serv. ..... Servian.
sing. ..... singular.
Skt. ..... Sanskrit.
Slav. ..... Slavic, Slavonic.
Sp. ..... Spanish.
subj. ..... subjunctive.
superl. ..... superlative.
surg. ..... surgery.
surv. ..... surveying.
Sw. ..... Swedish.
syn. ..... synonymy.
Syr. ..... Syriac.
technol. ..... technology.
teleg. ..... telegraphy.
teratol. ..... teratology.
term. ..... termination.
Teut. ..... Teutonic.
theat. ..... theatrical.
theol. ..... theology.
therap. ..... therapeutics.
toxicol. ..... toxicology.
tr., trans. ..... transitive.
trigon. ..... trigonometry.
Turk. ..... Turkish.
typog. ..... typography.
ult. ..... ultimate, ultimately
v. ..... verb.
var. ..... variant.
vet. ..... veterinary.
v. i. ..... intransitive verb.
v. t. ..... transitive verb.
W. ..... Welsh.
Wall. ..... Walloon.
Wallach. ..... Wallachian.
W. Ind. ..... West Indian.
zoogeog. ..... zoogeography.
zool. ..... zoology.
zoot. ..... zootomy.

KEY TO PRONUNCIATION.

a as in fat, man, pang.
ā as in fate, mane, dale.
ä as in far, father, guard.
â as in fall, talk, naught.
à as in ask, fast, ant.
ã as in fare, hair, bear.

e as in met, pen, bless.
ē as in mete, meet, meat.
ė as in her, fern, heard.

i as in pin, it, biscuit.
ī as in pine, fight, file.

o as in not, on, frog.
ō as in note, poke, floor.
ö as in move, spoon, room.
ô as in nor, song, off.

u as in tub, son, blood.
ū as in mute, acute, few (also new, tube, duty: see Preface, pp. ix, x)
ú as in pull, book, could.
ü German ü, French u.

oi as in oil, joint, boy.
ou as in pound, proud, now.

A single dot under a vowel in an unaccented syllable indicates its abbreviation and lightening, without absolute loss of its distinctive quality. See Preface, p. xi. Thus:

ạ̄ as in prelate, courage, captain.
ẹ̄ as in ablegate, episcopal.
ọ̄ as in abrogate, eulogy, democrat.
ụ̄ as in singular, education.

A double dot under a vowel in an unaccented syllable indicates that, even in the mouths of the best speakers, its sound is variable to, and in ordinary utterance actually becomes, the short *u*-sound (of but, pun, etc.). See Preface, p. xi. Thus:

ạ̈ as in errant, republican.
ẹ̈ as in prudent, difference.
ị̈ as in charity, density.
ọ̈ as in valor, actor, idiot.

ụ̈ as in Persia, peninsula.
ẹ̈ as in *the* book.
ụ̈ as in nature, feature.

A mark (⌣) under the consonants *t, d, s, z* indicates that they in like manner are variable to *ch, j, sh, zh*. Thus:

ṭ as in nature, adventure.
ḍ as in arduous, education.
s̰ as in pressure.
z̰ as in seizure.

th as in thin.
TH as in then.
ċh as in German ach, Scotch loch.
ṅ French nasalizing n, as in ton, en.
ly (in French words) French liquid (mouillé) l.
′ denotes a primary, ″ a secondary accent. (A secondary accent is not marked if at its regular interval of two syllables from the primary, or from another secondary.)

SIGNS.

< read *from*; i. e., derived from.
> read *whence*; i. e., from which is derived.
+ read *and*; i. e., compounded with, *or* with suffix.
= read *cognate with*; i. e., etymologically parallel with.

√ read *root*.
* read *theoretical* or *alleged*; i. e., theoretically assumed, or asserted but unverified, form.
† read *obsolete*.
☆ references so marked are to the supplementary volumes.

SPECIAL EXPLANATIONS.

A superior figure placed after a title-word indicates that the word so marked is distinct etymologically from other words, following or preceding it, spelled in the same manner and marked with different numbers. Thus:

back[1] (bak), *n.* The posterior part, etc.
back[1] (bak), *a.* Lying or being behind, etc.
back[1] (bak), *v.* To furnish with a back, etc.
back[1] (bak), *adv.* Behind, etc.
back[2]† (bak), *n.* The earlier form of *bat*[2].
back[3] (bak), *n.* A large flat-bottomed boat, etc.

Various abbreviations have been used in the credits to the quotations, as "No." for *number*, "st." for *stanza*, "p." for *page*, "l." for *line*, ¶ for *paragraph*, "fol." for *folio*. The method used in indicating the subdivisions of books will be understood by reference to the following plan:

Section only	§ 5.
Chapter only	xiv.
Canto only	xiv.
Book only	iii.
Book and chapter Part and chapter Book and line Book and page Act and scene Chapter and verse No. and page	iii. 10.
Volume and page	II. 34.
Volume and chapter	IV. iv.
Part, book, and chapter	II. iv. 12.
Part, canto, and stanza	II. iv. 12.
Chapter and section or ¶	vii. § or ¶ 3.
Volume, part, and section or ¶	I. i. § or ¶ 6.
Book, chapter, and section or ¶	I. i. § or ¶ 6.

Different grammatical phases of the same word are grouped under one head, and distinguished by the Roman numerals I., II., III., etc. This applies to transitive and intransitive uses of the same verb, to adjectives used also as nouns, to nouns used also as adjectives, to adverbs used also as prepositions or conjunctions, etc.

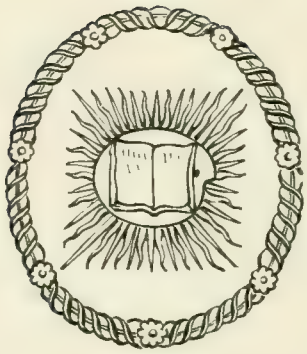
The capitalizing and italicizing of certain or all of the words in a synonym-list indicates that the words so distinguished are discriminated in the text immediately following, or under the title referred to.

The figures by which the synonym-lists are sometimes divided indicate the senses or definitions with which they are connected.

The title-words begin with a small (lower-case) letter, or with a capital, according to usage. When usage differs, in this matter, with the different senses of a word, the abbreviations [*cap.*] for "capital" and [*l. c.*] for "lower-case" are used to indicate this variation.

The difference observed in regard to the capitalizing of the second element in zoölogical and botanical terms is in accordance with the existing usage in the two sciences. Thus, in zoölogy, in a scientific name consisting of two words the second of which is derived from a proper name, only the first would be capitalized. But a name of similar derivation in botany would have the second element also capitalized.

The names of zoölogical and botanical classes, orders, families, genera, etc., have been uniformly italicized, in accordance with the present usage of scientific writers.



THE CENTURY DICTIONARY SUPPLEMENT

A, 2 (*a*). In *music*, the A next above middle C has (at French pitch) 435 vibrations per second. In mediæval music, the final of the Æolian and hypoæolian modes. (*g*) In *chem.*, the symbol for argon.—**3.** Also an abbreviation of *ampere* and of ★*A-level* (which see).

AA., A A. [Prop. *āa*, which stands for *ana*, Gr. *ἀνά*, used in sense of 'throughout,' that is, 'of each one.'] In recipes, an abbreviation equivalent, when used after the names of several ingredients, to 'of each one take.'

Å, å (ō). A Swedish letter representing an original long *a* (ā), now sounded as English long open *o* in *form* or *a* in *fall*.

a-a (ä'ä), *n.* [Hawaiian.] A form of cooled lava-stream of which the surface consists of jagged and irregular blocks. The blocks represent the chilled and solidified crust of a molten mass, and were formed during a pause. When the onward movement was resumed the frozen cakes were piled one upon another. Contrasted with *pahoehoe*, which refers to smooth or fluted surfaces. Both words are of Hawaiian origin, but are occasionally used in English writings on volcanoes. *C. E. Dutton*, Ann. Rep. Director U. S. Geol. Survey 1884, p. 95.

Aachenian (ä-kē'ni-an), *a.* and *n.* [G. *Aachen* (F. *Aix-la-Chapelle*) + *-ian.*] In *stratigraphy*, noting formations underlying the Chalk in Belgium: now known as ★*Bernissartian* (which see).

A. A. G. An abbreviation of *Assistant Adjutant-General*.

aal, *n.* See ★*al*[1].

Aalenian (ä-lē'ni-an), *a.* and *n.* [G. *Aalen* in Würtemberg.] In *stratigraphy*, noting European subdivision of the Lower Oölite beds of the Jurassic.

aalii (ä ä-lē'ē), *n.* [Hawaiian; < *aa* (= Maori *aka*, etc.), roots, + *lii* (= Maori *riki*), small.] In Hawaii, a small tree, *Dodonæa viscosa*, 12 to 25 feet high. It is one of the commonest trees of that region and is found on all the islands. It also occurs in tropical America, New Zealand, and Australia, and on probably all of the volcanic island groups of Polynesia. It is valued for its hard-grained, dark wood. Called *apiri* in Tahiti

aannerödite, *n.* See ★*annerödite*.

aback[1], *adv.* **All aback** (*naut.*), said of sails when they are all flattened against the masts by the wind acting on them from in front. **All aback forward** (*naut.*), said of the square sails on the foremast when the wind coming from ahead has laid the sails against the mast.—**Flat aback** (*naut.*), said of sails when the wind is nearly at a right angle to them, so that they are neither bellied forward nor pressed against the mast, but just fluttering or lifting.

Abacola (a-bak'ō-lä), *n.* [NL.: origin not obvious.] The typical genus of the family *Abacolidæ*. *Edwards*, 1891.

Abacolidæ (ab-a-kol'i-dē), *n. pl.* [NL., < *Abacola* + *-idæ.*] A family of parasitic copepod crustaceans found in holothurians. They have simple mouth-parts adapted for piercing, and 5-jointed antennæ. The typical genus is *Abacola*.

abadejo (ä-bä-dā'hō), *n.* [Sp., a codfish, poor-jack, = Pg. *abadejo*, *badejo*: origin uncertain.] A Cuban name for the scamp *Mycteroperca falcata*, a large species of grouper.

abandond, *p.a.* A simplified spelling of *abandoned*.

abarticular (ab-är-tik'ū-lär), *a.* [*ab-* + *articular.*] Not affecting the joints; not articular. —**Abarticular gout.** See ★*gout* 1.

abasia (a-bā'si-ä), *n.* [NL., < Gr. **ἀβασία* (cf. *ἄβατος*, not trodden), < *ἀ-* priv. + *βάσις*, stepping: see *basis.*] In *med.*, inability to walk, through defect of muscular action, not necessarily paralysis or incoördination.

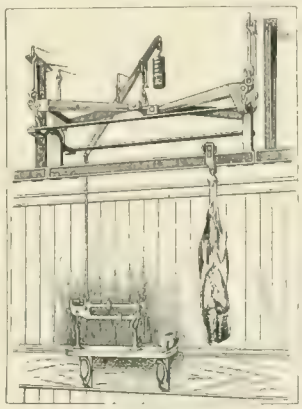
abasic (a-bā'sik), *a.* [*abasia* + *-ic.*] Of, pertaining to, or affected with abasia.

abask (a-bask'), *adv.* [< *a*[3] + *bask*, *v.*] Basking; bathed in sunlight or genial warmth. *J. M. Neale.*

abastard† (a-bas'tärd), *v.t.* [OF. *abastardir*, to stigmatize as bastard or degenerate.] To bastardize; render spurious or corrupt; debase. *Donne*, Pseudo-Martyr, p. 226. *N. E. D.*

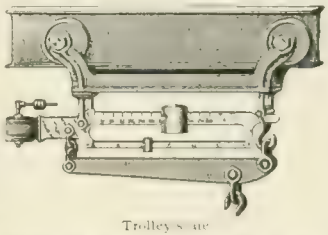
abaton (ab'a-ton), *n.*; pl. *abata* (-tä). [NL., < Gr. *ἄβατον*, prop. neut. of *ἄβατος*, not to be trodden, < *ἀ-* priv. + *βατός* < *βαίνειν*, go, walk, step.] A place sacred from common entry; a shrine. Same as *adytum*.

abat-son (a-bä'-soṅ), *n.* [F., < *abattre*, throw down (see *abate*), + *son*, sound.] A device for throwing downward sound, as that of a bell.



Abattoir Scales.

Abattoir scales, scales adapted to the rapid weighing of dressed meat in markets, abattoirs, and cold-storage warehouses. The meat, suspended from hooks attached to a trolley traveling on a telpherage system or overhead track, is run upon a short section of track which forms the weighing-platform of the scales. The lever system may be above the track, with the weighing-section suspended from the levers, and the weighing-beam may be below at a convenient distance from the floor. A single trolley with its load may be weighed, or as many as the weighing-section of track will hold may be weighed together. Another form of scale employs a trolley for weighing materials in transit, with a scale-beam attached directly to the trolley and traveling with it. This is called a *trolley-scale*.



Trolley Scale.

abaxile, *a.* **2.** In *bot.*, turned away from the axis: said of lateral organs.

abbadia (a-bä-dē'ä), *n.* [It.: see *abbacy.*] An abbey or, in Italian architecture, more often an abbey church. Also *badia*.

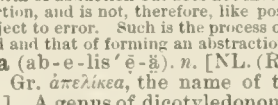
abbasi, *n.* **3.** A current, subsidiary coin of Afghanistan, equivalent to 2 sanars or $10\frac{82}{100}$ cents.

Abbe-Fizeau dilatometer. See ★*dilatometer*.

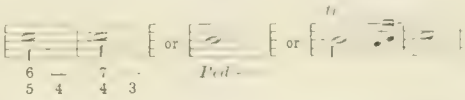
Abbe's focimeter, marine nephoscope. See ★*focimeter*, ★*nephoscope*.

Abbreviated numbers. See ★*number*.

abbreviation, *n.*, **4.** Other marks of abbreviation are: (1) One indicating that a rest is to extend for several measures, and consisting either of a general character in the staff with a figure above, or simply of a figure in the staff denoting the intended number of measures, thus



(2) Various horizontal dashes, lines, rows of dots, etc., indicating that the force of some preceding character is to continue as far as the dashes, lines, or dots extend, thus:



abciss (ab'sis), *n.* Same as ★*complement*, 8.

abcoulomb (ab'kö-lom), *n.* [*ab*(*solute*) + *coulomb.*] A name proposed for the c. g. s. electromagnetic unit of electrical quantity; 10 coulombs. Also *absoulomb*.

Abdominal brain, the solar plexus (which see under *plexus*).—**Abdominal ganglion,** the semilunar ganglion (which see, under *ganglion*).—**Abdominal gestation,** gestation occurring outside of the uterus.—**Abdominal mat,** a padded framework, with a stretcher for the feet, used in gymnasiums for exercising the abdominal muscles.—**Abdominal phthisis,** tuberculosis of the peritoneum, mesenteric glands, or mucous coat of the intestine.

Abdominal pregnancy. Same as ★*abdominal gestation*.—**Abdominal stalk,** in *embryol.*, the tube of mesoblast which envelops the stem of the allantois in the young human and mammalian embryo.—**Abdominal sweetbread,** the pancreas. See *sweetbread*.

abdominalian (ab-dom-i-nā'li-an), *a.* [*Abdominales* + *-ian.*] Pertaining to or having the characteristics of the *Abdominales*.

abdominothoracic (ab-dom″i-nō-thō-ras'ik), *a.* Relating to both the abdomen and the thorax.

abdominovesical (ab-dom″i-nō-ves'i-kal), *a.* Relating to the abdominal wall and to the urinary bladder.—**Abdominovesical pouch,** the concave surface of the peritoneum where it is deflected from the anterior abdominal wall to the distended bladder.

Abducens muscle, the external rectus muscle of the eyeball.—**Abducens nucleus,** the center in the medulla oblongata from which the abducens nerve seems to take its origin.

abduction, *n.* **3.** In the logical system of C. S. Peirce, reasoning from consequent to antecedent; the acceptance on probation (or more absolutely) of a hypothesis to explain observed facts; the deriving of a suggestion from observation.—**Formal abduction,** a logical process which has the form of abduction but does not involve any positive assertion, and is not, therefore, like positive abduction, subject to error. Such is the process of adopting a new word and that of forming an abstraction.

Abelicea (ab-e-lis'ē-ä). *n.* [NL. (Rafinesque, 1836), < Gr. *ἀπελίκεα*, the name of the Cretan species.] A genus of dicotyledonous plants of the family *Ulmaceæ*. See *Zelkova*.

Abe Lincoln bug. See ★*bug*[2].

aberglaube (ä'ber-glou″be), *n.* [G. *aberglaube*, for **oberglaube*, *überglaube*, D. *overgeloof*, 'over-belief.' The first element simulates *aber*, but.] Belief beyond what is justified by experience and knowledge. See the extract.

> Our word 'superstition' had by its derivation this same meaning, but it has come to be used in a merely bad sense, and to mean a childish and craven religiosity. With the German word it is not so; therefore Goethe can say with propriety and truth: '*Aberglaube* is the poetry of life.' . . . Extra-belief, that which we hope, augur, imagine, is the poetry of life.
>
> *M. Arnold*, Lit. and Dogma, p. 87.

Aberrant duct of the liver, a bile-duct unconnected with the other portions of the biliary apparatus.

aberrate, *v. i.* 2. In *optics*, to refract, as a lens, in such a manner that rays varying in wave-length or passing through different zones will have different foci. See *aberration*, 4. *Dolland.* [Rare.]

Aberration constant. See *constant of aberration*, under *constant.* **Lateral aberration,** in the theory of lenses, the product of the spherical aberration and the relative aperture of the lens; the radius of the circle formed by rays passing through the edge of a lens and falling upon a screen placed at the focal point.—**Lateral spherical aberration.** Same as *circle of aberration.*—**Longitudinal aberration,** in the theory of lenses, the distance between the points in which rays passing through the central zone and the edges of the lens, respectively, cut the axis; spherical aberration. **Negative spherical aberration,** in *optics*, spherical aberration in a divergent lens, where the focal length of the outer zones is greater than that of the center of the lens —**Positive spherical aberration,** in *optics*, spherical aberration of a convergent lens, where the focal length of the outer zones is less than that of the center of the lens.

Aberrational ellipse. See ★*ellipse.*

aberrometer (ab-e-rom′e-tėr), *n.* [Irreg. < L. *aberrare*, aberrate, + Gr. *μετρον*, measure.] An instrument for measuring deviations or errors in delicate experiments or observations. *G. E. Davis*, Pract. Microscopy, p. 183.

abevacuation, *n.* 2. Evacuation through an abnormal channel.

abfarad (ab′far″ad), *n.* [*ab(solute)* + *farad.*] A name proposed for the c. g. s. unit of electrical capacity; 1×10^{-9} farads or 1×10^{-15} microfarads.

abhenry (ab′hen″ri), *n.* [*ab(solute)* + *henry.*] A name proposed for the c. g. s. electromagnetic unit of inductance; 1×10^{-9} henrys.

Abhidharma (ab-i-dėr′mä), *n.* [Skt. *abhidharma*, < *abhi*, near, to, + *dharma*, order, rule, precept.] The Buddhistic philosophy.

abia (ä′biä), *n.* A Polish silver coin of the value of one shilling sterling or twenty-five cents.

abidal (a-bī′dal), *n.* [*abide*[1], *v. i.*, + *-al.*] Abiding-place; abode. *N. E. D.*

abidi (ä-bi-dē′), *n.* [E. Ind.] The silver half-rupee of Mysore.

Abieteæ (ab-i-ē′tē-ē), *n. pl.* [NL. (Spach, 1842), < L. *Abies* (*Abiet-*) + *-eæ.*] Same as *Abietineæ.*

abilious (a-bil′yus), *a.* Indicating or marked by an absence of bile, as in the stools.

ability, *n.*—**General ability,** in *polit. econ.*, "those faculties and that general knowledge and intelligence which are in varying degrees the common property of all the higher grades of industry." *Alfred Marshall*, Principles of Economics, I. 266.—**Gracious ability,** the semi-Pelagian and Arminian teaching that though man by the fall lost the ability to keep the moral law, yet God by his grace restores it to all men.—**Natural ability,** a term used in New England theology in distinction to moral ability; i. e., man since the fall has all the natural powers needed to obey God's law, but he is morally unable so to do since his will is opposed to righteousness.—**Plenary ability,** the Pelagian doctrine that responsibility is measured by ability, so that every man has full power at all times to obey God's law.—**Specialized ability,** "that manual dexterity and that acquaintance with particular materials and processes, which are required for the special purposes of individual trades." *Alfred Marshall*, Principles of Economics, I. 266.

abilo (ä-bē′lō), *n.* [Tagalog name?] A name in the Philippines of *Garuga floribunda*, a tree belonging to the *Balsameaceæ*, with pinnate leaves crowded at the ends of the branches and with fruit in the form of small, fleshy drupes. It is fragrant and yields a gum which is soluble in water, but only slightly so in alcohol.

abiochemistry (ab″i-ō-kem′is-tri), *n.* [Gr. *ἀ-* priv. + *βίος*, life, + E. *chemistry.*] Inorganic chemistry as contrasted with the chemistry of vital processes.

abiogenetical (ab-i-ō-jē-net′i-kal), *a.* Same as *abiogenetic.*

abiology (ab-i-ol′ō-ji), *n.* [Gr. *ἀ-* priv. + *βίος*, life, + *-λογία*, < *λέγειν*, speak: cf. *biology.*] The scientific study of things that are not alive; all science except biology. *Haeckel* (trans.), Planktonic Studies, p. 578.

abion (ab′i-on), *n.* [Gr. *ἄβιον*, neut. of *ἄβιος*, taken in the literal sense 'without (physical) life,' < *ἀ-* priv. + *βίος*, life.] Lifeless things considered collectively, as distinguished from living things. *Haeckel* (trans.), Planktonic Studies, p. 578.

abiophysiology (ab″i-ō-fiz-i-ol′ō-ji), *n.* [Gr. *ἄβιος*, without life, + *φυσιολογία*, physiology.] The study of the inorganic or purely physical and chemical phenomena in living organisms as distinguished from the biological phenomena proper.

abiosis (ab-i-ō′sis), *n.* [Gr. *ἀ-* priv. + *βίωσις*, way of life.] Absence of vital force.

abiotic (ab-i-ot′ik), *a.* [Gr. *ἀ-* priv. + *βιωτικός*, pertaining to life.] Noting those sciences which deal with inorganic nature, as contrasted with the biological sciences. *Haeckel* (trans.), Wonders of Life, p. 27. [Rare.]

abiotrophy (ab-i-ot′rō-fi), *n.* [Gr. *ἀ-* priv. + *βίος*, life, + *-τροφια*, < *τρέφειν*, nourish.] Degeneration due to congenital deficiency of vital force.

abirritation, *n.* 2. Asthenia.

Abispa (a-bis′pä), *n.* [NL. (Mitchell, 1838), < Sp. *abispa*, now usually *avispa*, < L. *vespa*, a wasp?] A peculiar genus of Australian solitary wasps comprising several species. A single female constructs a nest with a funnel-shaped entrance, so large that it appears to be the nest of a colony of social wasps.

abjoint (ab-joint′), *v. t.* [*ab-* + *joint.*] In *mycol.*, to separate by a septum, as in the case of the spores of some fungi. *Plow*, Brit. Ured. and Ustil. Gloss., p. 305.

abjunction (ab-jungk′shon), *n.* [NL. **abjunctio(n-)*, < L. *abjungere*, disjoin, separate: see *abjunctive.*] In *mycol.*, the separation of spores by means of a septum.

ablastic (a-blas′tik), *a.* Same as *ablastous.*

ablastozoa (a-blas″tō-zō′ä), *n. pl.* [NL., < Gr. *ἀ-* priv. + *βλαστός*, germ, + *ζῷον*, animal.] Animals without germ-layers; *Protozoa. Eimer*, Organic Evolution, p. 70.

ablation, *n.*, 4. (*b*) The washing away by rains of the lighter particles yielded by the decay and weather-waste of rocky ledges, whereby the heavier and more resistant minerals are left behind in a state of residual concentration, sometimes affording a body of ore.

able, *a.*—**To spell able,** to be able; to have all the ability or strength needed (for some particular purpose). [Colloq.]

ablepharia (ab-le-fā′ri-ä), *n.* [NL., < Gr. *ἀβλέφαρος*, without eyelids: see *ablepharon.*] Same as ★*ablepharon.*

ablepharon (a-blef′a-ron), *n.* [Gr. *ἀβλέφαρος*, without eyelids, < *ἀ-* priv. + *βλέφαρον*, eyelid.] Absence, through disease or congenital defect, of one or both eyelids.

abmho (ab′mō), *n.* [*ab(solute)* + *mho.*] A name proposed for the c. g. s. electromagnetic unit of conductance, admittance, or susceptance; 1×10^9 mhos.

abmodality (ab-mō-dal′i-ti), *n.* [**abmodal* + *-ity.*] Exception to or deviation from a statistical normal or mode when this is considered, for statistical purposes, as a fixed standard which living beings or their measurable qualities may approach or from which they may recede. See *mode*[1], 4.

Statistical Biology seeks to determine the exact status of species as regards variation, expressed in modes, *abmodalities* and abnormalities; the direction, rate, and causes of variation in species; the suppression of old modes, the rise of new ones, and the shifting of modes; and the inheritance and permanency of these characters and changes. With such data, accurately determined for a number of species for a period of years, it will be possible to test the validity and broad application of some of the fundamental theories upon which modern Biology is built. *Biometrika*, April, 1903, p. 313.

abmortal (ab-môr′tal), *a.* [*ab-* + *mortal.*] In *med.*, situated or directed away from the injured or dead part: applied to the course of the electrical current in an injured muscle.

abneural (ab-nū′ral), *a.* [*ab-* + *neural.*] Relating to or situated on the side of the body farthest from the neural axis.

abnormative (ab-nôr′ma-tiv), *a.* [*ab-* + *normative.*] Not normative. Applied by Cross, Iddings, Pirsson, and Washington (1902), in their quantitative classification of igneous rocks, to the minerals other than those which go to make up the norm or standard mineral composition by which a rock is classified. When the actual mineral composition of a rock differs from its theoretical or standard composition, the rock is said to have an *abnormative* mode. See *quantitative classification of igneous rocks*, under ★*rock.*

abnumerable (ab-nū′me-ra-bl), *a.* Not numerable; either having (as a collection) or being a multitude greater than that of all the integer numbers taken collectively. The multitude of all the quantities whose values (like that of π) can be expressed to indefinitely close approximation by means of indefinitely extended decimals is the *first abnumerable multitude.* There is a second, third, etc. (up to any finite ordinal number), abnumerable multitude; and there is no highest abnumerable multitude, any more than there is a highest enumerable multitude. There is no multitude greater than all abnumerable multitudes, since beyond them the individual members of the collection lose their separate identity and merge into one another in true continuity. The multitude of all the numbers considered in the calculus and theory of functions is the first abnumerable multitude, and of higher multitudes mathematicians as yet know little more than that they are logically and mathematically possible. Also *abnumeral.*

abnumeral (ab-nū′me-ral), *a.* [*ab-* + *numeral.*] Same as ★*abnumerable.*

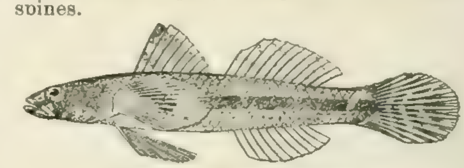
aboard[1], *adv.*—**To haul the starboard tacks aboard** (*naut.*), to bring the weather clues of the courses (lower square sails) inboard and down to the tack-irons in the deck by means of the tack-tackles.—**To have the starboard** (or **port**) **tacks aboard** (*naut.*), to be on the starboard (or port) tack, as the tacks are always boarded on the weather side of the ship.

abobra (a-bo′brä), *n.* [Pg. *abobora*, *abobra*, gourd.] A greenhouse tendril-climbing herb, a member of the family *Cucurbitaceæ*, from Brazil, grown both for its much-divided foliage and its scarlet, gourd-like fruit.

aboideau (a-boi-dō′), *v. t.* [*aboideau*, *n.*] To improve (a tidal river or stream) and prevent the tidal overflow of its marshes and tidal meadows by placing tide-gates at its mouth.

At first sight it might seem wise to *aboideau* all rivers at their mouths. *Bot. Gazette*, Sept., 1903, p. 180.

aboma, *n.* 2. [*cap.*] A genus of gobies found in Mexico and Japan, having more than 6 dorsal spines.



Darter Goby (*[illegible]*).
(From Bull. 47 U. S. Nat. Museum.)

abondance (a-boṅ-däṅs′), *n.* [F.: see *abundance.*] In *solo whist*, the naming of the trump suit and winning of 9 tricks without the assistance of a partner.—**Abondance déclarée.** Same as ★*abondance in trumps.*—**Abondance in trumps,** in *solo whist*, the winning of 9 tricks with the trump that is turned up, without the assistance of a partner.

Aboral pore, an opening or pore at the end of the body farthest from the mouth-opening, as in a few *Anthozoa.*

aboriginalism (ab-ō-rij′i-nal-izm), *n.* The recognition of the rights of aboriginal races.

abort, *v. t.* To render abortive; check or arrest the development of: as, to *abort* a fever.

abortient, *a.* and *n.* In *pathol.*, same as *abortifacient.*

abortion, *n.*—**Missed abortion,** expulsion of a fetus sometime after its death.

abortive, *a.* 8. Preventing full development; arresting the course of, as of a disease: as, *abortive* treatment.

Aboth (ä′bōt), *n. pl.* [Heb., pl. of *'āb*, father.] 'The Fathers,' otherwise *Pirke aboth*, 'Chapters of the Fathers': a treatise in the Mishnah consisting of maxims and aphorisms of ancient 'fathers' or rabbis: analogous to the Book of Proverbs in the Old Testament.

aboulic, *a.* See ★*abulic.*

abrachiocephalus (a-brā″ki-ō-sef′a-lus), *n.*; pl. *abrachiocephali* (-lī). [NL., < Gr. *ἀ-* priv. + *βραχίων* (L. *brachium*), arm, + *κεφαλή*, head.] A monster without head and arms.

abrader (ab-rā′dėr), *n.* [*abrade*, *v. t.*, + *-er*[1].] Any tool or machine used for abrading; a file, emery-wheel, grinding-, sandpapering-, or depolishing-machine.

Abraham†, *a.* See *Abram.*

Abrahamitic (ā″bra-ham-it′ik), *a.* Same as *Abrahamitical.*

Abram†, **Abraham**†, *a.* Corrupted forms of *auburn.*

abranchial (a-brang′ki-al), *a.* [Gr. *ἀ-* priv. + *βράγχια*, gills, + *-al.*] Having no branchiæ or gills, as certain worms, for example the earthworm, in which respiration is carried on by the moist skin.

abranchialism (a-brang′ki-al-izm), *n.* [*abranchial* + *-ism.*] The condition of being abranchial, or without gills, as the *Firoloida* among mollusks. *Encyc. Brit.*, XXX. 796.

Abranchiata, *n. pl.* 2. A group of macrurous crustaceans having the gills rudimentary or absent. It includes the *Mysidæ*, or opossum-shrimps.

abrastol (a-bras′tol), *n.* [Gr. *ἀ-* priv. + *βραστ-*, < *βράζειν*, boil, ferment, + *-ol.*] A technical name given to the calcium salt of β-naphthol-sulphonic acid, $(C_{10}H_6(OH)SO_3)_2Ca + 3H_2O$. It is used as a preservative in wines.

abrest, *prep. phr.* A simplified spelling of *abreast.*

abrotine (ab′rō-tin), *n.* [*abrot(anum)* + *-ine*[2].] A crystalline alkaloid, $C_{21}H_{22}ON_2$, found in *Artemisia Abrotanum.* Its solutions give a blue fluorescence.

absampere (abs′am-pãr″), *n.* [*abs(olute)* + *ampere.*] A name proposed for the c. g. s. electromagnetic unit of current; 10. amperes.

absarokite (ab-sä′rō-kīt), *n.* [*Absarok(a)* (see def.) + *-ite*[2].] In *petrog.*, a name applied by

Iddings (1895) to a group of igneous rocks occurring in the Absaroka mountains in the eastern part of the Yellowstone Park. Absarokite is usually porphyritic in texture, containing phenocrysts of augite and olivin in a ground-mass of orthoclase, leucite, augite, olivin, and magnetite. The ground-mass may be glassy and the texture aphanitic or phanerocrystalline. It occurs in dikes and flows. Absarokite is the basaltic end of a series containing, in addition, shoshonite and banakite.

abscess, *n.*—**Acute abscess,** an abscess occurring as the result of acute inflammation. **Cold abscess,** a collection of pus not associated with the ordinary signs of inflammation. It is usually located at some distance from the original point of suppuration, the matter burrowing along lines of fascia or within the sheath of a muscle: in this case also called *gravitation abscess.*—**Dubois's abscesses,** multiple areas of necrosis occurring in the thymus gland in young children with congenital syphilis.—**Gravitation abscess,** a form of *cold* ★*abscess.*—**Sterile abscess,** an abscess containing no microorganisms.—**Stitch abscess,** formation of pus after closure of a wound at the points where the sutures are inserted.

absciss (ab-sis′), *n.* [See *abscissa.*] A part cut off; specifically, in *conic sections,* an abscissa (which see). Also *abscisse.*

abscission, *n.* **7.** In *bot.,* the separation of spores from a sporophore on the disappearance of the connecting layer.

absciss-layer (ab-sis′lā″ėr), *n.* In *bot.,* a layer or plane along which separation takes place, as in the fall of leaves.

abscoulomb (abs′kö-lom″), *n.* Same as ★*abcoulomb.*

absentee, *n.* **3.** An escaped or runaway convict: a euphemistic term formerly in use in Australia.

absohm (abs′ōm), *n.* [*abs*(*olute*) + *ohm.*] A name proposed for the c. g. s. electromagnetic unit of resistance: 1×10^{-9} ohms.

Absolute differential limen or **absolute threshold of difference,** in *psychol.,* the just noticeable difference of sensory stimulus stated absolutely, that is, without regard to the original stimulus of which it is an increment.—**Absolute forest land,** land fit only for forest growth. Also called *absolute forest soil.*—**Absolute form factor.** See ★*form factor.* **Absolute geometry, scale.** See ★*geometry,* ★*scale.*—**Absolute sensibility** or **absolute sensitivity,** in *psychol.,* Fechner's term for sensitivity as measured by the inverse magnitude of the stimuli applied to the sense-organ.

absolv, *v. t.* A simplified spelling of *absolve.*

absorbd, *p. a.* A simplified spelling of *absorbed.*

Absorbent screen, in *optics,* a screen which absorbs certain or all of the rays of light falling upon it. Thus ruby glass is an absorbent screen cutting off all but the red rays of the visible spectrum.

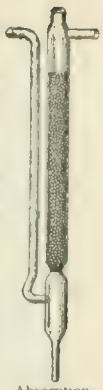
absorber, *n.* **2.** In a hot-air engine, a part which absorbs heat from the air at one time and gives it out at another; a regenerator.

absorptiometric (ab-sôrp″shi-ō-met′rik), *a.* [L. *absorptio*(*n*), absorption, + Gr. *μέτρον,* measure.] Measuring or determining the amount of absorption, as of a gas in a given quantity of a liquid or of radiation in an opaque medium.—**Absorptiometric equilibrium,** the relation between the amounts of two or more gases absorbed by the same portion of a liquid with which they are simultaneously in contact.

absorption, *n.* **1.** (*e*) In *elect.,* the property of the solid dielectric of an electrostatic condenser by which it takes up a part of the charge and retains a part of the absorbed charge, after discharge, as residual charge.

2. In Herbart's pedagogic system, the gradual process of the apprehension of the manifold: a translation of the German *vertiefung.* Otherwise called *concentration* and *self-estrangement.*—**Acoustic absorption,** the absorption of sound-waves either by a body which does not perfectly transmit or reflect such waves or by a body whose frequency of vibration corresponds to that of the waves, so that it is thrown into sympathetic oscillation by resonance.—**Atmospheric absorption,** the loss of sunlight in passing through the atmosphere. It increases in proportion to the distance of the sun from the zenith, and also in proportion to the shortness of waves of heat or light. Besides the general absorption there is also a so-called "selective absorption" (see *selective*), in accordance with which each component of the earth's atmosphere absorbs with special intensity certain specific wave-lengths, thus causing dark lines in the optical spectrum, inert bands in the photographic spectrum, and cold bands in the bolographic spectrum. Absorption is to be distinguished from *selective reflection.*—**Coefficient of absorption,** a physical constant used to express the specific absorbing power of a substance. Specifically—(*a*) In the absorption of gases, the volume of a gas which one volume of a liquid will dissolve. (*b*) In *optics,* the constant K in the equation $\frac{A_0}{A_1} = \frac{1}{e^{-2\pi K}}$, where A_0 is the amplitude of an incident ray, A_1 its amplitude after penetrating to a depth of one wave-length in the absorbing medium, and *e* the base of natural logarithms.—**Disjunctive absorption,** in *med.,* a process by which a slough is separated from healthy tissue, a thin layer of the latter in immediate contact with the necrosed portion being absorbed.—**Fluorescence absorption,** the increased absorption of light by a substance which occurs when the latter is rendered fluorescent.—**Selective absorption.** See *selective.*

absorption-tube (ab-sôrp′shon-tūb), *n.* An instrument for the absorption of gases, consisting of a vertical tube filled with glass beads which are wet with the absorbing material. It has been modified by various experimenters.


Absorption-tube.

abstat-. [*ab*(*solute*) + (*electro*)*stat*-(*ic*).] In *elect.,* a prefix which it has been proposed to place before the practical electrical units such as the ohm, ampere, volt, and coulomb, to designate the corresponding absolute electrostatic units.

abstatampere (ab′stat-am-pār″), *n.* [See *abstat-.*] A name proposed for the absolute electrostatic unit of current; about 3.3×10^{-10} amperes.

abstatcoulomb (ab′stat-kö-lom″), *n.* [See *abstat-.*] A name proposed for the absolute electrostatic unit of electrical quantity; about 3.3×10^{-10} coulombs.

abstatfarad (ab′stat-far″ad), *n.* [See *abstat-.*] A name proposed for the electrostatic absolute unit of electrical capacity; about 1.1×10^{-6} microfarads.

abstathenry (ab′stat-hen″ri), *n.* [See *abstat-.*] A name proposed for the absolute electrostatic unit of inductance; about 9×10^{11} henrys.

abstatohm (ab′stat-ōm), *n.* [See *abstat-.*] A name proposed for the absolute electrostatic unit of resistance; about 9×10^{11} ohms.

Abstemii (ab-stē′mi-ī), *n. pl.* A sect of the early church, so called from their use of water instead of wine in the eucharist. They also abstained from all use of wine, and from meat and marriage, regarding these things as intrinsically impure. They were followers of Tatian.

abstinence, *n.* **4.** The act of abstaining from the use of, or from the doing of, something; specifically, in *economics,* voluntary abstention from the consumption of anything which one has the power of consuming or using, with the purpose of increasing one's resources or accumulating wealth for future enjoyment.

abstract, *v. i.*—**To abstract from.** (*b*) To separate itself from; occupy a plane or position apart; pursue an independent course.

> Physics, which is wholly the science of the senses, *abstracts from* religion, *from* morality, and *from* every kind of knowledge as far as the latter is independent of sense. I say "*abstracts from*"; I do not say "rejects," or "repudiates," or "denies." Physical science merely attends to its own business.
>
> *W. S. Lilly,* On Right and Wrong, p. 262.

abstract-concrete (ab″strakt-kon′krēt), *a.* Relating both to the abstract and to the concrete; in the Spencerian philosophy, noting those sciences which study abstractly concrete phenomena (physics and chemistry).

> Molar physics, molecular physics, and chemistry, dealing with abstract laws of motion and force that are gained from experience of concrete phenomena, and appealing at every step to the concrete processes of observation and experiment, may be distinguished as *abstract-concrete* sciences. *J. Fiske,* Cosmic Philos., II. 44.

abstraction, *n.* **6.** In *geol.,* the tapping of the head waters of one stream by another the erosive action of which is more rapid.

Abstractional demonstration, a demonstration which treats characters, relations, operations, and the like as themselves objects having characters, relations, operations, etc.

abub (ä-böb′), *n.* [Syr. **abūb*?] An ancient Syrian musical instrument, probably a Pan's-pipes.

abulic (a-bö′lik), *a.* Relating to or suffering from abulia. Also *aboulic.*

abundance, *n.* **3.** In *card-playing,* same as ★*abondance.*

aburahaye (ä″bö-rä-hä′ye), *n.* [Jap., < *abura,* oil, fat, + *haye,* said to mean 'minnow.'] A Japanese name of a fish of the family *Cyprinidæ, Sarcocheilichthys variegatus,* found in the waters of Japan. Also known as *higai.*

abusefulness (ab-ūs′fūl-nes), *n.* Capability of being abused or put to a wrong use. *Ruskin,* Unto this Last, p. 124.

Abutilon, *n.* **2.** [*l. c.*] A plant of this genus, generally of a cultivated species. See *velvet-leaf,* 3, and *American jute,* under *jute*[2].

abutment, *n.* **2.** (*c*) In a rotary engine, a part provided to cut off the steam pressure from the back or exhaust side of the piston.

abuttal, *n.* **2.** The fact of abutting or of lying contiguous: as, the *abuttal* of the land on a highway.

abuv, *adv.* and *prep.* A simplified spelling of *above.*

abuze, *v. t.* A simplified spelling of *abuse.*

Abysmal clay. Same as ★*abyssal clay.*

abyssal, *a.* **3.** In *petrol.,* applied by Brögger and others to deep-seated or plutonic igneous rocks.

> Abyssal benthos. See ★*benthos* and ★*hapobenthos.*
>
> Abyssal clay, fine clay now being deposited on the sea floor in depths exceeding 600–700 fathoms. This material is generally red, purple, chocolate, or brown in color, is made up of impalpable particles free from organic remains, and is regarded by Murray as constituted of fine volcanic materials which have been decomposed in sea-water and have accumulated with excessive slowness during immense periods of time. Intermingled with the clay are particles of metallic iron and concretions of manganese oxid. Some geologists regard it as doubtful whether rocks representing such profound oceanic deposits are present in existing continental masses; others find parallel conditions suggested in some of the barren and highly colored Silurian and Cambrian slates.

Abyssinian church, gold. See ★*church,* ★*gold.*—**Abyssinian languages,** the languages of Abyssinia, some Semitic and others Hamitic. The Semitic class includes: (*a*) Amharic, derived from the ancient Sabean or Himyaritic, introduced from Yemen in southern Arabia, and closely related to Geez or Ethiopic. (See next.) It has been the official language of Abyssinia since about the year 1300 (when the capital of Ethiopia was removed to Shoa), gradually superseding the ancient Geëz, but adopting its syllabic alphabet (with some modifications and many additions) and a large number of its words. It is the popular language; its literature is comparatively modern and slight. (*b*) Ethiopic, called by its users the *Ge'ez,* usually written *Geëz,* the language of the Aga'azi, 'emigrants' from southern Arabia who had settled in Tigré (now a province of Abyssinia) about 335 A. D. Superseded by Amharic as the official language of the country about the year 1300, it has continued to be the liturgic language of the Abyssinian Church, somewhat as Latin in the Roman Catholic Church. Originally written, like the other Semitic languages, from right to left, the direction was early changed, under Greek influence, to the European order (from left to right). The alphabet consists of peculiar characters of Himyaritic origin. There is considerable literature, including an ancient translation of the Bible. The two principal modern representatives of Geëz are the dialects known as (1) *Tigré* (*Tigrē, Tigrai,* native *Tigrai*), spoken by nomadic tribes in the extreme north, and (2) *Tigriña,* a more corrupt form largely mixed with Amharic words, as spoken in the old province of Tigré. The Hamitic family is represented in Abyssinia by *Agau* (*Agou*), spoken by a large number of Abyssinians and Tigré people, by Galla, and by many others.

A. C. (3) In *elect.,* an abbreviation for *alternating current.* (4) An abbreviation of *Analytical Chemist.*

ac_0, ac_1, ac_2, ac_3, etc. Points of flexure in the heating curves of iron and steel. The point ac_1 on heating is the same as ar_1 on cooling, etc.

acacanthrax (ak-a-kan′thraks), *n.* [NL., < Gr. *ἀκακος,* not bad (*ἀ-* priv. + *κακός,* bad), + *ἄνθραξ,* carbuncle: see *anthrax.*] Non-specific anthrax; carbuncle.

acacetin (a-kā′se-tin), *n.* [*acacia* + *-et-* + *in*[2].] A compound, $C_{16}H_{12}O_5$, found in the leaves of *Robinia Pseudacacia.* It is probably the monomethyl ether of ★apigenin (which see).

acacia, *n.*—**Parasol acacia,** a variety of the common locust or false acacia. It forms a compact spherical head and, though not producing flowers, is much cultivated in central and northern Europe for decoration and shade.

academic, *n.* **3.** A member of an academy or learned society; an academist or academician. *Swinburne,* Essays and Studies, p. 372. *N. E. D.*

academicalism (ak″a-dem′i-kal-izm), *n.* [*academical, a.,* + *-ism.*] Adherence to academic rules or methods; conventionalism; formalism. *Athenæum* (quoted in N. and Q., 8th ser., IV. 363).

academicism, *n.* **2.** A tendency toward Platonic opinions.

academize (a-kad′em-īz), *v. t.*; pret. and pp. *academized,* ppr. *academizing.* [*academy* + *-ize.*] To form into an academy, or subject to the rules of an academy. *Daily Telegraph,* May 4, 1868. *N. E. D.*

Academy of music. (*a*) A local musical society or corporation, founded either for the support of musical education or for research connected with musical science. (*b*) An operatic company or choral club organized for the study and rendering of musical works. (*c*) A building devoted to the rendering of musical works. The most famous of the many Italian academies is that of Bologna, founded in 1482. The French Academy, which is a royal subvention for the performance of opera, really dates from the privilege granted in 1669. The earlier operas of Handel were largely written for an operatic association called the Royal Academy.

Acadian. **I.** *a.*—**Acadian hairstreak.** See ★*hairstreak.*—**Acadian owl.** See ★*owl*[1].

II. *n.* **2.** In *geol.,* the middle division or stage of the Cambrian system of eastern North America, named from its typical development in Nova Scotia and New Brunswick, but extending into Newfoundland, Cape Breton, and eastern Massachusetts, and perhaps farther south in the Appalachian region. Paleontologically it is known as the *Paradoxides horizon,* con-

trasting with the *Olenellus horizon*, or Georgian stage, below, and with the *Dicellocephalus horizon*, or Saratogian stage, above. Its rocks are chiefly slates and shales.

Acajou oil, a fat oil obtained from the acajou or cashew-nut (*Anacardium occidentale*) used for food and in cooking in Brazil and the West Indies.

Acalephæ, *n. pl.* 2. A class of *Cœlenterata*, including medusæ of considerable size, with gastral filaments, endodermal gonads, and lobed umbrella-edge, and without true velum: contrasted with *Hydromedusæ* and *Actinozoa*. Same as *Acraspeda*.

acalyptrate (ak-a-lip'trāt), *a.* [*a*-18 + *calyptrate*.] In *bot.*, not furnished with a calyptra; in *entom.*, of or belonging to the *Acalyptrata*.

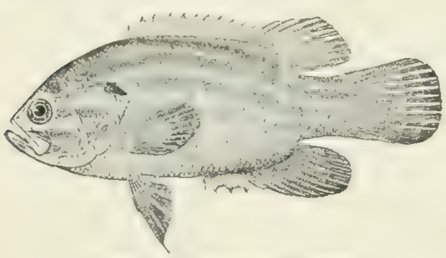
acamp (a-kamp'), *adv.* [*a*3 + *camp*.] To the camp; campward. *J. Barlow*, Columbiad, vi. 637.

a candelliere. 2. Said of a style of decoration frequently found on the majolica of Urbino, Castel Durante, and other manufactures, consisting of animal grotesques arranged symmetrically around the border or on either side of a central design.

acanth (a-kanth'), *n.* [*acanthus*.] Same as *acanthus*, 2.

acanthad (a-kan'thad), *n.* [NL., < *Acanthus* + *-ad*.] A plant of the *Acanthus* family.

Acantharchus (ak-an-thär'kus), *n.* [NL., < Gr. ἄκανθα, a thorn, + (?) ἄρχος, rectum.] A



Mud-sunfish (*Acantharchus pomotis*). (From Bull. U. S. Nat. Museum.)

genus of sunfishes of the family *Centrarchidæ*, including the mud-sunfish, *A. pomotis*.

Acantharia, *n. pl.* 2. One of the four suborders into which Haeckel divides the *Radiolaria*: characterized by having the capsule-membrane uniformly perforated and the skeleton composed of acanthine spicules.

Acanthephyra (ak-an-thef'i-rä), *n.* [NL.] The typical genus of the family *Acanthephyridæ*. *Milne-Edwards*, 1881.

Acanthephyridæ (a-kan-the-fī'ri-dē), *n. pl.* [NL., < *Acanthephyra* + *-idæ*.] A family of macrurous podophthalmous crustaceans mainly inhabiting the deep sea. They have the body laterally compressed, the first antennæ with 2 long flagella, and the first two pairs of trunk legs slender and subequal. The typical genus is *Acanthephyra*. Also *Miersiidæ*.

Acantherpestes (a-kan-thėr-pes'tēz), *n.* [Gr. ἄκανθα, spine, + ἑρπηστής, a reptile.] A genus of Carboniferous myriapods, some of the members of which attained a length of a foot. They were armed with branching spines and appear to have had lateral branchial pores; hence they are regarded by Scudder as amphibious.

acanthin, acanthine (a-kan'thin), *n.* [Gr. ἄκανθα, thorn, + *-in*2, *-ine*2.] An organic substance, allied to horn or chitin, which enters into the composition of the spicules in the non-silicious *Radiolaria*.

acanthine, *a.* 3. In *ichth.*, spine-like; bearing spines.

acanthinic (ak-an-thin'ik), *a.* Composed of or containing ⋆acanthin (which see).

acanthinous (a-kan'thi-nus), *a.* [*acanthin* + *-ous*.] Consisting of or resembling acanthin.

acanthion (a-kan'thi-on), *n.* [NL., < Gr. ἀκάνθιον, dim. of ἄκανθα, a spine.] In *craniom.*, the extreme point of the nasal spine. *Von Török.*

Acanthistius (ak-an-this'ti-us), *n.* [NL., < Gr. ἄκανθα, spine, + ἱστίον, dim. of ἱστόν, a web.] A genus of serranoid fishes allied to *Plectropoma*: found in South America and elsewhere.

Acanthobatis (ak-an-thob'a-tis), *n.* [Gr. ἄκανθα, spine, + βατίς, skate, roach.] A genus of fossil rays or skates from the Miocene Tertiary of France and Würtemberg.

Acanthoceras (ak-an-thos'e-ras), *n.* [Gr. ἄκανθα, spine, + κέρας, horn.] The typical genus of the family *Acanthoceratidæ*.

Acanthoceratidæ (ak-an-thos-e-rat'i-dē), *n. pl.* [NL., < *Acanthoceras* + *-idæ*.] A family of tetrabranchiate cephalopods or ammonites which have evolute or loosely coiled whorls bearing more or less continuous transverse ribs. The species are from the Cretaceous system.

Acanthochætodon (a-kan-thō-kē'tō-don), *n.* [NL., < Gr. ἄκανθα, spine, + χαίτη, hair, bristle, + ὀδούς, tooth (see *Chætodon*).] A genus of chætodontids, the butterfly-fishes of the East Indies.

Acanthocladia (a-kan-tho-klā'di-ä), *n.* [Gr. ἄκανθα, spine, + κλάδος, a branch.] The typical genus of the family *Acanthocladiidæ*.

Acanthocladiidæ (a-kan″thō-kla-dī'i-dē), *n. pl.* A family of cryptostomatous *Bryozoa*, represented by genera which occur in geologic formations from the Silurian to the Permian.

Acanthocottus (a-kan-tho-kot'us), *n.* [NL., < Gr. ἄκανθα, spine, + κόττος, a river-fish (the bullhead?): see *Cottus*.] A genus of sea-sculpins. Earlier called *Myoxocephalus*.

Acanthocybium (a-kan-thō-sī'bi-um), *n.* [NL., < Gr. ἄκανθα, spine, + (?) κύβος, a die, a vertebra.] A genus of mackerels, family *Scombridæ*, of the tropics, remarkable for the elongate form and serrate teeth. The peto or wahoo of the West Indies, *A. petus* or *A. solandri*, belongs to this genus.

acanthocyst (a-kan'thō-sist), *n.* [Gr. ἄκανθα, thorn, + κύστις, bladder.] In the *Nemertini*, a sac or an enormous cell containing one or more calcareous stylets.

Acanthodei, *n. pl.* 2. In Agassiz's classification, an order of selachians or sharks having the endoskeleton and parts of the skull calcified; pterygoquadrate articulated with the cranium and sometimes bearing teeth; fins, except the caudal, with stout anterior spines; and shagreen scales quadrate and compactly arranged. The members of this order are all fossil and belong wholly to the Paleozoic formations. Two families are distinguished, the *Acanthodidæ* and the *Diplacanthidæ*.

acanthodian (ak-an-thō'di-an), *a.* and *n.* [*Acanthodes*.] **I.** *a.* Belonging to or having the characters of the genus *Acanthodes* or the order *Acanthodei*.

II. *n.* A fossil fish of the genus *Acanthodes*.

Acantholabrus (a-kan-thō-lā'brus), *n.* [NL., < Gr. ἄκανθα, spine, + L. *labrum*, lip (see *Labrus*).] A genus of labroid fishes of the north of Europe, having an increased number of anal spines. The species is *A. exoletus*.

acanthology (ak-an-thol'ō-ji), *n.* [Gr. ἄκανθα, thorn, spine, + -λογία, < λέγειν, speak.] The study of the structure and functions of spines, especially of those of sea-urchins.

Acanthomeridæ (a-kan″thō-mer'i-dē), *n. pl.* [NL., < *Acanthomera*, a genus (< Gr. ἄκανθα, a thorn, spine, + μέρος, a part (or μηρός, thigh?)), + *-idæ*.] A family of dipterous insects confined to America and containing only two genera, *Acanthomera* and *Rhaphiorhynchus*. They are allied to the gadflies of the family *Tabanidæ*. The family contains the largest *Diptera* known, some of them reaching a length of two inches.

acanthometran (a-kan-thō-met'ran), *a.* and *n.* **I.** *a.* Pertaining or relating to the genus *Acanthometra*.

II. *n.* A member of the genus *Acanthometra*.

acanthometridan (a-kan-thō-met'ri-dan), *a.* and *n.* **I.** *a.* Pertaining to or resembling the *Acanthometridæ*.

II. *n.* A member of the family *Acanthometridæ*.

Acanthonida (ak-an-thon'i-dä), *n. pl.* [NL., < Gr. ἄκανθα, thorn, + *-on-* + *-ida*.] An order or a family of acantharian radiolarians having 20 spines arranged according to Müller's law (4 equatorial, 8 tropical, and 8 polar). As an order it includes the families *Astrolonchidæ*, *Quadrilonchidæ*, and *Amphilonchidæ*.

Acanthonidæ (ak-an-thon'i-dē), *n. pl.* Same as ⋆*Acanthonida*.

acanthophore (a-kan'thō-fōr), *n.* [Gr. ἄκανθα, thorn, + -φορος, < φέρειν, bear.] A somewhat conical granular mass which bears the median stylet in the bottom of the eversible portion of the proboscis in certain *Metanemertini*.

acanthophract (a-kan'thō-frakt), *n.* One of the *Acanthophractæ*.

acanthopodous (ak-an-thop'ō-dus), *a.* [Gr. ἄκανθα, spine, + πούς (ποδ-), foot, + *-ous*.] **1.** In *bot.*, bearing spines on the petiole or peduncle.— **2.** Same as *acanthopod*.

acanthopore (a-kan'thō-pōr), *n.* [Gr. ἄκανθα, spine, + πόρος, pore.] In the extinct tabulate corals of the family *Chætitidæ*, one of a set of pores which emerge on the surface in small tubercles. Contrasted with ⋆*autopore* and ⋆*mesopore*.

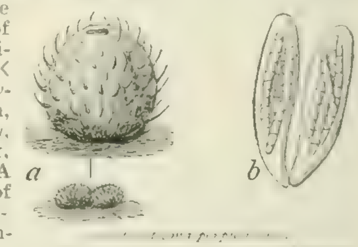
acanthopous (a-kan'thō-pus), *a.* [Gr. ἄκανθα, a spine, + ὤψ (ὠπ-), eye.] Having spines on or about the eye.

Acanthosoma (a-kan-thō-sō'mä), *n.* [NL. (Curtis, 1824), < Gr. ἄκανθα, spine, + σῶμα, body.] An interesting genus of pentatomid bugs common to the old and new worlds. *A. griseum* of Europe is remarkable for the solicitude shown by the female for her young. She not only protects the eggs but cares for the young for a considerable period after hatching.

acanthosphenote (a-kan-thō-sfē'nōt), *a.* [Gr. ἄκανθα, spine, + σφηνωτός, < σφηνοῦν, wedge, < σφήν, a wedge.] A term applied by Mackintosh to the spines of *Echinoidea*, which are shown by transverse section to consist of a number of wedge-shaped portions radiating from a central axis and separated by bands of porous tissue.

acanthosphere (a-kan'thō-sfēr), *n.* [Gr. ἄκανθα, thorn, + σφαῖρα, sphere.] One of the peculiar spiny bodies contained in the cells of *Nitella*: the *Stachelkügeln* of the Germans.

Acanthostigma (a-kan-thō-stig'mä), *n.* [NL. (De Notaris, 1863), named in allusion to the spine-like bristles of the perithecium, < Gr. ἄκανθα, thorn, + στίγμα, mark, dot, spot.] A genus of pyrenomycetous fungi having small superficial perithecia beset with short, stiff bristles. The spores are mostly fusiform and hyaline with several septa. The species are mostly saprophytic. *A. parasiticum* is said to cause a disease of the silver fir, *Abies Picea*, in Europe.



Acanthostigma parasiticum.
a, two perithecia [illegible]; b, [illegible] longitudinally to show the [illegible] spores.

Acanthostracion (a-kan-thō-strā'si-on), *n.* [NL., < Gr. ἄκανθα, spine, + ὀστράκιον, dim. of ὄστρακον, a shell.] A generic name applied to the three-angled box-fishes with horn-like spines above the eyes.

Acanthotelson (a-kan-thō-tel'son), *n.* [Gr. ἄκανθα, spine, + τέλσον, limit: see *telson*.] A genus of extinct amphipod *Crustacea* from the Carboniferous rocks.

acanthozoöid (a-kan-thō-zō'oid), *n.* [Gr. ἄκανθα, thorn, + *zoöid*.] The narrow hook-bearing posterior end of the proscolex of certain *Cestoidea*, as *Dipylidium caninum*. See ⋆*cystozoöid*.

a cappella. 2. In *music*, noting a species of time which employs four minims or half-notes in each measure.

acapulco (ä-kä-pul'kō), *n.* [*Acapulco*, a Mexican seaport.] A name in the Philippine Islands and Guam of *Herpetica alata*, an introduced plant of Mexican origin, the leaves of which are used as a remedy for ringworm and other parasitic skin-diseases. See *ringworm-shrub*.

acara (ä-kä-rä'), *n.* [Tupi *acará*.] A name applied to different cichloid fishes found in South America. From the common name the genus *Acara* was named.

acari (ak'a-rī), *n. pl.* [Plural of *acarus*.] The order *Acarina* as a whole, or any number of species or individuals of the order. See *Acarus* and *Acarina*.

acariasis, *n.*—**Poultry acariasis**, any infection of poultry by mites (*Acarina*), as the cutaneous infection with the chicken-tick (*Dermanyssus gallinæ*) or the chicken-mites (*Sarcoptes mutans, S. lævis gallinæ*), the subcutaneous infection with the cystic fowl-mite (*Laminosioptes cysticola*), or the infection of the air-passages with the internal chicken-mite (*Cytodites nudus*).—**Psoroptic acariasis**, a highly contagious cutaneous infection of certain domesticated animals with mites (*Acarina*) belonging to the genus *Psoroptes*. The best-known forms are the common sheep-scab, and cattle-mange or cattle-scab, sometimes called *Texas itch*. Similar infections occur on the horse, ass, mule, goat, and rabbit.—**Sarcoptic acariasis**, a highly contagious cutaneous infection with mites (*Acarina*) belonging to the genus *Sarcoptes*. The most common form is the itch or scabies of man, caused by the itch-mite (*Sarcoptes scabiei*), which burrows irregular galleries in the epidermis. *Norwegian itch* is a specially severe variety of the disease. Varieties of sarcoptic acariasis or sarcoptic mange also affect the horse, cattle, goat, camel, llama, hog, rabbit, ferret, dog, wolf, lion, wombat cat, pigeon, and poultry.

acariform (a-kar'i-fôrm), *a.* [NL., < Gr. ἀκαρι, acarus, mite, + L. *forma*, form.] Same as *acaroid*.

acarine (ak'a-rin), *a.* and *n.* [NL. **acarinus*, < *acarus*, acarus.] **I.** *a.* Like an acarian; of or relating to the order *Acarina*.

II. *n.* A member of the order *Acarina* or of the genus *Acarus*.—**Acarine diseases,** diseases such as mange or the itch.

acarocecidium (ak″a-rō-se-sid′i-um), *n.*; pl. *acarocecidia* (-ä). A plant-gall made by mites: practically the same as ★*phytoptocecidium*.

The analogy of these organs to the *acaro-cecidia* (that is to say, to galls caused by certain acarids) of laurels and various other plants is striking.
Smithsonian Report, 1896, p. 452

acarodomatia, *n.* Plural of ★*acarodomatium*.

acarodomatium (ak″a-rō-dō-mā′shi-um), *n.*; pl. *acarodomatia* (-shi-ä). [NL., < *Acarus* + Gr. δωμάτιον, dim. of δῶμα, a house: see *dome*.] A shelter formed on certain tropical plants for the protection of mites (acari) when they are of service to the host.

acarologist (ak-a-rol′ō-jist), *n.* [*acarolog-y* + *-ist.*] One who is versed in the study of the *Acarina*, or mites and ticks.

If that be so, then it appears to me that Dr. Oudemans has proved conclusively that the sense in which *acarologists* use the genus *Oribata* is correct.
Annals and Mag. Nat. Hist., April, 1902, p. 311.

acarology (ak-a-rol′ō-ji), *n.* [NL. *acarus* + Gr. -λογία: see *-ology*.] The scientific study of mites.

acatalepsy, *n.* **3.** A weak understanding; mental deficiency.

acatamathesia (a-kat″a-ma-thē′si-ä), *n.* [NL., < Gr. ἀ- priv. + καταμάθησις, thorough knowledge, < καταμανθάνειν, learn thoroughly, < κατά, intens., + μανθάνειν, know well.] Inability to comprehend ordinary conversation, accompanied by a blunting of the perceptions. *Baldwin*, Dict. of Philos. and Psychol.

acatastasia (a-kat-a-stā′si-ä), *n.* [NL., < Gr. ἀκαταστασία, instability, < ἀ- priv. + κατάστασις, stability: see *catastasis*.] In *med.*, irregularity in the symptoms or course of a disease.

acatastasis (ak-a-tas′ta-sis), *n.* [See ★*acatastasia*.] **1.** An unsettling, as of the mind. *E. Hooker*.—**2.** In *med.*, same as ★*acatastasia*. *Syd. Soc. Lex.*

acatastatic (a-kat-a-stat′ik), *a.* Unsettled; indeterminate; irregular.

acategorical (a-kat-ē-gor′i-kal), *a.* [*a-*, not, + *categorical*.] Illogical; loose; inexact: as, *acategorical* arguments. [Rare.] *N. E. D.*

acatharsia, *n.* (*c*) Amenorrhea.

acatholic (a-kath′ọ-lik), *a.* [*a-*[18] + *catholic*.] Un-Catholic; not Catholic; hence, sectarian. *Encyc. Brit.*, XXX. 525.

A. C. C. In *elect.*, an abbreviation of *Anodic Closure Contraction*.

accelerant (ak-sel′e-rant), *a.* and *n.* [L. *accelerans*, ppr. of *accelerare*, hasten: see *accelerate*.]
I. *a.* That accelerates; accelerating.
II. *n.* That which quickens; specifically, one of the nerves stimulation of which causes increased rapidity of the heart's action.

accelerate, *v. t.* **3.** To assign a date earlier than the true or real one; give an earlier date to; antedate. *Milman*, Hist. Latin Christianity, I. 72.

acceleration, *n.* (*e*) In *biol.*, the supposed acquisition of new characters by adults, and their inheritance by descendants at earlier and earlier stages of their life; ★tachygenesis (which see).—**Angular acceleration,** the time-rate of angular velocity. It is measured numerically as radians per second per second.—**Equation of acceleration.** The acceleration of a body is equal to the force acting on it divided by its mass. The acceleration of a moving body at any instant is the rate at which its velocity is changing at that instant: $a = \frac{dv}{dt} = \frac{d^2s}{dt^2}$.—**Equatorial acceleration of the sun,** the diminution of the rotation period for points on the sun's equator as compared with the period at points in higher latitudes. Between the equator and latitude 40° the difference is about two days.—**Linear acceleration,** rate of change of linear velocity: usually expressed in centimeters per second per second.—**Parallelogram of accelerations,** a vector diagram for the resolution or composition of accelerations, similar in construction and principle to the parallelogram of forces. See *force*1.—**Secular acceleration,** in *astron.*, a slow increase in the mean orbital motion of a heavenly body. In the case of the moon it amounts to about 8 seconds in a century. See *acceleration*.—**Triangle of accelerations,** a vector diagram for the resolution and composition of accelerations, similar to the triangle of velocities or of forces. See ★*polygon of vectors*.—**Unit of acceleration,** the acceleration which produces unit change of velocity in unit time: usually one centimeter per second per second.—**Unit of angular acceleration,** the acceleration which produces unit change in the angular velocity of a body in unit time: usually a radian in a second.

accelerative, *a.* **2.** In *philol.*, indicating a notion of acceleration: applied to certain verb-forms in some agglutinative languages. See the extract.

The highly agglutinating character of this language [the *Kuki-Lushai* of North Kachar Hills and parts of Nagaland] is evident from the numerous conjugations given by Mr. Soppitt, for some of which he has no names, but which may be called *Acceleratives*, Retardatives, Complementatives, and so on. *Keane*, Man Past and Present, p. 185.

Accelerative force, in *physics*, a force which produces positive acceleration and consequently increases the velocity of a moving body: opposed to *retarding force*, the acceleration due to which is negative.

accelerator, *n.* (*e*) A device in a motor-car by which the operator may render inoperative the speed-governor of the motor. If the governor is of the centrifugal type, as the speed increases the balls or weights fly outward against the action of a spring. The accelerator increases the tension of the spring or draws the balls inward directly, so that the governor ceases to act to close the throttle or regulate speed as the motor increases its number of revolutions above the limit set by the normal tension of the springs.

accelerator-pedal (ak-sel′e-rā-tor-ped″al), *n.* A pedal used to actuate the rods of the accelerator mechanism in many forms of motor-car. See ★*accelerator* (*e*).

accelerograph (ak-sel′e-rō-graf), *n.* An apparatus designed for measuring the succession of pressures developed in a powder-chamber by the combustion of a charge. The powder may be exploded in an inclosed vessel or be placed in the bore of a gun and act on a projectile.

accelerometer (ak-sel-e-rom′e-tėr), *n.* **1.** An instrument for measuring the force required to start a train and keep it going and the centrifugal force when the train rounds a curve. The instrument consists of two glass vessels connected by a tube, one containing a liquid such as mercury and the other red alcohol. *Amer. Inventor*, July 15, 1904, p. 312.
2. An apparatus for showing by direct registry the law of the movement, in the function of time, of a piston subjected to the action of powder gases.

accensor, *n.* **2.** In the early Christian church, the one who lighted and extinguished the candles on or about the altar. This office is now performed by an altar-boy.

accent, *n.*, **8.** Musical accent in general is said to be *transferred*, or *false*, when for esthetic reasons it is placed in some unusual place, contrary to the simple rhythm: thus in a syncopated passage (see *syncopation*, 2) the accents are systematically transferred. In *violin-playing*, an accent is called *dead* when the bow is held firmly against the strings after beginning an emphatic tone, so as to choke the sound.
10. In *decorative art*, an added relieving or contrastive touch or tint: as, deep blue or crimson, with *accents* of gold.—**Logical accent.** (*a*) The accent or stress placed by the voice on the root-syllable of a word, as in Anglo-Saxon and other Teutonic languages: as, for example, Anglo-Saxon *gifan*, to give, *forgifennes*, forgiveness, etc. (*b*) The special stress or emphasis laid on a particular word in a sentence: as, for example, on 'us' in the line, "Better for *us*, perhaps, it might appear (*Pope*, Essay on Man, I. 169). *Latham*, English, II. 45.—**Primary accent.** (*a*) The principal accent or stress in a word of several syllables. In English, as a rule, it falls on a root-syllable, as in shep′herdess, unnat′ural, impos′sible; or on the first syllable: but the fact depends upon the history of the word in question, and cannot be reduced to one or two rules. (*b*) A character, usually (′), used to mark such an accented syllable.—**Rhythmical accent,** accent depending on rhythm as associated with quantity or pitch.—**Secondary accent.** (*a*) A second or minor accent or stress heard in the pronunciation of some words with two or more syllables, preceding or following that bearing the primary accent. (*b*) A character, usually (″), used to mark such an accent. The term often includes minor accents of the third (tertiary) or weaker grades, as in in‴con″tro-ver′ti-ble, hy″per-cat″a-lec′tic, in⁗com″pre-hen‴si-bil′i-ty, etc.—**Tonic accent,** syllabic stress.

accentualist (ak-sen′tū-al-ist), *n.* [*accentual* + *-ist.*] One who holds to a particular theory of accent.

acceptance, *n.* **4.** Acceptableness: the quality of being acceptable. *Browning*, Ring and Book, ii. 835.—**Acceptance of persons,** favoritism; partiality.—**Proposal and acceptance.** See ★*proposal*.

acceptive, *a.* **2.** Fitting; appropriate. *Mrs. Browning*, Loved Once.

access, *n.* **8.** In the *Rom. Cath. Ch.*, same as *accession*, 6.

accession (ak-sesh′on), *v. t.* To enter in the accession-book of a library. See ★*accession-book*.

accession-book (ak-sesh′on-bůk), *n.* A blank-book in which the titles of the books or volumes received by a library are entered in the order of their receipt, with all the necessary details regarding them, such as date of entry, accession-number, class-number, author, name of publisher, place and date of publication, size, number of pages, etc. *J. C. Dana*, Library Primer, p. 77.

accession-number (ak-sesh′on-num′bėr), *n.* The number given to a volume when it is entered in the accession-book of a library, showing the order of its receipt.

accessorius, *a.*—**Lateralis accessorius,** the accessory lateral line; in fishes, one or more series of mucous tubes in addition to the usual series called the *lateral line*.

accessory. **I.** *a.* **3.** In the logical system of Lotze, adding (as thought) to the coherence of the matter of thought a notion of the ground of its coherence. See the extract.

That peculiarity of thought which will govern the whole of our subsequent exposition lies in the production of those *accessory* and articulate notions which condition the form of our apprehension.
Lotze (trans.), Logic, Introd., § 7.

4. In *geol.*, noting those minerals which are present in relatively small quantities in a rock and are not mentioned in its definition, such as zircon, apatite, and magnetite in granite: contrasted with *essential*.—**Accessory germ-plasm.** See ★*germ-plasm*.—**Accessory idioplasm.** See ★*idioplasm*.—**Accessory parts** or **voices,** in *music*, parts or voices which supply an accompaniment to those which are principal or essential.—**Accessory signs,** in *pathol.*, customary or constantly attendant signs.
II. *n.* **4.** In *organ-building*, same as *accessory* ★*stop*.

Accident yield. See ★*yield*.

Accidental variations. See ★*variation*

accidentalism, *n.* **4.** In *philos.*, the opinion that events are sometimes modified without adequate cause: a use of the word proposed by J. M. Baldwin.

accipenserin, *n.* See ★*acipenserin*.

acclimatable (a-klī′mā-ta-bl), *a.* Acclimatizable. [Rare.] *N. E. D.*

Acclimation fever. See ★*fever*1.

acclimatize, *v.* **II.** *intrans.* To become climatically accustomed or habituated to a new locality or to new conditions.

accolent (ak′o-lent), *a.* and *n.* [L. *accolens* (*-ent-*), ppr. of *accolere*, dwell by, < *ad*, to, + *colere*, till, dwell: see *cult*.] Dwelling near by; one who dwells near by.

The close resemblance between the skulls of the ancient Cibolans and those of the *accolents* of the Gila-Salado has been commented on by others. *J. W. Fewkes*, in Smithsonian Report, 1896, p. 519.

accommodation, *n.* **5.** In *biol.*, a change which is brought about in a living being by its own activity and is not transmitted to its descendants, as contrasted with a variation regarded as a congenital change which is not the effect of the activity of the organism and is transmitted to descendants; an acquired character.—**6.** In *genetic psychology*, the reverse of habit. It implies modification of function or type, and finds expression in selective thought, interest, etc. *Baldwin*, Handbook of Psychol., p. 49.
7. In *theol.*, the theory that God in his revelation so modifies its teaching that it meets the needs of man, who is limited in knowledge and holiness. So God's law is accommodated to the hardness of man's heart, and his truth to ignorance.—**8.** A public coach with seats inside for twelve persons, and with an entrance on each side. The body was hung on leather thorough-braces after the manner of the post-chaise. It was first used in New York on Broadway between Wall and Bleecker streets. Its successors were the sociable and the omnibus.—**Absolute accommodation,** that of one eye acting independently of its fellow.—**Accommodation phosphenes.** See ★*phosphene*.—**Limits of accommodation,** in *physiol.* and *psychological optics*, the nearest and farthest points at which an object can be seen single: also termed *range of accommodation*.—**Line of accommodation,** in *psychological optics*, the portion of the line of sight for points in which the same degree of accommodation is sufficient.—**Range of accommodation.** See *limits of* ★*accommodation*.—**Relative accommodation,** that effected by the two eyes acting together.

accompaniment, *n.* (*a*) An accompaniment is said to be *obbligato* when it so far differs from that which is accompanied that it is necessary for the intended effect, but *ad libitum* when it so nearly coincides with that which is accompanied that it may or may not be used, at will. The form of an accompaniment is specifically described by terms such as *arpeggio*, *chordal*, *figurate*, *harmonic*, *contrapuntal*, *running*, etc., and its character is indicated by naming the instrument or voices by which it is provided: as, a piano *accompaniment*, a chorus *accompaniment*, etc.—**Accompaniment figure,** in *music*, a small pattern of notes which is used again and again, with but slight modifications, so as to form a continuous background or framework for a solo or other principal melody. The so-called *Alberti bass* is one variety of accompaniment figure; but the term is extended to cover much more elaborate melodic figures which are repeated in accompaniments.

accordatura (a-kôr-dä-tö′rä), *n.* [It., < *accordare*, accord, *v.*] The normal series of tones to which the strings of a stringed instrument, such as the violin, are tuned: any deviation from this series is called *scordatura*. Sometimes written *accord*.

according, *adv.*—**According to Gunter,** reckoned, determined, ascertained, or laid down in accordance with, or by means of, the rule, scales, tables, or instruments devised by Edmund Gunter (1581–1626), a noted English mathematician; hence, exact or exactly; accurate or accurately.

accordion, *n.* **II.** *a.* Resembling in its folds

the bellows of an accordion: as, an *accordion* camera (one that is extensible), *accordion* skirts, etc.

accordment (a-kôrd'ment), *n.* [*accord, v.,* + *-ment.*] Accord; agreement; reconcilement. *N. E. D.*

account, *n.* **Bureau of accounts.** See ★*bureau.*—**Joint account,** an account, as in a bank or in some particular course of business dealings, in which two or more persons are conjointly interested, as, distinguished from an account in which only one person, firm, or corporation is interested.—**To square accounts,** to ascertain, and to pay or receive, the balance due in any particular course of business dealings; settle up by paying or receiving the balance due.

accountant, *n.*—**Chartered accountant,** a certified public accountant. [British.]

The fiftieth anniversary of the incorporation of *chartered accountants* in Scotland. *Athenæum,* Dec. 19, 1903.

accounter (a-koun'tèr), *n.* [*account, v.,* + *-er.*] 1. One who counts or reckons; an accountant; a 'teller.'—2. One who keeps or renders, or is required to render, an account, as a steward of his stewardship.

accounting (a-koun'ting), *n.* [*account, v.,* + *-ing.*] 1†. Reckoning; computation; counting.—2. An examination, reckoning, rendering, or balancing of accounts so as to arrive at the true state of any transaction or course of transactions: as, the court ordered an *accounting;* the parties came to an *accounting.*—3. The art or science of keeping accounts; the principles or methods of account-keeping; accountancy: as, manufacturing *accounting;* mercantile *accounting. Amer. Accountant's Manual,* I. 183.

accountment (a-kount'ment), *n.* [*account, v.,* + *-ment.*] Accounting; responsibility. [Rare.]

accouplement, *n.* 3. In *arch.,* the act of placing two pillars, columns, or pilasters close together, so as to form a pair, in contrast with similar pieces which are spaced more widely. Accouplement is rare in classical buildings as we know them, but is common in modern work.

Accra rubber. See ★*rubber.*

accrete, *a.* 2. In *biol.,* grown together: said of parts normally separate but naturally grafted. See *accretion,* 2.

accretion, *n.* 5. In *forestry,* increase in diameter or height: distinguished from *increment,* increase in volume.—6. In *petrol.,* a term proposed by Johnston-Lavis for a mass formed in solution by deposition about a nucleus, as in oölite, or upon the walls of a cavity. It stands in contrast to *concretion,* which is defined by the author named as a mechanical agglomeration about a nucleus.—**Accretion borer.** See ★*borer.*—**Accretion cutting.** Same as ★*accretion thinning.*—**Accretion thinning,** in *forestry,* a thinning made specifically to increase the rate of growth in diameter of the trees which are left standing.

accultural (a-kul'tū-ral), *a.* [L. *ac-* for *ad-* + *cultura,* culture, + *-al.*] Obtained by acculturation, or by the adoption of foreign cultural elements.

The invention is at first individual, but when an invention is accepted and used by others it is *accultural,* and the invention of the individual may be added to the invention of others, so that it may be the invention of many men.
J. W. Powell, in Rep. Bur. Am. Ethnology, 1897–98, p. xxi.

acculturation (a-kul-tū-rā'shon), *n.* [L. *ac-* for *ad-* + *cultura,* culture, + *-ation.*] The process of adopting and assimilating foreign cultural elements.

The process of culture in all the five departments is by invention and *acculturation.*
J. W. Powell, in Rep. Bur. Am. Ethnology, 1897–98, p. xxi.

acculture (a-kul'tūr), *n.* [See *accultural.*] The cultural elements acquired by contact with foreign forms of culture. *G. S. Hall,* Adolescence, II. 726.

acculturize (a-kul'tūr-īz), *v. t.;* pret. and pp. *acculturized,* ppr. *acculturizing.* [*acculture* + *-ize.*] To make the culture of a people similar to that of another; to bring about assimilation of culture.

The arts and industries of the partially *acculturized* Papago Indians. *Smithsonian Report,* 1895, p. 44.

accumbent, *a.* 3. In *entom.,* lying closely, as the scales on a butterfly's antenna.

accumpaniment, *n.* A simplified spelling of *accompaniment.*

accumpany, *v. t.* A simplified spelling of *accompany.*

accumulator, *n.* 3. (c) In the pressure accumulator the displacement plunger is forced into the hydraulic cylinder by a piston which fits a second cylinder and on whose acting face a pressure of steam or air is maintained from a steam-boiler or from a compressed-air pump or reservoir of large capacity. The name *accumulator* is also given to a storage battery, in electrical engineering, since the battery may be charged and discharged at different rates, and in the chemical reaction caused by the charging current an electrical energy is accumulated which is discharged when the circuit is completed through the line. The energy may also be accumulated or stored in the form of heat in steam or other heat-transferring medium. In what has been called the *regenerative accumulator,* for example, steam from the exhaust-pipe of an intermittent non-condensing engine, such as a hammer, a hoisting-engine, or a rolling-mill, is received in a sheet-steel cylinder containing cast-iron plates. The metal mass acts to condense and reevaporate this exhaust steam, and to accumulate the varying energy of the exhaust, so as to deliver a constant flow of low-pressure steam to some other form of steam-motor, preferably a condensing steam-turbine.

Ace in the pot, a dice game in which each player gets rid of a counter for every ace thrown.

a.-c.-e. mixture. See ★*mixture.*

aceconitic (as-e-kō-nit'ik), *a.* [*ace(tic)* + *(a)conitic?*] Noting an acid, $C_6H_6O_6$, which is formed by the action of sodium on the ethyl ester of bromacetic acid. It is isomeric with aconitic acid.

acedia (ä″sā-dē'ä), *n.* [Cuban use of Sp. *acedia,* a flounder.] A Cuban name for a species of tongue-fish or sole, *Symphurus plagusia.*

acediamine (as-e-dī-am'in), *n.* [Appar. *ace(tic)* + *di-*[2] + *amine.*] A substance $CH_3C(NH)NH_2$. Also *acetamidine.*

acefalous, *a.* A simplified spelling of *acephalous.*

aceitillo (ä-sā″i-tēl'yō), *n.* [Porto Rico Sp., dim of Sp. *aceite,* oil.] In Porto Rico, a small tree, *Simarouba Tulæ,* the wood of which is strong, durable, and well suited to all kinds of coarse carpenter-work.

ace-line (ās'lin), *n.* In *hand-ball* and similar sports, a line used in marking the courts.

acenaphthene (as-e-naf'thēn), *n.* [*ace(tic)* + *naphthene.*] A hydrocarbon, $C_{12}H_{10}$, obtained from coal-tar and also prepared artificially by heating *a*-ethylnaphthalene.

acenaphthylene (as-e-naf'thi-lēn), *n.* [*ace(tic)* + *naphthylene.*] A hydrocarbon, $C_{12}H_8$, formed when the vapor of acenaphthene is passed over red-hot lead oxid.

Acentrogobius (a-sen-trō-gō'bi-us), *n.* [NL., < Gr. ἀκέντρος, without sting, spine, or spur, + L. *gobius,* goby.] A genus of Asiatic river gobies, little different from *Ctenogobius.*

Acentropus (a-sen'trō-pus), *n.* [NL. (Westwood, 1835), < Gr. ἀ- priv. + κέντρον, spine, + πούς, foot.] An anomalous genus of pyralid moths of the subfamily *Schœnobiinæ,* which contains the most completely aquatic forms of the order *Lepidoptera.* The larvæ live below the surface of the water on the leaves of aquatic plants, but have no air-gills. Their method of respiration is unknown.

acentrous (a-sen'trus), *a.* [Gr. ἀ- priv. + κέντρον, center.] Without a center; specifically, noting a condition of the vertebral column found in some batrachians and fishes, in which bony neural arches are associated with a persistent notochord which shows no trace of segmentation: said also of cells in which a centrosome or centrosphere cannot be detected.

acephal, *n.* 2†. An animal or living being supposed to be headless; one of the *Acephali. Topsell,* Four-footed Beasts. *N. E. D.*

II. *a.* Headless; without a head or leader.

acephalate (a-sef'a-lāt), *a.* [As *acephal(ous)* + *-ate*[1].] Acephalous; specifically, of or pertaining to the *Acephala.*

acephalic (a-se-fal'ik), *a.* [*acephal-ous* + *-ic.*] Same as *acephalous;* headless.

Its evolution has been *acephalic,* diffuse, or headless.
L. H. Bailey, Survival of the Unlike, p. 16.

Acephalina (a-sef″a-lī'nä), *n. pl.* [NL., as *acephal(ous)* + *-ina*[2].] A group of *Eugregarinæ,* or a suborder of *Gregarinida,* in which the body is non-septate and there is no epimerite at any stage. They are chiefly cœlomic parasites. *Monocystis* is an example. Same as *Monocystidea.*

acephaline (a-sef'a-lin), *a.* [NL. *acephalinus* (neut. pl. *Acephalina*), < Gr. ἀκέφαλος, headless: see *acephalous.*] Resembling the *Acephalina,* or having no epimerite, as certain *Gregarinida.*

A small sporozoite penetrates into a blood corpuscle and there grows, assuming all the characters of a small *acephaline* Gregarine. *Encyc. Brit.,* XXXII. 814.

acephalism (a-sef'a-lizm), *n.* The opinions and practices of the acephalists, or those who acknowledged no ecclesiastical superior. See *Acephali.*

acephalocyst, *n.* 2. A sterile echinococcus cyst.

acephalophorous (a-sef-a-lof'ō-rus), *a.* [Gr. ἀ- priv. + κεφαλή, head, + -φορος, < φέρειν, bear.] Not bearing a distinct head; resembling the *Acephalophora.*

aceraceous (as-e-rā'shius), *a.* [NL. *Aceraceæ* + *-ous.*] In *bot.,* having the characters of or belonging to the *Aceraceæ* or maple family.

Acerata (a-ser'a-tä), *n. pl.* [Gr. ἀκέρατος, without horns, < ἀ- priv. + κέρας, horn.] In Kingsley's classification of the *Arthropoda,* a division given rank as a class and coequal with the *Crustacea.* It is defined as including branchiate arthropods in which the branchial folds act either as gills or as lungs. The body has a well-defined cephalothorax and abdomen, six segments and their appendages appertaining to the former, and the segments more or less fused; a caudal spine or telson; and no antennæ. The *Acerata* are divided into two groups, the *Merostomata,* of which *Limulus* is the only existing representative, and the *Arachnida,* or spiders, mites, and scorpions.

acerate[2] (as'e-rāt), *a.* [L. *aceratus,* mingled with chaff (taken here as 'like chaff,' that is, 'sharp-pointed,' appar. associated with *acus* (*acu-*), a needle), < *acus* (*acer-*), chaff.] Needle-shaped or rod-shaped: specifically applied to monaxon spicules found in calcareous sponges; in *bot.,* same as *acerose* (*b*).

a cerquate (ä cher-kwä'te). [It. dial. (Perugian): *a,* with; *cerquate,* pl., < *cerqua*= Sardinian *kerku* (= It. *querce, quercia*), < L. *quercus,* oak: see *Quercus.*] Said of decoration consisting of conventionalized oak leaves and acorns, usually painted in deep yellow on a blue ground. Such decoration is frequently found on Italian majolica wares, particularly those of Urbino.

Acervularia (a-sèr-vū-lā'ri-ä), *n.* [NL., < L. *acervulus,* a little heap, + *-aria.*] A genus of extinct tetracorals of the family *Cyathophyllidæ,* abundant in the Silurian and Devonian formations. They grow in bushy colonies, and have stout septa, tabulæ in the central area, and the peripheral zone filled with vesicular tissue.

acervulus, *n.* 2. The fruiting pustule of certain fungi, as *Glœosporium* and related genera, consisting of small dense masses of conidiophores and conidia formed beneath the epidermis of the host, which bursts and permits the escape of the conidia when they mature.

Acetabularia (as-e-tab-ū-lā'ri-ä), *n.* [NL., < L. *acetabulum,* cup, + *-aria.*] See ★*acetabulum,* 5.

acetabulate (as-e-tab'ū-lāt), *a.* Cup-shaped, as the sucker of certain trematodes.

acetabulum, *n.* 5. [*cap.*] A genus of calcareous green algæ, *Chlorophyceæ,* found in tropical or subtropical waters: characterized by an erect axis surmounted by a solid cap which consists of numerous radiating chambers. Also *Acetabularia. Tournefort,* 1719.

a, Acetabulum exiguum, a thallus enlarged; *b, Acetabulum exiguum,* spores with lid. (From Murray's "Introduction . . . to Seaweeds.")

acetabulous (as-e-tab'ū-lus), *a.* In *bot.,* same as *acetabuliform,* 1.

acetacetic (a-set-a-sē'tik), *a.* See ★*aceto-acetic.*

acetaldehyde (as-et-al'dē-hīd), *n.* [*acet(ic)* + *aldehyde.*] The aldehyde CH_3CHO, formed by the oxidation of common or ethyl alcohol. It boils at 21° C., and has a disagreeable penetrating odor.

acetamidine (as-et-am'i-din), *n.* Same as ★*acediamine.*

Acetaminoacetic acid. Same as ★*aceturic acid.*

acetaminol (as-et-am'i-nōl), *n.* [*acet(ic)* + *am(monia)* + *-in*[2] + *-ol.*] A trade-name for π-acetaminobenzoyleugenol, $NH(C_2H_3O)C_6H_4CO_2.C_6H_3(OCH_3)C_3H_5$. It is a crystalline substance having antiseptic properties.

acetanilide (as-et-an'i-lid), *n.* [*acet-yl* + *anilide.*] A substance, $C_6H_5NH.C_2H_3O$, formed by heating aniline and glacial acetic acid for several hours, or by the action of acetyl chlorid or acetic anhydrid on aniline. *Fownes.*

acetenyl (a-set'e-nil), *n.* [*acet*(*ic*) + *-ene* + *-yl.*] A term used in composition, indicating that a compound contains the group CH:C, derived from acetylene (C_2H_2), as acetenylbenzene, C_6H_5C:CH. It has also been erroneously used to designate the group CH_2:CH, styrene ($C_6H_5CH:CH_2$) having also been called *acetenylbenzene.*

acetenylbenzene. See ★*acetenyl.*

acethemin, acethæmin (as-et-hē'min), *n.* [*acet*(*ic*) + Gr. *αἷμα*, blood.] The term applied to a preparation, $C_{34}H_{33}O_4N_4ClFe$, of hemin said to contain an acetyl group, CH_3CO. It is derived from the coloring matter of the blood.

Acetin blue. See ★*blue.*

acetize (as'e-tīz), *v. i.*; pret. and pp. *acetized*, ppr. *acetizing.* To undergo acetous fermentation; become sour. *R. F. Burton.*

acetoacetate (as″e-tō-as'e-tāt), *n.* [*acetoacet*(*ic*) + *-ate*[1].] A salt of acetoacetic acid.

acetoacetic (as″e-tō-a-sē'tik), *a.* Noting an acid, $CH_3COCH_2CO_2H$, scarcely known in the free state because of its instability. It is found in the urine of persons suffering from diabetes and sometimes in that of those suffering from fevers. See ★*diacetic acid.*—**Acetoacetic ester,** an ester of acetoacetic acid, especially the ethyl ester, $CH_3COCH_2CO_2C_2H_5$. It is a colorless liquid with a pleasant odor, and boils at 180° C. It is of very unusual importance, both because its conduct is typical of a large class of similar compounds and because it can be used for the synthesis of a great variety of compounds.

acetochlorhydrose (as″e-tō-klōr-hī'drōs), *n.* [*acet*(*ic*) + *chlor*(*in*) + *hydr*(*ogen*) + *-ose.*] A bitter dextrorotatory compound, $C_6H_7(C_2H_3O)_4O_5Cl$, formed by the action of acetyl chlorid on *δ*-glucose.

acetol (as'e-tōl), *n.* [*acet*(*ic*) + *-ol.*] A compound, CH_3COCH_2OH, having the official name 1-*hydroxypropanone.* It is a liquid which boils with decomposition at 147° C. Variously designated as *acetylcarbinol, pyroracemic alcohol, hydroxyacetone,* and *acetone alcohol.*

acetolatum (a-set-ō-lā'tum), *n.* [*acetum*, vinegar.] An aromatic liquid preparation obtained by distilling vinegar containing an essential oil.

Acetone alcohol. Same as ★*acetol.* **Acetone chloroform,** a compound of acetone and chloroform, $(CH_3)_2C(OH)CCl_3 + 1\frac{1}{2}H_2O$. It is crystalline and has an odor resembling that of camphor.

Acetonic acid, *a*-hydroxyisobutyric acid, $(CH_3)_2C(OH)CO_2H$, a crystalline acid prepared from acetone. It melts at 79° C.

acetonine (a-set'ō-nin), *n.* [*acetone* + *-ine*[2].] A very unstable base, $C_9H_{18}N_2$, whose thiocarbonate is formed by the action of carbon bisulphid and ammonia on acetone.

acetonitrile (as″e-tō-nī'tril), *n.* [*acetone* + *nitrile.*] Methyl cyanide, CH_3CN, the nitrile of acetic acid. It is a liquid which boils at 81.6° C.

acetonuria (as″e-tō-nū'ri-ä), *n.* [NL., < *acetone* + Gr. *οὖρον*, urine.] The elimination of acetone in the urine: seen notably in diabetes and in febrile diseases.

acetonyl (a-set'ō-nil), *n.* [*acetone* + *-yl.*] A term used in composition, indicating that a compound contains the group CH_3COCH_2–, derived from acetone, as acetonylacetone, $CH_3COCH_2CH_2COCH_3$. It is also used for compounds containing the group $(CH_3)_2C$., as acetonylurea, $(CH_3)_2C.NH$

$$\cdot \qquad >CO.$$
$$CO.NH$$

acetonylacetonate (a-set″ō-nil-a-set'ō-nāt), *n.* [*acetonylacetone* + *-ate*[1].] A salt formed from acetonylacetone. See ★*acetonyl.*

acetophenine (as″e-tō-fē'nin), *n.* [*acetophen*(*yl*) + *-ine*[2].] A weak base, $C_{23}H_{17}N$, formed by the action of ammonia and phosphorus pentoxid on acetophenone. It crystallizes in needles which melt at 135° C.

acetophenone (as″e-tō-fē'nōn), *n.* [*acet*(*ic*) + *phen*(*yl*) + *-one.*] A compound, $C_6H_5COCH_3$, formed by the distillation of a mixture of calcium acetate and benzoate. It melts at 20.5° and boils at 202° C. It is used as a hypnotic and in the preparation of a great variety of compounds. Also ★*ethylonphen*, ★*phenylmethylketone*, and *hypnone.*

acetopyrin, acetopyrine (as″e-tō-pī'rin), *n.* Same as ★*acopyrin.*

aceto-soluble (as″e-tō-sol'ū-bl), *a.* Soluble in acetic acid: as, *aceto-soluble* albumin, a form of serum albumin described by Patein as occurring in the urine.

acetoxime (as-e-tok'sim), *n.* [*acet*(*ic*) + *oxime.*] The oxime ($(CH_3)_2C$:NOH) of acetone. It is a volatile solid which melts at 60° and boils at 134.8° C.

acetoxyl (as-e-tok'sil), *n.* [*acet*(*ic*) + *ox*(*ygen*) + *-yl.*] **1.** Kolbe's name for acetyl.—**2.** A name for the group $CH_2(OH)CO$: as, *acetoxylglycolic acid*, $CH_2(OH)CO.CH(OH)CO_2H$.—**3.** A name for the group $-O.C_2H_3O$: as, *acetoxylbutyric ester*, $CH_3CH_2CH(O.C_2H_3O)CO_2C_2H_5$. [Commonly used as a prefix.]

acetozone (a-set'ō-zōn), *n.* [*acet*(*ic*) + *ozone.*] A trade-name for ★*benzoylacetylperoxid* (which see).

acetract (as'e-trakt), *n.* [L. *ace*(*tum*), vinegar, + E. (*ex*)*tract.*] A solid extract of a drug made with a menstruum containing acetic acid. *Buck*, Med. Handbook, I. 65.

acetum, *n.* **2.** A pharmaceutical preparation usually made by percolating a drug with dilute acetic acid.

aceturic (as-e-tū'rik), *a.* [*acet-ic* + *uric.*] Noting an acid, the acetyl derivative ($C_2H_3O.NHCH_2CO_2H$) of glycocoll or glycin. It melts at 206° C. Also called *acetylglycin* and *acetaminoacetic acid.*

acetylacetonate (as″e-til-a-set'ō-nāt), *n.* [*acetylacetone* + *-ate*[1].] A salt formed from *acetylacetone.*

acetylacetone (as″e-til-as'e-tōn), *n.* [*acet*(*ic*) + *-yl* + *acetone.*] A compound, $CH_3COCH_2COCH_3$, formed by the action of sodium on a mixture of acetone and ethyl acetate. It is a liquid which boils at 137° C. It forms salts which are probably derived from the tautomeric form, CH_3COCH:C(OH)CH_3.

acetylate (a-set'i-lāt), *v. t.*; pret. and pp. *acetylated*, ppr. *acetylating.* [*acetyl* + *-ate*[1].] To introduce the acetyl group into; especially, to prepare an acetyl derivative of an organic compound containing a hydroxyl- or amino-group.

acetylation (a-set-i-lā'shon), *n.* [*acetyl* + *-ation.*] The treatment of organic substances with acetic anhydrid in order to determine the presence and amount of alcoholic hydroxyl. Same as *acetylization.* **Acetylation test,** the application of this process to glycerol and fatty substances as a part of their chemical examination.

acetylcarbinol (as″e-til-kär'bi-nōl), *n.* Same as ★*acetol.*

acetylene, *n.* This gas, C_2H_2, prepared by the action of water on calcium carbide, is now largely used as an illuminant and to increase the illuminating value of coal-gas and water-gas of poor quality.

acetylglycin (as″e-til-glī'sin), *n.* Same as ★*aceturic acid.*

acetylide (a-set'i-lid), *n.* [*acetyl* + *-ide*[1].] A compound formed by the replacement of one or both of the hydrogen atoms of acetylene by a metal. *Cuprous acetylide* (Cu_2C_2) and *silver acetylide* (Ag_2C_2) are highly explosive, while the acetylides of alkali and alkaline earth-metals are not explosive.

Achæmenian, *a.* **II.** *n.* A Persian of the time of Achæmenes or the Achæmenidæ; also, the Persian language of that period (recorded in cuneiform inscriptions).

achascophytum (a-kas-kof'i-tum), *n.*; pl. *achascophyta* (-tä). [NL., < Gr. *ἀ-* priv. + *χάσκειν*, to open, dehisce, + *φυτόν*, a plant.] In *bot.*, a plant having an indehiscent fruit.

Achatinellidæ (a-kat-i-nel'i-dē), *n. pl.* [NL., < *Achatinella* + *-idæ.*] A family of stylommatophorous, pulmonate *Gasteropoda.* They have a small bulimoid shell, indifferently dextral or sinistral, and a radula of two types, one having the teeth in very oblique rows, central, laterals, and marginals all of the same type, base narrow, head rather broad, with numerous small denticles (as in *Achatinella* proper, *Auriculella*, and *Tornatellina*), the other having the central tooth small and narrow, laterals bicuspid, and marginals as in *Helix* (*Amastra* and *Carelia*).

achenocarp, *n.* Same as *achænocarp.*

Achernian (a-kėr'ni-an), *a.* and *n.* [*Achernar*, the name of a star, + *-ian.*] **I.** *a.* Noting stars similar to Achernar, in the spectrum of which hydrogen, helium, asterium, oxygen, nitrogen, and carbon are predominant: supposed by Lockyer to be cooling.

II. *n.* An Achernian star.

Acheson graphite, process. See ★*graphite*, ★*process.*

Acheulian (ä-shė'li-an), *a.* Of or pertaining to Saint-Acheul, in the Somme valley, northern France.—**Acheulian deposits,** in *geol.* and *archæol.*, paleolithic deposits containing carefully worked flint implements of more recent date than the rude flints found in the Chelléan beds: so named by Mortillet from the occurrence of such relics at Saint-Acheul.

achiev, *v. t.* A simplified spelling of *achieve.*

achilia (a-kī'li-ä), *n.* [NL., < **achilus*, lipless: see *achilous.*] Congenital absence of one or both lips.

achill (a-chil'), *adv.* [*a*[3] + *chill.*] Chilled; chilly.

Had . . . the warm breeze grown *achill*?
Morris, Earthly Paradise, III. iv. 39

Achilles (a-kil'ēz), *n.* An argument, otherwise called 'Achilles and the Tortoise,' which was proposed by Zeno of Elea to prove that motion is impossible. Suppose that Achilles runs parallel to the tortoise, which is moving slowly in the same direction and is at the start some distance ahead of Achilles. The argument is that Achilles never will overtake the tortoise, because in order to do so he must first move to the point at which the tortoise started, and when he arrives there the tortoise will again be a certain distance ahead and the same condition of things will be repeated. Hence Achilles will not overtake the tortoise until he has completed or ended a series of advances which has no completion or end. The argument is absurd from both the logical and the mathematical point of view.

achilletin (ak-i-lē'tin), *n.* [*achill*(*ein*) + *-et* + *-in*[2].] A compound, $C_{11}H_{17}O_4N$, formed by the action of dilute sulphuric acid on achillein. It is a dark-brown powder and is not bitter.

achillodynia (a-kil-ō-din'i-ä), *n.* [*Achill*(*es* tendon) + Gr. *ὀδύνη*, pain.] Pain in the heel.

Achirinæ (ak-i-rī'nē), *n. pl.* [NL., < *Achirus* + *-inæ.*] A subfamily of soles, typified by the genus *Achirus.*

achlorhydria (a-klōr-hī'dri-ä), *n.* [NL., < Gr. *ἀ-* priv. + *chlorhydric* + *-ia.*] Absence of hydrochloric acid from the gastric juice.

achocon (ä-chō-kōn'), *n.* [Per. Sp., < a native name.] A name in Peru of a large tree of the violet family, *Leonia glycycarpa.* It bears a rough yellow edible fruit the size of a peach, filled with a soft sweet pulp of the same color, and is held in much esteem by the Peruvians.

acholic (a-kol'ik), *a.* [Gr. *ἀ-* priv. + *χολή*, bile: see *cholic.*] Marked by the absence of bile; free from bile. *Lancet*, May 30, 1903, p. 1,498.

achondrite (a-kon'drīt), *n.* [*a*-[18] + *chondrite.*] A meteoric stone, or aërolite, containing little or no iron and essentially free from chondrules. See ★*meteorite.*

achondroplasia (a-kon-drō-plā'si-ä), *n.* [NL., < Gr. *ἀ-* priv. + *χόνδρος*, cartilage, + *πλάσις*, molding, conformation.] An anomaly of development marked by deficient cartilaginous growth resulting in a form of dwarfism. The subject of this affection is very short and "stocky," with large head and well-developed muscles.

achondroplastic (a-kon-drō-plas'tik), *a.* [*achondro*(*plasia*) + *plastic.*] Relating to or affected with achondroplasia.

achordal (a-kôr'dal), *a.* [Gr. *ἀ-* priv. + *χορδή*, a cord.] **1.** Not connected with or developed from the notochord.—**2.** Having no spinal cord.

achordate (a-kôr'dāt), *a.* and *n.* [NL. **achordatus*, < Gr. *ἀ-* priv. + *χορδή*, chord.] **I.** *a.* Having no notochord; invertebrate; belonging to the *Achordata.*

II. *n.* One of the *Achordata.*

achoresis (ak-ō-rē'sis), *n.* [NL. *achorēsis*, < Gr. *ἀ-* priv. + *χωρεῖν*, make room, contain.] A condition of diminished capacity of any one of the hollow viscera, as the bladder.

Achorutes (ak-ō-rū'tēz), *n.* [NL. (Templeton, 1835), < Gr. *ἀ-* priv. + *χορευτής*, a dancer, jumper, < *χορεύειν*, dance.] A genus of collembolan insects of the family *Poduridæ.* It is remarkable for the fact that certain of its species, as *A. nivicola* of the United States and *A. murorum* of Europe, occur frequently in great numbers on the surface of snow. They are sometimes called *snow-fleas.*

achrematite (a-krē'ma-tīt), *n.* [Gr. *ἀχρήματος*, without money, < *ἀ-* priv. + *χρῆμα*, money: see *chrematistic.*] A mineral of doubtful character found at the mines of Guanaceré, Mexico. It occurs in masses varying from yellow to red, and consists of the arseniate and molybdate of lead.

Achroma unguium, in *pathol.*, the presence of white spots on the nails.

achromat (ak'rō-mat), *n.* [G. *achromat*, < Gr. *ἀχρώματος*, colorless: see *achromatic.*] In *optics*, a lens or system of lenses corrected for chromatic aberration.—**New achromat,** an achromat constructed on modern principles (the theory being far advanced beyond those which determined the construction of the old achromats) and made of the new Jena glass, which renders it possible to give the achromat a flat field.—**Old achromat,** an achromat made of old-fashioned crown- and flint-glass, and necessarily having a field which is not flat.

achromatic, *a.* **2.** In *biol.*: (*a*) Colorless; hyaline. (*b*) Difficult to stain: a term applied to the portion of the cell-nucleus which exhibits little or no tendency to stain in carmine, hæmatoxylin, or certain aniline dyes used in histologic and cytologic technic.—**Achromatic figure,** in *cytol.*, the non-staining as opposed to the staining portion of the karyokinetic figure. See *achromatin.*—**Achromatic mass,** in *cytol.*, any non-staining portion of the karyokinetic figure, such as the

substance which accumulates about the poles of the achromatic spindle. **Achromatic ★mirror ★objective, ★ocular, ★refractivity, ★stereoscope.** See the words.

Achromatic spindle, the protoplasmic threads between the poles of the spindle in karyokinesis, which do not stain.

achromatistous (ạ-krō″mạ-tis′tus), *a.* Of the nature of or characterized by achromatosis; deficient in coloring matter. *Syd. Soc. Lex.*

achromatizable (a-krō′mạ-tī-zạ-bl), *a.* Capable of being corrected for chromatic aberration. Also spelled *achromatisable.*

achromatolysis (a-krō-mạ-tol′i-sis), *n.* [Gr. ἀχρωματος, not colored, + λυσις, dissolution.] In *cytol.*, the breaking down or dissolution of the achromatic substance of the cell: opposed to *chromatolysis.*

achromic (a-krō′mik), *a.* [Gr. ἀ- priv. + χρῶμα, color.] Devoid of color; colorless. When starch is inverted by diastatic ferments a point is reached where the solution no longer gives a blue color with iodine; this is termed the *achromic* point of the starch solution.

achromin (a-krō′min), *n.* The achromatin or linin of the nucleus of the cell, as contrasted with the chromatin.

The most common division of the caryoplasm in the cells of the animal and plant body is into two chemically different substances, which are usually called chromatin (or nuclein) and *achromin* (or linin).
Haeckel (trans.), Wonders of Life, p. 140.

achronism (ak′rō-nizm), *n.* [Gr. ἀ- priv. + χρονος, time, + *-ism.*] Lack or deficiency of time; absence of time (in which to accomplish anything). [Rare.] *N. E. D.*

achroöglycogen (ak-rō-ō-glī′kō-jen), *n.* [Gr. ἀχροος, colorless, + *glycogen.*] A colloid carbohydrate which results from snail-mucin on prolonged boiling with dilute acids or alkalis. On decomposition it is said to yield glucose.

achylia (a-kī′li-ạ), *n.* [NL., < *achylus*, without chyle: see *achylous.*] Absence of chyle.—**Achylia gastrica,** a disease marked by deficient secretion or absence of the gastric juice.

achymous (a-kī′mus), *a.* [NL. **achymus*, < Gr. ἀ- priv. + χυμος, juice: see *chyme.*] Having no chyme.

achyrophytum (ak-i-rof′i-tum), *n.*; pl. *achyrophyta* (-tạ). [NL., < Gr. ἀχυρον, chaff, glume, + φυτόν, a plant.] In *bot.*, a glumaceous plant, as grasses, sedges, etc.

acicula, *n.* **5.** In *bot.*: (*a*) The bristle-like prolongation of the rachilla of a grass-spike. (*b*) A tooth-like process in the hymenium of certain fungi.

Aciculina (a-sik-ū-lī′nạ), *n. pl.* [NL., < L. *acicula*, a needle, + *-ina.*] A suborder of monaxonidan *Demospongiæ* of the order *Hadromerina*, having diactine megascleres. It includes the families *Epallacidæ*, *Stylocordylidæ*, and *Tethydæ*. Also *Acieulinæ.*

aciculite (a-sik′ū-līt), *n.* [L. *acicula*, a needle, + *-ite*[2].] Same as *aikinite.*

aciculus, *n.* **2.** Same as *acicula.*

acid, *a.* and *n.* **I.** *a.*—**Acid alizarin blue, brown, green.** See ★*blue*, ★*brown*, ★*green.* **Acid color.** See ★*color.* For specific acid colors see ★*acid blue*, *acid green*, ★*acid-red*, etc. - **Acid dyestuff.** Same as *acid* ★*color.* - **Acid intoxication.** Same as ★*acidosis.*—**Acid leather.** See ★*leather.*—**Acid mordant color.** Same as *mordant acid* ★*color.*—**Acid** or **acidic oxid.** See ★*oxid.*—**Acid soap.** See ★*soap.*—**Acid steel.** See ★*steel.*—**Acid tar,** impure sulphuric acid which has been used in refining petroleum. Also known as *sludge acid.* **Acid test, tide.** See ★*test*[1], ★*tide*[1].

II. *n.*—**Schaeffer's acid,** the commercial name of one of the seven isomeric monosulphonic acids of β-naphthol. It is an important raw material in the color industry. **Scheele's acid,** a 5 per cent. solution of absolute hydrocyanic acid in water.

Acidanthera (as″i-dan-thē′rạ), *n.* [NL., appar. < L. *acidus*, sour, acid, + Gr. ἀνθηρος, flowering (or NL. *anthēra*, anther.)] A genus of about 20 African and Australian plants of the family *Iridaceæ*, intermediate between *Gladiolus* and *Ixia.* They are grown indoors in pots, or in the open in summer. The best-known species is *A. bicolor*, with creamy white, chocolate-blotched flowers in a simple, lax spike.

Acidaspis (as-i-das′pis), *n.* [NL., < L. *acidus*, sharp, + *aspis* (Gr. ἀσπίς), shield.] A genus of trilobites in which the shield bears numerous spines: characteristic of the Silurian and Devonian formations.

acid-black (as″id-blak′), *n.* One of the naphthol blacks.—**Anthracene acid-black,** a mordant acid coal-tar color. In an acid bath it dyes unmordanted wool a black which becomes much faster when after-chromed.—**Azo acid-black,** the name assigned to a mixture of various dyestuffs. It is largely used on account of its good distributing power and the handsome shade, resembling logwood-black, which it produces.

acid-blue (as″id-blō′), *n.* Same as *cyanol* ★*blue.*—**Azo acid-blue,** an acid dyestuff of the monoazo type, similar to Victoria ★violet.—**Biebrich acid-blue,** an acid coal-tar color of unpublished constitution, which dyes wool blue in an acid bath. **Fast acid-blue,** a coal-tar color prepared by the action of paraphenetidine upon fluorescein chloride and the sulphonation of the product. It dyes wool and silk violet-blue in an acid bath. Also called *violamine 3B.*

acid-brown (as″id-broun′), *n.* An acid coal-tar color of the diazo type, which dyes wool and silk brown in an acid bath.—**Azo acid-brown,** an acid coal-tar color of unpublished constitution, which dyes wool very level shades of brown in an acid bath.

acid-carmoisin (as″id-kär′mō-i-sin), *n.* One of the fast reds. See *fast red*, under *red*[1].

acid-cell (as′id-sel), *n.* One of the cells at the cardiac extremity of the stomach which secrete the acid constituent of the gastric juice.

acid-cerise (as″id-se-rēz′), *n.* An impure acid-magenta.

acid-egg (as′id-eg), *n.* A form of pumping apparatus for handling liquors which would act chemically upon the moving parts of an ordinary piston- or plunger-pump. Chambers which have an elongated spheroidal or egg shape receive the liquor at a low pressure, and, when they are filled, either air or steam under pressure is admitted to them, displacing the liquor through connecting pipes to the desired point.

The pumping of the acids up to the top of the towers is now always performed by means of compressed air, either in the old "*acid-eggs*," or more economically in "pulsometers."
Encyc. Brit., XXV. 44.

acid-fast (as′id-fȧst), *a.* A literal translation of the German "säurfest": applied to a class of bacteria which, when once stained with basic aniline dyes, tenaciously hold the dye on subsequent exposure to acids or alcohol. The most notable representative of this group is the tubercle bacillus, and its recognition in the tissues, the sputum, etc., is essentially based upon this "acid-fastness."

acid-fuchsin (as″id-fōk′sin), *n.* Same as *acid-magenta.*—**Fast acid-fuchsin.** Same as *fast* ★*acid-magenta.*

acid-gland (as′id-gland), *n.* **1.** One of certain glands found in the pedipalp *Arachnida*, secreting an acid liquid.

In connection with the *acid-glands* he describes a convoluted mass of tubules twisting about on each side of the central or right gland, and succeeded in tracing two of these tubules, apparently opening into the left sac.
Proc. Zool. Soc. London, 1902, II. 171.

2. In *entom.*, one of the glands, found in the honey-bee and other stinging *Hymenoptera*, which secrete an acid liquid. There are also glands which secrete an alkaline fluid; and the poison of the insect is effective only when both fluids are mixed. *A. S. Packard*, Text-book of Entom., p. 358.

3. One of the glands of the stomach secreting the acid portion of the gastric juice.

acid-green, *n.* **2.** An acid dyestuff, a sulphonated triphenylmethane derivative, which dyes wool and silk green in an acid bath.

Acidic oxid. See *acid* ★*oxid.*

acidifiant (a-sid′i-fī-ant), *a.* That acidifies or renders acid; acidifying.

acidimeter, *n.*—**Twichell's acidimeter,** a form of acidimeter shown in the accompanying cut.

Twichell's Acidimeter.

acidimetric (as″i-di-met′rik), *a.* Of or pertaining to the acidimeter or to acidimetry; acidimetrical.

acidite (as′i-dīt), *n.* [*acid* + *-ite.*] A term proposed by Von Cotta (1864) for all igneous rocks which are rich in the acid radical silica, as opposed to those which are poor in it, which he called *basites.*

acidity, *n.*—**Coefficient of acidity,** in *petrol.*, a ratio derived from the chemical analysis of a rock by dividing the number of atoms of oxygen contained in the various oxid bases by the number of atoms of oxygen belonging to the acid radical silica. This ratio is characteristic of certain groups of igneous rocks.

acidize (as′id-īz), *v. t.*; pret. and pp. *acidized*, ppr. *acidizing.* [*acid* + *-ize.*] To treat with an acid; render acid.—**Acidizing process,** the trade-name of a method of vulcanizing india-rubber by treating it with a solution of calcium or sodium hypochlorite, with or without the addition of an acid.

acid-magenta, *n.*—**Azo acid-magenta,** an acid color of unpublished constitution, which dyes wool a color resembling that produced by magenta.—**Fast acid-magenta,** an acid coal-tar color of the monoazo type. It is prepared by combining diazotized aniline with amido-naphthol-disulphonic acid, and dyes wool and silk a bluish red in an acid bath. Also called *fast acid-fuchsin.*

acid-maroon (as″id-mạ-rōn′), *n.* A crude acid-magenta.

acid-mauve (as″id-mōv′), *n.* An acid coal-tar color made by sulphonating mauvaniline.

acidophil, acidophile (a-sid′ō-fil), *a.* [NL. *acidum*, an acid, + Gr. φιλεω, loving.] Capable of being dyed with acid stains: said of cells or parts of cells.

acidophilic (as″i-dō-fil′ik), *a.* Same as ★*acidophil.*

Special attention has been called by Rosin (24), to the micro-chemical differentiation of the constituents of the cell body, the Nissl bodies reacting to the basic dyes, while the ground substance is *acidophilic* in character.
F. R. Bailey, in Jour. Exper. Med., Oct. 1, 1901, p. 555.

acidophilous (as-i-dof′i-lus), *a.* [NL. *acidum*, acid, + φιλειν, love.] Same as *acidophil.*

acid-orange (as″id-or′ạnj), *n.* Same as *orange II* (which see, under *orange*[1]).

acidosis (as-i-dō′sis), *n.* [NL. *acidum*, an acid, + *-osis.*] Poisoning by certain acids, such as uric acid or the fatty acids, formed within the body under various morbid conditions, such as cancer, diabetes, or fever. Also called *acid intoxication.*

acid-ponceau (as″id-pon-sō′), *n.* An acid coal-tar color of the monoazo type. It is prepared by combining diazotized β-naphthylamine-sulphonic acid with β-naphthol, and dyes wool and silk scarlet in an acid bath. Also called *fast acid-ponceau*, *acid-scarlet* or *fast acid-scarlet*, and *ponceau S.*

acid-red (as″id-red′), *n.* An acid coal-tar color which dyes wool red in an acid bath. Also called *fast acid-red.*

acid-rosamine (as″id-rōz-am′in), *n.* An acid coal-tar color of the xanthene type, which dyes wool and silk a bluish red. Also called *violamine G.*

acid-roseine, acid-rubine (as″id-rō′zē-in, -rō′bin), *n.* Same as *acid-magenta.*

acid-scarlet (as″id-skär′let), *n.* Same as ★*acid-ponceau.* Also called *fast acid-scarlet.*

acidulation (a-sid-ū-lā′shọn), *n.* The act or process of rendering (something) acid, or of imparting an acid or subacid quality to it.

Acidulous water, a natural mineral water containing a notable amount of free carbonic acid.

acid-violet (as″id-vī′ō-let), *n.* A name of two coal-tar colors (*fast acid-violet ARR* and *B*) of the xanthene type, of similar composition. They dye wool and silk reddish violet in an acid bath. Also known as *violamine R* and *violamine B.*—**Fast acid-violet 10 B,** an acid coal-tar color of the triphenyl-methane-carbinol type. It dyes wool violet in an acid bath.

acidyl (as′i-dil), *n.* [*acid* + *-yl.*] Same as ★*acyl* (the preferable form).

Acinetaria (as″i-nē-tā′ri-ạ). *n. pl.* [NL.] Same as *Acinetæ.*

acinetarian (as-i-nē-tā′ri-an), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the *Acinetaria.*

II. *n.* One of the *Acinetaria.*

acinetic (as-i-net′ik), *a.* [Gr. ἀ- priv. + κινητός, moved, movable: see *kinetic.*] That prevents motion; that deprives of, or causes the loss of, voluntary motion.

acinotubular (as″i-nō-tū′bū-lạr), *a.* [NL. *acinus*, acinus, + L. *tubulus*, tubule.] Possessing both acini and tubules: said of certain glands.

Acinous cancer. See ★*cancer.*

acipenserin (as-i-pen′sẹ-rin), *n.* [*Acipenser* (see def.) + *-in*[2].] A protamin found in the testicles of a fish, *Acipenser stellatus.*

Aciprion (a-sip′ri-ọn), *n.* [NL., < (?) Gr. ἀκίς, a point, + πρίων, a saw.] A genus of true lizards or *Lacertilia* of Miocene age.

acknowledgeable (ak-nol′ej-ạ-bl), *a.* [*acknowledge* + *-able.*] That can be acknowledged, admitted, or recognized; recognizable; noticeable.

acknowledgedly (ak-nol′ejd-li), *adv.* [*acknowledged* + *-ly.*] Admittedly; confessedly.

acleistous. See ★*aclistous.*

acli (ä′kli), *n.* [Tagalog and Pampanga *acli.*] A name in the Philippine Islands of *Xylia xylocarpa*, a valuable timber-tree. The wood is strong and durable and does not take fire easily. It is used in boat-building and for posts and beams of houses. The bark is saponaceous. See *pyengadu.* Also *acle.*

aclistous, acleistous (a-klī′stus), *a.* [Gr. ἀκλειστος, not closed, not fastened, < ἀ- priv. + κλειστός, closed: see *clistocarp*, etc.] Not closed: used in crystallography to designate certain open forms of hemimorphic type; also, certain crystalline groups characterized by these forms. See ★*form*, 2, and ★*symmetry*, 6.

aclythrophytum (ak-li-throf′i-tum), *n.*; pl. *aclythrophyta* (-tạ). [NL., < Gr. ἀ- priv. + κλεῖ-

θρον, a bar, + φυτον, a plant.] In *bot.*, a plant with naked or apparently naked seeds; that is, one destitute of a pericarp.

acmatic (ak-mat'ik), *a.* [Irreg. < *acme* + *-atic*[2].] The normal adj. is *acmic*.] Of or pertaining to an acme. [Rare.] *Hyatt*, Biol. Lect., p. 141.

acmic (ak'mik), *a.* [*acme*(*e*) + *-ic*.] Of or pertaining to an acme, specifically to the acme of a genetic series of organisms, or the period when it is richest in genera and species. [Rare.] *Amer. Jour. Sci.*, Oct., 1903, p. 300.

acmite-trachyte (ak″mīt-trak'īt), *n.* See ★*trachyte*.

acmonoid (ak'mō-noid), *a.* [Gr. ἀκμων, an anvil, + εἶδος, form.] In *anthrop.*, noting a type of cranium high, long, with straight sides, a slight swelling of the parietal protuberances situated very far back, and the occipital resembling a quadrangular pyramid leaning slightly on its cranial base. *G. Sergi*, Var. of the Human Species, p. 42.

Acne agminata, a form of acne in which the lesions are grouped together, forming patches of various sizes.—**Acne indurata,** a form of acne in which the papules are hard and shot-like, deep-seated, and inflamed, but do not always go on to suppuration.—**Acne necrotica,** a form of acne, affecting chiefly the forehead, in which the papules break down, leaving depressed scars like pock-marks.—**Tar acne,** a papular eruption of the skin caused by the external application of tar in susceptible persons.

acneform (ak'nē-form), *a.* [Irreg. < NL. *acne*, acne, + *forma*, form.] Resembling acne in appearance.

acnemia (ak-nē'mi-ä), *n.* [NL., < Gr. ἀκνημος, without the calf of the leg, < ἀ- priv. + κνήμη, calf of the leg.] Absence or imperfect formation of the legs.

acocantherin (ak-ō-kan'the-rin), *n.* [*Acocanthera* (see def.) + *-in*[2].] A poisonous glucoside, $C_{32}H_{50}O_{12}$, obtained from an African arrow-poison which is prepared from *Acocanthera Abyssinica*. In physiological action it resembles the glucosides of *Digitalis*.

Acœla, *n. pl.* 2. A suborder of *Rhabdocœlida* in which the cavity of the enteron is obliterated by the concrescence of its walls, the mouth leading through a simple pharynx directly into the digestive syncetium. It contains the families *Porporidæ* and *Aphanostomidæ*.

Acœlomata, *n. pl.* 2. The coelenterates and sponges considered collectively as animals without a true cœloma, or body-cavity, as distinct from the enteron or digestive cavity. Many zoologists regard the *Metazoa* as consisting of two great primary groups: the *Acœlomata*, or sponges and coelenterates, and the *Cœlomata*, or all the remaining *Metazoa*.

The cavities of the *Acœlomata*, except certain ectodermal pits, are in all cases continuations of the primary central cavity lined by endoderm, and no cavities exist lined by mesoderm comparable to a cœlom.
A. E. Shipley, Zool. of Invertebrates, p. 36.

acoin (ak'ō-in), *n.* 1. A trade-name for hydrochlorid of diparanisylmonophenetylguanidin, a local anæsthetic introduced in 1899.—2. A general name given to a series of derivatives of guanidin similar to the above.

acolous (ak'ō-lus), *a.* [Gr. ἀκωλος, limbless, < ἀ- priv. + κῶλον, limb, member.] In *teratol.*, without limbs.

acomia (a-kō'mi-ä), *n.* [NL., < Gr. ἀκομος, without hair, < ἀ- priv. + κομη, hair: see *coma*[1].] Same as *alopecia*.

aconate (ak'o-nāt), *n.* [*acon*(*ic*) + *-ate*[1].] A salt derived from aconic acid.

acone (ā'kōn), *a.* [*a*-[18] + *cone*.] In *entom.*, lacking the cone or crystalline lens. In insects having acone eyes the cone or refracting body is represented only by the four primitive cone-cells. Distinguished from ★*acone* and ★*pseudocone*.

Acone eyes, where the cone or refracting body is wanting, but is represented by the four primitive cone-cells.
A. S. Packard, Text-book of Entom., p. 252.

aconic (a-kon'ik), *a.* [*acon*(*ite*) + *-ic*.] Derived from aconite: distinguished in chemistry from *aconitic*.—**Aconic acid,** an acid formed by boiling monobromparatartaric acid with water or with a solution of sodium carbonate. It is easily soluble in water and melts at 164° C.

aconital (ak'ō-nī-tal), *a.* [*aconite* + *-al*.] Characteristic of aconite: as, *aconital* bitterness.

aconite, *n.* 2. An extract or tincture of this plant, used as a poison and as a medicine.

acoprosis (ak″o-prō'sis), *n.* [*acopr*(*ous*) + *-osis*.] Absence of fecal matter from the intestine.

acoprous (a-kop'rus), *a.* [Gr. ἀκοπρος, with no or little excrement, < ἀ- priv. + κόπρος, excrement.] Without fecal matter in the bowels; characterized by acoprosis.

acopyrin, acopyrine (ak-ō-pī'rin), *n.* [*ac*(*etyl*) + (*anti*)*pyrine*.] The acetyl salicylate of antipyrin, $C_6H_4(OC_2H_3O)CO_2H.C_{11}H_{12}ON_2$. It is used as a remedy for headache.

acoria (a-kō'ri-ä), *n.* [NL., < Gr. ἀκορία, < ἄκορος, equiv. to ἀκόρεστος, insatiate, < ἀ- priv. + κορεννύναι, sate, satiate, satisfy.] Excessive appetite.

acorin (ak'ō-rin), *n.* [*acor*(*us*) + *-in*[2].] A name given to a substance, formerly supposed to be a glucoside, obtained from *Acorus Calamus*. It is of uncertain composition and probably a mixture.

acormus (a-kôr'mus), *n.* [Gr. ἀ- priv. + κορμός, trunk.] In *teratol.*, a monster with a head and an undeveloped napiform body, without extremities.

acorn-gall (ā'kôrn-gâl″), *n.* See *gall*[3] and *knopper*.

acosmic (a-koz'mik), *a.* [*a*-[18] + *cosmic*.] Sundered; disordered; confused; inharmonious.

Some who have . . . felt utterly lost in this charmed circle of agnosticism . . . despair of building up again the world they have lost out of its *acosmic* elements.
G. S. Hall, Adolescence, II. 537.

acospore (ak'ō-spōr), *n.* [Gr. ἀκή, point, + σπορά, seed.] In *phytogeog.*, a plant (mostly of the grasses) whose fruit is provided with awns to assist dissemination.

Acotylea (a-kot-i-lē'ä), *n. pl.* [NL., < Gr. ἀ- priv. + κοτύλη, cup, socket.] A group of polyclade *Turbellaria* without suckers and with the mouth in the middle of the body or behind it. It includes the families *Planoceridæ*, *Leptoplanidæ*, and *Cestoplanidæ*.

acoulation (a-kō-lā'shon), *n.* [Irreg. < Gr. ἀκούειν), hear, + L. *latio*(*n*-), bearing.] The telephonic transmission or reproduction of sounds, with increase of intensity, by means of a combination of microphone and telephone. Also spelled *akoulation*.

acoupa (a-kō'pä), *n.* [Pg.] A kind of weakfish, *Cynoscion acoupa*.

acousma (a-kōs'mä), *n.*; pl. *acousmata* (-tä). [Gr. ἀκούσμα, a thing heard, < ἀκούειν, hear.] 1. *pl.* Things heard or received on authority and without further inquiry or explanation, as among the *acousmatici* or probationary disciples of Pythagoras.—2. A form of auditory hallucination. *Baldwin*, Dict. of Philos. and Psychol.

Acoustic absorption. See ★*absorption*. **Acoustic agraphia.** See ★*agraphia*. **Acoustic disk,** an instrument for demonstrating the principles of Savart's wheel, the siren, and Newton's disk.—**Acoustic organ.** Same as *organ of Corti*. **Acoustic orifice,** in *entom.*, an orifice for the admission of air to the acoustic apparatus, as the orifice caudad of the prothorax in the *Locustidæ*.—**Acoustic penetration,** the carrying power of articulate sound measured by the distance in meters at which, under defined and standard conditions, it is still audible. **Acoustic resonance.** See *resonance*, 2.—**Acoustic shadow.** See ★*shadow*.—**Acoustic striæ.** Same as *striæ acusticæ*, which see, under *stria*. **Acoustic tetanus,** muscular contraction induced experimentally by the application of a faradic current, the number of interruptions being measured by the pitch of the sound caused by the vibrations.—**Acoustic tubes,** a set of tubes designed to illustrate the effect of different length and size on pitch.

acousticolateral (a-kōs″ti-kō-lat'e-ral), *a.* Having the organs of hearing arranged laterally.

acoustometer (a-kōs-tom'e-tèr), *n.* [*acoust*(*ic*) + Gr. μέτρον, a measure.] An instrument for determining the acoustic properties of a room or other inclosure.

acquaint†, *n.* An acquaintance. *Chaucer*.

acquiescence, *n.* 3. Originally, but now rarely, contentment; satisfaction. In the ethics of Spinoza, acquiescence in one's very self is an ignoble self-satisfaction; but acquiescence of the soul in the knowledge of God is the highest result of virtue.

Acquired character. See ★*character*.

acquisitiveness, *n.* 3. In *psychol.*: (*a*) The proprietary or collecting instinct. *W. James*, Princ. of Psychol., II. 422, 679. (*b*) The capacity for learning or for intellectual acquisition.

Acquittal in law, a judicial act which, in discharging one person from the accusation of a crime, operates to discharge all others who may be accused as accessories in the commission of the same crime: distinguished from *acquittal in fact*.

acracy (ak'rā-si), *n.* [Gr. ἀ- priv. + -κρατία, < κρατεῖν, to rule.] The extremest form of physiocracy, which reduces all government to the action of so-called natural laws and amounts to anarchism. *L. F. Ward*, Psychic Factors of Civilization, p. 319.

Acræides (a-krē'i-dēz), *n. pl.* [NL. (perhaps erroneously transferred, as if NL., from a F. form "*acrides*) for *Acræadæ*, < *Acræa* + *-idæ*.] A group of butterflies corresponding to the *Acræinæ*. *Acræides* is the form used by most English entomologists.

acramphibryous (ak-ram-fib'ri-us), *a.* [Gr. ἄκρος, at the end, + ἀμφί, on both sides, + βρύον, a flower or blossom, + *-ous*.] In *bot.*, producing lateral as well as apical buds. *Jackson*, Glossary.

Acrasiales (a-krā-si-ā'lēz), *n. pl.* [NL., < Gr. ἀκρασία, bad mixture, + *-ales*.] The lowest of the three orders of *Myxomycetes*, consisting of two small families of imperfectly known amœboid organisms, some of which are found in old manure.

acre-foot (ā'kèr-fût″), *n.* A unit of volume of water used in irrigation, equivalent to one acre covered one foot in depth, or 43,560 cubic feet. Water flowing at the rate of one cubic foot a second for 24 hours will cover an acre to a depth of 1.98 feet. In common usage, a cubic foot per second, or second-foot, for 24 hours equals 2 acre-feet.

acreophagist, akreophagist (ak-rē-of'a-jist), *n.* [*acreophag-y* + *-ist*.] One who habitually abstains from eating meat; a vegetarian.

acreophagy, akreophagy (ak-rē-of'a-ji), *n.* [Gr. ἀ- priv. + κρεοφαγία, eating of flesh, < κρεοφάγος, flesh-eating: see *creophagous*.] A habitual abstention from meat-eating.

acrepid (a-krep'id), *a.* [Gr. ἀ- priv. + κρηπίς, a boot, a foundation.] Having no crepis or foundation-spicule: specifically applied, in sponge-spicules, to desmas in which the crepis is atrophied.

acribia (ak-ri-bī'ä), *n.* [NL. *acribia*, < Gr. ἀκρίβεια, < ἀκριβής, accurate, precise.] Literal accuracy; exactness; precision.

acriby (ak'ri-bi), *n.* Same as ★*acribia*.

acridic (a-krid'ik), *a.* [*acrid*(*ine*) + *-ic*.] Derived from acridine.—**Acridic acid,** an acid, $C_{11}H_7O_4N$, formed by the oxidation of acridine. It crystallizes in needles and decomposes at 120°–130° C. Also called 2, 3-*quinolinedicarboxylic acid*.

Acridiides (ak″ri-dī'i-dēz), *n. pl.* [NL., irreg. (as if from a F. pl.?) for *Acrididæ*, < *Acridium* + *-idæ*.] In the classification of Brunner von Wattenwyl, the ninth tribe of grasshoppers, of the family *Acrididæ*, typified by the genus *Acridium*.

acridine (ak'ri-din), *n.* [*acrid* (?) + *-ine*[2].] An organic compound derived from anthracene by replacing one of its CH-groups with a nitrogen atom, its empirical formula being $C_{14}H_9N$. It is important in the color industry.—**Acridine color.** See ★*color*.—**Acridine orange, red,** etc. See ★*orange*[1], ★*red*[1], etc.

acridinic (ak-ri-din'ik), *a.* [*acridine* + *-ic*.] Derived from acridine.—**Acridinic acid.** Same as ★*acridic acid*.

acridioid (a-krid'i-oid), *a.* Having the characteristics or appearance of grasshoppers or locusts of the family *Acrididæ*.

acridone (ak'ri-dōn), *n.* [*acrid*(*ine*) + *-one*.] A compound, $C_6H_4 \begin{matrix} CO \\ NH \end{matrix} > C_6H_4$, formed by the oxidation of acridine. It melts at 354° C.

acridyl (ak'ri-dil), *n.* [*acrid*(*ine*) + *-yl*.] The radical or group $C_{13}H_8N$, derived from ★acridine (which see).

acrinyl (ak-rī'nil), *n.* In *chem.*, a hypothetical radical, $C_6H_4.OH.CH_2$, of which the sulphocyanide ($C_6H_4.OH.CH_2.NCS$) is the yellow, pungent, vesicating fixed oil formed by the action of the enzyme myrosin upon the glucoside sinalbin contained in white mustard seed, *Brassica alba*.

acrite[2] (ak'rīt), *n.* [L. *acris*, sharp, + *-ite*[2].] The inactive mannite formed by the reduction of acrose or of inactive mannose.

acroæsthesia (ak″rō-es-thē'si-ä), *n.* [Gr. ἄκρον, a terminal point, an extremity, + αἴσθησις, perception, sensation. The second sense is not justified by the meaning of the Gr. ἄκρον.] 1. Pain in the hands or feet.—2. Excessive sensibility; hyperæsthesia.

acroasphyxia (ak″rō-as-fik'si-ä), *n.* [NL., < Gr. ἄκρος, at the end, + ἀσφυξία, asphyxia.] Arrest of the circulation of the blood in the distal portion of the extremities.

acroblast (ak'rō-blast), *n.* [Gr. ἄκρον, apex, + βλαστός, germ.] In *embryol.*, that portion of the embryonic germ-layers in vertebrates which gives rise to the blood and connective tissue; the mesenchyme.

acroblastesis (ak-rō-blas-tē'sis), *n.* [NL., < Gr. ἄκρον, apex, + βλαστός, bud, germ, spore.] In *bot.*, a condition in lichens in which the germ-tube proceeds from the end of a spore.

acroblastic (ak-rō-blas'tik), *a.* In *bot.*, arising from a terminal bud: applied to branches of the inflorescence. *Celakorsky.*

acrocarp (ak'rō-kärp), *n.* [*acrocarp(ous).*] An acrocarpous plant: applied mainly to the *Acrocarpi.*

acrocephalous (ak-rō-sef'a-lus), *a.* Same as *acrocephalic.*

acroceroid (ak-ros'e-roid), *a.* Having the characteristics or appearance of a moth of the family *Acroceridæ.*

a c, acrocoracoid; *prc*, precoracoid; *pnf*, pneumatic foramina; *f*, foramen for nerve.

Acrochilus (ak-rō-kī'lus), *n.* [NL., < Gr. ἄκρον, the farthest point, + χεῖλος, lip.] A genus of chubs found in the Columbia river, noted for the bony sheath to the jaws: hence called *hardmouth* or *chisel-mouth jack.*

acrocoracoid (ak-rō-kor'a-koid), *n.* [Gr. ἄκρος, at the end, + *coracoid.*] In *ornith.*, a process or projection from the distal end and internal face of the coracoid, to which the clavicle is usually attached.

acrodontism (ak'rō-don"tizm), *n.* [*acrodont* + *-ism.*] The property of being acrodont, or of having teeth ankylosed to the cutting edge of the jaws. [Rare.]

acrodrome (ak'rō-drōm), *a.* Same as ★*acrodromous.*

acrodromous (a-krod'rō-mus), *a.* [Gr. ἄκρον, point, + -δρομος, < δραμεῖν, run.] In *bot.*, running to a point: said of a nervation in which the nerves all terminate in or point to the apex of the leaf. See *nervation* (*a*) (4) and fig. 4.

Acrodus (ak'rō-dus), *n.* [NL., < Gr. ἄκρος, at the end, + ὀδούς, tooth.] A genus of cestraciont sharks known chiefly by the pavement-teeth. They occur in the Jurassic and Cretaceous formations.

acrogamous (a-krog'a-mus), *a.* [Gr. ἄκρος, at the end, + γάμος, marriage.] In *bot.*, producing the ovules at the summit of the embryo-sac: the usual condition in angiosperms. *Van Tieghem.*

acrogamy (a-krog'a-mi), *n.* [*acrogam-ous* + *-y*³.] The state of being acrogamous.

acrogonidium (ak"rō-gō-nid'i-um), *n.*; pl. *acrogonidia* (-ä). [Gr. ἄκρος, at the end, + *gonidium.*] A gonidium formed at the terminal end of a fertile hypha.

Acrogynæ (a-kroj'i-nē), *n. pl.* [NL., < Gr. ἄκρον, apex, + γυνή, female.] In *bot.*, a suborder of cryptogamic plants of the order *Jungermanniales*, class *Hepaticæ*, in which the archegonia are formed from or near the apical cell. See ★*Anacrogynæ.*

acrogynous (a-kroj'i-nus), *a.* [As *Acrogynæ* + *-ous.*] In *bot.*, having the archegonia formed from or near the apical cell, as in the *Acrogynæ.*

Acrolepis (ak-rol'ē-pis), *n.* [NL., < Gr. ἄκρος, at the end, + λεπίς, scale.] A genus of ganoid fishes from the Carboniferous and Permian rocks.

acrologue (ak'rō-log), *n.* [Gr. ἄκρος, at the beginning or end, + λόγος, word.] An acrologic name, that is, a letter-name beginning with that letter; an alphabetic name formed on or exhibiting the principle of acrology, as the Hebrew aleph beginning with *a*, beth with *b*, etc. See the extract.

> The alphabetic names, considered as pictorial *acrologues*, may therefore in some cases receive an easier explanation from the Hieratic characters than from the Semitic letters as we have them.
>
> *Isaac Taylor*, The Alphabet, I. 169.

acromegalia (ak"rō-me-gā'li-ä), *n.* Same as ★*acromegaly.*

acromegalic (ak"rō-me-gal'ik), *a.* and *n.* [As *acromegaly* + *-ic.*] **I.** *a.* Of the nature of or relating to acromegaly.

II. *n.* A victim of the complaint known as acromegaly.

acromegaly (ak-rō-meg'a-li), *n.* [Gr. ἄκρον, extremity, + *μεγαλία, < μέγας (μεγαλ-), great.] A disease characterized by hypertrophy of the bones and soft tissues of the face and extremities. It is thought to be due, possibly, to a morbid change in the internal secretion of the pituitary body, since this structure is also enlarged. Most of the so-called 'giants' owe their size to this disorder. Also called *Marie's disease.*

acromerostich (ak-rō-mer'ō-stik), *n.* [Gr. ἄκρος, at the beginning or end, + μέρος, part, + στίχος, line.] A short poem or stanza containing several acrostics, as in the accompanying example, in which the name 'Jesus' occurs four times:

> I nter cuncta micans I gniti sidera cœl I,
> E xpellit tenebras E toto Phœbus ut orb E;
> S ic cæcas removet IESUS caliginis umbra S
> V ivificansque simul, V ero præcordia mot U
> S olem Justitiæ se S e probat esse beati S.
>
> *N. and Q.*, Feb. 26, 1887.

acromion, *n.* **2.** In *ichth.*, same as *supraclavicle;* a shoulder-girdle bone above the clavicle.

acromiosternal (a-krō"mi-ō-stėr'nal), *a.* Relating to the acromion process and the sternum.

acronus (ak'rō-nus), *n.*; pl. *acroni* (-nī). [NL., < Gr. ἄκρον, apex, summit.] In *bot.*, a terminal ovary; that is, one without a basal disk. *Necker.*

Acronycta (ak-rō-nik'tä), *n.* [NL. (Ochsenheimer, 1816, as *Acronicta;* Treitschke, 1825, as *Acronycta*), Gr. ἀκρόνυκτος, of nightfall: see *acronyctous.*] A prominent and very large genus of noctuid moths, synonymous with *Apatela* (Hübner, 1810).

acroparæsthesia (ak"rō-par-es-thē'si-ä), *n.* [Gr. ἄκρον, extremity, + παρά, beside, + αἴσθησις, perception, sensation (see *paræsthesia*). See remark under ★*acroæsthesia.*] **1.** Paræsthesia of the hands or feet.—**2.** Excessive paræsthesia, or perversion of normal sensation.

acroparalysis (ak"rō-pa-ral'i-sis), *n.* [Gr. ἄκρον, extremity, + παράλυσις, paralysis.] Paralysis which affects the extremities only.

acropathy (a-krop'a-thi), *n.* [Gr. ἄκρον, extremity, + πάθος, disease.] Disease of the hands or feet.

Acrophalli (ak-rō-fal'ī), *n. pl.* [NL., < Gr. ἄκρος, at the extremity, + φαλλός, phallus.] A group of nemathelminths in which the cloacal aperture is at almost the extreme end of the body on the ventral side.

acrophobia (ak-rō-fō'bi-ä), *n.* [Gr. ἄκρον, topmost point, + φοβεῖν, fear.] Morbid fear of great heights.

acrophonic (ak-rō-fon'ik), *a.* [Gr. ἄκρον, extremity, + φωνή, sound.] Same as *acrophonetic.*

acropolitan (ak-rō-pol'i-tan), *a.* Of or pertaining to the acropolis or citadel of an ancient Grecian city, especially that of Athens.

acrorhagus (ak-rō-rā'gus), *n.*; pl. *acrorhagi* (-jī). [NL., prop. **acrorrhagus*, < Gr. ἄκρος, at the end, + ῥάξ (ῥαγ-), a grape, a berry.] One of the marginal tubercles on the peristome of *Actinia* bearing nematocysts or stinging-cells.

acroscopic (ak-rō-skop'ik), *a.* [Gr. ἄκρον, apex, + σκοπεῖν, see, + *-ic.*] In *bot.*, looking toward (that is, on the side toward) the apex.

acrose (ak'rōs), *n.* [L. *acris*, sharp, + *-ose.*] A sugar which has been shown to be identical with *i*-fructose. It has been prepared synthetically in several ways, especially by the action of a dilute solution of sodium hydroxid on glycerol aldehyde. It is of special interest as being the first sugar containing six carbon atoms to be prepared synthetically. It was also used for the synthesis of *d*-glucose.

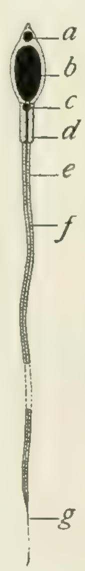


Diagram of a Flagellate Spermatozoön.

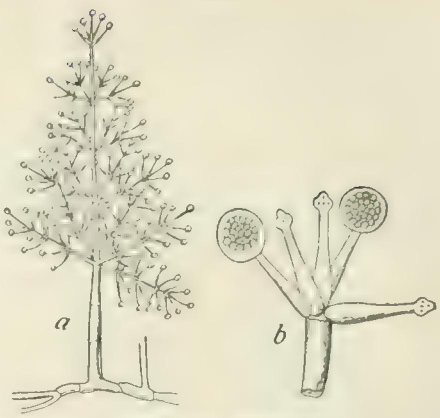
a, apical body, or acrosome; *b*, nucleus; *c*, end-knob; *d*, middle piece; *e*, envelop of the tail; *f*, axial filament; *g*, end-piece.

acrosome (ak'rō-sōm), *n.* [Gr. ἄκρον, apex, + σῶμα, body.] In *cytol.*, the body which forms the extreme anterior portion of the spermatozoön. *Von Lenhossek*, 1897. In the spermatozoa of some animals the acrosome is spur- or hook-shaped and is thus adapted for boring its way into the egg.

Acrospeira (ak-rō-spī'rä), *n.* [NL. (Berkeley and Broome, 1857), < Gr. ἄκρον, tip, + σπεῖρα, coil.] A monotypic genus of hyphomycetous fungi having erect branched sporophores spirally bent at the tips, and bearing simple spherical, black, rough spores. *A. mirabilis* sometimes destroys the ripe fruit of Spanish chestnuts (*Castanea*).

acrosperm (ak'rō-spėrm), *n.* [Gr. ἄκρον, tip, + σπέρμα, seed.] In *bot.*, an angiosperm of the group or class which are supposed by Treub to have been originally fertilized through the chalaza instead of the micropyle—the *Acrospermæ.* Compare ★*pleurosperm.*

Acrostalagmus (ak"rō-sta-lag'mus), *n.* [NL. (Corda, 1838), referring to the drop-like conidia at the tips of the conidiophores, < Gr. ἄκρον, tip, + σταλαγμός, a drop.] A genus of hyphomycetous fungi having erect verticillate-branched conidiophores and simple conidia collected in globular masses at their



Acrostalagmus cinnabarinus.

a, a branching conidiophore, enlarged; *b*, one of the branchlets, showing the globular masses of conidia, greatly magnified.

tips. *A. cinnabarinus* is a common species occurring on decaying vegetable matter.

Acrosticheæ (a-kros-tik'ē-ē), *n. pl.* [NL., < *Acrostichum* + *-eæ.*] A tribe of polypodiaceous ferns, typified by the genus *Acrostichum.* It comprises genera of varying habit and venation but readily associated by similarity in fructification, the naked sporangia overspreading at least a portion of the under surface of the wholly or partially metamorphosed fertile frond.

acrostichoid (a-kros'ti-koid), *a.* Pertaining to the fern genus *Acrostichum*, or to the tribe *Acrosticheæ.*

Acrostichum (a-kros'ti-kum), *n.* [NL., so called in allusion to the 'acrostic' appearance of the spores: see *acrostic.*] A genus of tropical ferns, largely American. The species are diverse, and are sometimes referred to other genera. In general they are long-leaved, rather coarse species, with mostly simple or pinnate fronds. No less than twenty species have been advertised in American horticultural catalogues. They are treated as greenhouse plants.

Acrotidæ (a-krot'i-dē), *n. pl.* [*Acrotus* + *-idæ.*] A family of deep-sea fishes remotely allied to the mackerels: notable for the very soft, rag-like body and the absence of spines and ventral fins.

Acrotinæ (ak-rō-tī'nē), *n. pl.* [*Acrotus* + *-inæ.*] The subfamily of ragfishes, of the family *Icosteidæ*, typified by *Acrotus willoughbyi.*

acrotonous (a-krot'ō-nus), *a.* [< Gr. ἄκρον, apex, + τόνος, cord.] In *bot.*, extending to the apex: applied to the tissue of the pollen-sac of orchids when prolonged to the upper end of the anther.

Acrotreta (ak-rō-trē'tä), *n.* [NL., < Gr. ἄκρος, at the top, + τρητός, bored through, perforated.] A genus of extinct brachiopods with a flat dorsal valve and a subconical ventral valve perforated at the top: from the Cambrian and Silurian beds of Europe and America.

Acrotretidæ (ak-rō-trē'ti-dē), *n. pl.* [NL., < *Acrotreta* + *-idæ.*] A family of inarticulate brachiopods of early Paleozoic age, embracing the genera *Acrotreta*, *Conotreta*, *Acrothele*, and *Linnarssonia.*

Acrotus (ak'rō-tus), *n.* [NL., given as from Gr. "ἄκροτος, without oars (ventral fins)"; but there is no such form. Cf. Gr. ἄκροτος, without noise, < ἀ- priv. + κρότος, a rattling, a clapping.] A genus of deep-sea fishes represented by *A. willoughbyi.* This species, once taken on the coast of Washington, is usually placed in the family *Acrotidæ*, next to *Icosteidæ.*

act, *n.*—**Ballot Act.** Same as *Reform Bill* (which see, in Cyclopedia of Names).—**Carey Act**, an act of Congress donating one million acres of desert land to each State containing such land, upon condition that the land donated be reclaimed by irrigation at the expense of the State.—**Desert Act.** Same as *Carey* ★*Act.*—**Hatch Act**, an act of the United States Congress in 1887 which gave to each State and Territory $15,000 a year for the establishment of an agricultural experiment station (see ★*agricultural*), to be a department of the land-grant college (see *Morrill* ★*Act*), except where a separate station already existed. The fund is maintained by an annual appropriation.—**Morrill Act.** (*a*) An act of the United States Congress in 1862 which provided for the maintenance of at least one college in each State, the chief object of which should be instruction in the branches of learning related to agriculture and the mechanic arts, though other scientific and classical studies were not excluded and instruction in military tactics was included. For this purpose a grant was made of 30,000 acres of public land for each senator and representative, the proceeds of sale to be invested as an endowment. (*b*) A second act (1890) which provided for an annual appropriation, to be increased in ten years from $15,000 to a permanent sum of $25,000 from the proceeds of the sale of public land, for the more complete endowment of these institutions. This income could be applied only to instruction (with facilities) in agriculture, the mechanic arts, the English

language, and other branches directly related to industrial life.—**Scalp Act**, in the United States, a statute which provides for the payment by a State of a bounty or reward for the destruction of certain animals deemed to be injurious to agriculture. It is usually provided that the reward shall be paid upon the production of the heads or scalps of the animals destroyed.—**Sherman Act**, an act of Congress of July 14, 1890, directing the secretary of the treasury to purchase monthly 4,500,000 ounces of fine silver bullion, or so much thereof as might be offered, at the market rate, not to exceed $1 for 371¼ grains of fine silver. It was repealed in 1893.

Actiad (ak'ti-ad), *n.* [Gr. *Ἀκτία*, the Actian games, + *-ad*[1]. Cf. *Olympiad*.] The space of four Actian years; the four years intervening between one celebration of the Actian games and the next. See *Actian*.

actinally (ak'ti-nal-i), *adv.* Toward, or having reference to, the actinal or oral side of an echinoderm; orally.

Actinaria (ak-ti-nā'ri-ä), *n. pl.* [NL., neut. pl. of **actinarius*, < Gr. *ἀκτίς* (*ἀκτιν-*), a ray.] The flesh-corals, a suborder of *Anthozoa*, usually with 6 (or a multiple of 6) simple tentacles and no skeleton. It includes *Actinia*, *Adamsia*, *Cerianthus*, and other genera.

actine (ak'tin), *n.* A ray of a monaxon or rod-like megasclere of a sponge.

actinellidan (ak-ti-nel'i-dan), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the *Actinellida*.

II. *n.* One of the *Actinellida*.

acting, *p. a.* 2. Performing, or used in performing, stage-plays.—**Acting edition** (of a play), one which contains full stage-directions for the information of the players.

II. *n.* The profession of an actor or player.

actinian (ak-tin'i-an), *a.* and *n.* [*Actinia* + *-an*.] **I.** *a.* Pertaining to or resembling an actinia.

II. *n.* An animal of the family *Actiniidæ* or of the order *Actiniidea*.

actiniarian (ak-tin-i-ā'ri-an), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the *Actiniaria*.

II. *n.* One of the *Actiniaria*.

Actinic ★focus, ★light, ★photometer. See the nouns. —**Actinic plane** a plane of maximum actinic activity in a system of standing light-waves. According to Wiener, such planes pass through the loops of the system, and at right angles to the path of the waves.—**Actinic ★ray, ★spectrum.** See the nouns.

actinicism (ak-tin'i-sizm), *n.* [*actinic* + *-ism*.] Same as *actinism*.

actinicity (ak-ti-nis'i-ti), *n.* Chemical or photographic activity; a property of rays of the spectrum by which chemical reactions are produced or promoted. Same as *actinism*.

Actinidia (ak-ti-nid'i-ä), *n.* [NL., < Gr. *ἀκτίς* (*ἀκτιν-*), a ray, + dim. *-ιδιον*.] A genus of twining shrubs, of about eight species, natives of eastern Asia and members of the family *Ternstrœmiaceæ*. About half of the species are in cultivation for covering arbors and porches, *A. arguta* being the most common species. The leaves are large and ovate, and are more or less toothed or serrate; the flowers are small and whitish. The species are hardy and useful climbers.

Actiniidea (ak-tin-i-id'ē-ä), *n. pl.* [NL., irreg. < *Actinia* + *-id-ea*.] An order of zoantharian *Anthozoa* consisting of colonial or solitary *Zoantharia cryptoparamera*, with or without a skeleton The mesenteries are arranged in cycles (each cycle usually consisting of 12 couples of equal size), and the tentacles equal the mesenteries in number. It contains the *Actiniidæ*, *Corallimorphidæ*, *Ilyanthidæ*, *Liponemidæ*, *Amphianthidæ*, *Dendractidæ*, and *Thalassianthidæ*.

actinine (ak'ti-nin), *a.* [*Actinia* + *-ine*[1].] Actinian.

actinioid (ak-tin'i-oid), *a.* [*Actinia* + *-oid*.] Resembling a sea-anemone or actinian.

Actiniomorpha (ak-tin"i-ō-môr'fä), *n. pl.* [NL., < *Actinia* + Gr. *μορφή*, form.] A subclass of *Anthozoa* including *Actinaria*, *Antipatharia*, and *Madreporaria*.

actinism, *n.* 3. In *bot.*, the chemical action of sunlight on plants.

Actinistia (ak-ti-nis'ti-ä), *n. pl.* [NL., < Gr. *ἀκτίς*, a ray, + *ἱστίον*, a web (?).] A suborder of extinct ganoid fishes ranging from the Carboniferous to the Jurassic. They are characterized among other things by having the interspinous bones of each dorsal and anal fin fused into a single piece.

actinium, *n.* 1. This supposed chemical element, of a metallic character, was announced by Phipson in 1881 as obtained from a commercial white pigment consisting mainly of oxid and sulphid of zinc with sulphate of barium. It was described as forming a white sulphid which became brown and finally black under the action of the sun's rays, the blackening being prevented by screening the surface with a plate of glass, and removed when the darkened surface was exposed to air in the absence of light.

2. A radioactive substance found by Debierne to exist in the residues remaining from pitchblende after the extraction of the uranium: a new radio-element closely related in its chemical behavior to lanthanum, from which it has not as yet been found possible to separate it completely. It has not been obtained in a state of sufficient purity to give any characteristic spectrum and is identified and recognized entirely by its radioactive properties. Actinium itself has not been found to emit a radiation but undergoes disintegration with the formation of a series of radioactive products known as radioactinium, actinium-X, actinium emanation, actinium A, actinium B, and actinium C. Of these, the first, second, third, and fifth emit alpha-rays, the fourth beta-rays, and the sixth beta- and gamma-rays (see ★*obscure rays*). These products are present in all ordinary actinium preparations. The occurrence of actinium indicates that it is a disintegration product of uranium, although its genetic relationship to ionium and radium has not yet been established. Actinium is identical with the *emanium* of Giesel. See ★*emanation*.

M. and Mme. Curie, with the collaboration of MM. Bemont and Debierne, succeeded in establishing the existence of three new radio-active substances in pitchblende: radium associated with the barium in the mineral, and closely resembling it in its chemical properties; polonium associated with the bismuth, and *actinium* with the thorium. *J. J. Thomson*, Elect. and Matter, p. 141.

Actinium rays, Becquerel rays emitted by the disintegration products of actinium. See *obscure* ★*rays*.

actinoblast (ak-tin'ō-blâst), *n.* [Gr. *ἀκτίς* (*ἀκτιν-*), ray, + *βλαστός*, germ.] In sponges, the mother-cell, in which is formed each ray of a radiate spicule; a scleroblast.

actinobranch (ak-tin'ō-brânk), *n.* [NL. *actinobranchia*, < Gr. *ἀκτίς* (*ἀκτιν-*), ray, + *branchia*, gill.] One of the gill-like vascular organs found in certain anthozoans.

actinobranchia (ak"ti-nō-brang'ki-ä), *n.*; pl. *actinobranchiæ* (-ē). [NL.] Same as ★*actinobranch*.

actinocarp (ak-tin'ō-kärp), *n.* [Gr. *ἀκτίς* (*ἀκτιν-*), ray, + *καρπός*, fruit (carpel).] A plant having the carpels or placentas radiating from the central axis of the fruit.

actinocarpic (ak"ti-nō-kär'pik), *a.* In *bot.*, of the nature of an actinocarp.

Actinocephalidæ (ak"ti-nō-se-fal'i-dē), *n. pl.* [NL., < *Actinocephalus* + *-idæ*.] A family of cephaline *Gregarinida*. The sporonts are always solitary; epimerite symmetric, simple or with appendages; cysts dehiscing by simple rupture; spores navicular, biconic, or cylindric, with conic extremities. They are mostly parasites in the alimentary canal of carnivorous arthropods. The family contains *Actinocephalus*, *Anthorhynchus*, *Stictospora*, *Schneideria*, and other genera.

Actinocephalus (ak"ti-nō-sef'a-lus), *n.* [NL., < Gr. *ἀκτίς* (*ἀκτιν-*), ray, + *κεφαλή*, head.] The typical genus of the family *Actinocephalidæ*. *Stein*, 1848.

Actinoceras (ak-ti-nos'e-ras), *n.* [NL., < Gr. *ἀκτίς* (*ἀκτιν-*), ray, + *κέρας*, horn.] A genus of nautiloid cephalopods typical of the family *Actinoceratidæ*.

actinoceratid (ak"ti-nō-ser'a-tid), *a.* and *n.* **I.** *a.* Pertaining to the *Actinoceratidæ*.

II. *n.* One of the *Actinoceratidæ*.

Actinoceratidæ (ak"ti-nō-se-rat'i-dē), *n. pl.* [NL., < *Actinoceras* + *-idæ*.] A family of longicone nautiloid cephalopods. They have the siphuncle more or less filled with calcareous deposits which may radiate into and even fill the chambers of the shell. The family includes several important genera, namely, *Actinoceras*, *Hormoceras*, and *Tretoceras*, chiefly of Silurian age.

actinocrinid (ak"ti-nō-krin'id), *a.* and *n.* **I.** *a.* Pertaining or related to the *Actinocrinidæ*.

II. *n.* An encrinite of the family *Actinocrinidæ*.

Actinocrinidæ, *n. pl.* 2. In Wachsmuth's classification, the third family of the camerate crinoids. They have a monocyclic base, three radial plates in the cup, fixed brachials large and interradials numerous, arms stout, usually biserial and simple, with long pinnules, and food-grooves subtegminal. The family is a large one and is sometimes divided into *Actinocrinidæ* and *Batocrinidæ*. It is represented by numerous genera and species of Paleozoic age occurring in the formations from the Lower Silurian to the Carboniferous.

actinogram (ak-tin'ō-gram), *n.* [Gr. *ἀκτίς* (*ἀκτιν-*), ray, + *γράμμα*, what is written.] 1. A record of the chemical activity of light made by means of the actinograph.—2. An impression made on a sensitized photographic plate by the Röntgen or Becquerel rays.

actinograph, *n.*—**Hurter and Driffield's actinograph**, a slide-and-roller calculating-machine for determining photographic exposures. A cylinder, carrying a chart which shows geographically the intensity of daylight for every hour of each day of the year, is fitted in a light box. The slide next this cylinder is furnished with two scales, one marked for lens-apertures and the other set out for exposures. Next to this is a small pointer slide which is adjusted to a fixed plate-speed scale and indicates the exposure for each of six selected typical meteorological conditions. The instrument is plotted for any desired latitude.

actinographic (ak"ti-nō-graf'ik), *a.* Of or pertaining to actinography or the actinograph; obtained by means of the actinograph.

actinography (ak"ti-nog'ra-fi), *n.* [As *actinograph* + *-y*[3].] The registration of actinic power by means of the actinograph.

Actinoidea (ak-ti-noi'dē-ä), *n. pl.* [NL., < Gr. *ἀκτίς* (*ἀκτιν-*), ray, + *εἶδος*, form.] Same as *Crinoidea*.

actinolite, *n.* 2. A trade-name of an apparatus by which the ultra-violet rays may be employed in the treatment of cutaneous diseases.

actinologist (ak-ti-nol'ō-jist), *n.* [*actinology* + *-ist*.] One who is versed in the study of the *Actinozoa*, or the sea-anemones, corals, and related forms.

actinologue (ak-tin'ō-log), *n.* [Gr. *ἀκτίς* (*ἀκτιν-*), ray, + *λόγος*, analogy, proportion (?).] In a radiate animal, as a sea-anemone or an echinoderm, any organ or other part of an actinomere which corresponds to another in a different actinomere.

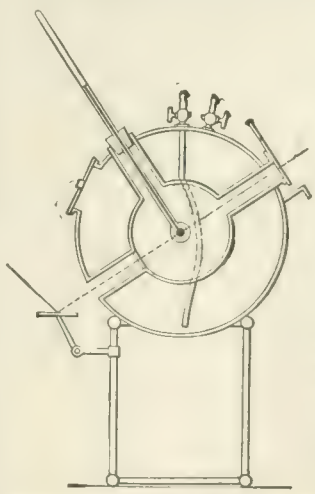
actinology, *n.* 2. The study of the *Actinozoa*: as, the *actinology* of the South Atlantic.

actinolyte (ak-tin'ō-līt), *n.* [Gr. *ἀκτίς*, ray, + *λυτός*, < *λύειν*, dissolve, separate.] 1. A chemical compound analyzable into its components by light.—2. Any substance in which light effects a marked sensible change.

actinolytic (ak"ti-nō-lit'ik), *a.* Pertaining to or of the nature of an actinolyte.

Actinomeris (ak"ti-nom'e-ris), *n.* [NL., < Gr. *ἀκτίς* (*ἀκτιν-*), a ray, + *μέρος*, a part.] A small genus of North American *Compositæ*, of which one or two are sometimes grown in gardens. The cultivated species are perennials, to be treated after the manner of perennial sunflowers.

actinometer, *n.* *Chemical actinometers* measure the energy of radiation by its chemical effects. Bunsen measured the amount of hydrochloric acid made by sunshine from a mixture of hydrogen and chlorin; Marchand measured the amount of carbonic-acid gas liberated from a solution of perchlorid of iron and oxalic acid by the use of his antiphotypimeter. *Photographic actinometers* measure the intensity of the shade produced on a sensitized plate by an exposure during one unit of time. *Vapor actinometers* measure the volume of liquid (water, alcohol, or ether) evaporated in a unit of time. *Thermal actinometers* measure the heating effect of radiation by many different devices: sometimes called *pyrheliometers*. De Saussure used the simple hot box; Sir John Herschel, a large thermometer-bulb filled with a blue liquid; Pouillet, a measured volume of water inclosed in a blackened cylinder, the temperature of the water being given by a thermometer within it; Crova and Violle, a black-bulb thermometer within a large spherical inclosure kept at uniform temperature; Arago, as modified by Davy, a pair of bright- and black-bulb thermometers each inclosed in a plane-glass spherical envelop from which the air has been exhausted: when exposed to the sunshine the black bulb attains a higher temperature than the bright bulb, and the difference between the two is an index of the amount of heat which penetrates the glass envelop. The complete theory of this action was published by Ferrel in 1885. Langley used a fine wire coated with lamp-black, the intensity of an electric current flowing through the wire being shown by a delicate galvanometer and varying with the temperature of the wire. Hutchins, following Melloni and Tyndall, employed a delicate thermo-electric junction together with a galvanometer; Chwolson, a pair of plates one of which is exposed to the sunshine while the other is in the shade, the difference of temperature being shown by the intensity of a thermo-electric current; and Angstrom, in his electrically compensated actinometer, two thin strips alternately exposed and shaded, the difference of temperature being measured by the intensity of the electric current needed to bring them both to the same temperature.—**Absolute actinometer**, an apparatus for determining in absolute units the total quantity of heat received at any place during any time by radiation, as distinguished from the relative measurements made with an ordinary actinometer.—**Draper's actinometer**, an actinometer which measures the action of light by the weight of carbon dioxid



Violle's Actinometer (cross-section). (See p. 12.)

disengaged by it from a solution of ferric oxalate. It was devised by Professor Henry Draper. **Richardson's actinometer,** an instrument for measuring and recording the intensity of the chemically active rays of the sun by means of the expansion of dry chlorin gas. **Roscoe's actinometer,** an actinometer devised by Sir Henry Roscoe for measuring the action of light by the use of paper sensitized with silver chlorid. The paper, fixed round a drum moved by clockwork, is periodically exposed behind a hole in a thin sheet of brass fastened over the drum. **Stanley's actinometer,** an actinometer for measuring the actinicity of light by the length of time required to bring a piece of sensitized paper to a standard tint. **Violle's actinometer,** a black-bulb thermometer placed at the center of a spherical metallic inclosure which is kept at a known constant temperature by the flow of water within its double walls. A small aperture allows sunshine to fall upon the thermometer-bulb, whose rate of warming is observed.

Actinometric degrees, the calculated quantity of radiant energy received by an actinometer in any given interval of time as expressed on any arbitrary scale.

actinomyces, *n.* **2.** [*cap.*] [NL. (Harz, 1877).] A genus of fungi of doubtful relationship. The type is *A. bovis*, the ray-fungus. See *actinomyces*, 1.

actinomycotic (ak″ti-nō-mī-kot′ik), *a.* [**actinomycosis* (-*ot*- + -*ic*.] Resembling, related to, or caused by the ray-fungus or actinomyces. *Jour. Exper. Med.*, V. 179.

Actinomyxidia (ak″ti-nō-mik-sid′i-ä), *n. pl.* [NL., < Gr. ἀκτίς (ἀκτιν-), ray, + μύξα, slime + -*idia*.] A group of peculiar parasites found in fresh-water oligochætes. They are regarded by some as being intermediate between *Myxosporidia* and *Mesozoa*, while others consider them as belonging to the former group. *Stole* 1899.

Actinonema (ak″ti-nō-nē′mä), *n.* [NL. (Persoon, 1822), < Gr. ἀκτίς, ray, + νῆμα, thread.] A genus of *Fungi Imperfecti* characterized by pycnidia produced upon a superficial layer of radiating mycelium. The spores are hyaline and mostly two-celled. *A. rosæ* is a common species which attacks leaves of roses. See ★*leaf-blotch*.

actinophore, *n.*— **Epaxial actinophores,** in *ichth.*, nodules of bone or cartilage between the dorsal rays and the interneural spines.— **Hypaxial actinophores,** in *ichth.*, nodules of bone or cartilage between the anal rays and the interhemal spines.

Actinopoda (ak-ti-nop′ọ-dä), *n. pl.* [NL., < Gr. ἀκτίς (ἀκτιν-), ray, + πούς (ποδ-), foot.] An order of *Holothurioidea*. The tentacles and podia are supplied by the five radial canals of the water-vascular system springing from the circular canal. The order includes the families *Holothuriidæ*, *Cucumariidæ*, *Molpadiidæ*, *Elpidiidæ*, and *Pelagothuriidæ*.

Actinopteria (ak″ti-nop-tē′ri-ä), *n.* [NL., < Gr. ἀκτίς (ἀκτιν-), ray, + πτερόν (πτερό-), feather (wing).] A genus of Paleozoic aviculoid shells. They have a well-defined auricle and wing and radial surface-plications which cover the latter. Abundant in the Devonian formations of America and Europe.

Actinopterygia (ak-ti-nop-te-rij′i-ä), *n. pl.* [NL., < Gr. ἀκτίς (ἀκτιν-), a ray, + πτερύγιον, a fin.] A great group of fishes including all of the living bony fishes except the *Dipnoi* or lung-fishes and, usually, the *Crassopterygii* or fringe-finned ganoids. The term *Teleostomi* is more commonly used and usually embraces all of the living bony fishes.

actinosome (ak′ti-nọ-sōm), *n.* Same as *actinosoma*.

actinostome, *n.* 2. The pentagonal area in the center of the oral surface of an echinoderm which is occupied by the peristome and mouth.

actinostomial (ak″ti-nō-stō′mi-ạl), *a.* [NL. **actinostomialis*, < *actinostomium*, actinostome.] Pertaining or relating to the actinostome: as, the *actinostomial* ring in *Asteroidea*.

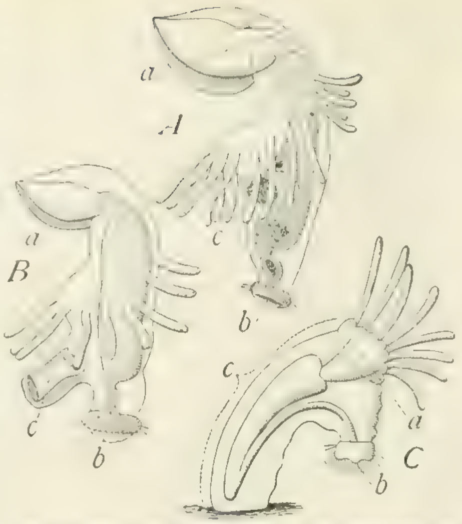
actinostomous (ak-ti-nos′tọ-mus), *a.* [Gr. ἀκτίς, ray, + στόμα, mouth.] In *bot.*, radiating round the mouth: applied specially to the radiate structure round the ostioles of certain lichens.

Actinostroma (ak-ti-nọ-strō′mä), *n.* [NL., < Gr. ἀκτίς, ray, + στρῶμα, bed.] A genus of hydrocoralline hydrozoans. They grew in spreading masses and exhibited, in vertical section, a series of radial pillars extending more or less continuously through successive layers. An abundant reef-building organism in the Devonian.

actinotherapeutic (ak″ti-nọ-ther-ạ-pū′tik), *a.* Pertaining to the therapeutic use of certain rays of light, especially in the treatment of cutaneous diseases.

actinotherapy (ak″ti-nō-ther′ạ-pi), *n.* [Gr. ἀκτίς (ἀκτιν-), ray, + θεραπεία, cure.] Same as ★*radiotherapy*.

actinotrocha (ak″ti-nō-trō′kä), *n.* [NL., < Gr. ἀκτίς (ἀκτιν-), a ray, + τροχός (?), a wheel, a ring.] The peculiar larval form of *Phoronis*, an aberrant genus of marine worms of doubtful affinities, being sometimes classed with the



Three stages in the Metamorphosis of the Actinotrocha into *Phoronis*. *A*, Actinotrocha larva with the invagination (*c*), which [illegible] which ultimately forms the greater part of the body of the adult. (From "Cambridge Natural History.")

Gephyrea, sometimes with the *Molluscoidea*, and sometimes with the *Hemichordata*.

action, *n.*, **11** (*b*). In the pianoforte the action is said to be *heavy* or *light*, *hard* or *easy*, according to the amount of resistance to the finger; *deep* or *shallow*, according as the dip of the keys is great or small; *repeating* if the mechanism permits repetition of the stroke without allowing the keys to rise to their original position, etc.; and the word is also extended to the pedal mechanism. In the organ (besides the above usages) the action is called an *electric*, *pneumatic*, or *tracker action*, according as the mechanism connecting the keys with the valves varies in construction; and the word is also extended to the stop mechanism. Furthermore, in the organ the action is said to be *extended* when the keyboards are placed at some distance from the case in which are the pipes. **13.** In *psychol.*, bodily movement, in so far as it is directly preceded, accompanied, or followed by consciousness. Some psychologists distinguish this as the *external voluntary* action from an *internal voluntary* action, in which the effect of the initial volition is itself a mental process, a change in the train of ideas which does not manifest itself by any sort of external symptom. Others use the phrase *action of the mind* loosely as the equivalent of *mental function* or *mental activity*.

A voluntary *action* consists, in the first place, of a feeling, in which the tendency of the will is manifested; secondly, of a change in ideational content which may be accompanied by an external effect mediated by the organs of movement; and thirdly, of the general idea of the dependence of this change upon the whole trend of consciousness.
W. Wundt (trans.), Human and Animal Psychol., p. 233.

14. In *mech.*, the sum of the average momenta of the elements of a moving system, each multiplied by the distance through which it moves. —**Action consciousness.** See ★*consciousness*.— **Action ex contractu,** a civil action in which the rights of the parties are subject to the law of contracts as distinguished from the law of torts.—**Action ex delicto,** a civil action in which the rights of the parties are subject to the law of torts as distinguished from the law of contracts.— **Action theory,** a psychophysical theory which correlates the attributes of sensation with definite phases of the passage from excitation to discharge in the cerebral cortex: its quality and intensity with locality and strength of excitation; its value and vividness with locality and strength of discharge. *H. Münsterberg*, Harvard Psychol. Stud., I. iv.—**Automatic action,** in *psychol.*, a term used, with various shades of meaning, to denote action which, originally voluntary, has become more or less mechanical.— **Continuous action,** in *mech.*, action in the same direction, without a reversal. The action of a circular saw or band-saw or a dynamo is continuous; that of an engine-piston is alternating.— **Directive action,** action which tends to cause a body possessed of polarity, as a magnet or a crystal, to take some certain position in the field of force in which it lies. See the extract.

If the attraction with parallel axes exceeds that with crossed axes there must be a *directive action* resisting the turn from the crossed to the parallel positions.
J. H. Poynting, Smithsonian Rep. 1901, pp. 209, 210.

Dynamic action, in *sociol.*, an action in which the end is sought mediately: opposed to *static action*, in which the end is sought immediately.— **Funicular action.** See ★*funicular*.— **Impulsive action,** in *psychol.*, a simple voluntary action determined by a single motive. *W. Wundt* (trans.), Human and Animal Psychol., p. 232.— **Instinctive action,** in *psychol.*, action founded on a congenital, instinctive basis, but consciously motived by acquired experience. *Morgan*, Habit and Instinct, p. 136. —**Joint action,** a civil action in which several parties, having the same or similar rights in the subject-matter of the suit, are joined as plaintiffs or defendants.— **Law of mass action,** in *phys. chem.*, the statement that when any substance in solution enters into a chemical reaction the amount of the reaction in the unit of time is proportional to the active mass of the substance, that is, to the number of gram-molecules of the substance contained in one liter of the solution.— **Law of reciprocal action.** See ★*law*.— **Local action.** (*b*) In an electric battery, the development of electrical energy by chemical action on the elements of the battery even when the outer circuit is open. Such local internal circuits weaken the effective or useful current. (*c*) In dynamo-electric machines, wasteful internal circuits in the pole-pieces or cores; eddy, parasitic, or Foucault currents.— **Multiplicity of actions,** a term used in equity jurisprudence wherein a court of chancery has jurisdiction to compel the consolidation of several suits where the issue in all can be determined in a single action. A suit in such a court may be brought to prevent a 'multiplicity of actions.'— **Psychomotor action,** in *psychol.*, action which occurs as the direct response to a perception or idea. The term includes *ideomotor* and *sensorimotor action*.— **Selective action** in *psychol.*, action which results from the clash in consciousness of two or more impulses. *E. B. Titchener*, Outline of Psychol., p. 266.— **Static action.** See *dynamic* ★*action*.— **Volitional action,** in *psychol.*, a term used, with various shades of meaning, to denote action which involves the exercise of active attention.

action-extension (ak′shọn-eks-ten″shọn), *n.* In *pianoforte-making*, a wooden rod which transfers the motion of the key-tail to the whip. Its length varies with the size and arrangement of the action. Analogous to *sticker* in organ-building. See cut under *pianoforte*.

action-rail (ak′shọn-rāl), *n.* In *pianoforte-making*, a bar or rail extending across the action from side to side, to which are pivoted the movable parts of all the hammers and dampers. See cut under *pianoforte*.

action-time (ak′shọn-tīm), *n.* In *psychol.*, a term occasionally used for the simple reaction-time.

activ, *a.* A simplified spelling of *active*.

activate, *v. t.* **2.** In *physics*, to render active; specifically, to make radioactive by exposure to the influence of a radioactive substance; to ionize. See ★*radioactivity*.

J. Elster and H. Geitel describe their method of studying the radio-activity of the atmosphere in places removed from physical or meteorological laboratories. In these measurements it is necessary to maintain the body to be *activated* for several hours at a negative potential of several thousand volts.
Sci. Amer. Sup., Apr. 18, 1903, p. 22815.

activated (ak′ti-vā″tẹd), *p. a.* In *physics*, in a state or condition of acquired radioactivity; ionized.

They find that underground air is not like *activated* air, but rather resembles radium and thorium compounds, which, while neutral themselves, are capable of ionizing gases by means of the free ions they emit.
Elec. World and Engineer, Jan. 10, 1903, p. 86.

activation (ak-ti-vā′shọn), *n.* The act of rendering active or the state of being activated; specifically, in *physics*, the process or method of producing radioactivity in a body by exposure to the influence of a radioactive substance or otherwise; the state or condition of being radioactive; ionization.

active, *a.* 9. In *psychol.*, representative of a type of character whose dominant characteristic is a natural and constantly renewed tendency to action.— **Active ★congestion, ★mass, ★pressure, ★principle.** See the nouns.— **Active deposit,** in *radioactivity*, a substance deposited by the emanation from a radioactive material, as radium or thorium, and itself capable of producing excited activity in neighboring bodies.— **Active material** (of a storage-cell), in *elect.*, the substance or substances which change chemically during charge and discharge.— **Active verb,** a verb which expresses action. It may be (*a*) *active transitive*, in which the action passes from the subject or agent to an object: as, the sun *gives* light; or it may be (*b*) *active intransitive*, in which the action is confined to the subject: as, the sun *shines*.— **Active voice** in *gram.*, that form or aspect of a verb in which the subject of the verb is represented as acting. See *active*, 8

activital (ak-tiv′ị-tạl), *a.* [*activity* + -*al*.] Relating to action as opposed to thought. *J. W. Powell.*

Full knowledge of aboriginal character may be gained only through study of both the *activital* habits and the intellectual systems of the aborigines; for in every stage of human development, action and thought are concomitant and complementary.
Rep. Bur. Am. Ethnol., 1897-98, p. 825.

activity, *n.* **6.** In *psychol.*, a self-determination of mental process, experienced or inferred, especially characteristic of the conative consciousness. The term has been variously and loosely used in modern psychology. In those systems which are still dominated by philosophical influences it denotes a primary and irreducible experience of self-causation or free initiative. To the psychologist who looks upon mind as a system of organic functions activity is given with the direction of the course of consciousness, knowingly or unknowingly, upon a determinate end: a particular mental process is the first term of a definite series, the remaining members of which it evokes in their order, while the series reaches its natural conclusion when the end is attained. In this sense, however, mental activity becomes practically synonymous with mental function itself, since the limiting cases of anoëtic sentience and involuntary movement are still self-determined in just so far as consciousness is in-

volved in them. Lastly, there are psychologists who, investigating mind as a stream of mental processes, predicate of it neither activity nor passivity, but hold that the antithesis of active and passive has no more place within psychology than the antithesis of subjective and objective. However, they still employ the terms, in obedience to traditional usage, as descriptive names of mental states or mental complexes; they speak, for example, of active attention, meaning attention that is [illegible] constituted; and of a feeling of activity which accompanies the state of active attention. Such a terminology, however harmless in intention, can only add to the existing confusion.

actol (ak'tol), *n.* [*act* + *-ol.*] A trade-name for silver lactate, $C_3H_5O_3Ag$, a substance used as a soluble antiseptic. It must be kept from the sunlight.

Actuality theory, in *psychol.*, the theory that psychology deals with the immediate and underived reality of experience, while the natural sciences, as abstracting from the knowing subject, deal only with mediate experience: opposed to the *theory of substantiality* or of *mental substance*. *W. Wundt* (trans.), Outlines of Psychol., p. [illegible].

actuarian (ak-tū-ā'ri-an), *a.* Same as *actuarial.*

acuate, *a.* **2.** Having an elongate smooth form pointed at one end; needle-shaped: applied to sponge-spicules.

II. *n.* An acuate monactinellid sponge-spicule.

aculeolus (ak-ū-lē'ō-lus), *n.*; pl. *aculeoli* (-lī). [NL. (L. as a doubtful reading), dim. of *aculeus*: see *aculeus*.] In *bot.*, a minute aculeus or prickle.

acuminate, *a.* (*c*) In *ichth.*, drawn out in a long point: said of the fins.

acupunctuate (ak-ū-pungk'tū-āt), *v. t.*; pret. and pp. *acupunctuated*, ppr. *acupunctuating*. [L. *acus*, needle, + *punctuare*, prick: see *punctuate*.] To prick with a needle, acupuncture.

acupunctuation (ak"ū-pungk-tū-ā'shon), *n.* Same as *acupuncturation.*

acuta (a-kū'tä), *n.* [NL.: see *acute*, *a.*] In *organ-building*, an unusually shrill mixture-stop.

Acutalis (ak-ū-tā'lis), *n.* [NL. (Fairmaire, 1846), < L. *acutus*, pointed.] A genus of tree-hoppers of the homopterous family *Membracidæ*. *A. dorsalis* is found in considerable numbers on grape-vines in the northern United States in July. It is known as the *black-backed tree-hopper*.

acuteness, *n.* (*c*) In *musical acoustics*, relative elevation of pitch in a sound or tone, produced by greater frequency of vibration: opposed to *gravity*. The higher the pitch, the greater is the acuteness.

acutilingual (a-kū-ti-ling'gwal), *a.* [L. *acutus*, sharp, + *lingua*, tongue.] Having a sharp-pointed tongue.

acutiplantar (a-kū-ti-plan'tär), *a.* [L. *acutus*, sharp, + *planta*, sole.] In *ornith.*, having the tarsus sharply ridged on its posterior face. *Ridgway*, Birds of North and Middle America, I. 24.

acutish (a-kū'tish), *a.* [*acute* + *-ish*[1].] Rather acute; specifically, in *bot.*, barely acute or verging toward an acute form.

acutorsion (ak-ū-tôr'shon), *n.* [L. *acus*, needle, + *torsio*(*n-*), twisting.] In *surg.*, an operation for arresting hemorrhage from a wounded artery by passing a needle beneath the vessel, twisting it, and passing it out over the vessel.

acutospinous (a-kū-tō-spī'nus), *a.* [L. *acutus*, sharp, + *spina*, spine.] Having sharp spines.

acyanoblepsia (a-sī'a-nō-blep'si-ä), *n.* Same as *acyanoblepsy.*

acyclic, *a.* **2.** In *dynam.*, not having the property of whirling or moving in circles.

> The system now behaves, as regards the co-ordinates $q_1, q_2, \ldots q_m$, exactly like the *acyclic* type there contemplated. *Encyc. Brit.*, XXVII. 570.

3. Irregular in course; not occurring with normal periodicity.—**4.** In *chem.*, containing no cycle or ring: said of organic compounds which contain no ring of atoms.—**Acyclic surface**, a surface such that any closed curve upon it can contract to a point without leaving the surface.

acyesis (a-si-ē'sis), *n.* [NL., < Gr. ἀ- priv. + κύησις, conception, < κυεῖν, conceive.] **1.** Inability to conceive; barrenness.—**2.** The condition of non-pregnancy.

acyl (as'il), *n.* [*ac*(*id*) + *-yl.*] A name introduced by Liebermann to designate an acid radical such as acetyl, C_2H_3O.

acylate (as'i-lāt), *v. t.*; pret. and pp. *acylated*, ppr. *acylating*. [*acyl* + *-ate*[1].] To introduce an acyl-group into; especially, to prepare an acyl derivative of an organic compound containing a hydroxyl- or amino-group.

acyrology (a-si-rol'ō-ji), *n.* [L. *acyrologia*, < Gr. ἀκυρολογία, < *ἀκυρολόγος, adj., < ἀκυρολογεῖν, speak incorrectly, < ἄκυρος, unauthorized, improper (< ἀ- priv. + κῦρος, authority), + λέγειν, speak.] Faulty diction. [Rare.]

Acystosporea (a-sis"tō-spō'rē-ä), *n. pl.* [NL., < Gr. ἀ- priv. + κύστις, bladder, + σπορά, seed (see *spore*).] A suborder of *Sporozoa*, of the order *Hæmosporidia*. It contains those forms in which the trophozoite is [illegible] simple body [illegible] typically [illegible] throughout the schizogonous cycle. An alternation of hosts occurs in many cases, schizogony taking place usually in a warm-blooded vertebrate host while sporogony occurs in an invertebrate host, usually an arthropod. See ★*Hæmosporidia.*

Acystosporidia (a-sis"tō-spō-rid'i-ä), *n. pl.* [NL., as *Acystospor-ea* + *-id-ia.*] A group of protozoan cell-parasites infesting certain vertebrates. They are found mainly in the red corpuscles, but also in the kidney, liver, and intestinal epithelium. In blood they cause hypertrophy of the corpuscles and diminution of the hemoglobin. They are associated with malaria in man and with Texas fever in cattle. See ★*Hæmamœba* and ★*Gymnosporidia*.

ad, *v.* A simplified spelling of *add.*

Ada (ā'dä), *n.* [NL., appar. from the feminine name *Ada.*] A genus containing two species of epiphytal orchids native to northern South America, sometimes grown in choice collections under the same conditions as *Odontoglossum.*

adactylia (a-dak-til'i-ä), *n.* [NL., < Gr. ἀ- priv. + δάκτυλος, finger or toe: see *dactyl*.] In *teratol.*, a congenital lack of some or all of the fingers or toes.

adactylism (a-dak'til-izm), *n.* Same as ★*adactylia.*

adagio, *adv.* and *a.* Special varieties of movement or style are indicated by adding other terms, as: *adagio assai* or *molto*, very slow; *adagio non troppo*, slow, but not too much so; *adagio cantabile* or *sostenuto*, slow, with a flowing or sustained movement; *adagio patetico*, slow and with pathos; *adagio pesante*, slow, with heavy accents; *adagio religioso*, slow and in the church style; etc.

adalid (ad-a-lēd'), *n.* [Sp., a chief or commander, < Ar. *al-dalīl*, < *al*, the, + *dalīl*, leader, guide.] A leader or guide. *Miss Yonge*, Christians and Moors in Spain, p. 206.

Adam, *n.*—**Adam and Eve.** (*c*) A colloquial name for *Sempervivum tectorum*, the houseleek.—**Adam's apple.** (*d*) A name given to the crape jasmine or East Indian rosebay, *Tabernæmontana coronaria*. See *crape jasmine*, under ★*jasmin*.—**Adam's fig.** See *fig*².

Adamantine layer or **substance,** the enamel of the teeth.

adamantoblast (ad-a-man'tō-blast), *n.* [Gr. ἀδάμας, adamant, + βλαστός, germ.] In *embryol.*, one of the cells which produce the enamel of the teeth. Same as ★*ameloblast.*

adamellite (ad-a-mel'īt), *n.* [(Monte) *Adamello*, in the middle Alps, + *-ite*².] In *petrog.*, a name proposed by Cathrein (1890) as a substitute for *tonalite*, and described as a granular igneous rock of the group intermediate between granite and diorite, containing orthoclase and plagioclase feldspars with hornblende and biotite. Brögger uses the term for highly quartzose monzonites.

Adam Kadmon (ad'am kad'mōn). [Heb. *'ādām ḳadmōn*, *'ādām ha-ḳadmōnī*, 'the first man.'] In cabalistic doctrine, the primordial man, the image of God, emanating from the En-soph, the Infinite, and representing the Eser Sephiroth, the ten attributes of the deity. See ★*Sephiroth* and ★*Nachash Hakadmoni.*

Adamkiewicz's reaction. See ★*reaction.*

Adams-Stokes disease. Same as *Stokes-Adams* ★*disease.*

adanal (ad-ā'nal), *a.* [L. *ad*, to, + *anus*, anus.] Extending to the anus: as, the *adanal* plate, in *Arachnida*, a plate-like sclerite reaching to the anus.

adangle (a-dang'gl), *adv.* [*a*³ + *dangle.*] Hanging loosely; in a dangling position or condition; dangling. *Browning*, Men and Women, i. 37. *N. E. D.*

Adapisoricidæ (ad"a-pi-sō-ris'i-dē), *n. pl.* [NL., < *Adapisorex* (< *Adapis*, a genus of monkeys, + *Sorex*, a genus of insectivores) + *-idæ.*] A family of extinct insectivorous mammals related to the moles, but more highly specialized. The type genus, *Adapisorex*, about the size of a hedgehog, is from the Lower Eocene of Reims, France.

adapoid (ad'a-poid), *a.* [*Adap-is* + *-oid.*] Related to the *Adapidæ.*

adapt, *v. t.* **4.** Same as ★*immunize.*

> Bordet heated for half an hour to 56° C. some of the lytic serum secured by *adapting* the guinea-pig through subcutaneous injections to the red blood cells of the rabbit. He found that it had completely lost its new lytic power. *Med. Record*, Feb. 14, 1903, p. 246.

adaptation, *n.* **4.** Same as ★*immunization.*—**Adaptation product.** See ★*adaptation-product.*—**Constitutional adaptation**, constitutional impregnation. See ★*immunity.*—**Functional adaptation**, [illegible] in its structure. The notion of functional adaptation as [illegible] that an organism can do things for which it has no adaptive machinery. *H. E. Crampton*, Biometrika, March–July, 1904, p. 114.—**Law of adaptation**, in *sociol.*, the assumption that social groups acting upon one another universally adapt themselves to a certain end, namely, further social development.—**Ontogenetic adaptation**, an adaptive change which [illegible] its own activity and is not transmitted to descendants, as contrasted with a change which is congenital and is transmitted to descendants; a useful acquired character. *H. F. Osborn*, [illegible].—**Visual adaptation**, the adjustment of the eye, by the pupillary mechanism and by retinal changes, to a change in the color or brightness of its surroundings. [illegible] adapted either to a change of the total field of vision (*general adaptation*) or to local and partial changes within a given field (*local adaptation*). Adaptation itself may be partial or complete.

adaptationist (ad-ap-tā'shon-ist), *n.* One who believes that social phenomena must be explained as adaptations to environment and accounted for by collective causes rather than by individual efforts.

adaptation-product (ad-ap-tā'shon-prod"ukt), *n.* A substance produced in the body of an animal of one species by immunization with cells or cellular products derived from the body of an animal of an alien species. Also called *reaction-substance*. It has a specific effect upon the body used in immunization which, generally speaking, is antagonistic to the immunizing substance. In this relation also called *antibody* or *antisubstance*. Examples are the various antitoxins, cytotoxins, agglutinins, and precipitins. See ★*immunity.*

adapted (a-dap'ted), *p. a.* Specifically, resulting from immunization: as, an *adapted* serum.

adapter, *n.* **6.** In *photog.*, an attachment to a camera by means of which plates of sizes other than those for which the camera is designed may be used.

adaxial (ad-ak'si-al), *a.* [L. *ad*, to, + *axial.*] In *bot.*, in a plane facing the axis. See the extract.

> The ovaries [in Casuarina] are flattened laterally, in contrast to the *adaxial* flattening of the wings in Pinus. *Bot. Gazette*, XXXVI. 104.

A. D. B. An abbreviation of *Artium Domesticarum Baccalaurea*, Bachelor of Domestic Arts, a degree conferred by some institutions upon women.

A. D. C. 1. An abbreviation of *Aide-de-camp.*—2. An abbreviation of *Anodic Duration Contraction*: used in electrotherapy.

add, *v. t.*—**Added part** or **voice**, in *music*, a part or voice supplementary to the principal melody or to the essential harmony. Thus in polyphonic writing a counterpoint may be called the *added part* or *voice*, in distinction from the cantus; or when a solo part is combined with a chorus it may be called the *added part* or *voice*.

addental (a-den'tal), *n.* [*ad-* + *dental.*] In *ichth.*, one of the bones of the upper jaw, joined to the premaxillary in front: synonymous with *maxillary.*

adder[1], *n.*—**Banded adder,** *Bungarus fasciatus* of southern Asia.—**Berg adder,** *Clotho* (or *Vipera*) *atropos* of South Africa.—**Blowing-adder,** a harmless hog-nosed snake of North America belonging to the genus *Heterodon.*—**Horned adder,** *Clotho cornuta* of North Africa: not to be confounded with the horned viper, *Cerastes cornuta*, also of North Africa, but more abundant and more deadly.

adder's-tongue, *n.* **2.** A name sometimes given to the hart's-tongue, *Phyllitis Scolopendrium*. See *Scolopendrium.*—**3.** Any of the eastern species of *Erythronium* or dog-tooth violet. The white adder's-tongue is *E. albidum.*—**Adder's-tongue family**, the *Ophioglossaceæ*, including *Ophioglossum*, the adder's-tongue fern.

Addie's process. See ★*process.*

addigital (a-dij'i-tal), *a.* and *n.* [*ad-* + *digital.*] **I.** *a.* In *ornith.*, attached to a digit (the third).—**Addigital remex**, the primary attached to the first phalanx of the third digit of a bird's wing.

II. *n.* Same as ★*addigital remex.*

addiment (ad'i-ment), *n.* [NL. **addimentum*, < L. *addere*, add.] A thing added; an additament; a complement; specifically, same as ★*complement*, 8. See ★*alexin.*

> Dr. Longcope gives a study of the bacteriolytic action of human blood in disease, and Dr. Walker surveys the various factors in bacteriolytic action, from which he deduces the fact that the complement or *addiment* is a product of disintegration of leucocytes. *Nature*, Feb. 19, 1903, p. 373.

adding-machine, *n.* Its different forms depend either on the totalizing principle, on the principle of a train of gears whose ratio is 10 to 1, or on both. In a convenient form the figures are arranged like the keys of a type-writer in vertical rows from 1 to 9. By depressing the key for the proper figure in the row of units, tens,

hundreds, etc., the result of the addition appears in figures. Such machines are much used in banks, offices, and factories.

addition, *n.*—**Algebraic addition,** addition in which the signs (+ and −) of the quantities to be added are considered. The result is the difference between the sums of the positive and of the negative quantities, with the sign of the greater.—**Relative addition,** such a combination of two relative terms as will produce a third term expressing the relation in which any relate, A, of the first term added would stand to any correlate, C, of the second term added if, and only if, every object in the universe, say X, were either such that A was in the first relation to X, or such that X was in the second relation to C. For example, in the universe of whole numbers, the number 4 stands to the number 2 in the relation which results from the relative addition of "is prime to" to "is a multiple of," since 4 is prime to every number unless to a multiple of 2. This operation was introduced into logical algebra in 1882 by C. S. Peirce, and has generally been employed, although Whitehead and others hold it to be of little utility.

addition-compound (a-dish′on-kom′pound), *n.* Same as ★*addition-product.*

addition-product (a-dish′on-prod″ukt), *n.* In *chem.*, a compound formed by the direct addition of one element or compound to another. It is contrasted with *substitution-product,* in which one element or group is substituted for another. Also called *addition-compound.*

Additítious force, in *astron.*, the radial component of a disturbing force when it increases the attraction of a satellite toward its primary, especially of the moon toward the earth: opposed to *ablatitious force,* which diminishes the attraction. The force is *additítious* when the satellite is in quadrature with the disturbing body (usually the sun), *ablatitious* when in syzygy.

addograph (ad′ō-gräf), *n.* [L. *addere,* add, + Gr. γράφειν, write.] An adding-machine with a device for recording results on a type-writer.

address, *n.*—**Forms of address.** See ★*form.*

addressing-machine, *n.* These machines are of several kinds: (*a*) A small apparatus, operated by hand, for cutting from a prepared paper ribbon of printed addresses one address at a time and pasting it on the wrapper. (*b*) A machine for stenciling addresses, etc., on wrappers or cards. The stencils, made on parchment and reinforced by a cardboard frame, are prepared by a perforating-device attached to a type-writer. When ready, the stencils are placed in alphabetical order in the hopper of a special form of stenciling-press and automatically fed to the inking-roller and then passed to the press, which forces enough ink through the stencil to make a clear impression on the wrapper. The stencils are then relieved of surplus ink and delivered to another hopper, which retains them in regular order ready for use again. The machine stencils the addresses on a continuous roll of paper, and cuts off, counts, and delivers the wrappers in the same order as that of the stencils. (*c*) A press for printing addresses, etc., from embossed type. The addresses are embossed in a special form of power type-writer on ribbons of type-metal, and are then, in a special machine, cut apart and fitted with locking hinges, and made up by hand into chains or ribbons. A ribbon on a spool is placed in a power printing-press and automatically fed to the inking-rollers and to the press; each addressed type plate is printed in turn, and the chain is rewound on another spool. The addresses are printed on a continuous roll, cut, and counted in regular order. A smaller machine of this type is fed by hand and operated by foot-power.

addressograph (ạ-dres′ō-gräf), *n.* [*address* + Gr. γράφειν, write.] A special form of foot-power addressing-machine employing endless chains of embossed metal type or chains of movable rubber type. See ★*addressing-machine.*

ade (ād), *n.* [Detached from *lemonade, limeade, orangeade.*] A drink of the lemonade or orangeade class. [Colloq.]

They make a superior *ade* which rivals lemon or lime ¡*ade.* *Science,* Feb. 13, 1903, p. 263.

Adelaide ruby, sovereign. See ★*ruby,* ★*sovereign.*

Adelea (ad-ē-lē′ä), *n.* [NL. (A. Schneider, 1875), appar. (irreg.) < Gr. ἀδηλος, not manifest, unseen.] A genus of *Coccidia,* of the family *Polysporocystidæ,* having the dizoic spores spherical or compressed and the sporocysts smooth. The various species are parasitic in myriapods and insects.

adelite (ad′ē-līt), *n.* [Gr. ἀδηλος, not manifest, + *-ite*[2]. The allusion is to the indistinct crystallization.] A basic arseniate of calcium and magnesium, of a grayish color, occurring in embedded grains and rarely in monoclinic crystals: found in Sweden.

adeloceratous (ad″ē-lō-ser′ạ-tus), *a.* Same as ★*adelocerous.*

adelocerous (ad-ē-los′ẹ-rus), *a.* Having concealed antennæ. Same as *cryptocerous.*

Adelochorda (ad″ē-lō-kôr′dä), *n. pl.* [NL., < Gr. ἀδηλος, not evident, + χορδή, chord.] A subphylum and class of *Chordata* including the genera *Balanoglossus, Rhabdopleura,* and *Cephalodiscus.* The distinctive features of the group are the presence of the presumed rudimentary representative of a notochord and of the gill-slits. The group is not homogeneous, and the affinities of its members to *Chordata* are denied by some zoölogists.

adelomorphic (ad″ē-lō-môr′fik), *a.* [Gr. ἀδηλος, not manifest, + μορφή, form.] A term applied to the so-called chief or central cells of the gastric mucosa, which supposedly furnish the pepsin and chymosin. *W. D. Halliburton,* Chemical Physiology and Pathology, p. 633.

Adelops (ad′ē-lops), *n.* [NL. (Tellkampf, 1844), < Gr. ἀδηλος, not evident, + ὄψ, eye.] A genus of beetles of the family *Silphidæ.* They inhabit caves, where their larvæ feed upon the dung of bats and other cave-inhabiting animals. About 30 species are known, mainly from European caves. *Adelops hirtus* lives in the Mammoth Cave of Kentucky.

Adelosiphonia (ad″ē-lō-si-fō′ni-ä), *n. pl.* [NL., < Gr. ἀδηλος, not evident, + σίφων, pipe.] A group or section of anomalodesmaceous pelecypod mollusks, or *Acephala.* They constitute a subdivision of the superfamily *Anatinacea* and comprise those mollusks which have short siphons and a well-defined lithodesma. The genus *Pandora* is an example.

adelphiarchal (ạ-del′fi-är-kạl), *a.* [Irreg. < Gr. ἀδελφός, brother, + ἀρχός, ruler, + *-al.*] Relating to a form of government exercised by the men assembled in council, the members of the council being considered as brothers. See the extract.

In this way the women sitting in clan council constituted the primary legislative body, while their brothers sitting in tribal council formed a senate or final legislative body whose decisions were binding on the executives of clans and tribes; so that the social organization may be classed as *adelphiarchal* (like that of the Seri Indians described in earlier reports) in principle, though largely patriarchal in detail. *Smithsonian Rep.,* 1901, p. 77.

adelphic (ạ-del′fik), *a.* [Gr. ἀδελφικός, brotherly or sisterly, < ἀδελφός, brother, ἀδελφή, sister.] In *math.*, pertaining to the connectivity of a surface.—**Adelphic order,** in *math.*, the connectivity.

adelphogamy (a-del-fog′ạ-mi), *n.* [Gr. ἀδελφος, brother, + γάμος, marriage.] That form of polyandry in which a number of brothers have a wife in common. *J. W. Powell.*

Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or *adelphogamy.*
Rep. Bur Am. Ethnol., 1895-96, p. 281.

adelphotaxy (ạ-del′fō-tak-si), *n.* [Gr. ἀδελφός, brother, + τάξις, disposition, order.] In *biol.*, the movement of certain motile cells in relation to each other: a term proposed by Hartog in 1888.

adempted (a-demp′ted), *p. a.* Same as *adeemed.* See *adeem.*

adenase (ad′e-nās), *n.* An autolytic ferment found in certain glands which transforms adenin into hypoxanthin.

adendric (a-den′drik), *a.* [*a-*[18] + *dendron* + *-ic.*] Same as ★*adendritic.*

adendritic (a-den-drit′ik), *a.* [*a-*[18] + *dendritic.*] In *neurol.*, having no dendrites: said of nerve-cells which have only the neuraxon or axis-cylinder process.

adenin (ad′e-nin), *n.* [Gr. ἀδήν, gland, + *-in*[2].] One of the purin or xanthin bases, $C_5H_5N_5$. It has been obtained from the lymph glands, spleen, thymus gland, kidneys, etc.

adenocheirus (ad″e-nō-kī′rus), *n.*; pl. *adenocheiri* (-rī). [NL., < Gr. ἀδήν, gland, + χείρ, hand.] In *Turbellaria,* one of the outgrowths from the atrial walls in the genus *Artioposthia* which serve as accessory copulatory organs. See ★*adenodactylus.*

adenochondrosarcoma (ad″e-nō-kon″drō-särkō′mä), *n.*; pl. *adenochondrosarcomata* (-mạ-tä). A mixed tumor containing the elements of adenoma, chondroma, and sarcoma.

adenocyst (ad′e-nō-sist), *n.* Same as ★*adenocystoma.*

adenocystic (ad″e-nō-sis′tik), *a.* Same as ★*adenocystomatous.*

adenocystoma (ad″e-nō-sis-tō′mä), *n.*; pl. *adenocystomata* (-mạ-tä). [NL., < Gr. ἀδήν, gland, + κύστις, bladder (see *cyst*), + *-oma.*] An adenoma containing cystic cavities.

adenocystomatous (ad″e-nō-sis-tō′mạ-tus), *a.* Relating to or of the nature of adenocystoma.

adenodactylus (ad″e-nō-dak′ti-lus), *n.*; pl. *adenodactyli* (-lī). [NL., < Gr. ἀδήν, gland, + δάκτυλος, finger.] In *Turbellaria,* one of the outgrowths from the atrial walls in the genus *Artioposthia* which serve as accessory copulatory organs. See ★*adenocheirus.*

adenofibroma (ad″e-nō-fī-brō′mä), *n.*; pl. *adenofibromata* (-mạ-tä). A glandular tumor consisting largely of an overgrowth of fibrous tissue.

adenoid, *a.*—**Adenoid disease,** pseudoleucocythemia.—**Adenoid tumor.** Same as *adenoma.*—**Adenoid vegetations,** masses of lymphoid tissue, similar in structure to the tonsils, situated at the posterior wall of the upper end of the pharynx. When hypertrophied, as they often are in children, these vegetations may obstruct the passage of air through the posterior nares and so necessitate mouth-breathing. Also called *pharyngeal tonsil* and *Luschka's tonsil.*

II. *n.* An adenoid growth; specifically, an adenoid vegetation.

adenolipoma (ad″e-nō-li-pō′mä), *n.*; pl. *adenolipomata* (-mạ-tä). [NL., < Gr. ἀδήν, gland, + λίπος, animal fat, + *-oma.*] A glandular tumor consisting largely of fatty substance.

adenolymphoma (ad″e-nō-lim-fō′mä), *n.*; pl. *adenolymphomata* (-mạ-tä). [NL., < Gr. ἀδήν, gland, + L. *lympha,* lymph, + *-oma.*] Same as *lymphadenoma.*

Adenoma destruens. [L., destructive adenoma.] An adenoma, usually of the stomach, intestines, or uterus, which has taken on malignant characteristics. Also called *adenocarcinoma.*

adenomalacia (ad″e-nō-mạ-lā′si-ä), *n.* [NL., < Gr. ἀδήν, gland, + μαλακία, softness, < μαλακός, soft.] Pathological softening of glands.

adenomatome (ad-e-nom′ạ-tōm), *n.* [Gr. ἀδήν, gland, + -τομος, < ταμεῖν, cut.] An instrument employed in the removal of adenoid growths.

adenomyxoma (ad″e-nō-mik-sō′mä), *n.*; pl. *adenomyxomata* (-mạ-tä). [NL., < Gr. ἀδήν, gland, + μύξα, mucus, + *-oma.*] A tumor composed of glandular and mucous tissue.

adenomyxosarcoma (ad″e-nō-mik′sō-särkō′mä), *n.*; pl. *adenomyxosarcomata* (-mạ-tä). [NL., < Gr. ἀδήν, gland, + μύξα, mucus, + σάρξ (σαρκ-), flesh, + *-oma.*] A tumor composed of glandular, mucous, and sarcomatous elements.

adenopetaly (ad″e-nō-pet′ạ-li), *n.* [Gr. ἀδήν, a gland (nectary), + πέταλον, leaf (petal).] The transformation of nectaries into petals. *Morren.*

adenophlegmon (ad″e-nō-fleg′mon), *n.* [Gr. ἀδήν, gland, + φλεγμονή, inflammation.] Acute inflammation of a gland.

adenopodous (ad-e-nop′ō-dus), *a.* [Gr. ἀδήν, gland, + πούς (ποδ-), foot, + *-ous.*] In *bot.*, having the petiole or peduncle glandular.

adenoscirrhus (ad′e-nō-sir′us), *n.*; pl. *adenoscirrhi* (-rī). [NL., < Gr. ἀδήν, gland, + *scirrhus.*] A hard cancer which involves a gland.

adenosclerosis (ad″e-nō-sklē-rō′sis), *n.* [NL., < Gr. ἀδήν, gland, + σκλήρωσις, a hardening: see *sclerosis.*] Induration of a gland.

adenostemonous (ad″e-nō-stē′mō-nus), *a.* [Gr. ἀδήν, gland, + στήμων, taken for 'stamen,' + *-ous.*] In *bot.*, having glandular stamens.

adenyl (ad′e-nil), *n.* [*aden(in)* + *-yl.*] The group $C_5H_4N_4$, formerly assumed to be present in adenin and hypoxanthin. This name is no longer used, but these and related compounds are spoken of as derivatives of ★*purin* (which see).

adenylic (ad-e-nil′ik), *a.* [*adenyl* + *-ic.*] Relating to adenyl.—**Adenylic acid,** a nucleinic acid obtained from the thymus gland. On decomposition it yields guanine, adenin, cytosin, and thyminic acid.

Adeps lanæ, purified fat of sheep's wool, containing not over 30 per cent. of water.

adermia (a-dēr′mi-ä), *n.* [NL., < Gr. ἀδερμος, without skin, < ἀ- priv. + δέρμα, skin.] Partial or complete congenital absence of the skin.

adessive (ad-es′iv), *n.* [L. *ad,* at, + *esse,* be, + *-ive.* Cf. *abessive.*] In *gram.*, a syntactic case expressing position at some spot or locality. *A. S. Gatschet,* Grammar of the Klamath Language, p. 486.

Adetopneusia (ad″e-top-nū′si-ä), *n. pl.* [NL., < (?) Gr. ἀδετος, unbound, loose, + πνεῦσις, a blowing, < πνεῖν, blow, breathe.] An order of *Stelleroidea,* the *Cryptozonia.*

adetopneustic (ad″e-top-nū′stik), *a.* [Gr. ἀδετος, unbound, loose, + πνευστικός, < πνεῖν, breathe.] Bearing papulæ or dermal branchiæ beyond the abactinal surface.

ad eund. An abbreviation of the Latin *ad eundem gradum,* to the same degree.

adevism (ä′dā-vizm), *n.* [Skt. *ádeva,* hostile to the gods, < *á-* priv. + *deva,* a god (see *deva*), + *-ism.*] Hindu 'atheism' in the sense of a denial of the old 'devas': a proposed term distinguished from *atheism.*

ad fin. An abbreviation of *ad finem* (which see).

adgustal (ad-gus′tạl), *n.* [L. *ad,* to, + *gustus,* taste (suggesting 'palate'), + *-al.*] In *ichth.*, a name given by Geoffroy to the pterygoid bone which forms part of the palatoquadrate arch.

adha (äd′hä), *n.* [Nepalese *ādhā,* half.] A silver coin of Nepal equal to half a muhr or one fourth of a rupee.

adharma (ạ-där′mä), *n.* [Skt.] Unrighteousness; injustice: personified in Hindu mythology as the destroyer of all things.

adheat (ad-hēt′), *v. t.* [*ad-* + *heat.*] To superheat (a quantity of steam) by adding to it a quantity of very highly superheated steam.

adherence, *n.* **6.** In the *theory of aggregates*, the aggregate of all those points of a point-aggregate which are not limiting points (that is, limits of endless series of points): called the *adherence of the point-aggregate*; the aggregate of all the remaining points is called its *coherence*.

adhesion, *n.* **10.** An expression of, or the act by which one expresses, acquiescence in, adherence to, and support of some statement, declaration, or proposal; assent; concurrence.

Up to June 30, 1,787 *adhesions* to the congress had been received. *Science*, July 29, 1904, p. 157.

Adhesion weight, the weight which is producing friction; specifically, the weight on the driving wheels of a locomotive.—**Primary adhesion, secondary adhesion.** Same as ★*union by first intention* and ★*union by second intention.*—**Traction of adhesion.** Same as *friction of rolling* (which see, under *friction*).

adhesional (ad-hē′zhon-al), *a.* [*adhesion* + *-al.*] Of the nature of or depending upon adhesion: applied specifically to the action of locomotives when the smooth driving-wheel, running on a plane rail, is prevented, through the weight of the engine, from slipping on the rail by its adhesion thereto. When the power of the cylinder applied to turn the wheel exceeds this effect of adhesion, and friction of motion ensues by the slipping of the wheel on the rail, the tractive power becomes less. When the grades become too steep for adhesional traction because the cylinder-diameter necessary to overcome the resistance will cause the wheels to slip, the tractive effort must be exerted through toothed gears meshing into a rack or toothed rail, while the weight may be still carried on smooth rails by ordinary wheels.

adhesion-rail (ad-hē′zhon-rāl), *n.* In *railroading*, a traction-rail as distinguished from a guard-rail or a third rail; the ordinary rail of a track. Sometimes called *service-rail* and *stock-rail*.

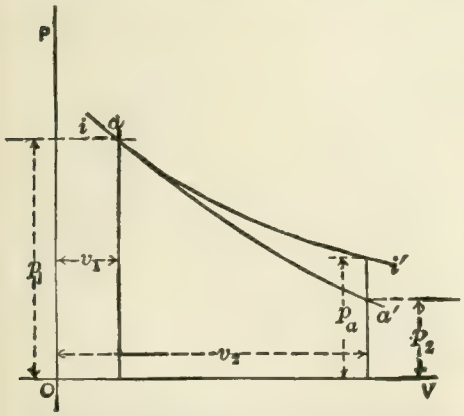
adhesiv, *a.* A simplified spelling of *adhesive.*

Adhesive papilla. See ★*papilla.*

adhvaryu (ad-vär′yö), *n.* [Skt. *adhvaryú*, < *adhvará*, religious ceremony.] A Brahman priest who assists in reciting the prayers of the Yajur-Veda and performs manual labor at sacrifices.

adiabat (ad′i-a-bat), *n.* [Gr. ἀδιάβατος, not to be passed over: see *adiabatic.*] An adiabatic curve or line.

Adiabatic compression, compression exerted or occurring under conditions in which heat neither leaves nor enters the substance compressed.—**Adiabatic diagram,** a graphic method of representing by adiabats the changes as to temperature, pressure, and condition experienced by a unit mass of gas by virtue of any possible adiabatic change. The adiabatic diagrams for moist air by Hertz (1884) and Neuhoff (1903), and Clapeyron's indicator-curve of the steam-engine, are familiar examples.



Adiabatic Diagram, the curve *a a′* showing a lower pressure at the end of expansion than given for the isothermal diagram *i i′* illustrates the typical relations of pressure and volume. Horizontal abscissas proportional to volumes (V, *v*); vertical ordinates proportional to pressures (P, *p*); *O*, origin.

adiagnostic (a-dī-ag-nos′tik), *a.* [*a-*18 + *diagnostic.*] Not diagnostic; specifically, in *petrog.*, a term, proposed by Zirkel (1893), applied to the phanerocrystalline texture of rocks when the mineral particles, though recognizable, are not specifically determinable without special test: opposed to ★*eudiagnostic.*

Adianthidæ (ad-i-an′thi-dē), *n. pl.* [NL., < *Adianthus*, a genus (for * *Adiantus*, < Gr. ἀδίαντος, unwetted: see *Adiantum*), + *-idæ.*] A family of extinct ungulate mammals of the suborder *Liopterna*, found in the Eocene of Patagonia.

adiantiform (ad-i-an′ti-fôrm), *a.* [NL. *Adiantum*, genus of ferns, + L. *forma*, form.] In *bot.*, having the form or character of *Adiantum* or maidenhair. *Encyc. Brit.*, XXXI. 417.

adiaphanous (ad-i-af′a-nus), *a.* [*a-*18 + *diaphanous.*] Not transparent; opaque.

adiaphon (ad′i-a-fŏn), *n.* [G., < *adiaphonon.*] A form of pianoforte (patented in 1882) in which the sound is produced from tuning-forks instead of from strings: essentially similar to the older adiaphonon.

adiaphonon (ad-i-af′ō-non), *n.* [G., < Gr. ἀ- priv. + διάφωνα, dissonant: see *diaphony.*] A form of pianoforte, invented by Schuster in 1819, in which the sound is produced from steel bars instead of from strings.

adiaphoretic (ad″i-af-ō-ret′ik), *a.* and *n.* [*a-*18 + *diaphoretic.*] **I.** *a.* Relating to, produced by, or causing diminution or suppression of perspiration.

II. *n.* An agent which diminishes or suppresses perspiration.

adiathermancy (a-dī-a-thėr′man-si), *n.* [*a-*18 + *diathermancy.*] The character of being adiathermanous; the property by virtue of which a substance absorbs the invisible heat-rays of the spectrum: opposed to *diathermancy.*

adiathermanic (a-dī-a-thėr′man-ik), *a.* [*a-*18 + *diathermanic.*] Same as *adiathermic.*

adiathetic (a-dī-a-thet′ik), *a.* [*a-*18 + *diathetic.*] In *pathol.*, occurring without reference to a preëxisting constitutional tendency or diathesis.

Adibuddha (ä-di-bö′dä), *n.* [Modern Skt., < Skt. *ādi*, the beginning, + *Buddha*, Buddha.] The first Buddha.

adillah (ä-dil′ä), *n.* A money of Malwa, equal to half a pice.

Adimeridæ (ad″i-mer′i-dē), *n. pl.* [NL., < *Adimerus* + *-idæ.*] A family of clavicorn beetles. In these beetles the tarsi appear to have but two joints, a broad first and a long terminal one, but they have in fact two minute joints between, hidden by the broad basal joint. This structure is unique among the *Coleoptera* and is found only in the American genus *Adimerus.*

Adimerus (a-dim′e-rus), *n.* [NL. (Sharp, 1894), < Gr. ἀ- priv. + διμερής, two-parted, two-jointed.] The typical and sole genus of beetles of the family *Adimeridæ*, consisting of several Central and South American species.

Adinia (a-din′i-ä), *n.* [NL., < Gr. ἀδινός, crowded, loud.] A genus of killifishes of the family *Pœciliidæ*, found in the Rio Grande region.

adipogenic (ad″i-pō-jen′ik), *a.* [L. *adeps* (*adip-*), fat, + Gr. *-γενής*, -producing.] Having the property of producing or of storing fat: as, the *adipogenic* function of the digestive gland in invertebrates. *Jour. Roy. Micros. Soc.*, Feb., 1905, p. 47.

adipogenous (ad-i-poj′e-nus), *a.* [L. *adeps* (*adip-*), fat, + Gr. *-γενής*, -producing.] Fat-producing; productive of adipose.

adipohepatic (ad″i-pō-hē-pat′ik), *a.* [L. *adeps* (*adip-*), fat, + Gr. ἡπατικός, of the liver: see *hepatic.*] Same as ★*adipogenic. Jour. Roy. Micros. Soc.*, June, 1904, p. 303.

adipolytic (ad″i-pō-lit′ik), *a.* [L. *adeps* (*adip-*), fat, + Gr. λυτός, < λύειν, dissolve.] See ★*lipolytic.*

adipomatous (ad-i-pom′a-tus), *a.* [*adipoma*(*t-*) + *-ous.*] Same as *lipomatous.*

Adipose degeneration. See ★*degeneration.*—**Adipose lobe,** a small appendage springing from the base of the ventral fin of some fishes, as the salmon and the trout. Usually known as an *auxiliary scale.*

Adiposis dolorosa, a disease of the nervous system marked by the formation of irregular masses of fat beneath the skin, especially that of the arms and legs, which are the seat of considerable pain. Also called *Dercum's disease.*

Adiposorex (ad″i-pō-sō′reks), *n.* [L. *adeps* (*adip-*), fat, + *sorex*, a shrew-mole.] A genus of small shrew-moles from the Lower Eocene.

Adiscota (ad-is-kō′tä), *n. pl.* [NL., < Gr. ἀ- priv. + δίσκος, disk, + *-ota* (see *-ote*).] A group of dipterous insects. It was based by Weismann upon developmental characters, and includes those forms in which the parts of the fly's head are developed in close relation to those of the larva.

aditus (ad′i-tus), *n.*; pl. *aditus.* [NL., < L. *aditus*, approach: see *adit.*] An approach; an adit. Specifically: (*a*) In sponges, same as *prosodus.* (*b*) In *anat.*, an opening leading into a cavity.—**Aditus ad antrum,** the communication between the tympanum and the mastoid cells.—**Aditus ad infundibulum,** the opening between the infundibulum and the third ventricle of the brain.—**Aditus laryngis,** the superior opening of the larynx, or rima glottidis.

adj. An abbreviation of *Adjudged, Adjourned.*

adjectiv, *a.*, *n.*, and *v. t.* A simplified spelling of *adjective.*

Adjectival phrase, a phrase that is or may be used with the force of an adjective: as, a *much to be desired* result; a *never to be forgotten* occasion.

adjective, *n.*—**Participial adjective,** a participle used in an adjective relation, as in the phrases a *running* stream, a *cultivated* field, a *practised* hand, *molten* iron.—**Proper adjective,** an adjective derived from a proper name, as *American* from *America*, *Calvinistic* from *Calvin*, *Newtonian* from *Newton.*

adjectivism (ad′jek-tiv-izm), *n.* Tendency to an excessive use of adjectives. *G. S. Hall*, Adolescence, II. 467.

adjectivity (ad-jek-tiv′i-ti), *n.* [*adjective* + *-ity.*] Tendency to a free use of adjectives. *Athenæum*, April 14, 1894, p. 469.

Adjoint curve. Same as *adjunct* ★*curve.*

adjudicative (a-jö′di-kā-tiv), *a.* That adjudicates or adjudges; that embodies the award, decision, or decree in an adjudication or adjudgment: as, the *adjudicative* part of a sentence. [Rare.] *N. E. D.*

Adjunct curve. See ★*curve.*

adjunction, *n.* **4.** In *math.*, the process of obtaining the domain $\Omega(a)$ from the domain Ω by adding to it the number a which does not already belong to it, and adding also all numbers arising from a finite number of additions, subtractions, multiplications, and divisions involving a and all numbers in the domain Ω. See the extract.

By the *adjunction* of i to the domain of rational numbers $\Omega_{(1)}$ we obtain the domain of complex numbers $\Omega_{(1,i)}$. *F. Cajori*, Theory of Equations, p. 135.

adjurn, *v.* A simplified spelling of *adjourn.*

Adjusted drainage. See ★*drainage.*

adjuster, *n.* **2.** In *hardware*, any appliance used to regulate the movement of a blind, sash, hitching-strap, shaft, or other moving object in a wagon, house, etc.: as, a casement-*adjuster*, a pole-*adjuster*, a window-stop *adjuster.*—**3.** In *insurance*, an officer of an insurance company whose duty is to determine the amount to be paid under a policy of insurance when a partial loss has been sustained.

In Great Britain they are for the most part members of the Average *Adjusters'* Association, a body which has done and is doing much careful work with a view to making and keeping the practice uniform and in accord with right principles. *Encyc. Brit.*, XXVI. 32.

adjustment, *n.* **6.** In an exacter sense than 2, the operation of modifying the relations between a set of things or other objects so as to make these relations conform to some requirement, especially so as to bring them into conformity with relations between elements of a plan or purpose. Thus the adjustment of a transit instrument consists, first, in turning it round a vertical axis until its axis of rotation (in using it) is nearly enough in the plane of the prime vertical; second, in raising or lowering one end of the latter axis until it is nearly enough in the plane of the horizon; and, third, in shifting the wires until the collimation is near enough to zero. **7.** Specifically, the modification of a set of statements so as to bring them into harmony with one another and with some proposition treated as absolutely true. Thus in geodesy, after an extensive triangulation is complete it will be found that the observed values of the angles do not exactly agree with the principles of geometry and the assumed figure of the earth, which would give rise to much inconvenience. Accordingly by an elaborate series of modifications skilful computers modify the values so that the sum of the squares of all the changes shall be the least possible required to bring the values into agreement with the requirements; and this operation is termed the *adjustment of the triangulation.* Owing to the fact that the rules are derived from the calculus of probabilities, and that the adjusted values are the most probable that can be assigned, it might be supposed that the purpose was merely to ascertain the most probable values; but the superiority of the adjusted values in that respect is very small and the major consideration is consistency. **8.** In *biol.*, a change which is brought about in a living being by its own activity and is not transmitted to descendants, as contrasted with a change which is congenital and hereditary; an acquired character. *J. M. Baldwin*, Development and Evolution, p. 142.—**Methods of adjustment,** in *psychophys.*, a group of methods employed for the determination of the relation between stimulus and sensation. The term is used in two senses: (*a*) for methods in which the observer himself varies a given stimulus until it appears equal to a second, constant stimulus, for example, Fechner's method of average error (see ★*method*); (*b*) for methods in which a variable stimulus is adjusted, whether by experimenter or observer, to the required relation to a constant stimulus, for example, Wundt's method of minimal changes (see ★*method*).—**Processes of adjustment,** in *physiog.*, changes in the courses of streams by means of which they come to sustain definite and stable relations to the rock-

structures beneath. **Topographic adjustment.** See the extract.

> A tributary is in *topographic adjustment* when its gradient is harmonious with its main.
> *Chamberlin and Salisbury*, Geol., I. 1 4.

Adjutant's call, in *mil. music*, a signal on the drum for the band to pass to the right of the line.

adlea (ad-ia'a), *n.* A billon coin of Tripoli, issued in 1827, plated with gold and forced into currency at the value of one dollar.

adlerglas (ad'lér-gläs), *n.* [G., 'eagle-glass.'] A large drinking-glass having on it enameled paintings of the double-headed eagle of the Holy Roman Empire and armorial bearings of 56 principalities and towns: common in Germany in the seventeenth and eighteenth centuries. See ★*reichsadler*.

adlumidine (ad-lö'mi-din), *n.* [*Adlumia* (see def.) + *-ine*².] An alkaloid, $C_{30}H_{29}O_9N$, found in *Adlumia fungosa*. It melts at 234° C.

adlumine (ad-lö'min), *n.* [*Adlumia* + *-ine*².] A dextrorotatory alkaloid, $C_{39}H_{39}O_{12}N$, found in *Adlumia fungosa*.

A. D. M. An abbreviation of Latin *Artium Domesticarum Magister*, Master of the Domestic Arts.

Adm. An abbreviation of *admiral*.

admedial (ad-mē'di-al), *a.* [*ad-* + *medial*.] Same as *admedian*.

admezure, *v. t.* A simplified spelling of *admeasure*.

administration, *n.*—**All-the-Talents Administration**, an ironical name given to the British ministry of 1806–07, in allusion to the distinguished ability of its members.—**Limited administration**, administration of a personal estate in which the powers of the administrator are granted for a special purpose and are strictly defined and confined to the matters set forth in special or limited letters of administration.

Administrative county. See ★*county*¹.

admiralty, *n.* 1. (*b*) The members of this body are officially designated as the Commissioners for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland. The commissioners include *Civil Lords*, *Naval* or *Sea Lords* and *Secretaries*. The *First Lord of the Admiralty* is a civilian and the responsible political head of the organization. Absolute power within the Admiralty, subject only to the King and Parliament, is vested in him. The *Sea Lords*, four in number, are naval officers, usually admirals. The *First Sea Lord* makes preparation for war and advises on all large questions of naval policy. He is responsible for the efficiency of the fleet and the distribution of ships. He controls the Intelligence, Hydrographical, and Naval Ordnance departments. The *Second Sea Lord* is responsible for all questions relating to the personnel of the navy, including manning of the fleet and appointment of officers. The *Third Sea Lord and Controller* has charge of the materiel of the fleet and has under him the *Director of Naval Construction* and the *Engineer-in-Chief*. He is also responsible for the administration of the Royal Dockyards. The *Fourth* or *Junior Sea Lord* deals with transport, coaling, victualing, and stores, and with questions relating to pay, medals, uniforms, prisons, collisions, etc. The *Civil Lord* deals with public works, the civil staff, etc. The *Parliamentary and Financial Secretary* has charge of finances, accounts, and expenditures. The *Permanent Secretary* signs in the name of the Admiralty, and has charge of the general secretariat, correspondence, etc.—**Admiralty coefficient.** See ★*coefficient*.

admission, *n.* 8. Specifically, in *engin.*: (*a*) Entrance of motor fluid (as steam, air, or water) into a cylinder for the purpose of driving a piston. (*b*) The portion of a full traverse of a piston during which the motor fluid is allowed to enter the cylinder. (*c*) The point in the traverse at which such entrance of motor fluid begins.

admission-line (ad-mish'on-līn), *n.* That line of an indicator-diagram which is made by the pencil of the indicator while steam is being admitted to the cylinder.

admission-port (ad-mish'on-pōrt), *n.* The steam-port or -passage through which the entering steam gains access to an engine-cylinder. In engines of ordinary construction, each port is alternately supply and exhaust, though it is usual to apply the latter term only to the port which exhausts directly into the atmosphere. (*Lockwood.*) In Corliss engines the admission- and exhaust-ports are separate.

admission-valve (ad-mish'on-valv), *n.* The valve which controls the admission of steam, gas, air, or water to a motor- or compression-cylinder.

admittance, *n.* 6. The reciprocal of the impedance in an alternating-current circuit or the ratio of alternating current divided by the electromotive force consumed by the current. See *impedance*. The components of admittance are the ★*conductance* and the ★*susceptance* (which see).

admotive (ad-mō'tiv), *a.* [*ad-* + *motive*.] Characterized by motion toward: as, *admotive* germination. *Syd. Soc. Lex.*

adnasal (ad-nā'zal), *n.* [L. *ad*, to, + *nasus*, nose: see *nasal*.] In *ichth.*, a name given by Geoffroy to the premaxillary bone.

adnatum (ad-na'tum), *n.*; pl. *adnata* (-ta). [NL.: see *adnate*.] In *horticulture*, a small or secondary bulb which forms from the old bulb and eventually supplants it; a clove.

adnephrin (ad-nef'rin), *n.* Same as ★*adrenalin*.

adnexa (ad-nek'sä), *n. pl.* [L., neut. pl. of *adnexus*, pp. of *adnectere*, *annectere*: see *annex*.] Connected or associated things: specifically, in *anat.*, appendages or structures accessory to a main organ. **Adnexa oculi**, the lids, muscles, and other parts in relation with the globe of the eye.—**Adnexa uteri**, the Fallopian tubes and ovaries.

adnexal (ad-nek'sal), *a.* Relating to adnexa especially to the uterine adnexa.

adnominally (ad-nom'i-nal-i), *adv.* [*adnominal* + *-ly*².] As an adnoun or adjective: as, a verb used *adnominally*.

Adobe concrete, a building material prepared by mixing broken stone with adobe clay before it is dried or fired.—**Adobe mortar**, adobe mud prepared specially to serve as mortar in laying adobe brick.

adoccipital (ad-ok-sip'i-tal), *a.* Noting one of the fissures of the brain near the occipital in the caudal portion of the precuneus.

adolescence, *n.*—**Topographic adolescence**, in *phys. geog.*, a stage in the development of relief which is marked by well established river-drainage.

adolescent, *a.* 2. In *phys. geog.*, noting that stage of land-sculpture, between youth and maturity, in which some rapids still remain even in the larger streams.—**Adolescent river.** See ★*river*.

adolescential (ad-ō-le-sen'shal), *a.* Of or pertaining to the period of adolescence.

adon (a-don'), *n.* A device which consists essentially of a high-power telephoto combination so set as to transmit parallel rays. When used in front of an ordinary lens in a 'fixed-focus' camera it gives an enlarged image without disturbing the focal adjustment. The elements of the adon are, however, adjustable so that it can be used with varying effect when the camera permits of focusing. Used by itself it acts as a high-power telephotographic lens.

adonidin (a-don'i-din), *n.* [*Adonis* (*-id-*) (see def.) + *-in*².] A glucoside of uncertain composition obtained from *Adonis vernalis*: said to resemble digitalis in its physiological action.

adonin (ad'ō-nin), *n.* [*Adonis* (see def.) + *-in*².] A very bitter non-crystalline glucoside, $C_{24}H_{40}O_9$, found in *Adonis Amurensis*.

adonite (ad'ō-nīt), *n.* [*Adonis* (see def.) + *-ite*².] An optically inactive pentite, $C_5H_7(OH)_5$, found in *Adonis vernalis* and also formed by the reduction of ribose. It melts at 102° C.

adonitol (a-don'i-tōl), *n.* [As *adonite* + *-ol*.] Same as ★*adonite*.

adoperate (ad-op'e-rāt), *v. t.*; pret. and pp. *adoperated*, ppr. *adoperating*. [ML. *adoperari*, < L. *ad*, to, + *operari*, work: see *operate*.] To bring into use or operation; apply; use. *Sir J. Hayward*, Eromena, p. 88. *N. E. D.*

adoperation (ad-op-e-rā'shon), *n.* Application; use, as of means to an end. *Peacock*, Melincourt, II. 56. *N. E. D.*

adopter, *n.* 2. An apparatus for the rapid leveling of a compass, consisting of a spindle, ball, and ball-socket.

adorbital (ad-ôr'bi-tal), *n.* [L. *ad*, to, + *orbita*, orbit: see *orbit*.] In *ichth.*, the preorbital bone.

Adoxaceæ (ad-ok-sā'sē-ē), *n. pl.* [NL. (Fritsch, 1891), < *Adoxa* + *-aceæ*.] A family of dicotyledonous, sympetalous plants of the order *Rubiales*. It contains only the genus *Adoxa*, and is characterized chiefly by the split or 2-parted stamens inserted on the tube of the corolla.

adoxaceous (ad-ok-sā'shius), *a.* [NL. *Adoxaceæ* + *-ous*.] In *bot.*, having the characters of or belonging to the family *Adoxaceæ*.

ad placitum (ad plas'i-tum). [ML., NL.] At pleasure: in *music*, noting a free part in a contrapuntal work which is not bound by the strict rules of imitation; especially, in a canon, noting a voice-part that does not follow the subject exactly.

adradial, *a.* 2. Pertaining to an adradius: as, the *adradial* organs of an echinoderm.

adradius (ad-rā'di-us), *n.*; pl. *adradii* (-ī). [NL., < L. *ad*, to, + *radius*, ray.] One of the eight radii which lie between the perradii and the interradii in animals which exhibit radial symmetry. Compare *perradius* and *interradius*.

adrenal, *n.*—**Accessory adrenals.** See *Marchand's* ★*adrenals*.—**Marchand's adrenals**, islets of adrenal tissue found in other parts. Also called *accessory adrenals* and *adrenal rests*.

II. *a.* Situated near or in contact with the kidney: specifically, noting the adrenal or suprarenal glands. **Adrenal extract**, a medicinal preparation made from the suprarenal glands and believed to be the internal secretion of these bodies. It increases blood pressure and constricts the vessels, and is employed to arrest hemorrhage and to diminish mucous secretion. See ★*adrenalin*.—**Adrenal gland.** Same as *adrenal*, *n.*—**Adrenal rests.** See *Marchand's* ★*adrenals*.

adrenalin (ad-ren'a-lin), *n.* [*adrenal* + *-in*².] The active principle of the adrenal glands, first isolated by a Japanese chemist, Takamine. Its probable formula is $C_{10}H_{15}NO_3$. H_2O. It is practically identical with Abel's epinephrin and is a powerful heart-stimulant and hemostatic. See ★*adrenal extract*.

adrenalone (ad-ren'a-lōn), *n.* [*adrenal* + *-one*.] A ketone, $(HO)_2C_6H_3COCH_2NHCH_3$, prepared by the oxidation of a derivative of adrenalin.

Adrianist (ā'dri-an-ist), *n.* Same as *Adrianite*, 2.

Adriatic, *a.* 2. In *anthrop.*, of or pertaining to the racial type represented by Albanians and Serbo-Croatians, characterized by tall stature, elongated face, and short head. *Deniker*, Races of Man, p. 285.

adsmith (ad'smith), *n.* One whose business is the writing of advertisements: as, the art of the *adsmith*. *W. D. Howells*, Lit. and Life, p. 265. [Humorous slang.]

adsmithing (ad'smith-ing), *n.* The trade of an 'adsmith.' [Humorous slang.]

adsorb (ad-sôrb'), *v. t.* [L. *ad*, to, + *sorbere*, suck in. Cf. *absorb*.] To gather (a gas or liquid) on the surface in a condensed layer. Thus solids, such as glass, gather gases and liquids with which they are in contact

adsorption, *n.* 2. The mechanical imbibition of fluids or gases.

adsorptive (ad-sôrp'tiv), *a.* [*adsorb* (*-sorp-*) + *-tive*. Cf. *absorptive*.] Capable of or characterized by adsorption.

adsternal (ad-stėr'nal), *a.* [L. *ad*, to, + *sternum*, sternum.] Situated near or in relation with the sternum.

a due (ä dö'e). [It.] By twos: in *music*, employed when two voices or instruments use the same staff, to indicate that the two are to proceed in unison: opposed to *divisi*.

adularescence (ad-u-la-res'ens), *n.* [*adularia* + *-escence*.] The chatoyancy of the adularia variety of feldspar; the moon-like sheen of the moonstone, best visible when the stone is cut with a convex dome.

adult, *n.* 2. Specifically: (*a*) In *civil law*, a male infant who has attained the age of fourteen, or a female infant who has attained the age of twelve. (*b*) In *common law*, one of the full age of twenty-one. *Bouvier*, Law Dict.

adulterin, *a.* and *n.* A simplified spelling of *adulterine*.

adulterism (a-dul'tėr-izm), *n.* A name or word that has been corruptly altered. [Rare.] *N. E. D.*

adulthood (a-dult'hůd), *n.* [*adult*, *a.*, + *-hood*.] The state of being adult or completely developed: as, in full vigor and *adulthood*. *Cowden Clarke*. *N. E. D.*

adumbra (ad-um'brä), *n.*: pl. *adumbræ* (-brē). The penumbra, in an eclipse of the moon.

adumbrella (ad-um-brel'ä), *n.* [NL., < L. *ad*, to, + *umbrella*, a little shade.] The upper surface of the velum in jelly-fishes: distinguished from *exumbrella*.

aduncirostrate (a-dun-si-ros'trāt), *a.* [L. *aduncus*, hooked, + *rostrum*, beak, + *-ate*¹.] Having a hooked beak, as birds of prey.

adurol (ad-ū'rol), *n.* A trade-name for two compounds used as photographic developers. *Adurol* "*Schering*" is bromhydroquinone, $C_6H_3Br(OH)_2$; *adurol* "*Hauff*" is chlorhydroquinone.

adv. An abbreviation of *advocate*.

advaita (äd-vī'tä), *n.* [Skt. *advaita*, non-duality, unity, < *a*- priv. + *dvaita*, duality, < *dvi*-, two.] The pantheistic doctrine of the Vedanta school of Hindu philosophy, taught especially in Shankara's commentary on the upanishads. The doctrine is that *ātman*, self, is *Brahman*, the Absolute.

advance, *n.* 13. The angular interval in excess of 90° which the center-line of an engine-eccentric makes with the center-line of the engine-crank. It is given to enable a valve with lap, which will work the steam expansively, to begin admission of steam at or before the dead-point of the piston-traverse. See *angular advance of an eccentric*, under *angular*.
14. In *fencing*, a quick move of the right foot a few inches forward, followed instantly by

the left foot, but so that the fencer keeps his equilibrium and is ready for parry, or the forward lunge of the right foot.

advance-growth (ad-vȧns′grōth), *n.* In *forestry*, young trees which spring up in accidental openings in the forest or under the forest cover, before reproduction cuttings are begun. See *volunteer* ★*growth*.

advancement, *n.* 6. In *surg.*, an operation for strabismus, consisting in dividing the tendon of the healthy muscle, bringing the end forward, and fastening it to the eyeball forward of its former point of insertion.

advancing (ad-vȧn′sing), *n.* The act of taking or of giving an advanced position; advancement; promotion; furtherance. [Obsolete or rare.]

Advent Sunday, the first Sunday in Advent, or that nearest St. Andrew's day (Nov. 30).

adventitial (ad-ven-tish′al), *a.* Same as *adventitious*. *Jour. Exper. Med.*, VI. 69.

adventitious, *a.* 4. In *phytogeog.*, naturalized from a distant formation: opposed to ★*vicine*. A term proposed by Pound and Clements. Compare *adventitious*, 2.

adventurism (ad-ven′tūr-izm), *n.* The ways, habits, and schemes of the adventurer or adventuress; the practices, pretenses, or experiences of those who live by their wits.

adventuresum, *a.* A simplified spelling of *adventuresome*.

adverb, *n.* — **Flat adverb,** a substantive or an adjective placed in an adverbial position (so called by *J. Earle*, Philol. Eng. Tongue, § 430): as, *forest* wild; to look *bad*; to walk *slow*, "with foreheads *villainous* low," *Shak.*, Tempest, iv. 1. 274. Some adverbs of this type are, however, reduced forms of Middle English or Anglo-Saxon adverbs with an adverbial suffix (*-e*), from the adjective with which they have later become identical in form. — **Flectional adverb,** an adverb formed of a case of a formerly inflected noun, as *mornings*, *evenings*, *needs*, *darkling*, *upward* (genitives), *whilom*, *seldom* (datives): as, he is usually at home *evenings*; "he must *needs* go through Samaria," John iv. 4; "the wakeful bird sings *darkling*," *Milton*, P. L., iii. 38, 39. — **Phrasal adverb,** an adverb consisting of a phrase or clause; an adverbial clause: as, *of course*, *of a truth*, *at random*, *in an instant*, *little by little*. — **Relative adverb,** an adverb which is derived from a relative pronoun, relates to an antecedent, and usually introduces an adverbial clause, as *when*, *where*, *whence*: as, at the place *where* the accident occurred; at a time *when* he was not expected.

adverbial, *a.* — **Adverbial clause,** in *gram.*, a clause or phrase which serves as an adverb: as, he met with an accident *on his way home*.

II. *n.* An adverbial word or clause, as *truly*, *exceedingly*, *of course*, *to-day*, *as soon as he arrives*.

adverbiation (ad-vèr-bi-ā′shọn), *n.* [NL. **adverbiatio(n-)*, < L. *adverbium*, adverb.] An extended phrasal adverb. See the quotation.

> Room must be given to the term Adverb to let it take in all that appertains to the description of the condition and circumstances attendant upon the verbal predication of the sentence. . . . I would propose that for such extended phraseological adverbs we adopt the title of *Adverbiation*. *J. Earle*, Philol. Eng. Tongue, p. 431.

adverbism (ad′vèrb-izm), *n.* Tendency to an excessive use of adverbs. *G. S. Hall*, Adolescence, II. 467.

advertisemental (ad-vèr-tīz-men′tạl), *a.* [*advertisement* + *-al*.] Relating or pertaining to advertising or to advertisement. [Rare.]

advisal (ad-vī′zal), *n.* [*advise* + *-al*.] Advice; counsel. *J. S. Blackie*, Æschylus, I. 197. [Rare.]

advize, *v.* A simplified spelling of *advise*.

advolution (ad-vọ-lū′shọn), *n.* [L. *ad*, to, + *volvere*, roll: formed on type of *evolution*.] An onward rolling or unfolding; progressive development; the theory of evolution considered with regard to its trend or ultimate developments. See the extract.

> Why should Evolution stop with the Organic? It is surely obvious that the complement of Evolution is *Advolution*, and the inquiry, Whence has all this system of things come, is, after all, of minor importance compared with the question, Whither does all this tend?
> *H. Drummond*, Nat. Law in Spiritual World, p. 401.

adynamandry (a-din-ạ-man′dri), *n.* [Gr. *ἀδύναμος*, without power, + *ἀνήρ* (*ἀνδρ-*), man (male).] In *bot.*, self-sterility; incapability of self-fertilization. *Delpino*.

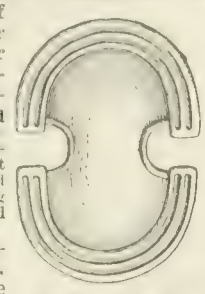
adynamical (a-dī-nam′i-kạl), *a.* Not dynamical.

> The properties of electric and magnetic force are explicable upon dynamical principles; so far there is no known necessity for seeking for *adynamical* properties in ether.
> *Jour. Inst. Electric Engineers* (Brit.), 1889–1900, p. 396.

adz-block (adz′blok), *n.* A solid oblong block of iron or steel, square in section, which carries the cutters or plane-irons of a wood-planing machine. *Lockwood*.

Adzuki bean. See ★*bean*[1].

Æacid (ē′a-sid), *n.* [L. *Æacides*, < Gr. *Αἰακίδης*, < *Αἰακός*, Æacus.] A son or descendant of Æacus (who was a son of Zeus and Ægina, and after death a judge in the lower world), especially: (*a*) Peleus; (*b*) Achilles; (*c*) Telamon; (*d*) Ajax. **Æacid shield,** the shield of the Telamonian Ajax, which was represented on the coins of ancient Salamis in Greece. It assumed a peculiar form resembling types found in the Dipylon and Mycenæan periods.



Æacid Shield on Coins of Salamis. (From "Journal of Hellenic Studies," by permission of the Council.)

aeae (ä-ā-ä′ā), *n.* [Hawaiian = Maori *akeake*, the name of a small tree (see ★*ake*).] A name in Hawaii of *Lycium Sandwicense*, an erect shrub from two to three feet high, with stiff, smooth branches. It grows along the sea-coast, and bears a red berry which is edible but not very palatable. Also called *ohelo-kai*.

æcial (ē′shial), *a.* [< Gr. *αἰκία*, an injurious effect.] Same as *æcidial*. *J. C. Arthur*.

Æcidial form, stage. Same as *æcidiostage*.

æciospore (ē′si-ọ-spōr), *n.* [Gr. *αἰκία*, an injurious effect, + *σπορά*, a spore.] Same as *æcidiospore*. *J. C. Arthur*.

æcium (ē′shium), *n.* [NL., < Gr. *αἰκία*, an injurious effect.] A term proposed by J. C. Arthur for the æcidial stage of the rust fungi, *Uredinales*. Same as *æcidiostage*.

Aëdes (ā-ē′dēz), *n.* [NL. (Meigen, 1818), < Gr. *ἀηδής*, unpleasant, odious, < *a-* priv. + *ἡδύς*, pleasant.] A genus of small mosquitos of the dipterous family *Culicidæ*. They have the palpi in both sexes less than half as long as the proboscis (2-jointed in the male and 4-jointed in the female), and have no bluish scales on the upper side of the thorax and no bristles below the scutellum. Several species are known. *Aedes fuscus* inhabits the northern United States.

ægagropila, *n.* 2. [*cap.*] *pl.* Marine algæ which form more or less spherical masses and are freely driven from place to place.

ægagropilous (ē-ga-grop′i-lus), *a.* [Gr. *αἰγαγρος*, the wild goat, + L. *pila*, a ball, + *-ous*.] Noting the dense tufted condition assumed by certain algæ, particularly the cladophoras. *Athenæum*, IV. 363.

ægialosaur (ē-ji-al′ọ-sâr), *n.* A reptile of the genus *Ægialosaurus*.

ægicrania (ē-ji-krā′ni-ạ), *n. pl.* [NL., < Gr. *αἴξ* (*αἰγ-*), goat, + *κρανίον*, skull.] In *Rom. antiq.*, the heads of goats or rams used in the sculptured decoration of altars: suggested by the custom of hanging up the heads of victims.

Ægicrania, from the Arch of Titus, Rome.

Æginidæ, *n. pl.* 2. A family of *Narcomedusæ*, having a circular canal communicating with the stomach by double peronial canals, with internemal gastral pouches, and without otoporpæ. It contains the genera *Ægina*, *Ægineta*, *Æginopsis*, and others.

Æglina (ē-glī′nạ), *n.* [NL., < Gr. *Αἰγλη*, a nymph, + *-ina*[1].] A genus of asaphid trilobites. They are remarkable for their immense compound eyes, which give them a strikingly larval aspect; found in the Lower Silurian of Europe.

Ægocera (ē-gos′ẹ-rạ), *n.* [NL. (Latreille, 1809), < *αἴξ* (*αἰγ-*), goat, + *κέρας*, horn.] An interesting genus of East Indian moths of the family *Agaristidæ*. The male of *A. tripartita* makes a peculiar clicking noise while flying; it is produced by a special structure on the front wings, which is rubbed against the spines of the front feet.

Ægoceratidæ (ē-gō-se-rat′i-dē), *n. pl.* [NL., < ★*Ægoceras*, < Gr. *αἴξ* (*αἰγ-*), goat, + *κέρας* (*κερατ-*), horn, + *-idæ*.] A family of ammonoid cephalopods or ammonites. They have smooth, discoidal shells with broad umbilicus and highly specialized complicated septal sutures. The species occur in the Triassic formation.

Ælurodon (ē-lū′rọ-don), *n.* [Gr. *αἴλουρος*, a cat or a weasel, + *ὀδούς* (*-οντος*), a tooth.] A genus of *Canidæ* of the North American Miocene, with affiliations with the bears.

ælurophobia (ē-lū-rọ-fō′bi-ạ), *n.* [Gr. *αἴλουρος*, cat, + *-φοβία*, < *φοβεῖν*, fear.] A morbid dislike or fear of cats.

aëneofuscous (ā-ē″nẹ-ọ-fus′kus), *a.* [L. *aeneus*, of brass, + *fuscus*, fuscous.] In *entom.*, of the color of dirty brass.

aëneolithic (ā-ē″nẹ-ọ-lith′ik), *a.* [L. *aëneus*, brazen, + Gr. *λίθος*, stone.] Pertaining to the period in which both metal and stone implements were used: a term introduced by Italian archæologists.

aëneous (ā-ē′nẹ-us), *a.* [L. *aëneus*, of brass.] In *entom.*, having brassy or metallic reflections.

ænigmatite (ē-nig′ma-tīt), *n.* A rare triclinic member of the amphibole group. It occurs in black prismatic crystals in the sodalite-syenite of southern Greenland and similarly elsewhere. It is a titano-silicate of ferrous iron and sodium.

Æolian, *n.* 2. Same as *Æolic*.

Æolic digamma, the digamma (which see).

æolidoid (ē-ol′i-doid), *a.* [*æolid* + *-oid*.] Having the form or characters of the *Æolididæ*.

æolina, *n.* 2. An organ-stop of a thin, delicate tone.

æolipile, *n.* 2. A form of blast-lamp for use in chemical laboratories, in which an alcohol flame is deflected by a stream of alcohol vapor escaping from a jet, this vapor being produced from liquid alcohol in a little boiler over the original flame.

æolodicon (ē-ọ-lod′i-kon), *n.* [Gr. *Αἰολος*, Æolus, + *ᾠδή*, song, + *-icon*, as in *harmonicon*.] A musical instrument, played from a keyboard, the tone of which was produced in one variety by the blows of hammers upon steel springs, and in another from free reeds, as in the harmonium. Neither form attained artistic importance.

æolodion (ē-ō-lō′di-on), *n.* [Gr. *Αἰολος*, Æolus, + Gr. *ᾠδή*, song, + *-ion*, as in *melodion*.] Same as ★*æolodicon*.

æolomelodicon (ē″ọ-lọ-me-lod′i-kon), *n.* [Gr. *Αἰολος*, Æolus, + *μελῳδός*, musical (see *melodion*), + *-icon*, as in *harmonicon*.] A musical instrument of the pipe-organ class, invented by Hoffmann of Warsaw about 1825. Its chief peculiarity was that metal tubes were placed in front of the mouths of the pipes, to impart to them special qualities imitating various instruments and to strengthen the tone. The use of these resonators was under the control of the player. Also called *choraleon*.

æolopantalon (ē″ọ-lọ-pan′ta-lon), *n.* [Gr. *Αἰολος*, Æolus; second element uncertain.] An æolomelodicon having a pianoforte attachment which could be used with or without the organ tones.

æolophon (ē′ọ-lọ-fōn), *n.* [Appar. G., < *Æolus* + Gr. *-φωνος*, < *φωνή*, sound.] A form of seraphine.

æolotropism (ē-ō-lot′rọ-pizm), *n.* The state or condition of æolotropy.

æonial, *a.* See ★*eonial*.

æonologe (ē′on-ọ-lōj), *n.* [Gr. *αἰών*, an age, + *-λόγιον*, < *λέγειν*, tell: formed on type of *horologe*.] An imagined clock that measures time by eons or ages. See the quotation. [Rare.]

> The horologe of earth . . . is no measure for the *æonologe* of heaven.
> *F. W. Farrar*, Early Days of Christianity, p. 511.

æqualis (ē-kwā′lis), *n.* [L., equal.] In *gram.*, the case which expresses similarity (like, similar to). Also called *similative*. *Barnum*, Essen. of Innuit, p. 17.

Æquidens (ē′kwi denz), *n.* [NL., < L. *æquus*, equal, + *dens*, tooth.] A genus or subgenus of South American *Cichlidæ*: they resemble the sunfishes of the north.

aërage (ā′ẹ-rāj), *n.* [F. *aérage*, < L. *aer*, < Gr. *ἀήρ*, air.] Airing; ventilation.

aërate, *v. t.*—**Aërating plants,** epiphytes.—**Aërating roots,** roots which rise out of the water or mud, provided with a loose corky tissue with large cellular interspaces adapted to aeration, as the "knees" of the bald cypress.

aërenchyma (ā-ę-reng'ki-mä), *n.* [NL., ⟨ Gr. ἀήρ, air, + ἐγχυμα, infusion.] A tissue consisting of thin-walled cells with large, intercellular spaces, adapted to aëration. It occurs in the stems of certain marsh plants. *Schenk.*

aërialist (ā-ē'ri-al-ist), *n.* [*aërial* + *-ist.*] An aërial navigator; one skilled in aëronautics. [Rare.]

aërobia, *n. pl.*—**Facultative aërobia,** bacteria, normally anaerobic, which have acquired the capacity of living and growing in the presence of oxygen.

aërobic (ā-ę-rō'bik), *a.* Same as *aërobian.*—**Facultatively aërobic,** having the ability to live either in the absence or in the presence of oxygen.

aërobiont (ā-ę-rō-bī'ont), *n.* Same as *aërobe.*

aërobioscope (ā″ę-rō-bī'ǫ-skōp), *n.* An apparatus for collecting bacteria from the air.

aërobium (ā-ę-rō'bi-um), *n.* Singular of *aërobia* (which see).

aëro-club (ā'ę-rō-klub″), *n.* [Gr. ἀήρ, air, + E. *club.*] A club or association devoted to the promotion and practice of aëronautics or aviation.

aërocondenser (ā″ę-rō-kon-den'sėr), *n.* [Gr. ἀήρ, air, + E. *condenser.*] A form of surface-condenser for changing the vapor of water, or any other vapor, back into a liquid by the withdrawal of heat by means of a rapid circulation of air. It is much used as a means of cooling and condensing in motor-vehicles. The vapor to be condensed is contained in a chamber through which pass a great number of tubes, the air being made to move at speed through the latter.

aëroconiscope (ā″ę-rō-kon'i-skōp), *n.* [Gr. ἀήρ, air, + κόνις, dust, + σκοπεῖν, view.] An apparatus for collecting dust for future examination. Also *aërokoniscope. R. E. Maddox.*

aërocurve (ā'ę-rō-kėrv), *n.* [Gr. ἀήρ, air, + L. *curvus,* curve.] A curved surface intended for the support, in the air, of a gliding- or a flying-machine. See ★*aëroplane,* 1.

One of the most difficult questions connected with the problem of aërial navigation is the longitudinal stability of a machine supported on aero-planes and *aëro-curves.*
Rep. Brit. Ass. Advancement of Sci., 1902, p. 524.

aërodrome (ā'ę-rō-drōm), *n.* [Gr. ἀήρ, air, + -δρομος, ⟨ δραμεῖν, run.] **1.** A flying-machine supported by aëroplanes and having a motor and a rudder for navigating the air; specifically, a machine of this kind invented and named by S. P. Langley.—**2.** A course for testing or practising with aëroplanes or other flying-machines.

aërodromic (ā″ę-rō-drom'ik), *a.* [*aërodrome* + *-ic.*] Of or pertaining to aërodromes or flying-machines. *A. G. Bell,* in Smithsonian Rep., 1896, p. 6.

aërodromics (ā″ę-rō-drom'iks), *n.* [As *aërodrome* + *-ic.*] The art of navigating the atmosphere by means of engines and balloons, but especially by means of aëroplanes or aërocurves driven by machinery. *S. P. Langley,* in The Aeronaut. An., 1897, p. 13.

aërodyne (ā'ę-rō-dīn), *n.* [Gr. ἀήρ, air, + δύναμις, power.] See the extract.

I use the word "*aërodyne*" in preference to "flying-machine," to denote an aëroplane-supported machine, driven by mechanical power through the air.
W. R. Turnbull, in Phys. Rev., March, 1907, p. 286.

aërogram (ā'ę-rō-gram), *n.* [Gr. ἀήρ, air, + γράμμα, a writing.] A message transmitted through the air, especially one transmitted by wireless telegraphy. *L. de Forest,* in N. Y. Com. Advertiser, Jan. 31, 1903.

aërograph (ā'ę-rō-gräf), *v.* [Gr. ἀήρ, air, + γράφειν, write.] **I.** *trans.* To transmit or send through the air by wireless telegraphy: as, to *aërograph* the state of the money-market to London or Paris. *N. Y. Com. Advertiser,* Jan. 31, 1903.

II. *intrans.* To communicate by means of wireless telegraphy; use wireless telegraphy in communicating with others.

[Recent in both uses.]

aërohydropathy (ā″ę-rō-hī-drop'a-thi), *n.* [Gr. ἀήρ, air, + E. *hydropathy.*] Combined water- and air-cure.

aërohypsometer (ā″ę-rō-hip-som'e-tėr), *n.* [Gr. ἀήρ, air, + E. *hypsometer.*] A simple form of air-barometer devised by G. Govi of Turin in 1867 for measuring small differences of altitude by measuring the expansion under varying pressures of a short column of air whose temperature is constant or is known. Also *aërypsometer.*

aëroides (ā-ę-roi'dēz), *n.* A pale sky-blue variety of beryl.

aëroklinoscope, aërokoniscope, *n.* See *aëroclinoscope,* ★*aëroconiscope.*

aëromechanics (ā″ę-rō-mē-kan'iks), *n.* [Gr. ἀήρ, air, + E. *mechanics.*] The mechanics of the atmosphere or, in general, of gases; the science of the action of forces on gases; pneumatics.

aëromotor (ā'ę-rō-mō″tor), *n.* [L. *aer,* air, + *motor,* motor.] **1.** An air-ship; a vehicle for navigating the air.—**2.** A form of windmill using metallic vanes or sails.

aëronat (ā'ę-rō-nat), *n.* [*aëro-* + L. *nat*(*are*), swim, float.] See the extract. [Rare.]

Aëronat is a dirigible, motor-driven balloon, or air-ship.
Sci. Amer. Sup., Feb. 20, 1909.

aëronef (ā'ę-rō-nef), *n.* [F. *aéronef,* ⟨ L. *aer,* air, + F. *nef,* ⟨ L. *navis,* ship.] An airship; specifically, one heavier than air.

aërophagia (ā″ę-rō-fā'ji-ä), *n.* [NL., ⟨ Gr. ἀήρ, air, + -φαγία, ⟨ φαγεῖν, eat.] The swallowing of air sometimes observed in hysteria.

aërophilous (ā-ę-rof'i-lus), *a.* [Gr. ἀήρ, air, + φίλος, loving.] Air-loving: applied to bacteria and other organisms which require air for their development. See *aërobian.*

aërophobic (ā″ę-rō-fō'bik), *a.* Of or pertaining to aërophobia; afraid of air; having a morbid dread of currents of air.

aërophone, *n.* **2.** An instrument having the functions of both an ear-trumpet and a speaking-trumpet.

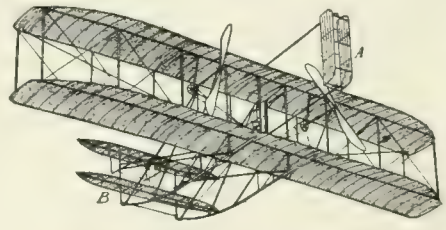
aërophore, *n.* **2.** An instrument for filling with air the lungs of a still-born child.—**3.** In textile spinning-rooms, a device used to diffuse moisture throughout the air. An excess of moisture is required both to make shrinkage-effect uniform and to counteract the electrifying action of the rapidly moving belts and other elements of the machines.

aërophorus (ā-ę-rof'ǫ-rus), *a.* [Gr. ἀήρ, air, + -φορος, ⟨ φέρειν, bear.] Containing or conveying air: same as *aëriferous.*

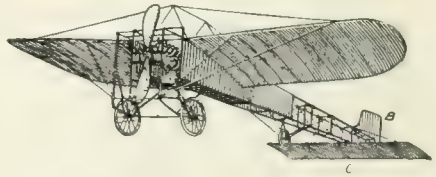
aërophysical (ā″ę-rō-fiz'i-kal), *a.* [Gr. ἀήρ, air, + φυσικός, physical.] Of or pertaining to aërophysics or the physics of the atmosphere; specifically, relating to the atmospheric conditions of heat and cold, dryness and humidity.

aërophysics (ā″ę-rō-fiz'iks), *n.* [Gr. ἀήρ, air, + E. *physics.*] The physics of the atmosphere.

aëroplane (ā'ę-rō-plān), *n.* [Gr. ἀήρ (ἀερ-), air, + E. *plane.*] **1.** A plane or curved (see ★*aëro-curve*) surface, used to sustain a flying-machine or a gliding-machine in the air, or in aërodynamical experiments. As the machine moves through the air, the aëroplane (commonly a light framework covered with a fabric), set at a small angle above the horizontal, tends to support it by its lifting-power. Flying-machines in which aëroplanes are so used are also called 'aëroplanes' (see def. 2): those in which support in the air has been sought by the movement ('flapping') of such surfaces in imitation of the action of the wings of birds are called 'ornithopters.'



Wright Brothers' Aëroplane (biplane).
A, rudder; *B,* dipping-planes.



Bleriot's Aëroplane (monoplane).
A, engine; *B,* rudder; *C,* dipping-plane.

2. A flying-machine driven by an engine and supported by the pressure of the air upon the under side of plane or curved surfaces known as 'aëroplanes' or 'aërocurves.' (See def. 1.) Various attempts to attain flight, in "heavier-than-air" machines, by means of the lifting-power of aëroplanes (surfaces) were made during the second half of the nineteenth century. Models of flying-machines of this type, more or less successful, were constructed by Stringfellow in 1847 and 1868 and by Moy in 1874 and Tatin in 1879. But the most important advances toward the solution of the problem were made in the aërodynamical investigations of S. P. Langley and Sir Hiram Maxim, and in the experiments of O. Lilienthal, O. Chanute, and others with gliding-machines. Langley perfected a model of an aëroplane (his "aërodrome") propelled by a steam-engine (burning naphtha), which in November, 1896, flew about three quarters of a mile. Experiments with gliding-machines were begun by Orville and Wilbur Wright in 1900, and on December 17, 1903, an aëroplane constructed by them and propelled by a gasolene motor rose from the ground and made a flight of 260 meters in 59 seconds—the first instance of successful mechanical flight by man. From that time the development of the aëroplane by the Wrights and others (Voisin, Farman, Curtiss, Bleriot, Latham, etc.) has been rapid and extraordinary results have been attained. The machines in successful use are of two general types: 'biplanes' (Wright, Curtiss, Voisin, Farman, etc.) having two aëroplanes (surfaces) placed one above the other, and 'monoplanes' (Antoinette, Bleriot, etc.) having one aëroplane (surface) or two laterally disposed. On Dec. 31, 1908, Wilbur Wright made, in France, a flight of 2 hours and 20 minutes, a period surpassed on August 7, 1909, by Sommer (2 hrs. 27¼ min.) and on Aug. 27, 1909, at Rheims, by Farman (3 hrs. 4 min. 56⅖ sec.: 111.848 miles; his flight was continued (unofficially) for about seven miles more). On July 27, 1909, Orville Wright, at Fort Myer, made a cross-country flight of ten miles, with a passenger, at the rate of over 42 miles an hour. A record for speed was made by Curtiss, in a biplane, at Rheims on August 28, 1909, when he made 12.42 miles in 15 min. 50⅘ sec. On July 25, 1909, Bleriot crossed the English Channel from Calais to Dover in a monoplane, in about 40 minutes.

aëropleustic (ā″ę-rō-plōs'tik), *a.* [Gr. ἀήρ, air, + πλευστικός, adj., ⟨ πλεῖν, sail.] Of or pertaining to aërial navigation or the art of sailing in the air. *N. E. D.* [Rare.]

aërorthometer (ā″ęr-ôr-thom'e-tėr), *n.* [Gr. ἀήρ, air, + ὀρθός, straight, + μέτρον, measure.] An instrument in which an air-thermometer and a barometer are combined.

aërosphere, *n.* **2.** The spherical mass of any gas surrounding a molecule or atom and temporarily constituting a unit with it.

aërostat, *n.* **3.** In *entom.,* a tracheal dilatation forming an air-sac, as in the abdomen of the honey-bee and certain other insects. [Rare.]

Aërostatic setæ. See ★*seta.*

aërotaxis (ā″ę-rō-tak'sis), *n.* [Gr. ἀήρ, air, + τάξις, disposition, order.] The movement of cells or organisms in relation to a source or supply of air.

aërotherapy (ā″ę-rō-ther'a-pi), *n.* [Gr. ἀήρ, air, + θεραπεία, medical treatment.] Same as *aërotherapeutics.*

aërotropism, *n.* **2.** In general, the bending or growth of organisms in relation to a source or supply of air.

aërypsometer (ā″ę-rip-som'e-tėr), *n.* Same as ★*aërohypsometer.*

æsaloid (ē'sa-loid), *a.* [NL. *Æsalus,* a genus of beetles, + *-oid.*] Related to or resembling a beetle of the family *Æsalidæ.*

æschrolalia (es″krō-lā'li-ä), *n.* [NL., ⟨ αἰσχρός, shameful, + λαλία, ⟨ λαλεῖν, talk.] Indecency of speech in the insane.

Æsculaceæ (es-kū-lā'sē-ē), *n. pl.* [NL. (Lindley, 1841), ⟨ *Æsculus* + *-aceæ.*] A family of dicotyledonous choripetalous plants of the order *Sapindales,* typified by the genus *Æsculus.* See *Hippocastanaceæ.*

æsculetic, *a.* See ★*esculetic.*

æsculotannic, *a.* See ★*esculotannic.*

Æsopic (ē-sō'pik), *a.* [L. *Æsopicus,* ⟨ Gr. Αἰσωπικός, ⟨ Αἴσωπος, Æsop.] Same as *Æsopian. Jour. Hel. Studies,* XIII. 300.

æsthacyte, *n.* See *esthacyte.*

æsthesia, *n.* **2.** In *bot.,* the capacity of an organ to respond to physical stimuli. *Czapek.*

æsthesin (es-thē'sin), *n.* [Gr. αἴσθησις, feeling, + *-in*[2].] A compound, $C_{35}H_{69}O_3N$, formed by the hydrolysis of phrenosin.

æsthesiomania, *n.* See ★*esthesiomania.*

æsthetal (es-thē'tal), *a.* [Gr. αἰσθητός, perceptible (see *esthete, esthetic*), + *-al*[1].] Sensory.

I propose to call the sensory cells, or sense-centres, *aesthetal* cells. *Haeckel* (trans.), Wonders of Life, p. 14.

æstivo-autumnal, *a.* See ★*estivo-autumnal.*

æthochroi (ē-thok'rō-ī), *n. pl.* [NL., ⟨ Gr. αἰθός, burnt (see *Æthiop*), + χρόα, color.] Races of black color; the negroes of Africa, the Melanesians, Papuans, and Australians. Also *ethochroi.*

æthokirrin (ē-thō-kir'in), *n.* [Gr. αἰθος, fire (see *ether*), + κιρρός, tawny, yellow.] The yellow coloring matter of *Linaria Linaria,* the common toad-flax.

ætiatic (ē-ti-at'ik), *a.* [Also *aitiatic*, < Gr. *αἰτιατικός*, < *αἰτία*, cause: see *ætiology* and *accusative*.] Causal, as when a quality is supposed to exist in an object which is suggested by its name; accusative.

As to the whiteness of the dog, it will be noticed that this is only insisted upon in the passage of Hesychius, and is evidently due to an *aitiatic* exposition of the termination.
Cecil Smith, Jour. Hellenic Studies, XIII. 117.

Ætiological myth, a myth accounting for the origin of a phenomenon.

Aëtobatinæ (ā″e-tō-bat'i-nē), *n. pl.* [*Aëtobatus* + *-inæ*.] A subfamily of sting-rays typified by the genus *Aëtobatus*.

Aëtobatis (ā-e-tob'a-tis), *n.* [NL., < Gr. *ἀετός*, eagle, + *βατίς*, a ray (fish).] A later variant of ★*Aëtobatus*.

Aëtobatus (ā-e-tob'a-tus), *n.* [NL., < Gr. *ἀετός*, eagle, + *βατος*, a ray (fish).] A genus of sting-rays of the family *Myliobatidæ*. *A. narinari* is the common species and is widely diffused. It is brown, with many large yellow spots.

aëtosaur (ā'e-tō-sâr), *n.* A reptile belonging to the genus *Aëtosaurus*.

aëtosaurian (ā″e-tō-sâ'ri-an), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of *Aëtosaurus*.

II. *n.* Same as ★*aëtosaur*.

afaint (a-fānt'), *adv.* [a^3 + *faint*.] In a fainting state or on the point of fainting.

affect[2], *n.* **3.** In *psychol.*: (*a*) The felt or affective component of a motive to action; the incentive, as opposed to the inducement, to act. See the extract.

Affects . . . are the feeling antecedents of involuntary movements; as motives, including *affects* [and ends], are the inner antecedents of acts of will.
J. M. Baldwin, Handbook of Psychol., II. 314.

(*b*) Emotion.—**4.** In Spinoza's philosophy, a modification at once of the psychic and the physical condition, the former element being called an *idea* and the latter an *affection*.

affection, *n.* **10.** In *recent psychol.*, the elementary feeling-process; the pure or qualitatively simple feeling, in which there is no admixture of sensation. See the extract.

They [the mental elements] are very numerous: . . . but they may all be grouped into two great classes, as sensations and *affections*.
E. B. Titchener, Primer of Psychol., p. 21.

11. In *trigon.*, relation to $\frac{\pi}{2}$. In right-angled spherical triangles, angle A and side *a* are either both greater or both less than $\frac{\pi}{2}$. This is expressed by saying that A and *a* are of the same *affection*.

12. In *law*, the making over, pawning, or mortgaging of a thing to assure the payment of a sum of money or the discharge of some other duty or service. *Bouvier*, Law Dict.

affective, *a.* **3.** In *psychol.*, relating to, characterized by, or consisting of affection: as, the *affective* side of the mental life; *affective* experience.—**Affective curve**, in *psychol.*, a graphic expression of the correlation of some attribute (intensity, quality) of affection with some attribute of stimulus or sensation. *E. B. Titchener*, Exper. Psychol., I. i. 106.—**Affective memory**, the revival, in affective terms, of past affective experience. *Ribot*, Psychol. of Emotions, p. 153.—**Affective process**, in *psychol.*: (*a*) An affection. (*b*) A mental complex of which affection is characteristic or in which it is dominant.—**Affective tone**, in *psychol.*, affection considered with reference to the sensory or intellectual processes which it accompanies; sometimes, affection considered as an attribute of sensation.

affectivity (a-fek-tiv'i-ti), *n.* [*affective* + *-ity*.] The mental faculty concerned in the emotions, affections, and sentiments; the affective power of the mind.

The frequency of delusions in their multiform characters of degenerative characteristics, of the loss of *affectivity*, of heredity, more particularly in the children of inebriate, imbecile, idiotic, or epileptic parents, and above all, the peculiar character of inspiration, show that genius is a degenerative psychosis of the epileptoid group. *C. Lombroso* (trans.), Man of Genius, p. 359.

affectomotor (a-fek″tō-mō'tor), *a.* In *psychol.*, combining emotional disturbance with muscular activity: for example, the joyousness and unusual activity of the phase of exaltation in circular insanity constitute an *affectomotor* state.

affiliate (a-fil'i-āt), *a.* and *n.* **I.** *a.* Occupying the position of or recognized as an adopted son; affiliated. *Browning*, Ring and Book, x. 392.

II. *n.* An affiliated person or institution, etc. *Tourgée*, Fool's Errand, p. 126. *N.E.D.*

affinity, *n.* **9.** In *projective geom.*, a perspective of which the center is at an infinite distance. *Möbius.*—**Affinity constants**, in *phys. chem.*, numerical constants by means of which the relative strength of acids or of bases can be expressed, or with which the partition of a base between two acids or of an acid between two bases can be computed.—**Clang affinity** or **relationship**. See ★*clang*.—**Predisposing affinity**, in *early chem.*, a term employed to signify the cause of a chemical change produced by a substance having an affinity or attraction, not for a second substance itself, but for something producible as a result of the change. Thus, using the language of the time, it was said that soda, by its affinity for phosphoric acid, enables phosphorus to decompose carbonic acid (which without the soda it would not do) and form phosphoric acid. This idea has long been discarded.

Affirmance day general, in the English Court of Exchequer, a day appointed by the judges of the common pleas and barons of the exchequer, to be held a few days after the beginning of every term, for the general affirmance or reversal of judgments. *Bouvier*, Law Dict.

Affirmative pregnant. See ★*pregnant*.

affix, *n.* **4.** In *math.*, the complex number $x + iy$ is denoted by a single letter, z: the point P, (x, y), is then called the *affix* of the value z; the number z is also spoken of as the *affix* of the point P.

affixment (a-fiks'ment), *n.* [*affix* + *-ment*.] Same as *attachment*.

affixt, *pp.* A simplified spelling of *affixed*.

afflictionless (a-flik'shon-les), *a.* [*affliction* + *-less*.] Free from affliction or trouble. *T. Hardy*, Far from the Madding Crowd. *N. E. D.*

affrettando (ä-fret-tän'dō), *a.* [It., 'hurrying,' ppr. of *affrettare*, hurry.] In *music*, hastening the pace: virtually the same as *accelerando* or *stringendo*.

affrettato (ä-fret-tä'tō), *a.* [It., 'hurried.'] Same as ★*affrettando*.

affrettoso (ä-fret-tō'sō), *a.* [It., 'with hurry.'] Same as ★*affrettando*.

affricate (af'ri-kāt), *n.* [= G. *affrikata*, < NL. **affricata*, < L. *ad*, to, + *fricare*, rub: see *fricative*.] In *phonology*, an intimate combination of a stop with a spirant or fricative of the same position, as German *pf* (originally *p*) in *pfennig*, *pfeffer*, etc., or German *z* or *tz* (originally *t*) in *zinn*, tin, *katze*, cat, etc.

affricate (af'ri-kāt), *v. t.*; pret. and pp. *affricated*, ppr. *affricating*. [*affricate*, *a.*] In *phonology*, to utter as an affricate. *Scripture*, Exper. Phonetics, p. 307.

affricative (a-frik'a-tiv), *n.* Same as *affricate*. *Sayce*, Introd. Sci. Lang., I. 270.

affrightfully (a-frīt'fùl-i), *adv.* [*affrightful* + *-ly*.] In a manner to affrighten, terrify, or alarm; terrifyingly: as, to dream *affrightfully*. [Rare.]

affrunt, *v. t.* and *n.* A simplified spelling of *affront*.

afikomen (af-i-kō'men), *n.* [Heb., prob. < Gr. *ἐπίκωμον*, understood as 'an after-meal dessert or pastime,' neuter of *ἐπίκωμος*, of or for a festival, < *ἐπί*, for, + *κῶμος*, a festival: see *Comus*. Others refer it to Gr. *ἐπικώμιον*, a festal song.] A piece broken off from the middle one of the three thin cakes of unleavened bread, called respectively 'Cohen,' 'Levi,' and 'Israel' (thus representing the whole Jewish nation), used by the Jews at the seder service on Passover eve. It is broken off at the beginning of the service, and hidden by the head of the family, who presides at the seder table, until the conclusion of the meal. After the two whole cakes and the unhidden part of the broken cake have been partaken of, with all the proper ceremonies, the afikomen is eaten. See ★*seder*.

a fiori (ä fi-ō'ri). [It.] With flowers: said of a style of pottery decoration which consists of intertwined flowers and birds, characteristic of certain Italian majolica.

aflicker (a-flik'èr), *adv.* [a^3 + *flicker*.] In a flickering state or condition; flickering. *Browning*, Aristoph. Apol., p. 225.

aflower (a-flou'èr), *adv.* [a^3 + *flower*.] In flower; abloom; flowering. *Swinburne*, Erechtheus, l. 1147. *N. E. D.*

aflush[1] (a-flush'), *adv.* [a^3 + *flush*[1].] In a flushed or blushing state; aglow; ablush.

aflush[2] (a-flush'), *adv.* [a^3 + *flush*[7].] On a level; in the same plane: as, *aflush* with the sea. *Swinburne*, Studies in Song, p. 169. *N.E.D.*

aflutter (a-flut'èr), *adv.* [a^3 + *flutter*.] In a flutter or commotion; agitated; fluttering. *Browning*, Men and Women, ii. 147.

a foglie (ä fōl'ye). [It.] With leaves: said of a style of decorative treatment in which leaves of trees form the principal motive, seen frequently on the majolica of Genoa, Venice, and other Italian pottery-centers.—**A foglie da dozzina.** [It., 'with leaves of the dozen,' that is, 'in ordinary or common style.'] Said of a coarse style of decoration found on certain inferior majolica wares (particularly those of Venice), consisting of painted foliage.

A-frame (ā'frām), *n.* The A-shaped support for the cylinder-beam and cross-head guides of a vertical engine; the housing.

African breadfruit. See ★*breadfruit*.—**African Coast fever**, African fever. See ★*fever*[1].—**African green.** See ★*green*[1].

Africanistics (af″ri-kan-is'tiks), *n.* That department of philology concerned with the study of the languages of Africa.

Africanoid (af'ri-kan-oid), *a.* [*African* + *-oid*.] In *anthrop.*, resembling African types of man. *W. Z. Ripley*, Races of Europe, p. 397.

Afro-American (af″rō-a-mer'i-kan), *a.* and *n.* [L. *Afer* (pl. *Afri*), an African, + E. *American*.] **I.** *a.* Of, pertaining to, or composed of persons of African descent born in America (specifically in the United States): as, an *Afro-American* church; *Afro-American* citizens.

II. *n.* A native of America (specifically of the United States) who is of African descent.

Afro-European (af″rō-ū-rō-pē'an), *a.* [L. *Afer* (pl. *Afri*), an African, + E. *European*.] African and European; European with African relations.

Afrogæa (af-rō-jē'ä), *n.* [NL., < L. *Afer* (*Afr-*), African, + Gr. *γαία*, earth.] In *zoögeog.*, a (proposed) division or realm comprising the part of Africa that lies south of the equator. Correlated with *Arctogæa*. See *Afrogæan*.

Afrogæic (af-rō-jē'ik), *a.* Same as *Afrogæan*.

afrown (a-froun'), *adv.* [a^3 + *frown*.] In a frown; frowning: as, "with brows *afrown*," *Joaquin Miller*. *N. E. D.*

afrunt, *prep. phr.* as *adv.* and *prep.* A simplified spelling of *afront*.

a frutti (ä frōt'ti). [It.] With fruits: said of a characteristic style of majolica decoration consisting of foliage and fruits.

aft[1], *a.* and *adv.* **To haul aft a head-sheet** (*naut.*), to pull on the rope secured to the clue of a staysail, jib, or flying jib, so as to flatten the sail in a fore-and-aft direction.—**To haul aft the main-sheet** (*naut.*), to pull on the tackle or purchase secured to the after part of the main-boom, so as to bring that spar more fore-and-aft, or in line with the keel.—**Fore-and-aft rig.** See *fore-and-aft sails*, under *fore-and-aft*.—**To have the starboard sheets aft**, an expression, sometimes employed on a fore-and-aft vessel to signify that she is on the port tack, and vice versa.

after, *prep.* **10.** In *mineral.*, derived from; having the form of: said of pseudomorphs, which retain only the form of the original mineral: as, malachite pseudomorph *after* cuprite; cassiterite pseudomorph *after* feldspar. See *pseudomorph*.—**After one's own heart**, that comes up to one's ideas or liking; entirely worthy of one's admiration and approval: as, he is a man *after my own heart*.

after-burning (åf'tèr-bèr″ning), *n.* In *gas-engines*, combustion or burning of the gases after the explosion has taken place which should have made all the gas unite at once with the oxygen present.

after-chrome (åf'tèr-krōm), *v. t.*; pret. and pp. *after-chromed*, ppr. *after-chroming*. To treat (textiles, after they are dyed or printed) with a solution of some chromium compound, in order to fix, or render more fast, the colors already on the cloth. Sometimes the chromium compound acts as a mordanting principle and brings about the deposition of a chromium mordant which combines with the dyestuff; in other cases the potassium bichromate commonly used acts as an oxidizing agent.

after-color (åf'tèr-kul″or), *n.* A colored after-image. See *after-image*.

after-cooler (åf'tèr-kō″lèr), *n.* A chamber in which air or a gas is cooled after it has been compressed. See *compressor*.

after-cure (åf'tèr-kūr), *n.* A course of treatment pursued after convalescence is established in order to insure the permanency of the cure.

after-darken (åf'tèr-där″kn), *v. t.* In *textile-coloring*, to deepen (a color) by subsequent dyeing or by oxidation with a chemical solution.

after-dinner (åf'tèr-din″èr), *n.* and *a.* [*after* + *dinner*.] **I.**† *n.* The portion of the day which follows dinner or the dinner-hour.

II. *a.* Following dinner; postprandial: as, *after-dinner* coffee; an *after-dinner* nap; an *after-dinner* anecdote or speech.

aftergrowth, *n.* **2.** In *forestry*, young trees which spring up as the result of reproduction-cuttings.

after-heat (åf'tèr-hēt), *n.* The autumnal or after-summer warm weather which usually prevails in the northern United States during the period known as 'Indian summer.' *Monthly Weather Rev.*, Jan., 1902.

after-image, *n.* **2.** In *psychol.*, any phase of sensation which persists after the withdrawal of the exciting stimulus: as, a visual *after-image*; an auditory *after-image*; an *after-image* of pressure.

after-impression (åf′tėr-im-presh″ọn), *n.* A sensation which persists after the stimulus that originally caused it is withdrawn.

after-leech (af′ter-lech), *n.* The roping on the after edge of a fore-and-aft sail. The roping on the forward edge is called by American seamen the *luff* and by English seamen the *forward leech*. See *leech*[3].

after-mast (af′tėr-mȧst), *n.* The mast nearest to the stern of the ship. On a one- or two-masted vessel it is the mainmast; on a three-masted vessel, the mizzenmast; on a four-masted vessel, the jigger-mast; on a five-masted vessel, the spanker-mast; on a six-masted vessel, the driver-mast; and on a seven-masted vessel the pusher-mast. The last three names have been recently coined by the captains of many masted vessels as a convenience when giving orders concerning the rigging and sails belonging to the masts in question.

after-milk (åf′tėr-milk), *n.* Strippings.

afternoony (åf-tėr-nōn′i), *n.* Like a (summer) afternoon; languid; enervating; inclining to a siesta, as if in the heat of the day.

There is something idle and *afternoony* about the air which whittles away one's resolution. *Huxley*, Life, II. 96.

after-nose (åf′tėr-nōz), *n.* In *entom.*, a triangular piece below the antennæ and above the nasus. *Stand. Dict.*

after-sensation (åf′tėr-sen-sā″shọn), *n.* In *psychol.*: (*a*) An after-image. (*b*) A secondary or consequent sensation: as, the *after-sensation* of pain which follows the sensation of pressure when the skin is lightly tapped with a needle.

after-shock (åf′tėr-shok), *n.* A shock following a primary shock; a succeeding shock.

The periodicity of the *aftershocks* of the great Indian earthquake of June 12, 1897, is treated by Mr. R. D. Oldham in vol. xxxv. of the Memoirs of the Geological Survey of India. *Nature*, April 14, 1904, p. 571.

after-sound (åf′tėr-sound), *n.* A subjective sensation of sound which remains after the sound itself has ceased.

after-stain (åf′tėr-stān), *n.* A stain or dye employed after another stain, for the purpose of still further differentiating details of cell or tissue structure.

after-stain (åf′tėr-stān), *v. t.* [*after* + *stain*.] To treat with an after-stain.

after-strain (åf′tėr-strān), *n.* In *elasticity*, a strain which develops gradually after the application of the stress to which it is due and which persists after the stress has ceased. Also called *elastic fatigue*.

after-stretch (åf′tėr-strech), *n.* In *wool-manuf.*, the elongation of the roving on the spinning-mule after the delivery-rolls have stopped.

after-taste (åf′tėr-tāst), *n.* A gustatory sensation which persists after the stimulus that originally excited it has ceased to act.

after-vision (åf′tėr-vizh″ọn), *n.* An impression of an object that remains in the retina after the object itself is removed from sight.

after-world (åf′tėr-wėrld), *n.* The people of succeeding generations; future ages.

The language . . . in which Shakespeare and Milton have garnered for the *after-world* the rich treasures of their mind. *Trench*, Eng. Past and Present, ii.

after-wort (åf′tėr-wėrt), *n.* In brewing, the second run of wort.

afu (ä-fō′), *a.* and *n.* [Perhaps from the Polynesian *tapu*, *tabu*: see *taboo*.] Same as *taboo*. [Torres Strait.] *Geog. Jour.* (R. G. S.), XVI. 420.

afunction (a-fungk′shọn), *n.* [*a*-[18] + *function*.] In *pathol.*, loss of function or functionating power. *Alien. and Neurol.*, Aug., 1904.

afyllous, *a.* A simplified spelling of *aphyllous*.

Afzelia (af-zē′li-ä), *n.* [NL. (Gmelin, 1791), named in honor of Adam *Afzelius*, a Swedish naturalist.] A genus of scrophulariaceous plants improperly called *Seymeria* by many authors. See *Seymeria*.

A. G. An abbreviation of *Attorney-General*.

agada[2] (ä′gä-dä), *n.* [Abyssinian?] An Egyptian or Abyssinian pipe sounded by means of a reed mouthpiece somewhat like that of a clarinet.

agalactous, *a.* **2.** Not nursed, as a hand-fed infant.—**3.** Serving to check the secretion of milk; lactifugal.

agalenoid (ag-a-lē′noid), *a.* [NL., *Agalena* + *-oid*.] Of, belonging to, or resembling the spiders of the family *Agalenidæ*.

agalite (ag′ạ-lit), *n.* [Appar. < Gr. *ἀγη*, wonder, + *λίθος*, stone.] A fibrous variety of talc, pseudomorphous in origin, from St. Lawrence County, New York: used in the manufacture of paper. Sometimes written *agalith*.

agalith (ag′ạ-lith), *n.* Same as ★*agalite*.

agamobium (ag-a-mō′bi-um), *n.*; pl. *agamobia* (-ạ). [NL., < Gr. *α*- priv. + *γάμος*, marriage, + *βίος*, life.] The asexual generation of a hydroid jellyfish, as contrasted with the sexual generation or gamobium.

agamogenetical (ag″ạ-mō-jē-net′i-kạl), *a.* Same as *agamogenetic*.

agamospore (ag′ạ-mō-spōr), *n.* [Gr. *ἀγαμος*, without marriage, + *σπορά*, seed (spore).] A spore produced asexually.

Agaon (a-gā′on), *n.* [NL. (Dalman, 1818), said to be < Gr. *ἀγάων*, ppr. of *ἀγάειν*, var. of *ἀγασθαι*, adore.] A remarkable genus of hymenopterous insects of the superfamily *Chalcidoidea*, giving name to the family *Agaonidæ*. It contains the single species *A. paradoxum*, which lives in figs in Sierra Leone.

Agaonidæ (ag-ā-on′i-dē), *n. pl.* [NL., < *Agaon* + *-idæ*.] An extraordinary family of chalcidoid hymenopterous insects. It comprises species of small size, distributed in 2 subfamilies and 12 genera, all living in figs and accomplishing the fertilization of the flowers of this fruit. Other genera containing true parasites have been hitherto placed in this family, but are now separated into other distinctly parasitic groups. See ★*Blastophaga*.

Agapetidæ (ag-a-pet′i-dē), *n. pl.* [NL., < *Agapetes* + *-idæ*.] A family of butterflies containing the forms known in the United States as *meadow-browns* and their allies. Prominent American genera are *Cercyonis*, *Erebia*, *Cœnonympha*, and *Œneis*.

agar[1] (ä′gär), *n.* [Hind. *agar*, < Skt. *aguru*: see *agallochum*.] The aloes-wood or calambac, *Aquilaria Agallocha*. In India it is used for making jewel-cases, rosaries, and ornaments of various kinds. The chips are sold in bazaars and are burned in Hindu temples. See *agallochum* and *eaglewood*. Also *aggur*.

agar[2] (ä′gär), *n.* Same as *agar-agar*.—**Glucose agar.** See ★*agar-agar*, 2.—**Hydrocele agar,** a culture medium suggested for the growth of the gonococcus, in which hydrocele fluid is used as the nutrient medium, the agar being added to solidify the medium.—**Litmus lactose agar,** a culture medium used in bacteriological work. It is ordinary agar containing ⅔ per cent. of lactose, with enough litmus tincture added to give the solution a light-blue color.—**Peptone agar,** a bacteriological culture medium; it contains a certain amount of peptone. Also called *nutrient agar*.—**Slant agar,** agar that has been solidified so as to present a slanting surface: used in bacteriological work. *Science*, March 14, 1902, p. 406.

agar-agar, *n.* **2.** A gelatinous product from certain seaweeds often combined with various nutrient substances to form a solid medium for the artificial cultivation of bacteria and other organisms.

agaric. **I.** *n.*—**Deadly agaric,** *Amanita phalloides*, a very poisonous fungus.—**Ivory agaric,** the mushroom, *Hygrophorus eburneus*.—**Maned agaric.** Same as ★*horsetail-agaric*.—**Royal agaric,** a large and elegant edible mushroom, *Amanita cæsarea*. It has a bright orange-colored pileus, an annulus, and a large, thick, leathery volva. It is sometimes confused with the poisonous fly-agaric, *Amanita muscaria*.—**Sugar-cane agaric,** *Schizophyllum commune*, which is reported to be sometimes parasitic on sugar-cane.

II. *a.*—**Agaric acid,** a compound, $C_{16}H_{30}O_5 \cdot H_2O$, obtained from agaric in the form of a white powder. Also called *agaricic* and *agaricinic acid*.—**Agaric resin,** a red amorphous solid obtained from the larch-fungus. It is slightly bitter, and melts at 90° C.

Agaricaceæ (a-gar-i-kā′sē-ē), *n. pl.* [*Agaricus* + *-aceæ*.] The name now adopted for the family *Agaricini*.

agaricaceous (a-gar-i-kā′shius), *a.* [*Agaricaceæ*.] Having the characteristics of the family *Agaricaceæ*, the agarics.

Agaricales (a-gar-i-kā′lēz), *n. pl.* [NL., < *Agaricus* + *-ales*.] A large order of fungi including the greater part of the *Hymenomycetes*, as the families *Thelephoraceæ*, *Clavariaceæ*, *Hydnaceæ*, *Polyporaceæ*, and *Agaricaceæ*.

Agarum Turneri, expanded blade of a frond.

agaricic (ag-ạ-ris′ik), *a.* [*agaric* + *-ic*.] Same as *agaric*.

agaricinic (a-gar-i-sin′ik), *a.* [*agaricin* + *-ic*.] Related to agaricin. — **Agaricinic acid.** Same as ★*agaric acid*.

Agarum (ag′a-rum), *n.* [NL. (Postels and Ruprecht, 1840), < Malay *āgar-āgar*: see *agar-agar*.] A genus of brown algæ (*Phæophyceæ*) inhabiting the Arctic and colder waters of the Atlantic and Pacific oceans. The frond consists of a stipe attached by a branching holdfast and a broadly expanded blade which is perforated with numerous holes. Popularly called *sea-colander*.

agasp (ạ-gȧsp′), *adv.* [*a*[3] + *gasp*.] In a gasping state or condition: panting; eager. *Coleridge*, Own Times, II. 395. *N. E. D.*

Agassizocrinidæ (ag-a-siz-ō-krin′i-dē), *n. pl.* [*Agassizocrinus* + *-idæ*.] A family of fistulate *Crinoidea* characterized by the elongate dorsal cup composed of thick solid plates, and by the absence of a column. It is believed that in early stages these forms were attached by a stem, but that they subsequently became free-swimming. They have been found only in the Kaskaskia limestone of the Lower Carboniferous formation in the United States.

Agassizocrinus (ag-a-siz-ō-krī′nus), *n.* [NL., < *Agassiz* + Gr. *κρίνον*, lily.] The typical genus of the family *Agassizocrinidæ*.

agast, *p.* or *a.* A simplified spelling of *aghast*.

agate[2], *n.* **6.** *Naut.*, the jewel cup in the center of the compass-card, which rests upon the upright pivot in the center of the compass-bowl.—**Eye-agate,** a variety of agate having the layers in concentric circles.—**Iceland agate,** a fine variety of obsidian (volcanic glass) found in Iceland.

agate-ware (ag′ạt-wār), *n.* **1.** Pottery mottled and veined in imitation of agate.—**2.** A variety of enameled iron or steel household ware.

Agathaumas (ag-ạ-thâ′mas), *n.* [NL., irreg. < (?) Gr. *ἄγαν*, much, + *θαυμασία*, wonder.] A genus of dinosaurian reptiles from the Laramie beds of the Rocky Mountains.

agathin (ag′ạ-thin), *n.* [Gr. *ἀγαθός*, good, + *-in*[2].] A trade-name for the *a*-methylphenylhydrazone of salicylic aldehyde, $C_6H_5CH_3NN:CHC_6H_4OH$. It crystallizes in white needles which melt at 71° C. It has been used as a remedy for rheumatism.

agathodæmon, *n.* **2.** In *astrol.*, the eleventh house of the heavens.

agathology (ag-ạ-thol′ọ-ji), *n.* [Gr. *ἀγαθός*, good, + *-λογία*, < *λέγειν*, speak.] The ethical doctrine of the *summum bonum*, or that which is good apart from any ulterior reason.

agatoid (ag′ạ-toid), *a.* Resembling an agate in structure or appearance.

Agau (ä′gou), *n.* See ★*Abyssinian languages*(*b*).

agave, *n.* **2.** [*l. c.*] A plant of this genus.—**Soap agave,** a name applied to several species of *Agave*, the roots or other portions of which, called *amole* by the Mexicans, are used in place of soap for washing. The principal soap-producing species is *Agave Lecheguilla* of northern Mexico. See *amole*.

agavose (a-gā′vōz), *n.* [*Agave*+*-ose*.] A sugar, $C_{12}H_{22}O_{11}$, obtained from the stalks of *Agave Americana*.

A. G. C. In *astron.*, an abbreviation of *Argentine General Catalogue* (of stars).

Age class. See ★*class*.—**Age coating,** the carbonaceous layer or deposit which gradually accumulates upon the interior surface of incandescent-lamp bulbs in consequence of the disintegration of the filament.—**Age of the tide.** Same as *retard of the tide* (which see, under *retard*).—**Copper age,** in *prehistoric archæol.*, the period during which copper was used for the manufacture of implements. In some parts of the world the stone age was followed by a copper age, while in other regions the stone age was followed by the bronze age.—**Flint age.** Same as *stone age*. See *archæological ages*, under *age*.—**Heroic age,** the age of heroes and demigods.—**Lacustrine age,** in *archæol.*, the period of lake-dwellings; especially, the period of lake-dwellings in central Europe.—**Topographic old age,** the stage which is produced by long-continued subjection of a region to the processes of erosion in its present relation to base-level.

age[1], *v. t.* **2.** To expose (mordanted or dyed cloth) to the air in order to fix the mordant or dye in insoluble form.

age[2] (ä′hä), *n.* [Mex. (?). Cf. ★*axin*.] The fat obtained from the *Coccus axin* of Mexico. Also called *axin*.

aged, *p.a.* **4.** In *geol.*, approaching peneplanation: said of the topography of a greatly denuded region.—**5.** Of a horse, arrived at the age when the 'pit' or 'mark' on the front teeth has been obliterated by the gradual wearing away of the crown. This change usually occurs in the eighth or ninth year; but under racing rules a 'running' horse (as distinct from a trotting horse) is said to be aged when he is more than seven years old.

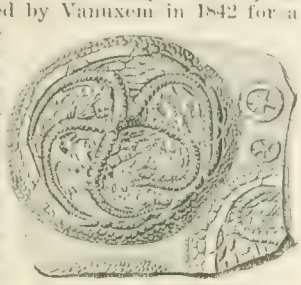
age-distribution (āj′dis-tri-bū″shọn), *n.* In *social statistics*, the number of occurrences, conditions, or relations (as births, marriages, or deaths) in a given population in each year or in each five- or ten-year period of life: as, 50 deaths annually in each 1,000 children under five years; 10 deaths annually in each 1,000 males 25 to 30 years of age.

age-fraternity (āj′frạ-tėr″ni-ti), *n.* A fraternity of individuals of the same or similar age. This is a form of social organization found frequently among primitive tribes, boys, youths, young men, men

in their prime and old men being organized each in a society by themselves. Societies of women of similar character are rarer than those of men.

On superficial examination various tribes appear to be organized according to identical principles, but fuller knowledge generally reveals differences among the similarities. From this it was concluded that such terms as gens, band, *age-fraternity* and dance-society have no stable or exact meaning and hence little descriptive value, detailed information being the great desideratum.
Science, May 31, 1901, p. 864.

Agelacrinites (āj″e-lak-ri-nī′tēz), *n.* [NL., ⟨ Gr. ἀγέλη, herd, + κρίνον, lily, + *-ites*.] A name introduced by Vanuxem in 1842 for a Devonian cystidean found in the Hamilton rocks of New York, but also represented by species in both Silurian and Carboniferous rocks: typical of the family *Agelacrinitidæ*. Also improperly written *Agelacrinus*.


A group of individuals attached to a shell.

Agelacrinitidæ (aj″e-lak-ri-nit′i-dē), *n. pl.* [NL., ⟨ *Agelacrinites* + *-idæ*.] A family of extinct cystid echinoderms, discoid in form, sometimes with a short stem, but usually attached to other objects by the entire abactinal surface. In typical species the ambulacral arms are long and curved and the spaces between are filled with irregular and often scaly plates.

Agelacrinus (aj-e-lak′ri-nus), *n.* See ★*Agelacrinites*.

agelong (aj′long), *a.* [*age* + *long*.] Long as an age; that lasts or has lasted for an age; unending: as, *agelong* strife.

agency, *n.* **Commercial agency.** See *mercantile* ★*agency*.— **Mercantile agency,** an institution or company formed for the purpose of obtaining, by careful inquiry and investigation, and supplying in confidence to subscribers for their own special use, accurate information regarding the character, personal responsibility, and commercial and financial standing of individuals, firms, and corporations engaged in mercantile, financial, or industrial enterprises, either throughout the country or, in the case of the larger associations, throughout the world. Full revised lists and reports giving the 'commercial rating' of each of these individuals, firms, and corporations are issued quarterly in book form, but special reports with regard to particular cases are made to subscribers on request. Also sometimes called *commercial agency* and *credit bureau*.

agent, *n.*— **Fixing agent,** in *textile-coloring*, any substance used to fix a mordant or render fast and permanent colors which would otherwise be more or less fugitive.— **Insurance agent.** See ★*insurance*. **Reducing agent,** in *chem.*, a substance capable of removing the electronegative constituent from a compound, setting free the electropositive constituent, as a metal from one of its oxids.

agentialis (ā-jen-ti-ā′lis), *a.* [NL.: see *agential*.] In *gram.*, noting the case which expresses the subject of a sentence and sometimes the owner of an object. Also called *subjective*. *Barnum*, Innuit Lang., p. 12.

agentive (ā-jen′tiv), *a.* [*agent* + *-ive*.] In *gram.*, noting the case which expresses the subject of the transitive verb in languages in which its form differs from that expressing the subject of the intransitive verb. This case is found in many American languages, for instance, in Eskimo. Also called *subjective*. *Amer. Anthropologist*, Jan.–March, 1903, p. 26.

ager[2] (ā′jėr), *n.* [*age*, *v. t.* + *-er*[1].] One who or that which ages; specifically, a chamber in which mordanted or dyed cloth is submitted to the process of aging. A *steam-ager* is such a chamber to which both air and steam are admitted.

agger, *n.*— **Agger nasi,** a projection at the anterior extremity of the middle turbinate bone, being a vestige of the nasal turbinate bone in certain of the lower animals.

agglomerant (a-glom′e-rant), *n.* [*agglomer*(*ate*) + *-ant*.] That which causes agglomeration: a material which may be added to a mixture in order to cause the particles of the latter, when in a fine state of division or in small lumps, to adhere together and form larger lumps or agglomerations. This is necessary in some systems of treating ores, and in making artificial briquets from pulverized fuel. Lime mixed with water to form a paste is a suitable agglomerant in the first case, and tar or pitch in the second.

agglomerative, *a.* **2.** In *sociol.*, tending to combine small social groups into larger organizations.

agglutinability (a-glö″ti-na-bil′i-ti), *n.* [*agglutinable* (*-bil-*) + *-ity*.] Susceptibility to agglutination, in any sense. *Jour. Exper. Med.*, V. 361.

agglutinable (a-glö′ti-na-bl), *a.* Capable of agglutination. **Agglutinable substance,** a substance present in bacteria and red blood-corpuscles to the union with which, on the part of the agglutinins, the specific agglutination is due.

agglutinant, *n.* **2.** In *bacteriol.*, same as ★*agglutinating substance*.

agglutinate, *v. t.* **2.** In *bacteriol.*, to cause the coalescence or clumping of (bacteria or red blood-corpuscles).

If the blood *agglutinates* a paratyphoid bacillus in high dilution, and fails to *agglutinate* the typhoid bacillus or *agglutinates* it only in very low dilutions.
Med. Record, Feb. 14, 1903, p. 267.

agglutinating, *p. a.*— **Agglutinating substance,** in *bacteriol.*, the substance which causes agglutination. Also called ★*agglutinin* (which see).

agglutination, *n.* **3.** In Wundt's psychology, the simplest type of apperceptive connection of ideas: a connection in which one is still clearly conscious of the constituent ideas, while the total idea aroused by their conjunction is nevertheless unitary: for example, watch-tower, steamboat.— **4.** In *bacteriol.*, the clumping or coalescence of red blood-corpuscles or bacteria brought about by the action of special agglutinating substances (agglutinins).

Careful observation of this phenomenon has shown that, in many cases, a state of coalescence of the corpuscles to which the name '*agglutination*' is applied, precedes that of solution; and, further, that while these changes are often associated, yet one may occur in the absence of the other. *Science*, July 3, 1903, p. 4.

Agglutination test, a test based upon the principle that specific agglutinins appear in the blood-serum of infected animals or patients which will cause the agglutination of the specific bacteria concerned in the infection. In this manner it is sometimes possible not only to identify bacteria, but also to determine whether or not infection with a given organism exists. Diagnosis by such means is spoken of as *serum diagnosis*, and constitutes a most important method of recognizing certain infections. In typhoid fever especially the agglutination test, or *Widal reaction*, as it is also termed, is extensively utilized in the diagnosis of the disease. Generally speaking, the examination is carried out by mixing some bacilli of the kind under investigation with some of the diluted blood-serum, when a drop is observed under the microscope, in order to ascertain whether or not the bacilli, which at first are evenly scattered through the field, will gather in clumps, and, if previously motile, will lose their motility. See *serum* ★*diagnosis*.

agglutinative, *a.*— **Agglutinative réaction.** Same as ★*agglutination*, 4.

agglutinator (a-glö′ti-nā-tor), *n.* He who or that which agglutinates; specifically, same as ★*agglutinin*, in contradistinction to ★*agglutinable substance*.

Thus, if ricin, a strong *agglutinator*, is permitted to act upon red corpuscles for periods under thirty minutes, then upon the addition of venom lysis ensues in about the average time and proceeds normally.
Jour. Exper. Med., Mar. 17, 1902, p. 289.

agglutinin (a-glö′ti-nin), *n.* [*agglutin*(*ate*) + *-in*[2].] An adaptation-product produced by immunization with the corresponding cells (red blood-corpuscles or bacteria), which causes the clumping or coalescence of the cells used in immunization. The agglutinins are receptors of the second order (Ehrlich), being composed of a special zymophoric group and a haptophoric group, which latter effects the union with the cell. The bacillary agglutinins in their action upon motile bacteria cause arrest of motility. See also ★*agglutination test*.— **Flagellar agglutinin,** an agglutinin resulting on immunization with a motile bacillus and supposedly referable to the specific action of the flagellar substance. As the body of the organism gives rise to special somatic agglutinins, the two will coexist in the serum of an animal immunized with motile bacilli, while the latter only will be found if a nonmotile organism has been used. *Jour. of Med. Research*, Oct., 1904, p. 313.— **Somatic agglutinin,** an agglutinin resulting on immunization, which in contradistinction to the flagellar type is referable to the special immunizing effect of the bodies of the bacilli, and is thus obtained not only with motile but also with non-motile organisms. *Jour. of Med. Research*, Oct., 1904, p. 314.

agglutinogen (a-glö′ti-nō-jen), *n.* A substance present in bacteria, immunization with which gives rise to the production of agglutinins. *Jour. of Med. Research*, Oct., 1904, p. 314.

agglutinogenous (a-glö″ti-noj′e-nus), *a.* [Irreg. ⟨ *agglutin*(*ation*) + *-genous*, producing.] Producing agglutination or agglutinins.

Nicolle and Trenel find that agglutinative and *agglutinogenous* functions are subject to the greatest variations.
Jour. Roy. Micros. Soc., Feb., 1903, p. 78.

agglutinoid (a-glö′tin-oid), *n.* [*agglutin*(*ate*) + *-oid*.] An agglutinin which has lost its agglutinophoric group, but retains the haptophoric group for the cell. *Lancet*, April 4, 1903, p. 946.

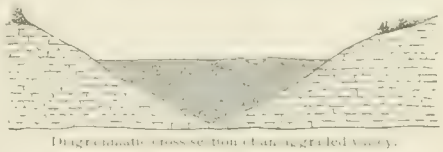
agglutinophore (a-glö′ti-nō-for), *n.* [*agglutin*(*ate*) + Gr. *-φορος*, ⟨ φέρειν, bear.] A molecular complex of the agglutinins to which their agglutinating property supposedly is due.

agglutinophoric (a-glö″ti-nō-for′ik), *a.* Noting that molecular group of the agglutinins to which the agglutinating properties are due.

aggradation (ag-rā-dā′shon), *n.* [*aggrade* + *-ation*.] The act or process of aggrading, or the state of being aggraded: in *geol.*, the act of aggrading, as in depositing detritus upon a valley floor, the slope of the depositing stream being maintained at an almost constant value.— **Aggradation plain,** a plain formed by the accumulation of clastic material in arid districts under conditions unfavorable to distant transportation and where overloading of streams is habitual. The alluvial fan and the flood-plain are initial stages.

aggradational (ag-rā-dā′shon-al), *a.* **1.** Pertaining to or effected by means of aggradation. —**2.** Effecting an upbuilding of sediments: contrasted with *degradational* agencies or those which remove material.

aggrade (a-grād′), *v. t.* [L. *ad*, to, + *gradus*, step. Cf. *degrade*.] In *geol.*, to grade up; fill up: the opposite of *degrade* or *wear away*.


Diagrammatic cross-section showing aggraded valley.

A river aggrades its valley when, owing to an increase in the load of detritus or to a decrease of carrying power of its current (as a result of diminution in volume or of tilting of the land), some of its load has to be laid down along its course.

aggraded (a-grā′ded), *p. a.* In *geol.*, more or less filled with detritus by a stream: said of a valley, basin, or bay.

aggregate, *n.* **4.** In *logic*, a whole of aggregants which is universally predicable of every one of its aggregants and is not predicable of any individual of which none of its aggregants is predicable. So, likewise, a proposition which would be true under any circumstances whatsoever under which any one of a collection of propositions would be true, but which would under no circumstances be true when none of the propositions of that collection were true, would be the aggregate of those propositions as its aggregants. — **Social aggregate,** any group or class of animate creatures, human beings or animals, dwelling together or working together and leading a social life.— **Theory of aggregates,** in *demography*, the theory of the grouping of population about centers of density; in *sociol.*, the theory of the combination of hordes into tribes, tribes into nations, and nations into federal empires; in *biol.*, the theory that units of structure were once independent organisms.

aggregation, *n.* **6.** In *sociol.*, the phenomenon of the physical concentration of population, of animals, and of plants. *Giddings*. Inductive Sociol., p. 40.— **Aggregation theory,** the theory that the passage of matter from an imperceptible to a perceptible condition is necessarily a process of aggregation. It was held by John Fiske.— **Biological aggregation,** a term used by L. F. Ward to express his belief that organisms which are morphologically separable into structural units, such as the *Metazoa* and metamerized animals, have arisen through the aggregation of units which were at one time independent.— **Genetic aggregation,** in *sociol.*, a group of kinsmen who have lived together in one locality from their birth; hence, also, a population perpetuated chiefly by its birth-rate rather than by immigration. *Giddings*.— **Law of aggregation,** the universal tendency of particles and masses of matter to concentrate. See the extract.

The great law of progress in the universe therefore is the *law of aggregation*, and evolution is due to the resistance which this law meets with from the opposite law of dispersion. *L. F. Ward*, Dynamic Sociol., I. 249.

Organic aggregation. Same as *biological* ★*aggregation*.— **Primary aggregation,** the process by which the inorganic universe, as contrasted with living beings and with society, has come to be what it is. *L. F. Ward*.— **Secondary aggregation,** the process by which living beings, as contrasted with the inorganic universe and with society, have come to be what they are. *L. F. Ward*.— **Tertiary aggregation,** in *sociol.*, the aggregation of individuals into social groups or populations, a process which completes the sequence of integrations that constitutes one aspect of universal evolution. The aggregation of atoms in molecules and masses is called *primary aggregation*, that of molecules in living cells and organisms *secondary aggregation*. *L. F. Ward*.

aggregative, *a.* **3.** In *sociol.*: (*a*) Tending toward a center of density, as concentration of population. (*b*) Tending to combine small groups into large organizations, as hordes into tribes or small corporations into great corporations and 'trusts.'

Aggressive character. See ★*character*.— **Aggressive coloring,** coloring which serves to hide an animal from its prey.— **Aggressive resemblance.** See ★*resemblance*.

aggri-beads. *n. pl.* See *aggry-beads*.

aggriev, *v.* A simplified spelling of *aggrieve*.

aggur, *n.* See ★*agar*[1].

aghastness (a-gäst'nes), *n.* The state of being aghast or filled with amazement or horror: as, an expression of *aghastness* in the eyes. [Rare.] *N. E. D.*

Agialid (aj-i-al'id), *n.* [NL. (Adanson, 1763), from an Egyptian name of the African species *agihalid*, used by Alpinus.] A genus of dicotyledonous plants of the family *Zygophyllaceæ*.

agiasterium, *n.* See ★*hagiasterium*.

agil, *a.* A simplified spelling of *agile*.

aging, *n.* **4.** In the preparation of logwood for dyeing, the process of exposing the wood (usually in the form of chips) to the air, in order that the hematoxylin it contains may be oxidized or developed into hematein, the actual coloring agent. Also known as *curing* or *maturing*.—**5.** In *elect.*, the property, exhibited more or less by iron, of showing an increase of hysteresis loss when for a long time exposed to alternating magnetization, especially at a higher temperature.

aging-machine (ā'jing-mạ-shēn'), *n.* In *calico-printing*, a machine used in the process of aging or causing the mordant to decompose evenly on and in the fiber.

aging-room (ā'jing-röm), *n.* In *calico-printing*, a room or chamber in which cloth is aged. The cloth is hung and exposed for several days to a temperature of about 80° F. and to a relative humidity of about 82 per cent., for the purpose of fixing the mordant evenly on and in the fiber.

agitatrix (aj-i-tā'triks), *n.*; pl. *agitatrixes* (-ẹz) or *agitatrices* (-tri-sēz). [L. *agitatrix*, fem. of *agitator*, agitator.] A female agitator. [Rare.]

Aglaonema (ag″lā-ọ-nē'mä), *n.* [NL., < Gr. ἀγλαός, shining, + νῆμα, thread.] A genus containing about fifteen species of the family *Aroideæ*, two or three species of which are sometimes offered by plant-dealers. They are indoor subjects, in the manner of *Arum*, and are native to Asia and Africa.

Aglaospora (ag-la-os'pọ-rä), *n.* [NL. (De Notaris, 1845), < Gr. ἀγλαός, brilliant, + σπορά, spore.] A genus of pyrenomycetous fungi having membranous beaked perithecia embedded in a valsoid stroma. The spores are brown and several-septate. *A. profusa* is the type. It occurs in Europe and America, and is said to cause the death of young twigs of the locust, *Robinia Pseudacacia*.

Aglaspis (a-glas'pis), *n.* [NL., < Gr. ἀγλαός, beautiful, + ἀσπίς, shield.] A genus of Cambrian arthropods described by Hall as a trilobite, but regarded by Clarke as a primitive merostome of the order *Synxiphosura*. It has a short trilobed cephalothorax, 6 or 7 flat abdominal segments, and a long caudal spine or telson. It is the only representative of the family *Aglaspidæ*.

Aglaspis Eaton, Whitf.

Upper Cambrian; Lodi, Wisconsin. (From Zittel's "Paleontology.")

aglint (a-glint'), *adv.* [a^3 + *glint*.] In momentary glints or peeps; glintingly.

aglitter (a-glit'ẹr), *adv.* [a^3 + *glitter*.] In a glitter; glittering.

Aglossa, *n. pl.* **3.** A group of *Mollusca* having no radula and no head: distinguished from *Glossophora*. The group includes only the *Pelecypoda*. Same as *Lipocephala*.

aglossi, *n.* Plural of ★*aglossus*.

aglossia (a-glos'i-ä), *n.* [NL., < Gr. ἀγλωσσία, tonguelessness (used in fig. sense 'ineloquence'), < ἄγλωσσος, tongueless, < ἀ- priv. + γλῶσσα, tongue.] Congenital defect marked by absence of the tongue.

aglossus (a-glos'us), *n.*; pl. *aglossi* (-ī). [NL., < Gr. ἄγλωσσος, tongueless: see ★*aglossia*.] In *teratol.*, a monster having no tongue.

Agnatha, *n. pl.* **2.** A class of fishes, or fish-like vertebrates, characterized by the absence of jaws and shoulder-girdle. It contains the extinct ostracoderms and the existing lampreys.

agnathic (ag-nath'ik), *a.* Same as *agnathous*.

agnathus (ag'na-thus), *n.*; pl. *agnathi* (-thī). [NL.: see *agnathous*.] In *teratol.*, a monster having no lower jaw.

agnification (ag″ni-fi-kā'shọn), *n.* [L. *agnus*, lamb, + *-ficare*, < *facere*, make.] The making or representing of persons as lambs or sheep. *J. M. Neale*, Liturgiol. [Rare.] *N. E. D.*

agnosia (ag-nō'si-ä), *n.* [Gr. ἀ- priv. + γνῶσις, knowledge: see *gnosis*.] Same as *agnœa*.

agnosy (ag'nō-si), *n.* [Gr. ἀγνωσία, ignorance (cf. ἄγνωστος, unknown, unknowing, ignorant: see *agnostic*), < ἀ- priv. + γνῶσις, knowing: see *gnosis*.] Ignorance; specifically, an ignorance common to all mankind.

agnotozoic (ag-nō-tọ-zō'ik), *a.* and *n.* [Gr. ἄγνωτος, unknown, + ζωή, life.] **I.** *a.* Not known to contain fossils: applied to the early rocks and period of the earth in which definite evidence of organic life has not been found.

II. *n.* The rocks and period not yet known to contain evidences of life: contrasted with *eozoic* and *paleozoic*, and essentially equivalent, so far as the term has been applied, to the *Huronian* of Logan and the *Algonkian* of Walcott. Not in general use.

agoge (a-gō'jē), *n.* [Gr. ἀγωγή, a leading, course, mode, etc.] In *anc. Greek music*: (*a*) Tempo or pace; rhythmical movement; (*b*) Melodic motion upward or downward by successive scale-steps: same as *ductus* in medieval music. The first use is the more proper.

agogic (a-goj'ik), *a.* In *music*, pertaining to or emphasizing slight variations in rhythm for the sake of dynamic expression: as, *agogic* accent.

agogics (a-goj'iks), *n.* In *musical theory*, a term used by Hugo Riemann (from about 1884) for the general principle, in performance, that dynamic variations are, or should be, combined with slight variations in rhythmical regularity if the full expressiveness of a phrase is to be brought out. What is called *tempo rubato* (which see, under *tempo*) belongs to the field of *agogics*.

agoho (ä-gō'hō), *n.* [Bisaya.] A name applied in the Philippines to the Polynesian ironwood, *Casuarina equisetifolia*, a strand tree with very hard, heavy wood of a reddish-brown color, much used by the Pacific islanders for spears. See *swamp-oak*, 2 (*b*), and ★*ironwood*, 2.

agoing (a-gō'ing), *adv.* [a^3 + *going*.] In motion; in the act of going: used with *set*.

agomphosis (a-gom-fō'sis), *n.* Same as *agomphiasis*.

agonal (ag'ọ-nal), *a.* [NL. ★*agonalis*, < Gr. ἀγών, a struggle: see *agony*.] Relating to or occurring during the agony or death-struggle. See the extract.

The lower part of the ileum was of small calibre, a condition which, if not due solely to *agonal* contraction, might at least favor the production of diverticula in the upper part. *Jour. Exper. Med.*, V. 344.

Agoniada bark. See ★*bark*[2].

agoniadin (a-gō'ni-a-din), *n.* [*agoniada* + *-in*[2].] A glucoside, $C_{10}H_{14}O_6$, found in agoniada or agonia bark (*Plumeria lancifolia*), which is used in Brazil as a remedy for intermittent fevers. It is bitter, and crystallizes in needles which melt at 155° C.

agoniatite (a-gō'ni-a-tīt), *n.* and *a.* **I.** *n.* A member of the genus *Agoniatites*.

II. *a.* Containing or relating to *Agoniatites*. —**Agoniatite limestone,** a limestone stratum characterized by an abundance of *Agoniatites expansus*, occurring in the Marcellus shales of New York.

Agoniatites (a-gō″ni-a-tī'tēz), *n.* [NL., < Gr. ἀ- priv. + NL. *Goniatites*.] A genus of nautiloid ammonoids or goniatites. They are of very primitive form, the septal sutures having no angles except on the ventral edge about the siphuncle. *Agoniatites* is among the earliest forms of these cephalopods to appear. They are of Devonian age.

agonism (ag'ọ-nizm), *n.* [Gr. ἀγωνισμός, < ἀγωνίζειν, contend: see *agonize*.] **1.** Struggle or contest for a prize, especially at the ancient Grecian games.—**2.** The prize itself. [Rare in both uses.]

agonistic, *a.* **II.** *n.* The act of combating or struggling; combat; struggle. *G. S. Hall*, Adolescence, II. 251.

agonizant, *n.* **II.** *a.* Being in the death-agony; moribund.

agonizedly (ag-ọ-nī'zed-li), *adv.* As one in agony; in tones of agony or anguish. *Thackeray*, Paris Sketch Book, p. 166. *N. E. D.*

agonizing (ag'ọ-nī-zing), *p. a.* [*agonize* + *-ing*[2].] **1.** That causes or produces agony or anguish; characterized by extreme anguish or painful struggles: as, *agonizing* suspense; "agonizing distress," *Ruskin*, Fors Clavigera, i. 8.—**2.** Indicative of or expressing agony or anguish: as, an *agonizing* cry.—**3.** In the last agony; in the throes of death. See the extract.

An extraordinary Restorative and Cordiall, recovering frequently with it *agonizing* persons.
Philos. Trans. Roy. Soc. (London), I. 249. *N. E. D.*

Agonomalus (ag-ọ-nom'a-lus), *n.* [NL., < *Agonus* + Gr. ὁμαλός, even.] A genus of sea-poachers, of the family *Agonidæ*, found in northern Japan. They are often dried in a distorted form and sold as dragon curiosities.

Agonopsis (ag-ọ-nop'sis), *n.* [NL., < *Agonus* + ὄψις, appearance.] A genus of sea-poachers of the family *Agonidæ*. They are small sea-fishes found off the coast of southern Chile.

Agonostoma (ag-ọ-nos'tọ-mä), *n.* See ★*Agonostomus*.

Agonostominæ (ag″ọ-nos-tọ-mī'nē), *n. pl.* [NL., < *Agonostomus* + *-inæ*.] A subfamily of fresh-water mullets, typified by the genus *Agonostomus*.

Agonostomus (ag-ọ-nos'tọ-mus), *n.* [NL., < Gr. ἄγωνος, without angle, + στόμα, mouth.] A genus of fresh-water mullets of the family *Mugilidæ*, found in the swift streams of the East and the West Indies. Also *Agonostoma*.

Agonyclitæ (ag-ọ-nik'li-tē), *n. pl.* [NL., < MGr. ἀγονυκλῖται, < Gr. ἀ- priv. + LGr. γονυκλίνειν (cf. γονυκλιτεῖν), bend the knee, < γόνυ, knee, + κλίνειν, bend.] A sect who refused to kneel in prayer: condemned by a synod of Jerusalem A.D. 726.

agoraphobe (ag'ọ-ra-fōb), *n.* [A back-formation from *agoraphobia*.] One who is subject to agoraphobia.

Agosia (a-gō'si-ä), *n.* [NL., coined name.] A genus of small minnows found in the brooks of the Rocky Mountain region from British Columbia to Arizona.

agra dolce (ä'grä dōl'che), *n.* [It., 'sour sweet'; *agra*, fem. of *agro*, < L. *acer*, sharp, sour; *dolce*, < L. *dulcis*, sweet.] A well-known Italian sauce used with venison, calf's head, etc. It contains sugar, chocolate, lemon-peel, currants, etc., and vinegar. It is poured over the cooked meat and served hot.

agraffe, *n.* **4.** An appliance used in operations for harelip to keep the two surfaces of the wound in apposition.—**5.** An iron fastening used to hold in place the cork of a bottle containing champagne or other effervescing wine during the final fermentation.

Agrania (a-grā'ni-ä), *n. pl.* [Gr. Ἀγράνια, also Ἀγριάνια, a festival in Argos (Hesychius); prob. equiv. to Ἀγριώνια, a festival of Dionysus, prob. < ἄγριος, rustic, wild: see *agriology*.] A festival of Thebes in ancient Greece. It was celebrated in the night by women, a priest, and an attendant. It consisted in tearing in pieces a figure made out of or covered with ivy, and then, like the Thyiades on Parnassus, running over the mountain to look for Dionysus.

agraph (ag'raf), *n.* [Gr. ἄγραφος, unwritten, < ἀ- priv. + γράφειν, write.] An unwritten word; a word or saying preserved by oral tradition.

agraphia, *n.*—**Acoustic** or **auditory agraphia,** inability to write from dictation.—**Amnemonic agraphia,** loss of ability to write connected sentences.—**Ataxic agraphia,** inability to write resulting from imperfect muscular coordination.—**Literal agraphia,** loss of ability to write the letters of the alphabet.—**Musical agraphia,** loss of ability to write musical notation.—**Optical agraphia** loss of ability to write from copy, while the power to write from dictation may remain.—**Verbal agraphia,** loss of ability to write words, although the individual letters may be formed perfectly.

Agrauleum (ag-râ-lē'um), *n.* [NL., < NGr. ★Ἀγραυλεῖον, < Gr. Ἄγραυλος (see def.).] In *Gr. antiq.*, a modern name for a shrine of Agraulos or Aglauros, daughter of Cecrops, on the northern slope of the Acropolis at Athens. About 60 meters west of the Erechtheum a staircase leads down to it.

Agraulos (ä-grâ'los), *n.* [Gr. ἄγραυλος, living in the fields, < ἀγρός, field, + αὐλή, court, hall.] A genus of Cambrian trilobites having a large cephalon, small eyes, 16 thoracic segments, and very small pygidium. Properly *Agraulus*.

Agr. B. An abbreviation of L. *Agriculturæ Baccalaureus*, Bachelor of Agriculture.

agreement, *n.*—**Frankfort agreement,** a set of rules governing craniometry adopted by the Anthropological Congress at Frankfort in 1882.

agrégé (ä-grā-zhā'), *a.* [F., pp. of *agréger*, < L. *aggregare*, collect, assemble: see *aggregate*, *v.*] Added; supernumerary: as, professor *agrégé*.

agrestian (a-gres'ti-an), *a.* and *n.* **I.** *a.* Belonging to the country; rural; rustic: as, the *agrestian* population.

II. *n.* A rustic; a countryman.

agricolite (a-grik'ọ-lit), *n.* [From *Georg Agricola*, a Saxon mineralogist, 1490–1555.] A silicate of bismuth, having the same composition as eulytite, but believed to crystallize in the monoclinic system.

Agricultural botany. See ★*botany.* — **Agricultural college,** an institution for education in agricultural science and other branches of knowledge useful to agriculturists; specifically, in the United States, one of a class of such institutions organized and maintained under the provisions of the Morrill Act (see ★*act*), usually accompanied by an agricultural experiment station.— **Agricultural engineering.** See *rural* ★*engineering.* **Agricultural experiment station,** an establishment for the investigation, by scientifically conducted experiments, of questions directly affecting agricultural practice, relating to varieties of plants and breeds of animals, fertilizers, methods of culture, insect pests, diet of animals, etc. There are now about 800 such stations in 50 different countries. In the United States there is one or more in each State and Territory, mostly organized under the provisions of the Hatch Act (see ★*act*), but partly supported by individual States. The results of investigations are diffused by means of an extensive free literature.

agriculturer (ag-ri-kul'tūr-ėr), *n.* One engaged in farming operations; a husbandman. *Coleridge,* Own Times, III. 751. [Rare.] *N.E.D.*

Agriochœridæ (ag'ri-ō-kē'ri-dē), *n. pl.* [NL., *Agriocharus* + *-idæ.*] A family of extinct artiodactyl mammals, whose members are intermediate in character between the pig and the deer. The type genus, *Agriochœrus,* from the White River Oligocene, has somewhat claw-shaped hoofs, no upper incisors, an open orbit, and complex last premolars.

Agriochœrus (ag″ri-ō-kē'rus), *n.* [NL., ⟨ Gr. ἀγρός, wild, + χοῖρος, a pig.] A genus of imperfectly known ungulate mammals from the Tertiary of North America.

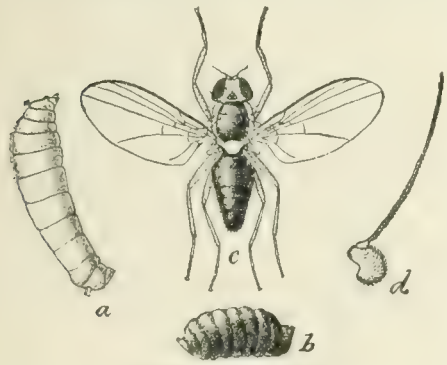
Agriotypidæ (ag″ri-ō-tip'i-dē), *n. pl.* [NL.; ⟨ *Agriotypus* + *-idæ.*] A family of hymenopterous parasites of the superfamily *Ichneumonoidea.* It contains the single genus *Agriotypus* and the single species *A. armatus,* whose larva is parasitic on trichopterous larvæ.

Agriotypus (ag-ri-ot'i-pus), *n.* [NL. (Walker, 1832), ⟨ Gr. ἀγριος, wild, + τυπος, type.] A remarkable genus of ichneumonoid parasites typical of the family *Agriotypidæ.* Only a single species, *A. armatus,* inhabiting Europe, is known. It descends under the water to lay its eggs in caddis-fly larvæ. Its larva lives inside the cases of the caddis larvæ, and undergoes a hypermetamorphosis, transforming to pupa in a cocoon attached to the wall of the case of the host. To the cocoon is attached a long string-like process, the function of which is unknown.

Agr. M. An abbreviation of L. *Agriculturæ Magister,* Master of Agriculture.

agromania (ag-rō-mā'ni-ä), *n.* [NL., ⟨ Gr. ἀγρός, open country, + μανία, madness.] A morbid impulse to wander or dwell away from human habitations.

Agromyza (ag-rō-mī'zä), *n.* [NL. (Fallen, 1810), ⟨ Gr. ἀγρός, field, + μύζειν, suck.] A genus of acalyptrate flies, typical of the family *Agromyzidæ,* of wide distribution and containing species which in the larval state damage the stems of grasses and small grains. *A. trifolii* is a leaf-miner which affects the leaves of clover.



Agromyza trifolii, Burgess.
a, larva; *b,* puparium; *c,* fly; *d,* antenna of fly. Much enlarged. (Riley, U. S. D. A.)

Agromyzidæ, of wide distribution and containing species which in the larval state damage the stems of grasses and small grains. *A. trifolii* is a leaf-miner which affects the leaves of clover.

Agromyzidæ (ag-rō-miz'i-dē), *n. pl.* [NL., ⟨ *Agromyza* + *-idæ.*] A family of acalyptrate *Diptera* comprising a series of small dull-colored flies whose larvæ burrow in the leaves and stems of living plants or (as in the genus *Leucopis*) feed on plant-lice and scale-insects.

agronomy, *n.* 2. Specifically, a group of agricultural subjects, particularly when set off as a department of instruction in agriculture. In this use it has not yet acquired a definite meaning, although it is generally held to be limited, properly, to farm crops and methods of cropping. In this signification it includes all forage, hay, cereals, and other general farm crops, but not fruits and other strictly horticultural crops. With the department of agronomy are often associated the subjects of farm-machinery, rural engineering, and rural architecture. [Recent.]

Agronomy as here used is restricted to the theory and practice of the production of farm crops.
T. F. Hunt, The Cereals in America, p. 2.

Agropyron (ag-rō-pī'ron), *n.* [NL., ⟨ Gr. ἀγρός, a field, + πυρός, wheat.] A genus of about 30 annual and perennial species of grasses in Europe and America. *A. repens* is a very common species in America, and is often a troublesome weed. It is known under many names, as *couch-grass, witch grass, quitch-grass, quack-grass,* etc. It was introduced from Europe. Under certain conditions, it has merit as a forage-plant.

agrotechny (ag'rō-tek-ni), *n.* [Gr. ἀγρός, field, + τέχνη, art.] That branch of agricultural science which relates to the conversion of raw farm-products into manufactured commodities as far as it is done on the farm or in immediate connection with it. This includes dairying, the drying and canning of fruits, and sugar-making, but not milling nor the spinning and weaving of cotton, etc.

Agrotechny or agricultural technology (including dairying, sugar making, etc.). *Science,* Nov. 27, 1903, p. 684.

a grotesche (ä grō-tes'ke). [It.] With grotesques: said of a style of decoration consisting of human figures with foliated limbs, in combination with animals, painted usually in yellow on darker grounds on majolica ware.

agrypnode (a-grip'nōd), *a.* [Gr. ἀγρυπνώδης, ⟨ ἀγρυπνος, seeking sleep, sleepless, ⟨ ἄγειν, seek, hunt, + ὕπνος, sleep.] That prevents sleep: as, *agrypnode* fever. *Syd. Soc. Lex.*

aguacate (ä-gwä-kä'tā), *n.* [Nahuatl, *ahuacatl:* the name became in colonial Sp. perverted to **avocate, avocato, avocado, abogado,* etc., and so to *alligator*(-pear).] The alligator-pear. The tree yields a reddish-brown, soft, and very brittle wood. Also known as the *butter-pear* and *vegetable marrow.*

aguacatillo (ä″gwä-kä-tēl'yō), *n.* [Sp., dim. of *aguacate,* the alligator-pear.] A name in Porto Rico of two trees, *Meliosma obtusifolia* and *M. Herbertii,* belonging to the family *Sabiaceæ.* They yield a soft white wood. Also called *cacao bobo.*

aguaji (ä-gwä-hē'), *n.* [Cuban Sp., from a native name.] A Cuban name for species of large bass-like fishes or groupers, especially for *Mycteroperca bonaci.*

aguavina (ä-gwä-vē'nä), *n.* [Amer. Sp., of unascertained origin.] A serranoid fish, *Diplectrum fasciculare,* found in tropical American waters.

aguayo (ä-gwä'yō), *n.* [Aymará of Bolivia.] A many-colored wrap or rectangular piece of woolen cloth used by the Indian women of Bolivia for carrying their children on the back. Compare ★*atado.*

ague, *n.*— **Brass-founders' ague,** symptoms of zinc-poisoning in brass-workers who are exposed to the fumes of this metal.— **Irish ague,** typhus fever.— **Shaking ague,** the worst form of the malarial paroxysm, beginning with a pronounced chill.

aguilarite (ä-gi-lä'rīt), *n.* [From *Aguilar,* a personal name.] A rare sulphoselenide of silver found at Guanajuato, Mexico.

aguil-boquil (ä″gēl-bō'kēl), *n.* [Native name.] The Chilean name for the berries of *Lardizabala biternata,* a climbing plant belonging to the family *Lardizabalaceæ,* with enormously long stems, which, after the application of heat, are used in place of ropes.

aguja (ä-gö'hä), *n.* [Sp., a needle: see *aiguille.*] The Cuban name of the needle-fishes or garfishes of the genus *Tylosurus,* as *T. marinus* and *T. notatus.* In Europe the name is also applied to species of *Belone,* as *B. belone* and *B. acus.*— **Aguja blanca,** the lesser or common spear-fish, *Tetrapturus imperator.* [Cuban.]— **Aguja de casta,** the great spear-fish, *Tetrapturus amplus,* a rare fish weighing sometimes 800 pounds. [Cuban.]

agujon (ä-gö-hōn'), *n.* [Sp., ⟨ *aguja,* a needle.] The Cuban name of the great garfishes or houndfishes, as *Tylosurus raphidoma* and other species of large size.

agulha (ä-göl'yä), *n.* [Cuban.] A fish belonging to the family *Characinidæ* found in fresh waters of South America.

agurin (ä'gū-rin), *n.* A trade-name for the mixture of sodium acetate and the sodium salt of theobromine. It is used as a febrifuge.

agush (ą-gush'), *adv.* [a^3 + *gush.*] In a gushing state; gushing. *N. Hawthorne,* Fr. and Ital. Note-books, II. 149. *N. E. D.*

Agynian (a-jin'i-an), *n.* [ML. **Agyni,* **Agynii,* in Du Cange *Agynni,* pl.; ⟨ Gr. ἄγυνος, ἀγύναιος, without a wife, ⟨ ἀ- priv. + γυνή, woman, wife.] A member of a sect of the 7th century who condemned all intercourse with women.

ahakea (ä-hä-kā'ä), *n.* [Hawaiian.] A name in Hawaii of several species of rubiaceous trees belonging to the genus *Bobea.* They yield a yellowish wood used by the natives for the rims of canoes, and for making poi-boards, canoe-paddles, etc.

ahed, *prep. phr.* as *adv.* or *a.* A simplified spelling of *ahead.*

ahey (ą-ha'), *interj.* [*a*-9 + *hey*1.] An exclamation used to attract attention or to express mild surprise; O! Oho! hey! *Smollett,* Peregrine Pickle, II. lxvi.

ahgao (äch-gä-o'), *n.* [Given as the pron. in Guam; = Bisaya *abgao,* Tagalog *alagao*: see ★*alagao.*] The name in Guam of *Premna Gaudichaudii,* a tree with bitter leaves and elder-like flowers, which, like those of allied species in the Philippines, the East Indies, and Madagascar, are used medicinally by the natives. The wood, though often crooked and knotty, is very durable and is proof against the attacks of termites, so that it is used for posts of houses and for bridges. See *headache tree.*

ahia (ä-hē'ä), *n.* [Tahitian.] In Tahiti, a tree, *Caryophyllus Malaccensis,* occurring on all the larger island groups of Polynesia and in the Malay Archipelago. It is everywhere valued for its fine crimson fruit.

ahinahina (ä-hē″nä-hē'nä), *n.* [Hawaiian, ⟨ *a* + *hina* + *hina,* gray, hoary.] In Hawaii, a tall, robust composite plant, *Argyroxiphium Sandwicense,* with rose-purple flowers: named from the lustrous silver-gray down which thickly covers the leaves. Also called *silver-sword.*

ahmedi (ä-me-dē'), *n.* [E. Ind.] A gold coin of Mysore, equal to 16 rupees.

Ahnfeltia (än-fel'ti-ä), *n.* [NL. (Fries, 1835), named in honor of N. O. *Ahnfelt* of Lund, Sweden.] A small genus of red algæ (*Rhodophyceæ*), widely distributed in the colder waters of both hemispheres: characterized by a stiff, wiry frond.

ahuehuetl (ä-hō-ā-hwā'tl), *n.* [Also *ahuehuete,* Nahuatl (central Mexico).] The swamp-cypress of Mexico, a tree frequently of very large size. The ahuehuetls in the former viceregal park of Chapultepec, near the city of Mexico, are noted for their size; but the most famous of all is the big tree at Santa Maria del Tule, in the Mexican state of Oaxaca. The circumference of this tree exceeds 130 feet.

ahuhu (ä-hö'hö), *n.* [Hawaiian.] A name in Hawaii of *Cracca purpurea,* a leguminous plant used by the natives for stupefying fish. It possesses a narcotic property affecting the action of the heart. The plant is spread over a great part of tropical Asia and Australia. Also called *auhola.*

ahum (ą-hum'), *adv.* [a^3 + *hum.*] In a hum; humming: as, the air is all *ahum* with the sound of bees.

ahunt (ą-hunt'), *adv.* [a^3 + *hunt.*] On the hunt; hunting. *Browning,* Aristoph. Apol., p. 272.

ahypnia (a-hip'ni-ä), *n.* [NL., erroneously formed from Gr. ἀ- priv. + ὕπνος, sleep. The proper form would be **anypnia,* ⟨ NGr. *ἀνυπνία, ⟨ MGr. ἄνυπνος, sleepless, ⟨ Gr. ἀν- priv. + ὕπνος, sleep.] Same as *insomnia.*

Aianteja (ā-yan-tē'yä), *n. pl.* [NL., ⟨ Gr. Αἰάντεια, neut. pl. of Αἰάντειος, adj., ⟨ Αἴας (Αἰαντ-), Ajax.] In *Gr. antiq.,* a festival in honor of Ajax. Three of them were commonly celebrated, one at Opus in Locris in honor of Ajax, son of Oïleus; one at Salamis in honor of Ajax, son of Telamon; and one at Athens in honor of Ajax, son of Telamon. In these festivals a bed was prepared on which was placed an effigy of the hero, as in the Lectisternium at Rome.

aianthous (ā-ī-an'thus), *a.* [Gr. ἀεί (Æolic ἀί), always, + ἄνθος, flower.] Ever-blooming, that is, blossoming through a large part of the season. *F. E. Clements.*

aichmophobia (āk-mō-fō'bi-ä), *n.* [NL., more reg. *æchmo-,* ⟨ Gr. αἰχμή, point of a spear, etc., + -φοβία, ⟨ φοβεῖν, fear.] 1. A morbid fear of touching sharp-pointed objects, such as needles and pins.— 2. A morbid fear of being touched by the finger or any slender object.

aid1, *n.* 6. In the navy, an officer on the staff of an admiral whose duties are similar to those of an aide-de-camp to a general.— **First aid,** immediate attention given to the injured, with the object of arresting hemorrhage, relieving pain, and preserving life until the services of a physician can be obtained.

aidant, *a.* II. *n.* A helper or aid; an adjuvant or assistant. *Sir R. Phillimore,* Law Reps.

Aiden, Aidenn (ā'den), *n.* A fanciful form of *Eden. Poe,* Raven.

A. I. G. An abbreviation of *Adjutant Inspector General.*

aigialosaur, *n.* See ★*ægialosaur.*

aigues mortes (āg môrt). [F., dead waters.] Stagnant waters left in an abandoned river-channel, as when an ox-bow is cut off from a river. *Geikie.*

ailantery (ā-lan'tėr-i), *n.*; pl. *ailanteries* (-iz). [*ailantus* + *-ery.*] A grove of ailantus-trees.

ailantine, *a.* **II.** *n.* Silk from the silkworm which feeds on the ailantus-tree.

ailantus-worm (a-lan'tus-wėrm), *n.* The larva of the bombycid moth, *Philosamia cynthia* Drury, which feeds on the foliage of the ailantus. It is a native of Japan and Java, where its silk is utilized to some extent. It has been introduced for sericultural purposes into Europe and the United States without practical result, and now occurs commonly in the wild state in the coast cities of the United States.

aile, *n.* A simplified spelling of *aisle*.

Aileron, from façade of Church of Santa Maria in Via, Rome.

aileron, *n.* **2.** In *arch.*, that piece of the end wall, as of nave or transept, which covers the end of the aisle-roof. It resembles a wing of the main or central structure.

ailurophobia (ā-lū-rō-fō'bi-ä), *n.* Same as ★*ailurophobia.*

aim, *n.*—**Point of aim,** in *archery,* the point at which aim should be taken in order to hit the target: it varies with the distance, and may be above or below the target.

aimak (ī'mak), *n.* [Mongol.] A group of families, probably originally related by blood, forming the principal political unit among the Mongols. Each aimak is governed by its own chieftain.

aimara (ī-ma-rä'), *n.* [Tupi *aimará.*] A Brazilian name of *Macrodon malabaricus*, a river fish of the family *Erythrinidæ*.

Aimé's nephoscope. See ★*nephoscope.*

aimworthiness (ām'wėr-thi-nes), *n.* Excellence of aim. *Blackmore*, Lorna Doone, liv. *N. E. D.*

ain[2] (īn), *n.* [Ar. *'ain*, the letter *ain*, also an eye, a fountain, essence, = Heb. *'ayin*, the letter, also an eye.] **1.** The eighteenth letter of the Arabic alphabet, having a vibratory palatal sound without any equivalent in English.—**2.** A spring; a fountain. See the extract.

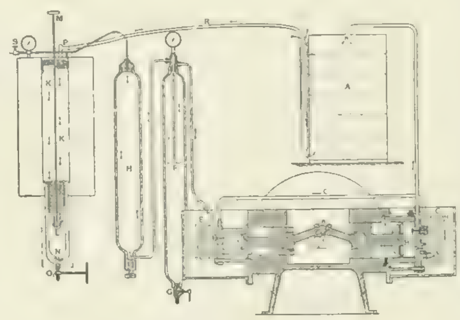
> Most of the . . . artesian wells [in the oases of the Libyan desert], known locally as "*ains*," are ancient.
> *Geog. Jour.* (R. G. S.), XVI. 655.

ainalite (ā'nal-īt), *n.* A variety of cassiterite containing about 9 per cent. of tantalum pentoxid.

Ainu (ī'nö), *n.* See *Aino.*

aipim (ä-i-pēm'), *n.* [Also *aypim, aypi.* A (former) native name (Tupi?).] The name in Brazil of the sweet cassava. See *cassava*, 1, *Manihot*, and *manioc.*

air[1], *n.* **1.** The air constituting the earth's atmosphere, in addition to the principal gases, nitrogen and oxygen, and the other gaseous substances long known to be present, contains in admixture five gases distinguished by their chemical inertness, viz.: helium, neon, argon, krypton, and xenon. All of these appear to be elementary substances. Argon occurs to the extent of nearly 1 per cent. by volume or 1 per cent. by weight, the others in far smaller proportion. Free hydrogen, as well as methane and perhaps other hydrocarbons, is also probably present. Within recent years apparatus has been constructed for the liquefaction of air on a large scale by compressing it by means of powerful pumps, cooling it in the compressed state, and allowing it to expand again. The only commercial use which has been found for liquid air is as a source of oxygen gas in a fairly pure state, in demand mainly for medicinal purposes.—**Complemental air.** Same as *complementary* ★*air.*—**Complementary air,** the air which can be drawn into the lungs by an effort after the ordinary inspiration is completed.—**Empyreal air** (Scheele) and **vital air** (Condorcet), names given to oxygen soon after it became known in the separate state.—**Hampson's liquid-air apparatus,** an apparatus designed by W. Hampson for the liquefaction of air. It consists of a purifier (A) filled with trays spread with moist slaked lime, and a double-cylinder compression-pump (B and D) worked by a 5-horse-power electric motor, by which the air is compressed in B to 16 atmospheres, and after being cooled in the water-jacketed coil C is again compressed to 160–180 atmospheres in D. Again cooled in the coil E, the air passes to G, where water used for lubricating the pistons separates. The vessel H is filled with caustic potash, which removes the last traces of water and carbon dioxid. The liquefaction takes place in the next apparatus, known as the *liquefier.* It has either two or four copper coils wound coaxially about a spindle and joined at their lower ends to a vertical jet. The coils fill the whole space KK.



Hampson's Liquid-air Apparatus.
(From Travers's "Exper. Study of Gases.")

The jet L can be closed by means of a rod which screws down on the top of it and which can be adjusted to form an annular opening by the milled screw-head M. The coils are inclosed by a cylinder of insulating material, except the lower part and the valve, which are contained in a vacuum vessel, N. The liquid air is run off through the tap O. The air which escapes liquefaction passes upward over the coils and through P and R to A. The actual quantity of the air which is liquefied is 5 per cent. of the quantity which passes through the apparatus. The yield in an apparatus of this size is 1–1.5 liters of liquid air an hour. In a newer form of liquefier the liquid air collects in a metal reservoir placed within the insulation, its quantity being indicated by a glycerol-gage.—**Liquid air.** See *liquefaction of gases*, under *liquefaction.*—**Mephitic air,** a name early in use to signify an irrespirable gas or mixture of gases. It applied chiefly to carbon dioxid as in the choke-damp of coal-mines, but was also used for the mixture of this gas with nitrogen in air in which a candle had ceased to burn or an animal to breathe.—**Supplemental air.** Same as *residual air* (which see, under *air*[1]).

air-bag, *n.* **2.** The presser of a pneumatic molding-machine. It consists of bags inflated with air, by which an elastic and equal pressure is imparted to the sand. *Lockwood*, Dict. Mech. Eng. Terms. Air-bags are also used in cases where a uniformly distributed pressure is desired, as in blue-printing frames.

air-barometer (ãr'ba-rom'e-tėr), *n.* An apparatus devised by F. H. King to determine small oscillations in the level of well-water depending on small oscillations of atmospheric pressure. It consists of a large vessel full of air buried deep in the soil in order to keep its temperature constant; some mercury rests at the bottom of the vessel, and into this dips a tube extending vertically above the surface of the ground. The changes of air-pressure force the level of the mercury in the tube to change correspondingly, and these changes are recorded on a revolving drum.

air-beat (ãr'bēt), *n.* In *acoustics*, an individual pulse of air such as may be felt mechanically where the waves from a vibrating body are of very low frequency. For frequencies within the auditory range the air-beats cannot be separately distinguished, but blend into a tone.

air-bell (ãr'bel), *n.* **1.** In *Auronectæ*, a large roundish gas-secreting organ, probably a modified swimming-bell; an aurophore.—**2.** A small bubble which appears on a photographic plate, sensitized paper, or film.

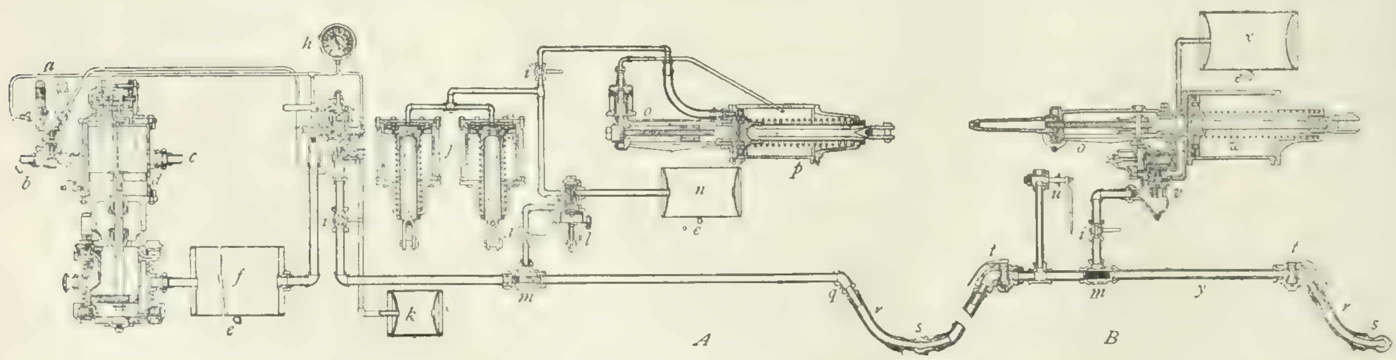
air-belt (ãr'belt), *n.* An annular space around the twyer zone of a cupola. The air passes from this space into the twyers instead of going directly from the blast-pipe.

air-billow (ãr'bil-ō), *n.* An air-wave which is long and gentle; specifically, a wave produced at the boundary surface between two horizontal layers of air having different velocities and directions: analogous to the waves on the surface of water.

air-bladder, *n.* **3.** See ★*air-float.*—**4.** In *entom.*, one of the numerous bladder-like endings of smaller tracheæ in the bodies of many insects, which, filled with air, greatly reduce the specific gravity of the insect.

air-bound (ãr'bound), *a.* Bound or stopped up so that the passage of air is prevented: in *plumbing*, said of a water- or drain-pipe so obstructed.

air-brake, *n.*—**Automatic air-brake,** a form of air-brake which automatically applies the brake-shoes to the wheels with maximum pressure on each car in a train, without the aid or knowledge of the engineer or train-crew, whenever, from any cause, a rupture occurs in the brake-pipe which runs throughout the length of the train—as, for example, when the train breaks in two. Compressed air is supplied from large main reservoirs on the locomotive, through the brake-pipe, to smaller auxiliary reservoirs on each car, and a 'triple valve' forms the connection between the brake-pipe, auxiliary reservoir, and brake-cylinder. Any fall in pressure in the brake-pipe causes the triple valve to connect the brake-cylinder with the auxiliary reservoir and to apply the brakes. When the brake-pipe pressure is reinstated, the triple valve connects the brake-cylinder with the atmosphere and the auxiliary reservoir with the brake-pipe. The automatic brake was invented by George Westinghouse in 1872.—**Quick-action automatic air-brake,** an improved form of air-brake by which the time required to apply the brakes in an emergency on a train of fifty freight-cars was reduced one half. The improvement consisted in enlarging the brake-pipe and changing the triple valve (see ★*valve*) by enlarging the ports and passages, and also by adding a secondary valve portion by which, in emergency application, a part of the brake-pipe pressure is vented into the brake-cylinder, thereby increasing the brake-cylinder pressure and hastening the fall of brake-pipe pressure, thus causing the successive application upon each car throughout the train to occur much more rapidly. In ordinary service applications the operation of the quick-action automatic air-brake does not differ



Quick-action Automatic Air-brake.

A, Engine Equipment: *a*, [illegible] pump-governor; *c*, from boiler; [illegible] exhaust; [illegible] air-pump; *e*, drain-cock; *f*, main reservoir; *g*, engineer's brake-valve; *h*, gage; [illegible] *i*, driver-brake cylinders; [illegible] reservoir; [illegible] triple; *m*, air-strainer; [illegible] truck and driver brake-reservoir; [illegible] automatic slack-adjuster; *p*, truck brake-cylinder; [illegible] angle fitting; [illegible] hose-coupling. *B*, Car Equipment: [illegible] conductor's valve; *m*, air-strainer; [illegible] quick-action triple valve; [illegible] automatic slack-adjuster; *w*, car brake-cylinder; *e*, drain-cock; *x*, auxiliary reservoir; *y*, train-pipe; *r*, hose; [illegible] hose-coupling. The tender equipment [illegible] is similar to the car equipment.

from that of the plain automatic above mentioned. This improved form was invented by George Westinghouse in 1887. **Straight-air brake**, the original form of air-brake, in which the brake-pipe connects the brake-cylinder on each car to a valve on the locomotive, by means of which the engineer can allow air-pressure to flow from the large reservoirs on the locomotive directly to each brake-cylinder to apply the brakes, or he can connect the brake-pipe with the atmosphere to release the brakes. In this system the brake-pipe is under pressure only during an application of the brakes. This form of brake was first patented in England early in the nineteenth century, and was first applied to railway service in America by George Westinghouse in 1869.

air-cataract (ãr'kat″a-rakt), *n.* A device to check the vibrations or oscillations of a body, and also to cushion or soften the blow of a body brought suddenly to rest. It consists of an air-cylinder having a moving piston or disk attached to the body whose motion is to be checked or damped. The confined air, being allowed to escape only through small openings in the end of the cylinder or through the piston or disk, checks the vibration or the motion of the piston and the body to which it is attached.

air-chamber, *n.* **4.** A septal chamber in the nautilus and other chambered cephalopods like the ammonites, goniatites, and orthoceratites. The name was commonly thus employed in the belief that these spaces, successively abandoned by the animal as the forward growth of the shell continues, were filled with air which facilitated the flotation of the shell when the animal chose to rise to the surface of the sea. It is now regarded as doubtful if gases ever enter these chambers during life. Verrill has pointed out that water has access to the elastic siphuncular tube, "but living, as the animal does, under pressure at considerable depths, the fluid in the chambers is saturated with the gases in solution. When the *Nautilus* is rapidly brought to the surface, some of the gas is liberated in consequence of diminished pressure and must occupy part of the space within the chambers by forcing out some of the fluid. Hence the shell will float until the free gases within the chambers are absorbed or otherwise eliminated." Also termed *camera* and *loculus.*

5. In *bot.*: (*a*) One of the mostly prismatic intercellular spaces occurring in aquatic plants. (*b*) The intercellular area beneath a stoma.

air-channel (ãr'chan″el), *n.* **1.** A channel for the passage of air.—**2.** *pl.* Channels underneath the hearths or in the brickwork of the walls and fire-bridges of reverberatory furnaces, designed to protect the foundations from the intense heat of the furnace as well as to preheat the air entering the furnace.

air-compartment (ãr'kom-pärt″ment), *n.* An air-tight subdivision of a shaft or other mine passage for the ventilating current.

air-compressor, *n.* **2.** A combined steam-engine and air-compressing cylinder, or a compressing-cylinder operated by a motor or by belting. A typical form has 4 horizontal cylinders arranged in tandem pairs. One pair is composed of the high-pressure cylinder of the engine and the first air-compressing cylinder; the other pair consists of the larger, low-pressure steam-cylinder and a second and larger cylinder which recompresses the air already compressed in the first cylinder. Each pair has one piston-rod which unites the pistons in each cylinder and extends beyond the steam-cylinder through a connecting-rod to a fly-wheel, the two rods thus being joined and moving together through the fly-wheel. Each air-cylinder is water-jacketed to keep it cool and to absorb and carry away the heat of compression. The air compressed in the first cylinder passes to the second cylinder through a group of pipes inclosed in a large pipe which carries a stream of cold water that absorbs more of the heat of compression from the air, and is again compressed. From the second cylinder the compressed air may pass through a second cooler or be delivered direct to the air-receiver for storage and cooling, ready for use in rock-drills or other air-motors. Other types of air-compressors consist of single or compound vertical engines or of single-acting air-compressing cylinders operated by a crank from a belt-driven fly-wheel.

air-condenser (ãr'kon-den″sėr), *n.* **1.** An electric condenser made by having two thin metal plates separated by a layer of air, one plate being connected to a positive pole and the other to a negative pole from the same circuit. The action of such a condenser is exactly the same as that of a Leyden jar; when there is sufficient potential to overcome the resistance, the condenser discharges.

2. A condenser for steam in which air is used for cooling the condensing surface instead of water: used on some motor-cars.

air-cooled (ãr'köld), *p. a.* Cooled by a current of air; having its heat carried off by passing cool air over its surface.

air-cube (ãr'kūb), *n.* The amount of air in a closed space available for respiratory purposes by each person occupying it. It is expressed by the cubic contents of the space divided by the number of persons.

air-cure (ãr'kūr), *n.* Same as *aërotherapeutics.*

air-cushion, *n.*, **4.** Specifically, a volume of air imprisoned behind a movable piston in a chamber which it fits. The air, by its compression, gradually arrests the motion of the piston. Used as a safety appliance at the foot of elevator-shafts to catch and stop the fall of the cage in case of the breaking of the hoisting-rope or other accident.

air-cylinder, *n.* **2.** Any cylinder in which air is used, as in an engine run by compressed air instead of by steam.

air-door (ãr'dōr), *n.* A door for the regulation of currents of air through the workings of a mine. *Coal and Metal Miners' Pocket-book.*

air-drain, *n.* **3.** A pipe or flue built into a fireplace to insure an ample supply of air.

air-duct, *n.* **2.** In *building*, same as ★*air-drain*, 3.—**3.** In the heating and ventilation of buildings, a large pipe, often built of wood or thin metal, used to transmit air, either cold or hot.

air-embolism (ãr'em″bọ-lizm), *n.* Air-bubbles in a blood-vessel, causing obstruction of the flow of blood.

Fucus vesiculosus, showing air-floats. (From Murray's "Introd. to Seaweeds.")

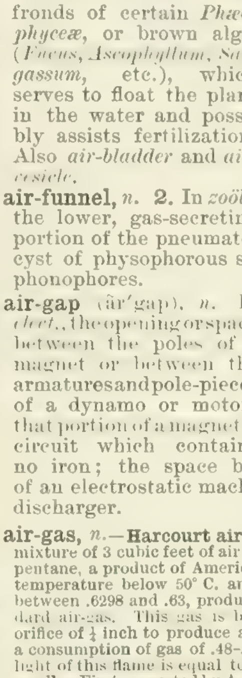
air-extractor (ãr'eks-trak″tor), *n.* A device for separating air from a liquid.

air-float (ãr'flōt), *n.* A bladder formed in the fronds of certain *Phæophyceæ*, or brown algæ (*Fucus, Ascophyllum, Sargassum*, etc.), which serves to float the plant in the water and possibly assists fertilization. Also *air-bladder* and *air-vesicle.*

air-funnel, *n.* **2.** In *zoöl.*, the lower, gas-secreting portion of the pneumatocyst of physophorous siphonophores.

air-gap (ãr'gap), *n.* In *elect.*, the opening or space between the poles of a magnet or between the armatures and pole-pieces of a dynamo or motor; that portion of a magnetic circuit which contains no iron; the space between the terminals of an electrostatic machine, induction-coil, or discharger.

air-gas, *n.*—**Harcourt air-gas pentane standard**, a mixture of 3 cubic feet of air and 9 cubic inches of liquid pentane, a product of American petroleum distilling at a temperature below 50° C. and having a specific gravity between .6298 and .63, producing 4.05 cubic feet of standard air-gas. This gas is burned at a burner with an orifice of ¼ inch to produce a flame 2½ inches high, with a consumption of gas of .48–.52 cubic feet an hour. The light of this flame is equal to that of a British standard candle. First suggested by A. G. Vernon-Harcourt in 1877.

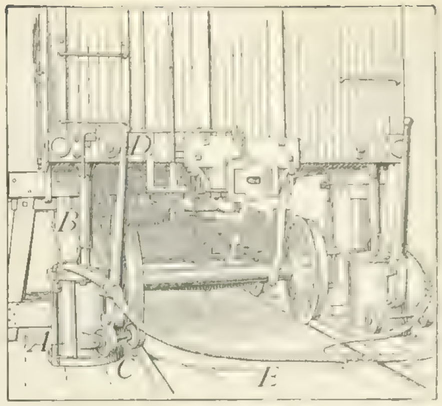


Motor Air-hoist.

air-hoist, *n.*—**Cylinder air-hoist**, an air-hoist employing a long cylinder fitted with a piston and piston-rod, the weight to be lifted being suspended from the lower end of the latter. The compressed air is delivered through hose to the lower end of the cylinder, forcing the piston upward and lifting the weight. To lower the load the air is released and the piston allowed to fall slowly. The load can be held at any point of the hoist and safety appliances prevent the too sudden rise or fall of the piston through loss of load or loss of air-pressure. Cylinder-hoists are hung by a hook in fixed positions or attached to a trolley traveling on an overhead track, to the jib of a crane, or to a traveling-crane. Telescopic cylinders are used where head-room is limited.—**Motor air-hoist**, a chain-hoist operated by an air-motor. It may be suspended in a fixed position or from a trolley traveling on an overhead track or on a traveling-crane.

air-insulated (ãr'in″sụ̄-lā-ted), *p. a.* In *elect.* or *heat*, insulated by means of an intervening layer of air.

air-jack (ãr'jak), *n.* A lifting-jack operated by compressed air. It consists of an upright cylinder with a piston, the piston-rod acting as the lifting-arm of the jack. In one form the cylinder is telescopic. It is



usually fitted with wheels for transportation, and is used in railroad car-shops.

air-jacket, *n.* **2.** A space surrounding a steam-cylinder or other vessel within which is circulated hot air or gas, or within which ordinary air is confined without circulation: used to diminish loss of heat by radiation through the walls of the cylinder and to lessen cylinder-condensation of steam back to water. Its function is the same as that of the steam-jacket. Since air is one of the best non-conductors of heat when it is not allowed to circulate, an air-jacket may also be used to keep the cylinders of a refrigerating apparatus from being warmed by the outside air.

3. A closed space, usually annular, about some part of a machine or piece of apparatus, designed to secure uniformity of temperature.

air-jacket (ãr'jak″et), *v. t.* To provide with an air-jacket. See ★*air-jacket*, *n.*, 2.

air-jig (ãr'jig), *n.* In *mining*, a machine which effects the separation of minerals according to their specific gravity by intermittent rising currents of air which lift the lighter particles of gangue and permit the heavier metallic minerals to settle. The light tailings flow off at the top and the concentrates are discharged from below by some mechanical device. The Paddock-Hooper pneumatic concentrator and the Vrom air-jig are the principal machines of this class.

air-leak (ãr'lēk), *n.* In *electrostatics*, the loss of charge, in the case of an insulated body, due to the discharging action of the surrounding air.

air-level (ãr'lev″el), *n.* A level or airway of former workings made use of in subsequent deeper mining operations for ventilating purposes. *Coal and Metal Miners' Pocket-book.*

air-lift (ãr'lift), *n.* A device for raising water from deep wells by means of compressed air. It comprises an air-compressor and two pipes open at the lower end and placed one within the other in the well. The compressed air passes down the inside pipe to the bottom of the well, where it rises through the larger pipe and through the water which fills the lower part of it, carrying the water upward with it and delivering it at the surface. The system can be so applied to a group of wells as to lift several million gallons a day.

air-liquefier (ãr'lik″wẹ-fī-ėr), *n.* An apparatus for converting air under pressure into liquid air by the effect of cooling.

air-meter, *n.*—**Biram's air-meter**, a modification of the Casella air-meter in which a large light radial fan is kept in rotation by the current of air to be measured. The apparatus is usually graduated so as to show the volume of fresh air that passes through the shaft leading to a mine or a room that needs ventilation.

air-monger (ãr'mung″gėr), *n.* [*air* + *monger.*] One who is taken up with the pursuit of visionary or impracticable projects. *Felltham*, Resolves, I. xv. [Rare.] *N. E. D.*

airol (ãr'ōl), *n.* A greenish-gray, fine, voluminous, odorless, and tasteless powder, said to be an oxyiodide of bismuth subgallate. It is absorbent and antiseptic.

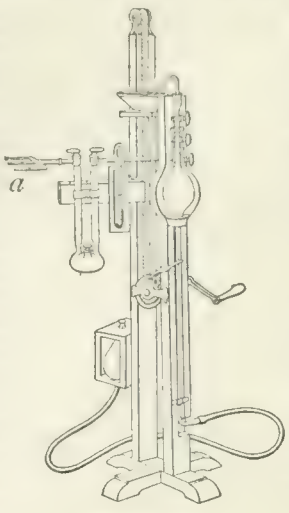
air-plate (ãr'plāt), *n.* A plate perforated to allow the passage of a limited amount of air; a perforated baffle.

air-pressure (ãr'presh″ụ̄r), *n.* The barometric pressure or elastic pressure of the atmosphere. It is expressed in pounds per square inch or in dynes per square meter, or, more commonly, by the height of the mercurial column of the barometer, and sometimes in units of one standard atmosphere.

air-proof (ãr'pröf), *v. t.* To protect from injurious action of the air or of some of its ingredients, as by a suitable varnish applied to the material to be protected.

air-pump, *n.*—**Duplex air-pump**, a form of air-pump in which two air-pumping cylinders are placed

side by side in pairs, the piston-rod of each being the prolongation of the piston of the steam-cylinders (also in pairs) which drive them; specifically, a form of air-pump for air-brake service in which one of the cylinders is twice the diameter of the other but of the same stroke. Both air-cylinders draw in air from without on the intake stroke, but the larger delivers into the smaller on the completion of the intake stroke of the latter. Hence three volumes of free air are delivered in each double stroke. —**Geissler's mercury air-pump**, an apparatus used for producing a vacuum, consisting essentially of a reservoir which can be filled with or emptied of mercury by raising or lowering another containing mercury and connected with the former by a flexible rubber hose. By the proper adjustment of stop-cocks the air or gas exhausted from a vessel attached at *a* is dried by passing through a U-tube containing a desiccating material, usually phosphorus pentoxid, and is either collected over mercury held in a trough or is driven into the air. A barometer-gage indicates the degree of exhaustion. The raising and lowering of the reservoir holding the mercury are effected either by hand or by the use of a simple mechanical device.—**Toepler's mercury air-pump**, a modified form of the Geissler air-pump, in which a glass valve replaces the controlling stop-cock and a barometer-tube serves to permit the exhausted air to escape.



Geissler's Air-pump.

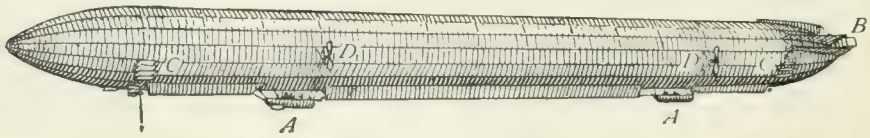
air-regenerator (ãr′rē-jen″e-rā-tor), *n.* The regenerator through which atmospheric air passes to be heated on its way to a steel-melting or reheating furnace, a zinc furnace, a coke-oven, etc. It is larger than the corresponding gas-regenerators.

air-register (ãr′rej″is-tẽr), *n.* Same as *register*[1], 8.

air-sac, *n.* **3.** In *bot.*, a cavity in a pollen-grain of the genus *Pinus*.

air-separator (ãr′sep″a-rā-tor), *n.* In *mining*, a machine which effects the separation of minerals according to size or density by air, either by pulsating rising currents (see ★*air-jig*); or by a continuous blast, as in the Edison, Hochstedt, and other dust-separators; or by projecting the particles to be separated by mechanical means into still or moving air, as in the centrifugal separators of the Pape-Henneberg and Clarkson-Stanfield types.

airship (ãr′ship), *n.* A buoyant balloon provided with a motor, propellers, and rudders, so that it can navigate the air under the control of an aëronaut; a dirigible balloon. Such balloons are made in various elongated, more or less cigar-shaped, forms and have successfully traversed long distances under good control. The first notably successful experiments with the dirigible balloon were made by Renard, in France, 1884–85; he attained a velocity of 14 miles an hour and was able (as a rule) to return to his starting-point. In 1900 Count Zeppelin made short voyages over Lake Constance in a dirigible of his own design, which has been remodeled and improved until in 1909 it made voyages of several hundred miles. Other successful experimenters have been Santos-Dumont, whose air-ships (successive models) accomplished notable results in 1900 and 1901, Lebaudy in France, Gross and Parseval in Germany, and Thomas S. Baldwin in the United States.



Airship Zeppelin III.
A, A, engines; *B*, rudder; *C, C*, dipping-planes; *D, D*, propellers.

air-stone (ãr′stōn), *n.* [*air*[1] + *stone*.] A meteorite. [Rare.] *N. E. D.*

air-tap (ãr′tap), *n.* A cock or valve fixed in the air-pipe in hot-water apparatus, to allow of the escape of air from the series, which without this means of exit would accumulate therein. The air tap is placed at the highest point in the series of pipes. Air taps in pumps and engines are called pet-cocks. *Lockwood*, Dict. Mech. Eng. Terms.

air-tester (ãr′tes-tẽr), *n.* An apparatus for testing the quality of air, as in inhabited apartments.

air-trap, *n.* **3.** A small funnel of glass fastened in the inside of a barometer-tube to catch any bubbles of air that would otherwise rise through the mercury into the vacuum-chamber.

air-twist (ãr′twist), *n.* A bubble of air which is sometimes contained in the stem of a vessel of glass, and which, in twisting, becomes a hollow spiral.

The secret of the construction of two of the classes — namely, the brilliant, and the combined opaque and *air-twist* — seems to have been lost.
Wynn Penny, English Eighteenth Century Drinking Glasses. Burlington Mag., III. 63.

Glass Vessel, showing Air twist.

air-twisted (ãr′-twis″ted), *p.a.* Having an air-twist. See ★*air-twist*.

air-valve, *n.* **3.** In an engine-cylinder, and particularly on the locomotive engine, a valve which is held shut by steam-pressure when the throttle-valve is open, but which opens by a spring to admit atmospheric air when the throttle is closed and the pistons keep on moving from the momentum of the mass of engine and train. In the absence of such a valve the pistons reduce the pressure behind them, after a stroke or two, to a point at which the pressure in the cylinders is much less than that of the atmosphere; and when the exhaust-passage is opened a rush of air back through it will carry into the cylinders the products of combustion from the smoke-box, including cinders and grit, which are injurious to the working-surfaces. Such air-valves are placed on the steam-chest or connect with the steam-passages.

air-vesicle, *n.* **3.** Same as ★*air-float*.

air-washer (ãr′wosh-ẽr), *n.* An appliance in which a current of moving air may be cleansed from dust or other particles, and from some polluting gases, by passing through water. The cleansing water may fall in a shower across the moving air by escaping from perforated pipes or through perforated metal screens; or the air may be compelled to escape by pressure under the lower edge of a plate which is immersed an inch or two in the water.

air-wave (ãr′wāv), *n.* A wave in the atmosphere. It may be either a wave of compression and rarefaction, like those of sound; or a tidal effect like the ocean tides; or a wave of progression like that produced by the outburst from Krakatua in 1883. In the case of the Krakatua outburst, the wave moved around the globe several times at an average velocity of 700 miles an hour, and the accompanying sound-wave was heard several hundred miles away.

ais (ä-ēs′), *n.* [Native name.] A name in Ponape, Caroline Islands, of *Parinari laurinum*, a tall tree having oblong leathery leaves.

Aitken's coke-oven. See ★*coke-oven*.

Aizoaceæ (ā″i-zō-ā′sē-ē), *n. pl.* [NL. (Alexander Braun, 1864), ⟨ *Aizoön* + *-aceæ*.] A family of dicotyledonous, archichlamydeous (apetalous or choripetalous) plants, the carpet-weed family, of the order *Chenopodiales*, typified by the genus *Aizoön*. See *Ficoideæ*.

aizoaceous (ā″i-zō-ā′shius), *a.* [NL. *Aizoaceæ* + *-ous*.] Having the characters of or belonging to the family *Aizoaceæ*.

Aizoön (ā-i-zō′on), *n.* [NL. (Linnæus, 1753, adopted from his "Genera Plantarum," 1737), ⟨ Gr. ἀείζωον, an evergreen plant, supposed to be the houseleek, ⟨ ἀεί, ever, + ζωός, living.] **1.** A genus of dicotyledonous plants, type of the family *Aizoaceæ*. They are evergreen spreading herbs or small shrubs, with fleshy, entire leaves, and axillary, solitary or cymose, yellow flowers. The ten species are natives of the warmer parts of the old world, six being found in South Africa and one in Australia, while the others occur mainly in the Mediterranean region. The most widely distributed species is *A. Canariense*, which occurs in the Canary and Madeira Islands, in the Azores, South Africa, and through southern Asia to India. *A. Hispanicum* is a characteristic plant of southern Italy and Spain, also occurring in northern Africa and extending eastward to Persia.
2. Sometimes used as a specific name for plants of a low and tufted, persistent character, as *Anthemis Aizoön*, *Saxifraga Aizoon*.

aja (ä′yä), *n.* A South-African Dutch form of the East Indian *ayah*, a nurse; a lady's-maid.

ajacol (a-jak′ol), *n.* An oleaginous fluid, congealing to a crystalline mass at low temperatures. It has the same properties as guaiacol. Also called *guaethol* and *thanatol*.

ají (ä-hē′), *n.* [Sp., formerly *axi*; of W. Ind. (Taino) origin.] A red pepper. See *pepper*, *chilli*, and *pimento*.—**Ají dulce**, the sweet pepper, *Capsicum annuum*.—**Ají picante**, the fruits of *Capsicum frutescens* and *C. baccatum*, the pungent red peppers used in the preparation of Cayenne pepper.

ajo (ä′hō), *n.* [Sp., ⟨ L. *allium*, garlic.] **1.** The garlic, *Allium sativum*.—**2.** A very large tree of Peru and Bolivia, *Cordia alliodora*, which when wounded gives forth from its bark and leaves a penetrating odor of garlic. See *garlic*.

ajog (a-jog′), *adv.* [*a*[3] + *jog*.] On a jog; at a leisurely pace. *G. Meredith*, The Egoist, II. 100.

ajonjoli (ä-hōn-hō-lē′), *n.* [Sp., *ajonjolí*, *aljonjolí*.] The sesame, *Sesamum orientale*, the seed of which, also called *benneseed*, yields a bland oil. See *sesame*.

Ajuga (a-jö′gạ), *n.* [NL., ⟨ L. *ajuga*, name of a plant.] A genus of hardy, herbaceous, European perennials, members of the family *Menthaceæ*, creeping by stolons, and commonly known as ★*bugle-weed*. Some of them are grown as garden plants, in rockeries and borders, although they are not generally known in America. Of the 30 known species, *A. Genevensis*, *A. pyramidalis*, *A. reptans*, and *A. metallica* are most common in gardens.

ajugate (a-jö′gạt), *a.* [*a*-[18] + *jugate*.] Having no jugum.

ajutment (ạ-jut′mẹnt), *n.* [Irreg. ⟨ *a-* + *jut* + *-ment*, after *abutment*.] A jutting out; a projection. [Rare.]

The *ajutment* of a hill toward the sea.
Marryat, Peter Simple, III. 323. *N. E. D.*

ak (äk), *n.* [Hind. *āk*, ⟨ Skt. *arká*, name of a tree or shrub, lit. ray, or sun.] The red-flowered form of *Calotropis gigantea*. See *madar* and *yercum*. [Northern India.]

aka (ä′kä), *n.* [Maori *aka*, name of the plant, lit. long fibrous roots: see ★*aalii*.] A climbing epiphyte of the myrtle family, *Metrosideros scandens*. It completely envelops the tree on which it grows, which ultimately dies, the wood decaying. The epiphyte remaining forms a hollow cone. [New Zealand.]

akaakaawa (ä″kä-ä′kä-ä′wä), *n.* [Hawaiian, ⟨ *aka-aka* (Maori *kata*), laugh at, + *awa*, fine rain or mist. The plant is found in greatest profusion in humid mountain ravines near the spray of waterfalls.] *Hillebrandia Sandwicensis*, a beautiful plant of the begonia family, bearing clusters of delicate pink-and-white flowers. [Hawaii.]

akaakai (ä-kä″ä-kä′ē), *n.* [Hawaiian.] In Hawaii, a bog-plant, *Scirpus lacustris*, the stems of which are used in making mats and bags.

akahara (ä-kä-hä′rä), *n.* [Jap., ⟨ *aka*, red, + *hara*, belly.] The Japanese name of a large chub of the family *Cyprinidæ*, *Leuciscus baknensis*, found in the waters of Japan. Also known as *ugui*.

akala (ä-kä′lä), *n.* [Hawaiian.] In Hawaii, a native species of raspberry, *Rubus Macræi*. The fruit often attains a diameter of nearly two inches, is of a deep-red color, is very juicy, and, although slightly bitter, is agreeable to the taste. The name is also sometimes given to another raspberry, *Rubus Hawaiensis*, the fruit of which is not so large and is dry and unpalatable.

akanthion, *n.* See ★*acanthion*.

akaroa-tree (ä-kä-rō′ạ-trē), *n.* [Maori.] The New Zealand lace-bark or ribbon-tree. See *Plagianthus*.

akaryota (a-kar-i-ō′tạ), *n. pl.* [Gr. *ἀ*- priv. + κάρυον, nut (nucleus).] In *biol.*, non-nucleated cells, as opposed to nucleated cells or karyota.

akasha (ä-kä′shạ), *n.* [Skt. *ākāça*, clear space, ether.] Ether; one of the five gross elements (the others being air, fire, water, and earth) which, according to the Sānkhya system of Indian philosophy, make up the visible world; the subtile fluid which fills and pervades infinity and is supposed to be the peculiar vehicle

of life and sound. Unlike air (*vāyu*), which is always moving and penetrates only where it can find an entrance, akasha is perfectly immovable and exists everywhere.

akcha (äkh'chä), *n.* [Also *akchek*, *aqcha*; < Turk. *akcha*, *aqcha*, money, coin, cash, a monetary value, an asper; as adj. rather white, whitish: see *asper*[2].] A very small Turkish silver coin of the value of ⅛ para.

ake[2] (ä'kä), *n.* [Maori, < *ake*, onward, *ake ake ake*, for ever and ever. The allusion is to the durable qualities of the wood.] **1.** In New Zealand, a small tree, *Dodonæa viscosa*, of the soapberry family, with very hard variegated wood.—**2.** In the Chatham Islands, a small tree, *Shawia Traversii* (*Olearia Traversii* of Hooker), of the aster family.

akea (ä-kē'ä), *n.* Same as ★*akia*.

akeratophorous (a-ker-ạ-tof'ō-rus), *a.* Same as *aceratophorous*.

akerite (ak'ẹ-rīt), *n.* [Norw. *Aker*, a locality in Norway, + *-ite*[2].] In *petrog.*, a term applied by Brögger (1890) to a syenite containing much plagioclase, with biotite, augite, and some quartz.

akermanite (âk'ẹr-man-īt), *n.* [For Richard *Åkerman*, a Swedish mineralogist.] An artificial mineral species closely related to melilite: identified in certain slags.

Akhmimic (äch-mim'ik), *a.* and *n.* **I.** *a.* Of or pertaining to Akhmim or to its language.

II. *n.* One of the main divisions of Coptic, spoken in the neighborhood of Akhmim.

akhter (äk'tẹr), *n.* [E. Ind.] A copper coin of Mysore, equal to one fourth of a paissa or pice.

akhyana (ä-ki-ä'nä), *n.* [Skt. *ākhyāna*, tale (cf. *ākhyā*, name), < *ā-* + *vkhyā*, call, name.] A tale; a story; a legend. *Encyc. Brit.*, XXVI. 431.

akia (ä-kē'ä), *n.* [Hawaiian.] A name in Hawaii of several shrubs belonging to the genus *Capura*, of the family *Daphnaceæ*, particularly of *C. viridiflora* (*Wikstræmia viridiflora* of Meissner), found also in the Society, Samoan, and Fiji Islands. The bark contains an acrid narcotic principle, and is used by the natives for narcotizing fish in fresh water. The stems yield a strong, flexible bast-fiber. Also spelled *akea*.

akiahala (ä-kē″ä-hä'lä), *n.* [Hawaiian.] In Hawaii, a small shrub, *Hibiscus Youngianus*, with pink flowers.

Akinesia algera. [Gr. ἀλγηρός, painful.] Loss of the power of motion as a result of pain.

akinesis (ak-i-nē'sis), *n.* In *biol.*, direct cell-division or the amitotic multiplication of cells.

akinete (ak'i-nēt), *n.* [Gr. *ἀ-* priv. + κινητός, movable: see *kinetic*.] The resting-spore of certain algæ formed directly from a vegetative cell by the simple thickening of the wall and without rejuvenescence. Same as *hypnocyst*. See ★*aplanospore*.

akinetic (ak-i-net'ik), *a.* [Gr. *ἀ-* priv. + κίνησις, change, movement.] **1.** Same as *akinesic*.—**2.** In *cytol.*, without perceptible internal movements: a term applied to that form of cell-division which is not karyokinetic. Same as ★*amitotic*, ★*karyostenotic*, or *direct* (cell-division).

akkum (ak'kum'), *n.* [Heb. *'akkum*, formed of the initials of a Hebrew phrase of three words meaning a worshiper of the stars and constellations.] A star-worshiper, originally a Chaldean star-worshiper: applied in the Talmud to heathen idolaters; a pagan. Also *akum*.

akolea (ä-kō-lā'ä), *n.* [Native name.] A name in Hawaii of a large fern, *Phegopteris Hillebrandi*.

akoulation, *n.* See ★*acoulation*.

akouphone (ak'ö-fōn), *n.* [Incorrectly formed from Gr. ἀκούειν, hear, + φωνή, sound.] The trade-name of an appliance for enabling the deaf to hear, constructed on the analogy of the telephone.

akra (äk-rä'), *n.* [Hind. and Hindi *akrā*.] In India, a common name for the vetch or tare, *Vicia sativa*. See *Vicia*.

akreophagist, *n.* Same as ★*acreophagist*.

akreophagy, *n.* Same as ★*acreophagy*.

akrocephalic, *a.* See *acrocephalic*.

akromegaly, *n.* See ★*acromegaly*.

akule (ä-kö'le), *n.* [Hawaiian.] A Hawaiian name of the goggle-eyed scad, *Trachurops crumenophthalmus*. Called *atule* in Samoa.

akum, *n.* See ★*akkum*.

akund (ä'kund), *n.* [Hind., < Hindi *akund*, the tree.] The dried root-bark of *Calotropis gigantea*, extensively used in Indian medicine, especially as a substitute for ipecacuanha in dysentery.

al[1], *n.* The name is applied in India to several species of *Morinda*, especially to *Morinda citrifolia* and *M. tinctoria*, trees belonging to the madder family, which grow spontaneously and are also cultivated for the sake of the dye obtained from the bark of their roots and stem. The smallest roots yield the most valuable dye, the stem the most inferior. The alizarin dye is gradually supplanting the more expensive red obtained from the Indian madder, or chaya root (*Oldenlandia umbellata*), with which the celebrated Madras handkerchiefs and turbans were formerly dyed. *Morinda citrifolia*, the principal al-tree, is widely spread throughout the East Indies, the west coast of Africa, and the islands of the Pacific Ocean, where its fruit is sometimes eaten by the natives. See ★*noni*.

al-[3]. A nominal prefix, actually a reduction of *alcohol* in certain arbitrary formations, as *aldehyde* (and its numerous recent derivatives), ★*althionic*, etc. Compare *-al*[2]. Compare *alk-* in words like ★*alkamine*, etc. (where *alk-* represents G. *alkohol*), and *-ol*, representing the last syllable of *alcohol*.

-al[2]. In *bridal*, *burial*, etc., a nominal suffix, associated with *-al*[1], but actually of different origin, according to the history of each word. See the etymologies of the words cited.

-al[3]. [*al*(*cohol*), *al*(*dehyde*). See ★*al-*3.] In *chem.*, a termination now recognized as signifying that the body named is an aldehyde, or derived from alcohol. Thus ordinary aldehyde is also called ★*ethanal*, that is, the aldehyde of ethane.

A. L. A. An abbreviation of *American Library Association*.

Ala magna sphenoidei, in *ichth.*, same as *prootic*; a lateral cranial bone just in front of the exoccipital. As used by Hallmann it is a synonym of the alisphenoid of Parker; as used by Erdl it is a synonym of the sphenotic of Parker.—**Ala orbitalis,** in *ichth.*, a term applied by Stannius to the alisphenoid bone. **Ala parva,** in *ichth.*, same as *opisthotic*.—**Ala parva sphenoidei,** in *ichth.*, the basisphenoid bone. **Ala temporalis,** in *ichth.*, the prootic bone.

alaalawainui (ä″lä-ä″lä-wä″ē-nö'ē), *n.* [Hawaiian, < *alaala*, soft, flabby, + *wai*, water, + *nui*, be great. The name refers to the succulent nature of the plant.] In Hawaii, a plant of the genus *Peperomia*.

Alabama (al-ạ-bä'mä), *n.* [NL. (Grote, 1895), < *Alabama*, the State.] A genus of noctuid moths containing one species, *A. argillacea* Huebner. It is notorious as a destroyer of the cotton-plant in the southern United States, where its larva is known as the *leaf-caterpillar* or *chenille*. Formerly known as *Aletia xylina*. **Alabama china.** See ★*china*.—**Alabama shad.** See ★*shad*[1].

alabandite (al-ạ-ban'dit), *n.* See *alabandine*.

alacreatine (al-ạ-krē'ạ-tin), *n.* [L. *ala*, wing (?), + *creatine*.] A compound, NH: $C(NH_2)NHCH(CH_3)CO_2H$, a combination of cyanamide with α-aminopropionic acid; α-guaninopropionic acid.

alacreatinine (al-ạ-krē-at'i-nin), *n.* [*alacreatine* + *-ine*[2].] The anhydrid, $C_4H_7N_3O$, of alacreatine, formed by heating the latter to 180° C.

alagao (ä-lä-gä'o), *n.* [Tagalog *alagao* (also *sahugo*, < Sp. *saúco*) = Bisaya *abgao*, also *adgao*.] A Philippine tree, *Premna vestita*, of the *Verbena* family. Its bitter leaves and its flowers are used medicinally by the natives. The tree is generally known to Spaniards living in the Philippines by the name of *saúco* (elder), owing to the resemblance of its flowers to those of *Sambucus nigra*. In its medicinal qualities it resembles the allied *Premna Gaudichaudii* of the island of Guam and *P. integrifolia* of the East Indies and Madagascar. See *headache-tree*.

alalonga (ä-lä-long'gä), *n.* [Appar. < L. *ala longa*, 'long wing.'] Same as *long-finned albacore*.

alang (ä'lang), *n.* See ★*alang-alang*.

alang-alang (ä″lang-ä'lang), *n.* [Malay *ālang-ālang*.] A grass, *Imperata arundinacea*, widely spread in the tropics, growing on land which has gone out of cultivation. Also called *alang* and, in the Philippines, *cogon*. [Malay Archipelago.]

alani (ä-lä'nē), *n.* [Hawaiian.] In Hawaii, a timber-tree of the rutaceous genus *Ptelea*. The wood is used in building canoes.

alantic (a-lan'tik), *a.* [G. *alant*, elecampane, + *-ic*.] Obtained from elecampane.—**Alantic acid,** the hydroxyacid $OH.C_{14}H_{20}CO_2H$, corresponding to alantolactone. It crystallizes in needles which melt at 94° C.

alantoic (al-an-tō'ik), *a.* [G. *alant*, elecampane, + *-o-ic*.] Derived from elecampane.—**Alantoic acid,** a colorless compound, $C_{14}H_{20}(OH)COOH$, found in the drug elecampane.

alantol (a-lan'tōl), *n.* [G. **alantol* (?), < *alant*, elecampane, + *-ol*.] Same as *alant camphor* (which see, under *camphor*).

alantolactone (a-lan″tō-lak'tōn), *n.* [G. *alant*, elecampane, + *lactone*.] Same as *helenin*.

Alar membrane, the elongate triangular membrane lying on the anterior edge of a bird's wing and running from wrist to shoulder-joint; the prepatagium.—**Alar septa,** in the extinct *Tetracoralla*, the two prominent lateral septa or vertical plates in the calyx, one on each side, from which the adjoining septa branch pinnately: contrasted with the *cardinal* and *counter septa*.

Alaria, *n.* **2.** A genus of platypodous gastropod mollusks of the family *Aporrhaidæ*. They have a turreted spire, expanded and spinous outer lip, and long apertural canal. Shells of this genus are very abundant in the Jurassic and Cretaceous rocks.

alarm, *n.*—**Still alarm.** See *still*.[1]

alarm-buoy (ạ-lärm'boi), *n.* A buoy provided with a bell or a whistle to make its presence known at night or in a fog.

Alaska cedar, dab. See ★*cedar*, ★*dab*[2].

alaskite (ạ-las'kīt), *n.* **1.** See *alaskaite*.—**2.** In *petrog.*, a name proposed by Spurr (1900) for igneous rocks composed almost wholly of alkalic feldspar and quartz without other essential minerals. It is a group-term embracing many granular and porphyritic rocks which have been called *granite*, *rhyolite*, *haplite*, *elvan*, *granulite*, *eurite*, *granitel*, etc. The distinct lava forms corresponding to alaskite in composition are called *tordrillite* by Spurr.

alastor, *n.* **2.** [*cap.*] A genus of bats from the Upper Eocene phosphorites of France.

Alaunian (ạ-lâ'ni-ạn), *a.* and *n.* [L. *Alauni*, Gr. Ἀλαυνοί, a people of Noricum.] **I.** *a.* In *geol.*, in the Triassic formation of the Mediterranean province, noting a substage corresponding to the middle division of the Juvavic stage, which lies just below the Rhætic and above the Carinthian stage. The Juvavic appears to correspond to the lower Rhætic of Germany, and the Alaunian, therefore, is correlated with the lower part of that formation.

II. *n.* The Alaunian substage.

albacore, *n.*—**Great albacore,** the tunny or tuna, *Thunnus thynnus*.

albahaca (äl-bä-hä'kä), *n.* [Sp. *albahaca*, basil, < Ar. *al*, the, *habaq*, pennyroyal.] A name applied in Guam, the Philippines, Peru, and Porto Rico to several aromatic plants of the mint family, especially to *Ocimum Basilicum* and *O. sanctum*, which are cultivated for culinary and medicinal purposes. See *Ocimum*, *toolsi*, and *basil*[1].

Albany slip, zone. See ★*slip*, ★*zone*.

albardin (äl-bär-dēn'), *n.* [Sp., of Ar. origin.] A shoreweed, *Lygeum Spartum*, of southwestern Europe and northern Africa: similar in its use to esparto and sometimes included under that name.

Albata metal. See ★*metal*.

Albatrossia (al-ba-tros'i-ä), *n.* [NL., named for the exploring steamer *Albatross*, U. S. N.] A genus of grenadiers of the family *Macruridæ*, cod-like fishes of the deep seas. *A. pectoralis* is found in Bering Sea.

albecore, *n.* See *albacore*.

Albedo unguium, the lunula of the nails.

albene (al'bēn), *n.* [L. *albus*, white, + *-ene*.] The substance formed by boiling melam with water. It is white and insoluble.

alberello, *n.* Same as *albarello*.

Alberini's process. See ★*process*.

albert (al'bẹrt), *n.* [Named, about 1860, from Prince *Albert*, consort of Queen Victoria.] A short watch-chain made with a cross-bar designed to be passed through a buttonhole.

Albert and Albertine ware. See ★*ware*[2].

Albian (al'bi-ạn), *a.* and *n.* [So named from the department of *Aube* (L. *Albia*, < *albus*, white), France.] **I.** *a.* In *geol.*, noting the lower division of the Upper Cretaceous formation in Belgium and France, equivalent to the Galt and Upper Greensand of England. The deposits consist of argillaceous marls, greensand, and limestone and are highly fossiliferous.

II. *n.* The Albian division.

albinescent (al-bi-nes'ẹnt), *a.* [*albino* + *-escent*.] Showing a tendency to albinism. *Nature*, March 16, 1893.

albinic (al-bin'ik), *a.* [*albin*(*o*) + *-ic*.] Marked by albinism or absence of pigment.

Two of the sons, apparently, married wives who were 'pure dominants,' *i. e.*, who were entirely free from the recessive (*albinic*) character. *Science*, Jan. 9, 1903, p. 75.

albino, *n.* **4.** In Mexico, a person who has one eighth negro and seven eighths Spanish blood; the child of a Morisco woman (who is the daughter of a mulatto mother and a Spanish father) and of a Spaniard.

Albion ware. See ★*ware*[2].

albirupean (al-bi-rō′pē-an), *a.* [L. *albus*, white, + *rupes*, rock.] Containing white rocks.

Albirupean group, in *geol.*, a series of sand beds occurring along Chesapeake Bay and regarded by the Maryland geologists as of Lower Cretaceous age.

Albite law, the law of twinning of albite. See *albite twin*, under *twin*.

albitite (al′bi-tīt), *n.* [*albite* + *-ite*².] In *petrog.*, a name proposed by Turner (1896) for granular igneous rocks consisting essentially of albite. Such rocks occur in dikes in the Sierra Nevada mountains of California.

albitization (al″bi-ti-zā′shon), *n.* [*albite* + *-ize* + *-ation*.] The process of transforming into albite; the alteration of some preëxisting mineral, such as lime-soda-feldspar, into albite. *Geikie*, Text-book of Geol., p. 790.

albiventral (al-bi-ven′tral), *a.* [L. *albus*, white, + *venter*, belly.] Having a white belly or under parts, as is the case with many birds.

albo† (al′bō), *n.* [NL., orig. abl., in the phrase *in albo*, of L. *album*: see *album*.] Same as *album*.

Albo-carbon burner, a burner provided with a chamber containing solid naphthalene, which, being volatilized by the heat of the gas-flame, enriches the inflowing gas and thus increases its luminosity.

albocracy (al-bok′ra-si), *n.*; pl. *albocracies* (-siz). [L. *albus*, white, + Gr. *-κρατεία*, ‹ *κρατεῖν*, rule.] Government by white men, that is, by men of European origin. *R. N. Cust*, Linguistic Essays, p. 303. [Rare.] *N. E. D.*

albodactylous (al-bō-dak′ti-lus), *a.* [L. *albus*, white, + Gr. *δακτύλος*, finger.] Having white wings. [Rare.]

albolene, alboline (al′bō-lēn,-lin), *n.* [L. *albus*, white, + *-ol-* + *-ene* or *-ine*².] An unctuous substance derived from petroleum: used for the same purposes as vaseline.

albo-pruinose (al-bō-prō′i-nōs), *a.* [L. *albus*, white, + *pruina*, frost, + *-ose*.] Covered with a thin white powdery bloom: said of the surface of certain plants, especially the stipes and caps of some pileate fungi.

alboranite (al-bō-ran′īt), *n.* [*Alboran* (see def.) + *-ite*².] In *petrog.*, a name proposed by Becke (1899) for hypersthene-andesite rich in lime, the type occurring in the island of Alboran. Loewinson-Lessing considers alboranite as essentially a hypersthene-basalt without olivin.

Albright (âl′brīt), *n.* One of the 'Albright People,' the name given to the Evangelical Association founded by Jacob Albright. See *Evangelical Association*.

albronze (al′bronz), *n.* [*al(uminium)* + *bronze*.] An alloy of aluminium with copper and tin or of aluminium with bronze, used for bearings where lightness of weight and durability are required; aluminium bronze.

Albuginaceæ (al-bū-ji-nā′sē-ē), *n. pl.* [NL., ‹ *Albugo* (*Albugin-*) + *-aceæ*.] A family of phycomycetous fungi typified by the genus ★*Albugo*.

albugo, *n.* **2.** [*cap.*] [NL. (S. F. Gray, 1821).] In *mycol.*, a genus of fungi erroneously called *Cystopus* (which see).

albulignosine (al″bū-lig′nō-sin), *n.* [*albu(men)* + *lignose* + *-ine*².] A material obtained by the action on wood of a solution of sodium sulphite boiling under pressure, making the liquid acid, and adding albumen: proposed for use as a sizing and mordanting agent.

albumean† (al-bū′mē-an), *a.* [Irreg. ‹ *album* + *-e-an*.] Of or pertaining to albums, or the pressing invitations of friends or acquaintances to contribute to their albums. *Lamb*, Letters, xvii. 156. [Rare.]

Albumen color. See ★*color*. **Albumen dyestuff.** Same as *albumen* ★*color*.

albumen-gland (al-bū′men-gland″), *n.* In certain mollusks, as *Helix*, a glandular organ of which the thick viscid secretion probably serves to envelop the eggs.

I dissected one specimen, but was unable to obtain a clear view of either the central nervous system or the reproductive organs. The latter, as usual in this family, were extremely complicated, both the prostate and *albumen-gland* appearing to be extensively ramified.
Proc. Zool. Soc. London, 1903, I. 257.

albumin, *n.* The albumins are highly complex organic bodies which enter prominently into the composition of all animal and vegetable tissues and form the groundwork, so to speak, of every living cell. They are the most important food-stuffs of all classes of animal life, and can be elaborated by the chlorophyl-bearing plants from such simple substances as water, carbon dioxid, and certain nitrates or ammonium salts. All albumins contain carbon, hydrogen, oxygen, nitrogen, and sulphur in definite proportions which vary but little in the different members of the group: one albumin, which is found in the thyroid, also contains iodine. Other elements are not met with in albumins proper, but are encountered in certain compound albumins, in which an albuminous radical is united with other more or less complex groups. Thus hemoglobin contains iron, hemocyanin copper, and the nucleo-albumins and nucleoproteids phosphorus. All albumins also contain variable amounts of mineral salts in firm combination. Their molecular size is very large. For crystallized egg-albumin Hofmeister established the formula $C_{239}H_{386}N_{58}S_2O_{78}$, which corresponds to a molecular weight of 5,378. The protamins and histons apparently have the smallest molecules, while the compound albumins are proportionately heavier: the weight of oxyhemoglobin has thus been determined as 14,800. The greater number of the albumins are amorphous. A few, however, can be obtained in crystalline form, such as egg-albumin, serum-albumin, oxyhemoglobin, and certain vegetable albumins, as edestin, etc. The so-called Bence Jones albumin, which has been met with in the urine in certain pathological conditions (multiple myeloma), also belongs to this order. All true albumins are levorotatory, while certain compound albumins (the nucleoproteids) turn the plane of polarization to the right. Osborne has shown that this property, in the case of the nucleoproteids, is very likely wholly referable to the nucleinic acid complex which they contain. All albumins — owing to the great size of the molecule, no doubt — are incapable of diffusing through animal membrane or vegetable parchment. Some members of the group are soluble in water, others only in dilute saline solution, and still others in dilute acids and alkalis. From their solutions they can be precipitated by mineral acids, the salts of the heavy metals, the so-called alkaloidal reagents (as tannic acid, phosphotungstic acid, iodomercuric iodide, etc.), strong alcohol, and certain neutral salts (sodium chlorid, magnesium sulphate, sodium sulphate, and notably ammonium sulphate). All albumins further give certain color-reactions, of which the biuret reaction (production of a bluish or reddish violet-color on the addition of very dilute copper-sulphate solution in the presence of an excess of strong caustic alkali) is especially characteristic. The true albumins are all coagulated by heat. As a result they lose their individual characteristics and are then said to be denaturized. After this they can be brought into solution only by means which at the same time will produce integral changes in their composition. From study of the various cleavage-products which result from the albumins on hydrolysis by boiling mineral acids and alkalis, by digestion with the proteolytic ferments, etc., a certain insight is now possible into the complex structure of the albuminous molecule. Thus it appears that various α-amido acids (as leucin, tyrosin, asparaginic acid, glutaminic acid), and the diamido acids (ornithin, lysin, etc.), exist in the albuminous complex in the form of Fischer's polypeptides, which have the general structure represented by the formula $NH_2.(CH_2.CO.NH)n.CH_2.COOH$. These in turn are combined with other groups, such as the sulphur-containing cystin complex, the glucosamin-group, etc., to form still more complex radicals, which are further combined with similar groups to even larger complexes, which last in turn are again united with correspondingly large groups to form the complete molecule. Evidence of the correctness of this supposition is furnished by a study of the products of albuminous digestion. Here we find among the primary products of cleavage three complex bodies which individually differ from one another and which in the intact molecule were manifestly in combination. These are the three primary albumoses, termed *protoalbumose*, *heteroalbumose*, and *glucoalbumose*. The first-mentioned on further decomposition yields diamido acids in small amount, much tyrosin, little leucin, no glycocol, etc.; while the second contains diamido acids in large amount, much leucin, no tyrosin, and the total amount of glycocol of the original substance. Glucoalbumose in turn contains the entire carbohydrate-group and a larger percentage of oxygen, while the amount of nitrogen and carbon is less than in the two other groups. (See also ★*products of digestion*.) The albumins may be divided into 5 classes, namely the *native albumins*, the *nucleo-albumins*, the *proteids*, the *albuminoids*, and the *derived albumins*. Examples of the first group are the serum-albumin and serum-globulin of the blood-plasma, the ovalbumin of white of egg, the lactalbumin of milk, and the myosin and myogen of muscle-plasma. The same group further comprises the glucoalbumins, which are characterized by the special predominance of a carbohydrate-group, and of which the various mucins and mucoids are common representatives; further, the markedly sulphurous ceratins of the skin and related substances (hair, horn, etc.); then the histons and the closely related protamins. These latter represent albumins of simplest structure, and are fairly typical representatives of Fischer's polypeptides. Kossel's salmin thus apparently consists only of an ornithin complex, associated with tyrosin, serin, tryptophan, and α-pyrrolidin-carbonic acid. The second group of albumins is formed by the nucleo-albumins or phosphoglobulins. These are more complex than the members of the first group in having a special phosphorized radical in combination with an albuminous complex. They comprise many important food-stuffs, such as the casein of milk, the vitellins of the yolks of birds' eggs, the ichthulin of fishes' eggs, besides the phytoglobulins or phytovitellins of the leguminous plants. The third class is represented by the proteids, which are complex albumins, containing an albuminous group united with other complex radicals. In the nucleoproteids, which are important constituents of cell-nuclei, we find nucleinic acid, from which the so-called purin or xanthin bases and uric acid are derived. In the hemoglobins we meet with pigment radicals: so in the common coloring matter of the blood, the hemoglobin, with hematin. The albuminoids, which form the fourth group, in contradistinction to those already mentioned, are notably constituents of intercellular structures and thus especially abundant in the skeletal parts of the animal body. To this group belong the collagens or glutins of fibrous tissue and cartilage, the elastin of elastic tissue, the various skeletons found in the supporting structures of the invertebrates, etc. The last class comprises substances which are albuminous derivatives, but still possess albuminous character, such as the coagulated albumins and the various intermediary digestive products, including the albuminates, albumoses, and peptones. **Bence Jones albumin**, formerly known as the *Bence Jones albumose*. Shown by Magnus Levy and Simon to be a true albumin. Its presence in the urine seems to be invariably associated with a fatal disease known as multiple myeloma. — **Circulating albumin**, the albumin which exists in the fluids of the body and not in the solid tissues. — **Ferrier's albumin process.** See ★*process*. **Iodized albumin**, in *photog.*, albumin containing an iodide. — **Martin's albumin negative process.** See ★*process*. — **Mayall's albumin negative process.** See ★*process*. **Toxic albumin**, a poisonous substance supposedly of albuminous character: for example, the specific poison produced by the diphtheria organism. Also called *toxalbumin*.

albuminate, *n.* — **Weyl's albuminate**, an insoluble modification of a globulin which results from the latter on prolonged exposure to water.

albuminic (al bū min′ik), *a.* Pertaining to or derived from albumin: as, *albuminic* acid. According to Schmiedeberg, ferratin is a ferri-albuminic acid.

albuminimeter, *n.* — **Esbach's albuminimeter**, an apparatus for the estimation of albumin in urine. The tube is filled with urine to the mark *u*, and with the reagent (which consists of an aqueous solution of citric acid 2 per cent. and picric acid 1 per cent.) to the mark *r*. After thorough mixing the tube is set aside for twenty-four hours. The volume of the precipitate, as read from the graduations indicates the parts of albumin per thousand of urine.

Esbach's Albuminimeter.
r, mark for reagent; *u*, mark for urine; 1–7, grams albumin per thousand.

albuminize, *v. t.* — **Albuminized collodion.** See ★*collodion*.

albuminoid, *n.* The albuminoids represent a class of albumins which, in contradistinction to the albumins proper, are essential components of the intercellular structures and result from the albumins, in the narrower sense of the term, through the activity of cellular elements. As a class they do not contain all the typical radicals of the pure albumins, and for this reason, no doubt, their nutritive value is distinctly less than that of the albumins proper. They are largely found in the supporting tissues of the animal body, namely, the connective tissue, cartilage, and bone. The group comprises collagen (gelatin), elastin, spongin, fibroin, albumoid, etc. Also called *glutinoid*.

albuminometer (al-bū-mi-nom′e-tēr), *n.* Same as *albuminimeter*.

albuminometry (al-bū-mi-nom′e-tri), *n.* The measurement of the amount of albumin in any fluid, such as the urine.

albuminose, *a.* **II.** *n.* Same as ★*albumose*.

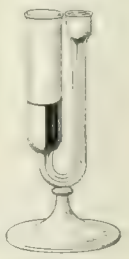
albuminuria, *n.* — **Cyclic albuminuria**, a condition in which albumin appears in the urine for a short time at about the same period each day.

albuminuric, *a.* **II.** *n.* One who suffers from albuminuria.

It was found that, classing all *albuminurics* in one group, the percentage of mortality was decidedly increased.
Med. Record, Feb. 14, 1903.

albumoid (al′bū-moid), *n.* [*album(en)* + *-oid*.] An albuminoid found in the cartilage of full-grown animals. It is insoluble in all neutral solvents and dissolves in acids and alkalis only with great difficulty.

albumoscope (al-bū′mō-skōp), *n.* [*album(ine)* + Gr. *σκοπεῖν*, view.] A glass instrument for detecting and estimating the quantity of albumin in urine. The urine is made to float on the surface of strong nitric acid poured gently into a funnel-tube. The albumin appears at the zone of contact of the two liquids.


Albumoscope.

albumose (al′bū-mōs), *n.* [*album(en)* + *-ose*. In effect short for ★*albuminose*.] A name of derived albumins (see ★*albumin*) which result from the albumins proper, as also from the albuminoids and the albuminous radicals of the nucleo-albumins and -proteids, through the action of proteolytic ferments, or on decomposition by means of acids or alkalis. Their formation is preceded by the denaturization of the albuminous molecule and, in the case of the use of acids or alkalis, by the formation of acid albumins and alkaline albuminates respectively. During the process of digestion primary albumoses first result, which are subsequently transformed into secondary or deuteroalbumoses, and these in turn into peptones and simpler bodies. In their quantitative composition the albumoses do not differ materially from the original albumins, but their molecular weight is lower. As a result, no doubt they are more readily soluble, and as a class not altogether indiffusible through animal membrane or vegetable parchment. They can be separated from one another by fractional precipitation by means of certain neutral salts, notably ammonium sulphate. The albumoses which are derived from the albumins proper, in contradistinction to those resulting from the albuminoids, are also called *proteoses*. The majority of the commercial peptone preparations are essentially mixtures of albumoses. — **Toxic albumose**, an albumose with toxic properties.

albumosuria (al″bū-mō-sū′ri-ä), *n.* [*albumose*

+ Gr. οὖρον, urine.] In *pathol.*, the presence of albumose in the excreted urine.

Alburnus (al-bẽr′nus), *n.* [NL.: see *alburn.*] A genus of small minnows, known as *bleaks*, found in the waters of Europe. *A. alburnus* is the common bleak.

albus (äl′bŏs), *n.* [G., < L. *albus*, white.] A German copper coin equivalent to 12 hellers at Cassel and Cologne.

alcaldía (äl″käl-dē′ä), *n.* [Sp.] 1. The office or jurisdiction of an alcalde.—2. The building where an alcalde transacts the business of his office.

alcaptor, alcaptonuria. See ★*alkapton*, ★*alkaptonuria.*

alcassuz (äl-käs-sŏs′), *n.* [Pg., *alcaçuz.*] In Brazil, the name of the native licorice, *Periandra Mediterranea*, the root of which is used in medicine, like that of the common licorice.

alcelaphine (al-sel′a-fin), *a.* [NL. *alcelaphinus*, < *Alcelaphus*, a genus of antelopes.] Relating to the antilopine genus *Alcelaphus*, or to this with related genera considered as forming a division of the family *Bovidæ*. *Flower and Lydekker*, Mammals, p. 334.

Alchemilla (al-kē-mil′ä), *n.* [NL.] A genus of hardy perennial herbs of the family *Rosaceæ*, allied to *Sanguisorba*. The flowers are corymbose and inconspicuous. They are suitable for rockeries and front rows of borders, although little grown. There are about 35 species, natives of the Old and New Worlds, most abundant between Mexico and Chile.

Alchornea (al-kôr′nē-ä), *n.* [NL. (Swartz, 1788), named in memory of Stanesby *Alchorne*, an English botanist and chemist who died about 1799.] A genus of dicotyledonous plants belonging to the family *Euphorbiaceæ*. They are trees or shrubs with alternate leaves and small flowers clustered on simple or panicled terminal spikes or racemes. About 50 species are known, widely distributed in the warmer parts of both hemispheres. For *A. ilicifolia*, see *Cœlebogyne.*

Alcidea (al-sid′ē-ä), *n.* [NL., < Gr. ἀλκή, elk, + εἶδος, resemblance.] A genus of deep-sea sculpins of the family *Cottidæ*. *A. thomsoni* is found off the coast of California.

alcogel (al′kō-jel), *n.* [*alco(hol)* + *gel(atin).*] Silicic acid separated in gelatinous condition by means of alcohol.

alcohol, *n.*—**Acetone alcohol.** Same as ★*acetol.*—**Alcohol lamp.** See ★*lamp.*—**Pyroracemic alcohol.** Same as ★*acetol.*—**Tolane alcohol,** the name given to a substance of somewhat uncertain composition, said to be formed by the action of ethyl alcohol on benzoin.—**Whey alcohol,** an alcoholic liquor prepared from milk, after the separation of the fat and casein, by fermentation of the lactose or milk-sugar.

alcoholase (al′kō-hol-ās″), *n.* A ferment of vegetable origin which supposedly causes alcoholic fermentation during anaërobic respiration.

alcoholic, *a.* **II.** *n.* 1. One who indulges to excess in alcoholic beverages, or who is suffering from the systemic effects of alcohol.—2. A remedy the chief therapeutic value of which depends upon the presence of alcohol.

The unadministered *alcoholics* are catalogued by genera on cards and located so that any jar can be found at once. *Smithsonian Report*, 1900, p. 38.

alcoholize, *v. t.*—**Alcoholized paper,** in *photog.*, paper prepared with an alcoholic solution containing milk-sugar, zinc iodide, and zinc bromide. The paper is afterward sensitized with a solution of silver acetonitrate acidified with glacial acetic acid.

alcohol-motor (al′kō-hol-mō″tor), *n.* An internal-combustion motor in which alcohol vapor is burned explosively; an alcohol-engine; an engine which uses alcohol as fuel for its source of heat.

alcornoco (äl-kôr-nō′kō), *n.* Same as *alcornoque.*

alcove, *n.* (*d*) A recess in an escarpment formed by the more rapid retrogressive erosion of one part than of another.—**Alcove system,** a method of arranging books in a library, or of exhibiting specimens in a museum, in which each subject and each class has an alcove or series of alcoves to itself.

Alcyonacea (al″si-ō-nā′sē-ä), *n. pl.* [NL., < *Alcyon* + *-acea.*] An order or suborder of *Alcyonaria* in which the skeleton consists of loose spicules embedded in a well-developed canaliferous cœnenchyma without axial skeletal rod. The group contains the families *Xeniidæ*, *Alcyonidæ*, and *Nephthyidæ*. Nearly equivalent to *Alcyoniacea.*

alcyonacean (al″si-ō-nā′sē-an), *a.* and *n.* **I.** *a.* Of, pertaining to, or resembling the *Alcyonacea.*

II. *n.* One of the *Alcyonacea.*

Alcyonaria, *n. pl.* 2. A subclass of *Anthozoa*, containing the orders *Stolonifera*, *Alcyonacea*, *Pseudaxonia*, *Axifera*, *Stelechotokea*, and *Cœnothecalia.*

aldane (al′dān), *n.* [*ald(ehyde)* + *-ane.*] A name proposed by Riban to designate a compound formed by the condensation of two molecules of an aldehyde with the loss of water.

aldea (äl-dā′ä), *n.* [Pg., < Ar. *al-dai'a*, a farm or village.] A villa or country-seat. *Yule and Burnell.* [East Indies.]

aldeament (al-dē′a-ment), *n.* [Brazilian Pg. *aldeamento*, < Pg. *aldear*, lodge in villages, < *aldea*, *aldeia*, a village: see ★*aldea.*] In Brazil, a settlement in which natives who have submitted to the government, or to missionary influences, are gathered. See *reduction* (*e*). *F. Boas.*

While the Government and the missions have succeeded with great difficulty with others, as for the Bororo, with their hostile indisposition to link their interests with those of the colonists and to settle in permanent *aldeaments*, the plan to interest them in the cultivation of the soil did not succeed.
Smithsonian Report, 1896, pp. 574, 575.

Aldebaran (äl″de-bä-rän′ or al-deb′a-ran), *n.* [Ar., the follower (i. e. of the Pleiades).] A chrome star of magnitude 1.0; *α* Tauri.

Aldebaranian (äl-de-bä-rä′ni-an), *a.* and *n.* **I.** *a.* Noting stars which have a spectrum similar to that of Aldebaran. They have fluted spectra in which a series of calcium lines, sometimes called *protocalcium*, together with arc lines of iron calcium manganese (*protostrontium*) and hydrogen, are predominant. The flutings are incipient. The blue line of calcium, λ 4227, is strongly marked.

II. *n.* An Aldebaranian star.

aldehydase (al″dē-hī-dās′), *n.* [*aldehyde* + *-ase.*] A ferment which oxidizes an aldehyde to its corresponding acid.

aldehyde, *n.*—**Crotonic aldehyde,** a volatile oil with a disagreeable, penetrating odor, having the formula $CH_3CH{:}CHCHO$, and prepared by the distillation of aldol. It boils at 104° C.—**Formic aldehyde.** See ★*formic.*

aldehydene (al′dē-hī-dēn), *n.* [*aldehyde* + *-ene.*] 1. A name formerly applied to the base formed by heating aldehyde ammonia, now known to be trimethylpyridine.—2. A name given by Ladenburg to the bases formed from aldehydes and hydrochlorids of aromatic orthodiamines.

alder[1], *n.*—**Alder grab.** See ★*grab*[1].—**California alder,** *Alnus rhombifolia.* **Dwarf alder.** (*a*) The alder leafed buckthorn, *Rhamnus alnifolia.* (*b*) A shrub of the genus *Fothergilla*, of the southeastern United States.—**Green alder,** *Alnus Alnobetula*, a shrub of the northern part of both hemispheres and of the Alleghanies farther south.—**Hoary alder,** the speckled alder, *Alnus incana.*—**Mountain alder.** (*a*) The green alder, *Alnus Alnobetula.* (*b*) *Alnus rhombifolia*, of the western United States. (*c*) The striped maple, *Acer Pennsylvanicum.* [North Carolina.]—**Narrow-leafed alder,** an arborescent species, *Alnus tenuifolia*, of western North America. The bark furnished the Indians an orange dye.—**Red alder,** a northwestern species, *Alnus Oregona.*—**Seaside alder,** *Alnus maritima*, found in wet ground in Delaware and Maryland, near the coast, and also in Indian Territory.—**Spiked alder,** the white alder, *Clethra alnifolia.*—**Western alder,** the Californian *Alnus rhombifolia* or the more northern red alder, *Alnus Oregona.*

alder-blight (âl′dẽr-blīt″), *n.* A plant-louse, *Schizoneura tessellata.* It occurs in great numbers on the under side of the branches of the alder, and secretes large quantities of down-like wax. It also secretes much honeydew, which is attractive to honey-loving insects and to the resting-spores of certain fungi.

alder-fly (âl′dẽr-flī″), *n.* A name given by fishermen to a certain neuropterous insect of the family *Sialidæ*, used as, or imitated for use as, bait: so named because it occurs along alder-lined streams in England.

aldermanlike (âl′dẽr-man-līk), *a.* Like an alderman; characteristic of an alderman; proper or becoming to an alderman; aldermanly.

Alderney (âl′dẽr-ni), *n.* [The name of one of the Channel Islands.] A breed of small-sized cattle originating in Alderney, noted for the abundance and richness of their milk. They are of light build, with small horns, and are generally of a fawn color with blackish legs.

aldime (al′dim), *n.* [*ald(ehyde)* + *-ime.*] A compound, having the general formula RCH:NH, which may be considered as derived from ammonia and an aldehyde by the loss of water. The aldimes are stable only in the form of salts.

aldine[2] (al′din), *n.* [*ald(ehyde)* + *-ine*[2].] A name given to those pyrazines ($C_nH_{2n-4}N_2$) which may be formed by the condensation of two molecules of an *α*-aminoaldehyde.

aldo-alcohol (al′dō-al″kō-hol), *n.* [*ald(ehyde)* + *-o-* + *alcohol.*] An organic compound containing both an aldehyde (CHO) and a hydroxyl (OH) group.

aldohexose (al-dō-hek′sōs), *n.* [*ald(ehyde)* + *-o-* + Gr. ἕξ, six, + *-ose.*] A general name given to those sugars which have the composition $C_6H_{12}O_6$ and contain an aldehyde group.

aldol (al′dol), *n.* [*ald(ehyde)* + *-ol.*] A compound, $CH_3CHOHCH_2CHO$, formed by the condensation of acetaldehyde by means of zinc chlorid. The official name is *butanalol-3.*—**Aldol condensation,** a condensation of two or more aldehyde molecules in which an aldehyde alcohol is formed.

aldose (al′dōs), *n.* [*ald(ehyde)* + *-ose.*] A name given to any monosaccharide which is an aldehyde to distinguish it from a ketose, which contains a ketone-group.

aldoxime (al-dok′sim), *n.* [*ald(ehyde)* + *oxime.*] A compound, having the general formula R—CH:NOH, which is formed by the action of hydroxylamine on an aldehyde. Also *aldoxim.*

Aldrich deep. See ★*deep.*

Aldrovandia (al-drō-van′di-ä), *n.* [NL., < *Aldrovandi* (1522–1605), an Italian naturalist.] A genus of deep-sea fishes of the family *Halosauridæ*. Also called *Halosauropsis.*

alecithal (a-les′i-thal), *a.* [Gr. ἀ- priv. + λέκιθος, the yolk of an egg.] In *embryol.*, provided with very little and uniformly distributed food-yolk: a term applied to certain eggs, such as those of the sponges, sea-urchins, etc.

Alectis (a-lek′tis), *n.* [NL., said to be < Gr. ἀλέκτωρ, a cock.] A genus of *Carangidæ* remarkable for its long threadlike fin-rays: hence known as the *cobbler-fish.*

alectorioid (a-lek-tō′ri-oid), *a.* [*alectoria* + *-oid.*] Resembling the thallus of the lichen *Alectoria.*

Alectryonia (a-lek-tri-ō′ni-ä), *n.* [NL., < Gr. ἀλεκτρυών, a cock.] A genus of oysters in which the left valve is attached by clasping shelly processes and has strong divaricate folds on the upper surface. The genus is living in existing seas, but was most abundant during Jurassic and Cretaceous times.

ale-haunter (äl′hän-tẽr), *n.* [*ale*, 2, + *haunter.*] A frequenter of ale-houses or ale-drinkings. *Heylin.* [Rare.]

alembical (a-lem′bik-al), *a.* [*alembic* + *-al.*] Of or pertaining to, or of the nature of, an alembic.—**Alembical lamp,** a lamp having a capital or head like an alembic, used to arrest the smoke and unconsumed vapors and return them to the oil-reservoir. It was invented by Besnard.

Aleochara (al-ē-ok′a-rä), *n.* [NL. (Gravenhorst, 1802), < Gr. ἀλεός, equiv. to ἀλεεινός, open to the sun, warm, + χαίρειν, rejoice.] A genus of rove-beetles, of the family *Staphylinidæ*, typical of the tribe *Aleocharini.* It has the antennæ 10-jointed, tarsi 5-jointed, head retracted, not narrowed, and the palpi with accessory terminal joint. It is a genus of general distribution, comprising nearly 200 species.

Aleocharini (al″ē-ō-ka-rī′nī), *n. pl.* [NL., < *Aleochara* + *-ini.*] A large tribe of small rove-beetles of the family *Staphylinidæ*. They have the antennæ inserted upon the front, the prothoracic spiracles visible, the front coxæ large, and the fourth joint of the maxillary palpi distinct. The tribe comprises more than 30 North American genera.

Aleposomus (a-lep-ō-sō′mus), *n.* [NL., < Gr. ἀ- priv. + λεπίς, scale, + σῶμα, body.] A genus of deep-sea fishes of the Atlantic, belonging to the family *Alepocephalidæ.*

Aleppo boil, button, evil. See *ulcer.*—**Aleppo gall.** See ★*gall*[3].

alerta (ä-lär′tä), *n.* [Sp. See *alert.*] 1. A call repeated by sentinels at regular intervals to indicate their watchfulness.—2. An alarm by a sentinel, causing the guard to assemble under arms.

Alethopteris (al-ē-thop′te-ris), *n.* [NL. (Sternberg, 1825), < Gr. ἀληθής, true, + πτερίς, fern.] A genus of fossil plants usually classed with the ferns and made the type of a suborder *Alethopterides.* It is characterized by large bipinnate to tripinnate fronds, the thick pinnules being inserted on the rachis by a broad, decurrent base, sometimes confluent. The fruit is unknown, but the recent discovery of seeds intimately associated with the fronds renders it probable that they were borne by this plant, in which case it will be necessary to remove it from the *Pteridophyta* and place it in the class *Pteridospermæ* of Oliver and Scott. (See ★*Pteridospermæ.*) The genus occurs chiefly in the productive coal-measures of both hemispheres.

alethopteroid (al-ē-thop′te-roid), *a.* [*Alethopteris* + *-oid.*] Resembling or pertaining to the fossil plant genus *Alethopteris.*

alethorama (al-e-thō-rä′mä), *n.* [Gr. ἀληθής, true, + ὅραμα, what is seen, a sight.] A form of cinematograph devised by Mortier and Chéri-Rousseau in which the film, instead of having the usual interrupted motion, moves continuously, and the screen, instead of being alternately light and dark, is illuminated in a permanent manner by the images. The apparatus consists of a wheel of which the peripheral teeth en

gage the perforations of the film and carry it in front of a brilliant beam of light from an electric arc. The transparent film permits the light to pass through, and the picture is reflected from a mirror behind to another at one side, then through the first lens of the projection-objective to another mirror or to a reflecting prism, and finally out of the second lens to the screen. The instrument may also be used as a registering apparatus if a special shutter is provided. This is done by placing within the principal drum a smaller one which shall have slits one-third as numerous as the compartments of the outer drum and shall revolve three times as fast.

aletophyte (a-lē′tō-fīt), *n.* [Gr. ἀλήτης, vagabond + φυτόν, plant.] A ruderal plant, or one sporadically introduced. Aletophytes are regarded by Pound and Clements, the authors of the term, as a subclass of mesophytes.

aleurodiform (al-ū-rō′di-fôrm), *a.* In *entom.*, resembling one of the insects of the genus *Aleurodes* or family *Aleurodidæ*. *Jour. Roy. Micros. Soc.*, April, 1904.

aleuronate (a-lū′ro-nāt), *n.* [Irreg. < Gr. ἄλευρον, flour, + *-ate*[1].] Albuminous material of vegetable origin. The so-called aleuronate flour has been used as a substitute for ordinary flour in making diabetic bread. It contains a low percentage of starch.

Our bread was partly carefully dried wheaten biscuits, and partly *aleuronate* bread, which I had caused to be made of wheat flour mixed with about 30 per cent. of *aleuronate* flour (vegetable albumen).
Nansen, Farthest North, II. 126.

aleuroscope (a-lū′rō-skōp), *n.* [Gr. ἄλευρον, flour, + σκοπεῖν, view.] An instrument, invented by Sellnick, designed, like the aleurometer of Boland, to indicate the fitness of flour for making bread.

aleutite (a-lū′tīt), *n.* [*Aleut(ian)* (islands) + *-ite*[2].] In *petrog.*, a name used by Spurr (1900) for andesites characterized by andesin and labradorite feldspars. The corresponding granular rocks are called *belugite* by Spurr.

A-level (ā′lev-el), *n.* A leveling instrument used for grading earth-work, leveling ditches, etc. It consists of a light wooden frame of three pieces fastened together like the capital letter "A" with a plumb-line suspended from the vertex. To prepare it for use, the two feet are first brought carefully to the same level and the position of the plumb-line is marked on the horizontal crosspiece. In use the two feet may thus be brought level by moving one up or down till the plumb-line coincides with the mark on the crosspiece. The two feet of the inclined pieces are frequently placed at some convenient distance apart, as three yards, ten feet, a rod; and the instrument may then also be used for stepping off horizontal distances as well as leveling.

alexander† (al-eg-zan′dèr), *v. t.* [*Alexander*: see def. and cf. *lynch*, *v.*] To treat with harshness and severity, in the manner of Sir Jerome Alexander, an Irish judge in the seventeenth century who was noted for his harsh and merciless decisions, especially in regard to Presbyterians and other nonconformists; by implication, to hang. [Rare.]

I thank God the robbers in this province are suppressed. I hear not of one these three weeks. Many I have taken and keep in jail against the assizes, where I hope they will be *alexandered*.
Earl of Orrery, Letter to Ormonde, April 18, 1666 (Trans. [Roy. Hist. Soc., II. 124).

alexanders, *n.*—**Golden alexanders,** a yellow-flowered umbelliferous herb of the northeastern United States, *Thaspium trifoliatum aureum*. The name is less properly applied to *Zizia aurea*. **Purple alexanders,** *Thaspium trifoliatum*, a plant similar to the golden alexanders, but with purple flowers.

alexandra (al-eg-zan′drä), *n.* In *angling*, an artificial fly with silver body and peacock harl.

Alexandra car. See ★*car*[1].

Alexandrian clover. See *Trifolium* and ★*berseem*.

alexia, *n.*—**Motor alexia,** a form of aphasia in which the patient cannot read aloud, though understanding the printed page.—**Optical, sensory,** or **visual alexia,** loss of ability to comprehend the written or printed page.

Alexian (a-lek′si-an), *a.* and *n.* **I.** *a.* Of or pertaining to St. Alexius or Alexis, or to the Alexians.

II. *n.* A member of the religious congregation of Alexian brothers, or Cellites. They are an association of laymen formed about the beginning of the fourteenth century to take charge of the sick and infirm: called *Alexians* from St. Alexius, their patron saint.

alexin (a-lek′sin), *n.* [Irreg. < Gr. ἀλέξειν, ward off, protect, + *-in*[2].] A term originally introduced by Buchner to designate certain substances present in normal blood-serum which are capable of destroying various foreign cellular elements, such as bacteria, red blood-corpuscles, etc. In the literature of immunity, this term has been retained to a certain extent, by French writers especially, to designate that component of the serum which renders possible the action of the various specific immune bodies (amboceptors) and which is destroyed by heating to a temperature of about 55° C. or on prolonged standing. In this sense its meaning is the same as that of ★*complement*, s, a term introduced by Ehrlich and now the one most commonly used. Such complemental action is noted in the case of the hemolysins, the bacteriolysins, and the various cytotoxins. Same as ★*addiment* and ★*cytase*.

alexocyte (a-lek′so-sīt), *n.* [Gr. ἀλέξειν, ward off, protect, + κύτος, a hollow (a cell).] A term introduced by Hankin to designate those leucocytes which supposedly furnish alexins.

Alexurus (a-lek-sū′rus), *n.* [NL., < (?) Gr. ἀλέξειν, defend, + οὐρά, tail.] A genus of gobies found in Mexico. *A. armiger* is found at La Paz.

alezan (al-e-zan′), *n.* [F. and OF. *alezan*, < Sp. *alazan*, of undetermined (Ar.?) origin.] A sorrel horse. [Rare.]

The snow-white steed of Odo; the *alezan* of Fitzosborne. *Bulwer*, Harold. *N. E. D.*

alfa, *n.* A simplified spelling of *alpha*.

alfabet, *n.* A simplified spelling of *alphabet*.

alfalfa, *n.*—**Turkestan alfalfa,** a variety of alfalfa of great value in the arid region of central Asia. This and the oasis alfalfa are likely to be valuable in the dry parts of the western United States, where irrigation is impracticable.—**Oasis alfalfa,** a drought-resisting variety of the common alfalfa, introduced into the western United States from Tunis.

Alfenid metal. See ★*metal*.

alferfemphyric (al fêr-fem-fir′ik), *a.* [*alfer(ric)* + *fem(ic)* + (*por*) *phyr(itic)*.] In *petrog.*, noting a porphyry containing phenocrysts of both alferric silicates (hornblende, augite, biotite) and the simpler ferric or ferromagnesian minerals (hypersthene, diopside, olivin): proposed by Cross, Iddings, Pirsson, and Washington (1902) in their quantitative classification of igneous rocks (which see, under ★*rock*).

alferphyric (al-fêr-fir′ik), *a.* [*alfer(ric)* + (*por*)-*phyr(it)ic*.] In *petrog.*, noting a porphyry containing phenocrysts of an aluminous ferromagnesian (alferric) mineral. See *quantitative classification of igneous rocks*, under ★*rock*.

alferric (al-fer′ik), *a.* [*al(uminous)* + *ferr(omagnesian)* + *-ic*.] Pertaining to, belonging to or having the characteristics of the group of aluminous, ferromagnesian, and calcic silicates, rock-making minerals, such as augite, hornblende, and biotite. See *quantitative classification of igneous rocks*, under ★*rock*.

alfilerilla, *n.*—**Musky alfilerilla,** a weed, *Erodium moschatum*, which invades pasture-grounds from California to Arizona. It has a limited forage value. Also called *ground-needle* and *musky heron's-bill*.

alfonsin (al-fon′sin), *n.* [Pg. *alfonsim*, a fish so named, also a silver coin, < *Alfonso*, a royal name.] Any species of fish of the genus *Beryx*.

alforja† (äl-fôr′hä), *n.* [Sp., perhaps < Ar. *al-khorj*: *al*, the, + *khorj*, store, supply.] A saddle-bag; knapsack; wallet. [Spanish-American.]

alfridary (al′fri-dā-ri), *n.* [NL. *alfridaria*, prob. of Ar. origin; perhaps < Ar. *al*, the, + *fariydah* (*farīda*), a fixed and defined part, < *farada*, he defined, decreed, etc.] In *astrol.*, the planet supposed to rule any given septennial period of human life.

alg (alg), *n.* [= G. *alge*, < L. *alga*: see *alga*.] A seaweed; an alga.

alga, *n.*—**Boring alga,** one of several of the algæ which have the power of penetrating bivalve-shells, corals, etc.

algal, *a.*—**Algal fungus,** any fungus which shows close relations to the algæ and is supposed to be derived from them, as the *Phycomycetes*.

algalia (äl-gä′lē-ä), *n.* [Colonial Sp.< Sp. *algalia*, civet, alluding to the odor of the seeds.] The abelmosk, *Abelmoschus Abelmoschus*, a shrub cultivated for its flowers and seeds, which have a strong odor of musk. See *Abelmoschus*, *abelmosk*, *amber-seed*, and *muskmallow*, 2.

Algansea (al-gan′sē-ä), *n.* [NL.] A genus of large chubs, of the family *Cyprinidæ*, found in Mexico.

algebra, *n.*—**Double algebra.** See ★*double*.—**Universal algebra.** (*a*) That calculus whose general principles are the general definitions which hold for any process of addition and others which hold for any process of multiplication. (*b*) Algebra of multiple units. *Sylvester*.

algebraic, *a.*—**Algebraic addition.** See ★*addition*.—**Algebraic configuration,** the aggregate of rational functions of x and y, where y and x are connected by an algebraic equation.—**Algebraic magnitude.** See ★*magnitude*.—**Algebraic surface.** See *surface*.

algebraization, algebrization (al″je-brā-i-zā′shon, al″je-bri-zā′shon), *n.* [*algebraize*, *-brize*, + *-ation*.] Algebraic calculation; reduction of a calculation or problem to algebraic form. *Nature*, LXVII. 203.

algedonic (al-jē- or al-gē-don′ik), *a.* and *n.* [NL. **algedonicus* < Gr. ἄλγος, pain + ἡδονή, pleasure.] **I.** *a.* In *psychol.* and *esthetics*, relating to the affections of pleasantness and unpleasantness; pertaining to pleasure and pain.

I shall venture occasionally to use the word *algedonic* as an adjective to cover the ground of pain and pleasure.
Marshall, Pain, Pleasure and Æsthetics, p. 9.

II. *n. pl.* In *psychol.* and *esthetics*, the doctrine of affection; the science of pleasure and pain.

It would be well if English usage authorized the employment of the word *algedonics* to signify the science of pain and pleasure.
Marshall, Pain, Pleasure and Æsthetics, p. 9.

Algerian fir. See ★*fir*.

Alger metal. See ★*metal*.

algesia (al-jē′si-ä), *n.* [Gr. ἀλγήσεια, sense of pain, < ἄλγειν, feel pain. Cf. *analgesia*.] Capacity for pain; pain sensitivity; sensitiveness to pain.

algesimeter, algesimetric (al-je-sim′e-tèr, al-jē-si-met′rik). See ★*algometer*, ★*algometric*.

algicide (al′ji-sīd), *n.* [NL., < *alga* + L. *-cida*, < *cædere*, kill.] Any substance, as copper sulphate, which has the property of destroying algæ. *Science*, XX. 805.

Algid fever, a form of pernicious malarial fever marked by severe chills.

algin, algine (al′jin), *n.* [*alga* + *-in*[2], *-ine*[2].] A mucilaginous substance obtained from certain algæ, *Laminaria stenophylla* and *L. digitata*. It slightly resembles gelatin, but differs from that in not coagulating to a jelly and in not being precipitated by tannin, from albumin in not coagulating by heat, and from gum arabic in being precipitated by mineral acids and several organic acids. Insoluble algin is a nitrogenous acid, *alginic acid*. This forms soluble salts with the alkaline metals; those of the heavy metals are for the most part insoluble in water. The solutions of algin are very viscid. It has 14 times the viscidity of starch and 37 times that of gum arabic. It may be used as a thickener and for fixing iron and aluminium mordants in calico-printing, as a waterproof dressing for cloth, and for emulsifying oils and clarifying wines and spirits. It may be obtained in thin transparent sheets, forming a substitute for parchment paper, gutta-percha, or gelatin; and it dries up to a horny substance which may be turned and polished like ivory or the ivory-nut.

alginate (al′ji-nāt), *n.* [*algin(ic)* + *-ate*.] In *chem.*, a salt of alginic acid.

algine, *n.* See ★*algin*.

alginic (al-jin′ik), *a.* [*algin* + *-ic*.] In *chem.*, of or pertaining to algin.—**Alginic acid,** the insoluble form of algin freed from the basic elements with which it produces salts, the *alginates*.

algioglandular (al″ji-ō-glan′dū-lär), *a.* [Irreg. < Gr. ἄλγος (gen. ἄλγεος), pain, + E. *glandular*.] Relating to glandular action as the result of painful stimulation.

algiometabolic (al″ji-ō-met-a-bol′ik), *a.* [Irreg. < Gr. ἄλγος, pain, + E. *metabolic*.] Relating to metabolic changes as the result of painful stimulation.

algiomotor (al″ji-ō-mō′tor), *a.* [Irreg. < Gr. ἄλγος, pain, + E. *motor*.] Relating to a motor effect, as the outcome of painful stimulation.

algiomuscular (al″ji-ō-mus′kū-lär), *a.* [Irreg. < Gr. ἄλγος, pain, + E. *muscular*.] Relating to muscular action as the result of painful stimulation.

algiovascular (al″ji-ō-vas′kū-lär), *a.* [Irreg. < Gr. ἄλγος, pain, + E. *vascular*.] Relating to vascular changes as the result of painful stimulation.

algivorous (al-jiv′ō-rus), *a.* [L. *alga*, a seaweed, + *vorare*, eat.] Feeding upon seaweeds: said of some fishes and of the Galápagos lizard, *Amblyrhynchus*.

Algol (al′gol or al-gol′), *n.* [Ar., 'the demon.'] A pale star varying in magnitude from 2.3 to 4.0 in a period of 2.89 days; β Persei.—**Algol variable,** a star which remains most of the time constant in brightness, but which at regular intervals suffers a comparatively sudden diminution of its light, due to the interposition of one of the members of a binary pair between the other member and the observer. Often called *eclipse variable*.

algometer (al-gom′e-tèr), *n.* [Gr. ἄλγος, pain, + μέτρον, measure.] An instrument used in psychophysical determinations of the stimulus limen and differential limen of cutaneous or muscular pain. Also *algesimeter*.

The pressure *algometer* consists essentially of a strong spring, by means of which a rubber disc or point is pressed against the surface to be tested.
Scripture, New Psychol., p. 303.

algometric (al-gō-met′rik), *a.* In *psychophys.*, pertaining to the use of the algometer or to the measurement of sensitivity to pain. Also *algesimetric*. *G. S. Hall*, Adolescence, II. 4.

algometry (al-gom′e-tri), *n.* [Gr. ἄλγος, pain, + -μετρία, < μέτρον, a measure.] The measurement of sensitivity to pain. Also *algesimetry*.

Algonkian, Algonquian (al-gon′ki-an), *a.* [*Algonk(in)* + *-ian*.] 1. Same as *Algonkin*.—2.

Specifically, in *geol.*, applied to the Precambrian rocks which are either themselves sedimentary or, if igneous, are later than known sediments. — **Algonkian period**, a subdivision of Precambrian time, as used by the United States Geological Survey, immediately preceding the Cambrian. It in turn is preceded by the Archæan in a restricted sense. It is equivalent to the latter part of the *Archæan*, in the broad sense of that term used by many authors: approximately to the *Archæozoic* of J. D. Dana or to the *Agnotozoic* of R. D. Irving. Under the Algonkian are placed all those Precambrian rocks which are sedimentary or, if igneous, are later than recognizable sediments.

algophilist (al-gof′i-list), *n.* [*algophily* + *-ist.*] One who takes a morbid pleasure in the contemplation of mental or physical pain in others or in himself. *Alien. and Neurol.*, May, 1903.

algophily (al-gof′i-li), *n.* [Gr. ἄλγος, pain, + -φιλία, ⟨ φιλεῖν, love.] Love of pain as felt by others (*active algophily*) or as experienced in one's own person (*passive algophily*). *Alien. and Neurol.*, May, 1903.

algorism, *n.*—**Isobaric algorism,** the process of forming the expression for the sum of the products of *m* factors, each being the same function of *m* integers whose sum is *p*.

algraphy (al′gra-fi), *n.* [Irreg. ⟨ *al*(*uminium*) + Gr. -γραφία, ⟨ γράφειν, write.] The art of printing from an aluminium plate to which a design in hardened oily ink has been transferred. The portions of the plate which are not covered by the lines of the design imbibe from a damping-roller water which resists where it is not needed the deposit of oily ink made by a second roller. The lines of the design accept the ink, which can then be neatly transferred to paper by impression. See the extract.

Successful work, especially in colour, has also been produced lately by *algraphy* — a process in which aluminum takes the place of the stone.
Encyc. Brit., XXVIII. 266.

alhambra (al-ham′brä), *n.* A counterpane or bedquilt of coarse texture, woven with colored threads and in Jacquard designs.

al-het (äl-ḥet′), *n.* [Heb. *'al ḥet*, 'for the sin.'] The Jewish 'longer confession of sin': so called from the first two words of that confession. Like most of the prayers in the Jewish festival ritual, called *maḥzor*, it is acrostically arranged. Each verse asks forgiveness for a special sin presumed to have been committed by the person confessing. This, like the 'lesser confession,' ★*ashamnu* (which see), is most solemnly chanted by the reader and congregation several times during the services of the day of Atonement.

alicyclic (al-i-sik′lik), *a.* [*ali*(*phatic*) + Gr. κύκλος, a circle, + *-ic* (see *cyclic*).] In *chem.*, a term introduced by Bamberger to designate a compound containing a ring of carbon atoms but at the same time having many of the properties of the aliphatic or open-chain compounds.

alienation, *n.* **2.** The state in which a person has completely forgotten his identity and becomes a new person, alien to his former self. This use of the term was proposed when the described mode of dissolution of personality first attracted attention; but the word having already the recognized technical meaning 1 (*d*), this employment of it has been rejected.

alienize (āl′yen-īz), *v. t.*; pret. and pp. *alienized*, ppr. *alienizing*. [*alien* + *-ize.*] To render alien or foreign; form or conceive in accordance with foreign notions or ways. *G. Meredith*, Evan Harrington, p. 32.

alienocola (ā″li-en-ok′ō-lä), *n.*; pl. *alienocolæ* (-lē). [NL., ⟨ L. *alienus*, of another, + *-cola*, ⟨ *colere*, inhabit.] A parthenogenetic insect which is born upon and inhabits a plant of a different kind from that upon which its parent was born.

In the spring winged females are produced, which migrate to the Larch and give rise parthenogenetically to a wingless generation which hibernates under the bark. These *alienocolæ* in the following spring produce parthenogenetic winged females.
Phillips, Proc. Amer. Philos. Soc., 1903, p. 298.

aliethmoidal (al″i-eth-moi′dal), *a.* [*aliethmoid* + *-al.*] Pertaining to the aliethmoid, or wing of the ethmoid region of the orbitonasal cartilage; relating to that part of the mesethmoid cartilage from which the aliethmoids are developed. *W. K. Parker*, Morphol. of the Skull, p. 226.

alif (ä′lif), *n.* [Pers., ⟨ Ar. *'alif* = Heb. *'aleph*: see *alpha.*] The first letter of the Persian (Arabic) alphabet, consisting of a single stroke; hence, a mere letter; a jot.

A hair, they say, divides the false and true;
Yes; and a single *alif* were the clue,
Could you but find it, to the Treasure-house,
And peradventure to The Master, too.
Fitzgerald, trans. Omar Khayyam, Rubaiyat, quat. 1.

aliipoe (ä-lē″ē-pō′ä), *n* [Hawaiian.] The common canna or Indian-shot, *Canna indica*.

alimentive (al-i-men′tiv), *a.* [*aliment* + *-ive.*] Relating or pertaining to food or to the desire to eat and drink.

alimentum (al-i-men′tum), *n.*; pl. *alimenta* (-tä). [L.: see *aliment.*] Aliment; food. *Pop. Sci. Mo.*, LIX. 468.

alinement, *n.* **4.** In *archæol.*, megaliths arranged in single, parallel, or converging rows.

alinite (al′i-nit), *n.* [G. *alinit*, a trade-name. From its use and form it may be conjectured to be formed from L. *al*(*imentum*), aliment, + *-in*[2] + *-ite*[2].] A preparation in the form of a yellowish powder containing a pure culture of *Bacillus Ellenbachensis α*. It is used for soil-inoculation, and is said to be an aid to cereals in assimilating nitrogen. Also *alinit*.

alinjection (al-in-jek′shon), *n.* [*al*(*cohol*) + *injection.*] In *histol.*, the injection of alcohol into the tissues for the purpose of hardening them. *B. G. Wilder.*

alintatao (ä-lin-tä′tou), *n.* [Said to be a Tagalog name.] In the Philippine Islands, a tree, *Diospyros pilosanthera*, of the ebony family. It has simple alternate entire leaves, small unisexual flowers, and globose edible fruit, and yields a very hard, dark-colored wood like ebony, which is used in cabinet-making.

alipata (ä-lē-pä′tä), *n.* [Said to be Bisayan, but not found.] In the Philippine Islands, the blinding-tree, *Excæcaria Agallocha*. See *Excæcaria*, *tiger's-milk*, and ★*blinding-tree*.

aliphatic (al-i-fat′ik), *a.* [NL. *aliphaticus*, ⟨ Gr. ἄλειφαρ (-αρ-), an unguent, fat, ⟨ ἀλείφειν, anoint.] Of or pertaining to fat; fatty; specifically, in *chem.*, designating compounds which have only an open chain of carbon atoms, as distinguished especially from aromatic compounds, which contain a ring of carbon atoms. The natural fats consist chiefly of compounds of this type.

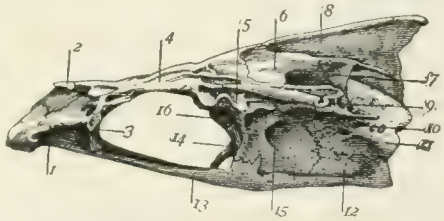
aliquot (al′i-kwot), *v. t.* [*aliquot*, *a.*] To divide into equal parts which are a multiple or a submultiple of another quantity. An aliquoting mechanism is one which causes one part of a machine to move *n* times while the other part moves once. *Sci. Amer. Sup.*, Nov. 22, 1902.

Aliquot tones, in *acoustics*, harmonics or overtones.

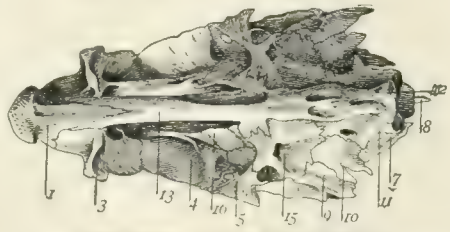
alisier (ä-lē-zi-ā′), *n.* [Creole F., same as F. *alizier*, the bean-tree.] The stag-bush, *Viburnum prunifolium*. [Louisiana.]

alism (al′izm), *n.* [*al-*, part of the Semitic name for 'God' (Heb. *el-*, Ar. *il-*, *ilāh*, *al′lāh*, *Allāh*), + *-ism.*] A title adopted by Francis F. Barham for his religious system, which honors 'divinity' as the all-supreme good, and describes religion as the life of God in the soul of man, a divinity of essential being rather than formal doctrine.

alisphenoid, *n.* **2.** In *ichth.*, a small lateral bone of the cranium. It articulates above with the sphenotic and an inner descending wing of the frontal, and behind with the proötic. It usually forms a part of



Roccus lineatus. Lateral View of Cranium.



Roccus lineatus. Inferior View of Cranium.

1, vomer; *2*, ethmoid; *3*, prefrontal; *4*, frontal; *5*, sphenotic; *6*, parietal; *7*, epiotic; *8*, supraoccipital; *9*, pterotic; *10*, opisthotic; *11*, exoccipital; *12*, basioccipital; *13*, parasphenoid; *14*, basisphenoid; *15*, proötic; *16*, alisphenoid.

the lateral border of the anterior opening of the braincase, though sometimes it nearly closes this by bending inward and meeting its opposite fellow in a median suture. The 'alisphenoid' of Owen is the 'proötic' of Parker.

aliturgic (a-li-tėr′jik), *a.* [*a-*[18] + *liturgic.*] Without liturgy: designating a day in the Christian year when the liturgical order is dispensed with. Strictly speaking, this never occurs. The mass of the presanctified on Good Friday, referred to below, is according to the liturgy, though the liturgical order is curtailed in that ceremony.

Meanwhile, both in East and West, the general practice has continued unbroken of reserving the Eucharist, in order that the "mass of the presanctified" might take place on certain "*aliturgic*" days.
Encyc. Brit., XXXII. 220.

aliturgical (a-li-tėr′ji-kạl), *a.* Same as ★*aliturgic*.

alivincular (al″i-ving′kū-lär), *a.* [L. *ala*, wing, + *vinculum*, band, + *-ar*[3].] Noting that form of ligament in the pelecypod mollusks which is like a cord or plug extending between the beaks of the two valves: it may be central or posterior: contrasted with *parivincular*.

alizarate (a-liz′a-rāt), *n.* [*alizar-in* + *-ate*[1].] A salt of alizarin.

alizarin, *n.* Commercial alizarin is sold in the form of a yellow paste containing 20 per cent. of dry substance, and, less frequently, as a dry powder. The dry substance in the paste is seldom pure alizarin, but contains varying amounts of flavopurpurin and anthrapurpurin, both of which have properties similar to alizarin. Natural alizarin derived from madder contains purpurin in addition to the above. The nature of the various commercial alizarins is often designated by suffixed letters or numbers. Thus *alizarin I*, *alizarin P*, and *alizarin V* are nearly pure alizarin and give bluish reds, while *alizarin CA*, *alizarin G*, etc., contain anthrapurpurin or flavopurpurin, or both, and give yellowish reds. — **Alizarin black, blue, Bordeaux, cardinal,** etc. See ★*black*, etc. — **Alizarin saphirol,** an acid dyestuff derived from anthraquinone. It dyes wool a bright and clear blue which is remarkably fast to light. — **Alizarin yellow, violet.** See ★*yellow*, ★*violet*[1].

aljama (äl-hä′mä), *n.* [Sp., ⟨ Ar. *al*, the, + Ar. *jamā'a*, a gathering, a congregation.] A self-governing community of Jews or of Moors living in Spain under Spanish rule during the middle ages.

aljofaina (äl″hō-fä′ē-nä), *n.* [Sp., ⟨ Ar. *al-ḥofaina*, *al-ḥufaina*, ⟨ *al*, the, + *ḥofaina*, *ḥufaina*, ⟨ *ḥafna*, a cup, porringer (Monlau).] An earthen jug or basin.

aljonjoli, *n.* Same as ★*ajonjoli*.

Alkahada pottery. See ★*pottery*.

alkali, *n.*, **3.** This term, used in the commercial sense, includes the carbonates of sodium and potassium, formerly called *mild alkalis*, and the hydroxids of the same metals, the *caustic alkalis*. The alkali industry is one of great importance, especially the manufacture of soda, both carbonate and caustic. It is carried on mainly by three methods: the Leblanc process, the Solvay or ammonia process, and the electrolytic process. In the last of these, of recent introduction, a solution of common salt is decomposed by an electric current. The Solvay process is not practically applicable to the production of potash; it is at present the principal source of soda.

4. A mineral compound soluble in water under ordinary surface conditions. They are chiefly chlorids, sulphates, carbonates, and bicarbonates of sodium, potassium, magnesium, and calcium. These salts commonly effloresce and form crusts over surfaces in dry seasons. They are derived from the decay of rocks, and are carried in solution from these sources, becoming concentrated enough to be detrimental only in arid or semi-arid regions. There are two well-known types, *black* and *white*. — **Alkali blue-grass, brown, bulrush.** See ★*blue-grass*, etc. — **Alkali flat,** a sterile plain or basin carrying an excess of alkali in its soil: usually the undrained or poorly drained remnant of a former lake in an arid region. — **Alkali manufacture,** in a general sense, the production on the great scale of the alkalis soda and potash, and their carbonates, but more generally used in a restricted sense to mean the manufacture of soda, carbonate and caustic, especially by the Leblanc process, with the accessory products, as bleaching-powder, commonly made on the same premises. — **Alkali soil,** any soil containing an unusual amount of soluble mineral salts or alkali. More than four tenths of one per cent. of such soluble matter is injurious to most vegetation, although smaller amounts, on the contrary, are often advantageous. Soils naturally well drained do not suffer from these constituents, and alkali soils are confined either to poorly drained or to arid regions. — **Alkali spot,** an area underlain by waters which drain from irrigated lands, frequently becoming increasingly saturated with alkali. *Yearbook U. S. Dept. Agr.* 1900, p. 472. — **Alkali waste,** in the Leblanc process for the manufacture of carbonate of soda from common salt, the insoluble residue left after leaching black ash with water. It consists chiefly of calcium sulphid, carbonate, and hydroxid, and is largely utilized for the recovery of the sulphur which it contains. — **Alkali waters,** natural mineral waters so heavily charged with alkalis as to be unfit for ordinary uses. — **Black alkali,** the name given, in some of the western regions of the United States, to sodium carbonate existing in the land, because it produces black spots by its action on the humus of the soil.

Ammonia and sodium carbonate or "*black alkali*," on the other hand, break down any aggregates which have been formed, and thus have the effect of "puddling" the soil, which dries into a hard compact mass.
Yearbook U. S. Dept. of Agr. 1900, p. 209.

Refined alkali. Same as *white* ★*alkali*. **White alkali,** in the manufacture of carbonate of soda by the Leblanc process, the product obtained by redissolving soda-ash in water, clarifying the liquor, and evaporating to dryness.

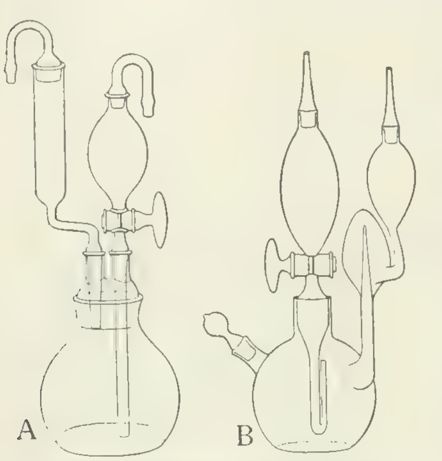
alkalic (al-kal′ik), *a.* [*alkali* + *-ic.*] **1.** Same as *alkaline*. *Elect. World and Engin.*, Sept. 3, 1904. — **2.** Specifically applied to the minerals of igneous rocks (in the quantitative classification) or to magmas and rocks generally, when specially characterized by their alkali con-

tents: in distinction from *alkaline*, which implies the chemical property of alkalinity.

alkalicalcic (al″kal-i-kal′sik), *a.* [*alkali* + *calcic.*] In *petrog.*, a term used in the quantitative classification of igneous rocks to indicate that certain rocks, the chemical composition of which is known, contain alkalis and lime belonging to the standard salic minerals (feldspars and feldspathoids) in equal or nearly equal amounts. A certain systematic division of the quantitative classification is called the *alkalicalcic rang*. See *quantitative classification of igneous rocks*, under ★*rock*.

alkali-grass, *n.* 2. *Puccinellia airoides* (sometimes called *alkali meadow-grass*) and *P. Lemmoni*, of the northern Rocky Mountain region. *Sporobolus airoides* of the Southwest has been called *alkali fine-top*.—3. A species of poison camass, *Zigadenus elegans*, dangerous to stock: so called in the stock-raising regions of Montana, etc.

alkalimeter, *n.* 2. An instrument for the quantitative analysis of carbonated alkali. It consists essentially of a thin glass vessel which can be weighed on a delicate balance and is so constructed that a known weight of sodium carbonate or acid carbonate contained in one division is kept from acid contained in another division during the first weighing. The acid is then run on the carbonate, causing an evolution of carbon-dioxid gas, which, in passing out of the apparatus, bubbles through



A, Mohr's Alkalimeter. B, Wibel's Alkalimeter.

concentrated sulphuric acid or passes over calcium chlorid and is thus deprived of moisture. The apparatus is weighed a second time, the loss in weight representing the carbon dioxid evolved and thus indicating the quality of the carbonate. As a precaution, dry air is drawn through the apparatus to displace any residual gas. Special forms have been devised by Bunsen, Fresenius, Schroetter, Mohr, and others.

alkalimirlic (al″kal-i-mėr′lik), *a.* [*alkali* + *mirlic.*] In *petrog.*, a term used in the quantitative classification of igneous rocks to indicate that certain rocks, the chemical composition of which is known, contain alkalis and mirlic constituents belonging to the standard femic minerals in equal or nearly equal amounts. A certain systematic division of the quantitative system is called an *alkalimirlic rang*. See *quantitative classification of igneous rocks*, under ★*rock*.

Alkaline glands. See ★*gland*.—**Alkaline iodide.** See ★*iodide*.—**Alkaline metals,** the metals of which the hydroxids constitute the alkalis, namely, sodium, potassium, and the rarer lithium, rubidium, and cæsium.—**Alkaline tide.** See ★*tide*.—**Alkaline water,** a mineral water occurring in nature with the carbonate of sodium or potassium (generally the former) as an ingredient in sufficient quantity to give a well-marked reaction to test-paper and medicinal activity. The carbonates of calcium and magnesium are also frequently present, dissolved by excess of carbonic acid. The waters of Vichy in France and Ems in Germany are examples.

alkali-weed (al′ka-li-wēd), *n.* The yerba mansa, *Anemopsis Californica*.

alkali-works (al′ka-li-wėrks), *n. pl.* The buildings, machinery, and other appliances used in the conduct of the alkali manufacture.

alkalizer (al′ka-lī-zėr), *n.* A chemical agent which tends to render alkaline.

alkaloid, *n.*—**Animal alkaloid,** a leucomaïne or a ptomaïne. See these words.—**Artificial alkaloid,** synthetic alkaloid.—**Cadaveric** or **putrefactive alkaloid** a ptomaïne.—**Synthetic alkaloid,** an alkaloid formed artificially by chemical processes.

alkamari (äl-kä-mä′rē), *n.* [Aymará of Bolivia.] A bird of prey, *Polyphorus tharus*, of the family *Falconidæ* (though chiefly a scavenger), frequently met with in the highlands of Peru and Bolivia. It stalks about in pairs in cultivated patches and open spaces, and when disturbed it flies only a short distance. Its plumage is dark brown on the back, with an almost white breast. In northern Peruvian (Quechua) it is called *chana-linda*.

alkameine (al-kam′ē-in), *n.* [G. **alkamein*: as *alkam(ine)* + *-e-ine*².] The carboxylic ester of an alkamine or alkine. Also called *alkeine*.

alkamine (al-kam′in), *n.* [G. **alkamin*, < *alk(ohol)*, alcohol, + *amine*.] A name given by Ladenburg to tertiary bases which contain an alcoholic group, as diethylethylol amine, $(C_2H_5)_2NC_2H_4OH$. Also called *alkine*.

alkane (al′kān), *n.* [G. **alkan* (?), < *alk(ohol)*, E. *alcohol*, + *-an*, E. *-ane*.] A hydrocarbon, C_nH_{2n+2}, of the marsh-gas or methane series: official name.

alkannin (al-kan′in), *n.* [*Alkanna* + *-in*².] A coloring matter, $C_{15}H_{14}O_4$, obtained as a dark reddish-brown powder from *Alkanna tinctoria*.

alkapton (al-kap′tōn), *n.* [*alk(ali)* + Gr. ἅπτειν, touch.] A term originally introduced to designate a certain urinary constituent which is met with on rare occasions, and which causes the urine to turn reddish brown or black on standing or upon the addition of an alkali. The substance to which this reaction is due has been identified as homogentisinic acid, $C_6H_3(OH)_2$.CH_2.COOH. In one instance uroleucinic acid has been found in the place of homogentisinic acid. Also *alcapton*.

alkaptonic (al-kap-ton′ik), *a.* Of or pertaining to alkapton. Homogentisinic acid and uroleucinic acid are sometimes collectively termed *alkaptonic acids*. See ★*alkapton*.

alkaptonuria (al-kap-tō-nū′ri-ä), *n.* [NL., < *alkapton* + οὖρον, urine.] The presence of alkapton in the urine when voided: a rare metabolic anomaly. Also *alcaptonuria*.

alkeine, *n.* Same as ★*alkameine*.

alkene (al′kēn), *n.* [G. **alken*, < *alk(ohol)*, E. *alcohol*, + *-en*, E. *-ene*.] A hydrocarbon, C_nH_{2n}, of the ethylene or ethene series: official name.

alkine (al′kin), *n.* [G. **alkin*, < *alk(ohol)*, E. *alcohol*, + *-in*, E. *-ine*².] 1. A hydrocarbon, C_nH_{2n-2}, of the acetylene or ethine series: official name.—2. Same as ★*alkamine*.

alkoxyl (al-kok′sil), *n.* [G. **alkoxyl*, < *alk(ohol)*, alcohol, + E. *ox(ygen)* + *-yl*.] A general name for an alkyl-group and oxygen, as ethoxyl, C_2H_5O.

alkylate (al′ki-lāt), *v. t.*; pret. and pp. *alkylated*, ppr. *alkylating*. [*alkyl* + *-ate*¹.] To introduce an alkyl in place of a hydrogen atom. *Amer. Chem. Jour.*, April, 1903.

alkylation (al-ki-lā′shon), *n.* [*alkylate* + *-ion*.] The process of introducing an alkyl in place of hydrogen. *Nature*, July, 9, 1903.

alkylene (al′ki-lēn), *n.* [*alkyl* + *-ene*.] Same as ★*alkene* or *olefine*.

alkylidine (al-kil′i-din), *n.* [*alkyl* + *-id* + *-ine*².] The term applied, in organic chemistry, to bivalent hydrocarbon radicals, containing the group >CRR, where R represents hydrogen or any hydrocarbon radical, such as methyl, CH_3. The ethylidine radicals are isomeric with the bivalent ethylene radical, $-CR_2.CR_2-$.

allachæsthesia (al″a-kes-thē′si-ä), *n.* [NL., < Gr. ἀλλαχῆ, elsewhere (< ἄλλος, other), + αἴσθησις, feeling.] The perception of a sensation elsewhere than at the point where the stimulus is applied.

allactite (al′ak-tīt), *n.* [Gr. ἀλλακτ(ικός), adj., < ἀλλάσσειν, change, exchange (see *allagite*), + *-ite*².] An arseniate of manganese occurring in small brownish-red prismatic crystals: found in Sweden.

Allagecrinidæ (a-laj-ē-krin′-i-dē), *n. pl.* [NL., < *Allagecrinus* + *-idæ*.] The name given by Etheridge and Carpenter to a family of simple inadunate crinoids. They have a very small calyx, basal plates ankylosed and supporting sometimes two arms, sometimes one. They lived in early Carboniferous seas.

Allagecrinus (al-a-jek′ri-nus), *n.* [NL., irreg. < Gr. ἀλλαγή, change, + κρίνον, lily.] The typical and only genus of the family *Allagecrinidæ*.

allalinite (al-a-lin′īt), *n.* [*Allalin*, a locality in Switzerland, + *-ite*².] In *petrog.*, a name used by Rosenbusch for saussurite-gabbro in which the secondary smaragdite and saussurite preserve the original texture of the rock in spite of the complete transformation they represent. It is distinguished from flaser-gabbro, in which there has been change in the form of the constituents.

allanic (a-lan′ik), *a.* [*allan(toin)* + *-ic*.] Noting an acid, $C_4H_5N_5O_5 + H_2O$, formed, together with urea and allanturic acid, by the action of nitric acid on allantoin.

allantiasis (al-an-tī′a-sis), *n.* [NL., < Gr. ἀλλᾶς (ἀλλαντ-), + *-iasis* noting a disease).] Same as ★*botulism*.

allantoid, *a.* 2. In *bot.*, sausage-shaped: applied especially to the spores of certain pyrenomycetous fungi.

Allantosporæ (al-an-tos′pō-rē), *n. pl.* [NL., < Gr. ἀλλᾶς (ἀλλαντ-), sausage, + σπορά, spore.] A name applied by Saccardo to artificial divisions of various families and orders of fungi, especially those of the *Pyrenomycetes* and *Fungi imperfecti*, to include the genera which have unicellular, cylindric, or curved spores.

allantoxaïdin (al-an″tok-sā′i-din), *n.* [*allantoxa(nic)* + *-id*² + *-in*².] A substance, $C_3H_3N_3O_2 + H_2O$, formed from allantoxanic acid by the loss of carbon dioxid. It is a weak acid.

allantoxanic (al-an″tok-san′ik), *a.* [*allant(oin)* + *ox(ygen)* + *-an-* + *-ic*.] Noting an acid, $C_4H_3N_3O_4$, formed by the oxidation of allantoin in an alkaline solution. It exists only in the form of salts.

allapine†, *n.* Another spelling of *alepine*.

alleged (a-lejd′), *p. a.* That is or has been stated to be (what is specified in the following word or clause); merely stated or asserted: much used when one wishes to disclaim responsibility for the statement, or to intimate his disbelief in it: as, an *alleged* fact; an *alleged* interview; an *alleged* illness.

> We cannot be sure that the *alleged* second dispatch was ever sent. *Sir G. Cox*, Gen. Hist. Greece, III. 10.

Alleghanian (al-ē-gā′ni-an), *a.* and *n.* 1. Of or pertaining to the Alleghanies.—2. In *anthrop.*, noting one of the secondary races of man, established by Geoffroy Saint-Hilaire, embracing the 'Red Indian.' Also used substantively.—**Alleghanian area.** See ★*area*.

Allegheny River series. See ★*series*.

allegorism (al′ē-gō-rizm), *n.* 1. Allegory or allegorical writing.—2. Allegorical interpretation, especially of the Scriptures. See the extract.

> *Allegorism*: That explanation of a Scripture passage which is based upon the supposition that its author, whether God or man, intended something 'other' than what is literally expressed. . . . Expositors of this system may be called allegorists; the system itself allegorism. *Ginzberg*, Jewish Encyc., I. 403.

allegorist, *n.* 2. One who interprets Scripture allegorically. See ★*allegorism*, 2.

allegoristic (al″ē-gō-ris′tik), *a.* Of or pertaining to an allegorist or writer of allegories: as, the *allegoristic* style; *allegoristic* lessons.

allégresse (al-ā-gres′), *n.* [F., < *allègre*, lively: see *allegro*.] Gaiety; sprightliness; gladsomeness; glee. *Urquhart*.

Allegrippus conglomerate. See ★*conglomerate*.

allegro, *a.* Special varieties of movement or style are indicated by adding other terms: as, *allegro agitato*, quick and with agitation; *allegro assai*, very quick; *allegro con brio* or *con fuoco*, quick and with spirit or intensity; *allegro con moto* or *allegro molto*, with decided quickness; *allegro vivace*, quick and with vivacity; *allegro giusto*, quick, but with steady, even movement; *allegro moderato*, moderately quick; *allegro ma non troppo*, quick, but not excessively so.

alleja (a-lē′jä), *n.* [Anglo-Ind. Also *allejah*, *allacha*, *alacha*, etc., < Hind. **alācha*, *ilācha*, < Turki *alāchah*, *alajah*, *alchah* (Yule).] A silk-and-cotton fabric of central Asia, woven in wavy effects.

allelomorph (a-lel′ō-môrf), *n.* [Gr. ἀλλήλων, of one another, + μορφή, form.] In *biol.*, one of a pair of mutually exclusive qualities exhibited respectively by each of two pure races or varieties of a species, these qualities being of such a nature that one or the other of the pair is exhibited in perfection, to the complete exclusion of the other, by each cross-bred descendant of the two pure races. When the cross-bred offspring, or the descendants of the cross-bred offspring, of two pure races or varieties which differ from each other in respect to some characteristic are like one or the other parent in respect to this characteristic, and not intermediate between them, the characteristic in question, in each parental form, is termed by Bateson an *allelomorph*, or in both parental forms, considered collectively, a pair of *allelomorphs*. Thus, for example, when descendants are reared from a tall (D) and a short (R) variety of the garden-pea, some are tall and some short, but intermediate forms are as rare as they are in the tall and short varieties of pure blood when bred true. In this case tallness and shortness may be considered as a pair of mutually antagonistic or incompatible unit characters, or *allelomorphs*, each of which may replace but not combine with the other in the descendants from a cross between them. According to Mendel and those who accept his theoretical explana-

tion of the results of his experiments, the cross-bred individuals have two sorts of germ-cells in approximately equal numbers, those which are like the germ-cells of one pure parental race (D) and those which are like the germ-cells of the other (R). If descendants are born from cross-breeds through the union of two of the D or tall germ-cells, the shortness (R) of the short variety will not be represented in the fertilized eggs from which they arise, and they will be tall and will have none but tall descendants; while those which arise from fertilized eggs formed by the union of the R or short germ-cells will be short and will have none but short descendants. Those which arise from fertilized eggs formed by the union of a tall (D) and a short (R) germ-cell may be tall or short but not intermediate.

[If] two similar gametes meet, their offspring will be no more likely to show the other *allelomorph* than if no cross had ever taken place.

Bateson and Saunders, Rep. Evol. Com. Roy. Soc. 1902, [I. 159

allelomorphic (a-lel-ō-môr′fik), *a.* [*allelomorph* + *-ic.*] Concerning or pertaining to an allelomorph; Mendelian.

But besides the strictly *allelomorphic* or Mendelian distribution of characters among the gametes . . . we can imagine three other arrangements.

Bateson and Saunders, Rep. Evol. Com. Roy. Soc. 1902, [I. 127.

Allelomorphic variety, an analytical variety. See ★*variation.*

allelomorphism (a-lel-ō-môr′fizm), *n.* [*allelomorph(ic)* + *-ism.*] The presence or the transmission or the inheritance of allelomorphic characters.

It does not appear as yet that simple *allelomorphism* occurs between any two colours, of which neither is xanthic or albino.

Bateson and Saunders, Rep. Evol. Com. Roy. Soc. 1902, [I. 142.

allelotaxis (a-lel-ō-tak′sis), *n.* [Gr. ἀλλήλων, of one another, + τάξις, arrangement.] In *embryol.*, the origin of an organ from several embryonic sources, such as that of the hypophysis from the entoderm of the pharynx and the ectoderm of the brain. *Von Kupffer.*

allelotropy (a-le-lot′rō-pi), *n.* [Gr. ἀλλήλων, of each other, + -τροπία, ⟨ τρέπειν, turn.] The existence in a tautomeric substance of the two isomeric forms in such a condition that either form readily passes over into the other. *Knorr.*

allene (al′ēn), *n.* [L. *all(ium)*, garlic, + *-ene.*] Same as ★*allylene.*

allepigamic (al″ep-i-gam′ik), *a.* [Gr. ἄλλος, other, + E. *epigamic.*] In *biol.*, concerning or pertaining to adventitious epigamic characters. *Poulton*, Colours of Animals, p. 338. [Rare.]

allesthesia (al-es-thē′si-ä), *n.* [NL., ⟨ Gr. ἄλλος, other, + αἴσθησις, sensation.] Same as *allochiria.*

all-fives (al′ fīvz′), *n.* A variety of all-fours in which the points are scored as fast as made in the tricks taken in. Ace of trumps counts 4, king 3, queen 2, jack 1, ten 10, and five 5. The game-point is decided by counting these all over again at the end. Sixty one points make a game.

alliance, . **Farmers' Alliance**, a cooperative association of farmers, formed in Texas in 1876, for mutual protection and assistance, especially in dealings with middlemen and against the encroachments of capitalists in their wholesale purchases of lands. In later years similar associations were formed in different parts of the United States, and as a result of frequent amalgamations of these the present Farmers' Alliance and Industrial Union came into existence as a political body, cooperating more or less closely with the People's party. **Grand Alliance.** See *Grand Alliance* in Cyclopedia of Names. — **Presbyterian Alliance.** See ★*Presbyterian.*

allicholy† (al′i-kol-i), *a.* A jocose perversion of the word 'melancholy.' *Shak.*, T. G. of V., iv. 2. 27.

A disconsolate wood-pigeon . . . so *allicholy* as anything *Walpole*, Letters, I. 8.

alligator, *n.* **6.** A boat used in handling floating logs. It can be moved overland from one body of water to another by its own power, usually applied through a drum and cable. [U. S.] **Horn alligator,** alligator leather made from the back of the skin, which has the roughest and largest scales, resembling plates of horn.

Alligatorellus (al′i-gā-tọ-rel′us), *n.* [NL., ⟨ *Alligator* + dim. *-ellus.*] An extinct genus of small crocodilians from the Jurassic lithographic stone of Cérin, France.

Alligatorium (al′i-ga-to′ri-um), *n.* [NL., ⟨ *Alligator* + *-orium.*] An extinct genus of small crocodilians of the family *Atoposauridæ*, from the Jurassic lithographic limestone of France and Bavaria.

alligator-shears (al′i-ga-tọr-shērz′), *n. sing.* and *pl.* Shears used for cutting off puddled bars in lengths suitable for piling, and also the crop ends of bars in general. There is a fixed lower jaw, and an upper movable jaw, whose fulcrum is set at the inner end of the cutting portion. Behind the fulcrum the lever is prolonged, and attached to a connecting-rod which receives its oscillatory movement from a crank or eccentric. Also called *crocodile* or *cropping-shears.* *Lockwood*, Dict. Mech. Eng. Terms.

alligator-snapper (al′i-ga-tọr-snap′ẹr), *n.* The more common name for the alligator-terrapin, *Macrochelys lacertina*, a species of fresh-water turtle found along the border of the Gulf of Mexico from Florida to Texas. It is the largest fresh-water turtle of North America and possibly of the world, reaching a length of 5 feet and a weight of 150 pounds.

Allionia (al-i-ō′ni-ä), *n.* [NL. (Loefling, 1758), named in honor of Carlo *Allioni* (1725–1804), a professor of botany at Turin.] A genus of dicotyledonous plants of the family *Nyctaginaceæ.* See *Oxybaphus.*

alliteral (a-lit′ẹ-ral), *a.* [Irreg. ⟨ L. *ad*, to, + *litera*, letter: see *literal.*] Characterized by alliteration; alliterational: as, the *alliteral* languages of Africa.

alliterate, *n.* **II.** *a.* Formed by or showing alliteration: as, *alliterate* words.

alliterational (a-lit-ẹ-ra′shọn-al), *a.* Characterized by or abounding in alliteration. *Penny Cyc.*, 1858.

alliturie (al-i-tu′rik), *a.* [*all(antoin)* + *-it-* + *uric*(?).] Noting an acid, $C_6H_6O_4N_4$, formed by boiling a solution of alloxantin with hydrochloric acid. It is a yellowish, crystalline powder moderately soluble in hot water.

all-nighter (âl-nī′tẹr), *n.* A public hack which plies during the night. [Slang.]

allo-. **2.** In *chem.*, a prefix proposed by Michael to designate an unexplained isomerism. Thus fumaric acid would be called *allomaleic* acid. The prefix is used for that isomer which is the less stable of the two compounds considered.

allo-autogamous (al″ō-â-tog′a-mus), *a.* [Gr. ἄλλος, other, + *autogamous.*] In *bot.*, self-fertilizing, but only when cross-fertilization fails.

allo-autogamy (al″ō-â-tog′a-mi), *n.* [⟨ *allo-autogamous* + *-y.*] The character of being allo-autogamous.

allocaffein (al″ō-ka-fē′in), *n.* A compound, $C_8H_9O_5N_3$, formed by decomposing the bromine addition-product of methylcaffein with water. It melts at 196°–198° C.

allocarpy (al′ō-kar-pi), *n.* [Gr. ἄλλος, other, + καρπός, fruit.] The bearing of fruit as a result of cross-fertilization.

allochiral (al-ō-kī′ral), *a.* [Gr. ἄλλος, other, + χείρ, hand.] Relating or related to the other hand; related as one hand of an individual is to the other hand of the same individual; similar, correspondent, or identical in form, as the right hand is to the left, though on opposite sides of the body and the parts are arranged in reverse order: opposed to ★*homochiral.* See also ★*heterochiral.*

allochirally (al-ō-ki′ral-i), *adv.* In an allochiral manner: as one hand is to the other.

Allochromatic precious stones, precious stones of a variable character, that is, possessing one or more colors in the same crystal or gem.

allocinnamic (al-ō-sin′a-mik), *a.* [Gr. ἄλλος, other, + *cinnamic.*] Noting an acid isomeric with ordinary cinnamic acid, but closely related to it in structure. The two acids are supposed to be stereomers.

alloclase (al′ō-klas), *n.* [Gr. ἄλλος, other, + κλάσις, breaking, ⟨ κλᾶν, break.] Same as ★*alloclasite.*

alloclasite (a-lō′kla-sīt), *n.* [As *alloclase* + *-ite*².] A mineral related to arsenopyrite, containing sulphur, arsenic, bismuth, cobalt, and iron: found in Hungary.

allocochick (al-ō-kō′chik), *n.* [N. W. North Amer. Ind.] The name of Indian shell-money used in northern California.

allocryptic (al-ō-krip′tik), *a.* [Gr. ἄλλος, other, + κρυπτός, hidden.] Concerning or pertaining to the concealment of an organism by objects which are not part of its body.

Allocryptic methods may also be used for aggressive purposes, as the ant-lion larva, almost buried in sand, or the large frog *Ceratophrys*, which covers its back with earth when waiting for its prey.

Encyc. Brit., XXVII. 147.

allocutive (a-lok′ū-tiv), *a.* Speaking with authority and in reprehension, as in a papal allocution.

He had been greatly convinced of the great resources of the vernacular, by hearing an old neighbor, noted for her *allocutive* energy, remark that she had just given the hired man a good tongue-banging. *The Atlantic*, 1884, p. 510.

Allodesma (al-ō-dez′mä), *n.* [NL., ⟨ Gr. ἄλλος, other, + δεσμή, band, ligament.] The typical genus of the family *Allodesmidæ.*

allodesmid (al-ō-dez′mid), *a.* and *n.* **I.** *a.* Having the characters of the *Allodesmidæ.*

II. *n.* A member of the pelecypod family *Allodesmidæ.*

Allodesmidæ (al-ō-dez′mi-dē), *n. pl.* [NL., ⟨ *Allodesma* + *-idæ.*] A family of extinct pelecypods of the order *Teleodesmacea* having very primitive characters and regarded by Neumayr as indicating the first stage in the development of the teleodesmacean hinge, as in *Astarte* and *Cardium.* The valves are small and round, the cardinal area is linear, the ligament is parivincular, the hinge has one or two lateral laminæ on each side of the beak, and the cardinal teeth are radially grooved. They are known only from the Silurian rocks.

Allodon (al′ō-don), *n.* [Gr. ἄλλος, other, + ὀδούς (ὀδοντ-), tooth.] A genus of extinct monotremes from the Upper Jurassic rocks of North America, having three upper incisors, of which the second is greatly enlarged. More correctly written *Allodus.*

Allodus (al′o-dus), *n.* See ★*Allodon.*

Allœocœla (al-ē-o-sē′lä), *n. pl.* See ★*Alloiocœla.*

allœogenesis, *n.* **2.** The alternation of sexual and parthenogenetic generations, seen especially in certain parasitic *Trematoda.* Also *allonogenesis.* *Schwarze.*

allœogenetic (al-ē-ō-je-net′ik), *a.* Pertaining to or produced by *allœogenesis.*

allogenic (al-ō-jen′ik), *a.* [Gr. ἄλλος, other, + -γενής, -producing.] Of a different origin: in *geol.*, applied to those inclusions in an igneous rock which are obviously older than the inclosing rock, and to the components of a clastic rock which have originated elsewhere: contrasted with ★*authigenic.*

Alloiocœla (a-loi-ō-sē′lä), *n. pl.* [NL., ⟨ Gr. ἀλλοῖος, of another sort, + κοῖλον, a hollow.] An order or a suborder of *Turbellaria* having the sac. It contains the families *Plagiostomidæ*, *Monotidæ*, and *Bothrioplanidæ.* Also *Allœocœla.*

alloiocœlous (a-loi-ō-sē′lus), *a.* Having the characteristics of or resembling the *Alloiocœla.*

alloiogenesis (al-oi-ō-jen′ẹ-sis), *n.* See ★*allœogenesis.* 2.

alloisomerism (al′ọ-ī-som′ẹ-rizm), *n.* [Gr. ἄλλος, other, + *isomerism.*] In *chem.*, a term introduced by Michael to distinguish certain cases of isomerism between different substances of the same percentage composition (as maleic acid and fumaric acid), involving, it is now believed, different geometrical positions of the atoms in space.

alloite (al′o-it), *n.* [Irreg. ⟨ Gr. ἄλλος, other, + *-ite*².] In *petrog.*, a name proposed by Cordier (1816) for volcanic tuff of white or yellowish color and imperfectly indurated.

allokinetic (al-ọ-ki-net′ik), *a.* [Gr. ἄλλος, other, + κινητός, moved: see *kinetic.*] Moving in response to an external stimulus: opposed to ★*autokinetic.*

allomorph (al′ō-môrf), *n.* [Gr. ἄλλος, other, + μορφή, form.] In *mineral.*, a paramorph, that is, a pseudomorph formed by molecular change only, the chemical composition remaining the same, as calcite after aragonite.

allomorphic, *a.* **2.** In *petrog.*, same as *xenomorphic.*

allopalladium (al-ọ-pa-lā′di-um), *n.* A supposed allotropic form of native palladium, crystallizing in hexagonal plates.

allopelagic (al-ō-pẹ-laj′ik), *a.* [Gr. ἄλλος, other, + πέλαγος, sea.] Being in different parts of the sea (at different times); moving up and down irregularly in the sea in search of food, for purposes of reproduction, at different stages of development, or in response to any stimulus except light or heat. A pelagic fish that floats as an egg and swims at the surface while young, afterward wandering in deeper water, is allopelagic. The word was introduced by Haeckel for the purpose of contrasting organisms that wander up and down irregularly with those that come to the surface only at night or only in the winter. See ★*bathypelagic*, ★*nyctipelagic*, ★*chinopelagic.*

allophylous (a-lof′i-lus), *a.* Same as *allophylian.*

alloplasmatic (al′ō-plas-mat′ik), *a.* [Gr. ἄλλος, other, + -πλασμα, anything formed.] Constructed out of cells or by cells, but incapable of growth by cell-multiplication.

allopsychic (al-op-sī′kik), *a.* [Gr. ἄλλος, other, + ψυχή, soul, mind.] Pertaining to mind or consciousness in its relation to the external world. Also *allopsychical.*

consciousness is a function of the associative mechanism, and may be considered in its threefold relationship to the outer world, the body, and self, *allopsychic*, *somatopsychic*, and *autopsychic*.
Buck, Medical Handbook, IV. 27.

allorhythmia (al-ō-rith′mi-ä), *n.* [NL., < Gr. ἄλλος, other, + ῥυθμός, rhythm.] In *pathol.*, a condition in which the rhythm of the pulse varies from time to time. *Lancet*, Aug. 22, 1903.

allorisma (al-ō-riz′mä), *n.* [NL., appar. < Gr. ἄλλος, other, + ἔρισμα, support.] A genus of extinct pelecypods of Paleozoic age. They have valves which gape posteriorly, edentulous hinge, and parivincular ligament. The genus embraces species which show the earliest evidence of retractile siphons.

Allosaurus (al-ō-sä′rus), *n.* [NL., < Gr. ἄλλος, other, + σαῦρος, lizard.] A genus of dinosaurian reptiles described by Marsh from the Upper Jurassic beds of Colorado and closely allied to the better-known *Megalosaurus*. They have very short fore and large hind legs, the latter reaching a length of 5 feet.

allosematic (al-ō-se-mat′ik), *a.* [Gr. ἄλλος, other, + σῆμα, mark: see *sematic*.] Having or using the sematic colors of another animal, which serve for deceptive protection. It has been suggested that the sea-anemones, which are often found on the shells of hermit-crabs and on the backs of decorative crabs, are illustrations of allosematic protection. *Poulton*, Colours of Animals, p. 338.

Allosomus (al-ō-sō′mus), *n.* [NL., < Gr. ἄλλος, other, + σῶμα, body.] A subgeneric name for the division of the genus *Argyrosomus* which contains the tullibee, *A. tullibee*.

allothigene (al′ō-thi-jēn″), *a.* [Gr. ἄλλοθι, elsewhere, + -γενής, -produced.] Same as ★*allogenic*.

allothigenetic (al″ō-thi-jē-net′ik), *a.* [Gr. ἄλλοθι, elsewhere, + γένεσις, origin: see *genetic*.] In *geol.*, composed of materials which have originated elsewhere: applied to the fragmental, sedimentary rocks, the components of which have been derived from other sources, as contrasted with the igneous rocks, whose minerals have crystallized *in situ*. See ★*allogenic*.

allothigenetically (al″ō-thi-jē-net′i-kal-i), *adv.* In an allothigenetic manner or by means of allothigenetic materials.

allothigenic (al″ō-thi-jen′ik), *a.* [Gr. ἄλλοθι, elsewhere (< ἄλλος, other), + -γενής, -produced.] Same as ★*allothigenetic*.

allothimorphic (al″ō-thi-môr′fik), *a.* [Gr. ἄλλοθι, elsewhere (< ἄλλος, other), + μορφή, form.] In *petrol.*, a term applied to particles derived from older rocks which retain unchanged their original form in the secondary clastic deposits where they now occur.

allothogenic (al″ō-thō-jen′ik), *a.* Same as ★*allothigenic*.

allotriomorphic (a-lot-ri-ō-môr′fik), *a.* [Gr. ἀλλότριος, of another, alien, + μορφή, form.] Same as *xenomorphic*.

allotrophic (al-ō-trof′ik), *a.* [Gr. ἄλλος, other, + τροφή, nourishment.] Of altered nutritive value: rendered less nutritious.

Allotropic silver. See ★*silver*.

allotropism, *n.* The occurrence of more than one form of a chemical element with difference in physical properties is explained, in the light of the atomic theory, as depending on a difference in the number, and possibly in the arrangement, of the atoms which go to make up the molecule. Thus it is believed that in the more common form of oxygen there are two, but in the allotropic ozone three, atoms to the molecule.

allotropist (a-lot′rō-pist), *n.* One who explains the presentation of unusual properties by a chemical element by assuming the existence of that element in an allotropic form; specifically, an advocate of the theory that allotropic modifications of iron have an important effect in producing the hardness of suddenly quenched steel, as distinguished from a ★*carbonist* (which see). *Nature*, May 5, 1904.

alloxuremia (al-ok-sū-rē′mi-ä), *n.* [*alloxur(ic)* + Gr. αἷμα, blood.] A condition resulting from the presence of any of the alloxuric bases in the blood.

alloxuric (a-lok-su′rik), *a.* [*allox(an)* + *uric*.] Pertaining to or derived from alloxan and uric acid: noting certain bases comprising xanthin, hypoxanthin, episarcin, heteroxanthin, paraxanthin, theophyllin, theobromine, caffein, guanine, epiguanine, adenin, and carnin. They are all nuclear derivatives. Also termed *xanthin bases* or *purin bases*.

alloy, *n.* 1. A metallic alloy possesses the general physical properties of a metal, but is usually intermediate in properties between those of its constituents. Alloys are divided into three classes: (1) Those which form solid solutions in all proportions; (2) those which do not form solid solutions in all proportions, and which form no chemical compounds; and (3) those which form one or more chemical compounds. An alloy of the first class forms a homogeneous fluid when melted, and a homogeneous solid after freezing. Alloys of the second class form a homogeneous fluid when melted, but on solidification the components separate from one another and form microscopic crystals of the different metals intimately associated, but not in chemical combination or solution. A highly magnified section of such an alloy would not show a homogeneous structure, but the individual crystals of the pure components could be distinguished. Alloys of the third class follow the same general laws on solidification as the alloys of the second class, but the crystals which separate do not consist of the pure components, but some of the crystals will be of one or more of the pure components, while other crystals will be formed of chemical compounds of the different components.—**Aluminium alloys.** See ★*aluminium*.—**Eutectic alloy,** an alloy having such a composition that it melts at a lower temperature than an alloy of the same metals having any other composition. See *eutectic*.—**Lipowitz's alloy,** a fusible alloy consisting of 3 parts of cadmium, 8 parts of lead, 4 parts of tin, and 15 parts of bismuth. It melts at 158° F., and is used for castings of delicate objects, as well as for soldering Britannia metal and other white articles which cannot withstand high temperature.—**Prinsep's alloys,** in *pyrom.*, a progressive series of alloys of gold, silver, and platinum employed by James Prinsep for estimating high temperatures, on the principle that the fusing-points of pure metals are fixed. This series consists of 10 alloys of gold and silver, each increased by $\frac{1}{10}$ of gold, and 100 alloys of gold and platinum with a progressive increase of $\frac{1}{100}$ of gold. The temperature of any furnace can readily be determined by introducing these alloys and noting the point where fusion begins. See also phrases under ★*metal* and the words *gold*, *silver*, etc.—**Retz alloy,** an alloy composed of 15 parts of copper, 2.34 of tin, 1.82 of lead, and 1 of antimony. It resists the corrosive action of alkalis and acids.—**Steel alloys.** The number of these alloys is very large, since iron alloys readily with most metals. In the best known, steel is combined with one or more of the following metals: manganese, nickel, chromium, titanium, tungsten, aluminium, vanadium, boron, uranium, copper, tin, and zinc. The term 'steel alloy' is applied only to steels containing influencing quantities of metals other than iron.

allspicy (âl′spī-si), *a.* [*allspice* + -*y*[1].] Warm; resembling allspice in warmth. *Hood*, Up the Rhine, p. 217. [Rare.]

All-the-Talents Administration. See ★*administration*.

alluranic (al-ū-ran′ik), *a.* [*all(oxan)* + *ur(ea)* + -*an* + -*ic*.] Noting a weak acid, $C_5H_4N_4O_4$, formed from alloxan and urea.

Alluring glands. See ★*gland*.

Allurus (a-lū′rus), *n.* [NL., < Gr. ἄλλος, another, + οὐρά, tail.] A subgeneric name for a small group of snail-fishes, of the family *Liparididæ*, from the depths of the North Pacific.

alluvial, *a.* 2. A term applied to the most recent or postglacial deposits, which follow the diluvial deposits.—**Alluvial cone.** See ★*cone*.—**Alluvial fan.** Same as *fan*, 3.

II. *n.* Alluvial soil; specifically, in Australia and New Zealand, gold-bearing alluvial soil.

alluviated (a-lū′vi-ā-ted), *p. a.* [*alluvium* + -*ate*[2] + -*ed*[2].] Pertaining to or characterized by alluvial deposits, such as alluvial fans. *Geog. Jour.* (R. G. S.), IX. 538.

alluviation (a-lū-vi-ā′shon), *n.* [*allurium* + -*ation*.] The process of accumulating rock-debris along the lower reaches of slopes by rain-wash and along the more slowly flowing stream-courses by loss of overload. Alluvial fans or cones, alluvial plains or flood-plains, and slope-waste are the chief products of alluviation. *Chamberlin and Salisbury*, Geol., I. 176.

allwhither (âl′hwiтн″ėr), *adv.* In all directions. [Rare.]

The swell . . . crumbled up and ran *allwhither* oilily. *Kipling*, Their Lawful Occasions.

allyl, *n.*—**Sulphocarbamide of allyl,** a crystallized compound obtained by the action of an excess of ammonium hydrate on the essential oil of mustard. A few drops of a saturated aqueous solution will reverse the image on a photographic plate and give a direct positive in the camera.

allylene (al′i-lēn), *n.* [*allyl* + -*ene*.] The name given to two isomeric hydrocarbons, methyl acetylene or propine, $CH_3C{:}CH$, and propadiene, $CH_2{:}C{:}CH_2$.

allylin (al′i-lin), *n.* [*allyl* + -*in*[2].] A name given to three ethers of glycerol and allyl alcohol known as monoallylin, diallylin, and triallylin. The last is $C_3H_5O_3(C_3H_5)_3$.

alma[2] (al′mä), *n.* [Turk.] A Turkish measure of capacity, equal to 1.15 gallons.

almacabala (al″ma-kab′a-lä), *n.* [ML. *almacabala*, < Ar. *al-muqâbalah*, 'the comparison': see etym. of *algebra* and cf. *cabala*.] The mystic explanation of numbers and of relations of numbers.

almacabalic (al-ma-kab′a-lik), *a.* Of or pertaining to almacabala.

almacen (äl-mä-than′), *n.* [Sp.: see *magazine*.] A warehouse; a magazine or storehouse.

Some sheep were procured, and from an *almacen* distant about a mile inland, other articles.
Geog. Jour. (R. G. S.), XV. 604.

almácigo (äl-mä′thē-gō), *n.* [Sp. mastic.] The West Indian birch, *Terebinthus Simaruba*, one of the commonest and most characteristic trees of Porto Rico. Its wood is soft and of little value. See *cachibou*, and *West Indian birch*, under *birch*. [Porto Rico.]

almagrerite (al-ma-grē′rit), *n.* [Sp. *Almagrera* (see def.) + -*ite*[2].] Anhydrous zinc sulphate, occurring as a natural mineral in the Sierra Almagrera in Spain. Also ★*zincosite*.

almandite (al′man-dit), *n.* Same as *almandin*.

almasca (al-mas′kä), *n.* A soft gray resin soluble in chloroform, ether, and absolute alcohol: probably derived from *Icica heptaphylla*. *Thorpe*, Dict. Applied Chem., I. 61.

almeidina (al-mā-dē′nä), *n.* [Pg., from the name of the first exporter of the product, João Duarte de *Almeida*.] The commercial name for a rubber adulterant obtained from the latex of *Fockea multiflora* and *Euphorbia rhipsaloides*. It is exported from Angola, and comes into commerce in the form of dry, somewhat brittle balls about as large as the fist and almost white in color.

almendor (äl-mān-dōr′), *n.* [Pg., almond-tree.] *Geoffræa superba*, a tree of the bean family common in Brazil and Venezuela. Its fruit is about the size of a walnut, with a greenish-yellow downy rind and a fleshy pulp inclosing a hard, nut-like seed. The fruit is boiled and used as food by the Indians, and the kernel is also eaten. The tree yields a fine, hard wood. In northern Brazil the Indians (Tupi) call it *mari*. [Brazil.]

almendro (al-men′drō), *n.* [Sp. *almendro*, almond-tree: see *almond*.] A name applied in Guam, the Philippines, and Porto Rico to *Terminalia Catappa*, the nuts of which somewhat resemble almonds in shape and flavor. See *Terminalia*[2], and *country almonds*, under *almond*.

Almen's solution. See ★*solution*.

Almond black. See ★*black*.—**Dika almonds** the seeds of a large tree, *Irvingia Gabonensis*, of tropical West Africa. They are rich in mucilage and fat, and when roasted are used for food. See *dika-bread* and *Irvingia*.—**Hard-shell almond,** a type of sweet almond having a nut sometimes as hard as a peach-stone, little valued except as a stock.—**Malabar almond.** Same as *country almond* (which see, under *almond*).—**Paper-shell almond,** a thin-shelled type of sweet almond, of the highest commercial grade. It includes a false variety with a double shell.—**Soft-shell almond,** the ordinary commercial almond exclusive of the paper-shell. There are all gradations of hardness in almond-shells.—**Tropical almond,** a common name for *Terminalia Catappa*. Also *Demerara almond*.

almond-butter (ä′mond-but″ėr), *n.* Same as *almond-paste*.

almond-meal (ä′mond-mēl), *n.* The cake left from almonds, after the oil has been removed by pressure, coarsely ground.

almond-oil, *n.*—**Artificial bitter-almond oil,** nitrobenzene ($C_6H_5NO_2$), a yellow liquid with a smell like that of bitter almonds, sometimes used in perfumery. Same as *mirbane oil*.

almondy (ä′mon-di), *a.* [*almond* + -*y*[1].] Like almonds in taste or fragrance. *Lyell*, Life, ii. 132. *N. E. D.*

alnein (al′nē-in), *n.* [L. *alneus*, adj., < *alnus*, alder, + -*in*[2].] A coloring matter extracted from the bark and wood of the alder, birch, and beech. It produces colors varying from yellow to brown-black.

Alnitamian (al-ni-tā′mi-an), *a.* and *n.* I. *a.* Noting stars whose spectrum is of the type of that of Alnitam. They are characterized by the predominance of hydrogen lines of the Huggins series (with fainter Pickering lines), strong helium, protosilicon, and a line of unknown origin in the cyan-blue having λ = 4649.2.

II. *n.* An Alnitamian star.

alnoite (al′nō-it), *n.* [*Alnö*, an island of Sweden, + -*ite*[2].] In *petrog.*, a name proposed by Rosenbusch (1887) for an igneous rock having the mineral composition of melilite-basalt, but occurring in dike form. It may also be considered as an olivin-rich biotite-monchiquite.

Alocasia (al-ō-kā′si-ä), *n.* [NL., appar. arbitrarily varied from *Colocasia*.] A genus of stove foliage plants of 20 or more species belonging to the family *Araceæ*, natives of tropical Asia and the Malayan Islands. Closely allied to *Colocasia*. See cut under ★*ape*[2], 2.

aloed (al′ōd), *p. a.* 1. Flavored with aloes; mixed with aloes; bitter: as, "death's *aloed* portion," *Felltham*.—2. Shaded with or formed of aloes: as, "the *aloed* porch," *Browning*, Men and Women, ii. 30.

aloëtic, *a.* — **Aloëtic acid,** tetranitroanthraquinone, $C_{14}H_4O_2(NO_2)_4 + H_2O$ (?). It is prepared by treating aloes with nitric acid and is a tetrabasic acid.

aloft, *adv.* **Aloft there!** the hail used to call the attention of the men who are aloft in the rigging or on the yards or in the tops. — **Lay aloft!** (*naut.*), an order to the seamen to mount the rigging for the execution of some piece of work in the tops or on the yards. **Lay down from aloft!** (*naut.*), a command for the seamen to cease work in the upper rigging and to descend to the deck.

alogia (a-lo′ji-ä), *n.* [NL.: see *alogy.*] In *pathol.*, aphasia due to ideational defect.

aloja (ä-lo′hä), *n.* [Sp., a beverage made of water, honey, and spices.] A fermented beverage made from the sweet pods of several leguminous trees. In Argentina those of the algarroba, *Prosopis alba*, and the chañar, *Gourliea decorticans*, are used. See ★*chañar.* [South America.]

Alonsoa (a-lon′sō-ä), *n.* [NL., from Z. *Alonso*, a Spanish officer.] A genus of very tender tropical, American, annual plants of the family *Scrophulariaceæ*. The cultivated species come mostly from Peru and Mexico. There are 6 distinct species and varieties, some authors, however, differ with regard to the number. These plants are cultivated in the open and very rarely in pots. *A. incisifolia*, *A. Warscewiczii*, *A. myrtifolia*, and *A. linifolia* are the species most commonly used. The seeds are sold by most seedsmen.

Alopecia dynamica, loss of hair due to destruction of the hair-follicles by ulceration, induration, or some other pathological process. — **Alopecia maligna,** a severe and intractable form of alopecia. **Alopecia neuritica,** loss of hair over the area of distribution of an injured nerve. — **Alopecia neurotica,** loss of hair due to some functional nervous disorder or trophoneurosis. **Alopecia presenilis,** premature baldness. — **Alopecia toxica,** loss of hair accompanying one of the infectious diseases, such as typhoid fever: supposedly due to the action of the toxins of the disease. — **Alopecia universalis,** the falling of hair from the face and body as well as from the scalp.

alopeke (a-lōp′ē-kē), *n.* [Gr. ἀλωπεκῆ, Attic contraction of ἀλωπεκέη, a fox-skin, Ionic fem. of ἀλωπεκεῖος, adj., < ἀλώπηξ, a fox.] An ancient Thracian head-dress of fox-skin.

alorcic (a-lôr′sik), *a.* [*al(oes)* + *orc(in)* + *-ic.*] Noting an acid, $C_9H_{10}O_3 + H_2O$, formed in small amount by fusing aloes with sodium hydroxid. It crystallizes in needles which, when dry, melt at 115° C.

alorcinic (al-ôr-sin′ik), *a.* [*al(oes)* + *orcin* + *-ic.*] Same as ★*alorcic.*

alouette (al-ö-et′), *n.* [F. *alouette*, a lark, < OF. *alouete*, dim. of *aloue*, < L. *alauda*, a lark.] A device for inducing sleep by tiring the eyes by a pencil of light reflected from a series of revolving mirrors.

aloxanthin (al-ok-zan′thin), *n.* A compound formed by oxidizing barbaloin and socaloin. It is probably tetrahydroxymethylanthraquinone, $C_{14}H_3(CH_3)(OH)_4O_2$. It consists of orange colored needles which melt at 260–265° C.

Aloysia (al-ō-is′i-ä), *n.* [NL., from a personal name.] A subgenus of plants, of the large genus *Lippia*, which contains the commonly known lemon verbena (*L. citriodora*). The lemon verbena is easily grown in common greenhouses. In the South it may be grown in the open. It is a low-growing, tender shrub, with long, narrow, pointed leaves, native to South America.

alpargata (al-pär-gä′tä), *n.* [Sp.] In Spanish-speaking countries, a kind of sandal or low shoe with a hemp or rush sole and cloth upper.

alpha, *n.* **4.** [*cap.*] The name given by Carl Neumann, the mathematical physicist, to a supposed body to which all motion, especially motion of rotation, is relative. It has been said that Newton originated this idea, but that is incorrect. Newton believed that space is a really existing thing, and he suggested that there might possibly be a body which is really in absolute rest relatively to real space. The conception of the body Alpha, which was originated by Neumann, arose, on the contrary, from a difficulty which the theory of Leibnitz (that space is not an existent thing, but is merely an image embodying certain general laws of the relations between things) meets in the circumstance that, according to the accepted doctrine of Newton's three laws of motion, motion of rotation (as it is ascertained, for example, by Foucault's pendulum experiment) is absolute and not merely relative motion. Neumann, and others who accept Leibnitz's theory of the entire relativity of space, seek to explain rotation by supposing that there is a body Alpha, which is not indeed absolutely at rest, as Newton thought it possible that some body might be (since these persons are of opinion that absolute place and absolute motion are phrases without meaning), but which is the body to which the motion spoken of in the three laws of motion ought to be understood to be relative. Ernst Mach undertakes to show that this body Alpha is really the universe as a whole, which virtually comes to saying that it is the starry heavens as a whole. The objection to this is that it makes objects the most remote from any given body the principal factors which determine the motions of that body. Now, according to that epistemological psychology which makes space an image embodying the laws of the relations of things, this image must be supposed to be so constituted as to make those things which principally affect one another appear to be near one another. According to Tait, there is no need of any body Alpha, since, so far as rotation and rectilinearity of motion are concerned, we have only to assume, as a definition, that rotation is relative to lines of force fixed within a body having no dynamic effects of rotation. **Alpha paper.** See ★*paper.* **Alpha rays.** See ★*ray*[1].

Alphabet of thought, a list of simple ideas by the combination of which it was supposed by Raymond Lully, the youthful Leibnitz, and perhaps by Spinoza, that knowledge could be manufactured. **Blind alphabet.** See ★*braille.* **Deaf-and-dumb alphabet,** the conventional signs or finger gestures used by the deaf and dumb in lieu of speech. See *deaf-mute.* **Missionary alphabet,** a regulated form of the Roman alphabet used by missionaries in writing the unwritten or imperfectly written languages of the peoples among whom they work. About 1830 English and American missionaries adopted a scheme, substantially that put forth by Sir William Jones in 1781, for the transliteration of Asiatic languages, based upon the Roman or Continental values of the vowels. This was extended by conferences of scholars held in 1854 and later. The first definite result was the publication of Lepsius's "Standard Alphabet" (1855, second edition 1863), and of F. Max Muller's "Church Missionary Alphabet," in effect a recension of Lepsius's scheme. This Lepsius-Muller alphabet has been applied to the recording of many hitherto illiterate languages, and, in one form or another, is used by missionaries throughout the world. It promises, in the more scientific form now being worked out in successive recensions by philologists, to become the general phonetic alphabet of the world. See *philological* ★*alphabets.* — **Philological alphabets,** modern phonetic forms of the Roman alphabet as enlarged, regulated, and controlled for philological purposes. Conspicuous philological alphabets are Lepsius's "Standard Alphabet" (1855, second edition, 1863; see above), Ellis's "Palæotype" (1869); Sweet's "Romic" (1877); Murray's scheme of notation in the New English Dictionary (1884), various Continental forms (since about 1875) associated with the names of Sievers, Victor, Fricke, Storm, Jespersen, and Passy and the Association Phonétique Internationale of Paris; and the alphabet recommended by the American Philological Association in 1877 (see below). Most of the phonetic redactions put forth by short-hand promoters (since 1840) are based upon the so-called 'English' values of the vowels, and are in no sense scientific or philological.

ALPHABET OF THE AMERICAN PHILOLOGICAL ASSOCIATION.

VOWELS.

SHORT.

Form.		Name		Sound as in
I	i	i	(ĭ)	*it* (it)
E	e	e	(ĕ)	*met* (met)
A	a	a	(ă)	*at* (at)
Ɑ	ɑ	ɑ	(*ah*)	*ask* (usk)
Ɵ	ɵ	ɵ	(ŏ)	*not* (nɵt), *what* (hwɵt)
O	o	o	(*oh*)	*obey* (obē)
U	ʊ	ʊ	(ŭ)	*but* (bʊt)
Ʊ	u	u	(ŏŏ)	*full* (ful)

LONG

Form		Name		Sound as in
Ī	ī	ī	(*ee*)	*pique* = *peak* (pīc)
Ē	ē	ē	(*ay*)	*they* (dhē), *veil* (vēl)
Ā	ā	ā	(*ai*[*r*])	*air* = *ere* = *heir* (ār)
Ɑ̄	ɑ̄	ɑ̄	(*ah*)	*arm* (ɑ̄rm), *far* (fɑ̄r)
Ɵ̄	ɵ̄	ɵ̄	(*awe*)	*nor* (nɵ̄r), *wall* (wɵ̄l)
Ō	ō	ō	(*oh*)	*no* (nō), *holy* (hōli)
Ʊ̄	ʊ̄	ʊ̄	(*u*[*r*])	*burn* (bʊ̄rn)
Ū	ū	ū	(*oo*)	*rule* (rūl), *ooze* (ūz)

DIPHTHONGS.

ƱI	ɑi	ɑi	(*eye, I*)	*aisle* = *isle* (ɑil)
ƱU	ɑu	ɑu	(*ou*)	*out* (ɑut), *our* = *hour* (ɑur)
ƟI	ɵi	ɵi	(*oi*)	*oil* (ɵil), *boy* (bɵi)
IU	iu	iu		*feud* (fiud), *few* (fiu)

CONSONANTS.

SURD.

P	p	pi	(*pee*)	*pet* (pet)
T	t	ti	(*tee*)	*tip* (tip)
CH	ch	chi	(*chee*)	*chest* (chest)
C(K)	c(k)	ci	(*kee*)	*come* (cʊm)
F	f	ef	(*eff*)	*fat* (fat)
TH	th	ith	(*ith*)	*thin* (thin)
S	s	es	(*ess*)	*soun* (sɵn)
SH	sh	ish	(*ish*)	*she* (shī)
H	h	hi	(*hee*)	*he* (hī), *hat* (hat)

SONANT.

B	b	bi	(*bee*)	*bet* (bet)
D	d	di	(*dee*)	*dip* (dip)
J	j	jē	(*jay*)	*jest* (jest)
G	g	gi	(*ghee*)	*gum* (gʊm)
V	v	vi	(*vee*)	*vat* (vat)
DH	dh	dhi	(*thee*)	*thee* (dhī)
Z	z	zī	(*zee*)	*zone* (zōn)
ZH	zh	zhī	(*zhee*)	*azure* (azhʊr)
W	w	wū	(*woo*)	*we* (wī), *wit* (wit)
L	l	el	(*ell*)	*lo* (lō), *ell* (el)
R	r	ār	(*ar*)	*rat* (rat), *are* (ār)
Y	y	yi	(*yee*)	*ye* (yī), *year* (yir)
M	m	em	(*em*)	*me* (mī), *my* (mɑi)
N	n	en	(*en*)	*no* (nō)
NG	ng	ing	(*ing*)	*sing* (sing)

Phonetic alphabet, an alphabet in which each character represents a definite sound, and which is so used that the pronunciation of each word can, within narrow limits, be known with certainty by any one who knows the alphabet. The Roman alphabet, like its original the Greek, was originally phonetic, and as used in modern times (in Italian, Spanish, Portuguese French, English, German, etc.) is still fairly phonetic. French has deviated most in the consonant system, allowing or requiring the extensive suppression of consonants in utterance, and English most in the vowel system, the whole series of English long vowels having been thrown into hopeless confusion. The most conspicuous instance of a highly phonetic and classified alphabet long in actual use is the Sanskrit, which was reduced to its present order by native grammarians about the second century A. D., on much the same lines as those on which scholars are now endeavoring to establish a classified reconstitution of the Roman alphabet. — **Physiological alphabet,** the elementary sounds of human speech. — **Scientific alphabet,** an alphabet based upon scientific principles; one which embodies phonetic precision and sufficiency. Perhaps the only alphabet fairly entitled to this designation is A. M. Bell's 'visible speech' (1867), which takes account of all distinguishable vocal sounds, including whispering, sneezing, coughing, chuckling, etc., and provides for each sound a symbol whose form is significant and thus in a way makes the intended sound obvious or 'visible' to the reader. In a laxer use, the term has been applied to the philological alphabets based upon the historic Roman alphabet. These are used with a tolerable degree of precision and uniformity, and, compared to the traditional alphabets as conventionally used, are fairly scientific. See *philological* ★*alphabets.*

alphabetist (al′fa-bet-ist), *n.* [*alphabet* + *-ist.*] A student or a deviser of alphabets. *S. S. Haldeman*, Analyt. Orthog., ii. 22.

alpha-naphthol (al-fa-naf′thol), *n.* A naphthol having the hydroxyl-group in the alpha position.

alpha-naphthylamine (al″fa-naf″thil-am′in), *n.* Naphthylamine in which the amido-group is in the alpha position.

Alphestes (al-fes′tēz), *n.* [NL., < Gr. ἀλφηστής, a kind of fish.] A genus of sea-bass allied to *Epinephelus*, of the family *Serranidæ*.

alphogen (al′fo-jen), *n.* Same as ★*alphozone.*

alphonse (al-fons′), *n.* [Sp. *Alfonsino.*] A Spanish gold coin of the reign of Alfonso XII., worth 20 pesetas or $3.86.

alphozone (al′fō-zōn), *n.* A white crystalline compound, $C_8H_{10}O_8$, obtained by the action of hydrogen peroxid on succinic anhydride; disuccinic peroxid. It is a powerful germicide. Also called *alphogen.*

alphyl (al′fil), *n.* A name proposed by Bamberger to designate an aromatic radical, as phenyl, C_6H_5. Such radicals are now more often called *aryls*, while aliphatic radicals, as methyl, CH_3, are sometimes called *alphyls*; but the latter are more properly called *alkyls*, and the name *alphyl* has become superfluous.

alphylate (al′fi-lāt), *v. t.*; pret. and pp. *alphylated*, ppr. *alphylating.* [*alphyl* + *-ate*[2].] To introduce an alphyl into (an organic compound). *Amer. Chem. Jour.*, April, 1903.

alpine, *a.* **2.** [*cap.*] In *anthrop.*, noting the type of the European race which inhabits the Alps and the regions east and west of the Alps: characterized by a broad, short head, broad face with full chin and heavy nose, medium stature, and prevalently grayish eyes and brown hair. Also called *Celto-Slavic*, *Sarmatian*, *Arvernian*. *Ripley*, Races of Europe, p. 123. — **Alpine blue, diluvium, glacier.** See ★*blue*, etc. — **Alpine hat,** a soft felt hat with a deep dent in the crown and rolled brim: originally a traveling-hat, and used in mountain-climbing, whence the name. — **Alpine granite.** See *protogine.*

Alpinia (al-pin′i-ä), *n.* [NL. from Prospero *Alpino*, an Italian botanist.] A genus of stove herbs of the family *Zinziberaceæ*, cultivated for both the foliage and the racemes or panicles of flowers. There are about 60 species of this genus found in tropical and subtropical Asia, the islands of the Pacific Ocean, and Australia. The species most commonly cultivated is *A. nutans*, a plant with very beautiful foliage, sometimes known as the *shell-flower.*

alpinin (al′pi-nin), *n.* [(?) *Alpine* + *-in*[2].] A substance prepared from galangal root, since shown to be a mixture of galangin and campherid.

Alsace gray, green, etc. See ★*gray*, ★*green*[1], etc.

Alsatian clover. See ★*clover.*

alsbachite (alz′ba-kit), *n.* [*Alsbach*, a stream on Mount Melibocus, Odenwald, Baden, + *-ite*[2].] In *petrog.*, the name given by Chelius (1892) to a variety of granite-porphyry poor in ferromagnesian minerals and rich in pink garnet, occurring on the slope of Mount Melibocus.

Alsidium (al-sid′i-um), *n.* [NL. (C. A. Agardh, 1827), said to have been formed (if so, irregularly) < Gr. ἁλσία, saltness, or ἅλς, salt, + *-idium.*] A genus of red seaweeds containing the species *A. Helminthochortos*, or Corsican moss, used in medicine.

alsike (al′sik, Sw. äl′si-ke), *n.* [Prop. *Alsike clover*, named from (Sw.) *Alsike* near Upsala in Sweden.] A species of clover (*Trifolium hybridum*) native to Europe, much grown in the United States for forage. It thrives best

in most land. It is a tall, weak-stemmed branching species, with small whitish heads which become pink. It is sometimes known as *Swedish clover*.

Alsine (al′si-nē), *n.* [NL. (Linnæus, 1753), ⟨ Gr. ἄλσος, a plant of unknown identity, ⟨ ἄλσος, grove or place grown with trees and grass.] A genus of dicotyledonous plants belonging to the family *Silenaceæ*. See *Stellaria*.

alstonidine (al-stō′ni-dīn), *n.* [*Alstonia* (see def.) + *-id* + *-ine*².] An alkaloid found in *Pala* (*Alstonia*) *constricta*. It crystallizes in needles which melt at 181° C.

alstonine (al′stō-nin), *n.* [*Alstonia* (see def.) + *-ine*².] An alkaloid, $C_{22}H_{20}N_2O_4+3H_2O$, found in the bark of *Pala* (*Alstonia*) *constricta*. It is amorphous and was formerly called *chloroegenin*.

Alstrœmeria (al-strē-mē′ri-ä), *n.* [NL., from a personal name.] A genus of cool-house and stove plants, members of the family *Amaryllidaceæ*, with tuberous roots, treated as bulbs. The species most common in the United States are natives of Brazil, Peru, Chile, and Mexico. *A. Pelegrina* is best adapted for greenhouse purposes. In all there are about 50 described species, found in the tropical and subtropical regions of South America.

Altamaha grits. See ★*grit*².

altar-book (âl′tăr-bůk), *n.* Same as *missal*.

altar-boy (âl′tăr-boi), *n.* A boy who serves a priest while he is officiating at the altar.

altar-mound (âl′tăr-mound), *n.* A mound of earth erected over an altar of clay on which sacrifices were burned. Altar-mounds have been discovered principally in Ohio.

alteratio (al-te-rā′shi-ō), *n.* [NL.: see *alteration*.] In *mensural music*, the regular doubling of the time-value of a note in certain relations. The rules governing this were complicated and arbitrary.

Altered chord, note, or **triad,** in *music*, a chord, note, or triad affected by an accidental and thus changed in character or significance.

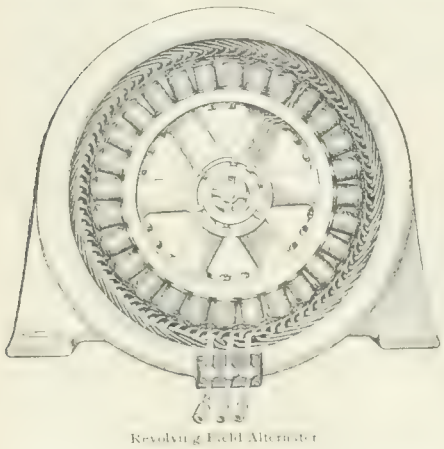
alteregoism (al-tėr-ē′gō-izm), *n.* [L. *alter ego*, 'another I,' + *-ism*.] A narrow altruism amounting merely to sympathy with persons who are in one's own case. *Amer. Jour. Psychol.*, XII. 470.

alteregoistic (al-tėr-ē-gō-ist′ik), *a.* Of or pertaining to alteregoism.

Alternaria (al-tėr-nā′ri-ä), *n.* [NL. (Nees von Esenbeck, 1816), ⟨ L. *alternus*, alternate, + *-aria*.] A genus of hyphomycetous fungi doubtfully distinct from *Macrosporium*. The conidia are dark-colored, are both transversely and longitudinally septate, and are borne in chains. *A. Brassicæ* occurs on the cabbage and cauliflower.

alternate *a.* **4.** In *elect.*, same as ★*alternating*.

alternater, alternator (al′tėr-nā-tėr,-tor), *n.* In *elect.*, an alternating-current dynamo or generator. It consists of an armature in which electric power is produced and a magnetic field which produces the magnetic flux acting upon the armature. According to their construction, alternators are: (1) *revolving armature alternaters*, having the magnet field stationary and the armature revolving; (2) *revolving field alternaters*, having the magnet field revolving and the armature stationary; (3) *inductor alternaters*, having the field coils and armature stationary and the iron core revolving; (4) *induction* or *asynchronous alternaters*, that is, induction motors running as generators above synchronism. See ★*induction generator*.—**Compensated alternater,** an alternater in which the armature reaction is compensated by a compensating ★exciter (which see) and the voltage thereby maintained irrespective of load or character of load, that is, power-factor.—**Inductor alternater,** in *elect.*, an alternating-current generator, in which field and armature windings are stationary, and only a toothed iron structure revolves.



Revolving Field Alternater

alternating (al′tėr-nā-ting), *p. a.* Specifically in *elect.*, periodically reversing or changing the direction in such a manner that the total effect in one direction is the same as in the opposite direction. An *alternating current* is a current consisting of a series of half waves of equal duration and equal intensity but opposite direction. One half-wave is called an *alternation*, two successive half-waves or a complete wave, a *cycle*. The number of cycles per second is the *frequency*. Commercial frequencies are 25, 60, and 125 cycles per second. Since the alternating current varies from instant to instant, the square-root of the mean square of the instantaneous values is commonly employed and called the *effective value* of the alternating current, since it represents the effect or power of the latter. Under *alternating current, alternating electromotive force*, etc., usually the effective value is understood. If the successive half-waves gradually decrease in intensity, the current is called an *oscillating current*. Oscillating currents usually have frequencies of hundred thousands and millions of cycles per second. They are produced by condenser discharges and are used in wireless telegraphy, etc.—**Alternating group.** See ★*group*.—**Alternating motion.** See ★*motion*.—**Alternating symmetry,** in *crystal*. See ★*symmetry*.

alternation, *n.* **5.** In *phytogeog.*, the discontinuous occurrence of a plant type due to local variations in the conditions. See the extract.

The term *alternation* is used to designate that phenomenon of vegetation in which a formation recurs at different places in a region, or a species at different points in a formation.

F. E. Clements, Bot. Surv. Neb., VII. 163.

6. In *elect.*, the time of one reversal, or one half-wave of alternating current. One alternation therefore is one half-cycle. The frequency of an alternating current formerly was given in alternations per minute. See ★*alternating*.—**Antithetic alternation of generations,** the alternation between a sexual generation and an asexual generation which is unlike it in form or structure or in both; metagenesis. *Encyc. Brit.*, XXXII. 214.—**Homologous alternation of generations,** the alternation of a sexual generation with an asexual generation similar to it in appearance.

Homologous alternation is illustrated by many Algæ and Fungi where offspring of similar appearance are produced in two different ways, either vegetatively or sexually.

Encyc. Brit., XXXII, 214.

alternative I. *a.*—**Alternative inheritance.** See ★*inheritance*.

II. *n.*—**Voltaic alternatives,** suddenly reversed galvanic currents.

alternativity (al-tėr-na-tiv′i-ti), *n.* [*alternative* + *-ity*.] The power of choosing between two alternatives, as between two courses of action; decision of character. By some writers confused with the power of ethical self-control or moral inhibition.

alternativo (äl-tėr-nä-tē′vō), *a.* [It.] In *music*, noting a movement or section which alternates with another or is set in contrast with it.

alternator, *n.* See ★*alternater*.

althionic (al-thi-on′ik), *a.* [*al*(*cohol*) + Gr. θεῖον, sulphur, + *-n* + *-ic*.] Derived from alcohol and sulphur.—**Althionic acid,** an old name, no longer used, for ethyl-sulphuric acid.

altho, *conj.* A simplified spelling of *although*.

Alticus (al′ti-kus), *n.* [NL., prop. *Halticus*, ⟨ Gr. ἁλτικός, good at leaping, ⟨ ἅλλεσθαι, leap.] A genus of blennies similar to *Salarias*. *A. saliens* lives on lava-rocks about the reefs in the South Seas, lurking out of water and leaping like a lizard when disturbed. It is black in color and about 4 inches in length.

altilik (äl′ti-lik), *n.* [Turk. **altilik*, ⟨ *alti*, six, + *-lik*, adj. suffix.] The Turkish six-piaster piece.

altimetric (al-ti-met′rik), *a.* Same as ★*altimetrical*.

He proposed to carry a chain of *altimetric* observations to Kara-koshum and Chaklik.

Geog. Jour., (R. G. S.), XVI. 472.

altimetrical (al-ti-met′ri-kal), *a.* [*altimetry* + *-ic-al*.] Relating or pertaining to altimetry, or the measurement of heights. *Blount*.

altimetrically (al-ti-met′ri-kal-i), *adv.* As regards the measurement of heights.

altinichlic (äl-ti-nik′lik), *n.* [Turk. *altin*, a gold coin.] A Turkish silver coin, the one-piaster piece, which has a legal weight of 18.557 grains and a varying value.

altist (alt′ist), *n.* [*alt*(*o*) + *-ist*.] In *music*, one who sings the alto part.

Altitude circle. See ★*circle*.—**Altitude motion,** the motion of an instrument when it turns on a horizontal axis. See *sextant*.—**A. M. altitude,** the sextant sight measured in the morning by the navigator for the purpose of obtaining a base from which to calculate the longitude of the vessel.—**Double altitude,** the angle between an object and its reflection in an artificial horizon (ordinarily a trough of mercury). Such angles are usually measured with a sextant by an observer on land.—**Observed altitude,** the angular height of a heavenly body from the horizon, as measured on the sextant, or other nautical instrument of reflection, or the sextant altitude before corrections for semi-diameter, parallax, dip of the horizon, and refraction are applied.—**P. M. altitude,** the sextant sight measured in the afternoon by the navigator for determining the ship's meridian.

Altitudinal index. See ★*index*.

Altmann's bioblasts or **granules.** See ★*bioblast*.

alto²†, *adv. phr.* See *all*, *adv.*, **1.**

alto-cumulus (al-tō-kū′mu-lus), *n.*; pl. *alto-cumuli* (-lī). [L. *altus*, high, + *cumulus*, heap (see *cumulus*).] A cloud, the highest form of

Alto-cumulus.

From a photograph by J. Vincent.

cumulus, appearing in small masses, bright on the sunny and shaded on the opposite side; in the older terminology, a cumulo-cirrus. They are frequently arranged in rank and file, generally disappearing in the sunshine, and are then indicative of dry, pleasant weather. Sometimes this little cloud has a definite structure as a vortex-ring.

alto-nimbus (al-tō-nim′bus), *n.*; pl. *alto-nimbi* (-bī). [L. *altus*, high, + *nimbus*, cloud (see *nimbus*).] A cloud from which rain falls after it is completely developed, but which in its first stages is seen to be a dull-colored cloud at the summit of a mass of air flowing in under an advancing cumulus or cumulo-nimbus. Similar clouds of much greater extent are formed when broad sheets of air, blowing from the southwest, approach near a storm-center and begin to form clouds before reaching the rain region.

alto-stratus (al-tō-strā′tus), *n.*; pl. *alto-strati* (-tī). [L. *altus*, high, + NL. *stratus*.] **1.** A thin horizontal sheet of clouds, usually disappearing slowly: apparently a lower layer of what under favorable circumstances might have been a cumulus cloud. The outer surface, melting away at sunset, gives rise to beautiful sunset cloud-colors by reflection of light from the sun or the sky beyond the western horizon. —**2.** A rather high cloud covering the sky as a layer whose lower surface is horizontal. The extreme boundaries of such an alto-stratus cloud thin away into a series of alto-cumuli.

altro-nutrition (al″trō-nū-trish′on), *n.* [Irreg. ⟨ L. *alter*, other, + *nutrition*.] Nutrition carried over to another: applied in the quotation to reproduction viewed in its social and ethical consequences.

Reproduction is therefore not only ultra-nutrition, in going beyond the individual, but it is *altro-nutrition*, in carrying the process to and into another. It is, as we shall see, the beginning of altruism.

Ward, Pure Sociol., p. 291.

altrotelic (al-trō-tel′ik), *a.* See the extract.

The few years of schooling is only the very end of a process that, in a sense, has run through eons. The school merely puts on the final touches. . . . Letourneau speaks of spontaneous and organic training. Nature first adjusts the body to the physical environment; then the social adjustment marks a higher stage. Heredity is stored up experience. The second stage or division of education we may call . . . artificial or telic. Art is here teleological control of nature; if it is directed by another it is *altrotelic*; and when it becomes subjective it is autotelic. The telic aspect begins when we enter the social sphere.

G. S. Hall, Adolescence, II. 447.

altruistic, *a.* **2.** Pertaining to that theory of ethics which regards altruism as the highest motive.

aludel, *n.* In modern times it has been applied almost exclusively to the thin earthen condensers used in the collection of mercury at the reduction-works at Almadén, Spain.

aluff (a-luf′), *adv.* *Naut.*, of sails, in the position when the helm is put down, or alee, so that the vessel is thrown up into the wind and the sails shake or slat.

alum, *n.*—**Alum bath,** a saturated solution of potassium alum. It is used in photography to check the frilling of plates or the blistering of paper.—**Alum schist.** Same as *alum shale*.—**Porous alum,** the trade-name of aluminium sulphate obtained by evaporation of its solution and to which, just before solidification, a small quantity of sodium carbonate is added with stirring of the pasty mass. The evolution of carbon-dioxid gas in bubbles puffs up the material to a spongy condition, which becomes permanent on setting.

alum-cake (al′um-kāk), *n.* The dried mass left after the treatment with strong sulphuric acid of kaolin or fairly pure clay which has

been roasted. It consists essentially of aluminium sulphate, but includes, mixed with it, the silica derived from the clay. Also *alum clay cake.*

alum-earth, *n.* 2. A loose clay containing iron pyrites from which alum may be made. It often occurs with beds of lignite, and usually contains rather less silica than the more compact alum slate.

alumian (a-lu′mi-an), *n.* [*alumi(num)* + *-an.*] A doubtful aluminium sulphate (perhaps $Al_2S_2O_9$) found in Spain.

Alumina cream, freshly precipitated aluminium hydrate held in suspension in water.

aluminium, *n.* Aluminium melts at 654.5° C., and the tensile strength of bars made of it is about 28,000 pounds a square inch. The commercial production of the metal began about 1888, the process most largely used, as at Pittsburg and Niagara, being that of Hall, in which anhydrous alumina from bauxite is dissolved in a bath of fused cryolite in the presence of carbon and electrolyzed by a current of 6 or 7 volts and 7,000 amperes. The price has been brought down from $15 to 30 cents a pound, and the annual output increased from 3 to many thousand tons per annum. The only moderate strength of the metal, certain difficulties in working it (as, for instance, in soldering), and its chemical alterability under some conditions have tended to limit its applications. Among the more recent uses made of it may be mentioned the etching of designs for theatrical and other posters, substitution for copper in wire for the transmission of electric currents, the manufacture of a silver-like paint from the powder, and the production of a very high temperature by rapid combustion of the powder in admixture with sodium dioxid. See ★*aluminothermics.*—**Aluminium brass,** an alloy of aluminium, zinc, and copper produced either by introducing metallic aluminium into melted brass, or by introducing zinc into melted aluminium bronze. The proportion of aluminium varies from 1 to 5.8 parts, that of copper from 55.8 to 77.5, and that of zinc from 21 to 43. The metal is very ductile and malleable, and its tensile strength is far above that of ordinary brass.—**Aluminium hypochlorite.** A solution of this salt prepared by the interaction of solutions of bleaching-powder and aluminium sulphate has been used in bleaching under the name *Wilson's liquor.* It has been applied chiefly in the preparation of paper stock, but it may also be used as a preservative and disinfectant and in mordanting cloth for dyeing.—**Aluminium processes.** See ★*process.*—**Aluminium pyrolignite,** a trade-name for aluminium acetate, largely used in solution as a mordant in dyeing.—**Aluminium solder.** Very nearly pure zinc has been recommended for soldering articles of aluminium, but the process is still a difficult and unsatisfactory one, chiefly in consequence of the high conducting power and high specific heat of aluminium.—**Aluminium steel.** See ★*steel.*—**Aluminium sulphate,** $Al_2(SO_4)_3 18H_2O$, a substance manufactured from bauxite, kaolin, or cryolite, used in making alum, clarifying drinking-water, purifying sewage, preparing size, etc.—**Aluminium zinc,** an alloy of aluminium and zinc. These two metals are combined in various proportions, and the alloy obtained is generally harder than aluminium but very brittle, unless the proportion of zinc is very small. The further addition of copper makes a very stiff metal, well adapted for castings.—**Bromide of aluminium,** a salt prepared by saturating hydrobromic acid with gelatinous aluminium hydrate and then carefully evaporating to dryness. It is used in photography in sensitizing collodion, one grain to the ounce.—**Wolfram aluminium,** an alloy of aluminium and tungsten, used largely for military equipments. The metal rolls, draws, and spins well.

aluminize (a-lū′mi-nīz), *v. t.*; pret. and pp. *aluminized,* ppr. *aluminizing.* [L. *alumen (alumin-)* + *-ize.*] To apply alum or a salt of aluminium to (a material, as cloth).

alumino-. A combining form (with *silicate, phosphate,* etc.) of *aluminum, aluminium.* The feldspars are all *aluminosilicates.*

aluminoferric (a-lū″mi-nō-fer′ik), *a.* See the following.—**Aluminoferric cake,** the trade-name for aluminium sulphate when it contains a considerable quantity of ferric sulphate derived from iron occurring as an impurity in bauxite or china clay.

aluminol (a-lū′mi-nōl), *n.* [*alumin(ium)* + *-ol.*] A trade-name for β-naphtholdisulphonate of aluminium, $Al_2(C_{10}H_5OH(SO_3)_2)_3$. It combines the astringency of alum with the antiseptic power of naphthol.

aluminothermic (a-lū mi-nō-thèr′mik), *a.* Pertaining to or produced by aluminothermy; producing high temperatures by the combustion of finely divided metallic aluminium. *Elect. World and Engin.,* Feb. 13, 1904.

aluminothermics (a-lu mi-no-thèr′miks), *n.* [*aluminium* + *thermics.*] A collective name for the processes in which high temperatures are produced by the chemical combination of oxygen and aluminium. It has been known for some time that high temperature could be obtained by the formation of alumina, but the operation was not practically applied previous to the invention of the process patented by Dr. Hans Goldschmidt. This consists in mixing finely powdered aluminium with some pulverized metallic oxid (e. g., Fe_3O_4), and then raising the temperature to the point where reaction takes place through which the aluminium deprives the other metal of its oxygen, forming Al_2O_3. This reaction generates a great quantity of heat and a very high temperature. The process is used for the production of pure metals which it has not before been possible to isolate completely and in a pure form, such as chromium, manganese, etc. Another very important application of the aluminothermic process is to welding. In this thermit (which see) is placed in a specially prepared crucible of refractory material and the reaction is started by means of an igniter. The fluid mass of iron produced is poured into a mold placed around the joint to be welded. This process is especially useful for welding conductor-rails, defective castings, and parts of broken machinery which must be repaired at the places where they are in use. When the aluminothermic process is used for the separation of metals, an important by-product is formed, namely, the melted aluminium oxid or alumina. It is an artificial corundum and has been called *corubin.* Its uniform hardness makes it far superior to natural corundum or emery for grinding and polishing purposes. A great obstacle in the way of the use of aluminothermic processes has been the lack of some means of starting the reaction, which requires a high temperature. Dr. Goldschmidt accomplishes this by using an igniter consisting usually of a readily reducible oxid, such as barium peroxid, mixed with finely powdered aluminium. The reaction of this mixture may be started by means of a match. A pinch of this mixture placed upon the thermit or other aluminothermic mixture will serve to start the reaction. Once started, the main reaction will propagate itself, since the temperature produced is probably above 3000° C., and higher than can be obtained in any other artificial way except by the electric arc.

aluminothermy (a-lū′mi-nō-thèr″mi), *n.* [NL. *aluminum* + Gr. θέρμη, heat.] Same as ★*aluminothermics.*

alum-meal (al′um-mēl), *n.* Alum as obtained in small crystals, at its first crystallization, by rapid cooling, with agitation, of a hot solution.

alundum (a-lun′dum), *n.* [L. *al(ius),* other, + *(cor)undum.*] An artificial abrasive made in an electric furnace and used as a substitute for corundum.

alurgite (a-lėr′jit), *n.* [Gr. ἀλουργής, purple (lit. 'wrought in the sea,' with reference to the genuine purple dye from the purple-fish as distinguished from imitations made on land, < ἅλς, sea, + ἔργον, work), + *-ite*[2].] A manganese-mica, varying from purple to cochineal red, from St. Marcel, Piedmont.

Alutera (a-lu′te-rä), *n.* [NL., < L. *aluta,* soft leather.] A genus of file-fishes remarkable for their leathery skin and lean body: found in tropical seas. *A. monoceros* is the commonest species.

Alvarius (al-vā′ri-us), *n.* [NL.] A genus of small darters of the family *Percidæ.* *A. lateralis* is found in northern Mexico.

alveate (al′vē-āt), *a.* [L. *alveatus,* hollowed out like a trough or tray, < *alveus,* a trough, tray: see *alveus.*] Same as *alveated.*

alvelos (äl′ve-lōs), *n.* The milky resinous juice of *Euphorbia heterodoxa,* indigenous to Brazil: a yellowish-white syrupy substance used in medicine.

alveola (al-vē′ō-lä), *n.*; pl. *alveolæ* (-lē). [NL. fem.: see *alveolus.*] In *bot.*: (*a*) One of the pits in a receptacle after the removal of the flowers, especially in the heads of composite plants. (*b*) A pore in a fungus, as *Polyporus.* (*c*) The depressed perithecium in certain fungi.

alveolar, *a.* 2. In *phonetics,* formed or articulated by bringing the tip of the tongue into contact with the alveolar point of the upper front teeth, as the consonants *t, d, n, l.*—**Alveolar abscess,** a deep-seated gum-boil.—**Alveolar angle,** in *anthrop.,* the angle formed by the lines drawn from the alveolar point to the basion and to the nasion.—**Alveolar hypothesis,** the doctrine or opinion that the reticulated appearances in protoplasm are due to the walls of contiguous vesicles or alveoli, and that this foam-like structure is the universal fundamental structure of protoplasm.—**Alveolar line,** in *craniom.,* the continuation of the lateral margin of the anterior nasal aperture to the anterior nasal spine. *Harrison Allen,* Jour. Acad. Nat. Sci., X. 418.

alveolar-dorsal (al-vē″ō-lär-dôr′sal), *a.* Alveolar and dorsal. *Stud. Yale Psych. Lab.,* X. 105.

Alveolites (al″vē-ō-lī′tēz), *n.* [NL., < L. *alveolus,* dim. of *alveus,* a cavity, + *-ites,* E. *-ite*[2].] A genus of extinct tabulate corals. They grow in spreading or branching masses composed of contiguous corallites opening obliquely on the surface with semilunar apertures; the septa are represented by rows of spinules and mural pores are present. This coral is very abundant in the Silurian and Devonian.

alveololabial (al-vē″ō-lō-lā′bi-al), *a.* Pertaining to the lips and to the alveolar processes.

alveololingual (al-vē″ō-lō-ling′gwal), *a.* Pertaining to the tongue and to the alveolar processes.

alveolonasal (al-vē″ō-lō-nā′zal), *a.* In *craniom.,* relating to the alveolar point and to the nasion: as, the *alveolonasal* line.

alveolus, *n.* (*h*) In the shells of belemnites or fossil dibranchiate cephalopods, the conical cavity at the anterior end.

Alvine calculi, intestinal concretions which result from the inspissation of portions of the fecal contents.

alvite (al′vīt), *n.* [*Alve* in Norway + *-ite*[2].] A silicate resembling zircon in form, but containing yttrium and probably thorium and other rare elements: found in Norway.

aly (ā′li), *a.* [*ale* + *-y*[1].] Of, pertaining to, like, or characteristic of the use of ale: as, an *aly* tale; an *aly* taste; an *aly* nose.

Alypia (a-lip′i-ä), *n.* [NL. (Huebner, 1825), said to be < Gr. ἀλυπία, freedom from grief.] A genus of agaristid moths containing several species which inhabit the United States. One of them, *A. octomaculata,* occurs abundantly in the larval state upon grape-vines, which it injures by devouring the foliage.

A. M. A. An abbreviation of *American Medical Association.*

ama-ama (ä″mä-ä′mä), *n.* [Hawaiian.] A Hawaiian name of the common mullet, *Mugil cephalus.* It is a food-fish of very superior quality, and is reared in artificial ponds in that region.

amacrine (a-mak′rin), *a.* [Gr. ἀ- priv. + μακρός, long, + ἶς (-ιν-), muscle, in pl. fiber.] Not having long fibers: a term applied to anaxone nerve-cells, sometimes called *spongioblasts,* found in the inner molecular layer of the retina of the eye.

amaldar, *n.* 2. In India, an agent or manager; in some districts, a revenue-collector. Also written *amildar.*

Amalgamated plates. See ★*plate.*

amalgamating-pan (a-mal′ga-mā-ting-pan″), *n.* In *gold- and silver-milling,* a pan-shaped machine with a revolving muller for grinding ores in order to extract the precious metals from the resulting pulp with the aid of mercury. The use of chemicals and heat is sometimes required, especially for silver ores.

amalgamation, *n.*—**Barrel amalgamation,** a process of amalgamation in which the ore to be treated is charged into revolving barrels and there the precious metals are united with mercury. In the United States the barrel-process has been replaced by the pan-process, while in Europe and in South and Central America it is still in use.—**Kröncke's process of amalgamation,** a Chilean amalgamation process, in use since 1862, adapted chiefly for ores from the deeper workings, which carry, besides some native silver and chlorid, much argentite, proustite, pyroargyrite, and polybasite. The active reagent is a hot solution of cuprous chlorid which is prepared separately. The operation is carried on in rotating wooden barrels, and lead or zinc is employed as a means of decomposing the calomel.—**Raw amalgamation,** the amalgamation of silver ore without a preliminary chloridizing roast.—**Roast amalgamation,** amalgamation of silver ore after a preliminary chloridizing roast. See *chloridize.*

amalic (a-mal′ik), *a.* [Formation not obvious.] Noting an acid, $C_{12}H_{14}N_4O_8$, formed by the oxidation of caffein or theobromine; tetramethyl alloxantin.

Amanist (a-mä′nist), *n.* [*Amana,* a group of villages in Iowa (< *Amana,* a mountain mentioned in Cant. iv. 8), + *-ist.*] A member of a German religious community properly known as the "True Inspiration Society." It originated as a religious sect in Germany in the seventeenth century, was much persecuted there and elsewhere on the continent of Europe, removed to the United States in 1842, and became communistic. The community settled first at Ebenezer, near Buffalo, New York, but removed, in 1855 and the following years, to Amana, near Cedar Rapids, Iowa, where it forms a group of seven villages, engaged in agriculture and manufactures, and sharing things in common under the rule of a president and several trustees elected by the people. Its members believe in the plenary inspiration of the Bible, and make it their sole creed, differing little in their beliefs from Lutherans. They have no rite of baptism, do not believe in eternal punishment, and, like the Quakers, disapprove of war and are non-resistants. They disbelieve in ceremonies and in gaiety of all kinds, have no clergy, and no preaching except when God raises up an 'inspired instrument,' but all are devout church-goers. See *inspirationist.*

Amanita (am″a-nī′tä), *n.* [NL., < Gr. ἀμανῖται, pl., a sort of fungi.] 1. In *mycol.,* a genus of fungi of the family *Agaricaceæ,* restricted by recent authors to white-spored species having the stem provided with bothan annulus, or ring, and a

volva. Over 50 species have been described, a number of which are common and widely distributed throughout temperate regions.— 2. [*l. c.*] A plant of this genus. **Fly amanita,** a name frequently applied to *Amanita muscaria*, a poisonous species.— **Orange amanita,** a common name for *A. cæsarea*, a large edible species having an orange-colored pileus. – **Poison amanita,** a name applied to *A. phalloides*, a white species which is extremely poisonous.

Amanitopsis (a-man-i-top'sis), *n.* [NL. (Roze, 1879), ⟨ *Amanita* + ὄψις, view.] A genus of white-spored agarics having a volva but no annulus. *A. plumbea* is a common and widely distributed species. See cut on preceding page.

amanous (am'ä-nus), *a.* [Gr. *a-* priv. + L. *manus*, a hand.] Without hands or manus: sometimes applied to birds. [Rare.]

amaranth, *n.* 4. Same as *purple heart.*— 5. An acid dyestuff, of the monoazo type, which dyes wool and silk a pure bluish red that is moderately fast to light and milling. It is known by various other names, as *azo acid-rubine*, *Bordeaux S*, and *fast red*. **Amaranth spirit,** a trade-name for one of the solutions of chlorid of tin used as a mordant in dyeing. These solutions are now much less used than they were before the introduction of the coal-tar dyes.—**Low amaranth,** one of the tumbleweeds, *Amarantus blitoides*, of the prairie States resembling *A. græcizans*, but more spreading. Also *prostrate* or *spreading amaranth*. **Rough amaranth,** the pigweed, *Amaranthus retroflexus*.— **Spiny amaranth,** a tropical weed, *Amaranthus spinosus*, recently spread in waste places from Virginia to Missouri and southward. It is a stout, bushy species and the stems bear slender spines. Also called *careless-weed* and *red careless-weed*.— **Spreading amaranth.** Same as *low* ★*amaranth*.—**Thorny amaranth.** Same as *spiny* ★*amaranth*.

amarantite (am-ạ-ran'tīt), *n.* [*amarant*, proper form of *amaranth*, + *-ite*[2].] A hydrous ferric sulphate occurring in slender prismatic crystals and bladed masses of an amaranth-red color. Also called *hohmannite*.

amargosa (ä-mär-gō'sä), *n.* [Sp. *amargoso*, bitter.] A name in Guam and the Philippines of the balsam-pear and the balsam-apple (*Momordica Charantia* and *M. Balsamina*), gourd-like plants with palmate leaves and warty, yellow fruit which bursts open when ripe, displaying the seeds surrounded by a red aril.

amaric (a-mar'ik), *a.* [L. *amarus*, bitter, + *-ic*.] Of a bitter nature.— **Amaric acid,** an acid, $C_{23}H_{22}O_3 + H_2O$, formed by boiling benzamarone with alcoholic sodium hydroxid. It is crystalline and easily forms an anhydrid.

amaril (am'ạ-ril), *n.* [L. *amarus*, bitter + *-il*.] The hypothetical poison of the *Bacillus icteroides*, regarded by some as the cause of yellow fever.

amaroid (am'ạ-roid), *n.* [L. *amarus*, bitter, + *-oid*.] A name proposed to designate those bitter substances which have a definite composition but do not belong to one of the recognized classes of compounds such as glucosides or alkaloids.

amaroidal (am-ạ-roi'dạl), *a.* [*amaroid* + *-al*.] 1. Somewhat bitter in taste.— 2. In *pharm.*, resembling a bitter in properties.

Amasonia (am-ạ-sō'ni-ä), *n.* [NL., named for Thomas Amason, an early American traveler.] A genus of greenhouse shrubs from tropical America, of the family *Verbenaceæ*: sometimes grown for the long, persistent, hairy, yellow flowers. *A. calycina* is the only common species in the United States. There are about six species, but they are not much known in cultivation.

amastia (a-mas'ti-ä), *n.* [NL., ⟨ Gr. *ἀμαστία, ⟨ ἄμαστος, without breasts, ⟨ *ἀ-* priv. + μαστός, breast.] Congenital absence of the nipples or of the entire breasts.

amasty (ạ-mäs'ti), *n.* Same as ★*amastia*.

amaurosis, *n.* – **Intoxication amaurosis,** blindness due to the action of some systemic poison, such as alcohol or tobacco.

Amaurotic family idiocy, a form of idiocy accompanied by constant and irremediable retinal lesions causing blindness. *Lancet*, June 25, 1904.

amaxophobia (am-ak-sō-fō'bi-ä), *n.* [Prop. ★*hamaxophobia*, ⟨ Gr. ἅμαξα, a wagon, + *-φοβία*, ⟨ φοβεῖν, fear.] A morbid fear of vehicles.

amazia (a-mā'zi-ä), *n.* [NL., ⟨ Gr. *ἀ-* priv. + μαζός, breast.] Congenital absence of the mammary glands.

Amazonian group, in *geol.*, a term applied to rocks of Cretaceous age along the Rio Purús, Brazil, and regarded as equivalent in part to the Upper Chalk or Maestrichtian of Europe.

Amazonianism (am-ạ-zō'ni-ạn-izm), *n.* The state or condition of Amazons; Amazonian customs and conditions which develop in a certain state of society; particularly, the supposed Amazonian revolution of the women against prevailing hetærism. *McLennan.*

Amazonism (am'ạ-zon-izm), *n.* The supposed supremacy and rule of women in primitive society: an interpretation of the facts of descent traced in the female line, and the consequent supremacy of the male relatives of the wife over her husband. *Ward*, Pure Sociol., p. 338.

Amazonomachia (am″ạ-zon-ō-mak'i-ä), *n.* [NL., ⟨ Gr. Ἀμαζών, Amazon, + μάχη, fight.] In *Gr. antiq.*, a battle of Amazons. There were several of these mythic battles: (1) the invasion of Lycia by the Amazons; (2) the invasion of Phrygia by the Amazons; (3) the battle with Hercules, his 9th labor, in which Hippolyta, queen of the Amazons, was slain; (4) the battle with Theseus to liberate Antiope; (5) the battle at the close of the Trojan War, when the Amazons came to the assistance of Priam; (6) the invasion by the Amazons of the island of Leuce at the mouth of the Danube. Since it furnished many interesting arrangements of men, women, and horses in action, the Amazonomachia was a favorite subject with Greek artists. The finest representation of it now in existence is a series of

Amazonomachia, from a Sarcophagus in the Louvre

bas-reliefs, in the British Museum, which was found in the ruins of the Mausoleum at Halicarnassus. It was often represented in the decoration of vases.

A.M.B. An abbreviation of the Latin *Artium Mechanicarum Baccalaureus*, Bachelor of the Mechanic Arts, a title conferred by some colleges.

ambach, *n.* Same as ★*ambatch*.

ambagiousness (am-bā'jus-nes), *n.* [*ambagious* + *-ness*.] The quality of being ambagious, roundabout, or indirect.

ambatch (am'bach), *n.* [See *ambash*.] The pith-tree of the Nile, *Æschynomene Elaphroxylon*, a thorny shrub or small tree of extraordinarily quick growth: a characteristic plant of the waters of tropical Africa. Its uncommonly light, spongy wood is used for floats and small rafts. See *ambash*.

ambeer, ambier (am'bēr), *n.* [Perhaps due in some way to *amber*, in allusion to its color.] Tobacco-juice. *Joaquin Miller*. [Local, U. S.]

amber[2], *n.*— **Drawn amber,** amber which has been dragged out of the sea with nets and rakes.— **Pit amber,** amber mined from pits or diggings. It usually has a friable brown crust. Distinguished from *strand* and *sea amber*, from which this coating has been worn by the action of sea and sand.— **Sea amber,** amber washed up by the sea (from deposits under the sea or on the coast) or dredged from its depths. Also called *sea-stone*.— **Strand amber,** water-worn amber found on a coast or strand.

amber-beds (am'bėr-bedz), *n. pl.* A deposit of glauconitic sands of Lower Oligocene age, developed along the coast of the Baltic Sea near Königsberg, in the lower part of which is a band containing considerable quantities of amber. The sands carry marine fossils, but the amber incloses insects, spiders, and centipeds, together with the fruit, flowers, seeds, and leaves of a large number of land plants.

amberiferous (am-bėr-if'ėr-us), *a.* Amber-bearing or amber-producing.

The west coast of Denmark . . . is included in this *amberiferous* region. *Buck*, Med. Handbook, I. 208.

amberite (am'bẹ-rīt), *n.* [*amber* + *-ite*[2].] One of the modern explosives known as smokeless powders. It contains 40 per cent. of nitroglycerin, 56 per cent. of soluble guncotton, and 4 per cent. of camphor, vaseline, or some equivalent substance.

amber-jack (am'bėr-jak), *n.* A name given to large species of the genus *Seriola*, as *S. lalandi* and *S. dumerili*.

amberous (am'bėr-us), *a.* Amber-colored; like amber.

Its chambers paved with *amberous* lights.
The Century, Aug., 1890, p. 500.

amber-snail (am'bėr-snāl), *n.* A species of *Succinea*.

amber-tree, *n.* 2. The extinct tree *Pinites succinifer*, which yielded most of the amber of the Baltic region.

ambiance (än-bi-äns'), *n.* [F. (*Nouveau Larousse*), ⟨ *ambiant* = E. *ambient*. The E. form would be **ambience*.] Environment: in *art*, the arrangement of accessories and surroundings to support the main effect intended.

ambiciliate (am-bi-sil'i-āt), *a.* [L. *ambi-*, on both sides, + NL. *ciliatus*, ciliate.] In *ichth.*, having the scales on both sides of the body edged with minute teeth. [Rare.]

Ambicolorate fish appear to be always what one may call 'ambiciliate' also.
Proc. Zool. Soc. London, 1894, p. 439.

ambicolorate (am-bi-kul'ọr-āt). *a.* [L. *ambi-*, on both sides, + *coloratus*, colored.] Having both sides of the body colored: applied specifically to abnormal examples of flatfishes, colored on both sides, which are normally white beneath. *Proc. Zool. Soc. London*, 1894, p. 435.

ambicoloration (am-bi-kul-ọ-rā'shọn), *n.* [L. *ambi-*, on both sides, + *coloration*.] In *zoöl.*, the property or fact of having both sides colored. *Proc. Zool. Soc. London*, 1894, p. 432.

Ambient vein. See ★*vein*.

ambier, *n.* See ★*ambeer*.

ambilation (am-bi-lā'shọn), *n.* [*ambi-* + (*re*)*lation*.] A relation in which every individual object of the universe of discourse stands to every other; a pene-coexistence.

ambisinistrous (am-bi-sin'is-trus), *a.* [L. *ambi-*, on both sides, + *sinister*, left.] Same as *ambilevous*.

ambital (am'bi-tạl), *a.* [*ambit* + *-al*.] Of or pertaining to the ambitus or margin of the shell or test, as in echinoderms.

ambitty (am-bit'i), *a.* [Prob. a factory pron. of F. *invitré* (aṅ″vi″trā′), unvitrified, ⟨ *in-*, L. *in-*, neg., + *vitré*, ⟨ L. *vitrum*, glass.] In *glass-manuf.*, devitrified in the pot during the time it is being worked, as glass.

ambitus, *n.* 6. In *Gregorian music*, the range or compass of a melody.— 7. In the flat sea-urchins or echinoids, the peripheral or equatorial area of the test which is not transsected by the ambulacra.

Amblotheriidæ (am-blō-thē'ri-i-dē), *n. pl.* [NL., ⟨ *Amblotherium* + *-idæ*.] A family of primitive mammals in which the molars bear a tritubercular blade and a posterior talon: from the Jurassic of North America and Great Britain.

Amblotherium (am-blō-thē'ri-um). *n.* [NL., for **Amblytherium*, ⟨ Gr. ἀμβλύς, sluggish, + θηρίον, wild beast.] The typical genus of the family *Amblotheriidæ*: regarded by some authors as synonymous with *Peraspalax*, *Phascolestes*, and *Stylodon*.

Amblycephalidæ (am-bli-se-fal'i-dē), *n. pl.* [NL., ⟨ *Amblycephalus* + *-idæ*.] A family of harmless tropical snakes found in South America and Asia. The pterygoids, which are widely separated from the quadrates, do not reach beyond the plane of the occipital condyle. On account of the size of the head, the species (about 30 in number) bear some resemblance to venomous snakes.

amblychromatic (am-bli-krō-mat'ik), *a.* [Gr. ἀμβλύς, dim, + χρῶμα, color.] Feebly staining: applied to certain myelocytes occurring in marrow. Opposed to ★*trachychromatic*.

Amblygobius (am-bli-gō'bi-us), *n.* [NL., ⟨ Gr. ἀμβλύς, dull, blunt, + L. *gobius*, goby.] A genus of gobies in the East Indies.

amblyopia, *n.* Failing sight, as distinguished from amaurosis or total blindness.

amblyoscope (am'bli-ọ-skōp), *n.* [Gr. ἀμβλύς, dim, dull, obtuse, + σκοπεῖν, view.] A stereoscope each lateral half of which has independent motion, whereby a fusion of the two images can be effected under any conditions of divergence or convergence of the visual axes. *Lancet*, July 18, 1903.

amblypod (am'bli-pod), *n.* [Gr. ἀμβλύς, blunt, + ποῦς, foot.] A member of the order *Amblypoda*, a group comprising a large number of extinct ungulates.

Amblypomacentrus (am″bli-pō-ma-sen'trus), *n.* [NL., ⟨ Gr. ἀμβλύς, dull, blunt, + (?) *Pomacentrus*.] A name given to a section of the genus *Pomacentrus*, small reef-fishes known as *damsel-fishes* or *demoiselles*.

Amblyrhiza (am-bli-rī'zä), *n.* [NL., ⟨ Gr. ἀμβλύς, blunt, + ῥίζα, root.] An extinct genus of rodents, allied to *Chinchilla*, from the Post-tertiary of the Antilles.

amblystegite (am-blis'tẹ-jīt), *n.* [Gr. ἀμβλύς, blunt, + στέγη, roof, chamber, + *-ite*[2]. The name alludes to the form of the crystals.] A variety of hypersthene from the andesite of the Laacher See in the Eifel, originally described as an independent species.

Amblystomatidæ (am″bli-stọ-mat'i-dē), *n. pl.* [NL., ⟨ *Amblystoma*(*t-*) + *-idæ*.] Same as *Amblystomidæ*.

amboceptor (am-bō-sep'tor), *n.* [L. *ambo*, both, + (*re*)*ceptor*.] A specific adaptation-product, the result of immunization, which unites the corresponding complement with the receptor of the cell or cellular product for which it has a special affinity. See ★*immunity*. Also *copula*, *desmon*, *fixator*, *immune body*, *intermediary body*, *preparator*.

The excessive or lateral chains, being useless to the cells in which they are produced, are cast off and appear in the body juices as intermediary bodies or 'ceptors,' which, according to their nature, are designated uniceptors (antitoxins, etc.) and *amboceptors* (intermediary bodies). *Science*, July 3, 1903.

Ambocœlia (am-bō-sē'li-ạ̈), *n.* [NL., < Gr. ἄμβων, a raised edge, + κοιλία, belly.] A genus of small spire-bearing brachiopods with smooth or spinous valves: abundant in the Devonian and Carboniferous rocks.

Ambonychia (am-bō-nik'i-ạ̈), *n.* [NL., < Gr. ἄμβων, a raised edge, + ὄνυξ, talon.] The typical genus of the family *Ambonychiidæ*.

Ambonychiidæ (am-bō-ni-kī'i-dē), *n.* [NL., < *Ambonychia* + *-idæ*.] A family of pelecypod or acephalous mollusks. They have mytiliform shells with no auricle and with the anterior adductor muscle obsolete, no hinge-teeth, ligament external, and byssal gape small. It is highly characteristic of the early Silurian faunæ and has a few Devonian representatives.

Amboyna button or **pimple**. See ★*button*.

ambroid (am'broid), *n.* The trade-name of a substance made from the inferior pieces of amber. See the extract.

The inferior pieces of amber are made into what is called *ambroid*. The pieces are washed and dried, coated on the outside with some chemical, and are then moulded with the aid of heat and pressure. *Scientific American*, Sept. 16, 1899.

ambrosia, *n.* **3**. The food of certain wood-boring beetles, consisting of various hyphomycetous fungi found associated with the beetles in their galleries, and said by some authors to be propagated by them, each species of beetle using a particular species of fungus.

Their [ambrosia-beetles'] food consists not of wood, but of a substance to which the name *ambrosia* has been given, and which is a coating formed by certain minute fungi and propagated on the walls of their galleries by the beetles. The action of the fungus produces the characteristic stain in the wood. *Yearbook U. S. Dept. Agr.*, 1896, p. 421.

ambrosia-beetle (am-brō'ziạ̈-bē"tl), *n.* Any one of a group of beetles of the family *Scolytidæ*, which burrow in the wood of different trees, and in their burrows cultivate certain fungi known as *ambrosia*. See ★*ambrosia*, 3. Thirty species belonging to 6 genera in the United States are known to have this habit.—**Cosmopolitan ambrosia-beetle**, a scolytid beetle of wide distribution, *Xyleborus saxeseni*. **Oak ambrosia-beetle**, an American scolytid beetle, *Xyleborus affinis*.

Ambrosiaceæ (am-brō-zi-ā'sẹ-ē), *n. pl.* [NL. (Reichenbach, 1828), < *Ambrosia* + *-aceæ*.] A family of dicotyledonous, sympetalous plants of the order *Campanulales*, the ragweed family: chiefly distinguished from the *Asteraceæ*, in which it is included by many authors, by having the stamens (usually 5) separate, or the anthers merely connivent, so as not to be truly syngenesious. There are 8 genera and about 55 species, mostly American, coarse weeds, some bearing burs. *Ambrosia*, the ragweed, is the type, and the two other best-known genera are *Iva* and *Xanthium*.

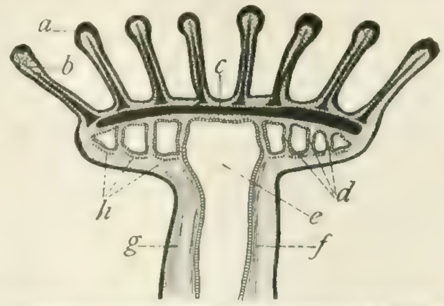
ambrosial, *a.* **2**. Pertaining to the senses of taste and smell: a forced use.

While yet in the animal state man learns to enjoy the *ambrosial* senses in partaking of food and drink and in inhaling the air laden with many particles given off by natural bodies. *J. W. Powell*, Amer. Ethnol. Rep., XIX. lix.

Ambrosian, *a.*—**Ambrosian hymn**, any hymn attributed to St. Ambrose (340–397) or his school. The title is generally considered as applying to twelve hymns characterized by their lack of rhythm and their austere simplicity. The 'Te Deum' commonly called 'Ambrosian' is thought now to be a translation of an ancient Greek hymn.

ambrosine (am'brō-sin), *n.* [? *ambros*(*ia*) + *-ine*[2].] A resinous mineral found in the phosphate-beds near Charleston, South Carolina.

ambulacral, *a.* **2**. Situated on the side which bears the ambulacra; hence, in *Stelleroidea* and *Crinoidea*, oral.—**Ambulacral brush**, in spatangoid sea-urchins, a structure consisting of an ordinary tube-foot of which the terminal disk is extraordinarily widened and carries a number of club-shaped or conical solid appendages, each supported by a calcareous rod. The brushes occur near the mouth and anus, and are said to play an important part in the taking in of food by stirring up the sand.—**Ambulacral fields**, the areas or divisions of the surface of an echinoderm which are covered by the ambulacra.—**Ambulacral foot**, one of the hollow adhesive locomotive organs of an echinoderm; a tube-foot or tentacle.—**Ambulacral pore**, one of the openings between adjacent ambulacral ossicles in star-



Longitudinal section through an ambulacral brush of a spatangoid (after Loven and Hamann). *a*, body-epithelium; *b*, supporting rod; *c*, supporting plate of the terminal disk; *d*, septa; *e*, canal of the water-vascular system; *f*, longitudinal muscles; *g*, nerve; *h*, circular muscle-fibers. Magnified. (Drawn from Lang's "Comparative Anatomy.")

fishes, or through the ambulacral plates in echinoids, for the passage of the canal which connects a tube-foot with its ampulla.

II. *n.* Same as *ambulacral ossicle* or *plate*.

ambulance, *n.*—**Veterinary ambulance**, a substantial, heavy wagon with horizontal bottom and a false removable floor which can be rolled in and out, used for conveying invalid and disabled horses. The sides are high and are fitted with slings, etc.

ambulance-chaser (am'bụ-lans-chā"sėr), *n.* A person, either a lawyer or the agent of a lawyer, who follows up cases of accident in the streets and tries to induce the injured person to bring suit for damages. [Colloq.]

ambulancier (am-bụ-lan-sēr'), *n.* [F. *ambulancier*, < *ambulance*, ambulance.] An ambulance surgeon or attendant. [Rare.]

Ambulatoria (am"bụ-lā-tō'ri-ạ̈), *n. pl.* [NL.] A group or suborder of orthopterous insects, corresponding to the *Gressoria* or walkers, and including only the family *Phasmidæ*. See *Gressoria*.

Ambulatory school, in Sweden, a method of education resorted to on account of the sparse population of the country. See the extract.

In so sparsely populated a country the organization of education (which is both free and compulsory) is a special difficulty, which has been partly overcome by *ambulatory schools*, in which the teacher shifts his quarters twice a year or oftener within his district. The local management of education is part of the duties of the clergy, and this system seems to work without friction, though Sweden has her Nonconformists, perhaps because the latter are compelled to contribute to the support of the State Church. *Athenæum*, March 18, 1905, p. 333.

ame (ä'mā), *n.* [Jap. *ame*, a kind of jelly made of flour.] A form of glucose or starch sugar made in Japan by the action of barley malt upon rice paste. It is melted and molded into numerous fanciful shapes for sale.

amebic, *a.* See ★*amœbic*.

amebocyte, *n.* See ★*amœbocyte*.

ameed (ạ-mēd), *v. t.* [*a*-[1] + *meed*.] To reward; recompense. *J. Barlow*, Columbiad, vii. 611.

ameen (ạ-mēn'), *n.* [Ar. *'amīn*, faithful, trustworthy.] A person employed in a confidential capacity; a confidential servant or agent; an assistant; a bailiff, inspector, or intendant. [Anglo-Indian.]

Ameiurus, *n.* An earlier spelling of *Amiurus*.

Amelanchier (am-ẹ̄-lan'ki-ėr), *n.* [NL. (Medicus, 1789), from *Mespilus Amelanchier*, the Linnean name of the rock-medlar.] A genus of ornamental dicotyledonous shrubs or trees belonging to the family *Malaceæ* and including about 12 species widely distributed in North America, Europe, northern Africa, and eastern and southwestern Asia. They have alternate, simple, entire or serrate leaves, and usually racemose, white flowers with persistent sepals and obovate-oblong or spatulate petals contracted at the base into slender claws. The fruit is small, globose or pyriform, with sweet and juicy flesh. The rock-medlar of central Europe is *Amelanchier Amelanchier*. See *service-berry*, 3.

amelification (ạ-mel"i-fi-kā'shọn), *n.* [*amel* + L. *-ficare*, < *facere*, make.] In *embryol.*, the formation of enamel in the developing tooth.

ameliorant (ạ-mēl'yọ-rạnt), *n.* That which ameliorates, betters, or improves.

amelioration, *n.*—**Latent amelioration**, unperceived progress due to natural causes, for example, increase of population and migration, which makes possible artificial amelioration through conscious effort. *Ward*, Dynamic Sociol., II. 209.

ameloblast (ạ-mel'ō-blȧst), *n.* [*amel* + Gr. βλαστός, a germ.] In *embryol.*, same as ★*adamantoblast*.

amemasu (ä'mạ-mä'sū), *n.* [Jap.] A Japanese name of *Salvelinus kundscha*, a trout common in streams of Kamchatka and occasionally taken in northern Japan.

Amen corner, a place in some Methodist churches, usually at one side of the pulpit, where formerly sat the deacons who led the responsive 'amens' during the service.

amenomania, *n.* See *amœnomania*.

Amentifloræ (a-men-ti-flō'rē), *n. pl.* [NL., < L. *amentum* (see *ament*) + *flos* (*flor-*), a flower (see *flower*).] In *phytogeog.*, the catkin-bearing division of the ecological group *Stigmatica*, consisting of *Salix*, *Populus*, and *Betula*.

amentulum (a-men'tụ-lum), *n.*; pl. *amentula* (-lạ̈). [NL., dim. of *amentum*, ament.] The male inflorescence of *Sphagnum* compared to a diminutive catkin.

amenyl (am'en-il), *n.* The organic radical, C_5H_9, derived from amylene, C_5H_{10}.

American blight. See ★*blight*.—**American class**, a group of domesticated fowls including those breeds which have originated in the United States. These are the Plymouth Rocks, wyandottes, javas, American dominiques, and Jersey blues.—**American** ★**cockroach**, ★**copper**, ★**copper hind-wing**, ★**dagger**, ★**lappet**, ★**locust**, ★**pottery**, etc. See the nouns.—**American Protective Association**. See ★*protective*. **American race**, in *anthrop.*, the primitive race of man inhabiting America. It is closely allied to the Mongol race, and is characterized by straight black hair, strong development of the malar bones and nose, and a skin which ranges from almost white to dark reddish brown in color. While the types of South and Central America are not well known, six fundamental types may be distinguished in North America and northern Mexico: (1) the Arctic type: short, with long and high head, very wide and flat face, and narrow nose, and of light color; (2) the Northwestern type: of moderate stature, with short head, wide face, broad and flat nose, and of darker color; (3) the Mississippi Valley type: tall, with moderately elongated head, wide face, broad and high hooked nose, and of reddish color; (4) the Southeastern type: very tall, with rounded and high head, wide face, and high hooked nose; (5) the Sonoran type: of moderate stature, with long, rather low head, delicate face, and of dark color; (6) the Mexican type: of moderate stature, with short head, moderately heavy face, and of dark color. A number of subtypes of these may be distinguished.—**American saw-fly**. See ★*saw-fly*.—**American scale**, in *numis.*, a measure of one sixteenth of an inch, used for indicating the sizes of coins.

Americana (ạ-mer-i-kā'nạ̈), *n. pl.* [NL., neut. pl. of *Americanus*, American.] Books and papers relating to America, particularly to its early history, geography, etc.

Americanism, *n.* **5**. A name applied to a series of opinions at variance with the policy and practice of the Roman Catholic Church, supposed for a time to be held by some members of that church, especially in the United States, and condemned by Pope Leo XIII. in 1899 in an apostolical letter addressed to Cardinal Gibbons. The chief points were: that in order to attract those who differ from her the church should shape her teachings more in accord with the spirit of the age; that larger individual independence be allowed; that the church should relax some of her ancient severity and make concessions to new opinions; that points of teaching which are of minor importance be omitted and others toned down; that the monastic orders are out of date and their vows have no moral value; and that there should be a separation between church and state in all countries and under all conditions.

We are unable to give approval to these views which, in this collective sense, are called by some *Americanism*. But if by this name are to be understood certain endowments of mind which belong to the American people, just as other characteristics belong to various other nations, and moreover by it is intended your politic condition and the laws and customs by which you are governed, there is no reason to take exception to the name. *Pope Leo XIII. to Cardinal Gibbons*, in Amer. Cath. Quar. Rev., April, 1899.

Americanistic (ạ-mer-i-kạn-is'tik), *a.* Of or pertaining to an Americanist or to his science; carried on by Americanists: as, *Americanistic* research.

Americanitis (ạ-mer-i-kạn-ī'tis), *n.* Overweening national conceit in citizens of the United States, especially when shown or expressed by vulgar brag or noisy braggadocio.

The removal (from athletics, etc.) of the real dishonor so often revealed by the disqualification of men tainted with professionalism, less perfervid *Americanitis* at games and in celebrating victories, less newspaper exploitation, and a better regulation of the rapidly-growing pecuniary side of these spectacles—these yet remain to be accomplished. *G. S. Hall*, Adolescence, II. 411.

Amerind (am'ẹ-rind"), *n.* and *a.* [A back-formation from *Amerindian* for *Amer*(*ican*) *Indian*.] Same as ★*Amerindian* (which see).

The tribal fraternities of the *Amerinds*. *An. Rep. Bur. Amer. Ethnol.*, 1897-98, p. xlviii.

Amerindian (am-ẹ-rin'di-ạn), *a.* and *n.* [*Amer*(*ican*) + *Indian*.] Hence, by back-formation, *Amerind*. This word, with the associated forms *Amerind*, *Amerindic*, etc., was originally suggested by Dr. Charles P. G. Scott to Major J. W. Powell as a new but intelligible term

freed from the ambiguous and false associations of *Indian* and *American Indian*, and serving the need of a comprehensive term covering all the aboriginal tribes and languages of North and South America. The word was adopted by Major Powell and other ethnologists at Washington in 1898, and has been much used since. The formation of the word is analogous with that of *Eurasian*, *Eurasiatic*, *Euroafrican*, etc., of *aldehyde*, *albumose*, *chloroform*, *diol*, *glycol*, etc., of *cosecant*, *cosine*, *cotangent*, etc., and of innumerable names of genera in zoölogy and botany.] **I.** *a.* American Indian, in the widest sense; of or pertaining to the aboriginal inhabitants of North and South America (the Amerinds) or their languages; Amerind.

The four worlds of wide-spread *American* mythology. *Am. Rep. Bur. Amer. Ethnol.*, 1897-98, p. 855.

II. *n.* One of the aboriginal inhabitants of North and South America; an 'Indian' (without the ambiguity of that term); a 'red man'; an Amerind.

Amerindic (am-ę-rin'dik), *a.* Amerindian in the most general sense, especially as applied to matters of ethnology or philology.

ameristic, *a.* 2. In *bot.*, destitute of a meristem: applied to the prothalli of certain ferns which, being inadequately nourished, produce antheridia only.

Amerosporæ (am-e-ros'pō-rē), *n. pl.* [NL., < Gr. *ἀ-* priv. + *μερός*, part, + *σπορά*, seed.] A name applied by Saccardo to artificial divisions of various families and orders of fungi, especially those of the *Pyrenomycetes* and *Fungi Imperfecti*, to include the genera which have unicellular globose or short cylindric hyaline or colored spores.

amesial (a-mē'si-al), *a.* [*a-*[18] + *mesial.*] In *biol.*, not median. A median or unpaired organ in a bilateral organism may be said to be *amesial* in origin if it arises by the union of two bilateral rudiments.

ametabole (a-me-tab'ō-lē), *n.* Direct development without metabole or metamorphosis.

amethenic (am-e-then'ik), *a.* Noting an acid, $C_7H_{14}O_2$, formed by the oxidation of diamylene. It is a liquid with weak acid properties.

amethyst, *n.* **4.** A trade-name for certain artificial dyes of the azine class, as tetramethyl safranine and tetra-amyl safranine.—**Burnt amethyst,** amethyst obtained by burning out the color of smoky quartz, which is occasionally combined with the amethystine quartz.

ametœcious (a-me-tē'shius), *a.* [Gr. *ἀ-* priv. + *μετά*, beyond, + *οἶκος*, house. Cf. *metœcious.*] Not changing its host: applied to parasitic plants. Compare *metœcious*, *heteœcious*, *heteœcism.*

amfibia, *n. pl.* A simplified spelling of *amphibia.*

amfibian, *a.* and *n.* A simplified spelling of *amphibian.*

amfibious, *a.* A simplified spelling of *amphibious.*

Amharan (am-har'an), *a.* and *n.* Same as ★*Amharic.* *Geog. Jour.* (R. G. S.), IX. 315.

Amharic, *n.* See ★*Abyssinian languages* (*a*).

amic (am'ik), *a.* [*am(ide)* + *-ic.*] Having the properties of an amide and also of an acid: usually employed in composition: as, *oxamic acid*, $CO_2H.CONH_2$. Same as *amidic.*

A. M. I. C. E. An abbreviation of *Associate Member of the Institute of Civil Engineers.*

Amici's telescope. See ★*telescope.*

amicrobic (a-mi-krō'bik), *a.* [*a-*[18] + *microbic.*] Not related to or caused by microbes: as, an *amicrobic* disease.

Amicruræ (am″i-krō'rē), *n. pl.* [NL., < Gr. *ἀ-* priv. + *μικρός*, small, + *οὐρά*, tail. Cf. *Micruræ.*] A group of *Nemertini*, belonging to the family *Lineidæ*, characterized by the absence of a small filamentous tail: contrasted with *Micruræ.* The group includes the genera *Lineus* and *Euborlasia.*

amidah (a-mē'dä), *n.* [Heb., < *'amad*, stand.] The most solemn prayer in the Jewish liturgy, also known as the *shemonah 'esra* ('eighteen blessings'). It is repeated thrice daily, *sotto voce*, while standing. The prayer is composed of eighteen short prayers and praises which treat principally of resurrection, the restoration of Jerusalem, and the coming of the Messiah. Nothing should disturb the pious worshiper while he is engaged in this prayer.

amide, *n.*—**Amide powder,** an explosive mixture consisting of nearly equal parts of ammonium nitrate and niter, with a small amount of charcoal.

amidize (am'i-dīz), *v. i.*; pret. and pp. *amidized*, ppr. *amidizing.* [*amid(e)* + *-ize.*] To treat cotton material (cellulose) with calcium chlorid and ammonia at a temperature of 100° C., in order to increase the affinity of the fiber for basic colors: not widely used.

amidmost (a-mid'mōst), *adv.* and *prep.* [*amid* + *-most.*] In the very middle; in the midst of. *William Morris*, Earthly Paradise, III. iv. 52.

amidoazobenzene (am″i-dō-az-ō-ben'zēn), *n.* [*amide* + *azo-* + *benzene.*] Same as ★*aminoazobenzene* and *aniline* ★*yellow.*

amidoazobenzol (am″i-dō-az-ō-ben'zōl), *n.* An azobenzene, $C_6H_5.N{=}N.C_6H_5$, into which an amido-(NH_2) group has been introduced: $C_6H_5.N{=}N.C_6H_4.NH_2$.

amidol (am'i-dōl), *n.* [*amide* + *-ol.*] A trade-name for the hydrochlorid of diaminophenol, used as a developer in photography. Its formula is $C_6H_3OH(NH_2)_2.2HCl$. The free base is unstable.

amidothiolactic (am″i-dō-thi-ō-lak'tik), *a.* Noting lactic acid which contains a thio (SH) and an amido (NH_2) group. Cysteïn ($C_2H_3(NH_2).(SH).COOH$) is generally regarded as an acid of this order.

amidoxime (am-i-dok'sim), *n.* [*amide* + *oxime.*] The general name for a class of compounds formed by the union of a nitrile with hydroxyl amine. They have the general formula $R{-}C(NH_2){:}NOH$. The amidoximes are usually crystalline but unstable compounds and have both basic and acid properties.

amidoxyl (am-i-dok'sil), *n.* [*amide* + *ox(ygen)* + *-yl.*] The univalent group NHOH, as in isobutyric *amidoxyl* nitrile, $(CH_3)_2C(NHOH)$-CN, which is formed by the addition of hydrocyanic acid to acetoxime.

A. M. I. E. E. An abbreviation of *Associate Member of the Institute of Electrical Engineers.*

amigo (ä-mē'gō), *n.* [Sp., < L. *amicus*, a friend.] A friend: used specifically, in the Philippine Islands, for a native who is not hostile to the United States.

Amiichthys (am-i-ik'this), *n.* [NL., < Gr. *ἀμία*, a kind of tunny, + *ἰχθύς*, fish.] A genus of small cardinal fishes, of the family *Apogonidæ*, in Cuba.

amildar, *n.* Same as ★*amaldar.*

amimetic (a-mi-met'ik), *a.* [*a-*[18] + *mimetic.*] Not mimetic: applied to animals, especially insects, which do not mimic or resemble other species in coloration or behavior.

amimia, *n.*—**Amnesic amimia,** loss of appreciation of the significance of gestures.—**Ataxic amimia,** aphasia with inability to make gestures.

amin (am'in), *n.* Same as *amine.*

aminic (a-min'ik), *a.* [*amine* + *-ic.*] Pertaining to an amine or to the amino group: as, *aminic* nitrogen.

amino (am'i-nō), *a.* [Orig. combining form of *amine.*] Containing the group NH_2: as, *aminoacetic acid.* The word is also used as a prefix or in compound words with the same meaning. Often written, incorrectly, *amido.*—**Amino explosive,** an explosive containing an amino compound, usually in the form of a nitrate, as the nitrate of aminoacetic acid, $CH_2NH_2CO_2H.HNO_3$.

aminoazobenzene (am″i-nō-az-ō-ben'zēn), *n.* [*amine* + *azo-* + *benzene.*] A yellow crystalline compound, $C_6H_5N{:}NC_6H_4NH_2$, formed by warming diazoaminobenzene with aniline hydrochlorid and aniline. Some of its derivatives are valuable dyes. Also called, less correctly, ★*amidoazobenzene.*

aminoform (a-min'ō-fôrm), *n.* [*amine* + *-form.*] Hexamethylene tetramine. Same as ★*cystogen*, ★*urotropin*, and ★*formin.*

aminoglutaric (am″i-nō-glō-tar'ik), *a.* [*amine* + *glutaric.*] Pertaining to glutamic acid in a relation indicated by the specific prefix.—**Aminoglutaric acid** a colorless, dextrorotatory compound, $HOOCCH(NH_2)CH_2CH_2COOH$, prepared by the action of dilute sulphuric acid on certain constituents of wheat gluten. It crystallizes in trimetric tetrahedra, melts at 202° C., and is also called *a-aminoglutaric acid* or *a-glutamic acid.*

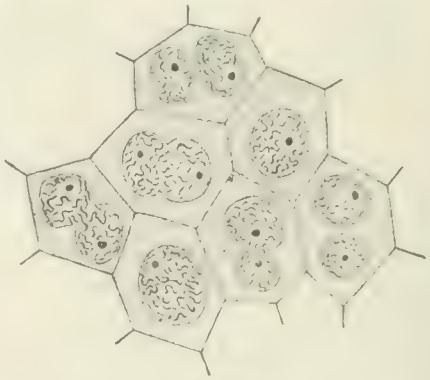
aminolysis (am-i-nol'i-sis), *n.* [*amine* + Gr. *λύσις*, dissolving.] In *chem.*, the decomposition of a substance when involving a taking up of the elements of ammonia.

Amish (am'ish or ä'mish), *a.* and *n.* [Also *Omish*; < *Ammosch*, < *Amman* (see def.), < *amman*, dial. form of *amtmann*, officer: see *amman.*] **I.** *a.* Pertaining to Jacob Amman (see next) or to his followers or their sect.

II. *n.* A sect of the Mennonites which arose in the 17th century in Switzerland, named from its leader, Jacob Amman. He insisted on the strict use of the ban, and went so far as to repudiate the use of buttons and shaving as things of the world. The Amish Church in the United States numbers about 1,200 followers. They are also called *Hookers* from their use of hooks in their clothing.

Amishman (am'ish- or ä'mish-man), *n.* [*Amish* + *man.*] A member of the Amish sect of the Mennonites. See ★*Amish.*

amitosis (am-i-tō'sis), *n.* [NL., < Gr. *ἀ-* priv. +



epithelium of the cockroach. (Wheeler.)

μίτος, thread, + *-osis.*] In *cytol.*, direct cell-division, akinesis or karyostenosis, as opposed to the indirect form of division (mitosis, karyokinesis, which see): so called from the absence of thread-like figures in the nucleus.

amitotic (am-i-tot'ik), *a.* Exhibiting amitosis; relating to amitosis.

amitotically (am-i-tot'i-kal-i), *adv.* By amitosis or direct division of cells without preliminary karyokinesis. *Encyc. Brit.*, XXXI. 514.

Amitra (am'i-trä), *n.* [NL., < Gr. *ἄμιτρος*, without girdle or head-band, < *ἀ-* priv. + *μίτρα*, a girdle, a head-band: see *miter.*] A genus of deep-sea snail-fishes, of the family *Liparididæ*, lacking ventral fins.

Amitrichthys (am-i-trik'this), *n.* [NL., < Gr. *ἄμιτρος*, without girdle, + *ἰχθύς*, fish.] A subgenus of deep-sea snail-fishes of the family *Liparididæ.*

Amitrinæ (am-i-trī'nē), *n. pl.* [NL., < *Amitra* + *-inæ.*] A subfamily of *Liparididæ*, lacking ventral fins: typified by the genus *Amitra.*

amixia (a-mik'si-ä), *n.* [NL., < Gr. *ἀμιξία*, < *ἀμικτος*, unmingled, < *ἀ-* priv. + *μικτός*, < *μίγνυναι*, mix.] In *biol.*, cessation of interbreeding between races or varieties.

amixis (a-mik'sis), *n.* [NL., < *ἀ-* priv. + *μῖξις*, mingling.] Same as ★*amixia.*

When we reflect that species extinct elsewhere must have survived locally, and add to these those local forms which owe their origin to *amixis*, we cease to be astonished at the enormous number of species of Lepidoptera which we find on the earth at the present day.
Eimer (trans.), Organic Evolution, p. 131.

amly (am'li), *n.* [Origin unknown.] The larva of the hellgrammite-fly, *Corydalis cornuta* (*Corydalus cornutus*). [Rhode Island.]

A. M. M. An abbreviation of *Artium Mechanicarum Magister*, Master of Mechanic Arts: a degree conferred by some institutions.

ammelide (am'e-lid), *n.* [*ammel-in* + *-ide.*] A monamide of cyanuric acid having the formula $(CN)_3(OH)_2NH_2$. It is formed from ammeline by heating the latter with sulphuric acid. Also called *melanurenic acid.*

ammeline (am'e-lin), *n.* [Metathetic form of *melamine.*] The diamide, $(CN)_3OH(NH_2)_2$, of cyanuric acid. It forms microscopic needles which are very difficultly soluble in water. It is a weak base.

ammine (am'in), *n.* See *metal-ammonia compounds*, under ★*ammonia.*

ammiolite (am'i-ō-līt), *n.* [Gr. *ἄμμιον*, cinnabar in its sandy state (< *ἄμμος*, sand), + *λίθος*, stone.] A mineral from mines in Chile, earthy in texture and of a red color: supposed to be an impure antimoniate of copper mixed with cinnabar.

ammodyte, *n.* **3.** In *bot.*, a plant growing habitually in sandy places.

ammonal (am'ō-nal), *n.* A high explosive mixture consisting of 3 parts of ammonium nitrate and 1 part of aluminium.

ammonia, *n.* The great value of ammonia as a fertilizer, chiefly in the form of ammonium sulphate, renders the question of its supply on a large scale one of much importance. Until recent years it was obtained mainly from the watery ammoniacal liquor which is a by-product of the manufacture of coal-gas for illuminating purposes.

This source of supply has been seriously threatened by the extension, especially in the United States, of the use of carbureted water-gas, in making which little or no ammonia is obtained. Notable improvements, however, have been made in methods for the recovery of ammonia from the waste gases of coke-ovens, shale-works, and blast furnaces, and very considerable amounts are now obtained from these previously neglected sources. One of the most interesting results secured with the aid of the high temperature of the modern electric furnace is the synthetical production of ammonia from the nitrogen of atmospheric air and the hydrogen of water. Carbon in the form of coke is mixed with lime and the mixture intensely heated in the presence of atmospheric nitrogen, giving rise to carbon-monoxid gas and calcium cyanamide ($CaCN_2$). The latter, heated with water under pressure, yields calcium carbonate and ammonia ($CaCN_2 + 3H_2O = CaCO_3 + 2NH_3$). It appears that cyanamide itself may serve, when used directly as a fertilizer, to furnish assimilable nitrogen to growing plants.—**Albuminoid ammonia,** the ammonia formed by the decomposition of organic matter when water, sewage, or other substances are distilled with an alkaline solution of potassium permanganate. The determination of albuminoid ammonia is used to secure information as to the amount of nitrogenous organic matter in potable waters or in sewage.—**Ammonia coil,** in *refrigeration,* a special kind of gas-piping bent into a coil and used in conveying and cooling ammonia.—**Ammonia condenser,** a large coil of pipe built up with the proper fittings, used in cooling and condensing hot ammonia gas as it comes from the compressor. Two types are in use. In one, called a *surface condenser,* the gas passes through the coil while cold water flows in a film over the outside surface of the pipes. In the other, called a *pipe condenser,* double pipes, one within the other, are built up as a coil, the ammonia gas traveling through the smaller inside pipe and the cold water flowing in the opposite direction through the larger pipe, cooling the ammonia gas and condensing it to a liquid which, when allowed to expand, may be used in making ice or cooling a cold-storage plant.—**Ammonia fittings,** couplings, elbows, tees, and other pipe-fittings of special shape, size, and weight adapted to pipes used in conveying ammonia as a liquid or a gas. See ★*pipe-fittings.* **Ammonia-nitrate process.** See ★*process.* **Ammonia-soda process,** the chief method by which at present carbonate of soda is made from common salt. Its essential feature is the action of ammonia and carbon dioxid upon strong brine under considerable pressure. Invented in practical form by E. Solvay.—**Ammonia type,** in *chem.,* the structure characteristic of the molecule of ammonia and analogous compounds, an atom of nitrogen or some other triad element united to three monad atoms or radicals of electropositive character. Thus trimethylamine, $N(CH_3)_3$, and tri-ethylphosphine, $P(C_2H_5)_3$, are compounds of the ammonia type.—**Aqua ammoniæ** (ammonia gas dissolved in water) is used by textile-colorists for neutralizing acids and when an alkali of milder character than caustic soda or potash is desired, as in the neutralizing of Turkey-red oil. It is also used as a fixing agent for certain metallic mordants.—**Mercuric chlorid and ammonia process.** See ★*process.*—**Metal-ammonia compounds,** in *chem.,* a large and complex series of substances formed by the union of ammonia in different proportions with the salts of certain metals, as platinum, cobalt, and copper, new compound radicals being thus produced. The term *ammine* (not to be confounded with *amine*) has been proposed for these substances.

ammoniater (a-mō′ni-ā-tèr), *n.* [★*ammoniate, v.* (< *ammonia*), + *-er*[1].] A substance which supplies ammonia to a compound fertilizer.

ammonioplatinic (a-mō″ni-ō-pla-tin′ik), *a.* Derived from ammonium and platinum.—**Ammonioplatinic chlorid,** ammonium chloroplatinate $(NH_4)_2PtCl_6$, the double chlorid of platinum and ammonium: a sparingly soluble yellow crystalline precipitate often used as the form in which to determine, in chemical analysis, ammonia or its constituent nitrogen.

ammonite[2] (am′ō-nīt), *n.* [*ammon(ium)* + *-ite*[2].] A name applied to certain explosive materials, patented by Favier, containing ammonium nitrate with other substances, chiefly nitro- or dinitro-naphthalene.

ammoniticone (am-mō-nit′i-kōn), *n.* and *a.* [*Ammonites* + *cone.*] **I.** *n.* A cone-shaped shell coiled in one plane, as in an ammonite; the shell of an ammonite, ceratite, or goniatite.

II. *a.* Having a close-coiled symmetrical shell, as the ammonoid cephalopods.

ammonitiform (am-ō-nit′i-fôrm), *a.* [NL. *ammonites,* ammonite, + L. *forma,* form.] Resembling an ammonite in shape, as the young of certain *Gasteropoda.*

ammonitoid (a-mon′i-toid), *a.* and *n.* [*ammonit(e)* + *-oid.*] **I.** *a.* Related or belonging to the ammonites or *Ammonoidea;* resembling an ammonite. *Zittel* (trans.), Textbook of Paleon., I. 547.

II. *n.* An ammonite (which see) or ammonoid.

ammonium, *n.*—**Ammonium bichromate,** ammonium pyrochromate ($(NH_4)_2Cr_2O_7$). By heating this salt nitrogen gas may be obtained, in accordance with the reaction $(NH_4)_2Cr_2O_7 = Cr_2O_3 + 4H_2O + N_2$. **Ammonium carbonate,** $(NH_4)_2CO_3$, a commercial salt valuable in wool-scouring and also used in medicine and in common smelling-salts.—**Ammonium chlorid,** sal ammoniac, NH_4Cl. It is usually prepared from ammonium sulphate by heating with common salt, the ammonium chlorid subliming, and is used to some extent in the exciting fluid of the Leclanché galvanic cell, in the production of mordants, etc. It is obtained on a great scale as a by-product of the Solvay or ammonia process for making soda from common salt—in this case used to recover ammonia, which is again applied in a renewal of the process.—**Ammonium chloroplatinate.** See ★*ammonioplatinic chlorid.* **Ammonium hydrate.** See ★*ammonium hydroxid.* **Ammonium hydroxid,** in *chem.,* the form in which ammonia is assumed to exist when dissolved in water, $NH_4.HO$, resulting from the action of NH_3 and H_2O upon each other. The solution, the ordinary liquid ammonia of commerce, behaves in many respects like the solution of caustic soda ($NaHO$) or caustic potash (KHO), but decomposes, on being heated, into gaseous ammonia and water. Recent investigations of the physical properties of the solution make it very doubtful whether the hydroxid has any real existence. Often improperly called *ammonium hydrate.*—**Ammonium magnesium phosphate,** in *chem.,* a slightly soluble crystalline salt ($NH_4MgPO_4.6H_2O$) frequently resorted to in chemical analysis as the form in which to separate magnesium from other substances. It is often met with as a constituent of urinary calculi.—**Ammonium nitrate,** in *chem.,* the salt formed by the union of ammonia and nitric acid ($NH_3 + HNO_3 = NH_4.NO_3$), chiefly noteworthy as the source from which, by cautiously heating it somewhat above its melting-point, nitrogen monoxid or nitrous oxid, the so-called laughing-gas, is prepared for use as a gaseous anesthetic, most commonly by dentists. **Ammonium persulphate,** a salt ($(NH_4)_2S_2O_8$) sparingly used in the development of photographic pictures.—**Ammonium phosphomolybdate,** in *chem.,* a salt of the composition $(NH_4)_3PO_4.12MoO_3$, appearing as a bright-yellow crystalline precipitate insoluble in a nitric-acid solution of ammonium molybdate. It is very commonly used in analytical processes as the form in which to separate the radical of orthophosphoric acid, for the determination of this radical or of the phosphorus it contains, and is of great value in connection with the analysis of fertilizers and of steel.—**Ammonium picrate,** a substance crystallizing in bright-yellow needles, burning on the application of flame, but exploding by shock less easily than other picrates: used in the preparation of Brugère's and Abel's powders.—**Ammonium platinochlorid.** Same as ★*ammonioplatinic chlorid.*—**Ammonium sulphate,** in *chem.,* the salt formed by the union of ammonia and sulphuric acid ($2NH_3 + H_2SO_4 = (NH_4)_2SO_4$). It is prepared on a larger scale than any other ammonium salt, chiefly for use as a fertilizer or an ingredient of mixed fertilizers. See ★*ammonia.*—**Metal-ammonium compounds,** in *chem.,* substances in which a metal may be viewed as replacing part or all of the hydrogen of the radical ammonium: as, dimercurammonium chlorid, $NH_{g_2}Cl$, which may be considered as ammonium chlorid, NH_4Cl, with the 4 atoms of monad hydrogen replaced by 2 atoms of dyad mercury.

ammono-acid (a-mō″nō-as′id), *n.* A compound which in solution in liquid ammonia conducts itself in a manner analogous to the conduct of ordinary acids in water: as, acetamide, CH_3CONH_2, which reacts with the ammono-base, KNH_2, giving potassium acetamide, CH_3CONHK, and ammonia.

ammono-base (a-mō′nō-bās″), *n.* A compound which conducts itself in a solution in liquid ammonia as an ordinary base conducts itself in aqueous solution and which contains the group $—NH_2$ in place of the hydroxyl, OH, of an ordinary base: as, potassium amide, KNH_2.

ammono-basic (a-mō-nō-bā′sik), *a.* Designating a compound related to an ammono-salt in a manner analogous to the relation of a basic salt to the salt from which it is derived: that is, an ammono-salt in which a part of the acid groups have been replaced by NH_2 as OH replaces acid groups in the formation of ordinary basic salts.

ammonoid, *n.* **II.** *a.* Pertaining to or having the characteristics of the *Ammonoidea.*

ammonol (am′ō-nōl), *n.* The trade-name of a remedy said to consist of acetanilid, sodium bicarbonate, and ammonium carbonate. It is antipyretic and analgesic.

ammonolysis (am-ō-nol′i-sis), *n.* The decomposition of an ammono-salt in liquid ammonia in a manner analogous to the hydrolysis of salts in water.

ammono-salt (a-mō′nō-sâlt″), *n.* A compound formed together with ammonia by the action of an ammono-acid on an ammono-base in a solution in liquid ammonia.

Ammon's horn. Same as *cornu Ammonis.*

ammotherapy (am-ō-ther′a-pi), *n.* [Gr. ἄμμος, sand, + θεραπεία, medical treatment.] The employment of sand-baths in the treatment of disease.

ammunition-conveyer (am-ū-nish′on-kon-vā″èr), *n.* In a man-of-war, a mechanical appliance, moved by power, for transporting ammunition horizontally from the magazines to the bottom of the ammunition-hoists.

ammunition-hoist (am-ū-nish′on-hoist), *n.* A mechanical contrivance, worked by hand or power, by means of which ammunition is lifted from the magazines or passages in the lower parts of a war-ship and delivered in the vicinity of the guns, or on the decks upon which they are placed.

ammunition-passage (am-ū-nish′on-pas″āj), *n.* A passage arranged in the lower parts of a war-ship, beneath the protective deck, through which ammunition is transported from the magazines to the places from which it is sent up through the decks to the guns above.

ammunition-room (am-ū-nish′on-rōm), *n.* Any compartment on a war-ship in which ammunition is stored for use: usually made water-tight and provided with means for flooding with water in case of fire on board. The term includes magazines, shell-rooms, and fixed-ammunition rooms.

ammunition-scuttle (am-ū-nish′on-skut″l), *n.* In a man-of-war, a scuttle in a deck or in the bulkhead of a magazine through which ammunition is passed on its way to the guns. See *scuttle*[2], *n.*, 1.

Amnemonic agraphia. See ★*agraphia.*

amnesia, *n.*—**Auditory amnesia,** word-deafness.

Amnesic aminia. See ★*aminia.*

Amnigenia (am-ni-jē′ni-ä), *n.* [NL., < L. *amnis,* a river, + *-genus,* -born.] A genus of extinct pelecypod mollusks or clams allied to the family *Unionidæ* and believed to be of fresh- or brackish-water habitat. *Amnigenia Catskillensis* is a characteristic fossil in the brackish-water Oneonta sandstones lying at the base of the Catskill formation.

amnio-allantoic (am″ni-ō-al-an-tō′ik), *a.* Concerning or pertaining to the presence of an amnion and an allantois.

amnion, *n.* **5.** In echinoderms, the sac in the pluteus larva inclosing the developing echinus.

True amnion, the inner of the two embryonic envelops in reptiles, birds, and mammals, as opposed to the outer or false amnion.

amniote (am′ni-ōt), *a.* and *n.* [NL. *amniotus,* < *amnion,* amnion.] **I.** *a.* Possessing an amnion; amniotic.

II. *n.* A member of the *Amniota.*

Amniotic band, a cord-like formation on the inner surface of the amnion, sometimes constricting a limb of the fetus.—**Amniotic cord,** in ruminants, a band of tissue persisting for a time after the closure of the amnion and chorion, and connecting these two structures.—**Amniotic dropsy.** See ★*dropsy.*

amniotitis (am″ni-ō-tī′tis), *n.* [NL., irreg. (after *amniote*) < Gr. ἀμνίον, amnion, + *-itis.*] Inflammation of the amnion.

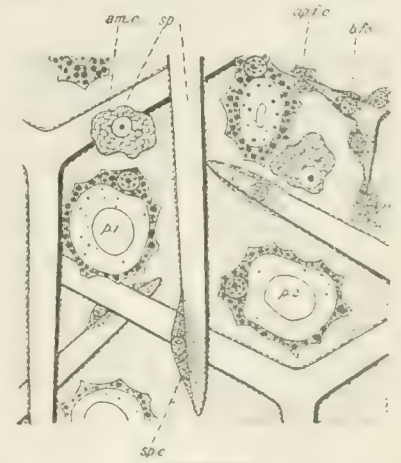
Amœba coli or **dysenteriæ,** an amœboid organism believed to be causative of one form of dysentery.

amœbiasis (a-mē-bi-ā′sis), *n.* Morbid condition induced by the presence of amœbæ.

amœbic (a-mē′bik), *a.* [*amœba* + *-ic.*] Of, pertaining to, or characterized by the presence of *amœbæ.* Also *amebic.*—**Amœbic colitis,** inflammation of the large intestine caused by the presence of *Amœba coli* or *dysenteriæ;* amœbic dysentery. *Jour. Exper. Med.,* VI. 167.—**Amœbic dysentery,** a form of dysentery due to the presence of *Amœba coli* or *dysenteriæ* in the intestine. See *dysentery. Jour. Exper. Med.,* VI. 89.

Amœbida (a-mē′bi-dä), *n. pl.* [NL., < *Amœba* + *-ida.*] An order of *Rhizopoda.* They have lobose pseudopodia, are with or without a shell, have one or more nuclei, and usually have a contractile vacuole. It includes the families *Amœbidæ, Arcellidæ,* and *Euglyphidæ.*

amœbocyte (a-mē′bō-sīt), *n.* [NL. *amœba* +



(Gr. κύτος, a hollow (a cell).] An amœboid cell or corpuscle, usually of rounded or lobose shape (frequently packed with granules or sometimes with particles of pigment), found everywhere among the cells and tissues and in the cavities of various invertebrate animals. Such cells are known also, from their vagrant habits, as *wandering cells*. In some organisms, as sponges, they give rise to the genital products, and they are also probably concerned with the functions of nutrition and excretion. Also spelled *amœbocyte*.

amœbocytogenous (a-mē-bō-si-toj'e-nus), *a.* [NL., < *amœba* + Gr. κύτος, a hollow (a cell), + -γενής, -producing.] In *pathol.*, relating to or producing amœbocytes.

Amœbogeniæ (a-mē-bō-jen'i-ē), *n. pl.* [NL., < *amœba* + *-genus*, producing.] A group of *Sporozoa* having amœboid sporozoites: equivalent to *Myxosporidia*.

Amœbosporidia (a-mē-bō-spō-rid'i-ä), *n. pl.* [NL., < *amœba* + Gr. σπορά, seed, + *-idia*.] A group of *Gregarinida* which have a multinucleate amœboid form and increase by direct division or by falciform young coming from spores. They are found in the Malpighian tubules of some beetles. Same as ★*Schizogregarinæ*.

amok (ä'mōk), *a.* and *n.* [Malay *āmok*, *āmoq*, pron. ä'mōk or ä'mōh: see *amuck*.] **I.** *a.* Same as *amuck* (but a form nearer the original). See *amuck*.

II. *n.* An affray in which one or more persons (Malays) run amuck. See the quotation.

An *amok* took place last night, by a Malay, which resulted in the loss of his own life and the wounding of 16 persons.
Straits Times, quoted in Giles's Glossary of Reference.

amok (ä'mōk), *v. i.* To run amuck (which see).

amora (ạ-mō'rä), *n.*; pl. *amoraim* (am-ō-rä'im). [Heb. *'amōra*, expounder, < Heb. Aram. *'amar*, say, speak.] **1.** An officer who stood beside a public teacher or lecturer and announced in a loud voice, in popular language, what the teacher had just uttered in a low voice in academic language: otherwise called 'translator' or 'interpreter.'—**2.** One of the expounders of the Mishnah, successors of the tannaim. The expositions of these rabbis and the Mishnah constitute the oral law called *Talmud*. The period of the amoraim began after the death of Rabbi Judah ha-Nasi (the Prince Judah), about 200 A. D., and extended to about 500 A. D.

amoral (ā-mor'al), *a.* [*a-*[18] + *moral*.] Devoid of moral quality; neither moral nor immoral; non-moral. *R. L. Stevenson*, in Longman's Mag., I. 70. *N. E. D.*

amorfous, *a.* A simplified spelling of *amorphous*.

Amorgan (a-môr'gạn), *a.* [L. *Amorgus*, *Amorgos*, < Gr. Ἀμοργός.] Of or pertaining to Amorgos, one of the Cyclades, a group of islands in the Ægean Sea, or to an ancient civilization, preceding that of Mycenæ, shown by numerous remains which have been found by recent excavators. Amorgos is noted as the residence of the Greek poet Simonides (7th century B. C.) and for the production in ancient times of a very fine kind of flax which was woven into garments and dyed red.

The material employed, and the simple form of the vase, seem to show that it belongs to the later prae-Mycenean or *Amorgan* period.
A. J. Evans, in Jour. Hell. Studies, XVII. 350.

Amorgian (a-môr'gi-ạn), *a.* Same as *Amorgan*.

amorism (am'ō-rizm), *n.* [L. *amor*, love, + *-ism*.] Love-making tendencies or disposition; amatory intrigue; gallantry.

Full of the romance and colour and sparkle of that curious life—half old-world Spanish, half topsy-turvy Oriental in its fatalism and passionate *amorism*—which was to be found in California.
Athenæum, Jan. 17, 1903, p. 77.

amorist, *n.* **2.** One who is given to writing love-sonnets or -songs.

The Angel determines all conceptions of the poet, who is imagined as a mild and amiable *amorist*.
Athenæum, April 1, 1905, p. 390.

amoristic (am-ō-ris'tik), *a.* [*amorist* + *-ic*.] Amatory. *The Academy*, April 9, 1881.

Amorphophallus (a-môr-fō-fal'us), *n.* [NL., < Gr. ἄμορφος, shapeless, + φαλλός, phallus.] A giant plant of the family *Araceæ* from the eastern tropics, grown as a curiosity in hothouses. It has immense spathes containing many ill-smelling flowers. The three most commonly cultivated species are *A. Rivieri* (commonly called ★*devil's-tongue*), *A. campanulatus*, and *A. giganteus*. See cut in next column.

amorphophyte (ạ-môr'fō-fīt), *n.* [Gr. ἄμορφος, shapeless, + φυτόν, a plant.] A plant with flowers of irregular or anomalous form. *Necker*.

amorphose (ạ-môr'fōs), *a.* Amorphous. [Rare.]

Amorphophallus campanulatus.
(After figure in Engler and Prantl's "Pflanzenfamilien.")

amorphozoary (ạ-môr-fō-zō'ä-ri), *n.* [Gr. ἄμορφος, formless, + NL. *zoarium*, q. v.] An irregular or shapeless animal growth, as a sponge or a colonial cœlenterate.

amorphus (ạ-môr'fus), *n.*; pl. *amorphi* (-fī). [NL., < Gr. ἄμορφος, shapeless.] In *teratol.*, a mole or shapeless monster.

amortisseur (ä-môr-ti-sèr'), *n.* [F., < *amortir*, deaden: see *amortize*.] In *elect.*, an induction motor secondary winding located in the pole-faces of the magnet-field of electric machines to dampen any tendency to oscillation. It usually consists of a 'squirrel cage,' or number of copper bars passing through the field-iron and connected with each other by end-rings.

amortizable (ạ-môr'ti-zạ-bl), *a.* That can be or is intended to be amortized or extinguished: as, a debt *amortizable* in ten years.

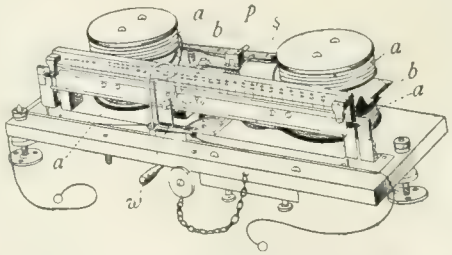
amotion, *n.* **3.** In *law*: (*a*) An unlawful taking of chattels. (*b*) The act of turning out an owner of an estate in land before the termination of his estate. (*c*) In corporations, removal of an official of a corporation before the expiration of the term for which he was appointed.

amoyong (ä-mō'yong), *n.* [Tagalog **amoyong*, Bisaya *amoyon*, < Tagalog *amoy*, scent.] A name in the Philippines of *Fissistigma fulgens* (*Melodorum fulgens* of Hooker and Thompson), a large woody climber or small tree of the custard-apple family, having tawny-orange colored flowers and pod-like fruit inclosing a number of cinnamon-colored, somewhat aromatic seeds, which are administered medicinally in the Philippines under the name of *grains of paradise*.

ampelidaceous (am-pel-i-dā'shius), *a.* [NL. *Ampelidace(æ)* + *-ous*.] Belonging to the *Ampelidaceæ* (that is, the *Vitaceæ*) or vine family.

amperage (am-pār'ạj), *n.* The strength of an electrical current measured in amperes.

ampere-balance (am-pār'bal"ạns), *n.* An instrument for measuring electric currents by



Ampere-balance.

a, *a*, fixed coils, between which are moving coils, *b*, *b*, brought to a balance by sliding weight, *w*, on which is index, *p*, indicating on scale, *s*.

means of the attraction between a fixed coil, through which the current flows, and a movable balanced coil which forms a part of the same circuit.

ampere-hour (am-pār'our), *n.* In *elect.*, a unit of quantity, the electricity transferred by a current of one ampere in one hour. It is equal to 3,600 coulombs.

Ampère's frame, rule. See ★*frame*, ★*rule*.

ampere-turns (am-pār'tèrnz"), *n. pl.* A measure of the magnetizing power, or magnetomotive force, of a current of electricity in a conducting-coil, equal to the product of a number of turns in the coil by the current (in amperes) passing through it.

ampharkyochrome (am-fär'ki-ō-krōm), *n.* [Gr. ἀμφί, on both sides, + ἄρκυς, net, + χρῶμα, color.] In *neurol.*, a cell in which the nodal points of the nucleus are connected by deeply staining bands or bridges.

ampheclexis (amf-ek-lek'sis), *n.* [Irreg. < Gr. ἀμφί, on both sides, + ἔκλεξις, selection: see *eclectic*.] Sexual selection on the part of both male and female. Compare ★*gyneclexis* and ★*andreclexis*. *Ward*, Pure Sociol., p. 361.

amphiaster, *n.* **3.** [*l. c.*] A sponge-spicule consisting of a straight axis with a whorl of rays near each end.

amphibia, *n. pl.*, **2.** Boulinger divides the *Amphibia* into four orders, *Stegocephalia*, *Apoda*, *Caudata*, and *Ecaudata*, the last three being the same as the *Gymnophiona*, *Urodela*, and *Anura* of other writers, but bearing the names originally applied to them. Recent researches emphasize the distinctness of the *Stegocephalia* and show that they approach reptiles in some structural features. On this account it has been proposed by Seeley to place the two in one class, while Credner would unite the *Stegocephalia* with the *Rhynchocephalia*. The order *Stegocephalia* is variously divided into from 2 to 5 suborders, mainly on characters furnished by the vertebræ.

amphibichnite (am"fi-bik'nīt), *n.* [Irreg. < Gr. ἀμφίβιος, amphibious, + ἴχνος, track: see *ichnite*.] A fossil marked by tracks of amphibia.

amphibole, *n.*—**Soda amphibole**, a variety of amphibole, or a species of the amphibole group, characterized by the presence of sodium as a prominent constituent: the species riebeckite, glaucophane, arfvedsonite, and barkevikite belong here.

amphibolic[1], *a.* **2.** Ambiguous; of a doubtful nature.—**Amphibolic fistula**, an opening made in the gall-bladder of an animal for the purpose of obtaining bile for physiological study. The common bile-duct is left intact, so that when the external opening is plugged the bile may flow away through the duct.

amphibolitic (am-fib-ō-lit'ik), *a.* [*amphibolite* + *-ic*.] In *petrog.*, same as *amphibolic*. *Geikie*, Text-book of Geology, p. 804.

amphibolization (am"fi-bōl-i-zā'shọn), *n.* [*amphibolize* + *-ation*.] In *geol.*, the metamorphic process by which minerals of the amphibole group are produced in rocks by the alteration of other minerals.

amphibrachic (am-fi-brak'ik), *a.* [*amphibrach* + *-ic*.] Of or pertaining to the amphibrach; characterized by amphibrachs. *Scripture*, Elements of Experimental Phonetics, p. 510.

amphicarpium (am-fi-kär'pi-um), *n.*; pl. *amphicarpia* (-ä). [NL., < Gr. ἀμφί, on both sides, + καρπός, fruit.] In *bot.*, an archegonium that persists after fertilization as a fruit-envelop.

amphicarpogenous (am-fi-kär-poj'e-nus), *a.* [Gr. ἀμφί, on both sides, + καρπός, fruit, + -γενής, -producing.] In *bot.*, developing the fruit above ground and subsequently burying it, as the peanut.

Amphicerus (am-fis'ẹ-rus), *n.* [NL. (Le Conte, 1861), < Gr. ἀμφικερως, two-horned.] A genus of bostrychid beetles peculiar to North America. *A. bicaudatus* is known in the United States as the apple-twig borer. It frequently injures apple-orchards by boring into the small twigs and causing them to break off. It also injures the canes of the grapes.

Amphichelydia (am" fi-ke-lid'i-ä), *n. pl.* [NL., < Gr. ἀμφί, on both sides, + χέλυς (stem χελυ-, assumed to be χελυδ-), a tortoise.] A name introduced by Lydekker and redefined by Baur as a suborder to include fossil turtles or chelonians having free nasals, a squamosoparietal arch, pelvis not ankylosed to the carapace or plastron, and an intergular shield. At present it embraces only a single family, the *Pleurosternidæ*, containing several generalized forms from the Jurassic, Cretaceous, and Tertiary rocks.

amphicondylous (am-fi-kon'di-lus), *a.* [Gr. ἀμφί, on both sides, + κόνδυλος, a joint or knob (see *condyle*).] Having two condyles or articular facets, as the skull of mammals and batrachians: contrasted with ★*monocondylous*.

amphicotyledon (am"fi-kot-i-lē'don), *n.* [NL., < Gr. ἀμφί, on both sides, + NL. *cotyledon*.] The cotyledons when united so as to form a cup. *De Vries*.

amphicreatinine (am-fi-krē-at'i-nin), *n.* [*amphi-* + *creatinine*.] A base, $C_8H_{19}N_7O_4$, found in small amount in lean meat. It forms bright-yellow crystals and resembles creatine in its properties.

amphictyonian (am-fik-ti-ō′ni-ạn), *a.* Same as *amphictyonic.*

Amphicyonidæ (am″fi-si-on′i-dē), *n. pl.* [NL., ⟨ *Amphicyon* + *-idæ.*] A family of *Carnivora* in which the characters of the teeth and base of skull are those of the dogs, while the structure of the limbs and the plantigrade feet are like those of the bears: found in the Tertiary rocks of North America, Europe, and Asia.

amphidepula (am-fi-dep′u-lä), *n.*; pl. *amphidepulæ* (-lē). [*ampho-* + *depula.*] In *embryol.*, a phase of the metadepula stage characteristic of the cyclostomes, ganoids, *Dipnoi*, and *Amphibia* among vertebrates. *Haeckel.*

amphidesmous (am-fi-des′mus), *a.* [Gr. ἀμφί, on both sides, + δεσμός, a band.] Having a ligament on each side.

amphidetic (am-fi-det′ik), *a.* [Gr. ἀμφί, on both sides, + *δετός, bound, ⟨ δεῖν, bind.] In the pelecypod mollusks, extending on both sides of the beak: noting a type of ligament.

amphidetically (am-fi-det′i-kal-i), *adv.* In an amphidetic manner; with the ligament on both sides of the beak, as in some mollusks.

Amphidiscophora (am″fi-dis-kof′ō-rạ), *n. pl.* [NL., ⟨ *amphidiscus, amphidisk, + Gr. -φορος, ⟨ φέρειν, bear.] An order of lyssacine, hexactinellidan sponges having amphidisks always present in the limiting membranes and no hexasters in the parenchyma. It includes the family *Hyalonematidæ.*

amphidiscophoran (am″fi-dis-kof′ō-rạn), *a.* and *n.* **I.** *a.* Pertaining to or having the characteristics of the *Amphidiscophora.*

II. *n.* Any member of the *Amphidiscophora.*

Amphidozotherium (am″fi-dō-zō-thē′ri-um), *n.* [NL., appar. a misprint for **Amphidoxotherium.* ⟨ Gr. ἀμφίδοξος, uncertain, + θηρίον, a wild beast.] A genus of fossil moles from the Tertiary phosphorites of Quercy, France, supposed to be allied to the existing *Urotrichus* of Japan and North America.

amphidromic (am-fi-drom′ik), *a.* [Gr. ἀμφιδρομος, running around: see *amphidromia.*] Pertaining to cotidal lines arranged radially about a no-tide point.

amphigean, *a.* 3. In *bot.*, bearing flowers from a rootstock.

amphigenetic (am′fi-jē-net′ik), *a.* [Gr. ἀμφί, on both sides, + *genetic.*] By means of both sexes. Amphigenetic reproduction is sexual reproduction.

Amphigenia (am-fi-jē′ni-ạ), *n.* [NL.: see *amphigenous.*] A genus of extinct brachiopods belonging to the family *Pentameridæ.* The shells are of large size, and the ventral valve has a small spondylium or pedicle-pit resting on a very short vertical septum. These shells abounded in Devonian seas.

amphigenic (am-fi-jen′ik), *a.* [Gr. ἀμφιγενής, of both kinds, + *-ic.*] In *petrog.*, a term applied to sedimentary rocks which are partly of organic and partly of inorganic origin, such as numerous silicious and calcareous deep-sea deposits. Also *amphogenic.*

amphigenite (am-fij′e-nīt), *n.* [*amphigene* + *-ite*[2].] In *petrog.*, a name sometimes given, especially in France and Italy, to igneous rocks rich in leucite.

amphigonia (am-fi-gō′ni-ạ), *n.* [NL.] Same as *amphigony.*

Amphigonic heredity. See ★*heredity.*

amphigonium (am-fi-gō′ni-um), *n.*; pl. *amphigonia* (-ạ). [NL., ⟨ Gr. ἀμφί, on both sides, + γόνος, generation.] That stage of the malarial parasite which is passed in the mosquito. *Grassi.* Compare ★*monogonium.*

amphilepsis (am-fi-lep′sis), *n.* [NL., ⟨ Gr. ἀμφί, on both sides, + λῆψις, a taking, ⟨ λαβεῖν, take.] The transmission to an offspring and to its descendants of characteristics of both parents: contrasted with ★*monolepsis.*

amphimesodichotriæne (am-fi-mes-ō-dī-kō-trī′ēn), *n.* [Gr. ἀμφί, at both ends, + μέσος, middle, + δίχα, in two, + τρίαινα, a trident.] In the nomenclature of the spicular elements of sponges, a form of triæne having a thick shaft or rhabd from near the middle of which arise symmetric sets of branches by threes. It is derived from the tetraxial type of spicular structure. Also called *amphiaster.* See ★*amphiaster*, 3, and *sponge-spicule.*

amphimixis (am-fi-mik′sis), *n.* [NL., ⟨ Gr. ἀμφί, on both sides, + μῖξις, a mingling.] In *biol.*, the mingling of the hereditary tendencies of the two parents in sexual reproduction, considered abstractly, as distinct from *amphigony* or the reproductive process.

Although the study of heredity is greatly complicated by *amphimixis*, this mingling of the hereditary tendencies of two parents, and even the process of sexual reproduction which accompanies it, afford us a much deeper insight into the process of heredity than we could ever have obtained in any other way.

Weismann (trans.), Germ-plasm, p. 21.

Amphinesian (am-fi-ne′siạn), *a.* and *n.* [Gr. ἀμφί, on both sides, + νῆσος, island.] **I.** *a.* Of or pertaining to the aborigines of Indonesia, Polynesia, and Micronesia, considered as one racial division of mankind.

II. *n.* A member of the Amphinesian race.

Amphineura, *n. pl.* 2. A class or order of marine *Mollusca.* They have a bilaterally symmetrical elongated body, with terminal mouth and anus; the shell either lacking or consisting of 8 median pieces; mantle not divided into paired lobes; ctenidia absent or variously arranged; and the odontophore either present or lacking. The class includes the *Chitonidæ*, *Neomeniidæ* and *Chætodermatidæ.*

amphineurous (am-fi-nu′rus), *a.* [Gr. ἀμφί, on both sides, + νεῦρον, sinew, nerve.] Having two lateral and two ventral nerve-cords, as the chitons; having the characteristics of the *Amphineura.*

amphiodont (am′fi-ọ-dont), *a.* [Gr. ἀμφί, on both sides, + ὀδούς, tooth.] In *entom.*, having the dentition of the jaws intermediate between the teleodont and priodont forms: applied to certain stag-beetles of the family *Lucanidæ.*

amphiœcious (am-fi-ē′shus), *a.* [Gr. ἀμφί, on both sides, + οἶκος, a dwelling.] In *ichth.*, capable of living in either salt or fresh water.

Amphion (am-fī′on), *n.* [NL., ⟨ Gr. Ἀμφίων, a name in poetic myth.] A generic name introduced by Pander for trilobites characterized by their broad and short cephalon, 15 to 18 thoracic segments, and pygidial ribs extended into spines. These trilobites are of Silurian age.

amphiont (am′fi-ont), *n.* [Gr. ἀμφί, on both sides, + ὤν (ὀντ-), a being.] A zygospore or sporont formed by the union of two individuals: specifically applied to one of the two stages of alternation of generations in the life-history of *Coccidia.* *Haeckel.* Compare ★*monont.*

amphiox (am′fi-oks), *n.* [Gr. ἀμφί, at both ends, + ὀξύς, sharp.] In the nomenclature of the spicular elements of sponges, a slender spindle-shaped rod of monaxial type, sharp at both ends.

Amphioxides (am-fi-ok′si-dēz), *n.* [NL., ⟨ *Amphioxus* + Gr. *-ιδης* (see *-ides*).] A genus of lancelets, of the family *Branchiostomatidæ*, characterized by the absence of cirri about the mouth. *A. pelagicus*, found in the open sea off Hawaii, is the typical species.

amphipeptone (am-fi-pep′tōn), *n.* [*amphi-* + *peptone.*] In the sense of Kuehne, the end-product of peptic digestion, a hypothetical mixture of anti- and hemi-peptone. Also *amphopeptone.*

amphiplatyan (am-fi-plat′i-ạn), *a.* [Gr. ἀμφί, on both sides, + πλατύς, flat, + *-an.*] Of vertebræ, having both of the articular faces of the centra flat or plane. *Owen.*

amphipneustic (am-fip-nūs′tik), *a.* [Gr. ἀμφί, on both sides, + πνευστός, breathing.] Breathing at both ends: applied to certain dipterous larvæ having spiracles at each end of the body connected by large tracheal trunks. *Cambridge Nat. Hist.*, VI. 450.

amphipositive (am-fi-poz′i-tiv), *a.* In *photog.*, noting a process invented by Sabatier in which the picture is the result of a superposition or entangling of two images, one negative and the other positive. It is based upon the fact that certain substances, when poured in solution upon a negative which is in course of formation, exercise upon it, whatever be the developing agent otherwise employed, a disturbing and substituting action such that the development of the negative is stopped at the moment of contact, and the chemical combination which follows this contact gives rise to a positive. The substances which exercise this power are probably numerous. Lime-water, solutions of ammonia, and silver nitrate possess it in the highest degree. They may be applied after the use of pyro-developer.

Amphiprion (am-fip′ri-on), *n.* [NL., ⟨ Gr. ἀμφί, on both sides, + πρίων, a saw.] A genus of damsel-fishes of the family *Pomacentridæ*: found on the coral reefs of the Pacific, and remarkable for their varied coloration.

amphipyrenin (am-fi-pī-rē′nin), *n.* [Gr. ἀμφί, on both sides, + πυρήν, stone of a fruit (nucleus), + *-in.*] In *bot.*, a substance, related to pyrenin, forming the nuclear membrane in the cell. *Schwarz*, 1887.

Amphisorex (am-fi-sō′reks), *n.* [NL., ⟨ Gr. ἀμφί, about, near, + L. *sorex*, a shrew.] A genus representing the *Soricidæ*, or shrews, found fossil in the Quercy phosphorites of Oligocene age.

amphispermous (am-fi-sper′mus), *a.* [Gr. ἀμφί, on both sides, + σπέρμα, seed.] In *bot.*, having the seed closely invested by the pericarp without modification of its form, as in an achenium.

Amphisphæria (am-fi-sfē′ri-ạ), *n.* [NL. (Cesati and De Notaris, 1863), ⟨ Gr. ἀμφί, on both sides, + σφαῖρα, sphere.] A genus of sphæriaceous fungi having mostly superficial scattered perithecia. The spores are two-celled and dark-colored. The species are numerous and occur chiefly on dead wood.

Amphisphæriaceæ (am″fi-sfē′ri-a′sē-ē), *n. pl.* [NL., ⟨ *Amphisphæria* + *-aceæ.*] A family of pyrenomycetous fungi, typified by the genus *Amphisphæria.*

amphispore (am′fi-spōr), *n.* [Gr. ἀμφί, on both sides, + σπορά, a spore.] A unicellular spore occurring in certain species of *Puccinia*, resembling a uredospore in its mode of germination, but requiring a period of rest before it will germinate. Amphispores are found in *Puccinia rexans* and *P. Tripsaci.*

Amphistegina (am′fi-stē-jī′nạ), *n.* [NL., ⟨ Gr. ἀμφί, on both sides, + στεγή, a roof, + *-ina.*] A genus of calcareous foraminifers, of the family *Nummulitidæ*, having a lenticular test spirally enrolled and chambered: very abundant in the Miocene Tertiary.

Amphistichus (am-fi-stik′us), *n.* [NL., ⟨ Gr. ἀμφί, on both sides, + στίχος, a line.] A genus of surf-fishes, of the family *Embiotocidæ*, found off the coast of California. *A. argenteus* is the common species.

amphistrongyle (am-fi-stron′jīl), *n.* [Gr. ἀμφί, at both ends, + στρογγύλος, round.] In the nomenclature of the spicular elements of sponges, a short monaxial rod with rounded ends. See *sponge-spicule.*

amphistyly (am-fis′ti-li), *n.* [*amphistyl(ic)* + *-y*[3].] The state or condition of being amphistylic, or of having (as some sharks) the mandibular arch attached to the skull by a ligament and but slightly supported by the hyoid.

amphithecium (am-fi-thē′sium), *n.*; pl. *amphithecia* (-siạ). [NL., ⟨ Gr. ἀμφί, on both sides, + θήκη, case.] In *bot.*, the layer of cells at first surrounding the endothecium in the capsule of a moss.

amphiton (am′fi-ton), *n.* [Said to be ⟨ Gr. ἀμφί, at both ends, + τόνος, a rope.] In the nomenclature of the spicular elements of sponges, a monaxial pencil-like rod with abruptly sharpened ends. See *sponge-spicule.*

amphitriæne (am-fi-trī′ēn), *n.* [Gr. ἀμφί, at both ends, + τρίαινα, a trident.] A name given to a form of skeletal element in the silicious sponges which presents the appearance of a vertical rod bearing a trident at each end: regarded as a modification of the tetraxial type of spicule.

amphitriænic (am″fi-trī-ē′nik), *a.* [*Amphitriæne* + *-ic.*] Of the nature of an amphitriæne.

amphitrichous (am-fi-trī′kus), *a.* [Gr. ἀμφί, on both sides, + θρίξ (τριχ-), hair.] Provided with a flagellum at each extremity.

amphitrider (am-fi-trī′dėr), *n.* [Gr. ἀμφί, at both ends, + τρίδειρος, three-necked (see *trider*).] In the nomenclature of the spicular elements of sponges, a trider in which the end of the principal axis is developed into a cladome. Analogous to ★*amphitriæne* (which see). See also *sponge-spicule.*

amphitrochal (am-fit′rō-kạl), *a.* [*amphitrocha* + *-al.*] Pertaining to or resembling amphitrocha.

amphityle (am′fi-tīl), *n.* [Gr. ἀμφί, at both ends, + τύλος, a knob.] In the nomenclature of the spicular elements of sponges, a slender, straight, monaxial rod with swollen ends. See *sponge-spicule.*

amphitypy (am′fi-tī-pi), *n.* The character of exhibiting both types. See the extract.

In the arrangement of the reproductive organs one finds the double condition designated sexual *amphitypy*, in which one individual is, as it were, the mirror image of the other. Usually one can be designated as having the normal arrangement but the relative frequency may be such that neither can be said to be more typical than the other. *Buck*, Handbook of Med. Science, VII. 863.

amphivasal (am-fi-va′sal), *a.* Of or pertaining to the presence of concentric fibrovascular bundles.

Among the Cyperaceæ it has been found that *amphivasal* bundles occur in practically all the nodes of plants bearing well-developed leaves. *Science*, Jan. 27, 1905, p. 140.

amphogenic (am-fo-jen'ik), *a.* Same as ★*amphogenous.*

amphopeptone (am-fo-pep'tōn), *n.* See ★*amphopeptone.*

amphophil (am'fō-fil), *a.* [Gr. ἀμφό-, both, + φίλος, loving.] Noting granules, in certain leucocytes, which have an affinity for both acid and basic dyes.

amphophilic (am-fō-fil'ik), *a.* [Gr. ἀμφό-, both, + φίλος, love.] In *cytol.*, capable of being dyed with both acid and basic stains: said of certain cells or parts of cells.

amphophilous (am-fof'i-lus), *a.* Same as ★*amphophilic.*

amphoriskos (am-fō-ris'kos), *n.* [NL., < Gr. ἀμφορίσκος, dim. of ἀμφορεύς, amphora.] A type of Greek vase resembling the amphora but much smaller, being about 3 or 4 inches high.

amphoteric, *a.* **2.** In *chem.*, capable, in different reactions, of exhibiting both acid and basic character, as, for example, glycocoll or amidoacetic acid.

amphoterite (am-fot'e-rīt), *n.* [As *amphoter(ic)* + *-ite*[2].] See ★*meteorite.*

amphoterogenic (am-fō-ter''ō-jen'ik), *a.* [Gr. ἀμφότερος, each of two, + γένος, kind.] In *petrog.*, a term applied to sedimentary rocks resulting from the mixture of chemical and mechanical deposits, as marl and loess.

amphoterotoky (am-fō-te-rot'ō-ki), *n.* [Gr. ἀμφότερος, each or both, + τόκος, production.] The production of both males and females from unfertilized eggs; ★heteroparthenogenesis (which see). See also *normal* ★*parthenogenesis.*

amphotoky (am-fot'ō-ki), *n.* [Gr. ἀμφω, both, + τόκος, production.] Same as ★*amphoterotoky.*

amplexicauline (am-plek-si-kâ'lin), *a.* [*amplexicaul* + *-ine*[1].] In *bot.*, same as *amplexicaul. Syd. Soc. Lex.*

Amplexopora (am-plek-sop'ō-rä), *n.* [NL., < L. *amplexus*, embraced, + Gr. πόρος, L. *porus*, pore.] The typical genus of the family *Amplexoporidæ.*

Amplexoporidæ (am-plek-sō-por'i-dē), *n. pl.* [NL., < *Amplexopora* + *-idæ.*] A family of cryptostomatous *Bryozoa* which assume a variety of forms having simple zoœcial tubes, no mesopores, and abundant acanthopores. The species occur fossil in the Silurian and Devonian rocks.

Amplexus (am-plek'sus), *n.* [NL., < L. *amplexus*, pp. of *amplecti*, embrace.] A genus of Paleozoic tetracorals of the family *Zaphrentidæ*, having simple subcylindrical coralla with shallow calice, well-marked septal fossula, and septa not reaching to the center.

ampliation, *n.* **2.** (*b*) In *French law:* (1) A duplicate of an acquittance or other instrument. (2) A notary's copy of acts passed before him, delivered to the parties. *Bouvier*, Law Dict.—**4.** In *med.*, dilatation or distention of a canal or cavity.

amplitude, *n.* **4.** (*c*) In *function theory*, if $x = \xi + i\eta$, let the polar coördinates of (ξ, η) be ρ, θ, then any one of the angles θ or $\theta + 2n\pi$, where n is any positive or negative integer, may be called the amplitude of x.—**6.** In *meteor.*, the range or difference between the maximum and minimum values of the temperature, pressure, or other meteorological element within a definite time, such as a day, a month, or a year.—**Chief amplitude,** the vectorial angle θ_0, when $-\pi < \theta_0 \leq \pi$: abbreviated Am x, while any amplitude is θ_0 x.—**Periodic amplitude,** the difference between the maximum and minimum values computed by a Fourier-Bessel series, as distinguished from the non-periodic amplitude, which is the difference between the absolute maximum and minimum values, or the means of all the maxima and minima. Observations made with maximum and minimum thermometers give the non-periodic amplitude; hourly observations can give the periodic amplitude in temperature.

ampulla, *n.* **6.** In *Hydrocorallinæ*, a pit formed in the cœnenchyma for the reception of gonophores.

ampullation (am-pul-ā'shon), *n.* An ampullary process or condition.

In Cidethys the *ampullation* of the main canal is described as a remarkable phenomenon hitherto unrecorded in any other animal.
Linnean Zool. Soc. Lond., Oct., 1898, p. 184.

amputating-knife (am'pū-tā-ting-nīf''), *n.* A knife with a long narrow blade, used to divide the muscular tissues in the amputation of a limb.

Amputation in continuity, amputation through the segment of a limb and not at a joint. **Dry amputation,** an amputation performed with a minimum loss of blood.—**Gritti's amputation,** amputation at the knee-joint, the end of the stump being terminated by the patella, which is turned under the femur, and the opposing surfaces of the bones are denuded of cartilage, so that union occurs between them. **Intermediary amputation,** amputation of a limb during the period of reaction following the shock caused by the injury, but before the occurrence of suppuration in the wound.—**Primary amputation,** amputation of a limb within a very short time after the receipt of the injury necessitating operation—after the shock has subsided, but before the establishment of inflammatory symptoms.—**Secondary amputation,** amputation performed some time after the receipt of the injury, when suppuration in the wound has begun.—**Spontaneous amputation,** separation of the dead portion of a limb in case of gangrene; also, the division of a limb by constricting bands formed during intra-uterine life. *Jour. Exper. Med.*, V. 105.

ampyx, *n.* **3.** In the anatomic structure of the Devonian fish *Palæospondylus*, an element of the anterior part of the skull.

So far as it contributes to the floor of the skull it may be described as a transverse bar or fillet, somewhat higher in front than behind, providing a support on each side for the terminal half of the low anterior cranial walls. The thickness of the bar, which for brevity may be called the '*ampyx*,' is considerable and it is extended downwards to the ventral face of the skull where it is seen as a very conspicuous ridge.
W. J. and I. B. J. Sollas, in Philos. Trans. Roy. Soc. [London, ser. B, 196. 276.

Amsler's integrator. See ★*integrator.*

Amstelian (am-stē'li-an), *a.* and *n.* [D. *Amstel*, a river.] **I.** *a.* Of or pertaining to the Amstel, a river in the Netherlands.

II. *n.* In *geol.*, a proposed division of the Pliocene in Holland.

amuguis (ä-mö-gēs'), *n.* [Philippine Sp.] A name in the Philippines of *Koordersiodendron pinnatum*, a valuable timber-tree belonging to the cashew family. It occurs also in Celebes and New Guinea. Its wood, which is also called *palosanto*, is light red sometimes marked with lead-colored spots. It is used in ship-building and for the construction of buildings, but it does not resist the attacks of termites.

amusement, *n.* **4.** In *music*, a brief entertaining piece, often one intended to give variety to technical exercises.

amusia (a-mū'si-ä), *n.* [NL., < Gr. ἄμουσος, not musical, < ἀ- priv. + μοῦσα, muse: see *muse, music.*] Loss, through disease, of the ability to express musical sounds either vocally or instrumentally, to write musical notation (the power of ordinary writing being retained), or to appreciate musical sounds mentally. See ★*tone-deafness.*

amusingness (a-mū'zing-nes), *n.* Amusive quality or effect; the quality of affording amusement.

amutter, (a-mut'er), *adv. phr.* [*a*-[2] + *mutter.*] Muttering; in a muttering state. *Mrs. Browning*, Aurora Leigh, p. 28. *N. E. D.*

Amyaria (am''i-ā'ri-ä), *n. pl.* [NL., < Gr. ἀ- priv. + μῦς (μυ-), muscle, + *-aria.*] A group of acephalous mollusks having no adductor muscles. It includes the genus *Chlamydoconcha. Dall.*

amyarian (am-i-ā'ri-an), *a.* [*Amyaria* + *-an.*] Pertaining to or resembling the *Amyaria;* having no adductor muscles.

Amycteridæ (a-mik-ter'i-dē), *n. pl.* [NL., < *Amycterus* + *-idæ.*] A family of Australian short-beaked rhynchophorous beetles, of which *Amycterus* is the type.

Amycterus (a-mik'te-rus), *n.* [NL. (Schönherr, 1826), < Gr. ἀμυκτηρ, without a beak or nose, < ἀ- priv. + μυκτήρ, beak.] A genus of rhynchophorous beetles of the family *Curculionidæ*, or typical of the *Amycteridæ*, containing several Australian species characterized by an excessively short beak.

amyelinic (a-mī-e-lin'ik), *a.* [Gr. ἀ- priv. + μυελός, medulla, + *-in* + *-ic.*] In *neurol.*, without a medullary sheath: said of nerve-endings and embryonic nerves in vertebrates.

Amygdalaceæ (a-mig-da-lā'sē-ē), *n. pl.* [NL. (Reichenbach, 1828), < *Amygdalus* + *-aceæ.*] A family of dicotyledonous, choripetalous plants of the order *Rosales*, the almond family, called by De Candolle *Drupaceæ* (which see), and included by many authors in the *Rosaceæ* as a subfamily. It contains 7 genera, of which *Amygdalus* (almond, peach) and *Prunus* (plum, cherry) are the only important ones, and about 110 species, mainly of the north temperate zone of both hemispheres, with a few in the tropics. See *Amygdalus*, *Prunus*, and *Rosaceæ.*

amygdalectomy (a-mig-da-lek'tō-mi), *n.* [Gr. ἀμύγδαλα, tonsils, + ἐκτομή, a cutting out, excision.] Same as *amygdalotomy.*

amygdaliform (am-ig-dal'i-form), *a.* [Gr. ἀμυγδάλη, almond, + L. *forma*, form.] Almond-shaped.

Amygdaline fissure. See ★*fissure.*

amygdalolith (a-mig'da-lō-lith), *n.* [Gr. ἀμυγδάλη, an almond, + λίθος, stone.] A concretion in the substance of a tonsil. *Buck*, Med. Handbook, III. 232.

amygdalotome (a-mig'da-lō-tōm), *n.* [Gr. ἀμυγδάλα, tonsils, + τομή, < τέμνειν, cut.] Same as *tonsillotome.*

amygdophenine (a-mig-dō-fē'nin), *n.* [L. *amygd(ala)*, almond, + *phen(ol)* + *-ine.*] Phenylglycolyl phenetidine, $C_6H_4(OC_2H_5)$-$NHCOCH(OH)C_6H_5$. Its acetyl derivative is a febrifuge; it is also antiseptic in its properties.

Amyl acetate, a compound, $C_5H_{11}OC_2H_3O$, prepared from fusel-oil or amyl alcohol and acetic acid. It is much used in the manufacture of lacquers, and is also used in a lamp for a primary standard in photometry. **Amyl-acetate standard,** in *photom.*, a standard of light consisting of the flame of an amyl-acetate lamp. The accepted form is that devised by Von Hefner-Alteneck. See ★*light standard.*

Amylaceous bodies. Same as *corpora amylacea* (which see, under *corpus*).

amylan (am'i-lan), *n.* [*amyl* + *-an.*] The name given to two compounds, known as *α*- and *β*-*amylan*, found in wheat, rye, and oats. In composition and properties they somewhat resemble dextrine.

amylase (am'i-lās), *n.* [*amyl* + *-ase*, as in *diastase.*] A ferment which will convert starch into dextrose: it occurs widely distributed in both the animal and the vegetable world. Same as *diastase* or *amylolytic ferment.*

amylate, *n.* **2.** A metallic derivative of amyl alcohol: as, sodium *amylate*, $C_5H_{11}ONa$.

amylobacter (am''i-lō-bak'ter), *n.* [Gr. ἄμυλον, starch, + βακτήριον, a little rod.] See ★*amylobacterium.*

amylobacterium (am''i-lō-bak-tē'ri-um), *n.*; pl. *amylobacteria* (-ä). [NL., < Gr. ἄμυλον, starch, + βακτήριον, a little rod.] A micro-organism which has the power of producing butyric acid from a large number of substances, including lactic, citric, malic, and other acids, as well as of splitting up certain pectic compounds associated with the cell-walls of many tissues.

amylocoagulase (am''i-lō-kō-ag'ū-lās), *n.* [*amyl* + *coagul(ate)* + *-ase*, as in *diastase.*] A ferment which coagulates soluble starch: found in cereals.

amyloid, *a.* and *n.* **I.** *a.* **2.** In *pathol.*, noting a degenerative change characteristic of lardaceous disease (which see, under *lardaceous*). *Encyc. Brit.* XXXI. 548.—**Amyloid bodies.** Same as *corpora amylacea* (which see, under *corpus*).—**Amyloid kidney.** See ★*kidney.*

II. *n.* **2.** A precipitate obtained from a gelatinous solution of cotton which has been treated with concentrated sulphuric acid. Vegetable parchment is due to the partial transformation of the vegetable fibers into this substance.—**3.** In *pathol.*, same as *lardacein.*

amyloin (a-mil'ō-in), *n.* [Gr. ἄμυλον, fine flour, + *-in*[2].] A name given by Brown and Morris to a class of substances formed by the action of diastase upon starch. They have the properties of both maltose and dextrine.

amylome (am'i-lōm), *n.* [*amyl* + *-ome* (see *-oma*).] Xylem parenchyma which contains starch.

amyloplastic (am''i-lō-plas'tik), *a.* [Gr. ἄμυλον, fine meal (starch), + πλαστός, < πλάσσειν, form.] Starch-forming.

amyloplastid (a-mil-ō-plas'tid), *n.* [Gr. ἄμυλον, starch, + πλαστός, formed, + *-id*[2].] A colorless plastid which produces starch in plant cells.

amylotype (a-mil'ō-tīp), *n.* [Gr. ἄμυλον, fine meal, + τύπος, type.] In *photog.*, a picture printed by the action of light on paper which has been washed in juice extracted from

plants or from flowers or in an artificial coloring substance. See ★*anthotype*.

Amylum body. Same as ★*amyloplastid*. **Amylum center.** Same as *parenchyl*.

Amynodon (a-min′o-don), *n.* [NL., irreg. < Gr. ἀμύνειν, ward off, + ὀδούς (ὀδοντ-), a tooth.] A genus of rhinoceros-like ungulates from the Eocene of North America.

Amynodontidæ (am-i-no-don′ti-dē), *n. pl.* [NL. < *Amnodon* (< Gr. ἀμύνειν, ward off, + ὀδούς, tooth + *-idæ*.] A family of ungulates, related to *Rhinoceros*, from the Tertiary rocks of North America. They have on each ramus of the jaw 3 incisors, 1 canine, 4 premolars, and 3 molars. The manus is regarded as having had 4 digits and the pes 3.

amyotrophia (a″mi-ō-trō′fi-ä), *n.* [NL., < Gr. ἀ- priv. + μυς, muscle, + τροφή, nourishment, < τρέφειν, nourish.] Same as *amyotrophy*.

Amyotrophic paralysis, paralysis resulting from muscular atrophy.

amyrilene (a-mir′i-lēn), *n.* [*amyr (in)* + *-il* + *-ene*.] A triterpene $C_{30}H_{48}$, formed by the action of phosphorus pentachlorid on amyrin. A dextro- and levo-rotatory α-amyrilene and a dextrorotatory β-amyrilene have been described.

Anabæna (an-ą-bē′nä), *n.* [NL. (Bory, 1822), irreg. < Gr. ἀνά βαίνειν, to go up: see *anabasis*. The name alludes to the habit of the plants in coming to the surface of the water.] One of the blue-green algæ (*Schizophyceæ*), consisting of numerous oval or circular cells united into a filament, with intercalary heterocysts. It is distinguished from *Nostoc* by the absence of an enveloping gelatinous mass which incloses a number of filaments. This genus is responsible for some of the bad odors and tastes frequently noticeable in water during the warmer months.

anabix (an′ą-biks), *n.*; pl. *anabices* (a-nab′i-sēz). [NL., an arbitrary or mistaken formation, based, according to some, on Gr. ἀναβιοῦν, revive, but perhaps on ἀνάβασις, a going up.] The part of certain cryptogamic plants, as lichens, liverworts, and club-mosses, that perishes below while vegetating above.

anabo (ä-nä′bō), *n.* [Tagalog?] A name in the Philippine Islands of *Abroma augusta* and allied species, the twigs of which yield a strong, white bast-fiber which is easily separated and is superior to sunn-hemp. The plant is readily cultivated and yields three crops a year. See *devil's-cotton*.

anabolergy (an-ab′ō-lēr-ji), *n.* [Gr. ἀναβολή, a striking up (see *anabolism*), + ἔργον, work.] Energy expended in anabolism.

anabolistic (an-ab-ō-lis′tik), *a.* [*anabol(ism)* + *-ist* + *-ic*.] Relating to or consisting in anabolism or constructive metabolism. *Phil. Med. Jour.*, Jan. 31, 1903.

anabranch (an′ą-branch), *n.* [*ana-*, in *anastomosing*, + *branch*.] A branch of a river which reunites with it lower down, thus forming an island known as a branch-island. Called by the aborigines *billabong*. [Australian.]

A curious history is given of the word "*Anabranch*," which was applied by Colonel Jackson in the R. G. S. *Journal* of 1834 to the branch of a river which reunites lower down with the main stream.

Geog. Jour. (R. G. S.), XI. 349.

anabrosis (an-ą-brō′sis), *n.* [NL., < Gr. ἀνάβρωσις, an eating up, < ἀναβιβρώσκειν, eat up, < ἀνά, up, + βιβρώσκειν, eat.] In *med.*, erosion of the surface: ulceration.

anabrotic (an-ą-brot′ik), *a.* [*anabrosis* (*-ot-*) + *-ic*.] In *med.*, relating to or consisting in anabrosis or superficial erosion of the surface.

anacampsis (an-ą-kamp′sis), *n.* [Gr. ἀνακαμψις, < ἀνακάμπτειν, bend back, < ἀνά, back, + καμπτειν, bend.] Reflection as of light or sound; reaction; reciprocation.

anachlorhydria (an-ą-klōr-hī′dri-ä), *n.* Absence of hydrochloric acid in the gastric juice.

anachoresis (an-ą-kō-rē′sis), *n.* [NL., < Gr. ἀναχώρησις, withdrawing, retreating, < ἀναχωρεῖν, withdraw, < ἀνά, back, + χωρεῖν, give way.] In *bot.*, retrograde change in an organ or whorl.

anachromatic[1] (an″ą-krō-mat′ik), *a.* [Gr. ἀνά, up, + χρῶμα, color.] Relating to an ascending color scale. *Buck*, Med. Handbook, III. 208.

anachromatic[2] (an-ak-rō-mat′ik), *n.* [*an-*[3] + *achromatic*.] In *photog.*, a corrective for achromatism. *Woodbury*, Dict. of Photog., p. 33.

anachronismatical (an-ak″ron-iz-mat′i-kal), *a.* [Irreg. < *anachronism* + *-at-ic-al*.] Same as *anachronous*. *Barham*, Ingoldsby Legends, p. 182. [Rare.] *N. E. D.*

anacidity (an-a-sid′i-ti), *n.* [Gr. ἀν- priv. + E. *acidity*.] Reduced or abolished acidity of the gastric juice or other fluid.

anaclete (an-ą-klēt), *n.* [Gr. ἀνά, back, + καλεῖν, call.] One who is called back.

anaclinal (an-ą-klī′nal), *a.* [Gr. ἀνά, back, + κλίνειν, bend.] In *geol.*, transverse to the dip: said of a valley or a river which descends against the dip.—**Anaclinal valley,** a valley whose axial direction is not in accord with the dip of the underlying rocks.

anacostia (an-ą-kos′ti-ä), *n.* A twill-woven fabric with a worsted warp and a woolen weft.

Anacrogynæ (an-ak-rō-jī′nē), *n. pl.* [NL., < Gr. ἀ- priv. + ἄκρον, apex, + γυνή, female.] In *bot.*, a suborder of cryptogamic plants of the order *Jungermanniales*, class *Hepaticæ*, in which the archegonia are formed at a point below and remote from the apex. It embraces the thalloid genera of the *Jungermanniaceæ*, of simpler type than the ★*Acrogynæ* (which see).

anacrogynous (an-ak-roj′i-nus), *a.* [Gr. ἀν- priv. + ἄκρον, apex, + γυνή, female, + *-ous*.] In *bot.*, having the archegonia formed at a point below and remote from the apex, as in the *Anacrogynæ*.

Anacyrtus (an-ą-sèr′tus), *n.* [NL., < Gr. ἀνάκυρτος, curved upward or backward, < ἀνά, up, + κυρτός, curved.] A genus of South American toothed shiners of the family *Characinidæ*.

anadenia (an-a-dē′ni-ä), *n.* [NL., < Gr. ἀν- priv. + ἀδήν, a gland.] Insufficiency or absence of glands, especially of the gastric glands.

anadiæne (an-ą-dī′ēn), *n.* [Gr. ἀνά, up, back, + *διαινα, an assumed form ('two-pronged staff'), from δι-, two, parallel to τριαινα, a trident.] In the nomenclature of the spicular elements of sponges, a hexactine spicule having a straight rhabd or shaft and an anchor-shaped head. See *sponge-spicule*.

anadipsia (an-ą-dip′si-ä), *n.* [NL., < Gr. ἀνα- intensive + δίψα, thirst.] Intense thirst.

anadipsic (an-ą-dip′sik), *a.* Pertaining to or characterized by anadipsia.

anaërobe, *n.*—**Facultative anaërobe,** an organism usually requiring oxygen, which has become capable of living in either the presence or the absence of oxygen.

anaërobia[2] (an-ā-ę-rō′bi-ä), *n.* [NL., abstract noun, fem. sing. of *anaërobius*: see *anaërobious*.] The ability (on the part of bacteria) to live in the absence of free oxygen.—**Facultative anaërobia,** the possibility of living in either the presence or the absence of oxygen.

anaërobic, *a.*—**Facultatively anaërobic,** having acquired the ability to live in either the presence or the absence of oxygen.

anaërobically (an-ā-ę-rob′i-kal-i), *adv.* In an anaërobic manner. *Jour. Exper. Med.*, VI. 67.

anaërobiont (an-ā-ēr-ō-bī′ont), *n.* Same as *anaërobe*.

anaërobism (an-ā′ę-rō-bizm), *n.* [*anaërobe* + *-ism*.] That faculty or power of living without oxygen which is possessed by some micro-organisms, particularly certain bacteria.

anaëro-oxydase (an-ā″ę-rō-ok′si-dās), *n.* [Gr. ἀν- priv. + ἀήρ, air, + *oxydase*.] Same as ★*peroxydase*.

anæsthesia, *n.*—**Crossed anæsthesia,** a condition in which anæsthesia exists on one side of the face and on the opposite side of the body.—**General anæsthesia,** total anæsthesia, with loss of consciousness, induced by the inhalation of an anæsthetic gas or vapor, such as chloroform, ether, or nitrous oxid.—**Infiltration anæsthesia,** local anæsthesia induced by the injection into the subcutaneous tissues, in and about the seat of operation, of large quantities of a very weak solution of cocaine or other local anæsthetic.—**Local anæsthesia,** anæsthesia of a circumscribed area induced by the injection of a solution of cocaine, or other substance of similar action, or by the application of cold.—**Medullary anæsthesia,** anæsthesia induced by injection beneath the membranes covering the spinal cord of a solution of cocaine or other substance with similar action. The anæsthesia so produced is very wide in its extent, but there is no loss of consciousness, as in general anæsthesia.—**Mixed anæsthesia,** general anæsthesia induced by one agent, as nitrous-oxid gas, and maintained by another, as chloroform or ether.—**Primary anæsthesia,** insensibility to pain occurring soon after the administration of ether is begun. It is of brief duration, but is usually long enough to permit of the extraction of a tooth or for the incision into a boil.—**Spinal anæsthesia.** (*a*) Anæsthesia of a circumscribed portion of the body due to a lesion of the spinal cord. (*b*) Same as *medullary* ★*anæsthesia*.—**Surgical anæsthesia,** local or general anæsthesia induced artificially for the purpose of preventing the pain of a surgical operation.

anæsthesiant, *a.* and *n.* See *anesthesiant*.

anæsthol (an′es-thōl), *n.* A mixture of chloroform, ether, and ethyl chlorid recommended as an anesthetic in place of the mixture of alcohol, chloroform, and ether.

Anagallis (an-ą-gal′is), *n.* [NL., < L. *anagallis*, < Gr. ἀναγαλλίς, pimpernel.] An annual, biannual, or perennial herb, cultivated in the open, a member of the family *Primulaceæ* and sometimes called *pimpernel*. Only the annual species are known in America. *A. arvensis* is commonly known as *poor man's weather glass*. Twelve species are known in the temperate zone of Europe, Africa, East Asia, and South America.

anagap (ä-nä-gäp′), *n.* [Philippine Sp. *anagap*, *anagat*, from a native dialect.] In the Philippine islands, a tree, *Pithecolobium lobatum*, belonging to the mimosa family, having bipinnate leaves with a single pair of leaflets and a large pod deeply lobed along its lower suture into round divisions. The wood is durable, fine-grained, brittle, and of a yellowish-gray color. It is used in construction and for furniture.

anagenesis (an-ą-jen′e-sis), *n.* [Gr. ἀνά, up, + γένεσις, origin: see *genetic*.] Evolution by means of the acquiring of characters and of increasing complexity and differentiation. *Hyatt.*

anagenetic (an″ą-je-net′ik), *a.* Tending to the advancement or progressive development of organisms. *Hyatt*, Biol. Lect., p. 146. [Rare.]

anagerontic (an″ą-je-ron′tik), *a.* [Gr. ἀνά, up, + γέρων (γεροντ-), an old man: see *gerontic*.] Noting the early portion of the gerontic or senile period in the development of an organism. *Hyatt.*

anaglyph, *n.* **2.** In *photog.*, a kind of picture, invented by Ducos du Hauron, with two images printed nearly in superposition, one in red and the other in greenish blue. On viewing this double image through a pair of eye-glasses, one blue and the other red, the image is seen stereoscopically. On reversing the glasses the opposite effect, or pseudoscopic vision, is the result. Three-color heliochromy has also been applied to the anaglyph. When two slides from a stereoscopic negative, one with a red image and the other with a blue, are projected on a screen together, they appear stereoscopically when viewed through colored glasses.

anaglyphoscope (an-ą-glif′ō-skōp), *n.* [*anaglyph* + Gr. σκοπεῖν, view.] In *photog.*, a pair of eye-glasses, one red and the other greenish blue, for viewing anaglyphs so as to produce a stereoscopic effect.

anago (ä-nä′gō), *n.* [Jap. *anago*.] The Japanese name of an eel of the family *Leptocephalidæ*, *Congrellus anago*, found at Nagasaki.

anagyrine (a-naj′i-rin), *n.* [*Anagyris* + *-ine*[2].] An alkaloid, $C_{15}H_{22}N_2O$, found in *Anagyris fœtida*. The free base forms a gummy, amorphous mass. It has a powerful toxic action.

Anakim (an′ą-kim), *n. pl.* [Heb. *'anâkîm*, pl. of *'Anâk*; etym. unknown: in one view, from *'anak*, neck.] A pre-Canaanite tribe mentioned in the Old Testament, otherwise called 'the Anak' or 'the sons of Anak,' and, as usual in regard to outlying tribes of which little is known, reputed to be giants.

Anal glands. See ★*gland*.—**Anal margin,** the posterior margin of an insect's wing when expanded.—**Anal nerve** or **vein,** the posterior nerve or vein of an insect's wing when expanded. **Anal spot,** in the *Infusoria* the spot where the waste-products of digestion are ejected. *Parker and Haswell*, Zoology, I. 81.—**Anal vesicle.** See ★*vesicle*.

analcite-basalt (a-nal′sīt-ba-sâlt″), *n.* See ★*basalt*.

analcitite (a-nal′si-tīt), *n.* [*analcite* + *-ite*[2].] In *petrog.*, a basaltic rock rich in primary analcite and without olivin: proposed by Pirsson, 1896.

analeptic, *a.* **II.** *n.* In *med.*, a remedy which exerts a restorative or invigorating action. *Buck*, Med. Handbook, II. 694.

analgene (an-al′jen), *n.* [*analgesic* + *-ene*.] Ortho-ethoxyanabenzoylaminoquinoline, $C_9H_5N(OC_2H_5)NHCOC_6H_5$. It is a white crystalline powder, insoluble in water, used in the treatment of neuralgia.

analgesin (an-al′gē-sin), *n.* Same as *antipyrin*.

analgic (an-al′jik), *a.* [Gr. ἀναλγής, painless, < ἀν- priv. + ἄλγος, pain.] Same as *analgetic*. *Buck*, Med. Handbook, V. 865.

analog, *n.* A simplified spelling of *analogue*.

Analogous tissues, in *pathol.*, morbid tissues resembling in their structure normal tissues.

analogy, *n.*—**Convergent analogy,** resemblance between organisms or organs which is due to independent modification on similar lines and not to inheritance from a common ancestor.—**Kirkwood's analogy,** in *astron.*, a supposed but now discredited law, announced in 1849, connecting the distances of the planets and their masses with their axial rotations by an equation in form analogous to that which expresses Kepler's harmonic law.

analophic (an-ą-lof′ik), *a.* [Gr. ἀνά, up, + λόφος, crest.] In *craniom.*, having the incisor crest in the anterior nasal aperture confined to the posterior part of the floor of the nares. *Harrison Allen*, Jour. Acad. Nat. Sci. X. 419.

analphabetic, *a.* 2. Non-alphabetic.—**Analphabetic symbols**, in *phonetics*, symbols or signs which do not denote sounds, but components of sounds, each simple sound being represented by a group of symbols resembling a chemical formula, in much the same way as its might be taken to represent 'lip teeth-voice

analphabetism (an-al'fa-bet-izm), *n.* 1. Illiteracy; ignorance even of the alphabet.—2. In *phonetics*, a system of representing the articulations of speech-sounds by means of analphabetic symbols, proposed by Professor I. Otto Jespersen of Copenhagen in 1889. See ★*analphabetic*.

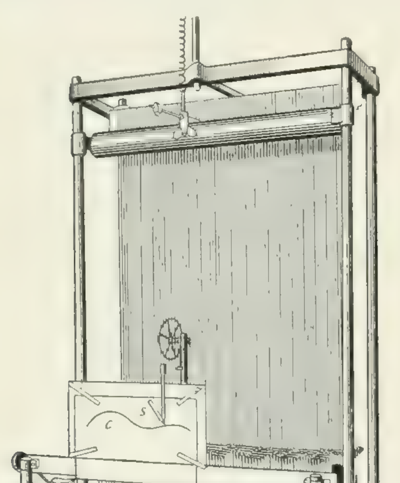
analysis, *n.* 5. In *cricket*, an itemized record of the play of the bowler, intended to show particularly the number of runs scored by him and the number of wickets obtained.—6. In *chem.*, intentionally produced decomposition: often applied to the ascertainment of the composition of a substance, whether the constituents are actually obtained in separate form or not.—**Capillary analysis**, a system of chemical analysis based upon the fact that solutions of different substances are propagated at different velocities by capillary attraction through porous material: used chiefly in the detection of different coloring matters in a mixture.—**Partition analysis**, a calculus founded upon the theory of partitions, an important part of combinatory analysis.—**Polariscopic analysis.** See ★*polariscopic*.—**Spherical harmonic analysis.** See ★*harmonic*.

Analytic proof, algebraical proof: proof depending upon a careful analysis of the problem: opposed to synthetic proof, which appeals to intuition or common-sense and is thus not strictly apodictic.

Analytical reference, an entry in a library catalogue relating to a particular chapter or section of a book, and referring the reader to the heading under which the book itself is entered. Sometimes also called simply an *analytical*.—**Analytical variation, variety.** See ★*variation*, ★*variety*.

analytics, *n. pl.* **Thermal analytics**, the mathematical or, more specifically, the algebraic analysis of the theory of heat.

analyzer, *n.*—**Harmonic analyzer**, a device for determining the harmonic elements of a periodic curve.



Michelson's Harmonic Analyzer
c, curve s, stylus

All periodic curves may be regarded as made up of one or more sine-curves, harmonically related to each other as regards frequency. By means of a machine so constructed as to impart to a stylus a linear oscillatory motion which is the resultant of the various simple harmonic motions which go to make up a given curve, it is possible to trace the curve in question upon a surface moving uniformly under the stylus. On the other hand, if the form of curve is given it is possible to determine by means of a suitable mechanism the amplitude and frequency of the elements of which it is the resultant. A machine of the latter description is called a *harmonic analyzer*. Such machines have been devised by Kelvin, Michelson, and others. That of Kelvin was constructed with special reference to the analysis of the tides. Since the number of harmonic elements in a periodic curve may be indefinitely great, the mechanical analysis is in some cases only approximate. The harmonic analyzer of Michelson, however, which permits of a determination of 80 different elements, gives a very close approximation for most curves.

anamesitic (an-am-e-sit'ik), *a.* [*anamesite* + *-ic*.] In *lithol.*, having the structure or appearance of anamesite. *Smithsonian Rep.*, 1899, p. 233.

anametadromous (an-a-me-tad'rō-mus), *a.* [Gr. ἀνά, back, + μετά, beyond, + -δρομος, < δραμεῖν, run.] In *bryol.*, having the nerves of the weaker pinnules anadromous and those of the stronger catadromous.

Anamirta (an-a-mėr'tä), *n.* A genus of climbing plants of the moonseed family (*Menispermaceæ*), a synonym of *Cocculus*. *A. paniculata* (*C. Cocculus*) furnishes cocculus indicus or fish-berries.

anamirtin (an-a-mėr'tin), *n.* A crystalline substance, $C_{19}H_{24}O_{10}$, found in small amount, with picrotoxin, in the seeds of *Cocculus Cocculus*. It is slightly bitter and not poisonous.

anamnesic (an-am-nē'sik), *a.* [*anamnesia* + *-ic*.] Endowed with a good memory; disposed to remember. *G. S. Hall*, Adolescence, I. 345.

anamniote (an-am'ni-ōt), *a.* and *n.* [Gr. ἀν- priv. + NL. *amniotus*, amniote.] **I.** *a.* Not amniote; having no amnion in the fetal state; anamniotic.

II. *n.* A member of the *Anamnionata*.

anamonæne (an-a-mon'ēn), *n.* [Gr. ἀνά, up, back, + *μόναινα, assumed form ('one-pronged staff'), from μόνος, single, parallel to τρίαινα, a trident.] In the nomenclature of the spicular elements of sponges, a triæne which has undergone atrophy of two of its axial arms or cladisks, the third being reflected on the fourth, giving the spicule the form of a gaff-hook. See *sponge-spicule*.

anamorphic (an-a-môr'fik), *a.* Pertaining to or resulting from anamorphism. *Van Hise*, U. S. Geol. Surv., Monograph 47, p. 169.

anamorphism (an-a-môr'fizm), *n.* In *geol.*, that variety of metamorphism which takes place below the zone in which cavities may exist. It results in the production of new minerals under conditions of great pressure. *Van Hise*, U. S. Geol. Surv., Monograph 47, p. 167.—**Zone of anamorphism**, the deep-seated zone of the earth in which anamorphism takes place.

anamorphote (an-a-môr'fōt), *a.* [From the assumed stem of *anamorphosis*.] Causing anamorphosis: distortive.—**Anamorphote lens** in *photog.*, a lens having a cylindric element and therefore distorting the image like a cylindric mirror. *Wall*, Dict. of Photog., p. 32.

ananaplas (ä-nä-nä'pläs), *n.* [Tagalog (?).] A valuable timber-tree, *Albizzia procera*, belonging to the mimosa family. Its heart-wood is hard and durable, of a brown color with alternate lighter and darker bands, and a straight grain. It is used for posts in house-building, and for making rice-pounders and parts of agricultural implements and machinery. The bark is astringent and is used for tanning, and the tree yields a gum soluble in water. [Philippine Is.]

Ananas oil, ethyl or amyl butyrate diluted with alcohol: used to imitate the odor of the pineapple in confectionery, soda-water syrups, and perfumery. Also called *ananas* or *pineapple essence*.—**Essence of ananas**, an artificial flavoring essence possessing the odor of pineapple; ethyl butyrate, $C_3H_7.CO.OC_2H_5$ (which see, under *butyrate*).

Ananchytidæ (an-an-kit'i-dē), *n. pl.* [NL., < *Ananchytes* + *-idæ*.] A family of spatangoid echinoids, most of whose representatives are extinct and belonged to Cretaceous time.

ananeanic (an″a-nē-an'ik), *a.* [Gr. ἀνά, up, + νεανίας, a youth: see *neanic*.] Noting the early portion of the neanic or youthful period in the development of an organism. *Hyatt*.

ananepiastic (an″a-nē-pi-as'tik), *a.* Noting the earliest expression of the nepiastic substage in the ontogeny of the compound individual or colony, as the bryozoan *Fenestella*. See ★*nepiastic*.

ananepionic (an-a-nē-pi-on'ik), *a.* [NL., < Gr. ἀνά, up, + νήπιος, infant.] In the terms of auxology or the development of the individual, noting a growth condition approaching the nepionic stage. See ★*nepionic*. Contrasted with ★*paranepionic*, which designates the phase which immediately follows the nepionic. The ananepionic stage is one of immature growth and directly follows the larval phase. The word was introduced by Hyatt with special reference to the stages of growth and decline in the fossil cephalopods.

For about half a volution or less, the shell is smooth, although lines of growth become more pronounced. At more or less regular intervals stronger lines of growth appear (*ananepionic*). In the later portion of the nepionic stage (metanepionic) longitudinal wrinkles or ribs appear which characterize the ambital portion of the whorl, and may be traced upward to the suture between the two whorls. *Amer. Nat.*, Aug. 1903, p. 518.

anangian (an-an'ji-an), *a.* [Gr. ἀν- priv. + ἀγγεῖον, a vessel.] Having no vascular system: applied to certain polychætous annelids in which the cœlomic fluid, whose corpuscles contain hemoglobin, is carried to the various organs of the body by the action of ciliate cells which cover the peritoneum along certain definite tracts.

anangioid (an-an'ji-oid), *a.* [Gr. ἀν- priv. + ἀγγεῖον, a vessel, + *-oid*.] Having no retinal blood-vessels. **Anangioid disk**, the retinal disk when without blood-vessels.

Anangioida (an″an-ji-oi'dä), *n. pl.* [NL.: see *anangioid*.] A collective name for those mammals in which the retina has no blood-vessels. *Philos. Trans. Roy. Soc. Lond.*, ser B, 194, p. 68.

anangiotic (an-an-ji-ot'ik), *a.* Same as ★*anangioid*.

anangious (an-an'ji-us), *a.* Having no retinal blood-vessels; anangioid.

Although these creatures [*Chiroptera*] are so highly specialised, typical Vespertilionidæ occurred already in the Eocene. . . . The eyes of these nocturnal creatures are very small *anangious*, and devoid of any traces of higher development, except that they are also without any traces of ancestral vestiges, besides the rather common rudiment of the hyaloid artery. *Philos. Trans. Roy. Soc. Lond.*, ser. B, 194, p. 68.

anantherum (an-an-the'rum), *n.*; pl. *anan-thera* (-rä). [NL., < Gr. ἀ- priv. + NL. *anthera*, anther.] In *bot.*, a filament without an anther; a staminode.

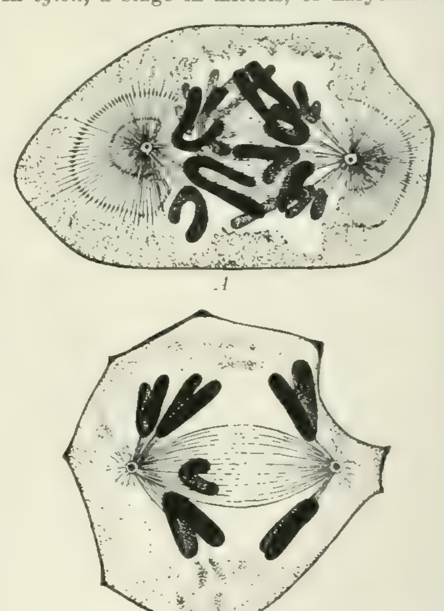
ananym (an'a-nim), *n.* [Erroneously for *anonym2, < Gr. ἀνά, back, + ὄνομα, ὄνυμα, name.] A name written backward, as *Noremac* for *Cameron*.

anaoxytriæne (an-a-ok-si-trī'en), *n.* [Gr. ἀνά, up, back, + ὀξύς, sharp, + τρίαινα, a trident.] In the nomenclature of the spicular elements in sponges, a form of anatriæne in which the branches are all acute. See ★*anatriæne* and *sponge-spicule*.

anapaite (a-nä'pa-īt), *n.* [Named (by A. Sachs, 1902) < *Anapa* (see def.) + *-ite2*.] A hydrated phosphate of ferrous iron and calcium occurring in colorless triclinic crystals and also in massive forms: found at Anapa on the Black sea.

anapanapa (ä-nä″pä-nä'pä), *n.* [Hawaiian.] A name in Hawaii of a widely distributed shrub, *Colubrina Asiatica*, the bark of which is used for soap.

anaphase (an'a-fāz), *n.* [NL. *anaphasis*, < Gr. ἀνά, back, again, + φάσις, appearance, phase.] In *cytol.*, a stage in mitosis, or karyokinetic



Anaphases of mitosis in cells (spermatocytes) of the salamander. (Druner. Magnified.)

A. Anaphase: divergence of the daughter-chromosomes, exposing the central spindle as the interzonal fibers; contractile fibers (principal cones of Van Beneden) clearly shown. *B.* Later anaphase (dyaster of Flemming); the central spindle fully exposed to view; mantle fibers attached to the chromosomes. Immediately afterward the cell divides.

cell-division, characterized by the moving apart of the chromosomes destined to enter the two daughter-nuclei. *Strasburger*, 1884.

anaphasis (a-naf'a-sis), *n.* [NL.] Same as ★*anaphase*.

anaphia (a-naf'i-ä), *n.* [Gr. ἀν- priv. + ἀφή, a touching, < ἅπτειν, touch. Cf. Gr. ἀναφής, not to be touched.] In *pathol.*, loss of the sense of touch. *Baldwin*, Dict. of Philos. and Psychol., I. 39.

anaphoria (an-a-fō'ri-ä), *n.* [NL., < Gr. *ἀνάφορος, < ἀναφέρειν, carry back: see *anaphora*.] The tendency of the axes of vision in the two eyes to assume too high a plane. *Med. Record*, April 18, 1903.

anaphylembryonic (an″a-fil-em-bri-on′ik), *a.* Noting the earliest expression of the phylembryonic substage in the ontogeny of any organism. See ★*phylembryonic.*

That it is probably not the most primitive type of gastropod is suggested by the consideration that the earliest stage (*ana-phylembryonic*) of the protoconch is not coiled, but rather cap-shaped like modern Patella.
Amer. Nat., Dec., 1902, p. 921.

anaplasia (an″a-plā′si-ä), *n.* [NL., ⟨ Gr. ἀνάπλασις, reformation, adjustment, ⟨ ἀναπλάσσειν, reform, mold anew, ⟨ ἀνά, again, + πλάσσειν, form.] 1. In *pathol.*, the sum of the morphological, structural, chemical, and other alterations which cells undergo when assuming the characteristics of malignancy.—2. Same as ★*anaplasis.*

anaplasis (an-ap′la-sis), *n.* [NL., ⟨ Gr. ἀνάπλασις, reformation, ⟨ ἀναπλάσσειν, reform, renew, restore.] In *biol.*, the history or course of an organic type during the period or stage of its rise, as distinguished from the period of its full maintained vigor (*metaplasis*) and the period of its decline or decadence (★*cataplasis*). *Haeckel.*

Anapterygota (an-ap-ter-i-gō′tä), *n. pl.* [NL., appar. ⟨ Gr. ἀνά, back, again, + πτέρυωτος, winged, ⟨ πτέρυξ (πτερυγ-), wing.] A group of insects (including the orders *Mallophaga* and *Siphonaptera* and the suborder *Anoplura*) which contains only wingless forms, which, however, are supposed to have descended from winged ancestors.

anapterygotism (an-ap-ter-i-gō′tizm), *n.* [*Anapterygota* + *-ism.*] In *entom.*, a condition of winglessness attained, usually through a parasitic life, by forms with a winged ancestry.

In these facts we have a clue to the change from exopterygotism to endopterygotism, namely, by an intermediate period of *anapterygotism.*
Encyc. Brit., XXIX. 503.

anapterygotous (an-ap-ter-i-gō′tus), *a.* In *entom.*, wingless, although derived from winged ancestors, as the *Mallophaga*, *Siphonaptera*, and *Anoplura.*

These cases render it highly probable that insects may in some circumstances become wingless, though their ancestors were winged. Such insects have been styled *anapterygotous.* *Encyc. Brit.*, XXIX. 503.

anaptyxis (an-ap-tik′sis), *n.* [Gr. ἀνάπτυξις, an opening, unfolding, ⟨ ἀναπτύσσειν, unfold, ⟨ ἀνά, back, + πτύσσειν, fold.] In *phonetics*, the involuntary utterance of an auxiliary vowel, especially before *r*, *l*, *m*, and *n*, in certain positions, as in *lucre*, *able*, *chasm*, etc.

anaqua (an-ä′kwä), *n.* Same as *anagua.* See *knackaway.*

anarcestean (an-är-ses′tē-an), *a.* [*Anarceste(s)* + *-an.*] 1. Pertaining to the Devonian cephalopod *Anarcestes.*—2. Noting a condition or growth-stage in any goniatite equivalent, in the development of the septa, to the mature condition in *Anarcestes.*

Anarcestes (an-är-ses′tēz), *n.* [NL., said to be formed ⟨ Gr. ἀν- priv. + *Arcestes*, a genus of ammonites.] A genus of ammonoid cephalopods or goniatites of primitive structure, having very simple septal sutures with single broad lateral lobes. It is of Devonian age.

anarcestian, *a.* Same as ★*anarcestean.*

anarithmoscope (an-a-rith′mō-skōp), *n.* A magic lantern having slides which are changed automatically.

Anarrhichthyinæ (an-a-rik-thi-ī′nē), *n. pl.* [*Anarrhichthys* + *-inæ.*] The subfamily of wolf-fishes typified by the genus *Anarrhichthys.*

Anarrhichthys (an-a-rik′this), *n.* [NL. irreg. ⟨ Gr. ἀναρρ(ιχάσθαι), clamber up, + ἰχθύς, fish.] A genus of wolf-fishes of the family *Anarrhichadidæ.* It is distinguished by the very long and tapering tail, whence the name *wolf-eel.* *A. ocellatus* is found on the coast of California and reaches a length of 8 feet.

Anarsia (an-är′si-ä), *n.* [NL. (Zeller, 1839), ⟨ Gr. ἀνάρσιος, unfavorable, hostile, ⟨ ἀν- priv. + ἄρσιος, fitting ⟨ *ἄρειν, fit.] A genus of *Microlepidoptera*, of the family *Gelechiidæ*, containing, among others, the very injurious *A. lineatella*, whose larva bores into the twigs and fruit of the peach in Europe and North America.

anarthropod (an-är′thrō-pod), *a.* and *n.* [As *Anarthropod-a.*] **I.** *a.* Without articulated appendages; having the characters of the *Anarthropoda.*

II. *n.* One of the *Anarthropoda.*

Anaryan (an-är′yan or -ar′ian), *a.* [*an-*[5] + *Aryan.*] Non-Aryan; noting a people which speaks a language that does not belong to the Aryan family. *Deniker*, Races of Man, p. 334.

anascope (an′a-skōp), *n.* [Gr. ἀνά, up, + σκοπεῖν, view.] An optical arrangement which enables one to view the image in a camera right side up. *Woodbury*, Encyc. Dict. of Photog., p. 35.

Anaspida (an-as′pi-dä), *n. pl.* [NL., ⟨ Gr. ἀν- priv. + ἀσπίς, shield.] An ordinal term introduced by Traquair for a group of singular fishes, chiefly from the Upper Silurian rocks of Lanarkshire, without paired fins and having a tubercled skin, a heterocercal tail, and a row of prominent processes along the belly. In some of the species, as *Birkenia elegans*, the branchial openings are a series of small lateral perforations.

anaspidean (an-as-pid′ē-an), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the *Anaspidea.*

II. *n.* One of the *Anaspidea.*

anastasis (an-as′ta-sis), *n.* [NL., ⟨ Gr. ἀνάστασις, a raising up or rising up, ⟨ ἀνίστανai, stand up.] 1. In *med.*, a condition of increasing health and vigor; convalescence.—2. Resurrection.

anastatic, *a.* 2. In *bot.*, reviving after desiccation, as so-called resurrection-plants.

anastigmat (an-as′tig-mat), *n.* [G. *anastigmat*: see *anastigmatic.*] A system of lenses in which the astigmatic aberration is overcome and a flat field obtained. It is of special use in photography. There are various forms with special trade-names, as *collinears*, *planars*, *protars*, *unars*, etc.—**Convertible anastigmat** (called in German *satzanastigmat*), a combination of two Zeiss anastigmats which for many purposes can be used separately.—**Double anastigmat,** a combination of two triple cemented lenses, each anastigmatically aplanatic. Such a system, invented by Van Hoegh, was put out in 1892 by the Goerz firm.

Double Anastigmat.

Several forms with different trade-names have been since added by the same firm, each with its own special advantages.—**Universal symmetric anastigmat,** a very rapid system of lenses covering a view-angle of 65° and consisting of two triple cemented lenses.

anastigmatic (an-as-tig-mat′ik), *a.* [⟨ *an-*[5] + *astigmatic.*] Not astigmatic: applied to a lens.

anastomosis, *n.* 3. In *surg.*, the establishment of communication between two canals or two portions of the same canal, usually the digestive tract, not previously in continuity.

Anastomotic artery, a term applied to several small arteries, in different portions of the body, which serve to connect two larger vessels.

anastomotica (an-as-tō-mot′i-kä), *n.* See *arteria anastomotica.* **Anastomotica magna.** (*a*) A branch of the brachial artery supplying the parts about the elbow and anastomosing with other branches of the brachial and of the ulna. (*b*) A branch of the femoral artery supplying the parts about the knee-joint and anastomosing with other articular branches of the femoral and tibial arteries.

Anastrophia (an-a-strō′fi-ä), *n.* [NL., ⟨ Gr. ἀναστροφή, a twisting about: see *anastrophe.*] A genus of pentameraceous brachiopods from the Silurian and Devonian rocks.

anat. An abbreviation of *anatomy* and *anatomical.*

Anathema cup. See ★*cup.*

anathesis (a-nath′e-sis), *n.* [Gr. ἀνάθεσις, a putting off, ⟨ ἀνατιθέναι, put off, etc.: see *anathema.*] Vowel-mutation; umlaut: a proposed term, scarcely used. See *mutation.*

Anatinacea (a-nat-i-nā′sē-ä), *n. pl.* [NL., ⟨ *Anatina* + *-acea.*] A suborder of *Eulamellibranchiata.* It includes the bivalve mollusks which have the external branchial fold directed dorsally, not reflected, sexes united, male and female reproductive glands with separate orifices, mantle edges largely united, byssus generally lacking, two adductor muscles, pallial line variable, and shell usually nacreous within. Among the families included are *Anatinidæ*, *Pandoridæ*, *Pholadomyidæ*, and *Clavagellidæ.* Both living and fossil forms are found.

anatinacean (a-nat-i-nā′si-an), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the *Anatinacea.*

II. *n.* One of the *Anatinacea.*

anatoid (an′a-toid), *a.* [L. *anas* (*anat-*), a duck, + Gr. εἶδος, form.] Resembling a duck; duck-like in form or character.

Anatolian ware. See ★*ware*[2].

anatomicobiological (an-a-tom″i-kō-bī-ō-loj′i-kal), *a.* Anatomical with a view to biology; treating of biology as illustrated by anatomy: as, an *anatomicobiological* thesis.

anatomicopathological (an-a-tom″i-kō-path-ō-loj′i-kal), *a.* Relating to pathological anatomy.

anatomobiological (a-nat″ō-mō-bī-ō-loj′i-kal), *a.* Same as ★*anatomicobiological.*

anatomopathological (a-nat″ō-mō-path-ō-loj′i-kal), *a.* Same as ★*anatomicopathological.* *Smithsonian Rep.* 1890, p. 635.

anatomy, *n.*—**Medical anatomy,** descriptive anatomy of the heart, lungs, and other parts, the diseases of which are not usually amenable to surgical treatment. **Morbid anatomy.** Same as *pathological anatomy.*—**Plastic anatomy,** surface anatomy in its relation to art.—**Practical anatomy.** Same as *anatomy*, 1.—**Surface anatomy,** the study of the markings and configuration of the surface of the body.

anatrepsis (an-a-trep′sis), *n.* [NL., ⟨ Gr. ἀνά, back, + τρέψις, a turning.] In *embryol.*, that movement of certain insect embryos which brings them back to the ventral surface of the yolk after they have moved away from it. *Wheeler*, 1893.

anatriæne (an-a-trī′ēn), *n.* [Gr. ἀνά, up, back, + τρίαινα, a trident.] In the nomenclature of the spicular elements of sponges, a straight cylindrical rhabd at the end of which three prongs or cladisks bent backward make a form like that of an anchor with three arms. It belongs to the tetraxial system of spicules. See *sponge-spicule.*

anatriptic (an-a-trip′tik), *a.* [*anatripsis* (*-tript-*) + *-ic.*] Frictional; specifically, in *med.*, of or pertaining to the use of rubbing or friction for remedial purposes.

anauca (ä-nä-ö′kä), *n.* [Native name.] A tree of the bean family, *Erythrina umbrosa*, a native of northeastern South America, which is used as a shade-tree in the cultivation of cacao. Also called ★*bucare* (which see). [Trinidad.]

anautotomic (an-â-tō-tom′ik), *a.* Not self-intersecting.

Anautotomic, unicuspidal, bicuspidal and tricuspidal quartics admit of a subsidiary division depending on the number of points of undulation they possess; and it must be borne in mind that, although it is convenient to use the term point of undulation, it is the tangent at this point and not the point itself which is the actual singularity.
Nature, Nov. 27, 1902, p. 80.

anaxial (an-ak′si-al), *a.* [Gr. ἀν- priv. + L. *axis*, axis, + *-al.*] Without a definite axis or axes; of irregular or asymmetrical form.

anaxile (an-ak′sil), *a.* [Gr. ἀν- priv. + L. *axis*, axis: see *axile.*] Noting such independent elements or spicules of sponge skeletons as do not show derivation from the uniaxial, tetraxial, or hexactinellid type. Such spicules are spherical, cylindrical, discoid, or stellate.

anaxone (an-ak′sōn), *a.* [Gr. ἀν- priv. + ἄξων, axis.] In *neurol.*, having no neuraxon or axis-cylinder: said of certain nerve-cells. *Buck*, Med. Handbook, II. 334.

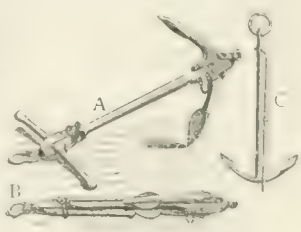
anaxonial (an-ak-sō′ni-al), *a.* [Gr. ἀν- priv. + ἄξων, axis, + *-ial.*] Having no definite axes of growth. See *anaxonia.*

ancecerite (an-ses′e-rīt), *n.* [Irreg. ⟨ Gr. ἀγκή, the bent arm, + κέρας, horn, + *-ite*[2].] In crustaceans, a curved projection at the base of the peduncle of an antenna.

Ancestral forms, the ancestors of an organism in any remote generation or generations considered collectively.—**Ancestral heredity, inheritance.** See ★*inheritance.*

Anchieta bark. See ★*bark*[2].

anchor[1], *n.* 7. In the tug of war, the man at the end of the line, who is supposed to hold while the rest endeavor to pull.—8. Same as *chapelet*, 4.—**Anchor system,** the mnemonic system according to which the ideas to be remembered are rendered readily recoverable by being deliberately associated with other ideas that are, either by familiarity or by their striking character, already easily recoverable. Thus it is an application of the



Folding Anchor.

[illegible] system to remember the map of Italy by its similarity to a boot. Also called *[illegible] system*.—**Folding anchor**, a boat's anchor having a stock and flukes which, when not in use, can be folded against the shank for convenience in stowing on board. Several styles are in use. **Shifting-stock anchor**, a boat's anchor in which the stock is kept in place by a pin and, when not in use, can be laid against the shank for convenience in handling.—**Stockless anchor**, a boat's anchor having pivoted flukes which fall into the holding position without the aid of a stock.

anchorate, *a.* **2.** As applied to the spicules of the sponges, having a pronged anchor-shaped arrangement at one or both ends, especially in the monactinellids.

II. *n.* An anchorate spicule.

anchor-ax (ang'kọr-aks) *n.* An anchor-shaped ax of stone, formerly used by the natives of Brazil.

anchor-bar (ang'kọr-bär), *n.* A wooden hand-spike used for prying the anchor off the bill-board, that is, the resting-place of the fluke.

anchor-beam (ang'kọr-bēm), *n.* A steel or iron beam forming a part of the anchorage of the cables or chains of a suspension-bridge.

anchor-bed (ang'kọr-bed), *n.* In *shipbuilding*, a support or platform on the deck, forward, on which the heavy anchors are secured when not in use. In war-ships these beds are usually recessed below the deck-level to keep the anchors out of the line of fire of the large guns.

anchor-bolt, *n.* **2.** A long bolt which serves to hold down a steam-engine or other piece of machinery to the masonry foundation on which it rests. The bolt passes down through the bed- or base-plate and far enough into the foundation to be securely held at its lower end by plates or other holding-devices to anchor it in place. When the nut above the bed-plate is tightened down, the machine is securely fastened to the mass of the foundation.

anchor-bracket (ang'kọr-brak″et), *n.* A bracket or block which carries the fulcrum of a lever; a bracket to which the stationary end of a brake-band is attached.

anchor-crane (ang'kọr-krān), *n.* In *shipbuilding*, a crane mounted on the deck of a ship for handling the anchor from the hawse-pipe to the bill-board or anchor-bed after the anchor is weighed. See cut of ★*battle-ship*.

anchor-dragger (ang'kọr-drag″ėr), *n.* One who makes a business of 'dragging' harbors and other anchoring-places for ships' anchors which have been lost during gales or otherwise. *W. M. Davis*, Elem. Phys. Geog.

anchored, *p. a.* **4.** In *billiards*, said of two object-balls which, with the cue-ball near, straddle a short line close to the cushion, because a player can hold them long in that position by playing alternately from side to side. This is possible only in games of balk-line billiards, and since 1893 has been barred among the best players.

anchor-light (ang'kọr-līt), *n.* The light exhibited on anchored vessels between sunset and sunrise.—**Anchor-light law**, that section of the international regulations of July 1, 1897, which provides for lighting anchored vessels in such a manner as to prevent collisions.

anchor-line (ang'kọr-līn), *n.* A line attached to a small buoy and to one fluke of an anchor: used in towing a raft of logs and to free the anchor when fast to rocks or snags. [U. S.]

anchor-money (ang'kọr-mun″i), *n.* An English colonial coinage, so named from its device, first struck for Mauritius in 1820.

anchor-plate, *n.* **3.** *Naut.*, the metal resting-place for the fluke of the anchor when the latter is fished. See *fish*1, 6 (*b*).

anchor-rod (ang'kọr-rod), *n.* The rod or bolt which connects the bed-plate of an engine to an anchor-plate buried in the foundation.

anchor-wing (ang'kọr-wing), *n.* The Australian black-cheeked falcon, *Falco melanogenys*: so named from the fancied resemblance of its outspread wings to the flukes of an anchor.

Anchovia (an-kō'vi-ạ̈), *n.* [NL., < E. *anchovy*.] A genus of anchovies of the family *Engraulididæ*, now usually defined so as to include nearly all the tropical species. It is distinguished from the anchovies of temperate regions (*Engraulis*) by the fewer vertebræ. Also wrongly called *Stolephorus*.

anchovy, *n.* **Silvery anchovy**, a name of *Anchovia browni*. **Striped anchovy**, *Anchovia browni* found on the Atlantic coast of North America.

Ancient house, one which has stood long enough to acquire an easement of support. *Bouvier*, Law Dict.

ancientism (ān'shent-izm), *n.* [*ancient* + *-ism*.] Favor to things ancient; the belief that ancient times were better than the present. *J. W. Powell*, First An. Rep. Bur. Ethnol., p. [illegible].

ancistroid (an-sis'troid), *a.* [Gr. ἀγκιστροειδής, < ἄγκιστρον, a fish-hook, + εἶδος, form.] Hook-shaped. *Syd. Soc. Lex.*

Ancistrus (an-sis'trus), *n.* [NL., < ἄγκιστρον, a fish-hook.] A genus of toothed shiners of the family *Characinidæ*, found in rivers of South America.

ancona (an-kō'nạ̈), *n.* [ML. *ancona*, an image, a crucifix, prop. *ancon*; cf. L. *ancon*, a console or volute, < Gr. ἀγκών, a bend, a jutting angle in a wall, etc.: see *ancon*.] An altar-piece or group of pictures elaborately mounted in an architectural setting.

> This altar-piece now hangs on the north wall of the choir of the Collegiata. It is a Gothic *ancona* in which four scenes are represented.
> *L. Douglas*, in Burlington Mag., I. 309.

Ancona ruby. Same as *rubasse*.

ancoume (än-kö'mā), *n.* [Kongo name.] In the Kongo region of West Africa, the fragrant yellow resin of *Ancoumea Klaineana*, a tree of the family *Balsameaceæ*.

ancylite (an'si-līt), *n.* [Gr. ἀγκύλος, crooked, + *-ite*2.] A hydrated carbonate of strontium and cerium occurring in from yellow to brown orthorhombic crystals with curved faces: found in southern Greenland.

Ancylocladus (an-si-lok'lạ-dus), *n.* [NL. (Kuntze, 1891; proposed but not established by Wallich in 1832), named in allusion to the contorted tendrils, < Gr. ἀγκύλος, crooked, curved, + κλάδος, branch.] An apocynaceous genus of plants improperly known as *Willughbeia*. See *Willughbeia*.

Ancylopoda (an-si-lop'ọ̄-dạ̈), *n. pl.* [NL., < Gr. ἀγκύλος, crooked, + πούς (ποδ-), a foot.] An order of extinct ungulate mammals, proposed by Cope for such genera as *Ancylotherium* and *Chalicotherium*, based on fragmentary remains from the early Tertiary deposits.

ancylopodous (an-si-lop'ọ̄-dus), *a.* Relating to or resembling in structure or appearance the *Ancylopoda*.

ancylostome (an-sil'ọ̄-stōm), *n.* [Gr. ἀγκύλος, bent, + στόμα, mouth.] A blood-sucking parasitic worm of the genus *Uncinaria*, sometimes found in the human intestine.

ancylostomiasis (an-si-los-tọ̄-mī'ạ-sis), *n.* [NL., < *Ancylostoma* (see def.) + *-iasis*.] A disease characterized chiefly by a profound anemia, sometimes associated with dirt-eating as cause or effect, due to the presence of one of several species of blood-sucking intestinal parasites of the genus *Ancylostoma*. Also called *dochmiasis*, *uncinariasis*, *tunnel-disease*, *brickmakers'* or *miners' anemia*, and *Egyptian chlorosis*.

Anda-assu oil. See ★*oil*.

andabatarian (an-dab-ạ-tā'ri-ạn), *a.* [*andabata* + *-arian*.] Pertaining to or characteristic of an andabata or gladiator who fought blindfolded; hence, misdirected: said of blind, struggling endeavor.

andalusitic (an-dạ-lū-sit'ik), *a.* [*andalusite* + *-ic*.] Containing or resembling andalusite.

Andaman bullet-wood. See ★*bullet-wood*.

andante, *a.* Special varieties of movement or style are indicated by adding other terms, as: *andante con moto*, in flowing style, with some quickness; *andante ma non troppo*, in flowing style, but not too slow; *andante cantabile*, with the movement of a song; *andante maestoso*, with a stately movement; *andante pastorale*, in the easy style of a pastoral melody.

Andaquies wax. See *wax*2.

Anderson process. See ★*process*.

andesite, *n.*—**Trachytic andesite.** See ★*asperite*.

andirine (an-dī'rin), *n.* [*Andira* + *-ine*2.] Same as ★*surinamine*.

andorite (an'dọ̄-rīt), *n.* [*Andor* (*Andor* von Semsey (?), a Hungarian) + *-ite*2.] A sulphid of antimony, lead, and silver occurring in steel-gray orthorhombic crystals with brilliant metallic luster: found in Hungary and Bolivia. Also called *sundtite* and *webnerite*.

Andreæaceæ (an-drē-ẹ̄-ā'sẹ̄-ē), *n. pl.* [NL., < *Andreæa* + *-aceæ*.] A family of mosses containing the genus *Andreæa* only. For characters see *Andreæa*.

andreæaceous (an-drē-ẹ̄-ā'shius), *a.* [*Andreæaceæ* + *-ous*.] Belonging to or having the characters of mosses of the family *Andreæaceæ*.

Andreæales (an-drē-ẹ̄-ā'lēz), *n. pl.* [NL., < *Andreæa* + *-ales*.] An order of mosses coextensive with the family *Andreæaceæ*.

andreclexis (an-drek-lek'sis), *n.* [NL., < Gr. ἀνήρ (ἀνδρ-), man, + ἔκλεξις, selection.] Sexual selection through choice exercised by the male. Compare ★*gynecleisis*. *Ward*, Pure Sociol., p. 361.

andreia (an-drī'ạ̈), *n. pl.* [Gr. ἀνδρεῖα, neut. pl. of ἀνδρεῖος, adj., of men, < ἀνήρ (ἀνδρ-), man.] In *Gr. antiq.*, public meals, especially in Crete and Sparta.

andreion (an-drī'on), *n.*; pl. *andreia* (-ạ̈). [Perhaps for Gr. ἀνδρεῖον, ἀνδρῶν, Attic ἀνδρών, m., the men's hall (see *andronitis*); otherwise < Gr. ἀνδρεῖα, Cretan ἀνδρήιον, a public hall where meals were served: see ★*andreia*.] A hall in which public meals were served.

> Whether Labyrinth, Palace, or *Andreion*, it is evident that the prehistoric building, as yet so imperfectly known to us, belongs to the great age of Mycenæ.
> *Evans*, Cretan Pictographs, p. 12.

andrenoid (an'dre-noid), *a.* Having the characteristics or appearance of a bee of the family *Andrenidæ*.

Andreoli process. See ★*process*.

andrewsite (an'drọ̄-zīt), *n.* [Named after Thomas *Andrews* (1813–86).] A hydrated phosphate of iron and copper occurring in bluish-green radiate forms: found in Cornwall.

Andrias (an'dri-ạs), *n.* [NL., < Gr. ἀνδριάς, an image of man, < ἀνήρ (ἀνδρ-), man.] The generic name given by Tschudi to the giant salamander from the Miocene of Œningen, the remains of which when found were regarded as human and were characterized by Scheuchzer as *Homo diluvii testis*. *Andrias scheuchzeri* attained a length of one meter, and there is a smaller species of the same geologic age.

androcentric (an-drọ̄-sen'trik), *a.* [Gr. ἀνήρ (ἀνδρο-), a male, + κέντρον, center.] Centering around the male; relating to the theory that all animal life normally centers around the male. *Ward*, Pure Sociol., p. 291.

androclinium (an-drō-klin'i-um), *n.*; pl. *androclinia* (-ạ̈). [NL. < Gr. ἀνήρ (ἀνδρ-), man (male), + κλίνη, couch.] See *clinandrium*.

androconia (an-drọ̄-kō'ni-ạ̈), *n. pl.* [NL., < Gr. ἀνήρ (ἀνδρο-), male, + (?) κόνις, dust.] Certain specialized scales occurring in limited areas on the wings of the males of certain *Lepidoptera*. They function as scent-scales and arise from scent-glands situated in folds of the wing. Androconia-like scales have also been found on the wings of a caddis-fly (*Mystacides punctata*).—**Androconia glands**, groups of formative specialized cells which secrete an odorous fluid.

androcracy (an-drok'rạ-si), *n.* [Gr. ἀνήρ (ἀνδρο-), man, + κρατεῖν, govern.] Authority and rule by man; hence, society organized on the basis of male supremacy. Compare *gynecocracy*. *Ward*, Pure Sociol., p. 341.

androcratic (an-drọ̄-krat'ik), *a.* Pertaining to androcracy or the supremacy of man over woman in social relations, or having the quality of such supremacy. *Ward*, Pure Sociol., p. 399.

androdiœcism (an″drō-dī-ē'sizm), *a.* The character of being androdiœcious.

> *Androdiœcism* signifies that the same species has both male and hermaphrodite plants.
> *Henslow*, Origin of Floral Struct., p. 227.

androgametangium (an″drọ̄-gam-e-tan'ji-um), *n.*; pl. *androgametangia* (-ạ̈). [NL., < Gr. ἀνήρ (ἀνδρ-), male, + γαμέτης, spouse (see *gamete*), + ἀγγεῖον, vessel.] Same as *antheridium*.

androgamete (an-drọ̄-gam'ēt), *n.* [Gr. ἀνήρ (ἀνδρ-), male + γαμέτης, spouse (see *gamete*).] In *bot.*, a male sexual cell.

androgenetic (an″drọ̄-jẹ̄-net'ik), *a.* [Gr. ἀνήρ (ἀνδρ-), male, + E. *genetic*.] Productive of males only.—**Androgenetic parthenogenesis**, the production of males alone from unfertilized eggs; arrhenotoky. See ★*homoparthenogenesis*.

androgonidium (an″drọ̄-gō-nid'i-um), *n.*; pl. *androgonidia* (-ạ̈). [NL., < Gr. ἀνήρ (ἀνδρ-) male, + NL. *gonidium*.] **1.** One of the male cells formed in *Volvox* which later subdivides into numerous spermatozoöids. *Cohn*.—**2.** Same as *androspore*.

androgynic (an″drọ̄-jin'ik), *a.* Having two sexes; androgynous; hermaphroditic. *Syd. Soc. Lex.*

androlepsia (an-drō-lep'si-ạ̈), *n.* [Gr. ἀνδρολημψία, seizure of men.] In *international law*, the seizure by one nation of the citizens or subjects of another, and the holding of them, to compel the performance of an act by the latter in favor of the former. Also *androlepsy*.

androlepsy (an'drọ̄-lep-si), *n.* Same as ★*androlepsia*.

andrology (an-drol'ọ̄-ji), *n.* [Gr. ἀνήρ (ἀνδρ-), man, + -λογια, < λέγειν, speak.] In the terminology of J. W. Powell, the whole theoretical

science of individual man, physiological and psychological.

Man is preeminently the psychic animal, so that human psychology is set over against the other attributes of man, which are grouped under the term somatology; therefore man studied as a human body gives rise to the science of somatology and the science of psychology. To these two sciences as a group I give the name *andrology*, while *andrology* and demology constitute anthropology, which is the customary term; but as the science is coordinate with the greater systems, I shall use the term anthroponomy.
J. W. Powell, in Amer. Anthropologist, Oct.–Dec., 1901, [p. 604.

andromedid (an-drom′e-did), *n.* [Lit. 'descendant of Andromeda'; < *Andromeda* + *-id*[2].] Same as *andromed.*

andromedotoxin (an-drom″e-dō-tok′sin), *n.* [*Andromeda*, a genus of plants, + *toxin.*] Same as ★*asebotoxin.* *Yearbook U. S. Dept. Agr.* 1897, p. 97.

andromonœcism (an″drō-mō-nē′sizm), *n.* [*andromonœc(ious)* + *-ism.*] The character or condition of being andromonœcious.

Andromonœcism signifies that the same plant bears both male and hermaphrodite flowers.
Henslow, Origin of Floral Struct., p. 227.

androna (an-drō′ni-ä), *n.* [NL., < Gr. ἀνήρ (ἀνδρ-), man (?).] A name given by Winterl in 1800 to a supposed new earth which was shown by a committee of the French Academy of Sciences to be merely a mixture of well-known substances.

androphobia (an-drō-fō′bi-ä), *n.* [NL., < Gr. ἀνήρ (ἀνδρ-), man, + *-φοβία*, < φοβεῖν, fear.] Fear of or repugnance to the male sex.

androphore, *n.* **1.** (*b*) A stalk supporting an andrœcium.

androphyl (an′drō-fil), *a.* [Gr. ἀνήρ (ἀνδρ-), male, + φύλλον, leaf.] A male sporophyl; a stamen.

androplasm (an′drō-plazm), *n.* The material that is supposed, by Haeckel and others, to enter into the composition of male cells and to give them their distinctive character, and to be unlike anything that enters into the composition of female cells.

This "sex-sense" of the two gonocytes, or elective affinity of the male *androplasm* and the female *gynoplasm*, is the cause of mutual attraction and union.
Haeckel (trans.), Wonders of Life, p. 245.

androrhopy (an-dror′ō-pi), *n.* [Gr. ἀνήρ, male, + ῥοπή, downward inclination.] The state or condition of a species in which the males depart more widely than the females from the ancestral condition, as exhibited by the young of both sexes or by allied species.

Androsace (an-dros′ä-sē), *n.* [NL., < L. *androsaces*, < Gr. ἀνδρόσακες, an uncertain plant.] A genus of small tufted perennial plants of the family *Primulaceæ*, commonly called *rock-jasmine*, cultivated in alpine gardens. The only species much known in the United States are *A. lanuginosa*, *A. sarmentosa*, *A. carnea*, and *A. eximea*. There are about 50 species, most of which are found in the mountains of the northern hemisphere.

androsporangium (an-drō-spō-ran′ji-um), *n.*; pl. *androsporangia* (-ä). [Gr. ἀνήρ (ἀνδρ-), male, + NL., *sporangium.*] A sporangium containing androspores.

androtauric (an-drō-tâ′rik), *a.* [Gr. ἀνήρ (ἀνδρ-) man, + ταῦρος, bull.] In *Gr. antiq.*, a term applied to mythologic monsters in which the forms of bull and man are combined, as an androcephalous bull or a taurocephalous man.

-ane. 3. A suffix applied to the names of classes in the quantitative classification of igneous rocks. See ★*rock*[1].

anecdoted (an′ek-dō-ted), *p. a.* Made the subject of an anecdote.

It is a story they tell in Rome, where everybody is *anecdoted.* *W. D. Howells*, Ital. Jour., p. 170.

anectobranchiate (ä-nek-tō-brang′ki-āt), *a.* [Gr. ἀν-, priv. + ἐκτός, without, + βράγχια, gills.] Having no external gills, as the *Melonitoida* among echinoids.

anelectrotonically (an-ē-lek-trō-ton′i-kal-i), *adv.* In a manner having relation to anelectrotonus.

anemia[1], *n.* — **Brickmakers' or miners' anemia**, anemia due to the presence of *Ancylostoma* in the intestine. — **Polar anemia**, a condition of blood impoverishment to which explorers and others wintering in the polar regions are liable: probably due to lack of fresh food, the inability to take sufficient exercise, and the absence of sunlight. — **Primary anemia**, anemia arising from no discoverable cause. — **Secondary anemia**, anemia due to some manifest cause, such as frequent losses of blood, malaria, cancer, etc. — **Splenic anemia**, a condition in which anemia is associated with enlargement of the spleen, but without enlargement of the lymphatic glands.

Anemia[2] (a-nē′mi-ä), *n.* [NL. (Swartz, 1806), irreg. < Gr. ἄνεμος, naked.] A genus of small, simply pinnate or decompound, schizæaceous ferns, characterized by having the ovate, sessile sporangia borne biserially upon the two elongate, rachiform-paniculate, lowermost pinnæ, or, if the genus is accepted in a wide sense, sometimes upon separate fertile fronds. Strictly delimited, the bulk of the species usually referred here will be placed under *Ornithopteris*, a genus technically distinguished from the typical *Anemia* by its free venation. The species are mainly tropical American.

Anemic gangrene. See ★*gangrene.*

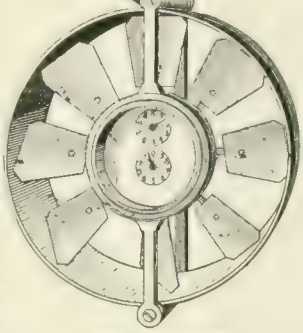
anemobarometer (an″e-mō-ba-rom′e-tèr), *n.* An instrument consisting of two tubes leading from closed vessels containing barometers up to a free exposure to the wind. One tube opens to the windward so that its barometer indicates the static atmospheric pressure plus the wind-pressure; the other tube opens to the leeward and gives the atmospheric pressure diminished by the wind-pressure or some portion thereof. From a comparison of the two readings one obtains the correct air-pressure and wind-pressure separately. As modified in 1887, only one tube is used, opening into the space between two horizontal planes.

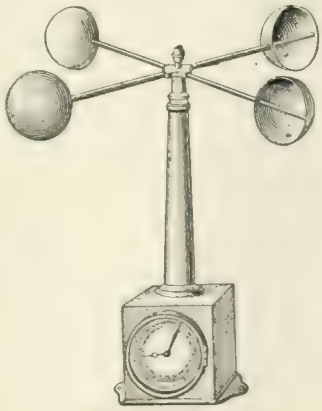
anemochore (a-nem′ō-kōr), *n.* [Gr. ἄνεμος, wind, + χωρεῖν, spread abroad.] In *phytogeog.*, a plant whose seed is disseminated by the wind, as by means of pappus, etc. *F. E. Clements.*

anemochorous (an-e-mok′ō-rus), *a.* [*anemochore* + *-ous.*] Having the character of an anemochore. *F. E. Clements.*

anemogen (a-nem′ō-jen), *n.* [F. *anémogène*; < Gr. ἄνεμος, wind, + *-γενής*, -producing.] An apparatus for experimentally producing, measuring, and studying currents of air analogous to the natural currents in the earth's atmosphere.

anemometer, *n.* — **Biram's anemometer**, a special form of wind-gage. — **Calibration of anemometer**, the study of an anemometer by means of the standard whirling apparatus so as to convert its instrumental readings into true wind-velocities or wind-pressures. — **Hagemann's anemometer**, a form of suction-anemometer; a vertical tube whose lower end opens in a manometer and whose upper end is exposed to the free wind and has a small tip and an orifice across which the wind blows. The velocity of the wind is deduced from the suction or rarefaction produced within the tube by the action of the wind. Special modifications of this instrument have been introduced by Abbe and Dines. — **Helicoidal anemometer**, a modification of Woltman's anemometer in which the radial arms are dispensed with and plates bent into helicoidal surfaces, similar to those of the screw-propeller, are used to receive the impulse of the wind. — **Hooke's anemometer**, the pendulum anemometer; a plate of metal hung as a pendulum broadside to the wind, and whose deflection from the vertical can be measured on a scale. First described in 1666. — **Lander's anemometer**, an anemometer (more properly anemograph) in which a delicately counterpoised rubber bellows is inflated by the pressure of the wind and lifts a small conical float suspended in glycerin so as to damp its oscillations. The movement of the float and the direction of the wind are both recorded. — **Reflecting anemometer**, the name originally given to what is better known as *Aimé's nephoscope.* — **Robinson's anemometer**, four hollow hemispheric metallic cups revolving, when exposed to the wind, on a vertical axis, to which they are attached by arms crossing at right angles. The motion is transmitted by an appropriate mechanism to a hand over the dial where the velocity of the wind is indicated.


Biram's Anemometer.


Robinson's Anemometer.

anemophily (an-e-mof′i-li), *n.* [*anemophil(ous)* + *-y*[3].] In *bot.*, the fact or character of being anemophilous.

anemophobia (an″e-mō-fō′bi-ä), *n.* [Gr. ἄνεμος, wind, + *-φοβία*, fear.] A morbid fear of high winds. *G. S. Hall*, Adolescence, II. 185.

anemotropic (a-nem-ō-trop′ik), *a.* [Gr. ἄνεμος, wind, + τρόπος, a turning.] Concerning or pertaining to the attitude or movement of organisms in relation to the direction of the wind.

anemotropism (an-e-mot′rō-pizm), *n.* [*anemotrop(ic)* + *-ism.*] The movement of organisms or the attitude of their bodies in relation to the direction of the wind.

This peculiarity . . . is an orientation of the body with respect to the wind. As it appears to be a true tropism I shall call it *anemotropism.*
W. M. Wheeler, Archiv f. Entwicklungsmechanik, 8. 373.

anencephalotrophic (an-en-sef″ä-lō-trof′ik), *a.* Characterized by anencephalotrophia or atrophy of the brain.

anephebic (an-e-fē′bik), *a.* [Gr. ἀνά, up, + ἔφηβος, adult: see *ephebic.*] The early portion of the ephebic or adult stage in the development of an organism. *Hyatt.*

aneretic, *a.* See *anæretic.*

anergia (an-ėr′ji-ä), *n.* [NL., < Gr. ἀνεργία, a doubted reading, equiv. to ἀεργία (cf. ἀνεργος, not done), < ἀν- priv. + ἔργον, work.] Lack of energy; passivity. Also *anergy.*

anergic (an-ėr′jik), *a.* [*anergia* + *-ic.*] Deficient in energy.

anergy (an-ėr′ji), *n.* [NL. *anergia.*] Same as ★*anergia.*

aneson (a-nē′son), *n.* An aqueous solution of acetone-chloroform.

anesthetic, *a.* — **Anesthetic ether, leprosy.** See *ether*[1], 3 (*b*), *lepra.* — **Schleich's anesthetic mixture**, a mixture of ether, petroleum ether, and chloroform, used by inhalation in the production of general anæsthesia.

anethical (an-eth′i-kal), *a.* Devoid of ethical quality; neither ethical nor anti-ethical. *Ward*, Pure Sociol., p. 303.

aneuria (a-nū′ri-ä), *n.* [NL., < Gr. ἄνευρος, without sinews (nerves), < ἀ- priv. + νεῦρον, sinew: see *nerve.*] Lack of nerve force.

aneuric (a-nū′rik), *a.* Lacking in nerve force; neurasthenic.

aneurism, *n.* **2.** In *thermom.*, an enlargement of the capillary tube of the thermometer. *Tait*, in Nature, XXV. 90. — **External aneurism**, dilatation of an artery outside of the visceral cavities of the body and therefore accessible to surgical methods of treatment. Also called *surgical aneurism.* — **Gelatin treatment for aneurism**, the administration of gelatin, which has the property of rendering the blood more coagulable and therefore favors clotting within the aneurismal sac. — **Internal aneurism**, dilatation of an artery within one of the cavities of the body and which is therefore not amenable to surgical treatment. Also called ★*medical aneurism.* — **Medical aneurism.** Same as *internal* ★*aneurism.* — **Miliary aneurisms**, minute aneurisms affecting one or more of the small arteries of the brain, rupture of which is a common cause of apoplexy. — **Racemose aneurism**, a condition of dilatation, lengthening, and tortuosity of the blood-vessels (arteries, capillaries, and veins) of a part. — **Surgical aneurism.** Same as *external* ★*aneurism.* — **Valvular aneurism**, a cavity containing blood and sometimes pus, formed between the layers of one of the valves of the heart. — **Worm aneurism**, an aneurism in horses caused by roundworm larvæ belonging to the species *Strongylus vulgaris.*

aneurism-needle (an′ū-rizm-nē″dl), *n.* A curved, blunt-pointed rod with an eye at the point, used for passing a ligature around an artery which it is desired to obliterate in the treatment of aneurism.

angarep (an′gä-rep), *n.* [Native name in Abyssinia (?). Appar. not in Egyptian Ar.] A light bedstead used by the Arabs, consisting of a simple framework set upon legs and covered with a network of green rawhide which hardens to the tightness of a drum when dry. On this is laid the mat. *Sir S. W. Baker*, Nile Trib. Abyssinia (ed. 1867), p. 113.

angarilla (än-gä-rēl′yä), *n.* [Sp.; in pl. a hand-barrow, panniers, etc.] **1.** A litter. — **2.** *pl.* In South America, a pair of uncovered boxes made of rawhide, fastened to each end of a pole also covered with hide. The pole is placed across the back of a mule or a donkey, so that the boxes or chests hang on each side of the animal. Children are frequently carried on long journeys in angarillas.
3. A net used for carrying things.

angekok (an′jē-kok), *n.* [Eskimo *angakok.*] Among the Eskimos of Arctic America, a medicine-man; a sorcerer; a shaman.

angel, *n.* **6.** In modern *theat. slang*, one who advances money to put a new play on the

boards; a financial backer.—**7.** Same as *angel-fish.* **Black angel,** a Bahaman name of the chirivita (*Pomacanthus paru*), a West Indian species of *Chætodontidæ.*

angel-cake (ān'jel-kak), *n.* White sponge-cake.

angeldom (ān'jel-dum), *n.* [*angel* + *-dom.*] The realm of angels.

All the light of *angeldom.*
Mrs. Browning, Drama of Exile, Chorus of Angels, sc. 3.

angel-fish, *n.*—**Yellow angel-fish,** the isabelita, *Holacanthus ciliaris,* a gorgeously colored fish of the West Indies, of the family *Chætodontidæ.* Also called *blue angel-fish.*

angel-food (ān'jel-föd), *n.* Same as ★*angel-cake.*

angelica, *n.*—**Oil of angelica,** an essence or essential oil obtained from the seeds of plants of the genus *Angelica.*

angelica-root (an-jel'i-kä-röt), *n.* The aromatic root of *Coleopleurum Gmelini* and *Angelica atropurpurea.*

angelicin (an-jel'i-sin), *n.* [*angelica* + *-in*2.] An amaroid, $C_{18}H_{30}O$, obtained from *Coleopleurum Gmelini.* It is crystalline and melts at 126.5°C.

Angelina (an-je-lī'nä), *n.* [NL., ⟨ *Angelin,* a Swedish paleontologist.] A genus of trilobites, of which *A. sedgwicki* is an example, having a conic glabella with faint or no lateral furrows, long genal spines, 15 thoracic segments, and a small pygidium. It is of Upper Cambrian age.

angeline (an'je-lin), *n.* Same as ★*surinamine.*

angelito (än-he-lē'tō), *n.* [Sp., 'little angel'; dim. of *angel,* angel.] A stingless honey-bee, belonging to the genus *Melipona,* found in tropical America. It forms its nests in trees, and keeps its honey in cups about the size of pigeons' eggs.

angelography (ān-je-log'ra-fi), *n.* A treatise on angels. [Rare.] *N. E. D.*

Angelonia (an-je-lō'ni-ä), *n.* [NL.] A genus of perennial herbs and sub-shrubs of the family *Scrophulariaceæ,* with handsome, irregular, 2-lipped, axillary flowers, grown as pot-plants in warm glass houses. There are about 24 species in the northern part of South America, Mexico, and the West Indies.

angico (än-jē'kō), *n.* [A European (Sp.?) form, also *angica, canjica,* of a supposed native name in Brazil.] The name in Brazil and Paraguay for a tree of the mimosa family, *Stachychrysum rigidum,* which yields an extremely hard, durable, dark-brown wood, and a gum similar to gum arabic. Both the gum and the astringent bark are used medicinally by the natives. See *Piptadenia.*

angiectopia (an″ji-ek-tō'pi-ä), *n.* [NL., ⟨ Gr. *ἀγγεῖον,* vessel, + *ἔκτοπος,* out of place.] An abnormal position of one or more of the important blood-vessels.

angiitis, *n.*—**Consecutive angiitis,** inflammation of the vessels caused by extension of the process from neighboring inflamed tissues.

angina, *n.*—**Angina dyspeptica,** a spurious angina pectoris caused by gaseous distention of the stomach. —**Vincent's angina,** a sore throat resembling diphtheria but associated with the presence of a different variety of bacillus.

anginiform (an-jin'i-fôrm), *a.* [L. *angina,* angina, + *forma,* form.] Resembling angina, especially angina pectoris.

angioblast (an'ji-ō-blast), *n.* [Gr. *ἀγγεῖον,* vessel, + *βλαστός,* germ.] In *embryol.,* an embryonic cell which takes part in the formation of the blood-vessels and -corpuscles.

angioblastic (an″ji-ō-blas'tik), *a.* **1.** Of or pertaining to angioblasts.—**2.** Forming blood-vessels or -corpuscles.

angiocarpic (an″ji-ō-kär'pik), *a.* Same as *angiocarpous.*

angioceratoma (an″ji-ō-ser-a-tō'mä), *n.*; pl. *angioceratomata* (-ma-tä). [NL., ⟨ Gr. *ἀγγεῖον,* vessel, + *κέρας* (*κερατ-*), horn, + *-oma.*] An eruption of horny reddish nodules caused by hypertrophy of the epidermis over circumscribed dilatations of the cutaneous capillaries. Also *angiokeratoma.*

angioclast (an'ji-ō-klast), *n.* [Gr. *ἀγγεῖον,* vessel, + *κλαστός,* ⟨ *κλᾶν,* break.] An instrument shaped like a forceps, used to compress a bleeding artery. *Buck,* Med. Handbook, IV. 635.

angioda (an-ji-ō'dä), *n. pl.* [NL., ⟨ Gr. *ἀγγεῖον,* vessel. The form suggests Gr. *ἀγγειώδης,* like a vessel, hollow, but the sense differs.] A collective name for those mammals in which the retina is provided with blood-vessels.

angiofibroma (an″ji-ō-fī-brō'mä), *n.*; pl. *angiofibromata* (-ma-tä). [NL., ⟨ Gr. *ἀγγεῖον,* vessel, + L. *fibra,* fiber, + *-oma.*] A mixed angioma and fibroma.

angioid (an'ji-oid), *a.* [Gr. *ἀγγειοειδής, ἀγγειώδης,* ⟨ *ἀγγεῖον,* vessel, + *εἶδος,* form.] Resembling a blood-vessel or lymphatic. *Buck,* Med. Handbook, VI. 955.

angiolithic (an-ji-ō-lith'ik), *a.* [Gr. *ἀγγεῖον,* vessel, + *λίθος,* stone.] Noting hardening of the vessels.—**Angiolithic degeneration.** See ★*degeneration.*

Angioma serpiginosum. [See *serpigo.*] An eruption of prominent red dots arranged in ring-shaped figures.—**Cavernous angioma,** a vascular tumor containing large open spaces filled with blood.

angiomatosis (an″ji-ō-ma-tō'sis), *n.* [NL., ⟨ *angioma*(*t*) + *-osis.*] A general diseased state of the blood-vessels or lymphatics.

angioneoplasm (an″ji-ō-nē'ō-plazm), *n.* [Gr. *ἀγγεῖον,* vessel, + E. *neoplasm.*] Same as *angioma.*

angioneurectomy (an″ji-ō-nū-rek'tō-mi), *n.* [Gr. *ἀγγεῖον,* vessel, + E. *neurectomy.*] Excision of vessels and nerves; specifically, excision of a portion of the spermatic cord as a means of inducing atrophy of the prostate gland.

Angioneurotic edema, the occurrence of urticarial swellings on the skin and mucous membranes, due to morbid vasomotor action.

angioparalytic (an″ji-ō-par-a-lit'ik), *a.* [Gr. *ἀγγεῖον,* vessel, + *παράλυσις,* paralysis, + *-ic.*] Relating to paralysis of the vasomotor nerves, resulting in dilatation of the blood-vessels.

angiopathy (an-ji-op'a-thi), *n.* [Gr. *ἀγγεῖον,* vessel, + *πάθος,* disease.] Disease of the lympathics or blood-vessels.

angiosclerosis (an″ji-ō-sklē-rō'sis), *n.* [NL., ⟨ Gr. *ἀγγεῖον,* vessel, + *σκλήρωσις,* hardening.] Fibrous induration of the walls of the vessels, usually of the arteries; arteriosclerosis. *Jour. Exper. Med.,* V. 105.

angiosclerotic (an″ji-ō-sklē-rot'ik), *a.* Pertaining to or characterized by angiosclerosis. —**Angiosclerotic neuritis,** degenerative inflammation of a nerve-trunk associated with angiosclerosis of its nutritive arteries.

The combination of arteritis with intense degeneration and inflammation of the nerves causes the *angiosclerotic neuritis* of Joffroy and Achard, Dutil and Lamy, and Schlesinger; the vasomotor and sensory irritation without the endarteritis causes acroparæsthesia.
Jour. Exper. Med., V. 105.

angiospastic (an″ji-ō-spas'tik), *a.* [Gr. *ἀγγεῖον,* vessel, + *σπαστικός,* ⟨ *σπᾶν,* draw.] Relating to stimulation of the vasomotor nerves; causing contraction of the blood-vessels. *Buck,* Med. Handbook, IV. 550.

angiospermic (an″ji-ō-spėr'mik), *a.* [*angiosperm* + *-ic.*] In the sphere of or pertaining to the *Angiospermæ:* as, *angiospermic* evolution; *angiospermic* anatomy.

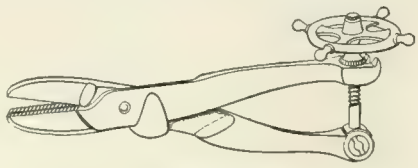
Angiosporea (an″ji-ō-spō'rē-ä), *n. pl.* [NL., ⟨ Gr. *ἀγγεῖον,* vessel, + *σπορά,* a seed (spore).] A subtribe of cephaline *Eugregarinæ* having well-developed spores with double sporocysts composed of epispore and endospore. It comprises the families *Gregarinidæ, Dactylophoridæ, Actinocephalidæ, Acanthosporidæ,* and others.

angiostenosis (an″ji-ō-stē-nō'sis), *n.* [NL., ⟨ Gr. *ἀγγεῖον,* vessel, + *στένωσις,* narrowing, contraction.] Morbid contraction of the blood-vessels.

angiosthenia (an″ji-ō-sthē'ni-ä), *n.* [Gr. *ἀγγεῖον,* vessel, + *σθένος,* strength.] Arterial tension.

angiotelectasia (an″ji-ō-te-lek-tā'si-ä), *n.* [NL., ⟨ Gr. *ἀγγεῖον,* vessel, + *τῆλε,* far, + *ἔκτασις,* extension.] Same as *telangiectasia.*

angiotribe (an'ji-ō-trīb), *n.* [Gr. *ἀγγεῖον,* vessel, + *τρίβειν,* rub, crush.] A strong forceps-like instrument used in surgical operations to



Tuffier's Angiotribe.

arrest hemorrhage by crushing the bleeding vessels with the tissues surrounding them.

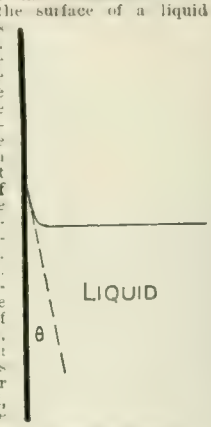
angiotripsy (an'ji-ō-trip″si), *n.* [Gr. *ἀγγεῖον,* vessel, + *τρίψις,* ⟨ *τρίβειν,* rub, crush.] The use of the angiotribe in arresting hemorrhage.

Anglaise (ang-glāz'), *n.* [F. fem. of *Anglais,* English.] A country-dance; also, the music for such a dance.

angle3, *n.* **6.** In *projective geom.,* a piece of a flat pencil bounded by two of the straights as sides. See the extract.

A portion of a sheaf of rays bounded by two rays of the sheaf as 'sides' is called a 'complete plane *angle.*' This consists of two 'simple' angles which are vertically opposite to each other.
T. F. Holgate, Geometry of Position by Reye, p. 12.

Angle of contact. (*b*) In the mechanics of liquids, the angle θ which the surface of a liquid in contact with a solid makes with the surface of the latter. The angle of contact may be greater or less than 90°. In the latter case the liquid wets the surface of the solid. In the former case it does not do so.—**Angle of deviation,** the angle which a branch or other organ makes with the axis of the plant to which it belongs.—**Angle of emergence,** in *geol.,* the angle at which the path of an earthquake-wave intersects the horizontal plane at the surface. *Geikie,* Text-book of Geol., p. 366.—**Angle of field,** in *photog.,* width of angle; the angle at which the circular picture of the object to be photographed, projected by the objective upon the ground-glass, appears as seen from the optical center of the lens.—**Angle of heel,** in *naval architecture,* the angle of transverse inclination measured from the vertical when a vessel heels over from any cause.—**Angle of lag.** See ★*lag*1.—**Angle of lead.** See ★*lead*1.—**Angle of Louis or of Ludovici,** a bend in the sternum at the junction of its upper segment with the body, sometimes present in chronic affections of the lungs. —**Angle of mandibles,** in *craniom.,* the angle formed by the lower surface of the lower jaw with the posterior border of the ramus. Also called *gonial angle.* —**Angle of ordination,** in *analyt. geom.,* the angle made by the coordinate axes.—**Angle of parallelism,** the angle made by one of two parallels with a perpendicular to the other. Lobachevski writes it $\Pi(p)$. In his non-Euclidean geometry it is a function of p, the perpendicular.—**Angle of plunge,** in *geol.,* the angle between a dipping stratum and the surface of the ground. It differs from true dip in all cases where the surface is not a horizontal plane, being greater if the ground rises in the direction of dip and less if it descends.—**Angle of projection,** in the theory of lenses, the angle which the exit-pupil of a system subtends at the focus conjugate to the point (object) from which the light enters the system. —**Angle of shear,** the angle through which a plane within a body subjected to a shearing stress (the plane having been originally perpendicular to the direction of the stress) is displaced.—**Angle of slope,** in *geol.,* the angle formed by the intersection of an inclined surface, as of a mountain, with the horizontal plane. Compare *angle of repose.*—**Angle of stability,** in *mech.,* the largest angle at which a body placed upon an inclined plane will remain at rest. Same as *angle of repose* or *angle of friction.*—**Angle of the iris,** the angle at the peripheral portion of the anterior chamber of the eye formed by the cornea in front and the iris behind.—**Angle of the vertical,** in *astron.,* the angle at any place between the direction of gravity and a line drawn to the center of the earth. It is the difference between the astronomic and the geocentric latitudes, the former being always the greater. The angle is at maximum in latitude 45° when it amounts to 11½′. It is zero at the poles and equator.—**Angle of upset,** the angle through which the upper part of a portable balance-crane can swing, from its position parallel to the center line of the truck, before it would upset with the weight of the load.—**Angle of view,** in *photog.,* the central portion of the angle of field, which is distinct and sharp. It is extended by the use of stops.—**Angles of displacement.** See ★*displacement.* —**Axial angle,** the angle between the optic axes of a biaxial crystal.—**Bounding-angle,** in *shipbuilding,* an angle-bar forming the boundary of a bulkhead or flat by means of which it is attached to the other parts of an iron or steel vessel.—**Brocard angle,** the acute angle ω related to A, B, C, the angles of a plane triangle, by the equation $\cot. \omega = \cot. A + \cot. B + \cot. C$. It is one of the three equal acute angles formed at the vertices by the sides of a triangle and the straight lines from a Brocard point to the vertices. See *Brocard* ★*point.*—**Brocard angle of a polygon,** that polygon being cyclic, the complement of half the angle subtended by any side of the polygon, the vertex of the angle being at the symmedian point. —**Epigastric angle,** the angle which the ensiform cartilage makes with the body of the sternum.—**Extinction angle.** See ★*extinction.*—**Goniac angle.** Same as ★*angle of mandibles.*—**Inscribed angle,** an angle whose sides are chords from the same point on the circle.—**Internal angle.** Same as *interior angle.* See *angle*3, 1.—**Limiting angle,** in *mech.,* the largest angle with the normal at which a force can be applied to a body resting upon a horizontal surface without producing motion. The limiting angle is independent of the size of the force and depends only upon the coefficient of friction of the quantity of which it affords a measure. It is equal to the angle of repose or angle of friction.—**Maxillary angle,** the angle formed by lines drawn from the most prominent points of the forehead and of the chin to meet at the most projecting point of the upper jaw.—**Nasial angle.** See ★*nasial.*—**Non-reposing angle.** See *reposing* ★*angle.* —**Polyhedral angle,** a solid angle.—**Reposing angle,** in the design of parts of a machine which are to roll one upon another, an angle between the resultant pressure and the plane tangent to the bearing surface such that when a limiting value is exceeded there is no



Angle of Contact.

tendency for the rolling surface to slip without rolling. When the angle is less than this limiting value the roll tends to slip and to become polygonal from wear. This angle may also be measured from the normal instead of from the tangent. It must be determined for any two materials by experiment, since it bears a relation to the so-called *angle of friction* or *angle of repose* in experiments on sliding. An angle beyond the critical value would then be called a *non-reposing angle*.— **Rolandic angle,** the angle formed by the upper edge of the hemisphere of the brain and the fissure of Rolando.— **Somatosplanchnic angle,** the angle formed in the vertebrate embryo by the junction of the somatic and splanchnic layers of mesoblast.— **Supplemental angles,** two angles whose sum equals two right angles.— **Supplementary angles.** Same as *supplemental* ★*angles*.— **Tanchord angle,** an angle between a tangent to a circle and a chord from the point of contact.— **View angle,** in *photog.*, the angle inclosed by a lens.

angle[3] (ang'gl), *v. t.*; pret. and pp. *angled*, ppr. *angling*. [*angle*[3], *n.*] To lead off or deflect (a body or element) from a direction parallel or perpendicular to another body or element to which or from which it is to move: as, to *angle* a rope.

The continuous change in direction experienced by the rope between the head-gear pulley and the drum in coiling on or off (the so-called "*angling*" of the rope) is a source of wear when the depth becomes considerable.
Encyc. Brit., XXVII. 121.

angle-bar, *n.* **3.** In *printing*, an iron bar which turns at a right angle a printed web of paper and mates it with another printed web.

Two general classes of the web press are made. In one, what is called the "*angle-bar*" is utilized to turn the sheets in order to assemble them from the different webs. The other is designated the "straight line," the sheet being run through the press without being diverted from a straight course.
Census Bulletin 216 (June 28, 1902), p. 63.

angle-bearing (ang'gl-băr″ing), *n.* A crank-shaft bearing attached to an engine-bed, the center line of its joint being placed at an angle of about 45° with the bed, the purpose of which is to effect that disposition of the metal best calculated to withstand the resultants of the strains due to the motion of the crank and connecting-rod. *Lockwood*, Dict. Mech. Eng. Terms.

angleberry (ang'gl-ber-i), *n.* [A perversion of *anbury*.] A fleshy excrescence found growing on the feet and other parts of sheep and cattle. Also spelled *anleberry*.

angle-board (ang'gl-bōrd), *n.* A board upon which pattern-makers plane their angles and hollows. It is traversed longitudinally with vee'd grooves of different depths to suit angles of different sizes, in which grooves the stuff is laid while being planed, a transverse strip near the end acting as a stop. *Lockwood*, Dict. Mech. Eng. Terms.

angle-bulb (ang'gl-bulb), *n.* A rolled bar of steel or iron, in the form of an angle with a bulb at the lower end of its long arm, used principally for deck-beams on steel ships.

angle-cutter (ang'gl-kut'ėr), *n.* A heavy machine used for cutting iron or steel angle-bars.

angled, *a.* **2.** A term applied to a billiard-ball which, when resting near the edge of a pocket, is so masked by the cushion that it cannot hit the desired object.

angle-frame (ang'gl-frām), *n.* A type of construction for the frame or skeleton of motor-vehicles in which the members that carry the weight and transfer it to the supporting springs, and thus to the axles, are made of steel angle or channel shapes to give greatest strength and stiffness with least weight of material. Sometimes for additional stiffness these angle- or channel-irons are reinforced with tough wood securely bolted to the steel. *Sci. Amer.*, LXXXVIII. 91.

angle-gage (ang'gl-gāj), *n.* **1.** A gage or standard carefully made to the exact value of the desired angle, used in testing the accuracy of the angles of screw-threads, cutting-tools, or machine-work of any kind.— **2.** Specifically, an instrument for setting the angle or incline of the top comb of a Heilmann cotton-combing machine. *Thornley*, Cotton-combing Machines, p. 166.

angle-hoop (ang'gl-höp), *n.* A hoop made of angle-iron. Such hoops are sometimes used for stiffening the furnaces in Scotch boilers.

angle-joint (ang'gl-joint), *n.* In *carp.*, a joint between two pieces which are mitered together.

angle-meter, *n.* **2.** An instrument designed to show the variations in angular velocity of the revolving shaft of an engine. *Sci. Amer. Sup.*, Oct. 15, 1904.

angle-mirror (ang'gl-mir″or), *n.* A surveyor's instrument for observing and measuring angles and the positions of distant objects in relation to one another. It consists of two mirrors, one being sometimes adjustable to the other, supported in a metal frame.

angle-plate (ang'gl-plāt), *n.* An angle-chuck.

angle-prism (ang'gl-prizm), *n.* An instrument similar to the angle-mirror, employing prisms instead of mirrors.

angler, *n.* **3.** A general name of the pediculate fishes, from the presence of a modified free dorsal spine, or 'fishing-rod,' above the mouth. **Marbled angler,** *Pterophryne histrio*, a fish of the family *Antennariidæ*, found in tropical parts of the Atlantic. It is remarkable, as are all of its relatives, for its form, color, and nest-building habits.

Anglesea penny. See ★*penny*.

angle-smith (ang'gl-smith), *n.* A blacksmith skilled in forging angle-bars, beams, and other profiled bars into the various forms in which they are used in shipbuilding.

angle-valve (ang'gl-valv), *n.* A form of lifting- or spindle-valve, in a globular casing, in which the spindle or stem enters the valve in the same axis as one of the openings, and the other outlet is at right angles to the axis of the spindle; much used with steam-radiators and in other places where a right-angled corner is to be turned and a valve is also required. The angle-valve opposes less resistance to the flow of fluid through it than the globe-valve.— **Angle check-valve,** an angle-valve which opens only to steam or water flowing in one direction.— **Angle stop-valve,** an angle-valve which has to be closed by hand to stop the flow in the pipes.

angle-wheel (ang'gl-hwēl), *n.* Any gear in which the teeth, instead of being parallel to the axis, make an angle with it; a helical gear; a twisted gear.

angle-wing (ang'gl-wing), *n.* Any one of several species of nymphalid butterflies whose wings are angular and excised, as species of the genera *Vanessa*, *Polygonia*, *Aglais*, and *Euvanessa*.

Anglicist (ang'gli-sist), *n.* One who favors or supports some proposition or movement relating to English or the English: specifically applied in history to one of those who favored the proposal to make the English language (and not Arabic or Sanskrit) the vehicle of instruction in those schools and colleges in India that were subsidized by the government during the administration of Lord William Bentinck (1828–35).

In describing the controversy between the "Orientalists" and the "*Anglicists*" [of the Committee of Public Instruction] which evoked Macaulay's famous minute . . . not a word is said [in Boulger's Life of Lord William Bentinck] of the champion Orientalist, Horace Wilson.
Athenæum, Sept. 24, 1892, p. 411.

Anglicity (ang-glis'i-ti), *n.* [NL. **Anglicitas*, ⟨ LL. *Anglicus*, Anglic.] Distinctively English quality, style, or character: as, *Anglicity* of speech.

Anglo-African (ang″glō-af'ri-kạn), *a.* and *n.* **I.** *a.* Pertaining to Africans, or persons of African descent, living among English-speaking peoples, as the Africans in the United States. *Keane*, Ethnology, p. 380.

II. *n.* An African living among English-speaking peoples.

Anglo-American pottery. See ★*pottery*.

Anglo-Asian (ang″glō-ā'shiạn), *a.* and *n.* **I.** *a.* Of or pertaining to England and Asia or to the English in Asia: as, *Anglo-Asian* enterprises.

II. *n.* An Anglo-Asiatic.

Anglo-Asiatic (ang″glō-ā-shi-at'ik), *a.* and *n.* **I.** *a.* **1.** Of or pertaining to both England (that is, Great Britain and Ireland) and Asia.— **2.** Relating to those Asiatics who are British subjects or are under British control, or who have become assimilated to the English in education, culture, etc.

II. *n.* An Asiatic who is under British rule.

Anglo-Australian (ang″glō-âs-trā'li-ạn), *a.* and *n.* **I.** *a.* Pertaining to Australians of English descent. *Keane*, Ethnology, p. 380.

II. *n.* An Australian of English descent.

Anglo-Chinese (ang″glō-chī-nēs'), *a.* and *n.* **I.** *a.* **1.** Of or pertaining to both England and China or to their inhabitants, etc.: as, *Anglo-Chinese* relations: an *Anglo-Chinese* alliance.— **2.** Established by the English in China or for the Chinese: as, an *Anglo-Chinese* college. —**3.** Written in English and Chinese, or prepared for the use of both English and Chinese readers: as, an *Anglo-Chinese* calendar; an *Anglo-Chinese* dictionary.

II. *n.* A Chinese who is under British rule or who is a British subject: as, the *Anglo-Chinese* of the Straits Settlements.

Anglo-Gallic (ang-glō-gal'ik), *a.* English and French; common to England and France. **Anglo-Gallic money.** See ★*money*.

angloid (ang'gloid), *n.* [*angle*[2] + *-oid*. The more proper form would be **angulond*.] A figure determined by three or more rays from the same point, taken in a certain order and such that no three consecutive rays are coplanar.

Anglo-Japanese (ang″glō-jap-ạ-nēs'), *a.* Of or pertaining to both England and Japan: as, an *Anglo-Japanese* alliance or understanding.

Anglomanist (ang'glō-mā-nist), *n.* [Irreg. ⟨ *Anglomania* + *-ist*.] An Anglomaniac: as, a rampant *Anglomanist*. *Macmillan's Mag.*, XLV. 475. [Rare.] *N. E. D.*

Anglophile, Anglophil (ang'glō-fil), *a.* and *n.* [LL. *Angli*, Englishmen, + Gr. φίλος, loving.] **I.** *a.* Friendly to England and English institutions; fond of English social life, manners, customs, etc.

When prudence dictated assistance to the Dutch, the Huguenots, or the '*Anglophile*' party in Scotland the vile but convenient adjective is Mr. Beesly's — that aid was scanty and underhand.
Athenæum, March 26, 1892, p. 400.

II. *n.* One who admires or is friendly to England; a lover or admirer of English institutions, social life, manners, customs, etc.

Anglophone (ang'glō-fōn), *n.* [LGr. Ἄγγλοι, L. *Angli*, the Angles (English), + φωνή, sound.] A person who speaks the English language. *Deniker*, Races of Man, p. 508.

Anglo-Venetian (ang″glō-ve-nē'shiạn), *a.* and *n.* **I.** *a.* Connected with both England and Venice; specifically of Venetian origin but domiciled in England: as, an *Anglo-Venetian* seaman. *Geog. Jour.* (R. G. S.), XIII. 205.

II. *n.* A Venetian domiciled in or engaged in the service of England.

Anglovernacular (ang″glō-vêr-nak'ū-lär), *a.* Of or pertaining to both English and the vernacular: as, an *Anglovernacular* school. *Encyc. Brit.*, XXX. 467. [Rare.]

ango (än'gō), *n.* [Native name.] In Samoa, a name applied to the turmeric-plant (*Curcuma longa*), the fleshy rhizome of which yields a yellow coloring matter which the natives use in ornamenting their bark cloth and for painting their skin. See *turmeric* and *huldee*.

angosturin (an-gos-tō'rin), *n.* [*Angostura* + *-in*[2].] A compound, with the empirical formula $C_9H_{12}O_5$, found in Angostura bark. It is bitter and is apparently a glucoside.

Angoumian (an-gō'mi-ạn), *a.* and *n.* [F. *Angoumois*, a former name of the district (department of Charente) in which Angoulême is situated.] **I.** *a.* In *geol.*, noting a division or substage of the Cretaceous system as recognized by the French geologists and constituting the upper part of the Turonian: essentially equivalent to the English Middle Chalk of the Upper Cretaceous.

II. *n.* The Angoumian division.

Angoumois grain-moth. See ★*grain-moth*.

Angræcum (an-grē'kum), *n.* [NL.] A genus of epiphytal orchids of tropical Africa, Madagascar, and Japan. There are at least 25 species known, of which the following are most common in cultivation in America: *A. articulatum*, *citratum*, *distichum*, *eburneum*, *Ellisii*, *Humboldtii*, *falcatum*, *Leonis*, *modestum*, *pertusum*, and *superbum*. Most of these species need warm-house treatment.

angrite (ang'grīt), *n.* [*Angra* (*Angra* dos Reis in Brazil, locality of a meteorite) + *-ite*[2].] See ★*meteorite*.

angster (äng'stėr), *n.* [Late MHG. (Swiss) *angster*.] An early Swiss copper coin, struck in Zürich, of the value of half a rapen, or seven twelfths of a German pfennig.

Ångström pyrheliometer, unit. See ★*actinometer* and ★*unit*.

Anguillula stercoralis, a parasitic species of worm which has been found in the intestine in certain cases of tropical diarrhea. *Jour. Exper. Med.*, VI. 84.

anguilluloid (ang-gwil'ū-loid), *a.* [*Anguillula* + *-oid*.] Eel-like; resembling the *Anguillula*.

angular, *a.* **5.** In *astrol.*, placed in one of the four angles of a nativity. *Raphael*, Manual of Astrol., p. 154.— **Angular acceleration.** See ★*acceleration* and *unit of angular* ★*acceleration*.— **Angular energy.** See ★*energy*. **Angular lead.** See ★*lead*[1]. **Angular leaf-spot.** See ★*leaf-spot*.— **Angular momentum.** See ★*momentum*.— **Angular point,** the vertex; the point common to the two rays of an angle. — **Unit of angular velocity,** the velocity which causes a rotating body to turn through a unit angle in unit time; an angular velocity of one radian per second.

II. *n.* In *ichth.*, a small bone on the lower posterior corner of the articulare: same as *angular bone*.

angulare (ang-gū-la′rē), *n.* [NL. (sc. *os*, bone): see *angular.*] Same as *angular bone* (which see, under *angular*).

angularization (ang″gū-la-ri-zā′shon), *n.* The act of angularizing or rendering angular: in *decorative art*, the transformation of a curved motive into a rectilinear one by the use of angles. *Haddon*, Evolution in Art, p. 112.

angularize (ang′gū-la-rīz), *v. t.*; pret. and pp. *angularized*, ppr. *angularizing.* [*angular* + *-ize.*] To render angular. *Haddon*, Evolution in Art, p. 112.

Angulatidæ (an-gū-lat′i-dē), *n. pl.* [NL., < *Angulata*, a group of the ammonites, + *-idæ.*] A family of ammonoid cephalopods or ammonites. They have compressed umbilicate shells with strong continuous ribs crossing the whorls and interrupted on the outer edge by a depressed zone. The septal sutures are highly complicated. Species occur in the Lias formation.

anguliform (ang′gū-li-fôrm″), *a.* [L. *angulus*, angle, + *forma*, form.] Bluntly pointed or bent. *Annals and Mag. Nat. Hist.*, Jan., 1903, p. 114.

angustisellate (an-gus-ti-sel′āt), *a.* [L. *angustus*, narrow, + *sella*, a saddle.] Having a narrow saddle: noting the form of the earliest septal suture in the coiled cephalopod shells and referring to the narrow saddle or forward prolongation of the suture in crossing the outer curve or venter of the shell. Contrasted with *latisellate* and *asellate.* The angustisellate stage characterizes only advanced and late forms of the ammonoids.

anhaline (an′ha-lin), *n.* [*Anhal(onium)* + *-ine*2.] A crystalline alkaloid, $C_{12}H_{15}NO_3$, found in *Anhalonium fissuratum.* It melts at 115° C. It produces, in frogs, a paralysis of the central nervous system.

anhalonidine (an-ha-lon′i-din), *n.* [*Anhalon(ium)* + *-id* + *-ine*2.] An alkaloid, $C_{12}H_{15}NO_3$, found in *Anhalonium Lewinii*, a cactus from which mescal buttons are obtained. It is crystalline and melts at 154° C.

anhalonine (an-hal′o-nin), *n.* [*Anhalon(ium)* + *-in*2.] Same as *anhalonidine.*

anhedonia (an-hē-dō′ni-ä), *n.* [NL., < Gr. ἀνήδονος, giving no pleasure, < ἀν- priv. + ἡδονή, pleasure: see *hedonism.*] In *psychol.*, inability to feel pleasure: the opposite of *analgesia.*

One can distinguish many kinds of pathological depression. Sometimes it is mere passive joylessness and dreariness, discouragement, dejection, lack of taste and zest and spring. Professor Ribot has proposed the name *anhedonia* to designate this condition.
W. James, Var. of Religious Exper., p. 145.

anhedral (an-hē′dral), *a.* In *mineral.* and *petrog.*, characterized by the absence of the external form of a crystal, though having its molecular structure.

anhedron (an-hē′dron), *n.*; pl. *anhedra* (-drä). [Gr. ἀν- priv. + ἕδρα, base (side).] A mineral individual, for example, a constituent of a rock having the molecular structure of a crystal but not its external form.

anhistic (an-his′tik), *a.* Same as *anhistous.*

anhydrid, *n.*—**Phosphoric anhydrid,** phosphorus pentoxid, P_2O_5. By union with the elements of water in different proportions it forms meta-, pyro-, and orthophosphoric acids.

anhydrochromic (an-hī-drō-krō′mik), *a.* Noting the acid ($H_2Cr_2O_7$) which corresponds to ordinary red chromate of potash. Also known as *dichromic acid* and *pyrochromic acid.*

Anhydrous steam. See ★*steam.*

aniconic (an-ī-kon′ik), *a.* [Gr. ἀν- priv. + εἰκών, an image.] Not presenting an image or portraiture: in *Gr. antiq.*, applied to the rudest agalmata, or symbols of a divinity, consisting of a simple pillar or block without human attributes. See *agalma.*

He [Dr. Waldstein] does, however, point out that among the terra-cottas we have representations of the various stages of development of her [Hera's] agalmata: the rudest of all, the *anikonic.* . . . He promises, moreover, to publish . . . a curious pillar which may have been the actual *anikonic* image of the goddess.
Athenæum, July 1, 1893, p. 38.

anidalin (a-nid′a-lin), *n.* Same as ★*aristol.*

anil2 (än-il′), *n.* [*anil(ine).*] A derivative of aniline containing the group NC_6H_5.

añil (än-yēl′), *n.* [Sp. *añil*, lit. indigo: see *aniline.*] A Cuban name of the blue variety of the vaqueta, a bass-like fish of the West Indies, *Hypoplectrus unicolor* (variety *indigo* of Poey).

anilao (ä-nē′lou), *n.* [Philippine name.] A name in the Philippines of *Colona serratifolia*, a shrub belonging to the linden family, the bark of which yields a strong bast fiber.

anilido. [*anil* + *-id-* + *-o*1.] Noting the group NHC_6H_5, derived from aniline: as, *anilido*-acetic acid, $CH_2NHC_6H_5CO_2H$: also used as an adjective: as, the *anilido*-group.

Aniline ★black, ★green, ★orange, ★process. See the nouns.—**Aniline salt,** a commercial name for the colorless crystalline salt formed by neutralizing aniline with hydrochloric acid. It has the formula $C_6H_5NH_2HCl$, and is known chemically as aniline hydrochlorid. Large quantities are used in the dyeing and printing of aniline black.—**Aniline spirits, yellow.** See *tin* ★*spirits*, ★*yellow.*

anilism (an′i-lizm), *n.* An illness caused by inhaling the vapor of aniline, not uncommon in workers in aniline-black dye-houses. It comes on suddenly, the lips turn purple, and temporary unconsciousness often ensues.

Animal color. See ★*color.*—**Animal kingdom.** According to recent conservative estimates, the animal kingdom consists of about 386,000 species of living animals and about 160,000 described species of fossil animals, or of about 550,000 species in all.—**Animal mechanics.** See ★*mechanics.*—**Animal mound.** See the extract.

The next class is composed of the "*animal mounds*," or mounds in which the ground plan is more or less irregular, and is thought to resemble animals, birds, and even human beings, though it is admitted that this resemblance is often imaginary, and that there is no evidence that the builders of these works intended to copy any such forms. . . . Mounds of this class are common in Wisconsin, and are also found in Ohio and Georgia. They are not burial mounds, though they are not unfrequently grouped with conical mounds that inclose human remains, as they are also with embankments and inclosures,—the grouping being always without any apparent order.
Smithsonian Report, 1891, p. 559.

Animal photography. See ★*photography.*—**Animal pole.** See ★*pole.*

animate, *a.* **4.** In *gram.*, referring to living things as indicated by a difference of form in the designating word: said of gender in some languages. See the quotation.

The distinction between *animate* and inanimate gender is still preserved in both Penobscot and Abenaki.
Amer. Anthropologist, Jan.-March, 1902, p. 27.

Animated oat. Same as *animal oat*; see *oat*, 1 (*b*).

animatism (an′i-mā-tizm), *n.* [*animate, a.*, + *-ism.*] That form of animism in which objects and phenomena are vaguely regarded as having personality and will-power, but not as possessing separable souls.

animato (ä-ni-mä′tō), *a.* [It.] In *music*, lively; with animation; usually, somewhat quick and with spirit.

animatograph (an-i-mat′o-grâf), *n.* [L. *animatus*, alive (see *animate, a.*), + γραφείν, write.] **1.** A cinematograph.—**2.** A special form of photographic camera for taking a series of pictures on films.

anime, *n.*—**Brazilian anime.** Same as *anime*, 3.

animé (an-i-mā′), *a.* [F., < L. *animatus*, animate: see *animate, a.*] In *her.*, animated, excited; showing a desire to fight: said of an animal and represented by giving the eyes, etc., a tincture different from that of the body.

animetta (an-i-met′ä), *n.* [It.] A medieval term for the veil or cloth used to cover the chalice or eucharistic cup.

animi, *n.* Same as *anime.*

Animikie (an-im-i-kē′), *n.* [A local name.] A name proposed by T. Sterry Hunt in 1873, and used by the Geological Survey of Canada and by the Natural History Survey of Minnesota, for a group of iron-bearing rocks, slates, schists, and sandstones which form the middle subdivision of the Algonkian as the latter term is used by the United States Geological Survey. In Canada the group is regarded as Cambrian in age, but in the Lake Superior district, especially in Minnesota, where these rocks carry the iron ore of the Mesaba range, they are referred to the Precambrian.

animikite (a-nim′i-kīt), *n.* [Said to be from Ind. *animike*, thunder, + *-ite*2.] An antimonide of silver from Silver Islet, Lake Superior.

animosity, *n.* **3.** In Spinoza's philosophy, the desire by which each man endeavors to preserve his own being after the guidance of reason alone; or, as sometimes interpreted, the steadfast and intelligent purpose to promote one's own welfare.

animotheism (an″i-mō-thē′izm), *n.* [L. *anima*, soul, life (or *animus*, mind?), + θεός, God, + *-ism.*] The belief that all things, but especially plants, animals, and the heavenly bodies, are conscious or animate beings, and that they possess supernatural, divine powers. See *animism.* *Ward*, Dynamic Sociol., II. 258.

anis, *n.* A simplified spelling of *anise.*

anisado (ä-ni-sä′dō), *n.* [Sp.: see *anisated.*] A native drink made in the Philippine Islands. It contains the poisonous principle of wood alcohol, and United States soldiers and employees have been forbidden its use. *Army and Navy Journal*, Dec. 7, 1901.

anisamic (an-i-sam′ik), *a.* [*anis(ic)* + *am(ine)* + *-ic.*] Noting an acid, a derivative of trimethyl benzene, found in balsam of Tolu and of Peru.

anisated (an′i-sā-ted), *p. a.* [NL. *anisatus*, < L. *anisum*, anise.] Mixed or flavored with anise-seed. *Syd. Soc. Lex.*

Anisian (a-niz′i-an), *a.* and *n.* A name given by Austrian geologists to a division of the Mediterranean Triassic deposits holding a position at the top of the Lower Trias.

anisidine (a-nis′i-din), *n.* [L. *anisum*, anise, + *-id*1 + *-ine*2.] The methyl ether of aminophenol, $C_6H_4(NH_2)OCH_3$. The name is applied especially to the ortho compound, which is an oil that boils at 218° C., and to the para compound, a solid which melts at 56° C. and boils at 240° C.—**Anisidine ponceau, scarlet.** See ★*scarlet.*

anisil (an′i-sil), *n.* [L. *anisum*, anise, + *-il.*] The dimethyl ether of paradihydroxybenzil, $CH_3OC_6H_4COCOC_6H_4OCH_3$. It crystallizes in golden-yellow needles which melt at 133° C.

anisilic (an-i-sil′ik), *a.* Noting an acid, $(C_6H_4OH)_2C(OH)CO_2H$, the dimethyl ether of dihydroxydiphenyl glycolic acid. It is formed together with anisic acid when anisil is boiled with alcoholic potash. It crystallizes in needles which melt at 164° C. It is named officially the *dimethyl ether of diphenylolmethanolmethylic acid.*

Anisoceratidæ (a-nī-sō-se-rat′i-dē) *n. pl.* [NL., < *Anisoceras* (< Gr. ἄνισος, unequal, + κέρας (κερατ-), horn), + *-idæ.*] A family of ammonoid cephalopods or ammonites having uncoiled shells terminating in a crook, the volutions bearing tubercles and ribs. The species are found in the Cretaceous formation.

Anisochætodon (a-nī-sō-kē′tō-don), *n.* [NL., < Gr. ἄνισος, unequal, + *Chætodon.*] A genus of butterfly-fishes of the family *Chætodontidæ.*

anisochela (a-nī-sō-kē′lä), *n.*; pl. *anisochelæ* (-lē). Same as ★*anisochele.*

anisochele (a-nī′sō-kēl), *n.* [Gr. ἄνισος, unequal, + χηλή, a crab's claw.] In the nomenclature of the spicular elements of sponges, a C-shaped monaxial rhabd having different arrangements of the processes at the two ends. See *sponge-spicule.*

anisocnemic (a-nī-sō-nē′mik), *a.* [Gr. ἀν- priv. + *isocnemic.*] In anthozoans, a term used to distinguish a unilateral pair composed of two unequal mesenteries: contrasted with *isocnemic.* *Annals and Mag. Nat. Hist.*, Aug., 1902, p. 105.

anisocoria (a-nī-sō-kō′ri-ä), *n.* [NL., < Gr. ἄνισος, unequal, + κόρη, pupil of the eye.] Inequality in size of the pupils of the two eyes.

anisocotyly (a-nī-sō-kot′i-li), *n.* In *bot.*, the unequal development of cotyledons in dicotyledonous plants.

anisocytosis (an-ī-sō-sī-tō′sis), *n.* [NL., < Gr. ἄνισος, unequal, + κύτος, a hollow (a cell), + *-osis.*] Inequality in size of the cells of a system, specifically of the red blood-corpuscles.

anisogamous (an-ī-sog′a-mus), *a.* Characterized by anisogamy, or conjugation between sharply differentiated male and female gametes.

anisogamy (an-ī-sog′a-mi), *n.* [Gr. ἄνισος, unequal, + γάμος, marriage.] In *biol.*, conjugation between dissimilar gametes or reproductive cells.

anisohypercytosis (an″ī-sō-hī″pèr-sī-tō′sis), *n.* [NL., < Gr. ἄνισος, unequal, + ὑπέρ, over, + κύτος, a hollow (a cell), + *-osis.*] An increase in the number of the leucocytes, with abnormal percentage relations of the neutrophilic cells, as regards the distribution of the different nuclear forms.

anisohypocytosis (an″ī-sō-hī″pō-sī-tō′sis), *n.* [NL., < Gr. ἄνισος, unequal, + ὑπό, under, + κύτος, a hollow (a cell), + *-osis.*] A decrease in the number of the leucocytes with abnormal relations of the neutrophilic cells, as regards the percentage distribution of the different nuclear forms.

anisoin (an-is′ō-in), *n.* [L. *anisum*, anise, + *-in*2.] The dimethyl ether of paradihydroxybenzoin, $CH_3OC_6H_4CH_2COC_6H_4OCH_3$. It consists of needles which melt at 110° C.

anisol (an′i-sōl), *n.* [Also *anisole* †; L. *anisum*, anise, + *-ol.*] **1.** Methyl phenyl ether, $C_6H_5OCH_3$, formed by distilling anisic acid with barium hydroxid. It is an oil with a pleasant odor and boils at 154° C.—**2.** A general name of derivatives of methyl phenyl ether.

anisoline (a-nis'ō-lin), *n.* [As *anisol* + *-ine*2.] A basic color of the xanthene group. It is comparatively fast to light. Also called *rhodamine 3 B.*

Anisometric texture, in *petrog.*, the texture of granular rocks when the mineral grains are of various sizes. It is contrasted with the *isometric granular texture*, where the grains are approximately of the same size.

anisometrope (a-nī'sō-met'rōp), *n.* [See *anisometropia.*] One who suffers from anisometropia, or inequality of refraction in the two eyes.

It was thought that *anisometropes* who fixed correctly could not have binocular vision.
Optical Jour., June 2, 1904, p. 375.

Anisomyaria (a-nī-sō-mī-a'ri-ä), *n. pl.* [NL., < Gr. ἄνισος, unequal, + μυς (μυ-) muscle, + *-aria.*] A group of the pelecypod mollusks, or *Acephala*, holding an intermediate position between the *Monomyaria*, or those with but one adductor muscle, and the *Dimyaria*, or those having two, the normal number, fully developed. In the *Anisomyaria* the anterior adductors are much more prominently developed than the posterior. These muscular differences have frequently been used as a basis of classification; but it is now recognized that the terms *Monomyaria* and *Anisomyaria* designate different stages of degeneration in the musculature.

anisomyarian (a-nī-sō-mī-ā'ri-an), *a.* and *n.* Pertaining to or having the characters of the *Anisomyaria.* Also used substantively.

anisonormocytosis (a-nī″sō-nôr″mō-sī-tō'sis), *n.* [NL., < Gr. ἄνισος, unequal, + L. *norma*, rule, norm, + κύτος, a hollow (a cell), + *osis.*] A normal number of the leucocytes with abnormal relations of the neutrophilic cells, as regards the percentage distribution of the different nuclear forms.

anisophylly (a-nī-sof'i-li), *n.* [Gr. ἄνισος, unequal, + φύλλον, leaf.] Dissimilarity in leaves due to difference of position, as in floating and submersed leaves. *Krasser.*

Anisoplia (a-nī-sop'li-ä), *n.* [NL. (Megerle, 1825), < Gr. ἄνισος, unequal, + ὅπλα, arms.] An important genus of lamellicorn beetles of old-world distribution. It includes some serious pests, especially *A. Austriaca*, which occasionally does great damage to the wheat crop of Russia. About 40 species are known.

anisopod (a-nī'sō-pod), *a.* and *n.* [NL. *anisopus* (*-pod*), < Gr. ἄνισος, unequal, + πους (ποδ-), foot.] **I.** *a.* Having unequal feet; specifically, having the characters of the *Anisopoda.*

II. *n.* One of the *Anisopoda.*

Anisopoda (a-nī-sop'ō-dä), *n. pl.* [NL., neut. pl. of *anisopus* (*-pod-*): see ★*anisopod.*] A tribe or suborder of arthrostracous crustaceans having a body more or less resembling that of an amphipod, and the abdomen with two-branched swimming-feet which do not function as gills, or with fin-like feet. It includes the families *Tanaidæ* and *Praniziddæ.*

Anisoptera (a-nī-sop'tē-rä), *n. pl.* [NL., < Gr. ἄνισος, unequal, + πτερόν, wing.] A suborder of insects of the order *Odonata* or dragon-flies. It includes the families in which the hind wings are slightly larger than the front wings, as distinguished from the *Zygoptera*, in which the wings are of equal size or the hind pair are somewhat the smaller.

anisospore (a-nī'sō-spōr), *n.* [NL. **anisospora*, < Gr. ἄνισος, unequal, + σπορά, seed (spore).] A form of spore produced among colonial radiolarians by the union of gametes of unlike size, as microspores and macrospores: contrasted with ★*isospore*, 3.

Anisotremus (a-nī-sō-trē'mus), *n.* [NL., < Gr. ἄνισος, unequal, + τρῦμα, hole.] A genus of grunts of the family *Hæmulonidæ*, having numerous species in tropical America. They are remarkable for their broad bodies and sometimes for bright colors. *A. surinamensis*, the pompon, is the commonest species.

anisotropic, *a.* **3.** Having predetermined axes: opposed to *isotropic.* **Anisotropic medium,** a medium in which the strain due to a given stress varies with the direction in which the stress is applied; an æolotropic medium.

anisotropical (a-nī-sō-trop'i-kal), *a.* Same as *anisotropic*; æolotropic.

Mr. A. Broca a short time ago stated that in a powerful field there are produced simultaneously both ordinary cathode rays, around the field according to well-known laws, and another kind of rays following the lines of force. These phenomena have likewise been investigated by Mr. Pellat, who accounted for them on the hypothesis of an *anisotropical* friction the cathode ray particles undergo in the magnetic field.
Sci. Amer. Sup., Aug. 27, 1904, p. 23960.

anisotropically (a-nī-sō-trop'i-kal-i), *adv.* In an anisotropic manner.

anisotropy, *n.* **2.** In *embryol.*, the condition of having the axes predetermined: applied to certain differentiated animal ova: opposed to *isotropy.*

anito (ä-nē'tō), *n.* [Tagalog; perhaps altered, under Sp. influences, from an orig. **antu*, Malay *antu*, *hantu*, a spirit.] An ancestral spirit worshiped as a protecting household deity by the pagan Malay peoples of the Philippine Islands, and frequently represented by an image of wood or other material which is carefully preserved.

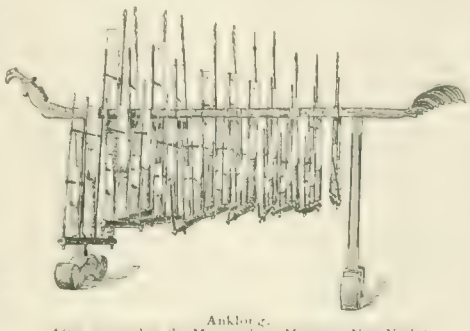
But, before Islam, ancestor worship, as has long been known, was widely prevalent. In almost every locality, every hut has its *Anito* with its special place, its own dwelling; there are *Anito* pictures and images, certain trees and, indeed, certain animals in which some *Anito* resides. *Smithsonian Rep.*, 1899, p. 522.

ankee (ang'kē), *n.* [Indian name in California.] The barn-yard grass *Echinochloa Crus-galli*, the seeds of which are ground into flour by the Mohave Indians. [Southern California.]

anker, *n.* and *v.* A simplified spelling of *anchor.*

ankle, *n.* **Cocked ankle,** knuckling or partial dislocation of the fetlock-joint of the horse, an unsoundness predisposing the animal to stumbling and to fracture of the pastern-bone.

anklong (ang'klong), *n.* [Also **anklung* (?), Malay and Jav. *anklung.*] A musical instrument used in Java and other parts of Malaysia, consisting of bamboo tubes so cut that when struck



Anklong.
(After original in the Metropolitan Museum, New York.)

or shaken they give definite tones. Usually the tubes are in pairs tuned at the interval of the fifth.

ankoot (an'köt), *v. i.* [Eskimo, *angakut*, *angakok*, *angekok*, a shaman: see *angekok.*] To perform shamanistic ceremonies: a term used by whalers who frequent Hudson and Baffin bays.

ankylite (an'ki-lit), *n.* Same as ★*ancylite.*

ankyloglossia (ang″ki-lō-glos'si-ä), *n.* See ★*ankyloglossas.*

ankyloglossus (ang″ ki-lō-glos'us), *n.* [Gr. ἀγκύλος, bent, + γλῶσσα, tongue.] Impeded movements of the tongue due to adhesions to the neighboring parts. Also called *ankyloglossia.*

ankylosed (ang'ki-lōst), *p. a.* [See *ankylose.*] Grown together: said of bones which are primitively separate.

Ankylostoma (ang-ki-los'tō-mä), *n.* Same as *Ancylostoma.*

ankylostomiasis, *n.* Same as ★*ancylostomiasis.*

anlage (än'lä″ge) *n.*; pl. *anlagen* (-gen). [G., foundation, < *anlegen*, < *an*, on, + *legen*, lay, found.] In *embryol.*, the first indication of a developing organ in the embryo; a rudiment, in the sense of a simple beginning.

annaline (an'a-lin), *n.* [Formation doubtful.] A name sometimes given to an artificially prepared calcium sulphate used by paper-makers.

annalism (an'a-lizm), *n.* The writing of annals. *W. Taylor.* [Rare.] *N. E. D.*

Annam ulcer. See ★*ulcer.*

Annealing lamp. See ★*lamp.*

annealing-machine (a-nēl'ing-ma-shēn″), *n.* A heating-furnace consisting of a long box of steel lined with some refractory material, open at each end, and fitted with a number of gas-burners. Within the furnace and extending beyond it at each end is a series of rolls connected by link-belting and turning together, all being supported by bearings inside the furnace or by tables at each end outside the furnace. The bars, rods, strips, and tubes to be annealed are laid on the rolls outside the furnace, carried by their motion into and through the furnace at a speed just sufficient for the annealing, and discharged at the distant end. In another form, for large pipe, a link-belt conveyer is used to carry the pipes through the furnace.

annerödite (a-ner'ē-dīt), *n.* [Also *annerodite*, *aannerödite*, *aanerodite*; *Ånneröd*, *Åanneröd* (see def.) + *-ite*2.] A rare niobate of uranium, yttrium, and other elements, near samarskite in composition but related to columbite in form: found at Ånneröd, Norway.

Anneslia (a-nes'li-ä), *n.* [NL. (Salisbury, 1807), named in honor of George *Annesley* (1769–1844), Viscount Valentia in Ireland and Earl of Mountmorris, who traveled and botanized in India.] A genus of plants belonging to the family *Mimosaceæ*, to which Bentham in 1840 gave the name *Calliandra.* See *Calliandra.*

annexable, annexible (a-neks'a-bl, i-bl), *a.* That may be annexed or added; attachable. *Cockeram.*

annexive (a-nek'siv), *a.* Expressing or serving to express annexion or addition; additive: as, an *annexive* conjunction.

annidalin (a-nid'a-lin), *n.* See ★*aristol.*

Anniellidæ, *n. pl.* Same as *Aniellidæ.*

annihilability (a-nī″hi-la-bil'i-ti), *n.* The capability of being annihilated. *Dr. H. More*, Immortal. of the Soul, p. 228.

annotative (an'ō-tā-tiv), *a.* Of the nature of annotation: as, *annotative* remarks.

annotine, *n.* **2.** A tree that bears fruit of two years at the same time, the fruit of the past year persisting, while that of the present year is growing.

announcement, *n.* **2.** In *card-playing*, a bid; a meld.

The player [at boston] who makes the highest *announcement* is entitled, if successful, to the contents of the pool, and a certain number of counters from each of the players; but if he be unsuccessful he must pay to the pool and to each of the other players a certain number of counters. *American Hoyle*, p. 243.

annual. I. *a.*—**Annual equation.** See ★*equation.*—**Annual range,** in *meteor.*, that portion of the total yearly range which may be supposed to be periodic and the simple and direct result of the annual revolution of the earth in its orbit; that portion of the annual range that is represented by the first term of the harmonic series or Fourier-Bessel series, depending on the simple mean longitude of the earth in its orbit around the sun.—**Annual variation,** in *meteor.*, the departure from the annual mean; the extreme total range during a year; the difference between the absolute maximum and absolute minimum or between their departures from the annual mean. The normal annual variation is the average of the annual variations for many years and is less than the extreme or absolute variation for those years.—**Annual working.** See ★*working.*

II. *n.*, **3.** Plants become annuals because of the limitations of the seasons. Some plants die outright at the approach of cold or dry weather and leave only their seeds to carry the species over to another season; these are the true annuals. Others, truly perennial in their native climates, become annual in short-season climates by being killed by frost; these are *plur-annuals.* Others carry themselves over by means of bulbs; these are *pseud-annuals.*

annualize (an'ū-al-īz), *v. i.*; pret. and pp. *annualized*, ppr. *annualizing.* To contribute to an annual publication; write for an annual. See *annual*, 4. [Rare.]

annuity, *n.*—**Consolidated annuities,** certain annuities or annual payments representing interest on various stocks issued by the British government at different times and at different rates, which were consolidated, under an act of 1751, into one fund, commonly known as *consols* (which see).

Annular kiln. See ★*kiln.*—**Annular ligament.** (*c*) A ligament attached at each extremity to a tubercle on the inner surface of the articular process of the atlas, which serves to retain the odontoid process of the axis. (*d*) The ligament which attaches the stapes to the rim of the fenestra ovalis.

Annularia (an-ū-lā'ri-ä), *n.* [NL. (Sternberg, 1822), < L. *annularis*, annular.] A genus of fossil plants of the family *Calamariaceæ*, having slender, branching, usually striate stems bearing whorls of lanceolate or spatulate leaves with a median nerve, which are fused at their bases into a sheath or annulus. The fruit is a heterosporous spike or strobile. It is not yet certain whether the specimens referred to this genus represent independent herbaceous plants or the smaller ultimate branches of calamitean plants. They are very abundant in the Carboniferous formation and range from the Devonian to the Permian.

Annulosiphonata (an″ū-lō-sī-fo-nā'tä), *n. pl.* [L. *annulus*, a ring, + *sipho*, siphon, pipe, + *-ata*2.] In Hyatt's classification, a group of extinct cephalopods, including straight and curved shells, in which the siphuncle is thickened by organic deposits into solid rays extending into the septal chambers. *Actinoceras* and *Huronia* are examples. The species are chiefly from Silurian rocks.

annulus, *n.* **3.** (*d*) In the *Equisetaceæ*, the sheath below the spike formed by the union of the bases of the leaves. (*e*) In diatoms, the rim of silex formed within the frustules of some genera. (*f*) The fleshy rim of the

corolla in milkweeds.—**4.** (*c*) One of the external subdivisions of the body of a leech, resembling a segment of the body of an earthworm. A single annulus, however, does not correspond to an internal segment. From 3 to 5 or even 12 annuli correspond to a segment in different genera.

Anodal diffusion, cataphoresis.

anodic[1], *a.* **2.** Of or pertaining to the anode. **Anodic rays,** in *elect.*, radiations issuing from the positive terminal or anode of a vacuum-tube.

anodyne, *n.*—**Hoffmann's anodyne,** a mixture of ether, alcohol, and ethereal oil, the last-named constituent containing ethyl sulphate, much used in medicine as a stimulant, antispasmodic, and anodyne.

anodynin (a-nod'i-nin), *n.* Same as *antipyrin.*

anoësis (an-ō-ē'sis), *n.* [NL., ⟨ Gr. *ἀ-* priv. + *νοησις*, understanding.] In *psychol.*, a hypothetic state of consciousness in which there is sentience but no thought; immediate experience without reference to an object. Anoesis is sometimes predicated of primitive organisms, sometimes of the marginal processes of the human consciousness. It is used, more correctly, simply as a limiting conception, the logical zero-point of intellectual function.

But it is conceivable that they [items or particulars] should be given and no intellectual synthesis ensue; such a consciousness has been happily named anoetic. Whether or no it actually exists is another matter: it is a conceivable limit, and has the theoretical usefulness of limiting conceptions generally. But relative *anoesis* suffices here. *Encyc. Brit.*, XXXII. 63.

anœstrous (an-es'trus), *a.* [Gr. *ἀν-* priv. + *οἶστρος*, vehement desire.] In *zoöl.*, without sexual desire; relating to the completed period of sexual desire in female mammals.—**Anœstrous cycle,** a single completed period of sexual desire not immediately followed by another. This comprises the ★*proœstrum*, ★*œstrus*, and ★*metœstrum*.

anœstrum (an-es'trum), *n.*; pl. *anœstra* (-trä). [NL.: see ★*anœstrous*.] In *zoöl.*, an interval between periods in 'heat' when the female mammal has no sexual desire.

anoëtic, *a.* **2.** In *psychol.*, relating to or characterized by anoësis. *G. F. Stout,* Anal. Psychol., i. 51.

anogenic, *a.* **2.** In *petrol.*, noting igneous rocks which originate by ascension from the earth's interior: synonymous with *eruptive.*

anogenital (an-ō-jen'i-tal), *a.* Relating to the anus and the genital organs; noting the region of the body including these parts.—**Anogenital band,** the rudimentary perineum in the embryo.

anol (an'ōl), *n.* [*an(ise)* + *-ol.*] Parapropenyl phenol, $CH_3CH:CHC_6H_4OH$, usually called *para-anol.* It crystallizes in leaflets which melt at 93°. Its methyl ether, anethol, is found in anise-oil.

Anomala, *n.* **4.** *pl.* A tribe of brachyurous crustaceans containing the families *Dromidæ*, *Homolidæ*, and *Raninidæ*.

Anomalocladina (a-nom″a-lō-kla-dī'nä), *n. pl.* [NL., ⟨ Gr. *ἀνώμαλος*, irregular, + *κλάδος*, twig, + *-ina*[2].] In Zittel's classification, a suborder of tetractinellid lithistid sponges. In this group the skeletal spicules are mostly short rays with inflated heads which are often digitate or branched and united with the processes of adjacent rays.

Anomalocrinidæ (a-nom″a-lō-krin'i-dē), *n. pl.* [NL., ⟨ *Anomalocrinus* (⟨ Gr. *ἀνώμαλος*, irregular, + *κρινον*, a lily (see *crinoid*) + *-idæ.*] A family of fistulate crinoids having radial plates of very irregular form and arms with pinnules on one side only. It is represented by a single genus, *Anomalocrinus*, from the Silurian of North America.

Anomalocystidæ (a-nom″a-lō-sis'ti-dē), *n. pl.* [NL., ⟨ *Anomalocystites* + *-idæ.*] In Woodward's classification, a family of cystidean echinoderms which have a compressed calyx, the sides of which are dissimilarly plated, generally with two free arms and a short stem. They occur in rocks of Cambrian and Silurian age. Properly, in uncontracted form, *Anomalocystitidæ*.

Anomalocystites (a-nom″a-lō-sis-tī'tēz), *n.* [NL., ⟨ Gr. *ἀνώμαλος*, irregular, + *κύστις*, bladder, + *-ιτης*, *-ite*[2].] The typical genus of the family *Anomalocystidæ*.

Anomalodesmacea (a-nom″a-lō-des-mā'sē-ä), *n. pl.* [NL., ⟨ Gr. *ἀνώμαλος*, irregular, + *δέσμα*, a band, + *-acea.*] In Dall's classification of the *Pelecypoda*, an order comprising burrowing shells with nearly edentulous hinge, the mantle lobes more or less completely united, leaving two siphonal openings, a pedal opening, and sometimes a fourth opening. The valves are generally unequal. The group includes many recent and late fossil forms, and in general expression is archaic, specially in regard to hinge-structure, which reproduces that of the Silurian and Devonian paleoconchs.

anomalodesmacean (a-nom″a-lō-des-mā'sē-an), *a.* and *n.* **I.** *a.* Having the characters of or pertaining to the *Anomalodesmacea*.

II. *a.* A member of the order *Anomalodesmacea*.

anomalodesmaceous (a-nom″a-lō-des-mā'shius), *a.* [Gr. *ἀνώμαλος*, irregular, + *δεσμός* or *δέσμα*, a band, + *-aceous.*] Same as ★*anomalodesmacean*.

Anomalon (a-nom'a-lon), *n.* [NL. (Jurine, 1807), ⟨ Gr. *ἀνώμαλον*, neut. *ἀνώμαλον*, irregular: see *anomalous.*] An important genus of hymenopterous insects of the family *Ichneumonidæ* and typical of the subfamily *Anomalinæ*. It comprises more than 150 species, many of them important enemies of injurious insects. Most of the described species occur in Europe and North America, but the genus is still more widely distributed.

Anomalous dispersion. See ★*dispersion.*—**Anomalous double refraction.** See ★*refraction.*

anomaly, *n.* **4.** In *meteor.*, the amount by which a given observed quantity is greater or less than an assumed ideal or normal value; a departure.

Anomiacea (a-nō-mi-ā'sē-ä), *n. pl.* [NL., ⟨ *Anomia* + *-acea.*] A suborder of bivalve mollusks of the order *Filibranchiata*. It includes forms which have the heart dorsal to the rectum, a single aorta, small foot, and very small anterior adductor. The shell is oyster-shaped, without hinge-teeth, and is attached by a calcified byssus which passes through a lobe in the right valve. It includes the single family *Anomiidæ*.

anomocephalus (an″ō-mō-sef'a-lus), *n.*; pl. *anomocephali* (-lī). [Gr. *ἀνομος*, irregular, + *κεφαλή*, head.] One with an irregularly shaped head.

anomure (an'ō-mūr), *n.* [As NL. *Anomura.*] One of the anomural or irregular-tailed crustaceans; an anomuran.

anomy, *n.* **2.** As used by Pearson and others, a breach in the routine of perceptions. See the extract.

In our ignorance we ought to consider before experience that nature may consist of all routines, all *anomies*, or a mixture of the two in any proportion whatever. *K. Pearson,* Gram. of Sci., iv. 15.

anon. An abbreviation of *anonymous* and *anonymously.*

anoöpsia (an-ō-op'si-ä), *n.* [NL., ⟨ Gr. *ἀνω*, upward, + *ὄψις*, vision.] Strabismus in which the axis of vision is directed upward.

Anopheles (a-nof'ē-lēz), *n.* [NL. (Meigen, 1818), ⟨ Gr. *ἀνωφελής*, useless.] **1.** A genus of true

Malarial Mosquito (*Anopheles maculipennis*).
Male at left, female at right. Enlarged. (After Howard, U. S. D. A.)

mosquitos (dipterous family *Culicidæ*), distinguished from the typical genus *Culex* by the long palpi of the female. The mosquitos of this genus are the true secondary hosts of the causative organisms of malaria, which undergo their sexual development only in the stomach of an anopheles. From this fact it results that these mosquitos convey the disease from malarial patients to healthy individuals.

2. [*l. c.*] An insect of this genus.

Anopheline (a-nof-ē-lī'nē), *n. pl.* [NL., ⟨ *Anopheles* + *-inæ.*] A subfamily of mosquitos (family *Culicidæ*), comprising *Anopheles* and its immediate allies. In both sexes the palpi are about as long as the proboscis, and the terminal joint is spatulate or clubbed in the male; in the wings the first submarginal cell is as long as or longer than the second posterior cell.

anopisthographic (an-ō-pis-thō-graf'ik), *a.* [Gr. *ἀν-* priv. + *ὄπισθεν*, at the back, + *γράφειν*, write.] Not written or printed upon at the back; written or printed upon on one side only, as a proof or a broadside.

Anoplagonus (an-ō-plag'ō-nus), *n.* [NL., ⟨ Gr. *ἄνοπλος*, unarmed, + *Agonus.*] A genus of sea-poachers of the family *Agonidæ*, found in the North Pacific.

anoplan (an-op'lan), *a.* and *n.* [*Anopla* + *-an.*]

I. *a.* Pertaining to or resembling the *Anopla*.

II. *n.* A nemertean worm of the section *Anopla*.

Anoplia (an-op'li-ä), *n. pl.* [NL., ⟨ Gr. *ἄνοπλος*, not armed, ⟨ *ἀν-*, not, + *ὅπλα*, arms.] A tribe of lithistidan *Tetractinellida*, having no ectosomal spicules or microscleres. It contains the families *Azoricidæ* and *Anomocladidæ*, together with extinct forms.

anoplian (an-op'li-an), *a.* and *n.* [*Anoplia* + *-an.*] **I.** *a.* Pertaining to or having the characters of the *Anoplia*.

II. *n.* One of the *Anoplia*.

Anoplogaster (an-op-lō-gas'tèr), *n.* [NL., ⟨ Gr. *ἄνοπλος*, unarmed, + *γαστήρ*, belly.] A genus of berycoid fishes found in the abysses of the Atlantic.

Anoplophora (an-op-lof'ō-rä), *n.* [NL., ⟨ Gr. *ἄνοπλος*, unarmed, + *-φορος*, ⟨ *φέρειν*, bear.] A genus of naiads from the Triassic formation of Germany.

Anoplotheca (an-op-lō-thē'kä), *n.* [NL., ⟨ Gr. *ἄνοπλος*, unarmed, + *θήκη*, case.] A genus of convexoconcave, spine-bearing brachiopods, having a median dorsal septum and the jugum articulating into a depression in the ventral valve: characteristic of Devonian faunæ.

anoplous (an-op'lus), *a.* Relating or pertaining to the *Anopla*; having the proboscis unarmed, as certain nemertines.

anoplurous (an-ō-plō'rus), *a.* Resembling the insects of the hemipterous suborder *Anoplura*.

Anor group. See ★*group*[1].

anorectal (ā″nō-rek'tal), *a.* [L. *anus*, anus, + NL. *rectum*, rectum.] Relating to both the anus and the rectum. *Therapeutic Gazette,* May 15, 1903, p. 344.

anorectic (an-ō-rek'tik), *a.* [*anorect-ous* + *-ic.*] Same as *anorectous*.

anorganon (an-ôr'ga-non), *n.*; pl. *anorgana* (-nä). [NL., ⟨ Gr. *ἀνόργανον*, neut. of *ἀνόργανος*, without organs, ⟨ *ἀν-* priv. + *ὄργανον*, instrument, organ.] A body without organs, that is, an inorganic body.

anorgic (an-ôr'jik), *n.* [Gr. *ἀνόργ(ανος)*, without organs (inorganic), + *-ic.*] A general designation, proposed by Haeckel, for the sciences that deal with inorganic nature, as contrasted with the biological sciences.

anorthoclase (an-ôr'thō-klāz), *n.* [Gr. *ἀνορθος*, not straight, + *κλάσις*, fracture. See *orthoclase.*] A triclinic feldspar allied to microcline but containing a considerable amount of soda: characteristic of certain igneous rocks, as the andesite of Pantelleria.

anorthographic (an-ôr-thō-graf'ik), *a.* [Gr. *ἀν-* priv. + *orthographic.*] That deviates from or is at variance with orthography or the accepted rules of spelling.

anorthographical (an-ôr-thō-graf'i-kal), *a.* Characterized by irregular or incorrect spelling; incorrectly spelled.

anorthographically (an-ôr-thō-graf'i-kal-i), *adv.* Irregularly as regards spelling. See the quotation.

A fresco painting has been discovered . . . representing the two martyrs, one of whom [Hyacinthus] bears his name written *anorthographically* thus, *Iaquintus*. *Athenæum,* July 14, 1894, p. 72.

anorthography (an-ôr-thog'ra-fi), *n.* [Gr. *ἀν-* priv. + *ὀρθογραφία*, correct writing.] Same as *agraphia*.

anorthoscopic (an-ôr-thō-skop'ik), *a.* [*anorthoscope* + *-ic.*] Pertaining to the anorthoscope or to the visual illusion which that instrument produces. *Amer. Jour. Psychol.*, II. 240.

anorthose (an-ôr'thōs), *a.* [Gr. *ἀν-* priv. + *ὀρθός*, straight, + *-ose.*] Same as ★*anorthoclase*.

anorthosite (an-ôr'thō-sit), *n.* [*anorthose* + *-ite*[2].] In *petrog.*, a granular or gneissoid igneous rock of eastern Canada, consisting chiefly of the plagioclase feldspar, labradorite. The name (first used by Hunt in 1863) is now applied to rocks composed largely of any lime-soda feldspar (plagioclase). The anorthosites are regarded by some petrographers as the highly feldspathic extreme of the gabbro family of igneous rocks.

anosmatic (an-os-mat'ik), *a.* [Irreg. ⟨ Gr. *ἀν-* priv. + *ὀσμή*, smell, + *-atic.* A more correct form would be *anosmic*, ″*anosmetic*, or ″*anosmotic*.] Having the sense of smell or the olfactory organs small or wanting, as in porpoises. *Amer. Anthropologist,* Oct.–Dec., 1903, p. 638.

anosmic (an-os'mik), *a.* [*anosmia* + *-ic.*] **1.** Having no odor.—**2.** Of or affected with anosmia.

anounou (ä-nō′ō-nō′ō), *n.* [Hawaiian.] In Hawaii, a species of peppergrass, *Lepidium Owaihiense*, found in all the islands of the group.

Anquetilia (an-kwē-til′i-ä), *n.* [NL. (Decaisne, 1848), named in memory of A. H. Anquetil-Duperron (1731–1805), a French orientalist.] A genus of dicotyledonous plants of the family *Rutaceæ*. See *Skimmia*.

Ansate fissure or **sulcus**. See ★*fissure*.

anselmino (än-sel-mē′nō), *n.* [It.] A silver coin of Mantua: so named from the effigy and name on the reverse.

Anseremme limestone. See ★*limestone*.

anseriform (an-ser′i-fôrm), *a.* [NL. *anseriformis*, < L. *anser*, goose, + *forma*, shape.] Resembling a goose; pertaining to the *Anseriformes*, a group of birds which contains the ducks and geese.

Anspach porcelain. See ★*porcelain*[1].

ant[1], *n.*—**Black ant,** *Monomorium minutum*, a common species in the United States, frequently entering houses. Also called *little black ant*.—**Bulldog ant,** any ant of the genus *Myrmecia*, which is confined to Australia and Tasmania and contains about 30 species. They form large mounds of earth for their nests, and are the most formidable of all ants, possessing large jaws and stinging severely.—**Corn-louse ant,** *Lasius brunneus*, a small brown ant which nests in fields and cares for certain plant-lice that feed on the roots of grains and grasses. **Imbauba ant,** a Brazilian arboreal ant, of the genus *Azteca*, which forms small nests in the interior of plants and is thought to protect them from the attacks of the leaf-cutting ants.—**Leaf-cutting ant,** *Atta fervens*, a large brown ant which defoliates trees: common throughout Central America, and found also abundantly in southern Texas.—**Mound-building ant,** *Formica exsectoides*, a species in the United States which builds large mounds. Some of these mounds are 10 or 12 feet in diameter. The head and thorax of this ant are rust-red and the legs and abdomen are black.—**Porcupine-grass ant,** an Australian ant, *Hypoclinea flavipes*, which makes its nest at the roots of the porcupine-grass, frequently covering the leaves with sand brought up from the ground.—**Red ant.** See *red*[1].—**Shed-builder ant,** *Cremastogaster lineolata*, a species, common in the southern United States, which sometimes builds sheds, composed of a paper-like pulp, over herds of aphids or scale-insects, from which they obtain honeydew. *Comstock*.—**Small yellow ant,** *Solenopsis debilis*.

anta[3] (än-tä′), *n.* [Native name.] A name in northwestern South America of the ivory-nut palm, *Phytelephas macrocarpa*. See *Phytelephas*.

Antæan (an-tē′an), *a.* [L. *Antæus*, < Gr. Ἀνταῖος.] Of, pertaining to, or resembling Antæus, a giant, in Greek legend, slain by Hercules. Antæus was invincible as long as he remained in contact with his mother Gæa, the earth; but Hercules, who discovered the source of his strength, lifted him into the air and crushed him.

antagonal (an-tag′ō-nal), *a.* Antagonistic: as, "*antagonal* principles of faith and sight," *J. Woodford*. *N. E. D.*

antagonistic, *a.* 2. In the psychology of visual sensation, complementary: as, blue and yellow are *antagonistic* colors.

Antarctogæa (an-tärk-tō-jē′ä), *n.* In *zoögeog.*, a name proposed by Sclater for an area chiefly in the southern hemisphere and embracing Central and South America, Australasia, Polynesia, and Austro-Malaysia. The association is based upon the faunal relationships.

Antarctogæan (an-tärk-tō-jē′an), *a.* Of or pertaining to the zoögeographical area known as *Antarctogæa*. Also *Antarctogæal* and *Antarctogæic*. See the extract.

> The *Antarctogæan* area thus includes what are regarded by Blandford, Lydekker and others as two separate realms, *i. e.*, Neogæa (South and Central America) and Notogæa (Australasia, Polynesia and Austro-Malaysia), while Africa south of the Sahara was regarded as a region or dependence of Arctogæa.
> *Science*, Feb. 5, 1904, p. 220.

Antarian (an-tā′ri-an), *a.* and *n.* **I.** *a.* Pertaining to or resembling the star Antares.—**Antarian stars,** stars of Secchi's third type, resembling Antares in having a fluted spectrum in which the dark flutings are sharply defined at their upper edge (toward the blue end of the spectrum) and fade out toward the red. They are far less abundant than Sirian and Arcturian stars, but still are not very rare.

II. *n.* A star of the type of Antares.

ant-cattle (ânt′kat″l), *n.* See *ant-cow*.

ant-disk (ânt′disk), *n.* A circular space cleared of herbage around the nests of agricultural ants. *Stand. Dict.*

anteal, *a.* **II.** *n.* In *ichth.*, the vomer; the anterior median bone of the cranium, immediately behind and below the maxillary bones. *Starks*, Synonymy of the Fish Skeleton, p. 508.

Antebrachial index. See ★*index*.

antebrachium, *n.* **2.** In *ichth.*, the hypercoracoid, a bone of the shoulder-girdle. *Starks*, Synonymy of the Fish Skeleton, p. 522.

antecedent, *a.* 2. In *phys. geog.*, noting rivers or streams which have persisted in their courses in spite of an uplift of the land: thus the Meuse is an *antecedent* river, because it has persisted in its course by cutting a deep gorge through the uplifted area of the Ardennes.

> Streams which hold their courses in spite of changes which have taken place since their courses were assumed are said to be *antecedent*. They antedate the crustal movements which, but for preexistent streams, would have given origin to a very different arrangement of river courses. *Chamberlin and Salisbury*, Geol., I. 161.

Antecedent drainage, the drainage of antecedent streams. **Antecedent valley,** a valley which has persisted throughout a period marked by crustal movement that has materially changed the attitude of the underlying strata.

antecilial (an-tē-sil′i-al), *a.* [L. *ante*, before, + *cilium*, eyebrow, + *-al*.] Same as ★*anteciliary*.

anteciliary (an-tē-sil′i-ā-ri), *a.* In the *Lepidoptera*, situated before the ciliary band, that is, before the band in front of the marginal fringe of the wings. *Proc. Zool. Soc. Lond.*, 1902, II. 118.

anteclypeus (an-tē-klip′ē-us), *n.* In *entom.*, the anterior part of the clypeus when that sclerite is divided into two parts.

antecrochet (an-tē-kroch′et), *n.* [L. *ante*, before, + *crochet*[2].] A fold of enamel directed posteriorly from the anterior cross-crest, or protoloph, in such a tooth as the molar of a rhinoceros. Sometimes erroneously spelled *anticrochet*. See cut under ★*tooth*.

antecubital (an″tē-kū′bi-tal), *a.* [L. *ante*, before, + *cubitus*, forearm: see *cubitus*.] In *anat.*, situated in front of the cubitus or forearm.

antedoctorial (an″tē-dok-tō′ri-al), *a.* Prior to becoming a doctor.

> Our doctor in his *antedoctorial* age was a student in Leyden. *Southey*, Doctor.

anteëssive (an-tē-es′iv), *a.* [Irreg. < L. *ante*, before, + *esse*, be, + *-ive*.] In *gram.*, noting the case which expresses position in front of. *Amer. Anthropologist*, Jan.–March, 1903, p. 26.

antefix, *n.* **2.** An ornament on a vase so placed as to conceal the part where the handle joins the body.

antefixal (an-tē-fik′sal), *a.* [*antefix* + *-al*.] Of, pertaining to, or of the nature of an antefix. *S. Birch*, Anc. Pottery, II. 7. *N. E. D.*

antefurcal (an-tē-fėr′kal), *a.* [*antefurca* + *-al*.] In *entom.*, relating or pertaining to the antefurca.

antehumeral (an-tē-hū′me-ral), *a.* In *entom.*, situated in front of the fore legs. *Proc. Zool. Soc. Lond.*, 1902, I. 77.

antelios (an-tē′li-os), *n.* [Gr. ἀντήλιος, opposite to the sun, < ἀντί, opposite, + ἥλιος, sun. Cf. *anthelion*.] The point in the heavens opposite to the sun. [Rare.]

antelope-beetle (an′tē-lōp-bē″tl), *n.* An American beetle, *Dorcus parallelus*, of the family *Lucanidæ*, with shorter jaws than the stag-beetles proper of the genus *Lucanus*.

antemedial (an-tē-mē′di-al), *a.* In *entom.*, situated before the middle, or cephalad of the theoretical middle transverse line, of the thorax: especially used in coleopterology. *Proc. Zool. Soc. Lond.*, 1902, I. 184.

antemedian (an″tē-mē′di-an), *a.* Same as ★*antemedial*.

antenna, *n.* 2. (*b*) In *Rotifera*, a spur-like process bearing a tuft of setæ and projecting from the mid-dorsal line close to the trochal disk. Same as *calcar*[1], 4.—**4.** In *elect.*, the vertical conductor used in wireless telegraphy to send out electric waves (*sender*) or receive them (*receiver*). *Phys. Rev.*, Sept., 1904, p. 197.

Antennal gland, lobes. See ★*gland*, ★*lobe*.

Antennary feet, the second and most important pair of swimming-feet in the *Nauplius* larva of crustaceans. These feet become the antennæ of the adult.—**Antennary gland.** See ★*gland*.

antennular (an-ten′ū-lär), *a.* Of the nature of or resembling an antennula or small antenna: as, *antennular* organs. *Huxley*.

antenodal (an-tē-nō′dal), *a.* [L. *ante*, before, + *nodus*, node.] In *entom.*, situated before the nodus: referring to a vein, or nervure, or space, as in the wings of dragon-flies. *Proc. Zool. Soc. Lond.*, 1902, I. 49.

ante-partum (an-tē-pär′tum), *a.* [L. *ante partum*, before delivery.] In *obstet.*, prior to the delivery of the child.

antephenomenal (an″tē-fē-nom′e-nal), *a.* [L. *ante*, before, + NL. *phænomena*: see *phenomenon*.] Antecedent to phenomena; related to consciousness, considered as generating phenomena, as a condition to contemplating them.

antephenomenalism (an″tē-fē-nom′e-nal-izm), *n.* The character of being antephenomenal; the state of consciousness in so far as it generates phenomena.

anteposition, *n.* **3.** In *pathol.*, a forward displacement in the horizontal plane, especially a misplacement of the uterus.

anteriad (an-tē′ri-ad), *adv.* [*anteri(or)* + *-ad*[3].] Toward the anterior end or surface of the body; anteriorly.

> The rudiment of the gall-bladder which in the previous stage is very shallow and basin-like, and opens dorsad within the primary evagination of the proton, is, in the present stage, a somewhat deeper evagination of the ventral part of the posterior wall, and opens *anteriad*.
> *Trans. Amer. Micros. Soc.*, Nov., 1903, p. 66.

anterodistal (an″te-rō-dis′tal), *a.* [L. **anterus*, assumed positive of *anterior*, anterior, + *distal*.] In *entom.*, situated at the front end and away from the body. *Proc. Zool. Soc. Lond.*, 1902, II. 275.

anterodistally (an″te-rō-dis′tal-i), *adv.* In *entom.*, at the front end and extending away from the body: as, an antennal joint prolonged *anterodistally* into a strong spine. *Proc. Zool. Soc. Lond.*, 1900, I. 26.

anterodorsal (an″te-rō-dôr′sal), *a.* Situated in front and on or toward the back. *Proc. Zool. Soc. Lond.*, 1903, I. 282.

antero-external (an″te-rō-eks-tėr′nal), *a.* Situated in front and on the outer side. *Amer. Jour. Sci.*, Jan., 1904, p. 29.

anterofixation (an″te-rō-fik-sā′shon), *n.* [L. **anterus*, positive of *anterior*, anterior, + E. *fixation*.] Fixation anteriorly, as of the uterus to the anterior abdominal wall in cases of retroversion of that organ.

anteroflexion (an′te-rō-flek″shon), *n.* A bending forward.

antero-inferior (an″te-rō-in-fē′ri-or), *a.* Situated in front and below or on the under side. *Buck*, Med. Handbook, II. 413.

antero-internal (an″te-rō-in-tėr′nal), *a.* Situated in front and on the inner side. *Amer. Jour. Sci.*, Jan., 1904, p. 32.

anterolaterally (an″te-rō-lat′e-ral-i), *adv.* In an anterolateral position or manner.

anteromedial (an″te-rō-mē′di-al), *a.* Situated in front and toward the median line. Also *anteromesial*. *Proc. Zool. Soc. Lond.*, 1901, I. 258.

anteromesial (an″te-rō-mes′i-al or -mē′zi-al), *a.* Same as ★*anteromedial*.

anteroposteriad (an″te-rō-pos-tē′ri-ad), *adv.* [*anter(ior)* + *posteri(or)* + *-ad*[3].] From in front backward, that is, from the anterior toward the posterior end or surface of the body; anteroposteriorly.

> The vitelline veins extend *antero-posteriad* in the extreme dorsal portion of the septum transversum.
> *Trans. Amer. Micros. Soc.*, Nov., 1903, p. 58.

anteroposteriorly (an″te-rō-pos-tē′ri-or-li), *adv.* From the front to the back; fore and aft.

anteropygal (an″te-rō-pī′gal), *n.* The median bony plate of a turtle's carapace immediately behind the posterior neural plate, which is borne upon the spinous process of a vertebra. In the cut under *Chelonia*, the line from *Py* runs to the anteropygal. The pygal plates are unsupported by any vertebræ, and may be three in number, in which case they are termed *anteropygal*, *posteropygal*, and *marginal-pygal*.

anterosuperior (an″te-rō-sū-pē′ri-or), *a.* Situated in front and on the upper part. *Proc. Zool. Soc. Lond.*, 1901, I. 133.

anteroventral (an″te-rō-ven′tral), *a.* Situated in front and below or toward the ventral side. *Buck*, Med. Handbook, VII. 708.

anteroventrally (an″te-rō-ven′tral-i), *adv.* Forward and downward, or ventrally.

antescript (an′tē-skript), *n.* The writing which precedes (some other writing) as a prefatory note, or all that part of a letter which precedes the postscript, if there is one. *Mrs. Browning*, Letters, II. 164. [Rare.] *N. E. D.*

anthem, *n.* Hence—**2.** A song or hymn expressive of praise, patriotism, loyalty, etc., and set to music.—**National anthem,** a song or hymn adopted by a particular country, either officially or by common consent, as a distinctive expression of devotion to it or to its ruler, such as "God Save the King," the so-called national anthem of the British people, and the "Star-Spangled Banner," the national anthem of the United States. The former is said to have been written and composed by Henry Carey (1696–1743) and first sung by him at a patriotic dinner in 1740. The "Star-Spangled Banner" was written by Francis Scott Key (1780–1843) in 1814, while a prisoner on a British ship; was set, by his

desire, to the tune of "To Anacreon in Heaven," composed by John Stafford Smith (1750–1836); and was first sung in Baltimore by Ferdinand Durang.

anthemene (an′the-mēn), *n.* [*Anthemis* + *-ene.*] A hydrocarbon, $C_{18}H_{36}$, found in the blossoms of *Anthemis nobilis.* It melts at 64° C.

anthemic (an′the-mik), *a.* Pertaining to or derived from *Anthemis.* **Anthemic acid,** a colorless, silky, crystalline principle of bitter taste, contained in German camomile (*Matricaria Chamomilla*) and in *Anthemis arvensis.*

anthemidin (an-them′i-din), *n.* A tasteless crystalline principle contained in German camomile (*Matricaria Chamomilla*).

anthemol (an′the-mol), *n.* [*Anthemis* + *-ol.*] A compound, $C_{10}H_{16}O$, found in the oil of camomile as esters of tiglic and angelic acids. It is a viscous oil with an odor like camphor.

antheridiophore (an-the-rid′i-ō-fōr), *n.* [NL. *antheridium* + Gr. *-φορος*, ⟨ *φέρειν*, bear.] A gametophore bearing antheridia only.

antherless (an′ther-les), *a.* [*anther* + *-less.*] Without anthers; anantherous.

antheromania (an″ther-ō-mā′ni-ä), *n.* [NL., ⟨ *anthera*, anther, + Gr. *μανία*, mania.] In *bot.*, an excessive development of anthers.

antherpetic (ant-hèr-pet′ik), *a.* Preventive or curative of herpes.

anther-smut (an′thèr-smut), *n.* A fungus (*Ustilago violacea*) which attacks the anthers of the carnation and of other nearly related plants.

Anthias (an′thi-as), *n.* [NL., ⟨ Gr. *ἀνθίας*, a sea-fish, *Labrus* or *Serranus anthias*, prob. ⟨ *ἄνθος*, a flower.] A genus of brilliantly colored fishes found in warm seas, the species longest known being the barbier, *A. anthias*, of the Mediterranean.

anthion (an′thi-on), *n.* [Gr. *ἀντί*, against, + *θεῖον*, sulphur.] The trade-name of a solution of potassium persulphate used by photographers to remove from their prints the last traces of sodium thiosulphate employed in washing.

anthocarp (an′thō-kärp), *n.* [Gr. *ἄνθος*, flower, + *καρπός*, fruit.] Same as *pseudocarp.*

anthocarpium (an-thō-kär′pi-um), *n.*; pl. *anthocarpia* (-ä). [NL.] Same as ★*anthocarp.*

anthocaulus (an-thō-kâ′lus), *n.*; pl. *anthocauli* (-lī). [NL., ⟨ Gr. *ἄνθος*, flower, + *καυλός*, stalk.] The pedicel or stalk of the trophozoöid, the upper part of which becomes expanded and disk-shaped during development and is finally set free as the adult *Fungia*

Anthoceros (an-thos′e-ros), *n.* [NL. (Linnæus, 1753), referring to the long-horned capsule; ⟨ Gr. *ἄνθος*, flower, + *κερως*, horned.] A genus of bryophytic plants, type of the family *Anthocerotaceæ.* It is distinguished from the other two genera of the family by having the prolonged capsule inclosed in a sheath only at the base, and by the clearly developed columella. There are 79 species, found growing on moist ground (rarely on decaying logs) in nearly all parts of the world.

Anthocerotaceæ (an-thos″e-rō-tā′se-ē), *n. pl.* [NL. (Schiffner, 1895), ⟨ *Anthoceros* (*Anthocerot-*) + *-aceæ.*] A family of bryophytic plants of the class *Hepaticæ*, typified by the genus *Anthoceros* and containing the two other genera *Notothylas* and *Dendroceros.* It is characterized by the thalloid proembryonal generation, monœcious reproductive organs, the antheridia inclosed at first in the depressions of the thallus, the archegonia depressed, and the sporogonia with the 2-lobed capsules much prolonged beyond the thallus. There are more than 100 species, small plants resembling liverworts, widely distributed over the globe.

Anthocerotales (an-thos″e-rō-tā′lēz), *n. pl.* [NL. (Schiffner, 1895), ⟨ *Anthoceros* (*Anthocerot-*) + *-ales.*] An order of cryptogamic plants of the phylum *Bryophyta*, class *Hepaticæ*, coextensive with the family *Anthocerotaceæ*, and regarded as intermediate between the *Marchantiales* and the *Jungermanniales.*

anthocerote (an-thos′e-rōt), *n.* [NL. *Anthoceros.*] A plant of the family *Anthocerotaceæ.* *Amer. Nat.*, June, 1904, p. 479.

anthocodium (an″thō-kō′di-um), *n.*; pl. *anthocodia* (-ä). [NL., ⟨ Gr. *ἄνθος*, flower, + *κωδία*, *κώδεια*, head, esp. of a poppy or similar plant.] The free distal, tentacle-bearing portion of the body, as in alcyonarian polyps. Compare ★*anthostele.*

anthocyan, *n.* **2.** A red coloring matter developed in the young leaves of shade-loving plants when exposed to more light than they usually encounter.—**3.** A preparation from the juice of the sweet or purple violet used in making syrup of violets and to color and flavor liquors. Also *anthokyan.* *Thorpe*, Dict. Applied Chem., I. 174.

anthocyathus (an-thō-sī′a-thus), *n.*; pl. *anthocyathi* (-thī). [NL., ⟨ Gr. *ἄνθος*, flower, + *κύαθος*, cup.] The free discoid adult formed by the expansion of the upper part of the calycle of the trophozoöid in *Fungia.* Compare ★*anthocaulus.*

Anthodon (an′thō-don), *n.* [Gr. *ἄνθος*, flower, + *ὀδούς* (*ὀδοντ-*), tooth.] A genus of theromorphous reptiles of the family *Pareiasauridæ* from the Karoo formation of South Africa.

antho-ecologist (an″thō-ē-kol′ō-jist), *n.* A student of flowers as correlated with their environment; a floral ecologist.

antho-ecology (an″thō-ē-kol′ō-ji), *n.* [Gr. *ἄνθος*, flower, + *ecology.*] The study of flowers in correlation with their environment; floral ecology.

anthogenetic (an-thō-jē-net′ik), *a.* Of or pertaining to anthogenesis.

anthomaniac (an-thō-mā′ni-ak), *n.* [*anthomania* + *-ac* (after *maniac*).] One who is extravagantly fond of flowers. *H. Smith*, Moneyed Man, II. 321. [Rare.] *N. E. D.*

Anthomedusæ (an″thō-mē-dū′sē), *n. pl.* **1.** An order of *Hydromedusæ* marked by a regular alternation of a sterile hydroid generation with a sexual generation of medusoids or other gonophores. Rigid permanent gonothecæ and hydrothecæ into which the hydroids are completely retractile are not formed. The sense-organs of the medusoids are ocelli, and the generative organs lie in the wall of the manubrium. The hydroid may be colonial or not, fixed or free. Same as *Gymnoblastea.*

2. [*l.c.*] The medusæ budded from polyps of the *Tubulariæ*, as distinguished from those budded from the polyps of the *Campanulariæ.* Compare *Leptomedusæ.* *Haeckel.*

anthony (an′tō-ni), *n.* [Orig. *Anthony pig*, also *Tantony pig.*] The smallest pig of a litter: from the fact that one of a litter was vowed to St. Anthony, patron saint of swineherds.

anthophagous (an-thof′a-gus), *a.* [Gr. *ἄνθος*, flower, + *φαγεῖν*, eat.] Flower-eating.

anthophobia (an-thō-fō′bi-ä), *n.* [NL., ⟨ Gr. *ἄνθος*, flower, + *-φοβία*, ⟨ *φοβεῖν*, fear.] A morbid dislike or even fear of flowers.

Anthophorabia (an″thō-fō-rā′bi-ä), *n.* [NL. (Newport, 1849), irreg. ⟨ *Anthophora* + Gr. *βίος*, life.] A curious genus of hymenopterous parasites of the family *Chalcididæ.* Its species live, as *A. retusa*, in the nests of the wild bees of the genus *Anthophora.* They are remarkable in structure, the males having no compound eyes.

Anthophoridæ (an-thō-for′i-dē), *n. pl.* [NL., ⟨ *Anthophora* + *-idæ.*] A family of solitary bees, of the superfamily *Apoidea.* It comprises forms usually thickly clothed with hair and usually burrowing into the earth, where they form earthen cells which they supply with pollen and honey for the sustenance of their young.

Anthophyta (an-thof′i-tä), *n. pl.* [Gr. *ἄνθος*, flower, + *φυτόν*, plant.] The flowering plants: only occasionally used. *A. Braun.*

anthophyte (an′thō-fīt), *n.* [Gr. *ἄνθος*, flower, + *φυτόν*, plant.] One of the flowering plants. See ★*Anthophyta.*

anthopoma (an-thō-pō′mä), *n.*; pl. *anthopomata* (-ma-tä). [NL., ⟨ Gr. *ἄνθος*, flower, + *πῶμα*, lid.] One of the spicular defenses, as calices and opercula, found among the alcyonarian polyps.

anthoptosis (an-thop-tō′sis), *n.* [NL., ⟨ Gr. *ἄνθος*, a flower, + *πτῶσις*, a falling.] The fall or shedding of flowers.

anthostele (an′thō-stēl), *n.* [Gr. *ἄνθος*, flower, + *στήλη*, a pillar: see *stele.*] The proximal portion of the body of an alcyonarian polyp by which it is fused to the neighboring members of the colony. Compare ★*anthocodium.*

Anthostoma (an-thos′tō-mä), *n.* [NL. (Nitschke, 1869), ⟨ Gr. *ἄνθος*, flower, + *στόμα*, mouth.] A large genus of pyrenomycetous fungi, mostly saprophytic. The perithecia are buried in the bark or wood and are provided with necks. The spores are simple and are brown or black in color.

Anthostomella (an″thō-stō-mel′ä), *n.* [NL. (Saccardo, 1875), ⟨ *Anthostoma* + dim. *-ella.*] A large genus of pyrenomycetous fungi having the perithecia covered by the epidermis of the host and a thin circular layer of dark mycelium. The spores are simple and are brown in color. Most of the species are saprophytic, but *A. pisana* attacks and kills the leaves of *Chamærops humilis.*

anthotype (an′thō-tīp), *n.* [Gr. *ἄνθος*, flower, + *τύπος*, type.] A fugitive photographic print produced by the action of light upon paper treated with the expressed juice of flowers or plants. The petals of fresh flowers are crushed to a pulp and moistened with water or alcohol; the juice expressed is strained through cloth and spread upon paper; and the paper thus prepared is exposed beneath a negative. The light produces a change of color. The anthotype process was discovered by Sir John Herschel. Recently the use of artificial coloring matters, as quinoline blue, curcuma, and a rapidly fading red, has been suggested.

anthracene, *n.* **2.** A poisonous ptomaïne obtained from cultures of the anthrax bacillus. —Anthracene acid-black, etc. See ★*acid black*, etc.

anthracitization (an″thra-sī-ti-zā′shon), *n.* [*anthracite* + *-ize* + *-ation.*] The process of changing lignite or bituminous coal into anthracite. *Athenæum*, Oct. 17, 1903.

anthracnose, *n.* **2.** A name given to those diseases of plants which are caused by the attacks of fungi of the genera *Glœosporium* and *Colletotrichum.* Among the important diseases caused by *Glœosporium* are: anthracnose of the almond, due to *G. amygdalinum*; anthracnose of the apple, caused by *G. fructigenum*; anthracnose of the blackberry and raspberry, caused by *G. Venetum*; anthracnose of the currant, caused by *G. Ribis*; and anthracnose of the rose, caused by *G. Rosæ.* Among the diseases produced by *Colletotrichum* are: anthracnose of beans, caused by *C. Lindemuthianum*; anthracnose of cotton, caused by *C. Gossypii*; anthracnose of the hollyhock, caused by *C. Malvarum*; anthracnose of melons, caused by *C. lagenarium*; and anthracnose of tomatoes, caused by *C. phomodes.*

anthracnosis (an-thrak-nō′sis), *n.* [NL.] Same as *anthracnose.*

anthracolithic (an″thra-kō-lith′ik), *a.* [Gr. *ἄνθραξ*, coal, + *λίθος*, stone.] In *geol.*, containing anthracite coal: specifically applied by the Geological Survey of India to a series of Permian strata metamorphosed to mica schists, with graphitic and anthracitic seams. *Nature*, May 26, 1904, p. 86.

Anthracomartus (an″thra-kō-mär′tus), *n.* [NL. ⟨ Gr. *ἄνθραξ*, coal, + (?) *μάρτυς*, a witness.] A genus of fossil spiders in which the cephalothorax is quadrangular and the abdomen is composed of 7 segments. It is found in the coal-measures of North America and Europe.

Anthraconectes (an″thra-kō-nek′tēz), *n.* [NL., ⟨ Gr. *ἄνθραξ*, coal, + *νήκτης*, a swimmer.] A genus of extinct merostome crustaceans from the coal-measures of Illinois.

anthraconene (an-thrak′ō-nēn), *n.* [Gr. *ἄνθραξ* (*ἀνθρακ-*), coal, + *-n-* + *-ene.*] A resin found between the coal strata near Schlan, in Bohemia. It is brownish black or, in thin layers, hyacinth-red.

Anthracosia (an-thra-kō′si-ä), *n.* [NL., ⟨ Gr. *ἄνθραξ*, coal, + L. *-os*(*us*) + *-ia*[2].] A fresh-water or estuarine genus of pelecypod mollusks, allied to living unios, found in the Carboniferous and Permian rocks.

anthracotic (an-thra-kot′ik), *a.* [*anthracosis* (*-ot-*) + *-ic.*] Relating to or affected by anthracosis. *Jour. Exper. Med.*, V. 156.

anthracotypy (an′thra-kō-tī″pi), *n.* [Gr. *ἄνθραξ* (*ἀνθρακ-*), coal, + *τύπος*, type.] Printing by means of powdered charcoal or other colors; in *photog.*, a process of reproducing subjects in tint on thin transparent paper. The image on a bichromated gelatin film is treated with warm water, which causes it to swell and become sticky at the parts not affected by light. These parts are thereby adapted to receive and hold powdered colors, which by printing may be transferred to paper.

anthraflavic (an″thra-flav′ik), *a.* [Prob. ⟨ *anthra*(*cene*) + L. *flavus*, yellow.] Noting an acid, 1,6-dihydroxyanthraquinone, $C_6H_3OH(CO)_2C_6H_3OH$. It is isomeric with alizarin, and crystallizes in yellow needles which melt above 330° C.

anthranil (an′thra-nil), *n.* [*anthra*(*cene*) + *anil* (indigo).] The anhydrid of anthranilic or orthoaminobenzoic acid, $C_6H_4 < \begin{matrix} CO \\ | \\ NH \end{matrix}$. It is an oil with an odor resembling that of oil of bitter almonds.

anthranilic (an-thra-nil′ik), *a.* [*anthranil* + *-ic.*] Noting an acid, orthoaminobenzoic acid, $C_6H_4(NH_2)CO_2H$: so named because it was first obtained by boiling indigo with potassium hydroxid. It has acquired great commercial importance in the manufacture of synthetic indigo. It melts at 145° C. and has a sweet taste.

anthranol (an′thra-nōl), *n.* [*anthran*(*il*) + *-ol.*] A substance, 9-hydroxyanthracene, $C_6H_4 < \begin{matrix} C(OH) \\ | \\ C \end{matrix} > C_6H_4$. It crystallizes in needles which melt, with decomposition, at 163°–170° C.

Anthrapalæmon (an″thra-pa-lē′mon), *n.* [NL., irreg. ⟨ Gr. *ἄνθραξ*, coal, + NL. *Palæmon*, a genus of crustaceans.] The generic name of an extinct crawfish from the coal-measures of Illinois and Scotland.

anthrapurpurin, anthrapurpurine (an″thra-pėr′pū-rin), *n.* [*anthrac(ene)* + *purpurin.*] A mordant color, a trihydroxyanthraquinone, $C_6H_3OH(CO)_2C_6H_2(OH)_2$, isomeric with purpurin: sometimes called *isopurpurin.* It is applied in the same manner as alizarin, but produces a yellower or more fiery red. The so-called yellow shades of alizarin often contain anthrapurpurin. See ★*alizarin.*

anthraquinoline (an′thra-kwin′ō-lin), *n.* [*anthra(cene)* + *quinoline.*] A base, $C_{17}H_{11}N$, formed by distilling alizarin blue with zinc-dust. It melts at 170 and boils at 446 C. It is related to both anthracene and quinoline in its structure.

Anthraquinone red. See ★*red*[1].

anthrarobin (an″thra-rō′bin), *n.* [*anthrac(ene)* + *Rob(inia)* + *-in*[2].] A compound, 1.2-dihydroxyanthranol, or 1.2.9-dihydroxyanthracene, $C_6H_4\langle{}^{COH}_{CH}\rangle CH_2(OH)_2$, formed by the reduction of alizarin. It crystallizes in yellow leaflets or needles which melt at 208° C. Also called *desoxyalizarin.*

anthrarufin (an thra-rö′fin), *n.* [*anthra(cene)* + *ruf(ous)* + *-in*[2].] A compound, 1.5-dihydroxyanthraquinone, $HOC_6H_3(CO)_2C_6H_3OH$, isomeric with alizarin. It crystallizes in yellow leaflets which melt at 280° C., and is used as a dyestuff.

anthrasol (an′thra-sōl), *n.* An oily substance possessing soothing and antipruritic powers.

anthrol (an′thrōl), *n.* [*anthr(acene)* + *-ol.*] A substance, 2-hydroxyanthracene, $C_6H_4(CH)_2C_6H_3OH$. It consists of leather-colored leaflets or needles which decompose at 200° C.

anthrophotoscope (an-thrō-fō′tō-skōp), *n.* [Irreg. < Gr. ἄνθρωπος, man, + *photoscope.*] A photographic instrument having rotating glass disks on the marginal edges of which backgrounds and figures are mounted: these, when viewed through a long-focus lens, produce the effect of a peep-show. Also used in rephotographing to change the grouping or background.

anthropic, *a.* **2.** [*cap.*] In *geol.*, a term introduced by Sir J. W. Dawson to designate the human period, or the period of such Pleistocene and recent deposits as are found to contain human relics. It was divided by him into an early, or Palanthropic, and a late, or Neanthropic, stage. See *human* ★*period.*

anthropinism (an-thrō′pin-izm), *n.* [Gr. ἀνθρώπινος, of man (< ἄνθρωπος, man), + *-ism.*] The habit of considering everything as subordinate to man, or of considering things in relation to man and his needs and destiny. *Grant Allen.* [Rare.]

anthropinistic (an-thrō-pin-is′tik), *a.* Of the nature of anthropinism; considering things from a purely human standpoint, or in their relation to man only. *Grant Allen.* [Rare.]

anthropism (an′thrō-pizm), *n.* The doctrine or opinion that man is essentially different from, and contrasted with, everything else in nature, and the end for which the natural world was made.

anthropistic (an-thrō-pis′tik), *a.* Of or pertaining to the doctrine or opinion of anthropism.

anthropocentricism (an″thrō-pō-sen′tri-sizm), *n.* The doctrine or opinion that the world, or the universe, has been made for man, and for the purpose of securing human welfare.

anthropoclimatologist (an″thrō-pō-klī-mā-tol′ō-jist), *n.* One who makes a special study of the relations of the weather or the climate to mankind.

anthropoclimatology (an″thrō-pō-klī-mā-tol′ō-jī), *n.* [Gr. ἄνθρωπος, man, + *climatology.*] The study of the mutual relations of climate and mankind, including all human interests; the environment of a race or a nation; the influence of climate on the evolution of man.

anthropocosmic (an″thrō-pō-koz′mik), *a.* [Gr. ἄνθρωπος, man, + κόσμος, world.] Of man and nature. *J. G. Schurman.*

anthropofagy, *n.* A simplified spelling of *anthropophagy.*

anthropogeographer (an″thrō-pō-jē-og′ra-fėr), *n.* A person who is versed in anthropogeographical science. *Brinton,* Basis of Social Relations, p. 181.

anthropogeographic (an″thrō-pō-jē-ō-graf′ik), *a.* Of or pertaining to anthropogeography.

anthropogeography (an″thrō-pō-jē-og′ra-fi), *n.* [Gr. ἄνθρωπος, man, + *geography.*] Geography as related to man and the conditions of his habitat.

In our estimation, *anthropogeography* is a convenient term under which to include all those aspects of geography that deal with the relations of humanity, as a whole or divided into communities, to the earth, with which alone physical geography has to deal. "Applied Geography" might be taken as an alternative term, though on the whole it has a wider scope. "Political Geography" may be regarded as a subdivision or special application of *anthropogeography*, and therefore Prof. Ratzel's latest work is a natural sequel to that on the more general subjects. *Geog. Jour.* (R. G. S.), XIII. 171.

anthropoidometry (an″thrō-poi-dom′e-tri), *n.* [Gr. ἀνθρωποειδής, like a man (see *anthropoid*), + -μετρία, < μέτρον, measure.] The measurement of the bodies of anthropoid apes. *Amer. Anthropol.*, Oct.-Dec., 1903, p. 708.

anthropolatric (an-thrō-pol′a-trik), *a.* Of or pertaining to anthropolatry.

anthropolith (an′thrō-pō-lith), *n.* Same as *anthropolite.*

anthropologically (an″thrō-pō-loj′i-kal-i), *adv.* In an anthropological way or direction.

anthropology, *n.* **Criminal anthropology,** that branch of anthropology which deals with the physical and mental characteristics of criminals.—**Culture anthropology,** that branch of anthropology which deals with the mental life of mankind, or with human activities: opposed to *physical anthropology*, or somatology, which deals with the physical characteristics of man.

anthropometer, *n.* **2.** An instrument used for anthropometric measurements.

anthropometrician (an″thrō-pō-mē-trish′an), *n.* [*anthropometric* + *-ian.*] Same as *anthropometer,* 1. *Smithsonian Rep.*, 1890, p. 563.

anthropometrics (an″thrō-pō-met′riks), *n.* Same as *anthropometry.*

anthropometrist (an-thrō-pom′e-trist), *n.* One versed in anthropometry, or engaged in anthropometric investigations.

Anthropometrists think growth in height to be more or less antagonistic to growth in girth. *G. S. Hall,* Adolescence, I. 19.

Anthropomorph, primitive American.

anthropomorph (an′thrō-pō-môrf), *n.* [Gr. ἀνθρωπόμορφος, of human form, < ἄνθρωπος, man, + μορφή, form.] An element in decorative art, derived from the human form. *Haddon,* Evolution in Art, p. 41.

anthropomorphism, *n.* **3.** In *pragmatistic philos.*, that philosophic tendency which, recognizing an absolute impossibility in the attainment by man of any conception that does not refer to human life, proposes frankly to submit to this as a decree of experience and to shape metaphysics to agreement with it. The term was first used in this sense by F. C. S. Schiller (Riddles of the Sphinx). See ★*humanism.*

anthropomorphological (an″thrō-pō-môr-fō-loj′i-kal), *a.* Characterized by or of the nature of anthropomorphology.

anthropomorphologically (an″thrō-pō-môr-fō-loj′i-kal-i), *adv.* With anthropomorphic language. *McCosh,* Divine Gov., p. 475.

anthropomorphously (an″thrō-pō-môr′fus-li), *adv.* In an anthropomorphous manner.

anthropopsychic (an″thrō-pō-sī′kik), *a.* Of or pertaining to ★anthropopsychism (which see).

anthropopsychism (an″thrō-pō-sīk′izm), *n.* [Gr. ἄνθρωπος, man, + ψυχή, soul, + *-ism.*] The doctrine of a God who is anthropomorphic in the vaguely magnified sense of being personal and spiritual, but not necessarily in the sense of having a human body: a term proposed by the Duke of Argyll, somewhat unnecessarily, since none but the most primitive men believe in any other anthropomorphism than this.

anthroposociologist (an″thrō-pō-sō-shi-ol′ō-jist), *n.* [Gr. ἄνθρωπος, man, + *sociologist.*] A sociologist who is primarily an anthropologist and who explains social phenomena for the most part by anthropologic principles; especially, one of a group of writers, headed by Lapouge, who base their classification mainly on the cephalic index and hold that the dolichocephalous races are superior and are destined to dominate all others. *Ward,* Pure Sociol., p. 231.

anthroposociology (an″thrō-pō-sō-shi-ol′ō-ji), *n.* [Gr. ἄνθρωπος, man, + *sociology.*] Sociology as studied primarily from the point of view of the physical characteristics of population constituting social groups; specifically, the science, or alleged science, which classifies the human races primarily by the cephalic index, arranging those of Europe in a hierarchy with the dolichocephalous races at the head. *Jour. Polit. Econ.*, Dec., 1900, p. 76.

anthropoteleological (an″thrō-pō-tel″ē-ō-loj′i-kal), *a.* [Gr. ἄνθρωπος, man, + *teleological.*] Pertaining to the teleological working of the human mind which adapts means to ends: distinguished from ★*theoteleological*, which applies to the teleological working of the divine mind. *Ward,* Dynamic Sociol., I. 28.

anthropoteleology (an″thrō-pō-tel-ē-ol′ō-ji), *n.* [Gr. ἄνθρωπος, man, + *teleology.*] The doctrine that the human mind always works teleologically. *Ward,* Dynamic Sociol., I. 28.

anthropotheism (an″thrō-pō-thē′izm), *n.* [Gr. ἄνθρωπος, man, + θεός, God, + *-ism.*] A stage in the evolution of religion in which deities are conceived in the image of man and are often believed to be the surviving spirits of once powerful men. *Ward,* Dynamic Sociol., II. 257.

anthropotoxin (an″thrō-pō-tok′sin), *n.* [Gr. ἄνθρωπος, man, + τοξ(ικόν), poison, + *-in*[2].] A poisonous substance given off from the lungs.

anthropozoic (an″thrō-pō-zō′ik), *a.* and *n.* [Gr. ἄνθρωπος, man, + ζωή, life.] **I.** *a.* Of the time of the existence of man; belonging to those recent geologic formations which have been deposited since the appearance of man upon the earth.

II. *n.* [*cap.*] The final member in the series Azoic, Eozoic, Paleozoic, Mesozoic, Cænozoic, Anthropozoic, or Psychozoic.

anthropozoömorphic (an″thrō-pō-zō-ō-môr′fik), *a.* [Gr. ἄνθρωπος, man, + ζῷον, animal, + μορφή, form, + *-ic.*] In *anthrop.*, partaking of the character of both man and animal: said in reference to animals which are believed by primitive tribes to be, or to have been, endowed with all the characteristics of their species and also with those of human beings, and to be able to assume animal or human form at will.

It is rather a worship of the ancestors of the Snake clans, which are *anthropo-zoomorphic* beings, called the Snake youth and the Snake maid. *An. Rep. Bur. Amer. Ethnol.*, 1897-98, p. 1008.

Anthurium, *n.* **2.** [*l. c.*] A plant of the genus *Anthurium. A. Veitchii* and *A. Warocqueanum* are cultivated for their foliage; others, conspicuously *A. Andræanum*, for their showy spathes and spadices. The last-named has the spathe cordate and spreading, sometimes very large, of an orange-red color varying to white.

anthurus (an-thū′rus), *n.* [NL. < Gr. ἄνθος, flower, + οὐρά, tail.] A cluster of flowers at the end of a long stalk. *Jackson.* [Rare.]

anthypophoretic (ant″hi-pof-ō-ret′ik), *a.* Of the nature of an anthypophora. *Urquhart,* Works, p. 292.

anti (an′ti), *n.* [Short for *anti-monopolist, -prohibitionist, -imperialist*, etc., according to the case.] One who is opposed to some proposed or undertaken course of action, policy, measure, movement, or enactment, as, for example, to imperialism. [Colloq.]

anti-. (3) In *chem.*, a prefix used to indicate that two groups or two atoms which might react with each other are so separated in space that they do not readily do this. It is contrasted with the prefix *syn-*. Thus in *anti*benzaldoxime, $C_6H_5\text{-}CH$ $\|$ HON, the H and OH do not readily combine to form water, while in *syn*benzaldoxime, $C_6H_5\text{-}CH$ $\|$ NOH, such a combination takes place easily.

anti-abrin (an-ti-ā′brin), *n.* [*anti-* + *abrin.*] The antibody to abrin.

anti-albumid (an-ti-al′bū-mid), *n.* A product of albuminous digestion characterized by its resistance to proteolytic ferments.

anti-albumose, *n.* **2.** In *immun.*, a specific precipitin corresponding to albumose.

anti-amaryllic (an″ti-am-a-ril′ik), *a.* Noting a serum suggested for the treatment of yellow fever. Also *anti-amarillic.*

anti-amboceptor (an-ti-am′bō-sep-tor), *n.* The antibody to an amboceptor.

anti-antibody (an-ti-an′ti-bod-i), *n.*; pl. *anti-antibodies* (-iz). The antibody to any adaptation-product.

anti-antidote (an-ti-an′ti-dōt), *n.* A substance that inhibits the action of an antidote.

anti-antitoxin (an″ti-an-ti-tok′sin), *n.* An antibody resulting on immunization with an antitoxin, which counteracts the effect of the latter.

anti-apex (an-ti-ā′peks), *n.* The point opposite the "apex of the sun's way," toward which his motion in space is directed. *Amer. Jour. Sci.*, Aug., 1903, p. 136.

Antiarcha (an-ti-är'kä), *n. pl.* [NL., said to be < Gr. *ἀντί*, against, + *ἄρχος*, rectum.] An ordinal term introduced by Cope for a group of extinct ostracoderm fishes characterized by their heavily plated head and abdomen. The head is articulated to the trunk and two paddle-like pectoral appendages are articulated to the plates of the trunk. The best-known genera of this order are *Pterichthys* and *Asterolepis*: all its representatives are restricted to the Devonian formations.

antiarigenin (an″ti-ą-rij'e-nin), *n.* [*antiar* + L. *-gen*, produce, + *-in*[2].] A crystalline compound, $C_{21}H_{30}O_5$, obtained by the decomposition of antiarin. It melts at about 180° C.

anti-arthrin (an-ti-är'thrin), *n.* [Gr. *ἀντί*, against, + *ἄρθρον*, a joint.] A compound formed by the condensation of tannin and saligenin. It is used as a remedy in acute and chronic gout and rheumatism.

anti-autolysin (an″ti-ą-tol'i-sin), *n.* An antibody which will inhibit the action of the corresponding autolysin.

antibacterial, *a.* **2.** Preventing the action or development of bacteria. *Med. Record,* Mar. 28, 1903, p. 511.

antibacteriolytic (an″ti-bak-tē″ri-ō-lit'ik), *a.* [*anti-* + *bacteriolytic.*] Antagonistic to bacteriolytic action.

antiballooner (an″ti-ba-lön'ėr), *n.* In *textile-manuf.*, a device employed on a ring-spinning frame to restrict the centrifugal bulging of the yarn during spinning. *Nasmith,* Cotton Spinning, p. 356.

antibenzenepyrine (an″ti-ben-zēn-pī'rin), *n.* [Gr. *ἀντί*, against, + E. *benzene* + Gr. *πῦρ*, fire, + *-ine*[2].] The trade name of a material for use in scouring clothing and textile fabrics generally. It is used in order to avoid or to diminish the danger of fire from using ordinary benzin, which is liable to become ignited by electric sparks produced by friction on the surface of the cloth. Antibenzenepyrine is said to consist of 60-65 per cent. benzin of specific gravity .700, 20-25 per cent. hydrocarbon oil of specific gravity .825-.830, and 10-12 per cent. magnesia soap.

antibiotic, *a.* **2.** In *biol.*, injurious or deadly to the living substance: as, an *antibiotic* secretion.

Glandular powers directed to the production of a bactericidal, or at least *antibiotic* substance.
Philos. Trans. Roy. Soc. (London), 1894, ser. B, 185. 312.

antiblennorrhagic (an″ti-blen-ō-raj'ik), *a.* and *n.* [*anti-* + *blennorrhagia* + *-ic.*] **I.** *a.* Curative of catarrh or of gonorrhea. *Buck,* Med. Handbook, I. 103.

II. *n.* A remedy possessing this property.

antibody (an'ti-bod-i), *n.*; pl. *antibodies* (-iz). [*anti-* + *body.*] A body or substance which inhibits the action of another substance. Also called *antisubstance* and, as a general term, *adaptation-product.* See ★*adaptation-product* and ★*immunity.*

The reaction is caused by the development within the blood-serum of the injected animal of an *anti-body* or a property or substance which causes a certain reaction with the serum homologous to the one injected.
Med. Record, June 13, 1903, p. 953.

antibromic (an-ti-brō'mik), *a.* and *n.* [*anti-* + Gr. *βρῶμος*, smell, + *-ic.*] **I.** *a.* Deodorant.

II. *n.* A deodorant.

anticathode (an-ti-kath'ōd), *n.* The plate, often of platinum, placed opposite the cathode in a vacuum-tube, on which the cathode rays, or streams of electrified particles, impinge and thus produce the Röntgen rays.

anticeltina (an″ti-sel-ti'nä), *n.* A compound of urea and mercury which does not precipitate albumen: used hypodermically in affections of the cornea and iris.

anticephalalgic (an″ti-sef-ą-lal'jik), *a.* and *n.* [Gr. *ἀντί*, against, + *κεφαλαλγία*, headache, + *-ic.*] **I.** *a.* Preventive or curative of headache.

II. *n.* A remedy possessing such properties.

antichlorin (an-ti-klō'rin), *n.* Same as *anti-chlor.*

antichretic (an-ti-krē'tik), *a.* [*antichresis* (*-et-*) + *-ic.*] Of the nature of antichresis: as, an *antichretic* agreement or contract.

antichrome (an'ti-krōm), *n.* [*anti-* + *chrome.*] A name given to certain pigments which are free from the defects of those in which chrome or chromium is an ingredient.

antichymosin (an-ti-ki'mō-sin), *n.* An antibody which will inhibit the coagulating action of chymosin on milk.

anticipant, *a.* **II.** *n.* One who anticipates or looks forward to something; an anticipator: as, "the sweet *anticipant* of dawn," *B. Taylor,* Poems of the Orient, p. 396.

Anticipating intermittent. See ★*intermittent.*

anticipatorily (an-tis'i-pą-tō-ri-li), *adv.* In anticipation; beforehand. *Ruskin,* Notes, I. 71. [Rare.] *N. E. D.*

anticipatoriness (an-tis'i-pą-tō-ri-nes), *n.* In *psychol.*, a complex feeling accompanying the antecedent image in volition.

The antecedent image is not a volition, unless it includes a certain realized *anticipatoriness*, which we may describe roughly as 'the thought of a real happening.'
M. W. Calkins, Introd. to Psychol., p. 300.

anticize (an'tik-iz), *v. i.*; pret. and pp. *anticized,* ppr. *anticizing.* [*antic* + *-ize.*] To play antics; cut capers; caper about; frolic. *Browning,* Prince Hohenstiel, l. 1307. [Rare.] *N. E. D.*

anticlinal, *a.*—**Anticlinal cells,** parent-cells that persist and do not produce antipodal cells. They may be (*a*) *inert,* (*b*) *active* (albuminigenous), or (*c*) *cotyloid.* *Vesque.* —**Anticlinal planes.** Same as ★*anticlinal walls.*—**Anticlinal valley,** a valley whose general course follows the arch of folded strata: contrasted with a *synclinal valley,* which follows the trough.—**Anticlinal vertebra.** See ★*vertebra.*—**Anticlinal walls,** walls cutting the surface, or periclinal walls at right angles. Also *anticlinal planes.*

anticlinorium (an-ti-klī-nō'ri-um), *n.*; pl. *anticlinoria* (-ą). [NL., < *anticline* + *-orium.*] A mountain formed by an anticline; a series of folds in which the anticlinal type predominates: a series of great arches with many minor undulations.

anti-clockwise (an-ti-klok'wīz), *a.* and *adv.* **I.** *a.* Noting or characterized by a rotatory motion contrary to that of the hands of a clock: as, an *anti-clockwise* direction.

II. *adv.* In an anti-clockwise manner.

anticoagulant (an″ti-kō-ag'ū-lant), *a.* and *n.* [*anti-* + *coagulant.*] **I.** *a.* Possessing the property of retarding or preventing coagulation, especially of the blood. *Buck,* Med. Handbook, V. 493.

II. *n.* Any agent which retards or prevents coagulation.

anticoagulin (an″ti-kō-ag'ū-lin), *n.* An antibody to a coagulin.

anticœlous (an″ti-sē'lus), *a.* In *ornith.*, noting that condition of the intestine in which its folds are united by the mesentery and are alternately turned in opposite directions.

anticoherer (an″ti-kō-hēr'ėr), *n.* [*anti-* + *coherer.*] A device which, like a coherer, is a detector of electric waves, but whose resistance is increased by them.

anticomplement (an-ti-kom'plē-ment), *n.* The antibody to a complement. Substances of this order result by immunizing animals with normal serum; they inhibit the action of the corresponding complements.

anticor (an'ti-kōr″), *n.* [Also *anticore, antecor, anticour; anti-* + L. *cor*, heart.] A circumscribed swelling or slough on the neck of a horse in the region of the collar, resulting from pressure of badly fitting harness or from irritating masses of dirt, sweat, or hair under the harness.

Anticosti group. See ★*group*[1].

anticreep (an'ti-krēp), *a.* In *mech.*, preventing creeping: applied specifically to devices for keeping the rails of a railway from creeping or moving lengthwise, and for diminishing the lengthwise motion of flat leather belts upon their pulleys.

anticryptic (an-ti-krip'tik), *a.* [Gr. *ἀντί*, against, + *κρυπτός*, hidden.] In *biol.*, serving to conceal or fitted for concealing one organism to the disadvantage of another: as contrasted with *procryptic*, serving to hide an organism for its own welfare.—**Anticryptic colors,** in *zool.*, those colors which cause an animal to resemble its surroundings, or some other species, and thus facilitate the capture of prey. Thus some spiders closely resemble parts of flowers, and so are enabled to capture insects, while the weasel so harmonizes with the snow in winter and the earth in summer that it can approach its prey unnoticed.

anticyclic (an-ti-sī'klik), *a.* In *math.*, two on a circle, the other two inverse as to that circle: said of four points.

anticyclonal (an-ti-sī'klō-nal), *a.* Same as *anticyclonic.*—**Anticyclonal gradient,** the barometric gradient directed away from the center of an anticyclone, especially in the outer portions of the anticyclone.

anticyclonic, *a.*—**Galton's anticyclonic law.** See ★*law.*

anticytolysin[1] (an-ti-sī-tol'i-sin), *n.* The antibody to a cytolysin.

These cytolytic or, as some prefer to call them, cytotoxic sera, when introduced into the living bodies of the species from which the cells inciting their formation are derived, act as toxins to which the organism responds, each after its kind, by the development of antitoxic substances. These are called *anticytolysins* or anticytotoxins. *Med. Record,* Feb. 14, 1903, p. 247.

anticytotoxin (an-ti-sī-tō-tok'sin), *n.* Same as ★*anticytolysin.*

antidiabetic (an-ti-dī-ą-bet'ik), *n.* An agent or medicine that will prevent or cure diabetes; specifically, a drug which diminishes the elimination of sugar.

anti-diastase (an-ti-dī'as-tās), *n.* An antibody which inhibits the action of diastase.

Antidicomarian (an″ti-dī-kō-mā'ri-ąn), *n.* Same as *Antidicomarianite.*

antidiphtheritic (an″ti-dif- or -dip-thē-rit'ik), *a.* [*anti-* + *diphtheritis* + *-ic.*] Antagonistic to the toxin of diphtheria: as, *antidiphtheritic* serum.

Antidiphtheritic serum has, in the few short years of its existence, so thoroughly proved its value and reliability that the failure of other antitoxic serums to produce equally good results has resulted in disappointment, and in some distrust of serum therapy in general.
Therapeutic Gazette, Feb. 15, 1903, p. 97.

antidote, *n.*—**Chemical antidote,** an antidote which combines chemically with the poison to form an innocuous compound.

antidromal, *a.*—**Antidromal torsion,** a twisting of a twining stem or organ in a direction opposite to that of twining.

antidrome (an'ti-drōm), *n.* and *a.* [Gr. *ἀντίδρομος*: see *antidromous.*] **I.** *n.* Same as ★*heterodrome.*

II. *a.* Same as *antidromous.*

The blaze reaction, whether unequivocal (homodrome) or equivocal (*antidrome*), requires short strong currents for its manifestation. *Nature,* Sept. 18, 1902, p. 191.

anti-enzym (an-ti-en'zim), *n.* The antibody to an enzym. Also *antiferment.*

We have already seen that bacteria are not digested in the alimentary canal and it is a familiar fact that ascarides can survive the digestive juices and it has recently been shown that the body wall of ascaris contains an *anti-enzyme* to pepsin. But what is more important and interesting is the fact that the human stomach wall contains an *anti-enzyme* to its own ferment.
Lancet, April 4, 1903, p. 946.

anti-epithelial (an-ti-ep-i-thē'li-al), *a.* Noting a serum obtained on immunization with epithelial cells and accordingly containing epitheliotoxins.

anti-expansionist (an″ti-eks-pan'shon-ist), *n.* In recent United States politics, one who is opposed to the expansion of the United States by acquisition or conquest of new territory beyond the seas.

antifebrine (an-ti-feb'rin), *n.* Acetanilide: employed in medicine as an antipyretic.

antiferment, *n.* **2.** A specific antibody which will inhibit the action of the corresponding ferment. The gastro-intestinal mucous membrane and possibly all the tissues of the animal body probably protect themselves against autodigestion by such means.

antifever-tree (an-ti-fē'vėr-trē), *n.* Same as *fever-tree,* 1.

antifony, *n.* A simplified spelling of *antiphony.*

antifrasis, *n.* A simplified spelling of *antiphrasis.*

antifreezing (an-ti-frē'zing), *p. a.* Not capable of freezing; preventive of freezing.

antiglobulin (an-ti-glob'ū-lin), *n.* A specific precipitin corresponding to globulins.

Antigonia (an-ti-gō'ni-ą), *n.* [NL., < (?) Gr. *Ἀντίγονος* or *Ἀντιγόνη*, a personal name.] A genus of fishes allied to the boar-fish, *Capros,* found in tropical seas. The color is salmon-red and the body is much compressed, being deeper than it is long.

Antigoniidæ (an-ti-gō-nī'i-dē), *n. pl.* The family of boar-fishes. The principal genera are *Capros* and *Antigonia.* Also *Caproidæ.*

antigopher-plant (an-ti-gō'fėr-plant), *n.* [*anti-* + *gopher* + *plant.*] Same as *mole-tree.*

antigravitate (an-ti-grav'i-tāt), *v. i.* [*anti-* + *gravitate.*] To rise from the surface of the earth; to be repelled, instead of being attracted like ordinary matter, in a gravitational field of force.

The author refers to Hovenden's theory of a substance or fluid which, when uninfluenced by external forces, rises from the surface of the earth or "*antigravitates.*"
Electrochem. Industry, June, 1904, p. 250.

antihalation (an″ti-hą-lā'shon), *a.* Counteracting the effects of halation.—**Antihalation plate,** a photographic dry plate so prepared that the rays reflected from the glass-support do not affect the sensitive film.

antihemolysin (an″ti-hē-mol'i-sin), *n.* In *physiol. chem.*, an adaptation-product which inhibits the action of the corresponding hemolysin. Its action is dependent upon the simultaneous formation of an anti-amboceptor and an anticomplement. Also *antihæmolysin.*

antihemolytic (an-ti-hem-ō-lit'ik), *a.* Inhibiting hemolysis. *Science,* May 27, 1904, p. 831. Also *antihæmolytic.*

antiheterolysin (an″ti-het-ę-rol′i-sin), *n.* An antibody resulting on immunization with a heterolysin.

antihidrotic (an-ti-hī-drot′ik), *a.* Same as *anhidrotic.*

antihydrophobic (an″ti-hī-drō-fō′bik), *a.* [*anti-* + *hydrophobia* + *-ic.*] Preventive or curative of rabies.

antihydropic (an″ti-hī-drop′ik), *a.* and *n.* [*anti-* + *hydrop(sy)* + *-ic.*] **I.** *a.* Curative of dropsy.

II. *n.* A medical agent employed in the treatment of dropsy.

anti-immune (an-ti-i-mūn′), *a.* Adverse to an immune body.—**Anti-immune body,** the antibody to an amboceptor. Such bodies result on immunization with specific immune bodies (amboceptors).

The "anti-body" prevents the linking of the immune body to the cell receptor and hence acts as an *anti-immune* body. *Med. Record,* Feb. 14, 1903, p. 247.

anti-imperialism (an″ti-im-pē′ri-ạl-izm), *n.* The principles or spirit of the anti-imperialists.

anti-imperialist (an″ti-im-pē′ri-ạl-ist), *a.* and *n.* **I.** *a.* Pertaining to the ideas of the anti-imperialists.

II. *n.* One who is opposed to imperialism, or to the spirit, principle, or methods of empire; specifically, in United States politics, one who is opposed to the acquisition and government of dependencies beyond the seas by the arbitrary will of President or Congress, without regard to the rights of the people to self-government. In use especially since the Spanish-American war of 1898.

anti-imperialistic (an″ti-im-pē″ri-ạ-lis′tik), *a.* Same as ★*anti-imperialist.*

anti-intermediary (an″ti-in-tẽr-mē′di-ạ-ri), *a.* Used only in the following phrase.—**Anti-intermediary body.** Same as ★*anti-amboceptor.*

The next experiment was to determine whether any action was exerted by venom upon the complements of these sera. For the purpose of obtaining the serum-complement free from the intermediary body, the rabbit was treated with dog's serum heated to 56° C. In this way the *anti-intermediary body* was obtained, which, when heated to 56° C. (to remove rabbit's complement) and added to fresh dog's serum, neutralized the action of the latter upon rabbit's corpuscles. From this it could be concluded that the intermediary body of the dog's serum was neutralized by the *anti-intermediary body* contained in the immunized rabbit's serum, leaving behind the pure dog's complement in the fluid.
Jour. Exper. Med., VI. 299.

anti-isolysin (an″ti-ī-sol′i-sin), *n.* An antibody which will inhibit the action of the corresponding isolysin.

antikamnia (an-ti-kam′ni-ạ), *n.* [Irreg. < Gr. ἀντί, against, + κάμνειν, suffer, be ill.] The trade-name of a preparation for medicinal use, antipyretic and anodyne in its action. It is said to contain acetanilide.

antikinase (an-ti-kin′ās), *n.* In *physiol. chem.,* a substance which inhibits or prevents the action of a kinase: such bodies occur in blood-serum.

antilactase (an-ti-lak′tās), *n.* An antiferment which will inhibit the cleavage of lactose into glucose and galactose by means of lactase.

antilactoserum (an″ti-lak-tō-sē′rum), *n.*; pl. *antilactosera* (-rạ). A serum containing the antiprecipitin corresponding to lactoserum, which will therefore inhibit the action of the latter.

antileucotoxin (an″ti-lū-kō-tok′sin), *n.* The antibody to a leucotoxin.

Antilopine kangaroo. See ★*kangaroo.*

antilysin (an-ti-lī′sin), *n.* [Also erron. *antilisin.*] The antibody to a given lysin.

antilytic, *a.* **2.** Inhibiting the lytic action of a substance.

antimalarial (an″ti-mạ-lā′ri-ạl), *a.* [*anti-* + *malaria* + *-al.*] Preventive or curative of malaria.

antimephitic (an″ti-mē-fit′ik), *a.* [*anti-* + *mephitis* + *-ic.*] Tending to purify the atmosphere; destructive of noxious emanations.

antimeron (an-tim′e-ron), *n.*; pl. *antimera* (-rạ). [NL.: see *antimere.*] Same as *antimere.*

antimerous (an-tim′ę-rus), *a.* Antimeric; pertaining to paired organs.

antimetrically (an-ti-met′ri-kạl-i), *adv.* As against the metric system of weights and measures. [Nonce-word.]

The questions propounded . . . are clearly biassed *antimetrically.*
Electrical World and Engineer, Nov. 28, 1903, p. 867.

antimetropia (an″ti-me-trō′pi-ạ), *n.* [NL., < ἀντί, against, + μέτρον, measure, + ὄψ, eye.] A condition in which myopia exists in one eye and hypermetropia in the other.

antimetropic (an″ti-me-trop′ik), *a.* Relating to or of the nature of antimetropia. *Optical Jour.,* June 2, 1904, p. 977.

antimiasmatic (an″ti-mi-az-mat′ik), *a.* [*anti-* + *miasma(t-)* + *-ic.*] Same as ★*antimalarial.* *Amer. Physician,* Jan., 1903, p. 14.

antimicrobic (an″ti-mī-kro′bik), *a.* [*anti-* + *microbe* + *-ic.*] Destructive to, or inimical to the development of micro-organisms: as, *antimicrobic* sera. *Encyc. Brit.,* XXVI. 69.

Antimonial cup, a drinking cup made of glass of antimony, claimed to impart the emetic antimony compounds to the contained liquid.—**Antimonial nickel, powder.** See ★*nickel, powder.*

Antimonious sulphid, a substance occurring as a natural mineral, stibnite, the chief source from which antimony and its other compounds are obtained. Artificially prepared, it was formerly called *mineral kermes* and *golden sulphid of antimony;* it is still occasionally used in medicine, but the official preparation usually contains a little of the oxid of the metal.

antimonsoon (an″ti-mon-sön′), *n.* [*anti-* + *monsoon.*] **1.** A current of air moving in a direction opposite to that of the monsoon: it may lie above the monsoon proper, but is generally strongest on the west side of it; the northerly wind which opposes the principal southwest monsoon of India, and is overcome by it.—**2.** A northerly wind of the Gulf States opposed to the southeasterly winds that draw inward from the Gulf toward the dome of the western continent in the spring and summer seasons and constitute light monsoon winds.

Antimony glass. See *glass of antimony,* under *glass.*—**Antimony ocher,** a name sometimes given to oxidized ores of antimony when of earthy or pulverulent texture.—**Feathered antimony,** refined metallic antimony showing distinct crystalline structure by feather-like markings on the surface of the ingot.—**Plumose antimony.** Same as *feathered* ★*antimony.*—**Tartarized antimony.** Same as ★*tartar emetic.*

antimonyl (an′ti-mō-nil), *n.* [*antimon(y)* + *-yl,* < Gr. ὕλη, matter, substance.] In *chem.,* a compound radical having the constitution SbO and exhibiting the valence of a monad.

antimony-salt (an′ti-mō-ni-sâlt″), *n.* A trade-name for a double salt of antimony fluoride and ammonium sulphate which has the formula $SbF_3(NH_4)_2SO_4$. It is sold as a substitute for tartar emetic, and is used chiefly as a fixing agent for tannin in the application of the basic colors.

Antimora (an-tim′ō-rạ), *n.* [NL., < (?) Gr. ἀντίμορος, corresponding, part to part, < ἀντί, opposite to, + μέρος, part (μόρος, lot).] A genus of deep-sea *Gadidæ,* allied to the ling.

antineuralgic (an″ti-nū-ral′jik), *a.* and *n.* [*anti-* + *neuralgia* + *-ic.*] **I.** *a.* Curative of neuralgia.

II. *n.* A remedy employed in the treatment of neuralgia.

anting-anting (än′ting-än″ting), *n.* [Tagalog *anting-anting,* a charm, amulet: same as Malay *anting-anting,* an ear-ring.] A charm supposed to protect the owner from injury, especially from bullets. [Philippine Is.]

antiniad (an-tin′i-ad), *adv.* [Appar. irreg., < L. *ante,* before, + *-in*[2] + *-i-* + *-ad*[3].] Forward; toward the anterior portion of the cranium, like the horns of a musk-ox. [Rare.] *Sir J. Richardson,* Zoöl. of the 'Herald.'

antinion (an-tin′i-on), *n.* [Gr. ἀντί, against, opposite to, + ἰνίον, the back of the head.] The antinial region. See *antinial.*

antinonnin (an-ti-non′in), *n.* A trade-name for a mixture of orthodinitrocresol, soap, and glycerol, used in very dilute solution as a disinfectant and preservative.

antinosine (an-tin′ō-sin), *n.* [Gr. ἀντί, against, + νοσος, disease.] The sodium salt of nosophen (tetra-iodo-phenolphtalein), a bluish, water-soluble powder, used as a substitute for iodoform.

antiodontalgic (an″ti-ō-don-tal′jik), *a.* [*anti-* + *odontalgia* + *-ic.*] **I.** *a.* Relieving toothache.

II. *n.* A remedy for toothache.

Antiopa butterfly. See *butterfly.*

antiophidic (an″ti-ō-fid′ik), *a.* A term applied by Vital to a serum devised for the treatment of snakebite, and supposedly of universal efficacy. It is a mixture of equal parts of bothropic and anticrotalic serum.

antiparallelogram (an″ti-par-ạ-lel′ō-gram), *n.* Same as ★*contraparallelogram.*

antiparamœcious (an″ti-par-ạ-mē′shus), *a.* Applied to a serum resulting on immunization with paramœcium, an organism belonging to the protozoa.

antiparasitic (an″ti-par-ạ-sit′ik), *a.* and *n.* [*anti-* + *parasite* + *-ic.*] **I.** *a.* Inimical to parasites.

II. *n.* A remedy employed for the destruction or removal of parasites.

antipathacean (an″ti-pa-thā′sē-ạn), *a.* and *n.* [*Antipathacea* + *-an.*] **I.** *a.* Pertaining to or having the characters of the *Antipathacea.*

II. *n.* One of the *Antipathacea.*

Antipatharia, *n. pl.* **2.** An order or a suborder of *Zoantharia.* They are colonial and tree like in form, with tentacles and mesenteries 6 to 24 in number and a skeleton in the form of a branched chitinoid axis, developed from the ectoderm, which extends throughout the colony. The "black corals" belong in this group, which includes the families *Savagliidæ, Antipathidæ,* and *Dendrobrachiidæ.*

Antipathidea (an″ti-pa-thid′ē-ạ), *n. pl.* [NL., < *Antipathes* + *-idea.*] An order of colonial *Zoantharia paramera* with a spinose, horny, usually branching axial skeleton on which the zoöids are seated. Six tentacles are usually longer than the others, and six primary mesenteries are always present. It includes the families *Antipathidæ, Leiopathiidæ,* and *Dendrobrachiidæ.*

antipedal (an-tip′ē-dạl), *a.* [Gr. ἀντί, against, + L. *pes* (*ped-*), foot, + *-al.*] Situated opposite to the foot: as, the *antipedal* area of a mollusk. *Lankester.*

antipepsin (an-ti-pep′sin), *n.* The antibody to pepsin, which inhibits the action of the latter.

antipeptone, *n.* **2.** In *immunity,* a specific precipitin corresponding to peptones.—**Fibrin antipeptone,** antipeptone obtained from fibrin.

antipericœlous (an″ti-per-i-sē′lus), *a.* In *ornith.,* having the second intestinal loop open, right-handed, and inclosing the third, which is left-handed and closed.

anti-pest (an″ti-pest), *a.* Same as ★*anti-plague.*

antiphagocytic (an″ti-fag-ō-sit′ik), *a.* Destructive to phagocytes.—**Antiphagocytic serum,** a serum which causes the destruction of phagocytes.

An *antiphagocytic serum,* prepared in this sense, has produced its demolishing effect not only upon the macrophages, but also upon their enemies, the useful microphages. *Med. Record,* July 18, 1903, p. 83.

antiphase (an′ti-fāz), *n.* and *a.* **I.** *n.* Opposition of phase, or difference of phase amounting to one half period or 180 degrees.

II. *a.* Of or pertaining to an antiphase.

antiphonic, *a.* **2.** In *anc. Gr. music,* of or pertaining to the interval of an octave: opposed to ★*paraphonic.*

antiphthisical (an-ti-tiz′i-kạl), *a.* [*anti-* + *phthisic* + *-al.*] Same as *antiphthisic.*

anti-plague (an″ti-plāg′), *a.* Used in the treatment or as a preventive of plague: as, *anti-plague* serum.

antiplanat (an″ti-pla-nat′), *n.* [G. *antiplanat,* < Gr. ἀντί, against, + L. *planatus,* made plane: see *planation.*] A combination of lenses, invented in 1881 by Adolph Steinheil, in which there are two members having large opposite aberrations which correct each other.

antiplanatic (an″ti-plạ-nat′ik), *a.* Used, erroneously, for *aplanatic.*

antiplateau (an″ti-pla-tō′), *n.* An area in the general ocean-floor which sinks to a greater depth than the average sea; a deep. Such areas are contrasted with plateaus, and extend downward from the ocean-floor in much the same manner in which plateaus protrude above the continental surface. *Chamberlin and Salisbury,* Geol., I. 8.

antiplenist (an-ti-plē′nist), *n.* [*anti* + *plenum* + *-ist.*] One who does not believe that space is a plenum (wholly occupied with matter); a vacuist.

antipneumococcic (an′ti-nū-mō-kok′sik), *a.* [*anti-* + *pneumococcus* + *-ic.*] Tending to destroy or prevent the development of pneumococci: as, an *antipneumococcic* serum. *Encyc. Brit.,* XXXI. 526.

antipodagric (an ti-pō-dag′rik), *a.* and *n.* [*anti-* + *podagra* + *-ic.*] **I.** *a.* Curative of gout.

II. *n.* A remedy for gout.

Antipodal cone, triangle. See ★*cone* and ★*triangle.*

antipoint, *n.* (*b*) Given any system of coaxal circles, another system of coaxal circles may be constructed such that every circle of either system cuts orthogonally every circle of the other system. The limiting points of either system are the antipoints of the limiting points of the other system.

antipole, *n.* **2.** In *cytol.,* a term applied to one of the two poles of the karyokinetic spindle of the dividing cell, the term *pole* being reserved for the one under immediate consideration.

antipolo (an-tē-pō'lo), *n.* [Tagalog name.] A name in the Philippines of the fertile bread-fruit tree (*Artocarpus communis*), the sterile form of which is called (in Bisayan) *colo*. The seeds, sometimes called bread-nuts, are roasted and eaten like those of the jacktrut, and the milky latex is used for bird-lime and as pitch for calking boats. Canoes are made of the logs, but they do not resist exposure to the weather and must be painted and kept covered when out of the water. The wood is soft and of a yellow color. It is used for interior woodwork in construction, but is not suitable for posts or sleepers. Also called *tepdo*, and on the island of Guam *dugdog*. See *Artocarpus*, *bread-fruit*, ★*bread-nut*, and ★*dugdug*.

antiprecipitin (an″ti-prē-sip'i-tin), *n.* The antibody to a precipitin, which will inhibit the action of the latter. See ★*antibody*.

antipruritic, *a.* **II.** *n.* A remedy which tends to relieve itching.

antipudic (an-ti-pū'dik), *a.* Used or worn to prevent shame; intended to cover the pudendum, for the sake of decency.

The men in certain islands [of Melanesia] wear only *antipudic* garments. *Deniker*, Races of Man, p. 499.

antiputrid (an-ti-pū'trid), *a.* and *n.* **I.** *a.* Antiputrescent; antiputrefactive; antiseptic.

II. *n.* Any substance which has the power of inhibiting, preventing, or destroying putrefaction. *Diseases of the Horse*, U. S. Dept. Ag., 1903, p. 511.

antipyresis (an-ti-pir'ē-sis), *n.* [Gr. ἀντί, against, + πυρετός, fever.] Reduction of fever; treatment for the reduction of fever.

antiquarianize (an-ti-kwā'ri-an-īz), *v. i.*; pret. and pp. *antiquarianized*, ppr. *antiquarianizing*. To engage in antiquarian pursuits or research. *Lyell*.

antiquarianly (an-ti-kwā'ri-an-li), *adv.* As an antiquarian; in the manner of an antiquarian. *Walpole*, Letters, I. 37. [Rare.] *N. E. D.*

Antirabic serum, a serum intended to inhibit the action of the specific virus of rabies. *Encyc. Brit.*, XXIX. 377.

antirattler (an-ti-rat'lèr), *n.* A device for holding a bolt and eye together to prevent rattling without interfering with the movement.

antirealism (an-ti-rē'al-izm), *n.* [*anti-* + *real* + *-ism*.] The doctrine that there is nothing whose characters are independent of all actual thought about them.

The "*anti-realism*," which takes the lion's share in "transfigured realism," is simply a development of the phenomenalism of Hume. *Encyc. Brit.*, XXX. 675.

antirennet (an-ti-ren'et), *n.* The antibody to the action of rennin (chymosin). See ★*antibody*.

antirentism (an-ti-ren'tizm), *n.* [*antirent* + *-ism*.] The principles of the Antirent party (which see).

antirevisionist (an″ti-rē-vizh'on-ist), *n.* One who is opposed to a particular measure of revision, as, in recent French history, one who is opposed to a revision of the constitution.

antirheumatic (an″ti-rō-mat'ik), *a.* and *n.* **I.** *a.* In *med.*, tending to prevent or cure rheumatism.

II. *n.* A remedy for rheumatism.

antiricin (an-ti-rī'sin), *n.* The antibody to ricin. See ★*antibody*.

antirrheoscope (an-ti-rē'ō-skōp), *n.* [Gr. ἀντί, against, + ῥεῖν, flow, + σκοπεῖν, view.] In *psychol.*, the artificial waterfall; an apparatus in which a band of horizontally striped cloth moves up or down upon a stationary background of the same material: used for the demonstration of after-images of motion.

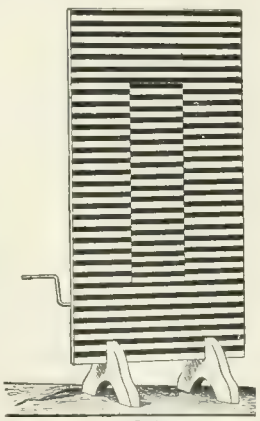


Fig. 61
Antirrheoscope

antiscion (an-tis'i-on), *n.* [NL. *antiscion*, < Gr. ἀντίσκιον, neut. of ἀντίσκιος: see *antiscian*.] In *astrol.*, a sign of the zodiac equidistant with another sign on the opposite side. Signs having north declination are called *commanding*, those with south declination *obeying*.

Anti-Semite (an″ti-sem'īt), *n.* One who seeks by political or other means to lessen the commercial, political, or social influence of the Jews. The name is given especially to those who have participated in the agitation against the Jews in Germany, Russia, and Austria which began about 1878.

Anti-Semitic (an″ti-sē-mit'ik), *a.* Of or pertaining to the Anti-Semites.

Anti-Semitism (an-ti-sem'it-izm), *n.* The agitation conducted by the Anti-Semites or its motives; antagonism to the Jews.

antisepsine (an-ti-sep'sin), *n.* A colorless crystalline compound, $C_6H_4Br.NH.CH_3CO$, obtained by adding bromine to a solution of acetanilide in glacial acetic acid; para-bromacetanilid. It is antipyretic. Also called *asepsine*.

antiseptol (an-ti-sep'tōl), *n.* [*antisept(ic)* + *-ol*.] A trade-name for a solution of 25 parts of cinchonine sulphate in 2,000 parts of water, mixed with a solution of 10 parts of iodine and 10 parts of potassium iodide in 1,000 parts of water. It is used as an antiseptic.

antiserum (an-ti-sē'rum), *n.*; pl. *antiserums* (-rumz) or *antisera* (-rä). A serum containing the antibody to a given immunizing substance, as antidiphtheria serum, antitetanus serum, etc. See ★*immunity*.

The author has produced a specific *antiserum* by the successive inoculation of animals with this toxin. Such an *antiserum* absolutely destroys the action of the toxin when the two are mixed in vitro. It also causes the symptoms produced by the toxin to rapidly disappear if inoculated subcutaneously or instilled into the eye of a susceptible individual shortly after such a toxin has been similarly introduced.
Med. Record, March 28, 1903, p. 511.

antisicular (an-ti-sik'ū-lär), *a.* [NL. *anti*, opposite to, + *sicula*, sicula.] Opposite the sicula: used to designate the part of the graptolite rhabdosome which is opposite the sicula-bearing or sicular end.

antisilverite (an-ti-sil'vèr-īt), *n.* In recent United States politics, one who is opposed to the free coinage of silver.

antisiphonal (an-ti-sī'fo-nal), *a.* [NL., < Gr. ἀντί, opposite to, + σίφων, pipe: see *siphon*.] Lying opposite to the siphonal (lobe): in the terminology of the ammonoid cephalopod shell, noting a lobe of the suture which lies on the inner dorsal side of the whorl and opposite to that on the ventral surface, called the siphonal lobe. Both of these are present in, and are indicative of, primitive stages, and become modified in progressed conditions.

Antislavery china. See ★*china*.

antisocial, *a.* **3.** Specifically, in *sociol.*, pertaining to a class of persons devoid of normal social instincts and showing criminal tendencies. *Giddings*, Prin. of Sociol., p. 72.

antisociality (an″ti-sō-shi-al'i-ti), *n.* A quality, act, or habit of an individual, class, or group which is antagonistic to social feeling, habit, or interest. Extreme antisociality is criminality. *Amer. Jour. Psychol.*, XIII. 586.

antisolar (an-ti-sō'lär), *a.* Situated at the point in the heavens opposite the sun, as the center of the rainbow, or the 'gegenschein.'

antispace (an'ti-spās), *n.* In *math.*, that part of the complete spatial manifold which is without the absolute: that part which is inclosed within the absolute is called *space*.

antispectroscopic (an-ti-spek-trō-skop'ik), *a.* Such as to counteract the spectroscopic effect. *Wall*, Dict. of Photography, p. 44.

antispermotoxin (an-ti-spèr-mō-tok'sin), *n.* The antibody to a spermotoxin, which inhibits the action of the latter. See ★*antibody*.

antispermy (an-ti-spèr'mi), *n.* [Gr. ἀντί, against, + σπέρμα, seed.] In spermatophytes, the coalescence of the fertile divisions of the phyllome into a single fertile body opposed to and superposed upon the sterile division. *Delpino*.

antisporangism (an-ti-spō-ran'jizm), *n.* [Gr. ἀντί, against, + *sporangium* + *-ism*.] In pteridophytes, the condition corresponding to antispermy in spermatophytes. *Delpino*.

antisquama (an-ti-skwā'mä), *n.*; pl. *antisquamæ* (-mē). [NL., < Gr. ἀντί, against, + L. *squama*, scale.] The middle one of three basal lobes of the wing of a dipterous insect, the inner one being the *squama* and the outer one the *alula*. *A. S. Packard*, Text-book of Entomology, p. 124.

antisquamic (an-ti-skwam'ik), *a.* and *n.* [*anti-* + L. *squama*, scale, + *-ic*.] **I.** *a.* In *med.*, tending to prevent or cure scaly affections of the skin.

II. *n.* A remedy used for this purpose.

antistaphylococcic (an″ti-staf-i-lō-kok'sik), *a.* [*anti-* + *staphylococcus* + *-ic*.] Tending to destroy or hinder the development of staphylococci. *Med. Record*, March 28, 1903, p. 510.

antisteapsin (an-ti-stē-ap'sin), *n.* An antibody which will inhibit the action of steapsin.

antistrephon (an-tis'tre-fon), *n.* [Gr. ἀντιστρέφων, ppr. of ἀντιστρέφειν, turn against: see *antistrophe*.] In *logic*, an argument in a lawsuit which is of such a nature that either party may urge it against the other with some appearance of conclusiveness. Antistrephons belong to the general class of crocodiles, the following stock example being from Aulus Gellius. Euathlus agreed to pay Protagoras, his teacher in rhetoric, a large sum of money should he win his first case in court. Having received the instruction, but not having had any case in court, he was sued by Protagoras for the amount, on the ground that should Euathlus win the suit he must pay, according to the contract (and a second suit would compel him to do so), while if the suit went the other way the court would compel payment. Euathlus replied that if the court decided in his favor that must be final, while if the court decided against him a further proceeding would award the money to him.

antistreptococcal (an″ti-strep-tō-kok'al), *a.* Same as *antistreptococcic*.

antistreptococcic (an″ti-strep-tō-kok'sik), *a.* [*anti-* + *streptococcus* + *-ic*.] Tending to destroy or hinder the development of streptococci: as, *antistreptococcic* serum. *Nature*, July 9, 1903, p. 227.

antistrofe, *n.* A simplified spelling of *antistrophe*.

antistrophic, *a.* **2.** Enantiomorphous.

antistrophize (an-tis'trō-fīz), *v. i.*; pret. and pp. *antistrophized*, ppr. *antistrophizing*. [*antistrophe* + *-ize*.] To form an antistrophe; correspond, but in inverse order. *De Quincey*, Blackwood's Mag., LI. 12. [Rare.] *N. E. D.*

antisubstance (an'ti-sub-stans), *n.* Same as ★*antibody*. See ★*adaptation-product*. *Jour. Exper. Med.*, V. 62.

antisudorific (an″ti-sū-dō-rif'ik), *a.* and *n.* [*anti-* + *sudorific*.] **I.** *a.* Tending to repress the secretion of sweat. *Buck*, Med. Handbook, I. 338.

II. *n.* A remedy possessing this property.

antisun (an-ti-sun'), *n.* **1.** The point in the sky diametrically opposite the sun.—**2.** A point in the sky opposite the sun in azimuth, but having the same altitude as the sun, and therefore not diametrically opposite to it. This use of the word is common only in describing halos and parhelia. *Encyc. Brit.*, XXX. 705.

antitegula (an-ti-teg'ū-lä), *n.*; pl. *antitegulæ* (-lē). [NL., < Gr. ἀντί, against, + L. *tegula*, tile.] Same as ★*antisquama*.

antiteleology (an″ti-tel-ē-ol'ō-ji), *n.* [*anti-* + *teleology*.] That attitude of mind which fails or refuses to see any proof of teleology in nature; the doctrine or tendency which disputes all attempts to show that there are actions in nature determined by anything which is to be in the future.

antitetanic (an″ti-tet'a-nik), *a.* [*anti-* + *tetanus* + *-ic*.] Tending to destroy or prevent the development of tetanus bacilli; preventive or curative of tetanus: as, *antitetanic* serum. *Science*, June 26, 1903, p. 1006.

antitetanin (an″ti-tet'a-nin), *n.* The antitoxin to the soluble poison produced by the tetanus bacillus.

antitetanolysin (an-ti-tet-an-ol'i-sin), *n.* The antibody to tetanolysin.

antithermic (an-ti-thèr'mik), *a.* [Gr. ἀντί, against, + θερμός, heat, + *-ic*.] In *med.*, same as *antipyretic*. *Med. Record*, March 7, 1903, p. 376.

antithermin (an-ti-thèr'min), *n.* [Gr. ἀντί, against, + θερμή, heat, + *-in*[2].] Phenylhydrazinelevulinic acid. It has been used as an antipyretic agent in medicine under this tradename.

antithesism (an-tith'e-sizm), *n.* [Irreg. < *antithes(is)* + *-ism*.] An antithetic sentence; an example or instance of antithesis. [Rare.] *N. E. D.*

antithesistic (an-tith-ē-sis'tik), *a.* [Irreg. < *antithes(is)* + *-istic*.] Presenting an antithesis; contrary: as, *antithesistic* ideas. *Dr. E. Darwin*, Zoonomia, IV. 234. [Rare.] *N. E. D.*

antithesize (an-tith'e-sīz), *v. t.*; pret. and pp. *antithesized*, ppr. *antithesizing*. To put into the form of an antithesis. *Burns*. *N. E. D.*

antithrombin (an-ti-throm'bin), *n.* A substance which inhibits the action of thrombin.

antitoxic (an-ti-tok'sik), *a.* and *n.* **I.** *a.* Serving to inhibit or neutralize toxic action; having the character of antitoxin.

The term *antitoxic* signifies that the serum has the power of neutralizing the action of the toxin.
Encyc. Brit., XXVI. 67.

Antitoxic immunity. See ★*immunity.* **Antitoxic serum,** serum containing antitoxin, as antidiphtheritic serum and antitetanic serum. **Antitoxic unit,** the unit of antitoxin, of such strength that it will just neutralize the hundredfold minimal fatal dose of the corresponding toxin.

II. *n.* An antitoxic remedy.

antitoxin (an-ti-toks'in), *n.* [*anti-* + *toxin.*] 1. A substance which neutralizes the action of a poison.—2. Specifically: (*a*) The antibody to a toxin of bacterial or related origin which is produced as the result of immunization with the corresponding toxin. Examples are the diphtheria antitoxin and the tetanus antitoxin. (*b*) In *bot.*, a substance secreted by a plant which protects it against destructive microbes.—**Fernbach's antitoxin flask,** a special form of culture flask used for cultures of diphtheria.—**Streptococcus antitoxin,** an antitoxin obtained by repeated inoculations of horses with streptococcus cultures: employed by hypodermic injection in the treatment of erysipelas, puerperal fever, septicemia, and other conditions in which there is infection by streptococci. Also called *antistreptococcus serum.*

antitragal (an-tit'rā-gal), *a.* Of or pertaining to the antitragus, or projection on the inferior side of the opening of the ear.—**Antitragal notch,** in *zool.*, the notch or emargination at the base of and behind the antitragus, which marks its posterior boundary. The phrase is much used in describing the ears of bats. *Annals and Mag. Nat. Hist.*, May, 1904, p. 386.

antitrust (an-ti-trust'), *a.* Opposed to the power or development of trusts, or of large combinations of capital.

antitrypsin (an-ti-trip'sin), *n.* An antibody which inhibits the action of trypsin. Normal blood sometimes contains such a body. *Science*, Aug. 19, 1904. p. 243.

antitryptic (an-ti-trip'tik), *a.* [*anti-* + *tryptic.*] Antifermentative. *Med. Record*, June 27, 1903, p. 1043.

antituberculous (an"ti-tū-bėr'kū-lus), *a.* [*anti-* + *tubercul(osis)* + *-ous.*] Tending to prevent or cure tuberculosis. *Med. Record*, July 25, 1903.

antitussin (an-ti-tus'in), *n.* [See ★*antitussive.*] A white, crystalline, fragrant compound ($C_6H_4F_2$), used in ointments; difluor diphenyl. It is used as an antispasmodic and hypnotic in whooping-cough.

antitussive (an-ti-tus'iv), *a.* and *n.* [Gr. ἀντί, against, + L. *tussis*, a cough.] **I.** *a.* Preventing or relieving cough. *Buck*, Med. Handbook, VI. 573.

II. *n.* Any agent which possesses this property.

anti-twilight (an-ti-twī'līt), *n.* The bright arc, or twilight arc, when first seen near the eastern horizon opposite the sun just before sunset, due to sunlight reflected from the illuminated portion of the atmosphere. The twilight arc rises, as the sun sinks lower, and eventually passes westward over the zenith.

antityphoid (an-ti-tī'foid), *a.* Tending to prevent or cure typhoid fever: as, *antityphoid* serum. *Med. Record*, June 27, 1903, p. 1043.

antivaccination (an"ti-vak-si-nā'shọn), *a.* Opposed to the practice of vaccination; considering or dealing with the subject of antivaccination: as, an *antivaccination* lecture; the *antivaccination* movement.

antivenene (an"ti-vẹ-nēn'), *n.* [*anti-* + **venene.*] The antibody to venene, which inhibits the action of the latter. *Buck*, Med. Handbook, VI. 716. Also called *antivenin, antivenine.*

antivenenian (an"ti-vẹ-nē'ni-ạn), *a.* [Gr. ἀντί, against, + *venenum*, poison, + *-ian.*] Same as *antidotal.*

antivenin, antivenine (an-ti-ven'in), *n.* [L. *anti-* + *ven(enum)*, poison, + *-in*2.] Same as ★*antivenene.*

antivenomous (an-ti-ven'ọ-mus), *a.* Antagonistic to the action of snake-poison. *Buck*, Med. Handbook, VI. 715.

antivivisectionist (an"ti-viv-i-sek'shọn-ist), *n.* [*anti-* + *vivisection* + *-ist.*] One who is opposed to the making of physiologic and therapeutic experiments on living animals. *Med. Record*, Feb. 14, 1903, p. 264.

antlerite (ant'lėr-īt), *n.* [*Antler* (see def.) + *-ite*2.] A hydrated copper sulphate occurring in soft lumps of a light-green color: from the Antler mine, Yucca Station, Arizona.

antodonin (an-tō'dọ-nin), *n.* A pigment found in certain invertebrate animals, notably crinoids. *Science*, May 31, 1901, p. 847.

antonino (än-tō-nē'nō), *n.* [Sp. (equiv. to E. *Tony*), dim. of *Antonio*, Antony.] A Cuban name of the mackerel-scad, *Decapterus macarellus.*

antorbital, *a.* **Antorbital vacuity,** in *anat.*, the open space in front of the antorbital plate and behind the maxillary process of the nasal.

II. *n.* 1. In *ichth.*, the preorbital bone.—2. In *ornith.*, a bony plate morphologically the equivalent of the prefrontal of reptiles, standing at an obtuse angle to the interorbital septum and forming the anterior border of the orbit of the eye.

ant-orchis (ant'ôr kis), *n.* An Australian and Tasmanian terrestrial orchid, *Chiloglottis Gunnii.*

ant-rice (ant'rīs), *n.* A grass, *Aristida oligantha*, growing in the clearings around the nests of the agricultural ants of Texas, which feed upon its seeds.

Antrophyum (an-trō'fi-um), *n.* [NL. (Kaulfuss, 1824), < Gr. ἄντρον, cavity, groove, + φύειν, grow.] A genus of polypodiaceous ferns, with simple linear-lanceolate to oblong-elliptical fronds and sori borne in continuous lines (either superficial or in shallow grooves, whence the name) following the reticulate venation. There are about 25 species, widely distributed throughout the humid tropics of both hemispheres.

antrorse, *a.* 2. In *ichth.*, turned forward: said of spines.

antroversion (an-trọ-vėr'shọn), *n.* [See ★*antrovert.*] A turning forward: same as *anteversion.* *Syd. Soc. Lex.*

antrovert (an-trọ-vėrt'), *v. t.* [*antro-* for *antero-* + L. *vertere*, turn.] To tip, turn, or bend forward. *Owen.*

Antrum femininum, the small tubular entrance to the female generative passage in polyclads.—**Antrum masculinum,** the outer tubular opening of the male generative organs in polyclads.—**Mastoid antrum,** the cells in the mastoid process of the temporal bone taken collectively.—**Maxillary antrum.** Same as *antrum Highmorianum.*

ant-spider (ant'spī'dėr), *n.* Any one of several spiders which closely resemble ants, forming notable examples of aggressive mimicry.

Antwerp (ant'wėrp), *n.* The name of a city in Belgium, used to distinguish a breed of domesticated pigeons having a large, massive head and short, stout beak with a small wattle at the base. They are bred in a variety of colors, but silver, silver checkered, "creamies," and black are those preferred. These birds fly well and have a strong homing sense: during the Franco-German war they were used for carrying despatches.—**Antwerp rose.** See ★*rose*1.

anubing (a-nö'bing), *n.* [Philippine Sp. *anubing, anubiong, anubin, anubion,* < Tagalog *anobing.*] A valuable timber-tree, *Artocarpus Cumingiana.* It yields a fine grained wood of a yellowish-gray color, which is light and very durable if properly seasoned. It also resists dampness, and is used for posts in house-building. [Philippine Is.]

anuclear (a-nū'klẹ-är), *a.* Non-nucleated; concerning or pertaining to the alleged absence of a nucleus in certain low organisms.

anuhe (ä-nö'hā), *n.* [Maori *anuhe*, a large caterpillar, = Hawaiian *anuhe*, Samoan *anufe*, etc., a worm, a caterpillar.] The New Zealand caterpillar-fungus, a species of *Cordyceps*, which attacks certain lepidopterous larvæ. See ★*aweto.*

anunu (ä-nö'nö), *n.* [Hawaiian, < *anunu*, greedy.] In Hawaii, a name of several species of climbing or prostrate herbs belonging to the genus *Sicyos*, of the gourd family.

anuretic (an-ụ-ret'ik), *a.* [*anuresis* (*-ret*) + *-ic.*] Same as ★*anuric.*

anuric (a-nū'rik), *a.* [*anuria* + *-ic.*] Resulting from or relating to anuria.

Anus cerebri, the anterior opening of the aqueduct of Sylvius.—**Anus vestibularis** or **vulvovaginalis,** a malformation in which the anus is imperforate, the rectum terminating at the vulva.—**Artificial anus,** an opening made into the large intestine for the purpose of giving exit to the fecal contents in cases of complete obstruction below.

anusim (a-nö'sēm), *n. pl.* [Heb., 'the forced,' < *anas*, compel, force, constrain.] Jews who were forced to accept the Catholic religion at the time of their expulsion from Spain (1492), but who secretly observed the principal tenets of their faith: same as *maranos.*

Anversian (an-vėr'sian), *a.* and *n.* [F. *Anvers*, Antwerp.] **I.** *a.* Of or pertaining to Antwerp.

II. *n.* In *geol.*, a division of the Miocene in the vicinity of Antwerp, Belgium.

anvil, *n.*—**Plattner's anvil,** a small polished steel block used in blowpipe analysis.

anvil-cutter (an'vil-kut"ėr), *n.* A chisel-like cutting instrument whose shank is inserted in a square hole in the face of an anvil, the bar to be cut being laid upon the cutting edge and struck with a hammer or sledge.

anvil-paper (an'vil-pā"pėr), *n.* See ★*paper.*

Anxious seat or **bench,** a seat, bench, or pew set apart for 'anxious inquirers,' or those who are concerned about their souls' salvation and desire counsel or comfort: often figurative. *Haliburton*, The Clockmaker.

anytin (an'i-tin), *n.* A trade-name for a derivative of ichthyol which is used in dermatological practice.

anytol (an'i-tōl), *n.* A solution of such a substance as phenol or guaiacol in water containing anytin.

A. O. In *astron.*, an abbreviation of *Argelander-Oeltzen*, referring to a catalogue of southern stars observed by Argelander in zones and reduced to a regular catalogue by Oeltzen.

aoa (ä-o'ä), *n.* [Polynesian name.] A name, throughout Polynesia, of the banian-tree (*Ficus Aoa* and other species). These trees were thought by the natives to be the lurking-places of spirits, and in some islands were planted near temples. Though not occurring in Hawaii, the aoa is mentioned in the ancient songs of the aboriginal inhabitants. See *banian*2.

A. O. M. An abbreviation of *Artium Obstetricarum Magister*, Master of Obstetric Arts.

aorta, *n.* 2. In the higher invertebrates, the large blood-vessel leading from the heart, usually anteriorly and posteriorly.—**Aorta chlorotica,** the small-sized aorta sometimes present in one suffering from chlorosis.

Aortic cartilage, the second costal cartilage on the right side, behind which is the arch of the aorta. **Aortic incompetence, or insufficiency,** failure of the aortic valve of the heart to close completely, thus allowing of regurgitation of blood into the left ventricle at each diastole.—**Aortic isthmus,** a narrow portion of the aorta, most marked in the fetus, at the point of attachment of the *ductus arteriosus.* **Aortic murmur,** a cardiac murmur indicating obstruction or insufficiency at the aortic orifice. **Aortic notch,** a point in sphygmographic tracing indicating the time of closure of the aortic valve. **Aortic obstruction,** a condition in which there are adhesions or thickening of the cusps of the aortic valve, preventing the free flow of blood from the left ventricle into the aorta. **Aortic spindle,** a slight fusiform dilatation of the aorta just below the isthmus.

aosmic (ā-oz'mik), *a.* [Gr. ἄοσμος, equiv. to ἄνοσμος, without odor: see *anosmia.*] Same as ★*anosmic.*

A. P. A. An abbreviation of *American Protective Association.*

Apache blue-grass. See ★*blue-grass.*

apachicta (ap-ạ-chēk'tạ), *n.* [Also *apachita, apacheta*; Quichua of Peru and Aymará.] In Peru and Bolivia, a heap of stones and twigs raised by the Indians at any prominent landmark, such as a pass, divide, crest, or height. The twigs are symbols of prayers offered on the site to spirits supposed to dwell on or about it, and the stones symbolize an offering. A quid or cud of chewed coca-leaves is invariably deposited there also in sacrifice.

apachite (a-pach'īt), *n.* [*Apache* (mountains), in Texas, + *-ite*2.] In *petrog.*, a variety of the igneous rock *phonolite*, first observed in the Apache mountains of Texas, characterized by sodic amphiboles and ænigmatite as associates of the usual sodic pyroxenes, and by microperthite feldspar. *Osann*, 1896.

apagogically (ap-ạ-goj'i-kạl-i), *adv.* In an apagogical manner; by indirect demonstration or proof; by *reductio ad absurdum.* *E. Caird*, Philos. of Kant, II. 568. *N. E. D.*

apaid†, *p. a.* [ME. *apaied*, etc., pp. of *apay.*] Satisfied; pleased; repaid. *Robert of Gloucester.* *N. E. D.*

apalit (ä-pä'lẹ̄t), *n.* [Phil. Sp.] A name in the Philippines of *Pterocarpus Blancoi*, a tree with pinnate leaves, smooth, winged pods, and red wood with an aromatic odor. Like other species of *Pterocarpus*, it is sometimes called *narra* and *asana*, and is used for furniture; but it is distinguished by its fragrance, and is sometimes called *Philippine sandalwood.*

Apama (a-pä'mạ̈), *n.* [NL. (Lamarck, 1783), from an Indian name of the type species of the genus.] A genus of dicotyledonous plants of the family *Aristolochiaceæ*, characterized by the short, three-lobed, campanulate corolla. See *Bragantia.*

apandry (a-pan'dri), *n.* [Gr. ἀπό, without, + ἀνήρ (ἀνδρ-), man, male.] In *bot.*, fusion of the antheridium with the oögonium: also extended to the corresponding organs in spermatophytes. *M'Nab.*

aparaphysate (a-pa-raf'i-sat), *a.* [*a-*18 + *paraphysis* + *-ate*1.] In *bot.*, destitute of paraphyses.

apasanca (ä-pä-sän'kä), *n.* [Sp. in Peru and Bolivia, < Peruv. (Quichua) *apasanca* (Tschudi); also used in Bolivia among the Aymará.] The bush-spider, or great *Mygale*, of which a smaller variety is found as high as 13,000 feet and more in the Bolivian Andes.

apasote (ä-pä-sō′tā), *n.* [Also *pasote*, and in Porto Rico *basote*; Mex. Sp., ⟨ *yepatzotl*, the Nahuatl name of the plant.] A name in Guam and the Philippine Islands of *Chenopodium ambrosioides*, an aromatic plant of Mexican origin now widely spread over the warmer regions of the earth and commonly known as *Mexican tea* (which see, under *Mexican*).

Apate (ap′ạ-tē), *n.* [NL. (Fabricius, 1775), ⟨ Gr. ἀπάτη, deceit, fraud.] A genus of bostrychid beetles which has been subdivided into several genera by recent authors. *A. terebrans* Pall. is an inhabitant of Africa.

apatetic (ap-ạ-tet′ik), *a.* [Gr. ἀπατητικός, serving to deceive, ⟨ ἀπάτη, deceit.] Concerning or pertaining to the copying, in an animal, of some useful characteristic of another species for the sake of obtaining the like advantage. —**Apatetic colors**, those colors which cause an animal to resemble some part of its surroundings, or cause it to be mistaken for another species. *Poulton*, Colours of Animals, p. 338.

apathetic, *a.* 2. In *biol.*, of or pertaining to the *Apathetica* of Lamarck.

apathetic-active (ap-ạ-thet″ik-ak′tiv), *a.* In *psychol.*, noting a composite character or temperament of the moral or stoical type. *Ribot* (trans.), Psychol. of Emotions, p. 400.

apathetic-sensitive (ap-ạ-thet″ik-sen′si-tiv), *a.* In *psychol.*, noting a composite character or temperament which finds its highest expression in the martyr, the hero, and the creative artist. *Ribot* (trans.), Psychol. of Emotions, p. 401.

apathic (a-path′ik), *a.* [As *apath-y* + *-ic.*] Without feeling or sensation. *Todd*, Cyc. Anat., I. 107.

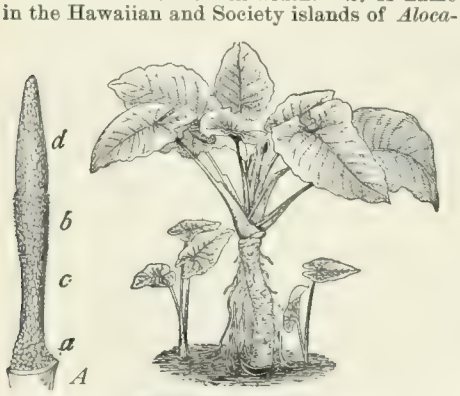
Apathus (ap′ạ-thus), *n.* [NL. (Newman, 1834), ⟨ Gr. ἀπαθής, without suffering: see *apathy.*] A genus of true bees, of the family *Apidæ*, allied to the bumblebees of the genus *Bombus*, which they mimic and in whose nests they lead an inquiline life. The word is a synonym of *Psithyrus* (St. Fargeau, 1832), and the genus is now generally referred to under that name.

apathy, *n.* 2. In the *Stoic philos.*, a certain imperturbability produced in the wise man's soul by sincere rejection of the notion that pleasure is in itself desirable, or pain in itself undesirable and by trained watchfulness to exclude all unreasonable passions (all passions affecting conduct being regarded as unreasonable).

Apatosaurus (ap-ạ-tō-sâ′rus), *n.* [NL., ⟨ Gr. ἀπάτη, deceit, + σαῦρος, lizard.] A genus of dinosaurian reptiles of the family *Camarasauridæ*, described by Marsh from the Upper Jurassic rocks of Colorado.

A. P. D. An abbreviation of *Army Pay Department.*

ape[2] (ā′pā), *n.* [Hawaiian.] 1. *Gunnera petaloidea*, a plant of the high mountain slopes of Hawaii, bearing large, broad, reniform leaves from two to three feet in width.— 2. A name in the Hawaiian and Society islands of *Alocasia macrorhiza*, an aroid plant with large, oval, sagittate leaves. It is cultivated in India, China, and many of the Polynesian islands, where the leaves of the very young plant and the corms are eaten after volatilizing the acrid principle by drying or the application of heat. Also called *apii* in Hawaii.



Ape (*Alocasia macrorhiza*).

A, inflorescence with spathe removed: *a*, female flowers at base of spadix; *b*, male flowers; *c*, neutral zone; *d*, terminal appendage. (After figure in Engler and Prantl's "Pflanzenfamilien.")

ape-cleft (āp′kleft), *n.* Same as ★*ape-fissure.* *Buck*, Med. Handbook, II. 278.

apedioscope (a-ped′i-ō-skōp), *n.* [Gr. ἀ- priv. + πεδίον, a plain (taken as 'plane'), + σκοπεῖν, view.] An apparatus for observing stereoscopic projections. It consists of a wooden box having two apertures for the eyes of a spectator, who views one picture in a direct line while the other picture is superposed on the first by the aid of a couple of mirrors.

ape-fissure (āp′fish″ūr), *n.* A deep fissure in the occipital lobe of the brain, present in the ape and occasionally also in man. Also called *exoccipital fissure.*

ape-hand (āp′hand), *n.* In *pathol.*, a deformity of the hand in which it resembles the fore paw of the ape in consequence of atrophy of the muscles of the thumb.

apeiry (a-pī′ri), *n.* [Gr. ἀπειρία, the boundlessness of space, ⟨ ἄπειρος, boundless.] In *geom. topics*, a number associated with a place of three or more dimensions and indicating how many places it contains for unbounded solid bodies that have no room within it to shrink to nothing. The apeiry of real space may be assumed to be either 0 or 1. If space, though infinite, be limited, so that there is no geometrical impossibility in the expansion of a small homogeneous mass without any union of parts that had been separate, so as to fill all space, the apeiry is 0: but if that substrate fluid which the vortex-atom theory supposes to fill all space geometrically could not, even if it were compressible, be so deformed as to leave any part of space empty, then the apeiry is at least 1; and while it is easy to imagine that even after a first rupture of that fluid there would still be a geometrical impossibility in its shrinking indefinitely toward occupying no solid space, which would make the apeiry of space greater than 1, there is nothing in experience to warrant or make pertinent such a suggestion.

Apeltes (a-pel′tēz), *n.* [NL., ⟨ Gr. ἀ- priv. + πέλτη, a shield.] A genus of American sticklebacks of the family *Gasterosteidæ*, having the pelvic shield divided and the skin naked.

apena (a-pē′nä), *n.* [NL., ⟨ Gr. ἀπήνη.] In *Gr. antiq.*, a wagon or chariot, four-wheeled or two-wheeled, sometimes used for racing. The vehicle sometimes had a tilt or cover with windows at the sides.

apertometry (ap-ėr-tom′e-tri), *n.* [Irreg. ⟨ L. *apertus*, open, + Gr. -μετρία, ⟨ μέτρον, measure.] In *optics*, the art of measuring the effective or equivalent apertures of a lens or system of lenses. *Jour. Roy. Micros. Soc.*, Feb., 1903, p. 94.

aperturate (a-pėr′tụ-rāt), *a.* [NL. *aperturatus*, ⟨ L. *aperture*, aperture.] Having apertures; specifically, having reference to that division of the brachiopod genus *Spirifer*, termed the *Aperturati*, which is typified by the species *S. aperturatus* and characterized by the plications on the fold and sinus of the valves.

aperture, *n.*—**Absolute aperture**, the actual or measured size of the aperture of a diaphragm, generally stated in giving its diameter: used in contradistinction to *effective aperture.*— **Pedal aperture**, the opening in the mantle of mollusks through which the foot is protruded.—**Relative aperture of a lens**, the radius of the actual aperture divided by the focal length of the lens.

Apetala (a-pet′ạ-lä), *n. pl.* [Gr. ἀ- priv. + πέταλον, a leaf.] In some classifications, a section or division of the echinoids belonging to the family *Spatangidæ*, characterized by apetalous ambulacra crossed by fascioles.

apetalous, *a.* 2. In the echinoids or sea-urchins, having one of the five ambulacral rays more or less imperfectly developed.

apex, *n.* 1. (*f*) In *projective geom.*, the point determined by 3 planes.— 3. *pl.* The abacus-marks. *Boethius.* The *apices* of Gerbert's abacus are symbols for the digits from 1 to 9, but without the zero. See the extract.

> In the tenth and eleventh centuries there appeared a large number of authors, belonging chiefly to the clergy, who wrote on abacus-reckoning with *apices* but without the zero and without the Hindu-Arab methods.
>
> *Beman and Smith*, Hist. of Math., p. 39.

aphakial (a-fā′ki-ạl), *a.* Same as *aphacic.*

Aphaneura (af-ạ-nū′rä), *n. pl.* [NL., irreg. ⟨ Gr. ἀφανής, unseen, + νεῦρον, sinew (nerve).] A family of *Oligochæta*, containing the single fresh-water genus *Ælosoma*. It is peculiar in having the central nervous system reduced to the central ganglia, which, moreover, retain the embryonic character of connection with the epidermis. The worms are small and their transparent bodies contain droplets of brightly colored oil.

aphanisis (a-fan′i-sis), *n.* [NL., ⟨ Gr. ἀφάνισις, abolition, suppression, ⟨ ἀφανίζειν, abolish, suppress, hide, ⟨ ἀφανής, unseen, invisible.] In *bot.*, the suppression or abortion of parts required by morphological analogy.

aphanophyre (a-fan′ō-fīr), *n.* [*aphan(itic)* + *-o-* + *(por)phyr(y).*] In *petrog.*, a porphyry with aphanitic ground-mass: analogous to *granophyre*, *melaphyre*, *felsophyre*, etc.

aphasia, *n.*—**Associative aphasia**, aphasia due to lesion in the association-area of the brain intercepting one or more of the pathways of impulses between the various centers.—**Auditory aphasia**, aphasia due to lesion in the hearing-center of the brain, the patient having lost the ability to understand spoken words; word-deafness.—**Motor aphasia**, loss of power to employ words in phrases, although the ability to read, write, and understand spoken words is unimpaired. **Optic aphasia**, a form of aphasia in which the patient is unable to recall the name of an object when he sees it.—**Visual aphasia**, a form of aphasia in which the patient is unable to appreciate the significance of printed or written words, although he sees the words distinctly.—**Wernicke's aphasia of conduction.** Same as *word-deafness.*

Aphelandra (af-e-lan′drä), *n.* [NL.] A genus containing about 60 species of the family *Acanthaceæ*, evergreen, tropical, American shrubs grown in hothouses for the fine foliage and showy 4-sided terminal spikes of red or yellow gaudy-bracted flowers. The species most common in trade are *A. aurantiaca* (including *A. Rœzlii*), *A. squarrosa* (*chrysops*), and *A. Fascinator.*

Aphelops (af′e-lops), *n.* [Gr. ἀφελής, level, smooth, + ὤψ, eye, face.] In Cope's classification of the extinct rhinoceroses, a group, represented chiefly by North American species, having but three digits on the manus. These are considered as belonging to the acerathine or hornless division of the genus. They occur in the Tertiary beds.

aphengoscope (a-feng′gō-skōp), *n.* Same as *aphenoscope.*

aphestic (a-fes′tik), *a.* [Gr. ἀφέστιος, far from hearth and home, ⟨ ἀπό, from, + ἑστία, hearth, family.] Relating to matters outside the home circle. *A. Sutherland.*

aphidein, aphideine (a-fid′ē-in), *n.* [*aphis* (*aphid-*) + *-e* + *-in*[2].] The red coloring matter of the *Aphididæ*, a composite substance which may be separated into three constituents called by Sorby *aphiduleine*, *aphiduleoline*, and *aphidirhodeine.*

Aphidiides (af-i-dī′i-dēz), *n. pl.* [NL., prop. *Aphidiidæ* or *Aphidiadæ*, ⟨ *Aphidius.*] A group of hymenopterous parasites, of the family *Braconidæ*, typified by the genus *Aphidius.*

Aphidiinæ (af-i-di-ī′nē), *n. pl.* [NL., ⟨ *Aphidius* + *-inæ.*] A subfamily of the hymenopterous family *Braconidæ*. All of its members are parasitic upon aphides, and they constitute one of the principal checks to the multiplication of these very injurious insects.

Aphidius (a-fid′i-us), *n.* [NL. (Nees, 1818), ⟨ NL. *aphis* (*aphid-*).] An important genus of hymenopterous insects, of the family *Braconidæ*, typical of the subfamily *Aphidiinæ* or *Aphidiides*, comprising a host of minute species, all of which are parasitic on aphides.

aphidoid (af′i-doid), *a.* [NL. *aphis* (*aphid-*) + *-oid.*] Belonging to or resembling the family *Aphididæ.*

aphidologist (af-i-dol′ō-jist), *n.* One who is learned in the study of the *Aphididæ.*

aphidophagous (af-i-dof′ạ-gus), *a.* Same as *aphidiphagous.*

aphikomon, aphikomen. See ★*afikomen.*

aphis, *n.*—**Black** or **brown aphis**, an aphis, *Rhopalosiphum violæ*, which injures violets, especially those in greenhouses.— **Corn aphis.** See ★*corn-aphis.*— **Corn-root aphis**, an American aphidid, *Aphis maidi-radicis*, found commonly on the roots of Indian corn.— **Peach aphis.** See ★*peach-aphis.*

aphis-fly (ā′fis-flī), *n.* Any species of any one of numerous genera of flies of the family *Syrphidæ*, the larvæ of which prey upon aphides.

aphis-wolf (ā′fis-wŭlf), *n.* The larva of any species of *Hemerobius*, as distinguished from the aphis-lions of the genus *Chrysopa.*

Aphlebia (a-flē′bi-ä), *n.* [NL. (Presl, 1838), ⟨ Gr. ἀ- priv. + φλέψ (φλεβ-), vein.] A supposed genus of fossil plants with lobed, flabellately pinnatifid, or pinnate fronds destitute of veins, found attached to or apparently climbing over other plants, especially *Pecopteris*, *Neuropteris*, and *Sphenopteris*. There is now little doubt that they are stipellar outgrowths or adventitious pinnæ of these plants. See *Rhacophyllum* and *Schizopteris.*

aphodal (af′ō-dạl), *a.* [*aphodus* + *-al*[1].] Pertaining to an aphodus; possessing aphodi: as, the *aphodal* type of canal system in sponges.

aphodus (af′ō-dus), *n.*; pl. *aphodi* (-dī). [NL., ⟨ Gr. ἄφοδος, a going out, ⟨ ἀπό, off, + ὁδός, a way.] In certain sponges, a small canal leading from a flagellated chamber to the excurrent canal.

aphonic (a-fon′ik), *a.* [Gr. ἀ- priv. + *phonic.*] 1. Having no sound or pronunciation. *N.E.D.* —2. Having no voiced quality; not voiced. *Scripture*, Elements of Experimental Phonetics, p. 443.

aphorisming (af′ō-riz-ming), *p. a.* Affecting the use of aphorisms in speaking and writing. *Milton*, Reform, II. 33. *N.E.D.*

aphorizer (af'ō-rī-zẽr), *n.* One who indulges in aphorisms in speaking and writing; an aphorist.

Aphoruridæ (af-ō rū'ri-dē), *n. pl.* [NL., ⟨ *Aphorura* (Gr. ἄφορος, not bearing, + οὐρά, tail) + *-idæ.*] A family of thysanurous insects, of the suborder *Collembola*, having no ventral spring below the abdomen. It is composed of very small soft-bodied insects which are not uncommon, although seldom noticed.

aphotic (a-fō'tik), *a.* [Gr. ἀ- priv. + φῶς, light, + *-ic.*] In *phytogeog.*, without light: applied to the deep level in a body of water in which only non-assimilating organisms can exist. *Schimper* (trans.), Plant Geog., p. 782.

aphotometric (a-fō-tō-met'rik), *a.* [Gr. ἀ- priv. + φως (φωτ-), light, + μέτρον, measure.] Noting zoöspores which not only take up a definite position with regard to the direction of light-rays (phototactic), but which invariably present the same end to the light.

aphototropic (a-fō-tō-trop'ik), *a.* [Gr. ἀ- priv. + φῶς (φωτ-), light, + τρόπος, a turning.] Pertaining to or exhibiting the absence of growth with reference to light; not phototropic.

The direct tropic effect of light is greatest in the green rays, absent in the blue, and reversed in the red. The effect is modified by the absorbing or scattering character of the background, and by the age of the animal. At the moment of hatching, Convoluta is *aphototropic.* *Nature*, July 9, 1903, p. 237.

aphrasia (a-frā'zi-ä), *n.* [NL., ⟨ Gr. ἀ- priv. + φρασις, speech: see *phrase.*] In *pathol.*, loss, through disease, of the power of expressing one's self in formed sentences.

aphrodæscin (af-rō-des'in), *n.* [Gr. αφρώδης, foamy, + L. *æsc(ulus)*, horse-chestnut, + *-in*[2].] A glucoside, $C_{52}H_{82}O_{23}$, occurring in the cotyledons of the horse-chestnut. It forms an amorphous powder easily soluble in water.

aphrodisia[2] (af-rō-diz'i-ä), *n.* [NL., ⟨ Gr. Ἀφροδίσιος: see *Aphrodisia*[1].] 1. Eroticism. —2. The sexual act.

Aphroditeum (af″rō-dī-tē'um), *n.* [NL., ⟨ *Aphrodite*, Aphrodite.] In *Gr. antiq.*, a temple, shrine, or precinct sacred to Aphrodite. There was such a temple at Cnidos, which contained the famous statue of the divinity by Praxiteles.

Aphrothoraca (af″rō-thō-rā'kä), *n. pl.* [Gr. ἀφρός, foam, + θώραξ, breast.] Same as ★*Aphrothoracida.*

Aphrothoracida (af-rō-thō-ras'i-dä), *n. pl.* [NL., ⟨ Gr. ἀφρός, foam, + θώραξ, breast, + *-ida.*] An order of *Heliozoa* having no skeleton, but with the power of amœboid motion and with plastic or stiff pseudopodia, the latter possessing axial filaments. It includes the genera *Vampyrella*, *Nuclearia*, *Myxastrum*, *Actinophrys*, *Actinosphærium*, and others.

aphtha, *n.*—**Aphthæ tropicæ**, a digestive disorder, accompanied by an aphthous eruption, occurring in tropical regions.—**Bednar's aphthæ**, an eruption of yellowish spots on the mucous membrane of the hard palate in infants.

Aphthartodocetic (af-thär″tō-dō-sē'tik), *a.* Of or pertaining to the Aphthartodocetæ or their teachings. See *Aphthartodocetæ.*

aphthite (af'thīt), *n.* An alloy composed of 800 parts of copper, 25 of platinum, 10 of tungsten, and 170 of gold. *Thorpe*, Dict. Applied Chem., I. 189.

aphthongal (af'thong-al), *a.* [*aphthong* + *-al.*] Of the nature of an aphthong; written but not pronounced; mute.

aphthongia (af-thong'gi-ä), *n.* [Gr. ἀφθογγος, voiceless, ⟨ ἀ- priv. + φθέγγειν, speak.] In *pathol.*, spasmodic contraction of the muscles supplied by the hypoglossal nerve, resulting in loss of voice.

Aphyllites (a-fi-lī'tēz), *n.* [NL., ⟨ Gr. ἀ- priv. + φύλλον, a leaf, + *-ites.*] See ★*Agoniatites.*

aphyric (a-fīr'ik), *a.* [Gr. ἀ- priv. + (*por*)*phyric.*] Non-porphyritic: a term applied to an igneous rock which does not possess the porphyritic texture.

Apiaceæ (ā-pi-ā'sē-ē), *n. pl.* [NL. (Lindley, 1836), ⟨ *Apium* + *-aceæ.*] A family of dicotyledonous, choripetalous plants of the order *Apiales*, the parsley, carrot, or celery family, based on the genus *Apium* as the type. See *Umbelliferæ* and ★*Apium.*

apiaceous (ā-pi-ā'shius), *a.* [NL. *Apiaceæ* + *-ous.*] Belonging to the *Apiaceæ;* umbelliferous.

a piacere (ä pi-ä-chā're). [It., 'at pleasure': see *pleasure.*] In *music*, same as *ad libitum.*

Apiales (ā-pi-ā'lēz), *n. pl.* [NL. (Ward, 1905), ⟨ *Apium* + *-ales.*] An order of dicotyledonous, choripetalous plants embracing the families *Apiaceæ*, *Araliaceæ*, and *Cornaceæ*, and characterized chiefly by having flowers in umbels. See *Umbellales.*

apicad (ap'i-kad), *adv.* [L. *apex*, apex, + *ad*, toward.] Toward the apex: introduced by Hyatt in the terminology of the cephalopod shell, and used to express the relation of parts to the apex. *Zittel* (trans.), Textbook of Paleon., I. 574.

apical, *a.*—**Apical axis**, in diatoms, the line through the center of the pervalvar axis in the direction of the raphe.—**Apical body.** Same as ★*aerosome.* **Apical cone**, the growing point. **Apical growth**, growth from the apex which lengthens the axis. **Apical organ.** Same as ★*apical plate.* **Apical plane**, in diatoms, the plane perpendicular to the valvar plane passing through the pervalvar and apical axis.—**Apical plasm**, the idioplasm to which the growth of a new shoot in a plant is due according to Weismann's doctrine of germ-plasm.—**Apical plate**, a thickening in the anterior end of a trochosphere or larval stage of certain invertebrates which is the nerve-center of the larva.—**Apical system**, in the echinoids or sea-urchins, the system of plates at the summit of the test or corona. Also called the *dorsocentral system.*

apicasm (ap'i-kazm), *n.* [Gr. ἀπείκασμα, a copy, ⟨ ἀπεικάζειν, form from a model, copy, ⟨ ἀπο, from, + εἰκάζειν, make like to, represent, ⟨ εἰκών, likeness, image.] A sign whose significance is due to characters which might conceivably equally belong to it although the object it represents had never existed; a copy or analogue; an icon. *C. S. Peirce.*

apicasy (ä-pik'a-si), *n.* [Gr. ἀπεικασία, representation by a copy or analogue.] Representation in an apicasm. See ★*apicasm.*

apicular (a-pik'ū-lär), *a.* [NL. *apiculus* + *-ar.*] In *bot.*, situated or occurring at the apex: as, *apicular* dehiscence.

apiculation (a-pik-ū-lā'shon), *n.* [NL. **apiculatio*(*n-*), ⟨ *apiculatus*, ⟨ *apiculus*: see *apiculus.*] In *bot.*, a short and abrupt but not stiff point at the apex of an organ; an apiculus.

apigenin (a-pij'e-nin), *n.* [*api*(*in*) + *-gen*, -produced, + *-in*[2].] A compound, $C_{15}H_{10}O_5$, formed by the hydrolysis of apiin. It crystallizes in bright-yellow needles.

apikoros (ä-pi-kō'ros), *n.*; pl. *apikorsim* (ä-pi-kōr'sēm). [Gr. Ἐπίκουρος, Epicurus: see *epicure.* The word has been referred to an Aram. source, *pakar*, be free, break through.] In Jewish use, one who is unsound in belief or lax in the observance of religion or ceremony; one who is irreverent to rabbis; a skeptic or heretic.

apio (ä'pē-ō), *n.* [A colonial use of Sp. *apio*, celery, ⟨ L. *apium*, parsley.] A biennial, umbelliferous plant, *Arracacia Arracacha*, a native of the Andes of northern South America. Its large, fleshy yellow roots contain from 20 to 22 per cent. of starch, and from the expressed juice of the root alcohol is made. See *arracacha.*

Apiocera (ap-i-os'e-rä), *n.* [NL. (Westwood, 1835), ⟨ ἄπιος, distant, + κέρας, horn.] A genus of bombylioid *Diptera* typical of the family *Apioceridæ.* *A. haruspex* inhabits the Yosemite valley.

Apioceridæ (ap″i-ō-se'ri-dē), *n. pl.* [NL., ⟨ *Apiocera* + *-idæ.*] A family of brachycerous *Diptera*, of the superfamily *Bombylioidea*, having the wings provided with five posterior cells. They are large and slender flies somewhat resembling the robber-flies, and the North American species all inhabit the western portions of the continent.

apioid, *n.* 2. A solid of revolution shaped something like a pear: a form assumed by a rotating liquid spheroid when the speed becomes too great for the persistence of the ellipsoid which followed the spheroid as the speed increased.

apioidal (ap-i-oi'dal), *a.* Having an incipient dumb-bell form resembling the apioid. *Knowledge*, Nov., 1903, p. 253.

apiol, *n.* 2. In *med.* and *phar.*, the green liquid alcoholic extract of parsley-seeds used as an emmenagogue and antiperiodic.

apiolic (ap-i-ol'ik), *a.* [*apiol* (?) + *-ic.*] Noting an acid, $CH_2{:}O_2{:}C_6H(OCH_3)_2CO_2H$, formed by the oxidation of apiol. It consists of needles which melt at 175° C.

apione (ap'i-ōn), *n.* [*api*(*in*) + *-one.*] A compound, $CH_2{:}O_2{:}C_6H_2(OCH_3)_2$, formed by heating apiolic acid with dilute sulphuric acid. It crystallizes in needles which melt at 79° C.

apionic (ap-i-on'ik), *a.* [*apione* + *-ic.*] Noting an acid, $C_{14}H_{12}O_6$ or $C_{14}H_{10}O_6$, formed by the oxidation of isapiol. It consists of small needles which melt with decomposition at 252° C.

Apionichthys (ap″i-ō-nik'this), *n.* [NL., ⟨ (?) Gr. ἀπίων, not fat (⟨ ἀ- priv. + πίων, fat), + ἰχθύς, fish.] A genus of small soles or tongue-fishes of the family *Soleidæ*, found in South America.

Apiosoma (ap″i-ō-sō'mä), *n.* [NL., ⟨ Gr. ἄπιον, pear, + σῶμα, body.] A genus of amœboid organisms found in the red corpuscles of the blood of cattle affected by Texas fever, the infection of which is carried by ticks: a synonym of ★*Piroplasma.*

Apiosporium (ap″i-ō-spō'ri-um), *n.* [NL. (Kunze, 1817), ⟨ Gr. ἄπιον, pear, + σπορά, spore.] A genus of fungi of the order of *Perisporiales*, having spherical perithecia, and asci containing eight brown spores with transverse septa. Many of the described species are known only in their conidial forms, which grow on leaves and branches, where the honeydew of plant-lice is present, causing what is called sooty mold.

apiri (ä-pē'rē), *n.* See ★*aalii.*

Apis[1], *n.* 2. A small southern constellation situated between the Cross and the Chameleon. Same as *Musca.*

apism (āp'izm), *n.* [*ape* + *-ism.*] The practice of aping; mimicry. *Carlyle*, Past and Present.

apiton (ä-pē-tōn'), *n.* [Philippine Sp., ⟨ Bisayan *apitong*, the resin of the tree 'dragon's-blood.'] In the Philippine Islands, a large forest-tree, *Dipterocarpus grandiflorus*, which yields a fine-grained wood of a grayish or greenish-gray color, used in construction and for the planking of boats. Like many of its congeners, this tree yields an oleoresin, which, however, is inferior to that of the panao or malapaho (*Dipterocarpus vernicifluus*). See *Dipterocarpus* and ★*panao.*

Apium (ā'pi-um), *n.* [NL. (Linnæus, 1753, adopted from Tournefort, 1700), ⟨ L. *apium*, the name of parsley and related plants: see *ache*[2].] A genus of dicotyledonous plants, type of the family *Apiaceæ.* They are erect or prostrate glabrous herbs with compound leaves and umbels of white flowers. They are distinguished by the laterally flattened fruit and by the solitary oil-tubes in the intervals between the usually prominent ribs of the carpels. The genus includes about 20 species, natives of the eastern hemisphere, with the exception of *A. Ammi*, which occurs from North Carolina to Florida and Mexico and extends into South America. Two or three introduced species occur locally in the eastern United States and in California. For *A. graveolens* see *celery*, *marsh-parsley*, i, and *smallage.*

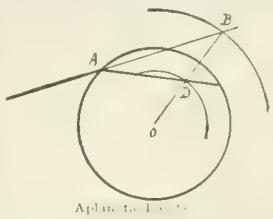
apjohnite (ap'jon-īt), *n.* [Named after James *Apjohn*, an English chemist, who first described it.] A manganese alum occurring in silky white fibrous masses and also in crusts.

Aplacophora (ap-la-kof'ō-rä), *n. pl.* [NL., ⟨ Gr. ἀ- priv. + Gr. πλάξ (πλακ-), a flat piece or part, + -φορος, ⟨ φέρειν, bear.] A suborder of *Amphineura*, having the body vermiform, foot absent or merely a groove, and the cuticle more or less covered with spicules. It includes the families *Neomeniidæ* and *Chætodermatidæ.* Same as *Solenogastres.* Compare *Polyplacophora.*

aplanat (ap'la-nat), *n.* [G. *aplanat*: see *aplanatic.*] A system of lenses invented by Adolph Steinheil, in 1866, for use in photography, consisting of a biconvex crown-glass lens placed between two concavo-convex lenses of flint-glass. The invention of these objectives was a great improvement in photography, since before that time no objective gave a wide view-field undistorted and with sufficient illumination.—**Group aplanat**, an aplanat of large aperture with the members at a moderately great distance, effecting high illumination.

Aplanat.

Aplanatic points, in *optics*, two points, lying upon any straight line passing through the center of a sphere, which serve to locate the path of a refracted ray within the sphere. They are situated at distances n r and $\frac{1}{n}$ r from the center of the sphere, where *r* is the radius of the sphere and *n* is its index of refraction. Let a ray of light meet the surface of the sphere at *A* and let *B* be the point in which the continuation of the ray meets a circle drawn in the plane of incidence with radius nr and having the same center *O* as the sphere. Let the line *O B* from the center of the sphere cut a circle drawn with radius $\frac{1}{n}$r at *D*. The line *AD* is the path of the refracted ray within the sphere, and the points *B* and *D* are aplanatic points.—**Aplanatic surface**, in *optics*, a surface from every point of which the sum of the optical paths to two given points, with reference to which the surface is defined, is constant.—**Aplanatic system**, in *optics*, a system of lenses free from aberration for two points upon the axis called the *aplanatic points.*



Aplanatic points.

aplanospore (a-plan'ō-spōr), *n.* [Gr. ἀπλανής, not wandering, fixed, ⟨ ἀ- priv. + πλάνος, wandering, + σπορα, spore.] Same as *hypnospore.* See ★*akinete.*

aplasmic (a-plaz'mik), *a.* [Gr. *ἀ-* priv. + [illegible] : see *plasma.*] Containing little or no protoplasm, sarcoplasm, or other form of plasma. *Buck*, Med. Handbook, III. 269.

aplastic, *a.* 2. Not molded, formed, or developed: imperfectly developed: as, *aplastic* organs. *Buck*, Med. Handbook, I. 140.

aplitic (a-lit'ik), *a.* See ★*haplitic.*

Aplocheilus (ap-lō-ki'lus), *n.* [NL., prop. *Haplochilus*, ⟨ Gr. *ἁπλοῦς*, single, + *χεῖλος*, lip.] A genus of top-minnows of the family *Pœciliidæ*, found mainly in India.

Aplocœla (ap-lo-sē'lą), *n. pl.* [NL., prop. *Haplocœla*, ⟨ *ἁπλοῦς*, single, + *κοῖλον*, a hollow.] Same as ★*Nemertini.* *Blanchard.*

Aplodinotinæ, Aplodinotus. See ★*Haplodinotinæ, Haplodinotus.*

Aplodontidæ (ap-lo-don'ti-de), *n. pl.* The first published form of *Haplodontidæ.*

Aplysioidea (ap-li-si-oid'ē-ą), *n. pl.* [NL., ⟨ *Aplysia* + *-oidea.*] A group of tectibranchiate gastropods of the order *Opisthobranchiata*, consisting of the family *Aplysiidæ.* The other subdivisions of the order are *Bulloidea, Pleurobranchoidea*, and *Siphonaroidea.*

aplysiopurpurin (ap-lis i-ō-pėr'pū-rin), *n.* [*Aplysia* (see def.) + *purpurin.*] A purple pigment found in the secretion of the dermal glands of *Aplysia.*

apnea, *n.* See *apnœa.*

apneustic (ap-nūs'tik), *a.* [Gr. *ἀπνευστος*, not blown through, ⟨ *ἀ-* priv. + **πνευστός*, ⟨ *πνεῖν*, breathe.] In *entom.*, having a tracheal system which is closed, that is, without stigmata or spiracles: or if these are present they are functionless. The apneustic system is found only in certain aquatic or parasitic larvæ in which the blood is oxygenated through tracheal gills or through a very delicate general body-integument. *A. S. Packard*, Textbook of Entom., p. 440.

apo-. In *chem.*, this prefix is sometimes used to indicate production from the particular source specified, as *apomorphia*, made or prepared from morphia by chemical change. In *petrog.*, it is used with the name of an igneous rock to indicate that the rock has been altered from an original glassy state to a more or less completely crystalline condition: as, *apobsidian, aporhyolite, apoandesite*, etc. These devitrified rocks are commonly of cryptocrystalline or microcrystalline texture and exhibit traces of perlitic or other textures of the original glass. *Bascom*, 1893.

apoatropin (ap-ọ-at'rō-pin), *n.* [*apo-* + *Atropa* + *-in*[2].] A crystalline alkaloid, $C_{17}H_{21}NO_2$, formed in the roots of *Atropa Belladonna*, and also prepared by treating atropin with nitric acid. It melts at 60° C.

apobiosis (ap-ọ-bī'ō-sis), *n.* [Gr. *ἀποβίωσις*, departure from life, ⟨ *ἀποβιοῦν*, depart from life, + *ἀπό*, away, + *βίος*, life.] Death as a physiologic fact.

apocalyps, *n.* A simplified spelling of *apocalypse.*

apocarp (ap'ọ-kärp) *n.* [Gr. *ἀπό*, from, + *καρπός*, fruit.] In *bot.*, a fruit with several separate carpels. *Jackson*, Glossary.

apocarpy (ap'ọ-kär-pi), *n.* In *bot.*, the character of being apocarpous.

apocatastatic (ap″ō-kat-ą-stat'ik), *a.* Of, pertaining to, or of the nature of apocatastasis or restoration.

apocenter (ap'ọ-sen″tėr), *n.* [Gr. *ἀπό*, from, + *κέντρον*, center.] 1. In the orbit of a heavenly body, the point most distant from the body or point around which it revolves. *Science*, Feb. 7, 1902, p. 221.—2. In *biol.*, an organism or organ which may be regarded as a specialized or divergent descendant from a more primitive or less specialized organism or organ.

apocentric (ap-ọ-sen'trik), *a.* [Gr. *ἀπό*, from, + *κέντρον*, center.] 1. Of or pertaining to an apocenter, in either sense. *Encyc. Brit.*, XXVIII. 343.—2. Departing more or less from the primitive or average type; specifically, in *ornith.*, departing from the primitive type of intestine.

Markedly *apocentric* though they may be in the matter of their intestinal coils. *Nature*, July 3, 1902, p. 235.

apocentrically (ap-ọ-sen'tri-kąl-i), *adv.* In an apocentric manner, or the manner that is characteristic of apocentricity. *Trans. Linnean Soc., London*, Oct., 1901, p. 204.

apocentricity (ap'ọ-sen-tris'i-ti), *n.* [★*apocentric* + *-ity.*] The property of being apocentric or of pertaining to an apocenter.

It is obvious that the mere *apocentricity* of a character can be no guide to the affinities of its possessor. *Encyc. Brit.*, XXVIII. 343.

Multiradial apocentricity, in *ornith.*, adaptive modifications of the intestine.—**Pseudocentric apocentricity,** in *ornith.*, slight departure from the primitive intestinal type.—**Uniradial apocentricity,** in *ornith.*, complex structural variation in the intestinal loops, not due to any adaptive cause.

apocentron, apocentrum (ap-ọ-sen'tron, -trum), *n.*; pl. *apocentra* (-trą). [NL.: see ★*apocenter.*] Same as ★*apocenter*, 1.

Apoceras (a-pos'ẹ-ras), *n.* [NL. (Coville, 1905), ⟨ Gr. *ἀπο*, away from, + *κέρας*, horn.] A genus of trees belonging to the *Rutaceæ* and characterized by five horn-like diverging ovaries, four of which disappear in the fruit. It is improperly called *Pentaceras* by many authors. See *Pentaceras.*

Apocheilichthys (ap″ọ-kī-lik'this), *n.* [NL., ⟨ Gr. *ἀπο*, off, + *χείλος*, lip, + *ἰχθύς*, fish.] A genus of very small top-minnows of the family *Pœciliidæ*, found in the rice-ditches of Japan.

apochromat (ap'ọ-krō-mat), *n.* [*apochromatic.*] A lens system, designed by Abbe, consisting of a combination of ten lenses with homogeneous immersion. It is achromatic for three colors, and therefore free from secondary spectra, and aplanatic for two colors.

a poco (ä pō'kō). [It., 'by little': see *pococurante.*] Gradually: used to qualify several terms for musical style or expression: as, *a poco più lento*, gradually slower; *a poco più mosso*, gradually faster.

apocodeine (ap-ọ-kō-dē'in), *n.* [*apo-* + *codeine.*] An alkaloid, $C_{18}H_{19}NO_2$, prepared by heating codeine hydrochlorid with a concentrated solution of zinc chlorid. Both the base and its salts are amorphous.

apocopation (a-pok-ọ-pā'shọn), *n.* [See *apocope.*] The dropping or omission of a letter or syllable from the end of a word; abbreviation by apocope.

apocrenate (ap-ọ-kren'āt), *n.* [*apocren(ic)* + *-ate*[2].] Any salt of apocrenic acid, $C_{21}H_{12}O_{12}$. Some of the salts are found in the humus of soil, in sinter deposits, and, sometimes, in ferrugineous waters.

Apocrita (a-pok'ri-tą), *n. pl.* [NL., ⟨ Gr. *ἀποκριτος*, separated, ⟨ *ἀποκρίνειν*, separate.] A suborder of insects of the order *Hymenoptera*, having the abdomen connected with the thorax by a deep constriction. It comprises the vast majority of the hymenopterous insects, including the three great series *Parasitica, Tubulifera*, and *Aculeata.* *Brauer.*

apocryfal, *a.* A simplified spelling of *apocryphal.*

apocryph (ap'ọ-krif), *n.* An apocryphal writing.

apocytial (ap-ọ-sish'ąl), *a.* [NL. **apocytium*, ⟨ Gr. *ἀπο*, from, + *κύτος*, a hollow (a cell).] Noting fungi and algæ, such as the *Siphonales* and *Phycomycetes*, which contain a number of nuclei within a single cell-wall.

apodal, *a.* II. *n.* An amphibian of the order *Apoda*; a cæcilian. *Encyc. Brit.*, XXV. 383. [Rare.]

apodete (a-pod'ē-tē), *n.* [NL. *apodetē*, ⟨ Gr. *ἀπό*, off, + *δετή*, fagot, fem. of *δετός*, bound. Cf. ★*anthodete* and ★*syndete.*] That region in a bunch of alcyonarian polyps where the zoöids are separate. Compare ★*syndete.*

Apodichthys (ap-ọ-dik'this), *n.* [NL., ⟨ Gr. *ἄπους* (*ἀποδ-*), without feet (allusion not apparent), + *ἰχθύς*, fish.] A genus of ribbon-shaped blennies found on the coast of California.

Apodina (ap-ọ-dī'ną), *n. pl.* [NL., ⟨ Gr. *ἄπους* (*ἀποδ-*), footless, + *-ina.*] A suborder or section of *Gastrotricha*, containing forms having no pedal appendages, as *Dasydetes* and *Gossea.* See ★*Euichthydina.*

apoëmbryony (ap-ọ-em'bri-ọn-i), *n.* [*apo-* + *embryon* + *-y*[3].] Suppression of the embryo-stage, in which the oösphere gives rise immediately to the vascular members.

apogalacteum (ap″ọ-ga-lak-tē'um), *n.*; pl. *apogalactea* (-ą). [NL. **apogalactæum*, ⟨ Gr. *ἀπό*, from, + *γαλαξίας* (*γαλακτ-*), the Milky Way, + *-æum*, as in *apogæum*, apogee.] The point of maximum distance from the Milky Way in the orbit of a star supposed to be revolving in an orbit within the galactic ring. *Amer. Jour. Sci.*, Aug., 1903, pp. 135, 136.

apogalactic (ap″ọ-ga-lak'tik), *a.* At a maximum distance from the Galaxy. See ★*apogalacteum.*

apogamous, *a.* 2. In *biol.*, illustrative of, pertaining to, or due to apogamy, or the substitution of vegetative for sexual reproduction.

apogamy, *n.* 2. Mating, pairing, or marriage at random, or without conscious or unconscious preference; pangamy.

Indiscriminate isolation allows free interbreeding of all varieties, or *apogamy.* *Buck*, Med. Handbook, IV. 33.

apogeny (a-poj'e-ni), *n.* [NL. **apogenia*, ⟨ Gr. *ἀπο*, away, + *-γενεια*, ⟨ *-γενής*, -producing.] Sexual impotence, both male and female organs having lost their functions.

apoglucic (ap-ọ-glō'sik), *a.* [*apo-* + *gluc(ose)* + *-ic.*] Derived from glucose.—**Apoglucic acid,** an acid, $C_{18}H_{10}O_7$, found in cane-juice and formed by the action of an alkali on glucose.

apogyny (a-poj'i-ni), *n.* [NL. **apogynia*, ⟨ Gr. *ἀπο*, away, + *γυνή*, female, + *-y*[3].] Loss of reproductive power in the female organs.

apohyal, *n.* 2. In *ichth.*, the basihyal bone. *Starks*, Synonymy of the Fish Skeleton, p. 517.

apoid (ap'oid), *a.* Of or belonging to bees of the typical family *Apidæ.*

Apoidea (a-poi'dē-ą), *n. pl.* [NL. (Ashmead, 1899), ⟨ *Apis* + *-oidea.*] The true bees, considered as a superfamily and including the families *Apidæ, Bombidæ, Anthophoridæ, Nomadidæ, Ceratinidæ, Xylocopidæ, Megachilidæ, Steliidæ, Andrenidæ, Colletidæ*, and *Prosopidæ.*

apoikogenic (a-poi-kọ-jen'ik), *a.* [Irreg. ⟨ Gr. *ἀποικος*, absent from home, + *-γενής*, -producing.] Concerning or pertaining to eggs which are abundantly supplied with food-yolk, and which at an early stage of development leave the follicle in which they were formed and pass into the cavity of the ovarian tube to complete their development: contrasted with ★*katoikogenic.* *Nat. Sci.*, Oct., 1896, p. 232. [Rare.]

apoise (ą-poiz'), *adv.* [*a*[3] + *poise.*] Poised; in a poised or balanced position. [Rare.]

apolar, *a.* 2. In *geom.*, having no determinate polar.

apolarity (a-pọ-lar'i-ti), *n.* [*apolar* + *-ity.*] In *geom.*, the condition of being apolar.

apolaust (ap'ọ-lâst), *n.* [A back-formation from *apolaustic.*] 1. A pleasure-seeker.—2. A student of apolaustic or esthetics.

apolausticism (ap-ọ-lâs'ti-sizm), *n.* [*apolaustic* + *-ism.*] The philosophy of taste or enjoyment; apolaustics.

He was indeed only fervent in his *apolausticism.* *Aut Diabolus aut Nihil*, p. 6 (1894).

apolegamic (ap-ọ-lẹ-gam'ik), *a.* [Erroneously formed ⟨ Gr. *ἀπολέγειν*, pick out, + *γάμος*, marriage.] Pertaining to or characterized by the conscious and intentional selection of mates in pairing or marriage.—**Apolegamic mating.** See ★*mating.*

Apollinaris (ą-pol-i-nā'ris), *n.* See *Apollinaris water*, under *water.*

Apollo red. See ★*red*[1].

apollonicon (ap-o-lon'i-kon), *n.* [*Apollo(n-)* + *-icon*, as in *harmonicon.*] A variety of orchestrion invented in 1800 by J. H. Völler of Hesse-Darmstadt, but first manufactured in 1828 in London. It was essentially a pipe-organ which could be played either mechanically by cylinders or, as it had six keyboards, by several players, each taking part of a concerted effect.

Apollonize (ą-pol'ọn-īz), *v. i.*: pret. and pp. *Apollonized*, ppr. *Apollonizing.* [Gr. *Ἀπόλλων*, Apollo, + *-ize.*] To act the Apollo, the god of the fine arts, music, literature, poetry, eloquence; hence, to speak or decide oracularly on these subjects. [Rare.] *N. E. D.*

apolog, *n.* A simplified spelling of *apologue.*

apologete (ą-pol'ọ-jēt), *n.* One skilled in that branch of theology which has to do with the grounds and defense of the Christian faith.

apolysin (a-pol'i-sin), *n.* A yellowish-white crystalline powder, differing from phenacetin in that it contains the citric acid radical in place of the acetic. It is antipyretic and anodyne.

Apomotis (ap-ọ-mō'tis), *n.* [NL.] A genus of fresh-water sunfishes abounding in the Mississippi valley.

aponeurosis, *n.*—**Gluteal aponeurosis.** See ★*gluteal.*—**Palmar aponeurosis.** See ★*palmar.*

Aponogeton (ap″ọ-nọ-jē'ton), *n.* [NL. (Linnæus filius, 1781), ⟨ Gr. *ἄπονος*, without trouble (?), + Gr. *γείτων*, neighbor (as in *Potamogeton*).] A genus of ornamental monocotyledonous plants, the type and only genus of the family *Aponogetonaceæ.* The species most frequent in cultivation is *A. distachyon.* See *Ouvirandra.*

Aponogetonaceæ (ap″ọ-nọ-jē-tọ-nā'sē-ē), *n. pl.* [NL. (Engler, 1886), ⟨ *Aponogeton* + *-aceæ.*] A family of monocotyledonous plants of the

order *Naiadales*, the lattice-leaf family, containing the genus *Aponogeton* only. See ★*Aponogeton* and *Ouvirandra*.

aponogetonaceous (ap″ō-nō-jē-tō-nā′shius), *a.* [*Aponogetonaceæ* + *-ous*.] In *bot.*, belonging to the family *Aponogetonaceæ*.

apophantic, *a.* **II.** *n.* The logical theory of the proposition. *Sir W. Hamilton.*

apophony (a-pof′o-ni), *n.* [F. *apophonie*, < NL. *apophonia*, < Gr. ἀπό, off, + φωνή, sound.] Vowel-gradation; the vowel-differentiation of words known as *ablaut* (which see). *N. and Q.*, 8th ser., IX. 222.

apophysal (a-pof′i-sal), *a.* Pertaining to or having the characters of an apophysis. *Amer. Jour. Sci.*, 4th ser., XV. 280.

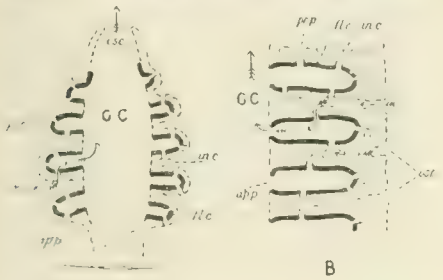
apophysary, *a.*—**Trousseau's apophysary points,** various points on the spine, pressure upon which causes pain in certain cases of neuralgia.

Apophysis mamillaris, the olfactory bulb. **Cerebral apophysis,** the pineal body.—**Genial apophysis.** See ★*genial*².

apoplectoid (ap-ō-plek′toid), *a.* Resembling or of the nature of apoplexy; apoplectiform.

apoplexy, *n.*—**Bulbar apoplexy,** hemorrhage into the substance of the pons Varolii.—**Choroid apoplexy,** hemorrhage between the choroid and the retina.—**Heat apoplexy,** sunstroke.—**Hepatic apoplexy,** hemorrhage into the substance of the liver.—**Nervous apoplexy,** the occurrence of symptoms of apoplexy without hemorrhage or other injury of the brain. **Placental apoplexy,** hemorrhage into the substance of the placenta.—**Pulmonary apoplexy,** an effusion of blood from the capillary vessels into the air vesicles and intervening lung substance.—**Serous apoplexy,** a condition in which symptoms of apoplexy are due to an effusion of serum into the ventricles of the brain.—**Verminous apoplexy,** coma occurring as a reflex symptom of the presence of parasitic worms in the intestine.

apopyle (ap′ō-pīl), *n.* [Gr. ἀπό, off, + πύλη, gate.] In the rhagon type of sponge, the open-



A

Diagrams of the rhagon type of canal system. A, simple type, with separate canal tubes. B, more complex type, with radial tubes fused and thickened distally to form cortex and incurrent canals; *pr.p.*, prosopyle; *fl.c.*, flagellated chamber; *app.*, apopyle; *gc*, gastral cavity. The arrows show the direction of the currents. The thick black line represents the gastral layer, and the dotted portion represents the dermal layer. (From Parker's "Zoology.")

ing by which a flagellated chamber communicates with the cloacal cavity.

aporetin (ap-ō-rē′tin), *n.* [Gr. ἀπό, from, + ῥητίνη, resin.] One of the resinous substances remaining after the crystalline substances have been removed from rhubarb extract.

aporrhaoid (ap-ō-rā′oid), *a.* [*Aporrhais* + *-oid*.] Resembling the *Aporrhaidæ*.

aporrhysa (ap-ō-rī′zä), *n. pl.* [NL., irreg. pl. based on Gr. ἀπόρρυσις, otherwise ἀπόρρυσις, a flowing off, < ἀπορρεῖν, flow off, < ἀπό, off, + ῥεῖν, flow. Cf. *epirrhysa*.] In Rauff's terminology of sponge morphology, the exhalant canals terminating on the cloacal surface.

aposematic (ap″ō-sē-mat′ik), *a.* [Gr. ἀπό, away, + σῆμα, mark: see *sematic*.] Of a nature to warn or alarm; serving to warn or alarm enemies: noting characteristics of organisms which, when displayed, effect this.

We often see the combination of cryptic and sematic methods, the animal being concealed until disturbed, when it instantly assumes an *aposematic* attitude.
Encyc. Brit., XXVII. 147.

Aposematic character, any characteristic of a dangerous, poisonous, or unpalatable organism which, when displayed, serves to warn or alarm an enemy; a warning character. The hood of the cobra, the rattle of the rattlesnake, and the large white tail of the skunk are familiar examples. **Aposematic coloring,** in dangerous, poisonous, or unpalatable organisms, conspicuous colors which warn or alarm enemies; warning colors.

apositic (ap-ō-sit′ik), *a.* [*aposit(ia)* + *-ic*.] Causing apositia or loathing of food; tending to diminish appetite.

aposorbic (ap-ō-sôr′bik), *a.* [Gr. ἀπό, from, + (?) *sorb(inose)* + *-ic*.] Noting an acid, $C_5H_8O_7$, prepared by oxidizing sorbinose with nitric acid. It crystallizes in leaflets, is bibasic, and melts at 110° C.

apostatic (ap-ō-stat′ik), *a.* [*apostate* + *-ic*.] Characterized by apostasy; apostate; backsliding. *Golding.* [Rare.] *N. E. D.*

apostatism (a-pos′tā-tizm), *n.* [*apostate* + *-ism*.] Departure from or relinquishment of the faith: as, "political *apostatism*." *Sir R. Wilson*, Diary, II. 308. *N. E. D.*

Apostolic delegate, an ambassador or diplomatic agent of second rank commissioned by the pope to a national church or to a government.—**Apostoli method.** See ★*method*. **Apostolic party.** See *apostolics*, in *Cyclopædia of Names*. **Prefect apostolic.** See ★*prefect*.

apostrofize, *v.* A simplified spelling of *apostrophize*.

apostrophism (a-pos′trō-fizm), *n.* Apostrophic mode of address. *Morning Star* (London), Dec. 18, 1866. [Rare.] *N. E. D.*

apotactical (ap-ō-tak′ti-kal), *a.* [Gr. ἀποτακτικοί, also ἀπότακτοι, certain heretics, < ἀπότακτος, set apart, < ἀποτάσσειν, set apart, arrange, < ἀπό, from, + τάσσειν, arrange.] Recreant. *Bp. Hall*, No Peace with Rome, p. 661.

apothecal (ap-ō-thē′kal), *a.* [L. *apotheca*, a shop: see *apothecary*.] Of or pertaining to a shopman; shopkeeper's: as, "bucolic menace and *apothecal* libel," *Mortimer Collins.* [Rare.] *N. E. D.*

Apothecaries' measure. See *measure*.

apothegmatically (ap-ō-theg-mat′i-kal-i), *adv.* In an apothegmatic manner; sententiously; pithily.

apotheose (a-poth′ē-ōz), *v. t.*; pret. and pp. *apotheosed*, ppr. *apotheosing*. [*apotheosis*.] To place or rank among the gods; apotheosize; exalt; glorify. [Rare.]

He must be *apotheosed*, or more than mortality or mankind will permit, and so omnipresent.
F. Philipps, Reg. Necess., p. 269.

a potiori (ä pō-shi-ō′rī or ä pō-ti-ō′rē). [L.] Literally, from the stronger or more important; hence, in *logic*, from the prevailing trend, or principal contents, of an argument or exposition.

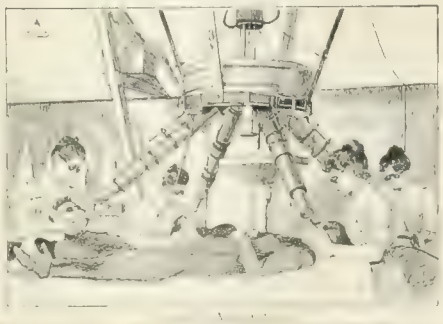
apotype (ap′o-tip), *n.* One of a series of specimens upon which are based supplementary descriptions, giving additional details about some previously described species: proposed to take the place of ★*hypotype*, which is used in another sense. *Science*, N. S., XXI. 900.

Appalachia (ap-a-lach′i-ä), *n.* [NL.] A continental area of Paleozoic time which occupied in part the general position of the present Appalachian region.

Appalachian, *a.* **2.** In *geol.*, specially noting an anticlinal fold, slightly overthrown so as to have one flank dipping more steeply than the other. See the extract.

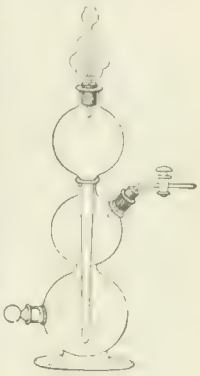
The folding in the rocks of the area is of three types: minute crinkling, small unsymmetrical wavy folds, and broad *Appalachian* ones in which the adjustment appears to have taken place along the bedding.
Amer. Jour. Sci., Feb., 1904, p. 150.

apparatus, *n.*—**Arsenic apparatus of Fresenius and Babo,** an apparatus for the reduction of arsenious sulphid by means of potassium cyanid in a current of carbon-dioxid gas, which excludes air. Arsenic appears as a mirror at the narrow exit-tube.—**Buck's extension apparatus,** an apparatus for making extension of the leg, in order to counteract muscular action and prevent displacement of the fragments in cases of fracture of the thigh-bone.—**Carbonic-acid apparatus,** an apparatus for the gravimetric estimation of carbonic dioxid in alkali. See *alkalimetry*. Various forms have been devised by Fresenius, Geissler, Mohr, Kipp, Schroetter, and others.—**Clayton's apparatus,** an apparatus for the generation of anhydrous sulphurous and sulphuric acids in the hold of a ship, for the purpose of disinfection and to kill the rats.—**Elliott's apparatus,** an apparatus for the rapid analysis of gaseous mixtures, such as illuminating gas. The sample is collected in the graduated eudiometer. It is then transferred to the laboratory-tube, where it is subjected to the action of a solvent. The residual gas is then returned to the graduated tube and the loss in volume measured.—**Fell-O'Dwyer apparatus,** an appliance for forcing air into the lungs through an intubation-tube by means of a bellows.—**Finsen's apparatus,** a system of lenses for concentrating the



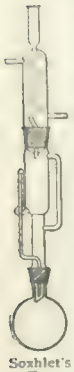
violet rays of light, used in the light-treatment of lupus and other diseases.—**Fresenius's drying apparatus,** a form of drying-oven. The temperature of the interior is controlled by a thermostat attachment.—**Hempel's gas-analysis apparatus,** an apparatus for the rapid and exact analysis of a mixture of gases, wherein a sample measured volume contained in a graduated burette is successively transferred to absorption pipettes, or other vessels containing reagents, the effect of which is determined by remeasuring the gaseous volume after subjecting it to each test. The gas is collected over mercury, though in some cases water may serve.—**Hofmann's apparatus,** an apparatus designed to [illegible] the combination of gases by volume. The one shown in the illustration is for the synthesis of water from its elements, hydrogen and oxygen.—**Hufner's apparatus,** an apparatus designed for the quantitative estimation of urea.—**Jaderin apparatus,** a baseline measuring apparatus [illegible] two wires of [illegible] the [illegible] side by side, whose relative lengths are observed and used to determine the temperature of the wires and from this the temperature-corrections to the lengths of the wires and of the line measured. **Kipp's apparatus,** an apparatus for the evolution of gases at a uniform rate. It consists of three globular communicating glass vessels. A solid put into the central one is subjected to the action of some liquid, as water or an acid. The gas generated is permitted to escape through a lateral stop-cock which regulates the flow. When an excess of gas is set free it causes a pressure within the globe and pushes the liquid away from the solid into the lower globe, and thence by the long central tube into the upper reservoir. The mutual action of the chemicals is also thus suspended when the gas is not needed.—**Kjeldahl's apparatus,** an apparatus for the determination of nitrogen in organic compounds by its conversion to ammonia, the weight of which is ascertained from its neutralizing a standard acid. **Langen's apparatus,** an apparatus for collecting the waste gases in a blast-furnace by closing the mouth of the furnace. It has the form of a bell-shaped tube resting in an inverted conical ring. It is raised and lowered by means of a lever and is provided at the extremity with a lip which dips into a water-trough in the gas-main, forming a perfectly air-tight joint. At the time of charging, the bell is lifted and, sliding in the water-joint on the gas-tube, allows the charge in the cup-shaped ring to fall into the furnace.—**Lindeman's oxygen apparatus,** an apparatus for the determination of oxygen in gaseous mixtures, based on its removal by union with phosphorus. The gas is collected in a measuring-eudiometer and transferred to a vessel containing small sticks of phosphorus. On being brought again to the graduated tube, the loss in volume indicates the amount of oxygen absorbed.—**Marsh's arsenic apparatus,** the form of apparatus originally proposed by Marsh for the application of his method of detecting minute quantities of arsenic. It consisted of a U-shaped tube of glass, with a bulb on each limb, and a stop-cock ending in a small jet from which the arseniureted hydrogen gas was allowed to escape and be ignited. It is now superseded by a simpler but more efficient arrangement.—**Memory apparatus.** See ★*memory*.—**Oettel's apparatus,** an apparatus for the volumetric determination of fluorin. Silicon tetrafluorid is evolved by heating the fluorid, under analysis, with quartz and sulphuric acid. The fluorin is calculated from the volume of the gas set free.—**Orsat's apparatus,** a portable apparatus for the rapid analysis of gases. It consists of a graduated burette, surrounded by a water-jacket, connected with a movable two-necked bottle by a rubber hose, and capable of being filled with gas from a stack, flue, etc., through the capillary tube and stop-cock attached thereto. The measured volume can then be transferred to any one of the absorption pipettes by opening the stop-cock connecting the pipette with the capillary. The gaseous volume is then returned to the burette and the loss due to absorption determined. Thus several constituents may rapidly be removed in succession. These are usually carbon dioxid, carbon monoxid, and oxygen. The reagents used are aqueous potassium hydrate, ammoniacal cuprous chlorid, and a solution of pyrogallol in potassium hydrate, respectively. Hydrogen is determined by means of palladium warmed by a spirit-flame and contained in a capillary tube connected with a pipette filled with water, which is displaced by the gases not acted on by any of the reagents.—**Puddling apparatus** (of Godfrey and Howson), an arrangement for the conversion of cast-iron into malleable iron or mild steel by means of a blast of previously heated gas and air directed into a rotating vessel lined with infusible material.—**Reaction apparatus.** See ★*reaction*.—**Roese-Stutzer apparatus,** an apparatus for the determination of fusel-oil. The spirit to be tested is shaken with chloroform and dilute sulphuric acid. The increase in the volume of the chloroform indicates the proportion of fusel-oil present.—**Root's calibrating apparatus.** See ★*calibrate*.—**Scheibler's apparatus,** an apparatus for the estimation of calcium carbonate in bone-black. The carbon dioxid, liberated by the action of hydrochloric acid on a given weight of bone-black, displaces air, the volume so displaced being measured with accuracy by means of the graduated eudiometer. The volume of gas being ascertained, the weight of the calcium carbonate may be calculated.—**Schelling's apparatus,** an apparatus [illegible] the determination of the specific [illegible]

Hofmann's Apparatus.

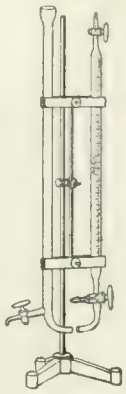


Kipp's Apparatus.

according to the Bunsen method, by ascertaining the rate of effusion. **Schilling's blast apparatus** a simple device for combining an aspirator and an air-blast, operated by water-pressure.— **Soxhlet's extraction apparatus,** an apparatus for the extraction of soluble constituents, as fat with a minimum quantity of solvent as ether. The solvent is boiled in the lower flask (see the illustration), the vapor is condensed in the water-cooled spiral, and the liquid drops upon the substance contained in the central vessel, where it accumulates until it reaches the top of the siphon, when it runs into the lower flask. This operation is repeated until the extraction is complete. The extract is obtained by boiling off the solvent.— **Squibbs's urea apparatus.** See ★*urea.* **Telesmatic apparatus.** See ★*telesmatic.*— **Time-sense apparatus.** See ★*time-sense.*— **Triple-effect apparatus,** an important modification of the vacuum-pan used in sugar-refining and other branches of industry, involving the use of latent heat from the vapor of a first pan to boil the liquid contained in a second pan in which a higher vacuum is maintained, and in like manner applying the vapor from the second to a third pan. Sometimes even a larger number of vessels than three is employed. **Wiborgh's apparatus,** an apparatus for the rapid estimation of sulphur in iron and steel. About .5 gram of drillings are heated in a flask with water. Sulphuric acid is then run in from the side-funnel and hydrogen sulphid is evolved. This reacts with the cadmium acetate with which a cloth fastened over the mouth of the upper funnel-like vessel has been saturated. The shade of yellow developed is compared with a set of standards.— **Winkler's apparatus for gas analysis,** a convenient form of gas burette. It consists of an accurately graduated eudiometer with a simple stop-cock at its upper and a three-way stop-cock at its lower end. The lower end is connected by means of rubber hose to the leveling tube. The gas may be collected over mercury or water.— **Yaryan apparatus** or **evaporator,** an ingenious and successful arrangement for evaporation by multiple effect, introduced in 1886: applicable to the evaporation of solutions of sugar and the concentration of liquids for many other purposes.



Soxhlet's Extraction Apparatus.



Winkler's Apparatus.

appareling (ạ-par′el-ing), *n.* Clothes; clothing.

Fishing and hunting the abundant waterfowl, as well as other game, contribute to the tribal subsistence, and during recent years part of the corn, beans, and peas is carried on horseback to Yuma, where it is bartered chiefly for *appareling.* *Smithsonian Rep.*, 1901, p. 72.

Apparent celestial latitude. See ★*latitude.*— **Apparent danger.** See ★*danger.*— **Apparent efficiency.** See ★*efficiency.*— **Apparent energy.** Same as *apparent* ★*power.*— **Apparent power.** See ★*power*[1].— **Apparent resistance.** See *impedance.*— **Apparent solar day.** See ★*day*[1].

apparition (ap-a-rish′ọn), *v. t.* To cause to to appear in phantom form. *Mrs. Whitney,* Sights and Insights, II. 468. [Rare.] *N. E. D.*

appassionato (ä-pä-si-ō-nä′tō), *a.* [It., < ML. *ad-* + *passionatus,* passionate.] Impassioned; emotional: in *music,* noting passages to be so rendered.

appatriation (a-pā-tri-ā′shọn), *n.* [L. *ad,* to, + *patria,* country, + *-ation.*] The assignment, as of a song or a saying, to the country or place where it originated. *Athenæum,* July 7, 1883. [Rare.]

appeal, *v. i.*— **To appeal from the chair,** to take exception to a decision of the chairman or presiding officer of a deliberative body, and ask the sense of the meeting or assembly in regard to it; to appeal to the house from a decision of the chair.

appeal, *n.*— **Circuit court of appeals,** a federal court of appellate jurisdiction established for the hearing of appeals from judgments, orders, or decrees of the various federal district and circuit courts throughout the United States.

appel, *n.* (*b*) A stroke on the opponent's foil or sword designed to notify him that the bout is to begin. (*c*) The stamping of the foot during ceremonial salutes prior to the bout. See *salute.*

appellatived (ạ-pel′ạ-tivd), *p. a.* Called; named. *Bulwer,* Disowned, i. [Rare.]

Appendages of the eye, the lacrymal apparatus, ocular muscles, eyelids, eyelashes, and eyebrows. — **Appendages of the fetus,** the umbilical cord, placenta, and membranes.—**Appendages of the skin,** the sweat and sebaceous glands, nails, and hair.—**Appendages of the uterus.** Same as ★*adnexa.*—**Auricular appendage.** Same as *appendix auriculæ* (which see, under *appendix*). —**Cæcal appendage, vermicular appendage,** the vermiform appendix.

appendant, *a.*— **Appendant powers,** those powers which the donee is authorized to exercise out of the estate limited to him, and which depend for their validity upon the estate which is in him. A life-estate limited to a man, with a power to grant leases in possession, is an example. *Bouvier,* Law Dict.

appendectomy (ap-en-dek′tō-mi), *n.* A shortened form of ★*appendicectomy.* *Med. Record,* July 11, 1903, p. 46.

appendical, *a.* 2. Relating to an appendix, specifically to the vermiform appendix.

appendicectomy (a-pen-di-sek′tō-mi), *n.* [NL. *appendix (vermiformis)* + Gr. *-εκτομή,* excision.] Excision of the vermiform appendix. *Med. Record,* March 28, 1903, p. 484.

appendicitis (a-pen-di-si′tis), *n.* [L. *appendix* (*-dic-*) + *-itis.*] In *pathol.,* inflammation of the vermiform appendix (which see, under *appendix*). The disease occurs at all ages, but most commonly in young adults, especially young men. The apparently increased prevalence of the affection in late years is to be accounted for chiefly by greater skill in diagnosis. The exciting causes of inflammation of the appendix are digestive disturbances (especially intestinal indigestion attended with much flatulence), influenza, rheumatism, and blows on the abdomen; the presence of seeds in the appendix is not, contrary to the popular belief, a frequent cause of the disease. The inflammation may be acute or chronic. The most prominent symptoms of the acute form are pain of a colicky nature, usually beginning in the neighborhood of the umbilicus and later becoming localized in the right lower abdominal region; rigidity of the abdominal muscles on the right side; and tenderness to pressure. The last, at the beginning, is nearly always most acute at "McBurney's point," which is situated about two inches from the anterior spinous process of the ilium on a line joining this process with the umbilicus. Nausea and vomiting, prostration, fever, rapid pulse, constipation or more rarely diarrhea, and chills are other symptoms usually present in varying degrees. In chronic appendicitis, the most prominent manifestation is constant pain in the right iliac region, which is aggravated by exertion or fatigue; but the condition may be seriously prejudicial to health in many other ways, while there is also the ever present danger of an acute exacerbation with all its perils. In the treatment of acute appendicitis surgeons usually advise operation as soon as the diagnosis is made. "Interval operations" are those in which the appendix is removed after the subsidence of an acute attack, so as to prevent a recurrence of the disease.— **Chronic, recurrent,** or **relapsing appendicitis,** a low grade of inflammation of the vermiform appendix, continuing without marked symptoms, but interrupted from time to time by acute exacerbations.— **Perforative appendicitis,** inflammation of the vermiform appendix in which perforation of this part occurs.

appendicula (ap-en-dik′ū-lạ), *n.*; pl. *appendiculæ* (-lē). [L., dim. of *appendix*: see *appendix.*] A fine hair-like growth borne at the apex of hymenomycetous fungi.

appendicular, *a.* 2. Relating to an appendicle, specifically to the appendix vermiformis: as, *appendicular* colic. *Buck,* Med. Handbook, I. 39.

appendiculocæcal (ap-en-dik″ū-lō-sē′kal), *a.* Relating to both the cæcum and the vermiform appendix. *Lancet,* Aug. 29, 1903, p. 600.

appending (ạ-pen′ding), *p. a.* Attached; appendant.

appending (ạ-pen′ding), *n.* Addition; an addition. *Athenæum,* April 27, 1895, p. 532.

Appendix cerebri, the pituitary body.

appendix (ạ-pen′diks), *v. t.* To add as an appendix. [Rare.] *N. E. D.*

apperception, *n.* 5. In Wundt's psychology, the process whereby a perception or idea attains to clearness in consciousness; also, the introspective contents of this process, that is, the clear idea itself and the changes resulting in consciousness from the induction of the attentive state.

Here we understand by *apperception* a psychological process in which, on the objective side, a certain contents becomes clear in consciousness and, on the subjective, certain feelings arise which, as referred to any given contents, we ordinarily term the state of 'attention.'
W. Wundt (trans.), Physiol. Psychol., I. 316.

Apperception center. See ★*center.*

apperceptionism (ap-ėr-sep′shọn-izm), *n.* In *psychol.,* the explanation and systematization of mental phenomena in terms not only of the mental elements and their physiological conditions but also of the process of apperception. The word is usually applied, in current controversy, to the psychological attitude represented by Wundt's system, that is, to a specific form of voluntarism: contrasted with *associationism.*

But without returning to *apperceptionism* we can overcome the one-sidedness of associationism.
H. Munsterberg, Harvard Psychol. Stud., I. 644.

apperceptionist (ap-ėr-sep′shọn-ist), *n.* An epistemologist who embraces apperceptionism.

The idealist's view is that of the '*apperceptionists.*'
Jour. Philos., Psychol. and Sci. Methods, Aug. 18, 1904, [p. 466.

apperceptionistic (ap-ėr-sep″shọn-is′tik), *a.* In *psychol.,* pertaining to or characterized by apperceptionism. *H. Münsterberg,* Harvard Psychol. Stud., I. 653.

apperceptive, *a.* 2. In current *psychol.*: (*a*) characterized by clearness, or by the state of attention; (*b*) resulting from or pertaining to the psychological process of apperception.

In almost every moment of the waking life an *apperceptive* process is taking place. Whenever an object is attended to, the presentation of it is apperceived.
G. F. Stout, Anal. Psychol., II. 113.

We may distinguish intellectual processes from associations, on the purely psychological basis, as *apperceptive* connections of ideas.
W. Wundt (trans.) Human and Animal Psychol. p. 312.

Apperceptive signal, in *psychophys.,* a premonitory signal to the observer to concentrate his attention on the coming impression.

apperceptively (ap-ėr-sep′tiv-li), *adv.* In *psychol.,* in an apperceptive manner; by way of the process of apperception: as, *apperceptively* known; *apperceptively* constituted.

appercipient (ap-ėr-sip′i-ẹnt), *a.* [NL. *appercipiens,* ppr. of *appercipere,* apperceive.] Apperceiving; capable of apperception. *G. F. Stout,* Anal. Psychol., II. 128.

Appert glass. See ★*glass.*

appetizement (ap-ē-tīz′mẹnt), *n.* [*appetize* + *-ment.*] Appetite; craving for food; hunger. *Scott,* Woodstock. [Rare.]

appetizingly (ap′ē-tī-zing-li), *adv.* In an appetizing manner; in a way to whet appetite: as, food cooked *appetizingly.*

applanation (ap-lạ-nā′shọn), *n.* [NL. **applanatio*(*n-*), < **applanare,* < L. *ap-* for *ad-,* to, + LL. *planare,* make plane: see *plane*[1], *v.*] Flattening: said of the crystalline lens.

In some cases the eye becomes myopic, which fact can be explained only by the assumption that the crystalline lens in toto is pressed forward toward the cornea, and that, in spite of the fact that in this manner the zonule of Zinn is stretched, and that an *applanation* of the lens is taking place. *Buck,* Med. Handbook, IV. 361.

apple, *n.* 1 and 2. The apple thrives under a very wide range of conditions, and in practically all temperate regions. In North America the chief regions in which it is produced commercially are the Eastern Canadian region, comprising parts of Ontario, Quebec, and the maritime provinces; the New England and New York region; the Piedmont region of Virginia; the Michigan-Ohio region; the prairie-plains region, from Indiana and Illinois to Missouri and Kansas, in which the Ben Davis variety is the leading factor; the Ozark region, comprising part of Missouri and Arkansas, often known as "the land of the big red apple"; and the rapidly developing regions of the Rocky Mountain States and the Coast States. In all these sections there are certain dominant varieties, which are usually less successful in other localities. As a country grows older, it usually happens that the list of desirable apples increases in length, because of the choosing of varieties to suit special localities and special needs. It is impossible to give lists of varieties for planting in all parts of the country, either for market or home use. The number of varieties of apples runs into the thousands. A generation and more ago, the great emphasis in apple-growing was placed on varieties, and the old fruit-books testify to the great development of systematic pomology. The choice of varieties is not less important now; but other subjects have greatly increased in importance with the rise of commercial fruit-growing, such as the necessity and means of tilling the soil, fertilization and cover-cropping, the combating of insects and diseases (especially by means of spraying), and revised methods of handling, storing, and marketing. The result is the transfer of the emphasis to scientific and commercial questions. The apple has been generally referred to the rosaceous genus *Pyrus,* although some recent authors reinstate the old genus *Malus.* Under the former genus it is known as *Pyrus Malus;* under the latter as *Malus Malus.* The nearest generic allies are the pears, comprising the typical genus *Pyrus.* The pears are distinguished, among other things, by having the styles free to the base; the apples by having the styles more or less united below. The species *Malus Malus* has run into almost numberless forms under the influence of long domestication. These forms are distinguished not only by differences in fruit, but by habit of tree and marked botanical characteristics. Thus the bloomless apple (see *seedless* ★*apple*) has more or less diclinous flowers, and it was early described as a distinct species under the name of *Pyrus dioica.* There are many forms of dwarf apple-trees, the best-known of which is the paradise or garden-apple. On this and similar stocks any variety of apple may be grafted or budded if very small or dwarf trees are desired. There are apple-trees with variegated foliage, others with double flowers, and others with a weeping or drooping habit. In China and Japan there is a double-flowered and showy-flowered apple of a very closely allied but apparently distinct species, *Malus spectabilis.* See also ★*crab-apple.*— **Apple bark-beetle, apple-blight, apple bud-worm, apple case-bearer.** See ★*bark-beetle,* ★*blight,* ★*bud-worm,* ★*case-bearer.*— **Apple canker.** See ★*canker.*— **Apple family,** the *Malaceæ,* often treated as a subfamily of *Rosaceæ.*— **Apple fruit-beetle.** See ★*fruit-beetle.*— **Apple leaf-miner, apple Lyonetia, apple saw-fly, apple twig-borer, apple-wood stainer.** See ★*leaf-miner,* ★*Lyonetia,* ★*saw-fly,* ★*twig-borer,* ★*stainer.*— **Argyll apple,** *Eucalyptus cinerea,* a gregarious species of New South Wales, yielding, with others, eucalyptus-oil.— **Bitter-rot of apple.** See ★*bitter-rot.*— **Black apple,** the native or wild plum, so called, of Australia, *Sideroxylon australe,* bearing edible fruit of an insipid flavor. Also called *bush-apple.* See *wild plum,* (*e*), under *plum*[1], and *Sideroxylon.*— **Black-rot of apple.** See ★*black-rot.*— **Bush-apple.** Same as *black* ★*apple,* above. — **Cannibal apple,** the fruit of *Solanum Uporo.* It is red like a tomato and is 5 or 6 cm. in diameter. It was formerly eaten by the Fijians at their cannibal feasts. In their vernacular it was called *boro dina,* or 'true boro.' In Samoa it is called *polo.* See *Solanum* and *cannibal's tomato,* under *tomato.*— **Green apple leaf-tier.** See ★*leaf-tier.*— **Lesser apple leaf-folder.** See ★*leaf-folder.*— **Mooley apple.** See ★*emu-apple.*— **Osage apple,** the Osage orange, *Toxylon pomiferum.* [Tennessee.]— **Possum-pocket apple,** the papaw, *Asimina triloba.* [Dismal Swamp region.]— **Seedless apple,** a variety of apple which normally has no seeds.

Such apples are not new, being mentioned in ancient times; nor has any seedless apple yet received general commendation. 'Seedless' apples are of two kinds: apples of normal form and structure in which the core is reduced to a minimum, and apples with nearly or quite apetalous and more or less imperfect flowers. The latter group comprises the so-called 'bloomless' apples, which have been known for centuries. The mere fact of comparative seedlessness has no significance in the choice of a variety, for the apple-grower must have a variety of certain quality, color, and form, with a high degree of productivity and other desirable qualities.—**Seven-year apple,** a West Indian tree, *Genipa clusiæfolia*, or its fruit. See *Genipa*.—**Sooty blotch of apple.** See ★*blotch*.

apple-aphis (ap'l-ā fis), *n.* The common leaf-louse, *Aphis mali*, of the apple, especially abundant in the late spring and early summer. Also *apple-leaf aphis* and *apple-louse*. See cut under *Aphis*.

apple-borer (ap'l-bōr″ėr), *n.* An insect which bores into apple-trees, as the round-headed apple-borer (larva of *Saperda candida*), or the flat-headed apple-tree borer (larva of *Chrysobothris femorata*). See cuts under *Saperda* and *Chrysobothris*.

apple-coal (ap'l-kōl), *n.* Free or soft coal; coal which mines easily. [Scotch.]

Applecross group. See ★*group*[1].

apple-dowdy (ap-l-dou'di), *n.* Same as ★*apple slump*.

apple-essence (ap'l-es″ėns), *n.* Same as ★*apple-oil*.

apple-faced (ap'l-fāst), *a.* Having a face round like an apple. *Dickens*, Dombey and Son. [Rare.]

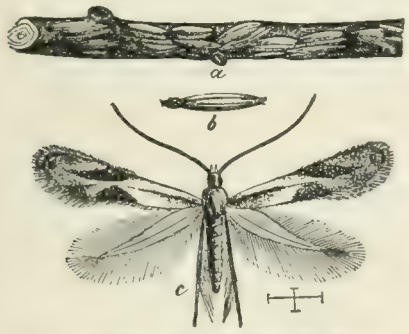
apple-fly (ap'l-flī), *n.* **1.** A little fruit-fly, *Drosophila ampelophila*, of the family *Drosophilidæ*, which lays its eggs in overripe apples and other fruit, and especially swarms around cider-mills. See cut under *fruit-fly*.—**2.** A trypetid fly (*Trypeta pomonella*) whose larva, known as the *apple-maggot* or *railroad-worm*, infests apples in the northeastern United States. See cut under *Trypeta*.

apple-gall (ap'l-gâl), *n.* A gall resembling an apple.—**Grape-vine apple-gall,** a gall, globular, fleshy, greenish in color, and nearly an inch in diameter, attached to the stems of grape-vines: produced by the larva of a fly, *Cecidomyia vitis-pomum*.

apple-grinder (ap'l-grīn″dėr), *n.* A grinding-mill for pulping apples, grapes, peaches, etc., or for grinding roots as food for cattle; a grinding-mill.

apple-gum (ap'l-gum), *n.* A medium-sized tree, *Eucalyptus Stuartiana*, resembling the common apple. It yields a useful hard, brown timber, and a kino. Also called *turpentine-tree*, *peppermint-tree*, and *apple-scented gum*. [Victoria.]

apple-leaf (ap'l-lēf), *n.* A leaf of the apple-tree.—**Apple-leaf Bucculatrix,** a tineid moth, *Bucculatrix pomifoliella*, whose larva feeds abundantly on the leaves of the apple in the eastern United States and hibernates within a whitish elongate, longitudinally ribbed cocoon attached to the twigs or trunk of the tree. **Apple-leaf flea-weevil.** See ★*flea-weevil*.



Apple leaf Bucculatrix (*Bucculatrix pomifoliella*).
a, apple twig covered with cocoons; *b*, cocoon, enlarged; *c*, moth, much enlarged (Riley).

apple-leather (ap'l-leтн″ėr), *n.* A sort of tough paste of a leathery consistency, made of apples partly cooked and dried in a hot sun.

apple-louse (ap'l-lous), *n.* Same as ★*apple-aphis*.—**Woolly apple-louse,** *Schizoneura Americana*. See *American* ★*blight*.

apple-maggot (ap'l-mag″ọt), *n.* The larva of *Trypeta pomonella*, a dipterous insect which damages apples in the New England States.

apple-midge (ap'l-mij), *n.* A small chironomid fly, *Molobrus mali*, whose larva feeds on the flesh of ripe and stored apples, hastening their decay.

apple-nuts (ap'l-nuts), *n. pl.* A commercial name for the apple-shaped fruits of the ivory-nut palms, *Calococcus Amicarum* and *C. Solomonensis*, of the Caroline and Solomon Islands. See *ivory-nut*.

apple-oil (ap'l-oil), *n.* Ethyl or amyl valerianate diluted with alcohol: used to imitate the odor of apples in confectionery and soda-water syrups. Also *apple-essence*.

apple-scab (ap'l-skab), *n.* A disease of the apple-tree which attacks both the leaves and fruit, caused by the fungus *Fusicladium dendriticum*. See *Fusicladium* and *scab*, 5.

apple-scale (ap'l-skāl), *n.* Any one of several species of scale-insects or bark-lice that infest the apple, notably, the oyster-shell bark-louse of the apple (*Lepidosaphes ulmi*, formerly *Mytilaspis pomorum*) and the scurfy scale (*Chionaspis furfurus*).

apple-slicer (ap'l-slī″sėr), *n.* An instrument for cutting apples into slices for culinary use.

apple-slump (ap'l-slump), *n.* Hot apple-sauce covered with a rich dough and cooked. [U.S.]

apple-sphinx (ap'l-sfingks), *n.* A sphingid moth, *Sphinx gordius*. Its apple-green larva feeds on the foliage of the apple in Canada and the United States, from the Mississippi valley eastward.

apple-thrips (ap'l-thrips), *n.* A minute thysanopterous insect, *Phlæothrips mali*, which is often found on young withered apples.

apple-toddy (ap'l-tod″i), *n.* A toddy into which the pulp of baked or roasted apples is stirred; also, a toddy made of apple-jack.

Apple-tree borer. See ★*borer*.—**Apple-tree canker.** See ★*canker*. **Apple-tree pruner.** See ★*pruner*.—**Apple-tree shot-hole borer.** See ★*borer* and ★*shot-borer*.—**Apple-tree tent-caterpillar.** See ★*tent-caterpillar*.—**Bronze apple-tree weevil.** See ★*weevil*. **Red-humped apple-tree caterpillar.** See ★*caterpillar*.—**Yellow-necked apple-tree caterpillar.** See ★*caterpillar*.

apple-worm (ap'l-wėrm), *n.* The larva of the codling-moth, *Carpocapsa pomonella*, a cosmopolitan tortricid moth. See *codling-moth*.—**Many-dotted apple-worm,** the larva of a noctuid moth, *Balsa malana*, two generations or broods of which appear during the summer, often feeding in numbers on the foliage of the apple. It is an inch or more in length and light green in color, with longitudinal white lines and many whitish dots.

apply, *v. i.* **5.** In *astrol.*, of a heavenly body, to approach to the conjunction or aspect of another.

appointment, *n.*—**Bureau of appointments.** See ★*bureau*.—**Illusory appointment,** such an appointment or disposition of property under a power as is merely nominal and not substantial. *Bouvier*, Law Dict.

Appolt coke-oven. See ★*coke-oven*.

apport (a-pōrt' or, as F., a-pôr'), *n.* [F., ⟨ *apporter*, ⟨ L. *apportare*, bring to, introduce.] The introduction, professedly by occult or supernormal means, of flowers, musical instruments, etc.: used with reference to performances of spiritualistic mediums.

Some of the physical phenomena which I have adduced as among those proclaimed to have occurred, such as *apports*, scent, movement of objects, passage of matter through matter, bear a perilous resemblance to conjuring tricks, of a kind fairly well known; which tricks if well done can be very deceptive.
Sir Oliver Lodge, in Proc. Soc. Psychical Research, XVII. 48.

apportionable (a-pōr'shon-ą-bl), *a.* [*apportion* + *-able*.] Liable to be apportioned. *Sir E. Coke*.

apposal (a-pō'zal), *n.* The act of apposing. **Apposal of sheriffs,** in *English law*, the charging them with money received upon account of the Exchequer. *Bouvier*, Law Dict.

apposit, *a.* A simplified spelling of *apposite*.

apposition[2] (ap-ọ-zish'ọn), [OF. *apposition*, var. of *opposition*. See *appose*[2].] A public disputation or examination: now used only as a name of Speech Day in St. Paul's School, London.

appositively (ą-poz'i-tiv-li), *adv.* In apposition or so as to stand in apposition; appositionally: as, substantive expressions put *appositively*.

appraisable (ą-prāz'ą-bl), *a.* [*appraise* + *-able*.] Capable of being appraised or of having the value fixed.

appreciation, *n.*—**The world of appreciation,** the world as it appears to spiritual insight, to the broadest and wisest conception of the most human good sense. Opposed to the *world of description*, or world of facts, under a materialistic and, as far as possible, scientifically theoretical aspect. The word *appreciation* in this phrase is to be understood in sense 2, as "sympathetic understanding" which "estimates the qualities of things and gives them their due value." The world of appreciation is a world of real, living, and purposing beings, in some sense the children of God. The term was introduced in 1892 by J. Royce. See the extract.

We shall be led to make a provisional sundering of the two points of view, viz. (1) that of our appreciative or most explicitly volitional consciousness, and (2) that of our descriptive or more theoretical consciousness. . . . We shall express the opposition of the two points of view by calling the realm of Being, as more abstractly theoretical consciousness defines it, the World of Description; while the world as otherwise interpreted is the world of life, *the World of Appreciation*. . . . The only justification for the more abstractly theoretical conception of the World of Description is its value as a means of organizing our conduct and our conception of what the will seeks.
Royce, The World and the Individual, 2d ser., p. 26.

appreciativeness (ą-prē'shi-ą-tiv-nes), *n.* [*appreciative* + *-ness*.] The character of being appreciative; disposition to recognize excellence.

apprehension, *n.*—**Implicit apprehension,** in *psychol.*, the understanding of a whole in its unity and distinctness, without discernment of all or even any of its component details.

This circumstance suggests a name for that apprehension of a whole which takes place without discernment of its parts. We may call it *implicit apprehension*.
G. F. Stout, Anal. Psychol., I. 95.

apprenticement (ą-pren'tis-mėnt), *n.* [*apprentice* + *-ment*.] The act of apprenticing; apprenticeship. [Rare.]

The premature *apprenticements* of these tender victims.
Lamb, Essays of Elia, Praise of the Chimney Sweeper.

appressor (a-pres'ọr), *n.* Same as ★*appressorium*.

appressorium (a-pre-sō'ri-um), *n.*; pl. *appressoria* (-ą). [NL., ⟨ L. *apprimere*, pp. *appressus*, press to: see *appressed*.] The organ by which parasitic fungi attach themselves to their hosts, consisting usually of the flattened or swollen end of a hypha.

Appressoria are also formed by some parasitic Fungi, as a minute flattening of the tip of a very short branch (Erysiphe), or the swollen end of any hypha which comes in contact with the surface of the host (Piptocephalis, Syncephalis), haustoria piercing in each case the cell-wall below. In Botrytis the *appressoria* assume the form of dense tassels of short branches.
Encyc. Brit., XXVIII. 555.

approach, *n.* **6.** In *golf*, the play by which a player endeavors to get his ball on to the putting-green.

approbatory, *a.*—**Articles approbatory.** See ★*article*.

Approver in the marches. See ★*march*[1].

Approximate numbers. See ★*number*.

approximator (ą-prok'si-mā-tọr), *n.* One who approximates or comes near.

Appunn's lamella or **reed.** See ★*lamella*.

apricot, *n.*—**Essence of apricot,** amyl butyrate mixed with amyl alcohol and diluted with ordinary alcohol: used to imitate the odor of apricots in confectionery and soda-water syrups.

apricot-oil (ā″pri-kot-oil'), *n.* A fat oil expressed from the kernels of apricots: now often substituted for almond-oil.

a prima vista (ä prē'mä vis'tä). [It.: see *prime* and *vista*.] At first sight: as, to read a piece of music *a prima vista*.

Aprion (a-prī'on), *n.* [NL., ⟨ Gr. *ἀ-* priv. + *πρίων*, saw.] A genus of snappers of the family *Lutianidæ*, found in the tropical seas: distinguished by the scaleless fins. *A. virescens* of the Pacific is an excellent food-fish.

apriorist, *n.* **II.** *a.* Of or pertaining to a priori cognition, or to apriorism.

The *apriorist* notion that among free competitors wealth must go to the industrious.
G. B. Shaw, Fabian Essays in Socialism, p. 177.

aproctia (a-prok'ti-ą), *n.* [NL., ⟨ Gr. *ἀ-* priv. + *πρωκτός*, anus.] The condition of having an imperforate anus.

apron, *n.* **2.** (*j*) In *mining*, a block of timber forming an off-set to a pump-rod. (*k*) In *gold-milling*, the amalgamated copper plates outside of a stamp-battery, used to collect the gold from the pulp which flows over these plates in a thin stream from the mortar. Also *apron-plate*.

4. (*b*) The vertical portion of the slide-rest of an engine-lathe which carries the clasp-nut and the gearing for the feed. (*c*) The slide or grate of a punching- or shearing-machine.

5. (*d*) A platform built of timbers at the foot of a slide, which guides in the desired direction logs leaving the slide. (*e*) The shield in front of the face of an undershot water-wheel, intended to keep the water in action upon the buckets.

6. An overwashed deposit of gravel and sand such as is commonly spread southward from the greater moraines of the northeastern United States. Also *frontal apron* and *morainic apron*.

Where the topography was not rugged, numerous ice-derived streams built sloping plains resembling low alluvial fans. These are well seen on Long Island and Martha's Vineyard, and to those of the latter place Professor Shaler has given the very descriptive name of *frontal aprons*. *Bulletin Amer. Geog. Soc.*, XXX. 205.

7. A trough, or channel, or a shallow vat, of considerable width as compared with its depth, over which water or other liquid flows in a thin wide sheet, or in which it stands; specifically, the wide, shallow channel through which the water flows to the periphery of a breast-wheel or overshot wheel.—8. In *salt-manuf.*, a shallow tray in which a dilute solution of brine is exposed to the sun to be evaporated and concentrated. **Hottentot apron.** Same as ★*tablier*.

apron-conveyor (ā′prun-kon-va ėr), *n.* See ★*conveyor*, 4.

apron-fall (ā′prun-fâl), *n.* A piece of leather attached to the top of the dash-board of a carriage: used as a cover to the apron when the latter is folded.

apronful (ā′prun-fūl), *n.* [*apron* + *ful.*] As much as can be held in an apron: as, "an *apronful* of flowers," *Miss Braddon.*

apron-hook (ā′prun-hůk), *n.* A short hook with an eye by which it is secured to the dash of a carriage. Together with a ring, it holds the apron in place when folded.

apron-plate (ā′prun-plāt), *n.* Same as ★*apron*, 2 (*k*).

aprosexia (ap-rō-sek′si-ą), *n.* [NL., ⟨ Gr. ἀπροσεξία, inattention, ⟨ ἀ- priv. + προσέξειν, attend, hold to, ⟨ πρός, toward, + ἔχειν, hold.] Lack of power to keep the attention fixed on any subject; an extreme degree of mind-wandering. *Buck*, Med. Handbook, VI. 112.

Apseudes (ap-su′dēz), *n.* [NL., ⟨ Gr. ἀψευδής, without deceit, ⟨ ἀ- priv. + ψεῦδος, lie, deceit: see *pseudo-*.] The typical genus of the family *Apseudidæ*. *Leach*, 1814.

Apseudidæ (ap-sū′di-dē), *n. pl.* [NL., ⟨ *Apseudes* + *-idæ*.] A small family of cheliferous *Isopoda*, having the body depressed, the carapace with a well-developed rostrum, and the first antennæ with two many-jointed flagella. The typical genus is *Apseudes*.

Apsilus (ap-sī′lus), *n.* [NL., ⟨ Gr. ἀ- priv. + ψῖλός, smooth.] A genus of snappers of the family *Lutianidæ*, found in tropical seas and often handsomely colored.

apterion (ap-tē′ri-on), *n.*; pl. *apteria* (-ą). Same as *apterium*.

apteros (ap′te-ros), *a.* [Gr. ἄπτερος, wingless.] Wingless: an epithet of Nike (Victory) as represented, unusually, without wings (signifying that she did not intend to leave the precinct favored by her presence). There was a temple of Nike Apteros at Athens. See cut under *Ionic*.

Apterura (ap-te-rū′rä), *n. pl.* [NL., ⟨ Gr. ἀπτερος, wingless, + οὐρά, tail.] A division of anomurous crustaceans in which the appendages of the sixth segment of the pleon are not expanded and wing-like: contrasted with *Pterygura*.

Apterygogenea (ap-ter″i-gō-jen′ē-ą), *n. pl.* [NL., ⟨ Gr. ἀ- priv. + πτέρυξ (πτερυγ-), wing, + -γενής, -producing.] In Brauer's classification, one of two principal divisions of the class *Insecta*, the other being the *Pterygogenea*. It includes only the order *Thysanura* (*Aptera* of Sharp's system).

Apterygota (ap-ter-i-gō′tą), *n. pl.* [NL., ⟨ Gr. ἀ- priv. + πτερυγωτός, winged, ⟨ πτέρυξ, wing.] A group of insects including only the order *Thysanura*, which contains wingless forms only that are supposed to have descended from wingless ancestors.

apterygotism (ap-ter-i-gō′tizm), *n.* [*apterygot*(*ous*) + *-ism*.] In *entom.*, the state of being wingless and also of being descended from wingless ancestors.

apterygotous (ap-ter-i-gō′tus), *a.* [Gr. ἀ- priv. + πτερυγωτός, winged.] In *entom.*, without wings and derived probably from wingless ancestors, as the *Thysanura* and *Collembola*.

Were an *apterygotous* insect gradually to develop wings, it would be on the exopterygotous system.
Encyc. Brit., XXIX. 502.

Aptian (ap′ti-ąn), *a.* and *n.* [*Apt* in Vaucluse, France.] In *geol.*, noting a geologic stage or division at the top of the Lower Cretaceous formation in France and Belgium. It comprises marls, clays, and impure limestones, and in places attains a thickness of 1,800 feet, divisible into an upper and a lower group and abounding in fossils.

aptyalia (ap-ti-ā′li-ą), *n.* [Gr. ἀπτύαλος, without spittle, ⟨ ἀ- priv. + πτύαλον, spittle.] Same as ★*aptyalism*.

aptyalism (ap-tī′ą-lizm), *n.* [See *aptyalia*.] In *pathol.*, diminution or suppression of the salivary secretion.

Aptychus beds, rock strata in the Alps of Upper Jurassic age characterized by the abundance of aptychi. See *aptychus*.

apyknomorphous (a-pik-no-môr′fus), *a.* [Gr. ἀπύκνωμορφος, not dense (⟨ ἀ- priv. + πυκνός, dense), + μορφή, form.] Noting the character of a cell which, in consequence of the fact that its chromatic or staining element is not compactly arranged, takes the ordinary dyes less readily than is usual, or irregularly.

In others, the chromatic elements are more loosely distributed, and the seeds staining less intensely, are said to be in the *apyknomorphous* condition.
F. R. Balsa, in Jour. Exper. Med., V. 553.

apyonime (a-pī′ǫ-nim), *n.* [Formation not clear.] Same as *auramine*.

apyrene (ap′i-rēn), *n.* [Gr. ἀ- priv., without, + πυρήν, the stone of a fruit (nucleus).] Deficient in nuclear substance: noting certain abnormal or unusual forms of spermatozoa.

apyrite (a-pī′rīt), *n.* [Gr. ἀ- priv. + πῦρ, fire, + *-ite*[2].] A refractory substance containing about 93 per cent. of silica: used at some German iron-works for furnace-linings.

A. Q. M. G. An abbreviation of *Assistant Quartermaster-General*.

aqua, *n.* 3. In *phar.*, a solution of an essential oil or gas in water, a solution of any other substance being termed *liquor*. In the British pharmacopœia, only a solution of an essential oil is called *aqua*, that of a gas being called *liquor*. **Aqua dolce sauce.** See ★*sauce*. - **Aqua fontis**, in *phar.*, spring water. - **Aqua pura**, in *phar.*, pure water (distilled water).

aquacultural (ā-kwą-kul′tūr-ąl), *a.* Relating or pertaining to the production of fish and other sea, lake, and river food-stuffs; piscicultural: as, an *aquacultural* experiment-station.

Aquæductus cerebri, the infundibulum of the brain.—**Aquæductus Cotunnii.** Same as *aquæductus vestibuli*.

aquamanile (ak″wą-mą-nī′lē), *n.* [ML., also *aquæmanile*, etc.] Same as *aquæmanale*.

aquamarine-chrysolite (ā″kwą-mą-rēn′kris′-ǫ-lit), *n.* The pale-yellow variety of beryl (aquamarine).

aquarial (ą-kwā′ri-ąl), *a.* Same as *aquarian*. [Rare.]

aquarian, *n.* 2. One who keeps an aquarium. [Rare.] *N. E. D.*

Aquarid (ą-kwa′rid), *n.* Same as ★*Aquariid*.

Aquarii (ą-kwa′ri-ī), *n. pl.* [See *Aquarius*.] A sect of the early church who used water instead of wine in the Lord's Supper. See ★*Abstemii*.

Aquariid (ą-kwā′ri-id), *n.* [*Aquari*(*us*) + *-id*[2].] One of the meteors of the flock which about May 4 radiate from the constellation of Aquarius.

aquate (ā′kwāt), *n.* [NL. **aquatum*, ⟨ L. *aqua*, water.] In *chem.*, same as *hydrate*.

aquatic, *a.*—**Aquatic plants**, in *hort.*, those plants which are grown continuously in water, as in ponds and aquaria. Typical examples are the water-lilies. In looser usage the term is sometimes applied to species that grow in bogs or other very wet places as well as to those that grow only in water of greater or less depth. Most aquatic plants are permanently attached to the earth or rocks at the bottom of the water, but some of them eventually break loose and for a part of their existence may float free.

aquation (ą-kwā′shǫn), *n.* [L. *aquatio*(*n-*), ⟨ *aquari*, bring or fetch water, ⟨ *aqua*, water.] 1. The procurement of a supply of water: as, "conveniently situated for *aquation*." *Gibson*, Camden's Brit.—2. Disposal of the dead by sea-burial. *Sci. Amer.*, Jan. 7, 1899. [Rare in both uses.]

aquativeness (ą-kwat′iv-nes), *n.* [**aquative* (⟨ L. *aquari*, get water) + *-ness*.] In *phren.*, a propensity for water.

aquavalent (ā-kwą-vā′lent), *n.* [L. *aqua*, water, + E. *valent*.] In *chem.*, the proportion of water, counted by molecules, which is needed by a single molecule of a salt to form with it a cryohydrate.

aqueoglacial (ā′kwē-ǫ-glā′shiąl), *a.* [*aqueo*(*us*) + *glacial*.] Formed or acted upon by glacial ice or water from glacial streams, or exhibiting characters which show the influence of both. *J. Geikie*, The Great Ice Age, p. 418.

aqueo-igneous (ā′kwē-ǫ-ig′nē-us), *a.* In *geol.*, resulting from the action of heat in the presence of much steam or of its dissociated elements: applied to those rocks which, like pegmatite, exhibit the effects both of igneous action and of aqueous solution.

Aqueous chambers of the eye. See *chambers of the eye*, under *chamber*.—**Aqueous extract**, in *phar.*, an extract made by evaporating a watery solution of the drug.—**Aqueous lava.** Same as *mœna*.

Aquia Creek group. See ★*group*[1].

aquicolous (a-kwik′ǫ-lus), *a.* [L. *aqua*, water, + *colere*, dwell in: see *cult.*] Inhabiting the water.

The larvæ possess a proboscis armed with hooks and bore into the body cavity of *aquicolous* insect larvæ, or rarely mollusks, where they encyst.
Buck, Med. Handbook, VI. 224.

aquifer (ak′wi-fėr), *n.* [L. *aqua*, water, + *-fer*, ⟨ *ferre*, bear.] In *geol.*, a water-bearing bed or stratum, necessarily of some open-textured rock.

The artesian system shows four or five *aquifers*, or water-bearing strata, more or less completely separated from one another. *Science*, Nov. 22, 1901, p. 794.

Aquifoliaceæ (ak′wi-fō-li-ā′sē-ē), *n. pl.* [LL. (A. P. de Candolle, 1813), ⟨ *Aquifolium*, Tournefort's name for the genus *Ilex* (⟨ L. *aqua*, water, + *folium*, leaf).] A family of dicotyledonous, choripetalous plants of the order *Sapindales*, the holly family. It is characterized by regular polygamodiœcious flowers, berry-like drupes, and simple alternate leaves mostly without stipules. They are trees or shrubs with watery sap. The family embraces four genera, of which only *Ilex* is specially important. See *Ilex* and *Nemopanthes*.

aquifoliaceous (ak′wi-fō-li-ā′shius), *a.* [NL. *Aquifoliaceæ* + *-ous*.] Belonging to the plant family *Aquifoliaceæ*.

aquilin, *a.* A simplified spelling of *aquiline*.

aquilino (ä-kwi-lē′nō), *n.* [It.: see *aquila*.] A small silver coin, bearing an eagle, which was struck in Padua during the republican epoch (1200–1300).

aquiloid (ak′wi-loid), *a.* [L. *aquila*, eagle, + εἶδος, form.] Resembling an aquiline form; noting particularly a nose which resembles in form an aquiline nose. *Keane*, Man Past and Present, p. 470.

Aquilonian (ak-wi-lō′ni-ąn), *a.* and *n.* [See *aquilon*.] In *geol.*, noting a division of the Jurassic formation in the Syzran district of Russia.

aquincubital (a-kwin-ku′bi-tąl), *a.* [Irreg. ⟨ Gr. ἀ- priv. + L. *quin*(*tus*), fifth, + *cubitus*, forearm, + *-al*[1].] Noting that condition of a bird's wing in which the fifth secondary is absent, although the coverts are present. *Wray*, Proc. Zool. Soc. London, 1887, p. 348.

aquintocubital (a-kwin-tō-ku′bi-tąl), *a.* A later, partly amended form of *aquincubital*. *Pycraft*, 1899.

aquintocubitalism (a-kwin-tō-kū′bi-tąl-izm), *n.* In *ornith.*, the state or condition of lacking the fifth secondary. Also called *diastataxy*. *Trans. Linnean Soc. London*, Zoöl., Oct., 1901, p. 221.

aquiparous (ą-kwip′ą-rus), *a.* [L. *aqua*, water, + *parere*, produce.] Producing water: applied to the parotid glands, which secrete a thinner fluid than the other salivary glands.

Aquitanian, *a.* and *n.* 2. In *geol.*, noting a division or stage in the Tertiary formations of the Paris basin representing the latest Oligocene. The deposits of this stage were essentially lacustrine, and the fossils are fresh-water and terrestrial mollusks, especially *Helix*, together with the remains of *Rhinoceros* and other mammals.

aquo-igneous (ā-kwō-ig′nē-us), *a.* Same as ★*aqueo-igneous*.

ar, *v.* A simplified spelling of *are*.

Ar_0, Ar_1, Ar_2, Ar_3, etc. Points of flexure in the curves of cooling of iron and steel.

A. R. A. An abbreviation of *Associate of the Royal Academy*.

araban (ar′ą-ban), *n.* Same as *arabin*. *Jour. Soc. Chem. Industry*, XI. 931.

Arabellites (ar-ą-be-lī′tēz), *n.* [NL. *Arabella*, a genus of worms, + *-ites*.] A genus of fossil worms based on detached jaws which are preserved as black and highly lustrous objects, and which are occasionally found in sets of like pairs. They are very variable in form, and certain phases of them have been referred to other genera, as *Eunicites*, *Œnonites*, *Polygnathus*, and *Prionodus*: found throughout the Paleozoic rocks.

a rabesche (ä rä-bes′ke). [It.] With arabesques: said of decoration with motives of arabesque form usually painted on a light ground, frequently seen on the majolica wares of Genoa and Venice.

arabesquely (ar′ą-besk-li), *adv.* In the style of the Arabians. [Rare.] *N. E. D.*

Arabesquely shapen barks of Carthaginian lands.
Hirst, Poems, p. 66.

Arabianize (a-rā'bi-an-īz), *v. t.*; pret. and pp. *Arabianized*, ppr. *Arabianizing*. To make Arabian; to assimilate to Arabian form and usage.

> It is probable that the Persian Persianized in this way neighboring tongues, that the Arabian *Arabianized* them.
> *Tarde* (trans.), Laws of Imitation, p. 258.

Arabicism (a-rab'i-sizm), *n.* [*Arabic* + *-ism.*] A word, idiom, or expression peculiar to Arabic. *Southey.*

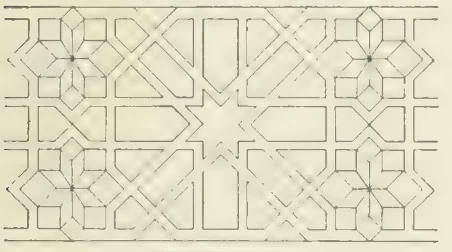
Arabic pottery. See ★*pottery*.

arabinone (ar'a-bi-nōn), *n.* [*arabin* + *-one.*] A compound, $C_{10}H_{18}O_9$, intermediate between arabin and arabinose, as dextrine is intermediate between starch and glucose. It is syrupy and sweet.

arabite (ar'a-bīt), *n.* [*arab(in)* + *-ite*[2].] A pentacid alcohol, $C_5H_7(OH)_5$, formed by the reduction of arabinose. It is an optically inactive compound, sweet, and soluble in water.

arabonic (ar-a-bon'ik), *a.* Noting an acid, $C_5H_{10}O_6$, formed by the oxidation of arabinose with bromine. It is monobasic, and the optically active form melts at 89° C.

arabotedesco (ar"a-bō-te-des'kō), *a.* [It., 'Arabic-German': see *Arab* and *Dutch*.] Having, or supposed to have, the characteristics at once of Saracenic and of German building or design: applied to Romanesque of the more florid sort and suggested by the use of the German *Byzantinisch* for the German round-arched building.



Arabesques [illegible]
From the Royal Chapel, Palermo.

Araby (ar'a-bi), *a.* and *n.* [ME. *Araby*, < OF. *Arabi*, < L. *Arabus*: see *Arabian*.] **I.** *a.* Arabian; Arabic: as, "the *Arabye* language," *Arnold's Chronicle*, p. 158. [Now only poetic.]

II†. *n.* **1.** A native of Arabia. *Trevisa.*—**2.** An Arabian horse.

> Elfaydes, and *Arrabys*, and olifauntez noble.
> *Morte d'Arthur*, l. 2288. *N. E. D.*

araça (ä-rä-sä'), *n.* [Tupi *araçá*.] A general name in Brazil of several varieties of guava, shrubs or trees of the genus *Psidium*, distinguished by qualifying words: as, *araça-guazu* (*P. Guajava*), *araça-iba* (*P. Araca*), *araça-mirim* (*P. Araca*), and *araça de Praya* (*P. Cattleyanum*).

arachic (a-rak'ik), *a.* [*Arachis* + *-ic.*] Same as *arachinic*.

arachinic (ar-a-kin'ik), *a.* Pertaining to or derived from the earth-nut, *Arachis hypogæa*: as, *arachinic* acid.

arachnean (a-rak'nē-an), *a.* [Gr. ἀραχναῖος, < ἀράχνη, a spider.] Of the nature of or resembling a spider's web in texture.

Arachnites (ar-ak-nī'tēz), *n.* [NL. (F. W. Schmidt, 1793), in allusion to the form of the flowers, < Gr. ἀραχνίτης, spider-like, < ἀράχνη, spider.] A genus of orchidaceous plants allied to *Orchis*: characterized by two pollen-glands inclosed in separate sacs. The genus is improperly called *Ophrys* by many authors. See *Ophrys*.

Arachnoidinæ (a-rak-noi-dī'nē), *n. pl.* [NL., < *Arachnoidus* (a genus of coleoptera) + *-inæ*.] A group of *Clypeastridæ*, containing the low, flat forms with open petals.

arachnophagous (ar-ak-nof'a-gus), *a.* [Gr. ἀράχνη, a spider, + φαγεῖν, eat.] Spider-eating; feeding upon spiders or other arachnids: said of some birds.

arada (ä-rä'dä), *n.* [Sp., < *arar*, < L. *arare*, plow.] Plowed or cultivated land; arable land. [Southwestern U. S.]

Aragallus (ar-a-gal'us), *n.* [NL. (Necker, 1790), appar. an anagram or an analogical formation from *Astragallus*, a form used by the same author for *Astragalus*.] A genus of dicotyledonous plants of the family *Fabaceæ*. See *Oxytropis*.

Arago-Davy photometer. See ★*photometer*.

Aragonite group, the isomorphous orthorhombic species: aragonite, $CaCO_3$; bromlite, $(Ca, Ba)CO_3$; witherite, $BaCO_3$; strontianite, $SrCO_3$; and cerusite, $PbCO_3$.

Arago's law of polarization. See ★*polarization*.

araguane (ä-rä-gwä'nā), *n.* [Native name in Venezuela.] In Venezuela, a tree of the bignonia family, *Tecoma spectabilis*, yielding a very hard wood of a dark-olive color.

araiocardia (a-rā-ō-kär'di-ä), *n.* [NL., < Gr. ἀραιός, thin, porous, with intervals, + καρδία, heart.] Same as ★*brachycardia*. *Lancet*, Aug. 22, 1903, p. 529.

Arales (a-rā'lēz), *n. pl.* [NL. (Lindley, 1833), < *Arum* + *-ales*.] An order of monocotyledonous plants embracing the families *Araceæ* and *Lemnaceæ* (which see). The inflorescence is usually a spadix inclosed in a spathe, whence the name *Spathifloræ*, but it is sometimes naked. In Lindley's system the aral alliance included also the *Pandanaceæ* and *Typhaceæ*.

araliad (a-rā'li-ad), *n.* [NL. *Aralia*, + *-ad*[1].] A plant of the family *Araliaceæ*.

aralie (ä-rä-lē'), *n.* [F. form of a native name (?) Cf. *Aralia*.] A name in the West Indies of two parasitic trees, *Clusia alba* and *C. rosea*. Also called *Scotch attorney*, *strangler-tree*, *murderer-tree*, ★*chigoe-poison*, and ★*cupay*. See the last two names and *Clusia*.

araliin (a-rā'li-in), *n.* [*Aralia* + *-in*[2].] A crystalline glucoside of unknown composition found in *Aralia spinosa*.

Aralo-Caspian (ā"ra-lō-kas'pi-an), *a.* Of or pertaining to the Aral and Caspian Seas.—**Aralo-Caspian basin**, the original area of sea-water cut off from the ancient and greater Mediterranean by the uprising of its floor in recent geologic times, and embracing the present Caspian Sea, the Sea of Aral, and the extensive salt-lagoons and marshes about them. The waters of these seas are still tenanted by seals and other animals elsewhere inhabiting the ocean. The Black Sea had a similar origin, but has been separated from the Caspian region, and the ridge that divides it from the Mediterranean has been cut through so that it now communicates therewith. It is believed that the Caspian and Aral Seas are still shrinking by evaporation.

A. R. A. M. An abbreviation of *Associate of the Royal Academy of Music*.

aramaca (ä"rä-mä-kä'), *n.* [Tupi *aramacá*.] A Brazilian name of a wide-eyed flounder, *Syacium papillosum*.

Aramigus (a-ram'i-gus), *n.* [NL. (Horn, 1876), formation not obvious.] A genus of otiorhynchid beetles. It contains two North American species, one of which, *A. fulleri*, is a serious enemy to the rose, its larvæ living on the roots, while the adults feed on the foliage and flowers. See cut under *rose-beetle*.

aramina (ä-rä-mē'nä), *n.* [Brazilian Pg., < Pg. *arame*, wire.] The commercial name in Brazil of the fiber obtained from the guaxima or cæsar-weed, *Urena lobata*. It is white and strong, and is considered a good substitute for jute in the manufacture of sacking and twine. See ★*cæsar-weed*, ★*guaxima*, and *Urena*.

aranga (ä-rän'gä), *n.* [Sp. *aranga*, from a native name (in Tayabas province ?).] In the Philippine Islands, a large forest-tree, *Homalium Luzoniense*, of the *Flacourtia* family, which yields straight logs often 75 feet long. The wood is hard and durable, of a reddish color streaked with violet, and is used for building purposes, cabinet-work, and the piles of wharves. It has the property of resisting the attacks of ship-worms.

Aran's ether. Same as *ethylidene* ★*chlorid*.

Arapaho group. See ★*group*[1].

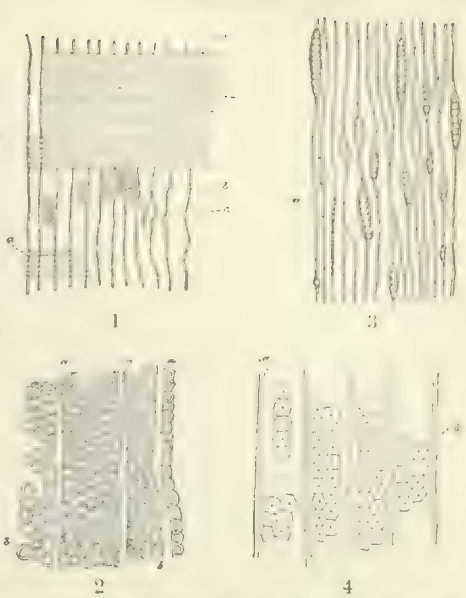
Arapaimidæ (ar-a-pī'mi-dē), *n. pl.* [NL., < *Arapaima* + *-idæ*.] A family of osteoglossoid fishes found in fresh waters of the tropics. It includes the gigantic *Arapaima gigas*, which reaches a length of 15 feet and a weight of 400 pounds and is an important food-fish.

arara, *n.* **2.** A fish, *Hæmulon plumieri*, found in abundance from Rio Janiero to Cape Hatteras.

arariba (ä-rä"rē-bä'), *n.* [Tupi *araribá*, < Tupi *arára*, parrot, + *-iba*, fruit, tree.] A leguminous tree of Brazil, *Centrolobium robustum*, the beautiful striped wood of which is one of the kinds known as *zebra-wood*. Also called *araroba*.

araticu (ä-rä-tē-kö'), *n.* [Native name in Brazil.] In Brazil, one of several trees, belonging to the genus *Anona* and to the related genus *Rollinia*, which bear edible fruits: as, *araticu do brejo* (*A. palustris*), *araticu do rio* (*A. spinescens*), and *araticu do mato* (*R. sylvatica*).

Araucarioxylon (ar"â-kā-ri-ok'si-lon), *n.* [NL. (Kraus, 1870), < *Araucaria* + Gr. ξύλον, wood.] A genus of fossil coniferous plants, based entirely on the internal structure of the wood, which has not been connected with other parts, and which agrees in most respects with that of *Araucaria*. The leading character is the hexagonal



Araucarioxylon [illegible]. From the [illegible], Virginia.

1. Radial section: *a*, *a*, medullary rays; [illegible] rows of hexagonal pits; *c*, walls of [illegible]
2. Transverse section: *a*, *a*, *a*, medullary rays; [illegible] spaces.
3. Tangential section: *a*, sections of bordered pits on radial walls.
4. Radial section further enlarged: *a*, single row of rounded pits; *b*, double row of hexagonal pits.

areolate punctations of the tracheids shown in radial section, which are always in two or more rows. The genus is properly Mesozoic, and chiefly Triassic, but certain Paleozoic forms have been referred to it. See *Dadoxylon*, *Pinites*, and *fossil wood* (*a*), under *wood*[1].

araxina (ä-rä-shē'nä), *n.* [Native name.] A name applied to a tree of southern Brazil, *Vochy gummiferum*, which yields large quantities of a useful gum, similar in appearance and properties to gum arabic.

arbacin (är'ba-sin), *n.* [*Arbacia* + *-in*[2].] A histon obtained from the spermatozoa of *Arbacia pustulosa*. *Simon*, Physiological Chem., p. 71.

Arbacina (är-ba-sī'nä), *n. pl.* [NL., < *Arbacia* + *-ina*[2].] A suborder of *Diademoida* containing echinoids in which the ambulacral plates are simple primaries near the apical area, while at the ambitus they are compound. The interambulacral plates and the peristome are large.

Arbaciosa (är-bā-si-ō'sä), *n.* [NL., < *Arbacia* + *-osa*.] A genus of cling-fishes of the family *Gobiesocidæ*. They live in rock-pools with the sea-urchin, *Arbacia*, which the fishes mimic in color.

arbalistry† (är'ba-lis-tri), *n.* [Also *arbalestry*; as *arbalist* + *-ry*.] The art of shooting with the arbalist.

arbelon (är-bē'lon), *n.* [Gr. *ἀρβήλον, otherwise ἄρβηλος.] In Greek use, a peculiar ax-shaped, round-edged knife employed in working leather. A symbol similar to the arbelon is often found in Cretan pictographs and gems.

> This symbol which is the most frequent of all, occurring no less than eleven times in the present series, may represent an instrument like an *arbelon* — for cutting leather. *A. J. Evans*, in Jour. Hellenic Studies, XIV. 305.

arbitragist (ar'bi-trā-jist), *n.* [*arbitrage* + *-ist*.] On exchange, one who carries on an arbitrage business.

arbor[2], *n.* **5.** A platform of boards upon which sea-island cotton is dried to prevent heating and improve the luster. [Islands of South Carolina.]

arborean (ar-bō'rē-an), *a.* Same as *arboreal*.

arborescent, *a.* **2.** In *bacteriol.*, specifically applied to the branched, tree-like colony formed by certain bacteria in stab-cultures.

arborescently (ar-bo-res'ent-li), *adv.* In the manner of an arborescent plant; branchingly.

arborize, *v.* **II.** *intrans.* To divide into numerous branches.

> One limb of each fibre turning caudad, . . . finally to *arborize* about the cells of the spinal nucleus associated with this tract. *Buck*, Med. Handbook, I. 632.

arboroid (är'bo-roid), *a.* [L. *arbor*, tree, + Gr. εἶδος, form.] Tree-like or bush-like in shape: as, an *arboroid* colony of *Protozoa*.

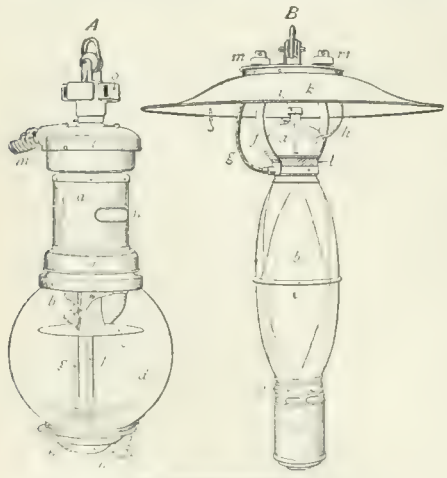
arborolater (är-bo-rol'a-tèr), *n.* [L. *arbor*, a tree, + *-olater* as in *idolater*.] A tree-worshiper.

arbor-press (är'bor-pres'), *n.* See ★*mandrel-press*.

Arbroath flags. See ★*flag*[4]

arbustum, *n.* 2. A woody branching plant without a distinct trunk.— 3. A treatise on the woody plants of any region; a sylva.

Arc rectifier. See ★*rectifier* (*e*). **-Arcs of parallel,** portions of a parallel of latitude on the earth's surface measured both astronomically and geodetically, in order to determine the length of a degree of longitude in that latitude. Such arcs furnish data for determining the dimensions of the earth. **Arc-spectrum.** See ★*spectrum*. **—Bigonial arc,** in *anthrop.*, the arc which extends along the inferior border of the lower jaw from one gonion to the other. **—Brocard arcs.** If Ω and Ω' are the Brocard points of the triangle ABC, then the arcs AΩC', AΩ'B, BΩA, BΩ'C, CΩB, and CΩ'A are the *Brocard arcs* of the triangle. **—Crater of an arc,** in *elect.* Same as *crater*, 6. **—Electric arc,** the passage of current across the gap between two conductors or terminals, through a bridge of conducting vapors consisting of and continuously replenished by the material of the electrodes. The arc must be started by forming this vapor-bridge, which is usually done by bringing the electrodes into contact and then withdrawing them from each other. The mechanism for this, and for maintaining the electrodes at a constant distance from each other, is called an *arc-lamp*. The voltage consumed by an arc is usually moderate, being from 40 to 80 volts. The temperature of the arc-stream is the boiling-point of the electrodes, hence it is extremely high with carbon terminals, so that these terminals, and especially the positive, get very hot and luminous. The electric arc between carbons is therefore used for illumination in the carbon arc-lamp. With free access of air these carbon terminals rapidly consume, and therefore have to be replaced daily in the open arc lamp. To increase the life of the carbons, in the inclosed arc-lamp the arc is surrounded by an inner globe which incloses it almost air-tight, so that the life of the carbons is increased about tenfold and they have to be renewed less frequently. The arc proper, or the vapor-bridge, with carbon electrodes, gives very little light, but most of the light comes from the incandescent tip of the positive carbon. To increase the amount of light, and thereby the efficiency, mineral salts (as calcium fluorid in the *Brehmer arc-lamp*) are mixed with the carbon and by entering the arc-stream make it luminous. Such prepared carbons are called *flame-carbons*, or *effect-carbons*, and their arcs *flame-arcs*. They are more efficient, but must be used in an open arc-lamp, since they give off some smoke and therefore require daily renewal. In the magnetite arc-lamp, the use of carbon electrodes has been eliminated altogether. Positive terminal copper is used, which does not consume and so requires no renewal, while the negative electrode consists of the conducting oxids of iron, titanium, etc. These do not consume in the air and therefore have a life several times longer than even the inclosed carbon arc, together with a very much greater efficiency, due to the great brilliancy and whiteness of the iron-titanium spectrum. In the mercury arc-lamp, mercury is used as the negative terminal and carbon, iron, or mercury as the positive. The temperature of this arc is so low that it is inclosed in an exhausted glass tube. The mercury arc is very long, of low voltage, and brilliant, but of a greenish color. Such arcs as the *magnetite* and *mercury arc*, in which the light is given by the arc-flame, are called *luminous arcs*, since the light is due probably to electroluminescence, *i. e.*, to direct transformation of electric energy into light. They are the most efficient illuminants known.—



[illegible] Magnetite Arc-lamp.

[illegible] ney; *f*, negative electrode; *g*, electrode-holder; *h*, ash-pan; *i*, ash-[illegible]

[illegible] Mercury Arc-lamp.

a, arc-tube; *b*, holophane globe; *c*, guard; *d*, solenoid cap; *e*, solenoid case; *f*, shade-support; *g*, negative lead; *h*, positive [illegible]

Flame-arc. See *electric* ★*arc*.**—Frontal arc,** in *anthrop.*, an arc extending from the nasion to the bregma over the surface of the frontal bone.**—Length of an arc.** Assume that with every arc is connected a sect such that if an arc be cut into 2 arcs, this sect is the sum of their sects; moreover, this sect is not less than the chord of the arc, nor, if the arc be minor, is it greater than the sum of the sects on the tangents from the extremities of the arc to their intersection, this sect itself, or its length, may be called *the length of the arc*. **Luminous arc.** See *electric* ★*arc*. **Magnetite arc-lamp.** See *electric* ★*arc*. **Maximum transverse arc,** in *anthrop.*, an arc extending transversely over the skull between the external auditory meatus.**—Mercury arc.** See *electric* ★*arc*.**—Nasomalar arc,** in *anthrop.*, an arc between the outer margins of the orbits over the nasion.**—Occipital arc,** in *anthrop.*, an arc extending from the lambda to the opisthion.**—Parietal arc,** in *anthrop.*, an arc extending

m m', maximum transverse arc; *c n c'*, nasomalar arc; *l o*, occipital arc; *b*, parietal arc; *m c m'*, frontal arc; *n b*, frontal arc; *n l o*, sagittal arc; *c'* and *m'* are the points on the left side corresponding respectively to *c* and *m*.

from the bregma to the lambda.**—Pre-auricular arc,** in *anthrop.*, an arc extending from the external auditory meatus over the glabella.**—Reflex arc,** in *physiol.*, the course of nervous action originating in the periphery, where the stimulus is applied, traversing the afferent nerve to the spinal-cord center, and then passing outward along the efferent nerve to the organ or muscle where the reflex act takes place.**—Sagittal arc,** in *anthrop.*, an arc extending from the nasion over the bregma and lambda to the opisthion.**—Supra-auricular arc,** in *anthrop.*, an arc extending transversely over the skull from the superior borders of the external auditory processes.**—Total horizontal arc,** in *anthrop.*, the horizontal circumference of the skull taken at the height of the glabella.

Arcacea (är-kā'sē-ä), *n. pl.* [NL., ⟨ *Arca* (a genus of mollusks) + *-acea*.] A group of asiphonate, bivalve mollusks of the order *Filibranchiata*. They have the mantle edge open; 2 well-developed adductors; heart with 2 aortæ; branchiæ free, without interlamellar junctions; and the renal and generative apertures distinct. The group includes the families *Arcadæ* and *Trigoniidæ*.

Arca clay. See ★*clay*.

arcade, *n.* 5. In *anat.* and *zoöl.*, those portions of the cranium having an arch-like structure and running from the postero-external to the orbital region. The *inferior temporal arcade* corresponds to the zygoma of mammals and is largely or entirely formed by the squamosal and jugal. The *superior arcade*, lacking in most vertebrates, is formed by the postorbital. *A. S. Woodward*, Vertebrate Palæontol., p. 144. See cuts under ★*Diapsida* and ★*Synapsida*.

Arcadianly (är-kā'di-an-li), *adv.* In Arcadian fashion; to or toward Arcadianism.

If *Arcadianly* given, he might fancy the yellow buttercups were asphodel. *Froude*, Carlyle, II. 152.

arcading (är-kā'ding), *n.* Construction or decoration by means of arcades, as in Romanesque and Gothic architecture, where arcading is a common adornment and also increases the rigidity of the walls.

arcanite (är'ka-nīt), *n.* [*arcanum* + *-ite*[2].] Native potassium sulphate crystallizing in the orthorhombic system.

arcato (är-kä'tō), *a.* [It., 'bowed,' ⟨ *arco*, a bow: see *arch*[1].] Bowed: in music for bowed instruments, marking passages to be played with the bow: opposed to *pizzicato*.

Arcestes (är-ses'tēz), *n.* [NL.; origin not obvious.] The typical genus of the family *Arcestidæ*.

Arcestidæ (är-ses'ti-dē), *n. pl.* [NL., ⟨ *Arcestes* + *-idæ*.] A family of ammonites having smooth and deeply involute shells with contracted outer whorl and phylliform septal sutures. The species are chiefly Triassic.

arch[1], *n.*—**Braced arch,** an arch of articulated members of timber, iron, or steel, kept in position by articulated bracing above the arch and usually extending up to the horizontal top-member on a level with or slightly above the crown of the arch.**—Carpal arches.** See ★*carpal*. **—Chord of an arch.** See ★*chord*.**—Compound arch,** an arch made up of several rings of voussoirs, each projecting beyond that next below, so that the section is in steps. Compare *compound* ★*pier*. **Dry arch,** an arch built of voussoirs without mortar: peculiar care in fitting and setting the stones is required.**—Hyoid arch.** See ★*hyoid*. **Imperfect arch,** an arch the first sign or altitude of which is less than half its span. Also called *diminished arch* and *skene arch*. [Not in use among builders or technical writers.]**—Maxillojugal arch,** in *ornith.*, the slender bar of bone running from the beak to the quadrate, composed of the maxillary, jugal, and quadratojugal bones. *Proc. Zool. Soc. London*, 1903, I. 265.**—Parahyal arch,** in some parrots (notably the lories), a slender loop of bone formed by the union of two processes (parahyal processes) directed forward, upward, and at their ends inward from the superior face of the posterior portion of the basihyal.**—Precoracoid arch,** a bony arch found in the salmon, carp, and most other soft-rayed fishes, on the inside of the shoulder-girdle, near the base of the clavicle. Also called *mesocoracoid arch*.**—Relieving arch.** Same as *arch of discharge* (which see, under *arch*[1]).**—Rising arch.** Same as *rampant arch* (which see, under *rampant*).**—Straight arch.** Same as *flat arch* (which see, under *arch*[1]). **Subocular arch,** the inverted arch of cartilage which extends downward and outward from the basal plate of the cranium of the lamprey, forming a support for the eye. *Parker and Haswell*, Textbook of Zool., II. 118.**—Twilight arch.** See *twilight bow*, under ★*bow*[2].

Archæan, *a.*—**Archæan protaxis,** that portion of North America, consisting of the most ancient rocks, about which as an axis the later sediments were deposited. *Geog. Jour.* (R. G. S.), XIII. 231.

Archæic (är-kē'ik), *a.* Same as *archæan*.

Archæochelys (är-kē-ok'ē-lis), *n.* [NL., ⟨ Gr. ἀρχαῖος, ancient, + χέλυς, a tortoise.] A genus of chelonians or turtles, from the English Wealden formation, in which the paired shields of the plastron were separated by a median series of azygous shields extending backward from the intergular to the extremity of the xiphiplastral.

Archæocidaridæ (ärᵉkē-ō-si-dar'i-dē), *n. pl.* [NL., ⟨ *Archæocidaris* + *-idæ*.] A family of extinct sea-urchins, or *Palæoechinoidea*, with a spherical test in which the ambulacra are narrow, two rows of perforated ambulacral plates, and interambulacrals beveled and frequently with strong spines. They occur only in the Paleozoic formations.

Archæocyathidæ (ärᵉkē-ō-sī-ath'i-dē), *n. pl.* [NL., ⟨ Gr. ἀρχαῖος, ancient, + κύαθος, a cup, + *-idæ*.] A family of fossils from the Cambrian rocks, originally regarded as sponges but now construed as a generalized type of perforate *Hexacoralla*, having a simple turbinate form, porous septa and outer wall, and a distinct inner wall which leaves an empty central tube or cone.

Archæocyathus (är'kē-ō-sī'a-thus), *n.* [NL., ⟨ Gr. ἀρχαῖος, ancient, + κύαθος, cup.] The typical genus of the family *Archæocyathidæ*.

archæocyte (är'kē-ō-sīt), *n.* [Gr. ἀρχαῖος, primitive, + κύτος, a hollow (a cell).] In *embryol.*, one of the undifferentiated blastomeres of the sponge embryo which give rise to the wandering and reproductive cells of the adult organism.

The *archæocytes* may be considered from two points of view: first, as wandering cells, or amœbocytes; secondly, as reproductive cells, or tokocytes. These two categories are not, however, to be regarded as two distinct classes of cells, but simply as two different phases in the activity of one and the same kind of cell.

E. R. Lankester, Treatise on Zool., II. 58.

archæographic (är-kē-ō-graf'ik), *a.* Of or pertaining to archæography or the description of antiquities.

Archæohyracidæ (ärᵉkē-ō-hī-ras'i-dē), *n. pl.* [NL., ⟨ *Archæohyrax*, the type genus (⟨ Gr. ἀρχαῖος, ancient, + ὕραξ, shrew), + *-idæ*.] A family of extinct ungulates of small size and supposedly related to the existing hyrax, *Procavia*, from the Miocene of Patagonia. *Ameghino*, 1897.

archæolithic (ärᵉkē-ō-lith'ik), *a.* [Gr. ἀρχαῖος, ancient, + λίθος, stone.] Of or pertaining to the earliest stone age.

archæomorphic (är-kē-ō-môr'fik), *a.* [Gr. ἀρχαῖος, ancient, + μορφή, form.] In *petrog.*, a term applied to rocks of which the component mineral particles have been formed in place and have retained their original form. Unaltered igneous rocks are *archæomorphic* as contrasted with *metamorphic* rocks.

archæontological (är-kē-on-tō-loj'i-kal), *a.* Of or pertaining to archæontology.

archæontology (ärᵉkē-on-tol'ō-ji), *n.* [Gr. ἀρχαῖος, ancient, + ὄντ- (ὄν), being, + -λογία, ⟨ λέγειν, speak.] Archæology which deals with the remotest antiquity or with prehistoric man.

Archæopithecidæ (ärᵉkē-ō-pi-thes'i-dē), *n. pl.* [NL., ⟨ *Archæopithecus*, the type genus (⟨ Gr. ἀρχαῖος, primitive, + πίθηκος, ape), + *-idæ*.] A family of extinct primitive primates, of moderate size, whose bones occur in the Miocene (?) of Patagonia. *Ameghino*, 1897.

Archæoplax (är'kē-ō-plaks), *n.* [Gr. ἀρχαῖος, ancient, + πλάξ, something flat, a plank.] A genus of fossil crabs from the Miocene Tertiary formation at Gay Head, Massachusetts.

archæopsychism (är-kē-op-si'kizm), *n.* [Gr. ἀρχαῖος, ancient, + ψυχή, mind, + E. *-ism*.] A

vestigial mental function; a mental process which is atavistically conditioned. *G. S. Hall*, Adolescence, II. 65.

Archæopteris (ärkē-op'tę-ris), *n.* [NL. (Dawson, 1871), < Gr. ἀρχαῖος, ancient, + πτερίς, fern.] A genus of fossil ferns, found chiefly in the Devonian, characterized by bi- to tripinnate fronds with oval pinnules narrowed toward the base. The fertile pinnules, which are borne above the sterile ones on the same pinnæ, consist of a naked axis bearing on the upper side two rows of stalked sporangia. The genus is regarded by some authors as probably belonging to the *Marattiaceæ*. See *Palæopteris*.

archæopterygoid (är″kē-op-ter'i-goid), *a.* Related or pertaining to the genus *Archæopteryx*.

Archæornithes (är-kē-ôr'ni-thēz), *n. pl.* [Gr. ἀρχαῖος, ancient, + ὄρνις, pl. ὀρνίθες, a bird.] An ordinal name introduced to include fossil birds of the genus *Archæopteryx* which have a bird-like skull, conical socketed teeth, amphicœlous vertebræ, and a long, lizard-like tail.

Archæotherium (är″kē-ō-thē'ri-um), *n.* [NL., < Gr. ἀρχαῖος, ancient, + θηρίον, wild beast.] One of several names which have been given to a genus of extinct swine, of the family *Chæropotamidæ*, in which the last lower true molar has no third lobe, the premolars are large, the canines are strong, and the functional digits are reduced to two. Other names are *Elotherium*, *Entelodon*, *Oltinotherium*, and *Pelonax*, the first of these being preferred. Its remains have been found in the Tertiary of Quercy and Ronzon, France, in the Isle of Wight, and in North America.

Archæozoic (ar″kē-ō-zō'ik), *a.* and *n.* [Gr. ἀρχαῖος, ancient, + ζωή, life.] **I.** *a.* In *geol.*, having reference to the earliest life-forms found in the rocks: a term introduced by Le Conte and employed by Dana to designate a hypothetical division or eon of Archæan time contradistinguished from the Azoic eon. This division is founded on the assumption of the existence of life on the earth during the later stages of Archæan time, although the rocks of this age are chiefly crystalline or altered by metamorphism and vulcanism. On presumptive physical conditions Dana divided the Archæozoic into two eras: (1) that of the first plants, such as algæ and bacteria, which might exist in an ocean having a temperature of 150° F., and of the deposition of limestone, silica, carbon, iron oxids and carbonates, in the accumulation of which plant life may have played an intermediary part; (2) that of the first animal life, involving a reduction of mean oceanic temperature from about 115° F. at the beginning to 90° F. or less at the end, the deposits being such lime, silica, and iron compounds as might result from animal secretions or decomposition. Actual evidences of organic remains in the rocks (Huronian or Algonkian) of this eon are still of the most dubious character, although a considerable number of objects have been described as such. The *Eozoön*, found in Archæan rocks in various parts of the world and described as a gigantic foraminifer; the *Archæophyton*, a supposed plant; and alleged sponge and radiolarian spicules from Brittany and New Brunswick, are no longer regarded as of organic origin. Other remains more palpably organic, and described as from Archæan rocks, are not yet generally admitted to be of Archæozoic age, as their geologic position is not fully determined. Also *Archizoic*, *Archiozoic*.

II. *n.* The Archæozoic eon.

Archæozonites (är″kē-ō-zō-nī'tēz), *n.* [NL., < Gr. ἀρχαῖος, ancient, + ζώνη, a girdle, + *-ites*.] A genus of pulmonate gastropods of the family *Zonitidæ*, from the Oligocene and Miocene Tertiary, having helix-shaped shells.

archaicism, *n.* **2.** In *biol.*, abnormal or exceptional resemblance to ancestors; atavism; reversion. [Rare.] *Philos. Trans. Roy. Soc.* (London), ser. B, 1903, p. 185.

archangelical (ärk-an-jel'i-kal), *a.* Archangelic: as, "*Archangelical* Orders." *Cudworth*, Intell. Syst., p. 565.

Archanodon (är-kan'ō-don), *n.* [Gr. ἀρχή, beginning, + NL. *Anodon*, a genus of mollusks.] A genus of extinct fresh- or brackish-water pelecypods. Same as ★*Amnigenia*. Also *Archanodonta*.

Archasterinæ (är″kas-tę-rī'nē), *n. pl.* [NL., < *Archaster* (a genus) + *-inæ*.] A group of asteroid *Stellaroidea* of the order *Phanerozonia*, family *Archasteridæ*. It includes the forms with a definite median line of abactinal plates, the remainder being arranged in oblique rows and with pedicellariæ present.

archdeaconess (ärch-dē'kn-es), *n.* The wife of an archdeacon.

arche[3] (är'kē), *n.* [Gr. ἀρχή, beginning, origin.] Something, having some mode of real being, from the understanding of which facts of experience can be deduced. The word is Greek, and was used in all periods of Greek philosophy, even by the Ionic philosophers. Plato in the Phædrus (245 D) calls the soul an arche of motion, and declares that an arche is ingenerate; and in the Timæus (42 E) "the immortal *arche* of a mortal being" is said to be received from the Creator. Aristotle uses the word frequently and loosely, sometimes as a cognitive principle; at other times as a cause of any kind, an element, etc.

archecentric (är-kē-sen'trik), *a.* [Irreg. < Gr. ἀρχή, beginning, + κέντρον, center.] In *ornith.*, relating to or having the characters of the primitive type of intestine. *P. Chalmers Mitchell*, 1901.

archecentricity (är″kē-sen-tris'i-ti), *n.* [*archecentric* + *-ity*.] In *ornith.*, the state or condition of having the intestine of a primitive type.

Archegoniatæ (är″kē-gō-ni-ā'tē), *n. pl.* [NL. (Engler, 1887), < *Archegonium* + *-atæ*.] A great group or subkingdom of cryptogamic plants (also called by Engler the *Embryophyta asiphonogama*), embracing the *Bryophyta* (mosses and liverworts) and *Pteridophyta* (ferns and fern allies), and made coördinate with the *Embryophyta siphonogama* (phanerogams, spermatophytes). Generation is by means of antheridia and archegonia. Called *Archegoniata* by Sachs.

archegosaurian (är″kē-gō-sâ'ri-an), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of *Archegosaurus*.

II. *n.* An amphibian of the genus *Archegosaurus*.

archegosauroid (är-kē-gō-sâ'roid), *a.* and *n.* **I.** *a.* Having characters similar to those of *Archegosaurus*.

II. *n.* An amphibian related to *Archegosaurus*.

archeion (är-kī'on), *n.*; pl. *archeia* (-ä). [Gr. ἀρχεῖον: see *archive*.] In *Gr. antiq.*, originally the name of the office or official residence of a magistracy; later, the body of magistrates itself, and, afterward, the depot in which public archives were preserved. Ruins of the archeia of Megalopolis have been recovered by excavation.

archencephalic, *a.* **2.** In *craniom.*, having a hypsicephalic skull curving from the glabella to the occipital protuberance so as to form a more or less regular arch. *A. Meigs*.

archenema (är-kē-nē'mä), *n.* [NL., < Gr. ἀρχε-, primitive, + νῆμα, a thread.] A gametophytic structure in the lower cryptogams. *C. Macmillan*.

archer, *n.* **4.** A Persian gold coin, the daric, bearing the figure of an archer.

archery-ground (är'chér-i-ground), *n.* A field measured and marked for an archery meeting. Usually the targets are in two parallel rows facing each other so that after shooting in one direction the archers may recover their arrows and shoot in the opposite direction instead of returning to their original standing-points. The ground is a rectangle having the target-bases on opposite sides at the greatest distance to be shot (in the York Round 100 yards) plus 5 yards. Targets are placed at intervals on each target-base. On interior lines parallel therewith and at the proper distances for the several ranges, shooting-points are marked opposite each target.

Archery-ground

archesporial (är-kę-spō'ri-al), *a.* Of or relating to archespores. **Archesporial cells,** the first eight cells in a spore-formation.—**Archesporial pad,** a mass of cells developing beneath the sporogenous tissue in certain pteridophytes. *Bower*.

archestome (är'kę-stōm), *n.* See *archæostoma*.

archetypally (är'kę-tī-pal-i), *adv.* Same as *archetypically*.

arch-genethliac (ärch″jē-neth'li-ak), *n.* In *astrol.*, the chief calculator of nativities.

Here amid the scrawled
Uncouth recordings of the dupes of this
Old *archegenethliac*, be my life's results!
Browning, Paracelsus, ii. 25.

archibenthal (är-ki-ben'thal), *a.* [*archibenthos* + *-al*.] Of or pertaining to the depths of the primitive ocean or archibenthos.

The *archibenthal* species, as was to be expected, have a greater range than those restricted to the more variable environment of the shallow waters of the coast.
Science, Oct. 7, 1904, p. 463.

archibenthos (är-ki-ben'thos), *n.* [NL., < Gr. ἀρχι-, primitive, + βένθος, depth.] The depths of the primitive or Paleozoic ocean.

archicarp, *n.* **2.** In ascomycetous fungi, the cell or group of cells fertilized by a sexual act.

archicembalo (är-ki-chem'ba-lō), *n.* [It.] A form of cembalo, said to have been made in Italy about 1537, provided with an enharmonic scale, 31 tones to the octave. See *cembalo*, 2.

archicenter (är-ki-sen'tèr), *n.* [Gr. ἀρχι-, first, + κέντρον, center.] An archetype; an organism or an organ which may be regarded as the primitive or ancestral or central or unspecialized type from which allied organisms or homologous organs are descended. Also *archecenter*. *Encyc. Brit.*, XXVIII. 343.

archicentric (är-ki-sen'trik), *a.* Of or pertaining to an archicenter; archetypal. An archicentric organism or organ is one which may be regarded as the common ancestor of allied organisms or homologous organs. Also *archecentric*.

When a series of the modifications of an anatomical structure has been sufficiently examined, it is frequently possible to decide that one particular condition is primitive, ancestral, or central, and that the other conditions have been derived from it. Such a condition has been termed . . . *archecentric*. *Encyc. Brit.*, XXVIII. 343.

archicentricity (är″ki-sen-tris'i-ti), *n.* [*archicentric* + *-ity*.] The property of being or of pertaining to an archetype or archicenter.

archicerebrum (är-ki-ser'ē-brum), *n.*; pl. *archicerebra* (-brä). [NL., < Gr. ἀρχι-, first, + L. *cerebrum*, brain.] The primary brain of arthropods. The brain of an arthropod is to be regarded as a compound structure or syncerebrum consisting of the archicerebrum fused with the morphological equivalents of two or more ganglionic portions of the ventral nervous system.

Archichætopoda (är″ki-kē-top'ō-dä), *n. pl.* [NL., < Gr. ἀρχι-, first, + NL. *Chætopoda*.] An order of *Polychæta* consisting of aberrant or primitive forms in which the nervous system is not separated from the epidermis and the ventral nerve-cord is not segmented into ganglia. *Saccocirrus* is the only genus.

Archichlamydeæ (är″ki-kla-mid'ē-ē), *n. pl.* [NL. (Engler, 1887), < Gr. ἀρχι-, first, + χλαμύς (χλαμυδ-), mantle, + *-eæ*.] A series of dicotyledonous plants embracing the *Apetalæ* (*Achlamydeæ* and *Monochlamydeæ*) and the *Choripetalæ* (*Polypetalæ*), and coördinate with the *Metachlamydeæ*. The plants of this series appeared earlier in the geologic history of plants, and possess a lower organization than those of the *Metachlamydeæ*.

archichlamydeous (är″ki-kla-mid'ē-us), *a.* [*Archichlamydeæ* + *-ous*.] Belonging to the plant series *Archichlamydeæ*.

archiclistogamous (är'ki-klīs-tog'a-mus), *a.* [Gr. ἀρχι-, first, + *clistogamous*.] In *bot.*, having none of the flowers opening at any time; unqualifiedly clistogamous.

archicœle (är'ki-sēl), *n.* [Gr. ἀρχι-, first, + κοῖλος, hollow.] A cœloma, or body-cavity, which is a persistent remnant of the segmentation-cavity.

archicyte (är'ki-sīt″), *n.* [Gr. ἀρχι-, first, + κύτος, a hollow (a cell).] In *embryol.*, the fertilized egg before it undergoes segmentation.

archidepula (är-ki-dep'ū-lä), *n.*; pl. *archidepulæ* (-lē). [NL. (Haeckel), < Gr. ἀρχι-, first, + NL. *depula*, depula.] In *embryol.*, the depula arising by cell-division from the archicytula.

Archidesmus (är-ki-des'mus), *n.* [NL., < Gr. ἀρχι-, chief, + δεσμός, band.] A genus of extinct centipeds from the Old Red Sandstone of Scotland.

archigenesis (är″ki-jen'ē-sis), *n.* [NL., < Gr. ἀρχι-, first, + γένεσις, genesis.] The genesis of the first living beings in the history of the earth. While there is no reason to believe that the first appearance of life on earth was abrupt, or that, if one had witnessed it, he could have recognized the exact point when the boundary between lifeless matter and the first living things was passed, belief in the fact of a first origin of life (archigenesis) seems to be logical and necessary.

archigonocyte (är-ki-gon'ō-sīt), *n.* [Gr. ἀρχι-, first, + *gonocyte*.] The primary germ-cell which results from segmentation of the impregnated ovum. *Buck*, Med. Handbook, VI. 864.

archigonous (är-kig'ō-nus), *a.* [NL. **archigonus*, *archigonus*, < Gr. ἀρχίγονος, first-born, < ἀρχι-, ἀρχι-, first, + -γονος, -born, -produced.] Produced at the beginning; originating as first of living beings. *Haeckel* (trans.), Wonders of Life, p. 157.

archigony (är-kig'ō-ni), *n.* [Gr. *ἀρχίγονια for *ἀρχιγόνια, < ἀρχίγονος, first-born, of the primeval race: see ★*archigonous.*] Archigenesis.

archikaryon (är-ki-kar'i-on), *n.*; pl. *archikarya* (-ä). [Gr. ἀρχι-, first, + καρυον, nut (nucleus).] In *embryol.*, the nucleus of the fertilized egg; the cleavage-nucleus. Also *archicaryon.*

Archil extract. Same as ★*archil substitute.*— **Archil substitute.** There are three so-called archil substitutes, all artificial dyestuffs of the monoazo sulphonic-acid type. See *Apollo* ★*red.* **Brilliant archil C,** an acid coal tar color of unpublished composition, which dyes wool and silk red in an acid bath.— **Canary archil,** a lichen, *Roccella tinctoria.* See *archil.*— **Flat archil,** a name sometimes applied to the lichen *Roccella fuciformis.*

archilithic (är-ki-lith'ik), *a.* [Gr. ἀρχι-, first, + λίθος, rock.] In *geol.*, noting the period of primitive rocks. [Rare.]

archimartyr (är-ki-mär'tèr), *n.* [Gr. ἀρχι-, first, + μάρτυρ, martyr.] The most eminent or chief among a group of martyrs in a given period or country.

A group of sufferers called the Madaurian martyrs seems to belong to the same period: for in the correspondence of St. Augustine, Namphamo, one of their number, is spoken of as "*archimartyr,*" which appears to mean protomartyr of Africa. *Encyc. Brit.*, XXXII. 462.

Archimedes (är″ki-mē'dēz), *n.* [NL., < L. *Archimedes*, < Gr. Ἀρχιμήδης, a Greek philosopher. The allusion is to *Archimedes's screw.*] A genus of extinct cryptostomatous bryozoans having a broadly spiral zoarium coiled about a solid vertical axis. It is very abundant in the Lower Carboniferous limestones.— **Archimedes limestone,** a formation of Lower Carboniferous age, well developed in the Mississippi valley, especially in Missouri and Iowa. It was defined by Swallow as lying below the St. Louis limestone and as characterized by the screw-shaped bryozoan *Archimedes.*

archimime (är'ki-mīm), *n.* [L. *archimimus*, < Gr. ἀρχίμιμος, < ἀρχι-, chief, + μῖμος, mime.] The chief mime; the hero of the Roman low comedy; also, the chief buffoon at a Roman funeral. See *mime.*

archimorphic (är-ki-môr'fik), *a.* [Gr. ἀρχι-, first, + μορφή, form.] Of the first form, or of the form shown in the earlier ages: as applied in *anthrop.*, characteristic of races which for very long periods have had a fixed habitat, as the Mediterranean, Mongolian, and negro races: distinguished from *protomorphic* and *metamorphic.* *Amer. Anthropol.*, July–Sept., 1902, p. 539.

Archimycetes (är″ki-mī-sē'tēz), *n. pl.* [NL., < Gr. ἀρχι-, first, + μύκητες, pl. of μύκης, fungus.] A subclass of the *Phycomycetes,* including the single order *Chytridiales.*

Archimylacris (är″ki-mi-lak'ris), *n.* [Gr. ἀρχι-, first, + μυλακρίς, a cockroach.] A genus of extinct cockroaches from the Carboniferous rocks.

Archipithecus (är″ki-pi-thē'kus), *n.* [Gr. ἀρχι-, first, + πίθηκος, ape.] A supposed ape-form, assumed as the ancestor of the *Pithecanthropus.*

archiplasm (är'ki-plazm), *n.* [Gr. ἀρχι-, first, + πλάσμα, anything formed.] 1. The simplest and most primitive living matter, homogeneous, undifferentiated into nucleus and cell-body. *Haeckel* (trans.), Wonders of Life, p. 158.— 2. In *embryol.*, the substance of which the fertilized ovum consists: not to be confounded with ★*archoplasm* (which see).

archipresbyteral (är″ki-pres'bit-e-ral), *a.* Pertaining to the office of archipresbyter, which arose in the church in the fourth century. His duty was to preside over worship and to take the place of the bishop in his absence.

archipterygial (är″kip-te-rig'i-al), *a.* Pertaining to or like an archipterygium, the theoretical primitive fin from which the limbs of vertebrates have been developed.

As regards the Dipneusti, in the course of some interesting remarks on vertebrate limb theories, the author adopts Dollo's view as to their probable derivation from the Crossopterygii, the corollary to which, as the present writer has also pointed out, is that the "*archipterygial*" form of limb must have been diphyletically realised, on the one hand, by the Pleuracanthid Selachii, and on the other by the Holoptychii and the lung-fishes.
Nature, Aug. 7, 1902, p. 340.

archisperm (är'ki-spèrm), *n.* [See *Archispermæ.*] 1. A member of the ★*Archispermæ* (which see).— 2. A structure formed before fertilization, or at an early stage in the macrospore. *Boulger.*

Archispermæ (är-ki-spér'mē), *n. pl.* [NL. (Strasburger, 1872), fem. of L. *archispermus*, adj., < Gr. ἀρχι-, first, + σπέρμα, seed.] Same as *Gymnosperma* (which see) and ★*Metaspermæ.* The term is designed to emphasize the fact that these plants appeared early in the geologic series, occurring as they do in the Paleozoic. See ★*Archichlamydeæ.*

archispore (är'ki-spōr), *n.* [Gr. ἀρχι-, first, + σπορά, seed (see *spore*).] In certain *Coccidiidea*, one of the uninucleate masses of protoplasm into which the sporont divides and from which later spores arise. *Labbé*, 1899. Same as *sporoblast.* Also *archespore.*

In general, it may be stated that the entire organism takes part in the formation of *archispores* (or sporoblasts), each *archispore* giving rise to spores, and each spore to sporozoites, either directly or indirectly.
Calkins, Infusoria, p. 151.

Archistes (är-kis'tēz), *n.* [NL., < Gr. (?) ἀρχός, a leader, + -ιστ-ες (?).] A genus of small sculpins of the family *Cottidæ*, found in the Kurile islands.

architecturalization (är-ki-tek″tū-ral-i-zā'shon), *n.* Adaptation to architectural purposes: as, "the *architecturalization* of foliage," *G. G. Scott*, Lectures on Med. Arch., I. 103.

architecturalize (ar-ki-tek'tū-ral-īz), *v. t.*; pret. and pp. *architecturalized*, ppr. *architecturalizing.* To adapt to architectural purposes. *G. G. Scott*, Lectures on Med. Arch., II. 139.

architecture, *n.*— **Celtic architecture,** the megalithic monuments of western Europe.— **Chalukyan architecture,** architecture as developed under the influence of the family of Chalukya, or the Chalukyas, who ruled in the Deccan, in the southern part of the Indian peninsula, from the sixth to the thirteenth century A. D. — **Columnar architecture,** architecture characterized by a free use of columns, especially in classic and neoclassic styles. The style of the Grecian temples, the Roman porticos, and all buildings not vaulted was columnar.— **Cottage architecture,** architecture displayed in the careful planning and designing of modern cottages, from either an artistic or a sanitary point of view.— **Dravidian architecture.** See *Indian architecture,* under *Indian.* **Federal architecture.** See ★*federal.*— **Flemish architecture,** the architecture of ancient Flanders, including the important cities of Tournai, Bruges, Ypres, Douai, and Oudenarde.— **Garden architecture.** (*a*) The design and regulation of pleasure-grounds, especially formal gardens. (*b*) The design of the strictly architectural buildings in such pleasure-grounds (pavilions, casinos, terrace walls, parapets, perrons, and pedestals for statues).— **Georgian architecture,** architecture as developed in England under the four Georges, especially the earlier sovereigns of that name. Its reproduction in the American colonies produced what has been called in the United States *colonial architecture* (which see, under *colonial*).— **Greco-Roman architecture,** architecture as developed at Rome or under the influence of the Roman dominion, but founded on Greek models. Throughout the empire the tendency was steadily away from the purely Greek type, and the buildings of the fourth century can hardly be classed as Greco-Roman except that porticos of purely columnar architecture were still in favor. See cut under *hexastyle.* **Indo-Aryan architecture.** See *Sanskrit architecture,* under *Sanskrit.*— **Indo-Saracenic architecture,** the architecture of the Moslem dominion in northern India, beginning with the Moslem conquest in the twelfth century A. D. See *Saracenic architecture,* under *Saracenic,* and *Indian-Saracenic.* — **Jewish architecture,** the architecture of the Jews, especially at two important periods of their history: (*a*) that of the kingdom of David and Solomon (about 1033–953 B. C.), of which very little is known and which is supposed to have been a mere variant of Phenician art; (*b*) that of the time of Herod Agrippa (37–44 A. D.), under whom the system of design was Roman, with only such modification as was common in the cities of Syria.— **Kmer** or **Khmer architecture,** the ancient architecture of Cambodia and of some neighboring districts in farther India. It is known chiefly by important sculptures which have been brought to France and are stored in the Louvre museum.— **Landscape architecture.** See ★*landscape-architecture.*— **Mesopotamian architecture,** the architecture of the great plains between the Tigris and the Euphrates and near those rivers on the east and the west. It includes the well-known styles called *Assyrian* and *Babylonian,* and also the as yet little-known styles of primitive times, such as the Accadian and the Chaldean, the last including the Babylonian style.— **Mohammedan architecture.** Same as *Moslem* ★*architecture.*— **Monastic architecture.** See ★*monastic.*— **Monolithic architecture.** (*a*) Rock-cut work, as in the case of the Buddhist caves. See *chaitya* and *Buddhist architecture.* (*b*) Architecture in which the work is cast in a solid mass (as in *pisé,* or rammed clay), in recent times by means of artificial stone.— **Moorish architecture,** the architecture of the Moslems in North Africa and in Spain. The most important building which has been studied is the mosque of Cordova, now the cathedral. The best-known is the palace of the Alhambra, on a hill above Granada. See *Saracenic architecture,* under *Saracenic,* and cuts under *Alhambraic, arcade, court, Moorish art.*— **Moslem architecture,** the architecture of the peoples conquered by the Arabs. It has existed in Egypt, Syria, and Persia since the seventh century A. D.; in North Africa and Spain since the eighth century; and in India since about 1250. The style may be divided into several substyles, with marked variations. See cuts under *Arabic architecture, Mogul architecture, mosque, stilted arch.*— **Mudejar architecture,** Spanish architecture from the fourteenth to the sixteenth century, exhibiting Moorish influence: often covered with ornament and showing a mixture of Oriental and Gothic detail.— **Neo-classic architecture,** the architecture which has been used in modern Europe since the Italian *risorgimento* at the beginning of the fifteenth century. It includes the Renaissance proper; the Italian *classicismo* and *decadenza* of the sixteenth century; the French and German styles as they grew to a close following of classic types about 1550; and the Jacobean of England, at least from the time of Inigo Jones. The succeeding styles (called *baroque, rocaille,* or *rococo*), the revived classic of the eighteenth century, and the buildings of the nineteenth and twentieth centuries founded on the above-named styles, are all included under this term. In careful writing it may be used to distinguish that which is closely Greco-Roman in style from that which shows much modern influence.— **Persepolitan architecture,** the architecture of Persia during the sixth and fifth centuries B. C., or from about the conquests of Cyrus (549 B. C.) to the conquests of Alexander (334 B. C.), named from the ruins at Persepolis near Shiraz.— **Persian architecture,** the architecture of the country now known as the kingdom of Persia. It is generally divided into three great schools, or epochs, the *Persepolitan,* the *Parthian,* and the *Mohammedan,* beginning with the Moslem conquest in the ninth century and existing to the present day.— **Peruvian architecture,** the architecture of western South America before the invasion of the Spaniards in the sixteenth century. The epoch of the most important buildings cannot be fixed with precision. They consist largely of tombs, in the form both of mounds and of masonry towers. The ancient city of Cuzco near Lake Titicaca contains the most important residential architecture and the most elaborate sculptured decorations.— **Phenician architecture,** the architecture of the people of Syria before the strong Greco-Roman influence was felt. The Phenicians were hardly a building race, but used largely a monolithic architecture, mainly in the form of rock-cut caves. Their colonies on the shores of the Mediterranean developed styles of their own, as at Carthage, though these have been little studied. The buildings of the Roman empire superseded and often replaced those of the Phenicians.

architrave, *n.*— **Banded architrave,** an architrave, as in the case of a window opening, of which the molded parts forming the usual architrave of the order employed are cut across, or interrupted by plain projecting blocks: a device of the latest neo-classic ★architecture (which see).

archive, *n.*— **Bureau of Indexes and Archives.** See ★*bureau.*

archivolt, *n.*— **Interlacing archivolts,** an arcade apparently formed by a series of arches, generally semicircular, crossing one another so that the actual openings are pointed arches below and triangular spandrels above: a feature peculiar to Romanesque architecture. The construction may be strictly arcuate, but is oftener a fitting together of stones cut to produce the decorative effect required. The arcades so produced were a common English wall decoration in the twelfth century. See cut at *interlacing arches,* under *interlace.*— **Returned archivolt,** an archivolt in which the band forming it is carried off horizontally, making a sharp angle with the curve-part, or, more rarely, is curved up again to meet another archivolt, as was often done in Syrian churches of the sixth and seventh centuries. See cut under *return.*

Archizoic (är-ki-zō'ik), *a.* and *n.* [Gr. ἀρχι-, first, + ζωή, life.] In *geol.*, noting the period of earliest life. Same as ★*Archæozoic.*

archontal (är'kon-tal), *a.* [*archon(t-)* + *-al*.] Of or pertaining to the office of archon. *Athenæum*, Aug. 22, 1891, p. 257.

archoplasm (är'kō-plazm), *n.* [Gr. ἀρχός, ruler, + πλάσμα, anything formed.] In *cytol.*, the substance which forms the attraction-spheres, astral rays, and spindle-fibers in the karyokinetic figure of dividing animal and plant cells. *Boveri*, 1888.

archoplasma (är'kō-plaz″mä), *n.* [NL.] Same as ★*archoplasm.*

archoplasmic (är-kō-plaz'mik), *a.* Consisting of or pertaining to archoplasm.

Archosargus (är-kō-sär'gus), *n.* [NL., < Gr. ἀρχός, chief (?), + σαργός, a fish: see *Sargus.*] A genus of sparoid fishes, containing the well-known sheepshead, *A. probatocephalus,* of the Atlantic coast of the United States.

Archosauria (är-kō-sâ'ri-ä), *n. pl.* [NL., < Gr. ἀρχός, chief (?), + σαῦρος, a lizard.] A name introduced by Cope to distinguish those orders of reptiles which have two temporal arches, the *Rhynchocephalia, Crocodilia, Dinosauria,* and *Pterosauria.* According to Zittel, the group properly includes the *Squamata* in which one or both arches have become obsolete.

archosaurian (är-kō-sâ'ri-an), *a.* and *n.* I. *a.* Of or relating to the *Archosauria.*

II. *n.* A member of that group.

Archozoic (är-kō-zō'ik), *a.* Same as ★*Archæozoic.*

arch-solid (ärch'sol'id), *n.* Same as *arch-stone.*

archt.[1] An abbreviation of *architect.*

archt[2], *p. a.* A simplified spelling of *arched.*

arciform, *a.* 2. Having the form or structure of the shell of the molluscan genus *Arca.*

arc-lamp (ärk'lamp), *n.* See *electric lamp,* under *electric,* and *electric* ★*arc.*— **Differential arc-lamp,** an arc-lamp the operation of which is controlled by the opposing magnetic forces of a shunt coil and a series coil. This is the most common type of lamp.

A. R. C. O. An abbreviation of *Associate of the Royal College of Organists.*

arcocentrous (är-kō-sen'trus), *a.* [Irreg. < L. *arcus,* arch, + Gr. κέντρον, center.] Having the

vertebral centra formed by the development of the arches about the sheath of the notochord; arcogenous.

The vertebræ do not possess, and cannot form, neurocentral sutures, because their bodies are exquisitely *arcocentrous*, formed, in fact, by the arches proper, namely, by the basidorsalia and basiventralia, while the interbasalia produce the ventral, intervertebral mass
H. Gadow, in Philos. Trans. Roy. Soc. (London), 1896, [ser. B, 187. 14.

arcogenous (är-koj′e-nus), *a.* [L. *arcus*, arch, + *-genus*, -producing.] Having the centra of the vertebræ developed from arcualia, or arches formed about the sheath of the notochord, and not from ossifications arising in the chordal sheath. Such vertebræ are found in *Amphibia* and their centra are called *arch-centra*. *Philos. Trans. Roy. Soc.* (London), 1896, ser. B, 187. 51.

arcose, *n.* See *arkose*.

Arcot rupee. See ★*rupee*.

Arctatlantis (ärkt-at-lan′tis), *n.* [NL., < Gr. ἄρκτος, the north, + Ἀτλαντίς, the Atlantic (ocean).] In *zoögeog.*, a sea-region proposed by Sclater, consisting of the northern portion of the Atlantic down to about 40° north latitude.

The North Atlantic Sea-region, or *Arctatlantis*, consisting of the northern portion of the Atlantic down to about 40° N. lat. *Geog. Jour.* (R. G. S.), X. 219.

arctian, *n.* **II.** *a.* Of or belonging to the lepidopterous genus *Arctia* or to the family *Arctiidæ*.

Arctic ★flounder, ★grayling, ★highlander, ★migration, ★skipper, ★sperm-oil. See the nouns.

Arctica (ärk′ti-kä), *n.* [NL., said to be < Gr. ἀρκτικός, of the beginning, < ἄρχεσθαι, begin.] A genus of teleodesmaceous pelecypods belonging to the family *Pleurophoridæ*. They have oval or rounded valves, prominent curved beaks, and three cardinals in each valve. The genus abounds in the Jurassic and Cretaceous formations, and also exists in present seas.

arcticize (ärk′ti-sīz), *v. t.*: pret. and pp. *arcticized*, ppr. *arcticizing*. [*arctic* + *-ize*.] To accustom or inure to arctic conditions. *Kane*, Grinnell Exped., p. 261.

Arctirenia (ärk-ti-rē′ni-ä), *n.* [Gr. ἄρκτος, the north, + εἰρήνη, peace.] In *zoögeog.*, a sea-region proposed by Sclater, comprising the northern portion of the Pacific Ocean down to about the tropic of Cancer.

The North Pacific Sea-region, or *Arctirenia*, containing the northern portion of the Pacific Ocean to about the tropic of Cancer. *Geog. Jour.* (R. G. S.), X. 220.

Arctium (ärk′ti-um), *n.* [NL. (Linnæus, 1753), < Gr. ἄρκτιον, a plant mentioned by Dioscorides, supposed by some of the early German botanists to be the burdock.] A genus of dicotyledonous plants of the family *Asteraceæ*. They are coarse, branching herbs with broad alternate leaves and heads of purple or white flowers: distinguished from *Carduus*, a related genus, by the bracts of the involucre ending in a long stiff point hooked at the extremity. There are about six species, natives of Europe and Asia. Three have been introduced into the United States. For *A. Lappa* see *batweed*, *burdock*, *hardock*, and *harebur*.

Arctogæic (ärk-tō-jē′ik), *a.* Same as *Arctogæal* and *Arctogæan*.

arctoidean (ärk-toi′dē-an), *a.* **1.** Pertaining to or resembling the *Arctoidea*.—**2.** Loosely, same as *arctoid*.

Arctopithecus, *n.* **2.** A genus of three-toed sloths comprising those species in which the pterygoids are not inflated. *Gray*, 1850. Considered by some as synonymous with *Bradypus*.

Arctos (ärk′tos), *n.* [Gr. ἄρκτος, bear.] The constellation of the Great Bear, Ursa Major.

Arcturian (ärk-tū′ri-an), *a.* and *n.* **I.** *a.* Pertaining to or resembling the star Arcturus. —**Arcturian stars**, those of Secchi's second type, which have a spectrum resembling that of Arcturus (α Bootæ). In the main it is like the solar spectrum, with extremely numerous metallic lines. Next to the Sirian stars these are the most abundant.

II. *n.* A star of the type of Arcturus.

arcuale (är-kū-ā′lē), *n.*; pl. *arcualia* (-li-ä). [NL., neut. of **arcualis*, adj., < L. *arcus*, a bow, an arch: see *arc*[1], *arch*[1].] The name given by Gadow to one of the paired cartilages which form on the superior and inferior faces of the notochord in amphibians and by their extension and ossification form the centra, spinous processes, and hemapophyses of the vertebræ. There are typically four pairs of arcualia, the two above being the *basidorsalia* and *interdorsalia*, and the two inferior pairs the *basiventralia* and *interventralia*. See ★*arcocentrous*, ★*gastrocentrous*, and ★*notocentrous*.

arculite (är′kū-līt), *n.* [L. *arculum*, a hoop, dim. of *arcus*, a bow, + *-ite*[2].] In *petrog.*, a term proposed by Rutley, 1891, to denote minute bow-shaped aggregates of crystallites, such as are commonly found on the microscopical study of semi-vitreous volcanic rocks, especially rhyolites and pitchstones.

Arcus juvenalis [L., 'bow of youth'], an opacity encircling the cornea, sometimes seen in the young, which greatly resembles the arcus senilis.

arcyid (är′si-id), *a.* and *n.* **I.** *a.* Having the characteristics of or pertaining to the spider family *Arcyidæ*.

II. *n.* A spider of the family *Arcyidæ*.

Ardisia (är-dis′i-ä), *n.* [NL. (Swartz, 1788) < Gr. ἄρδις, a point.] A very large genus of tropical trees and shrubs of the family *Myrsinaceæ*, a very few of which are grown in hot-houses and conservatories. About a dozen species are in cultivation, but only two are generally known, and these are grown as pot plants for their berries. They are *A. crenulata*, red-berried, and *A. Japonica*, white-berried. The former, from eastern Asia, is one of the popular pot-plants, with persistent foliage and berries that remain for months or even for a year or more. It is a synonym of *Icacorea*.

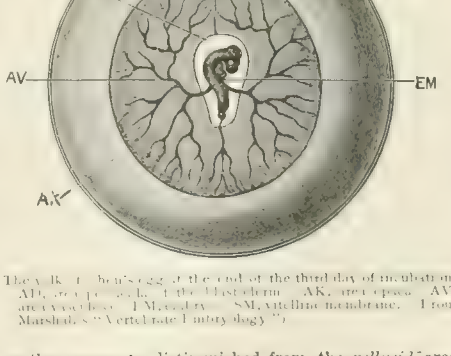
ardite (är de′te), *n.* [Sp.; referred by some to Basque *ardia*, sheep.] An ancient copper coin of Catalonia.

Ardois lantern, signal system. See ★*lantern*, ★*signal*.

Ardor urinæ, a scalding sensation on urination, in cases of urethritis.—**Ardor ventriculi**, pyrosis; heartburn.

-are. A suffix applied to the names of orders in the quantitative classification of igneous rocks proposed by Cross, Iddings, Pirsson, and Washington: as, *canadare*, *columbare*. See *classification of igneous rocks*, under ★*rock*.

area, *n.* **5.** In *conch.*, a space behind the apex of the shell, in certain bivalves, including the dorsal posterior side.—**6.** In *Polyzoa*, the calcareous surface outlined on the zoœcium by a raised ridge.—**Abysmal area**, that part of the lithosphere which is more than 10,000 feet below sea-level.—**Alleghanian (faunal or floral) area**, the eastern humid division of Merriam's transition life zone. (See ★*zone*.) It covers part of Nova Scotia, a large part of New England, New York and Pennsylvania, middle Ontario and Michigan, most of Wisconsin, a large part of Minnesota, and parts of the Dakotas.—**Area amniotica**, the transparent portion in the human embryo corresponding in general to the area pellucida in the chick.—**Area cribrosa** ['sieve-like tract'] or **cribriform area**. In *anat.*: (*a*) The anterior surface of the nipple, marked by the orifices of the milk-pores. (*b*) The area at the bottom of the internal auditory meatus giving passage to branches of the auditory nerve.—**Area of characterization**, a region in which the several varieties of plants and animals inhabiting it have been able to preserve their individuality through geographical isolation. *W. Z. Ripley*, Races of Europe, p. 48.—**Area of high pressure**, any region on the earth over which barometric pressure is higher than in the neighboring region. There are permanent tropical areas of high pressure, the pressure being slightly higher under the tropics of Cancer and Capricorn than to the north or south. This increase is specially marked over the continents in the winter and over the oceans in the summer season. Small areas of high pressure move from the poles toward the equator at irregular intervals, especially in the respective winter seasons, and are usually designated on the daily weather-maps as "highs."—**Areas of Langerhans**, minute collections of cells in the interstitial connective tissue of the pancreas: more commonly called *islands of Langerhans*.—**Area of low pressure**, any region on the earth over which atmospheric or barometric pressure is lower than in the neighboring regions. A large region of this kind occupies the antarctic circle and there is a less marked region in the arctic circle: these are called *polar areas*. Continental areas of low pressure develop over the continents in their summer seasons and oceanic areas over the extreme North Atlantic and North Pacific oceans in the summer season. There is a belt of areas of low pressure (*equatorial areas*) lying within the torrid zone near the equator. The smaller areas of low pressure which occupy the central portions of all cyclonic storms, and are usually designated on the weather-maps as "lows," are called *storm-areas*.—**Area opaca**, in *embryol.*, that portion of the blastodisc known



The yolk of a hen's egg at the end of the third day of incubation. AD, area pellucida of the blastoderm. AK, area opaca. AV, area vasculosa. EM, embryo. SM, vitelline membrane. (From Marshall's "Vertebrate Embryology.")

as the *opaque* as distinguished from the *pellucid* area (*area pellucida*), especially in the embryonic bird.—**Area placentalis**, that portion of the ectoderm, in the human ovum, which is in intimate contact with the wall of the uterus.—**Area system**, in *photog.*, a system of calculating relative exposures with various stops and lenses, based on the law of squares.—**Arid transition (faunal or floral) area**, that part of Merriam's transition zone, (see ★*zone*) lying west of the hundredth meridian and merging at length into the Pacific coast humid area. Its outlines are very irregular, being much affected by altitude. It extends interruptedly from British America far into the mountains of Mexico.—**Association areas**, portions of the cerebral cortex in which there are apparently no motor nor sensory centers, their function seeming to be to correlate the various impressions received and excite motor impulses consistent with them; in other words, to exercise the functions of the mind.—**Austroriparian (faunal or floral) area**, the eastern humid division of Merriam's lower austral life zone (see ★*zone*), alternatively called *Louisianian area*. Beginning in southern Virginia, it extends along the coast-plain to Florida, thence west over a large portion of the Gulf States to middle Texas. In the Mississippi valley it reaches north to the boundaries of Illinois and Indiana. The semitropical or gulf strip is a subdivision of this. The southern extremities of Florida and Texas belong to the tropical region.—**Broca's area**, the portion of gray matter in the brain between the peduncle of the corpus callosum and the middle olfactory lobe where are stored the memories of the movements necessary to articulate speech.—**Carolinian (faunal or floral) area**, the eastern moist division of Merriam's upper austral life zone (see ★*zone*). It extends along the coast from Connecticut to Virginia, thence along the base of the mountains to Alabama, north through Tennessee, to Ontario, and from there west over Indiana and succeeding States to the hundredth meridian.—**Conservation of areas**, the description of equal areas in equal times by the radius vector in all orbits described under the action of a central force.—**Cord area**, the portion of the brain injury to which is often followed by degenerative processes in the spinal cord.—**Culture area**, an area in which the forms of human culture have assumed a definite shape, owing to the influence of geographical environment.—**Distributional area, germinal area, hyperbolic area.** See ★*distributional*, ★*germinal*, ★*hyperbolic*.—**Louisianian area.** Same as *austroriparian* ★*area*.—**Lower Sonoran (faunal or floral) area**, the dry western division of Merriam's lower austral life zone. (See ★*zone*). It extends from western Texas to New Mexico, reaching far south into Mexico at middle altitudes. It reappears west of the Rocky Mountains, occupying irregular and interrupted areas in Arizona, California, Mexico, and Lower California.—**Motor area**, that portion of the anterior and posterior central convolutions of the brain where the nerve-centers for motion are believed to reside.—**Pacific coast transition (faunal or floral) area**, the humid western division of Merriam's transition zone. (See ★*zone*.) It comprises portions of western Washington and Oregon and northern California, together with a large part of the California coast.—**Principle of the preservation or conservation of areas**, in *mech.*, Kepler's law that the radius vector of a planet revolving in an ellipse about the sun describes equal areas in equal times in all parts of the orbit. Newton showed that this is a necessary consequence of the laws of motion of a body attracted or repelled by central forces only. In meteorology Ferrel showed that the same law applies to the motions of the atmosphere and of all bodies on the earth's surface held there by gravitation if friction is neglected; and H. Bruns (1883) showed that this law holds good even if the friction is appreciable, as the latter diminishes the area but does not affect the constancy.—**Rolandic area.** Same as *motor* ★*area*.—**Sensation** or **sense area.** (*a*) The surface of distribution, peripheral or central, of a particular sensory nerve or nerve-branch. (*b*) A term sometimes used to denote the separation that must be given to two esthesiometric points impressed upon the skin if the two stimuli are to be separately sensed; the limen of dual impression.—**Sensory area**, that portion of the brain cortex, embracing the superior temporal convolution and the posterior part of the occipital lobe, where the centers for receiving sensory impressions are believed to reside.—**Silent area**, an area of the surface of the brain injury to which is not expressed by special motor or sensory symptoms: now usually called *association* ★*area*.

But as it is in the association areas (hitherto termed the "*silent areas*" because, forsooth, we understood them not) that the higher intellectual activities are carried on, it is in these portions of the cortex that the higher feelings assume shape and control or influence the somæsthetic areas with which they are connected. Herein it is that the mind of man differs most from that of the brute.
Amer. Anthropologist, Oct.-Dec., 1903, p. 609.

Subpermanent areas of pressure. See ★*pressure*.—**Upper Sonoran (faunal or floral) area**, the western arid division of Merriam's upper austral life zone. (See ★*zone*.) It occupies irregular and discontinuous spaces, determined largely by altitude, west of the hundredth meridian from Montana and Washington to far south in Mexico.—**Vascular area**, in the amniote embryo, that portion of the extra-embryonic blastodisc which gives rise to the first blood-vessels. See cut at ★*area opaca*.

area-drain (ā′rē-ä-drān), *n.* An area near the foundation walls of a building, having a slight slope to carry the moisture off.

Areal geology, stimulation, etc. See ★*geology*, etc.

area-wall (ā′rē-ä-wâl″), *n.* The wall which retains the earth on either side of an area. In cities it is becoming increasingly common to set buildings of all kinds in what seems a pit formed by areas on all the street-fronts; the area-wall then becomes an important construction, like the counterscarp of a fortification.

arecaidine (ar-ē-kā′i-din), *n.* [Irreg. < *areca* + *-id* + *-ine*[2].] An alkaloid, $C_7H_{11}NO_2 + H_2O$, formed by the saponification of arecoline with barium hydroxid. It is crystalline, melts at 223° C., and is not poisonous. It is an acid as well as a base.

arecaine (ar'ē-ka-in), *n.* [Irreg. < *areca* + *-ine*².] An alkaloid, $C_7H_{11}NO_2 + H_2O$, found in the betel-nut from *Areca Catechu*. It is crystalline and melts at 213° C.

arecoline (ar'ē-kō-lin), *n.* [*areca* + *-ol-* + *-ine*².] The chief alkaloid, $C_8H_{13}NO_2$, of the betel-nut from *Areca Catechu*. It is an oil, is easily soluble in water, boils at 220° C., and is very poisonous. It is the methyl ester of arecaidine, and is used in medicine, principally as arecoline hydrobromate, as a vermifuge.

Arenacea (ar-ē-nā'sē-ä), *n. pl.* [NL., neut. pl. of *arenaceus*, of sand: see *arenaceous*.] A group of *Foraminifera* in which the test is not secreted by the organism, but is constructed by it from particles of sand, shell, sponge-spicules, and other adventitious bodies picked up by it and cemented together by a modification of the sarcode. The name does not indicate a true zoölogical group.

arenicole (a-ren'i-kōl), *a.* [L. *arena, harena*, sand, + *colere*, dwell in: see *cult.*] Living or burrowing in the sand, as certain marine worms; arenicolous.

areniferous (ar-ē-nif'e-rus), *a.* Bearing or containing particles of sand, as the horny fibers of certain sponges.

Arenig group. See ★*group*¹.

arenoid (ar'ē-noid), *a.* [L. *arena*, sand, + *εἶδος*, form.] Resembling sand. *Buck*, Med. Handbook, IV. 114.

arenosity (ar-ē-nos'i-ti), *n.* [*arenose* + *-ity*.] Sandy character or quality; sandiness. *Dr. H. More.*

areographer (ā-rē-og'ra-fèr), *n.* One who writes upon or describes the physical features of the planet Mars.

areola, *n.* **2.** (*b*) A tessellation in the thallus of some lichens.—**Areola umbilicalis,** a dark circle surrounding the umbilicus in pregnancy.

Areolar cancer. See ★*cancer.*

Areolate mildew of cotton. Same as ★*leaf-mold of cotton.*

areolatin (ar'ē-ō-lā-tin), *n.* A white crystalline neutral compound, $C_{12}H_{10}O_7$, found in the lichen *Pertusaria rupestris*. It melts at 270° C.

areolin (a-rē'ō-lin), *n.* A white crystalline substance, $C_{16}H_{14}O_7$, found in the lichen *Pertusaria rupestris*. It melts at 243° C.

areometrically (ar''ē-ō-met'ri-kal-i), *adv.* By means of the areometer or hydrometer.

Arethusina (ar-ē-thū-sī'nä), *n.* [NL., < L. *Arethusa*, < Gr. Ἀρέθουσα, a proper name, + *-ina*¹.] A genus of trilobites belonging to the family *Proëtidæ*. It is characterized by a broad cephalon with small glabella and ocular ridges running out to the eyes, a thorax with 22 segments, and a small pygidium. It occurs in the Silurian rocks.

a reverbero (ä rā-ver'be-rō). [It.: see *reverberate.*] With reflection: noting a peculiar tint of luster found on the old Moorish and majolica wares, consisting of iridescent metallic pigments.

Argand diagram. See ★*diagram.*

arganin (är'ga-nin), *n.* A glucoside, probably identical with ★*sapotin.*

argantid (är-gan'tid), *a.* and *n.* **I.** *a.* Having the characteristics of or belonging to the family *Argantidæ.*

II. *n.* A tick of the family *Argantidæ.*

Argelander's method, scale. See ★*method,* ★*scale*³.

argentamine (är-jent-am'in), *n.* [As *argent* + *amine.*] A solution of silver phosphate in an aqueous solution of ethylene diamine; ethylene-diamine silver phosphate. It is used as an antiseptic.

argentan, *n.* **1.** This alloy, also known as German silver, is often made with manganese instead of with nickel, the other constituents, copper and zinc, being the same in either case.

argentine, *n.* **7.** Metallic tin in a state of fine subdivision, precipitated by zinc from a dilute solution of a tin salt: used for tinplating and for printing upon paper and cloth.—**8.** A gold coin of the Argentine Republic, equivalent to $4.824.

argento (är-jen'tō), *n.* [It.] A silver coin struck by Pope Clement V. at Carpentras near Avignon in the early part of the fourteenth century.

argentol (är-jen'tōl), *n.* [L. *argentum*, silver, + *-ol.*] The trade-name of silver hydroxyquinolinesulphonate, $HOC_9H_5NSO_3Ag$. It is a yellow, pulverulent compound used in surgery as a dusting-powder.

argentotype (är-jen'tō-tīp), *n.* **1.** A picture printed by exposure behind a negative, on paper previously prepared by the use of ferric oxalate and silver nitrate solutions. The process was devised by Mallman.—**2.** A special make of gelatinobromide paper.

argillomagnesian (är-jil''ō-mag-nē'sian), *a.* [Gr. ἄργιλλα, clay, + NL. *magnesia*, magnesia.] Containing both clay and magnesia, as a limestone or a cement made from it.

argillophyre (är-jil'ō-fīr), *n.* [L. *argilla*, clay, + (*por*)*phyry*.] In *petrog.*, a porphyry, with a ground-mass rich in clay, resulting from the decomposition of the original feldspar particles contained in it.

arginase (är'ji-nās), *n.* [*argin*(*in*) + *-ase.*] A ferment which causes the decomposition of arginin into ornithin and urea. It has been found in the liver, the thymus, lymph glands, the mucosa of the small intestine, etc. *Nature*, June 16, 1904, p. 160.

arginin (är'jin-in), *n.* [Gr. ἀργιν(όεις), bright, shining, white (< ἀργός, white), + *-in*².] A constant decomposition product of the protamins and possibly of all albumins. It is a hexone base, $C_6H_{14}N_4O_2$. On hydrolysis it yields urea and ornithin.

Argiope (är-jī'ō-pē), *n.* [L. *Argiope*, < Gr. ἀργιόπη, a proper name.] A genus of brachiopods having a straight hinge-line, plicate shells, dorsal valve with from three to five septa, and a broad continuous brachidium divided into lobes by the septa. It occurs fossil in Mesozoic and Tertiary rocks, and also exists in present seas.

Argoan (är'gō-an), *a.* [L. *Argōus*, < Gr. Ἀργῷος, < Ἀργώ, Argo.] Of or pertaining to the ship Argo, in which Jason sailed for the golden fleece.

argon (ar'gon), *n.* [Gr. ἀργόν, neut. of ἀργός, inert.] A gaseous element having, in the pure state as a gas, a density of 19.96 (H=1) and an atomic weight of 39.6. It exists in the atmosphere, and is also obtained from the gases yielded by the water of some springs, and, with helium (which see), from certain minerals and from meteoric iron. It was first recognized in 1895 by Lord Rayleigh and Professor W. Ramsay, who separated it from the nitrogen with which it had till then been confounded largely because of its chemical inertness, it being more indifferent to reagents than even that element. It yields two characteristic spectra, marked respectively by certain prominent red and blue lines. This element, the first of five previously unknown gases existing in the atmosphere, exhibits the same chemical inertness or incapacity for combination as the others, with which when first examined it was more or less mixed. It can now be separated from them by reduction to the liquid state and fractional distillation of the mixture. When liquefied it boils under normal pressure at −186.1° C., and in the solid state it melts at −189.5° C. Argon is nearly 2½ times as soluble in water as nitrogen. As a gas it is more opaque to the Röntgen rays than either nitrogen or oxygen. It forms about .94 per cent. by volume or 1.33 per cent. by weight of the atmosphere. The fact that this substance was actually obtained by Cavendish in 1785 is interesting, although he did not pursue its examination or ascertain its elementary character.

Argonian (är-gō'ni-an), *a.* and *n.* [*Argo* + *-n-* + *-ian.* The normal adj. from *Argo* is *Argoan* (Gr. Ἀργῷος).] **I.** *a.* Noting stars having spectra like those of γ Argus and ζ Puppis (the stars shown in the figure of the constellation on page 305, the former (✱) on the deck a little forward of the mast, the latter (◆) north of it and just overboard). These spectra are characterized by the predominance of the two series of hydrogen lines. They are considered by Lockyer to be the hottest of all stars, and some of them show bright lines.

II. *n.* An Argonian star.

argonin (är'gō-nin), *n.* [Gr. ἀργός, white, + *-on* + *-in*².] A white, amorphous, practically neutral compound of silver (4 per cent.) and casein. It is used as a bactericide in cases of gonorrhœa.

argosy, *n.* **2.** A fleet of ships.

> Fun enough to float an *argosy* of second rates.
> *Forster*, Life of Dickens.

argotic (är-got'ik), *a.* Of the nature of argot or slang: as, *argotic* locutions.

Argovian (är-gō'vi-an), *a.* and *n.* [NL. *Argovia*, F. *Argovie*, G. *Aargau*, a canton of Switzerland.] In *geol.*, noting a division of the Middle Jurassic or Oxfordian in France and the Jura, corresponding to the upper part of the Oxfordian.

Arguesian (är-gē'si-an), *a.* [(*Des*)*argues* + *-ian.*] Of or pertaining to the French mathematician Gérard Desargues (1593–1661).—**Arguesian transformation.** See *transformation.*

argument, *n.* **8.** (*c*) When one variable is dependent upon another, the dependent variable is called a function of the other variable, which is then called the *argument* of the function.

> The graph of an equation shows very clearly how the function varies as the *argument* changes.
> *G. A. Gibson*, Introd. to the Calculus, p. 3.

argumentarian (är-gu-men-tā'ri-an), *n.* An arguer or debater. [Colloq.]

Argumentum a contingentia mundi [L., 'argument from the indeterminate nature of the universe'], the argument that because the universe was not by any *a priori* necessity arranged exactly as it is, therefore it must have a preexistent and independent cause.

argus-butterfly (är-gus-but'èr-flī), *n.* Any one of the meadow-browns of the family *Agapetidæ*, as the little wood-satyr, *Cissia eurytus*: so called on account of the numerous eye-spots on the wings.

argus-tortoise (är'gus-tôr''tis), *n.* A tortoise-beetle of the family *Cassididæ*, *Chelymorpha argus*, a large brick-red American species with many black dots. It feeds on herbaceous plants of different families.

Argyll-Robertson phenomena. See ★*phenomenon.*—**Argyll-Robertson's sign.** Same as *Argyll-Robertson pupil* (which see, under *pupil*²).

argyræscin (är-ji-res'in), *n.* [Gr. ἀργυρος, silver, + L. *æsc*(*ulus*), horse-chestnut, + *-in*².] A glucoside found in the horse-chestnut.

argyrol (är'ji-rol), *n.* [Gr. ἀργυρος, silver, + *-ol.*] The trade-name of a compound of silver with proteid material said to be obtained from wheat: used as an antiseptic instead of the more irritant mineral salts of silver.

argyropyrite (är''ji-rō-pī'rit), *n.* [Gr. ἀργυρος, silver, + πυρίτης, pyrites.] A sulphid of silver and iron from Freiberg in Saxony. It is allied to the more definitely known species sternbergite. Argentopyrite from Joachimsthal in Bohemia is a closely related compound.

argyrosis (är-ji-rō'sis), *n.* [NL., < Gr. ἀργυρος, silver, + *-osis.*] Same as *argyrism.*

Argyrosomus (är''ji-rō-sō'mus), *n.* [NL., < Gr. ἀργυρος, silver, + σῶμα, body.] A genus of ciscos or lake-herrings of the family *Salmonidæ*. It is distinguished by the relatively large mouth in connection with the large scales and small teeth. *A. artedi*, the lake-cisco or Michigan herring, is the commonest of the numerous American species.

arhinencephalus, *n.* See ★*arrhinencephalus.*

arhythmia, arhythmic. See *arrhythmia, arrhythmic.*

ari (ä'rē), *n.* [Telugu.] A small crooked tree, *Bauhinia racemosa*, distributed from India to Burma, China, and Malaysia. It yields a strong fiber used for cordage.

aria, *n.* Special varieties of movement or style are indicated by adding various terms: as, *aria cantabile*, an aria in a flowing, connected style, with but slight accompaniment; *aria concertato*, an aria of large dimensions, with an elaborate or concerted accompaniment; *aria parlante*, an aria in which the dramatic delivery of the text is conspicuous; *aria di bravura* or *d'agilità*, an aria in which special opportunity is given for vocal display through rapid passages and figures, trills and other embellishments, extreme notes, and the like; *aria d'imitazione*, an aria in which the music recalls some physical sound like the song of birds, the noises of battle, etc.

aribine (ar'i-bin), *n.* [NL. *Ar*(*ar*)*iba* (< Tupi *arariba*, < *arara*, a (red) parrot, + *iba*, fruit (tree), + *-ine*².] An alkaloid, $C_{23}H_{20}N_4 + 8H_2O$, found in the bark of *Arariba rubra*, which is used in Brazil as a red dye. The alkaloid is crystalline and melts at 229° C.

Arid region, a region where the rainfall is decidedly less than the annual evaporation, such as the great deserts of Sahara, Arabia, and Persia, and portions of Nevada, Utah, southern California, Arizona, New Mexico, and Spain.

aridian (a-rid'i-an), *a.* [NL. **Aridia*, the arid region (< L. *aridus*, arid) + *-an.*] Relating to the arid countries of the southwestern parts of the United States.—**Aridian culture,** the culture of the pueblos of the southwest. *F. N. Cushing.*

Aridine red. See ★*red*¹.

aridium (a-rid'i-um), *n.* [NL., < L. *aridus*, dry: see *arid.*] A supposed new chemical element announced by Ullgren in 1850: later shown to consist of the oxids of iron, chromium, and phosphorus.

ariegite (ar'i-e-jīt), *n.* [*Ariège*, a locality in the French Pyrenees, + *-ite*².] In *petrog.*, a granular igneous rock consisting essentially of pyroxenes (diopside, diallage, bronzite) and spinel, with or without garnet (pyrope) and hornblende. This rock was named by Lacroix in 1901.

Aries, *n.*—**First of Aries** or **first point of Aries,** the point at which the sun crosses the celestial equator in the spring; the vernal equinox, from which right-ascension and (celestial) longitude are reckoned; the Greenwich of the celestial sphere.

arietean (a-ri-ē'tē-an), *a.* Pertaining to or having the characters of the cephalopod genus *Arietes.*

Arietes (ar'i-e-tēz or a-rī'e-tēz), *n.* [NL., < L. *aries* (*ariet-*), a ram.] The typical genus of the family *Arietidæ.*

Arietidæ (a-ri-et′i-dē), *n. pl.* [NL., < *Arietes* + *-idæ*.] A family of ammonoid cephalopods comprising discoidal and widely umbilicate shells having a channeled periphery, strong ribs on the sides of the whorls, and highly complex septal sutures: characteristic of the Lower Lias beds.

arigue (ä-re′ga), *n.* [Philippine Sp. (Blumentritt), a form of Tagalog and Bisaya *halígi*.] In the Philippine Islands, timber, especially when whole, used in the construction of buildings; a post or pile.

a-ripple (a-rip′l), *adv.* [*a*[3] + *ripple*.] In a ripple; rippling.

That young man,
The muscles all *a-ripple* down his back.
Browning, Cleon.

Arisæma (ar-i-sē′ma), *n.* [NL.] A genus of about 50 widely distributed species of tuberous-rooted herbs of the family *Araceæ*. The tropical species are sometimes grown as hothouse subjects; but those commonly known are the two native species, *A. Dracontium*, the dragon-root, and *A. triphyllum*, the Indian turnip or jack-in-the-pulpit. These two species are easily transferred to the garden, and they can be grown in pots indoors for very early spring bloom.

Arisaig series. See ★*series*.

aristiform (a-ris′ti-fôrm), *a.* [L. *arista*, awn, + *forma*, form.] Of the form of an arista, in either sense; awn-like.

aristochin (a-ris′tō-kin), *n.* A white tasteless derivative of quinine; diquinine-carbonic-ether. It possesses antimalarial properties. Also *aristoquin*.

Aristoclesia (ar″is-tō-klē′zi-ä), *n.* [NL. (Coville, 1905), < Gr. Ἀριστοκλῆς, Aristocles, the early name of Plato, the Greek philosopher. See *Platonia*.] A genus of trees belonging to the family *Clusiaceæ*, improperly known by the name *Platonia* (which see).

Aristocystidæ (ar″is-tō-sis′ti-dē), *n. pl.* [NL., < ★*Aristocyst(ites)* + *-idæ*.] A family of cystoid echinoderms or cystids having a spherical or pear-shaped calyx composed of numerous very irregular plates which are traversed by simple canals. The ambulacral grooves lie beneath the plates. These echinoderms are without arms or stem. They are found only in the Silurian rocks.

Aristocystites (ar″is-tō-sis-tī′tēz), *n.* [NL., < Gr. ἄριστος, best, + κύστις, bladder, + *-ites*.] The typical genus of the family *Aristocystidæ*.

aristodemocratical (ar″is-tō-dem-ō-krat′i-kal), *a.* Of the nature of an aristodemocracy; combining both aristocratic and democratic features of government, as the Swiss Confederacy.

We may conclude that those authors have erred who call the government of Soleure *aristo-democratical*, for it is certainly a most complete aristocracy.
Coxe, Trav. in Switzerland, I letter xx.

aristogen (a-ris′tō-jen), *n.* [Gr. ἄριστος, the best, + -γενης, -producing.] In *photog.*, a trade-name for a concentrated solution of hydroquinone used in developing faintly printed pictures on printing-out paper.

aristol (a-ris′tōl), *n.* [Gr. ἄριστος, best, + *-ol*.] A pale-brown amorphous compound, C_3H_7.$CH_3.C_6H_2(OI)_2$, of faint odor, containing 45.8% iodine, obtained by treating thymol with sodium hydrate, iodine, and potassium iodide; di-thymol-di-iodide; thymol iodide. It is used as a substitute for iodoform. Also called *annidalin*.

aristolic (ar-is-tol′ik), *a.* [*Aristol(ochia)* + *-ic*.] Derived from *Aristolochia*.—**Aristolic acid**, an orange-red compound, $C_{15}H_{11}O_7N$ or $C_{15}H_{13}O_7N$, contained in Virginia and Texas snakeroot, *Aristolochia argentina*. It crystallizes in needles and melts at 260°–270° C.

Aristolochiales (är″is-tō-lō-ki-ā′lēz), *n. pl.* [NL. (Lindley, 1833), < *Aristolochia* + *-ales*.] An order of dicotyledonous, apetalous (monochlamydeous) plants, characterized chiefly by the thick, leathery, tubular, corolline calyx. It embraces the families *Aristolochiaceæ*, *Rafflesiaceæ*, and *Hydnoraceæ*.

aristolochine (ar″is-tō-lō′kin), *n.* [*Aristolochia* + *-ine*[2].] An alkaloid, $C_{32}H_{22}N_2O_3$, found in the seeds of *Aristolochia Clematitis*. It crystallizes in orange-yellow needles which decompose at 215° C. It is a violent poison for animals.

Aristotelian experiment. See ★*experiment*.

Aristotelism (ar″is-tot′el-izm), *n.* Same as *Aristotelianism*.

aristotype (a-ris′tō-tīp), *n.* [Gr. ἄριστος, best, + τύπος, type.] A photograph printed on paper on which silver salts are spread with collodion or gelatin. The name was originally given by Liesegang to the gelatinochlorid or collodiochlorid printing-out process. *Woodbury*, Encyc. Dict. of Photog., p. 42.

Aristozoe (ar″is-tō-zō′e), *n.* [NL., < Gr. ἄριστος, best, + ζωή, life.] A genus of extinct crustaceans of the order *Phyllocarida*. They have a bivalved nodose carapace jointed by symphysis along the back, and a long cylindrical abdominal segment curiously articulated with the caudal spine. Typical species are from the Devonian of Bohemia.

arithmachine (a-rith′ma-shēn″), *n.* [Irreg. < Gr. ἀριθ(μός), number, + E. *machine*.] A form of computing machine. Its principal parts are figure wheels operated by endless chains moved by a stylus, and sundry mechanisms whereby fundamental arithmetical operations and much of the labor of involution and evolution may be performed. A machine of this kind, invented by Goldman, may be carried in the pocket.

arithmachinist (a-rith′ma-shē-nist), *n.* One who is versed in the theory, construction, and operation of an arithmachine.

arithmechanical (a-rith-mē-kan′i-kal), *a.* Of or pertaining to devices for computation by mechanical means or by machines.

arithmetic, *n.* **Mechanical arithmetic**, the science of the constructive principles and the practical use of mechanical aids to arithmetical computation.

arithmetization (a-rith″me-tī-zā′shon), *n.* [*arithmet(ic)* + *-ize* + *-ation*.] The process by which any part of mathematics is so recast as to be made to depend only upon purely arithmetical concepts, to the exclusion of all measurement.

The Theory of Functions of Real Variables as it has been remodelled in the process of complete *arithmetization*.
Encyc. Brit., XXVIII. 544.

arithmetize (a-rith′me-tīz), *v. t.*; pret. and pp. *arithmetized*, ppr. *arithmetizing*. To render arithmetical. See ★*arithmetization*.

arithmetizer (a-rith′me-tī-zėr), *n.* One who arithmetizes. Specifically: (*a*) One who builds the entire number system, irrational numbers, and the mathematical continuum without any use of measurement or intuition or geometric magnitudes. *Dedekind* and *Georg Cantor*. (*b*) One who would abolish irrational numbers and the modern extensions of the number concept, substituting for them equivalents expressed in terms of whole numbers only. *Kronecker*.

arithmogram (a-rith′mō-gram), *n.* [Gr. ἀριθμός, a number, + γράμμα, a letter.] The number obtained by summing the numerical values of the letters of a word.

arithmography (ar-ith-mog′ra-fi), *n.* [As *arithmograph* + *-y*[3].] A formal presentation of the properties of numbers.

arithmological (a-rith″mō-loj′i-kal), *n.* In *math.*, of or pertaining to arithmology; pertaining to the rigorous treatment of numbers.

arithmology (ar-ith-mol′ō-ji), *n.* [Gr. ἀριθμός, number, + -λογία, < λέγειν, speak.] The theory of numbers; higher arithmetic. *André*, 1873.

arithmomania (a-rith″mō-mā′ni-ä), *n.* [NL., < Gr. ἀριθμός, number, + μανία, madness.] In *pathol.*, a morbid impulse to work over mathematical problems, or to count objects or acts, such as buttons, steps, etc. *Baldwin*, Dict. of Philos. and Psychol., I. 68.

arithmomechanics (a-rith″mō-mē-kan′iks), *n. pl.* [Gr. ἀριθμός, number, + *mechanics*.] Mechanical principles and devices employed in the construction of machines for performing arithmetical operations.

Ariyalur group. See ★*group*[1].

arize, *v. i.* and *n.* A simplified spelling of *arise*.

Arizonian (ar-i-zō′ni-an), *a.* and *n.* [*Arizona* + *-ian*.] **I.** *a.* Of or pertaining to Arizona.
II. *n.* A native or an inhabitant of Arizona.

A. R. jug. See ★*jug*[1].

arkyochrome (är′ki-ō-krōm), *n.* [Gr. ἄρκυς, net, + χρῶμα, color.] In *neurol.*, a somatochrome nerve-cell in which the stainable portion of the cytoplasm appears in the form of a network or reticulum. *Nissl*.

Arkyochromes or cells in which the chromatic substance is present in the form of anastomosing chains, making a coarser or finer meshwork; as, for example, in the Purkinje cells of the cerebellum and in the mitral cells of the olfactory lobe.
Jour. Exper. Med., V. 552.

arkyostichochrome (är″ki-ō-stik′ō-krōm), *n.* [Gr. ἄρκυς, net, + στίχος, row, + χρῶμα, color.] A somatochrome nerve-cell in which the stainable cytoplasmic substance combines a striate with a reticular arrangement. Typical examples of such cells are the Purkinje cells of the cerebellar cortex. *Nissl*.

In the cerebellum, the only cells of special interest, when subjected to the method of Nissl, are those of Purkinje. Formerly classed as *arkyostichochromes*, these cells Nissl now includes in the arkyochrome group. They lie as a distinct row of cells at the junction of the molecular layer with the granular layer, their cell bodies embedded in the latter.
Jour. Exper. Med., V. 568.

arm[1], *n.* 7. In *violin-playing*, the arm or its action in reference to the style of bowing: as, he plays with a good *arm*.—8. In *archery*, the longitudinal half of a bow, extending from the handle to the end of the bowstaff: limb: classified as *upper* and *lower arm*, according to their relative position when the bow is held perpendicularly, as in shooting.—**At arm's end**, beyond the reach of one's arm; hence, at a distance, or at such a distance as to prevent contact or familiarity in personal, social, or other relations: as, to keep one *at arm's end*.—**At arm's length.** (*a*) At arm's end; at a distance as regards personal relations. (*b*) At a disadvantage: as, to work *at arm's length*. **Base-ball pitcher's arm**, a condition of sprain, with pain and soreness over the points of insertion of the muscles, occurring sometimes as a result of overuse by base-ball players.—**Glass arm**, a neurosis, analogous to writers' cramp, marked by spasm of the pronator teres muscle, occurring in base-ball pitchers.—**Golf arm**, a neurosis, analogous to writers' cramp, which interferes with the motions of driving or putting at golf.

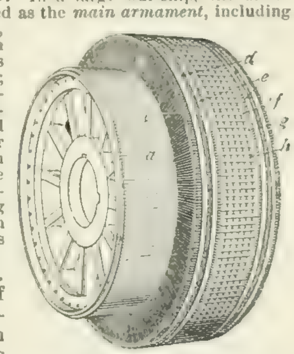
arm[2], *n.*—**Cessation of arms**, suspension of hostilities; an armistice or truce.—**Manual of arms**, a prescribed method of using a military arm.

Armadillidæ (är-ma-dil′i-dē), *n. pl.* Same as ★*Armadillididæ*.

Armadillididæ (är-ma-di-lid′i-dē), *n. pl.* [NL., < *Armadillidium* + *-idæ*.] A family of land isopods having the body very convex and contractile into a globular form. *Armadillidium* is the typical genus.

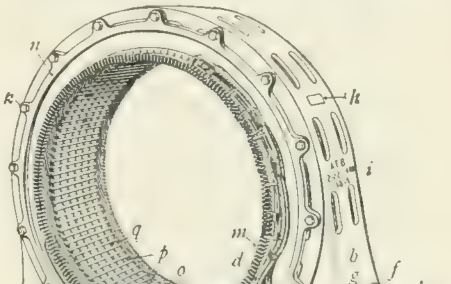
Armadillidium (är-ma-di-lid′i-um), *n.* [NL., < *Armadillo*, *n.*, 2, + dim. *-idium*, Gr. -ίδιον.] The typical genus of the family *Armadillididæ*. *Brandt*, 1833.

armament, *n.* 2. In a large war-ship, the armament is distinguished as the *main armament*, including all the largest guns, usually mounted in barbettes or turrets in the largest vessels; the *secondary* or *intermediate armament*, including all the medium-caliber guns such as 5-inch or 6-inch; and the *tertiary* or *minor armament*, including the smaller guns such as 3-inch, 6-pounders etc.



Revolving Armature.
a, commutator; *b*, commutator-leads; *c*, soldered clips; *d*, armature-winding; *e*, binding wires; *f*, top stick; *g*, laminations; *h*, ventilating ducts.

armature, *n.* 6. (*b*) That part of an electric machine in which electric power is generated (generator) or consumed (motor). Sometimes the rotating element is called *armature*, irrespective of its function. See *field*, 13.



Stationary Armature.
a, feet; *b*, frame; *c*, holding-down bolts; *d*, armature-leads; *e*, couplings; [illegible] ducts.

arm-chair, *n.* **II.** *a.* In one's arm-chair; seated comfortably at home; fireside; hence, theoretical, not practical: as, *arm-chair* geographers.

Much of the objection to horizontal fishing had no greater weight than belongs to *armchair* disputations on the subject.
Geog. Jour. (R. G. S.), XIII. 173.

Armeniaca (är-mē-nī′a-kä), *n.* [NL., < L. *Armeniacus*, adj., < Gr. Ἀρμενιακός, < Ἀρμενία, L. *Armenia*, Armenia.] An old generic name of the common apricot, but now most commonly used as a specific name in *Prunus*, as *P. Armeniaca*. The purple apricot is *Prunus* (*Armeniaca*) *dasycarpa*. The Japanese apricot is *P.* or (*A.*) *Mume*.

armeniaceous (är-me-ni-a′shus), *a.* Having the color of an apricot, *Prunus Armeniaca*; dull orange.

Armenioid (är-mē′ni-oid), *a.* [L. *Armenii*, < Gr. Ἀρμένιοι, Armenians, + εἶδος, form.] Resembling the Armenian: in *anthrop.*, noting a type of man found in Armenia and throughout Asia Minor, and in a few places in Syria and Mesopotamia: a branch of the Melanochroi characterized by a very short and high head and narrow, high nose. *W. Z. Ripley*, Races of Europe, p. 444.

Armenoid, *a.* Same as ★*Armenioid.*

Armeria (är-mē′ri-ä), *n.* [NL.] A genus of plants of the family *Plumbaginaceæ*, commonly called sea-pink or thrift. They are small perennial herbs, with rosettes of narrow, evergreen leaves on the ground. The species are much confused. They are used chiefly for border-planting in the open.

armes parlantes (ärm pär-länt′). [F.] Allusive or canting heraldry. See *allusive arms*, under *arm*[2].

arm-guard, *n.* 2. In *archery*, a guard of leather, metal, ivory, or other substance to protect the bow-arm and wrist from the friction of the bow-string, and to prevent the string from catching on the sleeve; a bracer.

armied (är′mid), *a.* [*army*[2] + *-ed*[2].] Forming an army; army-like. *Bailey*, Festus, xxxiii. 358. *N. E. D.*

armilla, *n.* 6. In *bot.*, the frill originally covering the hymenium of agarics and adhering to the stipe after the expansion of the pileus.

Armillaria (är-mi-lā′ri-ä), *n.* [NL. (Endlicher, 1836), < L. *armilla*, ring, + *-aria.*] A genus of white-spored agarics having the gills decurrent

Armillaria mellea.

Fruiting plants arising from the mycelium (*Rhizomorpha*). After figure in Engler and Prantl's "Pflanzenfamilien."

and the stipe furnished with an annulus. *A. mellea* is a common and widely distributed species, growing about old stumps, and regarded as the cause of certain root-diseases of trees.

Arminianizer (är-min′i-an-ī-zer), *n.* [*Arminianize* + *-er*[1].] One who spreads or seeks to spread Arminian doctrines; a promoter of Arminianism.

arm-lyre (ärm′līr), *n.* A lira da braccio (which see, under *lira*[2]).

armor, *n.* 5. In *paleobotany*, the thick covering or jacket which surrounds the woody axis of fossil cycadean trunks, consisting of the persistent leaf-bases and the copious ramentum which fills the interstices between them. The ramentum is firmly silicified, forming walls around the leaf-bases; and where, as is usually the case, only the lower portion of the leaf-bases is preserved, the triangular cavities remaining give to the trunks a honeycomb-like appearance.

armor-bar (är′mor-bär), *n.* In a man-of-war, a heavy steel bar, about an inch thick and six inches to a foot deep, used to protect an opening in a protective deck from shot or splinters. An assemblage of such bars constitutes an *armor-grating* (which see).

armor-belt (är′mor-belt), *n.* The portion of the armor of a war-ship in the vicinity of the water-line. In a battle-ship, it is usually thicker than the armor above it. A *complete armor-belt* extends the whole length of the vessel; a *partial belt* covers only the middle portions, behind which are the engines and boilers.

armor-clad (är′mor-klad), *n.* A war-vessel protected by external armor; an ironclad. Modern armor-clads include battle-ships, armored cruisers, and armored coast-defense vessels. In 1861 the British Government began the construction of eleven *armour clads*, six of which, including the Hector and Valiant, sister ships of 6700 tons, were iron vessels. *Encyc. Brit.*, XXXII. 554.

Armored scale, wood. See ★*scale*[3], ★*wood*[1].

Armorial porcelain. See ★*porcelain*[1].

Armorican sandstone, in *geol.*, the lowest division of the Silurian series of northwestern France.

armor-plating (är′mor-plā″ting), *n.* The protective sheets or masses of steel which are used to cover the hull of a war-ship or cruiser, in whole or in part, to resist the perforating impact of projectiles.

arm-ossicle (ärm′os″i-kl), *n.* One of the elongate ambulacral plates which form a roof over the ambulacral furrows of the *Asterozoa*. *Proc. Zool. Soc. London*, 1896, p. 1029.

arm-plate (ärm′plāt), *n.* One of the constituent plates in the arm of a crinoid or ophiurid; a brachial.

armstake (ärm′stāk), *v. t.*; pret. and pp. *armstaked*, ppr. *armstaking*. In *leather-working*, to stake or soften by means of a crutch. *Modern Amer. Tanning*, p. 162.

arm-viol (ärm′vī-ol), *n.* A viola da braccio (which see, under *viola*[1]).

Army blanket. See ★*blanket.*

army-ant (är′mi-ant), *n.* The foraging ant. See *Eciton.*

army-worm, *n.*—**Beet army-worm,** the larva of a cosmopolitan noctuid moth, *Caradrina exigua*, which damages sugar-beet plantations. — **Cotton army-worm,** the larva of a noctuid moth, *Alabama argillacea*, occurring abundantly in tropical America and in the southern United States. In former years it damaged the cotton crop of the United States very seriously, the estimated annual money loss amounting to $15,000,000. — **Fall army-worm.** See *grass-worm.* — **Forest army-worm,** another name for the so-called forest tent-caterpillar larva of *Malacosoma disstria.* — **Sciara army-worm,** the larva of any one of several species of midges of the genus *Sciara.* These larvæ are gregarious and travel in large snake-like masses, whence the name *army-worm* or *worm-snake.*

Arnica yellow. See ★*yellow.*

arnillo (är-nēl′yō), *n.* [Cuban Sp., < Sp. *arnilla*, a small beehive.] The Cuban name of a snapper-like fish of the species *Apsilus dentatus.*

arnimite (är′nim-īt), *n.* [Named after the German family Von *Arnim.*] A hydrated copper sulphate occurring as a green incrustation in porcelain-jasper: found at Planitz, near Zwickau, Bohemia.

Arnoglossus (är-nō-glos′us), *n.* [NL., < Gr. ἀρνός (gen.), lamb, + γλῶσσα, tongue.] A genus of small, thin-bodied flounders found in southern Europe.

Arnold's canal, fold. See ★*canal*[1], ★*fold*[1].

Arnusian (är-nū′si-an), *a.* and *n.* [Irreg. < It. *Arno*, L. *Arnus*, a river of Italy, whose valley (Val d'Arno) is famous.] Noting the uppermost stage in the Pliocene Tertiary deposits of the Mediterranean.

aroar (a-rōr′), *adv.* [*a*[3] + *roar.*] In a roar; roaring.

> Hail! day of storms! with thy woods *aroar* like rivers
> and thy rivers *aroar* like seas.
> *Blackwood's Mag.*, XXXIX. 842. *N. E. D.*

aroast (a-rōst′), *adv.* [*a*[3] + *roast.*] In process of roasting.

> He smelleth not his flesh
> *A-roast*, nor yet the sandal and the spice
> They burn. *Edwin Arnold*, Light of Asia, iii.

aroeira, *n.* 2. The name of several other trees of the cashew family, especially *Schinus terebinthifolius* of Brazil and *Astronium fraxinifolium*, an allied Brazilian tree. All of these yield medicinal resins, and the last-named yields a very hard, valuable wood.

aroid, *n.* II. *a.* Like or representing the genus *Arum* or the family *Araceæ*: as, an *aroid* type.

Aroides (a-rō-ī′dēz), *n.* [NL. (Heister, 1763), < *Arum* + *-oides.*] A genus of monocotyledonous plants of the family *Araceæ*. See *Richardia* and *Zantedeschia.*

Aromatic species, a mixture of the leaves and stems of several aromatic plants. — **Aromatic wine.** See ★*wine.*

aromaticalness (ar-ō-mat′i-kal-nes), *n.* Aromatic quality; spiciness. *Bailey*, 1731.

aromaticness (ar-ō-mat′ik-nes), *n.* Same as ★*aromaticalness.*

aromite (a-rō′mīt), *n.* [*Aroma* (see def.) + *-ite*[2].] A hydrated sulphate of aluminium and magnesium from the Pampa de Aroma, Tarapaca, Chile.

aromo (ä-rō′mō), *n.* [Sp. *aromo*, prob. < *aroma*, fragrance.] The sponge-tree, *Acacia Farnesiana.* It yields a reddish gum similar to gum arabic, and its wood is very heavy, hard, reddish-brown in color, and handsomely grained. See *Acacia* and *sponge-tree.*

aroze, preterit of *arize.* A simplified spelling of *arose.*

Arpaditidæ (är-pa-dit′i-dē), *n. pl.* [NL., < *Arpadites* (?) + *-idæ.*] A family of ammonoid cephalopods or ammonites. They have laterally compressed whorls with low transverse ribs, a channeled periphery or venter, and comparatively simple ceratitoid sutures. The species occur in the Triassic formation.

arpeggione (är-pej-i-ō′ne), *n.* [It., < *arpeggio*: see *arpeggio.*] A small six-stringed violoncello, invented by Staufer of Vienna in 1823, having a body shaped somewhat like that of a guitar: hence also called *guitar-violoncello.*

arpenteur (är-pan-tèr′), *n.* [F., < *arpent*, arpent.] A land-surveyor. *Arthur Young*, Trav. France, p. 149.

arras[3] (ä′räs), *n.* [Sp., < L. *arrha*: see *arrha.*] In *Spanish law*, a voluntary gift made by a husband to his wife upon marriage in consideration of the portion which he receives from her. If made, and the property is not more than one-tenth of the husband's estate, it becomes the absolute property of the wife, free from all debts of the husband.

array, *n.* 10. In *statistics*, the values of one variable which are correlated with a certain, definite value of another variable. See ★*correlation*, 5. — **Commissioner of array,** the officer who held, in England, a 'commission of array' for a county: now superseded by the lord lieutenant of the county. See *array*, 8, and *commission of array*, under *commission*[1].

arrayado (ä-rä-yä′dō), *n.* [Cuban Sp.] The Cuban name of the fish sailor's-choice, *Hæmulon parra.*

arrayan (ä-rä-yän′), *n.* [Sp. *arrayán*, myrtle.] 1. *Eugenia apiculata*, a small Chilean tree or shrub of the myrtle family, which has been introduced in the milder regions of the United States and Europe as an ornamental plant. — 2. A similar shrub of Ecuador and Colombia, *Eugenia Arayan*, first collected by Humboldt in the Andes.

arre[3] (är′e), *n.* [Also in a more English-looking form *arrie*, NL. *arra* (Pallas), from a native name in the Aleutian Islands, based upon the harsh cry of the birds, represented by *arrr, arrr.*] A name given by the Aleutian natives to the Pacific murres, *Uria troile californica* and *Uria lomvia arra.*

arrest, *n.*—**Nerve of arrest.** See ★*nerve.*

arrested (a-rēs′ted), *p. a.* Retaining through life an infantile or a juvenile state of development with respect to any organ. Modifications of structure from *arrested* development, so great or so serious as to deserve to be called monstrosities, are of common occurrence. *Darwin*, Variation of Animals and Plants, II. 379.

arretted (a-ret′ed), *p. a.* 1. Convened before a judge and charged with a crime. *Bouvier*, Law Dict. — 2. Imputed or laid to one's charge: as, no folly may be *arretted* to any one under age. *Bouvier*, Law Dict.

arrhenal (a-rē′nal), *n.* A name of the sodium salt of monomethyl arsenite, $Na_2CH_3AsO_3 + 6H_2O$.

Arrhenius's theory of electrolysis. See ★*electrolysis.*

arrhenoid (ar′ē-noid), *n.* [Gr. ἄρρην, male, + εἶδος, form.] In *embryol.*, the attraction-sphere or aster belonging to the sperm during the fertilization of the egg. *Henking*, 1890.

arrhepsia (a-rep′si-ä), *n.* [NL., < Gr. ἀρρεψία, equilibrium, < *a-* priv. + *ῥεπτός, < ῥέπειν, incline, as a balance.] Mental equilibrium: same as *ataraxia.*

Arrhina (a-rī′nä), *n. pl.* [NL., neut. pl.] An ordinal name formerly applied to a division of the fishes including the extinct genera *Pteraspis* and *Cephalaspis*: not now recognized.

arrhine (ar′in), *a.* and *n.* [NL. *arrhinus*, < Gr. ἄρρις, noseless, < *ἀ-* priv. + ῥίς (ῥιν-), nose.] I. *a.* Noseless: applied specifically to the *Arrhina*, an extinct order of fishes, including *Pteraspis* and *Cephalaspis.*

II. *n.* One of the *Arrhina.*

arrhinencephalus (ar-in-en-sef′a-lus), *n.*; pl. *arrhinencephali* (-lī). [NL., < Gr. ἄρρις (ἀρριν-), without nose (power of smell), + ἐγκέφαλος, brain.] A monster without the olfactory lobe of the brain, or rhinencephalon. Also spelled *arhinencephalus.*

arriccio (ä-rich′ō), *n.* [It., < *arricciare*, bristle up, < *riccio*, < L. *ericius*, a hedgehog: see *urchin.*] In *Italian art*, generally a coat of plaster prepared for mural painting, but not usually a final coat. See *intonaco.*

arrogater, arrogator (ar′ō-gā-tẽr, -ọr), *n.* One who makes unwarrantable or pretentious claims.

Against all Merlinical *arrogators.*
Gauden, Magastron., p. 376.

arrow, *n.* **1.** Arrows now used in archery are of two kinds, the *self arrow* and the *footed arrow*. The former has a shaft made of a single piece of wood, the latter a foreshaft or footing of hard wood about 7 inches long next the head. The parts of an arrow are the *horn* at the butt (the end resting upon the bowstring), in which is cut a nock for the string; the *shaft* or *stave* of soft wood, the *feathers*, glued upon the shaft near the butt; the *foreshaft* (in a footed arrow); and the *head* or *pile*, the point or striking end. Arrows are now usually from 25 to 28 inches long, and their weight is measured by that of new (British) silver coins; as, a 48 *arrow*. They are made in four shapes: *bobtail*, with the greatest diameter at the point; *clothed*, with the greatest diameter at a point between the middle and the nock; *barreled*, with the greatest diameter at the middle; and *parallel* or *cylindrical*, with a uniform diameter throughout.

2. (c) The arrow-shaped panicle of the sugar-cane. *Nature*, LXVII. 356. —**Love's arrows,** an English translation of the French *flèches d'amour*. Also called *Venus's hair stones*. **Rankling arrow,** an arrow the head of which is loosely attached to the shaft, so that it stays in the wound while the shaft drops off. *O. T. Mason.* **Retrieving arrow,** an arrow with a barbed head designed for retrieving fish or burrowing animals.

arrow, *v. i.* **3.** To blossom: said particularly of sugar-cane, which throws out an arrow-like flowering stalk.

arrow-head, *n.* **4.** The pointed member of an egg-and-dart molding; the 'dart' or 'tongue.' See cut at *egg and dart*, under *egg*[1].—**Arrow-head and feather illusion.** See ★*illusion.*

arrow-maker (ar′ō-mā-kẽr), *n.* One who makes arrows.

There the ancient *Arrow-maker*
Made his arrow-heads of sandstone,
Arrow-heads of chalcedony,
Arrow-heads of flint and jasper.
Longfellow, Hiawatha, iv.

arrow-pocket (ar′ō-pok-et), *n.* In *archery*, a pocket in a coat, used instead of a quiver by an archer to hold his arrows while shooting.

arrow-point (ar′ō-point), *n.* Same as *arrow-head.*

arrow-poison (ar′ō-poi-zọn), *n.* See *poison.*

arrowroot, *n.* —**Florida arrowroot.** See *Zamia.*

arrow-shaft (ar′ō-shȧft), *n.* The shaft of an arrow.—**Arrow-shaft polisher,** an implement made of stone, with a groove extending across one surface: often found in pairs. The shaft of the arrow was placed in the groove, or in the tube formed by the two grooves of the pair of polishers placed face to face; then the surface of the arrow shaft was rubbed down.

arrow-staff (ar′ō-stȧf), *n.* **1.** The wooden shaft or main part of an arrow, from the nock or horn at the butt to the head or pile at the end.— **2.** A selected and prepared piece of wood for an arrow; the arrow in a rough state.

arrow-straightener (ar′ō-strāt″nẽr), *n.* An implement used for straightening arrow-shafts, consisting of a strong piece of bone perforated at one end. By means of this implement the arrow-shaft when steamed is bent until it is straight.

arrow-weed (ar′ō-wēd), *n.* Same as ★*cachimilla.*

arrow-wood, *n.* **2.** Same as ★*cachimilla.*

'Arry (ar′i), *n.* [The cockney form of the very common Eng. name *Harry.*] A type of the London cockney of the lowest middle class, whose animal spirits and good-natured vulgarity of manner (as displayed in public, frequently in the company of his sweetheart or wife, '*Arriet*) are made prominent in the comic papers. [Eng.]

'Arryish (ar′i-ish), *a.* Like '*Arry;* vulgarly jovial. [Eng.]

A. R. S. A. An abbreviation of *Associate of the Royal Scottish Academy.*

arseneted, arsenetted (är′se-net-ed), *a.* Same as *arseniureted.*

arseniated (är-sē′ni-ā-ted), *a.* Same as *arseniureted.*

Arsenic mirror. See ★*arsenical mirror.*—**Arsenic test,** any one of several methods for detecting minute quantities of arsenic, often required in cases of supposed poisoning. The most important of these are known as the *Marsh test*, the *Reinsch test*, and the *electrolytic test*, the last of which has been improved and rendered more delicate by Thorpe. In using the first and last of these the arsenic is obtained in the elementary or metallic form deposited upon the surface of a piece of porcelain or a small glass tube; in the direct application of the Reinsch test a like deposit is formed upon a strip of pure copper foil.—**Fresenius test for arsenic.** See ★*test*[1].—**Flowers of arsenic,** the white oxid of arsenic (As_2O_3) in fine powder.

arsenical, *a.*—**Arsenical mirror,** the lustrous deposit of metallic arsenic obtained upon the surface of a glass tube by means of the Marsh test. See ★*arsenic test.*—**Arsenical paste of Frère Côme,** a paste made of gum arabic, arsenious acid, red sulphid of mercury, charcoal and water: used as a caustic application in the treatment of cancer.

II. *n.* A substance which owes its efficiency for the purpose to which it is to be applied to the presence of arsenic or some of its compounds, as medicinally employed remedies, insecticides applied to cultivated plants, etc. *Yearbook U. S. Dept. Agr.*, 1896, p. 619.

arsenic-glass, *n.* **2.** The white oxid of arsenic (As_2O_3) when first sublimed, in an amorphous and therefore transparent state. In time it crystallizes and becomes white, nearly opaque, and porcelain-like.—**Yellow arsenic-glass,** an impure sulphid of arsenic obtained by subliming white arsenic with sulphur. It contains much oxid and is therefore very poisonous.

arsenide, *n.* **Hydrogen arsenide.** Same as *arseniureted hydrogen.*

arseniopleite (är-se″ni-ō-ple′it), *n.* [*arsenio(us)* + (?) Gr. πλεῖος, full, + *-ite*[2].] A basic arseniate of manganese occurring in brownish-red masses: found in Sweden.

arseniosiderite (är-sē″ni-ō-sid′ẹ-rīt), *n.* [*arsenio(us)* + *siderite.*] A basic arseniate of ferric iron and calcium occurring in yellowish-brown fibrous forms.

Arsenious acid. This acid, corresponding to the orthoarsenites, has the formula H_3AsO_3, while the acid corresponding to the metaarsenites is $HAsO_2$; but neither of these has been obtained in the separate and pure state. —**Arsenious anhydrid.** Same as *arsenious oxid* (As_2O_3).

arsenohæmol (är-se-no-he′mol), *n.* A brown powder consisting of hæmol containing one per cent. of arsenious acid.

arsenoid (är′se-noid), *n.* [*arsenic* + *-oid.*] The trade-name applied to various commercial arsenical insecticides.—**Pink arsenoid,** the trade-name for an insecticide preparation consisting essentially of lead arsenite.

arsenolamprite (är″se-nō-lam′prīt), *n.* [*arsenic* + Gr. λαμπρός, bright, + *-ite*[2].] A supposed allotropic form of native arsenic.

arsenous (är′se-nus), *a.* Same as *arsenious.*

Arsinoite (är-sin′ō-it), *a.* Of, pertaining to, or made at Arsinoë in the Fayûm, Egypt: as, the *Arsinoite* collection of antiquities.

Arsinoitherium (är-sin″ō-i-thē′ri-um), *n.* [NL., < Gr. Ἀρσινόη, a queen of Egypt (who had a palace in the region where the fossils have been discovered), + θηριον, a wild beast.] A genus of extinct ungulate mammals recently discovered in the Upper Eocene rocks of the Libyan desert. The creature seems to have attained the size of a large rhinoceros, and bore a pair of very heavy bony horns over the nose. The form of the feet and legs suggests relationship to the elephants and *Dinocerata.*

Skull and lower jaw of *Arsinoitherium zitteli*, from the Upper Eocene of the Fayûm, Egypt.
About one twentieth natural size.
(From "A Guide to the Fossil Mammals of the British Museum," by permission of the Trustees.)

arsonist (är′son-ist), *n.* [*arson* + *-ist.*] One who commits arson.

Those whose houses were first seen in flames were imprisoned at the Yevo-gan's quarters, but they were not proved to be the real *arsonists.*
R. F. Burton, Mission to Gelele, II. 305.

arsonium (är-sō′ni-um), *n.* [Formation not obvious; appar. an arbitrary formation, *ars(enic)* + *-on-* + *-ium.*] A hypothetical group, AsH_4, known only in derivatives: as, tetramethyl *arsonium* hydroxid, $(CH_3)_4AsOH$.

Arts and crafts, industrial art. The name was originally given to a society founded by William Morris, Walter Crane, and others for the encouragement of artistic design in utilities.

It was momentous for the painter's art that in Germany, no less than in England and France, a new movement at this time set in—the so-called "*arts and crafts.*" Hitherto the various branches of art had followed different courses. The most beautiful paintings were often hung in surroundings grievously lacking in taste. Now arose the ambition to make the room itself a work of art.
Encyc. Brit., XXXII. 450.

Arts of design, those arts in which graphic or plastic methods are employed, as distinguished from music, poetry, dancing, etc.—**Graphic arts.** See *graphic*, 3.—**Intermediate arts,** the intermediate grade in any particular course of study in the faculty of arts, as distinct from the 'junior' and 'advanced' grades. **Liberal arts.** See *art*[2], 6.—**Social art,** the application of social science to human betterment, especially through legislation and government. *L. F. Ward*, Outlines of Sociol., p. 271.—**The art preservative of all arts,** printing.—**The manly art or the art of self-defense,** boxing.

artanthic (är-tan′thik), *a.* [*Artanthe* + *-ic.*] Noting an acid found in the oil from the matico, *Piper angustifolium* (*Artanthe elongata*).

artarine (är′ta-rin), *n.* An amorphous alkaloid, $C_{21}H_{23}O_4N$, from the root-bark of *Zanthoxylon Senegalense.*

artel (är-tel′), *n.* [Russ. *artĕlĭ.*] In Russia, a voluntary association of workingmen for any general or specific purpose. It is an ancient institution. Formerly the members of an artel usually dwelt together communistically, and the practice is still found among the peasantry.

artemisin (är-tem′i-sin), *n.* [*Artemisia* + *-in*[2].] A compound sometimes found as an impurity in commercial santonin.

Arteria profunda cerebri, a branch of the basilar artery distributed to the temporosphenoidal and occipital lobes.

Arterial constitution, the florid habit in which the blood is rich in fibrin and contains a relatively large proportion of red blood-globules.—**Arterial sclerosis.** Same as *arteriosclerosis.*

arterin (är′tẹ-rin), *n.* [*arter(y)* + *-in*[2].] A hypothetic compound of oxyhemoglobin and lecithin occurring in arterial blood.

arteriofibrosis (är-tē″ri-ō-fī-brō′sis), *n.* [NL., < *arteria*, artery, + *fibra*, fiber, + *-osis.*] Same as *arteriosclerosis.*

arteriolith (är-tē′ri-ō-lith), *n.* [Gr. ἀρτηρία, artery, + λίθος, stone.] A concretion formed in an artery; arterial calculus.

arteriometer (är-tē-ri-om′e-tẽr), *n.* [Gr. ἀρτηρία, artery, + μέτρον, a measure.] An instrument for determining the changes in caliber of an artery caused by the cardiac pulsations. *Buck*, Med. Handbook, I. 130.

arteriosclerosis, *n.* An increase of connective tissue in the walls of the arteries, especially in the inner coat. The resulting progressive thickening and contraction of the vessels interfere with the blood-supply of their own walls so that these become degenerated and weak, while at the same time their abnormal rigidity makes it difficult or impossible for the normal variations in caliber, in response to nervous stimuli, to take place. Local areas of fatty degeneration with the subsequent deposition of lime salts are apt to form, especially in the larger vessels, and are called atheromatous patches. A pulse of high tension with enlargement of the heart, due to the increased resistance to the blood flow, and Bright's disease owing to the involvement of the small vessels of the kidney, frequently accompany arteriosclerosis. Various disorders of the brain, including a tendency to apoplexy, and a predisposition to gangrene of the extremities, are other common consequences of the disease. In old age there is usually a greater or less degree of arteriosclerosis, and its presence then indicates that the bodily machine is beginning to wear out, but certain other factors, notably intemperance in eating and drinking, may cause it to appear early in life.—**Diffuse arteriosclerosis,** general fibrous thickening of the walls of the arteries.—**Nodular arteriosclerosis,** a disease of the arteries marked by the presence of nodules of fibrous tissue in the lining membrane at points where special strain occurs.—**Senile arteriosclerosis,** fibrous thickening of the walls of the arteries, characteristic of senile degeneration.

arteriosclerotic (är-tē″ri-ō-sklē-rot′ik), *a.* Relating to or affected with arteriosclerosis. *Buck*, Med. Handbook, II. 107.

Arteritis deformans, a condition of roughness and calcareous infiltration of the inner walls of the arteries following upon atheromatous ulceration.

artery, *n.*—**Celiac artery.** Same as *celiac axis* (which see, under *axis*[1]).—**Central arteries of the brain** See ★*central.*—**Dental arteries.** See ★*dental.*—**Gasserian artery,** a branch of the middle meningeal or internal carotid artery which supplies the Gasserian ganglion. —**Hemorrhoidal arteries,** three sets of arteries, superior, middle, and inferior, which supply the rectum and anus.—**Interosseous arteries,** numerous small arteries running between the metacarpal bones of the hand and the metatarsal bones of the foot. There are two sets of each, dorsal and palmar in the hand, and dorsal and plantar in the foot.—**Mammary arteries.** See ★*mammary.*—**Metatarsal artery,** an artery crossing transversely the dorsum of the foot and giving off branches to the interosseous muscles.—**Nasal artery.** See ★*nasal.*—**Pallial artery,** either of two branches which arise from the lesser aorta in certain cephalopods and run forward and backward respectively to supply the mantle and other organs.—**Pipe-stem arteries,** a late stage of arteriosclerosis in which the walls of the arteries have become calcified and converted into hard inelastic tubes.—**Terminal artery,** an artery which has no anastomotic connection with another.

arthemis (är′the-mis), *n.* [NL.; appar. a factitious name.] A nymphalid butterfly, *Basilarchia arthemis*, inhabiting the northern At-

lantic United States. The upper surface of the wings is velvety chocolate-black, with a conspicuous white arch extending across each pair. The larva lives on the foliage of birch, poplar, and the shad-bush. Also called the *banded purple*.

Arthonia (är-thō'ni-ä), *n.* [NL. (Acharius), said to be formed (erroneously) ⟨ Gr. ἀρθέν,

Arthonia radiata.

a, a group of star-shaped apothecia, showing the habit of the lichen. *b*, hymenium with [illegible] spores [illegible] highly magnified.) (Drawn from Engler and Prantl's "Pflanzenfamilien.")

sprinkle, water.] A genus of discolichens of the family *Arthoniaceæ*, having a crustaceous thallus and spores, mostly hyaline, with two or more cells. The species are numerous, occurring on rocks and the bark of trees.

Arthoniaceæ (är-thō-ni-ā'sē-ē), *n. pl.* [NL., ⟨ *Arthonia* + *-aceæ*.] A family of discolichens typified by the genus *Arthonia*.

arthrectomy (är-threk'tō-mi), *n.* [Gr. ἄρθρον, a joint, + ἐκτομή, excision.] Exsection of a joint.

Arthritis interna, gout of the stomach or other internal organ.—**Diaphragmatic arthritis.** Same as *angina pectoris*.—**Navicular arthritis**, an inflammation of the cartilage covering the small bone (navicular bone) situated on the back of the joint within the hoof of the horse. It frequently extends to the bone itself and sometimes involves the pedal joint.—**Rheumatic arthritis**, acute rheumatism.—**Urethral arthritis**, inflammation of one or more joints associated with urethritis or following the passage of a catheter or sound.—**Visceral arthritis.** Same as ★*arthritis interna*.

arthritism (är'thri-tizm), *n.* [*arthrit(is)* + *-ism*.] A predisposition to rheumatic or gouty joint-affections; uric-acid diathesis.

arthrobranch (är'thrō-brangk), *n.* [NL. *arthrobranchia*.] Same as *arthrobranchia*.

Arthroclema (är-thrō-klē'mä), *n.* [NL., ⟨ Gr. ἄρθρον, joint, + κλῆμα, twig.] A genus of extinct cryptostomatous *Bryozoa* having segmented zoaria, celluliferous on all sides: widely distributed in Silurian and Devonian formations.

arthrodesis (är-throd'ē-sis), *n.* [NL., ⟨ Gr. ἄρθρον, joint, + δέσις, a binding.] In *surg.*, the operative production of ankylosis in a joint. *Lancet*, June 18, 1904.

Arthrodira (är-thrō-dī'rä), *n. pl.* [NL., ⟨ Gr. ἄρθρον, joint, + δειρή, neck.] In Woodward's classification, a subclass of Paleozoic fishes with persistent notochord and head and trunk covered with symmetrically arranged bony plates, the head-shield being movably articulated to the body-shield. The group embraces the coccostean fishes formerly included in the *Placodermi*, and its species are among the most striking and enormous of the ancient fishes, *Dinichthys* and *Titanichthys*. All belong to the Devonian formations, especially to the black Upper Devonian shale of Ohio and the Old Red Sandstone of Great Britain.

arthrodiran (är-thrō-dī'ran), *a.* Of or pertaining to fishes of the order *Arthrodira*.

arthrodire (är'thrō-dīr), *n.* A fish of the subclass *Arthrodira*. *Science*, Nov. 7, 1902, p. 749.

arthrodirous (är'thrō-dī'rus), *a.* [Gr. ἄρθρον, joint, + δειρή, the neck.] Same as ★*arthrodiran*.

Arthrodonteæ (är-thrō-don'tē-ē), *n. pl.* [NL., ⟨ Gr. ἄρθρον, joint, + ὀδούς (ὀδοντ-), tooth.] A division of the stegocarpous mosses in which the teeth of the peristome are transversely septate. It embraces by far the greater number, including some in which the teeth are wanting. Compare *Nematodonteæ*. Also written *Arthrodontei*.

arthrogastran (är-thrō-gas'tran), *a.* and *n.* **I.** *a.* Pertaining to or resembling the *Arthrogastra*.

II. *n.* A member of the *Arthrogastra*.

arthrogenous (är-throj'e-nus), *a.* [Gr. ἄρθρον, joint, + -γενής, -produced.] Originating from a joint; noting any deformity caused by gout or other articular disease. *Buck*, Med. Handbook, IV. 496.

Arthrognatha (är-throg'na-thä), *n. pl.* [NL., neut. pl., ⟨ Gr. ἄρθρον, joint, + γνάθος, jaw.] A term applied by Dean to the group of fossil fishes commonly called *Arthrodira*, the latter name being restricted by him to those having the coat of mail jointed at the nape.

arthrolite (är'thrō-lit), *n.* [Gr. ἄρθρον, joint, + λίθος, stone.] In *geol.*, a cylindrical concretion with transverse segmentation, occasionally found in marls and clays. *Tschersky*, 1887.

Arthrolycosa (är"thrō-li-kō'sä), *n.* [NL., ⟨ Gr. ἄρθρον, joint, + λύκος, a wolf, also by transfer a spider.] A genus of fossil spiders belonging to the order *Anthracomarti*, obtained from the ironstone nodules in the coal-measures of Mazon creek, Illinois.

arthromeningitis (är-thrō-men-in-jī'tis), *n.* [NL., ⟨ Gr. ἄρθρον, joint, + NL. *meningitis*.] Same as *synovitis*.

arthroncus (är-throng'kus), *n.* [NL., ⟨ Gr. ἄρθρον, joint, + ὄγκος, bulk, mass.] Swelling of a joint.

arthropathic (är-thrō-path'ik), *a.* Relating to arthropathy. *Buck*, Med. Handbook, IV. 512.

arthropathy, *n.*—**Charcot's arthropathy**, a disease of the joints (usually of the larger joints, though even the fingers may at times suffer) occurring as a result of trophic disturbances in certain diseases of the spinal cord, especially locomotor ataxia and syringomyelia.—**Osteopulmonary arthropathy**, an enlargement of the ends of the long bones occurring in connection with chronic disease of the lungs.

arthroplastic (är-thrō-plas'tik), *a.* Relating to or of the nature of arthroplasty. *Med. Record*, May 30, 1903, p. 877.

arthroplasty (är'thrō-plas-ti), *n.* [Gr. ἄρθρον, joint, + πλαστός, formed.] In *surg.*, the operative establishment of an artificial joint in cases of ankylosis.

Arthropleura (är-thrō-plō'rä), *n. pl.* [NL., ⟨ Gr. ἄρθρον, joint, + πλευρόν, rib.] A genus of extinct isopod crustaceans, or sow-bugs, from the Carboniferous formation.

arthropodal (ar-throp'ō-dal), *a.* [*arthropod* + *-al*[1].] Same as *arthropodous*.

arthrosteitis (är-thros-tē-ī'tis), *n.* [NL., ⟨ Gr. ἄρθρον, joint, + ὀστέον, bone, + *-itis*.] Same as ★*osteoarthritis*.

arthrostome (är'thrō-stōm), *n.* [Gr. ἄρθρον, joint, + στόμα, mouth.] The mouth of an arthropod.

Arthrostraca, *n. pl.* **3.** An order of *Arthropoda*, including those malacostracous crustaceans which have the first, and sometimes the second, thoracic segment fused with the head and bearing maxillipeds, while the remaining seven are free and bear legs, the eyes usually being sessile. The order includes the *Amphipoda* and the *Isopoda*.

Arthrostylidæ (är-thrō-stī'li-dē), *n. pl.* [NL., ⟨ *Arthrostylus* + *-idæ*.] A family of cryptostomatous *Bryozoa* in which the zoaria are composed of rod-shaped articulated segments united into pinnate colonies. Usually all sides of the segments are celluliferous. Representatives of the family are common in the Silurian formations.

Arthrostylus (är-thrō-stī'lus), *n.* [NL., ⟨ Gr. ἄρθρον, joint, + στῦλος, pillar.] The typical genus of the family *Arthrostylidæ*.

arthroxesis (är-throk'sē-sis), *n.* [NL., ⟨ Gr. ἄρθρον, joint, + ξέσις, scraping, ⟨ ξέειν, scrape.] In *surg.*, the process of scraping the articular surfaces for the removal of fungosities.

artichoke, *n.*—**Chinese artichoke**, *Stachys Sieboldi*, a species from China bearing tubers somewhat like those of the Jerusalem artichoke. Known in France as *crosnes*.

article, *n.*—**Articles approbatory**, in *Scotch law*, that part of the proceedings which corresponds to the answer to the charge in an English bill in chancery. *Bouvier*, Law Dict.—**Articles improbative**, in *Scotch law*: (*a*) Articulate averments setting forth the facts relied upon. (*b*) That part of the proceedings which corresponds to the charge in our English bill in chancery to set aside a deed. The answer is called articles approbatory. *Bouvier*, Law Dict.—**Articles of partnership**, a written agreement between two or more parties stating the conditions and terms upon which an enterprise for profit shall be carried on by the parties.—**Articles of roup**, in *Scotch law*, the conditions under which property is offered for sale at auction.—**Articles of set**, in *Scotch law*, an agreement for a lease. *Bouvier*, Law Dict.—**Proprietary articles**, patent medicines and other patented articles the manufacture and sale of which are restricted to the patentee or patentees or their assigns.—**The Schwabach articles**, seventeen articles of faith drawn up by Luther and presented to the princes of the evangelically minded states at Schwabach (Oct. 16, 1529) as the foundation for their political combination. The articles are directed mainly against Zwinglianism; hence the prominence of the doctrine of original sin, of baptism, and of the doctrine of the real presence of Christ's body and blood in the eucharist. These articles furnished the material for the positive (first) part of the Augsburg Confession.—**The Torgau articles**, ten articles drawn up by Luther, Melanchthon, and Jonas, by order of the Elector, at Torgau, Mar. 20, 1530. They were a kind of apologia for the Elector, stating that he had established a true service of God and had proscribed certain abuses of the Roman Church. These articles furnished the material for the polemical part of the Augsburg Confession.

articulability (är-tik-u-la-bil'i-ti), *n.* The quality of being articulable.

articulable (är-tik'u-la-bl), *a.* Capable of being articulated or uttered as distinct syllables or words.

articulamentum (är-tik"ū-la-men'tum), *n.*; pl. *articulamenta* (-tä). [NL., ⟨ L. *articulare*, join, articulate: see *articulate*, *v.*] In the chitons or amphineurous mollusks, the inner or porcelanous layer of the shell-substance, the outer being termed the *tegmentum*. In many of the chitons the articulamentum projects beyond the outer layer of the shell and its ends are firmly inserted in the flexible girdle which binds the shell-valves together.

Articular arteries. (*a*) Five small arteries, three superior and two inferior, derived from the popliteal and surrounding the knee-joint. (*b*) The circumflex arteries of the arm (which see, under *circumflex*).—**Articular dropsy.** See ★*dropsy*.—**Articular sense**, the consciousness which attends movement of a joint.

articulary, *a.* **II.** *n.* In *ichth.*, the articular bone, or bone at the joint or insertion of the lower jaw. *Starks*, Synonymy of the Fish Skeleton, p. 515.

Articulata, *n. pl.* (*f*) An order of the *Crinoidea* which includes all recent and later fossil forms of this class, characterized by having the mouth and food-grooves exposed or suprategminal and the lower brachial plates incorporated into the calyx.

articulation, *n.*—**Axis of articulation**, in arthropods, a line drawn between the right and left hinges of the segments of the abdomen.—**Peg-and-socket articulation**, a term applied to the insertion of scales of ganoid and other primitive fishes having bony scales, in which each scale has a produced point or peg, which is inserted into a socket or cavity in a scale above or below it. The structure is sometimes complicated by the presence of two pegs.

articulationist (är-tik-ū-lā'shon-ist), *n.* One who teaches articulation to deaf-mutes. *N. E. D.*

articulo-angular (är-tik"ū-lō-ang'gū-lär), *a.* Relating to the articular and angular elements of the jaw collectively. *Proc. Zool. Soc. London*, 1901, I. 173.

articulo-kinesthetic (är-tik"ū-lō-kin-es-thet'ik), *a.* In *psychol.*, pertaining to the sensations aroused by the movements of articulation: opposed to ★*graphokinesthetic*. *Psych. Rev. Mo. Sup.*, III. xiv. 26.

articulus, *n.* **2.** In the pelecypod mollusks, the hinge: a term comprising the whole articulating apparatus, hinge-plate, teeth, and ligament.

artifactitious (är"ti-fak-tish'us), *n.* [*artifact* + *-itious* (after *factitious*).] Possessing the character of an artifact; caused by manipulation and not existing in nature. *Buck*, Med. Handbook, II. 40.

artificery (är-tif'i-se-ri), *n.* [*artifice* + *-ery*.] Workmanship; skill as an artificer. *Scottish Rev.*, VI. 246. *N. E. D.*

artificialism (är-ti-fish'al-izm), *n.* [*artificial* + *-ism*.] An artificial principle or practice.

Made up of *artificialisms*—for nothing seemed real about him but his ill-temper.
Mrs. H. Wood, Roland Yorke, III. 156.

artificing (är-tif'i-sing), *n.* [*artifice*, *v.* (a back-formation from *artificer*), + *-ing*[1].] Artificers' work; craftsmanship.

Yet in spite of all this backwardness in invention, the city is full of beautiful workmanship in every branch of *artificing*. *W. D. Howells*, Venetian Life, p. 300.

artinite (är'ti-nīt), *n.* [Named for E. *Artini* of Milan.] A basic hydrated magnesium carbonate occurring in spherical forms with radiated structure: found at the asbestos-mines of Val Lanterna, Italy.

Artinskian (är-tinsk'i-an), *a.* and *n.* **I.** *a.* Of or pertaining to Artinsk in the Urals: in *geol.*, noting the lowest division or stage in the development of the Permian system in the Ural Mountains. It consists of sandstones, conglomerates, shales, and limestones which carry a marine fauna having many species of the Carboniferous formation below and show no unconformity with those strata. This stage is named from Artinsk, but its rocks are distributed from the Arctic Ocean to the Kirghiz steppe. It apparently corresponds in age, as it does in position, to the Autunian of France, which bears a terrestrial flora.

II. *n.* The Artinskian division.

artiphyllous (är-tif'i-lus), *a.* [Gr. ἄρθρον, a joint, + φύλλον, leaf.] In *bot.*, bearing buds or leaves on the nodes or joints.

Artique's process. See ★*process*.

artisticism (är-tis'ti-sizm), *n.* [*artistic* + *-ism*.] Artistic pursuits or theories; artistic tendency.

Our present-day, lackadaisical, sham *artisticism*.
H. Herman, His Angel, p. 40.

artlike (ärt'lik), *adv.* and *a.* **I.** *adv.* According to the rules of art: as, "not *artlike* writ," *W. P. Taylor*, 1630.

II. *a.* Having the appearance of art.

It is among birds that we find specific modes of nest-building and a highly *artlike*, almost artistic song. *Whitman*, Life and Growth of Lang., xiv. 289.

art nouveau (är nö-vō′). [F., 'new art.'] A name given to a secession movement in art which had its origin in Paris at the close of the nineteenth century, and is still in process of development. It is concerned with architecture and the decorative arts chiefly. So far as the movement has any definite underlying principle, it is the negation of the conventional types which have attached themselves to art in the course of centuries and the realization of beauty by the proper management of necessary lines and values. In the hands of the practitioners, however, liberty has become libertinism, and results have been produced which have thrown discredit upon the movement.

artois (är-two′), *n.* [*Artois*, an ancient province of northern France.] A long coat worn by women about 1790. It had several capes, and lapels and revers like a box-coat.

artophagous (är-tof′a-gus), *a.* [Gr. ἄρτος, bread, + φαγεῖν, eat.] Bread-eating: as, an *artophagous* propensity.

Aruncus (a-rung′kus), *n.* [NL., ⟨ L. *aruncus*, ⟨ Gr. ἀρίγγος, Doric ἀρύγγος, a goat's beard, also a plant (see *eringo*).] A genus of tall, perennial herbs of the family *Rosaceæ*, often referred to the genus *Spiræa*, with numerous small, diœcious flowers. There are two species, *A. Aruncus* in the northern parts of America and Europe, and *A. astilboides* from Japan. *Aruncus* is often confounded with *Astilbe*. The latter is much used for forcing.

Arundel group. See ★*group*[1].

Arvernian (är-vèr′ni-an), *a.* **1.** Of or pertaining to the Arverni, a tribe of ancient Gaul which occupied a region corresponding to the modern Auvergne.—**2.** In *ethnol.*, relating to or exhibiting the European type, commonly known as *Alpine*, of which the inhabitants of Auvergne are typical representatives.

Arvonian (är-vō′ni-an), *a.* and *n.* [W. *Arfon* (pron. *arvon*) in Wales.] A term applied by Hicks to a division of rocks in Pembroke regarded by him (together with the Dimetian below and the Pebidian above) as of Precambrian age, but by others considered as purely eruptive intrusions into Cambrian rocks.

I regard the so-called "Dimetian" as a granite which has invaded the Cambrian rocks; the "*Arvonian*" includes the quartz porphyries which appear as apophyses of the granite; while the "Pebidian" is an interesting group of basic lavas which form here the lowest visible part of the Cambrian system. *Geikie*, Text-book of Geol.

Aryanization (är″yan-i-zā′shon), *n.* The process of Aryanizing or the state of having been made Aryan in character, appearance, etc.

The *Aryanization* of Europe doubtless resembled that of India. *I. Taylor*, Origin of Aryan, p. 212.

aryballoid (ar-i-bal′oid), *a.* [*aryballus* + *-oid*.] Like an aryballus.

aryl (ar′il), *n.* [*ar*(*omatic*) + *-yl*.] A name introduced by Vorländer to designate a radical derived from an aromatic hydrocarbon, as phenyl, C_6H_5, tolyl, C_7H_7.

arzrunite (ärts-rō′nīt), *n.* [Named after A. *Arzruni*, a German mineralogist.] A mineral consisting of basic copper sulphate and copper chlorid, and occurring in bluish-green crystalline crusts: found in Chile.

ås (às), *n.*; pl. *åsar* (à′sär). [Sw. *ås*.] Same as *os*[3] or *eskar*.

Asana.

Pterocarpus Indicus. (From a photograph by Warburg.) (Drawn from Engler and Prantl's "Pflanzenfamilien.")

Asaheim (as′a-hām), *n.* [Icel. *Ása heimr*, 'home of the gods.'] Same as *Asgard*.

asana (ä-sä-nä′), *n.* [Tagalog *asaná* (Bisaya *naga*, whence Sp. *narra*).] A name in the Philippine Islands of *Pterocarpus Indicus* and *P. echinatus*, valuable timber-trees, the wood of which is sometimes called *Philippine mahogany*. The trunks are surrounded at their base by radiating buttresses which yield planks of extraordinary width. The wood is of a beautiful red color often variegated with yellow, hard and durable, but porous and very brittle. It takes a fine polish and is much used in the Philippines for cabinet work and for furniture, handsome large table-tops being often made of single slabs. *P. Indicus* is known in the East Indies as *Burmese rosewood*, *Andaman red-wood*, and *kiabooca-wood*. In the Philippines it is also called *narra*. *P. echinatus*, known as *narra pula*, or "red narra," is distinguished by having spiny seed-pods. See *Pterocarpus* and *kiabooca-wood*.

asaphia (as-a-fī′ä), *n.* [NL., ⟨ Gr. ἀσάφεια, indistinctness, ⟨ ἀσαφής, indistinct, ⟨ *a-* priv. + σαφής, clear, distinct.] Defective speech, heard especially in cases of cleft palate.

Asaphic (a-saf′ik), *a.* Of or pertaining to Asaph, one of the chief singers in the Temple in the time of David and Solomon, and eponymous head of one of the gilds of singers, "sons of Asaph." Psalms 50 and 73–83 are called *Asaphic*, having the name of Asaph superscribed. Also *Asaphitic*.

asaphid (as′a-fid), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the trilobite family *Asaphidæ*.

II. *n.* A member of the family *Asaphidæ*.

Asaphidæ (a-saf′i-dē), *n. pl.* [NL., ⟨ *Asaphus* + *-idæ*.] A family of trilobites which have a large and subequal cephalon and a pygidium, in both of which the lobes and furrows are rather obscure. The eyes are large; the facial sutures cut the posterior margin of the head-shield within the genal angles and unite at the middle of the frontal border; and the thorax has from 5 to 10 segments. The family includes highly important genera of Silurian trilobites, *Asaphus*, *Illænus*, *Nileus*, and *Ogygia*.

Asaphitic (as-a-fit′ik), *a.* Same as ★*Asaphic*.

Asaphus (as′a-fus), *n.* [Also *Asaphes*. NL., ⟨ Gr. ἀσαφής, indistinct.] The typical genus of the family *Asaphidæ*.

asaprol (ā′sa-prōl), *n.* Same as ★*abrastol*.

åsar, *n.* Plural of ★*ås*.

asaresinotannol (as-a-rez″i-nō-tan′ōl), *n.* An amorphous compound, $C_{48}H_{68}O_8(OH)_2$ or $C_{24}H_{33}O_4.(OH)$, existing in small quantities in the free state, but principally combined as a ferulic acid ester in the resin of asafetida.

asarol (as′a-rōl), *n.* [*Asarum* + *-ol*.] A colorless, feebly dextrorotatory alcohol, $C_{10}H_{18}O$, contained in oil of Canadian snakeroot, *Asarum Canadense*. It boils at 196°–199° C. and is probably identical with linalool.

asaronic (as-a-ron′ik), *a.* [*asarone* + *-ic*.] Derived from asarone; noting an acid, the trimethyl ether of 2, 4, 6-trihydroxybenzoic acid $C_6H_2(OCH_3)_3CO_2H$, formed by the oxidation of asarone. It crystallizes in needles which melt at 144° C.

asarotum (as-a-rō′tum), *n.* [L. *asarotum*, neut. of *asarotos*, applied to floors painted in spots or divisions as if not swept clear, ⟨ Gr. ἀσάρωτος, unswept, ⟨ *a-* priv. + *σαρωτός, ⟨ σαροῦν, sweep, ⟨ σαρον, a broom, ⟨ σαίρειν, sweep.] In *anc. arch.*, a species of painted pavement used by the Romans before the invention of mosaic work. *Sturgis*, Dict. of Arch.

Asarum, *n.*—**Oil of Asarum Canadense,** an essential oil or essence used in perfumery and soap.

asbarg (äs′bärg), *n.* A dyestuff consisting of the dried flowers and flowering stems of *Delphinium Zalil*, imported from Afghanistan and Persia: used in native calico-printing and for dyeing silk a bright sulphur-yellow. See ★*zalil*.

asbestic, *a.* **II.** *n.* A local commercial name for massive asbestos reduced to a fibrous pulp and used for wall-plaster, etc.

asbestin, *a.* A simplified spelling of *asbestine*.

asbestinize (as-bes′ti-nīz), *v.t.*; pret. and pp. *asbestinized*, ppr. *asbestinizing*. To treat (cotton goods) chemically in order to render them fire-proof or not easily inflammable.

asbestolith (as-bes′tō-lith), *n.* [Gr. ἄσβεστος, asbestos, + λίθος, stone.] The trade-name of a material made from short-fiber asbestos, with the addition of cementing and coloring substances, for use in the construction of the floors and walls of houses. It has the advantages of light weight, durability, and capability of resisting fire and dampness.

Asbestos burner, a gas-stove burner employing Bunsen burners in combination with sheets or masses of fibrous asbestos which become incandescent in the flame. Such burners are used with gas-logs and gas fireplace heaters.—**Asbestos cloth,** a fabric composed of woven fibrous asbestos: used in making gloves for protection against heat and acids, as a covering for dining-tables and for steam-heated rolls, as a strainer in filtering acids, and for other purposes. **Asbestos curtain,** a curtain of asbestos cloth hung before an open fireplace. When drawn down it acts as a fire-screen and a blower. Large and heavy curtains of this material are hung in the proscenium arch of theaters as a protection against the spread of fire.—**Asbestos porcelain.** See ★*porcelain*.—**Asbestos torch,** a metal vessel or cresset suspended from a pole and packed with asbestos which is saturated with oil: used to destroy the nests of caterpillars.

Asbestos Torch.

A. S. C. An abbreviation of *Army Service Corps*.

ascalaphoid (as-kal′a-foid), *a.* Belonging to or resembling a member of the family *Ascalaphidæ*.

ascaricide (as-kar′i-sīd), *n.* [*ascar*(*id*) + L. *-cida*, ⟨ *cædere*, kill.] An agent destructive of round- or thread-worms which occur as intestinal parasites.

Ascaris equorum, the eel-worm or lumbricoid worm parasitic in the small intestine of the horse. It measures from 15 to 37 centimeters in length, and in most cases is without serious effect. *Goeze*, 1782. — **Ascaris megalocephala.** Same as ★*ascaris equorum*. *Cloquet*, 1824.

Ascelichthys (as-ē-lik′this), *n.* [NL., ⟨ Gr. ἀσκελής, without legs (without fins), + ἰχθύς, fish.] A genus of small sculpins found in the rock-pools along the coast of California. It is characterized by the absence of ventral fins. *A. rhodorus* is the known species.

ascendancy, *n.* **2.** Same as *ancestry*.

Epilepsy is followed chiefly by brain affections in childhood, while phthisis and alcoholism are prominent in the *ascendency*. *Buck*, Med. Handbook, V. 37.

Ascending ★degeneration, ★neuritis. See the nouns.

Ascension theory, in *mining geol.*, the theory that ores are derived from the depths of the earth by means of uprising solutions.—**Right-ascension circle** or **hour-circle.** See ★*circle*.

ascensionist (a-sen′shon-ist), *n.* One who makes ascensions; a mountain-climber; also, a balloonist who makes ascensions.

Ascensiontide (a-sen′shon-tīd), *n.* The period comprising the ten days from Ascension day to Whitsunday.

ascent, *n.*—**Song of ascents.** Same as *song of degrees* (which see, under *degree*).

ascesis (a-sē′sis), *n.* [Gr. ἄσκησις, training, walk of life, monastic life: see *ascetic*.] Self-discipline; self-denial.

Ascetta (a-set′ä), *n.* [NL.; origin not obvious.] A genus of sponges containing the simplest and most primitive forms, of which *A. primordialis* is an example.

aschaffite (a-shaf′it), *n.* [*Aschaff*(*enburg*), a city in Bavaria, + *-ite*[2].] In *petrog.*, a name proposed by Gümbel, in 1865, for an igneous rock of the diorite family rich in quartz, feldspar, and mica. It is now considered as belonging to kersantite.

ascham, *n.* **2.** A box for carrying bows, arrows, and other archery equipment from place to place; a bow-box.

ascharite (ash′a-rīt), *n.* A hydrated magnesium borate occurring in white lumps with boracite: found near Aschersleben, Germany.

Aschersonia (ash-ēr-sō′ni-ä), *n.* [NL. (Montagne, 1848), named for F. M. *Ascherson*, a German botanist who wrote about fungi.] A genus of sphæropsidaceous fungi having the pycnidia buried in a pulvinate, fleshy stroma, and the hyaline, fusiform spores borne on filiform sporophores. The species are mostly tropical, growing on leaves. *A. Aleurodis* grows on *Aleurodes Citri*, a plant-louse on *Citrus* in Florida.

Ascherson's haptogenic membrane. See ★*haptogenic membrane*.

aschistic (a-skis′tik), *a.* [Gr. ἀσχιστος, undivided, + *-ic*.] In *petrol.*, a term applied to hypoabyssal igneous rocks occurring in dikes which are considered to represent undifferentiated magmas of the depths, and thus to stand in contrast to ★*haplitic* and *lamprophyric* dike rocks, considered as complementary differentiation products of deep-seated magmas.

ascidicolous (as-i-dik′ō-lus), *a.* [NL. *ascidium* + L. *colere*, dwell in.] Inhabiting or parasitic in or on an ascidian.

Ascitan (a-sī′tan), *n.* [L. *ascitæ*, ⟨ Gr. ἀσκῖται, pl., ⟨ ἀσκός, a skin.] A member of a sect, an offshoot of the Montanists, which appeared

in Galatia about 173 A. D. In their religious revels they danced around skin bottles, declaring them to be the ones referred to in Mat. ix. 17.

asclepiadin (as-klē-pī'a-din), *n.* [*Asclepias* + *-ad-* + *-in*².] A glucoside of uncertain composition derived from *Asclepias vincetoxicum*.

Asclepieum (as-klē-pi-ē'um), *n.* [Gr. Ἀσκληπιεῖον, < Ἀσκληπιός, Æsculapius.] A temple or shrine sacred to Æsculapius.

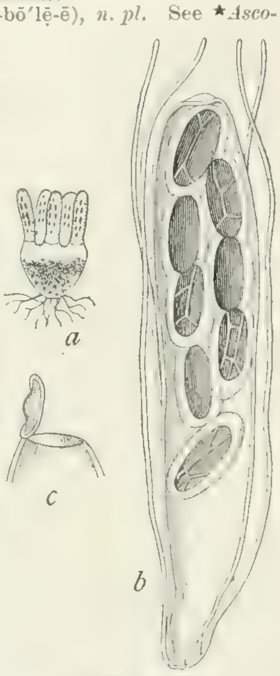
asclepione (as-klē'pi-ōn), *n.* [*Asclepias* + *-one*.] A neutral, tasteless, crystalline compound, $C_{20}H_{34}O_3$, formed in the juice of the milkweed, *Asclepias syriaca L.* It melts at 104° C.

ascobacterium (as″kō-bak-tē'ri-um), *n.*; pl. *ascobacteria* (-ä). [NL., < Gr. ἀσκός, a bag, + βακτήριον, a staff or rod.] In *bacteriol.*, a bacterium whose cells form masses embedded in or surrounded by gelatinous matter.

Ascobolaceæ (as-kō-bō-lā'sē-ē), *n. pl.* [NL., < *Ascobolus* + *-aceæ*.] A family of saprophytic, discomycetous fungi occurring mostly on dung. *Ascobolus* is the typical genus. Also erroneously written *Ascoboleæ*.

Ascoboleæ (as-kō-bō'lē-ē), *n. pl.* See ★*Ascobolaceæ*.

Ascobolus (as-kob'ō-lus), *n.* [NL. (Persoon, 1791), in allusion to the forcible projection of the asci, < Gr. ἀσκός, sac, ascus, + βόλος, a throw.] A genus of discomycetous fungi having a fleshy ascoma and simple brown or violet spores. The asci when mature are projected from the disk and the spores forcibly expelled. The species are mostly saprophytic and occur on old dung.



Ascobolus immersus.
a, a plant showing the disk, enlarged; *b*, an ascus with paraphyses, cut longitudinally to show the spores, greatly magnified; *c*, upper end of an ascus, showing the lid sprung open for the forcible expulsion of the spores, greatly magnified. (Drawn from Engler and Prantl's "Pflanzenfamilien.")

Ascoceras (as-kos'e-ras), *n.* [Gr. ἀσκός, a leather bag, + κέρας, a horn.] A singular genus of nautiloid cephalopods. In early growth it had a regularly septate shell with a siphuncle, but in old age the septal chambers were contracted by the incomplete development of the septa, leaving a long tubular living-chamber with the septa of later growth at one side. It occurs in the Silurian rocks and is typical of the family *Ascoceratidæ*.

Ascochyta (as-kok'i-tä), *n.* [NL. (Libert, 1831), < Gr. ἀσκός, sac, + χυτός, poured out, < χεῖν, pour.] A genus of sphæropsidaceous fungi having membranous pycnidia embedded in discolored spots on the leaves and twigs of the host. The pycnospores are hyaline and uniseptate. About 250 species have been described. *A. Pisi* attacks the leaves and pods of the pea. See ★*leaf-spot of pea*.

Ascococcus (as″kō-kok'us), *n.*; pl. *ascococci* (-sī). [NL., < Gr. ἀσκός, sac, + κόκκος, berry.] In *bacteriol.*, a generic name generally regarded as a synonym of *Micrococcus*. See *Micrococcus*.

Ascocorticiaceæ (as″kō-kôr″ti-si-ā'sē-ē), *n. pl.* [NL., < *Ascocorticium* + *-aceæ*.] A family of simple, saprophytic, ascomycetous fungi containing the single genus *Ascocorticium*.

Ascocorticium (as″kō-kôr-tis'i-um), *n.* [NL. (Brefeld, 1891), < Gr. ἀσκός, sac, ascus, + *Corticium* (which see).] A genus of simple, ascomycetous fungi in which the asci are borne on a thin membranous, mycelial layer and the spores are simple and colorless.

Ascoglossa (as″kō-glos'ä), *n. pl.* [NL., < Gr. ἀσκός, a bag, + γλῶσσα, tongue.] A group of gasteropods of the order *Opisthobranchiata*. The branchiæ, mantle cavity, and shell are generally wanting; the liver is ramified, with its branches inclosed in external papillæ called *cerata*, or beneath the dorsal surface; the radula has one series of strong teeth, and the worn-out teeth at the front end do not drop off, but are preserved in a special sac, or ascus, whence the name of the group. It includes the families *Oxynoidæ*, *Hermæidæ*, *Elysiidæ* and *Limapontiidæ*.

ascoglossan (as-kō-glos'an), *a.* and *n.* [*Ascoglossa* + *-an*.] I. *a.* Resembling or pertaining to the *Ascoglossa*.
II. *n.* One of the *Ascoglossa*.

ascogonial (as-kō-gō'ni-al), *a.* [*ascogonium* + *-al*.] Of or pertaining to an ascogonium.

When the fertilized oospore of Sphærotheca develops it puts out an *ascogonial* filament, destined to form the ascus. *Encyc. Brit.*, XXVIII. 562.

Ascolichenes (as-kō-lī-kē'nēz), *n. pl.* [NL., < Gr. ἀσκός, sac, ascus, + *Lichenes* (which see).] A large group of lichens, including all those which produce asci. They are divided into two subgroups, the *Discolichenes* and *Pyrenolichenes*.

ascoma (as-kō'mä), *n.*; pl. *ascomata* (-ma-tä). [NL., < Gr. ἀσκωμα, a leather pad or bellows, < ἀσκός, a leather bag: see *ascus*.] The sporocarp of discomycetous fungi and truffles.

It seems probable that the *ascomata* of the truffle are formed in the late autumn, and lie over the winter in a practically mature state.
Bot. Gazette, June, 1903, p. 428.

ascomycetal (as-kō-mī-sē'tal), *a.* Same as *ascomycetous*.

ascomycete (as'kō-mī-sēt), *n.* Any member of the class *Ascomycetes*.

Ascospora (as-kos'pō-rä), *n.* [NL. (Fries, 1825), < Gr. ἀσκός, a leather bag, + σπορά, seed.] A genus of pyrenomycetous fungi having small perithecia and asci and simple hyaline spores. *A. Beyerinckii* produces a leaf-spot of cherries, peaches, plums, etc. *Coryneum Beyerinckii* is said to be its conidial form, and to cause gummosis of cherry-trees.

ascosporic (as'kō-spō-rik), *a.* Of or pertaining to an ascospore.

ascript, *a.* II. *n.* An annexed remark, note, or explanation; a gloss. *Athenæum*, Aug. 27, 1892, p. 280.

ascription, *n.* 3. A prayer at the end of a sermon, ascribing praise to God.

-ase. [An assumed suffix taken from *diastase* (prop. *dia-sta-se*, where only *-se* is suffixal), used parallel to *-ose*.] 1. In *chem.*, a suffix used to designate the different kinds of ferments, as argin*ase*, lip*ase*, malt*ase*, etc., as well as diast*ase*. See the etymology.— 2. A suffix applied to the names of rangs in the quantitative classification of igneous rocks: as, *liparase*. See *classification of igneous rocks*, under ★*rock*¹.

asebotin (a-sē'bō-tin), *n.* [*asebo(fuscin*, etc.) + *-t-* + *-in*².] A glucoside, $C_{24}H_{28}O_{12}$, which is the active poison of *Pieris japonica*. It crystallizes in colorless needles which melt at 148° C.

asebotoxin (a-sē-bō-tok'sin), *n.* [*asebo(fuscin*, etc.) + *toxin*.] An extremely poisonous neutral crystalline compound, $C_{31}H_{50}O_{10}$, found in Japan in the leaves of *Pieris japonica* and in the United States in laurel (*Rhododendron maximum*). It is often fatal to sheep and cows.

asellate (a-sel'āt), *a.* [Gr. ἀ- priv. + L. *sella*, a seat, saddle.] Without saddle: applied to the primitive septal suture in the ammonoid cephalopods or goniatites, in which the course of the suture over the venter is direct, or without curve.

asellin (a-sel'in), *n.* [L. *asellus*, a sea-fish taken to be a cod or haddock, + *-in*².] A ptomaïne ($C_{25}H_{32}N_4$) found in cod-liver oil.

asepsine (a-sep'sin), *n.* Same as ★*antisepsine*.

Aseptic surgery. See ★*surgery*.

aseptically (a-sep'ti-kal-i), *adv.* In an aseptic manner; by means of asepsis.

asepticism (a-sep'ti-sizm), *n.* The state of being aseptic; the carrying out of measures which insure asepsis.

Popliteal, carotid, and other aneurysms, which are not of traumatic origin, are sometimes most successfully dealt with on this plan [dissecting out the aneurysm], which is the old "Method of Antyllus" under the influence of *asepticism*. *Encyc. Brit.*, XXXIII. 76.

aseptol (a-sep'tōl), *n.* [*asept(ic)* + *-ol*.] The trade-name for an antiseptic solution containing 33⅓ per cent. of orthophenolsulphuric acid, $C_6H_4(OH)SO_3H$.

aseptolin (a-sep'tō-lin), *n.* A solution said to contain 2.74 per cent. of phenol and .018 per cent. of pilocarpine. It is used subcutaneously in phthisis.

asequence (a-sē'kwens), *n.* [*a-*¹⁸ + *sequence*.] In *pathol.*, a lack of normal sequence; specifically, an irregularity in relation between the auricular and ventricular contractions of the heart.

The blood pressure . . . is also fairly high when some simple ratio is maintained between the rate of the auricular and ventricular beats and is lowest when the *asequence* of the two chambers is most marked.
Buck, Med. Handbook, II. 689.

asexuality (a-sek-sū-al'i-ti), *n.* The quality of being asexual; absence of sex.

asexualization (a-sek″sū-al-i-zā'shon), *n.* [*asexualize* + *-ation*.] The act of rendering sexually incompetent, as by castration. *Buck*, Med. Handbook, II. 713.

asfalt, *n.* and *v. t.* A simplified spelling of *asphalt*.

asfyxia, *n.* A simplified spelling of *asphyxia*.

ås-gravel (âs'grav″el), *n.* The water-worn constituents of eskars.

This theory seems to account satisfactorily for the passage of the *ås-gravels* into morainic matter, and for the fact that the gravels in the upper part of an as are often not well rounded. *J. Geikie*, The Great Ice Age, p. 171.

ash¹, *n.* 1. (*d*) In Australia, the name of various trees having a real or fancied resemblance to those of the genus *Fraxinus*, especially of trees of the genera *Elæocarpus* and *Flindersia*.
American ash, specifically, the white ash, *Fraxinus Americana*.— **Arizona ash**, the leatherleaf ash, *Fraxinus velutina*.— **Basket-ash**, the black ash, *Fraxinus nigra*: so called because it affords basket splints. [Massachusetts.] — **Berlandier ash**, *Fraxinus Berlanderiana* of the Mexican boundary region.— **Blue ash.** (*a*) See *ash*¹, 1. (*a*). (*b*) *Fraxinus lanceolata* [Arkansas and Iowa.] (*c*) A small Australian tree, *Elæodendrum australe*, whose close-grained pinkish wood is used for staves, oars, and shingles. Also called *olive-wood*.— **Blueberry-ash**, an Australian tree, *Elæocarpus holopetalus*, yielding a close-grained white wood valuable for turning and cabinet-work.— **Brown ash**, *Fraxinus nigra*; also, *F. Pennsylvanica*.— **Cane-ash**, the white ash, *Fraxinus Americana*: so called because it grows in cane-brakes. [Gulf States.] —**Crow's ash**, a very large tree, *Flindersia australis*, of Queensland and New South Wales. Also called *beech*, *red cedar*, and *rasp-pod*. See *rasp-pod* and *Flindersia*.— **Dwarf ash**, a shrub, *Fraxinus anomala*, of Utah and elsewhere. The trifoliate dwarf ash is *F. anomala triphylla*.— **Fringe-ash**, *Fraxinus cuspidata* of Mexico and the adjacent United States. The shrubby fringe-ash is *F. dipetala* of California.— **Gregg ash**, *Fraxinus Greggii* of the Mexican boundary region.— **Leatherleaf ash**, *Fraxinus velutina* of the southwestern United States.— **Moreton Bay ash**, a very large tree, *Eucalyptus tessellaris*, of central and northeastern Australia, yielding a timber, tough but not hard, which is excellent for building purposes. It also yields a kino from which a varnish may be made.— **New Zealand ash.** See ★*titoki*.— **Oregon ash**, *Fraxinus Oregona* of the northwestern coast of North America.— **Pop-ash, poppy-ash**, the water-ash, *Fraxinus Caroliniana*. [Florida and Alabama.] — **Pumpkin-ash**, *Fraxinus profunda*, found in river-swamps in the eastern United States.— **River-ash**, the red ash, *Fraxinus Pennsylvanica*. [Rhode Island and Ontario.]— **Swamp-ash.** (*a*) Same as *hoop-ash*. (*b*) The green ash, *Fraxinus lanceolata*. [Gulf States.]— **Texas ash**, *Fraxinus Texensis*. Also called *mountain-ash*.

ash², *n.* 4. The involatile constituents of wine; the solid residue evaporated to dryness.

As a distinctive mark of genuine wine the *ash* is of the greatest value. *Encyc. Brit.*, I. 173.

Canada ashes, a trade-name for ashes from Canada valued as a fertilizer.— **In sackcloth and ashes**, clothed in sackcloth and sitting in ashes, in sign of deep mourning: a custom among Orientals. Also used figuratively. Mat. xi. 21.

ashamnu (a-sham'nö), *n.* [Heb. *ashamnu*, 'we have trespassed,' < *asham*, trespass.] The Jewish 'short confession of sin.' It is composed of twenty-four acrostic sections which begin with the letters of the Hebrew alphabet in consecutive order (the twenty-first letter, the last, being used three additional times).

ash-bed (ash'bed), *n.* A bed of ashes; specifically, in *geol.*, a greatly decomposed amygdaloidal basalt on Keweenaw Point, Michigan, which is locally impregnated with native copper.—**Ash-bed diabase.** See ★*diabase*.

Ashberry metal. See ★*metal*.

ash-canker (ash'kang-kėr), *n.* A disease of ash-trees which has been attributed to bacteria.

ash-cart (ash'kärt), *n.* A cart in which ashes and other refuse are carried.

ash-chute (ash'shöt), *n.* Same as *ash-shoot*.

ash-conveyer (ash'kon-vā″ėr), *n.* Any form of conveyer used in removing ashes, as from a boiler-room or locomotive-engine house. Examples are: (1) a screw-conveyer which removes the ashes as fast as they fall from the locomotives into the ash-pit of an engine-house, and delivers them to a traveling-apron or carrier; and (2) a combined conveyer and elevator which passes through a series of ash-pits in an engine-house, conveying and lifting the ashes to an elevated hopper, where they may be discharged into cars. These machines are made in a great variety of forms.

Ashdown sand. See ★*sand*¹.

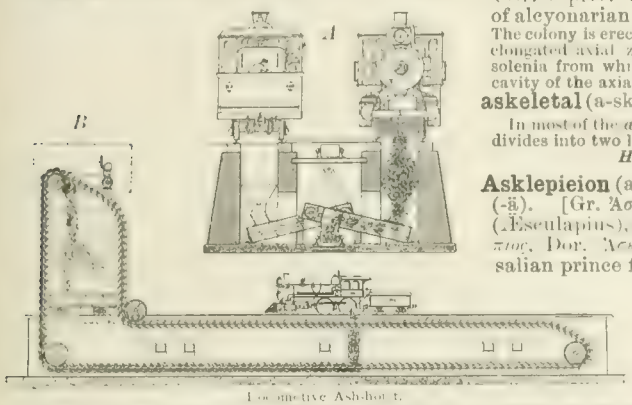
ash-dump (ash'dump), *n.* 1. A place where ashes are put, either temporarily or permanently.—2. A device for dumping the ashes from a furnace or conveyer.

ash-elevator (ash'el″ē-vā-tor), *n.* Same as ★*ash-hoist*.

ashen light. See ★*light*¹.

asherah (ash′ē-rä), *n.* [Heb. *'asherah*, pl. *'asherim*, or, rarely, *asheröth*: Assyr. *ashartu*, pl. *ashratu*.] **1.** A wooden post or pole planted near the altars of various Semitic gods: in the authorized version of the Bible erroneously translated 'grove.'—**2.** [*cap.*] A Semitic goddess not mentioned in the Bible except in three dubious passages, but whose name is certified by early tablets. She was sometimes confused with Ashtoreth. Baal seems to have been the consort of Asherah. The two are often mentioned together in connection with the idolatrous worship of Israel: see 2 Kt. xxiii. 4; 2 Chron. xxxiii. 3; Judges iii. 7. See *Ashtoreth*.

ash-hoist (ash′hoist), *n.* An apparatus for lifting ashes, as from the ash-pit of a locomotive-engine house, the boiler-room in a building, or the stoke-room of a vessel. The simplest form is a telescopic frame which when open extends from the basement of a building upward through an opening in the sidewalk and carries a block and tackle for hoisting ash-barrels to the sidewalk, where they may be dumped into a cart. When closed the frame sinks below the walk and the opening is covered. A more complicated form consists of a telescopic frame inclosing a drain-and-bucket elevator for lifting ashes from a subcellar to the street and discharging them through a chute into a cart.—**Pneumatic ash-hoist**, a traveling-crane having a pneumatic hoisting-cylinder which lifts the body of a car loaded with ashes and travels with it across the tracks to an ash-car, into which it is dumped.—**Skip ash-hoist**, a skip traveling upon an inclined track from the ash-pit of a boiler-house to the top of a tower over a railroad track. The ashes are discharged through a hopper into the skip, which is then hoisted by cable to the top of the tower, where it is dumped into a hopper, which delivers its load to a car on the track below.



Locomotive Ash-hoist.

A, section across the tracks, showing the inclined screw conveyer which lifts the ashes to the longitudinal bucket conveyer shown in *B*. *B*, section along the tracks, showing the long conveyer by which the ashes are transferred to the dump.

ash-hopper (ash′hop-ėr), *n.* Same as *leach-tub*. [Local, U. S.]

ashiver (a-shiv′ėr), *adv.* [a^3 + *shiver*.] In a shiver; quivering.

ashler, *n.* **4.** In *carp.*, studding or furring used to cut off the angle at the floor in a garret, so that the room inclosed will have a vertical wall of some height.—**Coursed ashler**, ashler masonry in which the stones form regular courses, all the blocks in one course being of the same height.—**Random-coursed ashler**, ashler masonry in which rather broad courses are made of uniform height or width from end to end, but are made up in part of smaller stones, two or three of which together make the height of the course. See cut under *ashler* (*a*, *b*, and *c*).—**Rough ashler**, quarried stone selected for ashler masonry, but not dressed.

ashlered, ashlared (ash′lėrd, -lärd), *p. a.* Faced with ashler: said of a wall.

Ashley beds. See ★*bed*[1].

Ashmolean (ash-mō′lē-an), *a.* Of or pertaining to Elias Ashmole, an eminent English antiquary (1617–92), who founded the Ashmolean Museum at Oxford University in 1679. His collections, which were presented to the university, consisted of books, manuscripts, coins, curiosities, and antiquities. The Ashmolean Society, founded in 1828, was named in his honor.

ash-pan (ash′pan), *n.* A pan under the grate of a boiler or other fire, into which ashes and clinker may fall and be caught when the fire is sliced or the fireplace cleaned.

ash-pumpkin (ash′pump″kin), *n.* [*ash*[2] + *pumpkin*. It is covered with an ashy bloom.] The wax-gourd, *Benincasa hispida*. See *Benincasa* and ★*condol*. [East Indies.]

ashrafi (ash′ra-fē), *n.* [Also *ashrafee*, *ashraffi*: Hind. Pers. *ashrafi*, < *ashrāf*, < Ar. *ashrāf*, gentle, refined, urbane, *ashrāf*, n., nobles, gentry.] The gold mohur of India.

ash-trolley (ash′trol-i), *n.* An overhead trolley from which ash-buckets are suspended for transporting ashes from ash-pits to the place of disposal.

Asiatic class, a group of domesticated fowls comprising those breeds which are supposed to have originated in eastern Asia, and including the brahmas, cochins, and langshans.

asilid (a-sil′id), *a.* and *n.* **I.** *a.* Having the characteristics of or belonging to the dipterous family *Asilidæ*.

II. *n.* An insect of the family *Asilidæ*.

asiminine (a-sim′i-nin), *n.* [*Asimina* + *-ine*[2].] An alkaloid obtained from the fruit of *Asimina triloba*.

asimmer (a-sim′ėr), *adv.* [a^3 + *simmer*.] In a simmering state.

Noon smote fierce the roof's red tiles to heart's desire,
The court *a-simmer* with smoke.
Browning, Ned Bratts, st. iv.

Asiphonacea (a-si-fō-nā′sē-ä), *n. pl.* [NL., < Gr. *ἀ-* priv. + *σίφων*, pipe, + *-acea*.] A group of alcyonarian polyps of the order *Stelechotokea*. The colony is erect, simple or branching, consisting of an elongated axial zooid with thickened walls containing solenia from which secondary zooids are formed. The cavity of the axial zooid is not divided by a partition.

askeletal (a-skel′e-tal), *a.* Having no skeleton.

In most of the *askeletal* vermalia the subdermal muscle divides into two layers.
Haeckel (trans.), Wonders of Life, p. 277.

Asklepieion (as-klē-pi-ī′on), *n.*; pl. *asklepieia* (-ä). [Gr. Ἀσκλήπιειον, a temple of Asklepios (Æsculapius), neut. of Ἀσκληπίειος, adj., < Ἀσκληπιός, Dor. Ἀσκλαπιός, L. *Æsculapius*, a Thessalian prince famous as a physician, later the tutelary god of medicine.] A temple of Asklepios (Æsculapius).

If we regard with reverence the dim traditional form of Asklepios as a founder of our art, and the *Asklepieia* where throughout Greece and Magna Græcia medicine was practised and taught, in greater degree should we reverence the much more venerable I-em-hotep and view with interest the primæval medicine temples and hospitals of Egypt.
Lancet, June 25, 1904, p. 1771.

asmolder, asmoulder (a-smol′dėr), *adv.* [a^3 + *smolder*.] In a smoldering state. *Swinburne*.

asoka (ä-sō′kä), *n.* [Skt. *ásoka* (*áçoka*), a tree so called (lit., free from sorrow) < *a-* priv. + *soka* (*çoka*), flame, anguish, sorrow.] **1.** A low-spreading, leguminous tree, *Saraca Indica*, bearing large sweet-scented, pale orange-scarlet flowers. It is found from southeastern India and Ceylon to Burma and the Malay peninsula and archipelago, and is much cultivated for its beauty and the odor of its flowers. It is a sacred tree of the Hindus, and figures prominently in their legends and literature.

2. The mast-tree or Indian fir, *Polyalthia longifolia*, of the custard-apple family. It is cultivated for the sake of its flowers, and is planted in avenues and near temples. See ★*vanjula*.

asonant (a-sō′nant), *a.* [a^{-18} + *sonant*.] Without sound; not sonant.

asouth (a-south′), *adv. phr.* [a^3 + *south*.] In or on the south; to or toward the south. *J. Barlow*, Columbiad, i. 571.

asparaginate (as-par′a-ji-nāt), *n.* [*asparagin* + *-ate*[1].] A salt of asparagin: as, silver *asparaginate*, $NH_2COCH(NH_2)CH_2CO_2Ag$. Also *aminosuccinamidate*.

asparagus-knife (as-par′a-gus-nīf), *n.* A knife having a long bent handle with a chisel-blade at the end, used in cutting the stems of asparagus. The chisel-blade is pushed into the soil to cut off the blanched portion of the stem below the surface.

asparagus-miner (as-par′a-gus-mī″nėr), *n.* The larva of a dipterous insect of the family *Agromyzidæ*, *Agromyza simplex*.

asparagus-rust (as-par′a-gus-rust″), *n.* A serious disease of asparagus, caused by the fungus *Puccinia Asparagi*.

asparkle (a-spär′kl), *adv. phr.* [a^3 + *sparkle*.] In a sparkling state; sparkling.

Otho, free to judge of both,
Ecelin the unready, harsh and loth,
And this more plausible and facile wight
With every point *a-sparkle*, chose the right.
Browning, Sordello, iv. 585–588.

aspect, *n.* **9.** In *forestry*, the direction toward which a slope faces. The eight main points of the compass, north, northeast, east, southeast, south, southwest, west, northwest, are distinguished in forest description. Also called *exposure*.—**10.** In *logic*, the concept of a compound object, or this object itself, resulting from mentally connecting a definite conception to an indefinite or partially indesignate object, the compound being regarded as identical with the previously indefinite object.

If with each unit of a collection *a*, *b*, *c*, . . . of *n* units [where *a*, *b*, *c*, etc., are absolutely indistinguishable, so that there is nothing to determine which unit is *a*, which *b*, etc.] of any form we mentally associate one of a given discrete heap of *n* marks [if, for example, we distinguish the units by numbers arbitrarily attached to them, or by proper names,] so that each unit thereby becomes distinguished from each of the others and from all other units, we obtain what I have termed an *aspect* of *a*, *b*, *c*, . . .
A. B. Kempe.

Aspect of the sky, the appearance of the sky as to clouds or rain or color, especially with reference to the possibility of forecasting from it an approaching change of the weather.—**Aspect of the weather-map**, the appearance of the isobars, isotherms, and other details given in the daily weather-maps, with special reference to the changes then progressing toward a given station; specifically, the direction of the gradient at any given station. If the gradient rises toward the northwest the aspect is northwest.—**Barometric aspect**, in a weather-map, the direction toward which the principal barometric gradient is rising; the direction from which the barometric pressure appears to be pushing hardest toward a given station.—**Dexter aspect**, in *astrol.*, one cast in the reverse order of the signs.—**Doctrine of two aspects** or **double-aspect theory**, a variety of psychophysical parallelism consisting in the opinion that the external physical world and the mental world (whether this is understood as synonymous with the internal world or not) are two aspects, though not necessarily aspects of any third more substantive being.

From causal theories we must distinguish sharply what may be called ultimate theories of the relation of mind and body: theories, that is, which seek to explain and make intelligible to us why mind and body are connected at all. The *double aspect theory*, with its assertion of one reality manifesting itself under two diverse forms, is an example of such a theory.
C. A. Strong, Why the Mind has a Body, p. 3.

Globe aspect, the presentation of features upon the surface of a sphere as seen from the outside, i. e. as given upon a terrestrial or celestial globe, or upon a geographical map: opposed to *sky aspect*, which represents things as seen from inside the sphere, as in star-maps. In the globe aspect, north being at the top of the map, east is at the right; in the sky aspect east is at the left.—**Sky aspect**, the presentation of features of a sphere as viewed from a point within it: used in maps of portions of the celestial sphere, which show the relative positions of stars as seen by one looking up to the sky: opposed to *globe* ★*aspect* (which see).—**Thermal aspect**, in a weather-map, the direction toward which the principal thermometric or temperature gradient is moving; the direction from which a higher or a lower temperature appears to be advancing toward a given station.

aspectabundt†, *a.* [NL. **aspectabundus*, < L. *aspectare*, look at, observe: see *aspect*, *v.*] Of expressive countenance; expressive in face. [Rare.]

On the stage he [Dogget] is very *aspectabund*, wearing a farce on his face, his thoughts deliberating, framing his utterance congruous to his look. He is the only comic original now extant.
Downes, Roscius Anglicanus, p. 52.

asperated (as′pe-rā-ted), *p. a.* Roughened; characterized by unevenness or harshness. *Boyle*, in Phil. Trans., XI. 806.

aspergation (as-pėr-gā′shon), *n.* [Erron. formed from L. *aspergere*, sprinkle, + *-ation*.] The act of sprinkling; aspersion.

They [the Indians and Iranians] had common words for priest, sacrifice, song of praise, religious *aspergation*, for the sacred soma drink, for God, Lord, for heroes and demons, and for Mithra, the god of light.
Isaac Taylor, Origin of the Aryans, p. 190.

asperger (as-pėr′jėr), *n.* [*asperge* + *-er*[1].] One who sprinkles.

This *asperger* personates the old Tcamahia of Wukoki, who parted from the Snake clans at that pueblo to seek his fortune in the east, finding it at Acoma.
An. Rep. Bur. Amer. Ethnol., 1897–98, p. 589.

Aspergillaceæ (as″pėr-ji-lā′sē-ē), *n. pl.* [NL., < *Aspergillus* (see *Aspergillus*, 2) + *-aceæ*.] A family of the lower ascomycetous fungi including *Aspergillus*.

Aspergillales (as″pėr-ji-lā′lēz), *n. pl.* [NL., < *Aspergillus* + *-ales*.] An order of ascomycetous fungi including six families and a great diversity of forms. The ascocarp is mostly small and without an opening. The conidial forms include the common molds *Aspergillus* and *Penicillium*.

Aspergillidæ (as-pėr-jil′i-dē), *n. pl.* Same as ★*Brechitidæ*.

aspergillin (as-pėr-jil′in), *n.* [*Aspergillus*, 2 (?), + *-in*[2].] Same as *palmellin*.

aspergillosis (as-pėr-ji-lō′sis), *n.* [NL., < *Aspergillus* + *-osis*.] A morbid condition resulting from the presence in the ear, sometimes in the lungs, of certain forms of *Aspergillus*.

Other forms of fungus disease or Mycoses are described. *Aspergillosis*, or pigeon-breeders' disease, is the result of the infection with the Aspergillus fumigatus.
Encyc. Brit., XXXI. 534.

asperite (as′pe-rīt), *n.* [L. *asper*, rough, + *-ite*[2].] In *petrog.*, a term proposed by Becker for andesitic lavas of light color which are porous in texture and consequently rough or harsh to

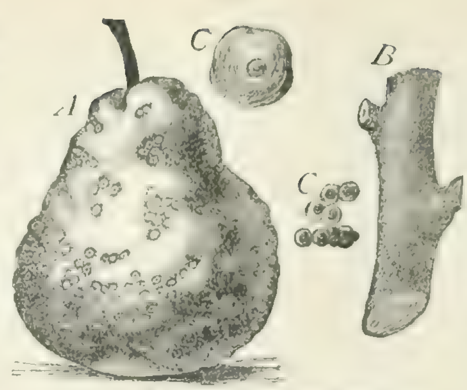
the touch. The asperites are contrasted with the darker, denser andesites of basaltic habit. They are more commonly called *trachytic andesites*.

aspermia (a-spėr′mi-ạ̈), *n.* [NL., < Gr. ἄσπερμος: see *aspermatism*.] Same as *aspermatism*.

asperolite (as′pe̤-rō̤-līt), *n.* [L. *asper*, rough, + Gr. λίθος, stone.] A variety of chrysocolla copper ore from Tagilsk, Russia.

Asperula (as-per′ụ̄-lạ̈), *n.* [NL., fem. dim., < L. *asper*, rough.] A genus of dwarf hardy herbs, used for borders, rockeries, and shady places, containing almost 80 species of ill-defined plants of the family *Rubiaceæ*, two of which, *A. odorata*, commonly called sweet woodruff, and *A. hexaphylla* are commonly cultivated in America.

asperulous (as-per′ụ̄-lus), *a.* [NL. **asperulus*, dim. of L. *asper*, rough.] In *bot.*, minutely roughened.



San José Scale (*Aspidiotus perniciosus*). *A*, infested fruit; *B*, branch; *C*, enlarged scales. (Howard, U. S. D. A.)

asphaleia (as-fa-lē′yạ̈), *n.* [Gr. ἀσφάλεια, security, safety, certainty, < ἀσφαλής, secure, safe.] A name applied to a safety system of stage mechanism in which the stage-floor and the overhead scenic appliances are all moved by hydraulic power.

Asphalt brown, process. See ★*brown*, ★*process*.

asphaltene (as-fal′tēn), *n.* [*asphalt* + *-ene*.] A name originally given by Boussingault to a residue left on distilling asphalt from an oil-bath. The name is now used to designate that portion of asphalt which is soluble in boiling turpentine or cold chloroform, but not in gasolene, ether, or acetone. The portion soluble in the latter solvents is called *petrolene*.

asphaltum, *n.*—**Gum asphaltum**, a term sometimes applied to the purer and more glossy forms of bitumen or asphalt, as used in the manufacture of varnishes.

Asphodeline (as″fō̤-de-lī′nē), *n.* [NL., < Gr. ἀσφοδέλινος, adj., < ἀσφόδελος, asphodel.] A genus of hardy herbs of the family *Liliaceæ*. About 14 species are found along the Mediterranean Sea and extending into Persia and Caucasia. *A. lutea* is most commonly grown in the United States, but other species are not unlikely to be found under cultivation.

Asphodelus (as-fod′ē̤-lus), *n.* [NL.: see *asphodel*.] A genus of hardy, stemless herbs, with white, lily-like flowers in long racemes, members of the family *Liliaceæ*. There are 6 or 7 species natives of the Mediterranean region, Western Asia, the East Indies, and Madagascar, some of which are found in flower-gardens. *A. ramosus* and *A. albus* are the only common trade-names in America. Most of the species are found along the Mediterranean Sea.

asphyxia, *n.*—**Secondary asphyxia**, asphyxia which sometimes recurs with fatal result after apparent recovery from drowning or other form of suffocation.

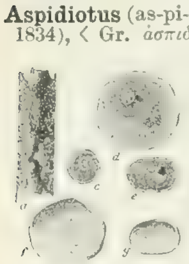
asphyxiater (as-fik′si-ā-tėr), *n.* **1.** A device or apparatus for producing suffocation by surrounding the victim with an irrespirable gas.—**2.** Specifically, a portable fire-extinguisher which operates by filling the air or space about the fire with a gas which does not support combustion.

asphyxied (as-fik′sid), *p.a.* Asphyxiated. *Carlyle*.

aspidate (as′pi-dāt), *a.* [Gr. ἀσπίς (-ιδ-), shield, + *-ate*[1].] Shield-shaped; having the form of a flat plate. *Zittel* (trans.), Textbook of Paleon., II. 143.

aspidin (as′pi-din), *n.* [*Aspidium* + *-in*[2].] A crystalline principle, $C_{23}H_{32}O_7$, said to be poisonous, which is contained in the rhizome of the male-fern, *Dryopteris* (*Aspidium*) *Filix-mas*.

Aspidiotus (as-pi-di-ō′tus), *n.* [NL. (Bouché, 1834), < Gr. ἀσπιδιώτης, shielded, or provided with a shield.] A very important genus of diaspine scale-insects, comprising many notorious pests of fruit-trees. The scales are small and round, those of the males being somewhat oblong; the pellicles of the female are completely superposed, and in both sexes are more or less centrally located; the pellicles are surrounded by a broad secretionary supplement; and the circumgenital glands occur in not more than five groups. To this genus belong the San José scale (*A. perniciosus*), the grape-scale (*A. uvæ*), the walnut-scale (*A. juglans-regiæ*), the oleander-scale (*A. nerii*), the quince-scale (*A. cydoniæ*), and many other destructive species.



European fruit-scale (*Aspidiotus ostreæformis*).

a, scales on twig; *c*, immature stage; *d*, female; *e*, male; *f* and *g*, inside of scales. (Marlatt, U. S. D. A.)

Walnut-scale (*Aspidiotus juglans-regiæ*). *d* and *e*, infested twigs. (Howard, U. S. D. A.)

Aspidistra (as-pi-dis′trạ̈), *n.* [NL.] A genus of the *Liliaceæ*, one species of which (*A. lurida*) from China is a common florists' plant. It is grown for its handsome crown of long, shining, recurving foliage, in the north in pots and as a window decoration, in the south in the open in moist ground. There is a striped-leafed form. The flowers are inconspicuous.

aspidium, *n.* **3.** In *phar.*, the rhizome of *Dryopteris Filix-mas* and *D. marginalis*, the oleoresin obtained from which is used for the expulsion of tape-worms.

Aspidobranchiata (as″pi-dō̤-brang-ki-ā′tạ̈), *n. pl.* [NL.] Same as *Scutibranchia*.

aspidobranchiate (as″pi-dō̤-brang′ki-āt), *a.* and *n.* [NL. *aspidobranchiatus*, < Gr. ἀσπίς (ἀσπιδ-), a shield, + βράγχια, gills.] **I.** *a.* Having the gills bipectinate, as certain gasteropods.

II. *n.* One of the *Aspidobranchiata*.

Aspidocephali (as″pi-dō̤-sef′a̤-lī), *n. pl.* [NL., < Gr. ἀσπίς, shield, + κεφαλή, head.] A Paleozoic order of singular ostracoderm fishes. They have a large, heavily plated head-shield composed of three layers; orbits close together; body, in the typical genera, covered with quadrangular scales; no paired fins; and heterocercal tail. The best-known of these forms is *Cephalaspis*. The species have been found only in the Upper Silurian beds of Great Britain and the Baltic provinces and in the Old Red Sandstone.

Aspidoceras (as-pi-dos′e̤-ras), *n.* [NL., < Gr. ἀσπίς (ἀσπιδ-), shield, + κέρας, horn.] A genus of Jurassic ammonites with wide umbilicus and rounded whorls having ribs in young stages and tubercles at full growth.

Aspidoceratidæ (as″pi-dō̤-se-rat′i-dē), *n. pl.* [NL., < *Aspidoceras* + *-idæ*.] A family of ammonoid cephalopods from the Jurassic formation.

Aspidocotylea (as″pi-dō-ko-til′ē-ạ̈), *n. pl.* [NL., < Gr. ἀσπίς (ἀσπιδ-), shield, + κοτύλη, socket, + *-ea*.] A group or an order of trematode platyhelminths having a large ventral round or oval adhesive apparatus, with numerous suckers in one or several rows. They are parasitic in the gall-bladder and alimentary canal of chelonians and fishes and in various organs of mollusks. The group contains the single family *Aspidobothridæ*.

Aspidoganoidei (as″pi-dō-ga-noi′dē̤-ī), *n. pl.* [NL., < Gr. ἀσπίς (ἀσπιδ-), shield, + NL. *Ganoidei*, the ganoid fishes.] The proper name for the group of fishes, including extinct species, commonly called *Ostracodermi* or *Ostracophori*. *Gill*, 1876.

Aspidophoroides (as″pi-dof-ō̤-rō̤-ī′dēz), *n.* [NL., < *Aspidophorus* + *-ides*.] A genus of very small fishes (sometimes called *sea-poachers*), of the family *Agonidæ*, found in the Atlantic and North Pacific. It is characterized by the absence of the first dorsal fin. *A. monopterygius* is the common species.

Aspidosoma (as″pi-dō̤-sō′mạ̈), *n.* [Gr. ἀσπίς (ἀσπιδ-), shield, + σῶμα, body.] A genus of Paleozoic star-fishes of the order *Asterozoa*. They have broad ambulacral fields with well-defined marginal plates, and a madreporite on the oral side of the disk. The genus, represented by the species *A. petaloides*, occurs in the Lower Devonian of the Rhine.

aspidospermatine (as″pi-dō̤-spėr′ma̤-tin), *n.* [*Aspidosperma*(*t-*) + *-ine*[2].] A crystalline, strongly basic, bitter alkaloid, $C_{22}H_{28}O_2N_2$, found in quebracho bark. It melts at 162° C.

aspidospermine (as″pi-dō̤-spėr′min), *n.* [*Aspidosperma* + *-ine*[2].] A crystalline alkaloid, $C_{22}H_{30}ON_2$, found in *Aspidosperma Quebracho*. It melts at 206° and is very difficultly soluble in water.

aspirate, *v. t.* **2.** To impel by aspiration or suction: as, to *aspirate* a current of air through a tube.

They connected a series of four air-tight cages by means of rubber tubing and *aspirated* a steady current of air through them. *Buck*, Med. Handbook.

aspiration, *n.* **7.** The staccato mark (which see, under *staccato*).—**8.** The drawing forward, in flight, against the direction of motion of a wind-current. See the extract.

It would not account for those flights in which the bird maintains his altitude without turning upon his course, as he so often does when the winds are high. This feat . . . is known as "*aspiration*."
E. C. Huffaker, in The Aeronaut. An., 1897, pp. 130, 131.

Aspiration pneumonia, pneumonia due to the inhalation of infectious material, as of vomited matter in a patient recovering from surgical anæsthesia.—**Aspiration psychrometer.** See ★*psychrometer*.

aspirin (as′pi-rin), *n.* A white crystalline compound, obtained by the action of acetic anhydrid or acetyl chlorid on salicylic acid; acetylsalicylic acid. It is used in the treatment of chorea.

Asplenieæ (as-plē-nī′ē̤-ē), *n. pl.* [NL., < *Asplenium* + *-eæ*.] A large tribe of polypodiaceous ferns, typified by the genus *Asplenium*. It contains many important genera of various types, with fronds uniform or dimorphous, venation free or anastomosing, and usually with the sori distinct, oblong to elongate, uniserial or biserial, mostly lateral and indusiate; or, as in *Stenochlæna*, with the naked sori diffused over the parenchyma of the under surface.

asplenioid (as-plē′ni-oid), *a.* [*Asplenium* + *-oid*.] Resembling or pertaining to the fern genus *Asplenium*.

Asporea (a-spō′rē̤-ạ̈), *n. pl.* In Labbé's classification of *Sporozoa*, a group in which the oöcyte gives direct origin to sporozoites. It includes the single genus *Eimeria*. Also *Monogenica*.

Asporocystea (as″pō̤-rō̤-sis′tē̤-ạ̈), *n. pl.* [NL., < Gr. ἀ- priv. + σπορά, a seed (spore), + κύστις, bladder.] One of two divisions, the other being *Sporocystea*, proposed by Mesnil for the *Coccidia*.

asporogenic (a-spō̤-rō̤-jen′ik), *a.* [Gr. ἀ- priv. + σπορά, a seed (spore), + -γενης, -producing.] Not spore-bearing: applied to bacteria, algæ, and similar simple plants which have no spores.

asporogenous (a-spō̤-roj′e̤-nus), *a.* [*a*-[18] + *sporogenous*.] Not reproducing by means of spores; asporous. *Buck*, Med. Handbook, I. 712.

Asporomycetes (as″pō̤-rō̤-mī-sē′tēz), *n. pl.* [NL., < Gr. ἀ- priv. + σπορά, seed (spore), + *Mycetes* (see *Mycetes*[2]).] A name given by Wallroth to a heterogeneous group of fungi, including sterile and imperfect forms, as well as the work of insects (*erineum*).

asporulate (a-spor′ọ̄-lāt), *a.* [*a*-[18] + *sporulate*.] Not producing spores or encysted bodies: as, the *asporulate* cycle in the development of certain coccidia.

Aspro[1] (as′prō), *n.* [NL., < (?) LGr. ἄσπρος, white, or (?) < L. *asper* (It. *aspro*), rough.] A genus of European river-fishes of the family *Percidæ*. They live in swift waters, lying close to the bottom and moving with great quickness from one station to another, in the fashion of the American darters (*Etheostomatinæ*), to which they are closely related.

aspro[2] (as′prō), *n.* A silver coin of the Knights of St. John of Jerusalem at Rhodes, in the 14th century; the Rhodian danaro.

ås-river (âs′riv″er), *n.* [See ★*ås*.] A stream which is so related to glacial waste as to accumulate gravelly debris in the form of long ridges or eskars.

There can be no doubt, for example, that the åsar are in some way connected in their origin with the great ice-sheet. Dr. Holst therefore accepts Hummel's main contention. He thinks, however, that the ås-rivers flowed upon and not underneath the mer de glace.
J. Geikie, The Great Ice Age, p. 171.

assailableness (a̤-sāl′a̤-bl-nes), *n.* The quality of being assailable or open to attack.

Assam fever. Same as ★*kala-azar*.

Assamese. I. *a.* **2.** Pertaining to the languages of Assam.

II. *n.* **2.** A language of Assam, one of the Aryan family, akin to Bengali.

assassin-bug (a̤-sas′in-bug), *n.* Same as ★*cannibal-bug*.

Assault at arms. (*b*) A hand-to-hand contest.

assay, *n.*—**Brightening of assay.** See *blick*.

assaying, *n.* In *chem.*, this term is usually applied to the ascertainment of the presence and amount of one or more metals in a given substance, and commonly refers to the precious metals, gold and silver. But it is sometimes used in the more general sense, the testing or examination of any substance, as, for example, the determination of the proportion of pure sulphur in a sample of the crude material.

assay-office (a-sā′of-is), *n.* A laboratory where ores or metals are assayed.

assedation (as-ē-dā′shon), *n.* In *Scotch law*, a term formerly used to signify the right of any inferior tenant in the feudal system.

assemblage, *n.* **4.** In the logicomathematical science of multitude, otherwise called the theory of cardinal numbers, a collection, not in the sense that the objects are assembled or collected, but merely in the sense that many things are regarded in thought as constituting one thing. Thus, in this sense, all the variable stars make up an assemblage, although they are scattered through all the universe. The word *collection* has from ancient times been used in this sense, but *assemblage* has only recently been so used, by a small number of persons who are either unacquainted with or indifferent to the established terminology of logic.

assemble[1], *v. t.* **4.** In *entom.*, to collect together (the males of certain moths and other insects) by exposing a female in a wire-gauze cage: an insect-collector's device.

assembler, *n.* **4.** That part of a linotype type-making machine which groups and holds together, against the mold, the matrices arranged in order for one line of type.

When a key is depressed, the matrix to which it corresponds emerges from its channel, is caught upon an inclined traveling belt, and is then carried to the *assembler*.
Census Bulletin 216, June 28, 1902, p. 57.

assembling-box (a-sem′bling-boks), *n.* In a type-casting machine, a box in which the matrices are assembled prior to their delivery to the casting position.

As the keys are struck on the keyboard the matrices and spacers descend into the *assembling-box*, traveling a distance of about four inches, and the bars are dropped more or less, according to the position of the letter to be brought in line to be cast.
Census Bulletin 216, June 28, 1902, p. 58.

assembling-line (a-sem′bling-līn), *n.* A line which unites the head of a harpoon to the shaft, and is carried down the shaft, to which it is made fast here and there with knots, thus holding the pieces together in case of a break. *J. Murdoch.*

The connecting line of a barbed harpoon at first was only a bit of string or thong uniting the head to the shaft. If there be no connecting line between head and shaft, the weapon is called a rankling arrow, because the head stays in the animal and causes death. However, the rude Fuegian inventors have gotten beyond that, for the thong is carried halfway down the shaft and made fast here and there with knots. The same happy thought is called by Murdoch an "*assembling line*," since it serves in case of a break in the shaft to save the pieces.
Smithsonian Rep., 1900, p. 200.

assembling-shop (a-sem′bling-shop), *n.* A shop, room, yard, or other place where the parts, as of machines, barrels, vehicles, motors, pumps, watches, etc., are put together to form the finished product. Also called *setting-up shop.*

assentaneous (as-en-tā′nē-us), *a.* [*assent* + *-aneous*, as in *consentaneous.*] Inclined to assent; deferential. *Landor.*

assentatious (as-en-tā′shius), *a.* [*assentati(on)* + *-ous.*] Ready to assent; compliant.

assertoric, *a.* **II.** *n.* A proposition capable of being stated absolutely but not affirmed as necessary.

Symbolic logic is confined exclusively to one kind of propositions, viz. *assertorics.*
Athenæum, April 8, 1905, p. 439.

assertorically (a-sėr′tor′i-kal-i), *adv.* [Erron. < *assertor* + *-ic-al* + *-ly*[2].] In an assertorial manner; as an assertion. *J. Martineau*, Essays, II. 190.

asservilize (a-sėr′vil-īz), *v. t.*; pret. and pp. *asservilized*, ppr. *asservilizing.* [*asservile* + *-ize.*] To make servile; reduce to the condition of a serf. [Rare.] *N. E. D.*

assessment, *n.* **5.** In *marine insurance*, the fixing of that part of a loss which saved property must bear to compensate for property voluntarily sacrificed to prevent a total loss.

assessment-roll (a-ses′ment-rōl), *n.* The official list filed with the tax department of a municipality, containing the names of the property-holders and the amount of property upon which the tax is to be levied.

assest, *pp.* A simplified spelling of *assessed.*

assets, *n. pl.*—**Assets enter mains,** property coming at once to an executor, administrator, or trustee to satisfy the debts of the estate.—**Assets per descent,** real property of an heir which may be charged to satisfy the debts of his ancestor.—**Liquid assets.** See ★*liquid.*

asseverantly (a-sev′e-rant-li), *adv.* By way of assertion. *Abp. Abbot*, Expos. on Jonah, p. 562. *N. E. D.*

assi (as′i), *n.* [Creek Indian *assi*, abbrev. of *assi lupuh'ska*, said to mean 'small leaves.'] The yapon, *Ilex Cassine*, or the drink made from it. Also *assi-shrub.*

The Creeks made use of the *assi* as we use fermented liquors, to promote conviviality.
Gatschet, quoted in Bulletin 14, Botany, U. S. Dept. [Agr., p. 13.

assideration (a-sid-ėr-ā′shon), *n.* [=It. *assideraziono*, < ML. *assideratio(n-)*, < *assiderare*, pass. *assiderari* (It. *assiderare*), in pp. *assideratus*, benumbed, < L. *ad-* + *siderari*, be benumbed, paralyzed, or planet-struck, < *sidus* (*sider-*), a constellation, star: see *sidereal.*] A form of homicide, especially of infanticide, in which death is caused by placing the victim in ice-cold water.

assiette (ä-si-et′), *n.* [F., seat, base, foundation, < *asseoir*, sit: see *assize.*] In *bookbinding*, a compound applied to the trimmed edges of the leaves of books before the application of gold-leaf. It is usually made of bole, bloodstone, and galena.

assify (as′i-fī), *v. t.*; pret. and pp. *assified*, ppr *assifying.* [*ass* + *-i-fy.*] To make an ass of: as, to *assify* one's self. *Southey.* [Humorous.]

assigned (a-sīnd′), *p. a.* Allotted; appointed; transferred; prescribed: as, an *assigned* position; an *assigned* quantity.—**Assigned servant,** during the early history of New South Wales and other British colonies, a convict assigned or allotted to a settler as an unpaid servant, "bound to perform diligently from sunrise to sunset all usual and reasonable labor." The system of assigning convicts from the British islands in this way was established in Australia in 1804. See *assignment*, 7, and ★*assignee*, 2.

assignee, *n.* **2.** An assigned servant; a convict formerly assigned to an Australian settler as an unpaid servant. See ★*assigned* and *assignment*, 7.

assigneeship (as-i-nē′ship), *n.* The official position of an assignee.

assignment, *n.*—**Equitable assignment,** the sale or transfer of property, or rights of property not in existence, or not capable of delivery at the time of the sale, but which may come into existence in the future. Such a sale or transfer is not enforceable except in courts of chancery.

assimilater, assimilator (a-sim′i-lā-tėr,-tor), *n.* One who or that which assimilates.

assimilation, *n.* (*e*) In *physiol.*, the conversion of chyle into material suitable for appropriation by the tissues. (*f*) In *psychol.*: (1) The process whereby new contents are received into a given consciousness: a general term covering the processes of fusion, association contrast, recognition, etc. (2) In Wundt's terminology, a particular form of the simultaneous association of ideas.

Simultaneous associations made up of elements from different psychical compounds may be divided into two classes: into *assimilations*, or associations between the elements of like compounds, and complications, or associations between elements of unlike compounds.
W. Wundt (trans.), Outlines of Psychol., p. 227.

(*g*) In *petrog.*, a term used to express the theory that molten magmas, when forced upward into the solid rocks, may, through fusion of included fragments or wall rock, absorb or assimilate a certain amount of these foreign materials, thus changing in some degree the chemical composition of the magma as a whole.—**Primary assimilation,** in *physiol.*, the taking up of chyle by the lacteals.—**Progressive assimilation,** in *philol.*, assimilation of a sound to the grade or nature of one that precedes it, as of *d* (a medial) to *k* (a tenuis) in the word *looked*, namely, by becoming *t* (a tenuis).

assishness (as′ish-nes), *n.* The quality of being like an ass, as in stupidity, stubbornness, etc.; asinine quality or character. *Florio*, 1598.

assistant, *a.* **3.** Assisting; hence, subordinate in rank; specifically, as an official designation, occupying the next lower grade: as, an *assistant* adjutant-general.

assistful (a-sist′fūl), *a.* [*assist* + *-ful.*] Helpful. *Chapman*, tr. of Iliad, v. 120.

assize, *n.* **10.** [F. *assise.*] In geological classification, the French equivalent of the term *bed*, constituting one of the minor subdivisions in geology. An assize, or bed, is composed of two or more zones; two or more assizes, or beds, constitute a group, stage, or *étage.*—**Tholed an assize,** a plea in bar in Scotland, in a criminal case, to the effect that the accused has once been tried for the offense charged. *Bouvier*, Law Dict.

Assmann's aspiration psychrometer. See ★*psychrometer.*

Associate. **I.** *a.*—**Associate antagonists,** muscles which, when acting singly, are antagonists, but when acting together move the part in an intermediate direction.—**Associate movements,** in *physiol.*, movements which take place in a paralyzed part when the non-paralyzed fellow is moved.—**Associate muscles,** muscles which act together to effect a certain movement.

II. *n.* **6.** In *logic*, a unit not contained in the collection which is paired with each unit of the collection so as to make a pair distinguished from every pair consisting of the associate and a unit not a member of the collection. Thus if we consider a number of indistinguishable regular tetrahedrons each with a point at its center, the point at the center of any one of these is an *associate* of the collection of its summits. According as the pairs of the associate with the different units of the collection are all, some but not all, or none, distinguished from one another, it may be called a *discrete pair associate*, a *various pair associate*, or a *uniform pair associate*; but Keynes terms the last two *multiple pair associate* and *single pair associate.*

7. In *law:* (*a*) An officer in the superior courts of common law in England whose duty it was to keep the records of his court, to attend its *nisi prius* sittings, and to enter the verdict, make up the *postea*, and deliver the record to the party entitled thereto. *Abbott*, Law Dict. (*b*) A person associated with the judges and clerks of assize in commission of general jail delivery. *Mozley and Whiteley Dict.* (*Bouvier*, Law Dictionary.)

associated (a-sō′shi-ā-ted), *p. a.* United into or forming an association; showing association; specifically, in *phys. chem.*, noting liquids some of whose molecules consist of aggregates of two or more of the molecules in which the substance exists when in the state of vapor. Thus water in the state of vapor has molecules whose weight is eighteen times the weight of an atom of hydrogen; but in the liquid state it is believed that many of its molecules are two or three times as heavy, or that water is an *associated* liquid. See ★*association*, 3. *Amer. Jour. Sci.*, June, 1904, p. 428.—**Associated Press,** an association of newspapers (originally confined to New York) for the collection and distribution of telegraphic news throughout the United States, with central bureaus in New York, Chicago, Cincinnati, and Washington.

associatedness (a-sō′si-ā-ted-nes), *n.* The condition or fact of being associated. *Fitzedward Hall*, Hindu Philos. Syst., p. 226.

association, *n.* **3.** In *phys. chem.*, the union of chemical molecules to form more complex aggregates; especially, the union of the molecules of a vapor to form more complex aggregates when the temperature is reduced nearly to the boiling-point, or when they condense into liquids. Acetic acid at 250° C. consists of molecules weighing sixty times the atom of hydrogen, but at 125° C. about half of the molecules weigh twice as much, which proves that two thirds of its gaseous molecules show association of two normal molecules into one. *Amer. Jour. Sci.*, June, 1904, p. 428.

4. In *phytogeog.*, the aggregation of plant individuals initiated by reproduction on the spot of growth, but finally determined by environment. See ★*formation* and *plant* ★*association.*

Association is divided into several kinds, according to the factor determining in specific cases, *e. g.* light *association*, water-content *association.*
F. E. Clements, Bot. Surv. Neb., VII. 9.

Anthropogenic association, in *sociol.*, an assumed stage of social evolution in which ape-like creatures, once merely animal, were becoming human, through increasingly close association and cooperation; the stage in which language, religion, and other distinctively human acquisitions were evolved. *Giddings*, Prin. of Sociol., p. 74.—**Association area,** that portion of the brain surface which is not occupied by centers of sensation: believed to be the seat of the intellectual activities of perception, ideation, memory, etc.—**Association center,** a nerve-center which regulates associated movements.—**Association consciousness** or **associative consciousness.** See ★*consciousness.*—**Association disease,** myoclonus epilepsy; the coexistence of myoclonus and epilepsy.—**Association factor,** in *phys. chem.*, a factor which defines the amount of association in a given liquid.—**Association fiber, association reaction** or **associative reaction.** See ★*fiber*, ★*reaction.*—**Association theory,** the theory that association governs all the actions of the mind, except where disturbed by dissociation.—**Demogenic association,** in *sociol.*, a stage of social evolution in which individuals live together and cooperate without regard to kinship relations, the association constituting a demos or people: contrasted with *ethnogenic* (tribal) *association. Giddings*, Prin. of Sociol., p. 74.—**Ethnogenic association,** in *sociol.*, a stage of social evolution in which individuals are socially organized on the basis of kinship, traced through clan and tribal relations; a tribal or gentile association. *Giddings*, Prin. of Sociol., p. 74.—**External** or **extrinsic association,** in *psychol.*, a connection of ideas resulting from associative practice; association by contiguity.—**Internal** or **intrinsic association,** in *psychol.*, a connection of ideas resulting from associative relationship; association by similarity.—**Mediate association,** in *psychol.*, association by unconscious or unnoticed intermediaries.—**Mullerian association,** all the organisms which exhibit the same sort of Müllerian mimicry in the same locality considered collectively. See ★*mimicry.*—**Plant association,** in *phytogeog.*: (*a*) A plant formation in a limited application: see ★*formation*, 5. (*b*) A local aggregation of plants within a formation characterized more by the species which compose it than by any biological peculiarity. *T. H. Kearney*, Contr. Nat. Herb., V. 269.—**Religious association law.** See ★*religious.*—**Simultaneous association,** in *psychol.*, a form of association of ideas in which the process of connection is given to introspection as a single instantaneous act.—**Successive association,** in *psychol.*, a form of association of ideas in which the process of connection falls, for introspection, into two stages: the appearance of the reproducing elements, and the appearance of the elements reproduced. *W. Wundt* (trans.), Outlines of Psy-

chol., p. 236. — **Writ of association,** in English practice, a writ whereby certain persons (usually the clerk of assize and his subordinate officers) are directed to associate themselves with the justices and sergeants; and they are required to admit the said persons into their society in order to take the assizes. *Bouvier*, Law Dict. — **Zoogenic association,** in *sociol.*, a stage of social evolution in the lower animals in which the animals consorting in bands, swarms, flocks, or herds find in mutual aid a powerful arm in the struggle for existence, and in which social instincts greatly affect the processes of natural and sexual selection. *Giddings*, Prin. of Sociol., p. 74.

associationistic (ạ-sō′si-ā-shon-is′tik), *a.* Pertaining to the theory of associationism. *Amer. Jour. Psychol.*, XIII. 164.

association-time (ạ-sō-si-ā′shon-tīm″), *n.* In *psychophys.*, the time required for the completion of a mental association. The term is used most commonly for the time obtained by subtracting the simple from the associative reaction-time; sometimes used for the total duration of the associative reaction.

Associative ★aphasia, ★comparison, ★consciousness, ★memory, ★reaction. See the nouns.

associatively (a-sō′shi-ā-tiv-li), *adv.* In *psychol.*, by way of association of ideas.

associatory (ạ-sō′si-ạ-tō-ri), *a.* Associative; having the quality of associating: as, the *associatory* activity of the senses.

Assoc. Sc. An abbreviation of *Associate in Science.*

Assonia (a-sō′ni-ạ̈), *n.* [NL. (Cavanilles, 1786), named in honor of Ignacio Jordan de *Asso* y del Rio (1742–1814), a Spanish botanist.] A genus of sterculiaceous trees or shrubs, usually with cordate leaves and axillary or terminal cymose flowers. See *Dombeya.*

assortative (ạ-sôr′tạ-tiv), *a.* [*assort* + *-ative.*] Involving a sorting of objects which brings together those of one kind and separates them from all other kinds. — **Assortative mating.** See ★*mating.*

assortive (ạ-sôr′tiv), *a.* [*assort* + *-ive.*] Same as ★*assortative.*

assumentum (as-ū-men′tum), *n.*; pl. *assumenta* (-tạ̈). [NL., < LL. *assumentum*, a patch: see *assument.*] In *bot.*, one of the valves of a silique.

assumingness (ạ-sū′ming-nes), *n.* The quality of assuming, or of taking upon one's self more than is proper or just. *Bentham*, 1832.

assumption, *n.* — **Archimedes's assumption,** the following: let A_1 be any point on a straight line between any given points A and B; then take the points A_2, A_3, A_4, . . . , such that A_1 lies between A and A_2, A_2 between A_1 and A_3, A_3 between A_2 and A_4, and so on, and also such that the sects AA_1, A_1A_2, A_2A_3, A_3A_4, . . . , are congruent; then in the series of points A_2, A_3, A_4, . . . , there is always such a point, A_n, that B lies between A and A_n.

assurant (ạ-shör′ạnt), *n.* [*assure* + *-ant.* The word should mean the assurer, not the assured.] One whose life or whose property is covered by insurance. [Rare.] *N. E. D.*

Assyro-Aramean (ạ-sī″rō-ar-ạ-mē′ạn), *a.* Including Assyrian and Babylonian on one side, and Aramean and its cognates on the other: a group-name in a classification of Semitic languages.

Assyro-Babylonian (ạ-sī″rō-bab-i-lō′ni-ạn), *a.* Pertaining to or common to both Assyria and Babylonia.

Assyroid (ạ-sī′roid), *a.* [More prop. **Assyrioid*, < L. *Assyrii*, Gr. Ἀσσύριοι, Assyrians, + εἶδος, form.] Of or pertaining to a race of western Asia, the purest representatives of which are pictured on ancient Assyrian monuments: characterized by a prominent hooked nose and thick lips. *Deniker*, Races of Man, p. 290.

Astacidea (as-ta-sid′ē-ạ̈), *n. pl.* [*Astacus* + *-idea.*] A tribe of macrurous decapod crustaceans including the families *Eryontidæ*, *Nephropsidæ*, *Potamobiidæ*, and *Parastacidæ.*

astacoid, *a.* **2.** Resembling a lobster or crawfish. — **Astacoid rash,** a diffuse reddish form of eruption in smallpox, the color of which resembles that of the shell of a boiled lobster.

astacomorph (as-tak′ō-môrf), *n.* [*Astacomorph-a.*] One of the *Astacomorpha.*

Astacomorpha (as″ta-kō-môr′fạ̈), *n. pl.* [NL., < Gr. ἀστακός, a lobster, + μορφή, form.] A group of crustaceans which includes the crawfishes and lobsters. *Huxley.*

astacomorphous (as″ta-kō-môr′fus), *a.* [As *astacomorph* + *-ous.*] Resembling or having the characters of the *Astacomorpha.*

astalk (ạ-stȧk′), *adv.* [*a*[3] + *stalk.*] Stalking about; afoot; lurking about. *M. N. Murfree*, Broomsedge Cove, p. 471.

A-standard (ā′stan″dạ̈rd), *n.* A vertical framing shaped like the capital letter A: used as a support for the parts of vertical pumps and engines. Also called ★*A-frame.*

astarboard, *adv.* **2.** Specifically, said of the tiller when it is shoved or drawn over to the starboard side of the vessel. — **Hard astarboard** (*naut.*), a phrase signifying that the tiller is jammed to starboard to its fullest extent, so that the rudder is thrown to the port side as far as it will go.

Astartian (a-stär′ti-ạn), *a.* and *n.* [NL. *Astarte*, a genus of mollusks.] In *geol.*, noting a subdivision of the Jurassic system in France and the Jura, constituting the upper substage of the Sequanian, which lies between the Kimmeridgian below and the Oxfordian above and corresponds to the Corallian or Coral Rag of Britain.

astartoid (as-tär′toid), *a.* and *n.* [NL. *Astarte*, a genus of mollusks, + *-oid.*] **I.** *a.* Similar to the genus *Astarte.*

II. *n.* A pelecypod mollusk allied to *Astarte.*

Astasia, *n.* **2.** [*l. c.*] Inability to stand in consequence of defective muscular action, which is not necessarily incoördination or paralysis.

astatki (as-tat′ki), *n.* [Appar. a trade corruption of Russ. *ostatokŭ*, residue.] The residuum from the distillation of Russian petroleum after the more volatile hydrocarbons, up to and including kerosene or illuminating oil, have been driven off. It occurs in the proportion of 10 to 15 per cent., and has a specific gravity of .9 to .95. This material is to some extent treated for the production of lubricating oil, but is for the most part utilized as fuel.

Astbury ware. See ★*ware*[2].

astegorrhine (as-teg′ō-rin), *a.* [Gr. ἀ- priv. + στέγος, roof, + ῥίς (ῥιν-), nose.] In *craniom.*, having a flat nose, like apes. *Von Török.*

astelic (a-stel′ik), *a.* In *bot.*, destitute of a stele or axial cylinder.

astely (a-stē′li), *n.* [NL. **astelia*, < Gr. ἀ- priv. + στήλη, pillar: see *stele.*] In *bot.*, absence of a stele or axial cylinder.

aster[1], *n.* **6.** In *sponges*, a multiactinate microsclere: same as *euaster.* — **7.** In *cytol.*,

Spermatogonium of Salamander. (Drüner.)

The nucleus lies below. Above is the enormous aster, the centrosome at its center, its rays showing indications of nine concentric circles of microsomes. The area within the second circle probably represents the "attraction-sphere" of Van Beneden. Highly magnified. From Wilson's "The Cell."

the star-shaped structure at either pole of the karyokinetic figure during cell-division: same as ★*karyaster* (which see). — **8.** Two small arches of precious metal, transversely riveted (said to have been invented by St. John Chrysostom), placed over the sacred wafer in the paten in preparation for the eucharistic sacrifice, to prevent the veil from touching it: now out of use.

The *aster* consists of two crossed half-hoops of silver and is used to place over the wafer.
Encyc. Brit., XXVII. 238.

Calico-aster, *Aster lateriflorus*: so called on account of the calico-like effect of its dull purple-and-whitish heads. Also called *starved aster.* — **Frostweed-aster.** Same as *white heath-aster*, below. — **New England aster,** *Aster Novæ-Angliæ*, a tall species bearing large heads with deep-purple rays. — **New York aster,** an Atlantic coast species, *Aster Novi-Belgii*, the heads of which have violet rays. — **Plume-aster,** a species, *Aster plumarius*, on North Carolina mountain-tops, which has a long violet inflorescence. — **Purple-stem aster,** a large swamp species, *A. puniceus*, ranging from Nova Scotia to Minnesota and south to North Carolina, with numerous smallish, violet-purple flowers and thick, rough-hairy, purple stems. See ★*cocash.* — **Rayless aster,** a plant of the asteraceous genus *Brachyactis*, the heads of which have the rays very short or wanting. — **Rice-button aster,** *Aster dumosus*, a delicate species with small white-rayed heads on slender branchlets. — **Sea-shore aster,** *Aster Tripolium*, a salt-marsh species of Europe and Russian Asia. — **Starved aster.** Same as *calico-aster*, above. — **White heath-aster,** a pasture weed, *Aster ericoides*, with small white heads: very abundant in the eastern United States. — **White-wreath aster,** *Aster multiflorus*: so called from its densely crowded small white heads. — **Wood-aster,** one of several woodland species, especially *A. cordifolius*, the blue wood-aster.

-aster. From its use in *oleaster*, etc., this suffix has been used in new formations, implying 'false,' as in *verticillaster*, false verticil. The Latin form appears in new systematic names, as *Lupinaster*, *Malvastrum*, etc.

Asteraceæ (as-tę-rā′sē-ē), *n. pl.* [NL. (Lindley, 1836), < *Aster* + *-aceæ.*] A family of dicotyledonous sympetalous plants, the aster family, usually included in the *Compositæ*, of which it constitutes the *Tubulifloræ*, except that the *Ambrosiaceæ* are now segregated. Called *Carduaceæ* by some authors. See *Compositæ*[1], *Tubulifloræ*, *Cichoriaceæ*, *Ligulifloræ*, and ★*Ambrosiaceæ.*

asteraceous (as-tę-rā′shius), *a.* [*Asteraceæ* + *-ous.*] Belonging to or having the characters of the *Asteraceæ.*

astereognosis (as-tē″ri-og-nō′sis), *n.* [NL., < Gr. ἀ- priv. + στερεός, solid, + γνῶσις, knowledge.] A defect in tactile sensation, which causes inability to estimate the form or substance of a body by touch.

Isolated loss of muscle sense usually shows itself in one of two ways: as loss of power to appreciate the position of the limbs, and as *astereognosis*, or failure to estimate the size, shape and weight of objects. The former is more marked in the legs and is seen in some cases of locomotor ataxia and multiple sclerosis; the latter is more often found in the arms and is a rare accompaniment of organic brain disease.
Buck, Med. Handbook, VII. 120.

Asteriidæ, *n. pl.* **2.** A family of asteroid *Stellaroidea*, of the order *Cryptozonia*, having opposite ambulacral ossicles, tube-feet in four rows, and an abactinal skeleton reticular and consisting of small unequal plates. It includes *Asterias*, *Anasterias*, *Uniophora*, and several other genera.

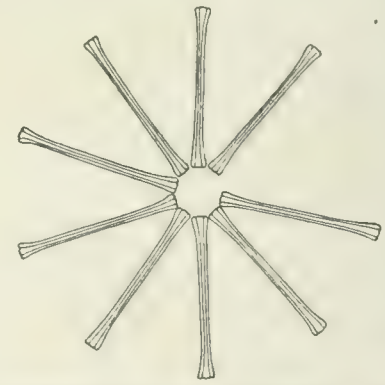
Asterina, *n.* **2.** In *bot.*, a genus of perisporiaceous fungi having the perithecia covered with or seated on a dark-colored radiating layer of hyphæ. The spores are uniseptate and brown. Many of the species are tropical and occur on leaves and stems. *Léveillé*, 1845.

Asterinidæ, *n. pl.* **2.** A family of asteroid *Stellaroidea*, of the order *Phanerozonia.* They have opposite ambulacral ossicles, small inconspicuous marginal plates whose axes are convergent, and intermediate plates imbricate and without pedicellaria. The family includes *Asterina*, *Radiaster*, *Nepanthia*, *Palmipes*, and other genera.

asterioid (as-tē′ri-oid), *a.* [*Asterias* + *-oid.*] Shaped like a starfish.

asterion, *n.* **2.** [*cap.*] The northern of the two 'hunting-dogs' in the constellation *Canes Venatici.* The other is *Chara.*

Asterionella (as-tē″ri-ō-nel′ạ̈), *n.* [NL., irreg. < Gr. ἀστέριος (neut. ἀστέριον), starlike (< ἀστήρ, star), + dim. *-ella.*] A genus of diatoms



Asterionella formosa. Hass. Greatly magnified. (From West's "British Freshwater Algæ.")

characterized by the arrangement of the frustules into stellar shapes: one of the organisms responsible for a bad odor and taste in drinking-water.

asterisk (as′tę-risk), *v. t.* To insert an asterisk (in a text) as the reference to a foot-note or for any other reason for which an asterisk is used. See *asterisk*, 1.

asterismal (as-tę-riz′mạl), *a.* Of or pertaining to asterisms, or groups of stars.

asterium (as-tē′ri-um), *n.* [NL., < Gr. ἀστήρ, a star.] The name given by Lockyer to a supposed element the presence of which in

the atmosphere of certain stars seemed to be indicated by spectroscopic examination of the light received from them. At one time it was suspected that helium was compound in character and asterium one of its constituents; but the more careful study of helium by Ramsay has rendered it improbable that this is the case or that asterium really exists.

Asternata (as-tėr-nā′tạ̈), *n. pl.* [NL., ‹ Gr. ἀ- priv. + στέρνον, sternum, + *-ata*².] A suborder of irregular *Echinoidea*, of the order *Atelostomata*. The peristome is central and never bilabiate; the ambulacra are simple, petaloid, and generally all similar; the floscelle is usually present; and there is no sternum.

Asternopteryx (as-tėr-nop′tẹ-riks), *n.* [NL., ‹ Gr. ἀ- priv. + στέρνον, breast, + πτέρυξ, wing, fin.] A genus of small blennies without ventral fins, found on the coast of Greenland.

asterol (as′tẹ-rol), *n.* [Gr. ἀστήρ, a star, + *-ol*.] A trade-name for a double salt of mercuric paraphenolsulphonate and ammonium tartrate, $(C_6H_5(OH)SO_3)_2Hg.4C_4H_4O_6(NH_4)_2 + 8H_2O$. It is used as an antiseptic in place of mercuric chlorid.

asterolepid (as-tẹ-rọ-lep′id), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of *Asterolepis*, a genus of fossil fishes.

The theory which explains *asterolepid* limbs as the produced and jointed head-angles, or 'cornua,' of forms like *Cephalaspis*. *Amer. Jour. Sci.*, Aug., 1904, p. 141.

II. *n.* A member of the genus *Asterolepis*.

Asterolepidæ (as″tẹ-rọ̄-lep′i-dē), *n. pl.* [NL., ‹ *Asterolepis* + *-idæ*.] A family of extinct and very curious fishes from the Devonian formations of Great Britain, Germany, and Canada, of which *Pterichthys*, *Asterolepis*, and *Bothriolepis* are the best-known genera. In *Pterichthys* the head and trunk are heavily plated, the former being articulated to the latter and having a movable plate between the orbits; the tail is scaly and bears a single dorsal fin and a heterocercal caudal fin; and a pair of lateral plated appendages is jointed to the anterior part of the trunk. These were articulated near the middle and were probably used in crawling over muddy bottoms.

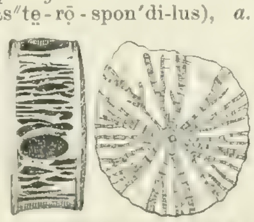
asterolithology (as″tẹ-rọ̄-li-thol′ọ̄-ji), *n.* Same as *astrolithology*.

Asteroma (as-tẹ-rō′mạ̈), *n.* [NL. (De Candolle, 1815), ‹ Gr. ἀστήρ, star, + *-oma*.] A genus of sphæropsidaceous fungi having the small pycnidia seated on star-like, dark mycelial patches. The pycnospores are minute, simple, and hyaline. The species are numerous and widely distributed, occurring mostly as parasites on leaves.

Asterophora (as-tẹ-rof′ọ̄-rạ̈), *n. pl.* [NL., ‹ Gr. ἀστήρ, star, + -φορος, ‹ φέρειν, bear.] Same as ⋆*Astrophora*.

Asterospondyli (as″tẹ-rō-spon′di-lī), *n. pl.* [NL., ‹ Gr. ἀστήρ, star, + σπόνδυλος, a vertebra.] A suborder or division of sharks containing those species in which the vertebral ossifications radiate from the centers of the vertebræ, which are largely cartilaginous: correlated with ⋆*Cyclospondyli*.

asterospondylous (as″tẹ-rọ̄-spon′di-lus), *a.* Having vertebræ which are partly cartilaginous and partly ossified by the deposit of bone radiating from the center: this, when seen in cross-section, has a starlike pattern.



Asterospondylous vertebra of a [illegible] shark, *Carcharias*, seen in profile and in section, showing the starlike rays of bone.

Asterozoa (as″tẹ-rō-zō′ạ̈), *n. pl.* [NL., ‹ Gr. ἀστήρ, star, + ζῷον, animal.] One of the groups (the others being *Pelmatozoa* and *Echinozoa*) into which Haeckel divided the *Echinodermata*. It includes the *Ophiuroidea* and the *Asteroidea*.

asterozoan (as″tẹ-rō-zō′an), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the *Asterozoa*.

II. *n.* A member of the branch or order *Asterozoa*.

asthenic. **I.** *a.*—**Asthenic emotions.** See ⋆*emotion*.

II. *n.* One who is asthenic or physically undeveloped or run down.

asthenical (as-then′i-kạl), *a.* Relating to asthenics or asthenic conditions or persons; asthenic.

Asthenodonta (as″the-nọ̄-don′tạ̈), *n. pl.* [NL., ‹ Gr. ἀσθενής, feeble, + ὀδούς (-οντος), a tooth.] A group of pelecypod mollusks of subordinal value in which the hinge-teeth have become obsolete from disuse. It comprises boring and burrowing species. In some of the genera, as *Pholas*, a conspicuous myophore is developed. The group also includes the myas, corbulas, saxicavas, and teredos.

asthenoid (as-then′oid), *a.* Weak; prone to decay or die out; lacking in persistency.

The dwindling or *asthenoid* species, by failing with different successive periods of time have a value of another kind in associating rocks together in groups. *Etheridge*, Man. of Geol., I. 437.

asthenope (as′the-nōp), *n.* [Back-formation from *asthenopia*.] One who suffers from asthenopia or weak vision. *Buck*, Med. Handbook, I. 581.

Asthma crystals. See *Charcot-Leyden crystals*, under *crystal*. **Bronchial asthma,** true asthma, due to spasm of the smaller bronchial tubes and not dependent upon any evident organic lesion.—**Essential asthma.** Same as *bronchial* ⋆*asthma* or *asthma* (without qualifying word).—**Furriers' asthma,** chronic bronchitis, due to the inhalation of hair-dust and particles of dyes, to which workers in fur are exposed.—**Heberden's asthma,** angina pectoris.—**Humid asthma,** asthma accompanied by profuse expectoration, edema of the lungs.—**Kopp's asthma,** laryngismus stridulus.—**Miners' asthma,** anthracosis.—**Potters' asthma,** pneumonoconiosis.

asthma-herb (ast′mạ̈-ėrb), *n.* A spurgewort, *Euphorbia hirta*, found in the tropics of the whole world, and of repute in Australia as a remedy for asthma.

asthma-paper (ast′mạ-pā″pėr), *n.* Bibulous paper moistened with a definite-strength solution of potassium nitrate and dried. The fumes from the ignited paper are inhaled by asthmatics.

asthmatic, *n.* **2.** Any agent or medicine capable of preventing or relieving asthmatic attacks, as stramonium, chloroform, etc.

Astian (as′ti-an), *a.* and *n.* [It. *Asti*, a town in Piedmont.] In *geol.*, noting the middle stage in the Pliocene series of the Mediterranean region, consisting of fluviatile and fluviolacustrine sands interbedded with marine deposits. These beds abound in fossils, among them being remains of rhinoceroses, mastodons, the Asiatic apes, and the African antelopes.

astigmatic, *a.* **2.** In *bot.*, without a stigma: applied to the flowers of gymnosperms from an ecological point of view. See ⋆*Stigmaticæ*. *F. E. Clements*.—**Astigmatic difference,** in the theory of lenses, the distance between the two focal lines in the image of a luminous point, formed by the passage of any elementary ray through an astigmatic system.

astigmatically (as-tig-mat′i-kạl-i), *adv.* In an astigmatic manner, as when, in the formation of images, the beam of light is oblique to the axis of a lens system or mirror, or when the reflecting or refracting surface has two different curvatures.

Astigmatism against the rule, a condition of astigmatism in which the curvature of the refracting surface is greater in the horizontal meridians.—**Astigmatism with the rule,** the usual form of astigmatism, in which the curvature of the refracting surface is greater in the vertical meridians.—**Compound astigmatism,** astigmatism combined with myopia or hypermetropia.—**Corneal astigmatism,** astigmatism due to irregular refraction in the cornea.—**Hypermetropic astigmatism,** astigmatism in which hypermetropia coexists in one meridian (*simple*) or in both meridians (*compound*).—**Irregular astigmatism,** astigmatism the degree of which varies in different portions of the same meridian.—**Lenticular astigmatism,** astigmatism due to irregular refraction in the crystalline lens.—**Mixed astigmatism,** astigmatism in which hypermetropia coexists in one meridian and myopia in the other.—**Myopia astigmatism,** astigmatism in which myopia coexists in one meridian (*simple*) or in both meridians (*compound*). **Regular astigmatism,** astigmatism in which the meridians of greatest refraction are at right angles to each other.

astigmia (as-tig′mi-ạ̈), *n.* [NL.] Same as *astigmatism*.

astigmoscope (as-tig′mọ̄-skōp), *n.* [*astigm* (*atism*) + Gr. σκοπεῖν, view.] Same as *astigmometer*.

Astilbe (as-til′bẹ̄), *n.* [NL.] A genus of perennial plants, belonging to the family *Saxifragaceæ*. There are some 7 or 8 species in Asia and North America. *A. Japonica*, with large, conical or pyramidal, terminal clusters of many small, white flowers, is much used for forcing, particularly for early spring bloom. These plants may also be grown in the open. This genus is often confounded with the rosaceous genus *Aruncus*. The genera *Aruncus* and *Spiræa* are characterized by having many stamens and usually several or many pistils; *Astilbe* has 8 or 10 stamens and a single 2-3-lobed pistil. *Astilbe Lemoinei* is said to be a hybrid between *Astilbe Japonica* and *Aruncus astilboides*.

astipulate (as-tip′ụ̄-lāt), *a.* [*a*-[18] + *stipulate*, *a.*] Same as *exstipulate*.

astite (as′tīt), *n.* [From Cima d'*Asta*.] In *petrog.*, the name proposed by Salomon, in 1898, for hornfels consisting of mica and andalusite.

astogenetic (as-tọ̄-jẹ̄-net′ik), *a.* [Gr. ἄστυ, city, + γένεσις, birth: see *genetic*.] In *zoöl.*, a term applied to the growth-stages of a compound individual or colony: as, *astogenetic* series, in distinction from *ontogenetic* series, or the growth-stages of the simple individual organism.

astomatal (as-tō′mạ-tạl), *n.* Same as *astomatous*.

Astomea (as-tō′mẹ̄-ạ̈), *n. pl.* [NL., ‹ Gr. ἀ- priv. + στόμα, mouth.] A group of *Protozoa*, of the class *Mastigophora* and the order *Polymastigida*, having many flagella and no mouth-opening. It includes the genera *Multicilia* and *Grassia*.

astomia (as-tō′mi-ạ̈), *n.* [NL., ‹ Gr. ἀστόμιος, ἄστομος, without a mouth, ‹ ἀ- priv. + στόμα, mouth.] Congenital absence of the mouth.

astonishedness (ạ-ston′ishd-nes), *n.* The state of being astonished; astonishment. *Palsgrave*. [Rare.] *N. E. D.*

Astoria shales. See ⋆*shale*².

astræiform, *a.* **2.** In the study of the madreporarian corals, noting colonies of calycles, all of which reach the same height and seem to exhibit no tendency to grow or bud independently: from the coral genus *Astræa*.

The true *astræiform* colony is therefore that built up by a calicle which is by habit low and whose buds spread laterally over the substratum all round the parent. *Annals and Mag. Nat. Hist.*, Jan., 1904, p. 27.

astragal, *n.* **5.** The game of knuckle-bones; knuckle-downs. *Amer. Anthropologist*, Jan.–March, 1902, p. 154.

astragalectomy (as-trag-ạ-lek′tọ̄-mi), *n.* [Gr. ἀστράγαλος, astragalus, + ἐκτομή, excision.] In *surg.*, excision of the astragalus.

astragalizont (as′trạ-gal-i-zont), *n.* [Gr. ἀστραγαλίζων (-οντ) ppr. of ἀστραγαλίζειν, play with astragali, ‹ ἀστράγαλος, astragalus.] In *Gr. antiq.*, an astragalus or hucklebone player. This was a favorite subject with Greek artists, and several statues representing it are to be found in European museums. There was a famous statue of an astragalizont by Polycletus.

astragalocalcanean (as-trag″ạ-lọ̄-kal-kā′nẹ̄-an), *a.* In *anat.*, relating to both the astragalus and the calcaneum. *Buck*, Med. Handbook, IV. 192.

astragalocrural (as-trag″ạ-lọ̄-krū′rạl), *a.* In *anat.*, relating to the astragalus and to the leg; specifically, noting the ankle-joint. *Buck*, Med. Handbook, IV. 194.

astragalus, *n.* **3.** *pl.* The small carpal and tarsal bones of animals, used by the ancients in games of chance. Different sides had different numbers and different names. There were many artificial astragali, some of which were decorated.

astral, *a.* **3.** In *cytol.*, of or pertaining to an aster: as, the *astral* rays in the karyokinetic or mitotic division-figure of the cell.—**4.** In some geologic classifications, noting the primitive period or era in the earth's history characterized as "that of the fluid globe, having a heavy vaporous envelop containing the future water of the globe or its dissociated elements and other heavy vapors or gases." *Dana*, Manual of Geology, p. 440.—**Astral light,** in *theosophy*, the light supposed to be derived from the stars.—**Astral world,** in *theosophy*, the world of stars and stellar spaces with the spirits supposed to inhabit them.

astralin (as′trạ-lin), *n.* [*astral* + *-in*².] One of the grades of illuminating oil from Russian petroleum.

astrally (as′trạl-i), *adv.* **1.** By means of or according to the stars.—**2.** In *theos.*, with reference to or by means of astral bodies, the astral fluid, etc.

astrapophobia (as″trạ-pọ̄-fō′bi-ạ̈), *n.* [NL., ‹ Gr. ἀστραπή, lightning, + -φοβία, ‹ φοβεῖν, fear.] A morbid fear of lightning.

Astrapotheria (as-trạ-pọ̄-thē′ri-ạ̈), *n. pl.* [NL., pl. of *Astrapotherium*, the type genus, ‹ Gr. ἀστραπή, lightning, + θηρίον, beast.] The *Astrapotheriidæ* considered as a suborder.

Astrapotheriidæ (as-trạ-pọ̄-thē-rī′i-dē), *n. pl.* [NL. *Astrapotherium*, the type genus, + *-idæ*.] A family of extinct ungulate mammals of large size, with molars much like those of a rhinoceros, a pair of tusk-like upper incisors, and tusk-like lower canines. Their bones are found in the Miocene of Patagonia. *Ameghino*, 1887.

astrochemistry (as-trọ̄-kem′is-tri), *n.* [Gr. ἄστρον, star, + E. *chemistry*.] That part of astronomy which treats of what is known of the chemistry of the celestial bodies.

astrocœle (as′trọ̄-sēl), *n.* [Gr. ἄστρον, star, + κοῖλος, hollow.] In *cytol.*, the space in which the centrosome lies at the center of the astrosphere at either pole of the karyokinetic spindle.

Astrocrinidæ (as-trọ̄-krin′i-dē), *n. pl.* [NL., ‹ *Astrocrinus* (‹ Gr. ἄστρον, star, + κρίνον, a lily)

+ *-idæ.*] The only family of the irregular blastoid echinoderms of the order *Irregulares.* They are unpedunculated forms in which one ambulacrum differs in form and size from the rest. They occur in the Carboniferous limestone.

astrocyte (as'trō-sīt), *n.* [Gr. *ἄστρον*, star, + *κύτος*, a hollow (a cell).] In *histol.*, a bone-cell or bone-corpuscle: so called on account of its starlike form.

astrographic (as-trō-graf'ik), *a.* Dealing with or pertaining to astrography, or the charting of the stars. At present this charting is done mainly by means of photography. *Nature*, June 4, 1903, p. 111.—**Astrographic chart.** See ★*chart.*

astroidin (as-trō'i-din), *n.* A yellow pigment found in certain lower invertebrates.

astrolarva (as-trō-lär'vä), *n.*; pl. *astrolarvæ* (-vē). The swimming bilateral larval stage of an echinoderm.

The little *astrolarva* has no muscles, and no water-vessels nor blood-vessels.
Haeckel (trans.), Wonders of Life, p. 279.

astrolater (as-trol'a-tẽr), *n.* A worshiper of the stars and other heavenly bodies.

astrologous (as-trol'ō-gus), *a.* Astrological. *Byron.* [Rare.]

astrology, *n.*—**Judicial astrology,** the art of foretelling future events by the positions and motions of the stars, as contradistinguished from *natural astrology,* which treats of the supposed influence of the stars upon mankind, but does not attempt prediction.

Astrolytes (as-trol'i-tēz), *n.* [NL., ⟨ Gr. *ἄστρον*, star, + (?) *-λυτης*, ⟨ *λύειν*, loose.] A genus of sculpins found on the coast of California.

astromancer (as'trō-man-sẽr), *n.* An astrologer.

astrometeoroscope (as″trō-mē'tē-o-rō-skōp), *n.* An instrument used to project, by means of the optical lantern, geometrical designs which constantly change their form.

astrometrical (as-trō-met'ri-kal), *a.* Pertaining to astrometry or designed to furnish, in astronomical work, quantitative measures of magnitude, position, distance, and motion.

Radial-velocity determinations, for example, are based largely upon astrophysical methods, but the direct results are mostly *astrometrical.*
Astrophysical Jour., Sept., 1903, p. 156.

Astronomical geography. See ★*geography.*—**Astronomical meridian,** a great circle passing through the zenith and the celestial poles.—**Astronomical ★revolver, ★telescope, ★unit, ★zenith.** See the nouns.

astronomy, *n.* Several other branches of the science are recognized: *gravitational astronomy* or *astronomical mechanics,* replacing the term *physical astronomy,* which is now generally discarded because of the danger of confusion with *astronomical physics* or *astrophysics; nautical astronomy,* astronomy applied to navigation; *sidereal astronomy,* the branch of the science which deals with the stars; *spheric astronomy,* which treats of the apparent position and motions of bodies on the celestial sphere; *theoretical astronomy,* which deals with the calculation of orbits and perturbations. These various branches interlace in all directions.—**Astronomy of the invisible,** that branch of the science which deals with heavenly bodies which cannot be seen, and deduces inferences concerning them from their effects on those that are visible. Thus Bessel ascertained the existence of the companions of Sirius and Procyon long before any telescope was made which would show them. *Knowledge and Scientific News*, Mar., 1904, p. 31.

astrophobia (as-trō-fō'bi-ä), *n.* [NL., ⟨ Gr. *ἄστρον*, star, + *-φοβία*, ⟨ *φοβεῖν*, fear.] Morbid dread of starlight, or of going out of doors on a cloudless night.

Astrophora (as-trof'ō-rä), *n. pl.* [NL., ⟨ Gr. *ἄστρον*, star, + *-φορος*, ⟨ *φέρειν*, bear.] A group of choristidan, tetractinellid sponges one or more of whose microscleres are asters.

astrophotographic (as-trō-fō-tō-graf'ik), *a.* [*astrophotograph(y)* + *-ic.*] Of or pertaining to astrophotography or astrographic work carried on by means of photography: also sometimes applied to any astronomical work into which photography enters: as, the general investigation of the "Conditions of Maximum Efficiency in *Astrophotographic* Work," *Astrophysical Jour.*, XVI. 672.—**Astrophotographic campaign,** the combined operations of various observatories for forming a complete photographic chart of the heavens: begun in 1888.

astrophotometry (as-trō-fō-tom'e-tri), *n.* [Gr. *ἄστρον*, star, + *photometry.*] The science and art of measuring the brightness of stars or other heavenly bodies; astronomical photometry.

astrophysicist (as-trō-fiz'i-sist), *n.* An astronomer who occupies himself with astrophysics. *Sci. Amer. Sup.*, Nov. 22, 1903, p. 22487.

astrophysicize (as-trō-fiz'i-sīz), *v. i.* To turn (astronomy) into astrophysics; study (astronomy) chiefly as astrophysics. *G. S. Hall*, Adolescence, II. 548.

astrophysics (as'trō-fiz″iks), *n.* Astronomical physics.

Astrophytonidæ (as″trō-fi-ton'i-dē), *n. pl.* [NL., ⟨ *Astrophyton* + *-idæ.* The correct formation is **Astrophytidæ.*] A family of ophiurans having the arms much branched, as the basket-fish.

astropyle (as'trō-pīl), *n.* [NL., ⟨ Gr. *ἄστρον*, star, + *πύλη*, a gate.] In *zoöl.*, one of the funnel-like projections of the membrane around the pores in *Cannopylea.*

astrorhiza, *n.* **2.** [*l. c.*; pl. *astrorhizæ.*] In the fossil hydrocorallines named *Stromatoporoidea*, one of the shallow stellate furrows on the surfaces of successive laminæ which radiate outward from numerous centers.

Astrorhizidea (as″trō-ri-zid'ē-ä), *n. pl.* [NL., ⟨ *Astrorhiza* + *-idea.*] An order of *Foraminifera* containing the families *Astrorhizidæ, Pilulinidæ, Saccamminidæ*, and *Rhabdamminidæ.*

astrorhizidean (as″trō-ri-zid'ē-an), *a.* and *n.* **I.** *a.* Pertaining to or resembling the *Astrorhizidea.*

II. *n.* One of the *Astrorhizidea.*

Astroscopus (as-tros'kō-pus), *n.* [NL., ⟨ Gr. *ἄστρον*, star, + *σκοπός*, watcher.] A genus of fishes belonging to the family *Uranoscopidæ* (star-gazers), found along the Atlantic coast of the United States.

astrospectroscopic (as-trō-spek-trō-skop'ik), *a.* Pertaining to the observation of the spectra of heavenly bodies. *Nature*, July 14, 1904, p. 252.

astrosphere (as'trō-sfēr), *n.* [Gr. *ἄστρον*, star, + *σφαῖρα*, ball, sphere.] In *cytol.*: (*a*) In the karyokinetic figure, the central portion of the aster, inclusive of the region in which the centrosome lies, but exclusive of the astral rays; the attraction-sphere of Van Beneden. *Fol*, 1891; *Strasburger*, 1892. See cut at ★*aster*[1], 7. (*b*) The whole aster, exclusive of the centrosome; the astral sphere of Mark. *Boveri*, 1895.

astrozoön (as-trō-zō'on), *n.*; pl. *astrozoa* (-ä). An echinoderm.

By a very curious modification the small bilateral astrolarva is transformed into the totally different pentaradiad *astrozoon*, the large sexually mature echinoderm with a pronounced five-rayed structure.
Haeckel (trans.), Wonders of Life, p. 279.

astylic (a-stī'lik), *a.* Same as *astylar.*

Astylospongia (as″ti-lō-spon'ji-ä), *n.* [NL., ⟨ Gr. *ἄστυλος*, without a pillar, + *σπόγγος*, a sponge.] A genus of silicious lithistid sponges, spherical in form, depressed at the summit, with large exhalant orifice, numerous radial canals, and larger circular canals. The skeleton consists of 4-rayed spicules with their arms fused to those adjoining, forming a continuous network. The species are highly characteristic of the Silurian formations.

asudden (a-sud'n), *adv.* [*a*[3] + *sudden.*] Of a sudden; suddenly; at once.

A-sudden stood I in a glowing sphere.
B. Taylor, tr. of Goethe's Faust, I. iv.

asulcar (a-sul'kär), *a.* [*a-*[18] priv. + *sulcus* + *-ar.* The preferable form would be *antisulcar.*] In *Anthozoa*, pertaining to that aspect of the body which is opposite to the sulcus; dorsal.

The zooids so oriented that their sulcar (ventral) aspects are abaxial, their *asulcar* (dorsal) aspects axial.
Trans. Linnean Soc. London, Zool., March, 1900, p. 527.

asweat (a-swet'), *a.* [*a*[3] + *sweat.*] In a sweating state; sweaty; sweating; moist.

The Dardan shore
So oft *asweat* with blood.
J. Long, tr. of Æneid, ii. 739.

asyllabia (a-si-lā'bi-ä), *n.* A form of word-blindness or visual aphasia in which the patient recognizes the letters but is unable to form them into syllables.

asylum, *n.*—**Asylum of ignorance** [L. *asylum ignorantiæ*], a phrase used by Spinoza to denote the pronouncing of any matter to be a mystery in order to evade arguments against its reality.

asymmetric, *a.*—**Asymmetric carbon atom,** a carbon atom combined directly with four different atoms or groups. All optically active carbon compounds have been found to contain such an atom.—**Asymmetric compound,** a compound in which the atoms are not symmetrically arranged; especially, a derivative of benzene having atoms or groups in the position 1, 2, 4.—**Asymmetric group,** in *crystal.* See ★*symmetry.*—**Asymmetric reflection,** reflection from a grooved surface or from a fabric, such as cloth, which is made up of numerous parallel strands.—**Asymmetric synthesis.** See ★*synthesis.*

asymmetrical, *a.* **4.** In the terminology of Herbert Spencer, entirely destitute of approximation toward symmetry, and thus distinguished from *unsymmetrical.*—**Asymmetrical fertilization.** See ★*fertilization.*

Asymmetron (a-sim'e-tron), *n.* [NL., ⟨ Gr. *ἀσύμμετρος*: see *asymmetric.*] A genus of lancelets constituting the family *Branchiostomatidæ.* It is distinguished by having the reproductive structures developed on one side only. Substantially equivalent to *Epigonichthys*, an earlier name.

asymmetry, *n.* **3.** In *chem.*, absence of symmetry in the positions particular atoms are believed to occupy in the molecule of a compound substance. See ★*asymmetric.*

asymptote, *n.* **2.** In *zoöl.*, either of two straight lines drawn from the apex to the aperture of the conical part of the phragmocone in the belemnites or fossil dibranchiate cephalopods. The smaller of the surfaces bounded by these lines occupies about one fourth of the circumference of the aperture and is marked with loop-lines of growth curving forward.—**Asymptote cone,** in *geom.*, the cone generated by the asymptotes of the generating hyperbola of a hyperboloid of revolution.—**Parabolic asymptote,** a parabola having 5-pointic contact with the cubic at infinity.

asynartetic (a-sin-är-tet'ik), *a.* Same as *asynartete.*

Asynchronous generator. See ★*generator.*

asyndetically (as-in-det'i-kal-i), *adv.* According to, or in accordance with, the rhetorical figure known as *asyndeton;* by omission of connectives.

asynergia (as-i-nẽr'ji-ä), *n.* Same as ★*asynergy.*

asynergy (a-sin'ẽr-ji), *n.* [NL., ⟨ Gr. *ἀ-* priv. + *συνεργία*, coöperation: see *synergy.*] In *pathol.*, lack of harmony between parts, organs, or muscles whose actions are normally coördinated.

asyngamy (a-sin'ga-mi), *n.* [Gr. *ἀ-* priv. + *συγγαμία*, marriage, ⟨ *σύγγαμος*, married, ⟨ *σύν*, together, + *γάμος*, marriage.] Absence of syngenesis or sexual reproduction; the relation of two types in which fertile interbreeding is impossible. See *syngenesis.*

a. t. In *elect.*, an abbreviation of *ampere-turn.*

ata (ä'tä), *n.* [Hind. Hindi Pers. Bengali *ātā*, also *atā;* said to be of Brazilian origin.] The name in Bengal, Assam, and other parts of India of the sweet-sop, *Anona squamosa.* See ★*atis* (with cut), ★*atta*[2], 2, *Anona*, and *sweet-sop.*

atactic, *a.* **2.** Same as *ataxic.*

atactiform (a-tak'ti-fôrm), *a.* [*ataxia* (*atact-*) + L. *forma.*] Resembling ataxia; slightly ataxic. *Buck*, Med. Handbook, II. 240.

atajo (ä-tä'hō), *n.* [Sp., a separation, a separate part, etc., ⟨ *atajar*, cut off, separate, ⟨ *a-* + *tajar*, cut off: see *tail*[2].] **1.** A fence, or an inclosed place for corralling cattle.—**2.** A drove of mules or horses. [Spanish America.]

Atamosco (at-a-mos'kō), *n.* [NL. (Adanson, 1763), after an American Indian name. See *atamasco.*] A genus of monocotyledonous plants of the family *Amaryllidaceæ.* See *Zephyranthes.*

Atana series. See ★*series.*

atatchite (a-tach'īt), *n.* [Mount *Atatch*, a peak of the Ural Mountains, Russia, + *-ite*[2].] In *petrog.*, an igneous rock, a vitro-orthophyre, consisting of orthoclase, augite, biotite, magnetite, sillimanite, and cordierite, in a glassy base. The rock is dark and compact, with hyalopilitic texture. *Morozevicz*, 1901.

atavist (at'a-vist), *n.* [*atav(ism)* + *-ist.*] In *biol.*, an organic being which exhibits atavism.

ataxia, *n.*—**Cerebellar ataxia,** muscular incoordination dependent upon disease of the cerebellum.

ataxiagraph (a-tak'si-ä-graf), *n.* [Irreg. ⟨ Gr. *ἀταξία*, disorder (see *ataxy*), + *γράφειν*, write.] In *psychophys.*, an instrument for recording the involuntary movements of the body, the subject standing upright and endeavoring to maintain a constant attitude. *J. A. Hancock*, Ped. Sem., III. 13.

Ataxic agraphia, amimia. See ★*agraphia*, ★*amimia.*—**Ataxic galt,** an irregular, jerky walk characteristic of locomotor ataxia and of other disorders of coordination.

ataxiform (a-tak'si-fôrm), *a.* Same as ★*atactiform.*

ataxite (a-tak'sīt), *n.* [Gr. *ἀταξία*, disorder, (see *ataxia*), + *-ite*[2].] **1.** A meteoric iron, or siderite, which is destitute of distinct and regular crystalline structure.—**2.** In *petrog.*, a name proposed by Loewinson-Lessing, in 1888, for lavas characterized by the presence of many angular fragments, of irregular arrangement, the fragments being regarded as the result of

the differentiation of the magma containing them and not as derived from any foreign source. See ★*taxite*.

ataxonomic (a-tak-sō-nom'ik), *a.* [*a*-18 + *taxonomic*.] In *bot.*, incapable of classification; abnormal; teratological: said of some structures.

-ate[1] (*b*). In *chem.*, serious mistakes may arise in regard to the meaning of this and analogous suffixes by failure to observe the proper use and translation of New Latin forms. New Latin forms as used by Germans are often erroneously translated or transferred into English in druggists' circulars and elsewhere. Thus New Latin *calcium sulfuratum*, *sulfuricum*, and *sulfurosum* as used by Germans answer to what are called in the prevalent abbreviated English phrasing *calcium sulphid* or *sulphide*, *sulphate*, and *sulphite* respectively. (*c*) In *petrog.*, a suffix added to the names of grads in the quantitative classification of igneous rocks. See ★*rock*[1].

ateknia (a-tek'ni-ä), *n.* [Gr. ἀτεκνία, ⟨ ἄτεκνος, childless, ⟨ *a*- priv. + τέκνον, child.] Childlessness.

ateleiosis, ateliosis (at-e-lī-ō'sis), *n.* [NL., ⟨ Gr. *ἀτελειωσις, ⟨ ἀτελείωτος, uncompleted, ⟨ *a*- priv. + *τελειωτός, completed, ⟨ τελειόειν, make complete or perfect, ⟨ τέλειος, complete, perfect, ⟨ τέλος, end, completion.] A form of dwarfism due to imperfect or arrested development. *Med. Record*, July 18, 1903, p. 96.

atelestite (at-e-les'tīt), *n.* [So called because the composition was unknown when the mineral was first described: Gr. ἀτέλεστος, uncompleted, ⟨ *a*- priv. + *τέλεστος, ⟨ τελεῖν, complete, fulfil.] A bismuth arseniate which occurs in minute yellow monoclinic crystals.

Atelostomata (at″e-lō-stō'ma-tä), *n. pl.* [NL., ⟨ Gr. ἀτελής, imperfect, + στόμα, mouth.] An order of irregular *Echinoidea* in which there are no jaws, teeth, perignathic girdle, or external branchiæ. It includes the families *Cassidulidæ*, *Spatangidæ*, *Pourtalesidæ*, and others.

a tempo. Various qualifying terms are often added: as, *a tempo commodo* or *ordinario*, at any convenient or ordinary pace; *a tempo rubato* (see *rubato*).

atemporal (a-tem'pō-ral), *a.* [*a*-18 + *temporal*.] Free from time relations or limitations; timeless. *D. Simon*, Dorner's Person of Christ, II. 273. [Rare.] *N. E. D.*

athanatism (a-than'a-tizm), *n.* [Gr. ἀθάνατος, deathless, + *-ism*.] The doctrine of immortality.

athaumasia (ath-â-mā'si-ä), *n.* [NL., ⟨ Gr. ἀθαυμασία, erroneous form of ἀθαυμαστία, ⟨ ἀθαύμαστος, not wondering, ⟨ ἀ- priv. + θαυμαστός, ⟨ θαυμάζειν, wonder.] The state of being surprised at nothing (*nil admirari*), which, according to the Stoics, is characteristic of the wise man.

atheciferous (a-thē-sif'e-rus), *a.* [Gr. ἀ- priv. + θήκη, box, L. *-fer*, ⟨ *ferre*, bear.] Bearing no thecæ, as certain graptolites.

athelia (a-thē'li-ä), *n.* [NL., ⟨ Gr. ἀθηλος, not having nipples (found in the sense 'unsuckled'), ⟨ ἀ- priv. + θηλή, nipple.] Congenital absence of the nipples.

atheologically (a″thē-ō-loj'i-kal-i), *adv.* [*a*-18 + *theologically*.] As one who is opposed to theology or who is no theologian; in opposition to theology.

Atheresthes (ath-e-res'thēz), *n.* [NL., etym. dubious.] A genus of flounders of the North Pacific; the arrow-toothed halibut: distinguished by the slender body and arrow-shaped teeth.

Atherfield clay. See ★*clay*.

Atherinella (ath″e-ri-nel'ä), *n.* [NL., ⟨ *Atherina* + *-ella*.] A genus of silversides of the family *Atherinidæ*, found in the region about Panama.

Atherinops (ath-e-rī'nops), *n.* [NL., ⟨ *Atherina* (?) + ὤψ (ὠπ-), eye, face.] A genus of silversides of the family *Atherinidæ*, found on the coast of California. *A. affinis* is a common food-fish sold as "small smelt."

Atherinopsis (a-the-ri-nop'sis), *n.* [NL., ⟨ *Atherina* (?) + Gr. ὄψις, look, aspect.] A genus of silversides of the family *Atherinidæ*, found on the coast of California. *A. californiensis* reaches a length of 18 inches and is highly valued as a food-fish. It is known in the markets as *blue smelt*, although it has little in common with the true smelt.

atheroid (ath'e-roid), *a.* [Gr. ἀθήρ, an ear of grain, + εἶδος, form.] Having the form of or resembling an ear of grain.

atheromasia (ath″e-rō-mā'si-ä), *n.* [NL., ⟨ *atheroma* + *-ia*.] In *pathol.*, the occurrence of atheroma; atheromatous condition.

atheromatosis (ath″e-rō-ma-tō'sis), *n.* [NL., ⟨ *atheroma*(*t*-) + *-osis*.] A morbid condition marked by the presence of atheroma.

atherospermine (ath″e-rō-spēr'min), *n.* [*Atherosperma* + *-ine*[2].] An amorphous bitter alkaloid, $C_{30}H_{40}N_2O_5$ (?), found in the bark of *Atherosperma moschatum*. See *Australian sassafras*(*a*) under *sassafras*.

athetesis (a-thet'ē-sis), *n.* [Gr. ἀθέτησις, ⟨ ἀθετεῖν, set aside, ⟨ ἄθετος, set aside, put aside: see *athetize*.] The act or fact of setting aside as spurious; rejection as spurious; invalidation.

No serious objection, apart from *athetesis* of a few single lines [of the Iliad] has been raised to any passage, except, etc. *Leaf*, The Iliad, II. 435.

athetosic (ath-e-tō'sik), *a.* [*athetosis* + *-ic*.] Relating to athetosis. *Buck*, Med. Handbook, II. 448.

Athlennes (ath-len'ēz), *n.* [NL., a blunder for *Ablennes*, ⟨ Gr. ἀ- privative, without mucus, ⟨ ἀ- priv. + βλέννα, βλέννος, mucus, slime: see *blenny*.] A genus of needle-fishes of the family *Belonidæ*, characterized by the ribbon-shaped body. The single species *A. hians* reaches a length of 4 feet and more, and is found throughout the West Indies and in Hawaii.

Athletic heart, simple hypertrophy of the heart without valvular disease, occurring in athletes.

athlothete (ath'lō-thēt), *n.* [Gr. ἀθλοθέτης, ⟨ ἆθλον, prize, + -θέτης, ⟨ τιθέναι, place.] Same as *agonothete*.

at-home (at-hōm'), *n.* A reception announced by a card stating that on a specified day a host or hostess will be "at home" during certain hours to receive and entertain visitors.

athrogenic (ath-rō-jen'ik), *a.* [Appar. irreg. ⟨ Gr. ἀθροος, in crowds, heaps, or masses, + -γενής, -produced.] In *petrol.*, a term applied by Renevier to clastic rocks the materials of which are of volcanic origin, such as tuff, lapilli, etc.

athumia (a-thū'mi-ä), *n.* Same as *athymia*.

The Danes slily remark that a good appointment and the easy temptation of rixdollars would greatly modify all this *athumia* and nostalgia.
R. F. Burton, Ultima Thule, I. 366.

athwartwise (a-thwârt'wīz), *adv.* Crosswise. *Hawthorne*, Amer. Note-book, II. 223.

athyreosis (a-thir-ē-ō'sis), *n.* [NL., ⟨ Gr. ἀ- priv. + θύρα, door (see *thyroid*), + *-osis*.] A morbid condition due to loss or impairment of function of the thyroid gland.

athyria (a-thir'i-ä), *n.* [NL., ⟨ Gr. ἀ- priv. + θύρα, door: see *thyroid*.] In *pathol.*, a constitutional state induced by functional defect or absence of the thyroid gland.

Athyridæ (a-thir'i-dē), *n. pl.* [NL., ⟨ *Athyris* + *-idæ*.] A family of brachiopods wide-spread through the early rocks and having great vertical range. It is characterized by its laterally directed brachial cones, or spiralia, and its frequently highly complicated scissors-shaped jugum. It is very abundant in the Paleozoic rocks everywhere and is continued upward into the Mesozoic.

Athyris (ath'i-ris), *n.* [NL., ⟨ Gr. ἀ- priv. + θύρα, door. It was thus named on the supposition that it has no perforation for the pedicle.] A genus of Paleozoic brachiopods with elaborate brachidium usually consisting of a single pair of spirals placed base to base and connected by a saddle-shaped loop. Processes from this loop extend backward, and may be produced between the primary lamellæ of the spirals.

athyroid (ath'i-roid), *a.* Similar or pertaining to *Athyris*.

athyroidea (a-thi-roi'dē-ä), *n.* Same as ★*athyria*. *Lancet*, April 4, 1903, p. 939.

athyroidism (a-thi-roi'dizm), *n.* Same as ★*athyria*.

atinga (a-tēng'gä), *n.* [Pg.] The Portuguese name of the porcupine-fish, *Diodon diodon*, and related species.

atingle (a-ting'gl), *adv.* [*a*[3] + *tingle*.] Tingling.

Some think fireflies pretty, when they mix in the corn and mingle,
Or thrid the stinking hemp till the stalks of it seem *a-tingle*.
Browning, Up at a Villa, viii.

a tirata (ä tē-rä'tä). [It.] With a stripe or strap: said of interlaced strap-work and foliated scrolls on a light ground, peculiar to certain majolica wares.

atis (ä'tis), *n.* [Hind. Hindi Pers. *ātā*, the same plant.] A name in Guam and the Philippines of the sweet-sop and ★*atta*[2] (which see).

atisine (at'i-sin), *n.* An amorphous alkaloid, $C_{23}H_{31}NO_2$, found in the root of *Aconitum heterophyllum*.

Atka fish, mackerel. See ★*fish*.

Atalanta butterfly. See ★*butterfly*.

Atlantic, *a.* 3. [*l. c.*] Relating to the atlas or first vertebra of the neck.

atlanto-axial (at-lan-tō-ak'si-al), *a.* Same as *atlo-axoid*. *Buck*, Med. Handbook, I. 553.

Atlanto-Mediterranean (at-lan'tō-med-i-te-rā'nē-an), *a.* Of or pertaining to both the Atlantic and the Mediterranean; specifically, in *anthrop.*, of or pertaining to the dark, dolichocephalic, tall European type inhabiting the shores of the Mediterranean from Gibraltar to the mouth of the Tiber and several points of the Atlantic coast. Also called *littoral*. *Deniker*, Races of Man, p. 331.

atlantosaur (at-lan'tō-sâr″), *n.* A reptile of the genus *Atlantosaurus*.

Atlantosaurus beds, one of the divisions of the Jurassic formation in Colorado, Wyoming, and Montana. These beds are regarded as of lacustrine origin, and are underlain by similar lacustrine deposits, named the *Baptanodon beds*, which rest on marine strata of Lower Jurassic age. They are from 100 to 300 feet thick and contain abundant remains of reptiles and of marsupial and oviparous mammals.

Atlas orange. Same as *orange II* (which see, under *orange*[1]).—**Atlas powder, red.** See ★*powder*, ★*red*[1].

atlas-weave (at'las-wēv), *n.* Same as *satin-weave*.

atlatl (ät'lätl), *n.* [Mex.] The throwing-stick of the Mexicans, used for propelling spears with great force. See *throwing-stick*.

Among the accessories to the harpoon, the throwing stick or board, called *atlatl* by the Mexicans, must not be omitted. True, the cunning device was used all around the Pacific Ocean and across the Arctic for projecting spears as well as harpoons, and there are other methods of using the harpoon effectively; but the elaboration of the *atlatl* throughout was greatly stimulated by association with the harpoon. *Smithsonian Rep.*, 1900, p. 212.

atman (ät'män), *n.* [Skt. *ātmán*, breath, soul, life, self, universal soul.] The soul as it is conceived by the Brahman philosophers: the existence of it is denied by the Buddhists. The soul of the universe is equally called *atman*.

Kapila's dualism proclaimed that a distinction existed between soul and body, yet Kapila regarded man's sensations and thoughts and desires as material. The soul was to him a transcendent being, which by a kind of sublimated body (similar to the so-called astral body of our modern theosophists, and supposed to reside in the material body) was implicated in the world of matter. This metaphysical soul-being of the Sâmkhya philosophy was supposed to be the apprehending principle in all psychic activities. It was said that the eye does not see, the ear does not hear, and the thoughts do not think, but it is that mysterious something called *âtman*, i.e., self or soul, which is the smeller in the nose, the taster in the tongue, the seer in the eye, the thinker of our thoughts, and the doer of our acts.
P. Carus, Buddhism and its Christian Critics, p. 24.

atmiatry (at-mī'a-tri), *n.* [Gr. ἀτμός, vapor, + ἰατρεία, healing.] The treatment of disease by means of inhalations or fumigation.

atmidalbumose (at-mi-dal'bū-mōs), *n.* [Gr. ἀτμίς, vapor, + *albumose*.] An albumose-like body which is formed from albumins through the action of superheated steam in neutral or alkaline solution. It is essentially an albumose of the anti-group which has lost a certain amount of its nitrogen and sulphur.

atmidometer, *n.* Atmidometers may be classed as: (1) *Micrometric*, such as Lamont's, in which the gradual fall of the surface of the water in a shallow pan is measured by the turning of a micrometer-screw, or is counteracted by the inflow of additional water pushed from a reservoir by means of a micrometer-screw. (2) *Balance atmidometers*, in which the loss of water is shown by loss of weight. (3) The *Piche evaporometer*, in which the evaporating surface is a small disk of porous paper closing the lower end of a vertical tube conveying water. The amount of evaporation is shown by measuring the descent of the feed-water in the tube. See cut on page 88.

(4) The *Stelling evaporometer*, in which the evaporating pan floats on the surface of a river or lake and the loss of water is measured from hour to hour by measuring either weight or volume. (5) The *bysmeter*, in which the evaporation from the surface of growing plants is measured by establishing the plant in a large vessel resting on the pan of a balance.

atmidometric (at″mi-dō-met′-rik), *a.* Of or pertaining to the atmidometer or to atmidometry.

atmidometry (at-mi-dom′e-tri), *n.* [As *atmidometer* + *y*³.] The art of constructing and using atmidometers and of discussing the results given by them; the scientific study and measurement of the evaporation of water under natural conditions in the open air.

atmocausis (at-mō-kâ′sis), *n.* [Gr. ἀτμός, steam, + καῦσις, a burning.] In *surg.*, cauterization by means of steam.

atmocauterization (at-mō-kâ″-tèr-i-za′shon), *n.* [Gr. ἀτμός, steam, vapor + E. *cauterization.*] Cauterization by means of steam.

atmogenic (at-mō-jen′ik), *a.* [Gr. ἀτμός, vapor, steam, + -γενής, -producing, + *-ic.*] In *petrol.*, a term applied to formations due to the metamorphosing action of volcanic vapors or gases upon rocks adjacent to fumarolic vents. It is also used as a synonym of *æolian.*

atmograph (at′mō-gráf), *n.* [Gr. ἀτμός, vapor (breath), + γράφειν, write.] **1.** An instrument for recording mechanically the frequency and extent of the respiratory movements. – **2.** In *photog.*, a picture obtained or developed by the action of smoke or vapors. See ★*vapograph.* *Wall*, Dict. of Photog., p. 60

atmokausis, *n* See ★*atmocausis.*

atmologic (at-mō-loj′ik), *a.* Of or pertaining to atmology.

atmosfere, *n.* A simplified spelling of *atmosphere.*

atmosferic, *a.* A simplified spelling of *atmospheric.*

atmosphere, *n.*—**Homogeneous atmosphere,** an atmosphere identical in composition and density throughout. The height of a homogeneous atmosphere is the vertical height of a body of gas, of density equal to that of the air at the surface of the earth, which would exert a pressure of one atmosphere. See *pressure* ★*height.*—**Soil atmosphere,** the gases (mostly atmospheric air) contained in the interstices of the soil, including those absorbed by the capillary films of water utilized in symbiosis and otherwise affecting the growth of plants. This air expands and contracts with changes of pressure and temperature, and thereby in turn modifies the distribution of the water in the soil.—**Yearly swing of the atmosphere.** See ★*swing.*

Atmospheric absorption. See ★*absorption.*—**Atmospheric electric gradient,** the rate at which the electric charge or potential varies in the free air. The horizontal gradient varies greatly with the advent of an electric storm; the vertical gradient has systematic diurnal and annual variations in addition to the irregular ones which attend electric storms. A cumulus cloud of one kilometer radius, with its center three kilometers above the earth's surface, will, by the induction due to its own internal change, produce a diversion of downward gradient of about 11,000 volts per meter of vertical distance. —**Atmospheric radiation.** See ★*radiation.*—**Atmospheric recorder.** See ★*recorder.*—**Atmospheric spectrum.** See ★*spectrum.*

atmospherics (at-mos-fer′iks), *n.* The study of atmospheres and of all their phenomena; meteorology.

atmospherology (at″mos-fē-rol′ō-ji), *n.* [E. *atmosphere* + Gr. *-λογία*, ‹ λέγειν, speak.] The study of the phenomena of the atmosphere of any planet or satellite, or of the sun itself; specifically, the study of the earth's atmosphere; meteorology.

atocia (a-tō′si-ä), *n.* [NL., ‹ Gr. ἀτοκία, ‹ ἄτοκος, childless, ‹ ἀ- priv., + τόκος, offspring.] Childlessness; barrenness.

atokal (at′ō-kal), *a.* [Gr. ἀ- priv. + τόκος, offspring, + *-al*¹.] Non-sexual, or not producing sexual cells, as certain regions of the bodies of worms, for example *Nereis.*

At the end of October (1897) the Samoan reef was "literally alive with Palolo," which were discovered by prising off pieces of rock with a crowbar. . . . The total length averages 400 mm., about one-fourth of which is in the anterior *atokal* part.
Jour. Roy. Micros. Soc., April, 1904, p. 183.

atoke (at′ōk), *a.* and *n.* [Gr. ἄτοκος, without offspring, ‹ ἀ- priv. + τόκος, offspring.] **I.** *a.* Same as ★*atokal.*

II. *n.* The sexless portion of certain *Polychæta.* See ★*epitoke.*

In other Polychaetes the sexual part (epitoke) separates from the sexless *atoke* portion and swims freely, while the *atoke* produces new epitokes.
Hertwig (trans.), Zoology, p. 311.

atokous (at′ō-kus), *a.* Same as *atokal.*

atole, atolle (ä-tō′lā), *n.* [Mex. Sp., ‹ Nahuatl *atolli.*] A mush made of Indian corn, also diluted and used as a drink: a favorite food in Spanish-American countries.

atoll, *n.*—**Sphagnum atoll,** an annular island occurring in certain ponds in Minnesota, covered with sphagnum and other vegetation, the surrounding water being shallow and the lagoon deep. *C. Macmillan*, Minn. Bot. Stud., IX. 2.

atolle, *n.* See ★*atole.*

atom, *n.* **1.** (*c*) Recent investigations on the discharge of electricity in gases and on the phenomena of radioactivity have suggested reasons for believing that the atom of a chemical element, as hitherto imagined, instead of being primordial and indivisible, may consist of numerous and far smaller particles, to which the name *electrons* has provisionally been given. See ★*electron.*—**Atom of electricity.** See ★*electricity.*—**Gram atom.** See ★*gram*².

atomechanics (at-ō-mē-kan′iks), *n.* [*ato(m-) mechanics.*] The mechanics of atoms; the science of the motions of atoms and of atomic forces.

atomic, *a.* **3.** In *chem.*, existing in the condition of isolated atoms of the same kind; not united into groups to constitute molecules: as, for example, active oxygen at the instant of its separation from hydrogen dioxid.—**Atomic capacity,** the equivalence or valence of an atom.—**Atomic mass,** a term preferable to the more common *atomic weight.*—**Atomic value,** a term sometimes, but not well, substituted for *valence.*—**Atomic weight.** The weight (or mass) of the atom of a chemical element was for a long time expressed in terms of the weight (or mass) of an atom of hydrogen taken as the unit, and it was long supposed that, so expressed, the atomic weight (or mass) of oxygen was 16. But it having been found that this value is not correct and that the true number is more nearly 15.88, while the numbers for most of the other elements have been directly compared with that for oxygen, many chemists prefer to represent the oxygen atom by 16, and thus to assign to hydrogen the value 1.0079 or 1.008. Under ★element will be found lists of atomic weights both on the basis of H = 1 and of O = 16.

Atomiosoma (ạ-tom″i-ō-sō′mä), *n. pl.* [NL., for **atomosoma*, ‹ Gr. ἄτομος, not cut (see *atom*), + σῶμα, body.] Same as *Monocyttaria.*

atonement, *n.*—**Day of Atonement.** Same as *Yom Kippur.* See *Jewish* ★*fasts.*

atonia (a-tō′ni-ä), *n.* [NL.] Same as *atony.*

atonicity (a-tō-nis′i-ti), *n.* [*atonic* + *-ity.*] Same as *atony.*

atonied (at′ō-nid), *a.* [*atony* + *-ed.*] Marked by atony. *Buck*, Med. Handbook, II. 751.

atoning (ạ-tōn′ing), *p. a.* Expiatory; that makes or is intended to make amends for offenses; reconciling: as, Christ's *atoning* blood.

Dion's *atoning* friendliness has a ring of artificiality.
George Eliot, Theo. Such, p. 122.

atoningly (ạ-tōn′ing-li), *adv.* By way of atonement.

Being just, I had slain their slayer *atoningly.*
Swinburne, Atalanta, l. 1647.

atopomenorrhea, atopomenorrhœa (at″ō-pō-men-ō-rē′ä), *n.* [Gr. ἄτοπος, out of place, + NL. *menorrhœa.*] Vicarious menstruation (which see, under *vicarious*).

Atoposauridæ (at″ō-pō-sâ′ri-dē), *n. pl.* [NL. **Atoposaurus* (‹ Gr. ἄτοπος, strange, + σαῦρος, lizard) + *-idæ.*] A family of extinct crocodilians of small size, with small triangular skull and dorsal armor composed of paired longitudinal series of oblong plates. Its members are found only in the Upper Jurassic rocks.

Atops (at′ops), *n.* [NL., for **Atopops*, ‹ Gr. ἄτοπος, strange, + ὤψ, visage.] A genus of trilobites described by Emmons from the Taconic or Cambrian rocks of New York. It has a long-lobed glabella, semicircular cephalon, 17 thoracic segments, and a small pygidium. It is the first trilobite recognized from rocks earlier than the Potsdam sandstone of New York and the Silurian of Europe.

atractylic (at-rak-til′ik), *a.* [*Atractylis* + *-ic.*] Derived from *Atractylis.*—**Atractylic acid,** a crystalline acid, $C_{30}H_{54}S_2O_{18}$, found as a potassium salt in the roots of *Atractylis gummifera.*

atractylin (a-trak′ti-lin), *n.* [*atractyl(ic)* + *-in*².] An amorphous, gummy, sweet glucoside, $C_{20}H_{30}O_6$, formed by the decomposition of atractylic acid.

atranoracid (at-ra-nor′a-sid), *n.* [*atranor(ic)* + *acid.*] Atranoric acid.

The products [of metabolism in lichens] he has determined are *atranoracid*, one of the most wide-spread lichen compounds. . . .
Jour. Roy. Micros. Soc., Aug., 1903, p. 537.

atranoric (at-ra-nor′ik), *a.* [Irreg. ‹ L. *atra* + (*Leca*)*nora* (see def.) + *-ic.*] Noting an acid, a crystalline compound, $C_{19}H_{18}O_8$, found in *Lecanora atra* and other lichens. It melts at 196° C. Also called *atranorin.*

atranorin (at-ra-nō′rin), *n.* [*atranor(ic)* + *-in*².] Atranoric acid.

atranorinic (at-ra-nō-rin′ik), *a.* [*atranor(ic)* + *-in*¹ + *-ic.*] Noting an acid, a compound, formed by the decomposition of atranoric acid, to which Paterno gave the formula $C_9H_{10}O_4$, but which Hesse has shown to be 1, 3, 5-trihydroxytoluene, $C_6H_2(OH)_3CH_3$. It crystallizes in needles which melt at 104° C. Called by Hesse *physciol.*

atraric (a-trā′rik), *a.* [*atra(no)ric.*] Derived from atranoric acid.—**Atraric acid,** betorcinol carboxylic methyl ester, $(CH_3)_2C_6H(OH)_2CO_2CH_3$. It is formed together with trihydroxytoluene (physciol) by the decomposition of atranoric acid. It crystallizes in leaflets which melt at 141° C. Also called *ceratophyllin* and *physcianin.*

Atremata (a-trem′a-tä), *n. pl.* [NL., ‹ Gr. ἀ- priv. + τρῆμα, a hole.] In Beecher's classification of the brachiopods, the primary order including inarticulate shells with the pedicle emerging from between the two valves, both sharing the pedicle-opening. Contrasted with *Neotremata*, which are also inarticulate, but which have the pedicle-opening restricted to the ventral valve. *Obolus* and *Lingula* are examples of *Atremata.* The species are mostly Paleozoic.

atrematous (a-trem′a-tus), *a.* Having the characters of the *Atremata.*

atremble (a-trem′bl), *adv.* [*a*³ + *tremble.*] In a trembling state; quivering.

I'll write about her presently;
My hand 's *a-tremble* as I had just caught up
My heart to write with, in the place of it.
Mrs. Browning, Aurora Leigh, vi.

atremia (a-trē′mi-ä), *n.* A condition in which there is inability to maintain an upright position, but no loss of the power of voluntary movements.

atresic (a-trē′sik), *a.* Same as *atresial.* *Nature*, Aug. 20, 1903, p. 384.

atretic (a-tret′ik), *a.* [*atresia* (*atret-*) + *-ic.*] Of or pertaining to atresia; characterized by atresia; imperforate.

The *atretic* follicle differs from the developing corpus luteum in the absence of any discharge to the exterior; the membrana granulosa degenerates and disappears prior to any considerable ingrowth from the connective-tissue wall. *Jour. Roy. Micros. Soc.*, Aug., 1903, p. 485.

Atrichia, *n.* **3.** [*l. c.*] In *pathol.*, absence of hair; alopecia or atrichosis.

atrioporal (ā″tri-ō-pō′ral), *a.* Relating to the atriopore.

atriopore (ā′tri-ō-pōr), *n.* [L. *atrium*, hall, + Gr. πόρος, passage.] The posterior opening of the body-cavity of the lancelet, *Branchiostoma*, from which issues the water taken in at the mouth. *Parker and Haswell*, Zoology, II. 39.

atripaic (at-ri-pā′ik), *a.* Noting a crystalline acid, $C_6H_6O_{12} + 6H_2O$, found in sugar-beets. It may be reduced to hydroxycitric acid, $C_6H_6O_8$.

Atrium genitale. (*a*) In *Turbellaria*, a cavity into which open the ducts from the male and female sexual glands, the uteri, and the yolk-glands. (*b*) In *Oligochæta*, a dilatation on the *vas deferens* close to its opening.—**Atrium laryngis,** the portion of the larynx which lies above the superior or false vocal cords.—**Atrium of infection,** in *pathol.*, the point of entrance into the body of the contagium of disease.—**Atrium vaginæ.** Same as *vestibule*, 2 (*b*).—**Corinthian atrium,** an atrium of which the compluvium is large and the curb or plate of the roof is supported by a number of columns (which need not be of the Corinthian style).—**Displuviate atrium,** an atrium in which the roof sloped outward, so that the water did not run toward the compluvium and into a cistern, but was thrown outward as in a modern house: a rare form.—**Testudinate atrium,** an atrium of which the roof had no opening, so that it was merely a large central room out of which other rooms opened. As the atrium was the only important room of the unpretentious early Roman house, this form must have been common, especially in places more exposed to cold than was the city of Rome.—**Tetrastyle atrium,** an atrium in which four columns only were used at the four corners of the opening; differing from the Corinthian form, in which there was a row of columns on either side.—**Tuscan atrium,** an atrium in which the roof is supported on girders, having no columns even at the corners of the compluvium.

atrochal (at′rō-kal), *a.* [Gr. ἀ- priv. + τροχός, a wheel, + *-al*¹.] In *Polychæta*, having the surface of the larva uniformly covered with cilia and the preoral circlet of cilia absent.

a trofei (ä trō-fā′i), [It.] With trophies: said of decorative motives consisting of musical in-

struments, arms, tools, and other trophies, painted on certain majolica wares, particularly those of Urbino, Italy.

atrofy, *n.* and *v. t.* A simplified spelling of *atrophy.*

atronene (at′ro-nēn), *n.* A hydrocarbon, $C_6H_5.C_{10}H_9$, formed by the slow distillation of isatropic acid. It boils at 325° C.

atronic (a-tron′ik), *a.* Noting an acid, $C_{17}H_{14}O_2$, formed by distillation of isatropic acid. It is amorphous and melts at 164° C.

Atrophic nasal catarrh. See ★*catarrh.*

atrophy, *n.*—**Acute yellow atrophy of the liver.** See *yellow.*—**Atrophy of disuse,** atrophy resulting from lack of normal use, as of the muscles in an immobilized limb.—**Compression atrophy,** in *pathol.,* wasting due to the action of continuous pressure.—**Concentric atrophy,** diminution in size of a hollow organ, as the heart, with reduced capacity of its cavity.—**Eccentric atrophy,** pathological increase in the size of the cavity of a hollow organ, as the heart, with attenuation of the walls.—**Granular atrophy of the kidney,** chronic interstitial inflammation resulting in compression and atrophy of the parenchyma of the kidney, usually associated with arteriosclerosis. See *granular kidney,* under *granular.*—**Gray atrophy,** a form of degeneration of the spinal cord and also of the optic disk in which the nerve matter becomes of a grayish color.—**Inflammatory atrophy,** atrophy of the functioning elements of an organ, as the kidney, due to overgrowth of the fibrous structures consequent upon chronic inflammation.—**Progressive muscular atrophy.** See *progressive.*—**Senile atrophy,** normal shrinkage of the tissues in the aged.

atropic, *a.*—**Atropic acid,** α-phenyl-acrylic acid, $C^1H_2=C^2(C_6H_5)C^3O_2H$, formed by boiling atropin with barium hydroxid. It crystallizes in scales or needles which melt at 106° C.

Atropidæ (a-trop′i-dē), *n. pl.* [NL., ⟨ *Atropos* + *-idæ.*] A family of corrodentian insects, distinct from the *Psocidæ,* including the minute forms known as *book-lice.* They are widely distributed, and are commonly found on book-shelves and in old volumes and records, where they feed on the starch paste used in binding. They also feed on flour and meal.

atropinization (at″ro-pin-i-zā′shon), *n.* [*atropinize* + *-ation.*] The act of bringing under the influence of atropin; specifically, of inducing the mydriatic effects of that drug.

Atropos, *n.* **4.** [*l. c.*] A neuropterous insect of the genus *Atropos.*—**Divining atropos,** *Atropos divinatorius* of Europe, so named on account of its supposed ability to predict death.

atroscine (at′rō-sin), *n.* The dihydrate of the optically inactive scopolamine, $C_{17}H_{21}O_4N + H_2O$. It is crystalline and melts at 37° C. The levorotatory form of the base is sometimes called *hyoscine.*

A-truss (ā′trus″) *n.* A roof- or bridge-truss shaped like the letter A spread out. It is either a simple truss consisting of two rafters and a tie-beam only, or it is a braced truss. *Lockwood.*

atta[2] (ät′ä), *n.* [Brazilian.] **1.** The name in Brazil of the fruits of several trees belonging to the genus *Anona,* especially of those of *A. obtusiflora,* a native of the Antilles and cultivated in Brazil.—**2.** The name given by the Singalese to the sweet-sop, *Anona squamosa,* which was introduced into India and Ceylon by the Portuguese several centuries ago. In India the name is represented by *ata,* and in Guam and the Philippines by *atis.* See *Anona,* ★*atis* (with cut), and *sweet-sop.*

attach, *v. t.*—**Attaching system,** the mnemonic system which consists in physically attaching an object to be remembered to another that is sure to be thought of. Thus a man may adopt the habit, in visiting, of putting his hat over his umbrella, lest he should otherwise forget the latter.

attacher (a-tach′ėr), *n.* One who arrests or seizes person or property under a writ of attachment. [Obsolete or rare.]

attachment, *n.*—**Attachment of privilege.** See ★*privilege.*—**Solar attachment.** See ★*solar.*

attachment-disk (a-tach′ment-disk), *n.* The holdfast of an alga.

attachment-pad (a-tach′ment-pad), *n.* The disk-like end of the narrow stem growing from the aboral pole of certain medusæ, as *Haliclystus,* used for temporary fixation. *Proc. Roy. Soc.* (London), 1903, II. 186.

attacht, *pp.* A simplified spelling of *attached.*

attacine (at′a-sin), *a.* Of or belonging to the genus *Attacus,* or resembling the moths of that group. *A. S. Packard,* Text-book of Entom., p. 634.

attack, *n.*—**Cozio counter-attack,** in *chess-playing,* a variation of the 1 P—K 4, P—K 4; 2 Kt—KB 3, P—K B4 variation in the King's Knight's gambit.—**Donop's** or **Ghulam Kassim's attack,** in *chess-playing,* a variation of the King's Knight's gambit, first played by Colonel Donop of Brussels, namely, 5 P—Q 4. See *King's Knight's* ★*gambit.*—**Fraser's attack,** in *chess-playing,* a continuation or variation of the Scotch gambit (4 Kt x P, Q—R 5; 6 Kt—KB 3).—**Grimm's attack,** in *chess-playing,* a certain continuation against an old-fashioned defense to the King's Bishop's gambit.—**Lolli's attack,** in *chess-playing,* a continuation of the Muzio gambit, white sacrificing a second piece, namely the king's bishop, on his fifth move. However, this attack is considered unsound.—**Macdonnell's attack,** in *chess-playing,* a variation of the king's bishop's opening wherein the first player sacrifices two pawns at the outset.—**Mortimer's attack,** in *chess-playing,* a variation of the Evans gambit (which see, under *gambit*).—**Ponziani's attack,** in *chess-playing,* one of the forms of the King's Knight's opening (3 P—QB 3). Also called *Staunton's opening.*

attacolite (a-tak′ō-lit), *n.* [Gr. ἄτακος, also ἀττάκης, a kind of locust, + λίθος, stone. The name is said to refer to the color.] A hydrated phosphate of aluminium and manganese occurring in light-red massive forms: found in Sweden.

Attacus (at′a-kus), *n.* [NL. (Hübner, 1816), ⟨ Gr. ἄτακος, also ἀττάκης, a kind of locust.] A genus of saturniid moths, comprising some of the largest and most beautiful species, now mostly merged in the genera *Samia, Philosamia,* and *Callosamia.*

Attagenus (at-a-jē′nus), *n.* [NL. (Latreille, 1802), ⟨ Gr. ἀττάγη, a bird, see *attagen.*] A genus of dermestid beetles, some of them of world-wide distribution. The European *A. pellio* is a well-known museum pest and a general enemy of furs and skins, and *A. piceus,* common to Europe, Asia, and North America, has similar habits, damaging carpets and woolen goods in the United States.

Attagides (a-taj′i-dēz), *n. pl.* [NL., pl. of *Attagis.*] A group of wading birds comprising the genera *Attagis* and *Thinocorus.* The family *Thinocoridæ* is considered to have the rank of a suborder.

Attalid (at′a-lid), *a.* Of or pertaining to one of the three kings named Attalus, who reigned at Pergamon in the second century B. C.

Naturally the island which stood in the closest relation to the *Attalid* capital as a centre of Art was Rhodes.
L. R. Farnell, Jour. Hellenic Stud., XI. 203.

attar, *n.* The chemical composition of this valuable perfume has been carefully studied, and its principal constituent, geraniol ($C_{10}H_{18}O$), obtained from cheaper sources (as from the essential oil of Indian grass or Turkish geranium), is now—with perhaps the addition of some of the minor constituents, also from relatively cheap sources—offered for sale as *synthetic attar of roses.*

attention, *n.* **1.** The concept of attention has come to play an increasingly large part in the psychological systems worked out under the influence of the experimental method. Looked at contentwise, as a certain modification of the make-up or structure of consciousness, attention consists essentially of a distribution of clearness values (the ideas attended to being clear, the ideas attended from obscure), accompanied by organic sensations due to the adjustment of the observing sense-organ or to the general bodily attitude (as in the scout, the eavesdropper, etc.), and by affective process. Looked at from the point of view of mental function, attention is simply the mind at work, the concentration or focalization of consciousness upon a given topic, whether of perception or of thought. "If and so far as any content of consciousness is a perception, idea, conception, apprehension or awareness of somewhat, the activity in and through which this content exists is *attentive* activity." (*Stout.*) It is customary to distinguish types of attention as *passive* and *active* or as *involuntary* and *voluntary.* The difference, however, is simply a difference of condition. *Passive attention* is constrained attention, attention which one cannot help giving, unequivocally conditioned attention: a loud sound, a moving object in the visual field, things that fit in with the present contents of consciousness—such stimuli compel attention, whether one will or not; and the reasons for their compelling power are to be sought in biology, not in psychology. *Active attention* is attention under difficulties, attention with distraction, attention to which there are rival claimants,—in short, an equivocally conditioned attention which is accompanied by the experience of effort: the organism is called upon, so to speak, to adjust itself to two different situations at one and the same moment. It is important to notice that with repetition of the conflict some one of the rival claimants will gain a permanent victory, so that active passes over into a secondary passive attention. The man of science immersed in his special study has traveled beyond the stage of active to this ultimate stage of secondary passive attention. Experimental work upon the attentive state has been concerned with the fluctuations of attention, or the duration of a single attentive effort or concentration; the range or scope of attention, or the number of ideas to which one can attend at one time; the effects of complication, or the subjective temporal displacement of disparate impressions simultaneously presented; distraction, or the behavior of attention when rival claimants of varying compulsive power are artificially introduced into the attentive consciousness; the organic concomitants of attention, changes of pulse, respiration, etc., which accompany the induction of the attentive state; and the effects of attention upon special mental functions, such as reproduction, retention, discrimination, action, etc. No adequate theory of attention has as yet been propounded. It cannot be derived from affective process, from intensity of sensation, or from any special group of sensations (as sensations of strain); neither can it be identified with motor adjustment. It seems probable that attention is paralleled, on the physiological side, by processes of reinforcement (or facilitation) and processes of inhibition running their course in the cerebral cortex, and that the feelings and organic sensations which accompany attention are in fact mere concomitants and not essential constituents. At the same time, it appears that certain special phenomena, usually referred to the center, are in reality due to changes at the periphery of the organism; thus it is very doubtful whether 'fluctuations of attention' are not due to fluctuations of excitatory process in the sense-organ. It may be, too, that psychology has tended to make the attentive state unitary when actually it is diverse, and that we ought rather to speak of *visual attention, cutaneous attention,* etc., than of attention in the abstract.—**Attention wave,** in *psychol.,* a single pulse or rise and fall of the attention, considered as a fluctuating or periodic process.—**Field of attention.** (*a*) The range of clear consciousness; the contents of consciousness at any moment attended to. (*b*) The whole of consciousness, regarded as made up of contents which may successively become clear under attention. The first usage is based on the analogy of the visual field of regard, the second on the analogy of the field of vision.—**To call attention.** See ★*call*[1], *v. t.*

attentional (a-ten′shon-al), *a.* [*attention* + *-al*[1].] Of or pertaining to attention; due to or conditioned by attention.

The experiments on *attentional* time-displacement form one of the most interesting and most difficult chapters of experimental psychology.
E. B. Titchener, Exper. Psychol., I. ii. 206.

attenuated (a-ten′ū-ā-ted), *p. a.* **1.** Thin; slender: as, long *attenuated* fingers; *attenuated* parchment.—**2.** Thin in consistency; diluted; rarefied: as, "*attenuated* small beer," *Lamb,* Elia.

attenuation, *n.* **5.** In *elect.*: (*a*) The decrease of telephonic currents with increasing distance, due to the absorption of current by the electrostatic capacity of the telephone line. (*b*) More generally, the decrease of electrical effects with increasing distance.

attenuative (a-ten′ū-ā-tiv), *a.* and *n.* Attenuant.

attestant (a-tes′tant), *a.* and *n.* **I.** *a.* Bearing witness

II. *n.* An attesting witness; an attester.

attestment (a-test′ment), *n.* [*attest* + *-ment.*] Testimony; attestation. *J. M. Neale,* Mediæv. Hymns, p. 155. *N. E. D.*

attic[2], *n.* **3.** The upper portion of the tympanic cavity of the ear. *Med. Record,* Feb. 14, 1903, p. 279.—**4.** Figuratively, a man's 'top story'; the skull

Here a gentleman present, who had in his *attic*
More pepper than brains, shrieked—The man's a fanatic.
Lowell, Fable for Critics, st. 50.

False attic, in *arch.,* an external division of the wall resembling an attic, but having no story of rooms behind it: in this sense often used for a dwarf wall built above the main cornice to receive an inscription or for a purely decorative purpose.

attingent (a-tin′jent), *a.* Touching or coming in contact with each other, as the elytra of a beetle or the tegmina of a grasshopper.

attitude, *n.* **3.** In *geol.,* the particular position or relation which the land bears at any time to the ocean. The geologist's point of view is that the land either has emerged from the oceanic waters or is to be again buried by them, and therefore at any particular time assumes an attitude with relation to the ocean. The term is also applied to the position and structural relations of any bed or mass of rock to others.

Perhaps a word of general explanation is necessary in speaking of the *attitude* of the land. Geologists are prone to talk of elevation and subsidence—of the uprising of the earth's crust at one place or at one time, and of its downsinking at another place or another time. Their language usually seems to imply the rise or fall of an area all together, without any relative displacement of its parts; but you will readily see that, unless a rising or sinking tract is torn asunder from its surroundings, there must be all about it a belt in which the surface assumes an inclined position, or, in other words, where the *attitude* of the land is changed. *Smithsonian Report,* 1890, p. 259.

Crucifixion attitude, a posture assumed in certain cases of hystero-epilepsy, in which the arms are extended at right angles to the body, the lower extremities being together and in the axis of the trunk.—**Illogical attitudes,** various strange and seemingly almost impossible attitudes sometimes assumed by subjects of hystero-epilepsy.

attitudinization (at-i-tū-di-ni-zā′shon), *n.* Attitudinizing; posturing or the striking of attitudes.

attorney[1], *n.*—**Attorney's certificate.** (*a*) In *English law,* a certificate of the commissioners of stamps that the attorney therein named has paid the annual duty. *Bouvier,* Law Dict. (*b*) In *United States law,* the certificate of the court admitting an attorney to practise, which testifies that the attorney has qualified and taken his oath of office.—**Prosecuting attorney, State's attorney,** terms usually synonymous with *district attorney.* They indicate the persons representing the people of the State in a criminal action. They are to be distinguished from *attorney-general* and *deputy attorney-general,* whose duties are to represent the State in civil actions.

attraction, *n.*—**Crystallic attraction,** the attraction between crystalline masses in alloys and other composite solids. "There is evidence that the large crystalline masses in solids have an attractive force for the smaller particles of the same kind, and under suitable conditions draw them to themselves." *J. E. Stead,* Jour. Roy. Micros. Soc., April, 1904, p. 254.—**Law of attraction and repulsion,** a rhetorical name for the assumption

that the fundamental processes of society are identical with those of the physical world; that the drawing together and the separations of men are inevitable effects of their natures, like chemical affinities and oppositions. *Gumplowicz*, Outlines of Sociol., p. 33. **Mass attraction**, the mutual attraction between masses, taken as a whole, as distinguished from the attraction between the individual molecules of a body; molar attraction. —**Newtonian attraction**, the gravitational attraction which each portion of matter in the universe has for every other portion.

attraction-cone (ạ-trak'shọn-kōn), *n.* In *embryol.*, the conic protrusion of the surface protoplasm of the egg at the point where the spermatozoön is about to enter.

attraction-sphere (ạ-trak'shọn-sfēr), *n.* Same as ★*astrosphere* and ★*centrosphere*.

attributal (at'ri-bū-tạl), *a.* Of the nature of an attributive: as, *attributal* or descriptive names. *Jour. Amer. Folk-lore*, Jan.–March, 1902, p. 14.

attritive (at'ri-tiv), *a.* Involving attrition or wearing away by attrition: as, "subjected to some further *attritive* process," *Hugh Miller*, Rambles Geol., II. 246.

attuite (a-tū'it), *v. i.* and *t.*; pret. and pp. *attuited*, ppr. *attuiting*. [L. *ad*, to, + *tueri* (pp. *tuitus*), look to, regard: see *tuition* and *intuit*.] In *psychol.*, to have attuition; to become conscious of objects outside ourselves. The term was introduced by *S. S. Laurie*.

He carries its operation before reason still further, supposing that "attuition" makes particular inferences about outside objects, and that a man, or a dog, through association, "*attuites*" sequence and invariableness of succession, and, in fact, gets as far in the direction of causation as Hume thought it possible to go at all.
Encyc. Brit., XXX. 677.

attuition (at-ū-ish'ọn), *n.* In *psychol.*, a hypothetical process which is more than sensation and less than perception, involving the coördination of sensations into an aggregate and the reference of this aggregate to the outside world.

His [S. S. Laurie's] psychology is founded on a proposed distinction between "*attuition*" and reason. His theory of "*attuition*," by which he supposes that we become conscious of objects outside ourselves, is his "return to dualism," . . . "*attuition*." It is, according to him, something more than sensation, but less than perception; it is common to us with lower animals such as dogs; its operation consists in co-ordinating sensations into an aggregate which the subject throws back into space, and thereby has a consciousness of a total object outside itself, e. g., a stone or a stick, a man or a moon.
Encyc. Brit., XXX. 677.

atty. A contraction of *attorney*.

atua (ä-tō'ä), *n.* [Polynesian, Maori, Samoan, Tahitian *atua*, Tongan *otua*, Marquesan *etua*, etc., a god, demon.] The supernatural powers; more particularly the gods and deified human beings, but also guardian spirits, in some cases even hostile spirits.

Atylus (at'i-lus), *n.* [NL. (Salisbury, 1807), < Gr. *ἀ-* priv. + *τύλος*, callosity. The name alludes to the absence of the four hypogynous glands or scales which occur in some of the related genera.] A genus of dicotyledonous plants belonging to the family *Proteaceæ*. See *Petrophila*[1].

Atypical children, a term suggested to designate children who are not strictly abnormal or degenerate, yet who are potentially so; children on the border-line between normality and degeneracy.

atypy (at'i-pi), *n.* [Gr. **ἀτυπία*, < *ἄτυπος*, not typic: see *atypic*.] Departure from the typic or normal condition. *Amer. Anthropologist*, Oct.–Dec., 1903, p. 610.

aua (ä'ö-ä), *n.* [Maori *aua*, a sea-mullet, = Tahitian and Samoan *aua*, a small fish.] A name of *Agonostomus forsteri*, one of the mullets found in abundance on the coasts of New Zealand and Tasmania.

aubépine (ō-bä-pēn'), *n.* [F., hawthorn: see *albespine*.] A trade-name for anisaldehyde. It is used as a perfume.

Aubergine purple. See ★*purple*.

aubernage (ō-ber-näzh'), *n.* [F., a local term in the department of Yonne.] A disease of the grape-vine caused by a fungus, *Dematophora necatrix*, which attacks the roots.

Aubert diaphragm. See ★*diaphragm*.

aubonne (ō-bon'), *n.* A silver crown of Lorraine in the 18th century, named from M. d'Aubonne, director of the mint 1724–1728.

Aubrey group. See ★*group*[1].

Aubrieta (â-bri-ē'tạ), *n.* [NL. (Adanson, 1763) for Claude *Aubriet*, a botanical draftsman.] A genus of perennial, bright-flowered plants, more or less evergreen trailers, of the family *Brassicaceæ*, sometimes grown for rock-work or edgings. Twelve species are found in Italy, Greece, Asia Minor, and Persia. *A. deltoidea* (including *A. Graeca*) is commonest in America.

Auchenaspis (â-kē-nas'pis), *n.* [Gr. *αὐχήν*, neck, + *ἀσπίς*, shield.] A name given by Egerton to cephalaspid fish remains from the Upper Silurian and lower Old Red Sandstone passage-beds of Hereford: equivalent to *Thyestes* of the Baltic Upper Silurian.

Auchenopterus (â″kē-nop'tẹ-rus), *n.* [NL., < Gr. *αὐχήν*, neck, + *πτερόν*, wing.] A genus of small blennies found in the rock-pools of the West Indies and the west coast of Mexico: characterized by having the soft dorsal reduced to a single ray.

au clou (ō klō'). [F.] With the nail: applied to gold which has been burnished with a nail fixed in a wooden handle, as that of the old soft-paste porcelain of Sèvres. This style of burnishing may be recognized by the scratches which are found on the gilding. The nail was replaced by the agate burnisher about the beginning of the nineteenth century.

auction-penuchle (âk″shọn-pē'nuk-l), *n.* A variety of penuchle in which the players bid for the privilege of making the trump, naming the number of points they will make. It is always played by four hands, the bidder's side having the first count. See ★*penuchle*.

auction-pool, *n.* On shipboard, the number of miles the ship will run next day is assumed, and 10 or 15 above and below this number are subscribed for and drawn. Each number is then put up at auction, and may be bought in by the owner or by any other passenger, half the amount realized being returned to the subscriber for that number. Choice of the highest and lowest numbers is usually sold separately at the end. The holder of the number agreeing with the ship's run next day, or the one nearest to it if it is below or above any number drawn, takes the entire pool.

aucubin (ä'kū-bin), *n.* [*Aucuba* + *-in*[2].] A slightly bitter crystalline glucoside found in *Aucuba Japonica*. It melts at 181° C.

audad (ou'dăd), *n.* Same as *aoudad*. *Geog. Jour.* (R. G. S.), XI. 601.

audiclare (â'di-klār), *n.* [Irreg. < L. *audire*, hear, + *clarus*, clear. Cf. *clairaudient*.] An apparatus for use in defective hearing, consisting of a tube with a diaphragm attachment at one end and a bell-shaped expansion at the other.

audiential (â-di-en'shạl), *a.* Of or pertaining to an audience.

There must be *audiential* response or the actor's portrayal is dead.
Marcella Sembrich, in New York Independent, Oct. 5, 1899.

audile, *n.* **II.** *a.* Of, pertaining to, or acting through the auditory nerves and tracts; ear-minded.

audist (â'dist), *n.* One who has an ear-memory; one whose memory is more tenacious of things heard than of things only seen.

Charcot, who classified people into "visualists"—those whose recollections were chiefly of things seen, who had to read a name in order to remember it; "*audists*"—those whose memories were of things heard, whose auditory sense was paramount, etc.
Pop. Sci. Mo., April, 1895, p. 732.

Audit certificate, the certificate issued by an auditor on the completion of an audit.

The efficiency, in most cases, of audits conducted by skilled accountants has led the public to attach exceptional value to their *audit certificates*, and to demand extensive knowledge and ability in the conduct of the audit of the accounts of public companies.
Encyc. Brit., XXV. 25.

audition, *n.*—**Chromatic audition**, a subjective impression of color excited by sounds.

auditization (â-di-tī-zā'shọn), *n.* [*auditize* + *-ation*.] In *psychol.*, representation in auditory terms; imaging in sound.

In silent reading there is a similar motorization, or *auditization*.
E. B. Huey, Amer. Jour. Psychol., XII. 309.

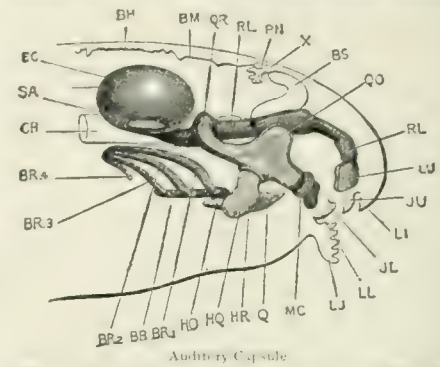
auditize (â'di-tīz), *v.*; pret. and pp. *auditized*, ppr. *auditizing*. [*audit* + *-ize*.] In *psychol.*, to represent in auditory terms; to image in sounds. *Amer. Jour. Psychol.*, XII. 119.

Auditor of the imprest. See ★*imprest*.

auditor-general (â″di-tọr-jen'ẹ-ral), *n.* In some States, the title given to the chief auditor of the State.

auditorially (â-di-tō'ri-ạl-i), *adv.* As a hearer or auditor; through the ear (as opposed to through the eye). *Rolleston*, Memoirs, p. 910.

Auditory agraphia. See ★*agraphia*. — **Auditory aphasia.** See ★*aphasia*.—**Auditory area.** Same as (*a*) ★*auditory center* and (*b*) ★*auditory field*.—**Auditory capsule**, in *embryol.*, the cartilaginous capsule surrounding the membranous labyrinth of the ear in the vertebrate embryo: same as *otic capsule*. (See cut in next column.) —**Auditory cells**, cells in the internal ear which bear the auditory hairs.— **Auditory center**, the supposed nerve-center for hearing in the first temporosphenoidal convolution of the brain. — **Auditory epithelium.** Same as *auditory hairs*. (See extracts under *auditory*.)



Auditory Capsule

The skull of a 12 mm. tadpole, seen from the right side. The notochord, the brain, and the entire head are represented in outline, in order to show the relations of the skull to them. Magnified 30 times.

BB, basibranchial; BH, roof of hind-brain; BM, roof of mid-brain; BR 1, BR 2, BR 3, BR 4, first, second, third, and fourth branchial bars; BS, cerebral hemisphere; CH, notochord; EC, auditory capsule; HO, urohyal; HQ, articulation of ceratohyal with quadrate; HR, ceratohyal; JL, lower jaw; JU, upper jaw; LI, upper lip; LJ, lower lip; LL, lower labial cartilage; LU, upper labial cartilage; MC, Meckel's cartilage; PN, pineal body; Q, quadrate; QO, orbital process of quadrate; QR, connection of quadrate with trabecula; RL, trabecula cranii; SA, membranous patch in the outer wall of the auditory capsule, in which the stapes is developed at a slightly later stage; X, choroid plexus of third ventricle. (From Marshall's "Vertebrate Embryology.")

—**Auditory field**, the space throughout which a sound can be heard.— **Auditory ganglion.** Same as *acoustic tubercle* (which see, under *acoustic*).— **Auditory hairs.** (*b*) In *entom.*, certain hairs of the antennæ of the male *Culicidæ* and *Chironomidæ*, which experimental tests seem to prove to have an auditory function.— **Auditory hyperæsthesia**, abnormal acuteness of hearing.— **Auditory meatus.** Same as *auditory canal*.—**Auditory nuclei**, the nuclei of origin, within the brain, of the auditory nerves. — **Auditory plate.** (*b*) An expanse of epithelium which receives the terminations of the auditory nerve. (*c*) The portion of the temporal bone which forms the roof of the tympanum.—**Auditory saucer**, in *embryol.*, the saucer-shaped invagination of the ectoderm, which eventually gives rise to the otocyst or membranous labyrinth of the ear.

Auer burner, light. See ★*burner*, ★*light*.

Auerbach, ganglion of. See ★*ganglion*.

auerlite (ou'ẹr-līt), *n.* [Named after Carl *Auer* von Welsbach.] A rare mineral occurring in from yellow to red tetragonal crystals and consisting of the silicate and phosphate of thorium: found in North Carolina.

auge[2] (ou'ge), *n.*; pl. *augen* (-gen). [G. *auge*, AS. *ēage*, E. *eye*.] A word adopted from the German by many English and American petrographers to designate a round or lenticular nodule, either a single mineral particle or an aggregate, often found in gneissic or schistose rocks, which in comparison with the inclosing finer-grained material produces an appearance compared to that of an eye. The term *eye* is less extensively used in this sense.

augelite (â'je-līt), *n.* [Irreg. < Gr. *αὐγή*, light, luster, + *λίθος*, stone.] A hydrated phosphate of aluminium occurring in tabular monoclinic crystals and in cleavable masses with strong pearly cleavage: first found in Sweden, and now also in Bolivia.

augengneis (ou'gen-gnīs), *n.* [G. *augen*, eyes, + *gneis*, gneiss.] A variety of gneiss which has lenticular nuclei, of one mineral or of several, more coarsely crystalline than the normal components of the rock, and around which the foliation forks and passes, so as to suggest eyes within eyebrows and eyelashes.

augite, *n.* The name of this member of the pyroxene group of silicate minerals is frequently used in petrography in composition with the name of any rock in which it occurs as a prominent or noteworthy constituent: as, *augite-andesite*, *augite-syenite*, *augite-gneiss*, etc.

augite-rock (â'jīt-rok), *n.* In *petrog.*, a term formerly applied to igneous or metamorphic rocks of granular texture consisting chiefly of augite. Most of the rocks once so named are now called *pyroxenite*.

augitite (â'ji-tīt), *n.* [*augite* + *-ite*[2].] In *petrog.*, a non-feldspathic, basaltic rock consisting essentially of augite and magnetite with a generally scanty glass base. Augitite is closely related to limburgite, from which it differs in its freedom from olivin.

augitophyre (â'ji-tō-fīr), *n.* [*augite* + (*por*)-*phyr*(*y*).] In *petrog.*, a porphyry in which the most prominent phenocrysts are of augite:

analogous to orthophyre. The term was first applied by Scacchi to the augitic and leucitic lavas of Italy in which the augite is megascopically the more prominent.

augitophyric (â ji-tọ-fir'ik), *a.* [*augitophyre* + *-ic.*] Porphyritic through the presence of augite phenocrysts. See ★*augitophyre.*

augitoporphyric (â ji-tọ-pôr-fir'ik), *a.* [*augite* + *porphyr(it)ic.*] Augitic and porphyritic: applied to a porphyritic igneous rock whose phenocrysts are augitic.

augmental (âg-men'tạl), *a.* and *n.* [*augment* + *-al*[1].] Formed by augmentation, as a number. See ★*augmentation,* 6.

In tracing vestiges in the form of *augmentals,* it is clearly to be borne in mind that their significance, like that of the primary numbers, is mystical rather than quantitative.
An. Rep. Bur. Amer. Ethnol., 1897-98, p. 848.

augmentation, *n.* **6.** A hypothesis relating to the development of number systems, according to which the primary number-concept was based on the idea of the self and of the four directions *front, back, right, left,* and sometimes, in addition to these, *above* and *below.*

Augmentation was the process of forming higher numbers by multiplying the directions by 2, 3, etc., while the self remained single. Thus the augmentals of the former system are $1+2\times4$, $1+3\times4$, etc.; those of the latter $1+2\times6$, $1+3\times6$, etc.
W. J. McGee, An. Rep. Bur. Amer. Ethnol., 1897-98, [pp. 839-842.

7. In *astron.,* the excess of the moon's apparent diameter, seen from a given point, over its diameter as it would be if seen from the center of the earth. The excess is due to the fact that the moon, except when on the horizon, is nearer to the observer than to the earth's center.—**8.** In *bot.,* same as *multiplication,* 3.—**9.** In *law,* a share of the great tithes temporarily granted to the vicars by the appropriators, and made perpetual by a statute of Charles II.: also used in a similar sense in the Canadian law. *Bouvier,* Law Dict.—**Coefficient of augmentation.** See ★*coefficient.*

augmentor (âg-men'tọr), *a.* Causing to increase; specifically, noting the nerves stimulation of which causes an increase in force and size of the cardiac contractions.

Wundt goes so far as to assume a differentiation of the bodies of nerve-cells into two parts, the anabolic inhibitory and the katabolic *augmentor* parts, and applies this hypothesis to the explanation of the valve-like nature of the paths of the spinal cord. *Nature,* Nov. 6, 1902, p. 3.

au gratin (ō gra-taṅ'). [F.] With a breaded or browned crust.

Augusta limestone. See ★*limestone.*

Augustan, *a.* **II.** *n.* One who belongs to the Augustan age or school of literature. See ★*Augustanism.*

Poetry is a spiritual thing, and, like the soul of man, it is fluent and fluctuating and impalpable. Wordsworth was half a Romantic and half an *Augustan,* and in the end his romanticism was subjugated by "an austerer mode," by his didactic passion.
Athenæum, March 18, 1905, p. 328.

Augustanism (â-gus'tạn-izm), *n.* Qualities such as those which characterized the reign of the Roman emperor Augustus (63 B. C.–14 A. D.) or (especially) the Roman literature of that period.

Perhaps the most profound passages in this essay are those dealing with the period of *Augustanism* in English literature—that age of acceptance which began after Milton and ended with Gray and Collins.
Athenæum, Jan. 16, 1904, p. 73.

Augustin, *n.* **4.** [*l. c.*] A silver coin of Mexico, the dollar or peso, of 1822, of Iturbide or Augustin I.

auhi (ou'hē), *n.* [Tigré.] A name in Abyssinia of a small tree of the borage family, *Cordia Abyssinica,* which yields a valuable timber and very sweet, edible fruits. It is much cultivated in the native gardens and is planted around the villages. Also called *wanza.*

auhola (ä-ū-hō'lä), *n.* Same as ★*ahuhu.*

aukery (âk'ẹ-ri), *n.* A place to which auks resort: as, *Aukery,* Nameless Bay, Novaya Zemlya. *Geog. Jour.* (R. G. S.), xi, 335.

Aulacocephalus (â″lạ-kō-sef'a-lus), *n.* [NL. < Gr. *αὖλαξ* (*-ακ-*), a furrow, + *κεφαλή,* head.] A genus of serranoid fishes found in the Pacific and Indian oceans.

Aulacoceras (â-lạ-kos'ẹ-ras), *n.* [Gr. *αὖλαξ* (*-ακ-*), a furrow, + *κέρας,* a horn.] A genus of belemnitoid dibranchiate cephalopods from the Triassic rocks, characterized by the long, slender guard and very long phragmocone, in which are retained the septa perforated by a siphuncle.

Auld Licht, one of the party in the Scottish church, during the latter part of the eighteenth century, which held by the traditions of the original seceders. The party was made up of the conservative members of the Burghers and Antiburghers, the two divisions of the seceders.

aulete (a-le'tē), *n.* Same as *auletes.*

Aulopidæ (â lop'i-dē), *n. pl.* [NL., < *Aulopus* + *-idæ.*] A family of lizard-fishes allied to the *Synodontidæ.* The typical genus is *Aulopus.*

Auloporidæ (â-lo-por'i-dē), *n. pl.* [NL., < *Aulopora* + *-idæ.*] A primitive family of tabulate corals having a reptant and branching corallum composed of trumpet-shaped corallites multiplying by lateral and basal gemmation. The septa are reduced to marginal striæ, and tabulæ are present in greater or less degree. They are confined to the Paleozoic rocks.

Aulopus (â-lō'pus), *n.* [NL., < Gr. *αὐλός,* a flute, pipe, + *ὤψ* (*ὠπ-*), eye, face.] A genus of lizard-fishes characterized by the roughish skull, the well-developed maxillary, and the presence of the adipose fin.

aulos (â'los), *n.*; pl. *auloi* (-loi). [Gr. *αὐλός,* a flute, pipe.] The Greek flute, which was of the direct or flageolet class. It was often double, and was provided with several finger-holes, in which stopples were sometimes inserted, probably to alter the pitch slightly. It is possible that the name *aulos* was also applied to pipes sounded by a reed, in which case they should be called oboes rather than flutes. Flute-players often wore the capistrum, a tight band encircling the head so as to support the cheeks in blowing.

Aulosteges (â-los'tē-jēz), *n.* [Gr. *αὐλός,* a flute, pipe, + *στέγη,* a roof, valve.] A genus of brachiopods having short but broad cardinal areas on both valves, the deltidium covered with spinules, and the surface of both valves thickly set with spines. It was allied to *Strophalosia,* but the valves were not adherent. It is characteristic of the Permian formation.

aulu (ä'ö-lö), *n.* [Hawaiian.] A large Hawaiian tree, *Sideroxylon Sandwicense,* of the sapota family, the thick milk-sap of which is used by the natives as bird-lime; also, a tree, *Sapindus Oahuensis,* belonging to the soapberry family.

aumil (a'mil), *n.* [Also *amil,* Hind. *'āmil,* < Ar. *amil,* an agent, < *'amala,* he performed a task or office.] In India, a collector of revenue in some of the native states, and the chief authority in his district. See *amaldar.*

auntly (änt'li), *a.* [*aunt* + *-ly*[1].] Natural to or characteristic of an aunt: as, *auntly* blessings; *auntly* affection. [Rare.] *N. E. D.*

aupaka (ä-ö-pä'kä), *n.* [Hawaiian.] *Isodendrion pyrifolium,* a shrub of the violet family with sweet-scented greenish-white flowers.

aur (our), *n.* [Assumed stem of Icel. *aurar* (gen. *auro,* dat. *aurum*), pl. of *eyrir,* (gen. *eyris,* dat. and acc. *eyri*), an ounce of silver, money in general, perhaps < L. *aurum,* gold.] A current subsidiary coin of Iceland, equivalent to .27 of a cent or .01 of a krona.

aura[1], *n.* **4.** [*cap.*] In *Gr. myth.,* a personification of the lighter winds or breezes, the divinities of the air. It was a subject frequently

Auræ from Terra Cotta Astragalus.

employed in Greek art. Pliny describes two marble statues of Auræ sailing by aid of their garments. The so-called Nereids of the famous Xanthian sepulchral monument in the British Museum are probably Auræ.—**Intellectual aura,** a peculiar dreamy reminiscent mental state preceding an epileptic attack.

aurally (â'rạl-i), *adv.* By means of the ear or of audition; in an auditory manner.

auramine, *n.* The name is applied to two basic dyestuffs of the diphenyl-methane type. The older was discovered in 1883; the suffixes *O, I,* and *II* indicate various degrees of its purity and strength. The other, known as *auramine G,* was discovered in 1892, and differs from the former in that it contains a tolyl in place of a phenyl group.

Aurantia screen, a collodion film dyed with aurantia and used in orthochromatic photography. *Woodbury,* Encyc. Dict. of Photog., p. 48.

aurantiamarin (a-ran-ti-am'a-rin), *n.* The bitter constituent of the rind of bitter orange (*Citrus Aurantium vulgaris*).

aurantiin (â-ran'ti-in), *n.* [*auranti(um)* orange, + *-in*[2].] Same as ★*naringin.*

aurantine (â-ran'tin), *n.* [? ML. *aurant(ium)* + *-ine*[2].] Same as *abietene.*

aurantium (â-ran'shi-um), *n.* [NL., < ML. *aurantium,* orange: see *orange.*] In *bot.,* same as *hesperidium.*

Aureobasidium (â″rē-ō-bā-sid'i-um), *n.* [NL. (Viala and Boyer, 1891), < L. *aureus,* golden, + NL. *basidium.*] A genus of simple basidiomycetous fungi having a thin byssoid hymenial layer and basidia bearing a variable number of sterigmata with light-yellow cylindrical spores. Only one species, *A. vitis,* is known; it is the cause of a disease of the fruit and leaves of the grape in France. See ★*scald of grape.*

aureole, *n.* **2.** The zone of contact-metamorphism about an intrusive igneous mass. It is equivalent to ★*contact-zone.*

Auric acid, auric hydroxid, $Au(HO)_3$. It behaves as a weak acid, forming with caustic potash potassium aurate, an unstable substance which has been used in gilding.

aurichlorid (â-ri-klō'rid), *n.* [L. *aurum,* gold, + *chlorid.*] In *chem.,* a double chlorid of gold and some more electropositive metal or compound radical, in which the gold exhibits triad valence: as, for example, potassium *aurichlorid* ($KAuCl_4$).

auricle, *n.* **3.** (*d*) *pl.* In the echinoids or sea-urchins having dentary apparatus, a structure composed of ambulacral processes and interambulacral ridges which together underlie the jaws and afford attachment for their muscles: equivalent to *perignathic girdle.* (*e*) In lobate ctenophorans, one of the elongated plate-bearing processes found at the base of each of the four shorter swimming-plates. (*f*) In *Rotifera,* one of a pair of lateral hollow ciliated pits on the body which can be everted to serve as additional swimming-organs.—**Cat's auricle,** a condition in the human subject in which the auricle is folded over on itself.—**Darwinian auricle,** a pointed auricle: so called from the fact that Charles Darwin first called attention to its evolutionary significance.—**Wildermuth auricle,** a condition of the auricle in which the antihelix is larger than the helix.

Auricular angle, in *craniom.,* any angle formed by two lines which meet at the center of the external auditory meatus.—**Auricular appendage** or **appendix.** Same as *appendix auriculæ* (which see, under *appendix*).—**Auricular crura.** See ★*crus.*—**Auricular height,** in *craniom.,* the distance of the auricular point from the horizontal plane tangent to the vertex.—**Auricular index,** the relation of the length of the external ear to its breadth.—**Auricular septum.** Same as *septum auricularum* (which see, under *septum*).—**Auricular sinus.** Same as *sinus venosus* (which see, under *sinus*).—**Auricular triangle,** a triangle formed by lines drawn between the tip of the auricle and the two extremities of its base of insertion.

auriculare (â-rik-ū-lā'rē), *n.* In *craniom.,* the point above the middle of the auditory meatus on the superior border of the external auditory process. *Von Török.*

auricularia, *n.* **3.** [*cap.*] [NL. (Bulliard, 1786).] A genus of fungi, type of the family *Auriculariaceæ,* having an irregular gelatinous more or less ear-shaped sporocarp, with a smooth or somewhat wrinkled hymenium. *A. Auricula-Judæ* is a common and widely distributed species. See *Jew's-ear.*

Auriculariaceæ (â-rik″ū-lā-ri-ā'sē-ē), *n. pl.* [NL., < *Auricularia* + *-aceæ.*] A family of basidiomycetous fungi, belonging to the group *Protobasidiomycetes. Auricularia* is the most common and widely distributed genus.

Auriculariales (â-rik″ū-lā-ri-ā'lēz), *n. pl.* [NL., < *Auricularia* + *-ales.*] A small order of basidiomycetous fungi including two families, the best-known being the *Auriculariaceæ.*

auricularis, *n.* **2.** One of the muscles attached to the concha of the ear.

auriculately (â-rik'ū-lạt-li), *adv.* In an auriculate manner.

auriculation (â-rik-ū-lā'shọn), *n.* [*auriculate* + *-ion.*] The development or possession of ear-like projections, as in the shells of the pelecypod mollusks.

auriculo-infraorbital (â-rik″ū-lọ-in″frạ-ôr'bi-tạl), *a.* In *craniom.,* relating to a plane passing through the upper borders of the auricular foramina and the lower borders of the orbits, accepted by German anthropologists as the horizontal plane of the skull.

auriculospinal (â-rik″ū-lọ-spī'nạl), *a.* Of or pertaining to the auricular foramina and the spine.—**Auriculospinal plane.** Same as *Camper's plane* (which see, under *plane*[1]).

auricyanide (â-ri-sī'a-nid), *n.* [L. *aurum,* gold, + E. *cyanide.*] In *chem.,* a double cyanide of gold and some more electropositive metal or compound radical. It is distinguished from an aurocyanide by the fact that the gold in the latter exhibits monad valence, whereas in an auricyanide the valence is triad. For example, potassium aurocyanide (formed in the important McArthur-Forrest process for the metallurgical extraction of gold, and also largely used in electrogilding), has the composition $KAu(CN)_2$, while potassium auricyanide is $KAu(CN)_4$.

aurifex (â'ri-feks), *n.* [L. *aurifex,* < *aurum,* gold, + *facere,* do, make.] A worker in gold. *Athenæum,* Aug. 30, 1862, p. 276. [Rare.] *N.E.D.*

aurification (â ri-fi-kā'shon), *n.* [L. *aurum*, gold, + *-ficare*, < *facere*, make.] **1.** The working of gold; goldsmith's work.—**2.** The stopping or filling of teeth with gold. *Times* (London), Feb. 2, 1881. [Rare.] *N. E. D.*

aurochlorid, aurochloride (â-rō-klō'rid), *n.* [L. *aurum*, gold, + E. *chlorid.*] In *chem.*, a double chlorid of gold and some more electropositive metal or compound radical in which the gold exhibits monad valence, as, for example, potassium aurochlorid ($KAuCl_2$).

auroduct (â'rō-dukt), *n.* [L. *aura* (< Gr. *αὔρα*), air, + *ductus*, duct.] The central canal of an aurophore.

auronect (â'rō-nekt), *n.* One of the *Auronectæ*.

Auronectæ (â-rō-nek'tē), *n. pl.* [NL., < Gr. *αὔρα*, air in motion, + *νήκτης*, a swimmer.] A section or other group of siphonanthous *Siphonophora*, having a large pneumatophore, a corona of nectocalyxes, and a network of canals in the jelly of the thickened trunk. The siphosome is rounded in shape. They are deep-sea forms.

aurophore (â'rō-fōr), *n.* [Gr. *αὔρα*, air in motion, + *-φορος*, < *φέρειν*, bear.] In *Siphonophora*, an appendage to the pneumatocyst, containing a central tube which puts the cavity of the pneumatocyst in communication with the exterior; possibly it serves as a gas-secreting gland.

aurora, *n.* **5.** In *elect.*, an electric glow-discharge, appearing at very high voltages and somewhat resembling the aurora borealis. It first appears as a blue glow at surfaces and especially at points; at higher electric pressures or voltages pink streamers issue, which gradually lengthen with increasing voltage until ultimately a disruptive spark occurs. See *electric spark.* Also called *corona.*—**Aurora belt,** the belt of maximum auroral frequency extending from Alaska to the southern part of Canada, thence east to Labrador, northeast to northern Sweden and Norway, and east over Siberia to the starting-point.

Auroral arch, an arch of auroral light, usually symmetrical with reference to the magnetic meridian. Sometimes several concentric arches are seen, separated by diffuse light; below the lowest arch is a dark space (the 'dark segment'), but above the highest arch the light gradually fades away toward the zenith. Every effort that has been made to determine the altitude of these sharply defined arches has only accumulated more evidence to show that no two persons see the same arch, and that the whole phenomenon is some form of perspective illusion.—**Auroral beams,** straight beams or bars of auroral light, usually perpendicular to the auroral arch, but often visible alone when the arch is not well formed or when it is entirely below the horizon.—**Auroral corona,** an arrangement of small auroral beams symmetrically surrounding a central point that lies in the direction of the freely suspended magnetic needle. Within the corona thus formed only faint diffuse light, if any, prevails. The small beams ("daggers" or "swords") forming the corona generally have a movement toward the center. The whole phenomenon is a perspective illusion; the beams of light are really parallel to each other and moving away from the observer; perspectively they point and move toward their vanishing-point.—**Auroral distribution,** the distribution of auroral frequency over the earth's surface. It was first shown by Fritz that a zone of maximum auroral frequency passes in an irregular way through southern Canada, Iceland, northern Norway, and Sweden around the north pole. Observers north of this belt see the aurora to the south of them rather than to the north. The aurora is very rarely seen at stations within thirty degrees of the equator, and it is less frequent at any latitude in the southern than in the northern hemisphere. The general distribution of auroras is shown by charts of auroral isochasmic lines.—**Auroral flashes,** variations in brightness of the auroral light: the beams and rays usually grow longer and broader as they brighten; specifically, the upward flashing movement of the short beams or spots of light which form the auroral corona.—**Auroral glory,** an auroral corona; auroral beams encircling a small region of the sky and pointing or converging toward its center. See *corona.*—**Auroral needles,** the finest elementary lines of auroral light. The apparent character of the perspective phenomena, such as arches, drapery, coronæ, waves, and diffuse light, depends upon the varying arrangements of the auroral needles.—**Auroral period.** (*a*) The season of frequent auroras. (*b*) The length of time elapsing between successive maxima or minima of auroral displays, as the diurnal, the annual, the sun-spot, and the 55-year period. The last is possibly equivalent to 5 sun-spot periods. See ★*auroral periodicity.*—**Auroral periodicity,** the periodic changes in brightness and frequency of the auroral display. Such changes are more frequent at 9 or 10 P. M., which indicate a diurnal maximum; they are more frequent in certain months of the year (after allowance is made for the interruptions by moonshine and by twilight), the annual maximum occurring in September; they are also more frequent in or near the years of maximum sun-spot frequency.—**Auroral waves,** local periodic variations in brightness running rapidly along each auroral beam or converging from all directions toward the center of an auroral corona. When only a single beam crosses the sky it sometimes appears broken up into individual parts, auroral clouds, or transverse striæ, each of which has a rapid progressive motion along the beam. It seems likely that the lines or needles of auroral light are arranged in obedience to magnetic or electric influences, and that when the latter undergo rapid disturbances, as in magnetic storms, the lines of light are also influenced, so that the perspective effect, which is called an auroral arch, beam, or flash, shows corresponding symmetrical periodical changes.

aurorium (â-rō'ri-um), *n.* A hypothetic chemical element the existence of which has been supposed to be indicated by a particular line observed by Angström in the spectrum of auroral light.

Still awaiting discovery by the fortunate spectroscopist are the unknown celestial elements *aurorium*, with a characteristic line at 5,570.7, and nebulum, having two bright lines at 5,007.05 and 4,959.02.

Sir W. Crookes, Address to the Brit. Assoc., 1898.

aurotin (â'rō-tin), *n.* [L. *aurum*, gold, + *-t-* + *-in*[2].] A mordant acid color of the triphenylcarbinol type. It dyes wool an orange-yellow.

aurotype (â'rō-tīp), *n.* [L. *aurum*, gold, + Gr. *τύπος*, type.] A photograph upon paper impregnated with a solution of gold salt. *Stand. Dict.*

aurulent (â'rū-lent), *a.* [LL. *aurulentus*, < L. *aurum*, gold.] Gold-colored. *Bailey.* [Rare.]

Aurum mosaicum or **musivum.** (*b*) Stannic sulphid or tin disulphid, $Sn\,S_2$. This substance has been used to rub over the silk cushion of an electric machine.

Ausgleich (ous'glīch), *n.* [G., a compromise, < *ausgleichen*, make equal, even or smooth, balance, compromise, < *aus*, out, + *gleichen*, make like or equal: see *like*[2].] In German or Austrian politics, a compromise or agreement between conflicting parties; particularly an agreement made in 1867 between Austria and Hungary, renewable every ten years, by which autonomy was granted to Hungary.

austenite (âs'ten-īt), *n.* [*Austen*, a surname, + *-ite*[2].] A constituent of steel, obtained by quenching high carbon steel from a temperature of 1000° C. in a menstruum such as iced brine, which will produce very rapid cooling. It is probable that austenite is a true solid solution of carbon in iron, and that martensite, troostite, and sorbite are stages in the decomposition of the solid solution—that is, are intermediate steps between austenite on the one hand and pearlite on the other. On the subject of the constituents of hardened steel there exists at the present time a great deal of confusion in the nomenclature, nor is it possible to say definitely what is the true nature of any of these constituents.

austenitic (âs-te-nit'ik), *a.* Of, pertaining to, or characteristic of austenite.

Except that the polyhedral or "*austenitic*" type of structure has never been obtained alone in a pure carbon steel, the types of the high-speed tool steels might all be obtained from pure iron carbon steels by appropriate thermal treatment. The *austenitic* structure appears to be that of the nose of the tool in actual use.

Nature, May 18, 1905, p. 69.

Austin limestone. See ★*limestone.*

austral, *a.* **2.** [*cap.*] Of or pertaining to the great group of islands in the southern hemisphere of which New Zealand, Tasmania, and the continental island of Australia are the chief; Australasian.—**Austral continent,** the supposed continent in the south-polar region.—**Austral-English,** English as spoken in Australia and New Zealand, its distinguishing features being a certain number of English words and phrases and names of animals and plants used with Australian applications, a number of slang terms and idioms, and, finally, a considerable number of words from the native Australian and Maori languages. *E. E. Morris*, Austral English, p. xi.

Australian ballot. See ★*ballot.*—**Australian blight.** Same as ★*angioneurotic edema.*—**Australian brome-grass.** See ★*brome-grass.*—**Australian harebell.** Same as *Tasmanian* ★*bluebell.*—**Australian ladybug.** See ★*ladybug.*—**Australian region,** a zoogeographic division including Australia, Tasmania, and the immediate adjacent islands. By some authorities it is extended to include New Guinea.

Australic (âs-trā'lik), *a.* Same as *Australioid.*

australium (âs-trā'li-um), *n.* [NL., < *Australia.*] The name given by Wedgewood in 1790 to a supposed new chemical element. The sand from Australia in which it was believed to be present proved on more careful examination to contain only substances already well known. The name *sydneium* was proposed as a synonym.

austraterebinthene (âs″tra-ter-ē-bin'thēn), *n.* [*Austra(lene)* + *terebinth* + *-ene.*] Same as *australene.* See ★*pinene.*

austriacum (âs-trī'a-kum), *n.* [NL., < *Austriacus*, adj., < *Austria*, Austria.] The name proposed by Brauner (of Prague, Austria) for a hypothetic chemical element of high atomic weight, of the probable presence of which in tellurium as hitherto known he supposed he had found some evidence. If really present this would serve to explain the failure of tellurium, with its usually accepted atomic weight, to fall into its proper place in the periodic classification of the elements.

Austrian brome-grass, cinnabar. See ★*brome-grass*, ★*cinnabar.*

austrium (âs'tri-um), *n.* [NL., < *Austria*, Austria.] The name proposed in 1886 by Linnemann for a supposed new chemical element which he believed he had found in the mineral orthite. It proved to be identical with gallium. In 1900 Pribram announced that he had found spectroscopic evidence of the presence in orthite of traces of another new element, not that of Linnemann, to which it was proposed that the name *austrium* should be transferred. To prevent confusion the latter has been distinguished as *austrium II.*

austrocentral (âs-trō-sen'tral), *a.* [L. *auster*, south wind, + *centrum*, center, + *-al*[1].] Of the south-central region.

Austro-Hungarian (âs″trō-hung-gā'ri-an), *a.* Of or pertaining to Austria-Hungary.

Austronesian (âs-trō-nē'sian), *a.* [L. *auster*, the south (wind), + Gr. *νῆσος*, island.] Same as *Malay-Polynesian.*

Father Schmidt rejects Muller's idea that the Polynesians were the first, the Melanesians a second, section of the migration represented by the oceanic peoples, but accepts that part of his theory which sees in the Melanesians a mixed race sprung from the Papuan aborigines and *Austronesian* (Malayo-Polynesian) immigrants.

Amer. Anthropologist, Jan.-March, 1903, p. 164.

austro-occidental (âs-trō-ok-si-den'tal), *a.* Of the southwestern region.

austro-oriental (âs-trō-ō-ri-en'tal), *a.* Of the southeastern region.

austroriparian (â-strō-rī-pā'ri-an), *a.* [L. *auster*, the south (wind), + *riparius*, riparian.] Pertaining to or situated on the southern bank or border; specifically, belonging to the austroriparian area: as, an *austroriparian* species, the *austroriparian* fauna. See ★*area.*

It was early shown by the division that the *Austroriparian* is the direct continuation of the arid Lower Sonoran fauna of the table-land of Mexico and the southwestern United States, and that this same fauna belt occupies the interior valley of California and most of the peninsula of Lower California.

Yearbook, U. S. Dept. Agr., 1894, p. 208.

Austroriparian zone. Same as *austroriparian* ★*area.*

ausubo (ou-sō'bō), *n.* [W. Ind. native name.] The name in Porto Rico of the West Indian mastic-tree, *Sideroxylon fœtidissimum.* Its timber is the most important and widely used on the island, being noted for its great durability.

autarch (â'tärk), *n.* [LGr. *αὐταρχος*, an autocrat, noun use of Gr. *αὔταρχος*, self-ruling: see *autarchy.*] An absolute ruler. [Rare.]

autarchic (â-tär'kik), *a.* [*autarchy* + *-ic.*] Of or pertaining to autarchy; specifically, pertaining to a stage of social evolution in which groups are held together in larger wholes involuntarily and by force. *Amer. Jour. Sociol.*, Jan., 1901, p. 505.

autarith (â'ta-rith), *n.* [Irreg. < Gr. *αὐτός*, self, + *ἀριθ(μός)*, number.] An automatic calculating-machine capable of performing the four fundamental arithmetical operations of adding, subtracting, multiplying, and dividing. Buttons are moved by the operator along certain slots corresponding to the figures with which the operation is to be performed. All further movements are effected automatically through the action of a weight or spring-motor which supplies the requisite energy. *Sci. Amer. Sup.*, Feb. 21, 1903, p. 22,689.

aute (ä'ō-tā), *n.* [Maori and Tahitian.] A name in Tahiti and New Zealand of the paper-mulberry, *Papyrius papyrifera.* See *Broussonetia.*

Auteupuccinia (â″-tū-puk-sin'i-ä), *n.* [NL., < Gr. *αὐτός*, self, + *εὖ*, well (good), + *Puccinia.*] The name applied by De Bary to a section of the genus *Puccinia* characterized by having the spermagonia, æcidia, uredospores, and teleutospores borne on the same host-plant.

authenticater, authenticator (â-then'ti-kā-tér, -tor), *n.* One who authenticates a document, statement, fact, or the like, or establishes or guarantees its genuineness, validity, or credibility.

authigenetic (â″thi-jē-net'ik), *a.* See ★*authigenic.*

authigenic (â-thi-jen'ik), *a.* [Gr. *αὐθιγενής*, born on the spot, < *αὐθι*, there, + *-γενής*, -born.] Originating where found: applied to the minerals of an igneous or metamorphic rock which have crystallized in place, as contrasted with the fragments of preëxisting rocks which form the sediments. Also *authigenetic* and *authigenous.* *Geikie*, Text-book of Geol., p. 90.

authigenous (â-thij'e-nus), *a.* See ★*authigenic.*

author, *n.* **7.** *pl.* A game of cards played with a special pack bearing the names of authors and their works. The pack is dealt out one at a time as far as it will go for the players engaged. The one on the left of the dealer begins by asking any player he chooses for a card of the same denomination as one in his hand, naming the suit he wants. If the player asked has it he must give it up, and the same player may ask again; if he has not the card it becomes his turn to ask. As soon as any player gets four of the same denomination (a 'book') he lays them aside. The winner is the one who lays aside the greatest number of 'books' in this way.—**Author's proof.** See ★*proof.*

author-catalogue, author-catalog (â'thor-kat'a-log), *n.* A library catalogue in which the books are arranged alphabetically according to authors.

authorcraft (â'thor-kraft), *n.* The craft of the author: the exercise of the skill of an author; authorship: as, "the mysteries of *authorcraft*," *Scott*, Antiquary, xiv.

author-entry (â'thor-en tri), *n.* In *library-cataloguing*, the entry of a book under the name of the author, as distinct from a subject-entry.

authorially (â thō'ri-al-i), *adv.* As an author; after the manner of an author or writer of books.

I was, *authorially* speaking, behind the door.
Tupper, Twins, p. 170. [Rare.] *N. E. D.*

authorish (â'thor-ish), *a.* [*author* + *-ish*[1].] Somewhat like an author.

Yet it hath an *authorish* twang about it.
Lamb, Final Mem., p. 257.

authorized (â'thor-īzd), *p. a.* **1.** Duly empowered: as, an *authorized* agent.—**2.** Formally sanctioned by those having the right or power to sanction, as a reprint or translation of a book: as, an *authorized* edition; the *authorized* version of the Bible. Also *authorised*.

authorless (â'thor-les), *a.* [*author* + *-less*.] **1.** Of unknown or unadmitted authorship; anonymous: as, an *authorless* rumor.

As I am not ignorant, so I ought to be sensible of the false aspersions some *authorless* tongues have laid upon me. *Mrs. T. Sackville*, Guardian, Aug 13, 1713, No. 133.

2. That never had an author; unoriginated by any one; uncreated. *Fitzedward Hall*, Hindu Philos. Syst., p. 64.—**3.** Without authors or writers: as, "an interval of *authorless* years," *B. Wheatley*. [Rare.] *N. E. D.*

author-number (â'thor-num"bėr), *n.* The number which, when appended to the initial letter of an author's name, is used throughout a library catalogue to represent that name: for example, *F*54 for John Fiske, *F*87 for E. A. Freeman, etc.

authotype (â'thō-tīp), *n.* [Appar. an error for *autotype*. Confused with *author*.] In *printing*: (*a*) The printed facsimile of a signature or design. (*b*) The block or plate by which the facsimile is produced.

autic (â'tik), *a.* [*aut*(*o*)[3] + *-ic*.] Of, pertaining to, or consisting of autos or real existences.

We should also bear in mind that behind and above the great universe of natural objects, and the true cause of all the rest, stands the *autic* universe.
G. J. Stoney, reprinted in Smithsonian Report, 1899, [p. 221.

auto[2] (â'tō), *n.* A colloquial abbreviation of *automobile*; a motor-car. *Amer. Inventor*, Feb. 15, 1904, p. 79

auto[3] (â'tō), *n.*; pl. *autos* (-tōz). [A detached use of *auto-*.] A real existence; what actually exists, in contradistinction to what only apparently exists.

An *auto*, then, is a thing that really exists and in no wise depends on the way we, human minds, may happen to regard it. Our impressions or beliefs about it may be correct or may be erroneous, but the term *auto* means the thing itself.
G. J. Stoney, Proc. Roy Dub. Soc., VI. (N. S.) 478, 1896.

auto-abstract (â-tō-ab'strakt), *n.* A summary or abstract of an address or communication, as before a learned society, prepared by the speaker himself for insertion in the printed proceedings. *Nature*, LXVII. 253.

auto-active (â-tō-ak'tiv), *a.* Self-active or self-acting: as, *auto-active* minds.

auto-anticoherer (â"tō-an-ti-kō-hēr'ėr), *n.* In *elect.*, an anticoherer which recovers spontaneously. See ★*anticoherer*.

auto-anticomplement (â"tō-an-ti-kom'plē-ment), *n.* An anticomplement which is formed within the same body against its own complements. See ★*complement*, 8.

Autobasidii (â"tō-bā-sid'i-ī), *n. pl.* [NL., pl. of adj. from *autobasidium*.] Same as ★*Autobasidiomycetes*.

Autobasidiomycetes (â"tō-bā-sid"i-ō-mī-sē'tēz), *n. pl.* [NL., < Gr. αὐτός, self, + *Basidiomycetes*.] A group of *Basidiomycetes* having unicellular basidia with sterigmata borne at the apex which produce a single spore. Also *Autobasidii*.

autobasidium (â"tō-bā-sid'i-um), *n.*; pl. *autobasidia* (-ä). [NL., < Gr. αὐτός, self, + *basidium* (which see).] A simple basidium without septation, as in the *Autobasidiomycetes*.

autobiografer, *n.* A simplified spelling of *autobiographer*.

autobiografy, *n.* A simplified spelling of *autobiography*.

autobiographal (â"tō-bī-og'ra-fal), *a.* Same as *autobiographical*. [Rare.] *N. E. D.*

autoboat (â'tō-bōt"), *n.* A boat equipped with an automobile engine which, by virtue of its ability to make many more revolutions per minute than the regular marine type of engine, gives a high rate of speed. The first regular autoboat race in America took place on May 30, 1904, under the charge of the Manhasset Bay Yacht Club of New York. See ★*motorboat*.

autoboating (â'tō-bōt"ing), *n.* The sailing or navigation of an autoboat for pleasure or recreation.

autobolide (ō-tō-bō-lēd'), *n.* [F. **autobolide*, < Gr. αὐτός, self, + βολίς (βολιδ-), a missile.] An automobile car designed to be projected through the air from a specially constructed track: an exhibition of daring devised in France. The car and operator descend a steep aërial incline which curves inward and backward at the foot. The car is held from falling by guard-rails as it turns upside down at the foot of the incline. The stored momentum of the car sends it across an air-gap in the track, and a counter-weight under the car causes it to turn a half-somersault in the air, landing against a curved surface which passes into a gentle incline on which the car, now right side up, is gradually retarded until it runs easily off on the ground and is brought to rest. The track is less than 200 feet long, and the act occupies about 4 seconds.

autobus (â'tō-bus"), *n.* [*auto-* + *bus*.] An automobile omnibus; a vehicle propelled by its own motor and capable of carrying a dozen or more passengers.

autocar (â'tō-kär), *n.* [*auto*(*-mobile*) + *car*.] **1.** An automobile car; a car which contains in itself a motor with its source of power.—**2.** A trade-name of a special form of motor-car.

autocarette (â"tō-kä-ret'), *n.* [*auto-* + *carette*.] A commercial name for a type of motor-driven omnibus or wagonette used in cities.

autocarpous, *a.* (*b*) Self-fruiting, that is, fruiting as the result of self-fertilization.

autocarpy (â'tō-kär-pi), *n.* [NL. **autocarpia*, < Gr. αὐτόκαρπος, self-fructifying, < Gr. αὐτός, self, + καρπός, fruit.] The condition of self-fruiting, or fruiting as the result of self-fertilization.

autocarriage (â'tō-kar-āj), *n.* [*auto-* + *carriage*.] A motor-driven vehicle or motor-car, usually of the pleasure-vehicle class and carrying more than two persons.

autocatalysis (â"tō-ka-tal'i-sis), *n.* [*auto-* + *catalysis*.] In *phys. chem.*, the catalytic action of a complex substance upon itself, in which one of its functions accelerates the velocity of reaction of another function.

autocatalytic (â"tō-kat-a-lit'ik), *a.* In *phys. chem.*, acting by autocatalysis, or exhibiting the phenomenon of autocatalysis.

autochore (â'tō-kōr), *n.* [Gr. αὐτός, self, + χωρεῖν, spread abroad.] In *phytogeog.*, a plant distributed by its own motility: applied to the same plants as *mastigospore*, but in a different sense. *F. E. Clements*.

autochrome (â'tō-krōm), *a.* [Gr. αὐτός, self, + χρῶμα, color.] A term applied to the Lumière process of color ★photography (which see). *The Century*, Jan., 1908, p. 326.

autochthon, *n.* **3.** That element or portion of the fauna of a given region which has descended directly from animals which occupied the region at a much earlier period: contrasted with *heterochthon*.

autochthonous, *a.* **3.** In *petrol.*, noting rocks which have originated *in situ*, such as peat, rock-salt, and stalagmitic limestone; also applied to constituent minerals of rocks which have crystallized in the place they now occupy. Autochthonous materials are contrasted with the mechanically derived particles of clastic rocks.

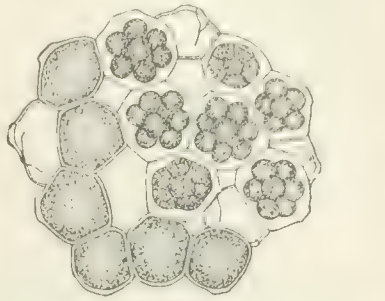
autoclastic (â-tō-klas'tik), *a.* [Gr. αὐτός, self, + κλαστός, < κλᾶν, break.] In *geol.*, noting a fragmental rock produced by dynamic crushing or granulation, without loss of cohesion: contrasted with sediments the particles of which come from a distance.

Another term, "*autoclastic*," introduced by American writers and frequently used in this memoir, might with advantage be changed to "authiclastic" (= brecciated *in situ*). *Nature*, April 16, 1903, p. 555.

autoclave, *n.* **2.** A form of digester in which mixtures of chemicals can be safely heated under great pressure: largely used in the manufacture of coal-tar dyestuffs.—**3.** A device for the sterilization by steam under pressure of bacterial cultures or culture media, milk, and other substances.

autocoherer (â"tō-kō-hēr'ėr), *n.* [*auto-* + *coherer*.] In *elect.*, a coherer which spontaneously recovers its resistance after the passing of the electric wave. See ★*coherer*.

autocolony (â'tō-kol-ō-ni), *n.* [*auto-* + *colony*.] In *bot.*, the union in the form of a colony of



Autocolony.
[illegible]

several autospores at the time of their expulsion.

autoconduction (â'tō-kon-duk'shon), *n.* [*auto-* + *conduction*.] A method of employing high-frequency currents by placing the part to be acted upon within the solenoid, but not in direct connection with the circuit.

autoconverter (â"tō-kon-vėr'tėr), *n.* See ★*autotransformer*.

autocopyist (â-tō-kop'i-ist), *n.* [Gr. αὐτός, self, + *copyist*.] In *photog.*, a simplified method of printing from sheets of bichromated gelatin in an ordinary letter-copying press.

autocratress (â-tok'ra-tres), *n.* A female autocrat; an autocratrix.

autocriticism (â-tō-krit'i-sizm), *n.* Criticism of one's self or of one's own productions; self-criticism.

autocycle (â'tō-sī-kl), *n.* [*auto-* + *cycle*.] **1.** The trade-name of a combination of two tandem bicycles side by side, between which are the tanks and appliances appropriate to a chemical fire-extinguisher, and a propelling motor. The saddles of the bicycles will carry four men, and the motor will propel the machine at high speed. See also ★*autoquadricycle*.—**2.** Same as ★*motor-cycle*.

autocytolysin (â"tō-sī-tol'i-sin), *n.* [Gr. αὐτός, self, + κύτος, a hollow (a cell), + λύσις, dissolution, + *-in*[2].] Same as ★*autolysin*.

autocytolytic (â"tō-sī-tō-lit'ik), *a.* [*autocytolysis*(*-lyt-*) + *-ic*.] Of or pertaining to the destruction of cells by cytotoxins produced in the body of the same animal.

Just what the agencies are under which in normal living tissues cells are protected from the action of the *autocytolytic* substances is not yet clear.
Med. Record, Feb. 14, 1903, p. 247.

autocytotoxin (â-tō-sī-tō-tok'sin), *n.* [*auto-* + *cytotoxin*.] A cytotoxin produced in the body of an animal against its own cells. The formation of such bodies is rare, but it seems to occur at times. See ★*autohemolysin*.

In a few instances *autocytotoxins* for blood-cells have been produced. *Science*, May 2, 1902, p. 697.

autodermalium (â"tō-dėr-mā'li-um), *n.*; pl. *autodermalia* (-ä). [NL., < Gr. αὐτός, self, + δέρμα, skin: see *dermal*.] In sponges, one of the spicules which support the dermal membrane. They are usually hexactinal or pentactinal, with 4 similar rays lying embedded in the membrane and with the axial cross placed within the latter. Compare *hypodermale*.

Autodetus (â-tod'ē-tus), *n.* [Gr. αὐτόδετος, self-bound, < αὐτός, self, + *δετός, < δεῖν, bind.] A genus of tubicolous annelids which make a regularly spiral tube attached by the apical whorls: erroneously regarded by some authors as gastropod mollusks. The species are all extinct and are found in Silurian and Devonian formations.

autodiagnosis (â"tō-dī-ag-nō'sis), *n.* [*auto-* + *diagnosis*.] Diagnosis of one's own disease or state of health.

autodiagnostic (â"tō-dī-ag-nos'tik), *a.* [*auto-* + *diagnostic*.] Relating to or effecting autodiagnosis.

The same hand must not be used for *autodiagnostic* purposes all the time, but it is advisable to change hands methodically, using the right hand at one séance, and the left at another. *Med. Record*, LXIII, 169.

autodifferentiation (â tọ-dif-e-ren shi-ā'-shọn), *n.* In *biol.*, differentiation produced by intrinsic causes or due to conditions resident in the organism. *A. W. Trettien*, Amer. Jour. Psychol., XII. p. 25.

autodigestion (â″tō-di-jes'tyọn), *n.* [*auto-* + *digestion.*] Digestion by the gastric juice of portions of the mucous membrane of the stomach which have lost their vitality. See ★*autolysis.*

autodrome (â'tọ-drōm), *n.* [*auto*² + *-drome*, as in *hippodrome.* Cf. Gr. *αὐτόδρομος*, running of itself, ‹ *αὐτός*, self, + *-δρομος*, ‹ *δραμεῖν*, run.] A circus or course for the running of automobiles, especially for speeding or racing.

autœcious, *a.* 2. In *mycol.*, passing through all its stages of development on the same host, as certain species of the genus *Puccinia.*

autœcism (â-tē'sizm), *n.* [*autœc*(*ious*) + *-ism.*] The state or condition of an autœcious parasite.

auto-epigraph (â-tọ-ep'i-graf), *n.* [*auto-* + *epigraph.*] An epigraph written by the subject of it; an inscription composed by one's self for one's own tomb or monument.

auto-erotism (â″tō-e-rot'izm), *n.* [*auto-* + *erot*(*ic*) + *-ism.*] A form of sexual perversion in which the presence or thought of another person is not necessary to arouse desire.

autogamic (â-tō-gam'ik), *a.* 1. In *bot.*, of, pertaining to, or exhibiting self-fertilization.—2. In *biol.*, of or pertaining to the pairing or mating of like with like.

Pearson adds, "Variations do not occur accidentally, or in isolated instances; *autogamic* and assortative mating are realities."
T. H. Morgan, Evol. and Adapt., p. 269.

Autogamic mating. See ★*mating.*

autogamy, *n.* 2. In *biol.*, the pairing or mating of like with like.

autogastralium (â″tō-gas-trā'li-um), *n.*; pl. *autogastralia* (-ä). [Gr. *αὐτός*, self, + *gastralis*, gastral. Cf. *gastralium.*] One of the spicules which support the gastral membrane in sponges. Also *gastralium.*

autogen (â'tō-jen), *n.* [Gr. *αὐτογενής*, self-produced.] A self-sustaining organism, as contrasted with one that is dependent upon others. [Rare.]

The broadest distinction that can be named is that which separates the manufacturing organisms from the non-manufacturing organisms, the *autogen* from the parasite. *L. F. Ward*, Dynamic Sociol., I. 412.

autogeneric (â″tō-jẹ-ner'ik), *a.* [*auto-* + *generic.*] Pertaining to other individuals of the same living type: used by K. Pearson in such phrases as *autogeneric* influence, *autogeneric* selection, etc.

autogenetic, *a.* 2. In *phys. geog.*, pertaining to a stream of which the course has not been determined by the slope of the original surface of the land.—**Autogenetic drainage,** drainage (streams) of which the course has not been determined by the original surface of the land. Such streams are characteristic of many plains and of the valley-sides of master-streams.—**Autogenetic topography,** land relief which has been produced by the work of autogenetic streams.

autogenic, *a.* 2. Same as ★*authigenic.*

Autogenous soldering. This process is now carried out with metals, in addition to the older methods, by means of the oxyacetylene blowpipe and of the aluminothermy of Goldschmidt.—**Autogenous valley,** a valley formed by an autogenetic stream.

autograf, *a.*, *n.*, and *v.t.* A simplified spelling of *autograph.*

autogram (â'tō-gram), *n.* [Gr. *αὐτός*, self, + *γράμμα*, writing.] 1. A telegraphic message sent and received in the handwriting of the sender. See *telautograph.*—2. An autograph.

Autograph recorder, a time-recording device which, when the autograph of an arriving or leaving employee is inscribed on a tape or tablet, simultaneously records the time of the inscription.

autographism (â'tō-gråf-ism), *n.* [As *autograph* + *-ism.*) A condition in which tracings made on the skin with the end of a stick or other hard object persist for a time as elevations on the surface; dermographism.

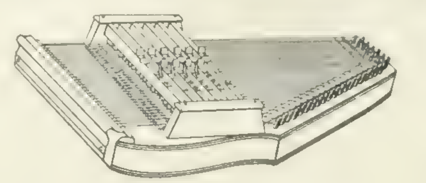
autographize (â'tọ-gra-fīz), *v. i.*; pret. and pp. *autographized*, ppr. *autographizing.* [*autograph* + *-ize.*] To collect autographs. *Dibdin.* [Rare.] *N. E. D.*

autographizer (â'tō-gra-fī″zėr), *n.* One who is engaged in making a collection of autographs. *Dibdin.* [Rare.] *N. E. D.*

autographometer (â″tō-gra-fom'e-tėr), *n.* [Gr. *αὐτόγραφος*, self-written, + *μέτρον*, measure.] An instrument which registers the topography of surfaces over which it is rolled.

autogravure (â″tō-grā-vūr'), *n.* [*auto-* + F. *gravure*, ‹ *graver*, engrave, record.] A photomechanical modification of the etching process. The placing of a bituminous ground on copper is followed by the transfer of a photographic image from a reversed transparency, etching being accomplished by solutions of ferric chlorid. *Woodbury*, Encyc. Dict. of Photog., p. 49.

autoharp (â'tọ-härp), *n.* [*auto-* + *harp.*] A musical instrument of the zither class, having



Autoharp

across the strings several bars provided with projecting dampers so arranged that when one of the bars is pressed down all strings are damped or rendered mute except those of some particular chord. By supplying such bars for a number of chords usually required in simple accompaniments, the instrument is made usable for convenient arpeggio effects with but little technical knowledge or skill on the part of the player.

autohemolysin (â″tō-hē-mol'i-sin), *n.* A hemolysin directed against the red corpuscles of the same individual.

autohemolysis (â″tō-hē-mol'i-sis), *n.* Hemolysis referable to the action of autohemolysins. It is of rare occurrence. Also *autohæmolysis.*

Some observations are recorded in which, after profuse internal hemorrhage, hæmaturia has developed, indicating the possibility of *autohæmolysis* under special conditions. *Med. Record*, Feb. 14, 1903, p. 247.

autohemolytic (â″tō-hem-ō-lit'ik), *a.* Referring to the action of autohemolysins. Also *autohæmolytic.*

autohypnosis (â tō-hip-nō'sis), *n.* [*auto-* + *hypnosis.*] Self-induced hypnotic trance.

autohypnotic (â″tō-hip-not'ik), *a.* and *n.* **I.** *a.* Relating to or of the nature of autohypnosis.
II. *n.* One who has the power to put himself into the hypnotic state.

autohypnotism (â-tō-hip'nọ-tizm), *n.* [*auto-* + *hypnotism.*] Self-induced hypnotism.

autohypnotization (â-tō-hip″nọ-ti-zā'shọn), *n.* The induction of hypnosis by autosuggestion: self-hypnotizing.

The conduct of our witch-burning ancestors now becomes intelligible, a step on the way to being pardonable. With their methods and inherited prejudices, they could scarcely have reasoned otherwise than they did in certain cases of hysteria and *autohypnotization.*
Encyc. Brit., XXXII. 53.

auto-immunity (â″tō-i-mū'ni-ti), *n.* [*auto-* + *immunity.*] Immunity acquired through disease, or congenital, as distinguished from that effected by the injection of prophylactic serums.

auto-immunization (â″tọ-i-mū-ni-zā'shọn), *n.* The immunization of an animal with cells or cellular products derived from the same animal. The resulting adaptation-products are toxic for the same cells which gave rise to their formation. Such an occurrence is rare. See ★*autohemolysin.*

auto-infection (â″tō-in-fek'shọn), *n.* Self-infection; infection of the body from within, in contradistinction to exogenic infection; the act whereby an organism infects itself with parasites, as sometimes happens in cases of tapeworm, pinworms, bacterial diseases, etc.

Some are short-lived, and from knowledge of their life history one may conclude that they are not likely to be met with in large numbers, while in other cases *auto-infection* renders a considerable increase in numbers probable as is the case with the pinworms, Oxyuris vermicularis, or threatens to infest the host with dangerous larval stages as in the pork tapeworm, Tænia solium.
Trans. Amer. Micros. Soc., Nov. 1903, p. 111.

autoing (â'tọ-ing), *n.* The use of automobiles for business or pleasure traveling.

auto-intoxication (â″tọ-in-tok-si-kā'shọn), *n.* Poisoning with substances produced within the body; systemic poisoning by toxic material formed within one's own body during the process of intestinal digestion, or by the waste products of metabolism.

The common starting-point of *auto-intoxication* theories is the influence of certain products of decomposition of living substance upon the continuance of cell-activity.
H. H. Foster, Amer. Jour. Psychol., XII. 160.

autoist (â'tọ-ist), *n.* [*auto* + *-ist.*] One who owns, uses, or runs an 'auto' or automobile. *Sci. Amer.* LXXXVIII. 134.

autokinesis (â″tọ-ki-nē'sis), *n.* [See *autokinesy.*] In *physiol.*, spontaneous motion.

autolimnitic (â″tọ-lim-nit'ik), *a.* [Gr. *αὐτός*, self, + *λίμνη*, lake, + *-it-ic.*] Floating or swimming in fresh water and confined to the superficial layer of water. See ★*bathylimnitic*, ★*limnitic*, ★*zonolimnitic.* *Haeckel* (trans.) Planktonic Studies, p. 580.

autologist (â tol'ọ-jist), *n.* One who is engaged in the scientific study of self. See *autology.*

autoluminescence (â″tō-lū-mi-nes'ẹns), *n.* The spontaneous emission of light. See ★*luminescence.*

Of more popular interest was Prof. George F. Barker's "Note on Radio-activity and *Autoluminescence.*"
Sci. Amer., May 7, 1904, p. 366.

autoluminescent (â″tọ-lū-mi-nes'ẹnt), *n.* [*auto-* + *luminescent.*] Capable of emitting luminous rays spontaneously and without excitation from other bodies: said of the so-called radioactive substances. See ★*luminescence.*

autolysin (â-tol'i-sin), *n.* [*autolysis* + *-in*².] A lysin which will cause the dissolution of cells in the body of the animal in which it is formed. The formation of such bodies is rare. Also *autocytolysin.*

autolysis (â-tol'i-sis), *n.* [Gr. *αὐτός*, self, + *λύσις*, dissolution.] Self-dissolution; in *physiol.*, self-digestion; autodigestion. Until recently it was generally held that the only ferments occurring in the animal body were the common ferments of the digestive secretions, and that cellular digestion, in contradistinction to gastro-intestinal digestion, was referable to the peculiar activity of living protoplasm. Salkowski, however, demonstrated as early as 1890 that liver-tissue, when finely minced and kept in saturated chloroform water, will undergo changes which are manifestly analogous to those occurring during pancreatic digestion. For this form of tissue-digestion Salkowski proposed the term *autodigestion*, and he suggested that probably the process was referable to the action of ferments contained in the liver-cells which were liberated after the death of the latter by the chloroform. Similar changes could be demonstrated in the case of muscle-tissue. Other investigators, while admitting that autodigestion of organs does occur, explained the phenomenon on the basis of a supposed absorption of gastro-intestinal zymogens and their transformation into the corresponding enzyms by the chloroform. This view has been definitely abandoned, it having been satisfactorily demonstrated that Salkowski's interpretation of the process of autodigestion, or *autolysis*, as it is now more commonly termed, is correct, and that cellular digestion is undoubtedly referable to intracellular ferment-action. This is in accord with observations made in vegetable physiology, where it had already been shown that the transformation of starch in developing seeds, in tubers, and in rhizomes was referable to an intracellular diastase, and that the solution of glucosides and fats was dependent upon the action of enzyms. Nevertheless the full import of intracellular ferment-action was not fully recognized until Büchner showed that even though ferments cannot be extracted from all dead cells by ordinary means, they can be demonstrated after the destruction of the cell-envelop by high pressure, by repeated freezing and thawing, etc. These researches, which were essentially conducted with yeast-cells, and led to the discovery of the intracellular zymose, are now classical. In their general behavior the intracellular autolytic ferments are similar to the common digestive ferments. Here, as there, are proteolytic ferments, diastatic ferments, and lipolytic ferments. There is, however, a greater multiplicity; for in certain cells is recognized the existence also of oxidizing ferments, of ferments which are capable of causing the cleavage of nucleins, of others which can transform amido-acids into amides, and of still others which are capable of splitting off carbon dioxid from certain bodies, etc. Apparently we are only on the threshold of knowledge of these ferments, the number of which in a single cell may be remarkable, as in the liver-cell, where at least 12 different ferments, side by side, have been demonstrated. Autolytic proteolysis is strictly analogous to peptic and tryptic digestion, but it is noteworthy that the autolytic proteases are more specific in their action. Generally speaking, they cause the cleavage of the albumins of their respective tissues more readily than of heterologous tissues, and certain members of the group, such as the proteolytic ferment of the liver, are totally incapable of acting upon the albumins of other organs, as lung-tissue, for example. Therefore Jacobi has suggested restricting the term *autolysis* to the destructive action of the ferments of a given organ or tissue upon the corresponding tissue, and designating the action of a given ferment upon a foreign tissue as *heterolysis.* Whether the autolytic ferments are also capable of constructive action has not yet been ascertained. *A priori* this appears likely, and it may be imagined that under normal conditions a certain equilibrium of reaction exists between the complex cellular components and the corresponding radicals. The recognition of this principle will lead to a more satisfactory understanding of many problems connected with cell-nutrition, not only under normal but also under pathological conditions. Jacobi has already shown that liver autolysis is much accelerated (in a catabolic direction) in animals poisoned by phosphorus, thus furnishing a satisfactory explanation of many obscure phenomena noted in this condition as well as in allied degenerative changes. The importance of autolytic processes is further exemplified in pneumonia, where the resolution of the exudate is unquestionably largely effected in this manner. There is evidence to show that

autolytic processes may be active in the defense of the animal body against bacteria and bacterial products, and hence of moment in the production of immunity. Knowledge of the subject is still in its infancy, but it may safely be asserted that the discovery of autolysis is one of the most important in the domain of physiology and physiological chemistry.

autolytic (â-tō-lit'ik), *a.* [*autolysis* (*-lyt-*) + *-ic.*] Relating to or of the nature of autolysis.

One can readily convince himself of the energetic action of *autolytic* ferments by the simple experiment of placing a piece of fresh pneumonic lung in the stage of gray hepatization under chloroform and noting the rapid solution of the exudate, in contrast with the absence of this process in earlier stages of the disease.
Science, Nov. 28, 1902, p. 888.

autolyze (â'tō-liz), *v. t.*; pret. and pp. *autolyzed*, ppr. *autolyzing.* [*autolysis*) + *-ize.* Cf. *analyze* from *analysis.*] To undergo or cause to undergo autolytic digestion. *Science*, July 3, 1903, p. 15.

automacy (â-tom'ą-si), *n.* [Gr. *αὐτομαρία* (recorded only as a name for the goddess of chance), < *αὐτόματος*, self-moving.] Same as *automatism*, 1; action determined by outer conditions and not by the will.

The several comparisons seem to define that course of volitional development arising in the chemical and mechanical affinities of the mineral realm, burgeoning in simple vitality, multiplying in the motility of animal life, greatly expanding in the collective activity of demotic organization, and culminating in the conquest of nature through the mind-guided powers of enlightened mankind. Expressed briefly, this course of development may be characterized as the progressive passage from *automacy* to autonomy.
W. J. McGee, An. Rep. Bur. Amer. Ethnol., XVII. 177.

automat (â'tō-mat), *n.* [G., < Gr., *αὐτόματον*: see *automaton.*] **1.** A photographic lens-shutter which is opened and kept open by means of a pneumatic bulb.—**2.** An apparatus consisting of a series of lifts in compartments from which, by means of automatic machinery, separate articles of food at stated prices are delivered to any one who will drop the necessary coin into a slot; also, a restaurant which serves its customers by means of such an apparatus. The aim is to do away with the intermediation of waiters. [Recent.]

automatic. **I.** *a.*—**Automatic combustion** or **automatic fire.** Same as *spontaneous combustion.*—**Automatic feeder.** See ★*feeder.*—**Automatic firearm,** a firearm in which the recoil, or part of the force of the explosive, is used to eject the spent cartridge-shell, introduce a new cartridge, cock the striker, and close the breech. It will continue to fire as long as there are cartridges supplied and the gunner presses the trigger. See ★*parabellum.*—**Automatic ★photography, ★piano-player.** See the nouns.—**Automatic printer,** in *photog.*, a machine for automatically printing upon slips of sensitized bromide or chlorid paper: devised by Urie. The strip is pressed by a pad against a negative for a suitable period, such as two seconds, and exposed during this time to the action of electric light. The lights are then turned down, and the strip is moved and a fresh portion exposed. All movements are actuated by clockwork. The strips are developed by being passed through chemical baths, and are then washed and dried. In this way several thousand prints a day can be secured.—**Automatic reel.** See ★*reel*1.—**Automatic writing,** writing performed unconsciously or subconsciously, while the attention of the writer is otherwise engaged: the term is applied to planchette-writing, on the theory that the writing done with that instrument is not always done with some degree of intention to deceive or entertain.

II. *n.* One who is subject to automatism.

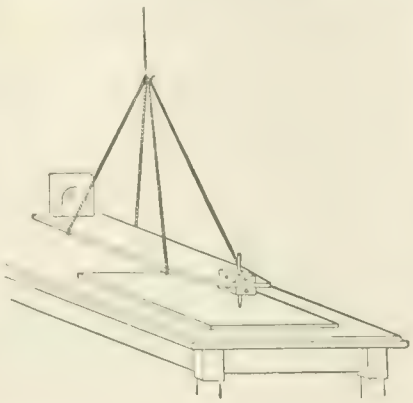
automatism, *n.* **4.** Specifically, in *psychol.*: (*a*) An action performed unconsciously or subconsciously while the agent's attention is otherwise engaged, or while he is in a trance or sleep-like state. (*b*) The mental state of the agent during such a performance.

This leads us to the chief field of research in "*automatisms*," or actions of the subconscious or "subliminal" self. The prototype of such things is found in the performances of natural somnambulists, who in all ages have seemed to exhibit faculties beyond their power when in a normal condition.
Encyc. Brit., XXXII. 52.

automatist, *n.* **3.** Specifically, in *psychol.*, the subject of automatism; one who writes, etc., automatically.

Trance is a name applied to a form of automatism, whether healthy or morbid, in which the *automatist* appears to be in some way altered, or even asleep, but in which he may speak or write certain matter of which his normal personality is ignorant at the time, and which it rarely remembers on his return to waking life. If there appears to be not merely a modification but a substitution of personality in the trance, it is called possession. Trance occurs spontaneously in so-called somnambulism, as a result of disease in hysteria, and as a result of suggestion, etc., in hypnotic states. A fuller analysis shows classes which slide into each other in various ways.
F. W. H. Myers, Proc. Soc. Psychical Research, [XVII. 67.

automatograph (â-tō-mat'ō-gräf), *n.* In *psychophys.*, an instrument for recording the



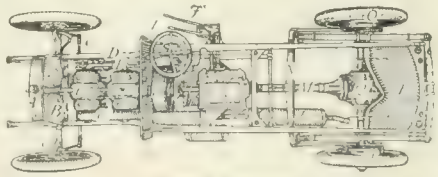
Automatograph.

involuntary movements of hand and arm; a scientific form of the planchette. *J. Jastrow*, Amer. Jour. Psychol., IV. 400.

automnesia (â-tom-nē'si-ą), *n.* [Gr. *αὐτός*, self, + *μνήσις*, memory.] In *psychol.*, spontaneous memory; the revival of past experience without apparent conditions in association. *Ribot* (trans.), Psychol. of Emotions, p. 153.

automobile. **I.** *a.*—**Automobile chair,** a chair on wheels, driven by an electric motor and storage-battery, used at exhibitions and fairs for carrying visitors about the buildings and grounds. The chair has somewhat the lines of a low phaëton, the larger wheels under the body being the driving-wheels, and the two smaller ones in front under the foot-rest being used for steering and steadying. The operator sits at the rear. The batteries and motors give a speed of about three miles an hour.—**Automobile cycle.** See ★*cycle*1.

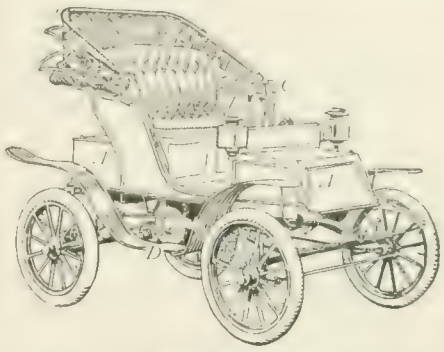
II. *n.* **2.** Any device or apparatus which is movable by a force placed within itself and is self-acting as to direction and control; specifically—(*a*) A torpedo, carrying within itself a store of accumulated energy, which can be launched from a vessel or fort, and which, when properly directed and adjusted, will move through the water until it reaches the object at which it is aimed. (*b*) A vehicle, carrying within itself the source of the mechanical power which propels it, designed to move on common roads or highways: a motor-car. The automobile or motor-car is not strictly an automobile, since a human intelligence always steers it and controls the power. The motor-car differs from the locomotive in that it does not travel on rails, and from the traction-engine or tractor in that it carries the load instead of drawing it after itself in other wheeled vehicles. The motor-bicycle and motor-tricycle differ from the motor-car in that the latter has nearly always four wheels. The types of vehicle included under the name *automobile* fall under one of four groups: (1) The *racing-car* (rarely called an 'automobile'), de-



Chassis of Automobile.

A, cooler; *B*, fan; *C*, steering knuckles; *D*, carbureter; *E*, water circulating pipe; *F*, inlet manifold; *G*, exhaust; *H*, fly-wheel and clutch; *I*, speed lever; *J*, emergency brake lever; *K*, [illegible]; *L*, [illegible]; *M*, [illegible] shaft drive; *N*, brake beams; *O*, *P*, brakes; *R*, gasolene tank; *Q*, differential casing.

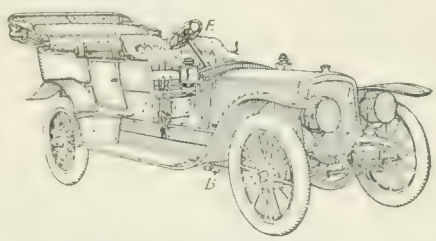
signed for great speed on prepared special tracks or speed ways, carrying one or at most two persons, and made as light as is consistent with high power; (2) the *touring-car*, designed to carry four or five persons, made to secure comfort on long trips, and of high power in the moderate class; (3) the *service-car*, intended for use in cities or suburban districts, of moderate power and speed, and carrying two or more persons; (4) the *business-wagon* or *truck*, intended for the delivery of merchandise, having considerable carrying capacity but slow speed. Again, motor-cars may be grouped, according to their source of propelling energy, into: (1) *electric-cars*, driven by electric motors energized from storage-batteries; (2) *steam-cars*, in which a boiler supplies steam to an engine geared to the driving-axles; (3) *gasolene-cars* (more properly termed *internal-combustion motor-cars*), in which the expansive force of a mixture of gasolene vapor and air, on being ignited, is used to drive the motor-piston. Compressed air has also been used to drive motor-cars. The wheels of the motor-car usually have rubber tires, pneumatic on the lighter and speedier vehicle, and solid on the motor-truck and -cab. The axle-bearings are fitted with steel balls in runways to reduce friction. The vehicle is usually steered by the front pair of wheels, which are carried on special mountings from the front axle, and the proper direction is given by a steering-lever or -wheel at the driver's seat. The wheel-steering device transmits less shock from the roadway to the controlling hand, and is universal on all but light cars. The rear axle is the driving-axle, receiving its motion either by drive-chains or by shaft and gears. In the electric car the motors (two usually) drive the axle by spur-gears, giving convenient reduction. The motors are controlled by a controller which is operated by a combined lever and switch. The car is fitted with two brakes, one a service-brake and the other a more powerful one for emergencies. The driving-wheels or axle must be fitted with a compensating gear to allow the outer wheel on turning a curve to travel a longer path than the wheel which is nearer the center. The gasolene motor has its ignition effected by electric spark (see *internal-combustion* ★*motor*), and can be controlled by a throttle-valve and by advancing or retarding the spark. Such motors must also have change-speed gears for varying resistances and to permit the direction of the motor to be reversed; a clutch must also be placed between motor- and driving-wheels to allow the car to be stopped without stopping the motor. In steam-cars the flash or semi-flash type of boiler is much used, eliminat-



Electric Automobile.

A, *A*, receptacles for storage batteries; *B*, motor control; *C*, steering gear; *D*, motor.

ing some troubles connected with the fire-tube types. For night use motor-cars are equipped with powerful reflector- or lens-lanterns, fed by acetylene gas from generators on the car. The speed of racing-cars is not fixed, but 120 miles an hour has been reached with motors of from 80 to 100 horse-power. The carrying capacity of trucks



Gasolene Automobile.

A, cooler (or radiator); *B*, connecting steering-rod; *C*, change-speed lever; *D*, emergency-brake lever; *E*, steering-wheel, with spark and throttle controls.

has been limited to about 10 tons on account of difficulties from the road-bed. Touring-cars have a capacity of from 16 to 60 horse-power, and speeds ranging up to 40 or 50 miles an hour. Light electrics have a radius of action of about 30 miles from a charging-station, or a 60-mile limit. Increasing comfort and luxury are secured by inclosing the rear or tonneau part of the touring-car, making it a vehicle for all weathers and temperatures and not a pleasure-vehicle only.

automobile (â-tō-mō'bil), *v. i.* To ride in an automobile vehicle. [Recent.] *Cosmopolitan*, XXV. 485.

automobilism (â-tō-mō'bil-izm), *n.* The use of automobile vehicles. [Recent.]

automobilist (â-tō-mō'bil-ist), *n.* One who uses an automobile vehicle.

automobility (â-tō-mō-bil'i-ti), *n.* [*automobile* + *-ity* (or *auto-* + *mobility*).] **1.** The character or fact of being automobile; capacity for making automatic movements. See *automatic*, 2.—**2.** The use of automobiles as a means of locomotion; travel by means of automobiles. *Nature*, Nov. 26, 1903 (advt.). [Rare.]

automobilize (â-tō-mō'bil-īz), *v. i.*; pret. and pp. *automobilized*, ppr. *automobilizing.* [*automobile* + *-ize.*] To use, ride in, or drive an automobile as a means of locomotion or for pleasure. *N. Y. Times*, March 26, 1902. [Rare.]

automorph (â'to-mōrf), *n.* [Gr. *αὐτός*, self, + *μορφή*, form.] In *math.*, the product of a form by its unit form.

As to the forms ($mx^2 \sim nx^2$), ($x^2 \sim mnx^2$), mere *automorphs* of the same form, i.e., products of the form by its unit-form $x^2 - mn\,y^2 = 1$, are not to be considered as distinct forms.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 658.

automorphic, *a.* **2.** In *math.*, characterized by automorphism. See ★*automorphism*, 2.—**3.** Same as *idiomorphic*.—**Automorphic function**, in *math.*, a function which is unchanged by all the substitutions of any group of linear transformations.

Two classes of *automorphic functions* are known by which this uniformisation may be effected; namely, one which was first given by Weber in Gottinger Nachrichten, 1886, and one which was first given by the author, Phil. Trans., 1898.
E. T. Whittaker, Modern Analysis, p. 339.

automorphism, *n.* **2.** In *math.*, the property of remaining unchanged by all the substitutions of any group of linear transformations. *Science*, June 5, 1903, p. 904.—**3.** Anthropomorphism; the conception of the lower animals by analogy with man. *H. M. Stanley*, Evol. Psychol. of Feeling, p. 297.

automorphous (â-tọ-môr′fus), *a.* Same as *automorphic*.

automotive (â-tọ-mō′tiv), *a.* [*auto-* + *motive.*] Propelled by its own power; automobile.

automotor (â-tọ-mō′tọr), *n.* [*auto-* + *motor.*] A motor-propelled vehicle; an automobile.—**Automotor crane.** See ★*crane*[2].

autonephrotoxin (â-tọ-nef-rọ-tok′sin), *n.* [*auto-* + *nephrotoxin.*] A nephrotoxin which has resulted in the body of an animal as the result of an auto-immunization, and which is directed against the renal epithelium of the same individual.

autonoëtic (â′tọ-nō-et′ik), *a.* [Gr. αὐτός, self, + νοητικός, < νοητός, perceiving; see *noëtic.*] Self-perceiving. Clairvoyant: as, the *autonoëtic* action of the mind. *N. E. D.*

autonomical (â-tọ-nom′i-kạl), *a.* Autonomous; same as *autonomic*.

autonomically (â-tọ-nom′i-kạl-i), *adv.* In an autonomic manner.

autonomism (â-ton′ọ-mizm), *n.* [*autonomy* + *-ism.*] **1.** The principle of autonomy or the independence of municipalities or of communities each containing but a single municipality. *J. Fiske.*—**2.** The theory that the forms into which animals and plants develop are determined by an inward agency. *Biol. Bull.*, Sept. 1904, p. 201.

autonomistic (â-ton-ọ-mis′tik), *a.* Of or pertaining to autonomism. *Biol. Bull.*, Sept., 1904, p. 201.

autonomize (â-ton′ọ-mīz), *v. t.*; pret. and pp. *autonomized*, ppr. *autonomizing*. [*autonom(ous)* + *-ize.*] To make autonomous; render self-governing.

autonym, *n.* **4.** In *anthrop.*, the name by which a people call themselves.

auto-objective (â″tọ-ob-jek′tiv), *a.* Subjectively objective; relating to an object residing in the subject. Thus an objective sensation is one aroused by the action of an external stimulus—sound, for example; a subjective sensation is a sensation produced in the absence of peripheral stimulation—an 'image' of an objective sensation; an auto-objective sensation is a sensation aroused by a stimulus residing in the body of the subject—an organic sensation (as pain, hunger, etc.).

The second class of objective sensations may be called indirect objective or *auto-objective*. This class of sensations includes hunger, thirst, suffocation, pain, fatigue, etc. It will be noted that these *auto-objective* sensations all arise from different conditions that exist within the system, the first three named being manifestations of needs of the body for more matter, the last two, manifestations of overstimulation or overwork. *Buck*, Med. Handbook, VII. 742.

auto-ophthalmoscope (â″tọ-of-thal′mọ-skōp), *n.* See *autophthalmoscope*.

auto-ophthalmoscopy (â″tọ-of-thal′mọ-skō-pi), *n.* [*auto-* + *ophthalmoscopy.*] Inspection of the interior of one's own eye by means of a specially devised instrument, the autophthalmoscope.

autopelagic (â″tọ-pẹ-laj′ik), *a.* [Gr. αὐτός, self, + πέλαγος, sea.] Living only at the surface of the water, or, in stormy weather, at slight depths. See *pelagic*, ★*bathypelagic*, ★*spanipelagic*. *Haeckel* (trans.), Planktonic Studies, p. 582.

autophonia (â-tọ-fō′ni-ạ̈), *n.* [Gr. αὐτός, self, + φωνή, voice.] A condition in which one's own voice is heard with abnormal distinctness and volume, as if one were speaking into a barrel.

autophonic (â-tọ-fon′ik), *a.* Pertaining to autophony: as, *autophonic* resonance.

autophotograph (â-tọ-fō′tọ-gráf), *n.* A print obtained by the exposure, in the dark, of a sensitive surface to the radioaction of minerals and other objects. *Nature*, Feb. 25, 1904, p. 403.

autophya (â-tō′fi-ạ̈), *n. pl.* [NL., < Gr. αὐτοφυής, self-grown, < αὐτός, self, + φύεσθαι, grow.] A name given by Haeckel to the skeleton elements secreted by the sponge itself, as distinguished from the admixture of foreign particles (as sand grains), the latter being designated *xenophya*.

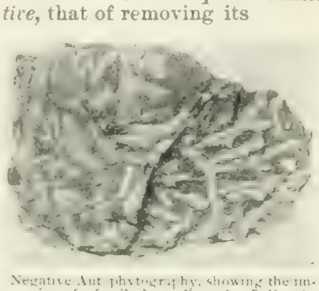
autophyte (â′tō-fīt), *n.* [Gr. αὐτός, self, + φυτόν, plant.] In *phytogeog.*, an autotrophic plant.

autophytograph (â-tọ-fī′tọ-gráf), *n.* [*auto-* + *phytograph.*] An impression, tracing, or outline of a plant upon a rock, due to the effect of the plant in staining the matrix or in removing its natural color.

For such plant pictures, or plant writings, in which the traces or outlines of plants are distinguishable by their color, and in which the variation of color from the matrix is due to chemical change brought about by the plant reproduced, the name *autophytograph* . . . is proposed.
C. H. White, in Amer. Jour. Sci., March, 1905, pp. 231–232.

Positive Autophytography, showing the impression of some plant, probably *M[illegible]anthemum* [illegible], on the polished surface of a pebble found on a bar of gravel on Cub Creek, Wilkesboro, N. C.

autophytography (â″tọ-fi-tog′ra-fi), *n.* [*auto-* + *phytography.*] The natural process by which autophytographs are produced. That of staining the matrix is called *positive*, that of removing its original color or *negative autophytography*. *C. H. White.*


Negative Autophytography, showing the impression of a fossil plant, *Fucoides Bollensis*, from the Lias of Boll, Würtemberg. (After Seward.)

Autoplastic graft. See ★*graft*[2].

autoplate (â′tọ-plāt), *n.* [*auto-* + *plate.*] A curved stereotype which has been automatically cast, shaved, and beveled.

In stereotyping, a device known as the *autoplate* was invented in 1900 by means of which the time required for casting plates was considerably reduced.
Census Bulletin, June 28, 1902, p. 51.

Autoplate machine, a combination machine containing a papier-mâché matrix or mold for rapidly and automatically casting, shaving, and beveling curved stereotypes: used principally in newspaper-printing.

autopoisonous (â″tō-poi′zn-us), *a.* Acting as a poison to the organism by which it is formed. *Buck*, Med. Handbook, IV. 184.

autopore (â′tọ-pōr), *n.* [Gr. αὐτός, self, + πόρος, a pore.] In the tabulate *Hexacoralla* of the extinct family *Chætetidæ*, one of the larger tubes of the corallites, which are surrounded on all sides by smaller tubes or mesopores.

autoprint (â′tọ-print), *n.* Same as ★*autophotograph*.

autopsy (â′top-si), *v. t.*; pret. and pp. *autopsied*, ppr. *autopsying*. [*autopsy*, *n.*] To make a post-mortem examination of; perform an autopsy on. *Jour. Exper. Med.*, V. 257.

autopsychic (â-tọ-sī′kik), *a.* [*auto-* + *psychic.*] Pertaining to consciousness in its relation to the self, or to self-consciousness.

Consciousness is a function of the associative mechanism and may be considered in its threefold relationship to the outer world, the body and self—allopsychic, somatopsychic, and *autopsychic*. *Buck*, Med. Handbook, V. 27.

autopsychical (â-tọ-sī′ki-kạl), *a.* Same as ★*autopsychic*.

autopticity (â-top-tis′ị-ti), *n.* [*autoptic* + *-ity.*] Autoptic quality, character, or nature. *Jour. Sacred Lit.*, XIV. 169. *N. E. D.*

autoquadricycle (â-tō-kwod′ri-sī-kl), *n.* [*auto-* + *quadricycle.*] A four-wheeled motor-cycle having accommodation for two persons tandem. One sits on a saddle and steers and controls the motor, while the other (the passenger) sits on a small seat with a back and a dash, supported by the front wheels. *Hiscox*, Horseless Vehicles, p. 213.

autoradiograph (â-tọ-rā′di-ọ-gráf), *n.* Same as ★*autophotograph*.

Another exhibit which naturally attracted much attention was that by Sir William Crookes, illustrative of the properties of the emanations of radium. There were *autoradiographs*, photographs of radium emanations, luminous effects of radium emanations.
Science, June 19, 1903, p. 976.

autoreduction (â″to-rẹ-duk′shọn), *n.* In *chem.*, the reduction to the state of metallic silver or mercury of either of these metals when its cyanide is simply heated with water in a sealed tube. *Nature*, Jan. 8, 1903, p. 238.

autoregulation (â″tọ-reg-ụ-lā′shọn), *n.* Self-regulation.

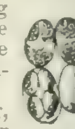
autoscope, *n.* **2.** Any instrument for the examination of an organ of one's own body.

autositic (â-tọ-sit′ik), *a.* [*autosite* + *-ic.*] That is, or is of the nature of, an autosite (which see).

autoskeleton (â-tọ-skel′e-tọn), *n.* [NL., < Gr. αὐτός, self, + σκελετόν, skeleton.] In sponges, the true skeleton secreted by the cells of the sponge itself. It consists of mineral sclerites or spicules, or of an organic substance called *spongin*, which usually occurs either as a cementing substance or as fibers. Distinguished from ★*pseudoskeleton*.

autosoteric (â″tọ-sọ-ter′ik), *a.* [Gr. αὐτός, self, + σωτηρικός, saving, delivering, < σωτήρ, a saver, savior.] Self-saving; based on the principle of salvation by one's own efforts or character. [Rare.]

autospore (â′tọ-spōr), *n.* [Gr. αὐτός, self, + σπορά, seed.] A daughter-cell arising from a mother-cell of certain of the unicellular algæ and possessing the exact shape and structure of the original cell.


Crucigenia rectangularis (Nag) Gay, with formation of autospores. (From West's British Fresh-water Algæ.)

autospray (â′tọ-sprā), *n.* [Gr. αὐτός, self, + E. spray.] A small tubular glass with one or two narrow necks having capillary orifices and armed with metallic caps to retain a volatile liquid such as ethyl-chlorid. When a cap is removed and the liquid is allowed to flow to that end, a spray is ejected, owing to the pressure of the vapor within the tube.

autostage (â′tọ-stāj), *n.* [*auto-* + *stage.*] A motor-driven vehicle capable of carrying a number of passengers; a motor-driven stage. See ★*autobus*.

autostarter (â′tọ-stär″tėr), *n.* An autotransformer used for starting motors. See ★*autotransformer*.

Each induction motor is started by the manipulation of a four-pole, double-throw, oil-break switch that is combined with its auto-converter in a single oil tank—the combination being termed an "oil-break *auto-starter*" switch. *Elect. Rev.*, Sept. 17, 1904, p. 459.

autostyly (â-tos′ti-li), *n.* [Gr. αὐτός, self, + στῦλος, pillar: see *style*[2].] The condition of having the palatoquadrate fused with the cartilaginous cranium, the second visceral arch broken up and not acting as a suspensorium, and the hyomandibular small and united with the cranium. In this restricted sense autostyly occurs in the *Dipnoi* and *Amphibia*. *Biological Bulletin*, June, 1904.

autosuggestion (â″tō-su-jes′chọn), *n.* In *psychol.*, self-suggestion, especially the voluntary arousal and fixation of the idea that one will fall into the hypnotic sleep.

The confirmed hypnotic will try in every possible way to procure the enjoyment which he craves. And he has in *autosuggestion* a means lying always ready to his hand.
W. Wundt (trans.), Human and Animal Psychol., p. 331.

autotelic (â-tō-tel′ik), *a.* [Gr. αὐτός, self, + τέλος, end.] In *esthetics*, being an end in itself; existing or proceeding for its own sake: opposed to ★*heterotelic*. *Baldwin*, Dict. of Philos. and Psychol., I. 96.

autotomize (â-tot′ọ-mīz), *v. t.*; pret. and pp. *autotomized*, ppr. *autotomizing*. [*autotomy* + *-ize.*] To practise autotomy; to cut off an organ or part of an organ: said of certain animals, as crabs, which drop their claws or legs, and lizards, which drop their tails, when rudely handled. *Morgan*, Regeneration, p. 153.

autotomous (â-tot′ọ-mus), *a.* Relating to or of the nature of autotomy. See ★*autotomy*. *Proc. Zool. Soc. London*, 1898, p. 926.

autotomy (â-tot′ọ-mi), *n.* [Gr. αὐτός, self, + -τομία, < ταμεῖν, cut.] The reflex throwing off of certain parts of the body, as the rays in starfishes and the legs of some arthropods, which do not, as in fission and budding, develop into new individuals. This property may be of use to animals by enabling them to escape from their captors at the expense of only the part seized.

One of the most remarkable cases of *autotomy* is that in the holothurians, in which the Cuvierian organs, and even the entire viscera, may be ejected when the animal is disturbed. *Morgan*, Regeneration, p. 154.

autotoxemia (â″tọ-tok-sē′mi-ạ̈), *n.* [*auto-* + *toxemia.*] Same as ★*auto-intoxication*.

autotoxic (â-tọ-tok′sik), *a.* [Gr. αὐτός, self, + τοξικόν, poison: see *toxic.*] Self-poisoning; of or pertaining to the action of autocytotoxins.

In considering the development of the disease, we believe the excitant is a toxic or *autotoxic* agent.
Med. Record, May 30, 1903, p. 857.

autotoxication (â-tō-tok-si-kā'shon), *n.* Same as ★*auto-intoxication.*

autotoxicity (â-tō-tok-sis'i-ti), *n.* [*autotoxic* + *-ity.*] The character of being autotoxic; toxicity directed against the individual in whose body the toxin has been produced.

autotoxin (â-tō-tok'sin), *n.* [*autotox(ic)* + *-in*2.] A poisonous substance formed in the body of an animal and directed against its own tissues.

autotoxis (â-tō-tok'sis), *n.* [NL., < Gr. αὐτός, self, + τοξ(ικόν), poison, + (s)is, as in abstract nouns from Gr., as *sepsis,* etc.] Same as ★*auto-intoxication.*

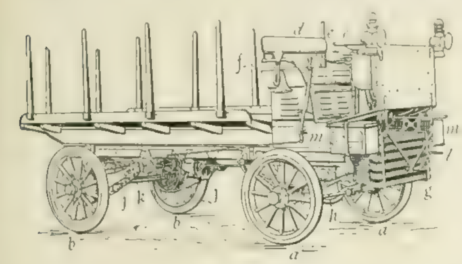
autotransformer (â-tō-trans-fôr'mėr), *n.* In *elect.*, a transformer, in which a part of the primary coil is used as secondary coil, or inversely. Frequently this part of the coil may be variable and so permit a regulation of the voltage. The autotransformer has the advantage, compared with the transformer, of smaller size and higher efficiency, but the disadvantage of connecting the primary and the secondary circuit together electrically. See *transformer.* Also called *compensator.*

autotransfusion (â"tō-trans-fū'zhon), *n.* [*auto-* + *transfusion.*] A method of forcing the mass of the blood to the internal organs by the application of tight bandages to the extremities.

autotrophic (â-tō-trof'ik), *a.* [Gr. αὐτος, self, + -τροφος, < τρέφειν, nourish.] Self-nourishing: said of plants which derive their nourishment directly from inorganic matter, that is, of all plants except parasites and saprophytes. See the quotation under ★*hemiparasite* and compare *holophytic.*

The root-difference between plants and animals is one of nutrition. Plants are *autotrophic,* animals heterotrophic.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 208.

autotruck (â'tō-truk), *n.* [*auto-* + *truck.*] A motor-driven wagon for carrying freight or



Autotruck.

a, a, front or leading-wheels; *b, b,* driving-wheels; *c,* steering-wheel; *d,* brake-lever; *e,* controlling-levers on post of steering-wheel; *f,* alarm-horn; *g,* radiator to cool circulating water; *h,* casing surrounding motor; *j, j,* drive-chains; *k,* compensating or differential shaft; *l,* starting-crank; *m, m,* battery-box, tools and supplies.

bundles, as distinguished from a passenger vehicle; a delivery-wagon propelled mechanically; the commercial motor-car. Usually they have a carrying capacity of from a half-ton to 10 tons.

autotypic, *a.* **2.** Setting one's own standard; determining by reference to one's self what shall be considered as typical.

Man the measurer—has always been and still is more *autotypic* than he knows, reproducing in his representation of the human form the type of his own race.
G. S. Hall, Adolescence, I. 124.

autotypy (â'tō-tī-pi), *n.* The art of making facsimiles by printing.

autovaccination (â"tō-vak-si-nā'shon), *n.* [*auto-* + *vaccination.*] Same as *auto-inoculation.*

autovalve (â'tō-valv), *n.* In a prepayment meter, a valve which automatically shuts off the gas-supply. *W. L. Dibdin,* Public Lighting, p. 176.

autoxenous (â-tok'se-nus), *a.* [Gr. αὐτός, self, + ξένος, host. Same as ★*autœcious.*

autoxeny (â-tok'se-ni), *n.* Same as ★*autœcism.*

autoxidation (â-tok-si-dā'shon), *n.* [*aut(o-)* + *oxidation.*] **1.** A process in which the oxygen in a compound oxidizes another portion of the molecule of the same compound.—**2.** A process in which a substance undergoing oxidation in air or oxygen causes a portion of the oxygen to assume an active condition, as ozone, hydrogen peroxid, or a peroxid of the substance, which may, in turn, cause the further oxidation of the same or of some other compound. *Amer. Chem. Jour.*, March, 1903, p. 179.

autoxidizable (â-tok-si-dī'za-bl), *a.* In *chem.*, capable of spontaneously undergoing oxidation, as by mere contact with the oxygen of the air.

autozoöid (â"tō-zō'oid), *n.* [Gr. αὐτός, self, + *zoöid.*] In alcyonarians, the ordinary normal zoöid as distinguished from the siphonozoöid.

Autumnal catarrh. See ★*catarrh.*—**Autumnal fever.** See ★*fever*1.—**Autumnal point,** the point of the celestial equator crossed by the sun at the autumnal equinox.

autumnize (â'tum-nīz), *v. t.*; pret. and pp. *autumnized*, ppr. *autumnizing.* [L. *autumnus,* autumn, + *-ize.*] To give an autumnal appearance to.

When first the maple begins to *autumnize* the grove.
Jesse, Jour. Nature, p. 109. *N. E. D.*

Autunian (â-tū'ni-an), *a.* and *n.* Of or pertaining to Autun, in France: in *geol.*, noting the lowest subdivision of the Permian in France: so called from Autun, where it carries a terrestrial flora. See ★*Artinskian.*

auxanogram (âk-san'ọ-gram), *n.* [Gr. αὐξάνειν, increase, + γράμμα, anything written.] The result obtained by growing colonies of microorganisms according to ★*auxanography* (which see).

auxanography (âk-sa-nog'ra-fi), *n.* [Gr. αὐξάνειν, increase, + -γραφια, < γράφειν, write.] A method devised by Beyerinck for testing the effect of various nutrient media upon bacteria. The bacteria are plated out in a medium known to be poorly adapted for their nourishment, and there are then added to the surface of the plate a few drops of the solution to be tested. If the requisite nutrient has been added the bacteria will develop rapidly in these spots.

auxesis, *n.* **3.** In *bot.*, the method of increase in size of the valves of diatoms.

auxetophone (âk-set'ọ-fōn), *n.* [Gr. αὐξητός, that may be increased, + φωνή, sound.] A device for increasing the loudness of the sounds produced by a phonograph. See the extract.

The Hon. C. A. Parsons, the inventor of the steam turbine, also had a highly interesting exhibit, the *auxetophone.* This may be described as a kind of pneumatic-acting stylus for the phonograph. Instead of the recording stylus of the instrument causing the diaphragm to vibrate in the usual manner, the sound waves operate a minute air-valve on the same principle as a relay. This air-valve controls the admission of air into the trumpet of the talking machine under a pressure of two pounds to the square inch.
Sci. Amer. Sup., June 2, 1904, p. 23832.

auxiliary. I. *a.*—**Auxiliary note or tone,** in *music,* any note or tone a degree above (or occasionally below) one that is essential to the harmony, and attached to the latter for some purpose of embellishment. Thus both appoggiaturas and suspensions may be called *auxiliary notes.*—**Auxiliary sailing-vessel,** one that has full sail-power, and boilers and engines of moderate horse-power. In this type of vessel sail is the main, and steam the auxiliary power.—**Auxiliary scale,** (*b*). Same as ★*adipose lobe.*—**Auxiliary steam-vessel,** one that has full steam-power and a moderate sailing rig, so that steam is the main and sail the auxiliary power.

II. *n.* **5.** In the nomenclature of the sutural inflections in the ammonoid cephalopods, a lobe or saddle lying between the umbilical curve or line of involution and the second lateral lobe.—**6.** In *mech.*, any machine except the principal one: a term applied specifically to the feed-pumps, fire-pumps, etc., in power plants.—**7.** A vessel fitted with power other than sails for propulsion but depending ordinarily on the latter.

Auxis (âk'sis), *n.* [NL., < Gr. αὐξίς, the young of the tunny.] A genus of fishes of the family *Scombridæ,* known as frigate-mackerels. They range widely in large schools over the warm seas, though occasionally coming to the New England coast. The only well-known species is *A. thazard.*

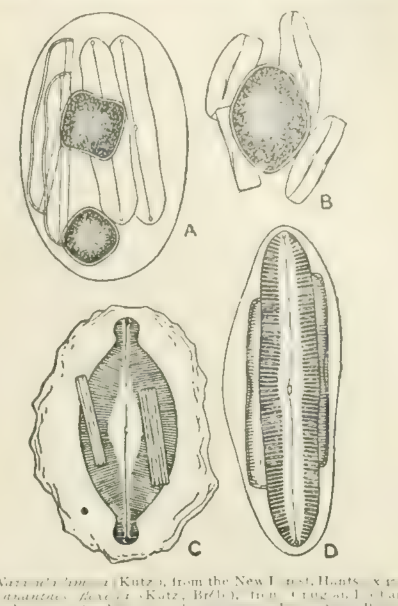
auxochrome (âk'sō-krōm), *a.* and *n.* [Gr. αὐξάνειν, increase, + χρῶμα, color.] In *chem.*, noting those groups contained in dyes which enable them to combine with the fiber of the cloth or with a mordant. The most important of these are the hydroxyl-, amino-, sulpho-, and carboxyl-groups. *Athenæum,* July 15, 1893, p. 100.

auxochromous (âk-sọ-krō'mus), *a.* [Gr. αὐξ(άνειν), increase, + χρῶμα, color.] Capable of increasing or developing color.—**Auxochromous group,** a group of elements which if introduced into a chromogen will develop a dyestuff. According to Witt's theory the coloring power of a dyestuff depends largely upon the simultaneous presence of an auxochromous group and a chromophorous group.

auxocyte (âk'sọ-sīt), *n.* [Irreg. < Gr. αὐξάνειν, increase, + κύτος, a hollow (a cell).] A cell which has to do with growth and reproduction, such as a spermatocyte. *Buck,* Med. Handbook, III. 72.

auxology (âk-sol'ō-ji), *n.* [Irreg. < αὐξ(ησις), growth, + -λογία, < λέγειν, speak.] That branch of biology which deals with the growth of organisms. *Natural Science,* Sept., 1898, p. 153.

auxospore, *n.* **2.** The resting-spore of the diatoms. It may be formed in at least five different ways, the most common methods being the following: (1) the valves of a single diatom open, the contents emerge,



A, *Navicula [illegible]* (Kutz.), from the New Forest, Hants (× [illegible]); B, *[illegible]* (Kutz.) Bréb.), from [illegible], Scotland (× 4[illegible]); C, *Navicula Amphisbæna* Bory, from Battersea Common, Surrey (× 4[illegible]); D, *N. [illegible]* Kutz., from [illegible], Antrim, Ireland (× [illegible]). C and D illustrate the first method of auxospore formation, B the third method, and A the fifth method. (From West's "British Freshwater Algæ.")

become inclosed in a thin membrane, and increase in volume; (2) the contents of two diatoms emerge and unite to form a single spore; (3) the contents of two diatoms, after emerging, are held together by a common gelatinous envelop, each mass producing a spore without fusion.

Aux Vases sandstone. See ★*sandstone.*

A. V. An abbreviation of *Authorized Version.*

availer (a-vāl'ėr), *n.* One who is helpful or proves serviceable. *Florio.* [Rare.]

availing (a-vāl'ing), *p. a.* Profitable, advantageous.

A truly valuable or *availing* thing.
Ruskin, Unto this Last, p. 118. *N. E. D.*

Avalanche conduction, in *neurol.*, the kind of conduction of nerve-currents which is made possible when the terminals of the neuraxon of one cell come in contact with the cell-bodies of several or many other neura.

avalanchine (av-a-lanch'in), *a.* Of the nature of an avalanche; overpowering: as, *avalanchine* weight. *W. Gaspey,* Doom. Creat. *N. E. D.*

avalent (a-vā'lent), *a.* [*a-*18 + *valent.*] In *chem.*, having zero valence, as argon, helium, and the other newly discovered gases of the atmosphere, which appear to be incapable of entering into chemical combination with one another or with any of the elements.

avania (ä-vä-nē'ä), *n.* [= F. *avenie,* Sp. Pg. *avania,* It. *avania,* NGr. ἀβανία, Turk. Ar. *'awānī, 'awān, 'awānia:* origin uncertain.] An imposition or tax levied by Turkish officials on merchants; as generally considered, an extortionate tax.

avant-courier (a-vänt'kö"ri-ėr), *v. t.* To announce as by herald; herald. *Lowell,* Among my Books, 1st ser., p. 167.

avaremotemo (ä-vä"rā-mō-tā'mō), *n.* [Tupi (in Piso).] A tree of the mimosa family, *Pithecolobium Avaremotemo,* the bitter bark of which is used medicinally. [Brazil.]

avascular (a-vas'kū-lär), *a.* [*a-*18 + *vascular.*] Without blood-vessels or lymphatics, or scantily supplied with them. *Buck,* Med. Handbook, IV. 573.

A. V. D. An abbreviation of *Army Veterinary Department.*

Ave. A contraction of *Avenue* (in an address).

avellano (ä-vel-yä'nō), *n.* [Sp. *avellano,* a hazel-tree: see *avellane.*] The hazel-tree of South America, *Guevina Avellana.* The nut-like seeds are rich in oil and are edible. The wood is used for veneering. See *hazel-tree,* 2.

avenalin (a-ven'a-lin), *n.* [L. **avenalis,* adj., < *avena,* oats, + *-in*2.] A crystallizable vegetable globulin found in the kernels of oats: similar to ★*excelsin.*

Avenger of blood. See ★*blood.*

avengingly (a-ven'jing-li), *adv.* In an avenging manner; with an avenging purpose; vengefully. *Galt,* Rothelan. [Rare.] *N. E. D.*

avenolith (a̤-vē′nō-lith), *n.* [L. *avena*, oats, + *λίθος*, stone.] An intestinal concretion having the husk or other indigestible part of oats as a nucleus.

avenue, *n.* **5.** In *archæol.*, a series of megalithic stones arranged in a row.

average[2], *n.* **4.** A mode of estimating, by comparison, the strength or weakness of a billiard player. The total points divided by the number of innings give the average of a game, and the aggregated points of all the games, divided by their total innings (but not the combined single averages divided by the number of games) gives the general or grand average. **5.** In *cricket:* (*a*) The aggregate number of runs a batsman has scored, divided by the number of his completed innings. (*b*) The aggregate number of runs scored from a bowler, divided by the number of batsmen he has 'dismissed.'

avernal (a̤-vēr′nal), *a.* and *n.* [L. *Avernalis*, ⟨ *Avernus:* see *Avernian.*] **I.** *a.* **1.** Relating or pertaining to Avernus. See *Avernian.*—**2.** Destructive of bird life: as, *avernal* places, *Stanley*, Hist. Philos. (in allusion to the ancient statement that birds attempting to fly across Lake Avernus were killed by its mephitic vapors. See etymology of *Avernian*).

II. *n.* A demon or other inhabitant of the infernal regions.

Averruncus (av-e-rung′kus), *n.* [NL., ⟨ L. *Averruncus*, an averting deity: see *averruncate.*] A genus of sea-poachers of the family *Agonidæ*, found in deep water off the coast of California and northward.

avertedly (a̤-vēr′ted-li), *adv.* In an averted position or manner; with aversion or repugnance; unfavorably.

Richard was silent; not *avertedly;* he was simply not outwardly responsive. *Mrs. Whitney*, Hitherto, p. 312.

avezacite (av′e-za̤-sīt), *n.* [*Avezac(-Prat)*, a locality in the French Pyrenees, + *-ite*[2].] In *petrog.*, the name proposed by Lacroix in 1901 for an ultra-basic igneous rock of granular texture, consisting principally of augite, hornblende, ilmenite, and magnetite, with some apatite, and titanite. It occurs in narrow dikes in lherzolite.

aviado (ä-vi-ä′dō), *n.* [Amer. Sp., pp. of *aviar*, provide articles for a journey, prepare, ⟨ *a*, to, + *via*, ⟨ L. *via*, way: see *via.*] One who works a (silver-) mine with means furnished by another (called the *aviador*).

aviatics (ā-vi-at′iks), *n.* [Compare *aviation.*] The science or art of aviation. [Rare.]

aviation (ā-vi-ā′shon), *n.* [L., *avis*, a bird.] The art or act of flying; specifically, the science or art of directing and controlling flying-machines; the art of navigating the air with machines heavier than air.

This mode of navigation [in air] is considered as an *aviation*, or support by mechanical means only.
Proc. Internat. Confer. on Aerial Navigation, Chicago, 1893, p. 334.

aviator (ā′vi-ā-tor), *n.* **1.** A flying-machine employing the principle of the aëroplane. [Recent.]—**2.** One who directs the course of a flying-machine or who practises the art of flying or gliding through the air.

These types of gliders have been taken up in France by Captain Ferber, of the Artillery, and subsequently by Mr. Ernest Archdeacon, both of whom have become enthusiastic *'aviators,'* and have in their turn brought gliding experiments into considerable popularity in that country. *G. H. Bryan*, in Nature, 1905, p. 465.

avichi (a̤-vē′chi), *n.* [Skt. *avīchi*, hell, lit. waveless, ⟨ *a*-priv. + *vīchi*, wave.] The Buddhist hell.

avicidal (av-i-sī′dal), *a.* Relating or pertaining to the killing or slaughter of birds.

avicide (av′i-sīd), *n.* [NL. **avicidium*, ⟨ L. *avis*, bird, + *-cidium*, ⟨ *cædere*, kill.] The killing or slaughter of birds.

avicolous (a-vik′ō-lus), *a.* [L. *avis*, bird, + *colere*, inhabit.] Living on birds, as the bird-ticks of the suborder *Mallophaga.*

Aviculopinna (a-vik″ū-lō-pin′ä), *n.* [NL., ⟨ *Avicula* + *Pinna*, genera of *Pelecypoda.*] A genus of Paleozoic pelecypods of the family *Pinnidæ*, having a very small wing in front of the beaks.

aviculturist (av′i-kul″tūr-ist), *n.* [*ariculture* + *-ist.*] One who rears or keeps birds, especially small birds, in a state of domestication.

The title of this work must therefore be interpreted in the sense in which it is generally used by *aviculturists.*
Nature, March 31, 1904, p. 507.

avidity, *n.* **3.** In *phys. chem.*, a constant by means of which can be expressed the distribution of a base between two acids each sufficient to neutralize the whole of the base, or conversely; that is, the relative energy with which the acids tend to seize their shares of base: a term employed to avoid the use of the word *affinity.*

avidly (av′id-li), *adv.* Eagerly; greedily.

avidya (ä-vid′yä), *n.* [Skt. *avidya*, ⟨ *avidya*, ignorant, ⟨ *a*-, without, + *vidya*, knowledge, understanding, ⟨ √ *vid*, see: see *Veda* and *wit*[1], *v.*] Ignorance; specifically, in Buddha's metaphysical system, the ignorance which mistakes the illusory phenomena of this world for realities. It is the first of the 12 *nidānas*, or links in the closed chain of cause and effect, in the whole range of sentient existence.

avio (ä-vē′ō), *n.* [Sp.] Money furnished the owners of a mine to work it, by another person, the aviador.—**Avio contract,** a contract between two parties for working a mine, by which one of the parties, the aviador, furnishes the money to the proprietors for working the mine. *Coal and Metal Miners' Pocket-book.*

aviolite (ā-vi-ō′līt), *n.* [Monte *Aviolo.*] In *petrog.*, a term proposed by Salomon in 1898 for hornfels consisting of mica and cordierite.

Avisseau pottery. See ★*pottery.*

avo (ä′vō), *n.* [Name in Timor?] A current subsidiary coin of Macao, Timor, equivalent to .42 of a cent.

Avocettina (av-ō-set′i-nä̤), *n.* [NL., ⟨ *avocetta*, *avosetta*, avoset.] A genus of snipe-eels of the family *Nemichthyidæ:* found in deep seas.

avoidance, *n.* **6.** The custom which forbids one member of a family to meet or address another member. This custom is found among many primitive tribes, and relates most frequently to a man and his mother-in-law.

It is assumed that the junior male would be allowed to remain only on condition that he respected the marital privileges of the senior; hence he would have to seek his mate from without the band; and the conditions in which he lived with the female members of his own family gave origin to the curious etiquette of *"avoidances"* which is still to be found amongst some savage races and the history of which has been such a puzzle to anthropologists.
Lancet, Aug. 23, 1903, p. 532.

avoidment (a̤-void′ment), *n.* The act of avoiding; avoidance. [Rare.]

avoird. An abbreviation of *Avoirdupois.*

avolitional (ā-vō-lish′on-al), *a.* [*a*-[18] + *volitional.*] Not volitional; involuntary: as, *avolitional* motility.

Avon pottery. See ★*pottery.*

avowableness (a̤-vou′a̤-bl-nes), *n.* The quality of being avowable or openly acknowledgable. *Donne*, Sermons, iv. 549.

avowedness (a̤-vou′ed-nes), *n.* The quality or fact of being avowed.

avoyership (a̤-voi′ēr-ship), *n.* The office or position of avoyer (which see).

aw, *n.* and *v. t.* A simplified spelling of *awe.*

awa (ä′wä), *n.* [Hawaiian *awa* (= Samoan *ava*,= Maori *kawa*, *kawa-kàwa*), the plant and the drink, ⟨ Hawaiian *awa*, etc., sour, bitter, sharp, pungent. See *kava.*] **1.** A name, in Hawaii and other islands of Polynesia, of a plant of the pepper family, *Piper methysticum*, from which the natives prepare a beverage.—**2.** The beverage prepared from *awa.* See *kava.*

awa[2] (ä′wä), *n.* [Hawaiian.] The common Hawaiian name of the milk-fish, *Chanos chanos.* It is found in the gulf of California and about the Hawaiian islands, where it is an important food-fish, reaching a length of from 2 to 5 feet.

Awaji ware. See ★*ware*[2].

awakable (a̤-wā′ka̤-bl), *a.* [*awake, v.*, + *-able.*] Liable to awake or be awakened. *Blackwood's Mag.*, iv. 631.

awapuhi (ä-wä-pō′hē), *n.* [Hawaiian and Tahitian.] **1.** A plant of the ginger family, *Zinziber Zerumbet*, which is distributed over all the volcanic islands of Polynesia and in India. See also ★*beta*[3]. [Hawaii.]—**2.** The name in Tahiti of another plant of the same family, *Amomum Ceruga.*

awardable (a̤-wärd′a̤-bl), *a.* [*award* + *-able.*] That is or may properly be awarded.

awaredom (a̤-wär′dum), *n.* [Irreg. ⟨ *aware* + *-dom.*] The state of being aware or on one's guard. *Walpole*, Letters, III. 60. [Rare.] *N. E. D.*

awaruite (ä-wä-rō′īt), *n.* [*Awarua* (see def.) + *-ite*[2].] The bay owes its name to Maori *awarua*, a ditch, channel. Cf. *awa*, stream, river, and *rua*, a hole.] A native alloy of iron and nickel ($FeNi_2$) occurring in river-gravel with gold, platinum, tinstone, etc., and probably derived from a peridotite: found near Awarua bay, New Zealand.

awash, *adv.*—**Heave awash** (*naut.*), an order to the men at the capstan to heave round once more so as to bring the anchor into view at the surface of the water.

awatch (a̤-woch′). *adv.* [*a*[3] + *watch.*] On the watch; watching. *Mrs. Browning*, Aurora Leigh, vii.

away, *prep. phr.* as *adv.*—**To do away with,** to eliminate, remove entirely; dispense with; put an end to, abolish.—**To walk away from,** to outrun with ease, as if in a walk.

awebound (â′bound), *a.* Restrained or held in check or submissiveness by awe, or fear mingled with reverence or respect. [Rare.]

awelessness (â′les-nes), *n.* The state or quality of being aweless; utter lack of awe. *Golding*, Calvin on Deut., li. [Rare.] *N. E. D.*

aweoweo (ä-wā-ō-wā′ō), *n.* [Hawaiian.] A Hawaiian shrub or small tree, *Chenopodium Sandwicheum*, found on all of the islands, and sometimes eaten by the natives.

awesomely (â′sum-li), *adv.* In an awesome manner. [Rare.]

awesomeness (â′sum-nes), *n.* The fact or quality of being awesome. *Mrs. Whitney*, Sights and Insights, II. 609. *N. E. D.*

awest (a̤-west′), *adv.* [*a*[3] + *west.*] In or toward the west; westward. *J. Barlow*, Columbiad, i. 670.

aweto (ä-wā′tō), *n.* [Maori.] The so-called vegetable caterpillar, the larva of a hepialid moth, *Hepialus virescens.* It is attacked by a fungus, *Sphæria Robertsii*, which destroys it without altering its form, sending out a strong shoot from between the head and thorax. [New Zealand.]

A. W. G. In *wire-manuf.*, an abbreviation of *American wire-gage.* The American wire-gage differs somewhat from the standard gage used in England, known as the *Birmingham wire-gage* (B. W. G.), and sometimes called *Stubbs's wire-gage* or *British wire-gage.* The American wire-gage is characterized by a regular geometric progression in the increase of standard diameters; the British wire-gage is slightly irregular in progression.

awhir (a̤-hwēr′), *adv.* [*a*[3] + *whir.*] In a whir; whirring.

awhirl (a̤-hwērl′), *adv.* [*a*[3] + *whirl.*] In a whirl; whirling.

awikiwiki (ä-wē-kē-wē′kē), *n.* [Hawaiian, ⟨ *awiki*, to be quick.] A tall climbing bean, *Canavali galeatum.* [Hawaii.]

awink (a̤-wingk′), *adv.* [*a*[3] + *wink.*] Winking. *Edwin Arnold*, Ind. Idylls, p. 59. *N. E. D.*

awiwi (ä-wē′wē), *n.* [Hawaiian, ⟨ *awiwi*, hasten.] A species of centaury, *Centaurion sabæoides* (*Erythræa sabæoides* of Gray), a small herb with pink flowers which grows on grassy plains near the coast. [Hawaii.]

awmry†, *n.* An obsolete form of *ambry.*

awning-deck (â′ning-dek), *n.* See ★*deck.*

awning-decked (â′ning-dekt), *a.* In *shipbuilding*, noting a type of merchant steamer in which the highest continuous deck and the closed-in side just below it are of light construction.

awning-stanchion (â′ning-stan″shon), *n.* One of the series of metal or wooden posts on the side of a ship above the rail, which support the ridge-rope to which the outer edges of the awnings are attached when they are spread to cover the decks.

awrack (a̤-rak′), *adv.* [*a*[3] + *wrack.*] Wrecked; ruined.

If she [the ship] split or sink, she is *awracke.*
Capt. John Smith, Seaman's Gram., p. 41.

awreck (a̤-rek′), *adv.* [*a*[3] + *wreck.*] In a wrecked condition; wrecked. *Joaquin Miller*, Songs of Italy, p. 122.

awsum, *a.* A simplified spelling of *awsome, awesome.*

axbreaker (aks′brā-kēr), *n.* A medium-sized tree, *Notelæa longifolia*, of the olive family, found from New South Wales to Queensland. It yields a hard, close-grained wood. Also called *mock-olive* and *coobagum.*

axed, *a.* **2.** Furnished with an ax or with axes. *F. W. Farrar*, St. Paul, IV. [Rare.]

axial, *a.*—**Axial angle,** a piece of the axial bounded by two of its planes as sides.—**Axial canal.** (*b*) In sponges, the cavity, in calcareous and silicious spicules, occupied by the axial thread or core of organic matter about which the mineral substance is deposited.—**Axial cell,** in *Dicyemida*, the single central cell of the body within which germ-cells arise.—**Axial cord,** in *Crinoidea:* (*a*) A thickening of the endothelium in the cœloma which gives rise to the gonads. (*b*) A nerve running in a special groove on the floor of the main brachial groove and proceeding from the aboral or dorsal nervous system. It sends branches to the muscles of the arms and to the supposed sensory endings in the ectoderm.—**Axial cross.** (*a*) In spicules of *Hexactinellida*, a cross formed by the union of the six axial threads or canals. (*b*) The projection of the crystallographic axes of a given

species, as used, for example, in the drawing of crystals.—**Axial current.** The central portion of the blood-stream in the smaller vessels, in which the red corpuscles are chiefly found, the white corpuscles moving sluggishly along in contact with the walls of the vessels in the so-called *still layer*.—**Axial duplicity.** See ★*duplicity*.—**Axial eject.** See ★*eject*.—**Axial fiber,** the delicate contractile thread contained in the stalk of certain sessile *Ciliata* among the *Infusoria* (for example, *Vorticellidæ*). Contraction of it causes the stalk to shorten and coil up into a close spiral. **Axial organ,** a structure of enigmatic function found in the axial sinus of *Echinodermata*, exclusive of the *Holothuroidea*. It is finely lobed, usually brownish, and pear-shaped, and consists of a complicated arrangement of tissue strands. It has been variously regarded as a heart, blood-plexus, chromatogen organ, lymph gland, kidney, etc. Also called *dorsal organ*.—**Axial pitch.** See ★*pitch*[1].—**Axial projection.** See ★*projection*.—**Axial ratio,** the relative lengths of accepted fundamental crystallographic axes of a given species, expressed in terms of one of the axes taken as unity; also, the relative lengths of the axes pertaining to a given form.—**Axial sinus,** the vascular sinus which surrounds the ovoid gland of an echinoderm.—**Axial symmetry,** in *acom.*, symmetry with respect to an axis.—**Axial thread,** a thread of organic substance which occupies the axis of each sponge-spicule and of its primary branches.—**Harmonic axial pencil.** See ★*pencil*.

II. *n.* In *math.*, an axial pencil.

axiality (ak-si-al'i-ti), *n.* Axial quality or character: as, the *axiality* of a building.

Axifera (ak-sif'e-rä), *n. pl.* [NL., < L. *axis*, axis, + *ferre*, bear.] An order of alcyonarian *Anthozoa*, consisting of *Synalcyonacea* that form colonies made up of a coenenchymatous rind investing a horny or calcified axis. Same as *Gorgonacea*.

axilemma (ak-si-lem'ä), *n.* Same as ★*axolemma*.

axilla, *n.* **2.** In *bot.*, same as *axil*, 2.

axillary. I. *a.*—**Axillary line,** a line descending vertically from the anterior fold of the axilla (*anterior axillary line*), the center of the axilla (*midaxillary line*), or the posterior fold of the axilla (*posterior axillary line*).

II. *n.* **2.** In the *Crinoidea*, the pentagonal plate which supports the branched arms. The axillaries may be of different orders, according to the degree of branching in the arms. The first axillary in each ray is often a fixed part of the calyx, but may be free, and this is called by some writers the *palmar*. Also termed *axillary radial*.

axin (ak'sin), *n.* A substance secreted by a Mexican coccid (*Llavia axinus*). It is chiefly fatty and contains axinic acid. It is used in medicine as an external application, and also as a varnish, drying and hardening on exposure to the air.

Axinella (ak-si-nel'ä), *n.* [NL., < Gr. ἀξίνη, ax, + dim. *-ella*.] The typical genus of the family *Axinellidæ*. *Schmidt*, 1862.

axinellid (ak-si-nel'id), *a.* Pertaining to or resembling the *Axinellidæ*; specifically, resembling the *Axinellidæ* in arrangement of the spicules of the skeleton-fibers; that is, having each component spicule inclined at an angle, usually acute, to the axis of the fiber, thus giving the latter a feathery or plumose appearance.

Axinellidæ (ak-si-nel'i-dē), *n. pl.* [NL., < *Axinella* + *-idæ*.] A family of halichondrine sponges having the skeleton typically nonreticulate, with the skeleton-fibers plumose, megascleres chiefly styli, and microscleres, if present, never chelate. It contains *Axinella*, *Auletta*, *Halicnemia*, and other genera.

axinic (ak-sin'ik), *a.* [*axin* + *-ic*.] Derived from axin.—**Axinic acid,** an oily acid, $C_{18}H_{28}O_{27}$, obtained by saponifying axin.

axiniform (ak-sin'i-fôrm), *a.* [Gr. ἀξίνη, ax, + L. *forma*, form.] Ax-shaped: as, "a broad, *axiniform* process." *Dana*, Crust., II. 769.

axiom, *n.*—**Middle axiom** [L. *axioma medium*], one of those generalizations of ordinary experience which nobody doubts, and which are soon replaced by scientific formulations, which latter are also, but less properly, termed *middle axioms*.—**Playfair's axiom,** the axiom, "two straight lines which intersect one another cannot be both parallel to the same straight line." It is given in Playfair's Euclid (1813), where Playfair says: "This Axiom has been assumed by others, particularly by Ludlam, in his very useful little tract, entitled *Rudiments of Mathematics*."

axioscotic (ak'si-ō-skot'ik), *a.* [Gr. ἀξιος, correct, + σκότος, darkness, shadow.] Correct in showing the relation of colors; orthochromatic; isochromatic.

axis[1], *n.* **11.** In *arch.*, one of several lines, either imagined or laid down in the plans, etc., which pass through the middle of an important feature. Thus the axis of an entrance-hall will probably be carried through the middle of the outer doorway, the vestibule and inner doorway, and the hall proper. In symmetrical planning and designing the parts on one side of the axis are exactly like those on the other side. Any feature, as a door or a window, may or may not be on the axis. Compare ★*on axe*. **Apical axis,** a line passing through the center of the main longitudinal axis of a diatom in the direction of the raphe and at the same distance from homologous points of the girdle.—**Axis of a storm,** the nearly vertical line about which, as the older cyclonologists assumed, the storm-winds circulate, the severest part of a storm; the region of heaviest wind.—**Axis of collimation,** the line with reference to which a meridian telescope or other optical instrument having motion in one plane only is adjusted, the line of collimation. See *collimation*. **Axis of curvature.** See ★*curvature*.—**Axis of elevation,** a line along which an uplift of the earth's crust has occurred. **Axis of glacial movement,** the line along which the fastest movement of a glacier takes place. **Axis of similitude.** If ABC, A'B'C' be homothetic triangles, and OX a straight line through their center of similitude, and A''B''C'' a triangle symmetric to A'B'C' with regard to OX as an axis of symmetry, then OX is the *axis of similitude* of the triangles ABC, A''B''C''. **Axis of suspension,** the line passing through the center of mass (of a body suspended from a single point) and the point of suspension.—**Axis of symmetry** (**dyad** or **binary axis, triad** or **ternary axis,** etc.). See ★*symmetry*.—**Axis of the horizon.** See ★*horizon*.—**Declination axis,** the axis of an equatorial telescope which is perpendicular to the polar axis: so called because when the telescope is moved by turning the declination axis, the declination of the point viewed is altered, but not its hour-angle or right ascension.—**Hemal axis.** Same as *aorta*.—**Optic axis.** (*b*) In *crystal.*, that direction in a crystal for which there is only one wave and one wave-velocity. Crystals having only one optic axis are said to be *uniaxial*, those with two such axes *biaxial*.—**Pervalvar axis,** the main longitudinal axis of a diatom.—**Ray axis,** in *geometrical optics*, a straight line joining the center of the Fresnel wave-surface in a crystal to one of the points of intersection of the inner and outer sheets of the wave-surface; any direction, in a doubly refracting crystal, in which the ray-velocities of the two waves become the same.—**Secondary axis,** in *optics*, (*a*) of a mirror, any radius which does not pass through the center of the mirror; (*b*) of a lens, any straight line through the center of the lens which does not coincide with the radii of curvature. (Used only in the approximate theory of lenses, in which the thickness is ignored.)—**Transapical axis,** a line passing at right angles to the apical axis of a diatom and through the center of the main longitudinal axis.

axis-band (ak'sis-band), *n.* Same as *axis-cylinder*.

axis-plane (ak'sis-plān), *n.* In *geol.*, a plane which symmetrically bisects a fold and passes through its axis.

axis-traction (ak'sis-trak"shon), *n.* Traction through an axis; specifically, in *obstet.*, traction made with the forceps along a curved line corresponding to the axis of the pelvis.

Axle safety-strap, in a car-truck, a curved strap hanging under the axle to support it in case of breakage. It takes the place of the axle-sleeve no longer used. See *car-truck*.—**Coached axle,** an axle-body which is square at the end. At the collar, next to the square, there is a short octagonal section, the rest of the body being round. The term is used of the body only.—**Concord axle,** an axle with a slightly tapered spindle: named from Concord, New Hampshire, where it originated.—**Cranked axle.** Same as *cranked* ★*shaft*.—**Fantail axle,** an axle-body drawn down thin and wide at the end where the center is welded: a term applied to the body only, without regard to the form of the spindle.—**Long-distance axle,** an axle with the spindle or box grooved so as to draw oil from an oil-chamber and distribute it when the wheel is in motion; also, an axle with a packing of felt which absorbs the oil and distributes it over the bearing surfaces.—**Mail patent axle,** a coach-axle with a straight spindle and without an axle-nut. Its peculiarity consists in two large plates, one of which bears against the rear of the collar and the other against the front end of the hub, the two plates being connected by long bolts which pass lengthwise through the hub and are tightened by nuts.—**Roller-bearing axle,** an axle provided with long steel rollers, placed parallel to or at an angle with the arm, which bear upon the spindle and reduce friction.

axle-cap (ak'sl-kap), *n.* A metallic cap which covers the axle-nut and the end of the axle-arm.

axle-grease (ak'sl-grēs), *n.* A lubricant of fatty character, used to diminish the friction of an axle, as of a vehicle, in its bearing. It is generally a mixture of semisolid oils with soap and resin.

axle-guide (ak'sl-gīd), *n.* On a locomotive, a guide which holds the boxes on the axles from moving endwise while leaving them free to move a certain distance vertically. Sometimes the guide is formed on the frame and at others it is a separate piece. Also called *pedestal*.

axle-lathe (ak'sl-lāTH), *n.* A special lathe for rapidly and exactly turning car-axles to dimension and gage. It is made very strong and stiff, and has several cutting tools.

axle-light (ak'sl-līt), *n.* See the following phrase.—**Axle-light system,** a system of electric train-lighting by means of a dynamo driven by the car-axle.

axle-setter (ak'sl-set"ėr), *n.* A machine which sets the spindles on the ends of axle-trees, making them true and giving them the required set and gather.

axle-wad (ak'sl-wod), *n.* A washer of papier-maché or wood, placed in the back part of an axle-box to protect the bearing from the entry of dust and dirt. It is divided across the middle with beveled edges. *Lockwood*.

axode (ak'sōd), *n.* [Gr. ἄξ(ων), axis, + ὁδός, way.] In *mech.*, the path of the instantaneous axis of a body moving in a plane.

axodendrite (ak-sō-den'drīt), *n.* [Irreg. < Gr. ἄξων, axis, + δενδρον, tree, + *-ite*[2].] In *anat.*, a fibril arising from the axon before it receives a sheath.

axogamy (ak-sog'a-mi), *n.* [L. *axis* (Gr. ἄξων), axis, + γάμος, marriage.] In *bot.*, bearing sexual organs on the axis or stem.

axoid, *a.* **II.** *n.* In *math.*, a curve traced by a point rotating about a moving center.

axoidean (ak-soi'dē-an), *a.* Same as *axoid*.

axolemma (ak-so-lem'ä), *n.*; pl. *axolemmata* (-a-tä). [NL., for ★*axonolemma*, < Gr. ἄξων (L. *axis*), axis, + Gr. λέμμα, a husk, skin.] In *neurol.*, a membrane investing the neuraxon or axis-cylinder of a nerve-fiber.

axon, *n.* **2.** The efferent or axis-cylinder process of a nerve-cell. Also spelled *axone*.

A single filament or *axon*, starting from the perikaryon by a cone of origin containing no chromatic elements.
Encyc. Brit., XXV. 334.

Axon hillock, the slight protuberance formed by the junction of the axon with the body of a nerve-cell.—**Naked axon,** an axon which is not inclosed in a medullary sheath.

axone (ak'zōn), *n.* Same as *axon*.

axoneme (ak'sō-nēm), *n.* [For **axononeme*, < Gr. ἄξων, axis, + νῆμα, thread.] One of the threads or strands in the central portion of the contractile stalk of *Vorticellidæ*.

Axonolipa (ak-sō-nol'i-pä), *n. pl.* [NL., < Gr. ἄξων, axis, + λιπο-, < λείπειν, be wanting.] An order of the graptolites in which a virgula or solid axis is absent. They comprise the earliest *Graptoloidea*, and appear in the Upper Cambrian, but do not extend beyond the Lower Silurian. *Dichograptus*, *Tetragraptus*, and *Didymograptus* are the most important genera of the order.

axonolipous (ak-sō-nol'i-pus), *a.* [Gr. ἄξων, axis, + λιπο-, < λείπειν, λιπεῖν, be wanting.] Pertaining to or having the characters of the *Axonolipa*.

Axonophora (ak-sō-nof'ō-rä), *n. pl.* [NL., < Gr. ἄξων, axle, + -φορος, < φέρειν, bear.] An order of the *Graptoloidea*, or graptolites, in which the rhabdosome is strengthened by a virgula or solid axis embedded in the dorsal periderm. The *Axonophora* appear in the later Lower Silurian after the *Axonolipa*. Their most typical genus is *Diplograptus*, and *Monograptus* is the predominating genus in the Upper Silurian.

axonophorous (ak-sō-nof'ō-rus), *a.* [Gr. ἄξων, axis, + -φορος, < φέρειν, bear.] Pertaining to or having the characters of the *Axonophora*.

axonost (ak'sō-nost), *n.* [Gr. ἄξων, axis, + ὀστέον, bone.] In *ichth.*, one of the interspinal bones; one of the rays of bones which support the dorsal and anal fins, their distal ends being typically inserted between the neural and the hemal spines. *Cope*.

axophyte (ak'sō-fīt), *n.* [Irreg. < Gr. ἄξων, axis, + φυτόν, plant.] A plant with stem and root, that is, with an axis; a cormophyte.

axopodium (ak-sō-pō'di-um), *n.*; pl. *axopodia* (-ä). [NL., for **axonopodium*, < Gr. ἄξων, axis, + ποίς (ποδ-), foot.] A motionless pseudopodium with an axial filament, seen in certain *Mastigophora*, as *Dimorpha*, and in *Radiolaria*.

axospongium (ak-sō-spon'ji-um), *n.*; pl. *axospongia* (-ä). [Gr. ἄξων, axis, + σπόγγος, sponge.] The network of extremely delicate fibrillæ found in the protoplasm of the axis-cylinder or neuraxon of nerve-cells.

ayangao (ä-yäng'ou), *n.* [Native name in the Philippines.] Same as ★*ananaplas*.

Aymarist (ī'ma-rist), *n.* [Bolivian Sp. *Aymarista*, < *Aymará*, name of a people and their language.] One who is proficient in the Aymará language.

Aymestrey limestone. See ★*limestone*.

ayrampu (ī'räm-pō), *n.* [Quichua of Peru (Tschudi) and Aymará of Bolivia.] A vegetable dye of red color much used in Bolivia like cochineal. It comes from the seed of the fruit of a small cactus.

Ayrshire (ār'shėr), *n.* The name of a county in Scotland, used to distinguish a breed of medium-sized cattle, with short incurved horns, originating in that county and largely bred for dairy purposes. The general color is reddish brown, more or less mixed with white.

ayudante (ä-yō-dän'te), *n.* [Sp.: see *adjutant*.] An assistant; a hired man on a ranch or hacienda in some Spanish-American countries.

azadon (ä-thä-dōn'), *n.* [Sp., < *azada*, OSp. *axada* (= Pg. *enxada*, a mattock), < *axa*, < L. *ascia*, a mattock.] A kind of mattock or heavy hoe.

azafran (a-thä-frän′), *n.* [Sp., saffron: see *saffron.*] 1. In Porto Rico, the Philippines, Mexico, and other Spanish-speaking countries, the safflower.—2. In Mexico, *Corylhea filipes* of the spurge family and *Escobedia lævis* of the figwort family; in Peru, *E. scabrifolia.* The roots of these plants yield a yellow dye. In Guam and the Philippines this name is also applied to the turmeric plant (*Curcuma longa*).

azalea, *n.*—**Clammy azalea,** the swamp honeysuckle, *Azalea viscosa*, so called from the viscid tube of the corolla.—**Flame azalea,** *Azalea lutea*, an Alleghany species presenting in the spring immense masses of flame-colored bloom.—**Hoary azalea** or **mountain azalea,** *Azalea canescens*, a shrub of the rocky woods and mountains of eastern North America, with gray pubescent leaves and flowers less showy than in other species.—**Smooth azalea** or **tree-azalea.** (*a*) See *tree-azalea.* (*b*) *Azalea arborescens*, a species growing in the Alleghanies, forming a small tree and bearing innumerable white and pink spicy-scented flowers.

azalin (az′ä-lin), *n.* [*az(ure)* + *-al* + *-in*[2].] A mixture of quinoline blue and quinoline red: used in the manufacture of orthochromatic photographic dry plates.

azelaic (az-e-lā′ik), *a.* [*azo-* + Gr. *ἔλαιον*, oil (see *oil*), + *-ic.*] Noting an acid, CO_2H-$(CH_2)_7CO_2H$, formed by the oxidation of castor-oil, cocoanut oil, or Chinese wax. It crystallizes in leaflets which melt at 106° C. Also called *leparylic acid* and *anchoic acid.*

azimene (az′i-mēn), *n.* [Origin unknown; perhaps Ar.] In *astrol.*, weak or tame degrees which, when ascending at birth, were supposed to afflict the native with infirmity.

Azimghar pottery. See ★*pottery.*

azimido-. Same as ★*azimino-.*

azimino-. [*az(o)-* + *imine* (from *amine*).] The initial part of some chemical names, designating a compound containing the group N_3H, as *azaminobenzene*, $C_6H_4N_3H$, which is formed by the action of nitrous acid on orthodiaminobenzene.

Azimuth circle. See ★*circle.*—**Azimuth error,** the amount by which the axis of a meridian instrument deviates from its correct east-and-west position: a matter of adjustment: sometimes used to designate the correction (to an observation) required by this deviation.—**Azimuth of the plane of polarization,** in *optics*, the angle made by the plane of polarization of a reflected ray of light with the plane of incidence.

azin, azine (az′in), *n.* [*az(ote)* + *in*[2].] One of a group of organic compounds derived from various hydrocarbons of the benzene series by the replacement of two CH-groups with two nitrogen atoms. The simplest azin is derived from benzene and has the formula $C_4H_4N_2$. The azins are of considerable importance in the color industry. Also called *diazin.*—**Azin** ★**blue,** ★**color,** ★**green,** ★**scarlet.** See the nouns.

azo. Same as *azo-*, used adjectively without the hyphen.—**Azo** ★**acid-black,** ★**acid-blue,** ★**acid-brown,** ★**acid-magenta,** ★**black-blue, color, navy** ★**blue,** etc. See the nouns.

azo-alizarin (az″ō-al-i-zä′rin), *n.* A mordant color of the diazo-salicylic-sulphonic-acid type. It dyes chromium-mordanted wool a vinous-red color. Also called *Bordeaux W.*

azo-black (az-ō-blak′), *n.* An acid color of the diazo-sulphonic-acid type. It is closely allied to naphthol black.

azo-blue (az-ō-blö′), *n.* A direct cotton coal-tar color of the diazo-sulphonic-acid type. It is prepared by combining diazotized toluidine with *a*-naphthol-monosulphonic acid, and dyes unmordanted cotton a grayish violet in a soap bath.—**Diamine azo-blue,** a direct cotton coal-tar color which dyes unmordanted cotton a dark reddish blue in a salt bath. By subsequent diazotizing and development the blues produced are rendered both clearer and faster.

azo-brown (az-ō-broun′), *n.* Same as *naphthylamine* ★*brown.*

azo-chromine (az-ō-krō′min), *n.* A mordant color of the monoazo type. It is prepared by combining diazotized para-amidophenol with pyrogallol, and produces dark brown when dyed with a chromium mordant.

azo-coccine (az-ō-kok′sin), *n.* 1. A diazo-compound (*azo-coccine 7B*) prepared by combining diazotized amidoazo-benzene with *a*-naphthol-monosulphonic acid. Same as *cloth-*★*red G* (*b*).—2. A monoazo-compound (*azo-coccine 2R*) prepared by combining diazotized xyloidine with *a*-naphthol-monosulphonic acid. Also called *double scarlet R.*

azo-cochineal (az-ō-koch′i-nēl), *n.* An acid color of the monoazo-sulphonic-acid type, prepared by combining diazotized orthoanisidine with *a*-naphthol-monosulphonic acid: so called because it dyes wool in an acid bath a color resembling that produced by cochineal.

azo-coralline (az-ō-kor′ä-lin), *n.* An acid color of the monoazo-sulphonic-acid type, which dyes wool red in an acid bath.

azo-corinth (az-ō-kor′inth), *n.* A direct cotton coal-tar color of the triazo-sulphonic-acid type, which dyes unmordanted cotton brownish violet in a soap bath.

Azo-diphenyl blue. See ★*blue.*

azo-eosin (az-ō-ē′ō-sin), *n.* An acid color of the monoazo-sulphonic-acid type. It is prepared by combining diazotized orthoanisidine with *a*-naphthol-monosulphonic acid, and dyes wool an eosin-color in an acid bath.

azoflavin, azoflavine (az-ō-flā′vin), *n.* [*azo* + *flavin.*] An acid color of the monoazo type: so called because it resembles flavin in its coloring properties.

azo-fuchsin (az-ō-fōk′sin), *n.* 1. An acid color (*azo-fuchsin B*) of the monoazo-sulphonic-acid type. It is prepared by combining diazotized toluidine with dihydroxy-naphthalene-sulphonic acid, and dyes wool magenta-red in an acid bath.

2. An acid coal-tar color of the monoazo-sulphonic-acid type. It is prepared by combining diazotized sulphanilic acid with dihydroxy-naphthalene-sulphonic acid, and dyes wool magenta-red in an acid bath.

azo-gallein (az-ō-gal′ē-in), *n.* A mordant color of the monoazo-pyrogallol type. It is prepared by combining diazotized dimethyl-paraphenylenediamine with pyrogallol, and gives a purple color with a chromium mordant.

azo-green (az-ō-grēn′), *n.* A mordant color of the monoazo-triphenyl-methane-carbinol type: but little used.

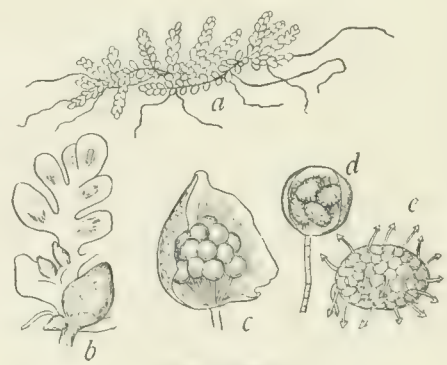
azo-grenadin (az-ō-gren′ä-din), *n.* The name applied to two different acid colors, of unpublished composition, which dye wool red in an acid bath.

azogue, *n.* 2. A poor silver ore.

azo-imide (az-ō-ī′mid), *n.* [*azo-* + *imide.*] In *chem.*, same as ★*hydrazoic acid.*

azole (az′ōl), *n.* [*az(o)-* + *-ole.*] A general name given to a class of carbon-compounds containing a five-membered heteroatomic ring in which at least one atom is nitrogen, as ★*pyrazole,* ★*oxazole,* ★*thiazole* (which see).

Azolla (a-zol′ä), *n.* [NL. (Lamarck, 1783), < Gr. *ἀζειν*, to dry, + *ὀλλύναι*, kill (the plants being killed by drought).] A genus of small,



Azolla Caroliniana.

a, plant, natural size; *b*, branch with sporocarps; *c*, a large sporocarp first open showing the microsporangia; *d*, microsporangia with four microspores; *e*, a single microspore. *b*, *c*, *d*, and *e* highly magnified. (From Britton and Brown's "Illus. Flora of Northern States and Canada.")

communal, moss-like, floating plants of the family *Salviniaceæ*, having pinnately branched stems closely covered by minute, imbricate leaves and with descending, filiform, villous rootlets. There are 4 or 5 species of wide distribution, of which *A. Caroliniana* and *A. filiculoides* occur in the United States.

azo-mauve (az-ō-mōv′), *n.* 1. A direct cotton coal-tar color (*azo-mauve B*) of the diazo-sulphonic-acid type, derived from toluidine. It dyes unmordanted cotton a blackish-blue violet in a soap bath.—2. A direct cotton coal-tar color (*azo-mauve R*) similar to azo-mauve B, but derived from benzidine instead of toluidine.

azonal (a-zō′nal), *a.* [Gr. *ἄζωνος*, zoneless, < *ἀ-* priv. + *ζώνη*, a zone, + *-al*[1].] In *phytogeog.*, not in or according to zones; without zones. See ★*zonal.*

azonation (a-zō-nā′shon), *n.* [Gr. *ἄζωνος*, zoneless, + *-ation.*] In *phytogeog.*, an arrangement other than in zones.

An entire absence of zones, i. e., *azonation*, is exceptional in vegetation.
F. E. Clements, Bot. Surv. Neb., VII. 155.

azo-nigrin (az-ō-nī′grin), *n.* An acid color of the monoazo-sulphonic-acid type which dyes wool a brownish black in an acid solution.

azonium (a-zō′ni-um), *n.* A compound containing a quinquevalent nitrogen atom together with a second nitrogen atom in the same molecule: used chiefly as a final combining form: as, ethyl *phenazonium* iodide.

azo-orange (az-ō-or′änj), *n.* A direct cotton color of the tetrakisazo type, derived from toluidine, which dyes unmordanted cotton orange in a salt bath.

azo-orchil (az-ō-ôr′kil), *n.* An acid color of unpublished composition which dyes wool brownish red in an acid bath.

azo-orseillin (az″ō-ôr-sā′lin), *n.* A direct cotton coal-tar color of the diazo type, derived from benzidine, which dyes unmordanted cotton brownish red in a soap bath.

azophenylene (az-ō-fē′ni-lēn), *n.* [*azo-* + *phenyl* + *-ene.*] Same as ★*phenazine.*

azophor (az′ō-fôr), *n.* [*azo* + Gr. *-φορος* = *bearer.*] See the etymology.—**Azophor blue.** See ★*blue.*—**Azophor red.** See ★*red*[1].

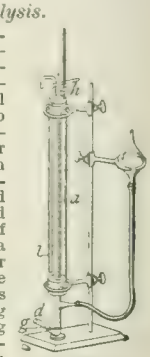
azophosphine (az-ō-fos′fin), *n.* [*azo* + *phosph(orus)* + *-ine*[2].] A coal-tar color of the monoazo type derived from resorcin. It acts as a basic color, and at the same time will dye cotton directly in an acid bath. It is employed in the dyeing of cotton-and-wool union goods.

azote (ä-thō′te), *n.* [Sp., < Ar. *al-sūṭ*: *al*, the, + *sūṭ*, whip.] A whip or switch. [Spanish America.]

azotea (ä-thō-tā′ä), *n.* [Sp., < Ar. *al-saṭḥ*: *al*, the, + *saṭḥ*, a flat roof.] A flat roof or a platform on the top of a house. [Spanish America.]

azotemia (az-ō-tē′mi-ä), *n.* [NL. *azotæmia*, < Gr. *ἀ-* priv. + *ζωτός*, < *ζώειν*, live (see *azote*), + Gr. *αἷμα*, blood.] A disease of solipeds characterized by sudden paralysis of the hind quarters and the passage of blood-colored urine. Commonly called *paralysis.*

azotometer, *n.*—**Bunte's azotometer,** an apparatus for the estimation of nitrogen. It consists of a water-jacketed, graduated eudiometer, provided at its upper end with a funnel and a three-way stop-cock. It is also serviceable in general gas analysis.—**Horn's azotometer,** an apparatus for measuring the nitrogen liberated from gunpowder.—**Johnson's azotometer,** an apparatus for collecting and measuring nitrogen gas liberated in analysis, particularly in that of organic compounds. It consists of a water-jacketed, graduated eudiometer with a tubulus at its lower end for the admission of gas, and a side-tubulus connected with a reservoir containing mercury, which serves for adjusting the internal pressure.—**Lunge's azotometer,** a form of azotometer which permits of the manipulation of larger gaseous volumes than usual.—**Winkler's azotometer,** an instrument which serves not only for the determination of nitrogen, but which is also of general applicability in gas analysis.



Johnson's Azotometer.

a, graduated eudiometer; *b*, tubulus for admission of gas; *d*, opening in tubulus; *h*, stop-cock; *g*, water-jacket.

azoxy-, azoxy (az′ok-si), [*az(ote)* + *oxy(gen).*] A prefix, or separate adjective, denoting that the compound to the name of which it is prefixed contains the azoxy group. See the following phrase.—**Azoxy group,** a bivalent group of elements or radicals consisting of an azo-group into which an oxygen atom has been introduced. Its formula is $-\overset{O}{N}-\overset{O}{N}-$.

Azulin yellow. See ★*yellow.*

azulmic (az-ul′mik), *a.* Noting an amorphous brown acid, $C_4H_5N_5O$, formed by passing cyanogen into ammonia.

azure, *n.* **Spring azure,** a small blue American lycænid butterfly, *Cyaniris lædon*, of wide distribution and remarkable for its complicated polymorphism. Its larva feeds on dogwood, spiræa, sumac, and other shrubs and plants.

azureous (a-zū′rē-us), *a.* Azure; of a clear blue color. [Rare.]

azurine, *n.* 4. A crystalline base, $C_{35}H_{32}N_4O_3$, formed by heating a mixture of orthotoluene diamine and salicylic aldehyde. It melts at 251° C.—**Brilliant azurine,** a direct cotton coal-tar color of the diazo type, derived from dianisidine, which dyes unmordanted cotton in a salt bath.

azygobranch (az′i-gō-brangk), *n.* [*Azygobranchia.*] A member of the *Azygobranchia.*

Azygobranchiata (az″i-gō-brang-ki-ā′tä), *n. pl.* [NL., < Gr. *ἀ-* priv. + *ζυγόν*, yoke, + *βράγχια*, gills.] A group of rhipidoglossate gasteropods of the order *Prosobranchiata*, in which only one ctenidium, the left, is present: contrasted with *Zygobranchiata.* It includes the families *Trochidæ*, *Turbinidæ*, *Helicinidæ*, *Neritidæ*, *Proserpinidæ*, and several others.

azygosperm (az′i-gō-spêrm), *n.* [*a-*[18] + *zygosperm.*] Same as *azygospore.*

B

3. (a) The B next above middle C has (at French pitch) about 488 vibrations per second. (2) The final of the rarely used Locrian mode. (g) In *logic*, the initial of the name of a logical mood signifying that the mood is to be reduced to *Barbara*. (h) In *elect.*: (1) the symbol for *magnetic induction*, or the number of lines of magnetic force per square centimeter or square inch. (2) [*l. c.*] The symbol for *susceptance* in alternating current circuits.—4. (e) An abbreviation for *best*.

Baalitic (bā-al-it'ik), *a.* Same as ★*Baalitical.*

Baalitical (bā-al-it'ikal), *a.* Of or pertaining to Baal or the Baalites.

babbitted (bab'i-ted), *p. a.* Lined or faced with Babbitt metal.

Mr. Van Alstine attributes the low mileage shown by English truck axles to the fact that these are *babbitted* brasses. *Jour. Franklin Inst.*, July, 1903, p. 53.

babbitt-lined (bab'it-līnd), *p. a.* Having a lining of Babbitt or antifriction metal. *Whitham*, Const. Steam Eng., p. 78.

Babcock test. See ★*test*[1].

Babeldom (bā'bel-dum), *n.* The confusion and noise of Babel; a state of confusion and noise resembling that of Babel. *Contemporary Rev.*, Nov., 1882.

Babelize (bā'bel-īz), *v. t.*; pret. and pp. *Babelized*, ppr. *Babelizing*. To throw into confusion; render unintelligible; confound.

Babi (bä'bē), *n.* [Pers. *bābī*, < *bāb*, a gate.] Babism (which see).

babiche (bä-bēsh'), *n.* [Canadian F. *babiche*, said to be from a Micmac **ababich*, string, cord; cf. Micmac *abe*, a cord.] A rawhide thong.

The trader brought along with him the gun and the curved knife, with which men built better canoes and women cut the finest leather, called *babiche*. Result: better boats for water travel, better snow-shoes for snow travel and also better men and women.
O. T. Mason, Pop. Sci. Mo., Feb., 1902, p. 340.

Babinet's compensator. See ★*compensator.*

Babinski phenomenon or **reflex.** See ★*phenomenon.*

babooism, *n.* See ★*babuism.*

baboračka (bä-bo-räch'kä), *n.* [Cf. ★*baborák.*] A Bohemian dance, or the music for it, which is in triple rhythm, akin to the *Tyrolienne* (which see).

baborák (bä-bō-räk'), *n.* [Bohem., < *Babor*, *Bawor*, Bavarian.] A Bohemian dance, or the music for it. The latter properly consists of three strains, of which the second ends in the key of the dominant. In each strain two measures are in triple rhythm and two in duple rhythm.

Babo's gas-generator. See ★*gas-generator.*

babracot (bä-brä-kō'), *n.* A French variant of ★*barbacot.*

babuism (bä'bö-izm), *n.* [Also *babooism.*] The language, culture, or manners of the English-speaking native clerks of India. Their English is characterized by fluency, with a misplaced eloquence and pathos which produces a ludicrous effect. See *babu.*

Babul gum. See ★*gum*[2].

baby, *n.*—**Blue baby**, an infant suffering from congenital cyanosis or blue disease.

baby-blue-eyes (bā-bi-blū'īz), *n.* The Californian bluebell, *Nemophila insignis*. See *Nemophila*. The name *baby-eyes* is applied to the variety *intermedia*, which has less azure flowers, and either name is applied to the family *Hydrophyllaceæ*.

baby-eyes (bā'bi-īz), *n.* See ★*baby-blue-eyes.*

Babylonian. I. *a.*—**Babylonian** or **Babylonish captivity.** (a) The deportation of a large number of Jews to Babylonia, and their captivity there, after the capture of Jerusalem by Nebuchadnezzar in 597 B.C., and on two later occasions (586 and 582 B.C.), the total number deported being estimated at about one eighth of the whole population. About 539 B.C. a portion of the exiles then living returned to Judea under conduct of Ezra. (b) Figuratively, the term of years (1309–76) during which the papal court was at Avignon.

II. *n.* 4. A variety of ball game played with a large ball called a *medicine-ball.*

Babylonism (bab'i-lon-izm), *n.* 1. A word or phrase peculiar to the Babylonians. — 2†. Popery; the papal power. *Bp. Hall.*

babyolatry (bā-bi-ol'a-tri), *n.* Child-worship. *Chambers's Journal*, Feb., 1846, p. 129.

baby's-breath (bā'biz-breth), *n.* The common name of *Gypsophila paniculata*, a diffuse and rather tall-growing herb. The leaves are linear-lanceolate, the largest being about three inches long, becoming smaller toward the inflorescence, and sharp-pointed. The flowers are white and very numerous, with pedicels ⅔ times as long as the calyx. It is a very graceful European plant of the family *Silenaceæ*, and on account of its wiry, stiff stem is excellent for cutting. Related species of *Gypsophila* are grown in gardens.

bacalao (bä-kä-lä'ō), *n.* [Also *baccalao*, *bacallao*, *baccalio*, *bacalow*, etc., < Sp. *bacalao*, *bacallao*, Pg. *bacalhao*, LG. *bakkeljau*, *bakeljauw*, also inverted LG. *kabeljau*, D. *kabeljaauw*, G. *kabeljau*, F. *cabéliau*, *cabliau*, *cábliau*, *cabillaud*, a word originating in the Newfoundland fisheries, in which Dutch, French, and Basque fishermen were engaged, < Basque *baccallaóa*, a codfish.] 1†. A codfish. 2. A Cuban name of the green grouper, especially the scamp, *Mycteroperca falcata.*

bacao (bä-kou'), *n.* [Pampanga.] Same as *bacauan.*

bacauan (bä-kou'än), *n.* [Also *bakauan*; < Philippine Sp. *bacauan*, < Tagalog **bacauan* = Pampanga *bacao.*] A name in the Philippine Islands of mangroves and their allies, especially *Rhizophora mucronata*, *Bruguiera gymnorhiza*, and *Bruguiera eriopetala*. See *mangrove* and ★*mangrove*. Also called *bacao.*

bacca (bak'ä), *n.* [L., a berry.] A berry, especially a succulent berry, like the gooseberry, in which seeds are distributed throughout a pulpy mass.—**Bacca corticata**, a berry with a rind; also an ovary.

baccarine (bak'a-rin), *n.* [For **baccharine*, < *Baccharis* + *-ine*[2].] Same as *baccarinine.*

baccetum (bak-sē'tum), *n.* [< L. *bacca*, a berry, + *-etum* (see ★*-etum*).] Same as *syncarp* (a). *Dumortier.*

bacchanalism (bak'a-nal-izm), *n.* Bacchanalianism.

bacchanalize (bak'a-nal-īz), *v.*; pret. and pp. *bacchanalized*, ppr. *bacchanalizing*. I. *trans.* To convert into a drunken orgy.

II. *intrans.* To indulge in drunken revelry or orgies.

Baccheion (ba-kī'on), *n.* [Gr. Βακχεῖον, prop. neut. of Βακχεῖος, adj., < Βάκχος, Bacchus.] A temple or shrine of Bacchus, or Dionysus. The Baccheion at Athens has been discovered between the Pnyx and Areopagus, and excavated by Dr. Dörpfeld.

bacciocolo (bä-chō'kō-lō), *n.* A Tuscan variety of guitar.

B. Acct. An abbreviation of *Bachelor of Accounts.*

bachelor, *n.* 7. One of the young male fur-seals which are forced, through fear of the adult bulls, to herd by themselves at a distance from the breeding-grounds.—**Bachelor girl**, a young unmarried woman (especially one who earns her own living) who lives more or less independently, often keeping house by herself or in the company of another or others similarly situated.

bachelorly (bach'e-lor-li), *a.* Bachelor-like.

bachi (bäk'hē), *n.* [Native name on Batanes islands.] A distilled liquor used by the natives of the Batanes.

bacillicidal (ba-sil-i-sī'dal), *a.* [*bacillicide* + *-al.*] Destructive of bacilli; bacillicidic.

bacilligenic (ba-sil-i-jen'ik), *a.* Of bacillary origin; caused by the presence of a bacillus.

bacillite (ba-sil'īt), *n.* [L. *bacillus*, a little rod, + *-ite*[2].] One of those embryonic crystals or crystallites, in the glassy eruptive rocks, which are composed of parallel longulites or little cylindric rods: a term suggested by F. Rutley. *Mineralogical Mag.*, IX. 263.

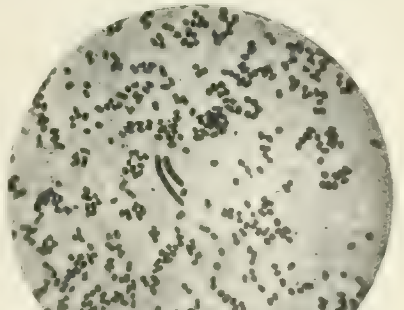
bacillophobia (ba-sil-ō-fō'bi-ä), *n.* [NL. *bacillus* + Gr. -φοβία, < φοβεῖν, fear.] A morbid fear of infection by bacilli.

bacilluria (bas-i-lū'ri-ä), *n.* [NL., < *bacillus* + Gr. οὖρον, urine.] The presence of bacilli in the urine when voided.

bacillus, *n.* 6. In sponges, a microstrongyle; a form of spicule.—**Acid-resisting bacillus**, any one of a small group of bacteria, including *Bacterium* (*Bacillus*) *tuberculosis*, *B. lepræ*, etc., which stain with difficulty, but are very resistant to the mineral acids when these are used as decolorizing agents.—**Bacillus botulinus** ['sausage bacillus'], a bacterium discovered by Van Ermengen and shown to be the cause of meat-poisoning.—**Bacillus bovis morbificans** ['disease-producing beef bacillus'], an organism described by Basenau as a possible cause of certain cases of meat-poisoning: perhaps a variety of the colon bacillus.—**Bacillus coli communis**, a bacterium, having the form of single or paired rods, present in the human intestine in health, and also found associated with other micro-organisms in the blood and other fluids of the body in the course of various diseases. It is found also in water, milk, and food-stuffs, and is one of the most widely disseminated of saprophytic bacteria.—**Bacillus mallei** ['bacillus of the hammer'], a pathogenic micro-organism,

Bacillus mallei, magnified ... times. (From Buck's "Reference Handbook of the Medical Sciences.")

the bacillus of glanders. Morphologically it resembles the bacillus of tuberculosis. It occurs in the form of rods from 2 to 5 microns long and actively motile.—**Bacillus pyocyaneus**, a bacillus found in certain cases of suppuration where the pus has a bluish coloration.—**Boas-Oppler bacillus**, a long bacillus which is found in the stomach contents almost exclusively in cases of cancer of the stomach. It is a marked lactic acid producer.—**Bubonic-plague bacillus**, *Bacillus pestis*, in-



Bubonic-plague bacillus (*Bacillus pestis*), from agar culture. Magnified ... times. (From Buck's "Reference Handbook of the Medical Sciences.")

variably associated with the bubonic plague, and generally accepted as the specific cause of the disease.—**Butter bacillus**, the *Bacillus* 41 of Conn, used to improve the flavor of butter.—**Diphtheria bacillus.** Same as *Klebs-Loeffler* ★*bacillus*.—**Eberth's bacillus**, *Bacillus typhosus*,

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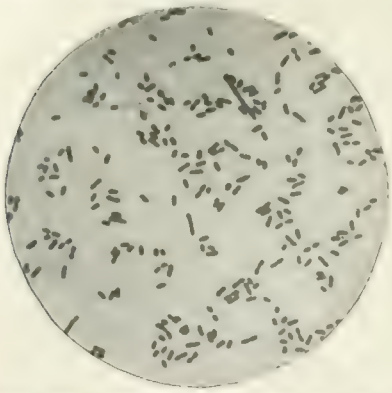
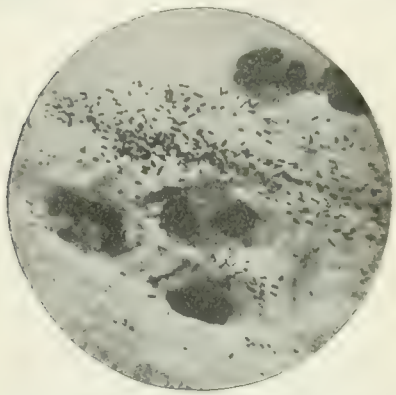
the probable causal agent of typhoid fever. See *typhoid* and *bacillus*.—**Friedlander's bacillus**, the organism *Bacterium* (*Bacillus*) *pneumoniæ*, discovered by Fried-



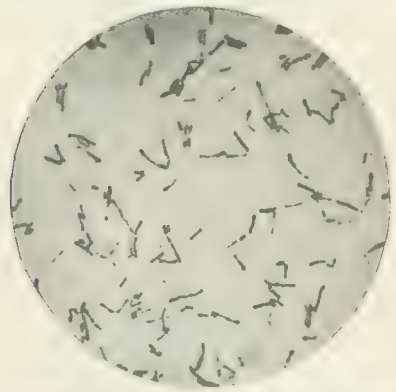
Eberth's bacillus (*Bacterium typhosum*). Magnified 1,000 times. (From Buck's "Reference Handbook of the Medical Sciences.")

länder and believed by him to be the cause of fibrinous pneumonia. Later investigations have not confirmed this belief.—**Glanders bacillus**, *Bacterium* (*Bacillus*) *mallei*, the bacillus of glanders. See ★*Bacillus mallei*.—**Icteroid bacillus**, the *Bacillus icteroides* of Sanarelli, who declared it to be the specific cause of yellow fever. This opinion has not been generally accepted by investigators of the disease.—**Influenza bacillus**, *Bacterium* (*Bacillus*) *in-*



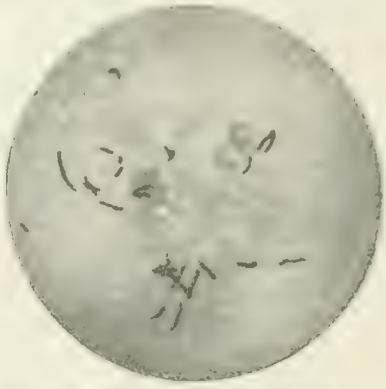
Influenza bacillus (*Bacterium* (*Bacillus*) *influenzæ*). Magnified 2,000 times. (From Buck's "Reference Handbook of the Medical Sciences.")

fluenzæ, considered by Pfeiffer to be the specific cause of epidemic influenza.—**Klebs-Loeffler bacillus**, *Bac-*



Klebs-Loeffler bacillus (*Bacterium* (*Bacillus*) *diphtheriæ*). Magnified 1,000 times. (From Buck's "Reference Handbook of the Medical Sciences.")

terium (*Bacillus*) *diphtheriæ*, the organism invariably found associated with true diphtheria. Its causal relation to this disease is regarded as demonstrated.—**Koch's bacillus**, the tubercle bacillus. See ★*tuberculosis*.—**Koch's comma bacillus**, *Microspira* (*Bacillus*) *comma*. It is found associated with Asiatic cholera, and there is much evidence to support the general belief that it is the cause of this disease. See ★*Microspira*.—**Koch-Weeks bacillus**, a micro-organism which causes one form of acute conjunctivitis.—**Leprosy bacillus**, *Bacterium* (*Bacillus*) *lepræ*. It is usually found in leprous tissue, but its causal relation to the disease has not yet been demonstrated.—**Neumann's bacillus**, a microbe (*Bacillus meningitidis purulentæ*) found associated with cases of purulent meningitis.—**Nicolaier's bacillus**, a bacillus found by Nicolaier in a post-mortem examination of an abscess of the kidney.—**Paracolon bacillus**, a micro-organism found in the blood in certain cases of fever resembling in general typhoid fever, but not responding to Widal's test.—**Pfeiffer bacillus**. Same as *influenza* ★*bacillus*.—**Pseudodiphtheria bacilli**, a name applied to certain bacteria resembling the diphtheria bacillus. They are found in the throat, but are not virulent.—**Pseudo-tubercle bacilli**, certain bacteria, as *Bacterium* (*Bacillus*) *pseudotuberculosis*, which resemble and produce effects similar to the tubercle bacillus.—**Shiga's bacillus**, *Bacillus Shigæ*, which is found quite generally in cases of diarrhœa, dysentery, and cholera infantum, and is believed to be their cause.—**Smegma bacillus**, the *Bacterium smegmatis* of Migula, found on the genital organs of man. It is not generally regarded as pathogenic.—**Tubercle bacillus**, *Bacterium* (*Bacillus*)



Tubercle bacillus (*Bacterium* (*Bacillus*) *tuberculosis*) in sputum. Magnified 1,000 times. (From Buck's "Reference Handbook of the Medical Sciences.")

tuberculosis, the organism demonstrated by Koch to be the cause of tuberculosis. Also called *Koch's tubercle bacillus*. See ★*tuberculosis*.—**Typhoid bacillus**. See *Eberth's* ★*bacillus* and *typhoid*.

back[1], *n.*, **12.** *Half-back* and *full-back* are also applied to similar positions in field-hockey, roller-polo, and other games. In American foot-ball there are two half-backs, who play at varying distances behind the rush-line. They render assistance to the tackles and ends as a secondary line of defense, and on the attack are the men most used for running with the ball. In field-hockey there are usually three half-backs, the center, the right, and the left, who stand about 15 yards behind the forwards.

13. A change in the direction of the wind in the order east, north, west, and south—that is, against the sun or against the hands of a watch.—**14.** In *mining*, a cleavage-plane: one of the main joints, vertical or nearly so, by which strata are intersected. [Scotch.]—**Back of a lode or vein**, in *mining*, the outcrop.—**Paneled back.** Same as ★*panel-back*.—**Repeating back**, in *photog.*, a form of single plate-holder by means of which two separate negatives may be made on one plate.—**Reversing back**, an arrangement of that portion of a camera which holds the focusing-screen and dark-slide by which oblong plates may be exposed either horizontally or vertically.

back[1], *a.* **5.** In *phonol.*, formed at the back of the mouth by raising or lowering the posterior part, or back, of the tongue.—**Back number.** See ★*number*.—**To take the back track.** See ★*track*[2].

back[1], *adv.*—**From 'way back.** (*a*) From a locality which is 'away back,' or far behind or remote, from the place where the speaker is, or from civilization; from some indefinitely distant, out-of-the-way, little-known, or rural region. (*b*) From the beginning, or from early times; hence, with systematic thoroughness: as, he explained the whole thing *from 'way back*. [Colloq.]—**To send back**, in *cricket*, to get (a batsman) out; to cause him to return to the pavilion. [Colloq.]—**To whip back.** See ★*whip*.

back[1], *v. t.* **13.** In *building*: (*a*) To complete at the back or rear by building or by covering or finishing something: often used with *up*. (*b*) To finish at the back by cutting off, trimming, or smoothing: sometimes used with *off*. (*c*) To give a new back to (as a wall), by cutting away some part of the material: generally used with *off*.—**14.** To move (coal) along the working-face to the haulage road.—**15.** To provide (a bow) with a back made of a separate piece or of different material from that of the belly.

back-action, *a.* **II.** *n.* A small wagon attached to and drawn by a larger one, for the transportation of freight. [Pacific States.]

back-airing (bak′ār″ing), *n.* The providing of ventilation, by means of pipes, to the lower or outer side of a trap, to prevent the accumulation of foul gases below it. Also called *back-venting*.

back-angle (bak′ang″gl), *n.* **1.** The angle formed by extending backward the two straight lines which form a given angle. The angular value of the back-angle equals that of the forward or direct angle, but the bearings or azimuths of its sides are reversed.—**2.** The third angle of a triangle which has been found by calculation from the observed values of the other two angles.

back-bag (bak′bag), *n.* A bag carried on the back, especially the *rücksack* of the Tyrolese.

back-balance (bak′bal-ans), *n.* A self-acting incline in the mine, where a balance-car and a carriage in which the mine-car is placed are used. The loaded car upon the carriage will hoist the balance-car, and the balance-car will hoist the carriage and empty car. *Coal and Metal Miners' Pocket-book.*

back-bar, *n.* **2.** In a carriage, a curved bar of ornamental character used to connect the tops of the rear springs and to act as a support for the pump-handles or body-loops.

back-block[2] (bak′blok), *a.* From the interior or back country: as, *back-block* youngsters. [Australia.]

back-blocker (bak′blok-ér), *n.* A settler or resident in the back-blocks of Australia; a bushman from the back-blocks. [Australia.]

back-blocks (bak′bloks), *n. pl.* **1.** A collective name in Australia for those sections which lie back of or away from the settled regions; the back country; the far interior: so called from the fact that on the survey-maps the country is divided into "blocks," or sections.

In the *back-blocks* of New South Wales he had known both hunger and thirst, and had suffered from sunstroke. *Haddon Chambers*, Thumbnail Sketches of Australian Life, p. 33.

2. Those parts of a station which are distant from the river-front. See ★*frontage*. [Australia.]

backboard (bak′bōrd), *v. t.* In *leather-manuf.*, to board on the flesh side instead of on the grain side as in regular boarding

back-box (bak′boks), *v. t.* In *turpentine-making*, to cut new boxes in the unused spaces of (a boxed tree).

back-center, *n.* **2.** The position of the link-block of a Stephenson-link reversing-gear when the engine is running backward; the position of the link-block when it is controlled by the backward eccentric.

back-choir (bak′kwīr), *n.* A secondary choir behind (that is, to the eastward of) the great choir, as in a large church. In the large Spanish churches it is often called the *greater chapel* (★*capilla mayor*, which see, with cut).

back-coal (bak′kōl), *n.* Coal which miners are allowed to carry home with them. [Scotch.]

back-coming (bak′kum″ing), *n.* The mining of coal in the pillars back toward the shaft. See *back-splinting*. [Scotch.]

back-cross (bak′krôs), *v. i.* To cross or interbreed between a Mendelian hybrid and one of the pure parental forms.

The correctness of Mendel's hypothesis of the purity of the germ-cells and of their production in equal numbers, is shown by *back-crossing* of a hybrid with one of the parental forms. For example, in a case of simple dominance the first generation will all be D (R). Any one of them *back-crossed* with the recessive parent will produce 50 p.c. pure recessives and 50 p.c. hybrids. *Jour. Roy. Micros. Soc.*, Feb. 1904, p. 52.

back-cutting (bak′kut″ing), *n.* **1.** In *civil engin.*, earth or other material brought from a place where there is an excess to fill up a cutting or place where there is a deficiency.—**2.** The place whence this extra earth is brought; the excavation made in procuring it.

back-deed (bak′dēd), *n.* In *Scots law*, same as *back-bond* (which see). It corresponds to the declaration of trust in English conveyancing.

back-down (bak′doun), *n.* The act of backing down. See *back*[1], *v.*

back-draft (bak′dráft), *n.* A reverse current; in a furnace, a draft of air or gas going in a direction contrary to the normal direction and often causing a burst of flame out into the fire-room or through the firing-door or ash-pit.

backed, *p. a.* **2.** In *archery*, having the back made of a separate piece from the belly: said of a bow. See *bow*.

backfill (bak-fil′), *v. i.* and *t.* In *engin.*, to fill (a depression) with material taken from a cutting.

back-filling (bak′fil″ing), *n.* **1.** Rough masonry forming the back of a wall.—**2.** The filling in again of a place from which earth has been removed; the earth so filled in.

backfire (bak′fīr), *v. i.*; pret. and pp. *backfired*, ppr. *backfiring*. **1.** To stop an advancing fire by setting in front of it, or around threatened buildings, woods, etc., another fire, which is then beaten out, thus producing a protective burnt area.

In dry times we patrol especially exposed parts. In spring and autumn, during dry weather, our woodsmen all have orders, no matter what they are doing, whenever they see smoke arise to go to it and put out the fire. It

is usually done by *back-firing* entirely around and watching it until we are sure the fire is out. By this means we have kept serious fires from our timber when we are working. *Yearbook U. S. Dept. Agr.*, 1899, p. 424.

2. To light before the proper time: said specifically of a gas-engine when the charge explodes before the admission-valve closes, thus making an explosion in the admission-passage, or before the working-piston reaches its dead-center, which it must do before beginning its working stroke. See ★*back-firing*.

back-fire (bak′fīr), *n.* A fire started purposely some distance ahead of a fire which is to be fought. The back-fire is often so set as to burn against the wind, so that when the two fires meet, both must go out for lack of fuel. Also called *counter-fire*.

back-firing (bak′fīr-ing), *n.* 1. The action of the burner of an explosive mixture, usually of gas and air, by which the flame runs back through the mixing- or combining-tube to the jet which delivers the fuel: due to the fact that the flow in the mixing-tube is slower than the rate at which the flame travels in such a mixture.—2. The pre-ignition of a mixture of gas and air, in the cylinder of an internal-combustion motor, by which the piston is strongly driven backward and a partial rotation of the shaft in reverse direction results: due to a very combustible mixture with high compression in relation to its composition, or to advanced spark-adjustment. See ★*ignition*, 5, and *internal-combustion* ★*motor*.

backflash (bak′flash), *v. i.* Of a flame which is consuming a combustible gas, to move back through the current of gas and burn at a point farther back than is desired. This happens when the rate of flow of the mixture in the current is less than the rate at which flame propagates itself through such a mixture.

back-flow (bak′flō), *n.* Back-draft; also, the flowing back of a flame in gas-engines.

back-flue (bak′flū), *n.* The reverse of a return-flue; a flue for conducting hot gases from the front to the rear end of a boiler.

back-fold (bak′fōld), *n.* A backward fold or folding; the English equivalent of the German *rückfaltung*, suggested by E. Suess for the following condition: A mountain-range which has been upheaved by folding later experiences a strike-fault whose inner side, away from the bounding plains, sinks. Later a cross-folding is developed at right angles to this break, and to the axis of the older folds, which causes great upheaval and tilting. This last-formed fold is called a *back-fold*. *Amer. Geol.*, Aug., 1904, p. 16.

back-furrow (bak′fur ō), *v. i.* To lay a second furrow-slice against the face of a first by plowing in the reverse direction.

backgammon, *n.*—**Russian backgammon,** a variety of backgammon in which the men, instead of being set up on various points at the beginning of the game, are entered by throws of the dice, both players entering upon the same table and going round the board in the same direction.

back-gear, *n.* 2. *pl.* Gears for changing the speed of a shaft by transferring the power to a secondary shaft and then back to the first shaft, or one concentric or parallel with it. Such a set of gears is commonly used on lathes for driving the live spindle when cutting metal.

back-geared (bak′gērd), *p. a.* So geared that the power is brought back to a shaft concentric with the driving-shaft, or parallel to it, but turning at a different speed.

back-gray (bak′grā), *n.* A piece of unbleached cotton cloth placed on a calico-printing machine between the cloth which is being printed and the back-blanket, to keep the latter clean as long as possible.

Back-hand stroke, in *tennis* and similar games played with a racket or bat, a stroke in executing which the player turns the back of his hand toward the direction in which he is sending the ball—for a right-handed player the ball on the left side, and for a left-handed player the ball on the right side.

backing, *n.* 3. (*i*) In *archery*: (1) A reinforcement of wood sinew, or other elastic material forming the back of a composite bow. (See *bow*[2].) Backing of sinew is *free* (simply bound or laced upon the bow) or *close* (molded or glued upon the bow). (2) The art or process of affixing such a reinforcement. (*j*) In *masonry*, the rough stonework, brickwork, or concrete of a wall whose face is of finer material or workmanship; in *arch. construction*, the masonry which rests immediately upon an arch, sometimes necessary to keep it from deformation. (*k*) In *mining*, planks or poles placed behind the main timbers.

backing-cloth (bak′ing-klôth), *n.* In *calico-printing*, an endless cloth, consisting of several layers of stout cotton cloth fastened together with caoutchouc, run immediately back of the fabric to be printed, to increase the elasticity of pressure of the engraved rollers.

backing-cylinder (bak′ing-sil″in-dėr), *n.* In *calico-printing*, the pressure-cylinder, on a cylinder printing-machine, which serves as a solid abutment for the engraved printing-rollers.

backlashing (bak′lash-ing), *n.* Same as *back-lash*, 1.

back-line (bak′lin), *v. t.*; pret. and pp. *back-lined*, ppr. *back-lining*. See *to* ★*hand back*.

back-mine (bak′min), *n.* A cross-cut passage toward the dip of the strata. Also *back-set mine*. [Scotch.]

back-observation (bak′ob-zėr-va shon), *n.* An observation made, as in surveying, in a direction contrary to the direction of progress, or contrary to the usual direction.

back-palming (bak′pä-ming), *n.* In *conjuring*, the art of passing cards or coins to the back of the hand through the fingers, and then back again to the palm, as the hand is turned in full view of the spectators.

Recently some new sleights were introduced from America. These consist in an amplification of the method of concealing coins and cards at the back of the fingers. The principle has received the incongruous title of "*back palming*." By means of this method both back and front of the hand alternately can be shown empty, while, notwithstanding its apparent emptiness, the hand nevertheless conceals a coin or card. *Encyc. Brit.*, XXX. 428.

backpedal (bak′ped-al), *v. i.* In *bicycling*, to press down upon the pedal as it rises, in order to check the movement of the wheel.

backplate, *n.* 2. A plate of cast-iron bolted against the back or outer edge of molding-boxes, for the purpose of preventing the liquid metal from forcing the sand outward and escaping from the mold: also applied to the plate used on the back of the wind-box of the Bessemer converter.

back-poppet (bak′pop″et), *n.* The tail-stock in a lathe. [Eng.]

back-positive (bak′poz″i-tiv), *n.* In German organ-building, that division of the instrument which is placed behind the player's seat and between him and the church. It is usually played from the lower bank of keys. Compare *chair-organ* and *choir-organ*.

Back-pressure line, that line of an indicator-card which is traced by the pencil of the indicator while the end of the cylinder to which the indicator is attached is exhausting.

back-quarter (bak′kwâr-tėr), *n.* A strip of leather at a rear corner of a bow-top carriage.

backset, *n.* 3. In *lock-making*, the horizontal distance between the front of the lock and the center of the keyhole: an essential measurement in lock-fitting.

back-shot (bak′shot), *n.* A back-firing; the firing of the charge in the cylinder of an internal-combustion engine before the admission-valve has closed, thus causing an explosion in the admission-passage.

back-shutter (bak′shut″ėr), *n.* That part of a shutter which is hinged to the stile.

back-slanging (bak′slang-ing), *n.* The custom of travelers in the back-blocks of Australia, where hotels are scarce, of seeking accommodations at the settlers' stations on their route. [Australia.]

back-slippage (bak′slip″ąj), *n.* Of pumps, same as *slip*[1], *n.*, 6.

back-spin (bak′spin), *n.* A backward rotation, as of a golf-ball. It checks the forward motion of the ball.

back-stamp (bak′stamp), *n.* An imprint upon the reverse side of mailed matter indicating the time and place of its receipt at a post-office.

backstay, *n.* 8. In *mining*, an inclined strut or brace of a shaft-head frame, designed to resist the pull of the hoisting-engine.—**Backstays to the sun,** radiating beams of light proceeding from behind a cloud near the horizon; the sunbeams shining between distant clouds and illuminating the lower hazy, dusty atmosphere. When these beams descend to the earth or ocean in front of the observer it is said that the sun is "drawing water."—**Shifting backstay,** a stay used on a fore-and-aft vessel only as necessity requires. Such stays are shifted when the vessel goes about, so that the weather ones will be taut and the lee ones slack. Shifting backstays are set up with their own permanent tackle and act as preventer stays for the topmast when the vessel is under a press of sail. When not in use they are secured in the after part of the channels or standing rigging of the mast to which they belong.

back-stop, *n.* 2. In *base-ball*, the catcher. See def. 1.—3. A stop or pawl designed to check the backward movement of a wheel; a detent. —**Back-stop net,** coarse netting used on athletic grounds to prevent the balls used in tennis or base-ball from passing beyond certain limits.

back-stope (bak′stōp), *n.* In *mining*, a working-place over a drift or level in which the ore is attacked from below.

backstope (bak′stop), *v. t.*; pret. and pp. *back-stoped*, ppr. *back-stoping*. To mine a stope by working from below.

back-stretch (bak′stresh′), *n.* That part of a circular or oval race-course which is at the side opposite to the finish; the part opposite the home stretch.

back-stroke, *n.* 3. In *telegr.*, the return-stroke of the lever in a telegraph-sounder. *Standard Elect. Dict.*—4. Diastole: the impulse of the heart, a faint beat occurring as the blood enters the ventricles.

back-swordman (bak′sord-man), *n.* Same as *back-swordsman*. *Shak.*, 2 Hen. IV., iii. 2.

back-swordsman (bak′sordz-man), *n.* A fencer with the single-stick or back-sword.

back-turn (bak′tėrn), *n.* In *mass.*, same as *turn*, 6.

back-up (bak′up), *n.* Mechanism or levers by which the forward motion of a motor-car or -vehicle is reversed.

The single lever which, by a forward and backward movement, through the space of about 12 inches, starts the engine, and controls the forward speeds and the *back-up*, doing away with the confusion arising from a multiplication of levers. *Hiscox*, Horseless Vehicles, p. 262.

back-valve (bak′valv), *n.* A check-valve; a valve which automatically prevents a fluid from flowing in the wrong direction.

back-vent (bak′vent), *n.* In *mining*, in wide rooms with center pack-walls, the air-course alongside the pillar. *Barrowman*, Gloss. [Scotch.]

back-wash (bak′wosh), *v. t.* 1. To cleanse from oil, as wool after combing.—2. To subject to the back-wash of a boat which is ahead or is passing.

back-wash (bak′wosh), *n.* 1. In *worsted manuf.*, a process of cleaning the carded sliver of wool by passing it through hot suds. *C. Vickerman*, Woolen Spinning, p. 225.—2. The disturbed water thrown aft by the action of the oars, paddle-wheels, or propeller of a boat.

backwasher (bak′wosh-ėr), *n.* In *worsted manuf.*, a machine for cleansing the carded sliver by passing it through hot soap-suds and water, over hot copper drums, and through a screw gill-box.

back-working (bak′wėr-king), *n.* In *mining*, working a coal-bed back or working toward the shaft. [Scotch.]

bacological (bak-o-loj′i-kal), *a.* [It. *bacologico* (< NL. *bacologicus*), < *bacologia*, the art of silkworm culture, < *baco*, reduced from *bombaco*, var. of *bombace*, < ML. *bombax*, var. of L. *bombyx*, silkworm (see *bombast*, *bombyx*) + Gr. *-λογία* < *λέγειν*, speak.] Of or pertaining to the culture of silkworms; sericultural.

Baconian theory, the theory that Bacon wrote the plays usually attributed to Shakspere. This theory, first distinctly put forth by Delia Bacon in 1857, has had many fervent advocates, who have found difficulty in believing that two men of the "supreme genius" commonly ascribed to both Bacon and Shakspere could exist as contemporaries.

Baconianism (bā-kō′ni-an-izm), *n.* Baconism.

Baconist (bā′kon-ist), *n.* 1. An adherent of the Baconian philosophy.—2. One who holds to or favors the Baconian theory as to the plays usually recognized as Shakspere's.

Bacony degeneration. Same as *lardaceous disease* (which see, under *lardaceous*).

Bacopa (ba-kō′pä), *n.* [NL. (Aublet, 1775), prob. after a native Guiana name of the type species.] A genus of dicotyledonous plants of the family *Scrophulariaceæ*. The type species, *B. aquatica*, is a native of Guiana and Brazil and in those countries is used medicinally. See *Herpestis*.

bacteræmia, *n.* An improper form of ★*bacteriæmia*.

bacteria-bed (bak-tē′ri-ä-bed′), *n.* In sewage disposal, same as ★*cultivation-bed* (which see).

Bacterial blight, a name given to certain bacterial diseases of plants: as, the *bacterial blight* of the walnut, which has been reported from California, and the *bacterial blight* of potatoes (*Bacillus solanacearum*), which causes the death of the leaves and stems, and also the rotting of the tubers.—**Bacterial lamp,** a glass flask of 1–2 liters capacity, containing a culture of phosphorescent bacteria. —**Bacterial proteins.** See ★*protein*.—**Bacterial spot,** a disease of carnations, of bacterial origin, which produces spots on the leaves and finally kills them. It is regarded as distinct from bacteriosis of the carnation, attributed to *Bacillus Dianthi*.

bacteria-tank (bak-tē′ri-ä-tangk′), *n.* In sewage disposal, same as ★*septic tank* (which see).

bacteric (bak-ter′ik), *a.* Same as *bacterial*.

Bactericidal immunity. See ★*immunity*.

bactericide, *n.*—**Specific bactericide,** a term introduced by Pfeiffer to designate the active substance of a bacteriolytic immune serum: same as ★*bacteriolysin*.

bacteriemia (bak-tē-ri-ē′mi-ä), *n.* [NL. *bacteriæmia*, < Gr. *βακτήριον*, a rod (see *bacterium*), + *αἷμα*, blood.] Presence of bacteria in the blood.

bacteriofluorescin (bak-tē″ri-ō-flū-ō-res′in), *n.* A green fluorescent pigment produced by *Bacillus pyocyaneus*.

bacterioid, *a.* **II.** *n.* An organism shaped like a bacterium; specifically, the branched form of bacteria found in the root-nodules of leguminous plants.

bacterioidal (bak-tē-ri-oi′dal), *a.* Having the shape of a bacterium; bacterioid.

bacteriologic (bak-tē″ri-ō-loj′ik), *a.* Same as *bacteriological*.

Bacteriological ★incubator, ★sterilizer. See the nouns.

bacteriologically (bak-tē″ri-ō-loj′i-kal-i), *adv.* In a bacteriological sense or relation.

bacteriolysin (bak″tē-ri-ol′i-sin), *n.* [*bacteriolys(is)* + *-in*[2].] A substance of the character of an amboceptor, which will cause the destruction of bacteria in the presence of a corresponding complement. (See ★*complement*, 8.) Its action is, generally speaking, specific, that is, a certain bacteriolysin will destroy only a certain definite species of bacteria.

In his Croonian lecture (1900) Ehrlich says: "From this it appears that in the therapeutic application of anti-bacterial sera to man therapeutical success is only to be attained if we use either a *bacteriolysin* with a complement which is stable in man, or at least a *bacteriolysin* the amboceptor of which finds in human serum an appropriate complement. The latter condition will be the more readily fulfilled the nearer the species employed in the immunisation process is to man."
Lancet, April 4, 1903, p. 943.

bacteriolysis (bak″tē-ri-ol′i-sis), *n.* [NL., < *bacterium* + Gr. *λύσις*, dissolution.] Destruction of bacteria by some specific lysin.

But inasmuch as the results of the studies form an integral part of the work on hæmolysis and *bacteriolysis*, which is now attracting so much attention among bacteriologists and pathologists, and as they contain certain facts of fundamental importance bearing on the theory of these phenomena, it seems best not to delay publication until the entire series of researches shall have been completed. *Jour. Exper. Med.*, March 17, 1902, p. 278.

bacteriolytic (bak-tē″ri-ō-lit′ik), *a.* [*bacteriolysis* (*-lyt-*) + *-ic*.] Pertaining to or of the nature of bacteriolysis; destructive to bacteria through the action of specific lysins.

The colon and typhoid bacillus were employed to check one another. It was found that in nearly every case the *bacteriolytic* power of the blood was sufficient to destroy the typhoid bacillus, even if alcohol was not employed.
Therapeutic Gazette, May 15, 1903, p. 292.

bacterioprotein (bak-tē″ri-ō-prō′tē-in), *n.* An albuminous substance derived from bacteria. Same as *bacterial* ★*protein*.

bacteriopurpurin (bak-tē″ri-ō-pēr′pū-rin), *n.* [L. *bacterium* + *purpureus*, purple, + *-in*[2].] The reddish-purple coloring matter contained in certain bacteria.

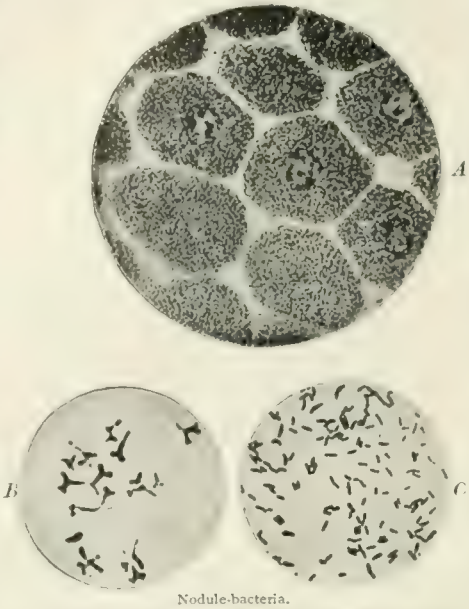
bacterioscopically (bak-tē″ri-ō-skop′i-kal-i), *adv.* By bacterioscopic methods; by means of a search for bacteria with the microscope or by culture methods. *Nature*, LXVII. 370.

bacterioscopist (bak-tē-ri-os′kō-pist), *n.* One engaged or skilled in the microscopical investigation of bacteria.

bacteriosis (bak-tē-ri-ō′sis), *n.* Any plant-disease caused by bacteria.—**Bacteriosis of the carnation,** a disease of carnations attributed by Arthur and Bolley to *Bacillus Dianthi*.—**Bacteriosis of the cucumber,** a disease of cucumbers caused by *Bacillus tracheiphilus*.—**Bacteriosis of the hyacinth,** a disease of hyacinths caused (according to Walker) by *Pseudomonas Hyacinthi*.—**Bacteriosis of the melon,** a disease which destroys the leaves and vines of melons: caused by *Bacillus tracheiphilus*.—**Bacteriosis of the mulberry,** a disease of the mulberry attributed to *Bacillus Cubonianus*.—**Bacteriosis of the potato,** a disease which attacks the leaves, stems, and tubers of potatoes: said to be caused by *Bacillus solanacearum*.—**Pink bacteriosis of wheat,** a disease of wheat attributed to *Micrococcus Tritici*.

bacteriotoxin (bak-tē″ri-ō-tok′sin), *n.* **1.** A toxin of bacterial origin.—**2.** Same as ★*bacteriolysin*.

bacterium, *n.*—**Hog-cholera bacteria,** a group of varieties or species, including *Bacillus Salmoni*, found associated with hog-cholera.—**Involution forms of bacteria,** irregular forms due to constrictions or swelling of the cells. They occur especially in old cultures, where the organisms have little vitality or are dead.—**Iron-bacteria,** certain of the higher bacteria, as species of *Crenothrix*, which make use of the iron compounds, especially iron carbonate. See ★*Crenothrix*.—**Luminous bacteria,** species which possess luminous properties. The luminosity appears to be due to the vital processes of the cell acting in the presence of free oxygen.—**Mesophilic bacteria,** a class of bacteria so called on account of the temperature at which they grow. The minimum is 10°–15° C., optimum 37° C., and maximum about 45° C. The forms which produce pathogenic action in man belong to this class.—**Nodule-bacteria,** the bacteria which produce nodules upon leguminous plants, enabling them to use atmospheric nitrogen.—**Pigment-bacteria,** bacteria which exhibit color.—**Psychrophilic bacteria,** bacteria which develop at a minimum temperature of 0° C., optimum 15°–20° C., and maximum about 30° C. The water-inhabiting bacteria generally belong to this class.—**Pus-producing bacteria,** the group of forms which are active in suppurative processes, of which *Streptococcus pyogenes* is a frequently found example.—**Sulphur bacteria,** a name applied to certain bacteria frequently found in sulphur-springs. The most common forms belong to ★*Beggiatoa* (see cut), and ★*Thiothrix*.—**Thermophilic bacteria,** a group of bacteria which require a high temperature for successful growth. The minimum is 40°–49° C., optimum 50°–55° C., and maximum 60°–70° C. Many of the soil-bacteria belong to this group.



Nodule-bacteria.
A, a few cells highly magnified to show the bacteria; four cells with nuclei; *B*, branching forms from clover tubercle; *C*, rod-forms from fenugreek tubercle.

bacteriuria (bak-tē-ri-ū′ri-ä), *n.* [NL., < Gr. *βακτήριον*, a rod (see *bacterium*), + *οὖρον*, urine.] Presence of bacteria in the urine when voided.

Bactrian. I. *a.*—**Bactrian sage,** Zoroaster.
II. *n.* The language of Bactria.—**Old Bactrian,** the old language of Bactria: usually called *Avestan* or *Zend*.

Bactrites (bak-trī′tēz), *n.* [NL., < Gr. *βάκτρον*, a cudgel, + *-ites*.] An early genus of fossil cephalopods in which the shell is straight, the protoconch round and calcified, and the septa regularly saucer-shaped, with a lateral siphonal lobe. Some writers regard this genus, which occurs only in the Devonian, as a derived form of the nautiloids because of its shape, the variability of its siphonal lobe, and the fact that some nautiloids, like *Orthoceras*, possess a calcified protoconch. Others regard the genus as a primitive form of the ammonoids; but this view is not now well supported.

bactriticone (bak-trit′i-kōn), *n.* [NL., < *Bactrites*, + Gr. *κῶνος*, cone.] The elongate-conic shell of the cephalopod genus *Bactrites*. The word was employed by Hyatt to distinguish this shell from the similar but stouter cones of nautiloids like *Orthoceras* (orthoceracones), on the assumption that *Bactrites* is an ammonoid genus and the only representative of that group with a straight and smooth shell. This view is not generally accepted, and the term *bactriticone* is held to be essentially equivalent to *orthoceracone*.

bacuba (bä-kö′bä), *n.* [A native W. Ind. name: cf. Oyambi *bacowe*, Galibi *baccoücou*, *baloulacu*, banana.] A name, in the Danish West Indies, of the cultivated dwarf banana, *Musa Cavendishii*.

bacule (bak′ūl), *n.* [MF. *bacule*.] Same as *bascule*, 2.

baculiferous (bak-ū-lif′e-rus), *a.* Bearing reeds or canes.

baculiform (ba-kū′li-fôrm), *a.* [L. *baculum*, rod, + *forma*, form.] Rod-shaped; straight.

baculiticone (bak-ū-lit′i-kōn), *n.* [NL., < *Baculites* + Gr. *κῶνος*, cone.] A shell like that of the ammonoid cephalopod genus *Baculites*; a shell close-coiled in early stages but in later growth becoming uncoiled and finally straight.

baddeckite (ba-dek′it), *n.* [*Baddeck* (see def.) + *-ite*[2].] A highly ferriferous mica occurring in small isolated scales embedded in a plastic clay: found near Baddeck, Nova Scotia.

baddeleyite (bad′li-īt), *n.* [Named after Joseph *Baddeley*, who brought the first specimen from Ceylon.] Zirconium dioxid (ZrO_2), occurring in tabular monoclinic crystals from yellow to brown or black in color: first found in the gem-sands of Rakwana, Ceylon, and later in Brazil (there called *brazilite*) and in Sweden.

badenite (bad′e-nīt), *n.* [Rumanian *Badeni* (see def.) + *-ite*[2].] An arsenide of cobalt, nickel, and iron, containing also a small amount of bismuth. It occurs in steel-gray granular to fibrous masses at Badeni-Ungureni, Rumania.

badge[1], *n.* **5.** A breed of domesticated pigeons, so named because of the sprinkling of white about the head and 10 white flight feathers.—**Badge of fraud,** in *law*, an act or omission innocent in itself, but so out of the usual course that a presumption of fraudulent dealing arises, which must be overcome by positive evidence.

badger[2], *n.* **5.** An erroneous translation, in the English version of the Bible, of the Hebrew *tahash*, an animal whose skins are mentioned 13 times in the Old Testament as coverings for the ark of the covenant, the table of showbread, and the tabernacle itself, and once (in Ezek. xvi. 10) as a material for the shoes or sandals worn by women. Badgers are not known to occur in Asia as far south as Palestine and Arabia. The particular animal which furnished these skins has not yet been identified.
6. In Australia, (*a*) the bandicoot, *Perameles*, and, rarely, (*b*) the rock-kangaroo, *Petrogale*.—**7.** A soldier who wears short whiskers. [Colloq., U. S.]—**8.** In *angling*, an artificial fly having a hackle of badger cock with a dark-brown, nearly black center and cream-colored points.—**Badger game,** a blackmailing scheme in which a man of means is enticed by a woman into a compromising relation, and is then pounced upon by her alleged husband and compelled to pay smart-money.

badger-box (baj′ėr-boks), *n.* A roughly constructed dwelling, shaped like an inverted V and covered with bark, much used by Tasmanian pioneers. [Australia.]

badhan (bäd′ċhan), *n.* [Yiddish, from Talmudic (Syr.) *beduh*, cheer up, amuse.] A professional jester; one who entertains the guests at a Jewish marriage by reciting Hebrew and Yiddish popular songs, anecdotes, etc., and who also addresses the bride and bridegroom. Although his chief occupation (as his name signifies) is merrymaking, his addresses to the couple before the marriage ceremony assume a solemn character. Also called *marshalok* or *marshallik*, from the German *marschalk*, a sort of leader in festivities.

badia (bä-dē′ä), *n.* [It., shortened form of *abbadia*.] Same as ★*abbadia* (which see).

Badiotites (bad-i-ō-tī′tēz), *n.* [NL.; formation not obvious.] A genus of ammonoid cephalopods with closely coiled discoidal shells, relatively simple septal sutures, and strongly ribbed and keeled whorls. It occurs in the Triassic rocks of the Mediterranean province.

badjong (bad′jông), *n.* [Aboriginal name.] The name, in western Australia, of a tall shrub, *Acacia microbotrya*. It produces a large quantity of good gum, similar to gum arabic, which has a pleasant sweetish taste; the aboriginals gather and store it in hollow trees for use as food in winter.

bad-wing (bad′wing), *n.* A geometrid moth, *Dyspteris abortivaria*, inhabiting the Atlantic United States, the hind wings of which are greatly reduced in size. It is pea-green in color, with two white bands on each of the fore wings and one on each of the hind wings. Its larvæ roll the leaves of grape.

Baelz's disease of the lip. See ★*lip*.

Bæna (bē′nä), *n.* [NL.; formation not obvious.] A genus of fossil turtles from the Cretaceous and Eocene of North America.

bænomere (bē′nō-mēr), *n.* [Irreg. < Gr. *βαίνειν*, go (see *base*[2], *basis*), + *μέρος*, part.] One of the thoracic segments of an arthropod.

bænopod (bē′nō-pod), *n.* [Irreg. < Gr. *βαίνειν*, go, + *ποίς* (*ποδ-*), foot.] One of the thoracic legs of an arthropod.

bænosome (bē′nō-sōm), *n.* [Gr. *βαίνειν*, go, + *σῶμα*, body.] The thoracic region of an arthropod. *Packard*.

baer, *n.* Same as ★*ber*.

Bætyl coin, an ancient coin representing a sacred meteorite, like those of Eleuthera, Myrina, and other Greek cities.

bætylic (bē-til′ik), *a.* Of or pertaining to a bætylus or sacred meteoric stone.

In the later palace a series of finds illustrated the '*bætylic*' cult of the Double Axe and its associated divinities. A gem showed a female figure—apparently a goddess—bearing this sacred emblem.
Rep. Brit. Ass'n Advancement of Sci. 1902, p. 468.

baetzner (betz′nėr), *n.* A small billon coin of Strassburg in Alsace, worth 8 deniers.

baff[3] (baf), *a.* [Prob. a form of *bauch*.] Worthless; useless. [Prov. Eng.]—**Baff week,** the week

in which no pay is received, fortnightly payment of wages being customary in some parts of Great Britain.—**Baff Saturday,** the Saturday of baff week.

baffle, *n.* **4.** An artificial obstruction (in the form of a board, plate, or cleat placed in the channel) to the continuous smooth flow of a liquid or gas. It is used for the purpose of producing a thorough mixture of the flowing medium, or of checking its velocity, or of detaining solid matters transported or propelled by the flowing medium.

baffle-block (baf'l-blok), *n.* A thick piece of metal, sometimes hollow, used to baffle, or deflect, gases in a furnace.

baffle-ring (baf'l-ring), *n.* A ring placed in a bearing to prevent leakage.

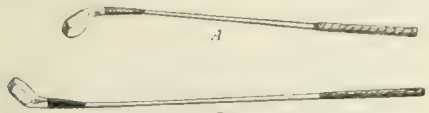
baffle-tank (baf'l-tangk), *n.* A tank in which baffles, or cross-partitions, are placed to check the flow of a liquid or vapor through the tank.

baffle-tube (baf'l-tūb), *n.* A tube placed in the path of the hot gases from a furnace, to deflect them and make them take a more circuitous path, so as to retard their passage out of the tubes until all heat has been given off.

baffling (baf'ling), *n.* An arrangement or system of partitions, plates, or rings whereby a tendency to motion in an undesired direction is prevented. See *baffle-plate*, ★*baffle-ring*.

baffy (baf'i), *n.* [*baff*[2] + *-y*[2].] Same as ★*baffy-spoon*.

baffy-spoon (baf'i-spön), *n.* A wooden club



A, baffy-spoon; *B*, long spoon.

with a short shaft and very much lofted in the face, used in golf for playing approaches.

bag[1], *n.* **13.** In *base-ball*, a base-bag.—**14.** A swelling on a boiler-plate. It is frequently found in wrought-iron boiler-plates, and is due to the presence of cinder inside the plate, which causes that part of the plate which is exposed to the heat to expand more than the side next to the water and to separate from it.

15. In *leather-manuf.*, fullness in the middle of a skin, which prevents it from lying out flat and smooth. It is more marked in large skins.—**Barnes's bag,** an hourglass-shaped rubber bag employed in dilating the os uteri.—**Faraday's electric bag,** an instrument devised by Faraday to show that a charge of static electricity is distributed on the exterior surface of bodies. A metal ring on an insulated support has a gauze bag fitted to it. After electrification by use of a proof-plane, it may be shown that the charge is on the exterior, for when the bag is drawn inside out by pulling the silk strings the charge will still be found on the exterior.—**Politzer bag,** a rubber bulb with a tube attached, used to force open the Eustachian tube in cases of catarrhal closure. See *politzerize*.

Faraday's Electric Bag.

bag[1], *v. t.*—**To bag a brace,** in *cricket*, said (humorously) of a batsman when he fails to score a run in either of his two innings. [Colloq.] *Hutchinson*, Cricket, p. 322.

bagatel, *n.* A simplified spelling of *bagatelle*.

bagatelle, *n.* **3.** Specifically, in *music*, a short and light piece, usually for the piano.

bag-filler, *n.* **2.** In *milling*, a machine for filling paper bags or cloth sacks with flour, bran, meal, etc. One form consists of a short conveyer, operated by hand, for drawing a fixed quantity of flour from a hopper and loading it in the bag. In other forms the empty bag is placed in a machine, where it is firmly held and raised to a filling-cylinder by which a fixed quantity of flour is placed in it, the filled bag or sack being released and removed by hand.

baggage-room (bag'āj-rōm), *n.* **1.** A room at a railway-station, steamship-pier, or the like, where baggage is received, registered, dated, checked, etc.—**2.** A room where baggage may be left until called for, a receipt or number being given. [U. S. in both senses.]

baggatiway (ba-gat'i-wā), *n.* [Ojibwa *pagaadowe*, to play ball.] The game of lacrosse. *J. M. Cooley*, Michigan, p. 61.

bagging[1], *n.*—**Cotton bagging,** a jute fabric of very coarse texture for baling cotton: same as *gunny bagging*.

Baggy group. See ★*group*[1].

bagio, baguio (bä'gi-ō, bä-gē'ō), *n.* [Sp. *baguio*, < Tagalog, Bisaya, Pampanga, etc., *bagio*, Ilocan *bagguio*, a tempest.] In the Philippine Islands, a native name for a whirlwind storm, hurricane, typhoon, or cyclone.

Baguios, as hurricanes are called here, seem to be of frequent occurrence. They often blow down all the huts of a village, destroying the bread-fruit and coconut crops, uprooting the trees or stripping them of their leaves, so that it takes them a long time to recover.
Plant World, May, 1903, p. 100.

bago (bä'gō), *n.* [Tagalog.] A name in the Philippine Islands of *Gnetum Gnemon*, an evergreen shrub or small tree with jointed, knotty branches, opposite leaves, and catkin-like inflorescence. The bark yields cordage; the seeds are roasted and eaten by the natives, and the young leaves are cooked and eaten like spinach. Also called *nabo*.

bag-rack (bag'rak), *n.* A rack attached to the side or bulkheads of a ship to support the bags in which the crew keep their clothing.

bagrada-bug (ba-grä'dä-bug), *n.* [NL. *bagrada* (Stål, 1862), from a native name?] A pentatomid bug, *Bagrada hilaris*, common in South Africa, where it damages cabbage and cauliflower just as does the allied harlequin cabbage-bug (*Murgantia histrionica*) in the United States.

bagre (bä'grā), *n.* [Sp., Pg.] A sea-catfish, a species of *Tachysurus* or of a related genus. [Spanish America.]

bagsang (bäg'säng), *n.* [Bisaya *bágsang*.] A name in the Philippine Islands of the starchy pith of several palms, especially that of *Caryota Rumphiana*. The pith yields a kind of sago which is highly nutritious, and which is eaten by the natives either in the form of gruel or as a substitute for rice.

baguet, *n.* **2.** In *cytol.*, a rod-shaped mass of chromatin in the nuclear division of some *Infusoria*.

baguilumban (bä-gē-löm'bän), *n.* Same as ★*balokanag*.

baguio, *n.* See ★*bagio*.

bag-worm, *n.* **Abbot's bag-worm,** the case-bearing larva of a psychid moth, *Oiketicus abbotii* (Grote), occurring in the southern United States. See *Psychidæ*.—**Quince bag-worm,** the larva of *Thyridopteryx ephemeræformis*. See *bag-worm*.

bahag (bä'hag), *n.* [Tagalog and Bisaya.] A loin-cloth worn by the natives of the Philippine Islands.

Bahama lancelet. See ★*lancelet*.

bahawdry (ba-hâ'dri), *n.* [Also *bahaudry*, *bahadry*, < Hind. *bahāduri*, adj., < *bahādur*, bahadur.] The star pagoda in Mysore. See *pagoda*, 3.

bahawdur (ba-hâ'dör), *n.* Same as *bahadur*.

Bahian group. See ★*group*[1].

baho (bä'hō), *n.* [Hopi *baho*, *paho*.] Same as ★*paho*.

bahur (bä'ḥör), *n.*; pl. *bahurim* (bä-ḥö'rēm). [Yiddish *bocher*, Heb. *bahūr*, pl. *bahūrīm*, < *baḥar*, choose, select.] **1.** In biblical Hebrew, a young man. *Gesenius.*—**2.** In modern use (since the fourteenth century), a student of the Talmud in a rabbinical college (yeshiba), especially now in Russia and Poland.

baia (bī'ä), *n.* [Said to be Siamese.] A money-shell, as a cowry.

baidarki, *n.* See *bidarkee*.

Baiera (bī'e-rä), *n.* [NL. (Friedrich Braun, 1843), named in honor of Johann Jacob *Baier* (1677–1735), an eminent man of science.] See *Jeanpaulia*.

bail[2], *n.* **7.** In *Canadian law*, a demise of realty.—**Bail court.** See ★*court*.—**Bail emphyteotique,** a lease for a long term, with right to renew indefinitely, practically amounting to an absolute conveyance.—**Common bail.** (*a*) See *bail*[2], 3. (*b*) In practice, the formal entering of fictitious bail when special bail is not required. It is intended merely to express the appearance of a defendant.

bail[3], *v.* **II.** *intrans.* To halt or surrender when "bailed up" or "held up" by a highwayman. [Australia.]

Bailable process, an attachment requiring the arrest of a defendant, and his release upon giving to the officer of the court to whom the attachment is directed suitable bail for his appearance.

bail-drive (bāl'drīv), *n.* A universal-joint drive; a Hooke's gearing.

bailer[3] (bā'lèr), *n.* [*bail*[3], *n.*, + *-er*[1].] In *cricket*, a ball that strikes the bails: usually applied to a ball that strikes the bails after pitching.

bail-former (bāl'fôr″mèr), *n.* A wire-cutting and -shaping machine for making bails.

bailiff, *n.*—**Water-bailiff.** (*b*) In English port towns, an officer appointed to search ships. (*c*) In London, an officer who supervises the inspection of fish brought into the city.

bailiff-errant (bā'lif-er″ant), *n.* An under-bailiff; a deputy to a bailiff.

bailing-net (bā'ling-net), *n.* A scoop- or gathering-net used in lifting live fish out of a trap or seine.

Baillarger's layer-line. See ★*line*[2].

baiochetto (bä-yō-ket'ō), *n.* [It., dim. of *baiocco*: see *baiocco*.] A small silver coin of the Farnesi, dukes of Castro, in the sixteenth century.

Bairdiella (bār-di-el'ä), *n.* [NL., named for Spencer F. *Baird*, an American naturalist.] A genus of American sciænoid fishes, including the mademoiselle, or silver-croaker, *B. chrysura*. *Gill*.

bait-bug (bāt'bug), *n.* A small burrowing crustacean, *Hippa talpoidea*, found on the Atlantic coast of North America.

baiz, *n.* A simplified spelling of *baize*.

bajara (ba-yä'rä), *n.* A form of pump or water-lift used for irrigation purposes. It comprises a large vertical wheel carrying on its circumference a chain of water-buckets and driven by rough gearing from a whim operated by a horse or mule.

Bajocian group. See ★*group*[1].

Bajuvarian series. See ★*series*.

bakam (bä'käm), *n.* [E. Indian.] A name applied in the East Indies to *Biancæa Sappan*, the sapan-wood of commerce. See *sapan-wood*. Also called *bookum* and *bukkum-wood*.

bakauan, *n.* See ★*bacauan*.

Baker's leg or **knee,** knock-knee.—**Bakers' sponge test.** See ★*test*[1].

bakerite (bā'kèr-īt), *n.* [Named after R. C. *Baker*, a director of the mining company.] A hydrated calcium borosilicate occurring in massive white forms at the borax-mines in San Bernardino county, California.

Bakewellia (bāk-wel'i-ä), *n.* [*Bakewell*, a market-town in Derbyshire.] A genus of extinct pelecypod mollusks belonging to the family *Pernidæ*, having elongate-alate shells with a multivincular ligament and denticulations under the beaks. It occurs in the Permian formation. Also written *Bakevellia*.

baking-paper (bā'king-pā″pèr), *n.* In *cooking*, a thin sheet of asbestos fabric or felt, used to control the baking of bread or cake. When the bread or cake is sufficiently browned in the oven, the paper is laid over it, effectually shutting off excess of heat and preventing scorching or burning.

baking-powder, *n.* The baking-powders in use in the United States belong virtually to the following classes: (*a*) bicarbonate of soda with cream of tartar; (*b*) acid calcium phosphate; (*c*) dry soda-alum; (*d*) both acid calcium phosphate and dry soda-alum; and in all starch to absorb hygroscopic moisture from the air and prevent premature loss of carbon-dioxid gas.

baking-soda (bā'king-sō″dä), *n.* Sodium acid carbonate or bicarbonate of soda, $NaHCO_3$.

Baktrian, *a.* and *n.* See *Bactrian*.

bakuin (bak'ö-in), *n.* [Russ. **bakuinŭ*, < *Baku* in Transcaucasia, a great petroleum center.] A Russian mineral lubricating-oil having a high viscosity and low cold test. Compare **bakurin*. *Thorpe*, Dict. Applied Chem., I. 263.

bakuol (ba-kö'ol), *n.* [Russ. **bakuolŭ*, appar. < *Baku* (see ★*bakuin*) + L. *ol(eum)*, oil.] A name given by Mendeléeff to an illuminating-oil made by mixing oils of different specific gravities and of different flashing-points.

bakurin (bak'ö-rin), *n.* [*Baku* (see ★*bakuin*) + *-r-* + *-in*[2].] A lubricating-oil made by mixing 100 parts crude Baku oil, 25 parts castor-oil, and 60–70 parts sulphuric acid of 66° Bé., followed by washing with water and sodium hydroxid. *Thorpe*, Dict. Applied Chem., I. 264.

Bala group. See ★*group*[1].

balaad (ba-läd'), *n.* [Given as Somali, but perhaps representing Ar. *bilád*, country.] A native name in Somaliland for a small tabanid fly resembling *Hæmatopota*, which bites camels, sometimes causing their death. *Proc. Zool. Soc. London*, 1900, I. 9.

balænoid (ba-lē'noid), *a.* [L. *balæna*, a whale, + *-oid*.] **1.** Resembling or pertaining to a whale; whale-like.—**2.** Pertaining to the genus *Balæna*.

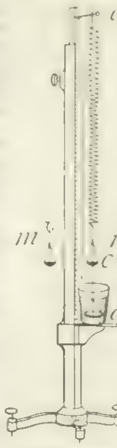
balafong, *n.* Same as *balafo*. See also ★*marimba*.

balagan (bal-a-gan'), *n.* [Siberian.] A thatched pyramidal wooden hut of eastern Siberia, raised on piles to a height of about 10 feet, and reached by a ladder consisting of a notched tree-stem.

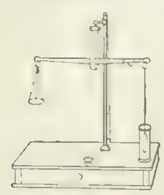
The little village of Karaga consists of seventeen straggling *balagans*, six yurts and one small tent.
Geog. Jour. (R. G. S.), XII. 285.

balance, *n.* **14.** In engines, a condition in which the forces at play due to the masses of the moving mechanism are balanced by others which operate in a contrary sense, so that the engine has no tendency to lift or slide upon its foundation, but would run without jar even if not secured to such foundation. Balance is of great importance in locomotive and motor-car engines, since, from the nature of their service, the bed-plates

or frames of these machines cannot be fastened to the ground.—**Automatic balance**, a weighing-machine which automatically cuts off the material being placed upon it when a fixed amount is in the weighing-pan.—**Inertia balance**, an instrument which, by means of oscillations controlled by adjustable weights, enables moments of inertia to be determined without the use of stop-watches.—**Jolly's balance**, a delicate spiral spring of elastic brass wire, intended chiefly for determining the specific gravity of small fragments of minerals.—**Kelvin's ampere-balance**, an apparatus for measuring the strength of an electric current in absolute terms by balancing its attracting force against a weight.—**Mohr's specific-gravity balance**, a convenient form of balance suited to the determination of the specific gravity of both solids and liquids. A rider on the graduated arm is used instead of the smaller weights.—**Plattner's balance**, a small assay-balance so constructed as to be easily taken apart and packed in a small box for safe transportation: used in rough mining regions.—**Quartz-thread gravity-balance**, an instrument, devised by Threlfall and Pollock, for statically measuring variations in gravity. It consists of a quartz thread 50.5 cm. long and .0058 cm. in diameter, held rigidly at one end and capable of torsion at the other. A gilded brass wire 5.3 cm. long and weighing .018 gram is soldered to the thread in such a way that its center of gravity is a little on one side of the quartz thread. Twisting the thread brings the wire into a horizontal position and on the cross-wire of an observing microscope. In use the twist put on the quartz thread to bring it into the horizontal position is determined. If gravity increases, the movement of the weight of the wire increases and a greater twist is required.—**Specific-gravity balance**, a balance used for determining the specific gravity of a substance. See above.—**Tangent balance**. See ★*tangent*.—**Torsion-balance**. (*b*) Besides the Coulomb torsion-balance, used principally for electric and magnetic measurements, an instrument so named has been made for ordinary weighings, in which the beam turns upon a horizontal wire subject to torsion instead of upon a knife-edge.—**Troemner's balance**, a form of dispensing-scale.—**Wheatstone's balance**. Same as *Wheatstone's bridge*. See *resistance*, 3.



Jolly's Balance. *a*, spiral spring; *c*, *d*, pans; *m*, graduated mirror.


Mohr's Specific-gravity Balance.

balance, *v. t.*—**Balanced ration**. See ★*ration*.

balance-box (bal'ans-boks), *n.* A box which counterbalances the load lifted by a balance-crane. It is usually a cast-iron box loaded with small weights or kentledge. *Lockwood*, Dict. Mech. Eng. Terms.

balance-cylinder (bal'ans-sil″in-dėr), *n.* A small steam-cylinder sometimes placed on top of the valve-chest of large vertical engines, so that steam acting on the under side of the piston will relieve the valve-gear of the weight of the valve and valve-rod. A similar cylinder is sometimes used, though rarely, to balance the weight of the engine-piston and piston-rod. Also *balancing-cylinder*.

balance-lever (bal'ans-lev″ėr), *n.* In *textile-manuf.*, a device for controlling the counter-faller of a spinning-mule.

balance-lug (bal'ans-lug), *n.* *Naut.*, a lug-sail contracted into a narrower compass by rolling up a portion of the canvas on its yard.

balance-rail (bal'ans-rāl), *n.* In the keyboard of the organ or piano, the rail or raised strip which carries the pins on which the keys are balanced and operated. See cut under *pianoforte*.

balance-reef (bal'ans-rēf), *v. t.* To close-reef; take in all the reefs.

balance-rope (bal'ans-rōp), *n.* In *mining*, a rope hung under the cage in a shaft to counterbalance the weight of the winding-rope. *Barrowman*, Gloss.

balance-rudder, *n.*—**Compound balance-rudder**, a type of balance-rudder, formerly used in some war-ships, in which the forward part could be locked in a fore-and-aft line when under sail, but the whole used as an ordinary balance-rudder when steaming.—**Twin balance-rudders**, a special arrangement of rudders for torpedo-boats, devised by Thorneycroft. There is a balance-rudder on each side of the screw, hollowed out toward the screw, thus forming a sort of tunnel in which the screw revolves.

balancing-cylinder (bal'an-sing-sil″in-dėr), *n.* Same as ★*balance-cylinder*.

balancing-lever (bal'an-sing-lev″ėr), *n.* Same as *equalizing-bar* (which see, under *bar*[1]).

balancing-machine (bal'an-sing-ma-shēn″), *n.* A machine for finding and correcting any variation in the weight of different parts of a pulley-machine knife or cutter and causing it to run true at high speed.—**Knife-balancing machine**, a scale-balance for testing the distribution of weight in machine-knives and rotary cutters. Unevenness in the distribution of weight in a knife is found by weighing it in different positions in the scale, and is corrected by filing the heavy portions until, after repeated tests, it is exactly uniform in weight in all positions. Knives used in pairs are tested until they balance in all the positions in which they will be placed in the cutter-head of a wood-working machine. **Rotary balancing-machine**, a machine for testing pulleys by causing them to revolve in a horizontal plane, any variations in the rotation caused by unequal distribution of weight being indicated by the machine. Weights may then be added to the pulley in such positions as to cause it to run true in the balancing-machine.

balancing-organ (bal'an-sing-ôr″gan), *n.* Same as *balancer*, 5. *Rep. Brit. Ass'n Advancement of Sci.*, 1901, p. 695.

balancing-way (bal'an-sing-wā″), *n.* A device for finding any want of balance in a wheel or arbor by suspending it upon carefully adjusted supports, or ways, and causing it to revolve. When it comes to rest the heavy side is downward, showing a want of balance at that place, and this is corrected by filing that point or adding weight at opposite points.

balaneutics (bal-a-nū'tiks), *n.* [Gr. *βαλανευτική*, fem. of *βαλανευτικός*, < *βαλανεύειν*, attend at the bath, < *βαλανεῖον*, a bath: see *balneum*.] The science of administering baths; balneology.

balangay (bä-län-gī'), *n.* See ★*barangay*.

balanophoraceous (bal″a-nō-fō-rā'shius), *a.* [NL., < *Balanophoraceæ* + *-ous*.] Having the characters of or belonging to the *Balanophoraceæ*.

balanoposthitis (bal″a-nō-pos-thī'tis), *n.* [NL., < Gr. *βάλανος*, acorn (glans), + *πόσθη*, penis, + *-itis*.] Inflammation of the prepuce and glans penis.

Balantidium (bal-an-tid'i-um), *n.* [NL. (Claparède and Lachmann, 1858), < Gr. *βαλαντίδιον*, dim. of *βαλάντιον*, a bag, pouch.] A genus of heterotrichous ciliate *Infusoria*, of the family *Bursarina*, having a large peristome and well-marked anal aperture. Its species are found in the rectum of batrachians, the large intestine of man, and the cœloma of annelids.

balao[1] (bä-lä-ō'), *n.* [Cuban Sp. *balaó*; cf. Sp. *balaou*, a kind of sprat.] The halfbeak, *Hemiramphus brasiliensis*. [Cuba.]

balao[2] (bä'lä-ō), *n.* [Tagalog.] A name in the Philippine Islands of *Dipterocarpus vernicifluus*, a forest-tree which yields a fragrant resin called *balao balsam* or *malapaho balsam*, highly prized by artists as a varnish for pictures. See ★*panao*.

balarao (bä-lä-rä'ō), *n.* [Tagalog (whence Pampanga *balarao*), a dagger, prob. orig. referring to an attached thong; cf. Bisaya *balalao*, a coil of string or rope, a skein of thread or silk.] In the Philippine Islands, a dagger with a rather broad blade.

balastre, *n.* See *baluster*.

balata-gum, *n.* Almost the entire output of balata-gum is produced in Guiana and Venezuela, and comes into commerce in the form of sheets and blocks. It is usually considered a kind of gutta-percha, but differs from the latter in that it is softer at the ordinary temperature, more elastic, cools more slowly after being heated, and is much more durable when exposed to light and air. Though sometimes used in mixtures with gutta-percha, pure balata-gum has certain uses for which it seems especially adapted, as molds for galvanic purposes, shoe-soles, dress-shields, and belts for transmitting power.

balate (bä-lä'te), *n.* [Philippine Sp. *balate*, < Tagalog *balat*, skin, hide.] A sea-cucumber, dried and smoked, eaten as a relish; trepang.

balatong (bä-lä-tong'), *n.* [Tagalog and Bisaya *balatong*.] A name applied in the Philippines to *Phaseolus Mungo*, one of the most important food-staples of the natives. See *green gram*, under *gram*[3].

Balatonian group. See ★*group*[1].

balaustre (bä-lä-ös'tre), *n.* [Sp. *balaustra*, flower of the wild pomegranate.] The name in Venezuela of the valuable timber-tree *Centrolobium robustum*. See ★*arariba*.

Balbach process. See ★*process*.

balboa (bal-bō'ä), *n.* [Panama Sp. *balboa*, named for *Balbōa*, who discovered the Pacific Ocean.] A new gold coin of the republic of Panama, worth $1 in United States gold: 1-, 2½-, 5-, 10-, and 20-dollar balboas are coined.

balbus (bal'bus), *n.* [L., stammering.] A stammerer.

baldface (bâld'fās), *n.* The widgeon, *Anas americana*. See ★*baldhead*, 4.

baldhead, *n.* 4. The widgeon, *Anas americana*: so called from its white head.

baldio (bäl-dē'ō), *n.* [Sp. *baldio*, *a.*, untilled, waste.] Waste or common land.

Baldwin's phosphorus. See ★*phosphorus*.

bale[3], *n.*—**Commercial bale**, a bale of certain form and weight, recognized in commercial usage as a legal tender in trade, for example, a cotton-bale rectangular in form and weighing about 500 pounds.—**Running bale**, any bale just as it is, for example, a cotton-bale as it comes from the press.—**Sea-island bale**, a marketable package of sea-island cotton, weighing about 390 pounds.

bale-band (bāl'band), *n.* *Naut.*, a big shackle-shaped iron at the masthead, secured to the cap-band, to which the standing part of the flying-jib stay is made fast.

bale-breaker (bāl'brā-kėr), *n.* A machine for opening or loosening the hard-packed layers of a cotton-bale.—**Porcupine bale-breaker**, a bale-breaker equipped with a rapidly revolving cylinder or beater, consisting of a number of teeth, spikes, or blades.

bale-sling (bāl'sling), *n.* *Naut.*, a simple strap (circle of rope) passed around a bale or bag, the two ends meeting on top, one dipping (passing) through the other. The hook of the hoisting-tackle is slipped into the loop formed by the rope, and when a strain is brought upon the tackle the rope strap tightens about the article hoisted and holds it securely.

Balfouria (bal-fō'ri-ä), *n.* [NL. (Robert Brown, 1810), named in memory of Sir Andrew *Balfour* (1630–1694), founder of the Royal Botanical Garden at Edinburgh.] A genus of dicotyledonous plants belonging to the family *Apocynaceæ*. See *Wrightia*.

balibago (bä-lē-bä'gō), *n.* [Tagalog and Bisaya. Cf. Guam *pago*, Fijian *vau*, Samoan *fau*, Hawaiian *hau*.] In the Philippines, a tree, *Pariti tiliaceum*, widely distributed in the tropics. Its bark yields a valuable bast-fiber from which the natives of Guam and other Pacific islands make cordage. Its wood is very light, and is used for outriggers for canoes, floats for fishing-nets, and for kindling fire by friction. See *corkwood* and *mahoe*, 1.

Balibago (*Pariti tiliaceum*).

balif, *n.* A simplified spelling of *bailiff*.

balimbing, *n.* See ★*balingbing*.

balingbing (bä-ling-bing'), *n.* [Tagalog and Bisaya *balingbing*, < Malay *bilimbing* (*belimbing*, *balimbing*): see *bilimbi*.] A Philippine name of the tree and fruit bilimbi or bilimbing (which see).

balisier (bä-lē-zē-ā'), *n.* [F. *balisier*, the canna or Indian shot.] A name in some of the West Indies of several species of banana-like plants of the genus *Bihai*, the flowers of which are protected by large red or yellow bracts which give them a very showy appearance. Also called *wild banana*. See *Heliconia*.

baliti (bä-lē'tē), *n.* [Philippine Sp. *baliti*, *balete*, < Pampanga *baliti*.] A name in the Philippine Islands of *Ficus Indica* and several allied species having aërial roots and the habit of growth of the banians of India. From the inner bark of some of the species the Negritos prepare bark-cloth similar to the tapa of the Polynesians, which they use for clothing. See *banian*[2].

balk[1], *n.* 9. (*c*) (2) In England, a beam of a certain size received from the Baltic. The size is stated at 4–8 inches in width, 5–12 inches in thickness, and of any considerable length. The word generally denotes a whole trunk roughly squared and therefore tapering from end to end. (*d*) Any heavy mass of timber, such as the string-piece of a wooden pier or bridge.
15. In *wool-manuf.*, a fullness and suppleness of texture.—16. The failure of a jumper or vaulter to jump after taking his run. Three balks usually count as a trial-jump.—**Double balk**, in *billiards* (now almost exclusively in the English game), a term used when the incoming striker's ball is in hand and the other two within the string.—**To make a balk**, in *billiards*, to force one's own ball and the red (or both reds, in the American game) within the string-line when one's opponent is at hand.

balk[1], *v. t.*—**To balk the crib**, in *cribbage*, to lay out cards for the dealer's crib which are unlikely to match any that he will lay out. Such would be a king and a 9.

balk-lining (bâk'lī″ning), *n.* A system of balk-lines in carom-billiards introduced in 1874 and later modified. It now consists of eight short lines, two in each corner, intersecting the original continuous line running parallel to and either 14 or 18 inches from each section of the cushion. Thus there are nine panels representing four different areas. Eight of the panels are balks. The central panel, having an area nearly as great as that of all the others combined, is free, and yet

is neglected by the best players. Starting at 8 inches, the continuous line has been changed, in public games, to 10, 12, 12½, 14, and 18 inches. The only ones now in force are briefly expressed as 14:2, 18:2, and 18:1, the final figures indicating the number of shots allowed on two object-balls in any one balk. Shots are not necessarily counts, and at 18:1 there can be no count at all unless a balk-ball is sent out, while at 18:2 or 14:2 there cannot be two in succession. Return of the ball to the same balk imposes no penalty.

balk-pocket (bâk′pok″et), *n.* One of two corner pockets at the foot of an English and the head of an American billiard-table.

ball[1], *n.* **25.** In the manufacture of soda by the Leblanc process, the batch of pasty material produced by heating together sodium sulphate or salt-cake, calcium carbonate (limestone or chalk), and coal as discharged from the furnace.—**26.** In *arch.*, a spherical ornament. Specifically (*a*) A sphere cut out of stone and serving as the crowning feature of a gate-post or the like. (*b*) A hollow sphere of thin metal, made as light as possible and braced with iron bars, set above a cupola or dome. The ball of St. Peter's at Rome is 8 feet in diameter.

27. *pl.* Iron ore occurring in balls or nodules. Also *ball-ironstone.* [Scotch.]—**Ball-and-socket joint.** (*b*) In *geol.*, a cup-shaped joint produced by the longitudinal contractions of basaltic columns during cooling.—**Ball thrust-bearing.** Same as ★*ball-thrust.* —**Best ball.** In games like golf or croquet, where there are three players, the best player matches his score against the best ball of the other two.—**Four-ball match,** in *golf*, a match in which four players engage, two on each side, each playing his own ball, only the best ball on either side counting.—**Guilty ball** or **danger ball,** in *croquet*, the ball to be played against on an opponent's side.—**Hanging ball,** in *golf*, a ball which lies on ground that slopes downward in the direction in which the ball is to be driven.—**Illegal ball,** in *base-ball*, a ball delivered to the batsman by the pitcher when the latter is not in his prescribed position. —**Innocent ball,** in *croquet* and similar games, the ball last played.—**Leg ball,** in *cricket*, a ball bowled so that if its course is not altered by the batsman it will pass behind his legs.—**Length ball,** in *cricket*, a ball bowled with the proper length or pitch; a ball so pitched as to cause the batsman difficulty in playing it.—**Liberia balls and flakes,** a trade-name for crude india-rubber of good quality brought in large balls from Liberia.—**Lined balls,** in *billiards*, balls so much in alinement that the first object cannot be hit for a count without hitting the second also, such a situation being commonly, though not always, a tie-up. —**Lopori balls,** a trade-name for a kind of crude india-rubber brought in small balls, black on the outside and white within, from the Kongo region in Africa.—**New Guinea balls,** a trade-name for a kind of crude india-rubber in strings of small balls, black on the outside and white or pink within, the product of *Ficus rigo*, imported from New Caledonia.—**No ball,** in *cricket*, a ball delivered or bowled unfairly as regards either action or position.—**Passed ball,** in *base-ball*, a ball which is delivered by the pitcher within the catcher's reach, but which the catcher fails to hold, so that it goes beyond him and the runner succeeds in gaining a base.—**Plain ball,** in *billiards*, the clear white as distinguished from the spotted white ball. In France (for no good reason) both are clear, with the result that the wrong one is often played with as a cue-ball.—**Running ball,** in *base-ball, foot-ball, golf, lawn-bowls*, and other games, a rolling ball. —**Short ball,** in *cricket*, a ball which pitches too far in front of the batsman to cause him difficulty in playing it; a ball bowled short of a length. See *length* ★*ball.*—**Three-ball match,** in *golf*, a match in which three players play against one another, each with his own ball; or a match in which one plays his ball against the best ball of two others. The latter is usually referred to as a *best-ball match.*—**To break the balls.** See ★*break.*—**To smother the ball,** in *cricket*, to play forward with the bat upon the ground, so as to stop the ball soon after it pitches.—**Wide ball,** in *cricket*, a ball bowled out of the batsman's reach.

ball[3], *n.* **3.** A belt of sand a short distance off-shore on which waves break in rough weather. [Local, Eng.]

The sands exposed at low tide were mostly smooth; only in the low between the beach and the "*ball*" were there well-preserved tidal sand-ridges.
Geog. Jour. (R. G. S.), XVIII. 183.

ballade, *n.* **3.** In *music*, a term variously applied to melodies for ballads, to extended narrative or dramatic works for a solo voice, occasionally to concerted choral cantatas, and to instrumental pieces of a melodic character —in the last case often without obvious reason.

ballahoo (bal-a-hö′), *n.* [Also *ballahou, bullahoo*; appar. another use of *ballahou*, W. Ind. name of a schooner: see *ballahou.*] A garfish. [Australia.]

ballast, *n.* **5.** The rough masonry of the interior of a wall, or that laid upon the vault; masonry used where weight and solidity are needed. Compare ★*filling*, 7, and ★*back-filling.* —**Ballast fever,** formerly, any epidemic disease occurring on board a ship from a tropical port, supposed to be due to a contagium present in the ballast.—**To freshen ballast.** See ★*freshen.*

ballast-car (bal′ast-kär), *n.* In *railroading*, a gondola- or hopper-car used in conveying, dumping, and distributing gravel, broken stone, or other ballast along a roadway.

ballast-fin (bal′ast-fin), *n.* A heavy metal extension bolted to the keel of a yacht, designed to give her great stability by carrying the ballast low down. It is on the principle of the fin-keel.

ballast-line (bal′ast-līn), *n.* The water-line of a vessel when she is in ballast.

ballast-loaded (bal′ast-lōd″ed), *p. a.* Said of a vessel when she has nothing but ballast in her hold.

ballast-shovel (bal′ast-shuv″l), *n.* A shovel employed in handling earth ballast.

ballast-tank (bal′ast-tank), *n.* In *shipbuilding*, one of a series of compartments built in a ship, made water-tight, and provided with pipes by means of which it may be filled with water from the sea or pumped out by the ship's pumps. When the tank is filled the water acts as ballast. Such tanks are usually formed in the space between the inner and outer bottoms, though additional ballast-tanks are frequently placed elsewhere for special reasons.

In other words, the volume of the *ballast-tank* is not included in the under-deck tonnage; and shipbuilders are left free to choose their methods of constructing the hulls for water-ballast purposes.
White, Manual of Naval Architecture, p. 55.

Ball-bearing axle, an axle with steel balls (held by a box or sheave) which bear upon the axle-arm to reduce friction.

ball-clay (bâl′klā), *n.* A plastic clay used in making pottery. Also known as *pipe-clay.*

ball-dance (bâl′dâns), *n.* A ceremonial dance connected with the ball-games of some Indian tribes.

baller (bâ′lèr), *n.* A workman who charges puddled bars into a balling- or reheating-furnace.

ballet[2], *n.* **4.** The music to which a ballet is danced.—**5.** In the sixteenth and seventeenth centuries, especially in England, a light glee-like madrigal or part-song, often with a fa-la burden. See *fa-la.*—**6.** In the eighteenth century, a series of instrumental dances properly in the same key and usually for stringed instruments; a suite (which see). The dramatic ballet (see def. 2) was the national form of drama in France; it originated in the sixteenth century, and in the seventeenth coalesced with the Italian musical drama, giving rise to the early type of French opera.—**Ballet of Ballets,** the name in the Bishops' Bible (1568) of the Song of Songs.

ballet-dancer (bal′ā-dân″sèr), *n.* One who dances in a theatrical or operatic ballet. See *ballet*[2], 1.

ballet-girl (bal′ā-gèrl), *n.* A female ballet-dancer.

ballet-master (bal′ā-mâs″tèr), *n.* The trainer or director of a ballet. See *ballet*[2], 1.

ballet-music (bal′ā-mū″zik), *n.* Same as ★*ballet*[2], 4.

ball-float (bâl′flōt), *n.* A float in the form of a sphere, used either as a valve or for operating a valve. See *ball-cock.*

ball-furnace (bâl′fèr″nās), *n.* The reverberatory furnace used in the Leblanc process of soda-manufacture. See ★*ball*[1], 25. Also called *black-ash furnace.*

ball-furnaceman (bâl′fèr″nās-man), *n.* A workman whose duty it is to turn over and ultimately to discharge the material from a ball-furnace.

ballhooter (bâl′hö-tèr), *n.* In *lumbering*, one who rolls logs down a hillside. [U. S.]

ballhornize (bâl′hôrn-īz), *v. t.*; pret. and pp. *ballhornized*, ppr. *ballhornizing.* [G. *ballhornisiren*, spoil while trying to mend, < *Ballhorn*, a man's name. "John Ballhorn was a printer at Lubeck, who flourished between the years 1531 and 1599, and who printed, amongst other things, a primer or A B C book, on the last page of which he substituted for the embellishment which was usual at that time, of a cock with spurs, a cock without spurs, but with a couple of eggs beside him; and on the strength of this substitution announced on the title-page 'Amended by John Ballhorn.' The expression has since become proverbial [in Germany]; and *ballhornisiren* or *ver-ballhornen* signifies 'to make unmeaning or useless alterations in anything — to make anything worse, instead of making it better.'" *Gwilt*, Review of Designs for Rebuilding the Royal Exchange.] To spoil while professing to mend; make unmeaning or useless alterations in. See the etymology.

balling[1], *n.* **2.** In the manufacture of soda, the firing, working back and forth, and discharging of the black-ash mixture. See ★*ball*[1], 25.—**3.** In *textile-bleaching* and *-coloring*, the collecting of the material into balls, to the detriment of the process. It occurs most frequently in loose cotton or wool.—**4.** In the process of nuclear development, the fusing of two or more nuclei into one.

ball-iron (bâl′ī″èrn), *n.* Concretionary clay ironstone.

Ballistic board (*milit.*), a tablet containing ballistic data so arranged that the allowances and corrections required to insure accurate firing with sea-coast cannon may be quickly determined.—**Ballistic fruit,** one which projects its seed (or containing-segments) or spores by elasticity; a catapult fruit. Compare ★*bolochore.*—**Ballistic instrument,** an instrument measuring an electric impulse by the throw or momentary deflection of the instrument-needle. It differs from an ordinary electric measuring-instrument in having the moving part heavier and not damped.—**Ballistic test,** a trial of ordnance or armor by firing with projectiles. A test of a gun is made by firing it with proof charges; that of an armor-plate by firing at it with armor-piercing projectiles.

ballistics, *n. pl.*—**Exterior ballistics,** that department of ballistics which treats of the motion of a projectile in the air.—**Interior ballistics,** that department of ballistics which treats of the motion of a projectile in the bore of a gun.

ballistite (ba-lis′tīt), *n.* A smokeless powder containing a large percentage of nitroglycerin: similar to cordite. It was originally introduced by Nobel, and was one of the earliest forms of smokeless powder. It has been modified as to exact composition and mode of manufacture, but at present consists of equal parts of nitroglycerin and soluble guncotton, with about one per cent. of diphenylamine. As made for military purposes by the Italian government it is pressed into small threads known as *filite.*

ball-lightning (bâl′lit′ning), *n.* An electric discharge which appears as a ball of fire descending from the atmosphere to the earth, rolling slowly along the ground or the rigging of a vessel, and eventually exploding violently, leaving a strong sulphurous or ozone odor: a form of natural atmospheric lightning. Although rare, the reality of this phenomenon is supported by several well-authenticated cases.

ball-machine (bâl′ma-shēn″), *n.* In *candy-making*, a machine for cutting and forming a great variety of small candies, such as gooseberries, butter-cups, balls, bonbons, etc. It consists essentially of rolls of a special form adapted to the various shapes of candies, and in large machines is used with a blower for chilling and hardening the candies as fast as they are formed between the rolls and delivered to a traveling-apron which conveys them through the air-blast from the blower.

ball-mill (bâl′mil), *n.* Same as *ball-grinder.*

ballonnet (bä-lo-nā′), *n.* [F., dim. of *ballon*, balloon.] A small balloon containing air, placed inside a larger balloon containing a gas lighter than air.

To secure rigidity they put an air balloon, or *ballonet*, inside the gas balloon, and when a cooling cloud or change of temperature contracts the gas, they pump air as needed into the *ballonet*, which makes the entire bag tight and snug.
P. Lyle, Jr., Smithsonian Rep., 1901, p. 583.

balloon[1], *n.* **8.** In *cricket* and *base-ball*, a lofty hit which gives a fielder the chance to catch a batsman out. [Slang.]—**9.** In *spinning*, the convex curve assumed by yarn on a ring-frame.—**Registration balloon, exploring balloon,** a small balloon to which recording instruments are attached for registering conditions in the upper air.

balloon[1] (ba-lön′), *v.* [*balloon*[1], *n.*] **I.** *trans.* **1.** To carry up or transport in, or as in, a balloon.

Thy pinions next *ballooned* me from the schools to town. *Colman the Younger*, Broad Grins, vi.

2. To distend with air, gas, or water, as the abdomen in tympanites, or the rectum or vagina with specially constructed apparatus.

II. *intrans.* **1.** To make ascents in a balloon.

When Wise the father tracked the son, *ballooning* through the skies,
He taught a lesson to the old,—go thou and do like Wise. *O. W. Holmes*, Meeting of Harvard Alumni.

2. To swell out like a balloon; in *ring-spinning*, to fly outward centrifugally from the spindle: said of yarn.

balloon-cloud (ba-lön′kloud), *n.* A small cumulus or alto-cumulus cloud upon which the sun is shining so that the top warms and rises rapidly, while the cooler bottom follows slowly, the whole cloud assuming the form of a rising balloon, until it reaches some upper level where it overflows and forms a thin stratum of false cirrus, alto-stratus, or analogous cloud.

balloon-foresail (ba-lön″för′sāl), *n.* See ★*foresail.*

balloon-guard (ba-lön′gärd), *n.* A device for keeping the yarns on a ring-spinning frame from interfering with one another during the process of spinning.

balloonine (ba-lön′in), *n.* [After F. **ballonine*, < *balloon* + *-ine*².] A varnish intended to render the silk of balloons impervious to gas. It is made by dissolving india-rubber in a mixture of benzin and carbon disulphid. *Sci. Amer. Sup.*, Oct. 10, 1903, p. 23221.

ballooning, *n.* **3.** In a steam-boiler, the lifting of scum on the surface of the water by the liberation of steam from it. *Newnes*, Tech. and Sci. Dict.

balloon-kite (ba-lön′kīt), *n.* A combination of the balloon and the kite, first designed for meteorological research, but subsequently modified in an entirely novel way for military purposes and used in the German army. In this construction the balloon, consisting of a cylindrical gas-bag about 80 feet long and 20 feet wide, and provided with interior and exterior air-sacks, is held captive by a cable so that it is inclined to the ground and the wind like a kite. The buoyancy is sufficient to carry an observer up to a height of 200 or 300 feet, so that he may overlook the surrounding country. See ★*kite-balloon*.

balloon-rail (ba-lön′rāl), *n.* The support for the balloon-guards on a ring-spinning frame.

ball-ore (bâl′ōr), *n.* Iron ore (limonite or siderite) occurring in layers of more or less closely united nodules. [Local, U. S.]

Ballostoma (bal-os′tọ-mä), *n. pl.* [NL.] A suborder of minute fossil thysanuran insects found in the Florissant shales of Colorado.

ballot¹, *n.*—**Australian ballot,** a system of balloting of which the principal features are the placing of the names of all the candidates on each ballot, the printing of the ballots by the government, the arrangement and control of the polling-places, and devices for securing secrecy in marking and casting the ballots. The system, with numerous variations, has been extensively adopted in the United States.—**Ballot Act.** Same as *Reform Bill* (which see, in the Cyclopedia of Names).—**Blanket-ballot,** a ballot containing the names of all candidates for public office to be voted for at a specified election. It is voted by each elector, whose choice is indicated by certain precise methods prescribed by law. In the United States it has been adopted in various States to prevent fraud by insuring secrecy as to the candidate chosen by the elector.—**Letter-ballot,** a ballot sent by mail to be voted for a candidate for office. Trustees of institutions and officers of private corporations may often be voted for by letter-ballot.

ballotage (bä-lo-täzh′), *n.* [F.] The French custom of casting a second ballot to elect one of two candidates who have come nearest to a legal majority.

balloting-machine (bal′ọt-ing-mạ-shēn″), *n.* Same as ★*voting-machine*.

ballottement, *n.* It consists of palpation, to determine the presence of a movable body in the abdomen, such as a child in the womb, a floating kidney, etc., by a sudden tap with the finger from below; this forces the body upward, and it can be felt again as it settles down upon the tip of the finger. Also called *repercussion*.

ball-planting (bâl′plan″ting), *n.* A method of transplanting trees with balls or lumps of earth around the roots.

ball-point (bâl′point), *n.* An attachment to a compass or pair of dividers, fitted to one leg to form a seat over a hole when a circle is to be described about the hole.

ball-race (bâl′rās), *n.* The cup, track, or groove in which the balls of a ball-bearing run. *Elect. World and Engin.*, Dec. 5, 1903, p. 931.

ball-rubber (bâl′rub″ėr), *n.* The trade-name of crude india-rubber in the form of large balls from Peru, the product of species of *Hevea*. It is superior in quality to the best Para rubber.

ball-thrombus (bâl′throm″bus), *n.* A blood-clot of spherical shape which forms in the heart before death.

ball-thrust (bâl′thrust), *n.* A ball-bearing arranged to take the end-thrust of a shaft. *Jour. Brit. Inst. of Electr. Engineers*, 1902–1903, p. 937.

Ball-turning lathe. See ★*lathe*¹.

ball-warping (bâl′wâr″ping), *n.* A method, formerly practised in textile-mills, of winding from a reel into a round package a series of warp-threads for the subsequent forming of the web for weaving: introduced about 1760.

ballyrag (bal′i-rag), *v. t.* Same as *bullyrag*.

balm, *n.*—**Copalm balm.** Same as *copal* or *copalm balsam*. See *Liquidambar* and *balsam*.

Balmain's paint. See ★*paint*.

Balmer's law. See ★*law*¹.

balmoral, *n.* **2.** A Scotch cap, originally of wool. [Not in use in U. S.]

balnearium (bal-nē-ā′ri-um), *n.*; pl. *balnearia* (-ä). [L.: see *balneary*.] In *Rom. archæol.*: (*a*) A small or private bath-room; a room with a small bath. (*b*) That part of a great bathing establishment which was devoted to the smaller rooms.

balokanag (bä′lō-kä-näg′), *n.* [Pampanga *balucanag*.] A name in the Philippine Islands of *Aleurites saponaria*, a tree allied to the candleberry and the tung-tree. The nuts yield oil which is utilized in making the soap commonly found in the markets of Manila and other towns. Also called *balok mad* and *bagulumban*.

Baloskion (ba-los′ki-on), *n.* [NL. (Rafinesque, 1836), with the ascribed meaning '*ball rush*,' in allusion to the spherical flowers, probably < Gr. βάλλειν, throw, + σχοῖνος, rush.] A genus of monocotyledonous plants, type of the family *Baloskionaceæ*. See *Restio*.

Baloskionaceæ (ba-los″ki-ō-nā′sē-ē), *n. pl.* [NL. (Wight, 1905), < *Baloskion* + *-aceæ*.] A family of monocotyledonous plants of the order *Xyridales*, the cord-leaf family, typified by the genus *Baloskion*. See *Restiaceæ*.

balsa, *n.* **3.** On Lake Titicaca, an aboriginal flat-bottomed boat or canoe, sometimes capable of conveying as many as 30 persons or a dozen donkeys. It is made of bundles of the totora reed tied together. While the balsa is a very rude and clumsy craft, incapable of speed, it has the advantage of keeping afloat in any circumstances. When small it is propelled by a sail made of the same material; for coasting and as a ferry, poles, an occasional oar, and paddles are used. The Aymará call it *yampu*.

balsam, *n.*—**Balao balsam.** See ★*balao*.—**Balsam of fir.** Same as *Canada balsam*.—**Balsam of Gilead.** Same as *balm of Gilead*.—**Black balsam.** Same as *balsam of Peru*.—**Carpathian balsam,** a colorless oleoresin with a pleasant odor and an acrid flavor, derived from the European *Pinus Cembra*. See *stone-pine* (*b*), under *pine*¹.—**Friars' balsam.** See *friar*.—**He-balsam,** the black spruce, *Picea Mariana*: opposed to *Abies Fraseri*, the she-balsam.—**Hungarian balsam.** See *Hungarian*.—**Lagam balsam.** See lagam-balsam.—**Malapaho balsam.** See ★*balao*.—**Sonsonate balsam.** Same as *balsam of Peru*: so called from the region in Salvador from which it is sent to market.—**Sweet balsam.** Same as *balsam-weed*.—**Tamacoari balsam,** a balsam, derived from the heart-wood of *Caraipa fasciculata*, used as a remedy for parasitic skin diseases. See ★*tamacoari*.—**Turlington's balsam.** See *benzoin*.—**Umiri balsam,** the fragrant yellow balsam yielded by the umiri. See ★*Humiri*.—**West-Indian balsam,** the gum-resin obtained from any one of several species of the genus *Clusia*, especially *C. multiflora*.—**White balsam.** Same as *sweet* ★*balsam*.

Balsamea (bal-sam′ẹ-ạ̈), *n.* [NL. (Gleditsch, 1782), < L. *balsameus*, of balsam, < Gr. βάλσαμον, balsam-tree.] A genus of dicotyledonous plants, type of the family *Balsameaceæ*. See *Commiphora*.

Balsameaceæ (bal-sam-ē-ā′sẹ-ē), *n. pl.* [NL. (Dumortier, 1829), < *Balsamea* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Geraniales*, typified by the genus *Balsamea*, and characterized mainly by regular 5-merous unisexual flowers and 2–5-seeded drupes. They are woody plants of the tropics, yielding important commercial products. The family contains 19 genera and about 320 species. See *Boswellia*, *Burseraceæ*, *Canarium*, *Commiphora* and *Protium*.

balsamina, *n.* **2.** A name in Guam and the Philippine Islands of *Momordica Charantia* and *Momordica Balsamina*. See ★*amargosa* and ★*balsam-pear*.

balsam-pear (bâl′sạm-pãr), *n.* The orange-colored warty fruit of *Momordica Charantia*, of the gourd family. See *Momordica* and compare *balsam-apple*.

Baltimore heater, shilling. See ★*heater*, ★*shilling*.—**Baltimore penny.** See *Lord Baltimore penny* under *penny*.

baltimore (bâl′ti-mōr), *n.* [Prob. with reference to the coloring of the Baltimore oriole]. In *entom.*, an American nymphalid butterfly, *Euphydryas phæton*. It has black wings margined with rows of reddish and pale-yellow spots. It occurs in the eastern United States, and its larvæ feed on the snakehead (*Chelone*) and other plants. *Comstock*, How to Know the Butterflies, Index, p. 125.

balu² (bä′lö), *n.* See ★*bhalu*.

baluster-column (bal′us-tėr-kol″um), *n.* A small column, especially one not of the recognized orders and in a subordinate position, as in the thickness of a wall or when used to divide windows or the like: a common feature of early medieval architecture.

Baly's pump. See ★*pump*¹.

bamban (bäm-bän′), *n.* [Tagalog.] A name in the Philippine Islands of *Donax Arundastrum*, a plant belonging to the *Marantaceæ*. In the Philippines this plant is of little economic importance, but in Bengal its split stems are used for making awnings and mats of the finest quality.

Bamberger's pulse. See ★*pulse*¹.

Bamboo fiber, spliced stems of the bamboo about ⅛ inch in width and 6–7 inches in length.—**Blowpipe bamboo** a tall bamboo-like grass, *Arthrostylidium Schomburgkii*, of northern South America. It attains a height of 50–60 feet and a diameter of 1½ inches. The lower part of the stem for 15 or 16 feet has no joints and forms a continuous smooth hollow tube. It is used by the Indians of the Orinoco and the Amazon as a blowpipe or blow-gun called by them *sarbacane*. See *blow-gun* and *sarbacane*.—**Female bamboo,** the large bamboo of Bengal and Assam, *Bambos Balcooa*, with stems 50–70 feet high. It is used chiefly for building purposes.—**Male bamboo,** the name in India of *Dendrocalamus strictus*, which is widely distributed throughout India, attaining a height of 100 feet or more. Its stems are strong, elastic, and nearly solid, and on account of their size it is one of the most useful bamboos. It is used like the ordinary bamboo, especially for walking-sticks, spear- and lance-shafts, and for fencing.—**Spiny bamboo,** a name in India and the Philippine Islands of *Bambos Bambos* (*Arundo Bambos* of Linnæus, *Bambos arundinacea* of Persoon), a large bamboo armed with recurved spines. It is much used in construction, and sections of its hollow stems serve as water-vessels. The seeds are eaten by the Cingalese.—**Thorny bamboo of India.** Same as *spiny* ★*bamboo*.

bamboo-brier, *n.* **2.** In the southern United States, *Smilax Bona-nox* and other prickly species of *Smilax*. See ★*stretchberry*.

bamboo-grass (bam-bö′grȧs), *n.* A cane-like Australian grass, *Panicularia ramigera*. largely used for thatching purposes. Cattle eat the young shoots freely. Another grass, *Stipa micrantha*, is also called by this name. See *bamboo*, 1 (*c*).

bamboo-pheasant (bam-bö′fez″ạnt), *n.* A general name for pheasants of the genus *Bambusicola*, found in India and China.

Bambos (bam′bos), *n.* [NL. (Retzius, 1789), from the East-Indian name: see *bamboo*.] A genus of monocotyledonous plants of the family *Poaceæ*. See *Bambusa*.

bamburo (bam-bö′rō), *n.* [Cingalese?] A wild bee of Ceylon, either *Apis indica* or *A. dorsata*, whose honey is collected in large quantities by the natives. *Kirby and Spence*, Entomology, p. 187.

ban¹ (bän), *n.*; pl. *bani* (bä′ni). [Rumanian.] A Rumanian coin and money of account: its value is that of the French centime.

banaba (bä-nä-bä′), *n.* [Tagalog.] A name in the Philippine Islands of a valuable timber-tree, *Lagerstrœmia speciosa*, with large showy rose-purple or red flowers and strong, tough, durable wood. Two varieties are recognized, one (*banaba colorada*), of a deep-red color, used in boat-building on account of its durability under water, and the other (*banaba blanca*), of lighter color and coarser grain, used in ordinary construction. See *Lagerstrœmia*.

banago (bä-nä′gō), *n.* [Bisaya *banago*.] A name in the Philippine Islands of two timber-trees: (*a*) *Thespesia populnea*, belonging to the mallow family, called *Polynesian rosewood* and *milo* in Polynesia; and (*b*) *Cordia subcordata*, belonging to the borage family, called *tou* or *kou* in Polynesia. Though of not much economic importance in the Philippine Islands, these woods are highly valued by the Hawaiians, who make polished bowls of them for holding their food. See ★*milo*, ★*kou*, *Thespesia*, and *Cordia*.

banaibanai (bä-nī″bä-nī′), *n.* [Tagalog? Bisaya *banay banay*.] A name in the Philippine Islands of several species of *Radermachera* belonging to the trumpet-creeper family, having opposite pinnate or bipinnate leaves, bell-shaped flowers, and membranous-winged seeds inclosed in long slender capsules. *Radermachera Banaibanai* yields heavy, durable timber of a grayish-brown color. It does not readily decay underground and is used in constructing posts.

banalo (bä-nä′lō), *n.* [Philippine Sp.] Same as ★*banago*.

banana, *n.* **2.** The papaw, *Asimina triloba*. [Arkansas.] Also called *false banana*. [Illinois.]—**Abyssinian banana.** See *Musa*.—**Banana liquid** or **varnish,** a solution of celluloid in a mixture of amyl acetate and acetone, used as a vehicle for the application of bronze-powders, so called because of the strong banana-like odor of the amyl acetate.—**Bruce's banana.** Same as *Abyssinian* ★*banana*.—**Chinese banana,** the dwarf banana, *Musa Cavendishii*. It produces edible fruit of good quality and endures more cold than most bananas. It is extensively cultivated in Florida and the West Indies.—**Dwarf banana.** Same as *Chinese* ★*banana*.—**False banana.** Same as ★*banana*, 2.—**Japanese banana,** *Musa Basjoo*, a native of the Liu-Kiu Islands, cultivated as an ornamental plant, and grown commercially in southern Japan for its fiber, which resembles abaca.—**Wild banana.** Same as ★*balisier*.

banana-disease (ba-nan′ạ̈-di-zēz″), *n.* See ★*disease*.

banana-fish (ba-nan′ạ̈-fish), *n.* **1.** A species of goby, *Awaous taiasica*, found in West Indian rivers.—**2.** Same as *ten-pounder*, 3.

bananaland (ba-nan′ạ̈-land), *n.* Queensland, where bananas are abundant. [Local, Australia.]

bananalander (ba-nan′ạ̈-land″ėr), *n.* An inhabitant of Queensland; a Queenslander. [Local, Australia.]

banana-wine (ba-nan′ạ̈-wīn), *n.* A drink made of sliced bananas which are covered with water and allowed to ferment.

banatite, *n.* In *petrog.*, a name originally proposed by Von Cotta (1865) for certain dioritic rocks of the Banat in Austria. The term is now more commonly used in the sense proposed by Brogger, to describe monzonite moderately rich in silica. See ★*monzonite* and ★*adamellite*.

banca (bän′ka), *n.* [Philippine Spanish *banca*, Tagalog *bangca*.] A dugout covered with a roof of bamboo. [Philippine Is.]

banco, *n.* 2. In *baccara*, a proposal to play against the banker for his entire capital at one coup. See *baccara*.—**Skilling banco.** See *skilling*[3].

banco-daler (bän′kō-dä″lėr), *n.* A Swedish bank-note issued by the national bank, equal to about 35 United States cents.

bancoul (ban-köl′), *n.* [A French form of the native name.] The candleberry, *Aleurites Moluccana*.

band[2], *n.* 6. In *bot.*, the band-like space between the two mericarps of a cremocarp.—**Amniotic band.** See ★*amniotic*.—**Anogenital band.** See ★*anogenital*.—**Band of proliferation.** See ★*proliferation*.—**Geneva bands,** two white linen bands worn at the neck as part of the clerical garb: originally worn by the Swiss clergy in Geneva. See def. 4.—**Germinal band** or **germ-band,** in *embryol.*, a band- or ribbon-shaped portion of the blastoderm from which the body of the embryo arises, especially in insects.—**Landolt band,** a dark band in the field of view of polarization instruments in which crossed Nicol prisms are employed. It is due to the unequal polarization of different parts of the field. It is used as a sensitive criterion in making polariscopic measurements.—**Moderator band,** an exaggerated columna carnea which sometimes stretches across the right ventricle in man: it is normal in certain of the lower animals.—**Primitive band,** in *entomological embryol.*, the first indication of the embryo as a whitish band or streak on the ventral side of the egg. *Packard*, Text-book of Entom., p. 531.—**Vocal bands.** Same as *vocal cords* (which see, under *cord*[1]).—**Zodiacal band.** See ★*zodiacal*.

band[3], *n.*—**Chamber band,** a group of players who play chamber music, either with stringed instruments only or with these and a few other instruments, such as flutes.—**Marine band,** a band attached to a naval establishment. **Regimental band.** Same as *military band*.—**Street band,** an itinerant group of players who play in city streets for such gifts as they can collect from chance listeners.—**Town band,** in the seventeenth and eighteenth centuries, especially in Germany, a group of instrumentalists organized and supported by the municipality for service on civic and religious occasions.—**String band, wood band** or **wood-wind band, reed band, wind band,** various sections of a concert orchestra, which is often called collectively a *band*.

banda[1] (ban′dä), *n.* [? Sp. *banda*, a band.] A mother-of-pearl shell found about the Philippine Islands and in adjacent waters.

banda[2] (bän′dä), *n.* [Native name.] In Kamerun, the fruit of *Buchholzia coriacea*, a shrub of the caper family. It is green in color, about the size of a walnut, and is used as a medicine for colds.

bandage, *n.*—**Barton's bandage,** a bandage so applied as to support the lower jaw in fracture of that part.—**Borsch's bandage,** a bandage for the eyes which covers the sound as well as the diseased eye.—**Capeline bandage,** a recurrent bandage applied to the head, or to the stump of a limb after amputation, to retain the dressings.—**Circular bandage,** a bandage applied by repeated turns round a limb or the head.—**Crucial bandage.** Same as *T-bandage*.—**Elastic bandage,** a bandage of india-rubber or other elastic material.—**Esmarch bandage,** a rubber bandage applied tightly to a limb to expel the blood, the return of the circulation being prevented by a rubber cord which constricts the part close to the trunk. After this is applied the rubber bandage is removed and an operation can be performed with little loss of blood.—**Figure-of-eight bandage,** a roller-bandage passed back and forth round two projecting points, crossing midway so as to resemble the figure 8.—**Galen's bandage,** a square of cloth cut at the sides and folded in such a way as to make a cap enveloping the head.—**Many-tailed bandage,** a bandage made of a number of strips fastened at one end to a cross-strip and applied so as to overlap.—**Plaster bandage, plaster-of-Paris bandage,** a bandage of cheese-cloth into which gypsum has been rubbed. It is applied wet, and soon hardens so as to form a splint to the part.—**Recurrent bandage,** a bandage covering the head, or the stump of an amputated limb, made by passing strips forward and back over the convexity, the folds being held in place by repeated turns of a circular bandage.—**Reversed bandage,** a bandage in which the strip is made to describe a half-turn backward at each revolution round the limb in order to make it lie smoothly when encircling the swelling portion of the member.—**Silicate bandage,** a bandage impregnated with silicate of sodium and potassium, used like the plaster-of-Paris bandage.—**Suspensory bandage.** See ★*suspensory*.—**Velpeau's bandage,** a system of bandaging used to support and immobilize the arm in cases of fracture of the clavicle.

bandaka (bän-dä-kä′), *n.* [Cingalese name.] The gumbo-plant or okra (*Abelmoschus esculentus*), the mucilaginous pods of which are eaten green as a vegetable and are used as a thickening for soup. It is called by the Hindus *bhindi*. Also written *bandikai*. See *okra*.

bandaree (bän-da-rē′), *n.* [Also *bhundaree*; Marathi *bhandārī*.] One of the low-caste native Indians about Bombay who tend cocoanut-palms, gather the nuts, and draw the toddy. [Anglo-Indian.]

bander[2] (ban′dėr), *n.* An apparatus for making or applying material in the form of bands.

bandicoy (ban′di-koi), *n.* [Tamil *vendai-khāi*, *vendai*, Hind. *bhendi*, the tree.] Same as ★*bandaka*.

band-music (band′mū″zik), *n.* Music intended for or made by a brass or military band.

bandoline, *n.* 2. A mucilage prepared from carrageen moss (*Chondrus crispus*) mixed with scented spirit: used to stiffen silk goods.

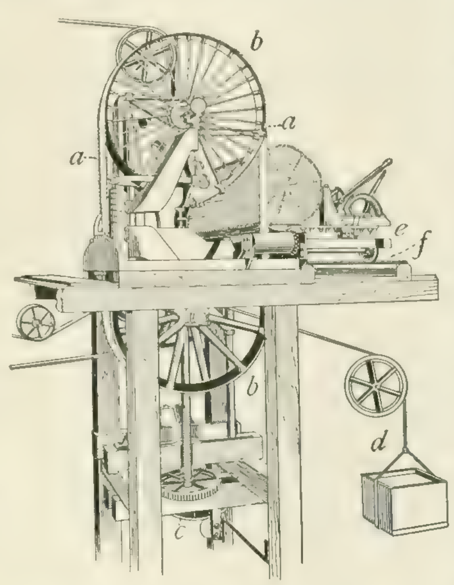
bandoline-wood (ban′dō-lin-wụ̂d), *n.* The wood of a lauraceous tree, *Machilus Thunbergii*, native to China, Formosa, Japan, and Korea. There is a considerable trade in China in chips and shavings of the wood. When soaked in water these yield a mucilage which is used by Chinese ladies for stiffening the hair.

bandonion (ban-dō′ni-ọn), *n.* [*band*[2] + (*harm*)*onium* + *-on*.] A large and elaborate variety of concertina.

band-plant (band′plant), *n.* See *Vinca*.

band-room (band′röm), *n.* A store-room on a flag-ship in which the bandsmen keep their instruments and music.

band-saw, *n.* This power-tool has in recent years become one of the most important used in woodworking. Band-saws range from small machines, employing fine, slender saws in cabinet-work, up to large machines used in sawing logs. They are used in scroll-sawing, as cut-off



Double-cutting Telescopic Band-saw.

a, band saw with teeth on each edge; *b*, upper and lower wheels [illegible]

saws, rip saws, and resaws, and in the largest sawmills. The smaller saws are fitted with tilting work-tables, and the resaws have feed-rolls to guide the material to the saw. Band-sawmills are supplied with log-carriages and are fitted with all the log-handling machines and tools used in first-class sawmills. In all types appliances are provided to secure the proper tension of the saw on the wheels. In sawmills the aim is to bring the log close up to the point where the band leaves the upper wheel, this being the most effective sawing-point. The chief advantage of the band-saw over the circular saw is in economy of material because of the narrow band-saw kerf.

band-wagon (band′wag″on), *n.* A wagon arranged to accommodate a band of musicians. It is generally large and ornate, with the seats along the sides.

band-wheel, *n.* 3. The large wooden pulley of a well-boring rig: it is driven by a belt from the engine, and in turn drives the bull-wheel, the sand-pump reel, and the working-beam. See *oil-derrick*.

Banff series. See ★*series*.

bang[4] (bang), *n.* The Cuban sardine, *Sardinella pseudohispanica*. [Bahama Is.]

banga (bäng-gä′), *n.* [Tagalog.] A large spherical water-jar made of baked clay. [Philippine Is.]

bangalay (bang-al′i), *n.* [Native Australian.] The hard, tough, durable timber of the swamp or bastard mahogany, *Eucalyptus botryoides*. [Southeastern Australia.]

bangalow (bang′ga-lō), *n.* [Native Australian.] An ornamental pinnately leaved palm, *Ptychosperma elegans*, of northeastern Australia. The tender young terminal bud is eaten either raw or boiled by the natives and sometimes by the colonists. The small stems are called *Moreton Bay canes*. See *Ptychosperma*.

bangca, *n.* See ★*banca*.

banger (bang′ėr), *n.* One who or that which bangs. Specifically — (*a*) Something very large; especially, a lie. [Slang.] (*b*) A large, heavy cane. [Slang, U. S.]

banger-rush (bang″ėr-rush′), *n.* A cane-rush, common in colleges, in which two sides struggle for the possession of a cane or banger.

banging-iron (bang′ing-ī″ėrn), *n.* See ★*cramping-brake*.

bangkal (bang-käl′), *n.* [Bisaya *bangcal*.] A tree, *Sarcocephalus cordatus*, belonging to the madder family, with globose heads of flowers fused together by their fleshy calyx-tubes, followed by solid fleshy, succulent fruit. The wood, which is yellow, light, and rather soft, is used in the construction of houses and for furniture, tubs, barrels, and small canoes. It is said to stand exposure to the weather. The roots yield a yellow dye. [Philippine Is.]

bang-tail (bang′tāl), *n.* A tail which has been banged, or cut horizontally across; also, an animal with a banged or docked tail.—**Bang-tail muster,** a periodical muster or round-up of all the cattle on an Australian station, theoretically for the purpose of having the long hairs at the ends of the tails cut off square. The practical object is to find out the actual number of cattle on the run. [Australian.]

bang-tailed (bang′tāld), *a.* Having a docked or banged tail: as, a *bang-tailed* horse.

banig (bä′nig), *n.* [Tagalog and Bisaya *banig*.] A mat; especially, a sleeping-mat. Also *petate*. [Philippine Is.]

banilad (bä-nẹ̄-läd′), *n.* [Bisaya.] A tree, *Sterculia urens*, with large 5-lobed leaves, which yields a mucilaginous gum resembling tragacanth. In India a bast-fiber is obtained from the bark and is used for rope-making, and the seeds are sometimes roasted and eaten, though they possess cathartic properties. See *Sterculia*, and *Indian tragacanth*, under *tragacanth*. [Philippine Is.]

banister, *n.* 2. A handle-brush used in spinning- and weaving-mills for cleaning the gearing of machinery.

banjeaurine, *n.* Same as ★*banjorine*.

banjo, *n.* 3. A form of automatic railway signaling-apparatus in which a flat circular disk, with an arm projecting from one side, is alternately exhibited in front of a glass opening in the signal-box and withdrawn from sight by the make and break of an electric circuit. The shape of the disk and its arm has suggested the name.

The enclosed disc signal, commonly called a "*banjo*," is a circular box about 4 feet in diameter, with a glass-covered opening, behind which a red disc is shown to indicate stop. *Encyc. Brit.*, XXXII. 147.

4. In *mining*, an iron frame for carrying a false clack. *Barrowman*, Gloss. [Scotch.]

banjore, banjor (ban′jộr), *n.* An obsolete or dialectal form of *banjo*. *Thomas Nelson Page*, The Old South.

banjorine (ban-jọ̄-rēn′), *n.* A variety of banjo, smaller than the usual form and properly higher in pitch. Also written *banjeaurine*.

banjula (bän-jö′lạ̈), *n.* Same as ★*vanjula*.

bank[1], *n.* 14. In *lumbering*. Same as *landing*, 9.—15. A small pottery. [Eng.]—**Bank fisheries,** fisheries on submarine banks, especially the Newfoundland Banks.—**Bank to bank,** in *mining*, a shift or working-day.

bank[1], *v. i.* 3. To fish on submarine banks, especially the Newfoundland Banks.

bank[2], *n.* In *lumbering*, the logs cut or skidded above the amount required in a day and held over by the saw-crew or skidders, to be reported when the daily quota is not reached.

bank-barn (bangk′bärn), *n.* A barn built on a hillside or sloping ground, so that three sides of the lower story are surrounded by earth, the fourth being unbanked. *Forest and Stream*, Feb. 21, 1903 (advt.). [U. S.]

bank-claim (bangk′klām), *n.* A mining right on the bank of a stream. *Coal and Metal Miners' Pocket-book*.

bank-engine (bangk′en″jin), *n.* 1. The engine at the mouth of a mine-shaft. [Eng.]—2. A locomotive employed to assist trains up inclines. [Eng.]

banker[1], *n.* 9. One who makes a business of picking up wreckage on the coast. [California.]

banket[3] (bang′ket), *n.* [Cape D., appar. a particular use of D. *banket*, sweetmeat, confectionery, a feast, banquet, also banquette: see *banquet*, *banquette*.] A formation of ore found on the Witwatersrand in the Transvaal, South Africa. It is a conglomerate of water-worn pebbles of translucent quartz set in a matrix composed mainly of oxids of iron and silica. Near the surface the gold occurs almost entirely free in the cement, while at a moderate

depth the oxids of iron are gradually replaced by sulphids; but the gold can still be extracted largely by amalgamation.

The oxidized *banket* ore, however, was not easily amenable to concentration and the percentage of concentrates could be was small. These concentrates were worked in various kinds of amalgamation pans or stored for future treatment. The total gold recovered in those days probably did not amount to more than 60 per cent of the original value of an ore, then going about an ounce to the ton or over. *Electrochemical Industry*, June, 1904, p. 215.

bank-fishing (bangk'fish ing), *n.* Fishing on submarine banks, especially the Newfoundland Banks.

banking-game (bang'king-gām), *n.* Any game in which one player pays and takes the bets made by all the other players.

banking-ground (bang'king-ground), *n.* Same as *landing*, 9.

banking-room (bang'king-röm), *n.* **1.** That room of a bank or private banking-house in which the greater number of the clerks work, and to which the public has access to deposit or to draw money. Hence—**2.** In any large financial business, as an insurance company, the principal, more public business-room. [U. S.]

bank-lock (bangk'lok), *n.* Any form of lock adapted for use on a safe or vault of a bank or safe-deposit company.

bankman (bangk'man), *n.* In printing-offices (generally newspaper offices), one who attends to the bank or rack on which standing matter is kept.

Banko pottery. Same as *banko-ware.*

bank-right (bangk'rīt), *n.* The right to divert water to a bank-claim. *Coal and Metal Miners' Pocket-book.*

bankside (bangk'sīd), *n.* The shelving or sloping bank of a river, brook, or the like.

bankul-nut (bangk-ūl-nut'), *n.* [Malay *bangkal*, the tree, + E *nut.*] Same as *candleberry*, 1.—**Bankul-nut oil.** Same as *kekune-oil*: used in the East for lighting and cooking, and exported to Europe for soap-making. See *Aleurites*, and *kekune-oil*, under *oil.*

banner-cloud (ban'ér-kloud), *n.* A cloud which streams horizontally from the summit of a mountain. Sometimes it is produced by snow carried from the surface of the mountain by the wind; at other times it is due to the expansion of the moist air which flows into the discontinuous space in the wind to the leeward of the mountain. It may also be a thin layer of haze caused by the mixture of warm air with the surface of a stream of cold air.

banner-fish (ban'ér-fish), *n.* A scombroid fish, of the genus *Istiophorus*, found in all warm seas.

banner-net (ban'ér-net), *n.* Netting made of strong twine and with a large mesh, used as a support or backing for street banners and theatrical scenery.

Bannisdale flags. See ★*flag*[4].

banquet-ring (bang'kwet-ring), *n.* A quaint or exceedingly large, rich, or highly decorated ring, too ornamental for general use, but worn on state occasions. Such rings often extend as far back on the hand as they project on the finger. Also called *dinner-ring.*

Banquet ring.

banquette, *n.* **5.** An elevated platform made of stones, running along the walls of cliff-dwellings and kivas. [Rare.]

Broad lateral *banquettes* are prominent features in the most complicated caves, and there are many recesses and small closets or cists.
17th An. Rep. Bur. Amer. Ethnol., II. 541.

Banqui rubber. See ★*rubber.*

bantam-weight (ban'tam-wāt), *n.* A light-weight boxer.

bantay (bän-tī'), *n.* [Tagalog and Pampangan *bantay*, a sentinel.] A person appointed to keep watch in a bantayan. [Philippine Is.]

bantayan (bän-tä'yän), *n.* [Tagalog and Pampangan *bantayan*, ⟨ *bantay*: see ★*bantay.*] An outlook or station near a village which serves as an armory and as a signal-station. Two bantays keep watch in the bantayan and give the alarm in case of danger. The bantays are inhabitants of the village. [Philippine Is.]

Banti's disease. See ★*disease.*

banty (ban'ti), *n.* and *a.* [*bant(am)* + *-y*[2].] **I.** *n.*; pl. *banties* (-tiz). A bantam chicken; hence, a very diminutive, cocky person. [Slang.]

II. *a.* Saucy; impudent. [Thieves' slang.]

banzai (ban-zī'), *interj.* [Jap. *ban-zai*, for **ban-sai*, 'ten thousand years': *ban*, Chinese *wan*, ten thousand, a myriad; *sai*, *sei*, Chinese *sui*, etc., year.] In Japan, a shout of patriotic joy or encouragement: somewhat like the English *hurrah.* Often used, in English books, as a noun.

A large crowd had assembled on the shore to see the prize, and she was greeted with loud and oft-repeated *banzais.* *N. Y. Evening Sun*, June 2, 1905.

baphiin (baf'i-in), *n.* [*Baphia* (see def.) + *-in*[2].] A neutral substance, $C_{12}H_{10}O_4$, extracted by ether from barwood, *Baphia nitida.* It crystallizes in leaflets.

B. Ap. Sc. An abbreviation of *Bachelor of Applied Science*, a degree conferred by some institutions. Also *B. A. S.*

Baptanodon (bap-tan'ō-don), *n.* [NL., ⟨ Gr. βάπτειν, dip, + ἀνόδους, without teeth: see *Anodon.*] A genus of large Jurassic enaliosaurs from the Baptanodon beds of the Rocky Mountain region. These animals attained a length of 8 or 9 feet, and had toothless jaws, orbits of great size, and a conic sclerotic ring of 8 plates. The genus is closely allied to *Ichthyosaurus.* The species is *B. discus.*—**Baptanodon beds,** the name given by Marsh to a series of beds of Upper Jurassic age in Colorado, Wyoming, and Montana which contain marine with some lacustrine remains and are characterized by the presence of the sea-saurian *Baptanodon discus*, from which the formation takes its name. These strata lie on red beds referred to the Triassic and are overlain by the ★*Atlantosaurus* beds (which see).

baptigenin (bap-tij'e-nin), *n.* [*bapti(sin)* + *-gen* + *-in*[2].] A crystalline compound, $C_{14}H_{12}O_6$, formed by the hydrolysis of baptisin. It turns brown at 250° C., without melting.

baptin (bap'tin), *n.* A crystalline glucoside of undetermined composition contained in the root of wild indigo, *Baptisia tinctoria.*

baptisin (bap'ti-sin), *n.* [*Baptisia* (see def.) + *-in*[2].] A crystalline non-poisonous glucoside, $C_{26}H_{32}O_{14} + 9H_2O$, found in the North American plant *Baptisia tinctoria.* It melts at 240° C. and gives rhamnose and baptigenin by hydrolysis.

baptist, *n.*—**Landmark Baptists,** a Baptist party, strong in the southwestern United States, which advocates a revival of the old landmark of non-ministerial intercourse between Baptists and pedo-baptists. They refuse to recognize the churches and ministers of the latter and hold their baptism to be invalid.

baptitoxine (bap-ti-tok'sin), *n.* A colorless crystalline alkaloid, $C_{11}H_{14}ON_2$, contained in the root of wild indigo, *Baptisia tinctoria.*

Baptosaurus (bap-tō-sâ'rus), *n.* [NL., ⟨ Gr. βάπτειν, dip, + σαῦρος, a lizard.] A genus of mosasaurs described by Marsh from the Cretaceous (Upper Greensand) formation of New Jersey.

baquid (bä'kid), *n.* [Tagalog *baquid*, a basket for fruit, etc., = Bisaya *baquid*, a measure for grain, = Ilocan *baqui*, a basket used as a hen's nest.] In the Philippine Islands, a basket, usually of cane, somewhat oval in shape.

bar[1], *n.* **8.** (*b*) In England, the space behind the bar, often large enough to form a small office. Also called *bar-parlor.*—**18.** In *anat.*: (*a*) A general term for any of the cranial arches, such as Meckel's cartilage, or the hyoid and branchial arches, which have the form of more or less continuous rods or bars. (*b*) Less often used for portions of the cranium which have a rod-like shape, as the jugal or postorbital bars. In this sense synonymous with ★*arcade* or *arch.*—**19.** In *meteor.*, a long cigar-shaped cloud, generally nearly stationary, but sometimes moving broadside on across the sky; specifically, the stationary cloud to the leeward of the helm-cloud over the Cross-fell range in England during easterly winds. —**20.** The division between the two tables of a backgammon-board on which captured pieces are placed.—**21.** Specifically, in *violin-making*, the same as *bass-bar.*—**22.** Same as ★*pennant-bar.*—**Bar calculator.** See ★*calculator.* —**Bar diggings.** See ★*digging.*—**Bar money.** See ★*money.*—**Bar of Michelangelo,** in *sculp.*, the projection of the frontal bone at the base of the forehead, called in anatomy the *superciliary ridge.* It is especially prominent in the heads of Michelangelo's statues and in certain Greek works.

Below this starts the lower forehead swelling above the brow in the '*bar of Michel Angelo.*' Certainly this bar is one of the most characteristic features of Scopaic male heads.
E. F. Benson, Jour. Hellenic Studies, XV. 199.

Bulb-angle bar. Same as ★*angle-bulb.*—**Cape bar,** a long yoke used with the Cape cart in South Africa.—**Dotted bar,** in *musical notation*, a double bar with two or four dots before or after it, indicating that a strain or section is to be repeated, the position of the dots showing whether it is the preceding or the following section that is intended.—**Galton bar,** in *psychophys.*, a flat rod of ebonite or blackened wood, plain upon the face and sealed upon the back, along which slides a light brass clip, carrying in front a tightly stretched white thread. The problem is to set the thread, by moving the clip to and fro, so that it bisects the length of the bar. The error made can be read off from the scale at the back. *E. C. Sanford*, Exper. Psychol., p. 402.—★**Hyoid bar,** ★**visceral bar.** See the adjectives.—**Jugal bar.** Same as ★*jugal arch* or *zygoma.*—**Meckelian bar.** Same as *Meckelian rod* (which see, under *rod*[1]). **Pentathlon bars.** See ★*pentathlon.*

bar[1], *v. t.* **To bar a bet.** (*a*) In *faro*, to notify the dealer that a bet does not go for that turn. (*b*) In any betting transaction, to exclude one of the possibilities: as, to bet 4 to 1, *bar* one, in a horse-race, meaning that a certain horse is not included.

B. Ar. An abbreviation of *Bachelor of Architecture*, a degree conferred by some institutions.

bar. An abbreviation of *barometer.*

barabara (bä-ra-bä'rä), *n.* [Russ. *barabora.*] A hut of the Aleuts, half underground and covered with soil. Also *barrabarra.* *Jour. Amer. Folk-lore*, Jan.–March, 1903, p. 16.

barad (ba-rad'), *n.* [Gr. βαρύς, heavy + *-ad* as in *farad.*] The unit of pressure in the centimeter-gram-second system, equal to one dyne per square centimeter.

baræsthesiometric, *a.* Same as ★*baresthesiometric.*

barangay (bä-rän-gī'), *n.* [Philippine Sp. *barangay*, ⟨ Tagalog and Bisaya *balanggay*, Pampangan *baranggay*, Ilocan *baranggay.*] **1.** A kind of boat used by the natives of the Philippine Islands at the time of the conquest. The modern boat of this kind is called *barangayan.*—**2.** In the Philippine Islands, the community which, under the Spanish government, formed the constituent element of the pueblo. The chief of such a group is called *cabeza de barangay.* Originally it was the name of the independent village communities (which were so called as being expected to equip each one barangay or boat).

barangayan (bä-rän-gī-yän'), *n.* [Philippine Sp.: see barangay.] A light vessel, low in the water, having a deck and a mast: used in the Philippine Islands, particularly in the Bisayan Archipelago and in Mindanao.

barasingha (bä-rä-sing'gä), *n.* [Hind. *bārah singhā*, twelve horn.] A name applied to two or three species of East Indian deer, such as *Cervus wallichi* and *C.* (*Rucervus*) *duvauceli.* *Proc. Zool. Soc. London*, 1903, II. 3.

Barathrodemus (bar-a-throd'e-mus), *n.* [NL., ⟨ Gr. βαράθρον, pit, + (?) δῆμος, people.] A genus of deep-sea brotulid fishes.

barauna (bä-rä-ō'nä), *n.* Same as *brauna.* The wood and bark are used by the natives in the preparation of a beautiful red dye.

barb[1], *v. i.* **2.** To bend or hook the points of wire teeth in the card-clothing used in carding textile fibers. *Nasmith*, Cotton Spinning, p. 141.

barbacot (bär'ba-kot), *n.* [A F. spelling of a native form (Arawak) of (Haitian) *barbacoa*: see *barbecue*, *n.*] A frame over a fire for drying or cooking meat.

barbacot (bär'ba-kot), *v. t.*; pret. and pp. *barbacoted*, *barbacotted*, ppr. *barbacoting*, *barbacotting.* To dry (meat) on a barbacot or frame over a fire.

Barbados earth. See ★*earth*[1].

Barbados lily. See ★*lily.*

barbari, *n.* **2.** Also improperly used for *baralipton*, 1.

barbarian, *n.* and *a.* **I.** *n.* **7.** A member of a barbarian people. See II., 5.

Some of the tribes of America are organized on a somewhat different plan which may be set forth. When they are organized on this new plan we call them *barbarians*, and thus distinguish them from tribes that are organized on the clanship system.
17th An. Rep. Bur. Amer. Ethnol., I. xxxiii.

II. *a.* **5.** In *anthrop.*, pertaining to a state of society in which descent is reckoned in the paternal line, and in which the members of the paternal family of all generations form an exogamous social unit called a *gens.*

barbarism, *n.* **5.** In *anthrop.*, the conditions of barbarian society. See ★*barbarian*, *a.*, 5.

Second, for the group which is called the clan in savagery there is substituted the gens in *barbarism*; this group embraces all of those persons who reckon kinship through fathers, so that the father and his brothers and sisters, together with the grandfather and his brothers and sisters, and all other consanguineal kindred back in past generations and forward in future generations are called a gens.
17th An. Rep. Bur. Amer. Ethnol., I. xxxiii.

barbarocracy (bär-ba-rok′-ra-si), *n.*; pl. *barbarocracies* (-siz). [Gr. βαρβαρος, foreign, barbarous, + -κρατια, < κρατειν, rule.] Government by barbarians; barbarian rule. *Felton.*

Barbarothea (bär-ba-rō′thē-ä), *n.* [NL., < Gr. βαρβαρος, barbarian, heathen, + θεα, goddess.] A genus of fossil butterflies from the fresh-water Oligocene Tertiary strata of Florissant, Colorado.

barbasco (bär-bäs′kō), *n.* [Porto Rican Sp., < native name.] A name in Porto Rico, Cuba, and other Spanish-speaking countries of a number of shrubs and trees bearing poisonous seeds. It is applied especially to *Jacquinia armillaris*, the joewood or bracelet-wood of the West Indies, and to species of several genera belonging to the soapberry family, such as *Serjania*, *Paullinia*, *Magonia*, and *Harpullia*. The seeds, stem-bark, and root-bark of many of these plants are used to poison fish.

barbatimao (bär-bä-tē-mä′ō), *n.* [Tupi *barbatimão*, corrupted from *parora tuim tamume*. (Martius).] A small tree of the mimosa family, *Stryphnodendron adstringens* (*Acacia adstringens* of Martius), yielding an astringent bark rich in tannin: used in medicine. [Southern Brazil.]

barbatin (bär′ba-tin), *n.* [NL. *barbata* (see def.) + -*in*[2].] A crystalline neutral compound, $C_9H_{14}O$, found in the lichen *Usnea barbata ceratina*. It melts at 209° C.

barbeau (bär-bō′), *n.* [F. *bleu barbeau*, 'blue-bottle blue.'] A decorative pattern, consisting of small blue flowerets, often seen on French porcelain. See *corn-flower*.

barbe du capucin (bärb′ dü kap-ü-saṅ′). [F., 'Capuchin's beard.'] A winter salad and vegetable consisting of the young blanched leaves of the common chicory. The roots, with the tops trimmed short, are placed horizontally in a sloping heap between layers of sand or earth in a dark warm place, and the projecting crowns emit tufts of white attenuated leaves. Compare *witloof*.

barbeiro (bär-bā′rō), *n.* [Pg.: see *barber*.] The surgeon-fish or tang, *Teuthis hepatus*, and other species. [Portugal.]

bar-bell (bär′bel), *n.* A bar of steel with a ball of iron at each end, used as a dumb-bell.

barber[1], *n.* **3.** A fish, *Cæsioperca rasor*, of the family *Serranidæ*. Also called *red perch*. [Tasmania.]—**Barber's itch.** See ★*itch*.

barber[2] (bär′bèr), *n.* [Said to be identical with *barber*[1], as if alluding to the lathering of the face, but the alleged variant *berber* points to a different origin.] A gale of wind with damp snow or sleet and spray that freezes upon every object, especially the beard and hair. Said to be called *berber* by wharfmen in New York. [Canada and N. S.]

barbering (bär′bèr-ing), *n.* In *ceram.*, the process of shaving or grinding the jagged edges of a fracture or the chipped tops of vessels to render them smooth and even. Chinese porcelain is cut in this manner on the jade-cutter's lathe.

barbero (bär-bā′rō), *n.* [Sp.] Same as ★*barbeiro*.—**Barbero negro,** a surgeon-fish of western Mexico, *Teuthis crestonis*.

barberry, *n.*—**Indian barberry,** a name applied to *Berberis aristata*, a shrub resembling the common barberry (*B. vulgaris*), but with foliage evergreen or nearly so, long-peduncled compound racemes of flowers, and usually coarsely spinous-dentate leaves. The fruit is purple, with a white bloom. The root-bark of this and of one or two other closely allied species is used in India as a bitter tonic in fevers, and an extract from the wood, known as *rasout*, is used as a local application in chronic ophthalmia. Several varieties of this plant are cultivated in Europe under different names.

barbette, *n.* **2.** A cylindrical armored structure built up in the interior of a war-ship and projecting above the deck. The barbette contains a rotary platform and its supports, with part of the machinery by means of which the platform is turned. On the rotary platform one or more heavy guns are mounted so that they can be fired over the top of the barbette. The top of the barbette and the guns are protected to a greater or less extent by a shield carried on the gun-platform. The covering shield may become so extensive and so heavily armored as completely to cover the rear part of the guns, the loading and sighting mechanism, etc. The rotary part is then called a turret and the combination is called a *barbette-turret*. The heavy guns of almost all modern battle-ships are mounted in barbette-turrets.

barbette-turret (bär-bet′tur″et), *n.* See ★*barbette*, 2.

barbicanage (bär′bi-kan-āj), *n.* In old *European law*, money for the support and maintenance of a barbican or watch-tower.

barbier (bär-byā′), *n.* [F., barber.] A name of certain serranoid fishes of the genus *Anthias*.

barbiton, *n.* A term loosely applied, in the middle ages, to one or more varieties of viol.

barbituric (bär-bi-tū′rik), *a.* [*barbata* (see def.) + *uric*.] Pertaining to the lichen *Usnea barbata* and to uric acid.—**Barbituric acid,** malonyl urea, $CO\begin{matrix}NH-CO\\NH-CO\end{matrix}CH_2 + 2H_2O$, a crystalline compound formed by heating alloxantin with concentrated sulphuric acid.

Barbizet pottery. See ★*pottery*.

Barbizon school. See ★*school*[1].

barbone (bär-bō′ne), *n.* [It., appar. same as *barbone*, a long thick beard, aug. of *barba*, beard.] **1.** A fatal contagious disease of the buffalo, identical with hemorrhagic septicemia of cattle and deer: caused by a minute polar-stained organism of the swine-plague group. See also ★*buffalo-cholera*.—**2.** A silver coin of Lucca weighing 44.25 grains.

Barbotine ware. See ★*ware*[2].

barbu, *n.* **3.** The thread-fin, *Polydactylus virginicus*. [Florida and West Indies.]

barbudo (bär-bō′do), *n.* [Sp.: see *barbu*.] Same as ★*barbu*, 3.

barbule, *n.* **4.** In *bot.*, the inner row of teeth in the peristome of certain mosses.

Barbulifer (bär-bū′li-fèr), *n.* [NL., < L. *barbula*, barbule, + *ferre*, bear.] A genus of small gobies found at Key West.

barb-wire (bärb′wīr), *n.* Barbed wire (which see, under *barbed*[1]).

barchan (bär-kän′), *n.* A crescentic sand-dune occurring commonly in the deserts of Turkestan. Also *barkhan*, *barkan*. See ★*medano*.

If very little more sand were supplied, the floor of the fulj might be left as a bare space half enclosed by the horns of a *barchan*, the windward side of the fulj being the lee cliff of the *barchan*.

Geog. Jour. (R. G. S.), XV. 24.

Barclayan (bär′klā-an), *n.* Same as *Berean*, 2.

Barcoo disease or **rot.** See ★*disease*.

bar-diggings (bär′dig″ingz), *n. pl.* **1.** River placers subject to overflow.—**2.** Auriferous claims on shallow streams. *Coal and Metal Miners' Pocket-book.*

bare[1], *a.* **II.** *n.* That part of a clapboard, roof-slate, or the like, which is exposed to the weather when the roof is complete, as distinguished from the *lap*.

barefoot, *a.* **2.** In *carp.*, set up on end without having its foot held in a tenon or socket, as, in balloon-framing, a post which is held merely by nailing it into place.

barem (ba-rem′), *n.* In *organ-building*, a stop, usually of the stopped diapason class, with a quiet, sweet tone.

baresthesiometric (bar-es-thē-si-ō-met′rik), *a.* Of, pertaining to, or determined by means of the baresthesiometer. Also spelled *baræsthesiometric*.

Barffed (bärft), *p. a.* Subjected to Barff's process, as ironwork: thus the iron plugs of plug cocks so treated are termed "Barffed plugs." See *Bower-Barff* ★*process*.

bar-folder (bär′fōl″dèr), *n.* A folding-machine adapted to forming square joints or angles, turning round edges, and forming locks of all kinds in sheet metals.

bar-frame, *n.* **2.** The typical American construction for the frame or skeleton of the locomotive, in which the elements of the frame are of rectangular section, nearly as wide as they are deep, instead of being made up of thin and deep plates, as in English and European designs.

bargain-counter (bär′gän-koun″tèr), *n.* A counter on which goods that are supposed to be remnants, or goods that have been "marked down" in price, are displayed for sale "at a bargain" or a price professed to be much lower than that at which the same or like goods are usually sold. [U. S.]

bargain-day (bär′gän-dā), *n.* The particular day in each week on which "bargains" are offered at the bargain-counters. [U. S.]

barge[1], *n.* **8.** *pl.* In *mining*, sheets of iron, zinc, or wood used for shedding water in wet shafts or workings. *Barrowman*, Glossary. [Scotch.]—**College barge,** an elaborate house-boat designed for students' use: it is peculiar to English colleges, Keble at Oxford possessing some notably beautiful ones.—**Crane-barge,** a beamy, flat-bottomed vessel which bears a crane for lifting and placing heavy weights.—**Dumb-barge,** a lighter which has no means of propulsion in the way of sail- or engine-power, but which must be towed or allowed to drift under the influence of tide-currents. This class of barge is very common in England, especially on the Thames, where these vessels carry cargo from one part of the river to another by means of tide-streams.—**Hopper-barge.** See *hopper*[1], 5.—**Tide-barge.** Same as *dumb* ★*barge*.

barge-bed (bärj′bed), *n.* The bed or interior of a barge.

bargello (bär-jel′lō), *n.* [It.] The building which serves as the headquarters of the armed force in an Italian town. The bargello at Florence is now the national museum.

barge-stone (barj′stōn), *n.* In a gable-wall of masonry, one of the stones which form the sloping edge.

Baric wind-rose. See ★*wind-rose*.

baricyanide (bar-i-sī′a-nid or -nīd), *n.* A compound cyanide of which barium cyanide is a part.—**Platinum baricyanide.** See ★*barium platinocyanide*.

barie (bä-re′), *n.* [F. *barie*, < NL. *baria*, heaviness, pressure, < Gr. βαρύς, fem. βαρεία, heavy.] An absolute unit of gaseous pressure; a pressure such that the force on each square centimeter of surface is one dyne. Also *barye*.

barilla, *n.* **2.** Grains of native copper disseminated in sandstone. Also called *copper barilla* (Sp. *barilla de cobre*).—**3.** *pl.* In a gold-mill, wooden divisions of blanket-strakes, copper plates, etc. *E. Halse*, Dict. of Span. Mining Terms.

bariolage (bä-rē-ō-läzh′), *n.* [F.] In *music*, a cadenza or series of cadenzas in an instrumental piece; sometimes, more specifically, in music for stringed instruments, a rapid passage to be played chiefly on the open strings, without the aid of stopping.

Barisal gun. See ★*gun*[1].

baritenor, *n.* See ★*barytenor*.

baritic (ba-rit′ik), *a.* In *chem.*, containing barium as a constituent.

Barium dioxid or **peroxid,** a compound, BaO_2, prepared in considerable quantity by passing atmospheric oxygen over heated barium monoxid or baryta, BaO, to be used in the preparation of hydrogen dioxid or peroxid, H_2O_2.—**Barium platinocyanide,** a substance, $BaPt(CN)_4.3H_2O$, largely used for the surface of the screen on which the Röntgen rays or X-rays are allowed to fall, serving by its fluorescence to render the pictures formed by these rays visible. The salt is dichroic, appearing in one direction yellow and in another green when seen by the light reflected from the crystals.

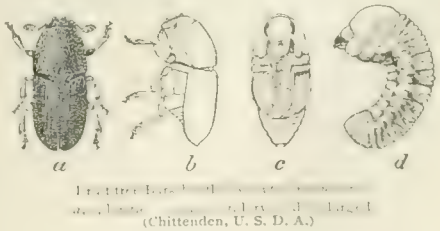
bark[2], *n.*—**Agoniada bark,** the bark of a Brazilian plant, *Plumeria lanceolata*, used in intermittent fever.—**Anchieta bark,** the root-bark of *Anchieta salutaris*, a shrub native to Brazil. It is used in syphilis and skin diseases.—**Cabbage-bark,** the bark of the cabbage-tree: same as *worm bark*. See *cabbage-tree*, 2. **Carony bark.** Same as *Angostura bark* (which see, under *bark*[2]). **Cotton-root bark,** the root-bark of the common cotton, *Gossypium hirsutum*, and other species, constituting an officinal drug with the action of ergot. The active principle appears to reside in a red resin.—**Cuenca bark,** one of the many varieties of pale cinchona bark (*Cinchona officinalis*, etc.).—**Gray bark.** See *Cinchona*.—**Huanuco bark.** See *Cinchona*.—**Ledger bark,** the bark of *Cinchona Ledgeriana*, sometimes considered a variety of *C. Calisaya*, the richest of the cinchona barks.—**Loja bark.** Same as *loxa bark* (which see, under *bark*[2]).—**Magellanic bark,** a kind of Peruvian bark.

An equal quantity of the Peruvian and *Magellanic bark*. *Sir E. Barry*, Observ. Wines, p. 221.

Monesia bark, the bark of *Pradosia lactescens* of Brazil. See ★*buranhem*.—**Panococo bark.** See *Swartzia*.—**Paracoto bark,** a bark resembling Coto bark in its medicinal properties.—**Porto Rico bark,** the bark of *Colubrina reclinata*. See *naked-wood* and ★*mabi*.—**Snouba bark,** the inner bark of the Aleppo pine, *Pinus hierosolymitana*. It contains about 25 per cent. of tannin and is imported from Tunis and Algeria for tanning leather.—**Tengah bark,** the bark of *Ceriops Candeolleana*, of the mangrove family, used for tanning leather.

barkan, *n.* See ★*barchan*.

bark-beetle (bärk′bē-tl), *n.* A member of the coleopterous family *Scolytidæ*, nearly all of which make burrows between the bark and the wood of woody plants.—**Apple-bark beetle,** a name given by Saunders to (*a*) *Monarthrum mali*, which, however, is not a bark-beetle but an ambrosia-beetle. Better called *apple pin-borer*. (*b*) *Xyleborus pyri*, a scolytid beetle which perforates the bark of the apple and pear. Also called *apple shot-borer*.—**Coarse-writing bark-beetle.** See *pine* ★*bark-beetle*.—**Douglas spruce bark-beetle,** a scolytid beetle, *Asemum nitidum*, which bores into the trunks and branches of the Douglas spruce.—**Elm bark-beetle,** a scolytid beetle, *Phlæophthorus liminaris*, which bores the bark of elm-trees and also occasionally attacks the peach and the cherry.—**Fruit-tree bark-beetle,** a very injurious scolytid beetle, *Scolytus*



(Chittenden, U. S. D. A.)

rugulosus, which bores into the trunks and branches of peach-, pear-, apple-, and plum-trees, rarely, however, attacking perfectly healthy trees.—**Hickory bark-beetle,** one of the largest of the North American *Scolytidæ*, *Scolytus quadrispinosus*, which bores into the trunk, branches,

and twigs of hickory in many parts of the United States. **Little bark-beetle.** See *pine ★bark-beetle.* — **Native peach bark-beetle.** Same as *elm bark-beetle.* — **Pine bark-beetle,** any one of numerous species of scolytid beetles which bore into and work in or under pine-bark, as the coarse writing bark beetle, *Tomicus calligraphus*; the little bark-beetle, *Pityophthorus annectens*; and many others. — **Wood-engraver bark-beetle.** See *★wood-engraver.*

bark-blazer (bärk'blā-zėr), *n.* See *★scratcher.* — **Cruiser's bark-blazer.** See *★scratcher.*

bark-borer (bärk'bor-ėr), *n.* Same as *★bark-beetle.* — **Western hemlock bark-borer,** a buprestid beetle, *Melanophila drummondi* (Kirby), which bores into the trunks and branches of pine and hemlock in western North America, from Alaska south to New Mexico.

bark-bug (bärk'bug), *n.* An insect that lives in or under bark. **Flat bark-bug,** any member of the heteropterous family *Aradidæ.* See *Aradus, Aradinæ,* and *Aradidæ.*

bark-conveyer (bärk'kon-va-ėr), *n.* In *tanning,* an endless-chain device for carrying bark from one place or room to another. *Davis,* Manuf. of Leather, p. 68.

bark-cutter (bärk'kut-ėr), *n.* A machine for cutting or grinding bark for use in tanning; used principally for oak and hemlock bark. *Davis,* Manuf. of Leather, p. 65.

bar-keel (bär'kel), *n.* In *shipbuilding,* a keel composed of a line of heavy rectangular iron or steel bars, with the greater dimension vertical and projecting below the bottom of the ship, to which the keel is attached by the garboard-plates. The inner edges of the garboard-plates are flanged down and riveted to the bar-keel.

barkevikite (bär'ke-vik-īt), *n.* [*Barkevik,* a locality in southern Norway, + *-ite*[2].] A member of the amphibole group, near arfvedsonite in composition.

bark-gouge (bärk'gouj), *n.* See *★scratcher.*

bark-grafting (bärk'gräf"ting), *n.* Same as *rind-grafting,* which see, under *grafting.*

Barking sands. See *singing ★sands.*

barking-deer (bär'king-dēr"), *n.* The East-Indian muntjac, *Cervulus aureus.*

The small *barking deer,* called "pause" by the natives. *Geog. Jour.* (R. G. S.), XI. 502.

bark-louse, *n.* — **Armored bark-louse,** any member of the coccid subfamily *Diaspinæ,* all of which are protected by a shield-like covering. *Yearbook U. S. Dept. Agr.* 1894, p. 251. — **Blackberry bark-louse.** (*a*) A diaspine scale, *Aulacaspis rosæ.* (*b*) An undetermined lecanine, *Lecanium* sp. — **Currant bark-louse.** (*a*) A coccine scale, *Eulecanium ribis.* (*b*) A diaspine scale, *Aspidiotus ancylus.* — **Grape-vine bark-louse.** (*a*) A coccine scale, *Pulvinaria innumerabilis* or *P. vitis.* (*b*) A diaspine scale, *Aspidiotus uvæ.* — **Harris's bark-louse,** a diaspine scale, *Chionaspis furfurus.* Also called the *scurfy bark-louse* (of the apple). — **Oyster-shell bark-louse.** See *oyster-shell.* — **Peach-tree bark-louse.** (*a*) A coccine scale, *Eulecanium persicæ.* (*b*) A diaspine scale, *Aspidiotus perniciosus.* (*c*) A diaspine scale, *Diaspis pyri.* (*d*) The San Jose scale, *Aspidiotus perniciosus.* — **Scurfy bark-louse,** a diaspine scale, *Chionaspis furfurus,* found commonly on the apple and pear in the United States.

barklyite (bär'kli-īt), *n.* [*Barkly* in Victoria, Australia, + *-ite*[2].] A more or less opaque magenta-colored ruby from Victoria, Australia.

bark-mark (bärk'märk), *n.* A symbol chopped into the side of a log to indicate ownership. It serves as a means of identification. [U. S.]

bark-marker (bärk'mär"kėr), *n.* One who cuts the bark-mark on logs.

barkslipper (bärk'slip"ėr), *n.* A beetle of the cerambycid genus *Phymatodes,* as *P. amœnus* or *P. variabilis,* whose larvæ loosen the bark of oak cord-wood, causing it to slip off. [Woodsmen's term.]

bark-worm (bärk'wėrm), *n.* A fishermen's term for the larva of any one of the wood-boring beetles of the families *Buprestidæ* or *Cerambycidæ.*

barley[1], *n.* — **Naked barley.** (*b*) A variety, *Hordeum distichon nudum,* of the two-rowed barley in which the chaff is not adherent to the grain, as in other barleys. — **Barley straw-worm.** See *★straw-worm.*

barley-candy (bär'li-kan"di), *n.* Same as *barley-sugar.*

barley-grass (bär'li-grâs"), *n.* Any grass of the genus *Hordeum* other than the cultivated barley.

barling-spar (bär'ling-spär), *n.* A small light spar or pole.

Barlow's disease, plate. See *★disease, ★plate.*

bar-machine (bär'ma-shēn"), *n.* A form of coal-cutting machine.

In this machine [the *bar-machine*], a bar carrying cutting tools, of rather a different pattern to those used with the disc machine, revolves horizontally, under or in the coal, cutting a parallel groove, similar to that cut by the disc. The bar has a reciprocating motion given to it, and behind the bar is an iron plate which is also carried by the machine, and which with the spirally arranged cutting tools forms an archimedean screw, and acts as a conveyor to bring out the dirt made by the machine. The frame of the machine is very similar to that of the disc machine. *Elec. Review,* Feb. 7, 1903, p. 187.

bar-mitsvah (bär-mits'vä), *n.* [Heb., lit. 'son of commandment.'] 1. A youth of an age to obey the commandments: applied to a Jewish boy on his thirteenth birthday, when, according to rabbinical law, he has reached the age of responsibility. Before this the father is responsible for his son's actions. The occasion is solemnized in the synagogue on the following Saturday, and is followed by a festive gathering.

2. The celebration of a Jewish boy's thirteenth birthday.

barmy, *a.* Hence — 2. Barmy-brained; empty-headed.

Y're dull if yer can't take the 'int;
Indeed! yer must be *barmy.*
War's Brighter Side, p. 278.

Barnacle scale. See *★scale*[1], *n.*

barnacle-eater (bär'na-kl-ē"tėr), *n.* A name applied to different species of file-fish of the family *Monacanthidæ.*

barn-dance (bärn'dâns), *n.* A dance or dancing-party given in a barn.

The Washington Post, Pas de Quatre, and several varieties of *Barn Dance* are of American origin, and have recently become fashionable. *Encyc. Brit.* XXVII. 376.

Barnegat limestone. See *★limestone.*

barn-yard, *n.* — **Noah's barn-yard,** a mass of buried vegetal debris of interglacial origin. [Colloq., Illinois and Indiana.]

baro (bä'rō), *n.* [Tagalog.] A sort of blouse or loose shirt, usually brightly colored, worn by natives of the Philippine Islands.

barocyclonoscope (bar"ō-sī-klon'ō-skōp), *n.* [Gr. βάρος, weight, + *cyclone* + Gr. σκοπεῖν, view.] An aneroid barometer modified by the addition of three indexes showing respectively the direction of the wind, the direction of the storm-center, and the direction which the navigator must take in order to avoid that center. It was constructed especially for use in the Philippine Islands, and needs appropriate modifications for use in other regions. See *storm-card.*

barogyroscope (bar-ō-jī'rō-skōp), *n.* [Gr. βάρος, weight, + γῦρος, circle, + σκοπεῖν, view.] An instrument which consists of a rapidly rotated gyrostat mounted on knife-edges by an axis perpendicular to its axis of rotation and pointing east and west. It demonstrates experimentally the rotation of the earth. It was devised by Gilbert. *Encyc. Brit.,* XXIX. 195.

barolite, *n.* 2. In *petrog.,* a term proposed by Wadsworth (1892) for rocks, formed by chemical precipitation, composed mainly of barite and celestite: it refers to the high specific gravity of these substances.

barometer, *n.* — **Blakesley portable barometer,** a tube of small bore, closed at one end, partly filled with air, and carrying a thread of quicksilver. The position of the mercury when the closed end of the tube is uppermost, and again when the open end is uppermost, gives the data for determining the pressure in terms of the weight or length of the thread of quicksilver. — **Capillary depression of the barometer,** the amount by which the mercurial column in the barometric tube is depressed by the repulsion between the glass and the mercury. This repulsion varies with the purity of the mercury, the cleanness and diameter of the tube, the temperature, the overlying gas, and other factors. It differs within the vacuum-chamber from that in the open leg of the siphon or the open cistern. The difference of the depressions at these two mercurial surfaces is the total effect upon the measured atmospheric pressure, and is an important source of error liable to large variations. — **Dines's minimum barometer,** an arrangement of two empty tubes which become filled with two different liquids on descending from any great height attained by a balloon: analogous to Sir William Thomson's tubular sounding apparatus. — **Glycerin barometer,** a barometer in which a column of glycerin replaces the mercury of the ordinary Torricellian barometer. These instruments are large and not portable, and are used principally for public display and storm-warning. — **Howson's barometer,** a mercurial barometer in which the tube is fixed, but whose cistern is free to move, being supported by the pressure of the atmosphere which corresponds to the area of the ring-section of the glass tube. The rise and fall of the cistern indicate the variations of this pressure on a large scale. — **Mascart's gravity barometer,** a barometer designed to determine the variations in the force or acceleration of gravity by measuring the elastic pressure of a mass of carbonic-acid gas whose temperature is accurately known, and which is confined under the pressure of a column of mercury about one meter in height. The same result is also attempted by Mohn by the comparison of pressures determined by both the mercurial barometer and the boiling-point thermometer. — **Moreland's barometer,** a mercurial barometer in which the cistern is fixed, but in which the tube is free to move and is attached to the lever-arm of a balance. The motion of the lever-arm indicates the variations of the atmospheric pressure on any desired scale. — **Mountain barometer,** a mercurial barometer in which the tube and cistern are adapted to a very large range of pressures and are especially constructed to avoid breakage in mountaineering work. — **Sub-standard barometer,** a barometer used for intercomparison of ordinary barometers and serving as an intermediary between normal barometers and ordinary instruments.

barometer-tube (ba-rom'e-tėr-tūb), *n.* The glass tube, hermetically sealed at the top, within which the mercurial column of a barometer is contained. The tube is filled with mercury when inverted, and many methods have been devised to accomplish this satisfactorily. By Fortin's method, the mercury is introduced little by little, and boiled within the tube by gently heating it so as to expel all gas or vapor. In George's method the mercury is not boiled but is stirred, and the air-bubbles are removed with a feather. In Bogen's method the mercury is made to flow from end to end until all bubbles escape: the open end is then attached to an air-pump and the last traces of air are pumped out. In Sprung's automatic method the tube is placed open end up and warmed; the mercury is placed in a separate vessel over a lamp and is continuously distilled over, through an intermediate tube, into the tube, where it collects under a perfect vacuum until the tube is full: a clean tube, a perfect vacuum, and distilled mercury are thus obtained by one operation.

Barometric elevation, an area of high pressure at sea-level; a rise of atmospheric pressure above the normal value; the center of an area of high pressure or a barometric maximum. — **Barometric fog.** See *★fog.* — **Barometric gradient.** See *★gradient.* — **Barometric hypsometry.** See *★hypsometry.* — **Barometric maximum.** (*a*) An area on the weather-map within which the barometric pressure at any time is decidedly above that which prevails over adjacent portions of the map; an area of high pressure. (*b*) An area in which the current barometric pressure is decidedly above the normal value for that place and date. — **Barometric minimum.** (*a*) An area on the weather-map within which the barometric pressure at any time is decidedly below that which prevails over adjacent portions of the map; an area of low pressure. (*b*) An area in which the current barometric pressure is decidedly below the normal value for that place and date. — **Barometric rate,** the rapidity with which atmospheric pressure rises or falls within a standard unit of time, usually one hour. — **Barometric surface,** a surface for which the barometric pressure is uniform. Owing to the influence of the temperature and of the wind, the barometric surfaces in the free air are continually changing. During gentle winds and in the midst of a large area of high pressure the barometric surfaces are horizontal; but in strong winds they are inclined to the level surface, and in revolving storms they become funnel-shaped. A *critical barometric surface* is one theoretically appropriate to steady winds, or a steady system of winds, and calls for a corresponding *critical barometric gradient.* — **Barometric surge,** an oscillation of the atmospheric pressure occurring simultaneously over large areas, such as the whole of India, and usually traveling from the west eastward in the north temperate zone: nearly equivalent to *barometric wave.* — **Barometric wind-rose.** See *baric ★wind-rose.*

barong (bä'rong), *n.* [Sulu.] A large, broad-bladed knife or cleaver used by the Moros of the southern Philippine Islands.

baronomy (ba-ron'ō-mi), *n.* [Gr. βάρος, weight, + νόμος, law.] The science of the laws of the gravitant forces (gravitation, weight): a proposed substitute for *barology* when used in that sense.

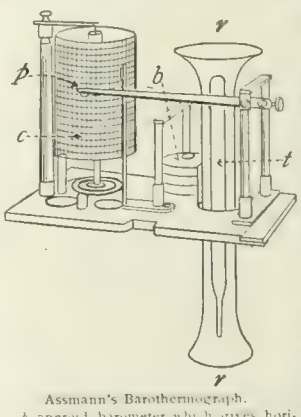
baroque, *n.* 3. Specifically, in *music,* a style of composition which abounds in extreme, irregular, or unpleasant harmonies or metrical patterns.

Barosma camphor. Same as *★diosphenol.*

barosmin (ba-ros'min), *n.* [*Barosm(a)* + *-in*[3].] A finely crystalline glucoside, perhaps identical with hesperidin, contained in buchu, the leaves of *Barosma crenulata, B. serratifolia,* and *B. betulina.* Also known as *diosmin.*

barotaxis (bar-ō-tak'sis), *n.* [NL., < Gr. βάρος, weight, + τάξις, disposition.] Stimulation brought about by change of pressure.

barothermograph (bar-ō-thėr'mō-gräf), *n.* [Gr. βάρος, weight, + θέρμη, heat, + γράφειν, write.] An apparatus for recording simultaneously the atmospheric pressure and temperature; a combination of barograph and thermograph, especially such as are made portable and very light to be sent up with kites and sounding-balloons. Assmann's barothermograph, used with sounding-balloons, records a pressure-temperature curve without any time coördinate and by means of one pen only.]



Assmann's Barothermograph.

b, aneroid barometer which gives horizontal motion to the cylinder, *c*; *t*, thermometer inside a protecting tube, *r*, *r*, which gives vertical motion to the pen, *p*.

The cylinder or sheet of paper is pushed in one direction by the action of the barometer while the pen is pushed

in the perpendicular direction by the action of the thermometer. In all other forms of apparatus each instrument makes its own record by its own pen and has its own independent time-scale. Sometimes called *meteorograph*. *Monthly Weather Rev.*, Sept., 1896, p. 323.

barothermohygrograph (bar-ọ-thėr mō-hi′-grọ-gräf), *n.* [Gr. *βάρος*, weight, + *θέρμη*, heat, + *ὑγρός*, moist, + *γράφειν*, write.] A barothermograph to which a self-registering hygrometer is added: made of the lightest material for use with kites and balloons, but more solidly for station-work.

barothermometer (bar-ọ-thėr-mom′e-tėr), *n.* [Gr. *βάρος*, weight, + E. *thermometer*.] An instrument for indicating the pressure and the temperature of the air.

baroto (bä-rō′tō), *n.* [Philippine Sp. *baroto*, < Bisaya *baloto*.] A small sea-going vessel. [Philippine Is.]

bar-parlor (bär′pär′lor), *n.* Same as ★*bar*[1], 8 (*b*). The bar-parlor in old English houses is sometimes a room of considerable size where favored guests are received.

barrack[1] (bar′ak), *v.* [*barrack*, *n.*] **I.** *trans.* To house in barracks; lodge in barracks, as troops.
II. *intrans.* To lodge or reside in barracks. *Hugh Miller*, Scenes and Legends, p. 478.

barrack[2] (bar′ạk), *v. i.* [An alteration, conformed to *barrack*[1], of earlier *borack*, *borak*, banter, chaff, from a New South Wales native term meaning something like 'what is not.' Cf. ★*barrikin*.] To jeer at or deride opponents; specifically, with *for* (like the equivalent United States slang *root*), to support, as a partizan, by cheers, shouts, and other demonstrations of approval, or by jeering at and noisily disturbing and interrupting the opposite side or party: as, to *barrack for* the school team. [Australia.]

To use a football phrase, they all to a man *barrack for* the British Lion. *Melbourne Punch*, Aug. 14, 1890.

barracker (bar′ạk-ėr), *n.* One who barracks; a noisy partizan in a contest, originally in football; a rooter. [Australia.]

The 'most unkindest cut of all' was that the Premier, who was Mr. Rogers's principal *barracker* during the elections, turned his back upon the prophet and did not deign to discuss his plan. *The Argus*, Nov. 29, 1894, p. 4.

barracoota (bar-ạ-kö′tä), *n.* Same as *barracuda*.

barracuda, *n.* **2.** *Thyrsites atun*, a gempyloid fish of Australia and New Zealand: not the barracuda of American waters.—**California barracuda**, *Sphyræna argentea*, of southern California.—**European barracuda**, *Sphyræna sphyræna* of the Mediterranean.—**Great barracuda**, *Sphyræna barracuda* a West Indian species.—**Northern barracuda**, *Sphyræna borealis*, a small fish of the coasts about New York.

barragan[2] (bar′ạ-gan), *n.* [Native Australian.] A variety of the Australian boomerang.

barrage, *n.* **3.** In playing instruments like the guitar, the application of the finger of the left hand across all or some of the strings near the nut, so as to shorten them uniformly and thus raise their pitch; a temporary nut. (See *nut*, **3.** (*f*) (1) and *capo tasto*.) When the finger stops part of the strings the barrage is *little*; if all, *great* or *grand*.—**Drum-barrage**, a species of movable dam used in the canalization of rivers. A sector of a hollow circular drum or cylinder rotates on a horizontal axis fixed in masonry. In one form the drum itself comprises the dam or water-barrier. In others the dam proper is formed of plane wickets. In either form the admission of water from the upper pool to or from the different compartments of the drum furnishes the power to raise or lower the barrier and thus raise or lower the water-surface up-stream from the dam.

Barrandeocrinus (ba-ran dẹ-ọ-krī′nus), *n.* [NL., < *Barrande*, a Bohemian geologist, + Gr. *κρίνον*, lily (see *crinoid*).] A genus of fossil crinoids, the only representative of the family *Barrandeocrinidæ*. It is characterized by the monocyclic base, 3 basals, and heavy biserial arms which are recumbent and completely inclose the calyx: found in the Upper Silurian beds of Gotland.

barrandite (ba-ran′dīt), *n.* [Named after J. *Barrande*, a Bohemian geologist (1799–1883).] A hydrated phosphate of ferric iron and aluminium occurring in gray spheroidal concretions: found in Bohemia.

Barred C, barred semicircle, in *musical notation*, the sign for duple rhythm.—**Barred teeth**, molar teeth with spreading, irregular roots.

barrel, *n.* **6.** In *mining*, a vessel by which water is lifted by engine or windlass from a sinking-shaft.—**Barrel amalgamation.** See ★*amalgamation*.

barrelage (bar′el-āj), *n.* The total quantity of any commodity, as measured by barrels, produced during a specified period or used for a particular purpose.

S.—8

barrel-cactus (bar′el-kak″tus), *n.* The bisnaga, *Echinocactus*: so named from its form and size. See *Echinocactus* and ★*visnaga*.

barrel-car (bar′el-kär), *n.* In *car-building*, a long flat-car fitted with open framework and used for carrying empty barrels.

barrel-cart (bar′el-kärt), *n.* A cart or truck carrying a barrel, swung so that it can be tipped, used chiefly in gardens as a receptacle for leaves and other rubbish.

barrel-chest (bar′el-chest), *n.* Permanent rounded expansion of the chest occurring in chronic pulmonary emphysema.

barrel-chime (bar′el-chīm), *n.* A chime of bells rung by means of a barrel-mechanism instead of by hand.

barreled, *p. a.* **4.** In *archery*, gradually reduced in diameter from the center to each end: said of an arrow.

barrel-header (bar′el-hed″ėr), *n.* A simple form of screw- or lever-press for pressing the head of a barrel into place and holding it in position until it is secured by the hoops or by nailing.

barrel-heater (bar′el-hē″tėr), *n.* A cylindric stove or heating-drum for heating and drying barrel-staves when formed into a barrel ready for putting on the hoops and closing the ends. The green barrel is placed over the stove, and a hood is lowered over it to keep in the heat. When the barrel is heated the hood is raised, automatically lifting the barrel and discharging it outside of the heater.

barrel-motion (bar′el-mō″shọn), *n.* A tappet-mechanism attached to a loom for operating the harnesses. Also called *barrel-tappet*. *Fox*, Mechanism of Weaving, p. 25.

Barrel-sanding machine. See ★*sanding-machine*.

barrel-scald (bar′el-skâld), *n.* A discoloration of apples and pears when packed in barrels. It is probably associated with harmful conditions of temperature and moisture.

barrel-tappet (bar-el-tap′et), *n.* Same as ★*barrel-motion*.

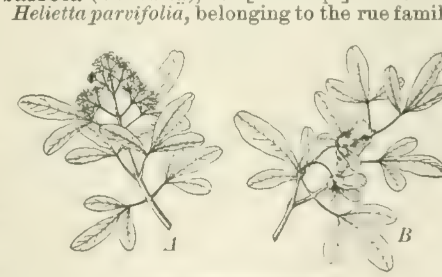
barrel-tree (bar′el-trē), *n.* See ★*bottle-tree*, 2.

barrel-wheel (bar′el-hwēl), *n.* The large wheel which is keyed upon the same shaft as the lifting-barrel of a crane, and by which the barrel is directly revolved. It is the last one in the train of gearing. *Lockwood*, Dict. Mech. Eng. Terms (App.).

barrel-work (bar′el-wėrk), *n.* Barrel amalgamation. See ★*amalgamation*. *Coal and Metal Miners' Pocket-book.*

Barremian (ba-rā′mi-ạn), *a.* and *n.* [F. *Barrême*, a canton in the department of Basses-Alpes.] In *geol.*, a name sometimes used by French geologists, in place of Urgonian, to designate a stage of the Lower Cretaceous deposits immediately overlying the Neocomian.

barreta (bär-rā′tạ), *n.* [Mex. Sp.] A shrub, *Helietta parvifolia*, belonging to the rue family,



Barreta (*Helietta parvifolia*).
A, flowering branch; *B*, fruiting branch. (From Sargent's "Manual of Trees of North America.")

with opposite 3-foliate leaves and panicles of small purplish-white flowers. The obconic fruit separates at maturity into 3 or 4 samaras. It is common on the bluffs of the Rio Grande. [Northern Mexico and Texas.]

barreto (bä-rā′tō), *n.* [Cuban Sp.] A goby of the genus *Gobioides*. [Cuba.]

barrette (ba-ret′), *n.* [F.: see *barret*[1].] The crossbar in the hilt of old rapiers over which the forefinger was placed.

barretter (bar′et-ėr), *n.* A receiving device used in wireless telegraphy, in which the electric wave is caused to vary the current in a local electric circuit.

barrier, *n.* **9.** The starting apparatus used in races: designed to keep the horses behind a certain line until the word is given, and thus prevent unfair advantage in starting.—**10.** In *phytogeog.*, any obstacle which prevents or restricts the migration of plants. Clements distinguishes *physical* barriers, such as large bodies of water, mountain-ranges, and deserts, and *biological* barriers, including vegetation, man and animals, and plant parasites.—**Surf barrier**, in *plant ecol.*, an aggregation of plants (mangroves) serving to resist the action of waves. *C. MacMillan.*

barriguda (bä-rẹ-gö′dạ), *n.* [Pg., orig. fem. of *barrigudo*, big-bellied, < *barriga*, belly.] A majestic palm, *Iriartea ventricosa*, which reaches a height of 80–100 feet. The trunk is generally cylindrical to a height of 40 or 50 feet, where it swells out to double, or more than double, its former diameter for 10 or 15 feet, diminishing again, and becoming cylindrical for the remaining distance to the summit. The wood is black, hard, and very heavy, and is used by the Indians for making harpoons and pens. The swollen part of the stem is sometimes made into a canoe. [Brazil.]

barrikin (bar′i-kin), *n.* [Cf. *baragouin* and ★*barrack*[2].] Unintelligible talk; jargon.

barrimba (bä-rim′bä), *n.* A gold colonial coin of Portugal of low standard, struck for Mozambique, 1847–53.

barring[1], *n.* **2.** In *machine-sewing*, the sewing of a decorative bar or tack upon a fabric or upon leather, the bar being composed of a series of long stitches crossed by short stitches. Sometimes called *tacking*. See ★*buttonhole-machine*.

barring-engine (bär′ing-en″jin), *n.* See ★*turning-engine*.

barring-machine (bär′ing-mạ-shēn″), *n.* A machine for forming a bar or turned edge in tinware. Allied to *edging-machine* (which see).

Barringtonia (bar-ing-tō′ni-ạ), *n.* [NL. (Forster, 1776), named in honor of Daines *Barrington* (1727–1800), a British lawyer and naturalist.] A genus of dicotyledonous trees of the family *Lecythidaceæ*. It is characterized by the alternate entire or slightly crenate leaves crowded toward the ends of the branches, and flowers in elongated terminal or lateral racemes or interrupted spikes. About 60 species are recognized, distributed from Mozambique to the East Indies, Australia, and the Samoan Islands.—**Barringtonia formation**, a dense belt of shrubs and trees, including several arborescent species of *Barringtonia*, growing next the tidal sand on East Indian shores. *A. F. W. Schimper.*

barrio (bä′ri-ō), *n.* [Sp. *barrio* = Pg. *bairro* = Cat. *barri*, a village, prob. < Ar. *barr*, land.] **1.** A village or small town which has no independent administration, but which is subordinated to a larger town. See *pueblo*. [Philippine Is.]—**2.** A ward; a division of a termino or municipal district in Cuba.

These [terminos], in turn, are subdivided into *barrios*, or wards, of which there were between 1100 and 1200. *Encyc. Brit.*, XXVII. 303.

barrister, *n.*—**Junior barrister**, in *Eng. law*, a barrister who has not been admitted to the rank of king's counsel; also, the assistant of the chief counsel on one side of a case.—**Vacation barrister**, in *Eng. law*, a newly qualified barrister who is to attend the exercises of the House for several long vacations.

barristerial (bar-is-tē′ri-ạl), *a.* Of or pertaining to a barrister.

Barroussia (ba-rö′si-ạ), *n.* [NL. (A. Schneider, 1885).] A genus of *Coccidia*, of the family *Polysporocystidæ*, in which the monozoic spores are spherical, with a smooth bivalve shell or sporocyst. The species are parasitic in myriapods and insects.

barrow-hole (bar′ō-hōl), *n.* In a building in course of construction, a hole, about 6 feet high and 3 feet wide, left in the wall for the workmen to pass through carrying hand-barrows with stones or bricks, or pushing wheelbarrows.

Barrowist (bar′ō-ist), *n.* A follower of Henry Barrowe, one of the leaders in the Independent movement in England in the latter part of the sixteenth century. He objected to the whole system of ecclesiastical government, and condemned the use of all set prayers. He is regarded as one of the founders of Congregationalism.

barrow-pulley (bar′ō-pùl-i), *n.* A pulley, gear, or wheel compounded on the same shaft with another of a larger size. *Taggart*, Cotton Spinning, I. 182.

barrow-wheel (bar′ō-hwēl), *n.* A pinion-gear that drives the doffer-cylinder on a cotton-carding machine. *Nasmith*, Cotton Spinning, p. 145.

bar-screen (bär′skrēn), *n.* In *mining*, a screen or grating made of bars.

bar-stays (bär′stāz), *n. pl.* Boiler-stays which are solid rods screwed at their ends, as distinguished from ★*tube-stays* or ★*stay-tubes*. *Lockwood*, Dict. Mech. Eng. Terms.

bar-stop (bär′stop), *n.* In *mech.*: (*a*) A stop which limits the movement of a bar, as of a number-bearing bar in a computing-machine. (*b*) A bar which stops or limits the movement of other mechanism.

bartholinitis (bär to-li-nī′tis), *n.* [Irreg. < *Bartholin's gland*) + *-itis.*] Inflammation of the vulvovaginal (Bartholin's) gland.

Bartlett's fume paint. See ★*paint.*

Barton clay. See *Bartonian* ★*group.*

Bartonia (bär-to′ni-ä), *n.* A genus of plants of the family *Loasaceæ*, now referred to *Mentzelia*. See *Mentzelia.*

Bartonian group. See ★*group*[1].

Barton's bandage, fracture. See ★*bandage,* ★*fracture.*

Barus camphor. Same as *Borneo camphor* (which see, under *camphor*).

Barybrotes (bar-i-brō′tēz), *n.* [NL. (Schiödte and Meinert, 1879), < Gr. βαρύς, heavy, + βρωτής, eating]. The typical and only genus of the family *Barybrotidæ.*

Barybrotidæ (bar-i-brot′i-dē), *n. pl.* [NL., < *Barybrotes* + *-idæ.*] A small family of cymothoid isopod crustaceans found in the open sea: typified by the genus *Barybrotes.*

Barycrinus (bā-rik′ri-nus), *n.* [NL., = < Gr. βαρύς, heavy, + κρίνον, lily (see *crinoid*).] A genus of extinct crinoids of the family *Cyathocrinidæ*, having stout plates and heavy massive arms: from the Lower Carboniferous of the Mississippi valley.

barymorphosis (bar-i-môr′fō-sis), *n.* [Gr. βαρύς, heavy, + μόρφωσις, shape.] The effect of gravitation in producing changes in the organs or parts of plants. *Sachs.*

baryphonous (bar-if′ō-nus), *a.* Deep-sounding; low in pitch.

barysilite (bar-i-sil′īt), *n.* [Gr. βαρύς, heavy, + *sil(ica)* + *-ite*[2].] A rare lead silicate occurring in white lamellar masses: found in Sweden.

barysphere (bar′i-sfēr), *n.* [Gr. βαρύς, heavy, + σφαῖρα, sphere.] The earth's interior, an inner core known to be of greater density than the crust: so named from this property.

Even as late as 1893, at the World's Fair Congress, at Chicago, it was argued by Posepny that the ores came from the *barysphere*, or heavy-sphere, from well down within the earth; though even Posepny conceded that the agent which transported and deposited the metals at the places where they are now found was underground water. *Science*, Nov. 15, 1901, p. 747.

Baryta paper. See ★*paper.*—**Baryta white,** barium sulphate used as a pigment.

barytenor (bar′i-ten-ọr), *n.* A low tenor or barytone. Also *baritenor.*

Barytic white. See ★*white*[1].

barytonesis (bar-i-tō-nē′sis), *n.* [NL., < Gr. βαρύτονος, barytone, + *-esis*, as in *phonesis*, etc.] The prevalence of a barytone quality or accent. *J. Clark*, Manual of Linguistics, p. 155.

bas (bä), *n.* [F., low: see *base*[1].] In *roulette*, a bet placed at the bottom of a vertical column of numbers, taking in 12 of them.—**Bas à cheval** ['low astride'], a bet placed between two vertical columns, taking in 24 numbers.

B. A. S. An abbreviation of (*a*) *Bachelor of Agricultural Science;* (*b*) *Bachelor of Applied Science*: degrees conferred by some institutions.

basal. **I.** *a.*—**Basal area.** (*b*) In *forestry*, the area of a cross-section of a tree, or the sum of such areas.—**Basal growth,** in *bot.*, growth or increase near the base, as distinguished from apical growth. See ★*apical.*—**Basal length.** See ★*length.*—**Basal placenta,** a placenta at the base of the ovary, as in *Dionæa.*—**Basal plate.** (*a*) In *embryol.*, the dorsal portion of the closed medullary tube. (*b*) In a typical solitary coral, as *Caryophyllia*, that part of the skeleton which is between the zooid and the surface of attachment.

II. *n.* Same as *genital plate* (which see, under *genital*).

basale, *n.* **4.** *pl.* In the nomenclature of the skeletal parts of sponges, recent and fossil, the root-tuft at the base of a silicious hexactinellid sponge, by means of which it attaches itself to the sediment. This tuft is composed of silicious fibers or rods, each of which may terminate in a hook or anchor to facilitate attachment.—**Basale inferius.** Same as *hypocoracoid. Starks*, Synonymy of the Fish Skeleton, p. 522.—**Basale medium.** Same as *hypercoracoid. Starks*, Synonymy of the Fish Skeleton, p. 521.—**Basale superius.** Same as *postclavicle:* a bone joined to the inner posterior surface of the clavicle of fishes. It is usually in two parts; *basale superius* refers to the upper part only. *Starks*, Synonymy of the Fish Skeleton, p. 521.

basalium (bā-sā′li-um), *n.*; pl. *basalia* (-ä). [NL.] Same as ★*basale*, 4.

basally (bā′sạl-i), *adv.* In *entom.*, at or near the base; proximally. *Buck*, Med. Handbook, V. 868.

basalt, *n.* **2.** Proposed as a field term, in *petrog.*, for all dark-colored aphanitic, nonporphyritic (aphyric), igneous rocks. The basalts, thus defined, include many dense andesites, diabases, and numerous lavas commonly grouped as basalt before their varying composition was revealed by microscopical study. Basalt in this sense is opposed to *felsite*, which includes light-colored rocks. See *felsite.*—**Analcite-basalt,** in *petrog.*, a term applied to a basalt containing analcite as a notable primary constituent in place of the usual feldspar.—**Deccan basalt,** in India, great flows of cretaceous basalt covering 200,000 square miles.—**Ellipsoidal, spheroidal basalt.** See *pillow* ★*basalt.*—**Melilite-basalt,** a very basic variety of basalt characterized by the mineral melilite. Nephelite and perovskite are usually abundant in the *melilite-basalts*, but feldspars are absent or subordinate. **Pillow basalt,** a term sometimes applied to basaltic masses composed of spheroidal, ellipsoidal, or pillow-shaped bodies formed when the rock consolidated and generally of variolitic nature. The terms *ellipsoidal basalt, spheroidal basalt,* and *concretionary dolerite* have also been applied to rocks exhibiting this structure. See *variolite.*

basaltine (ba-sal′tin), *a.* [*basalt* + *-ine*[1].] Same as *basaltic.*

basaree (bä-sạ-rē′), *n.* [Better ★*basuri*, < Hind. *basurī, basrī, basrī, bansī*, poetic forms of *bāṅsrī, bāṅslī*, < Skt. *vaṁçī*, a flute.] A Hindu direct flute or flageolet with 7 holes. It may be blown either by the mouth or by the nose.

base[2], *n.* **5.** In *chem.*, this term is properly applied to the hydroxid of a distinctly electropositive metal or compound radical, which easily exchanges hydroxyl for an acid radical, producing a salt; but the same term is often applied in a looser and more general way to other substances of more or less electropositive character, although not containing hydroxyl, as, for example, to ammonia and compounds of analogous structure.

22. In the gasteropod *Mollusca*, the flattened lower surface of the final whorl.—**Alloxuric, nucleinic base,** purin base.—**Base hit.** See ★*hit*[1].—**Brieger's bases,** several ptomaines which bear Brieger's name. One ($C_2H_8N_2$), supposedly ethylidene diamine, is obtained from putrefying fish; another ($C_6H_{13}NO_2$), probably a betain, is formed on the decomposition of tetanin. Three ptomaines of the formula $C_7H_{17}NO_2$ have also been described by Brieger, of which one, *gadinin*, is obtained from putrid fish, another, *typhotoxin*, from cultures of the typhoid bacillus, and a third from horse-flesh.—**De Coninck's base,** a ptomaine ($C_8H_{11}N$) obtained from putrid jellyfish.—**Delézinier's base,** a ptomaine ($C_{32}H_{31}N$) described by Delezinier, which in its general reactions resembles veratrine. Its origin is not stated.—**Guareschi and Mosso's base,** a ptomaine ($C_{10}H_{15}N$) obtained from putrefying fibrin.—**Gautier and Etard's base,** a ptomaine ($C_8H_{13}N$) obtained from the products of putrefaction of fish.—**Gautier and Mourgues's base,** a ptomaine ($C_7H_{11}N$) obtained from brown cod-liver oil.—**Lepierre's base,** a ptomaine ($C_{16}H_{23}N_2O_4$) obtained from poisonous cheese.—**Morin's base,** a nitrogenous base formed during alcoholic fermentation: found in fusel-oil.—**Nencki's base,** a ptomaine ($C_8H_{11}N$) obtained from a mixture of putrefying pancreas and gelatin.—**Newtonian base,** a hypothetical fixed point in space to which absolute motion, in the sense in which Newton used that term, may be referred.

Foucault's pendulum is another example of motion relative to the earth which exhibits the fact that the earth is not a *Newtonian base.* *Encyc. Brit.*, XXXI. 10.

Oser's base, a nitrogenous base ($C_{13}H_{20}N_4$) formed during the fermentation of saccharose by yeast.—**Pouchet's bases,** $C_5H_{12}N_2O_4$ and $C_7H_{18}N_2O_6$; they are probably not products of putrefaction, but are formed during the treatment of animal refuse with sulphuric acid.—**Purin, xanthin base.** See ★*purin.*—**Salkowski's base,** a ptomaine ($C_5H_{11}NO_2$) obtained from decomposing fibrin and meat.—**Thenius's base.** Same as ★*coridine.*—**Tri-acid base,** in *chem.*, a base containing three combining units of the radical hydroxyl which can be exchanged for three units of a monad acid-radical to produce a normal salt, as bismuth hydroxid, $Bi(HO)_3$, which gives rise to such salts as bismuth chlorid, $BiCl_3$, and bismuth nitrate, $Bi(NO_3)_3$. A tri-acid base is the correlative of a tribasic acid.

base-ball, *n.*—**Indoor base-ball,** a game developed from the outdoor game and played in rinks or halls. The base-lines are shortened from 90 to 27 feet, although in some large halls they are 45 feet in length. The rest of the field is in proportion, and the ball is a larger and softer one than that used out of doors. The number of players may be smaller, although 8 or 9 are usually considered a side.

base-bed (bās′bed), *n.* A name given on the Island of Portland to a limestone of Jurassic age largely used as a building-stone. [Local, Eng.]

base-board, *n.* **2.** In *photog.*, the foundation of the camera, which carries the lens, front, bellows, and back. *Woodbury*, Encyc. Dict. of Photog., p. 58.

basecphysis (bā-sek′fi-sis), *n.*; pl. *basecphyses* (-sēz). [NL., < Gr. βάσις, base, + ἐκφυσις, outgrowth.] In crustaceans, an appendage growing from the basis or second joint of a limb; an exopodite.

In this species [*Pontophilus australis*] . . . the basal joint bears a short appendage (*basecphysis*) not reaching to the extremity of the meros.
Trans. Linnean. Soc. London, Feb., 1903, p. 435.

base-level (bās′lev-el), *n.* **1.** In *geol.*, the ideal level surface with reference to which the erosive action of a stream is carried on; also, but less generally, the slope at which the erosive action of a stream practically ceases. The general base-level is the level of the ocean. A local base-level may be determined by a rock-sill in a river, or by a lake: in the latter case it may be below sea-level, as in the basin of the Dead Sea.

2. The level of the bottom plane of an engine or machinery; the level at which the bottom of the base is set.—**Base-level plain,** the nearly level surface to which a land-form would be reduced if acted on by the agencies of subaerial erosion for a sufficiently long time.

baselevel (bās′lev-el), *v.t.* and *i.*; pret. and pp. *baseleveled* or *baselevelled;* ppr. *baseleveling* or *baselevelling.* In *geol.*, to wear down or degrade (a surface) nearly to base-level.

Some of the salient problems of the outer lithosphere are the origin and maintenance of the continental platforms—with their superposed mountains and plateaus—and the abysmal basins, involving questions of rigidity, isostasy, etc.; the agencies and conditions that make possible the prolonged periods of crustal quiescence shown in *baseleveling*, and the antithetical epochs of crustal disturbance. *Carnegie Inst. Report*, 1902, p. 31.

base-line, *n.*—**Reid's base-line,** a line running from the infraorbital ridge to the back of the head, cutting the center of the external auditory meatus.

Basella (bā-sel′ä), *n.* A genus of plants, type of the family *Basellaceæ.* It contains only one species, *B. rubra*, a very variable annual or biennial climbing herb, which is cultivated in the tropics as a pot-herb. It is a native of tropical Asia and Africa, and is commonly known as Malabar nightshade (which see).

Basellaceæ (bā-se-lā′sē-ē), *n. pl.* [NL. (Moquin-Tandon, 1840), < *Basella* + *-aceæ.*] A family of dicotyledonous archichlamydeous plants of the order *Chenopodiales*, typified by the genus *Basella*, and characterized by flowers with 2 sepals, 5 petals, 5 stamens opposite the petals, a 3-merous gynœcium, and utricular fruit. There are 5 genera and 14 species, mostly tropical American, but the monotypic type genus is a native of tropical Asia, and *Anredera* extends northward into Texas. *Boussingaultia baselloides*, the Madeira-vine, has become established in southern Texas and Florida. See *Malabar nightshade*, under *nightshade.*

basellaceous (bā-se-lā′shius) *a.* [NL., < *Basellaceæ* + *-ous.*] In *bot.*, having the characters of or belonging to the family *Basellaceæ.*

Basement complex, a series of much metamorphosed and masked rocks (gneisses and schists), intricately folded, of unknown thickness and obscure origin, lying at the base of the geologic column. They have been mostly derived from original igneous rocks, but some appear to have been sediments. They are the oldest known rocks. *Dana.*—**Basement rocks,** in a series of rocks, the belt which offers least resistance to the wear of streams; the weaker strata. *Dana.*—**Basement substance,** in *histol.*, a substance formed at the basal ends of epithelial cells.

baseost (bā′sē-ost), *n.* [Gr. βάσις, foundation, + ὀστέον, bones.] In the fishes, especially those of the extinct family *Holoptychiidæ*, one of the series of small bones which support the dermal rays of the dorsal and anal fins and are subservient to the axonost which is the principal support of these fins.

base-rocker (bās′rok-ėr), *n.* A rocking-chair with a curved-topped base, to which it is attached and on which it rocks.

base-runner (bās′run″ėr), *n.* In *base-ball*, a player who is running the bases. The batsman becomes a base-runner immediately after he has made a fair hit, or after four balls have been called by the umpire, or after three strikes, or after the umpire calls a foul balk on the pitcher.

bas-fond (bä-foṅ′), *n.* [F.: *bas*, low, *fond*, bottom.] The fundus of a hollow organ: especially, the base of the urinary bladder.

Basham's mixture. See ★*mixture.*

bashaw, *n.* **3.** The mud-cat, *Leptops olivaris.* [Louisiana.]—**Bashaw cat.** See ★*cat.*

bashofu (bä-shō′fū), *n.* [Jap., < Chin. *pa-chiao pu*, banana cloth, *pa-chiao* (Jap. *basho*), plantain (banana); *pu*, cloth.] A kind of cloth woven from the fiber of the Japanese banana, *Musa Basjoo.* It is lighter in weight than that woven from hemp or flax, and is used in Japan for summer underwear. A coarser kind is used for wall decoration.

basi (bä-sē′), *n.* [Bisaya *basi.*] **1.** A native drink in the Philippine Islands, containing a large proportion of the poisonous principle of wood-alcohol. Insanity, crime, and frequently death in a few days result from its use. American soldiers and civilian employees of the government have been forbidden to drink it. *Army and Navy Jour.*, Dec. 7, 1901.

2. A native wine from northern Luzon.

basiale (bā-si-ā′lē), *n.*; pl. *basialia* (-li-ä). [NL., neut. of *basialis*, < L. *basis*, base: see *base*[2].] In *ichth.*, same as ★*hypohyal;* one of a pair of small bones anterior to the ceratohyal.

basibranchiostegal (bā″si-brang-ki-os′tē-gal), *n.* [L. *basis*, base, + *branchiæ*, gills, + Gr. στέγος, cover.] Same as ★*urohyal*, 2.

basibregmatic (bā-si-breg-mat′ik), *a.* [Gr. βάσις, base, + βρέγμα(τ-), sinciput, + *-ic.*] In *anthrop.*, relating to basion and bregma.—**Basibregmatic height,** the distance between basion and bregma.

Basic border, in *geol.*, the outer portion or shell of an intruded mass of igneous rock often found, as a matter of experience, to be lower in silica or more basic than the interior.

Secondary and less important causes may explain the existence of complementary dikes, *basic borders* and segregations.

R. A. Daly, Amer. Jour. Sci., April, 1903, p. 292.

Basic color. See ★*color*.—**Basic dye.** (*a*) In *histol.*, same as ★*basic stain*. (*b*) See *basic color* under ★*color*.—**Basic lines.** These lines apparently common to the spectra of two or more substances, and formerly supposed by Lockyer to indicate a common substance, have since been shown to be merely double or multiple lines with components very close together, and resolvable only by spectroscopes of higher power than he then possessed.—**Basic oxid,** in *chem.*, an oxid of a distinctly electropositive metal or compound radical, which may by union with the elements of water produce a hydroxid or base, or by union with the elements of an acid oxid produce a salt.—**Basic reagent.** Same as ★*basic stain*.—**Basic salt,** in *chem.*, a compound in which an electropositive metal or compound radical is partly united to an acid radical and partly to hydroxyl or to oxygen, as in basic bismuth nitrate, $Bi(HO)_2(NO_3)$, or in Monsell's salt, $Fe_2O(SO_4)_2$.—**Basic slag.** See ★*slag*[1].—**Basic stain,** in *histol.*, a non-acid dye, such as the methyl and phenyl derivatives of rosaniline, fuchsin, etc., employed to color elements for microscopical examination.—**Basic steel.** See ★*steel*[1].

basichromatin (bā-si-krō′ma-tin), *n.* [Gr. *βάσις*, base, + *χρῶμα*, color.] In *cytol.*, chromatin which takes on a deep stain with basic dyes only. Same as *chromatin* in the usual sense.

basicity, *n.* **2.** In *foundry-work*, the proportion of metallic oxid present in, and the absence of silica from, a furnace-lining, a cinder, flux, or slag. The fettling of a puddling-furnace depends for its efficacy on its basic character, as does also the magnesia limestone of a Bessemer converter. *Lockwood*, Dict. Mech. Eng. Terms.

Basicranial flexure. See ★*flexure*.

basid (bā′sid), *n.* [*basid(ium)*.] Same as *basidium*.

basidiogenetic (bā-sid″i-ō-jē-net′ik), *a.* Produced by or upon a basidium.

basidiogonidium (bā-sid″i-ō-gō-nid′i-um), *n.*; pl. *basidiogonidia* (-ä). Same as *basidiospore*.

Basidiolichenes (bā-sid″i-ō-lī-kē′nēz), *n. pl.* [NL., ⟨ *basidium* + *lichen*, lichen.] A group of lichens including those in which the fungous portion is a basidiomycete. They are divided into 2 smaller groups, *Hymenolichenes* and *Gasterolichenes*. Only a few genera are known, most of which are tropical.

basidiophore (bā-sid′i-ō-fōr), *n.* [NL., ⟨ *basidium* + Gr. *-φορος*, ⟨ *φέρειν*, bear.] A portion of the fructification of certain fungi which bears basidia.

basidorsal (bā-si-dôr′sal), *n.* [NL. *basidorsalis*, ⟨ Gr. *βάσις*, base, + L. *dorsum*, back: see *dorsal*.] One of the basidorsalia.

basidorsale (bā-si-dôr-sā′lē), *n.*; pl. *basidorsalia* (-li-ä). [NL.] One of a pair of ossifications on the superior side of the notochord from which the neural arch with its zygapophyses is developed. See ★*arcuale*.

basiemphytic (bā-si-em-fit′ik), *a.* [Gr. *βάσις*, base, + *ἔμφυτος*, implanted: see *imp.*] Attached or fixed by the base, as certain sponges.

basig (bä′sig), *n.* [Philippine Sp., appar. from an Igorrote form corresponding to Tagalog *basag*, rice, Bisaya, *básac*, a crop of rice, etc., under water.] An alcoholic drink made by the Igorrotes, principally of rice and buri (*Corypha umbraculifera*), but also of sugar-cane. [Philippine Is.]

basigamous (bā-sig′a-mus), *a.* In *bot.*, having the egg-apparatus at the lower end of the mother-cell of the endosperm, the reverse of the normal condition. *Van Tieghem.*

basigamy (bā-sig′a-mi), *n.* The condition of being basigamous.

basigenous (bā-sij′e-nus), *a.* In *chem.*, capable of forming a base, as, for example, potassium, the hydroxid of which is the base potash.

basignathite (bā-sig′na-thīt), *n.* [Gr. *βάσις*, basis, + *γνάθος*, jaw, + *-ite*[2].] In crustaceans, the second joint of a gnathite.

basilad, *adv.* **2.** Downward; toward the inferior face of the cranium. *Sir J. Richardson*, Zoology of the Herald. [Rare.]

basilar, *a.* **2.** Lying or situated at the base; fundamental.—**Basilar apophysis,** the basilar process.—**Basilar length of Hensel,** in *anat.*, the distance in a straight line from the posterior margin of the alveoli of the median incisors to the anterior edge of the foramen magnum: used in noting the size of mammalian skulls.—**Basilar membrane of the eye,** in *entom.*, a thin membrane in the eye which separates the optic tract from the cones and rods.—**Basilar meningitis,** inflammation of the membranes which cover the base of the brain.—**Basilar vertebra,** the last lumbar vertebra.

basileiolatry (bas-i-lī-ol′a-tri), *n.* [Gr. *βασιλεύς*, king, + *λατρεία*, worship.] The worship of kings. *N. E. D.* [Nonce-word.]

basilinna (bas-i-lin′ä), *n.* [Gr. *βασίλινα*, a form parallel to *βασίλισσα*, fem. of *βασιλεύς*, king: see *basilica*.] In *Gr. antiq.*, the wife of the archon basileus at Athens. She enjoyed special privileges and performed special functions in the state.

Dorpfeld points out that, according to Demosthenes, the oath which the Geraiai had to swear at the sacred marriage of the *basilinna* in the Anthesteria was inscribed on a stele.

Cecil Smith, Jour. Hellenic Studies, XVI. 335.

basiliscan (bas-i-lis′kan), *a.* Of or pertaining to a basilisk: as, *basiliscan* eyes.

basilissa (bas-i-lis′ä), *n.* Same as ★*basilinna*.

basilovomeric (bas″i-lō-vō-mer′ik), *a.* Relating to the base of the skull and the vomer.—**Basilovomeric angle,** in *craniom.*, the angle between the lower surface of the basioccipital and basisphenoid and the lower edge of the vomer. *Am. Rep. Eur. Amer. Ethnol.*, XVII. pt. 1, p. 143.

basilysis (ba-sil′i-sis), *n.* [NL., ⟨ Gr. *βάσις*, base, + *λύσις*, dissolution.] In *obstet.*, the operation of crushing the base of the skull of the fetus to make its extraction possible.

basilyst (bas′i-list), *n.* [Irreg. ⟨ *basilysis* + *-t*.] An instrument for performing basilysis.

basin, *n.* **12.** In *hort.*, the depression at the apex of pomaceous fruits, as apples and pears. The calyx or eye sits in the basin. The depression at the opposite end is known as the *cavity*.—**Closed basin,** a depression on the land-surface from which water does not escape to the sea. That of Great Salt Lake is to-day a closed basin, but under the moister climate of the glacial period it was filled to overflowing and then belonged to the Columbia River system.—**Half-tide basin.** (*a*) A dock or basin whose gates are closed at half ebb-tide to retain a navigable depth of water within the basin. (*b*) An intermediate basin between a wet dock and the sea or tidal portion of a river or harbor. This intermediate basin is operated in the same manner as an ordinary lock, and differs from it only in being larger and thus in locking in or out several vessels at a time.—**Knob-and-basin topography,** the undulatory topography characteristic of a moraine.

Speaking in general terms, the terminal moraine is a rough, irregular, complex ridge of drift, deposited in part directly by the ice, and in part by the waters which were active at its margin during the time of its accumulation. The time of its accumulation was a time during which the edge of the ice remained stationary, or nearly so, for a considerable period of time. The most distinctive single characteristic of the terminal moraine is its undulatory topography, which is often designated a "*knob-and-basin*" *topography*.

R. D. Salisbury, Geol. Surv. of New Jersey, 1892, p. 40.

Torsion basin, a basin formed by torsional deformation of the earth's crust.

basin-heel (bās′n-hēl), *n.* The talon, or posterior cusp of a tooth, when slightly hollowed out like a basin.

Trigonid and especially the protoconid lower than in Amphicyon, and marked *basin heel*.

Bull. Amer. Mus. Nat. Hist., XVI. 285.

basining (bās′n-ing), *n.* The formation of basins or depressed areas by local subsidence of the strata: produced sometimes by removal of soluble constituents from underlying beds, sometimes by gentle infolding.

basin-range (bās′n-rānj), *n.* The type of mountain-range found in the Great Basin of Utah and Nevada. It consists of greatly faulted and tilted strata.

Recently attention has been called to the geologic structure of the mountain ranges of Nevada and southeastern California. An attempt has been made to show that they are generally anticlinal in structure, and that the tilted-block type which Gilbert has described, and which is generally known as *basin-range* structure, is of rare occurrence. *Science*, Feb. 20, 1903, p. 302.

basiobregmatic (bā″si-ō-breg-mat′ik), *a.* Same as ★*basibregmatic*.

basioccipital, *n.* **2.** In *ichth.*, the lowest of the occipital bones. It is in the posterior part of the cranium, directly under the foramen magnum, and forms, usually with the assistance of the exoccipitals, the occipital condyle. The parasphenoid underlaps it anteriorly, while it articulates above with the exoccipitals and prootics.

basioceratochondroglossus (bas″i-ō-ser″a-to-kon″drō-glos′us), *n.* [NL., ⟨ Gr. *βάσις*, base, + *κέρας* (*κερατ-*), horn, + *χόνδρος*, cartilage, + *γλῶσσα*, tongue.] The hyoglossus muscle.

basioöpticon (bā-si-ō-op′ti-kon), *n.* Same as *foraminoöptic* ★*line*. *Harrison Allen*, Jour. Acad. Nat. Sci., X. 410.

basiophthalmous (bā″si-of-thal′mus), *a.* Of the nature of or resembling the basiophthalmite of the eye of a stalk-eyed crustacean.

basiotribe (bā′si-ō-trīb), *n.* [Gr. *βάσις*, base, + *τρίβειν*, rub, crush.] An instrument for performing basiotripsy.

basiotripsy (bā″si-ō-trip′si), *n.* [Gr. *βάσις*, base, + *τρίψις*, rubbing, crushing.] In *obstet.*, the operation of crushing the base of the skull of the fetus to render its extraction possible.

basipodium (bā-si-pō′di-um), *n.*; pl. *basipodia* (-a). [NL., ⟨ Gr. *βάσις*, base, + *πούς* (*ποδ-*), foot.] In *Polychæta*, the basal portion of a parapodium, or foot.

basipterygium (ba-sip-te-rij′i-um) *n.*; pl. *basipterygia* (-ä). [NL., ⟨ Gr. *βάσις*, base, + *πτερύγιον*, a fin.] In *ichth.*, the basal bone of a fin. *Zittel* (trans.), Textbook of Paleon., II. 23.

basis, *n.* **10.** Same as *basipodite*.—**Basis sphenoidalis,** in *ichth.*, same as *parasphenoid*, 2. Not the *basisphenoid* of Huxley.

basisphenoid, *n.* **2.** In *ichth.*, a bone attached to the anterior end of the inner wings of the proötics, which roof the myodome. It is probably not homologous with the bone so named in mammals. Gill has given it the special name of *dichost*. It is not synonymous with the bone in fishes called *basisphenoid* by Owen.

Starks, Synonymy of the Fish Skeleton, p. 512.

basite (bā′sīt), *n.* [*bas(ic)* + *-ite*[2].] In *petrog.*, a term proposed by Von Cotta (1864) as a collective name for igneous rocks of low content in silica, as opposed to those rich in silica (*acidites*).

basiventral (bā-si-ven′tral), *n.* [NL. *basiventralis*, ⟨ Gr. *βάσις*, base, + L. *venter*, belly.] One of the basiventralia.

basiventrale (bā-si-ven-trā′lē), *n. pl.* [NL.] One of a pair of ossifications on the inferior face of the notochord from which the centrum is developed. See ★*arcuale*.

basket-ball (bâs′ket-bâl), *n.* A game played with a ball resembling a foot-ball, in which the object is to throw the ball into one of two baskets (the goals) placed at opposite ends of the field. It is played by any number of persons (five or nine are preferred for championship games) upon a field (out of doors or within) of any convenient size. The rules are designed especially to eliminate the roughness of foot-ball. A well-defined line is marked around the floor or field, with the side-boundaries at least 3 feet from the wall or fence and the end-boundaries directly below the surface against which the goal is placed. The goals consist of baskets or hammock-nets of cords suspended from metal rings of 18 inches' inside diameter. These rings are placed 10 feet above the ground in the middle of the end-lines. The inside rim is 6 inches from the surface of a flat perpendicular screen, or very rigid surface, measuring at least 6 feet horizontally by 4 feet vertically. If a screen is used, it should not extend more than one foot below the upper edge of the goal. Teams should consist of 5 persons, and the officials are the referee, 2 umpires, a scorer, and a timekeeper. The ball is round, and consists of a rubber bladder covered with leather not less than 30 nor more than 32 inches in circumference and weighing not less than 18 nor more than 20 ounces. It should be tightly inflated. The referee's duties are to decide when the ball is in play, to whom it belongs, and when a goal has been made; to approve of the timekeeper and scorer before the game begins; and, when the ball is put in play, to toss it up in a plane at right angles to the side-lines, so that it will drop near the center of the field, which is indicated by a conspicuous mark. This is done at the opening of the game, at the beginning of the second half, and after each goal. After the referee puts the ball in play in the center, it must be first touched by one of the center players who shall have been previously indicated to the umpire. The game then continues for 20 minutes, when there is an intermission of 10 minutes and the teams change goals. The umpires call all fouls, and a foul called by one shall not be questioned by the other. A goal is made by throwing the ball fairly, so that it lands in the basket. A goal made from the field counts 2 points and a goal from a foul counts 1 point. The game is decided by the winning of the most points in 40 minutes' play consisting of two 20-minute halves with an intermission of 10 minutes. In case of a tie the game continues until either side has made two additional points. When a foul has been made the opposite side has a free throw for the goal at a distance of 15 feet from a point on the floor directly beneath the center of the goal. No player shall stand nearer than 6 feet to the thrower, nor in a lane 6 feet wide from the thrower to the goal, nor interfere with the ball until after it reaches the goal. A player is not allowed to carry the ball in his hands, but must play it from the spot on which he catches it. He can bat the ball with one hand. There should be no taking hold of nor pushing of an opponent, and the arms may not be used in any way to interfere with the player who has not the ball. There may be no shouldering, tripping, striking, kicking, hacking, or roughness of any kind. When the ball has gone out of bounds the player first touching it returns it to the field of play. He may throw the ball in any direction into the field of play from any spot, outside of bounds, on a line drawn at right angles to the boundary-line at a point where the ball crossed it. The game was invented by James Naismith.

basket-boat (bâs′ket-bōt), *n.* A skin-covered frame of basketry used as a boat in India.

basket-cloth (bâs′ket-klôth), *n.* Any fabric woven in imitation of the plaiting of a basket.

basket-elm (bâs′ket-elm), *n.* See ★*elm*.

basket-fence (bâs′ket-fens), *n.* A wattled stake-fence. [Australia.]

basket-fired (bâs′ket-fīrd), *a.* Cured or prepared by roasting in baskets over a charcoal fire: as, *basket-fired* tea.

basket-meeting (bâs′ket-mē″ting), *n.* A gathering, usually in connection with religious

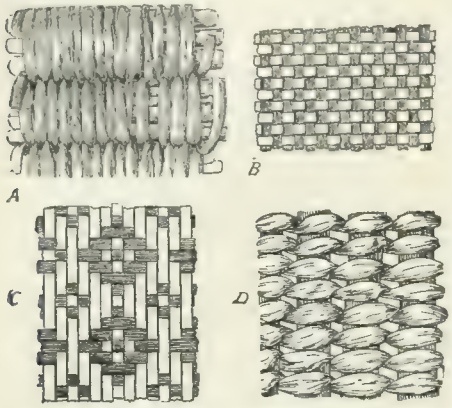
matters and lasting all day, at which no regular luncheon is served, those in attendance bringing their luncheon with them in baskets.

basket-phaëton (bȧs′ket-fā′e-ton), *n.* A phaëton having a body-frame of light iron secured to wooden rockers and covered with willow or ratan basketwork: of English origin.

basket-pot (bȧs′ket-pot), *n.* A water-tight basket which serves as a pot.

basket-rack (bȧs′ket-rak), *n.* In *car-building*, an openwork shelf of wire or the like supported by brackets placed on the side of a car over the seats; a bundle-rack.

basketry, *n.*—**Coiled basketry,** basketry made by sewing coils of fibers together. These coils may consist of one or more rods or of a bundle of vegetable fibers. Generally they are wrapped with a tough strip of root, bark, or wood, which serves at the same time for sewing the coils together.—**Plicated basketry,** basketry made by weaving, as by checker-weaving, twilling, or twining.—**Twilled basketry,** basketry woven like twill.—**Twined basketry,** basketry woven by twining a double or triple soft weft around a rigid warp.



A, coiled basketry; *B*, plicated basketry, checker ornament in two colors; *C*, twilled basketry in two colors; *D*, twined basketry. (From Report of Nat'l Museum, 1892.)

basket-shell (bȧs′ket-shel), *n.* Any corbuloid bivalve.

basket-stitch (bȧs′ket-stich), *n.* In *embroidery*, a stitch that interlaces with another, like basket-plaiting.

basket-stone (bȧs′ket-stōn), *n.* In the fossil *Crinoidea*, one of the joints of the columns.

basket-weave (bȧs′ket-wēv), *n.* The interlocking of the warp and weft in imitation of the plaiting of a basket.

basket-worm, *n.*—**Orange basket-worm,** the larva of an American psychid moth, *Platœceticus gloveri*, which forms a small oblong-oval case of silk interwoven with bits of leaf or twigs in which it lives and which it carries about with itself as a protection against birds and other natural enemies.

Baskish (bȧsk′ish), *n.* [*Bask* + *-ish*[1].] Same as *Bask*, *Basque*.

Baskonize (bȧs′kon-īz), *v. t.*; pret. and pp. *Baskonized*, ppr. *Baskonizing*. [*Bask* + *-on* (as in original *Vascones*) + *-ize*.] To turn into Basque.

Baskish *z* had, and still sometimes has, the sound of *tz* as in German. Salaberry in his Dictionary notes "botz" as meaning "voiz, suffrage." Castilian "voz = voice" would be *baskonized* as "boz."
N. and Q., 10th ser., I. 18.

basogenous (bā-soj′e-nus), *a.* Same as ★*basigenous*.

basophil, basophile (bā′sō-fil), *a.* and *n.* [NL., ⟨ Gr. βάσις, base, + φίλειν, love.] In *cytol.*, staining deeply with basic dyes only: said of a cell or part of a cell: opposed to *acidophil*. Also used substantively.

basophilia (bā-sō-fil′i-ȧ), *n.* [NL., ⟨ Gr. βάσις, base, + φίλος, loving.] A condition in which many leucocytes taking only basic stains are present.

basophilic (bā-sō-fil′ik), *a.* Same as ★*basophil*.

basophilous (bā-sof′i-lus), *a.* Same as ★*basophil*.

basophobia (bā-sō-fō′bi-ȧ), *n.* [NL., ⟨ Gr. βάσις, walking, + -φοβία, ⟨ φοβεῖν, fear.] Morbid fear of walking.

basote (bä-sō′tä), *n.* A Porto-Rican form of ★*apasotes*.

basrook (bas′rōk), *n.* See ★*budgrook*.

bass[1], *n.*—**Banklick bass.** Same as *calico bass*. [Local, Indiana.]—**Bayou bass,** the large-mouthed black-bass, *Micropterus salmoides*.—**Gray bass.** Same as *gray snapper*.—**Oswego bass,** the large-mouthed black-bass, *Micropterus salmoides*. [Local, New York.]—**Otsego bass,** the whitefish, *Coregonus clupeiformis*, of Otsego Lake at the head of the Susquehanna river. **Round bass,** a kind of sunfish, *Centrarchus macropterus*, commonly called *flier*.

bass[2], *n.* **4.** The commercial name of a fiber, resembling horsehair or wire, obtained from the sheathing leaf-bases or the leaf-stalks of certain palms. It is dark brown or black in color, and is used for brooms, brushes, ropes, and cables. Also called *piassava*. See *bast-palm*, *piassava*, and ★*bassine*. *Hannan*, Textile Fibers of Commerce, pp. 145–149.—**Cape bass.** Same as *West African* ★*bass*. **Madagascar bass,** the round, tapering deep-brown fibers obtained from the leaf-stalks of *Dictyosperma fœtosum*, a palm native to Madagascar. Called by the natives ★*voaitra*.—**Monkey bass,** the dark-brown wiry fiber obtained from the sheathing leaf-bases of *Leopoldinia Piassaba*.—**Para bass.** Same as *monkey* ★*bass*. **West African bass,** the brown, stiff, wire-like fiber obtained from the leaf-stalks of the bamboo palm, *Raphia vinifera*, after soaking them in water.

bass[3], *a.*—**Bass flute, trumpet.** See ★*flute*, ★*trumpet*. **Bass horn,** in the early nineteenth century, a wooden trumpet with an S-shaped tube and a brass bell, allied to the *serpent* (which see), with a compass of about two octaves both above and below middle C.—**Bass lute.** See ★*chitarrone* and *theorbo*.—**Bass tuba.** See *bombardon*.—**First bass, second bass,** in *part-music*, especially for male voices, the upper and lower bass voices or parts respectively.—**General bass.** Same as *figured bass* or *thorough-bass*.—**Spectacle bass,** a popular term in drum-music for certain passages consisting of two tones struck alternately, the name coming from the fact that, as commonly abbreviated, the notes suggest a pair of spectacles.

bassanello (bȧs-ȧ-nell′ō), *n.* [It.] A musical instrument sounded by a double-reed in a cup-shaped mouthpiece, which was joined by a metal tube curved like an S to a long, straight wooden body in which were 7 finger-holes. Compare *shawm* and *bassoon*. It was invented by Giovanni Bassani of Venice early in the seventeenth century, deriving from him its name, and was enough used for a time to be made in three sizes or pitches—bass, tenor, and alto.

bassarid (bas′ȧ-rid), *n.* [Gr. βασσαρίς, ⟨ βασσάρα, a Thracian bacchanal, lit. a fox.] In *classical myth.*, a votary of Bacchus; a bacchante.

bass-beam (bȧs′bēm), *n.* Same as *bass-bar*.

bass-bridge (bȧs′brij), *n.* Same as *bass-bar*.

basset[3] (bas′et), *n.* [F. *basset*, a breed of dogs so called, ⟨ OF. *basset* = It. *bassetto*, low: see *basset*[1], *basset*[2].] Same as ★*basset-hound*.

basset-hound (bas′et-hound), *n.* [*basset*[3] + *hound*.] A long-bodied, short-legged breed of dogs, similar in build to the dachshund, but larger and heavier. The color varies, but it is frequently white with liver-colored or black blotches.

bassine (bas-ēn′), *n.* [*bass*[2], 4, + *-ine*[2].] A commercial name for the stiff, wiry fiber obtained from the sheathing leaf-bases of the palmyra, *Borassus flabellifer*. It is used in making brushes and for ropes. See ★*bass*[2], 4, and *palmyra*. *Hannan*, Textile Fibers of Commerce, p. 149.

Bassini's operation. See ★*operation*.

bassist (bȧs′ist), *n.* One who sings bass or plays a bass instrument.

basso[1], *n.*—**Basso buffo** or **comico,** a singer in comic opera and similar works.—**Basso cantante,** a high bass, suited for solo-singing: opposed to *basso profondo*.—**Basso concertante.** See *basso continuo*, and *figured bass*, under *bass*[3].—**Basso ripieno,** a supplementary singer in a chorus or player in an orchestra: used only in full, or *tutti* passages.

Bassogigas (bas-ō-jī′gas), *n.* [NL., ⟨ L. *bassus*, low (deep), + Gr. γίγας, giant.] A genus of deep-sea brotulid fishes.

Bassozetus (bas-ō-zē′tus), *n.* [NL., ⟨ L. *bassus*, low (deep), + Gr. ζητεῖν, seek.] A genus of deep-sea brotulid fishes.

bass-player (bȧs′plā″ėr), *n.* One who plays a bass instrument, especially the bass viol.

bass-singer (bȧs′sing″ėr), *n.* One who sings bass; a bass or basso.

Basswood cheese. Same as *sapsago* ★*cheese* (*b*).

Basswood leaf-roller. See ★*leaf-roller*.

basswood-oil. See ★*oil*.

bast[1], *n.* **4.** A name sometimes given to the portion of raw-silk fiber which envelops the fibroin: virtually the same as the *sericin*.—**5.** A trade-name of the piassava-fiber. See *bast-palm*, *piassava*, and ★*bass*[2], 4.—**Bast-cells.** See def. 2.—**Bast-collenchyma,** tissue in which the walls are thickened on all sides. See *collenchyma*.—**Bast-fibers.** See def. 2.—**Bast sheath,** the sheath surrounding the fibrovascular bundle next within the cortex. Also called *periphloem*.—**Bast soap.** See ★*soap*.—**Bast-tissue.** Same as *phloem*.—**Bast-vessel.** Same as *sieve-cell*.—**Cuba bast,** a commercial name for guana. See def. 1, and ★*guana*[3].—**Hard bast.** Same as *liber*[1], 1.—**Russian bast,** the inner fibrous bark of the common European linden, *Tilia Europæa*. Much of it was formerly exported and used by nurserymen and gardeners for tying plants, but its place has almost entirely been taken by raffia. See *bast*[1], 1, and *Tilia*.—**Soft bast.** See def. 2.

Bastard box, ★**dory,** ★**halibut,** ★**measles,** etc. See the nouns.

bastardization (bas-tär-dī-zā′shon), *n.* The act of declaring or of rendering bastard or illegitimate. *N. E. D.*

Baste the bear. See ★*bear*[2].

Bastion series. See ★*series*.—**Full bastion.** See *hollow* ★*bastion*.—**Hollow bastion** a bastion in which the parade is at a lower level than the terre-plein, in contradistinction to a *full* bastion, in which the parade and terre-plein are practically at the same level.

bastose (bas′tōs), *n.* [*bast* + *-ose*.] Same as ★*lignocellulose*.

The blending of the *bastose* and plumose fibers to make one complete yarn is not feasible to begin with. Cotton fibers are unicellular, and flax fibers are multicellular, while the structure of the two is antagonistic to their union in a combined thread.
Hannan, Textile Fibers of Commerce, p. 17.

bastringue (bäs-trang′), *n.* The French name for a form of furnace used in the first stage of the Leblanc process for making carbonate of soda from common salt. It serves for the treatment of the salt with sulphuric acid.

bat[1], *n.* **15.** A paddle or blade in a coal-pulverizer. These bats are carried on rapidly rotating arms, and break the coal into very fine particles.—**16.** *pl.* (*a*) Heavy laced boots with hobnails. [Prov. Eng.] (*b*) Low-cut laced shoes formerly worn by women. (*c*) Boots in bad repair. [Colloq.]—**To ground the bat,** in *cricket*, to bring the bat in contact with the ground, either before playing the ball, in the act of playing it, or while running between the wickets.

bat[6], *n.* **2.** [Siamese *bāt*, ⟨ Hind. *bāt*.] A Siamese silver coin, the same as the tical.

batad (bä′täd), *n.* [Philippine Islands.] A name in the Philippine Islands of Indian millet, introduced and cultivated for forage, and in some places growing spontaneously. The natives sometimes make an intoxicating drink of the seed which they also eat in place of rice in times of scarcity; the stem yields sugar. See *sorghum*, 1, and *Indian millet*, under *millet*.

batala, *n.* See ★*bathala*.

batan (bä-tän′), *n.* [Sp., a fulling-mill, ⟨ *batir*, beat, pound: see *bate*[1], *bat*[1].] A stone hand-mill in general use in western South America. It is a heavy slab without legs or carvings of any kind, and is much ruder than the metate of Mexico. See ★*metate*.

batanga (bä-täng′gä), *n.* [Sp. *batanga*, ⟨ Bisaya *batangan* (*batanggan*), a beam, an outrigger; = Tagalog *batang*, a floating log.] In the Philippine Islands, an outrigger of a canoe, made of bamboo.

Batavia weave. See ★*weave*[1].

batching-tackle (bach′ing-tak″l), *n.* A mechanical appliance attached to a calico-printing machine for massing the cloth after it leaves the machine.

bate[5], *n.*—**Coal-tar bate,** a bate made from chemicals instead of from manures.

bateau-board (ba-tō′bōrd), *n.* Same as *battoule-board*.

batelo (bä-tā′lō), *n.* [Also *botella*; ⟨ Pg. *batell*: see *bateau*.] A boat with a square stern like a dhow's: used in western India. [Anglo-Indian.] *Yule and Burnell*, Anglo-Indian Gloss.

bate-prick (bāt′prik), *n.* In *tanning*, a small hole on the grain side of a skin, caused by the putrefying of the bate while the skin is in the liquor. *Flemming*, Practical Tanning, p. 98.

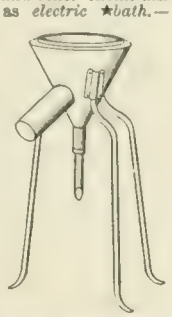
Batesian (bāts′i-ȧn), *a.* Pertaining to H. W. Bates, an English naturalist and explorer, and, in particular, to his theory, that certain animals exhibit protective resemblance to others (mimicry) that have effective means of protection or defense, such as the resemblance of some harmless snakes to venomous ones. According to this theory, individuals of certain species accidentally resembling certain other species especially protected from their natural enemies, as by a nauseous odor or taste, are supposed by natural selection to perpetuate and intensify this resemblance in their descendants, thus ultimately bringing protection to the species by mimicry alone, non-mimicking strains of the race lapsing.

In South Africa entomologists have found several excellent examples of those forms of mimicry which are known as "*Batesian*" and "Mullerian" mimicry respectively. It was clearly important to test experimentally the value of the colors of these insects as a protection from their enemies. This Mr. Marshall has done with results which are as interesting as they are remarkable. The fact that Mantidæ and spiders exhibit unmistakable signs that certain species of Lepidoptera are distasteful to them, but are unaffected by colors, whether warning or cryptic in character, suggests that birds and other vertebrates are the principal enemies which have caused the evolution of the color patterns of these insects.
Nature, Apr. 16, 1903, p. 572

bat-fish, *n.* 3. *Monodactylus argenteus*, of the family *Scorpididæ*, a silvery fish with the body deeper than long. The name alludes to the high fins. [New South Wales.] **Short-nosed bat-fish,** a species of *Ogcocephalus* (*O. radiatus*) found in Florida.

bat-gage (bat'gāj), *n.* An instrument for measuring the breadth of the blade of a cricket-bat.

bath[1], *n.* 9. In *elect.*, the solution in which electrochemical action takes place, as in electroplating, electrotyping, electrometallurgy, etc. **Brand bath,** a cool or cold bath employed to reduce the temperature and calm the nervous symptoms in typhoid fever. **Copper bath,** the solution of copper sulphate, or other salt of copper, in which articles are immersed to be coated with copper by electrolysis, or from which electrotype casts are to be made. **Cutting bath,** a solution of chemicals for discharging, or cutting, certain pigments printed on fabrics. This a solution of sulphuric and oxalic acids, of proper strength and temperature, may be used as an indigo-cutting bath. **Electric bath,** a bath in water through which a current of electricity is passing.—**Green bath,** a bath used in dyeing the hair on rabbit-skins black: so called on account of its color, which is due to green vitriol and other chemicals.—**Hydro-electric bath.** Same as *electric* ★*bath*.—**Koch's filtering-bath,** a device for hot filtration. The mass in a funnel is kept warm by an outer double-walled vessel which is filled with water. The water is heated by a flame applied to an offset.—**Long bath,** in *dyeing*, a dilute dye-bath: a term used in contradistinction to *short* ★*bath* (which see).—**Nauheim bath,** a bath in water charged with carbonic-acid gas, employed in the treatment of heart-disease.—**Needle bath,** a form of douche in which water is projected with considerable force, through a number of fine openings, against the surface of the bather.—**Sheet bath,** a form of hydropathic treatment in which the patient is enveloped in a cool wet sheet.—**Short bath,** in *dyeing*, a concentrated dye-bath; a dye-bath in which the amount of water used is reduced to a minimum.—**Single bath,** in *dyeing*, a dye-bath in which the complete operation of dyeing is carried on.—**Standing bath,** in *dyeing*, a dye-bath which is used continuously by adding, after each dyeing operation, sufficient quantities of dyestuffs and other necessary chemicals to replace those which have been extracted by the material previously colored.



Koch's Filtering-bath.

bath[3] (bȧth), *n.* Same as ★*bath-flower*.

Bath coup. See ★*coup*[4].

bathala (bät-hä'lä), *n.* [Also *batala*, Philippine Sp. *batala*, ⟨ Tagalog *bathala*, Bisaya *bathála* or *bahála*, a deity; Pampanga *bátala*, a bird supposed to be controlled by a sorcerer or a deity, and called in Tagalog *tigmamanoquin*.] 1. In the Philippine Islands, a god (in the heathen sense); a deity; in later use, the infant Jesus.

bath-flower (bȧth'flou″ėr), *n.* [*bath* (a corruption of *birth*-in *birthroot*) + *flower*.] The birthroot, *Trillium*, especially *T. grandiflorum*. Also *bath*[3] and *beth*.

Bathgate mineral, naphtha. See ★*mineral*, ★*naphtha*.

bathic (bath'ik), *a.* [Gr. *βάθος*, depth: see *bathos*.] Of or concerning depth, as of the sea.

bathism (bath'izm), *n.* Same as *bathmism*. *Natural Science*, June, 1897, p. 380.

bathmic, *a.* 2. Illustrative of or brought about by bathmism, or growth-force, considered as a cause or agent in the origin of species: as, *bathmic* evolution. *Buck*, Med. Handbook, IV. 34.

bathmotropic (bath-mō-trō'pik), *a.* [Gr. *βαθμός*, threshold, + *τροπικός*, turning.] Influencing the response of the nerves and muscular tissue to stimuli. *Sci. Amer. Sup.*, July 4, 1903, p. 22992.

bathmotropism (bath-mot'rō-pizm), *n.* [*bathmotrop-ic* + *-ism*.] Interference with the excitability of a muscle.

batholite (bath'ō-lit), *n.* Same as ★*batholith*.

batholith (bath'ō-lith), *n.* [Gr. *βάθος*, depth, + *λίθος*, stone.] A large mass of deep-seated igneous rock which may be exposed by erosion. The texture is granitoid and the shape indefinite. Batholiths of granite may cover hundreds of square miles. Contrasted with *laccolith*, ★*lysmalith*, ★*intruded sheet*, etc. Also *batholite*, *bathylite*, and *bathylith*.

Yet it is clear from a survey of geological literature, that the field evidence for such a view is but negative in the great majority of stocks and so-called "*batholiths*." Most of them are not true laccoliths, as they characteristically occur in regions of great structural complexity, where igneous contacts have none but the most remote sympathy with the structural planes of any one bedded series. *R. A. Daly*, Amer. Jour. Sci., April, 1903, p. 270.

batholithic (bath-ō-lith'ik), *a.* [*batholith* + *-ic*.] Relating to, originating in, or derived from a batholith.

batholitic (bath-ō-lit'ik), *a.* Same as ★*batholithic*.

Bathonian group. See ★*group*[1].

Batho's furnace. See ★*furnace*.

bath-sponge, *n.* **Egyptian bath-sponge.** Same as *sponge-wool* or *Lagia Ægyptiaca*.

Bathurst bur. See ★*bur*[1].

bathybic (ba-thib'ik), *a.* [*bathyb*(*ius*) + *-ic*.] Living in the depths of the water, or near the bottom under the deep water.

The deepest part of this zonary fauna forms the *bathybic* plankton. . . . One might also call them 'abyssal plankton' if it were not more practicable to limit the term 'abyssal' to the vagrant and sessile benthos of the deep sea. *Haeckel* (trans.), Planktonic Studies.

Bathybic plankton. See ★*plankton*.

Bathyclupea (bath-i-klō'pē-ä), *n.* [NL., ⟨ Gr. *βαθύς*, deep, + L. *clupea*, herring.] A genus of deep-sea fishes of peculiar structure, allied to *Beryx*.

bathyclupeid (bath-i-klō'pē-id), *a.* and *n.* I. *a.* Of or pertaining to the family *Bathyclupeidæ*. II. *n.* A fish of the family *Bathyclupeidæ*.

Bathyclupeidæ (bath-i-klō-pē'i-dē), *n. pl.* [NL., ⟨ *Bathyclupea* + *-idæ*.] A family of deep-sea fishes typified by the genus *Bathyclupea*, with compressed body, long anal fin, and the spinous dorsal little developed.

bathycurrent (bath-i-kur'ent), *n.* [Gr. *βαθύς*, deep, + L. *currens*, current.] A submarine stream or current which does not involve or affect the water at the surface.

The epicurrents, or the surface streams, furnish no evidence relative to the understreams to be found below, which we name *bathycurrents*. *Haeckel* (trans.), Planktonic Studies, p. 625.

Bathyergidæ (bath-i-ėr'ji-dē), *n. pl.* [NL., ⟨ *Bathyergus* + *-idæ*.] The *Bathyergidæ* considered as a family. See cut under *Bathyergus*.

Bathygadinæ (ba-thig'a-dī'nē), *n. pl.* [NL., ⟨ *Bathygadus* + *-inæ*.] A section of the family *Macruridæ*, typified by the genus *Bathygadus*, lacking the peculiar gill-structures of *Macrurus*.

Bathygadus (ba-thig'a-dus), *n.* [NL., ⟨ Gr. *βαθύς*, deep, + *γάδος*, ⟩ L. *gadus*, cod.] A genus of deep-sea grenadiers, or *Macruridæ*.

bathygraphic (bath-i-graf'ik), *a.* Showing graphically the depth of a body of water: as, a *bathygraphic* chart.—**Bathygraphic net.** See ★*net*[1].

bathygraphical (bath-i-graf'i-kal), *a.* Same as *bathygraphic*.

Bathylaginæ (bath″i-la-jī'nē), *n. pl.* [NL., ⟨ *Bathylagus* + *-inæ*.] A group of deep-sea fishes of the family *Microstomidæ*, typified by the genus *Bathylagus*.

Bathylagus (ba-thil'a-gus), *n.* [NL., ⟨ Gr. *βαθύς*, deep, + *λαγώς*, a hare, also a kind of fish.] A genus of deep-sea fishes, with small mouth and of fragile structure, of the family *Microstomidæ*.

bathylimnitic (bath″i-lim-nit'ik), *a.* [Gr. *βαθύς*, deep, + *λίμνη*, lake, + *-it-ic*.] Floating or swimming in the depths of fresh water. See also ★*limnitic*, ★*autolimnitic*, ★*zonolimnitic*. Also spelled *bathylimnetic*.

bathylite, bathylith (bath'i-lit, -lith), *n.* Same as ★*batholith*.

bathylithic, bathylitic (bath-i-lith'ik, -lit'ik), *a.* Same as ★*batholithic*.

bathymeter, *n.* 2. A simple apparatus for gaging the depth of liquids in wells and tanks. It consists of an air-tube dipping into the liquid to be measured, and an air-compressor connected both with this tube and with a reservoir of liquid into which there dips a gage-glass. When the air-compressor is worked the liquid rises in the gage until the pressure is sufficient to force air out of the bottom of the air-tube.

Bathymyzon (bath-i-mī'zon), *n.* [NL., ⟨ Gr. *βαθύς*, deep, + *μύζων*, ppr. of *μύζειν*, mutter, grumble.] A genus of deep-sea lampreys reputed to be without teeth. *Gill*.

Bathyopsis beds. See *bed*[1].

bathypelagic (bath″i-pē-laj'ik), *a.* [Gr. *βαθύς*, deep, + *πέλαγος*, sea.] Swimming or floating both at the surface of the sea and in its depths; pelagic. Most pelagic organisms are *bathypelagic*, some coming to the surface only at night, some only in winter, and some wandering up and down irregularly. See also ★*nyctipelagic*, ★*chimopelagic*, ★*allopelagic*.

I call *bathypelagic* all those organisms which occur not merely at the surface, but also extend down into the depths. *Haeckel* (trans.), Planktonic Studies.

Bathypelagic net. See ★*net*[1].

Bathypteroidæ (bath-ip-te-rō'i-dē) *n. pl.* [NL., ⟨ *Bathypterois* + *-idæ*.] A family of deep-sea fishes with the pectoral fins provided with long feelers, typified by the genus *Bathypterois*.

Bathypterois (bath-ip-ter'ō-is), *n.* [NL., ⟨ Gr. *βαθύς*, deep, + *πτερόν*, wing.] A genus of deep-sea fishes allied to the lizard-fishes.

Bathysaurus (bath-i-sä'rus), *n.* [NL., ⟨ Gr. *βαθύς*, deep, + *σαῦρος*, lizard.] A genus of deep-sea lizard-fishes.

bathyssal (ba-this'al), *a.* [An ignorant or capricious mixture of *bathos* (the deep sea) and *abyssal*.] Pertaining to or inhabiting the deep sea.

There are many vividly colored *bathyssal* animals belonging to all the classes of the animal kingdom and possessing nearly all the hues found in living types in littoral waters.

Quoted in *Science*, May 31, 1901, p. 847.

Bathystoma (ba-this'tō-mä), *n.* [NL., ⟨ Gr. *βαθύς*, deep, + *στόμα*, mouth.] A genus of grunts, or hæmulid fishes, found in the West Indies.

batiator-root, *n.* 2. The root of a plant growing in tropical Africa, said to be *Vernonia nigritiana*: used as a febrifuge.

Batidaceæ (bā-ti-dā'sē-ē), *n. pl.* [NL. (Alphonse de Candolle, 1873), ⟨ *Batis* (*Batid-*) + *-aceæ*.] A family of dicotyledonous apetalous plants of the order *Chenopodiales*, containing only the monotypic genus ★*Batis* (which see).

batik (bä-tik'), *n.* [Malay *bātik*, Jav. *batik*, designing in color upon cloth.] 1. A process employed by the natives of the Dutch East Indies in executing designs on a material, as a cotton fabric in one or more colors. By covering the design with hot wax the remaining portions of the material may be dyed any color desired, after which the wax is removed in boiling water, leaving the design-color intact. The liquid and process are now used, in the manufactures of Europe, upon velvets, velours, plushes, etc.

2. The fabric so decorated.

batikuling (bä″tē-kō-ling'), *n.* [Philippine Sp. *baticulin*, *baticuling*; from a native name.] A large tree, *Litsea Perottetii*, of the laurel family, the wood of which is soft, fragrant when fresh, easy to work, and not subject to the attacks of termites, or white ants. It is one of the most useful woods of the Philippine Islands, and is used for making writing-desks and other articles, taking the place of pine. [Philippine Is.]

batillus (ba-til'us), *n.* A rude contrivance, consisting of a board struck by a mallet, once used in the Armenian church service when bells were prohibited. *Stainer and Barrett*.

batino (bä-tē'nō), *n.* [Philippine Sp.; from an unidentified Tagalog name.] *Pala macrophylla* (*Alstonia macrophylla* of Wallich), an apocynaceous tree with milky latex, allied to the dita, or devil-tree. It has horizontal whorls of branches, and whorls of obovate-lanceolate leaves narrowing at the base. The wood, which is white and durable if protected from the weather, is used in construction by the natives. See *devil-tree*. [Philippine Is.]

Batis[1] (bā'tis), *n.* [NL., ⟨ Gr. *βατίς*, a flatfish, perhaps the skate or ray.] A generic name

Batis maritima.

a, a flowering [illegible] b, [illegible] flower; c, [illegible] flower; the [illegible] spike, enlarged. From Engler and [illegible]

applied to the rays or skates: equivalent to *Raia*.

Batis[2] (bā'tis), *n.* [NL. (proposed by Linnæus in 1759, established in 1763): said to be in allusion to the resemblance of the fruit to a blackberry, < Gr. *βατίς, βάτος*, bramble, blackberry.] A genus of dicotyledonous shrubs, the type and only genus of the family *Batidaceæ*. The single species, *B. maritima*, is a pale green, strong scented shrub with opposite fleshy, linear or clavate, entire leaves, and small diœcious flowers in axillary cones. It occurs in sand along the coast and in salt-marshes from North Carolina to Florida, Texas, the West Indies, and northern South America.

batitinan (bä-tē-tē'nän), *n.* [Also *batitinang;* Philippine Sp., < Tagalog *batitinang* (Blumentritt).] A large forest-tree, *Lagerstrœmia Batitinan*, with straight trunk, exfoliating bark, alternate simple leaves, and the young branches more or less square in cross-section. It yields logs the largest of which are about 40 feet long by 18 inches square. The wood is highly prized for building purposes, and is suitable for making furniture, as a substitute for teak. However, it is subject to the attacks of ship-worms, and in ship-building is used only for planking above the water-line. When properly seasoned it stands exposure to the weather, but in house-building and other construction it cannot be used for posts or sleepers, as it decays in contact with the ground. See *Lagerstrœmia*. [Philippine Is.]

batlan (bät-län'), *n.*; pl. *batlanim* (bät-lä-nēm'). [Heb. *batlan*, 'unemployed man.'] In Hebrew usage, one of ten men of leisure (batlanim) who are expected to devote their whole time to the affairs of a congregation, and especially to attend divine service in the synagogue. Many synagogues which adhere to the orthodox ritual hire men to attend service, so as to be sure of the requisite ten.

bat-louse (bat'lous), *n.* Any member of the heteropterous family *Polyctenidæ*, which, although true bugs, resemble lice and are parasitic on bats of the genus *Molossus*. Four or five species are known.

Batocrinus (bat-ō-krī'nus), *n.* [Gr. *βάτος*, a bramble, + *κρίνον*, a lily (see *crinoid*).] A genus of extinct crinoids having a pyriform calyx with numerous biserial simple arms and a highly developed and projecting proboscis. It occurs in the Lower Carboniferous of the Mississippi valley.

Baton River series. See ★*series*.

bat-parrakeet (bat'par″a-kēt), *n.* Any one of some 20 species of small parrots of the genus *Loriculus*, or *Coryllis*, which have the habit of hanging suspended by their feet, especially when sleeping. They inhabit the Indo-Malay region. Also known as *hanging-parrots*, *hanging-parrakeets*, and *bat-parrots*.

batrachiate (ba-trā'ki-āt), *n.* An erroneous form for *batrachian*. *Encyc. Brit.*, XXVIII. 139. [Rare.]

Batrachoides (bat″ra-kō-ī'dēz), *n.* [NL., < Gr. **βατραχοειδής, βατραχώδης*, frog-like, < *βάτραχος*, a frog + *εἶδος*, form.] A genus of toad-fishes found in tropical America, distinguished by the scaly skin.

Batrachoididæ (bat″ra-kō-id'i-dē), *n. pl.* [NL., < *Batrachoides* + *-idæ*.] The family of toad-fishes typified by the genus *Batrachoides*. Also *Batrachidæ*.

bats (bats), *n. pl.* Colic. See *bot*[1], etym. [Scotch.]—**The bats**, ill humor or condition; the blues: as, to be troubled with *the bats*. [Colloq.]

Batsman's box, on a base-ball field, the space in which the batsman must stand when endeavoring to strike the ball delivered by the pitcher.

battement, *n.* 2. Opposed to the *cadence* (see *cadence*, 4 (*c*)) in that in the latter the trill begins with the principal note.

batten[2], *n.* 2. (*b*) A log less than 11 inches in diameter at the small end. [Maine.]

Batten observations, a method of determining a vessel's angle of rolling by observing the rise and fall of the horizon-line on the edge of a suitably marked vertical batten or strip of wood several feet distant from a sight-hole at which the eye of the observer is placed.

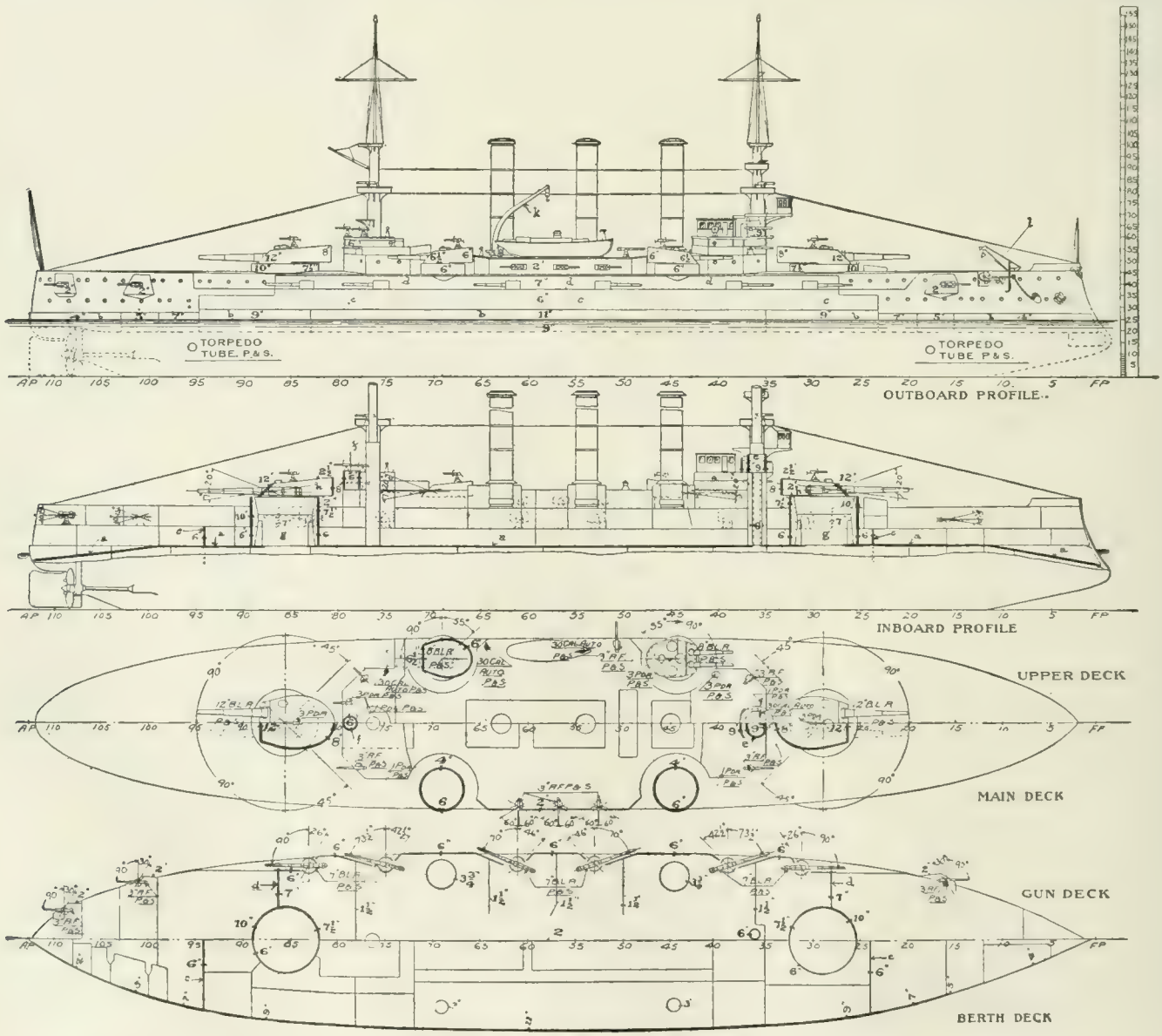
Battenberg lace. See ★*lace*.

batten-floor (bat'n-flōr), *n.* A floor of narrow strips. [Eng.]

batter-board (bat'ėr-bōrd), *n.* 1. One of two or more adjustable boards or straight-edges used in connection with plumb-lines to lay off the batter of a masonry wall.—2. One of two or more horizontal boards, fastened to posts near the corners of an excavation for a wall or building, to which strings are stretched to mark the outlines of the wall or building.

batter-dock (bat'ėr-dok), *n.* 1. The butter-bur, *Petasites Petasites*.—2. The floating pond-weed, *Potamogeton natans*.

battering-ram, *n.* 3. A child's game in which all the players except two form a circle, one of the latter being inside and the other outside. The one inside the circle endeavors to break through, the player outside assisting him. Should he succeed, that player in the



United States Battle-ships Connecticut and Louisiana.

Length on waterline, 450 ft., beam, 76 ft., 11 in., mean draft, 24 ft., 6 in. Displacement, 16,000 tons. Indicated horsepower of propelling machinery, 16,500. Speed, 18 knots. Armament, 4 12-inch guns in pairs in turrets, 8 8-inch guns in pairs in turrets, 12 7-inch guns in casemates; 2 3-inch guns on decks, and miscellaneous smaller guns, 4 submerged torpedo tubes. Complement, 41 officers, 815 men. B L R = breech-loading rifle, R F = rapid-fire gun, 3 P D R = 3-pounder gun, 1 P D R = 1-pounder gun, 30 cal. auto. = .30 caliber automatic gun, P = port side, S = starboard side. The figures indicate the thicknesses of armor on the different parts: a, protective deck; b, belt armor; c, lower casemate armor; d, upper casemate armor; e, conning tower; f, signal tower; g, 12-inch barbette; h, 12-inch turret; k, boat crane; l, anchor crane.

circle who is responsible for his escape takes his place.

battery, *n.* **16.** In *lumbering,* two or more donkey-engines for dragging logs, set at intervals on a long skid-road.—**17.** In *indigo manuf.,* a series of vats which are conducted as a unit. They may be either steeping-vats or beating-vats. See ★*vat.*—**18.** A set of stamps in a stamp-mill, comprising the number which fall in one mortar.—**19.** In cœlenterates, a group of stinging-cells.—**20.** A shield or shelter designed to hide the shooters in a grouse-drive; a butt used on English and Scotch moors. They are usually formed of blocks of peat or turf, cut with a spade and built up in the form of a wall, circular, horseshoe, or semicircular in shape.—**21.** In *harpsichord music,* an effect produced by striking a chord in quick repetition for greater sonority. It was indicated by prefixing a vertical curve to the notes of the chord.—**Coal battery,** a form of galvanic battery in which it is proposed to utilize the oxidation of carbon as the means of generating an electric current.—**Dry battery,** a battery of dry cells. See ★*cell.*—**In battery,** in the position for firing; said of a gun.—**Lamp battery,** an arrangement of electric incandescent lamps whereby a current of the required amount and tension may be drawn from the common source of supply. The lamp battery was devised as a means for the distribution of the electric current in psychological laboratories. *Scripture,* New Psychol., p. 483.—**Main battery, secondary battery, tertiary battery.** Same as *main, secondary,* and *tertiary* ★*armament.*

battery-room (bat'ėr-i-röm), *n.* A room in which electric batteries are located.

batting-board (bat'ing-bōrd), *n.* In *weaving,* a device in a Jacquard loom for forcing the needles forward.

batting-flake (bat'ing-flāk), *n.* A kind of stout frame, about 3 feet square, standing 3 feet high, strung with cords about half an inch apart, upon which seed-cotton is batted with sticks for the purpose of preparing it for carding and spinning: a contrivance for use in the home, now seldom employed.

battle-gaff (bat'l-gaf), *n.* In a man-of-war, a gaff placed on a military mast from which to display the national flag when the flagstaff is removed to clear the guns in action.

battle-quoit (bat'l-kwoit), *n.* See ★*chakra.*

Battlesden cart. See ★*cart.*

battle-ship (bat'l-ship), *n.* A ship of war; specifically, a powerful war-ship designed to fight in the line of battle; in recent use, a heavily armored and armed sea-going war-ship intended for the line of battle. The change from the wooden war-ship propelled by sail-power to the modern armored iron and steel steam battle-ship dates from about the middle of the nineteenth century. The first war-ship propelled by a screw was the United States ship Princeton, and the first ironclad (with the exception of a number of floating batteries built by the French for use in the Crimean war, and copied by the English) the French armored wooden frigate La Gloire, launched in 1860. This was followed by the English Warrior, launched in 1861. From this date the development of the war-ship, largely influenced by the success of the monitor (which see), has been very rapid, resulting in a great diversity of types (as regards arrangement and weight of protective armor, character of armament, and adaptation of design to special ends), and accompanied by an equally rapid progress in the perfection of ordnance (see *ordnance, gun*), armor-plate (which see), and explosives. The Warrior, an iron vessel, was of 9,210 tons' displacement, had 4½-inch iron armor, carried 32 muzzle-loading guns, of which the largest were of 8-inch caliber and of small power, and had no torpedo-ejectors; the Lepanto, of the Italian navy, launched in 1883, one of the largest war-ships yet constructed, is of 15,900 tons' displacement, has steel armor 19 inches in maximum thickness, carries 16 guns, of which 4 are of 17-inch caliber, and has 4 torpedo-ejectors. See ★*navy.* Modern war-vessels are classified, according to the service for which they are specially designed, as battle-ships, coast-defense and harbor-defense ships, cruisers (which are classed as armored, protected, or unarmored, according to their degree of defensive power), lookout ships, gunboats, despatch-vessels, rams, torpedo-boats, torpedo-boat destroyers, etc. The development of rapid-firing guns in recent years has resulted in increasing the area on the side of the ship covered by armor and the number of guns protected by armor. This involves making the armor of less thickness and compensating for this by improvements in manufacture by which its resisting power is increased. See *armor-plate.* On the other hand, it has resulted in placing armor on high-speed cruisers, sacrificing something of the speed for this purpose, accompanied by a great increase of size. The modern battle-ship is intended to combine in one vessel the most powerful offensive and defensive weapons of floating warfare. To be effective it is necessarily of large size, with a tendency toward continual increase, limited only by the depth of water in the harbors which it must necessarily frequent. The battle-ship may be divided into three portions, namely, the part under water, that in the vicinity of the water-line, and the upper works. In the first are carried the propulsive machinery and boilers, coal, the steering-gear, the submerged torpedo-tubes, the ammunition, and the greater part of the stores. Upon the integrity of this part depends the floating of the ship. It is subject to attack by mines and torpedoes, and the machinery within it is liable to destruction by fragments of exploding shells or by mortar fire. To protect it from mines and torpedoes, the under-water body is divided into a great number of compartments by an outer and inner skin and a number of water-tight transverse and longitudinal frames and bulkheads, so that the space to which water can gain access by a single explosion will be limited and will not seriously impair the floating power. This is, however, the most vulnerable part of a battle-ship. Attempts to armor the bottom against explosions under water have not yet been made to any extent, because the weight required is prohibitive. To prevent the penetration of projectiles from above, there is a protective or armored deck, usually from 2 to 4 inches thick, the middle part of which is a little above the water-line. This deck extends out to the side at the top of the belt-armor, or, in the most recent ships, slopes down at the sides to the bottom edge of the armor-belt from 4 to 6 feet under water. There is sometimes a second protective deck below the first one to catch fragments which might pass through the first, and this is sometimes called a *splinter-deck.* The part of the ship immediately above the protective deck, in the vicinity of the water-line, is sometimes called the *raft-body.* Upon its integrity depends the stability of the ship, for if a sufficient part of it is open to the sea, the ship will "turn turtle." It is protected from the enemy's projectiles by a heavy armor-belt. In modern battle-ships the armor-belt extends over the whole or the greater part of the length, but it is usually thicker in the middle portions over the engines, boilers, and magazines. The raft-body is further protected by subdivision into a large number of water-tight compartments in which coal and stores are carried and in some of which are quarters for officers and crew. The compartments just inside the armor-belt are called *coffer-dams* and are frequently packed with obturating material, such as cork or the compressed pith of corn-stalks, which, when wet by the water entering a shot-hole, swells up and closes the hole. In the upper part of the ship is carried the principal offensive power, its battery of guns. This consists of heavy guns, medium guns, and small guns. See ★*armament.* The heaviest guns on the modern battle-ship are usually of 12-inch caliber, firing a projectile weighing about 850 pounds. These are mounted in barbette-turrets. See ★*barbette.* The largest battle-ships carry four of these guns in pairs in two turrets, one forward and the other aft on the center line. The majority of United States battle-ships have also from four to eight 8-inch guns, also in turrets. In some cases an 8-inch turret is placed on top of a 12-inch turret, forming what is called a *superposed turret.* This plan has been adopted only on United States battle-ships. The guns of medium caliber, such as the 6-inch and 7-inch, are usually carried in casemates or in an armored citadel subdivided by splinter-bulkheads. The side of the ship in the vicinity of these guns is usually covered by armor. The tendency is to put more and more guns into turrets, and in battle-ships of French design the greater part of these medium-caliber guns are in small turrets. In the upper part of the ship, usually well forward, is the conning-tower, from which the captain directs the ship in battle. It contains a steering-wheel, speaking-tubes, battle-order transmitters, engine-telegraphs, and other instruments by means of which orders are given to the engineers below, the officers commanding the guns, etc. On the military masts above are small guns for repelling the attack of torpedo-boats, instruments for finding the range, and yards for displaying signals, and on them are frequently placed the search-lights. The most vulnerable part of a battle-ship being that subject to torpedo attack, the modern tendency is to fight at long range, beyond the effective limit of the automobile torpedo. At long range the heavy guns are much more effective and accurate than those of medium caliber. Hence the tendency is to build battle-ships carrying a greater number of heavy guns, reducing in number or abolishing the medium guns, but retaining a large number of small guns, such as the 3-inch, to repel the attacks of torpedo-boats and other unarmored vessels. As so much weight is required for guns and armor in a battle-ship, comparatively little can be devoted to the propelling machinery; hence battle-ships are of moderate speed as compared with cruisers and torpedo-boats. The modern battle-ship usually has a maximum speed of between 18 and 19 knots. The desire for a type of vessel having much higher speed combined with considerable offensive and defensive power has led to the building in recent years of a class of vessel called *armored* ★*cruisers* (which see). These vessels may be regarded as a special class of battle-ships in which offensive and defensive power have been sacrificed to speed (20 to 23 knots) and coal-endurance.

Battley's solution. See ★*solution.*

batule-board, *n.* See *battoule-board.*

Bauera (bou'ę-rä), *n.* [NL. (Banks, 1801), named in honor of the brothers Francis *Bauer* (1758–1840) and Ferdinand *Bauer* (1760–1826), botanic artists of Austrian birth.] **1.** A genus of dicotyledonous shrubs of the family *Saxifragaceæ,* including 3 species, natives of Australasia. It is characterized by its opposite three-lobed sessile leaves, which have the appearance of a six-leaved whorl, and by its axillary solitary flowers.—**2.** [*l. c.*] The Tasmanian name for *Bauera rubioides,* a handsome shrub with pink or white flowers and thin wiry branches which become so entangled as to form almost impenetrable thickets. Also called *native rose, tanglefoot,* and *leg-ropes.*

Bauhinia retusa gum, Bauhinia variegata gum. See ★*gum*[2].

Baumé (bō-mā'). An abbreviation of "according to the Baumé scale of a hydrometer." See *hydrometer,* and *Baumé* ★*degree.* Abbreviated *Bé.*

Baumes-Chaudes race. See ★*Cro-Magnon.*

baumhauerite (boum'hour-īt), *n.* [Named after Prof. H. *Baumhauer* of Freiburg, Baden.] A sulpharsenite of lead ($Pb_4As_6S_{13}$) from the dolomite of the Binnenthal, Switzerland.

bauta-stone (bou'tä-stōn), *n.* [Icel. *bautasteinn,* *bautarsteinar,* pl. *bautarsteinar,* orig. ★*brautasteinar,* 'road-stones,' ⟨ *braut,* road (⟨ *brjóta* = AS. *breotan,* break: see *brit, brittle,* and cf. *route,* 'a way broken'), + *steinn* = E. *stone.*] One of the stone monuments set up in Sweden and Denmark, along the highways, in the eleventh and twelfth centuries and earlier, in memory of the dead (or, sometimes, of the absent living).

Bauxite bricks. See ★*brick*[2].

bava (bä'vä), *n.* [Sp. *bava, baba,* slaver, spittle: see *bavette.*] In the West Indies, particularly in Trinidad, the slimy pulp which adheres to the seeds of the cacao, *Theobroma Cacao.* *Trinidad Mirror,* April 2, 1903.

bave (bäv), *n.* [F.] The double fiber as it issues from the silkworm. It is devoid of cellular structure and is nearly homogeneous in appearance. The single fiber is known as the *brin.*

The reelable cocoon thread or *bave* is composed of two cylindrical fibers or *brins,* consisting of homogeneous matter (fibroin Schorlemmer) surrounded and cemented together by a substance resembling gelatine (sericin or silk-gelatine, Schorlemmer).
Hannan, Textile Fibers of Commerce, p. 166.

bay[1], *n.*—**Swamp bay,** or **swamp red bay,** *Persea pubescens,* formerly considered a variety of *P. Borbonia.* Both belong to the coast of the southeastern United States.

bay[2], *n.*—**Juniper bay,** a swamp of white cedar or "juniper," *Chamæcyparis thyoides,* with or without white bay, *Magnolia Virginiana.* [Dismal Swamp region.]

bay[3], *n.* **10.** In *hydraul. engin.,* an opening through a dam or bulkhead for the passage of water, generally capable of regulation by gates or sluices: as, a *head-bay,* an opening in a dam at the head of a flume or canal.

baya (bä'yä), *n.* [Mex.] The Mexican name of a species of fish, *Mycteroperca jordani,* a form of grouper found in the Gulf of California.

bayabas (bä-yä'bäs), *n.* [Sp. *guayaba,* guava.] A name applied in the Philippines to the guava (*Psidium Guajava*). See *guava.*

bayacuru (bä"yä-kō-rō'), *n.* [Tupi.] The highly astringent root of *Statice Braziliensis.* Also *baycuru* and *biacuru.*

bayad (bä-yäd'), *n.* [Ar. *bayáḍ,* whiteness, white of eggs, plaster.] *Bagrus bayad,* a large siluroid fish found in the Nile.

bayadere, *n.* **2.** A weave of fabrics in which stripes run transversely instead of longitudinally.

II. *a.* Applied as a distinctive epithet to textile fabrics horizontally striped, of which various kinds were used for curtains, skirts, etc.: as, a *bayadere* grenadine, a *bayadere* skirt. The word is also applied to the stripes themselves. Balmoral petticoats when first introduced were ornamented with many-colored horizontal stripes around the bottom, and were said to be "*bayadere*-striped" or "skirts *à la bayadère.*"

bayag-kambing (bä-yäg-käm'bing), *n.* [Tagalog *bayag cambing,* ⟨ *bayag,* testicles, + *cambing,* a goat.] A name applied in the Philippines to the hard, smooth, stony seeds of *Guilandina Crista,* a prickly shrub of the *Cæsalpinia* family, with loosely spreading or climbing branches and bipinnate, prickly leaves. The seeds are inclosed in short broadly ovate prickly pods. They are used medicinally. Their chief interest lies in the fact that an air-space is inclosed between the kernel and the shell, which gives them remarkable buoyancy and makes it possible for them to be transported all over the earth by ocean currents. They are sometimes called *fevernuts, nicker-nuts,* or *Moluccа beans,* and in Samoa *anaoso.* In Spanish countries the plant is often called *uñas de gato* ('cat's-claws'), from the sharp recurved prickles with which it is armed.

Bayag-kambing (*Guilandina Crista*).

bayan (bä'yän), *n.* [Tagalog?] A political division comparable to a township; also, a district of the country. [Philippine Is.]

bayate (bä-yä'te), *n.* [Local Cuban; origin not ascertained.] A silicious rock, consisting of dense amorphous jasper, associated with the manganese deposits of the province of Santiago de Cuba. *Bulletin* 213, *U. S. Geol. Survey*, 1902, p. 252.

Bayberry fat. Same as *bay-oil.*

bay-head (bā'hed), *n.* The head or upper part of a bay.

bayldonite (bāl'don-īt), *n.* [Named after Dr. John *Bayldon.*] An arseniate of copper and lead occurring in small green concretions: found in Cornwall.

bayocks (bā'oks), *n. pl.* [Appar. due to the otherwise obsolete ★*bayock, baiock*, an Italian coin: see *baiocco.*] Inferior ostrich-feathers.

bayogo (bä-yō'gō), *n.* [A Philippine name.] In the Philippine Islands, the match-box sea-bean, or similar-pod (*Lens phaseoloides*), a giant climber of the mimosa family. Its stem, which is saponaceous, is pounded between stones and is used by the natives of those islands for washing. See *sea-bean, similar pod*, and *cacoon.* Also called *gogo* (Bisaya) in the Philippine Islands and *gaye* in Guam.

Bayogo (*Lens phaseoloides.*)

bay-oil, *n.* **2.** A volatile oil or essence obtained by distilling the leaves of the West Indian bay-tree (*Pimenta acris*).

bayok (bä-yōk'), *n.* [A Philippine name, said to be Tagalog. Cf. Bisaya *bayóg*, name of a tree.] In the Philippine Islands, *Pentapetes acerifolia*, a tree with winged seeds belonging to the family *Sterculiaceæ.* The wood is used in the Philippines for making oars and paddles, and in India for furniture. See *Pterospermum.*

bayon (bä-yōn'), *n.*; Sp. pl. *bayones.* [Philippine Sp., < Tagalog *bayong.*] In the Philippine Islands, a basket or bag made of palm-leaves or rushes. Such bags are used for shipping coffee or rice. Also *bayong.*

bayonet-engine (bā'o-net-en″jin), *n.* An engine in which the bed-plate is curved to one side at the end of the guide, so as not to interfere with the crank. Such an engine-bed has, in plan, somewhat the form of a bayonet for which the cylinder is the end of the gun-barrel; hence the term.

bayong (bä-yōng'), *n.* [Tagalog.] Same as ★*bayon.*

bayou, *n.* **2.** An abandoned portion of a river-channel forming a lake or swamp following the general course of the main stream: a special case of "ox-bow lake." The bayous of the lower Mississippi river are typical. *Chamberlin and Salisbury*, Geol., I. 181.

bay-plum (bā'plum), *n.* A name in the West Indies for the guava, *Psidium Guajava.*

bay-shark (bā'shärk), *n.* See ★*shark*[1].

bay-sore (bā'sōr), *n.* An ulcer which affects many of the natives of Honduras (as observed on the coast of the Bay or Gulf of Honduras, or of the Bay Islands).

bazarucco (bä-zä-rō'kō), *n.* [Also *basarucco, basaruco*, E. *budgerook, budgrook*, etc., apparently from a native Indian name at Goa, given as Canarese *bajāra-rokkha*, 'market-money': see *bazaar*, and cf. Canarese *rūka*, a copper coin, Marathi *rukā* or *rukkā*, one twelfth of an anna. (*Yule*).] A coin of copper, tin, or lead, of small and varying value, formerly current at Goa and elsewhere on the western coast of India.

B. B. An abbreviation (*b*) of *best best*, which see under ★*best, a.*, 5; (*c*) of *bail-bond.*

B. B. B. An abbreviation of *best best best*, which see under ★*best, a.*, 5.

B. C. An abbreviation (*b*) of *Bachelor of Chemistry*; (*c*) of *Bachelor of Commerce*; (*d*) same as ★*C. B.* (*d*); (*e*) of *bail court.*

B. Chem. Same as ★*B. C.* (*b*).

B. Chir. Same as ★*C. B.* (*d*).

B. C. L. An abbreviation of *Bachelor of Civil Law.*

B. C. S. An abbreviation (*a*) of *Bachelor of Chemical Science*; (*b*) of *Bachelor of Commercial Science*; (*c*) of *Bengal Civil Service.*

Bd. An abbreviation of *board.*

bdellid (del'id), *a.* and *n.* **I.** *a.* Having the characteristics of or belonging to the lepidopterous family *Bdellidæ.*

II. A mite of the family *Bdellidæ.*

bdelloid (del'oid), *a.* [NL. ★*bdelloidēs*, < Gr. βδέλλα, leech, + εἶδος, form. Cf. *Bdelloida.*] Of or pertaining to a leech or to the group *Bdelloida.*

Bdellura (de-lō'rä), *n.* [NL., < Gr. βδέλλα, a leech, + οὐρά, tail.] The typical genus of *Bdelluridæ. Leidy*, 1848. Also *Bdelloura.*

Bdelluridæ (de-lō'ri-dē), *n. pl.* [NL., < *Bdellura* + *-idæ.*] A family of triclad turbellarians having a caudal appendage for fixation. It contains the genera *Bdellura* and *Syncalidium*, both of which are parasitic on the king-crab (*Limulus*). Also *Bdelloridæ.*

B. D. M., B. D., In *astron.*, abbreviations of Argelander's *Bonn Durchmusterung* of the northern heavens. See ★*durchmusterung.*

Bé. An abbreviation of ★*Baumé.*

B. E. An abbreviation (*a*) of *Bachelor of Engineering*; (*b*) of *Bachelor of Elements*; (*c*) of *Bachelor of Elocution.*

beach, *n.*—**Barrier beach,** an off-shore sand-reef inclosing a lagoon or arm of the sea. Strictly speaking, the beach is only the outer slope of the barrier.—**Rolling beach,** a beach on which stones and pebbles are rolled back and forth by the waves.

In times of storm the stones of a *rolling beach*, sometimes to the depth of two or three feet, are carried to and fro with the advance and retreat of the waves. In this movement the bits roll over one another much in the manner of millstones.

Shaler, Nat. Geog. Monographs, v. 143.

Storm-beach, a beach formed by a storm.

beach-chicken (bēch'chik″n), *n.* One of many names for the turnstone, *Arenaria interpres*: used particularly in North Carolina.

beach-combing (bēch'kōm-ing), *n.* In *mining*, working the sands on a beach for gold, tin, or platinum. *Coal and Metal Miners' Pocket-book.*

beach-crab (bēch'krab), *n.* A name applied to any crab living on the sea-beaches, but especially to *Ocypoda arenaria* of the southern coast of the United States.

beach-cusp (bēch'kusp), *n.* One of a number of small points of gravel or sand 20 or 30 feet apart on a beach.

The author comes to the conclusion that *beach cusps* are produced by the interference of two sets of waves of translation on the beach.

Geog. Jour., (R. G. S.), XVI. 704.

beachless (bēch'les), *a.* Without a beach: as, "black rocks, and *beachless*," *William Morris*, Love is Enough, p. 64.

beach-ranger (bēch'rān-jèr), *n.* Same as *beach-comber*, 2.

beach-robin (bēch'rob-in), *n.* The robin-snipe or red-breasted sandpiper; the turnstone.

beach-sap (bēch'sap), *n.* A species of sea-rocket, *Cakile Chapmani*, found along the shores of the Gulf States.

beach-tramper (bēch'tram-pèr), *n.* A member of the British coast-guard service. [Slang.]

beacon-mark (bē'kon-märk), *n.* The rude figure of a beacon painted in blue on pieces of stanniferous faience made at Genoa, Italy, in the seventeenth and eighteenth centuries.

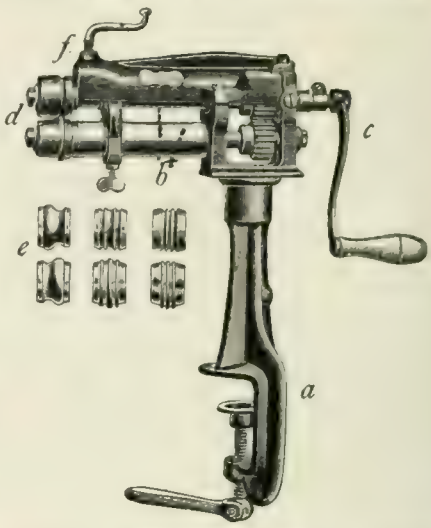
bead, *n.* **11.** In *weaving*, a roughness of yarn due to fraying by friction or rubbing.—**Parting-bead,** a separating bead or rounded strip.

Beaded hair, diseased hair having a series of alternate constrictions and beady swellings.—**Beaded ribs,** ribs the ends of which are enlarged at their junction with the costal cartilages, occurring in rickets and constituting the so-called ★*rachitic rosary.*

beader, *n.* **2.** A wood-working tool resembling a spoke-shave, having a number of interchangeable cutting-irons or -bits: used in reeding, fluting, beading, and routing straight or irregular surfaces; a reeder or molding-tool. See *combination* ★*plane.*—**3.** A ★beading-machine (which see).—**Single-handed beader,** a form of beader for reeding or fluting diagonal lines upon wood. It has but one handle.

bead-frame (bēd'frām), *n.* A frame holding beads strung on wires, used in calculating; an abacus.

beading-machine (bē'ding-ma-shēn″), *n.* In *sheet-metal work*, a hand- or power-machine for impressing a bead upon tinware, boxes, cans, covers, collars, gutters, and other objects or parts of objects. The essential features of the many forms of beading machines are the beading-rolls, placed in pairs, one each on two parallel shafts, and turning together, the face of each roll being of some concave or



Bench Beading-machine.

a, standard, and clamp for securing it to bench; *b*, spindles; *c*, handle for turning spindles; *d*, beading rolls; *e*, sample rolls showing different styles of beading; *f*, pressure control.

corresponding convex form. The sheet-metal to be beaded is passed between the moving rolls and is impressed with the bead or form of the roll-face. Power-machines, by the use of supplementary parts, may also be used as flanging-, forming-, trimming-, and crimping-machines. See *crimper, flanging-machine*, and *forming-machine.*

beading-oil (bē'ding-oil), *n.* See *beading*, 3.

beading-roll (bē'ding-rōl), *n.* See ★*beading-machine.*

beadlehood (bē'dl-hud), *n.* The office or dignity of a beadle. *Dickens.*

beadleism, *n.* **2.** Same as ★*beadlehood.*

beadlet (bēd'let), *n.* [*bead* + *-let.*] **1.** A small bead or bead-like drop.—**2.** A small sea-anemone, *Actinia mesembryanthemum.*

bead-lightning (bēd-līt'ning), *n.* A rare form of lightning having the appearance of a string of brilliant beads stretching through a cloud or from cloud to cloud.

According to the testimony of an intelligent eye-witness, who described the rare phenomenon of *bead-lightning* within an hour after it had been seen, it is a very beautiful luminous appearance, like a string of beads hung in a cloud, the beads being somewhat elliptical and the ends of their axes in the line of their discharge being colored red and purple respectively.

Smithsonian Rep. 1899, p. 129.

bead-tree, *n.*—**Coral bead-tree,** *Adenanthera pavonina*, a tree belonging to the mimosa family, bearing scarlet, orbicular, hard, glossy seeds. See *Adenanthera.*—**Mexican bead-tree,** *Erythrina corallodes.* See ★*colorin* and ★*chilicote.*—**Texas bead-tree,** *Sophora secundiflora*, a stout shrub or small tree bearing hard red beans in wooden pods constricted at each division between the beans. Also called *frigolito.* See *Sophora*, and *coral bean*, under *bean*[1].

beagling (bēg'ling), *n.* Hunting with beagles.

beak[1], *n.* **1.** (*g*) (3) In the shells of the *Brachiopoda* (*Molluscoidea*) and *Pelecypoda* (*Mollusca*), the projecting, usually arched, part of the valves; the initial part of the shell about which accretions by growth have been added unequally. Beaks in the two valves of the *Brachiopoda* are usually of unequal size and prominence, but in the *Pelecypoda*, they are generally alike. Often termed *umbo.*

2. (*j*) Specifically, the mouthpiece of instruments like the clarinet and some varieties of flageolets or direct flutes.

beak[1], *v. t.* **2.** To ram (a ship) with the beak or prow so as to penetrate the hull in an endeavor to sink it.

beak-sedge (bēk'sej), *n.* Same as *beak-rush.*

beak-wattle (bēk'wot″l), *n.* The large caruncular wattle found at the base of the beak in various breeds of domesticated pigeons, notably in the carrier.

beal[3] (bēl), *n.* [Native name.] A sweet Australian drink made by steeping honey-bearing flowers in water. Also called *bool* and *bull.*

beala, *n.* Same as ★*belah.*

beam, *n.* **2.** (*j*) In *lace-manuf.*, a tin drum of small diameter, varying in length with the width of the machine, upon which the yarn is wound.—**8.** In *currying*, an inclined table or stand on which the skin is placed while it is

beamed or scraped. *C. T. Davis*, Manuf. of Leather, p. 250.—**Bent beam,** a beam which has a camber, natural or artificial. In English wooden roofs such pieces were chosen for the horizontal chord of the truss, replacing the tie-beam and supporting a king-post. —**Compression beam,** in *bridge-building* and *constructive work*, a beam in a truss, bridge, car, or other structure designed to resist pressure or compression; a compression member: the opposite member of a truss to the *tension member*, usually called the *tension rod*. See *bridge* and *truss*.—**Paper-board beam,** a weighing-beam for ascertaining the number of sheets of board in fifty pounds by weighing one board.—**To tip the beam,** to prove heavier than the weight at the other end of the beam of a balance; weigh or have a weight of (so much): as, *to tip the beam* at 300 pounds. Same as *to tip the scales*. —**Yarn-numbering beam,** a small and very delicate weighing-beam for ascertaining the trade number of any particular lot of yarn. A bunch of fifty yards of yarn is tied by a single thread and hung by the thread on the beam at a point where it balances the beam; the mark on the beam under the thread then indicates the yarn number.

beam, *v. t.* 6. To burnish, as morocco leather, with a beaming-machine; also, in *currying*, to flesh or shave on the flesh side.

beamage (bē′māj), *n.* [*beam* + *-age*.] An allowance in the weight of the dressed carcass of an animal as shown at the beam, to compensate for loss of weight by evaporation in cooling.

beam-arm (bēm′ärm), *n.* In *ship-building*, the outer end of a beam where it joins the framing at the ship's side.

In wood ships, working at the *beam-arms* was very common during heavy rolling at sea.
White, Manual of Naval Arch., p. 326.

beam-element (bēm′el″ē-ment), *n.* An infinitesimal longitudinal element of any beam; an elementary fiber. In a beam of uniform cross-section, the beam-element is parallel to any element in the surface of the beam.

beam-face (bēm′fās), *n.* In *currying*, the surface of the beam on which a skin is placed for shaving. *C. T. Davis*, Manuf. of Leather, p. 301.

beam-hanger (bēm′hang″ėr), *n.* Same as ★*stirrup-iron*, 2.

beam-house (bēm′hous), *n.* The room or portion of a curriery in which the unhairing of the skins is done. *Flemming*, Practical Tanning, p. 1.—**Beam-house machine.** Same as *beaming-machine*, 2.

beaminess (bēm′i-nes), *n.* **1.** Breadth of beam: as, a ship of great *beaminess*.—**2.** Radiance. *Richardson*, Pamela, IV. 384.

beamit (bē′mit), *n.* [Appar. an arbitrary formation from *beam, v. t.*, + *-it*.] The commercial name of a compound made for unhairing hides and pelts. *Flemming*, Practical Tanning, p. 431.

beam-knee (bēm′nē), *n.* In *ship-building*, a reinforcement of the end of a deck-beam where it is attached to the side of a vessel to strengthen the whole against the racking effects of rolling at sea. In a wooden ship with wood beams the knees are separate knee-shaped pieces of timber. See *knee*, 3. (*a*). In steel ships they are sometimes triangular pieces of plate riveted to the beam and to the frame, and sometimes are formed by bending down the lower part of the beam itself and welding in a piece of plate forming a triangular prolongation which is riveted to the frame and called a *welded beam-knee*.

beam-motion (bēm′mō″shon), *n.* A motion involving the use of a reciprocating lever or walking-beam.

beam-scale (bēm′skāl), *n.* A weigh-beam (which see).

beam-shaft (bēm′shȧft), *n.* The shaft which carries the walking-beam of an engine.

beamsman (bēmz′man), *n.*; pl. *beamsmen* (-men). A man who works in a beam-house: same as *beamster*. *Modern Amer. Tanning*, p. 54.

beam-supports (bēm′su-pōrts″), *n. pl.* The brackets or standards which carry the bearings for the shaft of a walking-beam.

beam-trawling (bēm′trâl″ing), *n.* A method of fishing with a trawl attached to a beam and dragged on the bottom. *Science*, March 29, 1901, p. 510.

beam-wheel (bēm′hwēl), *n.* In *weaving*, a gear attached to the cloth beam or roller of a loom.

beam-work (bēm′wėrk), *n.* Work done in a beam house. *Modern Amer. Tanning*, p. 41.

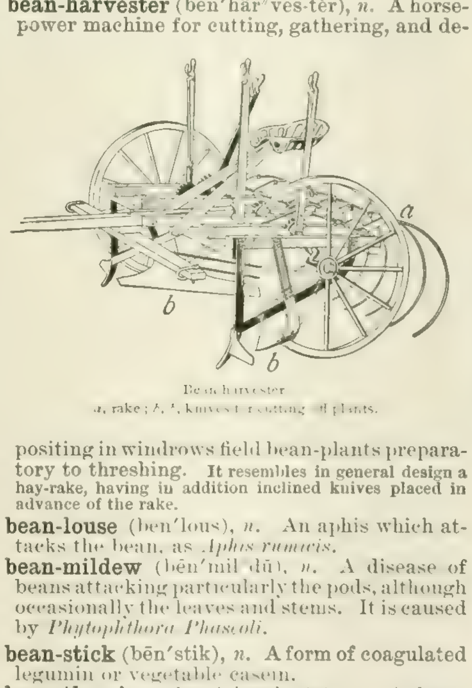
bean[1], *n.*—**Adzuki bean,** a variety of the gram, *Phaseolus Mungo*, much cultivated in Japan for making bean-flour and confectionery.—**Banana bean.** Same as *velvet-★bean*.—**Bean cutworm.** See ★*cutworm*.—**Bean ladybird.** Same as ★*bean-beetle*.—**Bean leaf-beetle.** See ★*leaf-beetle*.—**Bean vine-borer.** See ★*vine-borer*. **Black bean.** (*a*) See *Egyptian beans*, under *bean*[1]. (*b*) The seed of the bean-tree or Moreton Bay chestnut, *Castanospermum australe*, which, though poisonous when green, is rendered harmless by cooking and forms part of the diet of the aborigines.—**Bonavist bean,** a West Indian name for the lablab or hyacinth bean, *Dolichos Lablab*.—**Coral bean,** a name applied to various leguminous plants of the genus *Erythrina*, as *E. arborea*, bearing bright scarlet beans in pods which burst after maturing. See *Erythrina*.—**Espinoza bean.** See *Mexican* ★*coffee*.—**Florida bean,** a name applied to both the sea-bean and the oxeye bean, which are often washed up on the coast of Florida.—**Jack bean,** the sword-bean, *Canavali ensiforme*, growing well in the southern United States, but not much eaten by animals.—**Jumby beans,** a name in the West Indies for the seeds of the lead-tree, *Leucæna glauca*.—**Leichhardt's bean.** Same as *Queensland* ★*bean*.—**Lima-bean stem-borer.** See ★*stem-borer*.—**Lima-bean vine-borer.** See ★*vine-borer*. **Madagascar bean.** Same as *Egyptian bean*. See *Dolichos* and *bean*[1]. **Match-box bean,** the simitar-pod, *Lens phaseoloides*, the large, flat seeds of which are sometimes made into snuff-boxes, match-boxes, and other small articles. See *Entada*.—**Metcalfe bean,** *Phaseolus retusus* of the table-lands of New Mexico, etc., a promising forage-plant.—**Mexican coral bean,** the seeds of *Erythrina corallodes* and of *Dolicholus phaseoloides*. See ★*colorin*, ★*chilicote*, and *Mexican rosary* ★*pea*. —**Navy bean,** the common white variety of the kidney- or garden-bean.—**Negro bean,** a woody climber of eastern India and Ceylon, *Stizolobium monospermum*. The roundish, hairy pods each contain a single flat seed, about an inch in diameter, which is used as food and medicine.—**Pichurim-bean fat,** a fixed oil from Pichurim bean, *Acrodiclidium Puchury-major*, said to contain the glyceride of lauric acid.—**Queensland bean,** the Australian name for the simitar-pod, *Lens phaseoloides*. Also called *Leichhardt's bean*.—**Rattle-snake bean,** the cedron, *Simaba Cedron*, so called from its use in the treatment of snake-bites.—**Seewee bean,** the small lima, or butter-bean, preferred in the southern United States to the large lima.—**Snap-bean,** a string-bean: so called because the pods thus used break with a snap: often simply *snap*, and used mostly in the plural.—**Turkish bean.** Same as ★*fire-bean*.—**Velvet-bean,** *Stizolobium utilis* (*Mucuna utilis* of Wallich), widely grown in the tropics and much cultivated in the southern United States as a forage and green-manure crop. See *Mucuna* and *ox-eye bean*, under *bean*[1].—**Wild bean.** (*b*) Any native species of *Phaseolus*.

bean-bag (bēn′bag), *n.* A bag containing, or designed to contain, beans; specifically, a child's game played with bags full of beans. Various games are played with bags of beans, oats, sand, or other material.

bean-beetle (bēn′bē″tl), *n.* A coccinellid beetle, *Epilachna corrupta*, which damages growing beans in the western United States, differing in this phytophagous habit (together with other members of the same genus) from the usually carnivorous members of the family *Coccinellidæ*.

bean-blight (bēn′blīt), *n.* A disease of beans caused by *Bacillus Phaseoli*.

bean-harvester (bēn′här″ves-tėr), *n.* A horse-power machine for cutting, gathering, and de-



Bean-harvester.
a, rake; *b*, *b*, knives for cutting the plants.

positing in windrows field bean-plants preparatory to threshing. It resembles in general design a hay-rake, having in addition inclined knives placed in advance of the rake.

bean-louse (bēn′lous), *n.* An aphis which attacks the bean, as *Aphis rumicis*.

bean-mildew (bēn′mil dū), *n.* A disease of beans attacking particularly the pods, although occasionally the leaves and stems. It is caused by *Phytophthora Phaseoli*.

bean-stick (bēn′stik), *n.* A form of coagulated legumin or vegetable casein.

bean-thresher (bēn′thresh″ėr), *n.* A large power threshing-machine adapted to threshing bean-plants and resembling in general plan the wheat-threshing machine. It is fitted with a self-feeder or feed appliance, a bolting appliance, a dirt-conveyer for removing the dirt or waste to a distance, a dust-collector-and-conveyer for removing the dust from the machine, a wind-stacker, and a recleaner for cleaning the threshed beans. See *threshing-machine* and ★*wind-stacker*.

bean-vine (bēn′vīn), *n.* **1.** The plant of any climbing bean.—**2.** The wild kidney-bean, *Phaseolus perennis*; also *Strophostyles helvola*. See *Strophostyles*.

bean-weevil, *n.*—**Common European bean-weevil,** a cosmopolitan bruchid beetle, *Bruchus rufimanus*, of probable European origin, infesting beans.—**Four-spotted bean-weevil,** a bruchid beetle, *Bruchus quadrimaculatus*, probably from the tropical Orient originally, but now of wide distribution. It infests beans and cow-peas.—**Mexican bean-weevil,** an American bruchid beetle, *Spermophagus pectoralis*, which infests beans in Central America and the West Indies.

bear[1], *v. i.*—**To bear back,** to fall back. *Shak.*, J. C., III. ii.—**To bear down,** specifically, in *obstet.*, to make a straining effort to supplement the contraction of the uterus during childbirth.

bear[2], *n.* **10.** The panda, *Ælurus fulgens*, otherwise called *bear-cat*. **Baste the bear,** a child's game in which one of the players acts the part of the bear and another that of the bear's master. The others endeavor to hit the bear with knotted handkerchiefs. The bear's master, still holding the bear by a rope, endeavors to touch one who is doing this. If he succeeds in touching a player who is trying to strike the bear, without pulling the bear out of a marked ring in which he is placed, the one struck becomes the bear.—**Glacier bear,** *Ursus emmonsi*, a small species, allied to the black

The Glacier Bear (*Ursus emmonsi*.—Dall).

bear, but of a general bluish-gray color. The outer side of the limbs and a stripe down the back are black; the muzzle and front of the cheeks are tan-color. It is rare and is apparently confined to the vicinity of Mount St. Elias, Alaska.—**Kadiak bear,** *U. middendorffi*, a huge

The Great Kadiak Bear (*Ursus middendorffi*.—Merriam).

species, perhaps the largest of all bears, related to the brown bears of Europe and Asia. It is of a dark reddish-brown color in summer, lighter in winter; but the color appears to be variable. A number of related species have been described from Alaska, as the *Sitka bear, U. sitkensis*, the *Yakutat bear, U. dalli*, etc., but they are of doubtful validity. Several species of black bear are now recognized, among them the Louisiana and Florida bears, *U. luteolus* and *U. floridanus*. A bear of a yellowish-white color, though belonging to the black-bear group,

The Inland White Bear (*Ursus kermodei*.—Hornaday).

has been described from British Columbia under the name of *Ursus kermodei*.—**The Bear,** a familiar name for Russia.

bear-brush (bãr′brush), *n.* A shrub, *Garrya Fremontii*, of the Californian mountains. Also called ★*quinine-bush* (which see).

bear-cat (bãr′kat), *n.* The panda, *Ælurus fulgens*.

bear-clover (bâr-klō′vèr), *n.* See ★*clover.*

beard, *n.* **6.** (*b*) Also, a projecting flap of metal soldered to a pipe close to its mouth to improve its "speech." Beards are common on either side of the mouth, and in some kinds of pipe are carried across below the mouth as well. The former are *side-beards*, the latter *cross-beards.*—**11.** *pl.* A breed of pigeons of which the most distinctive character is a crescent-shaped patch of white on the throat just below the beak.

bearded, *a.* **4.** In *bot.*: (*a*) Awned; especially, having long stout awns, as bearded wheat. (*b*) Having a special growth of hairs on certain organs, as on the inside of the corolla in many flowers, for example, those of *Pentstemon.*

beardlet (bērd′let), *n.* [*beard* + *-let.*] A small beard or awn.

beardom (bâr′dum), *n.* **1.** The domain of bears; bears collectively.—**2.** Bearish personality or character. *Mrs. Browning,* Greek Christian Poets, p. 191.

beard-token (bērd′tō″ken), *n.* A copper coin struck by Peter the Great of Russia in 1724, to be given to those who had paid the tax of 50 rubles every year for the privilege of wearing their beards.

beardy, *n.* **3.** A fish, *Lotella marginata,* of the family *Gadidæ,* resembling the loach: so named from the barbel under its chin. Also called *ling.* [New South Wales.]

bearer, *n.* **13.** In *shipbuilding,* a support or foundation in the interior of a vessel for engines or boilers: usually in the plural: as, *engine-bearers, boiler-bearers.*—**14.** A person, usually a woman or girl, who formerly carried coal in baskets from the workings to the shaft, and in many cases up the ladders to the surface. The bearer was usually the miner's wife or daughter. *Barrowman,* Glossary. [Scotch.] —**15.** In *geom.*, a system of costraight points is called a *range,* of which the straight is the *bearer.* A system of copunctal straights is called a *pencil,* of which the intersection point is the *bearer.*—**16.** *pl.* In *mining,* pieces of timber 3 or 4 feet longer than the breadth of a shaft, which are fixed into the solid rock at the sides at certain intervals: used as foundations for sets of timber. *Coal and Metal Miners' Pocket-book.*—**Bearer's way,** in *mining,* an underground road or passage along which the bearers carried their burdens. See ★*bearer,* 14. *Barrowman,* Glossary. [Scotch.]

bearer-plate (bâr′ėr-plāt), *n.* A metal plate placed under a beam or girder where it rests on a wall or foundation.

bear-grass, *n.* **2.** A bunch-grass, *Stipa setigera,* ranging from the mountains of California, where it is considered valuable, to Oregon and Texas.

bearing, *n.* **7.** (*b*) That part of a construction which receives a superincumbent weight. (*c*) The act or condition of taking or supporting that weight: thus, the upper bed of a block or pier affords a *bearing* of so many square inches; or may be said not to give a good *bearing,* or to need an iron plate to provide a better *bearing.* (*d*) That part of a superincumbent mass which rests directly upon the supporting member: thus, a lintel has 6 inches' (or 48 square inches') *bearing* at either end.—**Absolute bearing** (*naut.*), the direction of an object as determined by the compass, that is, with reference to the north point of the heavens.—**Combination bearing,** a form of bearing for shafts or axles in which the contact and load-carrying surfaces are made up of combinations of rollers and balls (making a combination of ball-bearing and roller-bearing) to diminish friction and loss of power.—**Compass bearing.** Same as *absolute bearing.*—**False bearing,** the resting of a weight, as a piece of wall or a pier, upon a support which is not continued straight down to the foundation, as when the windows in a front are not placed exactly one over another, so that the piers between the upper windows come partly over the openings below. Parts of a building supported on corbels or brackets or girders may be said to have false bearing.—**Liquid bearing,** a form of bearing in which some liquid, such as oil or water, is forced under pressure between the two metallic surfaces which mutually restrain each other's motion, so as to keep them apart. Liquid friction replaces the sliding friction of the metals, and is less than the mediate friction between lubricated surfaces. See *water-bearing.*—**Plain bearing,** a common cylindrical bearing, as distinguished from a *roller-, ball-,* or *combination bearing.*—**Relative bearing,** direction observed or stated in relation to the ship's head.

bearing-bar (bâr′ing-bär), *n.* A bar at the back end of a boiler-furnace which carries the ends of the grate-bars.

bearing-doors (bâr′ing-dōrz), *n. pl.* In *mining,* double air-doors on a main airway. *Barrowman,* Glossary. [Scotch.]

bearing-pit (bâr′ing-pit), *n.* In *mining,* a shaft up which coal was formerly carried by bearers. *Barrowman,* Glossary. [Scotch.]

bearing-plate (bâr′ing-plāt), *n.* A carrying or supporting plate; a plate used to furnish a proper bearing-surface for a heavy load.

bearing-road (bâr′ing-rōd), *n.* A road on the line of bearing; a road used by bearers. See ★*bearer,* 14. *Barrowman,* Glossary. [Scotch.]

bearishly (bâr″ish-li), *adv.* In a bearish manner (in either sense of the adjective).

bear-jug (bâr-jug), *n.* A stoneware vessel at one time popular in certain localities in England. It was made in the form of a bear, was usually dark brown in color, had a rough surface produced by the application of small shavings of clay, and was used either as a tobacco-jar or a beer-jug, the detachable head or cover serving the purpose of a drinking-cup. Also called *bear.*

Bearnaise sauce. See ★*sauce.*

bear-oak (bâr′ōk), *n.* Same as *scrub-oak* (*c*).

bear-pipe (bâr′pīp), *n.* An obsolete organ-stop with pipes so covered or inclosed that they gave a hoarse, muffled sound.

bear's-foot, *n.* **2.** A stout composite plant, *Polymnia Uvedalia;* or, especially, its root, vaguely claimed to be an alterative.

Bear-trap dam, weir. See ★*dam*[1].

bearwood, *n.* **2.** Also *Rhamnus crocea,* the evergreen bearwood.

beastdom (bēst′dum), *n.* **1.** The domain of beasts; beasts collectively.—**2.** The condition of beasts; beasthood.

beast-gate (bēst′gāt), *n.* In Suffolk, England, land and common for one beast. *Black,* Law Dict.

The right [a right of common in gross] is then generally known as a cattle-gate or *beast-gate.*
Encyc. Brit., XXVII. 168.

beast-god (bēst′god), *n.* A deity conceived in animal form.

beastling (bēst′ling), *n.* A little beast; a little animal. *Miss Braddon,* Bitter End, p. 51.

beat[1], *v. t.* **20.** In *cricket,* to break through (a batsman's defense): said of the bowler or the ball.—**To beat a retreat,** to give the signal by drum-beat to retreat; hence, simply, to retreat.—**To beat out of** (something), to secure the surrender or relinquishment of (something) by persistent effort.—**To beat the Dutch.**—See *Dutch.*—**To beat the hoof,** to go on foot.

beat[1], *n.* **12.** In *fencing,* a smart tap on the adversary's blade to disconcert him or drive the blade aside for the thrust.—**13.** The act of overcoming or surpassing; specifically (in newspaper cant), the securing and publishing of some news item by a newspaper in advance of its competitors.—**14.** The news item itself. —**15.** The act of beating or ranging over a cover for game; the company, collectively, of those engaged in beating for game.—**Primary beat,** in *acoustics,* a beat produced by the interference of two musical tones which are nearly in unison.—**Secondary beat,** in *acoustics,* a beat produced by the interference or combination of two primary beats.

beatable (bēt′a-bl), *a.* Capable of being beaten. *Cotgrave.*

beat-borough (bēt′bur″ō), *n.* Same as ★*beat-hill.*

beat-earth (bēt′ėrth), *n.* An earth of black color containing iron ore, found in some of the western islands of Scotland.

beatee (bē-tē′), *n.* One who is beaten.

beater, *n.*—**Porcupine beater,** a cylinder or beater consisting of a number of spikes or blades for opening and mixing the matted layers of cotton from the bale; part of a machine known in the cotton-factory as an *opener.* Also called *porcupine cylinder.*

beat-hill (bēt′hil), *n.* [*beat*[3], *n.*, + *hill.*] A heap of beat or land-parings ready for burning. Also called *beat-borough.*

beating-vat (bē′ting-vat), *n.* A vat in which the liquor extracted from the fermenting indigo-plant is agitated to expose it to the air, in order that the indigo white it contains may be oxidized to indigo blue. The operation was formerly done by natives who beat the liquor with paddles, but it is now done mechanically.

Beatson's operation. See ★*operation.*

beat-tone (bēt′tōn), *n.* In *acoustics,* a musical tone produced by a beat too rapid to enable the separate pulses to be distinguished, and having a frequency falling with the range of audibility. Combination-tones, which are described by Koenig as *beat-tones,* are held by some authorities, notably by von Helmholtz, to have a different explanation.

What becomes of the beats when they occur too rapidly to produce on the ear a discontinuous sensation? On this matter there have been several conflicting opinions, some holding, with Lagrange and Young, that they blend into a separate tone; others, with von Helmholtz, maintaining that the combinational tones can not be so explained and arise from a different cause. Let it be observed that, even if *beat tones* exist, it is quite possible for beats and *beat-tones* to be simultaneously heard.
Smithsonian Rep. 1890, p. 342.

beau-catcher (bō′kach-èr), *n.* A small flat curl worn by women on the temples. [Humorous.]

Beaufort beds, scale. See ★*bed*[1], ★*scale*[3], *n.*

Beau gregory. See ★*gregory.*

beau-idealize (bō-ī-dē′a-līz), *v. t.* To invest with ideal qualities. [Nonce-word.]

Beaujard process. See ★*process.*

beaumontage (bō-mon-täzh′), *n.* [*Beaumont,* a surname, + *-age.*] A name of various compounds used for filling up holes which it is desired should be concealed. For this purpose pattern-makers use a mixture of chalk and varnish, and iron-founders a mixture of borings and sal ammoniac.

beaupleader (bō′plē-dèr), *n.* In *old Eng. law,* a writ directed to the sheriff, bailiff, or other officer, forbidding him to take the fine formerly imposed for not pleading aptly and to the purpose.

beauregarde (bō′rē-gärd), *n.* A corruption of ★*hudgeregar.*

beauty, *n.*—**Painted beauty,** a nymphalid butterfly, *Vanessa huntera,* common to the United States and the Mexican table-land. Its larva feeds on the everlasting (*Gnaphalium*) and allied plants. The wings above are dark brown, with large irregular spots of golden orange and several white spots at the apex of the front pair. The hind wings each have two submarginal eye-spots on the under side.

beautyship (bū′ti-ship), *n.* The personality of a beauty: as, your *beautyship:* formed on the analogy of *ladyship. Bailey,* Festus. *N. E. D.*

Beauvais tapestry. See ★*tapestry.*

Beaver parasite, a peculiar coleopterous insect, *Platypsyllus castoris,* type and sole species of the family *Platypsyllidæ,* occurring upon European and American beavers, where it may feed on the hair or epithelial scales, or upon a parasitic mite, *Schizocarpus mingaudi.*

beaverish (bē′vèr-ish), *a.* Like a beaver. *Carlyle.* [Rare.]

beaverism (bē′vèr-izm), *n.* The condition of a beaver; a beaverish trait. *Carlyle.*

beavery (bē′vèr-i), *n.*; pl. *beaveries* (-iz). A place where beavers live or are kept. *Buckland. N. E. D.*

beblast (bē-blast′), *v. t.* To blast completely; dry or wither up: as, "*beblasted* with lightning," *Phaer.* Æneid.

beblood (bē-blud′), *v. t.* To smear or cover with blood. *North,* Plutarch, p. 16.

bebog (bē-bog′), *v. t.*; pret. and pp. *bebogged,* ppr. *bebogging.* To entangle in a bog. [Rare.]

bebung, *n.* **2.** Specifically—(*a*) An effect produced upon the obsolete clavichord by balancing the finger on the key so as slightly to rub the tangent against the string and thus prolong the tone with a gentle pulsation. (*b*) An effect, common in violin-playing, produced by rocking the finger of the left hand in stopping a string so as to produce a slight waver or tremolo in the pitch. (*c*) An effect in singing produced by a slight unsteadiness in the breath so as to cause a waver both in pitch and in resonance. See *tremolo* and *vibrato.*

Bec-Carcel (bek-kär-sel′), *n.* The Carcel lamp, used as a standard of light in France. See *light,* ★*standard.*

Becchi test. See ★*test*[1].

bêche (bāsh), *n.* [F.] A hollow cone-shaped grip for drawing a broken rod from a bore-hole. *Barrowman,* Glossary.

bechilite (bek′i-līt), *n.* [Named after E. *Bechi,* an Italian mineralogist.] A hydrous calcium borate occurring as an incrustation at the boric-acid lagoons in Tuscany.

beckelite (bek′el-īt), *n.* [After Professor Friedrich Becke, of Vienna.] A silicate of the cerium metals and calcium (perhaps essentially $Ca_3(Ce, La, Di)_4Si_3O_{15}$), occurring in octahedrons and dodecahedrons, also in coarse yellow grains, in the rock of the eleolite-syenite type called mariupolite: found on the shore of the sea of Azov.

Becker's sodium process. See ★*process.*

becket[2], *n.* (*f*) A large hook used in loading logs on cars by means of tackle. (*g*) In *marine hardware,* a brass or iron ring forming a part of a metal block, the block and becket being cast in one piece.

Iron Block
a, eye; *b*, becket.

becket-block (bek′et-blok), *n.* A pulley-block having a rope-eye or becket.

becket-hitch (bek′et-hich), *n.* See *hitch.*

Beckwith's clover. See ★*clover.*

beclaw (bē-klä′), *v. t.* To scratch and claw all over. *Holland*, Plutarch.

beclog (bē-klog′), *v. t.*; pret. and pp. *beclogged*, ppr. *beclogging*. To clog thoroughly, as with something sticky.

beclothe (bē-klōтн′), *v. t.* To cover fully with clothes; clothe.

Becquerel ray. See ★*ray*[1], *n.* **Becquerel's electrochemical photometer.** See ★*photometer*.—**Becquerel's volumenometer.** See ★*volumenometer*.

becross (bē-kros′), *v. t.* To mark with the sign of the cross; decorate with a cross or crosses.

becrown (bē-kroun′), *v. t.* To crown: as, "the forest which *becrowns* the isle," *Monthly Mag.*, VIII. 806.

becudgel (bē-kuj′el), *v. t.*; pret. and pp. *becudgeled* or *becudgelled*, ppr. *becudgeling* or *becudgelling*. To belabor with a cudgel; cudgel soundly.

becuiba fat. Same as *becuiba-tallow* (which see, under *tallow*).

becum, *v.* A simplified spelling of *become*.

bed[1], *n.*, 7. (*n*) The curved piece of wood which forms the main section of the platform carriage-part of a vehicle. —**Arzzarola beds,** in *geol.*, a member of the *Rhætic* or Upper Triassic strata in the Lombardy Alps.—**Ashley beds,** in *geol.*, a name introduced by Tuomey for beds in South Carolina, along the Ashley river, consisting of calcareous marls of Eocene age and lying above the Santee beds. They abound in fossils, among which remains of the extinct whale, *Zeuglodon*, are notable.—**Back-set bed,** an inclined layer deposited at the head of a glacial sand plain as the ice mass retreats.—**Bathyopsis beds,** the organic or paleontologic name given to the Wind River group of the Lower Eocene in the Rocky Mountain region. See *Wind River* ★*group*.—**Beaufort beds,** in *geol.*, a division of the Karoo formation in South Africa, regarded as of Permian age, consisting of nearly horizontal sand and shale beds with intercalated volcanic rocks, and constituting the middle division of that group. They contain a considerable flora, in which the genus *Glossopteris* is conspicuous, and a remarkable reptilian fauna.—**Bed of state,** a richly decorated and finely appointed bed for show, or for use on state occasions, as when the dead body of some great personage is lying in state. See ★*state-bed*.—**Belgrano beds,** in *geol.*, a division of the Cretaceous rocks in Patagonia.—**Blackheath beds,** in *geol.*, a division of the Lower Eocene of the London basin lying below the London clay and above the Woolwich beds. These strata, though of slight thickness (20–40 feet) and almost wholly composed of rolled flints, have afforded numerous fossils, mostly marine, but partly estuarine.—**Bognor beds,** in *geol.*, the representative in Hampshire of the London clay or the upper division of the Lower Eocene. They consist of clays and sands, and contain many fossils. See *London clay*.—**Bononian beds** [LL. *Bononia*, later *Bolonia*, F. *Boulogne*], a division or substage of the Upper Jurassic, equivalent in part to the Kimmeridge clay of Britain and typically exposed along the coast at Boulogne-sur-Mer. The rocks are clays, sands, and sandstones; the fossils in them are abundant and indicate a littoral deposit.—**Borkholm beds,** in *geol.*, a division of the Baltic Silurian formations lying at the top of the Lower Silurian and consisting chiefly of limestones which are composed of calcareous algæ and carry an abundant fauna.—**Bottom-set bed,** in *geol.*, fine sediments carried by a stream some distance beyond its debouchment, and settling into essentially horizontal beds in advance of the delta-front. In time the inclined *fore-set* beds of coarser material encroach upon them, causing continuous migration seaward.—**Boulder-bed,** in *geol.*, a formation made up of rounded boulders, of glacial origin. The term is used especially in reference to the boulder accumulations supposed to indicate glacial periods in early geologic time. *J. Geikie*, The Great Ice Age, p. 820.—**Bracklesham beds,** in *geol.*, the Middle Eocene deposits as developed in the basin of Hampshire, England. They are composed of clays, sands, marls, and lignites, with a thickness of 1,000 feet at Bracklesham, on the coast of Sussex. The beds are extremely rich in remains of sharks, seasnakes, mollusks of various classes, and *Foraminifera* a strictly marine deposit.—**Browgill beds,** in *geol.*, a division of the Upper Silurian formation in Westmoreland and Cumberland, England.—**Buchenstein beds,** in *geol.*, a division of the Noric stage of the Triassic rocks in the southern Alps.—**Campil beds,** in *geol.*, the lowest beds of the Triassic bunter-sandstein formation in the southern Alps.—**Cape Fairweather beds,** in *geol.*, the Upper or Pliocene Tertiary beds in Patagonia and adjacent parts of South America.—**Cassian beds.** See *St. Cassian beds*.—**Cattaraugus beds,** in the geology of New York, the lowest division of the Carboniferous system.—**Chattahoochee beds,** in *geol.*, a division of the Lower Miocene Tertiary, of marine origin and extensively developed in southern Georgia and northern Florida.—**Cheltenham beds,** in *Eng. geol.*, the uppermost member of the Inferior Oolite or Bajocian group in Yorkshire.—**Chesapeake beds.** See *Yorktown* ★*beds*.—**Concealed bed,** a bed permanently built into a recess and concealed with folding-doors when not in use: much used in Scotland.—**Cosina beds,** in *geol.*, a subdivision of the Lower Eocene Tertiary deposits of the southern Alps, carrying a peculiar fresh-water fauna.—**Cuboides beds,** in *geol.*, a zone or division at the base of the Upper Devonian recognized in England, Germany, and New York, and characterized by the brachiopod *Hypothyris cuboides*.—**Denison beds** [*Denison*, a town in Texas], in *geol.*, a division of the Lower Cretaceous formation of Texas.—**Des Moines beds,** in *geol.*, a division of the Carboniferous of Iowa, Missouri, Kansas, and Indian Territory, underlain by the Kaskaskia formation and overlain by the Missouri formation. It is regarded by Iowan geologists as equivalent to a part of the Pennsylvania series. Its fossils (plants in sandstone and coal, marine forms in limestone) are those of the Lower Coal-measures.—**Dingle beds** [*Dingle*, a town in County Kerry, Ireland], strata lying at the base of the Old Red Sandstone in Ireland.—**Dossena beds** [It. *Dossena*, a locality in Bergamo, Italy], in *geol.*, a division of the Middle Triassic or Keuper formation in the southern Alps.—**Egeln beds** [G. *Egeln*, a town in Prussia], in *geol.*, a subdivision of the Tertiary series in Germany. It is regarded by German geologists as equivalent to the top of the Lower Oligocene. It is preceded by the Lower Brown-coal series and overlain by Middle Oligocene beds. Its characteristic fauna consists of marine lamellibranchs (*Ostrea centridaurum*), gasteropods, and corals.—**Equus beds,** in *geol.*, a subdivision of the Pleistocene series in the non-glaciated regions of the great plains between South Dakota and Texas. It has been correlated with a part of the glacial series and has furnished remains of fossil horses, camels, mammoths, sloths, together with remains of existing prairie animals. See *Sheridan* ★*stage*.—**Folding-bed,** a movable bed so contrived that it may be folded up when not in use, assuming the appearance of a wardrobe, a bureau, a sideboard, or other article of furniture.—**Fore-set bed,** an inclined layer of sediment that is deposited on the front of a delta, as it is built forward in a body of standing water.—**Gosau beds** [*Gosau* in Austria], in the geology of the Alps, a facies of the Flysch in the northeastern part of these mountains, consisting of limestones and marls with intercalated coal-bearing fresh-water beds, all lying unconformably on the early Cretaceous rocks beneath. They are regarded, from their fauna, which is profuse, as being of Upper Cretaceous age.—**Hampstead beds,** in *geol.*, a stage of the Oligocene Tertiary lying at the top of the series in Hampshire and the Isle of Wight. The uppermost beds are of marine origin, and the lower represent a fresh-water or estuarine stage. Below them lie the Bembridge beds, which are largely fresh-water deposits.—**Häring beds,** in *geol.*, a division of the Flysch or Upper Eocene deposits in the northern Alps. See *Flysch*.—**Hawthorn beds,** in *geol.*, a division of the older Miocene Tertiary of central Florida equivalent to the Chattahoochee group of Georgia.—**Headon beds,** in *geol.*, the lowest member of the Oligocene Tertiary in the Hampshire basin and the Isle of Wight. The deposits are estuarine, and the fossils are partly of fluviatile and partly of marine origin.—**Horsetown beds,** in *geol.*, the middle division of the Cretaceous formation or Shasta-Chico series in California, lying above the Knoxville and below the Chico beds. It is regarded as representing the Lower Cretaceous beds of Europe above the Neocomian, and contains many fossils, some of them identical with European species.—**Hospital bed,** a bed in a hospital, especially one provided and maintained by an endowment fund.—**Hythe beds** [*Hythe* in Kent], in *geol.*, a division of the Lower Greensand of the Cretaceous formation as developed on the Isle of Wight. It lies on the Atherfield clay and below the Sandgate beds, and contains many fossils, of which the cephalopods are similar to those of the Aptian stage of the Continent.—**Indian bed,** a pile of clams placed close together on the ground with the hinges uppermost, and covered with brush which is set afire to roast the clams. [Local, U. S.]—**Insect-beds,** rock strata in which the remains of insects abound. Such deposits are known in the Lias and Tertiary rocks of Europe and America.—**Intumescens beds** [named from the prevalence of the cephalopod species *Manticoceras intumescens*], in *geol.*, a name applied to a certain facies or life-zone in the lower Upper Devonian. It is developed in Devonshire, Germany, Poland, the Urals, Siberia, and New York.—**Itfer beds** [*Itfer* in Baltic Russia], in *geol.*, a division of the Lower Silurian beds in the Baltic basin, lying between the Jeve zone and above the Kuckers shale, and consisting of limestones with abundant fossils.—**Jackson beds,** in *geol.*, a subdivision of the Eocene Tertiary in the State of Mississippi and adjoining territory, lying beneath the Vicksburg beds and above the Claiborne beds.—**John Day beds,** in *geol.*, a formation of Middle Miocene age in eastern Oregon, Nevada, and Washington, taking its name from the John Day Patch. Though in large part composed of volcanic tuffs, the interbedded layers carry a very rich vertebrate fauna— horses, rhinoceroses, pigs, carnivores, oreodonts, rodents of various genera, etc.—**Jörden beds,** in *geol.*, a division of the Upper Silurian beds of the Baltic provinces lying near the base of the series.—**Karoo beds.** Same as *Karoo series*.—**Khussak beds,** in *geol.*, a subdivision of the Cambrian system in the Salt Range of India which is about 100 feet thick. It is underlain by the Salt Marl and correlated by Indian geologists with the paradoxidian group.—**Kiltorcan beds,** in *geol.*, an upper division of the Old Red Sandstone in the south of Ireland (Cork). It is underlain by the red sandstones of Kerry and overlain by the Carboniferous slate. The beds contain fishes (*Bothriolepis*, *Coccosteus*, *Glyptolepis*), *Merostomata* (*Belinurus*, *Pterygotus*), the clam *Amnigenia jukesii*, and some forms of brackish-water habit.—**Knox beds,** in *geol.*, a group of shales, limestone, and sandstone forming a thick terrain in Tennessee, which is barren of fossils, but by its stratigraphic position is referred to the Lower Cambrian.—**Knoxville beds,** in *geol.*, a subdivision of the Lower Cretaceous system in the Pacific border region of the United States. It is the upper part of the Shasta group, overlying the Horsetown group, and is correlated with the Neocomian of Europe. Like the Horsetown beds, it has an enormous distribution, extending from California to Alaska, and attains a thickness of not less than 20,000 feet.—**Kome beds,** in *geol.*, a series of beds in western Greenland, in the vicinity of Disko Island, which have afforded a Cretaceous plant fauna (Heer), including ferns, cycads, conifers, a few endogens, and but one angiosperm (*Populus primæva*). They are correlated with the Kootenay and Potomac beds of North America. —**Kössen beds,** in *geol.*, the uppermost subdivision of the Triassic system in the Alps. It is underlain by the Main Dolomite (*Hauptdolomit*) and correlated with the Rhætic stage.—**Kressenberg beds,** in *geol.*, a subdivision of the Eocene series in the northern Alps which is preceded by the Burberg beds, followed by the Flysch or Vienna sandstone, and correlated with the calcaire grossier of the Paris basin. Its most characteristic fossils are nummulites, and the division is sometimes termed the Lower Nummulitic group.—**Lagrange beds.** See *Lafayette* ★*group*.—**Lenham beds,** in *geol.*, a division of the Pliocene Tertiary in Britain lying near the base of the series, below the coralline crag. In Kent it overlaps the Chalk, and yet its fossils show that it is not Early but Middle Tertiary. It is the equivalent of the Diestian stage of the Continent.—**Lenticular bed.** See ★*lenticular*.—**Loup Fork beds,** in *geol.*, a division of the Miocene Tertiary in the interior of the United States constituting the uppermost part of the series above the Deep River beds. Its strata are partly of lacustrine and partly of fluviatile origin.—**Magellanian beds,** a series of Oligocene or Upper Eocene beds in Patagonia, named from the Strait of Magellan.—**Nanaimo beds,** in *geol.*, a series of coal-bearing strata of Cretaceous age on Vancouver Island.—**Naples beds,** in *geol.*, a series of Upper Devonian strata in western New York characterized by the presence of a pelagic fauna abounding in goniatites. —**Narrabeen beds,** in *geol.*, a subdivision of the Triassic Hawkesbury series in New South Wales lying at the base of the formation and overlain by the Hawkesbury sandstone. These beds are sandstones and shale, rising to a thickness of about 2,000 feet.—**Nodule beds,** in *geol.*, a local term applied to conglomeritic deposits which lie at the base of the red and coralline crags, belonging to the Pliocene Tertiary of England. Also known as *boxstones*. —**Osborne beds.** See *Osborne series*, under *series*.—**Palo Duro beds,** in *geol.*, the lower member of the lacustrine Pliocene series of Texas and Kansas, identical with the Goodnight beds, and containing a fossil fauna of horses, rhinoceroses, and camels.—**Pantolambda beds,** in *geol.*, the biotic designation of the Torrejon group of the basal Eocene Tertiary in New Mexico, named from the characteristic genus of its mammalian fauna.—**Paradoxides beds,** in *geol.*, those beds of the Middle Cambrian series which contain the fauna characterized by the trilobite genus *Paradoxides* (which see).—**Partnach beds,** in *geol.*, a series of sandy clays and limestones forming the upper member of the lowest division of the Alpine Middle Trias of central Europe. It is a local facies of the German Muschelkalk.—**Penarth beds,** in *geol.*, the uppermost member of the British Triassic, representing the Rhætic and uppermost Keuper of central Europe. It consists of limestones, black paper-shales, and basal green and gray marls, aggregating 50 to 150 feet in thickness, which contain an abundant fauna of mollusks, fish, saurians, and some insect remains.—**Pen-y-glog beds,** in *geol.*, a series of shales and grits forming a local phase or facies of the Wenlock shales of Upper Silurian age in Denbighshire, North Wales.—**Pikermi beds,** in *geol.*, a series of red clays and gravels deposited during the Plaisancian stage of Pliocene time at Pikermi and elsewhere in Greece, and noted for its profusion of vertebrate fossil remains, which include various types of carnivores, rodents, proboscideans, perissodactyls, artiodactyls, birds, tortoises, and lizards, many of which are of colossal size.—**Preston beds,** in *geol.*, the basal member of the Washita division of the Upper Cretaceous of Texas.—**Punfield beds,** in *geol.*, a local basal member of the Lower Greensand of the Cretaceous system developed in the vicinity of Punfield Cove, Swanage Bay, England.—**Raibl beds,** in *geol.*, a division of the Triassic rocks of the Alps, regarded as equivalent to the Keuper of Germany and pertaining to the Carinthian stage. It marks the close of the separation of the two great marine Triassic provinces of the northern and southern Alps as they extend through both regions, lying above the Wetterstein limestone in the former and above the Esino limestone in the latter.—**Raikull beds,** in *geol.*, a division of the Upper Silurian rocks in the Baltic provinces of Russia, lying near the middle of the series and comprising about 100 feet of coral reefs and flagstones.—**Ranikot beds,** in *geol.*, the lowest division of the Eocene Tertiary in the Sind district of India, containing an abundant marine fauna with some species of Cretaceous affinities.—**Reading beds,** in *geol.*, the lowest division of the Eocene Tertiary in the Hampshire basin in England, and lying above the Thanet sand in the London basin.—**Rhætic beds.** See *Rhætic*. **Rhenan beds,** in *geol.*, the lower division of the Devonian system in the Rhineland, subdivided in ascending order into the Gedinnian, Taunusian, and Coblentzian.—**Saarbrücken beds,** in *geol.*, the lower or main coal-bearing beds of the Carboniferous system in North Germany. These are from 5,000 to 9,000 feet thick, with 82 workable and 142 unworkable coal-seams, or in all between 350 and 400 feet of coal.—**St. Erth beds,** in *geol.*, the uppermost division of the older Pliocene Tertiary in Britain, limited to a patch of clay in Cornwall which has produced a considerable number of organic remains.—**Salina beds,** in *geol.*, the saliferous deposits of New York, forming the final stage of the Silurian: formerly termed the *Onondaga salt-group* (which see). It is subdivided as follows, in ascending order: Pittsford shale, Vernon shale, Syracuse salt, Camillus shale, Bertie water-lime.—**Sandgate beds,** in *geol.*, a subdivision of the Lower Greensand strata on the Isle of Wight, lying under the Folkestone beds and over the Hythe beds.—**Sandling beds,** in *geol.*, a subdivision of the Triassic rocks in the Mediterranean basin pertaining to the Carinthian stage and lying over the Raibl beds. —**San Pedro beds,** in *geol.*, a Pleistocene series of sediments named from San Pedro, Cal., their typical locality. —**Santee beds.** See *Santee*.—**Seis beds,** in *geol.*, the lowest subdivision of the Triassic rocks in the southern Alps.—**Skelgill beds,** in *geol.*, a series of strata in Westmoreland and Cumberland, of Upper Silurian age, essentially equivalent to the Llandovery group and characterized by their graptolite zones.—**Stormberg beds,** in *geol.*, the upper division of the so-called Karoo series of South Africa, regarded as probably of the age of the Rhætic Trias of Europe, while the lower division of this series is recognized as of Carboniferous age. The Stormberg beds carry a flora very similar to that of the Hawkesbury series of New South Wales. See *Karoo series*, under *karoo*.—**Tealby beds,** in *geol.*, a local development of the Lower Greensand of the Jurassic system in the vicinity of Tealby, Lincolnshire, England. They comprise about 20 feet of unfossiliferous ferruginous sands lying beneath 80–90 feet of sands and limestones containing an abundant Middle Neocomian fauna of cephalopods, pelecypods, and brachiopods.—**Telmatotherium beds,** in *geol.*, the biotic name for the lower Uinta beds of the Upper Eocene of Utah, characterized by the presence of several species of

the titanothere *Telmatotherium*.—**Timber-belt beds**, [illegible], a division of the Eocene system of Texas: same as the *Sabine River beds*.—**To lie** or **sleep on the bed** one has made, to reap the fruits or suffer the natural results of one's own conduct or acts.—**Top-set bed**, a nearly level layer of sediment that is deposited on the upper surface of a delta as it is built forward.—**Uintatherium beds.** See *Bridger* ★*group*.—**Vicksburg beds.** See *Vicksburg group*.—**Warminster beds**, in *geol.*, the uppermost beds of the galt of the Upper Greensand as developed in Wiltshire, England.—**Warp bed**, in *geol.*, a bed of estuarine silt. *J. Geikie*, The Great Ice Age, p. 406.—**Wengen beds**, in the subdivision of the pelagic Trias of the Mediterranean province, a member lying above the Marmolada limestone and below the St. Cassian beds: regarded as the upper division of the Noric stage, which is the lowermost of the stages of the Upper Trias.—**Werfen beds**, in *geol.*, the lowest division of the pelagic Trias in the eastern and southern Alps.—**Willow Creek beds**, in *geol.*, a division of the Lower Laramie beds of the Upper Cretaceous in the Canadian Northwest Territory.—**Woolwich and Reading beds**, in *Eng. geol.*, the lowest beds of the Eocene in the Hampshire Tertiary basin, which consist of lenticular sheets of plastic clay loam and sand and are very variable in local composition. The Woolwich type consists of sands crowded with estuarine fossils, while the Reading type is composed of unfossiliferous gravels.—**Yorktown beds**, in *geol.*, the upper division of the Eocene Tertiary, forming a belt through the Atlantic border States and well developed at Yorktown, Va. Also named *Chesapeake beds* from their development on Chesapeake Bay.

bed[1], *v. t.*—**To bed a tree**, to level up the place in which a tree is to fall, so that it may not be shattered. [U. S.]

bedamn (bē-dam′), *v. t.* To damn or curse roundly or with iteration and emphasis.

bed-and-platen (bed-and-plat′en), *a.* Of or pertaining to the bed and the platen of a printing-press.—**Bed-and-platen movement**, a printing-press movement by which the types on the bed and the platen above are at once brought together to print the sheet between: in contradistinction to a *cylinder movement*, which impresses the types that pass under it upon an oscillating bed-plate.—**Bed-and-platen press.** Same as *platen press* (which see, under *platen*[1]).

bedangled (bē-dang′gld), *p. a.* Beset with dangling things. *Swift.*

bedbug, *n.*—**Gigantic bedbug**, a reduviid bug, *Conorhinus sanguisuga*, of North and Central America. It was probably at first an inhabitant of the nests of field-mice and gophers, but it now often infests houses, especially in the southwestern United States.

bedbug-hunter (bed′bug-hun″tėr), *n.* A reduviid bug, *Reduvius personatus*, of cosmopolitan distribution, which inhabits houses, where it preys upon bedbugs, flies, and other household pests. When young it disguises its appearance by covering itself with dust and fibers, which adhere to a sticky secretion of the body. Called the *masked bedbug-hunter*.

Bedbug-hunter or Kissing-bug (*Reduvius personatus*). Twice natural size.

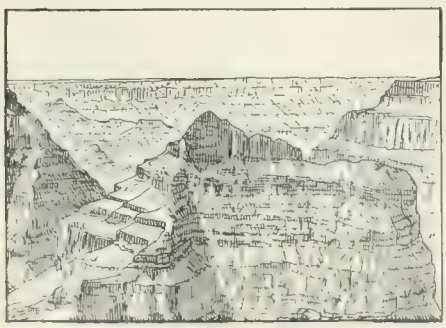
(Howard, U. S. D. A.)

bed-claim (bed′-klām), *n.* In *mining*, a claim which includes the bed of a river or creek. Australia.]

Bedded volcano. See ★*volcano*.

bedding-fault (bed′ing-fâlt), *n.* See ★*fault*.

bedding-plane (bed′ing-plān), *n.* The plane of stratification or bedding in a sedimentary series of rocks. It marks the surface upon which each succeeding layer of sediment was deposited, and, unless subsequently disturbed, is usually almost level.



Bedding-plane.

bedeck†, *pp.* A simplified spelling of *bedecked*.

bedewment† (bē-dū′ment), *n.* Dew-like moistening.

Bedford cord, shale. See ★*cord*[1], ★*shale*[2].

bedgery (bed′jėr-i), *n.* [Australian, corrupted from *pituri*, the native name.] Same as ★*pituri*, 2.

bedidlik (be-did′lik), *n.* [Egypt. Ar.] A gold coin of Egypt, equal to 100 piasters or about $4.97.

bedikah (bā-di-kä′), *n.* [Heb. *bedīkah*, examination, < *badak*, examine.] In Jewish ritual, the examination of a ceremonial act or of its accompaniments: as of the manner of slaughtering an animal or of its parts; or of a house, to remove any portion of leaven before the Passover, in order to assure the proper observance of the prescribed rules.

bed-lathe (bed′lāтн), *n.* A lathe having a bed which is so massive that no feet or legs are used to lift the center-line of the spindle to a convenient height.

Bedlington (bed′ling-ton), *n.* [From *Bedlington*, a parish in Northumberland.] A breed of moderate-sized short-haired terriers with narrow head, short body, and rather long legs. The ears and tail are slightly fringed, and the color is bluish, liver-colored, or sandy.

bedog (bē-dog′), *v. t.* **1.** To assail with the epithet 'dog.'—**2.** To follow like a dog; dog: as, "hatred *bedogged* his steps," *Trelawney*, Records of Shelley, etc.

bed-plane (bed′plān), *n.* In *geol.*, the junction between two layers or strata. *Dana*, Manual of Geol., p. 111.

bed-plank (bed′plangk), *n.* In *mining*, a plank in the lining or floor on the foot-wall side of an inclined shaft on which the hoisting-bucket slides.

bed-plate, *n.* **2.** An iron plate on the bed of a carriage, serving as a support to the king-bolt socket.

bedpost, *n.*—**Devil's bedposts**, a nickname for the four of clubs.

bedropt, *pp.* A simplified spelling of *bedropped*.

bedrug (bē-drug′), *v. t.* To drug thoroughly; saturate with drugs. [Rare.]

bedsted, *n.* A simplified spelling of *bedstead*.

bee[1], *n.* **4.** [*cap.*] In *astron.*, the constellation generally called *Apis* or *Musca*.—**Blunt-tongued burrowing bee**, any aculeate hymenopterous insect of the family *Colletidæ*.—**Dammar bee**, a wild East Indian bee, *Melipona vidua*.—**Horned bee**, a European megachilid bee, *Osmia rufa* (formerly *O. bicornis*), which has a two-horned head.—**Leaf-cutting bee**, any aculeate hymenopterous insect of the genus *Megachile*, which cuts fragments of leaves with which to construct its cells.—**Mosquito bee**, any one of the stingless tropical bees of the genera *Melipona* and *Trigona*.—**Pioneer bee**, the European solitary bee, *Odynerus murarius*.—**Potter-bee**, any one of certain bees of the aculeate hymenopterous family *Megachilidæ*, which construct small globular cells of earth and attach them to the stem of a plant.—**Sharp-tongued burrowing bee**, any aculeate hymenopterous insect of the family *Andrenidæ*.—**Solitary long-tongued bee**, any long-tongued bee except those belonging to the social families *Apidæ* and *Bombidæ*.

B. E. E. An abbreviation of *Bachelor of Electrical Engineering*.

bee-apron (bē′ā-prun), *n.* An apron worn by bee-keepers as a protection against stings.

bee-balm (bē′bäm), *n.* See *balm*, 7.

bee-beetle (bē′bē-tl), *n.* A European beetle, *Trichodes apiarius*, of the family *Cleridæ*, red and blue in color, which destroys the larvæ of the honey-bee. Other species of the same genus live in the nests of wild bees.

bee-brush (bē′brush), *n.* In *beekeeping*, a soft brush used in handling live bees.

beech[1], *n.* **2.** Any one of several trees of different genera having a real or fancied resemblance to the true beeches; especially, *Cryptocarya glaucescens*, of the laurel family. Also called *she-beech* and *black beech*. [Australia.]—**Beech pottery.** See *American* ★*pottery*.—**Beech seedling mildew.** See ★*mildew*.—**Beech tar.** See ★*tar*[1].—**Black beech.** Same as ★*beech*[1], 2.—**Copper beech**, a highly ornamental variety of the common beech, *Fagus sylvatica*, with red sap in the cells of the epidermis of the leaves which gives them a copper color and somewhat metallic luster. Also called *purple beech*.—**Evergreen beech**, the name in Australia of *Nothofagus Cunninghami*, the only tree there properly called *beech*.—**Native beech**, the name in Australia of *Callicoma serratifolia*, a tree of the saxifrage family.—**Queensland beech.** Same as *Australian beech* (which see, under *beech*[1]).—**Water-beech.** See *water-beech*.—**White beech.** See *white*.

beech-blight (bēch′blīt), *n.* An American plant-louse, *Pemphigus fagi*.

beech-drops, *n.*—**Carolina beech-drops**, the sweet pine-sap, *Monotropsis odorata*. See *Schweinitzia*.

beech-fern, *n.*—**Broad beech-fern**, *Phegopteris hexagonoptera*, of eastern North America.

beech-moth (bēch′môth), *n.* A European moth, *Stauropus fagi*, whose larva feeds on the beech. *Kirby* and *Spence*.

bee-escape (bē′es-kāp″), *n.* An attachment to a hive designed to control the movements of the bees while the honeycomb is being removed from the hive.

beef, *n.*—**Albany beef**, the cured flesh of the sturgeon, which was formerly caught and prepared near Albany, N. Y.—**Beef ham.** Same as *collared beef*.—**Dried beef**, beef which has been salted, dried and (frequently) smoked, being then eatable in thin slices without cooking.

beef-dodger (bēf′doj″ėr), *n.* A meat biscuit. [U. S.]

beef-fat (bēf′fat), *a.* In *stock-raising*, fat and in high condition, or ready for market. [U. S.]

Twenty-five or more years ago, while ranges were unrestricted and grass was free, it was no uncommon sight to see five- and six-year-old Texas steers coming into market *beef-fat* off the range.

Rep. Kan. State Board Agr., 1901–1902, p. 60.

beef-headed (bēf′hed-ed), *p. a.* Stupid; thick-headed.

beefing[1], *n.* **II.** *a.* Beef-forming; beef-producing: as, good *beefing* as well as good milking qualities. *Yearbook U. S. Dept. Agr.* 1901, p. 230.

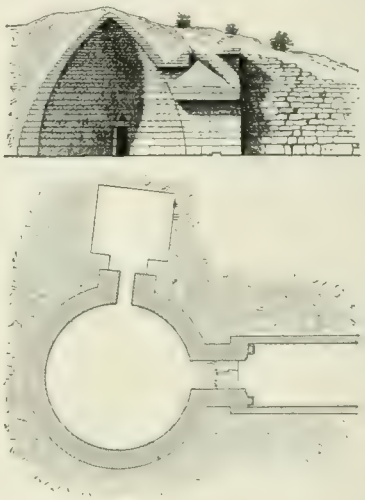
beefishness (bēf′ish-nes), *n.* Ox-like stupidity.

bee-fly, *n.* **2.** Any dipterous insect of the family *Bombyliidæ*: so called on account of its resemblance to a bee.

beef-measles (bēf′mē″zlz), *n.* Infection of cattle with *Cysticercus bovis*, the larval stage of *Tænia saginata* (the most common of the larger tapeworms of man). In cattle the parasites are found especially in the tongue and the muscles of the jaws. When the infection is very severe this condition is sometimes called *acute cestode tuberculosis*.

bee-glove (bē′gluv), *n.* A cotton glove soaked in linseed-oil and dried in the sun, worn by bee-keepers to protect the hand.

beehive, *n.* **3.** A covered cup or jug for holding honey, sugar, etc.—**4.** [*cap.*] In *astron.*, a name for Præsepe, the cluster of stars in Cancer.—**Beehive kiln.** See ★*kiln*.—**Beehive tomb**, an artificial subterranean sepulcher of the Mycenæan age in Greece. It is composed of two parts, a horizontal trench, called the *dromos*, cut into the sloping side of a hill, and a circular chamber, called the *tholos*, in which it terminates. The tholos is excavated vertically from the face of the rock to the level of the dromos, and has the form of an old-fashioned beehive. There is sometimes a rectangular chamber connected with it. The entire interior was faced with masonry and decorated. A fine example is the so-called Treasury of Atreus at Mycenæ.



Beehive Tomb.

Section and plan of the Treasury of Atreus at Mycenæ, Greece.

bee-hunter (bē′hun-tėr), *n.* One who hunts or searches for swarms of wild bees.

bee-keeper (bē′kē-pėr), *n.* One who keeps honey-bees; an apiarist.

beekite (bēk′īt), *n.* [Named after Dr. Henry *Beeke* (1751–1837), dean of Bristol.] A kind of chalcedony replacing shells, corals, etc., in the New Red conglomerate of South Devon, England.

bee-kite (bē′kīt), *n.* The honey-buzzard, *Pernis mellivora*, which feeds on bees and honey.

Beekmantown limestone. See ★*limestone*.

been[1], *n.* See *ennu*.

beena, beenah (bē′nä), *n.* In Ceylon a form of marriage in which the husband joins the wife's tribe and lives in it on sufferance. *McLennan*, The Patriarchal Theory, p. 42.

bee-plant (bē′plant), *n.* Any plant which is specially useful in furnishing nectar to bees; a honey-plant. Among well-known bee-plants are the

lindens (see *bee-tree*), the common red and white clovers, the sweet clover, and the common buckwheat. The name has been applied specifically to *Scrophularia Marylandica* and to *S. Californica*. The *Rocky Mountain bee-plant* (also called *bee-weed*) is one of the spider-flowers, *Cleome serrulata*.

beer[1], *n.* **Braga beer,** a kind of beer brewed in Russia.—**Lager-beer.** The name is often loosely applied to any German beer, or any beer made by German methods.—**Milk beer,** a name sometimes given to kumiss.—**Weiss-beer,** the German name for beer made chiefly from wheat malt and sold for consumption while the secondary fermentation is still in progress.

beerbachite (bēr'bak-it), *n.* [G. *Beerbach* ('Berry brook'?), a stream in the Odenwald, Baden, + *-ite*[2].] In *petrog.*, the name of an igneous rock of panautomorphic granular texture, consisting of labradorite, diallage, and magnetite, with other subordinate minerals. It was first named by Chelius (1894), and considered to be a haplitic differentiation-product of the gabbroic magma.

beer-wort (bēr'wèrt), *n.* Wort prepared by the infusion of malt with water, intended to be converted into beer.

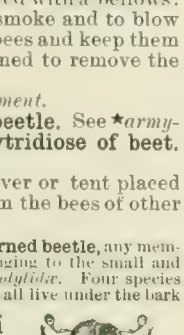
bee-smoker (bē'smō"kèr), *n.* In *bee-keeping*, a small portable furnace fitted with a bellows: used to produce a cloud of smoke and to blow it into a hive to stupefy the bees and keep them quiet when the hive is opened to remove the honeycomb.

Beeswax cement. See ★*cement*.

Beet army-worm, carrion-beetle. See ★*army-worm*, ★*carrion-beetle*.—**Chytridiose of beet.** See ★*chytridiose*.

bee-tent (bē'tent), *n.* A cover or tent placed over a hive to protect it from the bees of other hives.

beetle[2], *n.*—**Aberrant long-horned beetle,** any member of the cerambycid series belonging to the small and somewhat discrepant family *Spondylidæ*. Four species are known in North America, and all live under the bark of pine-trees.—**Brazilian beetle.** See *Brazilian* ★*bug*.—**Checkered beetle,** any member of the coleopterous family *Cleridæ*, the species of which are usually beautifully marked with strongly contrasting colors.—**Elm leaf-beetle.** See ★*leaf-beetle*.—**Feather-wing beetle,** any member of the coleopterous family *Trichopterygidæ*, an assemblage of very small species having long narrow wings so fringed with long hairs as to appear feather-like.—**Hornets'-nest beetle,** a large and powerful European Staphylinid or rove-beetle, *Velleius dilatatus*, which lives only in the nests of wasps and hornets, feeding on the wasp larvæ and pupæ which fall from their cells, and on the other organic refuse of the nest.—**Oak-pruner beetle,** a cerambycid beetle of the genus *Elaphidion* (which see).—**Pear ambrosia-beetle,** a scolytid beetle, *Xyleborus pyri*, which also affects the peach and plum.—**Pear-blight beetle.** Same as *apple tree* ★*shot-borer*.—**Pine-destroying beetle,** any beetle which destroys pine-trees; specifically, *Dendroctonus ponderosæ*, one of the most destructive enemies of western United States pine forests.—**Ship-timber beetle,** a coleopterous insect, *Lymexylon navale*, of the family *Lymexylonidæ*, formerly noted in Europe as very injurious to timber used for ship-building, from its habit of drilling cylindrical holes in the hard wood.—**Tan-bark beetle,** a small black bostrychid beetle, *Dinoderus substriatus*, which attacks hemlock bark which has been stripped and piled for tanning purposes.



Pine-destroying Beetle of the Black Hills (*Dendroctonus ponderosæ* Hopk.). Five times natural size. (Hopkins, U. S. D. A.)

beet-leaf maggot, miner, Pegomya. See ★*maggot*, ★*leaf-miner*, ★*Pegomya*.

beetle-crusher (bē'tl-krush"èr), *n.* A large foot. [Slang.]

beetle-sticker (bē'tl-stik"èr), *n.* A jocular name for an entomologist.

beetle-weed (bē'tl-wēd), *n.* See ★*Galax*.

Beet-root gum. See ★*gum*[2].—**Beet-root sugar.** The manufacture of sugar from beets has attained an enormous development, a larger product from this source than from sugar-cane being made, in ordinary years, for the general commerce of the world. Sugar from these two plants is, when purified, absolutely the same substance.

beet-scab (bēt'skab), *n.* A disease of beet-roots caused by the fungus *Oöspora scabies*. See ★*scab*.

beet-sugar (bēt'shug"är), *n.* Same as *beet-root sugar*, under *beet-root*.—**Beet-sugar industry,** the commercial production of sugar from the beet. In the United States this business after many failures became successful from 1888 onward. In 1903 there were 55 factories in operation with a total annual capacity of 328,104 tons of sugar. The State of Michigan led, followed at rather long intervals by California, Colorado, Utah, Nebraska, and New York, five other States having one factory each. See ★*sugar-beet*. The annual period of working up the crop, called the campaign, occupies about 100 days. In the factory the beets, after being washed and weighed, are sliced into cossettes (see ★*cossette*) and the sugar is extracted in a "diffusion battery," consisting of 14 air-tight cylindrical steel vats, each holding several tons, in which, under some pressure, the cossettes are subjected to 14 applications of hot water, the liquid passing from one vat to another. The sugary water is defecated by being mixed with lime, "carbonated" (see *carbonation*), and filtered, the process being once repeated, then, after being treated with sulphur fumes, evaporated to "thick juice," and through several further stages brought to the state of granulated sugar. The local requisites for a factory are, besides a supply of beets with high sugar content, a sufficiency of pure water, of fuel (coal most often used), and of limestone, together with transportation facilities.

bee-van (bē'van), *n.* A wagon used in instruction in bee-culture.

County councils have already done good work in providing lectures and demonstrations by means of travelling *bee-vans*. *Natural Science*, Oct., 1896, p. 273.

bee-veil (bē'vāl), *n.* A veil or netting worn over the head to protect the face from the attacks of bees while removing honey from a hive or working about it. It is worn over the hat and tucked under the coat, or drawn over a light metal frame which covers the head and rests on the shoulders.

bee-weed (bē'wēd), *n.* See ★*bee-plant*.

beewise (bē'wīz), *adv.* In the manner of the bee. [Rare.]

On every side occurred suggestive germs
Of that — the tree, the flower — or take the fruit,—
Some rosy shape, continuing the peach,
Curved *beewise* o'er its bough.
Browning, Pippa Passes, II. 90.

befeast (bē-fēst'), *v. t.* To treat to a feast; feast.

befel, *pret.* A simplified spelling of *befell*.

befreeze (bē-frēz'), *v. t.*; pret. *befroze*, pp. *befrozen*, ppr. *befreezing*. To freeze up or over; freeze thoroughly or completely.

befrend, *v. t.* A simplified spelling of *befriend*.

befriender (bē-frend'èr), *n.* One who befriends another.

Love and serve Man, angelical *Befrienders*.
Edwin Arnold, Light of the World, p. 24.

beg, *v. i.*—**To go a-begging,** to go about begging; figuratively, to have difficulty in finding a purchaser (for something offered for sale) or an incumbent (for an office to be filled), etc.; hence, to be in little demand; have little or no value or acceptance.

begar (be-gär'), *n.* [Hind. *begār*, forced labor (*begārī*, a forced laborer), < Pers. *bikār*, without work, unemployed (*bikārī*, idleness), < *bī*, without, + *kār*, work.] Forced labor in some parts of India, as in the construction of roads, irrigating banks, etc. [Anglo-Indian.]

begarry (be-gä'ri), *n.*; pl. *begarries* (-riz). [Hind. *begārī*: see ★*begar*.] One who is engaged in forced labor. See ★*begar*. [Anglo-Indian.]

beggar, *n.*—**Beggar's ultramarine black.** Same as *Spanish black* (which see, under *black*).—**Beggar's velvet,** the loose, fuzzy, wool-like particles which collect in the seams of clothing and under furniture, carpets, etc.

beggar's-lice, *n.* **3.** A name of the European stickseed, *Lappula Lappula*; of the hound's-tongue, *Cynoglossum officinale*; of the species of *Meibomia* (see ★*beggar-weed*, 2); and probably of other plants with adhesive seeds or pods.

beggar-weed, *n.* **2.** A plant of any species of *Meibomia*, the tick-trefoil, particularly of *M. tortuosa*, the Florida beggarweed. This is a tall species, native in the West Indies and probably in southern Florida, now found very valuable for forage and soiling purposes on light sandy soils in the warmest parts of the southern United States.

Beggiatoa alba.
a, living filament, showing sulphur granules; *b*, filament after treatment with sulphur carbonate. Magnified.

Beggiatoa (bej-i-at'ō-ä), *n.* [NL. (Trevisan, 1842), named after *Beggiato*, an Italian botanist.] A genus of filamentous bacteria consisting of non-septate, mostly colorless filaments containing sulphur granules and possessing an undulatory motion. They occur chiefly in sulphur springs and sea-water. *B. alba* is the most common species; it occurs on decaying plants in sulphur springs and produces slimy flakes.

Beggiatoaceæ (bej"i-a-tō-ā'se-ē), *n. pl.* [NL., < *Beggiatoa* + *-aceæ*.] A family of filamentous bacteria, typified by the genus *Beggiatoa*.

beggingly (beg'ing-li), *adv.* In the manner of a beggar; as a beggar. *Florio.*

Even my bonnet . . . how *beggingly* she looks at that.
Miss Mitford, Our Village, I. 51.

begift (bē-gift'), *v. t.* To thrust gifts upon. *Carlyle.*

begigged (bē-gigd'), *p. a.* Infatuated; crazy: as, *begigged* about bridge whist. [Colloq., southern U. S.]

begon, *v.* A simplified spelling of *begone*.

begoniad (bē-gō'ni-ad), *n.* [NL., < *Begonia* + *-ad*[1].] A plant of the family *Begoniaceæ*.

beharad (bā-hä-räd'), *n.* A mnemonic word representing the four letters B H R D, which indicate, according to Hebrew chronology, the first molad of creation. See ★*molad*. The numerical value of the four Hebrew letters is 2, 5, 200, and 4. The 2 stands for Monday (the day when the "great lights" were created), the 5 for the fifth hour (11 A. M.), and the 204 for the parts of an hour. Since an hour contains 1,080 parts, and the lunar month contains 29 days, 12 hours, and 793 parts of an hour, the first molad would fall on Monday at $5\frac{204}{1080}$ or about 11.12 A. M.

behead, *v. t.* **3.** To tap (a stream) and divert its upper waters through new channels: said of the encroachment of one stream upon another in such a way as to 'capture' its head and upper tributaries.—**Beheaded river,** in *phys. geog.*, the remaining lower course of a river after its former upper waters have been captured or diverted to another stream.

beheadal (bē-hed'al), *n.* [*behead* + *-al*.] Beheading; decapitation.

behed, *v. t.* A simplified spelling of *behead*.

behen, *n.* Also, same as *ben*[5].—**Oil of behen.** Same as *ben-oil*.

behenic (bē-hen'ik), *a.* Same as *benic*.—**Behenic acid,** a crystalline acid, $C_{22}H_{44}O_2$, found in behen-oil from the seeds of *Moringa Moringa*. It melts at 73° C.

behen-oil (bē'hen-oil), *n.* Same as *ben-oil*.

behenolic (bē-he-nō'lik), *a.* [*behen* + *-ol* + *-ic*.] Derived from behenic acid.—**Behenolic acid,** a crystalline acid, $C_{22}H_{40}O_2$, obtained by treating dibrom-behenic acid with alcoholic potash. It melts at 57.5° C.

Behmenism, *n.* Same as ★*Boehmenism*.

Behmenist, *n.* Same as ★*Boehmenist*.

behold, *v. t.* **4.** In *astrol.*, to cast (an aspect).

behram (bā'räm), *n.* A copper coin of Mysore, equal to half a pice.

beige, *a.* **II.** *n.* A thin, wiry dress-fabric of worsted, originally unbleached, but now made in all colors and many designs.

beignet (bān-yā'), *n.* [F.] A fritter composed of various ingredients.

beiju (bā-ē-zhō'), *n.* [Pg., from Braz.] The name in Brazil for cassava-bread. See *cassava*.

being, *n.* **7.** A living; livelihood; means of subsistence; home. *Spectator*, No. 544. [Obsolete or prov. Eng.]

"I shall have enough to do to keep a *beein* for you" (Mrs. Gummidge meant a home) "again you come back — to keep a *beein* here for any that may hap to come back, Dan'l." *Dickens*, David Copperfield, xxxii.

Truth of being, the totality of that which is such as it is independently of any assertion about it; truth in the objective sense.

beingless (bē'ing-les), *a.* Without being; non-existent. *Galt.*

beingness (bē'ing-nes), *n.* Actual existence; entity. *J. Chandler.*

be-inked (bē-inkt'), *p. a.* Smeared or daubed with ink. *Charlotte Brontë*, Villette, xxxv.

beisa (bī'sä), *n.* [Northeast African.] A large antelope, *Oryx beisa*, of northeastern Africa, of a light-gray color with black markings. The horns are long, almost straight, and directed backward. It is a near relative of the South African oryx, *O. gazella*. See *oryx*.

Beisa.

bejant (bē'jant), *n.* Same as *bejan*.

bejuco, *n.* **2.** A name applied especially to climbing palms, species of *Calamus* and *Dæmonorops*, known commercially as ratans. The

stems are remarkable for their tenacity, flexibility, and length, and are used in the construction of bridges, houses, and fish-corrals. They also furnish material for cordage, for the cane bottoms of beds and chairs, and for hats, mats, and fine cigar-cases. See *ratan*, 2, and *calamus*, 3. [Philippine Is.]

beknown (be-non′), *a.* Known: as, "the seaman was *beknown* to me," *Dickens*, Mutual Friend, I. ii. 12.

bel, *n.* A simplified spelling of *bell.*

B. E. L. An abbreviation of *Bachelor of English Literature*: same as ★*B. Lit.*

belah (bē′lä), *n.* [Native Australian.] The desert she-oak, *Casuarina glauca*, widely distributed throughout Australia, yielding a hard, durable wood. Also *beala*, *belar*, *billa*, and *beal;* known among the colonists as *bull-oak*. See *she-oak*.

belamarine (bel-am′a-rin), *n.* [Appar. *bel(ladonna)*, + *Amar(yllis)* + *-ine*².] An alkaloid formed in the tubers of *Amaryllis belladonna*, which grows in the islands of the Caribbean Sea. It crystallizes in colorless needles.

Belamcanda (bel-am-kan′dä), *n.* [NL. (Adanson, 1763, adopted from Rheede, 1692), from the Malabar name of the plant.] A genus of monocotyledonous plants belonging to the family *Iridaceæ*. See *Pardanthus*.

belay, *v. t.*—**Belay, there!** hold on! stop! enough!—an order to sailors preparatory to making fast the rope on which they are hauling.

belduque (bel-dö′kā), *n.* [Mex. Sp.; said to be a corruption of Sp. *verdugo*, a sword.] A large, heavy sheath-knife, used in Mexico and some parts of the western United States.

belemnitoid (be-lem′ni-toid), *a.* [*Belemnites* + *-oid.*] Allied to *Belemnites*.

Belemnocrinus (be-lem-nok′ri-nus), *n.* [NL., < Gr. βέλεμνον, a dart, + κρίνον, a lily.] The only genus of an extinct family of the *Crinoidea*, or fossil encrinites, termed *Belemnocrinidæ*. It occurs in the Lower Carboniferous rocks of the Mississippi valley.

belemnoid, *a.* **II.** *n.* One of the *Belemnoidea;* a belemnite or fossil dibranchiate cephalopod, or a related form.

Belemnoidea (be-lem-noi′dē-ä), *n. pl.* [NL., < Gr. βέλεμνον, a dart, + εἶδος, form.] An order or suborder of the dibranchiate cephalopods, now almost extinct, but very abundant in the Mesozoic age. They have internal chambered shells with septa traversed by a siphuncle, the posterior part of the shell bearing a calcareous guard or sheath. The arms, 10 in number, are provided with hooklets. Some authors include in this suborder the coiled living *Spirula*. In several of the fossil species the head, arms, and ink-bag of the animal have not infrequently been preserved.

Belemnoteuthidæ (be-lem-nō-tū′thi-dē), *n. pl.* [NL., < *Belemnoteuthis* + *-idæ.*] A family of *Belemnoidea*, or dibranchiate cephalopods, with a shell composed of a conic phragmacone and proöstracum, and the rostrum or guard greatly reduced. The species are found in the Triassic and Jurassic rocks.

Belemnoteuthis (be-lem-nō-tū′this), *n.* [NL., < Gr. βέλεμνον, a dart, + τευθίς, a squid.] The typical genus of the family *Belemnoteuthidæ*.

beletter (bē-let′ėr), *v. t.* **1.** To write letters to; invite or inform by letter.

The University-orator . . . *belettered* all the lords of the privy-council. *Fuller*, Hist. Camb., p. 179. *N. E. D.*

2. To decorate with letters or with appended abbreviations of office or title, such as *F. R. G. S.*, *M. R. A. S.*, *LL.D.*, etc. [Rare in both uses.]

The mania prevalent among people of more ambition than performance for *belettering* themselves.
Athenæum, May 19, 1899, p. 638. *N. E. D.*

beleve, *v.* An obsolete form of *believe*.

Belgian blocks, nearly cubical blocks of granite, trap or other suitable stone used for pavements. **Belgian canary.** See ★*canary.*—**Belgian-Silesian furnace.** See ★*furnace.*

belief, *n.*—**Primary belief,** in the philosophy of common sense, one of the irresistible beliefs which no man sane enough for the business of life can really doubt, and which, not in the least doubting, we really regard as infallible truths, whether we set down a doubt of them on paper or otherwise make believe to doubt them, or not.

beliefless (bē-lēf′les), *a.* Having no belief; indisposed to believe.

And most *beliefless*, that had most believed.
Clough, Easter Day, i. 10.

believ, *v.* A simplified spelling of *believe*.

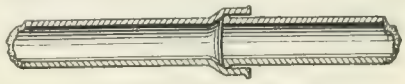
Belinuridæ (bel-i-nū′ri-dē), *n. pl.* [NL., < *Belinurus* + *-idæ.*] A family of merostome crustaceans closely allied to the living limulus and resembling a larval phase of that crab. The cephalothorax is broad, abdomen with distinct segments, and the telson a long spine. They occur in the Devonian and Carboniferous rocks.

Belinurus (bel-i-nū′rus), *n.* [NL., appar. an error for ★*Belonurus*, < Gr. βελόνη, a needle, + οὐρά, tail.] The typical genus of the family *Belinuridæ*.

Belis (bē′lis), *n.* [NL. (Salisbury, 1807), in allusion to the form of the leaves, < Gr. βέλος, a dart.] A genus of trees of the family *Pinaceæ*. See *Cunninghamia*.

bell¹, *n.* **2.** (*g*) The movable cap of a blast-furnace. It is lowered to put in the charge of ore, and rises after the charging to keep the top gas-tight. (*h*) An enlarged section at the end of a cast-iron pipe, the purpose of which is to furnish a means of making a joint with the next pipe.

5. A bell-shaped rock-mass of somewhat doubtful origin occurring occasionally in sedimentary rocks. The inverted position of of these masses leads to the theory that they were the result of some local disturbance of sedimentation. Some may be due to contemporaneous erosion.—**Bell and spigot,** a form of cast-iron pipe commonly used for underground pipe-



Cross-section of Bell and spigot

lines. Each length of pipe has one straight end, the other end forming a bell large enough to receive the straight end of the next length.—**Bell dollar,** the silver glockenthaler of Brunswick, which has on it the representation of a bell.—**Bow bells,** the celebrated peal of bells of Bow Church (properly the Church of St. Mary le Bow), situated in Cheapside, near the center of the City of London.—**Cap and bells.** See ★*cap*¹.—**Liberty bell,** the bell which was in the tower of the statehouse (since called *Independence Hall*) in Philadelphia, and which was rung on the occasion of the proclamation of Independence made July 4, 1776. It happened to bear a biblical inscription ("Proclaim liberty throughout the land unto all the inhabitants thereof") which made its use on that occasion especially appropriate, and established its popular name.—**Savart's bell and resonator,** an apparatus used to show the influence of boxes in strengthening sound. A hemispherical brass vessel is set in vibration by means of a violin bow. A cardboard cylinder, closed at one end, is then placed at varying distances and inclinations, to show its effect as a resonator.—**Uterine bell,** one of the peculiar bell-shaped or funnel-like structures, with muscular walls, found in the nemathelminth *Echinorhynchus*, whose contractions serve to draw into the bell the impregnated eggs which float freely in the body-cavity, and to force them along into the uterus and vagina and thence to the exterior.—**Within the sound of Bow bells,** within the limits of the City of London.

Uterine Bell.

Female Genital Apparatus of *Echinorhynchus*. Diagrammatic. *a*, ovaries; *b*, ligament; *c*, anterior aperture of uterine bell; *d*, posterior ditto; *e*, anterior aperture of one of the two oviducts; *f*, uterine bell; *h*, uterus; *i*, female aperture; *j*, vagina. The arrows indicate the course taken by the eggs in passing from the body cavity to the exterior. (From "Lang's Comparative Anatomy.")

Having been born *within the sound of Bow-bells* he cannot help being a son of Cockaigne.
Punch, Dec. 30, 1894, p. 294.

Bell process. See ★*process.*

belladonna, *n.*—**Japanese belladonna,** *Scopolina Japonica*, the rhizome of which appears in trade as a substitute for belladonna.

belladonnine (bel-a-don′in), *n.* [*belladonna* + *-ine*².] An amorphous alkaloid, $C_{17}H_{21}NO_2$, associated with atropine or hyoscyamine in *Atropa Belladonna*.

Bellani lucimeter. See ★*lucimeter.*

bella-moth (bel′a-môth′), *n.* A moth, *Utetheisa bella* (which see with cut).

belland (bel′and), *n.* A form of lead-poisoning to which lead-miners are subject. *Coal and Metal Miners' Pocket-book.*

bell-bearer (bel′bär-ėr), *n.* A leaf-hopper, *Bocylium tintinnabuliferum*.

bell-binder (bel′bin-dėr), *n.* Same as *bell-bind.*

bell-bird, *n.* **4.** In New Zealand, one of the *Meliphagidæ*, *Anthornis melanura*.—**5.** In Australia, *Oreoica gutturalis*, one of the shrikes.

bell-bottomed (bel′bot″umd), *a.* Having flaring bottoms: as, *bell-bottomed* trousers.

bell-cord *n.*—**Bell-cord hanger,** a swinging strap or rod suspended from the roof of a passenger-car and carrying a guide-ring for a bell-cord.

Belleek ware. See ★*ware.*—**Carved Belleek.** See *American* ★*porcelain.*

Belleville boiler. See ★*boiler.*

bell-faced (bel′fāst), *a.* Having the striking face convex or rounded: said of a hammer.

bell-horse (bel′hôrs), *n.* **1.** A horse wearing a bell; especially, a horse adorned with bells, ribbons, etc., used in celebrating May-day, which, in consequence, is called *bell-horse day*. [Eng.]—**2.** A workman who finds it to his advantage to exert himself more than his fellow employees, in order to give grounds for the discharge of those who cannot keep up with the pace set by him. [Slang, Eng.]

bellicosity (bel-i-kos′i-ti), *n.*; pl. *bellicosities* (tiz). Bellicose tendency or disposition; warlike intention or desire. *Manchester Examiner*, July 9, 1884.

bellite (bel′īt), *n.* [*Bell*, a proper name, + *-ite*².] An explosive, of Swedish invention, consisting of a mixture of 5 parts of ammonium nitrate with 1 part of meta-dinitrobenzene, melted together, pressed while warm, and granulated.

bell-joint (bel′joint), *n.* An abbreviation of *bell-and-spigot joint.*

bell-moth (bel′môth), *n.* The oblique-banded leaf-roller, *Archips rosaceana*, an American tortricid moth which when at rest holds its wings in the shape of a bell; also, any other tortricid moth of similar shape.

Bellocq's cannula. See *cannula.*

bellows, *n. sing.* and *pl.* **2.** In *photog.*, that part of a camera which connects the front and back portions and is capable of being extended or closed as desired.—**3.** In *organ-building*, the extensive apparatus by which air is supplied and compressed for the sounding of the pipes. It usually includes two distinct parts, an oblique bellows, or *feeder* (resembling the ordinary household bellows, but on a large scale), by which the air is pumped into the reservoir, and a reservoir, called the *storage-bellows*, which is a horizontal bellows (having its top and bottom boards parallel and connected by creased folds of leather) so loaded by blocks of lead or other weights that the air within is maintained at a constant compression or tension. From the reservoir lead off the wind-trunks by which the compressed air is supplied to all parts of the instrument. Furthermore, on the wind-trunks are usually placed small bellows with springs, called *concussion-bellows*, *panting-bellows*, or *winkers*, by which sudden irregularities in pressure are taken up and counteracted.—**Facings bellows,** in *foundry-work*, a hand-blower for distributing fine dust or facings over a mold, to give a finished surface to it, preparatory to casting.—**Hessian bellows,** a blower invented in Thuringia about 1621. It consists of a flat vane having an inlet-valve for air, which reciprocates in a sector-shaped box. The air-outlet is close to the hinge.

bellows-leather (bel′ōz-leтн″ėr), *n.* Leather used in the manufacture of bellows: usually made from side leather.

bellows-tongue (bel′ōz-tung), *n.* A large tongue stitched in each side of a shoe (usually high-laced) to the top, for protection against snow and water.

bell-pipe (bel′pīp), *n.* A pipe with a bell or socket at one end to make the joint with the next length.

bell-pit (bel′pit), *n.* In mining salt and other minerals, a pit which is gradually widened to 100 or 200 feet in diameter, becoming cylindrical below.

bell-scale (bel′skāl), *n.* In *bell-founding*, a scale or standard of reference of any sort by which the dimensions, proportions, or pitch of a bell are measured.

bell-strap (bel′strap), *n.* A strap running lengthwise through a railway or other car and attached to a signal-gong.

belltopper (bel′top-ėr), *n.* A colloquial name in Australia and to some extent in Great Britain for a tall silk hat.

bell-tree (bel′trē), *n.* **1.** The silverbell, *Mohrodendron Carolinum*.—**2.** A tall branching frame bearing several small bells which can thus be shaken at once: usually a mere toy, but occasionally used in popular band-music.

Bellvale flags. See ★*flag*⁴.

bell-wheel (bel′hwēl), *n.* A form of toothed wheel in which the pitch-surface is a frustum of a hyperboloid of revolution. This gives to the wheel a shape which, in projection, suggests the usual profile of a church bell. It was used in textile practice in former times to give a special and varying velocity-ratio of the driving and the driven shaft.

belly-ache, *n.*—**Dry belly-ache,** girdle-pain in the abdomen, due to disease of the spine.

belly-bar (bel′i-bär), *n.* A bar used in pianoforte-making. See the extract.

Beneath the strings from where the hammers rise, to the bent side, back, and end of the case, is the soundboard of spruce fir, barred beneath with batons, usually of the same wood, technically "*belly-bars*," which strengthen the belly, and by increasing its elasticity, extend its power to form nodes or centers of vibration, and

thus respond more promptly and effectively to the vibrations which are passed to it from the strings, when set in movement, through the hardwood belly bridge.
Sci. Amer. Sup., May 6, 1905, p. 24536.

belly-bump (bel'i-bump), *adv.* Prone on a sled, as a child in sliding down hill. *Dialect Notes*, III. iii, 181. [New England.]

belly-bumper (bel'i-bum"pėr), *n.* The act of sliding down hill prone on the sled. In New York, etc., *belly-whopper.* Also used adverbially. [New England.]

bellyman (bel'i-man), *n.*; pl. *bellymen* (-men). In *pianoforte-making*, one who makes or fits the soundboards.

Belly River series. See ★*series.*

belly-stay, *n.* 2. A plate on a locomotive which goes under the belly of the boiler, acting as a support for the latter and binding the frame-plates together. When the locomotive has inside cylinders the belly-stay also carries the cross-head guides.

belodont (bel'ō-dont), *n.* [*Belodon.*] A member of the reptilian family *Belodontidæ.*

Beloidea (bel-ō-ī'dē-ä), *n. pl.* [NL., < Gr. *βέλος*, a dart, + *εἶδος*, form.] A family of solitary or colonial peripylæan radiolarians having a skeleton of loose silicious needles. It contains the genera *Thalassosphæra*, *Thalassoplancta*, *Physematium*, *Belonozoum*, and *Sphærozoum.*

belonesite (be-lon'ē-sīt), *n.* [Said to be < Gr. *βελόνη*, a needle (referring to the form of the crystals), + *-ite*2. The proper form *belonite* is used in another application.] A magnesium molybdate occurring in white acicular tetragonal crystals: found on Vesuvius in the lava of 1872.

Belonesox (be-lon'ē-soks), *n.* [NL., < Gr. *βελόνη*, a needle, + L. *esox*, a kind of pike (see *Esox*).] A genus of pœcilioid fishes found in Honduras: characterized by the elongate jaws. *B. belizanus* is the known species.

belonophobia (bel-ō-nō-fō'bi-ä), *n.* [NL., < Gr. *βελόνη*, a needle, + *-φοβία*, < *φοβεῖν*, fear.] A morbid fear of needles and pins.

belonospherite (bel"ō-nō-sfē'rīt), *n.* [Gr. *βελόνη*, a needle, + *σφαῖρα*, sphere, + *-ite*2.] A term devised by Vogelsang (1872) for minute spherulites with radiate crystalline texture, often found in partly glassy lavas, especially the more silicious ones, such as rhyolite, and in artificial glasses. Compare *globospherite* and ★*granospherite.*

Belosepia (bel-ō-sē'pi-ä), *n.* [NL., < Gr. *βέλος*, a dart, + *σηπία*, a cuttlefish.] A genus of dibranchiate cephalopods or cuttlefishes from the Eocene Tertiary rocks.

Belou (bel'ö), *n.* [NL. (Adanson, 1763, adopted from Rheede, 1682), from one of the forms of (Bengali?) *bel*, a Hindu name of the Bengal quince, *Belou Marmelos.*] A genus of dicotyledonous plants belonging to the family *Rutaceæ.* See *Ægle.*

Belpaire fire-box. See ★*fire-box.*

belt, *n.* 6. In a war-ship, the side of the vessel, in the vicinity of the water-line, protected by external armor-plating. A *complete belt* is one in which the armor extends from stem to stern: a *partial belt* extends over only part of the length.—7. In *archery*, a strap for suspending the quiver: usually worn round the waist of the archer.—**Belt of high pressure, belt of low pressure.** See ★*pressure.*—**Belt of rains.** See ★*rain*1.—**Cotton belt,** the portion of the southern United States adjoining the Gulf of Mexico and the Atlantic (including North Carolina), where cotton is best and most extensively cultivated. See *Cotton States*, under *cotton*1.—**Thermal belt.** See ★*thermal.*

belt-armor, *n.* It extends from 4 to 6 feet below the surface of the water and to varying heights above it. In vessels with a partial belt the armor-protection is completed at the ends by a diagonal or athwartships belt in the interior from side to side. In modern vessels the armoring of the side is continued above the belt by the casemate armor.

belt-concentrator (belt'kon"sen-trā-tọr), *n.* See ★*concentrator.*

belt-conveyer (belt'kọn-vā'ėr), *n.* See ★*conveyer*, 4.

belt-coupled (belt'kup"ld), *a.* Connected by a belt: applied specifically to a machine which is driven by an engine through a belt instead of directly or by gears.

belt-course (belt'kōrs), *n.* Same as *string-course.*

belt-driven (belt'driv"n), *a.* In *mach.*, driven by means of a flexible belt. It is used of pumps, air-compressors, electric generators, etc., somewhat in opposition to *direct-connected*, which indicates that no transmission element intervenes; and specifically of a form of motor-cycle or motor-car in which a flat or angular belt is used to transmit power to the driving-wheels instead of a chain or a shaft and gears.

Belted cruiser. See ★*cruiser.*—**Belted plains.** See ★*plain.*—**Belted ship,** an early type of armored war-ship in which the hull protection was concentrated in the water-line armor-belt. *White,* Manual of Naval Arch., p. 33.

belt-fork (belt'fôrk), *n.* A two-pronged device for shifting the operating belt of a machine from one pulley to another.

belt-frame (belt'frām), *n.* In *shipbuilding*, a frame to which a belt of protective armor is to be attached, and hence built up of plates and angles much deeper and stronger than those of the ordinary frames: same as ★*web-frame.*

belting, *n.*—**Gut belting,** machine belting made of catgut. It is usually round and quite small.

belt-knife (belt'nīf), *n.* A knife which revolves over wheels, as a band-saw or circular saw: used in splitting hides or skins. *Modern Amer. Tanning*, p. 110.

belt-perch (belt'pėrch), *n.* A wooden or metal bar placed beside a belt-pulley to support the belt when it is thrown off the pulley for repairs. This prevents the belt from being caught on the revolving shaft.

belt-pump (belt'pump), *n.* A belt-driven pump.

belt-punch (belt'punch), *n.* A punch made up in the form of pliers for piercing holes in belting through which the lacing or rivets are passed when the ends are coupled together.

Beltrami's equation. See ★*equation.*

belt-stretcher (belt'strech"ėr), *n.* A piece of mechanism for stretching new leather belts, especially when they are to be laced or cemented, so as to make them grip the pulleys tightly.

belt-table (belt'tā"bl), *n.* Same as ★*belt-concentrator.*

belt-tightener, *n.* 2. A device used for pulling the ends of a belt together when they are to be laced or cemented. Clamps are attached to the ends of the belt, and are then drawn together by screws.

belugite (be-lū'gīt), *n.* [*beluga* + *-ite*2.] In *petrog.*, the name proposed by Spurr (1900) for granular igneous rocks intermediate in composition between diorite and diabase, especially as to the lime-soda feldspar, which is andesine or labradorite.

belying (bē-lī'ing), *n.* The telling of lies about one; calumniation: as, "backbiting and *belying*," *Swinburne*, Essays and Studies, Pref. x.

bemaim (bē-mām'), *v. t.* To maim seriously; wound.

> Spoiled of their goods, *bemaimed* and slaine.
> *Stow*, Annals, p. 673.

bemaster (bē-mås'tėr), *v. t.* To master completely. *B. Taylor*, Trans. of Goethe's Faust.

Bembecides (bem-bes'i-dēz), *n. pl.* [NL., < *Bembex* (*-bec-*) + *-ides.*] The *Bembecidæ* considered as a group of less than family rank: virtually synonymous with *Bembecinæ.*

bembil (bem'bil), *n.* [Australian.] In Australia, *Eucalyptus populnea*, a tree yielding a hard, heavy timber used for building purposes, posts, and mauls. From the leaves is obtained an oil resembling cajeput. Also called *poplar-box* and *red box.*

bementite (bē'ment-īt), *n.* [Named after C. S. *Bement* of Philadelphia.] A hydrated manganese silicate occurring in grayish-yellow stellate forms with micaceous structure: found at Franklin Furnace, New Jersey.

ben1, *adv.* 2. In *mining*, inward; toward the workings. [Scotch.]

ben1, *n.* 2. In *mining*: (*a*) The right to enter the mine and work. A workman may claim his *ben*, have his right to cars acknowledged, and delegate it to his boys. Hence—(*b*) A day's work. The terms *quarter-ben*, *half-ben*, *three-quarters-ben* are used to denote the proportion of a man's darg, or day's output of mineral, which a youth is able or allowed to put out. *Barrowman*, Glossary. [Scotch.]

benab (bā-näb'), *n.* [Also *benaboo*; from a native name (Carib?) in Guiana.] A temporary shelter made of leaves and branches and supported on a framework of poles. Also *benaboo.* [Guiana.]

Bence-Jones albumin, albuminuria, albumose. See ★*albumin.*

bench, *n.* 8. (*b*) (2) A horizontal subdivision of a bed of coal or other mineral.—11. A glass tray in which microscopical slides can be placed, in a vertical position, for staining or other purposes.—**Anxious bench.** See ★*anxious seat.*—**Mourners' bench.** See ★*mourner*1.—**Optical bench,** an apparatus suitable for experiments in optics, particularly on the interference of light. It consists of a properly supported horizontal brass bar, accurately graduated, along which vertical uprights can slide freely. A vernier is attached to each upright. An adjustable slit, a metal plate for holding special instruments, and a micrometer eyepiece with cross-wire form the usual outfit.—**Sloid bench.** See ★*sloid.*

bench-board (bench'bōrd), *n.* A board used by molders, on which the pattern is laid when starting to fill the flask with sand. This board is removed after the flask is turned over, so that the cope can be put on.

bench-diggings (bench'dig"ingz), *n. pl.* In *mining*, river placers not subject to overflow.

bench-grinder (bench'grīn"dėr), *n.* A small machine for grinding which, having short legs, is set on a bench to bring it to a convenient height.

benchlet (bench'let), *n.* [*bench* + *-let.*] A small bench; a stool. *Carlyle.*

bench-level, *n.* 2. The elevation of a surveyor's bench-mark above a given or datum-plane.

benchucha (ben-chö'chä), *n.* [From some S. Amer. source?] A large South American reduviid bug, probably of the genus *Conorhinus*, which sucks the blood of warm-blooded animals, including man.

benchy (bench'i), *a.* In *mining*, characterized by benches, as a lode or bed.

bend1, *n.* 13. Power; ability: as, that is above my *bend.* [Colloq., western U. S.]—14. A segmental plate or ring on which the movable carding-surfaces of a revolving flat cotton-carding machine run and are adjusted in their relation to the main cylinder or drum. *Nasmith*, Cotton Spinning, p. 101.—15. *pl.* Same as *caisson-disease.* *The Century*, Nov., 1903, p. 45. [Colloq.]

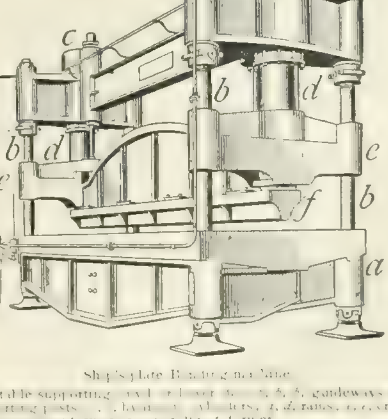
benda (ben'dä), *n.* An Ashanti gold coin.

bender, *n.* 6. A mechanical device for bending or drawing a crossbow.

bendigo (ben'di-gō), *n.* A rough fur cap named from a noted English pugilist. *Stand. Dict.*

bending-form (ben'ding-fôrm), *n.* In *hardware*, a form of bench-anvil used in bending steam-, gas-, and water-pipes.

bending-machine, *n.* 2. In *wood-working*, a power-machine for bending wood into the various forms required in making vehicles, agricultural tools, and furniture. Two types are in use: in one the wood, while soft and hot from the steaming-bath, is bent without additional heat; in the other the machine itself is steam-heated to assist in keeping the steamed wood hot until the bending is complete. In all machines there is a master-form of metal fixed in the machine, to give the wood the required shape, and a second form for holding the wood in place until bent. In some machines the form is removed with the wood to keep it bent until cold and rigid; in others the wood is bound by a shackle or other device for retaining its bent form, and removed from the machine and allowed to cool, when the shackle can be removed.—**Hydraulic bending-machine,** a machine for bending metal rails, beams, plates, etc., used in ship-building. It consists of a massive anvil, former, or table for supporting and guiding the



Ship's-plate Bending-machine.

a, table supporting anvil or lower former; *b*, *b*, *b*, guideways and supporting posts; *c*, *c*, hydraulic cylinders; *d*, *d*, rams; *e*, *e*, cross-heads carrying former or upper die; *f*, former.

beam, rail, or plate while it is subjected to the pressure of one or two hydraulic rams. The large machines are essentially double hydraulic presses, employing two vertical rams that carry a long former which bends the metal laid on the table under it into the required shape.

bending-rolls (ben'ding-rōlz), *n. pl.* A machine having a set of rolls, either horizontal or vertical, so arranged that a plate passed between them while they revolve will be curved to any desired radius. If it is desired to curve the plate until its two edges meet, the bending-rolls must be so made that the bearing at one end can be removed to provide for taking out the plate.

benduqi (ben-dö'kē), *n.* [Also *benduky*, *benduky*; < Ar. *bunduqi*, a Venetian sequin or ducat, lit. 'Venetian,' < *Bunduq*, Turk. *Vendik*, G. *Venedig*, Venice, < L. *Venetiæ*, adj., < *Venetia*, Venice.] A gold coin of Morocco.

benedicence (bē-ned'i-sens), *n.* [NL. as if *benedicentia*, < L. *benedicere*, bless: see *benedict*.] Kindly speech. *M. Williams.*

Benedictinism (ben-ē-dik'tin-izm), *n.* The system and method of religious life and thought exemplified in the Benedictine order.

benedictional, *n.* **II.** *a.* Pertaining to or of the nature of a benediction; pertaining to blessings given according to the prescribed rite; also, relating to objects so blessed.

Small *benedictional* crosses belong to each altar, and processional crosses are common.
Encyc. Brit., XXVII. 238.

benedictive, *a.* **2.** Expressing desire or wish; precative: a form of the optative mood in Sanskrit verbs.

The aorist has also an optative, of somewhat peculiar inflection, usually called the precative (or *benedictive*).
Whitney, Sansk. Gram., § 533.

benedictively (ben-ē-dik'tiv-li), *adv.* With the force of the *benedictive* mood. See ★*benedictive*, 2.

benedite (ben'e-dīt), *n.* An explosive containing 92–95 parts of ammonium nitrate and 5–7 parts of colophony.

benefactorship (ben-ē-fak'tor-ship), *n.* The position or relation of benefactor: as, "his *benefactorship* to his country," *Hales.*

benefactory (ben-ē-fak'to-ri), *a.* Benefit-conferring; beneficial: as, *benefactory* results.

benefice (ben'ē-fis), *v. t.*; pret. and pp. *beneficed*, ppr. *beneficing*. [*benefice*, *n.*] To endow or invest with a benefice. *Wyclif.*

beneficial, II. *n.* **2.** In *zoöl.*, an animal which benefits man by destroying or checking the increase of animals injurious to him.

Group G.—Animals which are known as "*beneficials*," on account of their being destructive to or checking the increase of the injurious animals classed under Groups D, E, and F. Examples:—Certain carnivorous and insectivorous birds, reptiles, and Amphibia; parasitic and predacious insects, acari, myriopods, etc.
Jour. Roy. Micros. Soc., April, 1904, p. 172.

Benefit of cession, in *civil law*, immunity from future imprisonment of a debtor for his present debts upon surrender of his property for the benefit of his creditors.

Bengal blue, isinglass. See ★*blue*, ★*isinglass*.

bengalin (ben'ga-lin), *n.* [*Bengal* + *-in*[2].] One of the Janus coal-tar colors. Same as *indoin* ★*blue*. Also *bengaline*.

bengaline (ben'ga-lin), *n.* [*Bengal* + *-ine*[2].] A fine, corded dress-fabric for women's wear. It has a silk warp and a worsted weft. The latter is so introduced as to form a cord, though entirely concealed on both surfaces by the silk warp.

bengaza (ben-gä'zä), *n.* A sponge of somewhat coarse texture found in deep water and used by the Turks as a bath-sponge.

beni (bā'nē), *n.* The name ('Japanese beni') of *Caryopteris* (*Mastacanthus*) *incana*, a hardy shrub native to China and Japan, cultivated for its late summer bloom. The leaves are petiolate, ovate, or oblong, the flowers small, violet-blue, or lavender-blue. It is known in the trade as the *blue spiræa*.

benighted (bē-nīt'ed), *p. a.* Overtaken with night; hence, involved in moral darkness or ignorance: as, *benighted* Hottentots.

benjamin[1], *n.* **2.** In Australian Pidgin-English, a married man; a husband.

Benjamite (ben'ja-mīt), *n.* A descendant of the patriarch Benjamin, son of Jacob.

Bennet's fracture. See ★*fracture*.

Bennettitaceæ (ben″e-ti-tā'sē-ē), *n. pl.* [NL. (Salms-Laubach, 1887), < *Bennettites* + *-aceæ*.] A family of gymnospermous fossil plants of the order *Bennettitales*. It is distinguished from the *Cycadaceæ* by having the reproductive organs, which consist of spadices surrounded by involucral bracts, embedded in a thick jacket or armor (see ★*armor*), and projecting only slightly or not at all beyond it. It contains the genera ★*Bennettites* and ★*Cycadeoidea* (which see). The numerous trunks of this family have all been found in Mesozoic strata, chiefly Jurassic and Lower Cretaceous, especially in England, France, Italy, Maryland, and South Dakota.

Bennettitales (ben-e-ti-tā'lēz), *n. pl.* [NL. (Engler, 1892), < *Bennettites* + *-ales*.] An order of fossil plants, of the class *Gymnospermæ*, containing the family *Bennettitaceæ* only, though further research may show that this should be divided into several families.

Bennettites (ben-e-tī'tēz), *n.* [NL. (Carruthers, 1871), named in honor of John Joseph *Bennett*, an English botanist.] A genus of gymnospermous fossil plants, type of the family *Bennettitaceæ* and order *Bennettitales*. It is characterized by the presence of seeds borne on long stalks and deeply embedded in the silicified armor. These seeds have been discovered in only a few specimens, and those in which they do not occur are referred to the genus *Cycadeoidea*, a name which has priority. It is probable that all the fertile plants actually bore them, and therefore the distinction is purely artificial. See ★*Cycadeoidea*.

Bennington pottery. See *American* ★*pottery*.

beno (bē'nō), *n.* An English spelling of Spanish *vino*, wine, applied in the Philippine Islands to aguardiente.

In view of the vile whiskey and "*beno*" selling dens which have sprung up around the army posts since the canteen was abolished, the military authorities here have asked the Commission to prohibit the sale of liquors within two miles of a military post, except in the case of a few stations located in large towns.
Med. Record, April 4, 1903, p. 547.

bent[1], *a.* **3.** In *mining*, said of a coal-seam which is difficult to work on account of the unequal distribution of the weight of the overlying strata. [Scotch.]—**4.** Bound in some direction or toward an aim; set; pointing toward something.

bent[1], *n.* **8.** (*b*) The articulated group of members forming a plane frame of a framed structure, such as a bridge-truss, a braced pier, or a building-frame. A bent of trestle would comprise all the members in one transverse plane, including the sill, cap, vertical and inclined posts, and transverse bracing-members.—**11.** A cleavage-plate of slate whose sides are slightly curved, cut from gently folded beds.

The rock surface may be but a few inches below the turf or may be buried beneath 30 to 40 feet of glacial deposits. There is frequently a flexure of the cleavage ("curl") for a few inches near the ribbon; more rarely there is a curvature of the cleavage across the entire bed. Slates cut from such beds are called "*bents*," and are used for covering curved or conical roofs.
Contrib. to Econ. Geol., U. S. Geol. Surv., 1902, p. 362.

bent[2], *n.*—**Black bent.** (*b*) The switch-grass, *Panicum virgatum*.—**English bent,** the redtop, *Agrostis alba*.—**Long-leafed bent,** the sand-grass, *Calamovilfa longifolia*.—**Panic bent,** the Munro-grass, *Panicum agrostoides*.—**Rhode Island bent,** the dog-bent, *Agrostis canina*, one of the best lawn grasses. Less properly, *A. alba*.—**Rough bent,** *Agrostis hyemalis*.—**Rough-leafed bent,** *Agrostis asperifolia*.—**Sea-coast bent,** *Agrostis coarctata*.

benthic (ben'thik), *a.* [*benthos* + *-ic*.] Living upon the bottom as distinguished from living in the water above; submarine; benthonic.

Benthocometes (ben″thō-kō-mē'tēz), *n.* [NL., < Gr. βένθος, depth, + κομήτης, hairy (or comet?): see *comet*.] A genus of deep-sea fishes of the family *Brotulidæ*.

Benthodesmus (ben-thō-des'mus), *n.* [NL., < Gr. βένθος, depth, + δεσμός, band.] A genus of deep-sea fishes allied to the mackerel, belonging to the family *Lepidopodidæ*.

benthonic (ben-thon'ik), *a.* [Irreg. < *benthos* + *-on-ic*.] Living upon or in the bottom of the sea as distinguished from the water; submarine. Benthonic organisms are contrasted with those that are water-dwelling or planktonic. Many animals are benthonic during part of their lives and planktonic during another part. Most hydroids are fixed to the bottom, or benthonic, while the medusæ which they produce and set free swim in the water and are planktonic. See *benthal* and ★*planktonic*.

The *Challenger* observations have shown that the bottom in this neighbourhood is covered by an exceedingly rich *benthonic* fauna. *Geog. Jour.* (R. G. S.), XIII. 58.

benthos (ben'thos), *n.* [Gr. βένθος, depth, akin to βάθος, depth: see *bathos*.] The plants and animals that live in the sea-bottom, and those that are attached to its surface, and those that creep or run over it: a collective noun introduced by Haeckel. The benthos is contrasted with the *plankton*, or floating and swimming fauna and flora of the sea. It includes all the marine macrophytic algæ, also some phanerogams, the sea-grasses (see *sea-grass*, 1), as well as an abundance of microphytic algæ (diatoms, etc.). It is divided into the *sedentary* and the *vagile* or vagrant benthos, the former including organisms attached to the bottom, the latter those moving over it. See *plankton*, ★*nekton*.

Others again have no natatory organs, and are either permanently fixed, like Zoophytes and Stalked Crinoids, or move by creeping over the sea-bottom, like Starfishes, Holothurians, Chætopods, etc.; such forms constitute the *benthos*, or "bottom fauna."
Parker and Haswell, Zoology, II. 600.

Abyssal benthos, the animals that live upon or in the bottom of the deep sea.—**Littoral benthos,** the animals and plants that live upon or in the bottom of the waters in the vicinity of the coast.

Benthosauridæ (ben-thō-sâ'ri-dē), *n. pl.* [NL., < *Benthosaurus* + *-idæ*.] A small family of deep-sea fishes with well-developed maxillary and very long ventrals, allied to the *Synodontidæ*.

Benthosaurus (ben-thō-sâ'rus), *n.* [NL., < Gr. βάθος, depth, + σαῦρος, lizard.] A genus of fishes, typical of the family *Benthosauridæ*. The species *B. grallator* is found in the Gulf Stream.

Benthosema (ben-thō-sē'mä), *n.* [NL., < Gr. βένθος, depth, + σῆμα, a sign, mark, token.] A genus of lantern-fishes of the family *Myctophidæ*, found in the waters about Greenland.

Benton shale. See ★*shale*[2].

bentonite (ben'ton-īt), *n.* [*Benton* + *-ite*[2].] A variety of clay occurring extensively in the Fort Benton strata of the Cretaceous of Wyoming. While containing chiefly silica, alumina, and water, with about 60 per cent. or more of the first-named, it nevertheless has so many other bases as not to be refractory, but rather to resemble fullers' earth. *Engin. and Min. Jour.*, Oct. 22, 1898, p. 491.

bent-wood (bent'wůd), *n.* Wood in rods, bars, and narrow boards and moldings softened in steam and fastened while hot into a curved clamp to give it a bent form. When cold and removed from the clamp it retains its form. Used in boat-building and in furniture-making. —**Bent-wood furniture,** chairs and other furniture made of round rods of wood bent into various artistic forms and usually having cane seats.

benum, *v. t.* A simplified spelling of *benumb*.

benylene (ben'i-lēn), *n.* [*ben(zene)* + *-yl* + *-ene*.] A hydrocarbon, $C_{15}H_{28}$, of the acetylene series, formed by the action of alcoholic potash on triamylene bromide.

benzal (ben'zal), *n.* [*benz(ene)* + ★*-al*[3].] **1.** An organic radical having the formula C_6H_5CH and a valence of two.—**2.** A prefix sometimes used to indicate that a compound is derived from benzaldehyde.—**Benzal green.** Same as *benzaldehyde green* (which see, under *green*[1]).

benzaldoxime (ben-zal-dok'sim), *n.* [*benzal-d(ehyde)* + *oxime*.] The oxime, $C_6H_5CH{:}NOH$, of benzaldehyde. It exists in two forms—antibenzaldoxim, which melts at 35° C., and synbenzaldoxim, which melts at 128°–130° C.

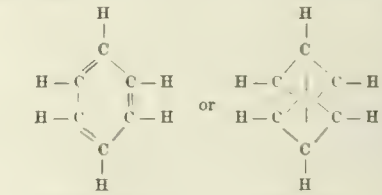
benzamarone (ben-zam'a-rōn), *n.* [*benz(aldehyde)* + L. *amar(us)*, bitter, + *-one*.] A crystalline compound formed by allowing an alcoholic solution of desoxybenzoin, benzaldehyde, and potassium hydroxid to stand. It melts at 218° C.

benzanilide (ben-zan'i-lid), *n.* [*benz(oyl)* + *anil(ine)* + *-ide*[2].] The benzoyl derivative of aniline, $C_6H_5NHCOC_6H_5$. It crystallizes in leaflets which melt at 161° C.

benzein (ben'zē-in), *n.* [*benz(oin)* + *-e-in*[2].] A triphenyl carbinol or one of its derivatives in which two of the benzene nuclei are hydroxylated: as, phenol *benzein*, $C_6H_5C\begin{cases}C_6H_4OH\\C_6H_4{=}O\end{cases}$.

The benzeins are formed by the condensation of benzotrichlorid with phenols, and are dyes.

Benzene nucleus. See ★*nucleus*.—**Benzene ring,** the graphical or structural representation of a molecule of benzene by the closed chain or ring, proposed by Kekule in 1865. It is usually written in the form of a hexagon, as follows:



Kekule's Formula. Centric Formula

benzenoid (ben'zē-noid), *a.* [*benzene* + *-oid*.] Derived from or related to benzene. *Rep. Brit. Ass'n Advancement of Sci.*, 1900, p. 166.

benzerythrene (ben-zer'i-thrēn), *n.* [*benz(ene)* + Gr. ἐρυθρός, red, + *-ene*.] A colorless hydrocarbon, $C_{24}H_{18}$, contained in anthracene oil and formed by passing benzene through a red-hot tube. It crystallizes in leaflets and melts at 307°–308° C.

benzhydrol (benz-hī'drōl), *n.* [*benz(ene)* + *hydr(ogen)* + *-ol*.] Diphenylmethanol or diphenylcarbinol, $(C_6H_5)_2CHOH$, a compound formed by the reduction of benzophenone. It crystallizes in needles which melt at 68° C.

benzidam (ben'zi-dam), *n.* [*benz(ene)* + *-id*[1] + *am(monium)*.] The name given to aniline

by Zinin in 1846, when he prepared it by reducing nitrobenzene with ammonium sulphid. [Now obsolete.]

benzidine (ben'zi-dīn), *n.* [*benz(ene)* + *-id*[1] + *-ine*[2].] The common name for para-diaminodiphenyl, one of the aromatic bases having the formula $NH_2.C_6H_4-C_6H_4.NH_2$. It is an important raw material in the preparation of many of the direct cotton colors. — **Benzidine blue, colors.** See ★*blue*, ★*color*. — **Benzidine rearrangement,** a molecular rearrangement by which benzidine is formed from hydrazobenzene, $C_6H_5NHNHC_6H_5$, or by which other hydrazo compounds undergo a similar transformation. The rearrangement takes place under the influence of dilute acids and is important as a step in the preparation of many dyes, especially those of the "Kongo" series. **Benzidine red.** See ★*red*[1].

benzilam (ben'zi-lam), *n.* [*benzil* + *am(monia)* (?).] The compound triphenyloxazole, C_6H_5-C-O ‖ C_6H_5-C-N ⟩ CC_6H_5. It crystallizes in prisms which melt at 115° C.

Benzilic acid, diphenylglycolic or diphenylhydroxyacetic acid, $(C_6H_5)_2C(OH)CO_2H$. It is formed by warming benzil with alcoholic potash. It crystallizes in needles which melt at 150° C.

benzimino (ben-zim'in-ō), *n.* Noting an ester of the general formula $C_6H_5NH-O-R$, salts of which are formed by the action of hydrochloric acid and an alcohol on benzonitrile. The *ethyl ester* is an oil which forms a crystalline hydrochlorid. Also called, less correctly, *benzimino ether*.

benzo-. A combining form of *benzene*, sometimes used to indicate that a compound is related to benzene or one of its homologues. Its significance is not definite, as is the case with such prefixes as *methyl-*, *phenyl-*, etc. In color-chemistry its use commonly indicates a direct cotton color, as in *benzo-blue*, *benzo-purpurin*, etc. The direct cotton coal tar colors are sometimes spoken of as the *benzo colors*. — **Benzo-black, blue,** etc. See the ★nouns. — **Benzo sky-blue.** Same as *diamine* ★*sky-blue*.

benzo-azurine (ben-zō-azh'ū-rin), *n.* Either of two direct cotton coal-tar colors (*benzo-azurine G* and *3G*) of the diazo type, derived from dianisidine. They dye unmordanted cotton blue in an alkaline salt bath.

benzo-black (ben-zo-blak'), *n.* A direct cotton coal-tar color of unpublished composition.

benzo-blue (ben-zō-blō'), *n.* A name applied to three distinct cotton coal-tar colors (*benzo-blue BB*, *BX*, and *3G*), of the diazo type, derived from benzidine or tolidine. They dye unmordanted cotton various hues of blue in a neutral salt bath. They are similar to some of the diamine blues.

benzo-brown (ben-zō-broun'), *n.* Same as *alkali* ★*brown*. — **Benzo-brown B** and **G,** two direct cotton coal-tar colors of the tetrakisazo type. The former is produced by combining diazotized sulphanilic acid, and the latter diazotized naphthionic acid, with Bismarck brown. They dye unmordanted cotton various shades of brown from a neutral salt bath.

benzo-cyanine (ben-zō-sī'a-nin), *n.* A direct cotton coal-tar color of unpublished composition. It dyes unmordanted cotton a bright blue from a salt bath.

benzo-flavin (ben-zō-flav'in), *n.* A basic coal-tar color of the acridine type. It dyes unmordanted wool and silk and tannin-mordanted cotton a bright yellow.

benzo-gray (ben-zō-grā'), *n.* A direct cotton coal-tar color of the trisazo type, derived from benzidine. It dyes unmordanted cotton gray from a neutral salt bath.

Benzoic sulphimide. Same as *saccharin*, 2. — **German benzoic acid,** a term formerly applied to benzoic acid made from horse-urine.

benzoin, *n.* **2.** [*cap.*] A genus of aromatic dicotyledonous trees or shrubs of the family *Lauraceæ*. See *Lindera*. — **3.** A compound, $C_6H_5CHOHCOC_6H_5$, formed when benzaldehyde is boiled with alcohol containing a little potassium cyanide. It melts at 130° C. and boils at 344° C. Also *diphenylethanolone*.

benzol, *n.* — **Ninety-per-cent. benzol,** the mixture of hydrocarbons obtained from coal-tar which distils over at temperatures not exceeding 110° C.; so called because 90 per cent. of it distils below or at 100°. It usually contains about 70 per cent. benzene and 25 per cent. toluene, and is used in the manufacture of nitrobenzene (oil of mirbane) and of aniline oil, from which aniline dyes are made.

benzoleic (ben-zō-lē'ik), *a.* Of or pertaining to benzol. — **Benzoleic acid.** Same as ★*tetrahydrobenzoic acid*.

benzometadiazine (ben″zō-met-a-dī-az'in), *n.* [*benz(ene)* + *metadiazine* (?).] Same as ★*quinazoline*.

benzonitrile (ben-zō-nī'tril), *n.* [*benzo(ic)* + *nitrile*.] Phenyl cyanide or the nitrile of benzoic acid, C_6H_5CN. It is an oil with an odor like that of bitter almonds. It boils at 190.6° C.

benzo-olive (ben-zō-ol'iv), *n.* A direct cotton coal-tar color of the trisazo type, derived from benzidine. It dyes unmordanted cotton a greenish olive in a neutral salt bath.

benzo-orange (ben-zō-or'ānj), *n.* A direct cotton coal-tar color of the diazo type, derived from benzidine and containing a salicylic-acid group. It dyes unmordanted cotton orange from an alkaline salt bath.

benzophenone (ben-zo-fē'nōn), *n.* [*benzo(ic)* + *phenyl*) + *-one*.] Diphenylketone, $(C_6H_5)_2CO$, a compound formed by the dry distillation of calcium benzoate. It melts at 48° C. and boils at 306.1° C.

benzoquinone (ben-zō-kwin'ōn), *n.* [*benzo(ic)* + *quinone*.] Same as *quinone*.

benzosol (ben'zo-sol), *n.* [*benz(oyl)* + *-ose* + *-ol*.] A colorless, tasteless, crystalline compound, $C_6H_4OCH_3OCOC_6H_5$, obtained by the action of benzoyl chlorid upon guaiacol; guaiacol benzoate; benzoyl guaiacol. It is sometimes taken internally for intestinal tuberculosis and diarrhea.

benzotrichlorid (ben″zō-trī-klō'rid), *n.* [*benzo(ic)* + *trichlorid*.] Phenyltrichlormethane or 1′, 1′, 1′-trichlortoluene, $C_6H_5CCl_3$, a colorless liquid formed by the action of chlorin on boiling toluene. It has a penetrative, irritating odor, and boils at 214° C. It is used in the preparation of a number of dyes.

Benzoyl chlorid, the chlorid of benzoic acid, C_6H_5COCl. It is a colorless oil with a pungent odor. Its vapor is very irritating to the eyes. It boils at 195° C.

benzoylacetylperoxid (ben'zō-il-as-e-til-pēr-ok'sid), *n.* [*benzo(ic)* + *acetyl* + *peroxid*.] A compound having the formula $C_6H_5CO.O.O.COCH_3$, a solid which melts at 40° C. It is a powerful germicide and has been used in medicine. A trade-name, *acetozone*, is sometimes used for this compound.

Benzyl acetate, an important constituent of the natural essential oils of jasmine and ylang-ylang, used in perfumery. — **Benzyl blue, violet.** See ★*blue*, ★*violet*[1].

benzylidene (ben-zil'i-den), *n.* [*benzyl* + *-id-* + *-ene*.] Same as ★*benzal*.

bepatched (bē-pacht'), *p. a.* Much or frequently patched; wearing patched clothes.

> You ragged vagabond . . . you *bepatched* and bespattered knave. *Addison*, Sir Roger de Coverley.

ber (bār), *n.* [Hindi *ber*.] The name in India of the jujube or Chinese date, *Zizyphus Jujuba*. Also called *badari*. See *jujube*, 1, and *Chinese date*, under ★*date*[3].

berakah (be-rä'kä), *n.*; pl. *berakoth* (-kōt). [Heb., < *barak*, Ar. *baraka*, bend the knee, bless, praise.] A blessing; a benediction. The blessings and thanksgivings generally begin with the words *Barukatah Adonai* ("Blessed art thou, O Lord"). The pious Hebrew eats or drinks nothing without a benediction before and after.

berakoth, *n.* Plural of ★*berakah*.

berascal (bē-ras'kal), *v. t.*; pret. and pp. *berascaled* or *berascalled*, ppr. *berascaling* or *berascalling*. To brand as a rascal; rate as a rascal. *Fielding*, Jon. Wild, II. iii.

berbamine (bēr'ba-min), *n.* [*Berb(eris)* + *amine*.] A crystalline alkaloid, $C_{18}H_{19}NO_3 + 2H_2O$, found in *Berberis vulgaris*, the common barberry. The anhydrous alkaloid melts at 156° C.

berber[2] (bēr'bēr), *n.* [Origin uncertain. See ★*barber*[2].] A cold fog, analogous to fine sleet, which freezes to one's face and hair or beard. See ★*barber*[2]. [New York City.]

berberic (bēr'be-rik), *a.* [*Berber(is)* + *-ic*.] Derived from berberine. — **Berberic acid,** a crystalline acid, $C_8H_8O_4 + H_2O$, obtained by melting berberine with potassium hydroxid. It melts with decomposition at about 165° C., giving homopyrocatechinol.

berberid (bēr'bē-rid), *n.* [*Berber(is)* (see *barberry*) + *-id*[2].] A plant of the family *Berberidaceæ*.

berberilic (bēr-be-ril'ik), *a.* [*Berber(is)* + *-il* + *-ic*.] Derived from berberine. — **Berberilic acid,** an acid, $C_{20}H_{19}NO_9$, formed by oxidizing berberine with potassium permanganate. It melts with the formation of an anhydrid at 177–182° C.

berberonic (bēr-be-ron'ik), *a.* [*Berber(is)* + *-one* + *-ic*.] Derived from berberine. — **Berberonic acid,** 2, 4, 6-pyridine tricarboxylic acid, $C_5H_2N(CO_2H)_3$. It is formed by the oxidation of berberine with nitric acid. It crystallizes in prisms which melt at 235° C.

Berchemia (bēr-kē'mi-ä), *n.* [NL. (proposed by Necker, 1790, established by De Candolle, 1825), of unknown significance.] An untenable name for *Œnoplia* a genus of usually climbing shrubs belonging to the family *Rhamnaceæ*. See ★*Œnoplia*.

Berdan pan. See ★*pan*[1].

berduque, *n.* Same as ★*belduque*.

Berea grit. Same as *Berea sandstone*.

Berecynthian (ber i-sin'thi-an), *a.* [Gr. Βερεκύνθιος, Βερεκυντιάς, adj., from Βερέκυντος, a place in Phrygia.] Of or pertaining to Berecynthos, a place in ancient Phrygia. — **Berecynthian mother,** Cybele, who was called "the mother of the gods," and whose worship was common in Phrygia, in the Berecynthian forest or Berecynthian mountains.

berengelite (be-ren'ge-lit), *n.* [*Berengela* (see def.) + *-ite*[2].] A substance resembling bitumen or asphalt, found in the province of San Juan de Berengela, Peru, locally used for calking and paying ships.

Berenicea (ber-ē-nis'ē-a), *n.* [NL., < L. *Berenice*, Gr. Βερενίκη, a feminine proper name.] A genus of cyclostomatous bryozoans growing as thin discoid crusts on foreign bodies, the zoœcia being arranged in irregularly alternating lines. These organisms are found in rocks as old as the Silurian, became very abundant in Mesozoic time, and are present in existing seas.

beresovite (be-res'ō-vit), *n.* [*Berezof*, a mining district and place in Russia, in the government of Perm, + *-ite*[2].] A chromate and carbonate of lead occurring in deep-red crystalline lamellæ: found at Berezof in the Ural.

bergamiol (bēr-gam'i-ōl), *n.* [*bergam(ot)* + *-i-ol*.] Linaloyl acetate, the principal constituent of the essence or essential oil of bergamot, now prepared in separate form and used in perfumery.

bergaptene (bēr-gap'tēn), *n.* A lactone, $C_{12}H_8O_4$, corresponding to ethenylol-phentriol-propenylic acid, $HO.CH:CHC_6H(OH)_3CH:CHCO_2H$: found in oil of bergamot. It crystallizes in needles which melt at 188° C.

Bergen game. See ★*game*[1].

bergenin (bēr'je-nin), *n.* An indifferent, crystalline, bitter substance, $C_8H_{10}O_5 + H_2O$. It melts at 130° C.

bergschrund (berg'shrönt), *n.* [G., < *berg*, mountain, + *schrund*, a gap, crevice.] A crevice between a glacier and the rocky wall of its valley. The bergschrund is the scene of thawing under the sun's rays during the day and of freezing at night, and along it frost is very destructive, furnishing the loose rocks for moraines. *Jour. of Geol.*, Nov.-Dec., 1902, p. 846.

bergstock (berg'stok), *n.* [G., 'mountain stick': see *berg* and *stock*.] An alpenstock; a long stick with a spike at the end, used in mountain-climbing.

berg-till (berg'til), *n.* Glacial debris carried and deposited by icebergs.

> When icebergs bearing till or bowlders floated out into lakes which bordered the ice-sheet, deposits were made in the water which bear resemblances both to till and to lacustrine clays. If the icebergs bore till, this might be deposited intact if the icebergs grounded. If the bergs bore only bowlders and stones, these were dropped into the lacustrine clay. The stones and the clay or mud might be in the relative proportions appropriate to till. Such deposits would be, in some respects, unlike ground moraine, both in physical constitution and in topography, but the two classes of deposits may so closely resemble each other that their local differentiation is no simple matter. Deposits of *berg till* are quite certainly existent in New Jersey.
> *R. D. Salisbury*, in Geol. Surv. of New Jersey, 1892, p. 44.

berilic (be-ril'ik), *a.* [*ber(berine)* + *-il* + *-ic*.] Noting a crystalline, monobasic acid, $C_{20}H_{15}NO_8$, obtained by the oxidation of berberine with potassium permanganate. It melts at 198°–200° C.

berith milah (be-rēt'mē'lä), *n.* [Heb. *berith*, covenant, + *milah*, circumcision.] The covenant of circumcision. The rite of circumcision is performed on every Jewish male infant on the eighth day after his birth.

Berkefeld filter. See ★*filter*[1].

Berkeleyite (bēr k'lē-īt), *n.* Same as *Berkeleian*.

Berkshire (bēr k'shir or bärk'shir), *n.* [A shire of England.] A breed of pigs which had its origin in Berkshire, England. These pigs are of moderate size, with short legs and straight backs, and the color is mainly black.

berley (bēr'li), *n.* [Origin unknown. Morris suggests that it is aboriginal Australian.] Among Australian fishermen, ground-bait.

berlin[1], *n.* **3.** A dance similar to a polka (which see). — **4.** A fine kind of dyed wool used for knitting fancy articles, tapestry, etc. — **5.** A variety of boxed sleigh, used for passengers or goods. — **Berlin black.** See ★*black*. — **Berlin coach,** the name given to a berlin when made up with a paneled boot instead of a hammer-cloth seat. — **Berlin defense.** See ★*defense*. — **Berlin rockaway,** a carriage in which the characteristic features of the berlin and the rockaway are combined. — **Berlin warehouse,** a shop where Berlin wool and fancy articles are sold.

berlinet (bêr-lin-et'), *n.* [*berlin* + *-et*[1].] A small berlin with interior seats for two persons.

berlingot (ber-lan-go'), *n.* [F. *berlingot*, formerly *brelingot*, < *berlingue*, *brelingue*, variations of *berlinde*, *berlien*, a berlin.] A carriage of the berlin type, with the front quarter removed and cut longitudinally to half its original width: fitted for only one passenger.

Berlinism (bêr'lin-izm), *n.* A manner of of speech or method of doing things peculiar to Berlin, or to some persons there.

He [Prof. Steindorff] contrives also—more Germanorum—to introduce into his memoir some extraordinary spellings, such as "Gize" for Ghizeh, "Otnoes" for Teta, "Phops" for Pepi, "Psemtek" for Psammetichus, and "Echenaten" for Khuenaten, with the apparent intention of showing that, even when deprived of the commas and crotchets of "*Berlinism*," German scholars can yet render unrecognizable to the unlearned reader the most familiar names in Egyptian history.
Athenæum, Sept. 19, 1903, p. 387.

berlinite (bêr'lin-īt), *n.* [Named after Prof. N. H. *Berlin* of Lund.] A hydrated aluminium phosphate occurring in from gray to rose-red massive forms: found in Sweden.

berm, *n.* **3.** In *railroad engin.*, the narrow horizontal plane between the foot of the embankment or excavation slope and the top of the slope of the side-ditch.

Bermuda ★**bluefish,** ★**catfish,** ★**lily,** ★**shilling.** See the nouns.

Bernardston series. See ★*series*.

Bernician group. See ★*group*[1].

Bernissartian (bêr-ni-sär'ti-an), *a.* and *n.* [*Bernissartia* (see def.) + *-an*.] In *geol.*, noting a group of clays and sands in Belgium lying at the base of the Cretaceous system. They lie beneath beds of Upper Neocomian age and represent in part Neocomian time. The name is derived from Bernissart, Belgium, "where in a buried system of Cretaceous ravines remains of the terrestrial and fluviatile life of the time have been well preserved" (*Geikie*). Formerly termed ★*Aachenian* (which see).

Beroida (bē-rō-i'dä), *n. pl.* [NL., < *Beroë*, a genus, + *-oida*.] An order of *Ctenophora*. They have an elongate, somewhat compressed body, no tentacles, wide mouth and spacious stomodæum, and the meridional vessels produced into a complex system of anastomosing branches. The order contains the family *Beroidæ*. Also *Beroidea*.

berri-berri, *n.* See *beriberi*.

berro (ber'rō), *n.* [Sp. *berro*, water-cress.] The name in Porto Rico for the common water-cress, *Rorripa Nasturtium*.

berrugate (be-rō-gā'te), *n.* [Sp. (Dominguez), appar. equiv. to ★*berrugado*, *verrugato*, warty, < *berruga*, *verruga*, < L. *verruca*, a wart.] A serranoid fish, *Lobotes pacificus*, found on the Pacific coast of Central America.

berry[1], *n.*—**Baked-apple berry.** Same as *baked-apple*.—**China berry.** Same as *china-tree*.—**Gall berry.** See ★*gall-berry*.—**Holm berry,** a berry of the butcher's-broom, *Ruscus aculeatus* (so called from its resemblance to a holly berry), or the plant itself. Sometimes called *kneeholm*.—**Miraculous berry,** a shrub belonging to the family *Sapotaceæ*, *Synsepalum dulcificum*, native to Upper Guinea, West Africa: so named by the English colonists from the exceedingly sweet fruits and from the long duration of the sweet flavor upon the palate. The natives use the fruits for sweetening stale and sour food and palm-wine.—**Molkaberry,** the cloudberry, *Rubus Chamæmorus*. [Alaska.]—**Purple berry,** a Tasmanian evergreen twining shrub, *Billardiera longiflora*, of the family *Pittosporaceæ*, bearing showy greenish-yellow flowers and purple berries.

berseem (bêr'sēm), *n.* [Egypt. Ar. *barsīm* (Spiro).] The Alexandrian or Egyptian clover, *Trifolium Alexandrinum*, the principal forage-plant and soil-plant of Egypt. It is an annual and of great value as a winter crop in warm countries where irrigation is practised. It has been introduced into America for trial, especially along the Rio Grande.

berth[2], *v.* **I.** *trans.* **2.** To find a berth for; provide with a "job" or "situation."

Comfortably *berthed* in the City Chamberlainship.
Leslie and Taylor, Sir Joshua Reynolds, II. 365.

II. *intrans.* To occupy as living-quarters on shipboard: used with *in*.

A part of the crew *berth in* the forward part of the 'tween deck. *Buck*, Med. Handbook, I. 519.

Berthelot calorimeter. See ★*calorimeter*.

Bertie dolomite, water-lime. See ★*dolomite*, *Salina* ★*beds*.

Bertillon system. See ★*system*.

bertillonage (ber-tē-yo-näzh'), *n.* [F., < *Bertillon*, a personal name.] The identification of criminals by the Bertillon system. See ★*system*.

Bertin's ligament. See ★*ligament*.

Bertolonia (bêr-tō-lō'ni-ä), *n.* [NL. (Raddi, 1820), named in honor of Antonio *Bertoloni* (1775–1869), an Italian botanist.] An untenable name for *Triblemma*, a genus of plants of the family *Melastomaceæ*. See ★*Triblemma*.

Berycinæ (ber-i-si'nē), *n. pl.* [NL., < *Beryx* (*Beryc-*) + *-inæ*.] A subfamily of fishes typified by the genus *Beryx*.

beryl, *n.*—**Golden beryl,** a golden-yellow transparent variety of beryl found in Connecticut and elsewhere used as a semiprecious stone.

beryllium, *n.* Some evidence has lately been brought forward which indicates that another element may perhaps be present in beryllium, which has heretofore been supposed to be simple.

beryllonite (be-ril'on-īt), *n.* [*beryll(ium)* + *-on-* (?) + *-ite*[2].] A phosphate of sodium and beryllium (glucinum), $NaBePO_4$, occurring in colorless orthorhombic crystals: found in Maine.

berzelium (bêr-zē'li-um), *n.* [NL (Ch. Baskerville), < *Berzelius*, a Swedish chemist (1779–1848).] A supposed new chemical element of which the chlorid was obtained by fractional sublimation of thorium chlorid. The oxid of berzelium, it is said, has a greenish color and does not phosphoresce with ultra-violet light.

Berzelius's lamp. See ★*lamp*.

besa[2] (bā'sä), *n.* [E. African coast.] A current coin of Benadir, equivalent to one fourth of an anna, or about half a cent.

besan (bā-sän'), *n.* A Creole name of the Moorish idol, *Zanclus canescens*, a fish of the tropical Pacific.

bescoundrel (bē-skoun'drel), *v. t.*; pret. and pp. *bescoundreled* or *bescoundrelled*, ppr. *bescoundreling* or *bescoundrelling*. To call 'scoundrel'; apply the epithet 'scoundrel' to.

Where surly Sam . . . Nassau *bescoundrels*.
Wolcott, *To Boswell*, Works, I. 313.

beshade (bē-shād'), *v. t.* To put in the shade; envelop in shade; shade.

The highe tre the ground *beshadeth*. *Gower*.

beshadow (bē-shad'ō), *v. t.* To cast a shadow upon; overshadow: as, *beshadowed* by huge trees.

beshame (bē-shām'), *v. t.* To put to shame. *Abp. Parker*.

beshear (bē-shēr'), *v. t.* To shear or shave all round: used chiefly in the past participle.

besil, *n.* Same as *bezel*.

besonnet (bē-son'et), *v. t.* To address or celebrate in sonnets.

Belles, who had been *besonneted* . . . for ten years before. *J. P. Kennedy*, Swallow Barn, p. 60.

besoot (bē-sůt'), *v. t.* To soil with soot; blacken with soot; besmut.

Was it fit that hee should *besoot* his face with the same paintings?
Mabbe, Aleman's Guzman d'Alf., I. 12. *N. E. D.*

besouled (bē-sōld'), *p. a.* Ensouled; endowed with a soul.

Besouled with earnest human nobleness.
Carlyle, Past and Present.

bespectacled (bē-spek'ta-kld), *p. a.* Wearing spectacles; having spectacles on: as, a prim, *bespectacled* schoolmaster

bespeed (bē-spēd'), *v. t.* To speed; cause to prosper.

Men set to woo . . . for others take often opportunity to *bespeed* themselves. *Jackson*, Creed. *N. E. D.*

bespined (bē-spīnd'), *a.* Covered with spines, or furnished with many spines.

bespirit (bē-spir'it), *v. t.* **1.** To fill or endow with spirit.—**2.** To possess with a familiar spirit.

The letter had no spirit in it; . . . but he aduised me, that he which wrote it should be *beespirited*.
Hellowes, Guevara's Epistles, p. 55.

besplash (bē-splash'), *v. t.* To splash all over; wet with splashing.

He *besplashes* and bemires the ladies who are walking.
W. Taylor, in Annual Review, II. 288.

bespout (bē-spout'), *v. t.* **1.** To recite in a pompous or affected manner.—**2.** To pester with too much "spouting" or oratory.

Woe for the age, woe for the man, quack-ridden, bespeeched, *bespouted*. Carlyle, Miscellanies, IV. 138.

bespred, *v. t.* A simplified spelling of *bespread*.

bess-bug (bes'bug), *n.* [Origin not obvious.] A large American beetle, *Passalus cornutus*.

bessemerize (bes'e-mêr-īz), *v. t.*; pret. and pp. *bessemerized*, ppr. *bessemerizing*. To subject (metal) to the Bessemer process; remove carbon, sulphur, or other combustible elements from (iron or steel) by forcing air through the material to be treated in a melted condition, as in the process, invented by Bessemer, for the production of mild steel or fused wrought-iron from cast-iron. See *Bessemer process*, under *process*, and *Bessemer copper* ★*process*.

bessroot (bes'röt), *n.* A provincial corruption of *birthroot*. *Small*, Flora Southeastern U. S.

bessy-cerka (bes-i-sêr'kä), *n.* [Origin not ascertained.] Same as *oldwife*, 2 (*c*).

best, *a.* **5.** Specifically, noting a certain grade of wrought-iron, which is generally divided into four grades: crown, best, best best, and best best best or treble best. This classification is largely arbitrary, and there is considerable difference between the same grades of different manufacturers.

bestar (bē-stär'), *v. t.* To sprinkle with stars; adorn with stars. *Sylvester*, Trophies.

bestialism (bes'tial-izm), *n.* Bestial condition or state; irrationality. *Rossetti*.

bestialist (bes'tial-ist), *n.* One who makes a study of beasts. *Swinburne*.

bestiarianism (bes-ti-ā'ri-an-izm), *n.* Bestiarian principles; the principles of the bestiarians or friends of the beasts.

bestrewment (bē-strō'ment), *n.* The act of strewing about: as, the *bestrewment* of flowers. *Blackwood's Mag.*, LVII. 526.

besugo (bā-sö'go), *n.* [Sp. *besugo*, the sea-bream, *Sparus pagrus* L.] The Cuban name of the red porgy, *Pagrus pagrus*.

bet[2], *n.* **3.** In *faro*, a card which is a case, that is, the only one of that denomination remaining in the box: so called because the player cannot be split. *Amer. Hoyle*, p. 348.—**Heeled bet,** in *faro* and some other games, a bet which plays two different events, the lowest chip being on one card and the remainder of the chips tilted toward the other.—**Mouth bet,** a bet, especially in poker, made without putting up any money or counters. [Slang.]—**Open bet,** in *faro*, a bet which is not coppered.—**To bar a bet.** See ★*bar*[1].—**To press a bet,** to increase the amount of a bet after losing one, in order to regain what has been lost.—**To raise a bet,** in *poker*, to increase the bet of the preceding player.—**To string a bet,** in *faro*, to lay the chips composing a bet so that they are spread out instead of being stacked up, to indicate either that the bet takes in a remote card or that it is on odd or on even cards only.

Beta[1] (bē'tä), *n.* [NL. (Linnæus, 1753, adopted from Tournefort, 1700), < L. *beta*, the beet.] A genus of dicotyledonous plants belonging to the family *Chenopodiaceæ*. They are annual or biennial herbs with fleshy roots, distinguished from *Chenopodium* by the three small bracts at the base of each flower and by the fact that the ovary is embedded in the succulent base of the perianth, which thickens and hardens as the fruit ripens, becoming angular and sometimes toothed or prickly. The genus includes 5 or 6 species, natives of Europe, the Orient, and northern Africa. Some of the species are ornamental. For *B. vulgaris*, see *beet*, 1, and see *beet-chards*, under *chard*[2].

beta[3] (bā'tä), *n.* [Fijian name.] In the Fiji Islands, a plant of the ginger family, *Zinziber Zerumbet*. See ★*awapuhi*.

beta-galactan (bē'tä-ga-lak''tan), *n.* Same as ★*lupeose*.

beta-naphthol (bē-tä-naf'thōl), *n.* A naphthol having the hydroxyl (OH) group in the beta position; β-naphthol. See *naphthol*.—**Beta-naphthol orange.** See ★*orange*[1].

betanglement (bē-tang'gl-ment), *n.* A tangled condition. *J. Hawthorne*, Fort, Fool, I. ii.

beta-rays (bē'tä-rāz), *n. pl.* See ★*ray*[1].

Betelgeuze (bet-el-gēz'), *n.* [F., explained as < Ar. *ibt-al-jauza*, 'the giant's shoulder.'] A reddish star of the first magnitude, situated in the right shoulder of the constellation Orion, and known to astronomers as *a* Orionis.

bête-rouge (bāt-rōzh'), *n.* [F., 'red beast.'] A larval mite of the spurious genus *Leptus*, probably a larval *Trombidium*, which in the West Indies corresponds to the so-called 'red bug' or 'jigger' of the southern United States. It infests low-growing shrubbery and readily transfers itself to the legs of pedestrians, penetrating the outer skin and causing much inflammation.

beth[2] (beth; Heb. bāt), *n.* [Heb. *bēth* (*bēt*), construct form of *bayith* (*bayit*), a house.] The second letter (ב) of the Hebrew alphabet, corresponding to the English B. Its numerical value is 11.

bethabara (beth-a-bā'rä), *n.* A trade-name of the wood of the wasahba-tree, a native of British Guiana. It resembles black walnut in color, is hard and of close grain, and because of its strength, toughness, and resiliency is used for making bows and fishing-rods. Also called *bow-wood*.

beth-din (bāt'-dēn'), *n.* [Heb. *bēth* (*bēt*) *dīn*, lit. 'house of judgment.'] Among Jewish orthodox communities, a tribunal which is composed of the rabbi and two or more dayanim (judges). Cases in dispute, whether ritual or secular, are brought before this tribunal for decision. After careful deliberation and research in Talmudic and other standard rabbinical authorities, judgment is given, from which there is no appeal.

betheral (beth'ér-al), *n.* A variant of Scotch *bedral*[1]. *Galt*, Annals of the Parish.

bethphany (beth'fa-ni), *n.* [ML. *bethphania*, an artificial term, < Heb. *beth*, house, + Gr. (ἐπι)φάνεια, epiphany.] In the artificial lan-

guage of the schoolmen, the 'third divine manifestation' of Christ, namely in the miracle of the wine at the house in Cana, commemorated on the feast of the Epiphany.

bethumb (bē-thum′), *v. t.* To soil or mark with frequent thumbing, as in turning the leaves of a much-read or much-studied book.

Bethylidæ (be-thil′i-dē), *n. pl.* [NL., ⟨ *Bethylus* + *-idæ*.] A curious family of proctotrypoid hymenopterous parasites, containing about twenty wide-spread genera and many species parasitic upon insects of several different orders.

betimbered (bē-tim′bérd), *p. a.* Timbered; furnished with timbers; built.

Venerable buildings *betimbered* with dark oak.
Hugh Miller, First Impressions, p. 172.

betis (bā′tēs), *n.* [Philippine Sp., said to be from a Tagalog name.] A name applied in the Philippines to a large forest tree, *Madhuca Betis* (*Azaola Betis* of Blanco), belonging to the sapodilla family. It has simple oblanceolate leaves which are clustered near the ends of the branches, and clusters of greenish, many-stamened flowers with long peduncles. The wood is brownish or red with lighter markings. It resists the attacks of the ship-worm and is highly prized for piles for wharves and piers, and for keels and other timbers in ship building. It yields logs from 40 to 65 feet long and from 16 to 20 inches square.

betol (bē′tōl), *n.* [*beta* + *-ol*.] A trade-name of the β-naphthyl ester of salicylic acid, $HO.C_6H_4CO_2C_{10}H_7$. It is crystalline and melts at 95° C. It is an antiseptic and febrifuge.

betone (bē-tōn′), *v. t.* To give a special tone to; lay stress upon; accentuate; emphasize.

betrail (bē-trāl′), *v. t.* To trail over or about. *Fuller*, Joseph's Coat, p. 221.

betrample (bē-tram′pl), *v. t.* To trample over; affect by much trampling: as, "a field . . . *betrampled* every day with horse," *Golding*.

betrodden (bē-trod′en), *p. a.* Trodden again and again. *Carlyle*.

betrumpet (bē-trum′pet), *v. t.* To trumpet the praises of. *Carlyle*.

betrunk (bē-trungk′), *v. t.* To deprive (a river) of its lower course or trunk by submergence or by the erosion of the land by the sea.

The former rivers have been *betrunked* by subsidence.
I. C. Russell, Rivers of North America, p. 218.

better[1], *adv.*—**To think better of,** to reconsider and change one's mind or one's plans.

Betterment tax. See ★*tax*.

Betts's process. See ★*process*.

betty, *n.*—**Brown betty** a baked pudding made of sliced apples, bread-crumbs, and molasses or brown sugar.

Betula resin. See ★*resin*.

betulaceous (bet-ū-lā′shius), *a.* Belonging to the family of plants known as *Betulaceæ;* resembling or allied to the birches.

between-brain (bē-twēn′brān), *n.* Same as *'tween-brain*.

betweenness (bē-twēn′nes), *n.* **1.** The quality or fact of being between.—**2.** In *math.*, the ordinal quality possessed by one of every three points on a straight line, in virtue of which it may be said to lie between the other two points.

Of Hilbert's *betweenness* assumptions, axioms of order, one of the five is redundant.
Science, March 11, 1904, p. 410.

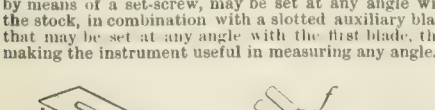
betyl, *n.* See *bætylus*.

beuteous, *a.* A simplified spelling of *beauteous*.

beutiful, *a.* A simplified spelling of *beautiful*.

beuty, *n.* A simplified spelling of *beauty*.

bevel, *n.*—**Combination bevel,** a bevel having a straight stock to which is pivoted a split blade which, by means of a set-screw, may be set at any angle with the stock, in combination with a slotted auxiliary blade that may be set at any angle with the first blade, thus making the instrument useful in measuring any angle.—



Universal Bevel

a, straight edge

Universal bevel, a bevel having a bent blade that increases its usefulness in measuring minute angles. Another type of universal bevel has a large slot in the stock which increases its range of work

bevel-disk (bev′el-disk), *n.* A disk having a beveled edge. Such disks are used for transmitting power by friction-drives from one shaft to another which makes an angle with it.

Bevel-gear drive, a mechanism which comprises a pair of bevel-gears with the necessary shafts, etc., for driving a machine or motor-car.

bevel-pinion (bev′el-pin′yon), *n.* The smaller of two toothed wheels in gear, the axes of whose shafts intersect one another. The teeth are formed on the surfaces of two cones, whose elements all intersect at the common point of the axes. The shafts are most frequently at right angles; when both wheels are of the same diameter they are called *miter-gears*, because the angle of the equal cones is 45°. See *bevel-gear* and *gearing*. 2. **Skew bevel-pinion,** a toothed wheel or gear-wheel which drives another on a shaft whose axis is neither parallel to the first nor intersects it. The teeth of the larger gear or the smaller pinion are formed on surfaces which are hyperboloids of revolution. If the two gears are formed upon cylinders developed on the circles at the gorge of the two hyperboloids, skew bevel-gears become the same as helical gears. See *skew gearing*.

bevel-tool (bev′el-tōl), *n.* A tool with a bevel edge: used by wood-turners for forming grooves and tapers.

bevel-wheel, *n.*—**Skew bevel-wheel,** in a skew-bevel transmission, the larger of two such wheels in gear. The other is the pinion. See *skew*, ★*bevel-pinion*.

bewig (bē-wig′), *v. t.* To provide or cover with a wig.

Beyrichia (bī-rik′i-ä), *n.* [NL., named after E. *Beyrich*, a German geologist.] A genus of ostracode crustaceans, or ancient water-fleas, in which each of the two valves bears three lobes or nodes. The shells of these creatures often occur in great quantities in the Paleozoic rocks.

beyrichite (bī′rik-īt), *n.* [Named after E. *Beyrich*, a German mineralogist.] A nickel sulphid, Ni_3S_4, of lead-gray color and metallic luster.

bezoar, *n.*—**German bezoar,** bezoar obtained from the chamois, made up for the most part of vegetable fibers or animal hairs in an entangled mass.—**Occidental bezoar,** bezoar obtained from the llama and vicugna of South America, consisting chiefly of calcium phosphate.—**Oriental bezoar** (the original bezoar), concretions found in the bodies of certain species of goat and gazel in Persia and India, and containing either ellagic acid or lithofellic acid with a coloring substance apparently bile-pigment.

bezzo (bet′sō), *n.* [It., ⟨ MHG. *betz*, G. *bätz*, etc.: see *batz*.] A small Venetian coin, of the value of a farthing.

B. F. An abbreviation of *Bachelor of Finance*.

B. F. A. An abbreviation of *Bachelor of Fine Arts*.

b. g. An abbreviation of *bay gelding*.

b. h. An abbreviation of *bay horse* (that is, *stallion*).

bhabar (bä′bär), *n.* [Hind. *bhābar*.] In India. —**1.** A grass, *Spodiopogon angustifolius*, extensively used for making string, mats, and paper.—**2.** A sedge, *Eriophorum comosum*, frequently associated and mixed with the preceding and used for the same purposes; also used in the construction of rope bridges. Also called *bhabar grass*.

bhalu (bä′lö), *n.* [Also *balu*, *baloo;* ⟨ Hind. *bhālu*, also *bhal*, a bear, ⟨ Skt. *bhalluka*, a bear (Macdonell).] A general name for any species of bear; in particular, the sloth-bear, *Melursus ursinus*.

bharal (bur′al), *n.* The blue sheep of northern India, *Ovis nahura* or *O. burhel*.

bherwa (bār′wä), *n.* [E. Ind.] An extraordinary locustid, *Schizodactylus monstrosus*, inhabiting India. It lives in burrows on the sandy banks of rivers, and sometimes damages the roots of tobacco and other crops on high ground. The extremities of the tegmina and wings are much prolonged and curled.

bhikku (bik′ö), *n.* [Pali *bhikku*, ⟨ Skt. *bhikshu*, a beggar, esp. a religious beggar (a Brahman in the fourth stage), ⟨ *bhiksh*, beg, ask alms.] In *mod. theos.*, a disciple (at a specified stage of his 'progress').

Amongst the notes is an invitation to western students to join the great brotherhood of the Yellow Robe, with a very explicit statement of the conditions under which candidates will be accepted. "*Bhikkus* of occidental nationalities" are first invited, "who in due time would be able to return to their own countries, there to spread the knowledge of Buddhism—in short, missionaries. Amongst these *Bhikkus* there may be some who may be willing to take the Robe, but they are candidly warned that the conditions of life in the order are "somewhat severe for occidentals. *Nature*, Dec. 17, 1903, p. 163.

bhindi (bin′dē), *n.* [Hind. name.] A name in India of the okra or gumbo. See ★*bandaka* and *okra*.

bhousa, *n.* See ★*bhusa*.

B H R D See ★*beharad*.

bhusa (bö′sä), *n.* [Also *bhousa;* ⟨ Hind. *bhāsā*, *bhus*, husk, straw.] Chopped straw. *R. Kipling*.

A few donkey loads of *bhusa* and a little corn brought from Polu enabled me to keep the few animals requisite for carrying the tents, instruments, etc., till the work was finished. *Geog. Jour.* (R. G. S.), XIII. 158.

B. Hy. An abbreviation of *Bachelor of Hygiene*.

bia (bē′ä), *n.* [Siamese *bia*, a shell used as a coin.] A round, thick copper coin of Siam, of the value of 200 cowries.

biacromial (bī-a-krō′mi-al), *a.* [*bi-*[2] + *acromial*.] Relating to both acromial processes.

biacuru, *n.* Same as ★*bayacuru*.

biajaiba (bē′ä-hī′bä), *n.* [Cuban Spanish, from a native name.] The Cuban name of the lane-snapper, *Lutjanus synagris*, a fish found about the West Indies.

bialveolar (bī-al-vē′ō-lär), *n.* [*bi-*[2] + *alveolar*.] Relating to the two sides of the alveolar processes.—**Bialveolar breadth,** the distance between the outer sides of the alveolar processes.

bianchetto (bē-an-ket′ō), *n.*; pl. *bianchetti*(-i). [It., white, white lead, dim. of *bianco*, white.] A billon coin of the marquisate of Montferrato, under the Palæologi.

biannulation (bī-an-ū-lā′shon), *n.* [*bi-*[2] + *annulation*.] A circular or ring-like formation consisting of two rings. *Annals and Mag. Nat. Hist.*, Jan., 1903, p. 75.

biasterial (bī-as-tē′ri-al), *a.* [*bi-*[2] + *asteria* + *-al*.] Same as ★*biasteric*.

biasteric (bī-as-ter′ik), *a.* [*bi-*[2] + *asteria* + *-ic*.] In *craniom.*, relating to the asteria, the points where the occipital, temporal, and parietal bones meet.—**Biasteric diameter,** the distance between the asteria.

biasterionic (bī-as-tē-ri-on′ik), *a.* [Irreg. ⟨ *bi-*[2] + *asterion* + *-ic*.] Relating to the two asteria; noting a diameter of the skull, the distance between the two asteria.

biatomic (bī-a-tom′ik), *a.* In *chem.*, same as *diatomic*.

biauricular (bī-â-rik′ū-lär), *a.* [*bi-*[2] + *auricular*.] In *craniom.*, relating to the auricular points.—**Biauricular diameter,** the transversal diameter of the skull, measured between the centers of the outer ears by French anthropologists, and between the central points of the upper rims of the outer ears by German anthropologists.

biaurite (bī-â′rīt), *a.* [L. *bi-*, two-, + *auritus*, eared.] See *biauriculate*.

bib[2], *n.*—**Best bib and tucker,** best clothes: originally used with regard to children, and now, humorously, applied to grown persons.

bibinca (bē-bēng-kä′), *n.* [Philippine Sp., ⟨ Tagalog *bibingca* (not verified), perhaps same as *bibingga*, a potsherd.] A kind of pastry made of boiled rice and cocoanut-milk. [Philippine Is.]

Bible, *n.*—**Cranmer's Bible.** Same as *Great* ★*Bible*.—**Great Bible,** a large folio Bible (called 'great' because of its size) published in April, 1539, in England, under the supervision of Coverdale. It is a revision of the versions of Tyndale, Matthew, and Coverdale. From it we have the Psalter of the Book of Common Prayer. Also called *Cranmer's Bible*.—**Hebrew Bible.** See ★*Tanak*.—**Printers' Bible,** an early edition of the Bible in which Ps. cxix. 161 was made to read, "*Printers* have persecuted me without a cause," *princes* being intended. *Stand. Dict.*—**Treacle Bible,** a black-letter Bible of the time of Queen Elizabeth, in which Jer. viii. 22 reads, "Is there no *treacle* in Gilead?" (*treacle* meaning an antidote for poison).

biblioclast (bib′li-ō-klast), *n.* [Gr. βιβλίον, a book, + -κλαστης, ⟨ κλᾶν, break: cf. *iconoclast*.] A mutilator or destroyer of books.

Made bonfires of the Maya and Aztec manuscripts. . . . May these bishops expiate their crimes in the purgatory of *biblioclasts*. *Athenæum*, June 7, 1884.

bibliogenesis (bib″li-ō-jen′e-sis), *n.*; pl. *bibliogeneses* (-sēz). [Gr. βιβλίον, a book, + γένεσις, generation.] The act or process of creating books or literature.

bibliognostical (bib″li-og-nos′ti-kal), *a.* Same as *bibliognostic*.

bibliografer, *n.* A simplified spelling of *bibliographer*.

bibliografy, *n.* A simplified spelling of *bibliography*.

bibliographist (bib-li-og′ra-fist), *n.* One who is interested in bibliography.

bibliographize (bib-li-og′ra-fīz), *v. t.*; pret. and pp. *bibliographized*, ppr. *bibliographizing*. [*bibliograph(y)* + *-ize*.] To write a bibliography of.

bibliomanism (bib″li-om′a-nizm), *n.* Bibliomania.

bibliopegistical (bib″li-ō-pē-jis′ti-kal), *a.* Same as *bibliopegistic*.

bibliophagic (bib-li-of′a-jik), *n.* [*bibliophag(y)* + *-ic*.] Book-devouring: as, a *bibliophagic* appetite.

bibliophagist (bib-li-of′a-jist), *n.* One who reads books omnivorously.

bibliophilistic (bib″li-of-i-lis′tik), *a.* Of or pertaining to a bibliophilist.

bibliophilous (bib-li-of'i-lus), *a.* [Gr. βιβλίον, a book, + φιλεῖν, love.] Book-loving; addicted to bibliophily.

bibliopoly (bib-li-op'o-li), *n.* [Gr. *βιβλιοπωλία, ⟨ βιβλιοπώλης, a bookseller.] Bookselling.

bibliotaphic (bib-li-o-taf'ik), *a.* [*bibliotaph* + *-ic.*] Of, pertaining to, or characteristic of a bibliotaph.

bibliotics (bib-li-ot'iks), *n.* [Irreg. ⟨ Gr. βιβλίον, book, + E. *-otic*, adj. ending.] The study of the essential character of documents, and the determination of the individual character of handwriting.

These contributions are contained in a published treatise of Dr. Frazer on this subject termed "*Bibliotics*, or the Study of Documents."
Jour. Franklin Inst., April, 1905, p. 323.

biborate (bī-bō'rāt), *n.* A salt of boric acid: as, *biborate* of sodium or borax.

Bibra alloy. See ★*alloy.*

bicalcic (bī-kal'sik), *a.*—**Bicalcic phosphate,** in *chem.*, calcium phosphate ($CaHPO_4$), in which one third of the hydrogen of phosphoric acid is present, the remaining two thirds being replaced by calcium. This substance is found in some urinary calculi, and occurs in the "reverted" phosphate of fertilizers, as also occasionally in the superphosphate of lime as originally manufactured for agricultural use. Also known as *bicalcium phosphate.*

bicapsular, *a.* 2. Having a bilocular capsule.

bicarpellate (bī-kär'pel-āt), *a.* [*bi-*[2] + NL. *carpellum* + *-ate*[1].] Same as *bicarpellary.*

bicefalous, *a.* A simplified spelling of *bicephalous.*

Bicheroux's furnace. See ★*furnace.*

bichlorid, *n.* 2. An abbreviation of *bichlorid of mercury*, mercuric chlorid or corrosive sublimate: often carelessly used in reference to this substance as an antiseptic and disinfectant.—**Bichlorid-of-gold cure.** Same as *chlorid-of-gold* ★*cure.*

bicho (bē'chō), *n.* [Sp. *bicho*, a worm, a small insect; Pg. *bicho*, a worm, *biche*, a small insect.] Another name in Spanish America for the chigoe, *Sarcopsylla penetrans.*

Bichromate cell, in *photog.*, a glass cell designed to hold a solution of potassium bichromate which is placed before the objective: used with orthochromatic plates and in securing fine cloud-effects.—**Bichromate ray-filter.** See ★*filter*[1].

bichrome (bī-krōm'), *n.* [*bichrom(ate of potassium).*] Bichromate of potassium or sodium: a workman's term. *G. Duerr*, Bleaching and Calico-printing, p. 56.

bichrone (bī'kron), *a.* [L. *bi-*, two-, + Gr. χρόνος, time.] Noting a type of internal-combustion motor having two cylinders set at an angle of less than 90° with one another and communicating motion to a common crank-shaft. Such cylinders give more frequent working impulses and more equable turning effort than one cylinder does, and can be used in places where the opposed or double-opposed motors cannot be used for lack of room, as on motor-bicycles, or where the side-by-side arrangement would be inconvenient on account of bulk.

bicinium (bī-sin'i-um), *n.*; pl. *bicinia* (-ä). [LL., ⟨ L. *bi-*, two-, + *canere*, sing.] A musical composition or performance for two voices; a duet.

bicircuition (bī-sèr-kū-ish'ọn), *n.* [*bi-*[2] + *circuition.*] The result of two successive circuitions of the same characters. See ★*circuition.*

bicollaterality (bī-kọ-lat-e-ral'i-ti), *n.* In *bot.*, the state of being bicollateral.

biconcavity (bī-kon-kav'i-ti), *n.* [*biconcave* + *-ity.*] The condition of being biconcave or of having two opposed concave surfaces, like a biconcave lens or the red blood-corpuscles of man.

bicondylar (bī-kon'di-lär), *a.* [*bi-*[2] + *condyle* + *-ar*[3].] In *anthrop.*, relating to two corresponding condyles, particularly to the condyles of the lower jaw.—**Bicondylar breadth,** the distance between the two condyles of the lower jaw at the middle of the transverse axis.

bicordal (bī-kôr'dal), *a.* [L. *bi-*, two-, + *chorda*, cord, + *-al.*] Relating to two cords; specifically, noting the vocal cords.

bicornate (bī-kôr'nāt), *a.* [As *bicorn* + *-ate*[2].] Two-horned: said of the uterus when the cornua are abnormally large and projecting.

bicycle, *n.* 2. A traveling block used on a cable in steam-skidding. [U. S.]—**Convertible bicycle,** a safety-bicycle which may be made either into a diamond-frame wheel for men's use or into a drop-frame for women by the adjustment of a removable bar in the frame.

bicyclette (bī-si-klet'), *n.* [F.] A chain-driven bicycle: so first named in France, to distinguish such bicycles from the high-wheel type which preceded them. There were transition forms, such as Lawson's, in which the large-diameter front wheel was retained, but the smaller back wheel was geared and chain-driven. The name is still used in France for all types of bicycles which are chain-driven, have wheels of equal size, and are geared for road use, as distinguished from racing-machines.

bicyclical (bī-sik'li-kal), *a.* [*bicycle* + *-ic-al*, after *cyclical.*] Same as *bicyclic*[2].

bicylindrical (bī-si-lin'dri-kal), *a.* [*bi-*[2] + *cylindrical.*] Having two cylindrical surfaces or axes of curvature: noting a form of lens.

bid, *v. i.*—**To bid to the board,** in *card-playing*, to bid for the privilege of naming the trump if the points are not to be credited to any player.

bidacryc (bī-dak'rik), *a.* [*bi-*[2] + *dacry(on)* + *-(i)c.*] In *anthrop.*, relating to the two dacrya. See *dacryon.*

bidaily (bī-dā'li), *a.* [*bi-*[2] + *daily.*] Appearing or occurring twice a day.

Each of the *bidaily* forecasts.
Yearbook U. S. Dept. Agr., 1894, p. 118.

bidarra (bī-dä'rä), *n.* [Russ. *baidára* (Alexandrow), *baidará* (Reiff), a skin canoe; perhaps of Alaskan origin: cf. *bidarka, bidarkee.*] Same as *baidar.*

Bidder, ganglia of. See ★*ganglion.*

biddy-bid (bid'i-bid), *n.* [A colonial English corruption of the Maori name *piri-piri.*] The name in New Zealand of either of two troublesome weeds belonging to the rose family, *Acæna Sanguisorbæ* and *A. ovina*, or of their fruits, which cling to the clothing of passers-by and to animals. See *sheep-pest*, 2.

bidentate, *a.* 2. In *bot.*, doubly dentate, the principal teeth, as of a dentate leaf, being less deeply dentate.

bidimensional (bī-di-men'shọn-al), *a.* [*bi-*[2] + *dimension* + *-al.*] Having two dimensions; of or relating to space so characterized.

The mechanical symbol is complicated, and eventually modified, through the difficulty of depicting tridimensional relations on the *bidimensional* surface.
An. Rep. Bur. Amer. Ethnol., 1897-98, p. 841.

bidri, *n.* 2. An alloy, called also *bidery* (or *Bidery*) *metal*, used by Indian metal workers. The alloy, as it is produced in India, is composed of 123.6 parts of zinc, 4.6 parts of copper, and 4.14 parts of lead, which are melted together with some resin and wax to prevent oxidation. In other countries the proportions differ considerably. The alloy is very resistive to corrosion and does not oxidize in air or moisture. In India it is used for the manufacture of various utensils.

biduotertian (bid-ū-ọ-tèr'shan), *a.* [L. *biduus*, lasting two days, + *tertianus*, tertian.] Tertian, but with the recurrences almost continuous (lasting, as it were, over two days).—**Biduotertian fever,** a tertian malarial fever in which the paroxysms are of such long duration that the fever is nearly continuous.

Bidyan ruff. See ★*ruff*[3].

Biebrich acid-blue, black, scarlet. See ★*acid-blue*, ★*black*, ★*scarlet.*

Biela's comet. See ★*comet.*

bielectrolysis (bī-ē-lek-trol'i-sis), *n.* [*bi-*[2] + *electrolysis.*] In *phys. chem.*, simultaneous deposition of two metals by the electrolysis of a mixture of their salts.

bielid (bī-ā'lid), *n.* and *a.* Same as *andromed*: so named because these meteors are supposed to be connected with Biela's comet and move in its orbit. See *Biela's* ★*comet.*

A well-marked shower of *Bielid* meteors was observed at Princeton on the evening of November 24. At ten o'clock the meteors averaged two or three per minute at times. *Sci. Amer.*, Dec. 9, 1899.

biennium (bī-en'i-um), *n.*; pl. *biennia* (-ä). [L.: see *biennial.*] A period of two years.

bier, *n.*—**Half-bier,** twenty warp-threads, or half of the bier measure used in weaving in English textile-mills.

bieremus (bī-er'ē-mus), *n.*; pl. *bieremi* (-mī). [L. *bi-*, two-, + *eremus*, a hermit.] In *bot.*, a two-celled fruit in which the loculi are widely separated.

Bier's operation. See ★*operation.*

bifacial, *a.* 4. In *geom.*, having two distinguishable sides or faces.—**Bifacial surface.** See ★*surface.*

bifanged (bī'fangd), *a.* [*bi-*[2] + *fanged.*] In *anat.*, having two roots or fangs, as is the case with some of the premolars of many carnivores.

The molars are sharply distinguished from the premolars, which are *bifanged* teeth with simple, laterally compressed crowns.
Amer. Jour. Sci., April, 1904, p. 322.

biff (bif), *n.* [An imitative var. of *buff*[3] and *baff*[2].] A brief, sharp sound, as of a blow with the fist.

biff (bif), *v. t.* To strike with a sharp blow, as of the fist.

"Et we all *biffed* you now, these same men you've been as dead anxious to kill 'u'd call us off. Guess we'll wait till they go back to the haouse, an' you'll have time to think cool an' quiet," said Rod.
R. Kipling, A Walking Delegate.

bifilar, *n.* 2. An electric circuit doubled back upon itself so that the conductor is closely adjacent to the return-conductor and the inductance of the circuit is thereby reduced to a minimum.

biflex (bī'fleks), *a.* [L. *bi-*, two-, + *flexus*, a bending: see *flex.*] Having two opposite flexures or bends.

Bifocal ★**lens,** ★**spectacles.** See the nouns.

bifoveate (bī-fō'vē-at), *a.* [NL. **bifoveatus*, ⟨ L. *bi-*, two-, + *fovea*, a pit.] Having two foveæ.

Mesonotum closely punctured, the apex in the middle broadly longitudinally striated, almost reticulated; middle lobe raised at the base. Scutellum roundly raised, smooth, covered with long pale hair. Postscutellum *bifoveate* at the base.
Annals and Mag. Nat. Hist., March, 1904, p. 222.

bifurcation, *n.* 3. Specifically, in *geog.*, the division of a stream into two parts, each of which connects with a different river system: as, the *bifurcation* of the upper Orinoco.

big[1], *a.*—**Tropical big leg.** Same as *pachydermia.*

bigamously (big'a-mus-li), *adv.* In a bigamous manner; so as to commit, or be chargeable with, bigamy.

bigarreau (bē-gä-rō'), *n.* [F. See *bigarroon.*] Same as *bigaroon.*

bigas (bē-gäs'), *n.* In the Philippines, a name for uncooked rice.

bigatus (bī-gā'tus), *n.*; *pl. bigati* (-ī). [L., ⟨ *bigæ*, a two-horse chariot.] A Roman silver denarius, bearing the figure of a two-horse chariot.

bigeminal (bī-jem'i-nal), *a.* [L. *bigeminus*, twin (see ★*bigeminous*), + *-al*[1].] 1. In the echinoids or sea-urchins, noting an arrangement of the pairs of ambulacral pores such that there are two vertical rows extending from peristome to apex. Also *biserial.*—2. Of or relating to the corpora bigemina.—**Bigeminal bodies,** the corpora bigemina. See *bigeminum.*

bigeminous (bī-jem'i-nus), *a.* [L. *bigeminus*, ⟨ *bi-*, two-, + *geminus*, twin.] Double, as a tooth apparently formed by the union of two teeth; bigeminal. *W. Bateson*, Study of Variation, p. 238.—**Bigeminous pulse,** one which intermits every third beat.

bigenous (bij'ē-nus), *a.* [L. *bi-*, two-, + *-genus*, -born.] Inherited from both parents: distinguished from *monogenous*, referring to one parent. *Philos. Trans. Roy. Soc.* (London), 1895, Ser. B, 186. 784.

bigging, *n.* 2. In *mining*, a pack-wall. *Barrowman*, Glossary. [Scotch.]

bighead, *n.* 2. A fish, *Eleotris nudiceps*, of the family *Gobiidæ.* [Australia.]

biglenoid (bī-glē'noid), *a.* [*bi-*[2] + *glenoid.*] Relating to both glenoid cavities, as of the temporal bones.

biglobulus (bī-glob'ū-lus), *n.*; pl. *biglobuli* (-lī). [NL., ⟨ L. *bi-*, two-, + *globulus*, globule.] In *Polyzoa*, a pair of zooecia growing on an internode.

bigmouth, *n.* 2. The squaw-fish, *Ptychocheilus oregonensis.* [California.]

bignai (bēg-nī'), *n.* [Tagalog *bignai, bignay.*] A name in the Philippine Islands of *Antidesma Bunius*, a small tree of the spurge family, with loose spikes of very small unisexual flowers and a small juicy acidulous fruit, red at first and turning black when ripe, used for making preserves.

bignoniad (big-nō'ni-ad), *n.* [*Bignonia* + *-ad*[1].] A plant of the family *Bignoniaceæ.*

bignonial (big-nō'ni-al), *a.* Related to, resembling, or having the characters of *Bignonia.*

bigoniac (bī-gō'ni-ak), *a.* [*bi-*[2] + *gonia* + *-ac.*] In *craniom.*, relating to the two gonia.—**Bigoniac diameter,** the distance between the two gonia, or angles of the lower jaw. *17th An. Rep. Bur. Amer. Ethnol.*, I. 144.

bigonial (bī-gō'ni-al), *a.* [*bi-*[2] + *gonia* + *-al.*] Same as ★*bigoniac.*—**Bigonial arc.** See ★*arc.*

bigquis (bēg-kēs'), *n.* [Tagalog.] A belt made of fabrics, worn by the natives of the Philippine Islands.

bigwiggery (big-wig'ér-i), *n.* Same as ★*bigwigism.*

bigwigism (big'wig-izm), *n.* Official display of importance; pomposity: as, "empty *bigwiggism*." *George Eliot*, Middlemarch.

bi-iliac (bī-il'i-ak), *a.* [*bi-*[2] + *iliac.*] Relating to the two iliac bones. *Russell.*

bi-impressed (bī-im-prest), *p. a.* [*bi-*[2] + *impressed.*] Impressed twice.

The propygidium is *bimpressed* and, like the pygidium, is clearly not closely punctured.
Annals and Mag. Nat. Hist., Aug., 1904, p. 144.

bijugal (bī-jō'gal), *a.* [*bi-*[2] + *jugal.*] In *craniom.*, of or pertaining to the two jugal points. —**Bijugal breadth**, the distance between the two jugal points.

bijugular (bī-jō'gū-lär), *a.* [*bi-*[2] + *jugular.*] Relating to the point of meeting of the jugular process and the masto-occipital suture on each side of the skull.

bike[2] (bik), *n.* and *v.* A corruption of *bicycle.*

bike-sulky (bīk'sul'ki), *n.* [*bike*[2] + *sulky, n.*] A sulky having a high-arched axle, short shafts, and low wooden or wire-spoked wheels with rubber tires. [Colloq.]

bike-wagon (bīk'wag"on), *n.* [*bike*[2] + *wagon.*] A light buggy having high-arched axles and low wheels with rubber tires. [Colloq.]

Bikukulla (bī-kū-kul'ä), *n.* [NL. (Adanson, 1763) for **bicuculla.* Named in reference to the form of the corolla, < L. *bi-*, two-, + *cucullus*, hood.] A genus of dicotyledonous plants belonging to the family *Papaveraceæ.* See *Dicentra.*

bil, *n.* and *v.* A simplified spelling of *bill.*

bilabial (bī-lā'bi-al), *a.* [L. *bi-*, two-, + *labium*, lip: see *labial.*] Involving the two lips.

Thus F came to be the representative of the unvoiced labiodental spirant instead of that for the *bilabial* voiced spirant. *Encyc. Brit.*, XXXIII. 897.

bilango (bi-läng'gō), *n.* [Tagalog *bilango*, a constable; cf. *bilango*, Bisaya *bilanggo*, take, arrest.] A peace officer or constable. [Philippine Is.]

bilangoan (bi-läng-gō'än), *n.* [Tagalog *bilangoan*, Bisaya *bilanggoan*, a prison: see **bilango.*] In the Philippine Islands, a prison.

bilati-pani (bi-lä'ti-pä'ni), *n.* [Hind. *bilyātī pānī*; *bilyāti*, foreign, European, *pānī*, water.] Literally, 'European water'; an Anglo-Indian name for soda-water. Also *bilatee-panee.*

Bile salt, the salt of a bile acid, for example, sodium glycocholate.—**Cystic bile**, that portion of the bile which is stored for a time in the gall-bladder before passing into the intestine. See extract under *hepatic.*—**Pettenkofer's test for bile acids**, a careful admixture of sulphuric acid and sugar with a fluid thought to contain bile. If bile is present, the mixture will show a play of colors, resulting finally in a bright purple.—**Platner's bile**, the bile-acid salts, in crystalline form, obtained from the bile by precipitating its alcoholic extract with ether. This forms the starting-point for the isolation of the individual members of the group.

bile-papilla (bīl'pā-pil'ä), *n.* An elevation at the point where the common bile-duct enters the duodenum.

bile-vessel (bīl'ves"el), *n.* One of the channels in the liver which conduct bile.

Bilge-and-cantline. See **cantline.*

bilge-block (bilj'blok), *n.* In *ship-building*, one of a series of blocks of timber used to support the bilges of a ship when it is building or is in a dry-dock. The bilge-blocks in a dry-dock are supported on transverse sliding ways, and provided with ropes or chains leading up to the top of the dock, by means of which the blocks can be pulled under the ship to help support it while they are still under water.

The reduction of transverse bending strains by these special supports is easily explained; for instead of an upward pressure W at the middle line and the downward force W forming a couple, the resultant of the pressure on the keel-blocks and *bilge-blocks* will necessarily lie some distance out from the middle and closer to the line of action of the downward force W.
White, Manual of Naval Arch. p. 325.

bilge-saw (bilj'sâ), *n.* A saw resembling the barrel-saw (which see), having a convex or barrel-shaped cylinder.

bilge-shore (bilj'shōr), *n.* In *ship-building*, a prop, or shore, which supports a ship at the turn of the bilge when it is on a building-slip or in a dry-dock.

bilge-strake (bilj'strāk), *n.* In *ship-building*, a strake of planking or plating at the turn of the bilge.

bilge-stringer (bilj'string"ėr), *n.* In *iron ship-building*, a stringer in the vicinity of the turn of the bilge.

bilharzial (bil-här'zi-al), *a.* Same as **bilharzic.* *Jour. Trop. Med.*, Jan. 1, 1903, p. 1.

bilharzic (bil-här'zik), *a.* Relating to or caused by infection with *Bilharzia.* *Phil. Med. Jour.*, Jan. 31, 1903, p. 208.

bilharziosis (bil-här-zi-ō'sis), *n.* [NL., < *Bilharzia* + *-osis.*] The state of being infected with *Bilharzia.*

Water serves as the vehicle and medium of existence of the bilharzia. Water taken as a beverage is very rarely the source of the parasite in man. Cultures of bilharzia have been negative so far. All kinds of mollusca have been examined for the intermediate host in vain. Dr. Ruffer, of Alexandria, does not believe that the parasites enter through the skin. In the Transvaal, where *bilharziosis* is very frequent, baths are rare. There may be fibrous lesions in which there are no eggs, and rough superficial lesions in which eggs are to be found.
Phil. Med. Jour., Jan. 31, 1903, p. 208.

bilianic (bil-i-an'ik), *a.* [L. *bilis*, bile, + *-an* + *-ic.*] Pertaining to or derived from bile. **Bilianic acid**, an oxidation-product, $C_{24}H_{34}O_8$, of cholalic acid.

Biliary acid, any bile acid.—**Biliary apparatus**, the secreting cells of the liver, bile-ducts, and gall-bladder which are concerned in the elaboration, conduction, and storage of the bile.—**Biliary canal.** Same as *hepatic duct* (which see, under *duct*).—**Biliary cirrhosis**, a form of cirrhosis of the liver in which the organ is enlarged, accompanied by jaundice.—**Biliary concretions**, biliary calculi.—**Biliary fistula**, a fistula communicating with the gall-bladder.

bilic (bil'ik), *a.* [L. *bilis*, bile, + *-ic.*] Derived from bile.—**Bilic acid**, a crystalline bibasic acid, $C_{18}H_{22}O_8$, obtained by oxidizing cholic acid with chromic acid. It melts, when heated quickly, at 190° C.

biliferous (bī-lif'e-rus), *a.* [L. *bilis*, bile, + *ferre*, bear.] Conveying bile.

bilinear, *a.* **2.** Linear in two ways. Thus the form $\Sigma_i \Sigma_j a_{ij} x_i y_j$ is a bilinear form, that is, lineolinear.—**Bilinear transformation.** See **transformation.*

bilineurine (bil-i-nū'rin), *n.* [L. *bilis*, bile, + Gr. *νεῦρον*, nerve (sinew), + *-ine*[2].] Same as *choline.*

bilingualism (bī-ling'gwal-izm), *n.* [*bilingual* + *-ism.*] The habitual colloquial use of two languages by the same person in different relations. *Ratzel*, Hist. of Mankind, II. 20.

bilingually (bī-ling'gwal-i), *adv.* In two languages: as, "a certain fact *bilingually* repeated," *J. Earle*, Philol. Eng. Tongue, ¶ 77.

biliprasinate (bil-i-prā'sin-āt), *n.* [*biliprasin* + *-ate*[1].] A salt of biliprasin.

bilipurpurin (bil-i-pėr'pū-rin), *n.* [L. *bilis*, bile, + *purpura*, purple.] A dark-violet coloring matter, $C_{32}H_{34}O_5N_4$, obtained from the bile of oxen and apparently formed by oxidation from another substance originally present in the bile.

bilirubinate (bil-i-rō'bin-āt), *n.* [*bilirubin* + *-ate*[1].] A salt of bilirubin.

bilirubinic (bil-i-rō-bin'ik), *a.* Of or pertaining to bilirubin.

bilirubinuria (bil"i-rō-bi-nū'ri-ä), *n.* [NL., *bilirubin* + Gr. *οὖρον*, urine.] Excretion of bilirubin in the urine.

bilithon (bī'lith-on), *n.*; pl. *bilitha* (-ä). [L. *bi-*, two-, + Gr. *λίθος*, stone.] A name invented by James Fergusson to describe a table-like megalithic monument formed by a flat horizontal stone resting on a vertical one.

biliverdinate (bil-i-vėr'din-āt), *n.* [*biliverdin* + *-ate*[1].] A salt of biliverdin.

biliverdinic (bil-i-vėr-din'ik), *a.* Of or pertaining to biliverdin.—**Biliverdinic acid.** Same as *biliverdin.*

bilixanthin (bil-i-zan'thin), *n.* [L. *bilis*, bile, + Gr. *ξανθός*, yellow, + *-in*[2].] The final oxidation-product of the common bile-pigments; a brownish amorphous substance having the formula $C_{16}H_{18}N_2O_6$: same as **choletelin.*

bill[1], *n.* **3.** A headland: as, the *Bill* of Portland (England).

The contrast between the three headlands of Selsey *Bill*, Beachy Head, and Dungeness . . . is remarkable.
Geog. Jour. (R. G. S.), XV. 215.

Bill at sight, a negotiable instrument payable by the drawer upon presentment.—**Bill obligatory**, in *old Eng. law*, a promissory note under seal; a single bill under seal. —**Bill of costs**, an itemized statement of the amounts of the costs and disbursements allowed by law to the prevailing party in an action.—**Bill of discovery**, a bill in equity filed to obtain information of facts within the knowledge of a defendant, or of deeds or other instruments or things in his custody or power.—**Bill of gross adventure**, in *French maritime law*, an instrument in the nature of a bond given to secure a maritime loan.—**Bill of imprest.** See **imprest.*—**Bill penal**, in contracts, a bond by which a debtor confessed to his debt in a certain sum and bound himself for payment in a larger sum. It is now superseded by a bond with conditions.—**Bill quia timet**, in *law*, a bill in equity filed by a plaintiff because he apprehends injury to his property or rights on account of the fault or neglect of another. It is employed to guard against possible or future injuries, and to preserve the means by which present rights may be protected against possible or future violations.—**Engrossed bill**, a proposed act of a legislature that has been engrossed before being called for final passage.—**Enrolled bill**, a proposed act of the United States Congress engrossed after passage by both houses and made ready for the approval or disapproval of the Executive.—**Sing e bill**, in contracts, a written instrument, without conditions, and which does not depend upon any future event to give it validity, for the absolute payment of a certain sum of money at a certain time.

bill[3], *v. t.* **3.** To furnish or cover with bills or advertisements; placard: as, to *bill* the town.

billa, *n.* Same as **billah.*

billabong (bil'a-bong), *n.* [Australian; Wiradhuri (New South Wales) *billa*, river, + *bong*, dead: see **bung.*] In Australia, a stream which flows away from the main stream (in some cases returning to it at a farther point); an effluent. Also *billibong, billybong.*

Billabong is often regarded as a synonym for Anabranch: but there is a distinction. From the original idea, the Anabranch implies rejoining the river; whilst the *Billabong* implies continued separation from it, though what are called *Billabongs* often do rejoin. *Austral English.*

bill-beetle (bil'bē"tl), *n.* Any beetle with a long rostrum, as a member of the family *Curculionidæ*; specifically, a **bill-bug* (which see).

bill-board[2], *n.* **2.** A ticket of admission to a theatrical performance, circus, or the like, given to shopkeepers, etc., in return for bill-board privileges accorded. [Theater cant.]

bill-bug (bil'bug), *n.* Any calandrid beetle of the genus *Sphenophorus*, as the *corn bill-bug*, *Sphenophorus sculptilis.* See *Sphenophorus*, with cut. They breed in the roots and stems of grains and grasses.

One of the most serious outbreaks of the corn *billbug*, Sphenophorus sculptilis, occurred in a field of timothy of three years' standing, containing 35 acres, which was broken during March of the present year, and on the 13th of May was planted with corn.
F. M. Webster, in Proc. Assoc. Econ. Ent., 1900, p. 86.

Blue-grass bill-bug, an American calandrid beetle, *Sphenophorus parvulus.*—**Calloused bill-bug**, *Sphenophorus callosus.*—**Clay-colored bill-bug**, *Sphenophorus æqualis.*—**Sculptured corn bill-bug**, an American calandrid beetle, *Sphenophorus sculptilis*, which damages growing corn. See cut under *Sphenophorus.*—**Tenacious bill-bug**, *Sphenophorus pertinax.*

billete (bil-yā'tā), *n.* [Sp.: see *billet.*] In Spanish-speaking countries, a ticket of any kind; especially, a lottery ticket.

billiard-green (bil-yärd-grēn'), *n.* A bright yellowish-green color: so named because billiard-tables are covered with cloth of this color.

billionism (bil'yon-izm), *n.* The financial position of a billionaire. *O. W. Holmes*, Elsie Venner, vii.

billionth (bil'yonth), *a.* and *n.* **I.** *a.* **1.** Coming last in a set of a billion terms: an ordinal numeral.—**2.** Being one of a billion equal parts.

II. *n.* One of a billion equal parts; the quotient of unity divided by a billion.

billow *n.*—**Atmospheric billow.** See **air-billow.*

billy[3] (bil'i), *n.*; pl. *billies* (-iz). [Prob. from the familiar name *Billy.*] A tin can or pail with an arched handle and a detachable lid, used by bushmen in Australia as a kettle.—**Billy tea**, tea made in a billy. [Australia.]

billybong, *n.* See **billabong.*

billy-can (bil'i-kan), *n.* The tin can used by Australian bushmen as a kettle. See **billy*[3].

Billy Playfair. A mechanical contrivance for weighing coal, consisting of an iron trough with a sort of hopper bottom, into which all the small coal passing through the screen is conducted and weighed off and emptied from time to time. *Coal and Metal Miners' Pocket-book.*

bilobal (bī-lō'bal), *a.* [*bi-*[2] + *lobe* + *-al*[1].] Having two lobes: used specifically in mechanism: as, a *bilobal* cam; a *bilobal* eccentric gear.

bilobe (bī'lōb), *v. i.*; pret. and pp. *bilobed*, ppr. *bilobing.* [*bi-*[2] + *lobe.*] To produce two lobes.

The *bilobing* of the anterior wall is adventitious, but the *bilobed* condition of the ventral wall is a constant character of the development.
Trans. Amer. Micros. Soc., Nov., 1903, p. 64.

bilobiate (bī-lō'bi-āt), *a.* [NL. **bilobiatus*, < **bilobium*, < L. *bi-*, two-, + *lobus*, lobe.] Having two lobes, or forming a double lobe; bilobate.

bilobite (bī-lō'bīt), *n.* [NL. *Bilobites.*] A fossil of the genus *Bilobites.* See **Bilobites*, 2.

Bilobites (bī-lō-bī'tēz), *n.* [NL., < L. *bi-*, two-, + *lobus*, lobe, + *-ites.*] **1.** A name given by Linnæus, in 1775, to a genus of fossil brachiopods of small size, in which both valves are strongly bilobed by a median sinus. These were subsequently recognized to have the essential structure of *Orthis*, and were so designated, although King, in 1850, proposed for them the name *Dicaelosia.* The name *Bilobites* is now generally recognized. They are found in Silurian and Devonian rocks.

2. A name given by post-Linnean authors to certain lobed (usually bilobed) markings, in the older Paleozoic rocks, which have been variously regarded as fossil fucoids, the casts of impressions produced by worms, crustaceans, and jellyfishes, and also as of purely mechanical origin.

Biloculina (bī-lok-ū-lī'nä), *n.* [NL., < L. *bi-*, two-, + *loculus*, dim. of *locus*, a place, + *-ina*[1].] A genus of *Foraminifera* in which each succes-

sive segment completely envelops the others. Shells of this genus enter largely into the composition of calcareous deposits now being formed in the North Sea, and have abounded throughout Tertiary times.

biloculine (bi-lok'ū-lin), *a.* [NL. *biloculinus*, < L. *bi-*, two-, + *loculus*, a compartment.] Having two chambers or compartments: specifically, having the structure or the mode of growth of *Biloculina*.

It is not until many chambers have been formed that the *biloculine* plan, characteristic of the genus, is assumed.
Sedgwick, Text-book of Zool., I. 9.

Biloxi pottery. See *American* ★*pottery*.

Bilston enamel. See ★*enamel*.

bimalar (bi-mā'lär), *a.* [*bi-*[2] + *malar*.] Of or pertaining to the two malar points or to the two malar bones. — **Bimalar breadth**, in *craniom.*, the breadth between the two malar points.

bimanually (bī-man'ū-al-i), *adv.* By means of both hands. *Buck*, Med. Handbook, V. 357.

bimarian (bī-mar'i-an), *a.* [L. *bimaris*, lying between two seas, < *bi-*, two-, + *mare*, sea.] Of or pertaining to two seas. *Bailey*.

bimastoid (bi-mas'toid), *a.* [*bi-*[2] + *mastoid*.] Relating to both mastoid processes.

bimaxillary (bi-mak'si-la ri), *a.* [*bi-*[2] + *maxilla* + *-ary*.] In *anthrop.*, relating to the two maxillæ. — **Bimaxillary breadth**, the maximum breadth of the maxillæ.

bimetameric (bī-met-a-mer' ik), *a.* [*bi-*[2] + *metamere* + *-ic*.] In *morphol.*, consisting of two metameres or segments.

bimodal (bī-mō'dal), *a.* [L. *bi-*, two, + *modus*, mode, + *-al*[1].] Having two modes. In a table of frequencies the mode is the most frequent measure. If the curve of frequencies has two maxima it is called *bimodal*.

Field studies showed that the stamens vary from 0 to 13, forming a *bimodal* curve with principal maximum on 3 and secondary maximum on 5. The relative prominence of the maxima, the value of the mean, and the coefficient of variability depend upon habitat and time at which collections are made.
Bot. Gazette, Dec., 1903, p. 477.

bimodality (bī-mō-dal'i-ti), *n.* The fact or quality of being bimodal.

In the case of the curve for the prosternal teeth, which is strongly bimodal, the *bimodality* is due to the tendency towards bilateral symmetry.
Amer. Nat., May, 1903, p. 303.

bimolecular (bī-mō-lek'ū-lär), *a.* Concerning or consisting of two molecules. — **Bimolecular reaction**, in *phys. chem.*, a reaction in which one molecule of one substance and one molecule of a second substance disappear, so that the active mass of two substances changes.

bin[4] (bin), *n.* A heap or pile. [Scotch.]

binaguan (bē-nä-gō-än'), *n.* [Native name, not traced.] A valuable timber-tree, *Dipterocarpus affinis*. See *Dipterocarpus*. [Philippine Is.]

Binah (bē'nä), *n.* [Heb. *bīnah*, understanding.] The third Sephira, attribute, or intelligence forming the Adam Kadmon, according to the teaching of the Cabala. See ★*Sephiroth* and ★*Adam Kadmon*.

binary. I. *a.* — **Binary numeration**, a system of numerals in which 2 is the higher unit, so that the numerals express the ideas 1, 2, 2 + 1, 2 × 2, 2 × 2 + 1, 2 × 2 + 2. — **Binary star**, a double star whose components revolve in oval orbits, presumably about their common center of gravity. About 70 of these orbits have been computed with more or less precision, the periods ranging from 5 to 800 years. At least 200 other pairs show distinct evidence of physical connection, but have not yet been sufficiently observed to permit a determination of the orbit. It is likely that the great majority of double stars will ultimately be found to belong to this class, since the theory of probabilities indicates that optical doubles should be comparatively few. — **Binary system.** (*a*) See *binary classification*. (*b*) In *astron.*, a pair of stars which revolve around their common center of gravity; a binary star.

II. *n.* — **Spectroscopic binary**, a binary star of which the components are too near each other to be separated by the telescope, but of which the binary character is shown by spectroscopic observations, being indicated by the periodic doubling and undoubling of the lines in the spectrum, or by the periodic shift of its lines relative to the lines of some element in a comparison-spectrum. About 60 such pairs are now known. Their periods range from about a day and a half to nearly a year, and their relative orbital velocity from 4 or 5 miles a second up to 400. The discovery of such objects (by Vogel and Pickering) dates from 1889. At present the list is rapidly growing. — **Twin binary**, a star which in the telescope is seen to consist of two pairs of stars, each pair binary: for example, ε Lyræ.

binauricular (bin-ä-rik'ū-lär), *a.* [L. *bini*, both, + *auricula*, auricula.] Same as ★*biauricular*.

binbashi, bimbashi (bin-, bim-bash'i), *n.* [Turk. *bing bashi* (pron. *bin-* or *bim-*), head of a thousand (a chiliarch), < *bīng*, a thousand, + *bāsh*, head.] In the Turkish and Egyptian armies, an officer of the rank of major.

Binche lace. See ★*lace*.

bind, *v. t.* — **Binding note** or **tone**, in *music*, a note or tone common to two successive chords, by which in passing from one to the other the harmony is bound together.

binder, *n.* **10.** In *lumbering*, a springy pole used to tighten a binding-chain. Also called a *pin-binder*. — **11.** In *mach.*, a crank-shaft journal-box or bearing on an engine. — **12.** In *obstet.*, a broad cloth band applied snugly to the abdomen after the termination of labor. — **13.** A firm leaf inclosing the filler in a cigar and itself surrounded by the wrapper. It grades, in market value, below the wrapper and above the filler. — **14.** Indurated argillaceous shales or clay very commonly forming the roof of a coal-seam and frequently containing clay ironstone. *Coal and Metal Miners' Pocket-book*. — **Binder's title**, the name of a book (usually abbreviated) placed on the narrow back of its cover.

binder-twine (bīn'dèr-twīn), *n.* A special kind of twine for use in the binding appliance attached to a harvester: twine for a binder. See *harvester*.

binding, *n.* — **Grolier binding.** Same as *Grolier design*. — **Loose-leaf binding**, a system of bookbinding which admits of the removal of any one or of all the pages of the book at will. The loose leaves can be reinserted in the book and practically rebound within the covers. Loose-leaf books are bound in many ways, all admitting of the ready removal of the pages, and yet holding all the leaves in place when locked to the covers.

binding-bar (bīn'ding-bär), *n.* Any bar used for binding the parts of a structure together.

binding-beam (bīn'ding-bēm), *n.* A girder upon which rest the smaller beams of a floor.

binding-bolt (bīn'ding-bōlt), *n.* A bolt used in binding machinery to a foundation. *Barrowman*, Glossary.

binding-chain (bīn'ding-chān), *n.* A chain used to bind together a load of logs. Also called *wrapper-chain*.

binding-log (bīn'ding-log), *n.* One of the logs placed on the top of the chain which binds a load in order to take up the slack.

Bindschedler's green. See *green*★[1].

bindweed, *n.* — **Bracted, great,** or **hedge bindweed**, *Convolvulus sepium*. — **English** or **small bindweed**, *Convolvulus arvensis*. — **Ivy bindweed.** See *ivy-bindweed*.

bingle-bangle (bin'gl-ban'gl), *a.* [Imitative derivate of *bang*[1].] Vacillating; fickle. [Dialectal.]

bingo (bing'gō), *n.* [Origin obscure; 'Bingo' and 'the Bingo farm' figure in the refrain of a college song.] A game of dominoes essentially identical with the card game of sixty-six. See *sixty-six*.

bingoi (bing-gō-ē'), *n.* [Jap.] The common rush, *Juncus effusus*, from which Japanese matting is made.

biniodide (bin-ī'ō-did), *n.* [L. *bini*, two by two, + E. *iodide*.] In *chem.*, an iodide containing two atoms of iodine in the molecule: as, *biniodide* of mercury or mercuric iodide (HgI_2).

bink[2] (bingk), *v. i.* To play the part of 'Binks the bagman': act in the manner of a binkser. See quotation under ★*binkser*.

binkser (bingk'sèr), *n.* [Also *binxer*. See the extract below.] A vulgar, loud-talking, blustering person; especially, a commercial traveler of this kind.

Among commercial travellers a "*binxer*" or "*binkser*" is a slang term for that type of bagman, "the gushing personage, with shiny hat and loud voice, who scours the country, establishing a character for being the nuisance of the calling."—*Globe*, 21 December, 1897. The word probably had its origin in a one-act farce by Stirling Coyne, entitled 'Binks the Bagman.' Binks is there depicted as a bragging, blustering upstart, a "bounder," although his deportment during commercial transactions is not alluded to, his vulgar behaviour being there confined to the inn at which he puts up.
N. and Q., March 9, 1901, p. 182.

binnacle-lamp (bin'a-kl-lamp), *n.* On a vessel, the small lamp which fits into the binnacle-hood and lights up the compass-card.

binnacle-light (bin'a-kl-lit), *n.* Same as ★*binnacle-lamp*.

binocular. I. *a.* — **Binocular camera.** See ★*camera*[3]. — **Binocular loop.** See ★*loop*[1].

II. *n.* An optical instrument, such as a field-glass, with two objectives and two eyepieces, adjusted so as to permit the simultaneous use of both eyes. The word *binocular* has almost entirely supplanted the older and grammatically preferable form *binocle*. — **Porroprism binocular**, a binocular field-or opera-glass, having a special combination of prisms, for the purpose of erecting the image, of increasing the interobjective distance, of materially shortening the length of the tubes, and of reducing the weight of the instrument: an adaptation of the work of the Italian engineer Porro. — **Prismatic binocular**, a field-glass or other binocular telescope in which compactness of form with great focal length is obtained by the use of a system of reflecting-prisms. Ordinary opera- and field-glasses are telescopes of the Galilean type, consisting of a positive objective and a negative eye-lens. This is a compact construction, since the focal length of the instrument is equal to the difference of the focal lengths of the two lenses, and because it is unnecessary to use an erecting-lens. It is practicable, however, only for magnifying powers of less than 3 diameters. To obtain the advantages of a telescope with positive eyepiece, a form which has a larger field and admits of much higher magnifying power without increasing the actual

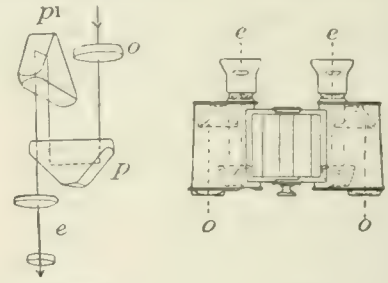


Figure 1. Figure 2.

length of the instrument, the optical system shown in Fig. 1 is employed. It consists of an objective, o, two reflecting-prisms, p and p[1], and an eyepiece, e, for the right eye of the observer, and of a similar system symmetrically placed for the left eye. The series of reflections within the prisms gives an erect image without the introduction of the erecting-lens used in ordinary terrestrial telescopes. In field-glasses of this type a magnifying power of from 4 to 8 diameters is easily obtained. In the prismatic binocular the interobjective distance oo (Fig. 2) is greater than the interocular distance ee: an arrangement which affords greater stereoscopic power than is obtained in ordinary binocular vision or with field-glasses in which the interobjective and interocular distances are equal.

Binodal area, a region of the ocean where, according to H. A. Harris, it becomes possible for the water to oscillate as a mass about two nodal lines, giving rise to a binodal tide.

binograph (bī'nō-graf), *n.* [L. *bini*, two by two, + γράφειν, write.] A picture in which the two elements of a stereogram are united in one: also applied to pictures in which all possible intermediate views are united. *Wall*, Dict. of Photog., p. 81.

binographic (bī-nō-graf'ik), *a.* Of or pertaining to binography. — **Binographic work**, in *photog.*, the production of pictures by the blending of the two elements of a stereogram. *Wall*, Dict. of Photog., p. 81.

binography (bī-nog'ra-fi), *n.* [As *binograph* + *-y*.] In *photog.*, the art of producing binographs. *Wall*, Dict. of Photog., p. 81.

binomenclature (bī-nō'men-klā-tūr), *n.* A binominal system of names or naming.

Binomial curve. See ★*curve*. — **Binomial law**, the law of chance according to which the probability that an event, whose probability on each one of n occasions is p, should occur r times among these n occasions is equal to the term containing p^r in the development of $(p+q)^r$, where $q = 1 - p$. See *probability*.

To those acquainted with the so-called *binomial* or serial *law*, according to which no phenomenon occurs singly — each one being, on the contrary, the expression of a series of less well-defined but analogous facts — such frequent occurrence of epilepsy among the most distinguished of distinguished men can but indicate a greater prevalence of this disease among men of genius than was previously thought possible, and suggests the hypothesis of the epileptoid nature of genius itself.
C. Lombroso (trans.), Man of Genius, p. 338.

binukao (bē-nō-kou'), *n.* [A Philippine name.] A tree, *Garcinia Cambogia*, belonging to the family *Clusiaceæ*. It yields a gum resin which is inferior to gamboge on account of its insolubility in water. However, it is soluble in turpentine and may be used as a varnish. The acid rind of the fruit is dried by the natives of India and Ceylon and is used in curries. See *Garcinia*. [Philippine Is.]

bioblast, *n.* — **Altman's bioblasts**, minute granules, of which (embedded in a homogeneous substance) protoplasm is composed, according to the theory of Altman.

bioblastology (bī'ō-blas-tol'ō-ji), *n.* [Gr. βίος, life, + βλαστός, germ, + *-λογία*, < *-λογία*, < λέγειν, speak.] The study or discussion of the properties or characteristics of germs or embryos in their relation to the adult properties or characteristics of ancestors. *Hyatt*, Biol. Lect., 1899, p. 141. [Rare.]

biochemical (bī-ō-kem'i-kal), *a.* [Gr. βίος, life, + E. *chemical*.] Of or pertaining to biochemistry; biochemic: also, chemicophysiological.

A constant constructive and destructive *biochemical* process occurs in the neurones of a healthy nervous system.
Encyc. Brit., XXXI. 539.

biochemistry (bī-ō-kem'is-tri), *n.* [Gr. βίος, life, + E. *chemistry*.] The chemical study of living matter; also, physiological chemistry.

The chair of *biochemistry* recently founded in University College.
Nature, Aug. 14, 1902, p. 381.

biocrystal (bī-ō-kris'tal), *n.* A term used by Haeckel to designate a skeleton or shell that admits of mathematical description.

Midway between the organic plasma-products and inorganic crystals we have the *biocrystals*, . . . for instance, the crystalline flint or chalk skeletons of many of the sponges, corals, etc.
Haeckel (trans.), Wonders of Life, p. 41.

biocular (bī-ok'u-lär), *a.* [L. *bi-*, two-, + *oculus*, eye: see *ocular*.] In *anthrop.*, relating to the two eyes: as, external *biocular* breadth, the distance between the outer corners of the eyes.

biodendry (bī'ō-den-dri), *n.* [Improp. formed from Gr. βίος, life, + δένδρον, tree, + -*y*[3]. The formation means 'life-treeness,' 'the quality of being a life-tree'—a notion not really existent. The proper form would be **dendrobia* or **dendroby*, 'tree-life.'] The economy of tree life; tree physiology.

Because a tree may take up only one millionth part of the carbon dioxid which comes to it in the air during its period of growth, is no reason for saying that this constituent of the air is of little consequence in *biodendry*.
H. W. Wiley, Science, May 15, 1903, p. 794.

biogen, *n.* **2.** In *biol.*, one of the smallest theoretical units of living substance: same as ★*plasome*, ★*biophore*, etc. *Verworn*, 1895.

Biogenetic law. See ★*law*[1].

biogenetical (bī"ō-jē-net'i-kal), *a.* Same as *biogenetic*.

biogeographic (bī"ō-jē-ō-graf'ik), *a.* Of or pertaining to biogeography or the geographical distribution of life.

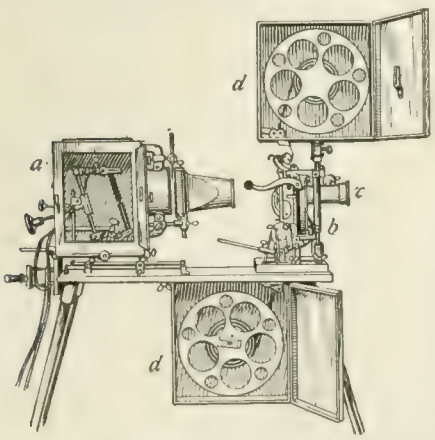
biogeographical (bī"ō-jē-ō-graf'i-kal), *a.* [*biogeography* + -*ic-al*.] Of or pertaining to biogeography, the geography of living things or geographical biology.

It has been thought expedient to employ "Association" for the more restricted assemblages, which are peculiar to each *biogeographical* area.
Kearney, Contrib. Nat. Herb., V. 269.

biogeography (bī"ō-jē-og'ra-fi), *n.* [Gr. βίος, life, + γεωγραφία, geography.] That branch of biology which treats of the geographical distribution of living things; geographical biology.

Bio-geography, the geographical distribution of life, arises directly from physical geography, which dominates it, but it is full of complex questions which involve the biological nature of the organism and the influence of physical environment, in which geographical elements, although predominant, do not act alone.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 705.

biograph (bī'ō-graf), *n.* [Gr. βίος, life, + γράφειν, write.] **1.** A mechanical device, invented by



Biograph Mechanism

Herman Casler, for projecting upon a screen pictures of moving objects.—**2.** A biographical sketch or notice; a brief biography. *E. Burritt.*

biograph (bī-ō-graf), *v. t.* To write a biograph of; prepare a brief biographical sketch of.

biographee (bī-ō-graf-ē'), *n.* [*biograph*(*er*) + -*ee*[1].] One of whom a biography is written.

biolith (bī'ō-lith), *n.* [Gr. βίος, life, + λίθος, stone.] In *petrog.*, a term proposed by Ehrenberg as a general name for a rock composed exclusively of organic debris. Also *organolith*.

biologia (bī-ō-lō'ji-ä), *n.* [NL.] Biology: used in the quotation for the flora and fauna of a region considered as a whole.

We shall be enabled to work out a *Biologia* of the country now under investigation.
Proc. Zool. Soc. London, 1897, p. 238.

Biologic form, a number of organisms with some common characteristic that is due to some constant external influence.

Within the last two years the existence of '*biologic forms*' in the Erysiphaceæ has been definitely proved.
Rep. Brit. Ass'n Advancement of Sci., 1903, p. 850.

Biologic geology. See ★*geology*.—**Biologic hemolysis,** hemolysis caused by lysins, the products of cellular activity, on the part of animals and plants: for example, the hemolysin produced by the tetanus bacillus, that found in snake-venom, the crotin of *Croton tiglius*, etc.

biological, *a.* **3.** Regarded from the point of view of biology and natural selection exclusively, as opposed to *sociological*, which implies that other considerations are taken into account.

If we call *biological* processes natural, we must call social processes artificial. The fundamental principle of biology is natural selection, that of sociology is artificial selection. And so it is throughout. The terms are all reversed.
L. F. Ward, Psychic Factors of Civilization, p. 135.

Biological aggregation. See ★*aggregation*.—**Biological survey,** a systematic examination of the organisms of any given region, involving their collection and identification and the determination of their distribution, life-histories, interrelations, and economic importance.

The *Biological Survey* proper carries on field explorations in all parts of the country, but does most of its detailed work in the west. It collects data and prepares maps showing the actual distribution of various species of mammals, birds, reptiles, trees and shrubs, and determines the boundaries between the several life-zones and areas. By a study of the associations of species distinctive of the several zones in connection with the crops found to thrive best in parts of these zones, it prepares lists of the particular varieties of fruits and other agricultural products adapted to each belt.
Science, XVII. 929.

Biological zones. See ★*zone*.

biology, *n.*—**Geographical biology.** Same as ★*biogeography*.—**Philosophical biology, transcendental biology,** that study which carries speculations concerning biology, and especially organic evolution, further than strict empirical science can, as yet, go.

We find the phrase transcendental biology employed by French writers, and elsewhere we meet with the significant title *philosophical biology*. Still more significantly Mr. Spencer, whose treatise on biology is occupied with researches of this high order, speaks of them as constituting a domain of "special philosophy."
J. Fiske, *Cosmic Philos.*, I. 61.

Structural biology, vegetable and animal morphology, or structural botany and zoology, considered collectively as the branch of science which treats of the structure or form of living beings.

—**Systematic biology,** systematic botany and systematic zoology, considered collectively as the branch of science which treats of the taxonomy of living beings, or their arrangement in groups according to their degree of likeness or genetic affinity.

biolysis, *n.* **2.** The chemical decomposition, or breaking up into simpler compounds, of organic matter, brought about by living bacterial or other minute organisms, as in the case of sewage.

biometric (bī-ō-met'rik), *a.* Of or pertaining to biometry; biometrical.

The analysis of composite characters into their individual units and statistical inquiry into the behavior of the units would seem to be a necessary part of *biometric* investigation. *Encyc. Brit.*, XXVIII. 344.

biometrical (bī-ō-met'ri-kal), *a.* Same as ★*biometric*.

biometrician (bī"ō-me-trish'an), *n.* One who devotes himself to biometry; a biometricist.

To the *biometrician* . . . variation is a quantity determined by the class or group without reference to its ancestry. *Pop. Sci. Mo.*, Jan., 1903, p. 252.

biometricist (bī-ō-met'ri-sist), *n.* A biometrician. *Encyc. Brit.*, XXVIII. 344.

biometrics (bī-ō-met'riks), *n.* Same as ★*biometry*, 2.

Biometrics.—Within quite recent years, however, a special school has arisen with the main object of treating the processes of evolution quantitatively.
Encyc. Brit., XXVIII. 344.

biometry, *n.* **2.** That branch of statistical science which treats of the measurable or quantitative properties of living beings (as weight or stature), or of their parts (as the stamens and petals of flowers), or of their activities (as speed). More specifically, it is the branch of science which treats the measurable or quantitative properties of living beings, or of their parts, or of their activities, as logically or intellectually separable from these beings and as common or general to many of them, for the purpose of establishing laws of inheritance or other general laws. Since it is only as individual and particular living beings that organisms exist in the natural world, and since they are organized and coordinated wholes and not bundles of qualities, many biologists, who admit that the study of biometry is valuable and important, hold that it is not biology but logic, since it deals with human intellectual conceptions or ideas rather than with the actual living world.

The phenomena of heredity and variation are specific, and give loose and deceptive answers to any but specific questions. That is where our exact science must begin. Otherwise we may one day see those huge foundations of *biometry* in ruins.
Bateson, Mendel's Prin. of Heredity, p. xi.

biomolecular (bī"ō-mō-lek'ū-lär), *a.* Of or pertaining to the biomolecules.

biomolecule (bī-ō-mol'e-kūl), *n.* [Gr. βίος, life, + E. *molecule*.] The smallest quantity of living matter that can exhibit some of the chemical phenomena of life; a molecule of living substance, in contradistinction to a molecule of lifeless or inorganic substance.

This view of the subject has led some thinkers, and notably Ermano Giglio-Tos of Turin, in a remarkable book entitled 'Les Problèmes de la Vie,' to form the conception of a *biomolecule*, or living molecule, that is to say the smallest quantity of living matter that can exhibit some of the chemical phenomena of life, such as respiratory exchange, the function of chlorophyll, the starch-forming function, and functions of disassimilation and secretion.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 810.

biomonad (bī-ō-mon'ad), *n.* [Gr. βίος, life, + E. *monad*.] One of the granules in protoplasm.

Living matter, when examined by the highest powers, presents some of the characters of an emulsion; that is to say, it is composed of minute particles with fluid matter between them. These minute particles, built up of biomolecules, have been termed by Tos biomones. Biomones, in their turn, form *biomonads* or bioplasm, or molecular or granular protoplasm, and this again forms the cell.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 810.

biomone (bī'ō-mōn), *n.* [Gr. βίος, life, + μόνος, single.] One of the minute particles of living matter, visible with the microscope and built up of biomolecules. See the extract under ★*biomonad*.

biomore (bī'ō-mōr), *n.* [Gr. βίος, life, + μόριον, piece.] In *biol.*, a mass of biomolecules constituting one of the organs of the cell, like a chromosome, centrosome, etc.

biomorph (bī'ō-môrf), *n.* [Gr. βίος, life, + μορφή, form.] A decorative form representing a living being or a part of a living being: opposed to ★*skeuomorph*. *Haddon*, Evolution in Art, p. 126.

biomorphic (bī-ō-môr'fik), *a.* [*biomorph* + -*ic*.] Having the form of or relating to a biomorph. *Haddon*, Evolution in Art, p. 188.

bion (bī'on), *n.* [NL., neuter form based on Gr. βίος, life.] A term introduced by Haeckel to designate a physiological individual as contrasted with a morphon or morphological individual.

The physiological individual (or *bion*), characterized by definiteness and independence of function.
Encyc. Brit., XVI. 842.

bionic (bī-on'ik), *a.* [Gr. βίος, life, + -*on-ic*.] In *biol.*, having the properties peculiar to living organisms; especially, being able to repeat the same morphological characters in successive generations.

bionomic (bī-ō-nom'ik), *a.* and *n.* [*bionomy* + -*ic*.] **I.** *a.* Same as ★*bionomical*.

II. *n.* Same as ★*bionomics*.

bionomical (bī-ō-nom'i-kal), *a.* [*bionomy* + -*ical*.] Of or pertaining to the conditions under which an organism lives in its natural home; œcological. See ★*bionomics*.

A large number of the continually increasing body of investigators have turned again to *bionomical* work.
Encyc. Brit., XXVIII. 344.

bionomically (bī-ō-nom'i-kal-i), *adv.* In relation to the conditions under which an organism passes its life in its natural home; œcologically. See ★*bionomics*.

bionomics (bī-ō-nom'iks), *n.* [Pl. of ★*bionomic*: see -*ics*.] That branch of biologic science which treats of the conditions under which organisms live in their natural homes; the economics of biology; œcology (which see). *Lankester*.

bionomist (bī-on'ō-mist), *n.* [*bionomy* + -*ist*.] One who studies bionomics or œcology.

biontology (bī-on-tol'ō-ji), *n.* [Gr. βίος, life (see ★*bion*), + *ontology*.] That branch of science which treats of the activities of the bion, or physiologic individual.

bionuclein (bī-ō-nū'klē-in), *n.* [Gr. βίος, life, + *nuclein*.] A hypothetic iron containing nuclein with both oxidizing and reducing properties.

biophilous (bī-of'i-lus), *a.* [Gr. βίος, life, + φιλεῖν, love.] In *phytogeog.*, parasitic in or on the leaves and stems of the higher plants, or upon animal organisms: said of a class of fungi.

biophore (bī'ō-fōr), *n.* [Gr. βίος, life, + -φορος, < φέρειν, bear.] **1.** A cell, as the vital unit. *G. C. Bourne.*—**2.** The hypothetical bearer, in the germ-plasm or substance of inheritance, of one

of the hereditary qualities of an organism. Also *biophor*. See ★*germ-plasm*.

Weismann's estimates as to the dimensions of the vital unit to which he gives the name of *biophor* may be shortly stated. He takes the diameter of a molecule at $\frac{1}{200,000}$ of a millimetre (instead of the one millionth) and he assumes that the *biophor* contains 1,000 molecules. Suppose the *biophor* to be cubical, it would contain ten in a row, or $10 \times 10 \times 10 = 1,000$. Then the diameter of the *biophor* would be the sum of ten molecules, or $\frac{1}{200,000} \times 10 = \frac{10}{200,000}$ or $\frac{1}{20,000}$ of a millimetre. Two hundred *biophors* would therefore measure $\frac{200}{20,000}$ or $\frac{1}{100}$ mm. or 1 μ (micron = $\frac{1}{1,000}$ mm.). Thus a cube one side of which was 1 μ would contain $200 \times 200 \times 200 = 8,000,000$ *biophors*. A human red blood corpuscle measures about 7·7 μ; suppose it to be cubed, it would contain as many as 3,652,264,000 *biophors*. If the *biophor* had a diameter of $\frac{1}{1000000}$ mm. the number would be much smaller.

Rep. Brit. Ass'n Advancement of Sci., 1901, p. 814.

biophorid (bī-of'ō-rid), *n.* [G. *biophorid* (Weismann); as *biophore* + *-id*[2].] A hypothetical living being consisting of biophores. In Weismann's notion, the lowest and most primitive organisms that we know are descended from biophorids. In the earliest biophorids all the biophores were alike (*homobiophorids*), but these were followed by those in which the biophores were of several kinds (*heterobiophorids*), from which all known organisms are descended.

These two kinds of hypothetical beings might be respectively distinguished as *homobiophorids* and *heterobiophorids*. *Weismann* (trans.), Germ-plasm, p. 450.

biophysics (bī-ō-fiz'iks), *n.* [Gr. *βίος*, life, + *φυσικά*, physics.] A science (not yet existent) which applies the principles of physics to explain the phenomena not merely of physiology but also of embryology and biological morphology. The term was introduced by K. Pearson in 1892.

Applied mathematics and *biophysics* are thus the two links between the three great divisions of science, and only when their work has been fully accomplished, shall we be able to realize von Helmholtz's prediction and conceive all scientific formulæ, all natural laws, as laws of motion. *K. Pearson*, Gram. of Sci., 1st ed., p. 470.

bioplasson (bī'ō-plas-on), *n.* [Gr. *βίος*, life, + *πλάσσων*, ppr. of *πλάσσειν*, form: see *plasm*.] Same as *bioplasm*.

biopsy (bī-op'si), *n.* [Gr. *βίος*, life, + *ὄψις*, sight.] Examination, for diagnostic purposes, of a piece of tissue severed from the living body.

biopsychic (bī-ō-sī'kik), *a.* [Gr. *βίος*, life, + *ψυχή*, mind: see *psychic*.] Pertaining to life and mind; psychophysiological.

But with more precision one can also aver, even outside the conditions profoundly pathologic, that there are a great number of cases in which the *bio-psychic* anomalies of the criminals may be the effect of an environment which is physically and morally mephitic.

Smithsonian Rep., 1899, p. 639.

biopsychological (bī″ō-sī-kō-loj'i-kal), *a.* Of or pertaining to biopsychology.

biopsychologist (bī″ō-sī-kol'ō-jist), *n.* A student of mind in its relations to life; one who approaches psychology by way of biology (this taken in its widest sense to include evolutionary theory, anthropology, sociology, etc.).

Some *biopsychologists* almost wish to take the pulpit to bring out aright the old anthems of Pauline conviction of sin and Socratic conviction of human ignorance.

G. S. Hall, Amer. Jour. Relig. Psychol., I. 3.

biopsychology (bī″ō-sī-kol'ō-ji), *n.* The investigation of mind in its relations to life; psychology as based upon or approached by way of biology.

bioral (bī-ō'ral), *a.* [L. *bi-*, two-, + *os* (*or-*), mouth: see *oral*.] Having two mouths, as certain polyps during fission.

biorbital (bī-ôr'bi-tal), *a.* In *craniom.*, of or pertaining to the two orbits.—**External biorbital breadth**, the distance between the external orbital points.

biorgan (bī'ôr-gan), *n.* [Gr. *βίος*, life, + *ὄργανον*, organ.] An organ in the functional or physiological sense, as contrasted with an organ in the structural or morphological sense.

bios (bī'os), *n.* [NL., < Gr. *βίος*, life, state of life, course of life, the world we live in.] Living things considered collectively and in contrast with things that are not alive. *Haeckel* (trans.), Planktonic Studies, p. 578.

bioscope (bī'ō-skōp), *n.* [Gr. *βίος*, life, + *σκοπεῖν*, view.] 1†. A view of life, or anything which gives such a view: as, "Bagman's *Bioscope*: Various Views of Men and Manners" (a book-title).—2. A cinematograph or vitascope. *Science*, Feb. 7, 1902, p. 235.

bioscopic (bī″ō-skop'ik), *a.* Pertaining to or connected with a bioscope: as, a *bioscopic* camera. *Athenæum*, Dec. 12, 1903, p. 799.

biose (bī'ōs), *n.* [*bi-*[2] + *-ose*.] A carbohydrate which on decomposition yields two molecules of a simpler sugar, as cane-sugar, which gives rise to equal molecules of dextrose and fructose.

biosphere (bī'ō-sfēr), *n.* [Gr. *βίος*, life, + *σφαῖρα*, sphere.] The sum of the living things on the earth considered as a stratum in contrast with the atmosphere and the lithosphere. *Encyc. Brit.*, XXVIII. 625.

biota[1] (bī'ō-ta), *n.* [NL., < Gr. *βιοτή*, beside *βιοτος*, life, way of life, < *βίος*, life.] 1. The sum total of animal and plant life of a given region or period: the equivalent of fauna and flora combined.—2. A treatise upon the animals and plants of any geographic area or geologic period. *Stejneger*, Amer. Nat., 1901, p. 89.

Biota[2] (bī'ō-ta), *n.* [NL. (proposed by Don, 1828), < Gr. *βιοτή*, life: see *biota*[1]. The name alludes to the common name of these trees, *arbor-vitæ*.] A group of conifers, now commonly referred to *Thuja*, the arbor-vitæ. The name, however, is frequent in nurserymen's catalogues.

biotic, *a.* 2. Pertaining to or treating of a biota, or the combined fauna and flora of a region or period: as, a *biotic* publication; a *biotic* region. *Stejneger*, Amer. Nat., 1901, p. 89.—**Biotic geology.** See ★*geology*.

biotomy (bī-ot'ō-mi), *n.* [Gr. *βίος*, life, + *-τομία*, < *ταμεῖν*, cut.] The study of the structure of animals and plants by dissection: a comprehensive term for zoötomy and phytotomy.

biotonic (bī-ō-ton'ik), *a.* Of or pertaining to biotonus. *G. S. Hall*, Adolescence, II. 112.

biotonus (bī-ot'ō-nus), *n.* [Gr. *βίος*, life, + *τόνος*, tone, intensity.] In *physiol.*, the relative amount of assimilation and dissimilation exhibited by any mass of living protoplasm in a given unit of time.

Biot's ★hemispheres, ★polariscope. See these words.

Bipaliidæ (bī-pa-lī'i-dē), *n. pl.* [NL., < *Bipalium* + *-idæ*.] A family of terrestrial *Tricladida*, having marginal eyes and the body broadened out to form a semicircular cephalic plate. It includes the genera *Bipalium*, *Perocephalus*, and *Placocephalus*, the members of some of which are very large, reaching a length of from 6 to 18 inches.

Bipalium (bī-pā'li-um), *n.* [NL., < L. *bi-*, two-, + (?) *pala*, a spade.] The typical genus of the family *Bipaliidæ*. *Stimpson*, 1857.

biparasitic (bī-par-a-sit'ik), *a.* [*bi-*[2] + *parasitic*.] Parasitic in or on another parasite.

biparental (bī-pā-ren'tal), *a.* [L. *bi-*, two-, + *parens*, parent, + -al.] Amphigonic; pertaining to or derived from two parents.

Be the source what it may, the existence of this assortative mating most substantially modifies the form of *biparental* inheritance. *Biometrika*, Nov., 1903, p. 396.

bipartite, *a.* 3. In *math.*, containing two separate sets of variable values; made up of two continuous, but non-intersecting, curves.

bipectinate, *a.* 2. In *Mollusca*, having 2 rows of plates on the ctenidium, or gill, arranged, typically, perpendicularly to the axis, as in *Aspidobranchiata* and *Tectibranchiata*. Also *bipennate*.

bipectinated (bī-pek'ti-nā-ted), *a.* Same as *bipectinate*.

biped, *n.*—**Diagonal biped,** a term applied by some veterinary writers to the off fore and near hind leg, or the near fore and off hind leg, of the horse, referred to as a pair.—**Lateral biped,** a term applied by some veterinary writers to the off fore and hind leg or the near fore and hind leg, referred to as a pair.—**Posterior biped,** the two hind legs of the horse, referred to as a pair.

bipedally (bī-ped'al-i), *adv.* On two feet: as, the Mexican iguanoid lizard also runs *bipedally*.

bipennate, *a.* 3. In *Mollusca*, same as ★*bipectinate*, 2.

bipenniform (bī-pen'i-fôrm), *a.* [*bi-*[2] + *penniform*.] Having the parts arranged along both sides of a median axis or rachis, like the barbs of a feather.

biphase (bī'fāz), *a.* [*bi-*[2] + *phase*.] In *elect.*, same as ★*quarterphase*.

biphasic (bī-fā'zik), *a.* Of two phases.

biplane, *n.* 2. A flying- or a gliding-machine in which two principal superposed aëroplane surfaces are depended upon to sustain the machine in the air.

biplate (bī'plāt), *n.* [L. *bi-*, two-, + E. *plate*.] An optical device, invented by Auguste Bravais, for the study of polarization phenomena in crystals. It consists of a quartz plate, cut parallel to the axis, and of such thickness as to show color when placed between crossed Nicol prisms. The plate is cut through in the direction which bisects its planes of vibration, and one of the halves is reversed so that the color-changes caused by variations in the difference of phase between the two rays traversing the biplate thus formed will be complementary. Such an arrangement is very sensitive to traces of double refraction, to changes of phase, etc.; hence its importance in polariscopic experiments.

bipocillate (bī-pos'i-lāt), *a.* [L. *bi-*, two-, + *pocillum*, a little cup, dim. of *poculum*, a cup.] Having a cup-shaped process at each end, as certain monactinellid sponge-spicules.

bipocillum (bī-po-sil'um), *n.*; pl. *bipocilla* (-la). [NL.: see ★*bipocillate*.] A bipocillate sponge-spicule.

bipolar, *a.* 3. In *elect.*, pertaining to an electric machine having two poles.—4. In *zoöl.*, occurring in the north and south polar regions, but not in the intervening tropical ocean. See extract under ★*bipolarity*, 2.—**Bipolar staining,** in *cytol.*, taking the stain only at the two poles, or staining differently at the two poles: said of cells or cell-structures.—**Bipolar theory of distribution of species,** a view advocated by Dr. John Murray, that many identical or closely allied species of marine organisms, both plant and animal, occur around both poles, but are absent from the intervening ocean.

bipolarity, *n.* 2. In *biol.*, the occurrence of organisms, mostly marine, in both polar areas, but not in the tropics. See *discontinuous* ★*distribution*.

Bipolarity in the distribution of marine organisms is a fact, however much naturalists may differ as to its extent and the way in which it has originated.

Geog. Jour. (R. G. S.), XI. 419.

biprism, *n.*—**Fresnel's biprism,** a prism with two refractive edges, each of small angle, its cross-section being an obtuse-angled isosceles triangle. The whole prism is as if made up of two prisms, hence the name. Used in experiments on the interference of light.

biprotovertebral (bī″prō-tō-vèr'tē-bral), *a.* [*bi-*[2] + *protovertebra* + *-al*[1].] In *embryol.*, comprising or consisting of two protovertebræ or mesoblastic somites. *Philos. Trans. Roy. Soc.* (London), 1895, p. 214.

bipyramid (bī-pir'a-mid), *n.* [*bi-*[2] + *pyramid*.] See ★*pyramid*.

biquadrantal (bī-kwod-ran'tal), *a.* [*bi-*[2] + *quadrantal*.] In *spherical trigon.*, said of a triangle if each of two of its sides is a great-circle quadrant.

biradial (bī-rā'di-al), *a.* and *n.* [L. *bi-*, two-, + *radius*, spoke (ray), + *-al*[1].] I. *a.* Having the radii arranged bilaterally, as in sea-anemones and corals.

II. *n.* In *geom.*, the figure formed by two rays which go out from the same point; an angle.

Birago trestle. See ★*trestle*[1].

Biram's ★air-meter, ★anemometer. See these words.

birational (bī-rash'on-al), *a.* [*bi-*[2] + *rational*.] In *math.*, characteristic of a transformation such that each of two sets of variables is expressible rationally by means of the other set.

birch, *n.* 4. In New Zealand, a name of any one of several species of *Nothofagus*.—**Black birch** (*c*), *Nothofagus fusca*, a tree 60 to 90 feet high: so called from the color of the bark.—**Bog birch,** the Carolina buckthorn, *Rhamnus Caroliniana*. [Minnesota.]—**Cañon-birch,** *Betula occidentalis*, a species inhabiting mountain cañons in the central and northwestern parts of the North American Continent.—**Fragrant birch,** a subspecies (*odorata*) of the European *Betula alba*.—**Gray birch.** (*a*) See *birch*, 1. (*b*) Same as *white* ★*birch* (*b*).—**Indian paper-birch,** *Betula utilis*, a medium-sized tree of Nepal and the higher ranges of the Himalayas. Its bark is the material upon which the ancient Sanskrit manuscripts of northern India are written. It peels off in large sheets and is used like paper for wrapping parcels, lining the roofs of houses, for umbrellas, and for many other purposes.—**Moor-birch,** *Betula pubescens*.—**Old field-birch.** Same as *white* ★*birch* (*b*).—**Red birch.** Same as *black* ★*birch* (*c*): so called from the color of the wood.—**Water-birch.** (*a*) The river-birch, *Betula nigra*. (*b*) Same as *cañon*-★*birch*.—**White birch.** (*a*) The European *Betula alba*. See *birch*, 1. (*b*) The Atlantic coast birch, *B. populifolia*. (*c*) The paper- or canoe-birch, *B. papyrifera*. (*d*) *Nothofagus Solandri*, a beautiful evergreen tree 100 feet high: so called from the color of the bark.

bird[1], *n.*—**Speckled bird,** a person of blemished character or reputation. [Slang, U. S.]

bird-cage, *n.* 2. In *textile-manuf.*, a small skeleton creel for holding yarn on a bank-winding machine.—**Bird-cage twine.** See ★*twine*.

bird-cherry (bèrd'cher-i), *n.* See *cherry*[1], 1.

birdeen (bèr-dēn'), *n.* [Appar. < *bird*[2] + Ir. Gael. dim. *-een* (*-in*), as in *colleen*, etc.] 'Birdie': a pet name. *Fiona Macleod*, Mountain Lovers.

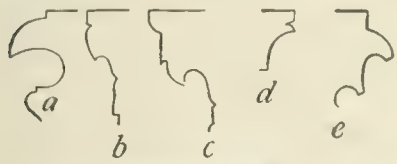
bird-grasshopper (bèrd'gras hop-èr), *n.* Any grasshopper of the genus *Schistocerca*, which contains large migratory forms, as *S. americana*, *S. peruviana*, etc. *Science*, July 29, 1904, p. 156.

birdlet (bèrd'let), *n.* [*bird*[1] + *-let*.] A little bird; a nestling.

bird-pepper (bèrd'pep-èr) *n.* See *Capsicum*

bird-pox (bêrd′poks), *n.* A disease of chickens, pigeons, turkeys, etc., characterized by the eruption about the head of yellow nodules varying in size from that of a pinhead to that of a pea. Also called *hen-pox* and *sorehead*.

bird's-beak (bêrdz′bēk), *n.* In *arch.*, a profile, as of a molding, supposed to resemble the sharp beak of a bird: used especially for drip-moldings, whether to shed water or to give a sharp-edged dark shadow.



Bird's beak Moldings

a, from the Theseion, Athens; *b*, Temple, Agrigentum (Akragas); *c*, Farnese Palace, Rome; *d*, Ely Cathedral; *e*, Netley Abbey

Bird's-dung spider. See ★*spider*.

bird's-eye. **I.** *n.* 1. (*d*) *pl.* A Californian wild flower, *Gilia tricolor*, sometimes carpeting whole slopes. The funnel-shaped corollas are azure or whitish, with purple spots in the throat bounded by bright gold.

II. *a.*—**Bird's-eye grain**, a slight roughness or grainy appearance on the grain side of rough leather: contrasted with a smooth grain. *Modern Amer. Tanning*, p. 171.—**Bird's-eye ★marble, ★porphyry.** See the nouns.

Bird's-foot fern. See ★*fern*[1].—**Bird's-foot star**, a star-fish of the asterinoid type; a sea-star.

Bird's-nest moss. See *resurrection-plant* (*b*). **Bird's-nest pudding.** See ★*pudding*.

birds'-nest (bêrdz′nest), *v. i.* To search for birds' nests or their eggs: as to go *birds'-nesting*.

bird-vine (bêrd′vīn), *n.* See the extract.

These plants, called *bird-vines* (*Loranthaceæ*), are, like the stranglers, distributed by birds. The seeds are covered with glutinous pulp, which, when they are dropped by birds, enables them to adhere to the branches of the trees. Here they sprout, and with their young leaves, produce aërial roots, covered with suckers, which run along and insinuate themselves into the cracks of the bark, continually nourishing themselves on the life-blood of their victims. *Smithsonian Rep.*, 1891, p. 339.

bird-wave (bêrd′wāv), *n.* In *ornith.*, the sudden arrival of birds during the spring or fall migration in such numbers as to make their coming noticeable.

birefringence (bī-rē-frin′jens), *n.* [*bi*-[2] + *refringence* (see *refringency*).] 1. Double refraction.—2. The strength of the double refraction, that is, the difference between the two indices of refraction for a uniaxial crystal and that between the maximum and minimum indices for a biaxial crystal. See *refraction*, 1.

biremal (bī-rē′mal), *a.* [L. *bi*-, two-, + *remus*, oar.] Having a dorsal and a ventral parapodium on each segment, as certain polychætous annelids.

Birkhill shales. See ★*shale*[2].

birl[2], *v. t.* 2. In *lumbering*, to cause a floating log to rotate rapidly by treading upon it.

Birmingham gage, platinum. See ★*gage*[2], ★*platinum*.

birmite, *n.* See ★*burmite*.

Birth palsy. See ★*palsy*.

Birthday card. See ★*card*[1].

birth-opening (bêrth′ōp″ning), *n.* In the liver-fluke, an opening in the wall of the redia through which the cercariæ escape. See *cercaria*. *Parker and Haswell*, Zoology, I. 231.

birth-stone (bêrth′stōn), *n.* A name applied to any precious or semi-precious stone which is imagined, according to a long-cherished superstition, to protect the wearer from harm, ill luck, and the evil eye. Lists of "appropriate" birth-stones for different persons to wear are often printed.—**Birth-stone jewelry**, birth-stones set in a jewel which is made up of the signs of the zodiac, the flower of the month, the jewel of the day, the gem of the guardian angel, and other emblematic devices.

biscalar (bī-skā′lär), *n.* [*bi*-[2] + *scalar*.] A complex number, $x + iy$; the sum of a real number, x, and a neomonic number, $y\sqrt{-1}$. See the extract.

In like manner, an expression of the form (3), or $x' = s + t\sqrt{\ }$, where s and t are two real scalars, but $\sqrt{\ }$ is still the ordinary imaginary of algebra, may be said by analogy to be a *biscalar*. Imaginary roots of algebraic equations are thus, in general, *biscalars*.
Sir W. Rowan Hamilton, Elem. of Quaternions, p. 219.

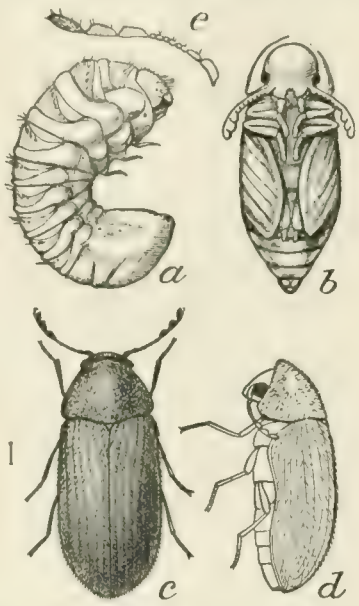
Bischoff sauce. See ★*sauce*.

bischofite (bish′of-īt), *n.* [Named after Dr. K. G. *Bischof* (1792–1870).] A hydrated magnesium chlorid found in the salt-mines of Leopoldshall, in northern Germany.

biscoyol (bis-kō-yōl′), *n.* See ★*huiscoyol*.

biscuit, *n.*—**Biscuit Tortoni.** Same as ★*bisque*[2].—**Naples biscuit**, lady's-fingers.—**Parian biscuit**, a fine, unglazed, soft-paste porcelain resembling Carrara marble: used for objects of art and ornament, and made by the casting process.

biscuit-beetle (bis′kit-bē″tl), *n.* A coleopterous insect, *Stodrepa panicea*, of the family



Biscuit beetle (*Stodrepa panicea*)

a, larva; *b*, pupa; *c*, adult; *d*, adult from side; *e*, antenna. *a*, *b*, *c*, and *d*, all greatly enlarged; *e*, still more enlarged. (Chittenden, U. S. D. A.)

Ptinidæ, which feeds on hard biscuits, giving rise to the expression 'weevily biscuit.' It also feeds on stored fruit and drugs, and is frequently so abundant in apothecary-shops as to be called the ★*drug-beetle*.

biscuit-weevil (bis′kit-wē″vl), *n.* Same as ★*biscuit-beetle*.

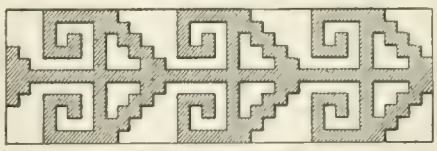
biscuit-worm (bis′kit-wêrm), *n.* The larva of the biscuit-beetle or biscuit-weevil.

biseauté (bē-sō-tā′), *n.* [F., 'cut obliquely,' pp. of *biseauter*, to cut obliquely, < *biseau*, oblique: see *bezel*.] A playing-card so trimmed that it can be distinguished by the fingers, and so can be withdrawn from the pack at will: used in conjuring and in cheating.

Bisection of a star, the accurate setting of a reticule wire in a telescope upon the center of a star-image, or the observation of the instant when that center crosses a wire.

biserial, *a.* 2. In the *Crinoidea*, or encrinites, noting a double arrangement, in the arms, of interlocking plates beveled toward each other and thickened on the margins of the arms. Contrasted with *uniserial*.

II. *n.* In *decorative art*, a double series in which the elements face toward each other,



Biserial Motive, Mexican

look away from each other, or alternately look toward or away from each other.

bisexual, *a.* 2. In *ethnol.*, characterized by an equal social development of both sexes. *O. T. Mason*, in Pop. Sci. Mo., LX. 341.

Bishop's circle. Same as *Bishop's* ★*ring*.—**Bishop's gambit**, in *chess*, playing 3 B×QB 4. See *gambit*. **Bishop's purple.** See ★*violet d'évêque*.—**Bishop's ring.** See ★*ring*[1].—**Two bishops' opening.** See ★*opening*.

bishop's-head (bish′ups-hed), *n.* An iron casting at the top of the king-post of a balance-bob, to which the iron straps are attached.

bisiliac (bis-il′i-ak), *a.* [*bis*- + E. *iliac*.] Relating to both iliac bones, especially to their crests.

bisilicic (bī-si-lis′ik), *a.* In *chem.*, noting metasilicic acid, H_2SiO_3, viewed as derived from silicon dioxid (SiO_2) and water (H_2O), with two atoms of oxygen in the former for one in the latter.

bisischiatic (bis-is-ki-at′ik), *a.* [*bis*- + *ischiatic*.] Relating to both ischia.

bisk[2], **bisque**[3], *n.* 2. In *golf*, a stroke allowed a player, which may be taken after a hole is played out and before the next tee-shot is made.

Biskra, or Biskara, boil. Same as *Aleppo ulcer*.

bismal (biz′mal), *n.* [*bism*(*uth*) + ★*-al*′.] A bluish-gray voluminous powder, consisting of the bismuth salt of methylene-digallic acid, the latter being a condensation-product of formaldehyde and gallic acid ($4C_{15}H_{12}O_{10} + 3Bi(OH)_3$). It is an internal astringent.

Bismarckian (biz-mär′ki-an), *a.* Of or pertaining to Prince Bismarck (1815–98), a famous Prussian statesman, the unifier of the German people and the first chancellor of the German empire.

bismuth, *n.*—**Basic gallate of bismuth.** Same as ★*bismuthum subgallicum*.—**Bismuth chrysophanate.** See ★*chrysophanate*. **Bismuth spiral**, in *elect.*, a spiral of bismuth wire, which increases in resistance by a magnetic field and is therefore used to measure magnetic fields.—**Bismuth subnitrate**, a compound of bismuth, largely used in medicine, and to some extent as a cosmetic. It varies somewhat in composition, but usually consists of bismuth hydroxy-nitrate, $Bi(HO)_2NO_3$. **Joachimsthal process for the extraction of bismuth.** The crushed ore, mixed with 28 per cent. of non turnings, 15 to 20 per cent. of carbonate of sodium, 5 per cent. of lime, and 5 per cent. of fluor-spar, is charged into earthen crucibles and fused in a wind-furnace. The fused mass is then ladled into inverted conical iron molds, on the bottom of which the bismuth collects. The metal obtained sometimes contains a certain amount of silver, which may be reduced by cupellation.—**Matthey's method of refining bismuth**, a method consisting in removing the arsenic by heating impure bismuth to a temperature of 395° C. for a considerable time in the air, so that the arsenic volatilizes without loss of bismuth. The antimony is removed by poling the bismuth, raised to the oxidization-point of antimony, with a piece of wood, and removing the scum which forms on the surface of the bath.—**Naphthol bismuth**, a basic or normal bismuth salt of β-naphthol, $[(C_{10}H_7O)_3Bi] + Bi_2O_3$ or $(C_{10}H_7O)_3Bi.3H_2O$. It is a neutral, non-irritant, light-brown powder of very slight odor. It acts as an intestinal sedative and antiseptic in diarrhea and dysentery.—**Radioactive bismuth**, the first substance, separated from the residues of the working of pitchblende for uranium, in which the phenomena of radio-activity were observed and studied by Mme. Curie. The substance, associated with and chemically similar to bismuth, which gives rise to these phenomena, was afterward named *polonium*, in honor of Mme. Curie's native country, and is probably identical with the *radio-tellurium* of Marckwald.—**Subgallate of bismuth.** Same as ★*bismuthum subgallicum*.

bismuthate (biz′muth-āt), *n.* In *chem.*, a salt derived from bismuthic acid.

bismuthose (biz′muth-ōs), *n.* [*bismuth* + *-ose*.] An albuminous compound containing 21–22 per cent. of bismuth, prepared by coagulating egg-albumin with a solution of bismuth subnitrate in saline solution.

bismuthum (bis-mū′thum), *n.* [NL.: see *bismuth*.]—**Bismuthum subgallicum**, subgallic bismuth; an amorphous, bright yellow, inodorous and tasteless powder, somewhat variable in composition, obtained by precipitating a solution of bismuth trinitrate with a solution of gallic acid. It is used as a dry antiseptic in surgery. Also called *dermatol*, *basic gallate of bismuth*, and *subgallate of bismuth*.

bismuthyl (biz′muth-il), *n.* [*bismuth* + *-yl*.] In *chem.*, bismuth of which one atom is united to one atom of oxygen. This compound (incapable of separate existence) occurs as a compound radical.

bismutosmaltite (biz″mu-tō-smâl′tīt), *n.* [*bismuth* + *smaltite*.] A skutterudite containing bismuth.

bisnada (bis-nä′dä), *n.* See ★*visnaga*.

bisnaga (bis-nä′gä), *n.* See ★*visnaga*.

bison, *n.* 4. A name applied by Indian sportsmen to the gaur, *Bibos* (or *Gavæus*) *gaurus*, in distinction to 'buffalo,' which is used for *Bos buffelus*.

bisonance (bī-sō′nans), *n.* [L. *bi*-, two-, + *sonans*, sonant: see *sonancy*.] In *psychol.* *acoustics*, pure dissonance; the intrinsic inability of certain tonal qualities to blend or fuse.

Ordinary dissonance is made up of a mixture of beats, or harshness, and pure dissonance. . . . This lack of accord in tones, due to the relation of their pure qualities, may be designated *bisonance*.
W. Wundt (trans.), Outlines of Psychol., p. 100.

bispatulate [bī-spat′ū-lāt), *a.* [L. *bi*-, two-, + *spatula*, a broad piece (see *spatula*).] Doubly spatulate; having the form of a spatula at both ends, as a sponge-spicule.

bisphenoid (bī-sfē′noid), *n.* See ★*sphenoid*.

bispore, *n.* 2. An ascus which has only 2 instead of the usual 8 spores.

bisque[2], *n.* 2. An ice-cream with which powdered macaroons are mixed before freezing.

Called also *biscuit Tortoni*. **Tomato bisque,** strained tomatoes into which milk thickened with a little corn-starch is poured after cooking.

bisque[3], *n.* See ★*bisk*[2].

bistelic (bi-stel'ik), *a.* In *bot.*, having two steles or axial cylinders.

bister, *n.* **Manganese bister.** Same as *manganese brown.*

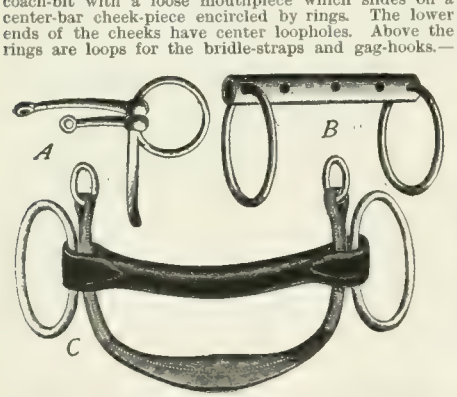
bisti (bē'ste), *n.* [Pers. *bist*, twenty.] A Persian copper and silver coin, also current in Georgia, equal to 4 cos.

bistratose (bī-strā'tōs), *a.* Having the cells disposed in two layers or strata.

bisulcated (bī-sul'ka-ted), *p. a.* Bisulcate.

bisulphite, *n.* **Bisulphite of lime,** the commercial name for calcium sulphite dissolved in water with the aid of sulphurous acid. The solution probably contains calcium acid sulphite, $CaH_2(SO_3)_2$, and is used on a very large scale in the manufacture of paper-pulp from wood, as also in sugar-making and brewing.

bit[1], *n.* **10.** In *mining:* (*a*) The cutting edge of a drill for boring rock by hand or by machine drilling. (*b*) A sharpened steel bar used for drilling rock by hand or by machine. A *chisel-bit* has a simple cutting edge, a *cross-bit* has two cutting edges crossing each other at right angles; similarly the *X-bit*, the *L-bit*, the *horse-shoe-bit*, and the *crown-bit* have cutting edges disposed as indicated by the several names. —**Barrel-head bit,** a bit having oblong heads on the mouthpiece for the rein-rings. **Baucher bit,** a curb-bit with long, straight cheeks and a high port: used in connection with a jointed bridoon. The curb-reins are attached to the lower ends of the curb-cheeks and the riding-reins to the rings of the bridoon. **Bentinck bit,** a bit having a long movable port in the mouth, standing above where the port is usually placed.—**Buxton bit,** a coach-bit with long, curved cheeks and a sliding mouthpiece which plays up and down upon a short section of the cheek; the lower ends are connected by a bar.—**Cambridge bit,** a stiff cheek-bit with a port. The tops of the cheeks have rings for the bridle-straps and loose hooks for the gag-chain; the lower arms have loose rings at the ends, and on each there is a small loop for a strap.—**Crescendo bit,** a bit with a double or triple mouthpiece, jointed or stiff; the rein-rings are attached to the long heads on the mouthpiece by branches having pins that enter the heads.—**D'Orsay bit,** a bit with a Buxton mouth- and cheek-piece, a ring around the center bar, and solid rings at the ends of the upper and lower cheek-pieces.—**Double mouth-bit,** a bit having two mouthpieces which connect with the cheek-pieces, generally with a long and a short section on each, so placed that a short section is near each cheek.—**Duke bit,** a bit in which the ends of the cheek-pieces are shaped like a flattened S.—**Greenwood bit,** a coach-bit with a segundo mouthpiece and elbow-cheeks.—**Hanging bits,** small iron plates with projecting studs which strike the caster-backs, attached to the vertical bars of a stocking-frame. **Leather mouth-bit,** a bit having a mouthpiece wholly of leather, or of metal with a leather cover.—**Liverpool bit,** a coach-bit with a loose mouthpiece which slides on a center-bar cheek-piece encircled by rings. The lower ends of the cheeks have center loopholes. Above the rings are loops for the bridle-straps and gag-hooks.—



A, double mouth-bit; *B*, wind-sucking bit; *C*, humane round leather mouth-bit.

Mameluke bit, an Oriental bit; it has a large ring jointed on the top of a high-port hunting-bit.—**Melton bit,** a bit with long, straight cheeks, having loops for the bridle-straps at the top, loose rings at the lower ends, and small side-loops below the mouth. The mouthpiece is a port. The cheeks pass through the ends of the mouthpiece and are loose, but do not slide.—**Mexican bit,** a bit with solid mouth- and cheek-pieces. The mouthpiece is provided with players, and the cheeks are of the gag variety and ornamental in character. This class of bits includes the California, Texas, and ranch bit, all of which embody the same general principle.—**Mullin bit,** a double-ring bit with a bow mouthpiece.—**Pelham bit,** a bit with a jointed or stiff mouthpiece. The cheek-pieces are long, and have bridle-loops at the tops, rein-rings at the mouth, gag-rein rings at the lower ends, and chin-strap loops above between the rein-rings. **Piercel bit,** a small bit commonly used for boring a vent in a barrel or keg. Often called a *piercel*.—**Rolling Buxton bit,** a Buxton bit so constructed that the mouthpiece both rolls and slides.—**Rubber bit,** a bit with a solid metal, chain, or linked mouthpiece, covered with hard or soft india-rubber.—**Segundo bit,** a bit with a horned port and long cheeks which are solid on the mouthpiece. The rein-rings are at the lower ends of the cheeks.—**Spiral bit,** a form of auger for boring holes in wood in which the steel of the shaft is twisted into a helical ribbon, so as to form a channel or groove between the helices up which the chips may pass as the tool penetrates.—**Weymouth bit,** a riding-bit with a sliding mouthpiece and one rein-ring. **Whitman bit,** a bit invented by Colonel R. B. Whitman, U. S. A., characterized by a snap-hook which revolves on the outside of the head of the cheek-piece. The hook is used to attach the bit to the bridle. It can be attached or released quickly.—**Wimble-bit,** a bit which has a screw at the point for making it feed. Frequently called a *wimble*. **Wind-sucking bit,** a bit with a perforated tubular mouthpiece, designed for cribbing horses.

bit[2], *n.* **8.** In *ceram.*, a small piece of stone for separating the pieces of pottery in the kiln: used before the invention of stilts, cock-spurs, and triangles. Ware so made was called *bit-stone ware*.—**Crimbal bits,** French coins made for the Windward Islands: said to be so called after the person who introduced them into Barbados.

bitanhol (bē-tän-hōl'), *n.* [Philippine Sp., < Bisaya *bitanghol*.] *Calophyllum Inophyllum*, a tree widely spread on tropical shores. It has

Bitanhol (*Calophyllum Inophyllum*). Branch with flower-stalk; *a*, lengthwise section of ripe fruit. (After Greshoff. (From Sadebeck's "Die Kulturgewächse der deutschen Kolonien.")

beautiful feather-veined leaves and tough, durable wood. It yields an aromatic resin and from its seeds a bitter oil is obtained. Also called *palo Maria*, or *St. Mary's wood*, and in Guam *dawg*. See *tamanu*, *tacamahac*, 1, *poonay-oil*, and *Calophyllum*. [Philippine Is.]

bitch, *n.* **3.** *pl.* A set of three chains for slinging pipes.

bitch-chain (bich'chān), *n.* A short, heavy chain with hook and ring, used to fasten the lower end of a gin-pole to a sled or car when loading logs. [U. S.]

bitemporal (bī-tem'pō-ral), *a.* [*bi-*[2] + *temporal*.] In *craniom.*, of or pertaining to the two temporal bones.—**Bitemporal breadth,** the maximum distance between the temporal bones.

Bithynis (bi-thī'nis), *n.* [NL. (Philippi, 1860), < Gr. Βιθυνίς, Bithynian, < Βιθυνοί, the inhabitants of Bithynia, a district in Asia Minor.] A genus of crustaceans. Same as *Palæmon*.

bitogo (bē-tō'gō), *n.* [Philippine name.] A name applied in the Philippines to *Cycas circinalis*. See ★*fadang* and *Cycas*, 1.

bitrochanteric (bī″trō-kan-ter'ik), *a.* [*bi-*[2] + *trochanter* + *-ic*.] In *anthropometry*, of or pertaining to the two trochanters.—**Bitrochanteric breadth,** the distance between the two trochanters.

Bit-stone ware. See ★*bit*[2], 8.

Bittacomorpha (bit″a-kō-môr'fä), *n.* [NL. (Westwood, 1835), < Gr. βιττακός, var. of ψιττακός, a parrot, + μορφή, form.] A remarkable American genus of dipterous insects of the family *Tipulidæ*, having short wings, banded legs, and swollen feet. The larvæ are subaquatic and bear a long anal respiratory tube with two spiracles at the end. The respiratory tube of the pupa projects from the opposite end of the body.

Bittacus (bit'a-kus), *n.* [NL. (Latreille, 1804), < Gr. βιττακος, var. of ψιττακος, a parrot.] A genus of curious mecopterous insects, of very wide distribution and predatory habits, resembling crane-flies in general appearance. They use the hind instead of the front legs for grasping their prey, and their larvæ live near the surface of the ground and feed upon dead animal matter.

Bitter salts. Same as *epsom salts*.

bitter-apple (bit-ėr-ap'l), *n.* See *colocynth*.

bitter-bark (bit'ėr-bärk), *n.* **1.** An Australian euphorbiaceous tree, *Petalostigma quadriloculare*, the bark of which contains a powerful bitter principle which is used medicinally. Also called *emu-apple*, *crab-tree*, and *native quince*.—**2.** Either one of two trees of the dogbane family, *Tabernæmontana orientalis* and *Pala constricta* (*Alstonia constricta* of F. von Müller), the barks of which are also used in medicine. The latter is better known as *fever-bark*. See also *Alstonia bark*, under *bark*[2].

bitter-buttons (bit-ėr-but'nz), *n.* The tansy, *Tanacetum vulgare*.

bitter-cup (bit'ėr-kup), *n.* A cup turned from quassia or bitter-wood. Water allowed to stand in such a cup soon acquires a bitter taste and is by many considered a beneficial tonic. See *Quassia*, 2.

bitter-leaf (bit'ėr-lēf), *n.* The Tasmanian native or wild hop, *Daviesia latifolia*, of the bean family. [Australia.]

bitter-root, *n.* **Natal bitter-root,** a climbing vine of the gourd family, *Gerrardanthus macrorhiza*, having tuberous roots, from 2 to 3 feet in diameter, which are intensely bitter and are used by the natives in medicine.

bitter-rot (bit'ėr-rot), *n.* A fungous disease of fruits which gives them a bitter taste.—**Bitter-rot of apple.** See *anthracnose of apple*, under ★*anthracnose*. **Bitter-rot of grape,** a disease of grapes caused by *Melanconium fuligineum*.

bitters, *n. pl.*—**Aromatic bitters,** bitters containing aromatic oil, but little tannin.—**Astringent bitters,** bitters containing considerable tannin, but little aromatic oil.—**Simple bitters,** bitters containing but little tannin or aromatic oils.

bitting (bit'ing), *n.* **1.** The act of putting the bit into a horse's mouth, one of the steps in horse-breaking; bridling.—**2.** In *weaving*, the piecing of warp-threads in the loom with short bits of yarn, to aid in drawing in through the harnesses and reed of wider warps than are commonly used, and for other purposes.

Bittium (bit'i-um), *n.* [NL., appar. < Gr. Βίττιον, a woman's name.] A genus of gastropod mollusks belonging to the family *Cerithiidæ*, having high-turreted spiral shells with granulated spiral ribs. It is common in Jurassic, Cretaceous, and Tertiary rocks, and also exists in the present seas.

bitty (bit'i), *n.* Refuse left after the starch has been removed from such plants as arrow-root, cassava, etc. [West Indies.]

bitubercular (bī-tū-bėr'kū-lär), *a.* Having two tubercles, as a tooth. *W. Bateson*, Study of Variation, p. 217.

bituminoid (bi-tū'mi-noid), *a.* [*bitumen* (*-min-*) + *-oid*.] Bitumen-like; having the general character of bitumen.

bitypic (bī-tip'ik), *a.* [*bi-*[2] + *type* + *-ic*.] Consisting of two types only: said of a genus containing but two species. Compare *monotypic*.

He found that many of the characteristic genera of eastern America, and a number of the monotypic and *bitypic* genera, occur also in the Japanese region.
L. H. Bailey, Survival of the Unlike, p. 270.

biuncinate (bī-un'si-nāt), *a.* [*bi-*[2] + *uncinate*.] Having two hooks.

biunial (bī-ū'ni-al), *a.* [Irreg. < L. *bi-*, two-, + *-unus*, one, + *-i-al*.] Having or consisting of two combined in one: as, the *biunial* magic lantern. *N. E. D.*

biuniform (bī-ū'ni-fôrm), *a.* [*bi-*[2] + *uniform*.] In *math.*, one-to-one.

This results from the definition which Hilbert gives of movement. To be a movement, a transformation must satisfy many conditions; first it must be continuous and transform two points infinitely near into two points infinitely near; then it must be *biuniform*, that is to say, that every point of the plane must have one transformé and only one, and be the transformé of one point and of only one. *Science*, Sept. 16, 1904, p. 360.

Biuniform transformation. See ★*transformation*.

Biur (bē'ūr), *n.*; pl. *Biurim* (-ēm). [Heb. *biur*, a commentary.] A comprehensive commentary on the Old Testament prepared by Moses Mendelssohn and others.

biurate (bī-ū'rāt), *n.* [*bi-*[2] + *urate*.] A neutral salt of uric acid. Gouty tophi are composed of sodium biurate.

Biuret reaction, a color reaction which is produced by all true albumins with a dilute solution of copper sulphate in the presence of strong caustic alkali. It is referable to the production of potassium cupric oxid biuret.—**Biuret test,** the red or reddish-violet color which is produced when sodium hydroxid and a dilute solution of copper sulphate are added to a solution of a protein.

Bivalence of the chromosomes, in *cytol.*, the double as distinguished from the single (univalent) condition of the chromosomes, for example, in the oocytes and spermatocytes of one of the forms of *Ascaris megalocephala*.

bivalent, *a.* **2.** In *cytol.*, having double as distinguished from single (univalent) chromosomes in the oöcytes and spermatocytes, as in one of the varieties of the roundworm of the horse (*Ascaris megalocephala*).

bivariant (bī-vā'ri-ant), *a.* [*bi-*[2] + *variant*.] In *phys. chem.*, having two degrees of freedom. See *degree of freedom*.—**Bivariant system,** a thermodynamic system in which two of the magnitudes which determine it may be made to vary independently without destroying the system by altering the number of phases of which it consists. If we place one pound of pure water and one pound of dry carbon dioxid in a cylinder provided with an air-tight piston, we shall have two phases present, one a solution of carbon dioxid in liquid water, and the other a mixture of gaseous carbon dioxid with water vapor. The composition of these two phases will be determined by the temperature and the pressure, and we can within limits vary each without regard to the

other and yet have the two phases still existing. The system is *bivariant*. If, however, we raise the temperature till all the water evaporates, or increase the pressure till all the carbon dioxid is dissolved, one phase disappears, and the system becomes *monovariant*.

bivocal (bi-vo′kal), *n.* [L. *bi-*, two-, + *vocalis*, a vowel.] A coalition or union of two vowels pronounced in one syllable; a diphthong: as *ai* in 'rain,' *oi* in 'noise,' etc.

bivoltin (bi-vol′tin), *n.* [F. ★*bivoltin*, ⟨ L. *bi-*, two, + *volte*, a turn, revolution (see *volt*[1], *volta*), + E. *-in*[1].] A race of domestic silkworms that have two generations each year.

biweekly, *a.* and *adv.* **III.** *n.* A periodical issued once every two weeks; a fortnightly publication.

Bixa (bik′sä), *n.* [NL. (Linnæus, 1753, first used by him in his 'Genera plantarum,' 1737), ⟨ *bixa*, a Spanish spelling of *bicha*, *bixcha*, the name of the plant among the Arawak Indians of Guiana.] A genus of dicotyledonous trees constituting the family *Bixaceæ*. It is characterized by its large cordate-ovate entire leaves, showy pinkish flowers in terminal panicles, and prickly capsules. The only species, *B. Orellana*, is a native of tropical America, but has been introduced in the tropics of the Old World. See *achiote* and *arnotto*.

bixaceous (bik-sā′shius), *a.* Belonging to the plant family *Bixaceæ*.

bixbyite (biks′bi-īt), *n.* [Named after Maynard *Bixby* of Salt Lake City.] A rare manganate of iron (essentially $FeMnO_3$), occurring in black cubic crystals with brilliant metallic luster. It is related to perovskite, and occurs in rhyolite in southern Utah.

bixein (bik′sē-in), *n.* Same as *bixin*.

bizet (bi-zet′), *n.* [Thought to be an arbitrary or mistaken form of *bizel*, *bezel*: see *bezel*.] The upper part of a brilliant between the table and the girdle in a full brilliant having 32 facets, and supposed to occupy one third of the depth of the gem.

biznaga (bēth-nä′gä), *n.* [Sp. *biznaga*.] See ★*risnaga*.

bizug (bi-zōg′), *n.* A Syrian lute.

The smallest distance observed between frets is the above-cited 14 mm., except that the Syrian lute, *bizug* (No. 95,144, U. S. N. M.), has two spaces of 12 and 13 mm. *Smithsonian Rep.*, 1900, p. 434.

bizz (biz), *n.* A dialectal (Scotch) variant of *buzz*[1].

bkr. An abbreviation of *barkometer*.

B. L. An abbreviation (*c*) of *Bachelor of Letters* or of *Literature*; (*d*) *milit.*, of *breech-loading*.

B. L. A. An abbreviation of *Bachelor of Liberal Arts*. Same as B. A. (*a*).

blaazop (bläz′op), *n.* [Cape Dutch, ⟨ *blaaz* . . . *op* (inf. *opblazen*), *blazen*, blow (see *blaze*[1], *bleeze*[1]), + *op*, up: see *up*.] A South African insect of the genus *Pneumora*, family *Acridiidæ*, which is said to inflate its abdomen and to make a tremulous noise at night. *Kirby and Spence*, Entomology, p. 495.

Blabera (blab′e-rä), *n.* [NL. (Serville, 1831), ⟨ Gr. βλαβερός, hurtful, pernicious, ⟨ βλάβη, hurt, harm, injury, ⟨ βλάπτειν, hurt, injure.] A genus of very large tropical and subtropical cockroaches of the orthopterous family *Blattidæ*. They are known in the West Indies as *drummers* and are supposed to make a noise at night.

Blaberides (bla-bēr′i-dēz), *n. pl.* [NL., ⟨ *Blabera* + *-ides*, taken as a plural suffix.] A tribe of cockroaches of which *Blabera* is the type. They have the thighs unarmed beneath, no pad between the claws, the pronotum smooth, and the wings with a fan-like folded anal field.

black. **I.** *a.* **10.** Dark-complexioned.

How if she be *Black* and *Witty*?
Shak., Othello, ii. 1.

Took up Mr. Hater and his wife. . . . I found her to be a very pretty, modest, *black* woman.
Pepys, Diary, April 30, 1661.

Black ★angel, ★ant, ★beech. See these words. **Black belt.** (*b*) Same as ★*cane-brake region*. **Black body,** in *phys.*, a body which completely absorbs the radiation falling upon it, reflecting none and transmitting none. No actual known substance rigorously fulfils this definition, and the black body thus specified is therefore commonly termed the *ideal black body*. See ★*radiation*. **Black ★Caucasian, ★drop, ★fern.** See the nouns.— **Black-figured style.** See ★*style*[1]. **Black hand.** (*b*) A criminal conspiracy among certain Italian immigrants in the United States for the purpose of blackmail and deeds of violence.— **Black house.** See ★*house*[1]. **Black line,** in *Australian hist.*, the line of about 5,000 armed men which in 1830, by order of the governor, swept across Tasmania from north to southeast in the attempt to drive the aboriginal tribes into that part of the island known as Tasman Peninsula. See ★*black war*. **Black lung.** See ★*lung*.— **Black mark,** a mark indicating failure, offense, or demerit.— **Black money.** See ★*money*.— **Black pod.** See ★*pod*.— **Black pool.** See ★*pool*[2].— **Black rot.** (*b*) A black appearance on hides, caused by the application of hot liquor to green stock. *C. T. Davis*, Manuf. of Leather, p. 183. **Black salt.** See ★*salt*. **Black Thursday,** in *Australian hist.*, Thursday, February 6, 1851, remarkable for a great heat-wave (112° F. in the shade) and a disastrous bush-fire which affected the whole colony of Victoria. Strutt's celebrated painting, 'Black Thursday,' commemorates the event.— **Black-tracker,** a member of a special force of aboriginal Australian police, skilled in following trails and employed in running down criminals. **Black War,** in *Australian hist.*, a bloodless military expedition undertaken in 1830 by the governor of Tasmania for the purpose of driving the troublesome aboriginal tribes into Tasman Peninsula. Only two natives were captured. See ★*black line*. **Black Will.** See ★*Will*.

II. *n.* **13.** In *archery*: (*a*) The fourth and next to the outermost circle of the target, which is colored black. See *target*. (*b*) An arrow which hits this circle; a hit in the black. According to the present method of scoring such a hit counts 3.— **14.** *pl.* Black or coaly shale. *Barrowman*, Glossary. [Scotch.]— **15.** *pl.* The larvæ of the black ★caterpillar (which see). **Alizarin black,** a mordant dyestuff, derived from anthracene, which dyes chromium-mordanted wool a very fast black. It is a trihydroxyanthraquinone quinoline.— **Alizarin-cyanine black,** a mordant coal-tar color similar in character to alizarin cyanine. It produces blue black shades with a chromium mordant. **Almond black,** a black pigment prepared by carbonizing almond and cocoanut shells. **Aniline black.** It is an insoluble substance produced by the oxidation of aniline, usually in the form of aniline salt. Its chemical composition is unknown. There are three stages in the oxidation of aniline: (1) the formation of emeraldine or azurine, (2) the oxidation of emeraldine to nigraniline, and (3) the oxidation of the nigraniline to the so-called 'ungreenable black' which is the color desired. The color is always made as used, the formation of the black taking place within and upon the fiber during the dyeing process. It is largely used in calico-printing and in hosiery-dyeing, and whenever an extra-fast black is desired. It is commonly applied to cotton, but processes have been devised by which it may be applied to cotton-and-wool union goods.— **Anthracite black,** an acid coal-tar color of the sulphonated azo type, derived from α-naphthylamine. It dyes wool black in an acid bath. Also called *phenylene black*. **Anthraquinone black,** a sulphid coal-tar color made by fusing dinitro-anthraquinone with sodium polysulphid. It dyes unmordanted cotton black, and possesses the common properties of the sulphid colors. — **Auronal black,** a sulphid coal-tar color prepared by the fusion of dinitro-paramido-diphenylamine with sodium polysulphid. It dyes unmordanted cotton black, and possesses the common properties of the sulphid colors. — **Autogene black,** a sulphid color prepared by the fusion of sodium polysulphid with the product formed by the condensation of amido-hydroxy-diphenylamine with the product of the action of sulphur chlorid upon phenol, cresol, or amines. It dyes cotton black, and possesses the common properties of the sulphid colors. **Beggar's ultramarine black.** See ★*beggar*.— **Berlin black,** a black varnish used in coating ironwork. It gives a dull finish.— **Biebrich black AN, 4AN, 6AN, AO, 4BN, 3BO,** and **RO,** acid coal-tar colors of unpublished composition which dye various shades of black on wool in an acid bath. **Black-white series,** in *psychophys.*, the series of colorless visual sensations, passing from black through gray to white. *E. B. Titchener*, Exper. Psychol., I. ii. 5. — **Bonsor's black,** a mixture of logwood, ferrous sulphate, copper sulphate, and oxalic acid in proper proportions to produce a one-dip logwood black.— **Brilliant black.** Same as *naphthol* ★*black* 6B. **Carbide black,** a direct cotton coal-tar color of unpublished composition which dyes unmordanted cotton black in a salt bath.— **Chromanil black,** one of several direct cotton coal-tar colors of unpublished composition which dye unmordanted cotton in a salt bath, but which are rendered faster by an after-chroming.— **Chromatrope black,** a color developed from one of the chromatropes. See ★*chromatrope*[2]. **Coffee black,** a black pigment made by carbonizing coffee-berries.— **Columbia black,** the name applied to a number of direct cotton coal-tar colors of the triazo type. They dye unmordanted cotton black in a neutral salt bath.— **Cross-dye black,** a coal-tar color of the sulphid type, used in dyeing cotton warps. It gives a deep blue-black. Also called *cross-dye navy*. **Cuba black.** Same as *diamid* ★*black*. **Dead black,** a preparation of lampblack for painting brass and white metals.— **Diamine beta-black,** a direct cotton coal-tar color of the triazo type derived from benzidine. It dyes unmordanted cotton in a salt bath a black which, upon being diazotized and developed with β-naphthol, becomes much faster.— **Diamine black,** the name of several direct cotton coal-tar colors, related to benzidine, which dye unmordanted cotton black in a salt bath.— **Diamineral black B, 3B, 6B,** and **R,** direct cotton coal-tar colors. They dye unmordanted cotton black in a salt bath, but for the best results they should be after-treated with potassium bichromate or copper sulphate.— **Dianil black,** a direct cotton coal-tar color of the tetrakisazo type derived from benzidine. It dyes unmordanted cotton in an alkaline salt bath. Also called *Cuba black*. **Diazin black,** a basic coal-tar color of the monoazo type derived from safranine. It dyes tannin-mordanted yarn black of a good degree of fastness. **Diazo black,** a direct cotton coal-tar color of the diazo type derived from benzidine. It dyes unmordanted cotton in a salt bath, but for the best results requires subsequent diazotizing and developing. **Diazo brilliant black,** a direct cotton coal-tar color of the diazo type derived from tolidine. It dyes unmordanted cotton in a salt bath, but for the best results it requires a subsequent diazotizing and developing. **Direct black.** (*a*) Same as *one-dip* ★*black*. (*b*) Any direct cotton black.— **Fast black,** a basic coal-tar color of the oxazin type, but of uncertain composition. It dyes cotton mordanted with tannin and iron a very fast black.— **Fast black B** and **BS,** two sulphid coal-tar colors prepared by the action of sodium sulphid upon dinitronaphthalene. They dye unmordanted cotton from an alkaline bath.— **Galena black,** a black pigment made from native lead sulphid. **Graphite black,** a black pigment consisting of powdered graphite.— **Immedial black,** a coal-tar color of the sulphid type, similar to Vidal black. Its composition is unknown. It dyes unmordanted cotton a very fast black in a sodium-sulphid bath.— **Kumassi black,** an acid coal-tar color of the diazo type derived from diamido-naphthalene-sulphonic acid. It dyes wool a deep black in an acid bath.— **Kumassi union black,** a coal-tar color of the triazo type derived from diamido-naphthalene-sulphonic acid. It is particularly well suited for the dyeing of cotton-and-wool union material.— **Kumassi wool black R** and **S,** acid coal-tar colors of the diazo type derived from diamido-naphthalene. They dye wool black in an acid bath.— **Liège black,** a black pigment obtained by carbonizing vine twigs. It consists of a pure form of charcoal. Also called *blue black*. **Naphthol black,** an acid dyestuff of the sulphonated azo type, derived from naphthalene. There are several naphthol blacks which vary slightly in composition, although they are all of the same general character.— **Naphthol black B, 3B,** and **6B,** acid coal-tar colors of the diazo type containing three naphthalene nuclei. They dye wool black in an acid bath.— **Naphthol black 12B.** Same as *naphthol* ★*blue-black*.— **Naphthylamine black,** an acid coal-tar color of the diazo type derived from α-naphthylamine. It dyes wool a blue-black in an acid bath.— **Nyanza black,** a direct cotton coal-tar color of the diazo type. It dyes unmordanted cotton in a salt bath, and is also well suited for wool-dyeing.— **One-dip black,** a logwood black dyed in a single bath, the mordant and dyestuff being applied simultaneously. The mordant first unites with the logwood to form a color-lake which dissolves and is held in solution by some acid, usually oxalic. From such a solution the color-lake gradually deposits upon the fiber. **Oxamine black,** a name applied to several direct cotton coal-tar colors which dye unmordanted cotton black in a salt bath.— **Oxidation black,** a name by which aniline black is sometimes designated, from the fact that it is produced by the oxidation of aniline.— **Oxydiamine black,** a name applied to several direct cotton coal-tar colors which dye unmordanted cotton black in a salt bath. — **Palatine black,** one of the wool blacks.— **Phenylene black.** Same as *anthracite* ★*black*. **Prudhomme's black,** a name sometimes given to aniline black when produced by using potassium ferrocyanide. **Reduced black,** a prepared mixture for the production of a one-dip logwood black which has been subjected to a reducing action.— **Salzburg black,** a logwood black, so called because Salzburg vitriol is used in its production. **Singie-bath black.** Same as *one-dip* ★*black*. **Spear-marked black,** a geometrid moth, *Rheumaptera hastata*, common in Europe and the northern United States, black in color and striped and spotted with white. One white spot and band somewhat resemble a spear-head, hence the name. Its larvæ are gregarious and feed upon birch and sweet-gale.— **Sulphone black,** a mordant acid coal-tar color similar to diamond black.— **Tabora black,** a direct cotton coal-tar color of unpublished constitution, which dyes unmordanted cotton from a salt bath.— **Union black,** a name given to several direct cotton coal-tar colors which are particularly well suited for dyeing cotton-and-wool union goods black.— **Victoria black,** an acid coal-tar color of the diazo type. It dyes wool black in an acid bath.— **Vidal black,** a sulphid coal-tar color, prepared by the fusion of amido-phenol and other compounds with sodium polysulphid: one of the earliest sulphid colors. It was discovered in 1893 and named after its discoverer. It dyes unmordanted cotton a very fast black.— **White-striped black,** an American geometrid moth, *Euchæca albovittata*, black in color, with a broad white band extending across the fore-wing.— **Wool black,** a name assigned to several acid colors of the diazo type which dye wool black in an acid bath.— **Zambesi black,** a direct cotton coal-tar color, which dyes unmordanted cotton in a salt bath, but is rendered faster by subsequent diazotizing and developing.

black-and-tan (blak-and-tan′), *n.* A cab of the coupé type, introduced in New York in 1883: so named from its colors. [Colloq.]

Black-ash furnace. See ★*furnace*.

blackback, *n.* **3.** The Menomonee whitefish, *Coregonus quadrilateralis*. [Lake Michigan.]

blackball, *n.* **4.** Same as *black ash*.

blackberry, *n.*, **1.** In North America the term *blackberry* is applied to those edible-fruited members of the genus *Rubus* in which the drupelets and torus ('core') adhere into one mass and in this form separate from the plant. The blackberry is now more extensively cultivated in the United States than elsewhere in the world. These fruits are the ameliorated products of native species, and the evolution has taken place within about half a century. The species of blackberry are much confused, but as now understood the forms cultivated for their fruit have been derived chiefly from *Rubus argutus*, the common wild blackberry. Some have come from *R. argutus*, and a very few from *R. cuneifolius*. The dewberries (trailing blackberries) are derived from *R. procumbens* (*R. villosus* of Aiton) and *R. invisus*. A few blackberries are hybrids between blackberries and dewberries. The blackberries are of very easy culture. If the ground is fertile and the plants free from disease, the crop is very heavy, and as this crop matures in mid-summer, it is important that the soil be retentive of moisture. As in related plants, the fruit arises from canes that grew the previous year, and these canes usually bear but once and never more than one good crop; therefore the old canes are wholly removed after they have borne, and the growing canes take their places. This removal of the old canes not only conserves the energy of the plant and removes objectionable brush, but also serves to keep disease in check. The chief diseases are the anthracnose and the red rust. The former causes discolorations and spots on the canes. It can be kept in check to some extent by thorough and repeated spraying with Bordeaux mixture; but the best procedure is to keep it out by timely removal of affected canes and by changing the patch to a new area every few years. The red rust, yellow rust, or yellows is due to a fungus that affects the entire plant but fruits on the under side of the leaves and is therefore often mistaken for a foliage

disease. The only remedy is to uproot the plant and burn it. The varieties of blackberry are many, and new kinds are constantly taking the place of the old. Probably the Snyder is now the most widespread, although not the best in quality.—**Blackberry bark-louse,** ★**cane-borer,** ★**crown-borer,** ★**root-borer.** See these words. **Blackberry blight,** a disease of blackberry canes and leaves, thought to be due to bacteria. **Blackberry gall-maker.** See ★*gall-maker.*—**Pithy blackberry-gall,** a large woody growth on the stems of the blackberry, polythalamous in character and produced by the cynipid *Diastrophus nebulosus.*

blackbird, *n.* **5.** A native of the islands of Torres Strait. [Australia.]—**Brewer's blackbird,** *Scolecophagus cyanocephalus,* a member of the oriole family common in the western United States.

blackbirder (blak′bêr-dêr), *n.* A slaver; a slave-ship. [Cant.]

blackbirding (blak′bêr-ding), *n.* and *a.* **I.** *n.* The kidnapping of negroes or Polynesians to be sold into slavery.

In the early days of sugar-planting [in Queensland] there may have been *blackbirding,* but it was confined to a very few, and it is done away with altogether now.
Gilbert Parker, Round the Compass in Australia, p. 78.

II. *a.* Engaged in the kidnapping of negroes or Polynesians to be sold as slaves: as, a *blackbirding* crew.

black-blue (blak′blö″), *n.* A blue so dark that it is nearly black. Similar to *blue-black.* **Azo black-blue,** a direct cotton coal-tar color of the diazo-sulphonic-acid type, prepared by combining diazotized toluidine with a mixture of hydroxy-diphenylamine and amido-naphthol-disulphonic acid: also called *azo navy-blue.* It dyes unmordanted cotton from a boiling salt bath.—**Benzo black-blue,** a name given to several similar direct cotton coal-tar colors of the trisazo type, derived from benzidine or tolidine. They dye unmordanted cotton black-blue shades from a salt bath.—**Diamine black-blue,** a direct cotton coal-tar color derived from benzidine, which dyes unmordanted cotton a black-blue shade from an alkaline salt bath.

black-brown (blak′broun″), *n.* A brown so dark that it is nearly black.—**Benzo black-brown,** a direct cotton coal-tar color of unpublished constitution, which dyes a black-brown from a salt bath.—**Katigen black-brown,** a sulphid color similar to ★*cachou de Laval.*

black-buck (blak′buk), *n.* A sportsman's name for the Indian antelope, *Antilope cervicapra.* See cut under *sasin.*

Black-bulb thermometer. See *solar-radiation thermometer,* under *thermometer.*

blackbutt (blak′but), *n.* A valuable timber-tree, *Eucalyptus pilularis,* of southeastern Australia. It is straight in the grain, moderately heavy, light reddish brown in color (though the lower part of the trunk is black), and is adapted for bent work. It is found to thrive in California near the coast. Its wood is of general excellence for house- and ship-building, etc., and on account of branching high is specially available for telegraph-poles. Also called *flintwood, willow, white-top,* and *mountain-ash.*

black-chaser (blak′chā″sêr), *n.* The black-snake, *Bascanion constrictor.*

black-dog, *n.* **3.** A general name for the debased and counterfeit subsidiary coinage current in the British West Indies.

blacken, *v. t.* **3.** In *founding,* to coat (the face of a mold) with graphite, or any mixture used for the purpose, in order to create a surface which will gasify under the heat of the molten metal. The thin film of gas so produced prevents any impression of the grain of the mold-surface being made and gives a smooth finish.

black-ends (blak′endz), *n. pl.* Refuse coke from cooking-ovens.

blackeyed Susan (blak-īd sū′zn). One of several plants having flowers or heads with a dark center. One of these is *Flemingia alata* (see *Thunbergia*); another the flower-of-an-hour, *Hibiscus Trionum*; a third, *Rudbeckia hirta* (see *Rudbeckia*).

blackfellow (blak′fel″ō), *n.* An aboriginal Australian. [Colloq. E. among the colonists.]

Black-fin snapper. See ★*snapper*[1].

blackfish, *n.,* **1.** (*g*) In Australia: (1) A sea-fish, *Incisidens simplex.* (2) A sea-fish, *Girella tricuspidata.* (3) A fresh-water fish, *Gadopsis marmoratus.*—**Blackfish oil.** See ★*oil.* **Grunt blackfish,** the black grunt (*Ronco Prieto*), *Hæmulon bonariense,* a fish of the West Indies and southward.

black-fly, *n.*—**Innoxious black-fly,** a dipterous insect, *Simulium pictipes,* of the family *Simuliidæ,* which in central New York does not appear to bite.

blackgard, *n., a.,* and *v.* A simplified spelling of *blackguard.*

black-grouse (blak′grous), *n.* The European blackcock (which see).

black-gum, *n.* **2.** The water-tupelo, *Nyssa biflora,* a tree inhabiting wet ground along the Atlantic and Gulf coasts. In the Dismal Swamp (southeast Virginia) it dominates areas of deciduous forest called *black-gum* or (on account of density) *dark swamp.* See ★*gum swamp.* These areas when cleared form *black-gum land,* a type highly adapted to the cultivation of Indian corn. Compare *juniper swamp,* under ★*juniper.*
3. *Eucalyptus stellulata.*

black-haw (blak′hâ″), *n.* **1.** Either of two species of arrow-wood, *Viburnum prunifolium* or *V. rufotomentosum.*—**2.** One of two shrubs or small trees, *Bumelia lanuginosa* and *B. tenax,* of the southern United States.

blackhead, *n.* **3.** In *entom.,* the larva of an American tortricid moth, *Eudemis vaccinianana,* which feeds on the leaves of the cranberry. Also called *fire-worm.*—**4.** A common name for comedo. See *comedo.*

Blackheath beds. See ★*bed*[1].

black-hot (blak′hot), *a.* Hot but not glowing; less hot than red-hot.

Blackiston's trout. See ★*trout.*

black-jack, *n.* **10.** Candy made of dark molasses.

Black-knot of the filbert, a disease which attacks the branches of the filbert, *Corylus Avellana,* and also those of *C. Americana.* It is caused by the pyrenomycetous fungus, *Cryptosporella anomala,* which produces enlarged black stromata.—**Black-knot of the gooseberry,** a disease of the gooseberry caused by *Plowrightia Ribesia.*—**Black-knot of the hazel.** Same as ★*black-knot of the filbert.*

black-led, *n.* and *v.* A simplified spelling of *black-lead.*

blackleg, *n.* **5.** A laborer who is not a member of a trade-gild or trade-union; a 'scab.'

The saddlers threw the blame [of bad saddles] on the joiners; and the joiners seem to have in their turn pushed it back on an illegal or "*blackleg*" labour encouraged by the saddlers for their own advantage. . . . As to the introduction of "*blackleg*" labour by the Masters, it was decreed that no stranger was to be brought into the trades till he had been received at the husting by the assent of eight respectable men of the craft.
Mrs. J. R. Green, Town Life in 15th Century, II. 163–165.

blackmailer (blak′māl-êr), *n.* One who levies, or attempts to levy, blackmail.

The Herald Building cannot be in the least degree affected by the Quixotic enterprise of the lobbyists and *blackmailers* of the Arcade Railroad.
New York Herald, April 24, 1868, p. 6.

blackmark (blak′märk), *v. t.* To put a black mark against the name of (some one).

Ostracise and *black mark* all who do not come into their confederacy.
D. Masson, Drummond of Hawthornden, xiii.

black-meat (blak′mēt), *n.* Mollusks of the genus *Rissoa* in the larval, or veliger, stage, occurring in masses on the surface of the sea, and furnishing food for mackerel, herring, and other fishes.

blackneck (blak′nek), *n.* Either one of the scaup-ducks, *Aythya marila nearctica* and *A. affinis,* which have the head and upper part of the neck black. More commonly called *broad-bill* or *bluebill.*

blackpoll (blak′pōl), *n.* The black-poll warbler, *Dendroica striata,* which has the top of the head black.

black-print (blak′print), *n.* A photographic print, resembling the blue-print, giving black lines on a white ground.

black-printing (blak′prin″ting), *n.* In *ceram.,* the process of printing on pottery in black over the glaze; it antedates blue-printing.

Black-process paper. See ★*paper.*

Black River limestone. See ★*limestone.*

black-rust (blak′rust), *n.* See *rust*[1].

black-saddler (blak′sad″lêr), *n.* A maker of gig-saddles. [Eng.]

black-shank (blak′shangk), *n.* Same as *black* ★*rot* of the sweet potato.

blacksmith (blak′smith), *v. i.* To follow the trade of a blacksmith; work as a blacksmith.

You have made me work very hard at this wild-goose chase, digging, and tramping, and *blacksmithing,* and you got me into a scrape that might have cost me my life.
M. N. Murfree, Despot of Broomsedge Cove, xx.

Blacksmiths' chisel. See ★*chisel*[2].

black-stick (blak′stik), *n.* A blackish, resinous mass, sometimes molded into sticks, which consists of a mixture of impure alkaloids separated from the mother-liquors in the manufacture of quinine. It is used as a substitute for quinine. Also known as *chinoidine* and *quinoidine.*

black-stone (blak′stōn), *n.* A carbonaceous shale.

black-stripe, *n.* **2.** A disease of the tomato-plant caused by the fungus *Alternaria Solani.*

Blacksville limestone. See ★*limestone.*

black-tooth (blak′tōth), *n.* A condition of hogs in which the teeth are black from accumulation of tartar. The condition produces no ill effect upon the health of the animal, and is not, as is commonly supposed, a disease.

blacktree (blak′trē), *n.* Same as *blackwood,* 3.

black-walnut (blak-wâl′nut), *n.* See *walnut.*—**California black-walnut,** *Juglans Californica,* a smaller and less valuable tree than the black-walnut of the eastern United States, found on the Pacific slope and ranging into Arizona, New Mexico, and Sonora.

Black-water fever. See ★*fever*[1].

Blackwood series. See ★*series.*

bladder, *n.,* **4.** (*c*) A membranous inflated fruit, as that of *Kœlreuteria* or the pericarp of *Physalis.*—**Bladder fever,** acute cystitis; also pemphigus.—**Fasciculated bladder,** a condition associated with obstruction to the flow of urine, in which the hypertrophied muscular coat of the bladder forms ridges or columns on the inner surface of the organ.—**Stammering bladder.** See *stammer, v.*

bladder-fish (blad′êr-fish), *n.* Same as *globe-fish* and *puffer,* 3.

bladder-lard (blad′êr-lärd), *n.* **1.** Lard put up for sale in bladders.—**2.** A trade-name for lard of the best quality from the kidney fat of the animal.

bladder-nut, *n.*—**African bladder-nut,** a small

Bladder-nut (*Royena lucida*)
a, flowering branch; *b,* fruit; *c,* longitudinal section of a fruit. (Drawn from Engler and Prantl's "Pflanzenfamilien.")

South African tree of the ebony family, *Royena lucida,* or its fruit. Its wood is much used. Also called *African snowdrop.* See *Royena.*

bladder-plum (blad′êr-plum), *n.* Same as ★*plum-pocket.*

bladder-sedge (blad′êr-sej), *n.* A species of sedge, *Carex vesicaria* of the temperate Old World, having the perigynia (seed-cases) much inflated. In its dried state this sedge was worn, on Nansen's polar expedition, inside boots and shoes, to keep the feet warm and dry.

bladder-seed (blad′êr-sēd), *n.* See *Physospermum.*

bladder-worm, *n.*—**Gid bladder-worm,** a cestode worm *Cœnurus cerebralis,* whose larval stage is passed in the brain of the sheep, ox, and other grazing animals, in which it causes gid, turnsick, or staggers. If eaten by a dog the larva develops into a tapeworm, *Tænia cœnurus,* which produces numerous eggs. These, if scattered about a farm or along roadsides, may in turn infect grazing animals. See *gid*[1].—**Thin-necked bladder-worm,** a cestode worm whose larval stage, *Cysticercus tenuicollis,* occurs in the omentum of grazing animals and sometimes causes their death. In the alimentary canal of the dog the larva develops into a tapeworm, *Tænia marginata,* whose eggs, if swallowed, may infect such animals as naturally harbor the larval stage.

blade, *n.,* **3.** (*k*) That part of an iron head of a golf-club which forms the face or striking-surface. (*l*) The broad part of a cricket-bat. **4.** A swords-man.

The short man I felt quite confident Hugh could handle, and was surprised, seeing his build, that Pike should have declared him a good *blade.*
S. Weir Mitchell, Hugh Wynne, I. 214.

blady-grass (blā′di-gras), *n.* The alang-alang grass, *Imperata arundinacea*: so named apparently from the abundance of leaf-blades. It is common throughout the warmer parts of the globe and is recommended as a binder of soil and sand. See ★*alang-alang* and ★*cogon.*

Blaes and balls, in *mining,* shale with embedded nodules of iron ore. *Barrowman,* Glossary.

Blair process. See ★*process.*

Blake crusher. See ★*crusher.*

Blakiston's line. See ★*line*[1].

blanch[1], *n.,* **3.** (*b*) Lead ore mixed with other minerals.

blanch[1], *v. t.*—*To blanch silver,* to oxidize copper superficially, when present in an alloy with silver, by heating to redness in the air, and then dissolving out the oxid of copper by dilute sulphuric acid, thus leaving the surface of the object with the white appearance of pure silver.

blanching-machine (blan′ching-ma-shēn″), *n.* A machine for removing the dark skins of almonds and peanuts. It breaks the skin, brushes it away, and leaves the nut clean, white, or blanched.

Blanco group. See ★*group*[1].

Blanjulidæ (blan-jö′li-dē), *n. pl.* [NL., < *Blanjulus* + *-idæ*.] A family of chilognath myriapods having a thin cylindrical body with more than 30 rings, and either with no eyes or with a simple row of eyes beneath the edge of the forehead.

Blanjulus (blan′jö-lus), *n.* [NL. (Gervais, 1837).] A genus of blind chilognath myriapods, typical of the family *Blanjulidæ*.

blank. I. *a.*—**Blank wall,** a flat wall without openings; a dead wall.

II. *n.* 12. An opening in a forest where from any cause very few or no trees are growing.—**In blank,** with parts left blank, to be filled in later by another hand: as, to sign a check *in blank*.

blank, *v. t.* 5. To leave (a card) so that it must be played when the suit is led.—**To blank out,** in *printing*, to extend the length of (a short page) by the insertion of leads, lines of quadrats, or low furniture.

blanket. I. *n.*—**Army blanket,** a coarse, extra strong wool blanket of a gray-brown color, napped on both sides, 60 by 90 inches in size, and weighing 9 pounds a pair.—**Mattress blanket,** a blanket of a cottony character, with a nap on both sides, though the face shows a distinct wave, produced in the finishing process. The size varies from 60 by 70 to 60 by 74 inches, and the weight from 5 to 10 pounds a pair.—**Navy blanket,** a heavy white blanket of wool, napped on both sides, 60 by 72 inches in size, and weighing 10 pounds a pair.—**Spanish blanket,** a showy wool blanket, with a white body and stripes of strong, contrasting colors, from 7 to 10 inches in width, running from list to list through the entire blanket.

II. *a.* That covers, or is intended (like a blanket) to cover, many different but more or less closely related things, conditions, contingencies, requirements, or the like; as a *blanket*-mortgage; a *blanket*-clause in a deed or resolution.

No such objection can be urged against such use of the word "art," as its significance in this connection has long . . . become conventional. . . . Therefore I have long been in favor of what has been called a *blanket* degree. *Science*, May 27, 1904, p. 818.

blanket, *v. t.*—**To blanket the fire** (of a ship), to interpose between the firing vessel and the vessel aimed at so as to screen the latter.

blanket-ballot (blang′ket-bal′ot), *n.* See ★*ballot*[1].

blanket-cattle (blang′ket-kat″l), *n.* The Dutch belted cattle (which see, under ★*cattle*).

blanket-flower (blang′ket-flour), *n.* A plant of the genus *Gaillardia*.

blanket-moss (blang′ket-môs), *n.* A local name for the felted mat of dead algæ, generally some species of *Spirogyra*, *Zygnema*, or *Cladophora*, which forms along the border of receding waters.

blanket-patent (blang′ket-pat″ent), *n.* Letters patent covering a variety of matters, each of which may be the subject of a single patent.

blanket-policy (blang′ket-pol″i-si), *n.* In *insurance law*, a contract of insurance applied to a class of property rather than to any particular property, in which the risk assumed is shifting and varying according as different articles or things in the class are brought within the terms of the contract.

blanket-scum (blang′ket-skum), *n.* In the manufacture of sugar from the cane, the first-formed thick layer of coagulated material which appears on the surface of the cane-juice which has been treated with milk of lime and heated in open kettles. It consists chiefly of calcium salts, coagulated proteid matter, and mechanically entangled particles of vegetable fiber. *Sadtler*, Handbook of Indust. Chem., p. 129.

blanket-strake (blang′ket-strāk), *n.* In *mining* and *metal.*, a sloping table or sluice containing coarse cloth, used for catching gold. See *blanket-sluice*. [Australia.]

blanket-table (blang′ket-tā″bl), *n.* In *mining*, an inclined plane covered with blankets or other coarse cloth, to catch the heavier minerals which pass over it. See *blanket-sluice*.

blanket-twill (blang′ket-twil), *n.* Same as ★*cassimere-twill*.

blanket-vote (blang′ket-vōt), *n.* Same as *blanket-*★*ballot*.

blanking-die (blang′king-dī), *n.* Same as ★*cutting-die*.

blare[1], *n.* 4. In *painting*, a broad and brilliant effect of color, as in the representation of flowers.

This is a thing unique in painting, unique in the sense of freshness and ambiance in which the "*blare*" of the flowers is rendered.
C. Ricketts, Velasquez, in Burlington Mag., v. 339.

blasfeme, blasfemous, blasfemy. Simplified spellings of *blaspheme*, *blasphemous*, *blasphemy*.

blast[1], *n.* 13. In *mining*, a fall of water down a mine-shaft designed to produce or quicken ventilation. *Barrowman.* [Scotch.]—14. In the West Indies, a disease of the sugar-cane, probably caused by an acarid now known as the sugar-cane mite. The species is still undescribed.—**Cranberry blast,** a disease caused by the pycnidial form of a species of *Guignardia*, which attacks the very young fruit and prevents its further development.—**White blast,** a disease of rice along the South Atlantic coast of the United States. The forming head of the rice-plant attacked by it turns snow-white. The cause of the disease is not known.

blast[2] (blast), *n.* [Gr. βλαστός, a sprout, shoot, germ, < βλαστάνειν, sprout, bud, grow.] In *zoöl.*, one of the spindle-shaped, spore-like bodies in the life-cycle of certain *Sporozoa*, such as the malarial parasite.

blast-area (blast′ā″rē-ä), *n.* The area over which a blast of air or steam is distributed; the cross-section of the blast.

blastesis (blas-tē′sis), *n.* [NL., < Gr. βλάστησις, a budding.] The reproduction of a lichen thallus by means of gonidia. *Minks.*

Blast-furnace gas, the mixture of gases discharged from the top of a blast-furnace used in smelting iron. It consists essentially of carbon monoxid, carbon dioxid, and nitrogen, and in view of the combustibility of the first of these is becoming a very important source of power hitherto wasted, being used as fuel in internal-combustion engines.—**Blast-furnace oil,** a tar-like mixture of hydrocarbons, phenols, etc., recovered from coal used in blast-furnaces.—**Buttgenbach's blast-furnace,** a blast-furnace in which the furnace-top is supported by pillars of cast- or wrought-iron, thereby relieving the stack of its weight.—**Styrian charcoal blast-furnace,** a blast-furnace for the production of white iron. The ores treated are chiefly spathic carbonates, poor in manganese and containing from 35 to 55 per cent. of iron. The use of charcoal as a fuel is confined to the production of fine grades of iron.

blastidium (blas-tid′i-um), *n.*; pl. *blastidia* (-ä). [NL., < Gr. βλαστός, germ, cell, + dim. *-ιδιον*.] A secondary cell generated within another; a daughter-cell. *Schleiden.*

blasting-powder (blas′ting-pou″dėr), *n.* An explosive agent, commonly gunpowder, used in blasting rock. Gunpowder for this purpose is often made with nitrate of soda instead of nitrate of potash, although the former salt, which is the cheaper, tends to take up hygroscopic moisture, and the powder is thereby reduced in strength.—**Borlinetto's blasting-powder,** an explosive, made by mixing intimately 10 parts of picric acid, 10 parts of sodium nitrate, and 8.5 parts of potassium chromate.—**Brain's blasting-powder,** an explosive, 40 per cent. nitroglycerin and 60 per cent. a mixture of charcoal, wood-pulp, and nitrate and chlorate of potassium. The last-named ingredient renders it a very dangerous material.

blastocele, *n.* Same as *blastocœle*.

blastochore (blas′tō-kōr), *n.* [Irreg. < Gr. βλαστός, a germ, sprout, + χωρεῖν, spread.] In *phytogeog.*, a plant disseminated by offshoots. *F. E. Clements.*

blastochyle (blas′tō-kīl), *n.* [Gr. βλαστός, a germ, + χυλός, juice, liquid.] In *embryol.*, the liquid which fills the blastocœle, or cavity of the blastula.

blastogenetic (blas″tō-jē-net′ik), *a.* [Gr. βλαστός, a germ, + γένεσις, production: see *genetic*.] In *biol.*, of or pertaining to characters which have their origin in the reproductive cells, or germ-cells, as distinguished from the acquired or *somatogenetic* characters, which make their appearance in the soma, or body, of the animal or plant.

blastogenic (blas″tō-jen′ik), *a.* 1. Pertaining to or produced by means of budding or blastogenesis.

The same is true as regards the formation of a new polyp from a *blastogenic* cell and from an ovum. In both cases the final result is the same, or very similar, though the method by which it is attained is different.
Weismann (trans.), Germ-plasm, p. 174.

2. Concerning or pertaining to origin from germ-plasm, or the substance of germ-cells, as contrasted with origin from the soma or body.

[I] contrast them [somatogenic characters] with the *blastogenic* characters of an individual, or those which originate solely in the primary constituent of the germ.
Weismann (trans.), Germ-plasm, p. 392.

Blastogenic germ-plasm, idioplasm. See ★*germ-plasm*, ★*idioplasm*.—**Blastogenic variation,** diversity among germ-cells considered as variation, and, according to Weismann's doctrine of germ-plasm, the only variation, which can be inherited or transmitted to descendants. *Weismann* (trans.), Germ-plasm, p. 411.

blastoidean (blas-toi′dē-an), *a.* and *n.* I. *a.* Having the characters of or pertaining to the *Blastoidea*.

II. *n.* One of the *Blastoidea*.

blastokinesis (blas″tō-ki-nē′sis), *n.* [Gr. βλαστός, a germ, + κίνησις, movement.] In *embryol.*, the movements of the whole insect embryo within the egg. *Wheeler*, 1893.

blastokinetic (blas″tō-ki-net′ik), *a.* Of or pertaining to blastokinesis.

Blastomyces (blas-tō-mī′sēz), *n.* [NL. (Costantin and Rolland, 1888), < Gr. βλαστός, a germ, + μύκης, a fungus.] A genus of hyphomycetous fungi having a scantily branched mycelium with somewhat polyhedral simple conidia produced on short lateral conidiophores. The single species, *B. luteus*, was found on bear-dung. Recently various writers on animal pathology have incorrectly referred to this genus certain fungi of obscure relationship which have been isolated from tumors, ulcers, and cancerous growths.

blastomycete (blas-tō-mī′sēt), *n.* One of the *Blastomycetes*.

Blastomycetes (blas″tō-mī-sē′tēz), *n. pl.* [NL., < βλαστός, a germ, + μύκης (pl. μύκητες), a fungus, a mushroom.] A name applied chiefly by animal pathologists to a heterogeneous group of fungi occurring as parasites on man and some of the lower animals. Some of the species included appear closely related to such genera as *Oospora* and *Oidium*. They are of simple structure, consisting chiefly of simple cells arranged in chains or small groups.

blastomycetic (blas″tō-mī-sē′tik), *a.* Pertaining to or due to *Blastomycetes*.—**Blastomycetic dermatitis,** a form of inflammation of the skin caused by the presence of a fungus of the yeast-plant family.

blastomycetous (blas-tō-mī-sē′tus), *a.* Pertaining to or caused by any of the so-called *Blastomycetes*; blastomycetic.

blastomycosis (blas″tō-mī-kō′sis), *n.* [NL., < Gr. βλαστός, a germ, + μύκης, a fungus, + *-osis*.] Inflammation due to the presence in the tissues, especially on the skin, of a vegetable parasite belonging to the family of budding fungi.

Blastophaga (blas-tof′a-gä), *n.* [NL. (Gravenhorst, 1829), < Gr. βλαστός, a germ, sprout, +

[illegible] *Blastophaga* [illegible]
[illegible] (After Westwood.)

φαγεῖν, eat.] A remarkable genus of chalcidoid insects of the family *Agaonidæ*, having winged females and wingless males of peculiar structure. They inhabit the flower receptacles of the fig, and act as fertilizers, bringing about the production of the so-called fruit in the pistillate varieties. *B. grossorum* fertilizes the Smyrna fig of commerce, which is absolutely dependent upon this insect for the production of seed. Both plant and insect have been introduced by the United States Department of Agriculture into California, where large crops of Smyrna figs are now grown.

blastophor, *n.* Same as *blastophore*.

blastophoral (blas-tof′ō-ral), *a.* [*blastophore* + *-al*[1].] Relating to a blastophore.

blastophore, *n.* 2. One of the nucleated portions of protoplasm formed in an oöcyst of *Sporozoa*, comparable to a sporoblast.

Blastoporic seam, in *embryol.*, the suture or seam formed by the closing of the lips of the blastopore.

blastostroma (blas-tō-strō′mä), *n.*; pl. *blastostromata* (-ma-tä). [Gr. βλαστός, a germ, + στρῶμα, a bed, mattress.] In *embryol.*, that portion of the egg which participates actively in forming the blastoderm.

blastous (blas′tus), *a.* Of or pertaining to a germ.

Blastozoa (blas-tō-zō′ä), *n. pl.* [Gr. βλαστός, a germ, + ζῷον, life.] Animals with germ-layers; *Metazoa*.

blast-stove (blast′stōv), *n.* See *hot-blast* ★*stove*.

blastular (blas′tū-lär), *a.* Of or pertaining to the blastula.

blastule (blas′tūl), *n.* Same as *blastula*.

blast-wheel (blast′hwēl), *n.* The wheel in a centrifugal disk- or pressure-blower; an impeller.

blat (blat), *v.*; pret. and pp. *blatted*, ppr. *blatting*. [Imitative: cf. *blatter*, *blather*, *bleat*.] I. *trans.* To utter heedlessly; blurt out: as, he *blatted* the news.

II. *intrans.* 1. To talk inconsiderately or nonsensically; blather.—2. To bleat.

blatjang (blä′chäng), *n.* In South Africa, chutney: a condiment.

Blatti (blat'i), *n.* [NL. (Adanson, 1763, adopted from Rheede, 1682), from a Malabar name of one of the species of the genus, *B. caseolaris*.] A genus of dicotyledonous plants, type of the family *Blattiaceæ*. See *Sonneratia*.

Blattiaceæ (blat-i-ā'sē-ē), *n. pl.* [NL. (Niedenzu, 1892), < *Blatti* + *-aceæ*.] A family of dicotyledonous archichlamydeous plants of the order *Myrtales*, typified by the genus *Blatti*, and mostly with the characters of that genus. It contains only one other genus. They are trees or shrubs of tropical Asia, the Malay Archipelago, and the Himalayas. See *Sonneratia* and *Lumbala*.

Blattidium (bla-tid'i-um), *n.* [NL., < L. *blatta*, a cockroach, + Gr. dim. *-ιδιον*.] A genus of extinct cockroaches from the Jurassic rocks.

blaze[1], *n.* 6. In *physiol.*, an electric current traversing normal living tissue in a positive direction when a mechanical stimulus is applied; the electric response of living tissue to stimulation. See ★*blaze-current*.

This "*blaze*" response is the algebraic sum of post-anodic and post-kathodic currents, the resultant is commonly homodrome, but an antidrome *blaze*, distinguished from polarisation by its much greater order of magnitude, is also seen. *Nature*, July 9, 1903, p. 238.

blaze-current (blāz'kur"ent), *n.* An electric current aroused in living tissue by stimulation.

In another paper, A. Durig describes observations which make it impossible, he says, to regard the appearance of *blaze-currents* as a specific property of living tissue. It is much more probable that they are to be considered as special manifestations of certain epithelial tissues. *Jour. Roy. Micros. Soc.*, Oct., 1903, p. 599.

blazed (blāzd), *p. a.* Having a white mark, properly a streak, on the forehead: said of horses and cattle.

blaze-reaction (blāz-rē-ak'shon), *n.* A reaction obtained when living tissue is stimulated by a mechanical or an electrical stimulant. It consists of an electric current traversing the living tissue in a positive direction, and it is thought to be an electrical criterion of vitality. See ★*blaze*, *n.*, 6, and ★*blaze-current*. *Jour. Roy. Micros. Soc.*, Oct., 1903, p. 599.

blazing-star, *n.*, 2. (*d*) In California, *Mentzelia lævicaulis*, a white-stemmed plant with cream-colored or light-yellow flowers 3 or 4 inches broad; also *M. Lindleyi*, with smaller golden flowers.

bleach[1], *n.* 3. An abbreviation of 'bleaching-powder,' or chlorid of lime.—**Madder bleach**, the most thorough calico-bleaching process: so named because it was first applied to goods to be printed or dyed with madder colors. Its object is the complete removal of every impurity which can attract coloring matter other than that desired.—**Market bleach**, a bleaching process for cotton goods suitable to meet the ordinary requirements of the trade. It differs from that for printed goods essentially in the absence of the boiling with resin soap and in the introduction of tinting with a blue coloring matter.

bleach-croft (blēch'kroft), *n.* A field of growing grass upon which linen or cotton cloth is spread for bleaching.

bleacher, *n.* 4. Same as ★*bleachery*, 2.

bleacherite (blē'chėr-īt), *n.* One who must be content to stand or occupy a bench in the open air while witnessing a base-ball or other game. [Slang, U. S.]

bleachery, *n.* 2. An outdoor stand from which spectators may view something, especially a game of foot-ball or base-ball. [Slang, U. S.]

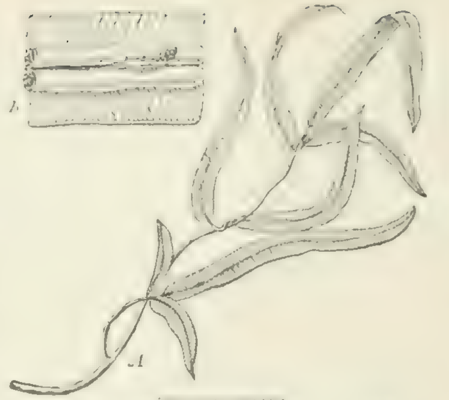
bleaching-engine (blē'ching-en"jin), *n.* In *paper-manuf.*, a machine for bleaching, cleaning, and preparing wood-pulp for use in a paper-making machine. It is essentially a form of beating-engine (which see).

bleaching-liquor (blē'ching-lik"or), *n.* Bleaching-liquid; as usually understood, the solution obtained by the action of water on bleaching-powder or chlorid of lime, but also applied to solutions of the alkaline hypochlorites, bleaching-liquor being now made directly by the electrolysis of an aqueous solution of common salt.

bleach-liquor (blēch'lik-or), *n.* Same as ★*bleaching-liquor*.

bleach-works (blēch'wėrks), *n. pl.* Same as *bleachery*.

Blechnum (blek'num), *n.* [NL. (Linnæus, 1753), < Gr. *βληχνον*, a kind of fern. (*Blechnon* was used by Pliny.)] A genus of hardy polypodiaceous ferns. The fronds are nearly or quite uniform and mostly pinnatifid or pinnate; the sterile veinlets are free, those of the fertile pinnæ being connected near their base by a transverse continuous receptacle which bears a linear sorus parallel to the midvein and provided with an elongate superior indusium free and at length reflexed from the inner margin. The species in cultivation are rather coarse greenhouse ferns which are very useful to florists for jardinières and for specimen ferns. The following are most commonly cultivated: *B. Brasiliense*, *B. nitidum*, and *B. Corcovadense*, of Brazil; *B. occidentale*, found in Mexico, the West



B. [illegible] [illegible]

Indies, and Brazil; and *B. serrulatum*, found in the regions between Florida and Brazil. *B. cartilagineum*, *B. Lanceola*, and others are also under cultivation.

bleed, *v. t.* 6. To allow an escape of (liquid or gas) through a cock or valve from a higher pressure to a lower. Specifically—(*a*) To let (steam) escape by a by-pass from a high-pressure cylinder of a compound engine to one of the low-pressure cylinders. (*b*) To let (air or condensed water) escape into the atmosphere from the train-pipe or reservoirs of an air-brake system. (*c*) To remove (condensation) from a gas-main or a steam-pipe by opening a drip-valve.
7. In making turpentine, to obtain resin from (living trees) by cutting into them.—**To bleed a sack**, to make a slit in it, as in loading sacked wheat for export. See the extract.

In loading sacked wheat for export a number of *sacks* in each row are "*bled*." In other words, a slit is made in the sack, which allows a small quantity of the wheat to escape and fill in the spaces around the corners and sides of the sack, thus making a more compact cargo, which is less liable to shift than would be the case if the sacks were loaded without "*bleeding*." *Yearbook U. S. Dept. Agr.*, 1901, p. 576.

bleeder, *n.* 3. In *mech.*, a pipe which leads steam from the pressure-line to the intermediate or low-pressure cylinder of the engine or to the condenser.

bleeding-heart, *n.* 4. Same as ★*coral-creeper*.—**California bleeding-heart**, *Bikukulla formosa*, a beautiful species of the Sierras and Coast Range.—**Wild bleeding-heart**, *Bikukulla eximia* of the Alleghany region.

bleeding-valve (blē'ding-valv), *n.* A valve used to bleed or drain a mechanical system. See ★*bleed*, *v. t.*, 6, and ★*bleeder*, 3.

Bleiberg process. See ★*process*.

blend[1], *v. i.* 3. In *biol.*, to exhibit or transmit to descendants the resultant or combination of resemblances to the two parents in inheritance.

In the former case where A and a are characters which can be denoted by reference to a common scale, the law assumes of course that the inheritance will be, to use Galton's term, *blended*, namely, that the zygote resulting from the union of A with a will on the average be more like a than if A had been united with A; and conversely that an Aa zygote will on the average be more like A than an aa zygote would be. *W. Bateson*, Mendel's Prin. of Heredity, p. 20.

4. In *psychol.*, to combine in such a way that the combining qualities are thrust more or less into the background by the total impression which results from their combination; fuse.

blend[1], *n.* 3. In *psychol.*, a fusion; a connection of mental processes in which the constituents are forced into the background by the total impression.

There is no trace of fusing, of being fused, when the tones sound: they form a *blend*; and this *blend*, the sound-whole, is the fusion. *E. B. Titchener*, Exper. Psychol., I. ii. 330.

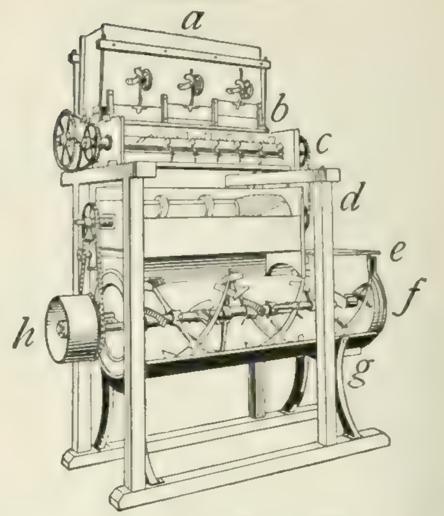
blend[2], *n.* A simplified spelling of *blende*.

blende, *n.*—**Sidot blende**, an artificially prepared zinc sulphid, in finely crystalline powder, exhibiting phosphorescence on exposure to sunlight, by friction, and by the impact of the radiation from salts of radium. *Science*, Oct. 28, 1904, p. 569.

blender, *n.* 2. A machine for mixing or blending together different kinds of flour, dry paints, or other powders. It consists of a cylinder of wood or iron in the axis of which is a shaft, called an *agitator*, fitted with spiral fans which when revolved stir and mix together the various powders or flours placed in the machine. It is usually combined with some form of sifting-machine, and is then called a *sifter and blender*. Large machines have also a feeder.

blending, *n.* 2. The combination of the characteristics of both parents as a resultant in cross-breeding.

In some cases there was obvious *blending*, as for example when white crossed with red or claret gave pink. *Bateson and Saunders*, Rep. Evol. Com. Roy. Soc., 1902, [I. 45.



Combined Feeder, Sifter, and Blender.

a, feed box with three compartments; *b*, feed gates regulating proportions [illegible] *h*, pulley for belt delivering power. Front of *c*, *d*, and *e* open to show construction. Machine 15 to 20 feet high.

blendure (blen'dūr), *n.* [*blend*[1] + *-ure* (cf. *mixture*).] A blend or mixture.

blend-word (blend'wėrd), *n.* An invented word, made up of two or more known words taken and combined without regard to etymological usage or rule, the object (which may not be consciously present in the inventor's mind) being to produce an absolutely new word, which shall not appear to be a compound or derivate of known words. Examples are frequent in humorous formations, as in the works of "Lewis Carroll"; as *snark* from *sn(ake)* and *(sh)ark*, *chortle* from *ch(uck)le* + *(sn)ort*, etc. So *brunch*, in Oxford University slang, from *br(eakfast)* + *(l)unch*. See ★*brunch-word*. Blend-words of this nature differ only in spirit from a class of chemical and other technical compounds in which two or more words are arbitrarily reduced for mere convenience, as *aldehyde* from *al(cohol) dehyd(rogenatus)*, *chloroform* from *chlor(in)* + *form(yl)*, etc.

blendy (blend'i), *a.* Containing the mineral blende.

blennemesis (ble-nem'ē-sis), *n.* [NL., < Gr. *βλέννα*, mucus, + *ἔμεσις*, vomiting.] The vomiting of mucus.

Blennicottus (blen-i-kot'us), *n.* [NL., < L. *blennius*, Gr. *βλέννος*, blenny, + Gr. *κόττος*, a fish (see *Cottus*).] A genus of cottoid fishes of the North Pacific: the typical species is *B. globiceps*.

blennostasis (blen-ō-sta'sis), *n.* [NL., < Gr. *βλέννος*, slime (mucus), + *στάσις*, standing.] Suppression of a discharge of mucus.

blennuria (blen-ū'ri-ä), *n.* [NL., < *βλέννος*, slime (mucus), + *οὖρον*, urine.] Discharge of mucus in the urine.

bleo (blā'ō), *n.* [Native name.] *Pereskia Bleo*, of the cactus family, a thorny shrub found in Colombia and Brazil. It bears flesh-colored flowers and smooth, pear-shaped edible fruit the size of a large plum. The plant serves as a good stock on which to graft the more ornamental species of cacti and is planted for hedges. See *Pereskia*. [Colombia.]

blephara (blef'a-rä), *n.*; pl. *blepharæ* (-rē). [NL., < Gr. *βλέφαρον*, eyelid.] One of the teeth of the peristome in mosses. [Rare.]

blepharic (ble-far'ik), *a.* [Gr. *βλέφαρον*, eyelid, + *-ic*.] Same as *palpebral*.

blepharis (blef'a-ris), *n.* [NL., < Gr. *βλεφαρίς*, eyelash, eyelid, < *βλέφαρον*, eyelid, appar. < *βλέπειν*, look at.] In certain crustaceans, the fringe of hair on the edge of the pit in which the eye is situated.

Blepharocera (blef-a-ros'e-rä), *n.* [NL. (Macquart, 1843) (also *Blepharicera*), < Gr. *βλέφαρον*, eyelid (*βλεφαρίς*, eyelash), + *κέρας*, horn.] 1. A genus of dipterous insects typical of the family *Blepharoceridæ*.—2. A genus of tineid moths. *Chambers*, 1877.

Blepharoceridæ (blef"a-rō-ser'i-dē), *n. pl.* [NL., < *Blepharocera* + *-idæ*.] A family of small bibionoid dipterous insects which have the wings furnished with a network of creased lines, from which they have been called the *net-veined midges*. The adults are mosquito-like in form, and the larvæ, which are aquatic, resemble *crustacea* more than insects. They attach themselves to rocks in swift-running streams, and have apparently but 7 segments.

blepharoclisis (blef"a-rō-klī'sis), *n.* [NL., < Gr. *βλέφαρον*, eyelid, + *κλεῖσις*, *κλῆσις*, shut-

ting up.] Union, to a varying extent, of the opposing eyelids, of congenital origin.

blepharoconjunctivitis (blef″a-ro-kon-jungk′ti-vī′tis), *n.* [NL., ‹ Gr. *βλέφαρον*, eyelid, + NL. *conjunctivitis*.] Inflammation of the conjunctiva of the eyelid.

blepharoplast (blef′a-ro-plast), *n.* [Gr. *βλέφαρις*, eyelash, + *πλαστός*, formed.] **1.** A specialized cilia-forming protoplasmic organ of the sperm-cells of certain plants. It first appears in the spermatozoid mother-cells in the form of a round body with radiating rays of kinoplasm, and through its growth and development gives rise to the motile cilia of the spermatozoids. The organ resembles a centrosome or centrosphere, and may be a modified homologue of that organ of the cell. In *Zamia, Cycas, Ginkgo*, and certain ferns, two of these organs appear in each spermatozoid mother-cell, one going to each of the two spermatozoids formed therefrom. *H. J. Webber*, Development of the Antherozoids of Zamia, in Bot. Gazette, July 16, 1897, p. 21.

2. In protozoans, a minute granule, of unknown function, at the base of each flagellum, as in *Multicilia*.

blepharoplastoid (blef″a-rō-plas′toid), *n.* [Gr. *βλεφαρίς*, eyelash, + *πλαστός*, formed, + *εἶδος*, form.] In *bot.*, a structure resembling the blepharoplast in the spermatids of certain plants, such as *Marsilia*.

blepharostat (blef′a-ro-stat), *n.* [Gr. *βλέφαρον*, eyelid, + *στατός*, fixed, ‹ *ἱστάναι*, cause to stand.] An instrument for keeping the eyelids apart; an eye-speculum. *Jour. Trop. Med.*, Mar. 2, 1903, p. 71.

blepharosymphysis (blef″a-rō-sim′fi-sis), *n.* [NL., ‹ Gr. *βλέφαρον*, eyelid, + *σύμφυσις*, a growing together.] Union, to a varying extent, of the opposing eyelids, occurring as a result of disease.

blepharosynechia (blef″a-rō-sin-e-kī′ä), *n.* [NL., ‹ Gr. *βλέφαρον*, eyelid, + *συνέχεια*, continuity, ‹ *συνεχής*, continuous, ‹ *συνέχειν*, continue, hold together, ‹ *σύν*, with, + *ἔχειν*, hold.] Adhesion between the margins of the opposing eyelids.

blepharotomy (blef-a-rot′ō-mi), *n.* [Gr. *βλέφαρον*, eyelid, + *τομή*, a cutting.] In *surg.*, incision of the eyelid.

Blessed bread. Same as *eulogia*.

blet (blet), *n.* [*blet*, *v.*] A soft spot in a fruit; an early stage of decay.

Bletia (blē′ti-ä), *n.* [NL. (Ruiz and Pavon, 1794), named in honor of L. Blet, a Spanish pharmacist and botanist.] A widely distributed genus of terrestrial or epiphytal herbs of the family *Orchidaceæ*. The leaves are plicate, membranaceous, erect, and have a sheathing base. The terrestrial species are most commonly grown by gardeners. There are about 20 species of *Bletia* found in the American tropics, and one species is found in China and Japan. *B. hyacinthina, B. verecunda, B. Sherratiana, B. patula*, and *B. campanulata* are most commonly grown.

bleu (blė), *n.* [F.] Blue.—**Bleu céleste**, in *ceram.*, same as ★*bleu turquoise*. **Bleu de ciel**, a shade of blue found in Chinese porcelain; sky-blue. Also called *bleu d'azur*. **Bleu de Nanking**, a dark-blue color found on Nanking or 'East India' stoneware and porcelain.—**Bleu de Sèvres**, a deep, rich cobalt blue color used at the Sèvres factory near Paris. Same as *bleu de roi* (which see). **Bleu fouetté**, a blue color used on Chinese ceramic ware so called from its whipped aspect. It is less deep in shade than the *lapis lazuli*, and has a mottled appearance. See *powder* ★*blue*. —**Bleu lapis**, a veined dark-blue color, or *gros bleu*, used on French porcelain, particularly that of Sevres. **Bleu turc**, a pale grayish or 'Turkish' blue, used as a ground-color on Sevres porcelain. **Bleu turquoise**, in *ceram.*, a highly prized turquoise-blue color invented in the reign of Louis XV.

blibe (blīb), *n.* [Appar. a dial. variant of *bleb*.] In *glass-making*, a defect in the glass, caused by the retention of gas-bubbles formed during the melting. Also called *blister*.

blicksilber (blik′sil″bėr), *n.* [G.] Silver as it appears after the removal of the impure litharge or abstrich in a cupeling-furnace. Blicksilber still contains some lead and has to be further refined. *Phillips and Bauerman*, Elements of Metallurgy, p. 707.

blight, *n.*, **3.** (*c*) Purulent conjunctivitis.—**4.** An insect, usually inconspicuous or hidden, which causes trees or plants to become diseased or to die, as the American blight.—**American blight**, a name given in England and the English colonies to the woolly root-louse of the apple (*Schizoneura lanigera*) on account of its supposed American origin. Its native home, however, is not satisfactorily determined, and it may quite possibly have been Europe or Asia. **Apple-blight.** Same as *pear-blight*. **Bacterial blight.** See ★*bacterial*. **Black blight.** (*a*) A disease of the mango, *Mangifera Indica*, caused by the fungus *Dimerosporium mangiferum*, which produces velvety black patches on the leaves, especially where insects that produce honeydew are present. (*b*) Same as *mosquito* ★*blight*. See also *tea-bug*. **Cane-blight**, a disease of raspberries doubtfully ascribed to a species of *Phoma*. **Corn-blight.** Same as ★*leaf-blight of corn*. **Douglas fir blight**, a disease of seedlings and young trees of *Pseudotsuga mucronata* and *Sequoia Washingtoniana*, caused by the fungus *Sclerotinia Douglassii*. *Botrytis Douglassii* is regarded as the conidial condition of the fungus. **Egg-plant blight**, a disease of the egg plant attributed to *Bacillus solanacearum*. **Grape-leaf blight.** See ★*leaf-blight of grape*. **Gray blight**, a disease of the tea-plant in India caused by *Pestalotia Guepini*, which produces brownish-gray spots on the leaves. **Green blight**, the greenfly, any green plant-louse, especially one of those forms which damage hot-house plants. **Maple-blight**, a disease of young shoots of the maple, *Acer campestre*, in Europe, caused by the fungus *Septogloeum Hartigianum*.—**Mosquito blight**, a blight of the tea-plant produced by the punctures of several species of plant bugs of the genus *Helopeltis*. See *tea-bug*.—**Pineapple-blight**, a serious disease of the pineapple, causing the death of the plant. It has been attributed to a species of *Fusarium*. Pineapple-blight has been injurious in Florida, causing large losses. **Potato early blight**, a disease affecting the leaves of the potato, caused by the fungus *Alternaria* (*Macrosporium*) *Solani*. Same as *potato leaf-curl*.—**Potato late blight**, a disease of potato leaves and tubers caused by *Phytophthora infestans*. See *potato-rot*. **Rice-blight**, a very destructive disease of rice, attacking the stem near the top and preventing the development of the grain. It is supposed to be due to a fungus.—**Sorghum-blight**, a disease of the leaves of sorghum ascribed to *Bacillus Sorghi*.—**Thread blight**, a disease which attacks the twigs and leaves of the tea-plant in India. It is said to be caused by the fungus *Stilbum inanum*, whose mycelium forms thread-like strands on the twigs and leaves. **Strawberry-blight**, a disease of strawberries supposed to be of bacterial origin. **Tomato-blight**, a disease of tomato-plants caused by *Bacillus solanacearum*; also, in the southern United States, a disease caused by a *Sclerotium*. —**Wheat-blight**, a disease of wheat attributed to *Mystrosporium abrodens*.

blight-powder (blīt′pou-dėr), *n.* A mixture of sulphur with a small proportion of anhydrous copper sulphate in fine powder, for dusting as a fungicide over cultivated plants.

Blikoor (blik′ōr), *n.* [Cape D., ‹ *blik*, bare, galled, sore, + *oor*, ear.] A South African nickname for a person from the Transvaal.

blind[1], *a.* **14.** In *hort.*, said of a shoot that does not bloom. It is most frequently applied to roses, chrysanthemums, and other twiggy growers. 'Such shoots are often spoken of as *blind wood*.' Shoots which do not fulfil their promise, or fulfil the expectations of the gardener in producing flowers, are said to "come blind."

Blind alphabet. See ★*braille*.—**Blind cat**, a siluroid fish, *Amiurus nigrolabris*, found in caves and having the eyes functionless.—**Blind coal.** (*b*) Coal, containing little volatile matter, which burns without smoke; anthracite. [Scotch.]—**Blind door.** (*b*) A door made of slats like a window-blind, and intended to allow of the passage of air while sight is prevented. **Blind gut**, the cæcum. **Blind hole.** (*b*) In *golf*, a hole so situated that a given player cannot see the flag which marks its position.—**Blind hookey.** See ★*hookey*[3]. **Blind insects**, any insects in which the eyes are absent or are functionless, as in a number of the forms of different orders which inhabit caves, in the curious orthopterous insects of the family *Hemimeridæ*, in certain cockroaches, in the full-grown females of many *Coccidæ*, in certain species of fig-insects of the chalcidoid family *Agaonidæ*, and in others.—**Blind pit**, in *mining*, a shaft which does not reach the surface, as a shaft from an upper to a lower seam.—**Blind pocket.** See ★*pocket*.—**Blind shearing**, in *coal-mining*, a side-cutting without undercutting. *Barrowman*, Glossary. **Blind spot.** (*b*) In *cricket*, that spot of ground in front of the batsman where, if the ball pitches, he is in doubt as to whether to play back or forward.—**Blind tiger**, a place where intoxicating liquors are sold surreptitiously. [Local U. S.]—**Blind wall**, a wall without openings.

blinded, *a.* **3.** In *mining*, not opposite, but nearly so, as two level drifts on either side of a slope. *Barrowman*, Glossary. [Scotch.]

blind-fish, *n.* **3.** Any of the several species of fishes which inhabit caves and have more or less rudimentary eyes.—**Cuban blind-fish**, either of two species of blind-fishes found in the caves of Cuba, *Lucifuga subterranea* and *Stygicola dentatum*. They belong to the family *Brotulidæ*, a group otherwise strictly marine.

blindfold chess. See ★*chess*[1].

blindfoldedness (blīnd′fōl″ded-nes), *n.* The state of being blindfolded. *N. E. D.*

blinding-tree (blīn′ding-trē), *n.* [Ppr. of *blind*[1] + *tree*.] A littoral tree, *Excæcaria Agallocha*, belonging to the spurge family, the acrid milky juice of which is said to cause blindness. See *Excæcaria* and *tiger's-milk*. [East Indies.]

blindling† (blīnd′ling), *n.* [*blind* + *-ling*[1].] A blind person. *N. E. D.*

blind-lobster (blīnd″lob′stėr), *n.* *Phoberus cæcus*, found in the Gulf of Mexico and the Indian seas.

blindness, *n.*—**Blue-yellow blindness**, a form of partial color-blindness in which the short-wave end of the spectrum is very dark and but little colored, and yellow is confused with white, while red and blue-green are still distinguished.—**Cortical blindness**, loss of sight due to a lesion in the cortical portion of the brain. —**Mental blindness, psychical blindness**, a pathological state in which the patient, though able to see objects before him, cannot recognize them by their visual properties.

blind-tooling (blīnd′tōl″ing), *n.* In *bookbinding*, an effect produced by various instruments upon the leather without the assistance of gold-leaf.

> *Blind-tooling* is the impression of the tools upon the leather without gold or color. It is produced by the tools, slightly warmed, being impressed upon the leather when damped, and by the same impression being often repeated to brighten its effect.
> *B. Matthews*, Bookbinding, p. 55.

blind-work (blīnd′wėrk), *n.* Same as ★*blind-tooling*.

blind-your-eyes (blīnd′yör-īz), *n.* [Australian.] Same as ★*blinding tree*.

blinker, *n.* **3.** *pl.* Goggles; spectacles used for protecting the eyes from the light, dust, glare of the snow, etc.—**4.** A small mackerel: a name used by fishermen.

blinking, *n.* **II.** *a.* **1.** Winking with half-opened eyelids, as when the eyes cannot bear full light.—**2.** Having twinkling eyes. *Scott*, Nigel, xvii.

blippo (blip′pō), *n.* [African.] A shrub or small tree, *Randia melleifera*, belonging to the madder family, with the inky sap of which the natives of North Central Africa dye their bodies.

blister, *n.* **6.** A swelling on a metal plate; a bag.—**7.** A young oyster. [U. S.]—**8.** In *photog.*, a defect in a plate or on a paper in the process of coating with gelatin, albumin, or collodion.—**9.** In *glass-making*, a defect in the glass caused by the retention of gas-bubbles formed during the melting.—**Larch-blister**, a disease of the branches of the European larch caused by a discomycetous fungus, *Dasyscypha Willkommii*.—**Pear-leaf blister.** (*a*) A disease of pear- and quince-leaves in Europe, causing swollen blister-like patches, due to the fungus *Taphrina bullata*. (*b*) A common disease of pear leaves produced by a mite, *Phytoptus pyri*, commonly called the *pear-leaf blister mite*. Each blister is a swelling of the leaf, producing a cavity in which the mites are found.—**Pine blister**, a disease of pines caused by species of *Peridermium* which form blisters on the leaves.—**Plum-leaf blister**, a disease of the plum caused by *Polystigma rubrum* which produces reddish patches on the leaves.

blister-beetle, *n.*—**Black blister-beetle.** See *Pennsylvania* ★*blister-beetle*.—**Black-striped blister-beetle**, an American meloid beetle, *Macrobasis atrivittata*, which damages garden plants in the Mississippi valley.—**Immaculate blister-beetle**, an American meloid beetle, *Macrobasis immaculata*, which damages garden vegetables in the Western States. **Lean blister-beetle**, an American meloid beetle, *Epicauta Strigosa*, common in the southern United States, where it damages flower-gardens in the late summer and autumn.—**Pear-tree blister-beetle**, a meloid beetle, *Pomphopœa ænea*, greenish blue in color. It injures pear-blossoms in the northern United States. **Pennsylvania blister-beetle**, a black meloid beetle, *Epicauta Pennsylvanica*, of wide North American distribution. It is common on certain field crops, as beets, beans, and peas, occurs frequently on goldenrod, and is abundant in flower-gardens on late blooming plants such as asters and chrysanthemums. Usually called *black blister-beetle*; also *aster-bug*.—**Striped blister-beetle**, a meloid beetle, *Epicauta vittata*, yellowish in color with two black stripes on each cover. It is a common and wide-spread North American species.—**Three-lined blister-beetle**, an American meloid beetle, *Epicauta lemniscata*, common throughout the Southern and Western States.—**Two-spotted blister-beetle**, an American meloid beetle, *Macrobasis albida*, common in the southwestern United States.

Pennsylvania Blister-beetle (*Epicauta Pennsylvanica*). Adult.
Three times natural size. (Chittenden, U. S. D. A.)

blister-blight (blis′tėr-blīt), *n.* A disease of the tea-plant in India, caused by *Exobasidium vexans*, which produces velvety convex blisters on the leaves. **Pine blister-blight**, a disease attacking the leaves of *Pinus sylvestris* in Europe, caused by *Peridermium Cornui*.

blister-copper (blis′tėr-kop″ėr), *n.* Metallic copper produced in the smelting of the metal by heating together copper sulphid and copper oxid, the escape of sulphur dioxid in bubbles giving rise to small cavities or blisters in the mass.

blister-furnace (blis-tėr-fėr′nās), *n.* The furnace in which blister-copper is melted. It is a form of reverberatory furnace.

> The multiple system anodes are sometimes cast directly from the *blister-furnace* or the converter.
> *Encyc. Brit.*, XXVII. 257.

B. Lit. An abbreviation of *Bachelor of Literature*.

B. LL. An abbreviation of *Bachelor of Laws*.

bloat[1], *a.* **II.** *n.* The bloater whitefish, *Argyrosomus prognathus*.

bloat-clover (blōt′klō vėr), *n.* See *bear-★clover.*

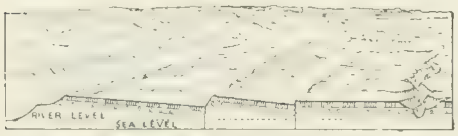
Bloater whitefish. See ★*whitefish.*

blob, *n.* 5. In *cricket*, no score; zero; a duck's-egg (which see).

blocage (blo-kazh′), *n.* [F., < *bloc*, block.] Rough masonry made by bedding small stones in masses of mortar, as in the interior of heavy walls.

Blochius (blok′i-us), *n.* [NL., named after M. E. *Bloch* (1723-99), a German ichthyologist.] A genus of singular elongate teleost fishes with a beak-like snout and finely toothed jaws. The body is covered with rhombic bony and keeled scales; the dorsal fin extends from occiput to tail and is composed of a spaced series of long spines; and the anal fin is of similar character. It is the only genus of the family *Blochiidæ*, and occurs only in the Upper Eocene rocks of Monte Bolca.

block[1], *n.*, 6. (*b*) A block-like form of cast-iron or steel used by angle-smiths in ship-building instead of an anvil. They are of various shapes and are named from their special uses, as *splitting-blocks, bending-blocks, welding-blocks, joggling-and-offsetting blocks*, etc.—10. Hence—(*d*) The engraving or plate itself.—15. One of the sections into which the colonies of Australia are divided. See ★*back-blocks.*—16. In *railroading*, the space or distance on a track between two signals; one of the short divisions into which a railroad is divided for signaling purposes, irrespective of the particular signal-system employed. See ★*block-signal*, and ★*signaling.*—17. In *ceram.*, the original model from which the block-mold is cast. See ★*block-mold.*—18. In *geol.*,



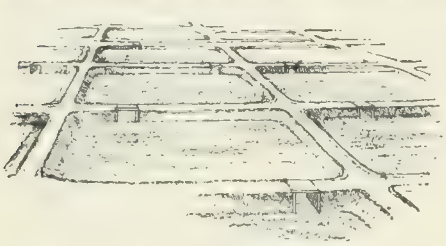
Portion of earth's crust, showing geological blocks.

a portion of the earth's crust separated by fracture from the adjacent parts, and usually uplifted or depressed with respect to them. —19. In *violin-making*, a triangular piece of wood within one of the projecting corners of the waist, to which the ribs, belly, and back are glued and by which the solidity and strength of the whole is largely secured. Usually called *corner-block.* As the waist has two corners on either side, the number of blocks is four. The introduction of corners and blocks in the fifteenth century marks a decided transition in the evolution of the true violin from the older lute.

20. In *forestry*, the unit of management treated in a working-plan. A block contains always two, but usually many more, compartments. —21. In *stock-raising*, any animal of a stocky, stout, compact, and well-made form: opposed to a loosely formed or rangy animal.

> Fifth on the list was Lucifer, a "*block*" with fine spread of fore rib, a strong loin, level lines, and a bull's head.
> *Rep. Kan. State Board Agr.*, 1901 1902, p. 204.

Block coefficient. See ★*coefficient of fineness.*—**Block system.** (*a*) In *geol.*, a mountain system in which the



Application of Water by Block System.

ranges are dislocated blocks of the earth's crust. (*b*) In *irrigation*, the method of applying water to the ground within small, regularly placed levees or dikes.—**Block teeth,** false teeth cut out of ivory or other suitable material, two or more on one piece.—**Perched block,** a glacial boulder, usually of large size, left in a high position by the melting of the ice. *Geikie*, Text-book of Geol., p. 161. **Process block,** a printing block obtained by photographic processes. **The Block,** a certain fashionable promenade in Melbourne and another in Sydney (Australia). See def. 15. —**To do the Block,** to lounge, promenade, or drive on 'the Block' (see above). [Local, Australia.]—**Volcanic block,** a relatively large and irregular fragment of volcanic rock, blown out by an explosive eruption which has (usually) shattered lava previously consolidated. *Geikie*, Text-book of Geol., p. 172.

block[1], *v. t.* 7. To secure (an electrotype or photo-engraved plate) upon a block of wood or metal, to make it type-high.—8. In *sugar-beet growing*, to remove, by the hoe or a machine, sections from thickly sown rows so as to leave blocks or bunches from 6 to 10 inches apart, which are then thinned by hand to one plant each; to bunch. **To block out.** (*b*) In *photog.*, to screen or cover a portion of the negative in order to prevent printing.

block[2], *n.* 3. In *cricket:* (*a*) A batsman's guard; the position in which he holds his bat upon the ground previous to striking. (*b*) A block-hole. (*c*) The stopping with the bat of a ball which is pitched in the block-hole. (*d*) A batsman who acts entirely on the defensive. [Colloq.]—**Lock-and-block,** a system of operating railroad-trains by which a holder is locked by a preceding train so as to block the following train, which cannot proceed until the forward train is out of the section. The presence of a train on a section prevents the release of a staff from the holder; no engineman is allowed to pass such a holder without withdrawing the staff from it.

> "*Lock-and-block*" has been used to a limited extent on a good many lines in England and a half-dozen in America, but of extensive installations there were in 1901 only four.
> *Encyc. Brit.*, XXXII. 146.

block[2], *v. t.* 2. In *card-playing*, to hold up a high card in order to prevent an adversary from making smaller ones later on.

block-ball (blok′bâl), *n.* In *base-ball*, a ball which goes out into the crowd or is stopped by some one who is not connected with the game.

block-chain (blok′chān), *n.* A form of drive-chain for transmitting motion or power, in which the alternate links are solid blocks connected by side-pieces or links which are held in place by pins through the blocks near their ends. The pins and flat links give flexibility. Newer designs use flat links edgewise, rather than the alternate block and links.

block-cutting (blok′kut″ing), *n.* In *ceram.*, the process of carving, out of gypsum or clay, molds from which the working-molds are to be made.

block-fuel (blok′fū″el), *n.* Small coal or coal-dust mixed with pitch or other binding-material and pressed into blocks for use as fuel. Also called *patent fuel. Thorpe*, Dict. Applied Chem., I. 329.

block-game (blok′gām), *n.* A game of dominoes in which each player starts with seven pieces, the object being to block the adversary so that he cannot play. The winner counts the points on his opponent's pieces.

blockhead-board (blok′hed-bōrd″), *n.* Same as ★*doll*[2], 2.

block-hole (blok′hōl), *n.* In *cricket*, a mark or depression just inside the popping-crease and in front of the wicket, upon which, for the purpose of determining his position, the batsman usually rests his bat previous to striking.

block-model (blok′mod-el), *n.* In *ship-building*, a model made from a number of flat pieces of wood called *lifts*, bolted or glued together into a block and carved to represent the shape of a vessel on a reduced scale. The joints between the pieces show the form of the water-lines of the vessel.

block-mold (blok′mōld), *n.* In *ceram.*, a hollow plaster cast taken directly from the original block, or clay model. Plaster of Paris is poured into this to make the case or case-mold, and from the latter the hollow working-molds, which are replicas of the block-mold, are made. See ★*case-mold* and ★*working-mold.*

block-printer (blok′prin-tėr), *n.* One who prints colored patterns on cloth with hand-blocks.

block-printing, *n.* 3. Any process in which, by the aid of photography, a block is produced which may be printed from in an ordinary printing-press together with the letterpress. The half-tones of the photograph must be broken up into lines, dots, stippling, or grain in order to hold the ink.

block-riffles (blok′rif″lz), *n. pl.* Wooden bars fastened to the bottom of the sluice to retain the gold. Instead of being sawn horizontally with the grain of the wood, like ordinary riffle-bars, block-riffles are cut across the tree, and stand in the sluice with the grain upward. They are said to be more durable than riffle-bars.

block-signal (blok′sig″nal), *n.* An automatic signal placed at one end of a section of a railroad to block the section by warning trains coming into it of the presence in it of another train. When the latter train leaves the section, the signal is changed automatically or by hand to indicate that the track is clear.

block-sugar (blok′shůg″är), *n.* Same as *cut sugar* (which see, under *sugar*).

block-switch (blok′swich), *n.* A railway-switch connected with a block-signal and operated with it at the same time and with a single movement.

block-train (blok′trān), *n.* A railway-train made up of cars which together form one unit of unvarying composition. [Eng.]

> In *block-trains*, where the component coaches are permanently coupled together, one dynamo sometimes lights all the carriages; but usually each has its own dynamo, and so becomes an independent unit.
> *Encyc. Brit.*, XXXII. 154.

blockwood (blok′wůd), *n.* Same as *logwood*, 1.

bloedite, *n.* See *blödite.*

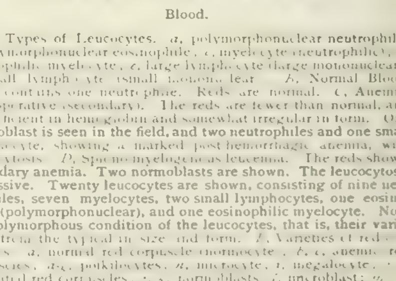
blolly (blol′i), *n.* [From *loblolly*, perhaps taken as *low-blolly.*] A tree, *Pisonia longifolia*, of the West Indies and southern Florida. The name is probably given also to *P. subcordata*, the loblolly-tree.

blomstrandite (blom′stran-dīt), *n.* [Named after Prof. C. W. *Blomstrand* of Lund.] A tantalate and niobate of uranium, related to samarskite: found in Sweden.

blondinette (blon-di-net′), *n.* [*blond* + *-ine* + *-ette.*] A breed of oriental frilled pigeons, of small size, plump, compact form, feathered legs, and tricolored wings. The markings are the same in the different varieties, but the colors, usually light, vary considerably.

Blondlot rays. See ★*ray*[1].

blood, *n.*, 1. The blood is a slightly alkaline, albuminous fluid with a specific gravity of 1.050, and is equal in amount to about one thirteenth of the body-weight. It transfers food and oxygen to the tissues, from which it also removes carbon dioxid and other waste products. Its fluid portion, the plasma, and its solid constituents, the cells, are present in about equal amounts. The plasma is a clear yellowish fluid containing serum albumin, globulin, fibrinogen, and inorganic salts. The formed elements are the red corpuscles, the white corpuscles or leucocytes, and the blood-plates. The red corpuscles are non-nucleated, biconcave disks of an average diameter of 7 micromillimeters, and it is their presence that gives the blood its red color and its opacity. Their chief constituent is the hemoglobin, and they number about 4,500,000 to the cubic millimeter. In disease three types of nucleated red cells are observed, named, according to their size, microblasts, normoblasts, and megaloblasts, as well as abnormal non-nucleated cells, the microcytes, megalocytes, and poikilocytes. The leucocytes are nucleated, number about 8,000 to the cubic millimeter, and five normal varieties are recognized—the polymorphonuclear neutrophiles, the lymphocytes, the large mononuclears, the eosinophiles, and the basophiles. In certain infectious diseases, such as appendicitis and pneumonia, the number of leucocytes may be much increased, while in typhoid fever the number is diminished. The blood-plates are supposed to take part in the clotting of the blood. In recent years the study of the blood has greatly increased in importance, and its examination furnishes indispensable information in certain diseases. The determination of the amount of hemoglobin, of the freezing-point of the blood, the enumeration of the red and white cells and of the different varieties of the latter, bacteriological reactions such as those of typhoid or Malta fever, and the search for microscopic parasitic organisms such as those of malaria, filariasis, and relapsing fever form some of the more important methods of examination. A recent development has been the elaboration of a method for differentiating the blood of man and animals by means of the ★precipitin test (which see).



Blood.

A, Types of Leucocytes. *a*, polymorphonuclear neutrophile; *b*, polymorphonuclear eosinophile; *c*, myelocyte (neutrophilic); *d*, eosinophilic myelocyte; *e*, large lymphocyte (large mononuclear); *f*, small lymphocyte (small mononuclear). *B*, Normal Blood. Field contains one neutrophile. Reds are normal. *C*, Anemia, postoperative (secondary). The reds are fewer than normal, and are deficient in hemoglobin and somewhat irregular in form. One normoblast is seen in the field, and two neutrophiles and one small lymphocyte, showing a marked post-hemorrhagic anemia, with leucocytosis. *D*, Spleno-myelogenous leucemia. The reds show a secondary anemia. Two normoblasts are shown. The leucocytosis is massive. Twenty leucocytes are shown, consisting of nine neutrophiles, seven myelocytes, two small lymphocytes, one eosinophile (polymorphonuclear), and one eosinophilic myelocyte. Note the polymorphous condition of the leucocytes, that is, their variations from the typical in size and form. *E*, Varieties of red corpuscles. *a*, normal red corpuscle (normocyte); *b*, *c*, anemic red corpuscles; *d-g*, poikilocytes; *h*, microcyte; *i*, megalocyte; *j-l*, nucleated red corpuscles; *j*, *k*, normoblasts; *l*, microblast; *m*, *n*, megaloblasts. (From Dunglison's "Medical Dictionary.")

The diseases of the blood are leucemia and anemia. Leucemia, or leucocythemia, may be of two varieties, lymphatic and myelogenous. In the former there is a great increase in the number of lymphocytes, which may reach 400,000 to 500,000 to the cubic millimeter, the hemoglobin is very low, and there is an enlargement of the lymph-nodes. In the myelogenous form there is in addition great enlargement of the spleen, and leucocytes of a special type, called myelocytes, appear in large numbers. Nucleated and degenerated red cells occur in both forms of the disease, which is accompanied by progressively increasing weakness with hemorrhages into the skin and mucous membranes, and is usually fatal. Anemia is a condition in which the quality of the blood is impaired through reduction either in the red cells, or in the hemoglobin, or in both. Numerous forms are recognized, and

it may occur in all grades of severity, from the mildest, which require only fresh air and attention to the general health for their cure, to the severest, which prove fatal in spite of all treatment. The primary or essential anemias include pernicious anemia and chlorosis, which are conditions whose cause has not yet been discovered. In pernicious anemia there is extreme destruction of the red cells, so that counts of less than 1,000,000 to the cubic millimeter (instead of the normal 4,500,000) are not uncommon. In contradistinction to the conditions obtaining in chlorosis and the so-called secondary anemias, the relative fall in hemoglobin is less than that of the red cells, so that each corpuscle contains more than its normal share of hemoglobin. Abnormal forms of red cells are a conspicuous feature. The symptoms include pallor of a yellowish tinge, progressively increasing weakness, shortness of breath, cardiac weakness and irregularity, and sometimes fever. The symptoms develop insidiously, and there may be periods of improvement; but though the patients sometimes live for several years, the disease usually terminates fatally. Chlorosis is a curable disease chiefly seen in young women, and is characterized by great reduction in the hemoglobin, while the number of red corpuscles is not diminished to nearly the same degree. The chief symptoms are a greenish pallor, general debility, headache, dizziness and fainting attacks, palpitation of the heart, menstrual disorders, and indigestion. The secondary anemias are those which are directly traceable to some other condition, and may be produced by profuse or long-continued hemorrhage, by wasting diseases, such as nephritis or tuberculosis, by malignant growths, malaria, lead-poisoning, improper or insufficient food, etc. A form due to the uncinaria or hook-worm common in southern latitudes is sometimes known as tunnel-workers', miners', or Egyptian anemia. The symptoms of secondary anemia of course vary according to the gravity of the anemia and the nature of its exciting cause, but the condition is usually amenable to treatment.

8. In *animal-breeding*, and by analogy in *plant-breeding*, the peculiar character of an individual conceived as transmissible.—**Avenger of blood**, the nearest relative of a man who had been murdered, whose duty it was, according to the laws of Moses, to seek out and slay the murderer.—**Black blood**, venous blood. **Blood line**, a particular transmissible character in an animal, or, analogically, in a plant.—**Blood quotient**, the figure obtained by dividing the amount of hemoglobin in a given quantity of blood by the number of red blood-corpuscles in the same. **Full blood.** See ★*full-blood*, *n.* **Laky blood.** See ★*laky*. **Red blood**, arterial blood.

blood, *v.* **II.** *trans.* In *leather-coloring*, to apply a coating of blood to, in order to obtain a good black. *Modern Amer. Tanning*, p. 110.

bloodberry (blud'ber″i), *n.* A name in the West Indies of the rouge-berry, *Rivina humilis*. Also called *cat's-blood*.

blood-bird (blud'bėrd), *n.* An Australian honey-eater, *Myzomela sanguineolenta*: so called from the red color of its plumage.

blood-blister (blud'blis″tėr), *n.* An effusion of blood-stained serum beneath the epidermis, forming a blister-like elevation.

blood-bond (blud'bond), *n.* The tie of consanguinity or blood-relationship.

blood-brother (blud'bruᴛʜ″ėr), *n.* 1. A brother by birth.—2. One who has become a brother by the ceremony of mutual mingling of blood, as among the American Indians and others.

blood-brotherhood (blud'bruᴛʜ″ėr-hůd), *n.* A bond between two or more persons made sacred by the mingling of their blood: a primitive custom symbolic of the establishment of blood-relationship.

blood-carrier (blud'kar″i-ėr), *n.* In a view of primitive society in which descent is reckoned in the maternal line, the female, through whom blood-relationship is established and reckoned.

> The confinement of their display to the recognized *blood-carriers* of the clan attests, perhaps more clearly than any other phenomena thus far noted, the strength of that semi-instinctive feeling expressed in maternal organization. *Smithsonian Rep.*, 1900, p. 62.

blood-clam (blud'klam), *n.* An ark-shell, *Arca Noæ*, whose blood contains some red corpuscles. See *blood-quahog*, under *quahog*.

blood-count (blud'kount), *n.* A determination of the number of red and white cells in a given quantity of blood, and also of the relative numbers of the different varieties of white cells: this latter is called the *differential blood-count*.

blood-crisis (blud'krī″sis), *n.* A sudden invasion of the circulating blood with red cells from the bone-marrow, many of which are nucleated: observed at times in cases of anemia where marked regenerative processes are going on.

blood-cyst (blud'sist), *n.* In *embryol.*, one of the cysts, or islets of Reil, which early make their appearance in the vascular area of the vertebrate embryo, and which give rise to the blood-corpuscles and to the walls of the embryonic blood-vessels.

blood-drop (blud'drop), *n.* A red worm, especially *Enoplobranchus sanguineus* or *Polycirrus eximius*, which is contractile into a red spot: found living on muddy bottoms as well as on and under oysters.

blood-drops (blud'drops), *n.* A variety of the wind-poppy, *Papaver heterophyllum crassifolium*, bearing many small red flowers: found in California.

blood-dust (blud'dust), *n.* Minute granules floating free in the blood-plasma. Their origin is unknown, as is also the function, if any, which they perform in the economy. Also called *hemoconia*.

blood-eagle (blud'ē″gl), *n.* The lungs, liver, etc., when torn by a conqueror out of an enemy's body. *Tennyson*, The Dead Prophet.

blood-elder (blud'el″dėr), *n.* See ★*elder*[2].

blood-feud (blud'fūd), *n.* A feud arising from vengeance for a murder. See *vendetta*.

> The benefits accruing to trade by the settlement of *blood-feuds*. *Geog. Jour.* (R. G. S.), XVI. 53.

blood-frenzy (blud'fren-zi), *n.* An irresistible mania for the shedding of blood.

blood-gill (blud'gil), *n.* 1. A branchial organ containing blood-vessels, found in some sea-worms: usually a parapodial, sometimes a cephalic, structure.—2. *pl.* In *entom.*, those gills in aquatic and subaquatic insects, as trichopterous larvæ and the larvæ of *Eristalis* and certain other *Diptera*, which are not provided with tracheæ and to and from which the blood flows directly. *A. S. Packard*, Text-book of Entom., p. 475.

blood-gland (blud'gland), *n.* In *Mollusca*, a cellular structure, in the course of the circulation, supposed to have a blood-forming function.

blood-groove (blud'gröv), *n.* A groove cut into the head, and sometimes in the shaft, of an arrow or spear, supposed to increase the flow of blood from the wound made by the weapon.

> Arrowheads and spears, many of them curiously barbed and twisted, and some showing a knowledge of the value of the "*blood-groove*." *Geog. Jour.* (R. G. S.), X. 156.

bloodied (blud'id), *p. a.* Bloody; stained with blood.

> After him came spurring hard
> A gentleman, almost forspent with speed,
> That stopp'd by me to breathe his *bloodied* horse.
> *Shak.*, 2 Hen. IV., i. 1.

blood-leaf (blud'lēf), *n.* See *Iresine*.

blood-lily (blud'lil-i), *n.* A name given to plants of the genus *Hæmanthus*, especially those with red flowers, as *H. coccineus* and *H. puniceus*. See *Hæmanthus*.

Blood-lye salt. See ★*salt*[1].

blood-money, *n.* (*c*) A percentage of the earnings of compositors working on profitable piece-work exacted for the benefit of brother workmen on less profitable work: practised in a few newspaper houses only, and almost obsolete. [Slang.]

bloodnoun (blud'noun), *n.* [Also *bloodynoun*; < *blood 'n 'ouns*, orig. *blood and wounds*, a profane exclamation, used vaguely in nursery narratives, like *raw head and bloody bones*, and *fe-fi-fo-fum*, to express something fearful. The hoarse croaking of a bullfrog suggests the like.] A local name of the bullfrog, *Rana catesbiana*. [Southern U. S.]

blood-orange (blud'or″ānj), *n.* See *orange*[1].

blood-plant (blud'plant), *n.* Same as ★*blood-lily*. See also *Hæmanthus*.

blood-plastid (blud'plas″tid), *n.* A plastid, or specialized cytoplasmic particle, supposed to give rise to a non-nucleated blood-corpuscle. *Smithsonian Rep.*, 1890, p. 430.

blood-rain (blud'rān), *n.* See *rain*[1], 2.

blood-revenge (blud'rē-venj″), *n.* The avenging of the murder of a man by his next of kin, in accordance with the ancient custom of demanding a life for a life. Also called *blood-vengeance*.

blood-sign (blud'sīn), *n.* A tattoo-mark or other mark by which members of a consanguineous group are recognized.

> The restriction of the painted symbols to the females and the especially conspicuous use of them by matrons betoken the strength and exclusiveness of that sense of maternal descent which is normal to the lowest stage of culture; the devices are at once *blood-signs*, definite as the face-marks of gregarious animals, and clan-standards, significant as tartan or pibroch; and the confinement of their display to the recognized blood-carriers of the clan attests, perhaps more clearly than any other phenomena thus far noted, the strength of that semi-instinctive feeling expressed in maternal organization. *Smithsonian Rep.*, 1900, p. 62.

blood-snow (blud'snō), *n.* The red snow of the arctic regions, due to the growth of a minute alga, *Sphærella nivalis*.

blood-vein (blud'vān), *n.* A British collectors' name for a geometrid moth, *Timandra amataria*, occurring throughout Europe and northern and western Asia.

bloodweed (blud'wēd), *n.* Same as *blood-flower*, 2.

bloodwood, *n.*—**Norfolk Island bloodwood**, a small tree of the spurge family, *Baloghia lucida*, found in eastern Australia, Norfolk Island, and New Caledonia. The blood-red sap which oozes from the trunk when wounded forms, without any admixture, a red indelible pigment, formerly used for marking bags, blankets, and other articles. Its wood is fine and close-grained and of a light reddish-brown color. Also called *scrub* or *brush bloodwood*. **Scrub bloodwood.** Same as *Norfolk Island* ★*bloodwood*. **Yellow bloodwood**, a tree of New South Wales, *Eucalyptus eximia*, which yields a kino (whence the name) and a soft, light-colored wood, having very lasting properties when kept under water.

Bloody angle. Same as ★*death-angle*.

bloomage (blö'māj), *n.* The blossoms or bloom of a plant or area taken collectively.

bloom-colored (blöm'kul-ọrd), *a.* Of a pale rose-color.

> "Well, let me tell you," said Goldsmith, "when the tailor brought home my *bloom-coloured* coat, he said, 'Sir, . . . when anybody asks you who made your clothes be pleased to mention John Filby.'"
> *Irving*, Oliver Goldsmith, p. 248.

Bloomeria (blö-mē'ri-ä), *n.* [NL. (Kellogg, 1863), named in honor of H. G. *Bloomer*, a pioneer botanist of California.] A genus of plants of the family *Liliaceæ*, closely allied to *Hookera*, from which they differ by having the perianth parted nearly to the base. There are only two species, *B. crocea* (*B. aurea* of Kellogg) and *B. Clevelandi*, natives of southern California. They have a flattish corm covered with fiber; the leaves are slender and grass-like; the scape is slender but stiff, and from 6 to 18 inches high; the flowers are nearly rotate, less than an inch across, and orange in color. They are sometimes seen in choice gardens.

blooming-rolls (blö'ming-rōlz), *n. pl.* The rolls in which ingots are broken down to blooms. *Lockwood*, Dict. Mech. Eng. Terms.

blotch, *n.* 4. In *bot.*, a disease of fruit or leaves, which cause the formation of spots, usually black in color.—**Sooty blotch of the apple**, a disease of the apple doubtfully attributed to *Phyllachora pomigena*.

blow[1], *v. t.* 11. In the tobacco industry, to sprinkle lightly with water before sweating: a disapproved practice.

> The tobacco is frequently *blown*, that is, lightly sprinkled with water, etc.
> *U. S. Dept. Agr.*, Farmers' Bulletin No. 60 (1898), p. 5.

To blow out. (*c*) In a high or shaft furnace, such as a blast-furnace for smelting iron from an ore, to stop the production of metal. It is done by gradually impoverishing the charges at the top by diminishing the proportion of ore and flux to fuel, until the furnace stops running iron and slag and contains only ashes and partly burned fuel. The blast can then be gradually reduced and finally shut off and the furnace left to cool. If the blast were shut off and cooling allowed to occur with normal charging, the contents would chill solid, and the furnace could be emptied only by blasting.—**To blow the gaff**, to betray a confidence: disclose a secret. *Marryat*, Peter Simple, xliii. [Naut. slang.]—**To blow the grampus**, to souse or drench one, especially a dawdler or a shirk, with water.

blow[1], *n.* 5. Boastfulness; blowing: as, mere *blow*. [Slang.]—**After-blow**, that period of the basic Bessemer operation for the manufacture of steel in which the phosphorus is being burned and after the carbon has been burned. In the acid Bessemer process the operation is ended when the carbon is eliminated from the bath. In the basic process, however, the phosphorus is not oxidized until after all of the carbon, which in turn follows manganese and silicon. In the basic Bessemer operation, atmospheric air is blown through the bath until the manganese, silicon, and carbon have been oxidized and eliminated from the pig-iron. This period constitutes the 'fore-blow' and is not very different in character from the total blow of the acid Bessemer process. In the basic process, however, the fore-blow is followed by an after-blow, which continues for a stated length of time and during which the phosphorus is oxidized and passes into the slag.

blow[3], *n.*—**Body blow.** (*a*) In *boxing*, a blow upon the body. (*b*) In *billiards*, a stroke in which the player, losing confidence, not simply lifts his shoulder, but also throws his whole body at the ball in essaying a 'draw' or 'spread.'

blow-can (blō'kan), *n.* In *foundry work*, a combined can and spraying-tube used in sprinkling liquids on a mold; a spraying-can.

blower-nozle (blō'ėr-noz″l), *n.* 1. A blast-nozle; the end of a blast-pipe.—2. An orifice for measuring a blast; a hole in a flat plate or a hole with its edges curved to form a nozle, used to insure a constant cross-section to the stream of gas or vapor flowing through the aperture.

blower-room (blō'ėr-röm), *n.* *Naut.*, a compartment in a ship containing forced-draft blowers or ventilating blowers.

blow-fish (blō'fish), *n.* The wall-eyed pike, *Stizostedion vitreum*.—**Spiny-back blow-fish**, a common name of one of the puffers, *Spheroides maculatus*.

blow-hole, *n.* 5. An orifice on a rocky coast connected with a passage which gives access to the waves. When a heavy roller dashes into the latter it spouts from the blow-hole.

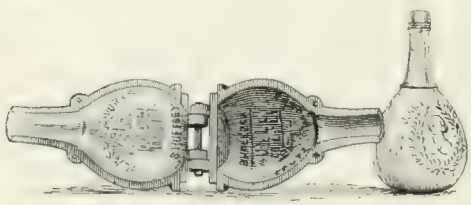
The cliffs are cut into numberless narrow inlets, and their summits are often completely bare of vegetation for some distance from the sea. *Blow-holes* are very numerous, and several columns of spray rising high above the trees may often be seen at once.
Geog. Jour. (R. G. S.), XIII. 25.

blowing-bottle (blō'ing-bot'l), *n.* In *ceram.*, an apparatus for distributing color over the ware as a background for decoration; an atomizer. See *blowing-pot*, *Mocha* ★*ware*, and ★*dip-ware*.

blowing-cone (blō'ing-kōn), *n.* A volcanic driblet-cone directly connected with a subterranean molten lake from which there is much gas escaping. The incessant explosion and escape of the vapors often produces a noise resembling the blowing of steam. *Dana*, Manual of Geol., p. 279.

blowing-machine, *n.* 2. In *hat-making*, a machine for cleaning and separating the fine hair of fur-bearing animals, such as rabbits, hares, etc., and preparing it for making felt. It consists essentially of a long chamber of which the sides are formed of fine wire netting and which is fitted with a series of rotary beaters. The raw hair cut from the skin is fed to the machine under a heavy air-pressure, and under the blast, aided by the beaters, is torn apart, cleaned and separated, and reduced to a cloud of loose hair ready to be blown through pipes to the forming-machine. See *forming-machine*.

blowing-mold (blō'ing-mōld), *n.* In *glass-manuf.*, a metal mold or box in two or more



Blowing-mold

parts, hinged together, in which bottles or other hollow objects are blown.

blow-lamp (blō'lamp), *n.* A hand-torch; a portable torch used for heating a small spot on any material. Naphtha is the fuel generally used: it is vaporized by the heat of the burner itself and forced through the orifice of the latter by vapor-tension of air or gas.

Blow-off valve. Same as *blow-off cock* (which see, under *blow-off*).

blow-out, *n.* 2. A recess or hollow in a sand-dune formed by the action of the wind in carrying away the lighter particles. A false blow-out may be formed by the wind carrying forward and depositing a mass of sand so as to leave a hollow region. Blow-outs are usually formed in the rear of an obstacle by the action of the wind as it curves around behind it.

It sometimes happens that settlers [in the sand-hill region] a few years after breaking their land find a field transformed into a big *blow-out*.
P. A. Rydberg, Contrib. U. S. Nat. Herb., III. 135.

3. In *elect.*, a device for blowing out by an air-blast, a magnetic field, etc., the arc formed in opening an electric circuit.—**Blow-out grass,** one of several grasses characteristic of blow-outs in the Nebraska sand-hills. The blow-out grasses are: *Redfieldia flexuosa* and *Muhlenbergia pungens* (the most abundant, found almost exclusively in blow-outs); *Eriocoma cuspidata* and *Eragrostis trichodes* (less abundant); *Stipa comata* and *Calamovilfa longifolia* (bunch-grasses, growing also in other situations). *Pound and Clements.*

blowpipe[1], *n.* 3†. A blast-pipe or blower-pipe; hence the steam-pipe for a steam-blast.—**Blow-pipe bamboo, furnace.** See ★*bamboo*, ★*furnace*.—**Oxyacetylene blowpipe,** a piece of apparatus similar in general character to the oxyhydrogen blowpipe, but serving to burn a mixture of oxygen with acetylene instead of hydrogen, and thus producing a much higher temperature. Special precautions against explosion are necessary in the construction of the instrument, which has been found valuable in the autogenic soldering of iron and steel.

blow-torch (blō'tôrch), *n.* An apparatus for applying heat to a small area; a small portable heater. See *gasolene* ★*torch*.

Bloxaming (blok'sam-ing), *n.* A method of obtaining a smoothed series or smooth curve from a series of irregular observed values and thus detecting any regular periodicity that may be concealed in those values: introduced into English meteorology by John C. Bloxam in 1858, but used in modified forms by many others previously. Bloxam adopted the rule that the mean value of 9 or 11 consecutive days gives the normal value for the central date more accurately than the identical value observed on that date. If, therefore, one desires the normal mean temperatures for a series of days, he takes the sums and means for consecutive decads, 1–10, 2–11, 3–12, etc. The dates for these mean values are, therefore, for the first mean 5½, for the second mean 6½, etc. Having carried this process through the whole year, the resulting series of mean decadal daily values is treated again in the same way, so that the new decadal values belong to dates that are whole numbers, such as 5, 6, etc. This process is repeated until the resulting values constitute regularly increasing and decreasing quantities for dates that represent whole numbers, and accidental irregularities are smoothed out. Bloxam states that by repeating the process twenty-two times the annual curve of temperature at Newport, England, was reduced to one line of constant ascent and one of common descent. Usually two or four repetitions are sufficient for climatological studies; but the great labor involved in the process, and the absence of any clearly defined theoretical basis, make the harmonic analysis preferable to this numerical method.

B. L. S. An abbreviation of *Bachelor of Library Science*.

blubber-guy (blub'ér-gī), *n.* A device, peculiar to a whaling-vessel, consisting of a stout rope secured between the two forward masts, having a tackle hooked into it: employed for turning the whale over as it is stripped of its blubber.

blubber-hook (blub'ér-hůk), *n.* In *whaling*, a hook used to remove and handle a whale's blubber.

In boarding the *blubber-hook* is detached.
Fisheries of the U. S., ser. 5, II. 28.

blue. **I.** *a.*—**Blue ash, baby.** See ★*ash*[1], ★*baby*.—**Blue band,** a band of ice in a glacier which owes its blue color to the absence of air-bubbles. *Dana*, Manual of Geol., p. 243.—**Blue butter.** Same as *mercurial ointment* (which see, under *ointment*).—**Blue** ★**calx,** ★**dragon,** ★**heat.** See the nouns.—**Blue iron earth.** See *vivianite*.—**Blue lead.** See ★*lead*[2].—**Blue line,** a bluish discoloration of the edge of the gums present in chronic lead-poisoning.—**Blue oil, oxid, powder, silver.** See ★*oil*, etc.—**Blue water,** the deep sea.—**Blue-yellow zone.** See ★*zone*.

II. *n.* 10. In *archery:* (*a*) The third circle of the target, which is now usually colored blue. See *target*. (*b*) An arrow which hits this circle; a hit in the blue. By the present method of scoring, such a hit counts 5.—**Acetin blue.** Same as spirit-soluble *induline*. **Acid alizarin blue,** a mordant acid coal-tar color derived from anthracene. It is rendered extremely fast when subjected to an after-chroming.—**Acid blue.** See ★*acid-blue*.—**Alizarin blue,** a mordant dyestuff derived from anthracene, which dyes chromium mordanted wool a very fast blue. It is a di-hydroxy-anthraquinone-betaquinoline, and is sold in the form of a paste.—**Alizarin blue powder,** a sulphonic-acid derivative of alizarin blue.—**Alizarin indigo blue,** a mordant dyestuff derived from anthracene. It is the sodium bisulphite compound of penta- and tetra-hydroxy anthraquinone-quinoline. With a chromium mordant it produces a color similar to indigo blue.—**Alpine blue,** an acid coal-tar color of the triphenyl-methane-carbinol sulphonic-acid type.—**Azindone blue.** Same as ★*indamine*.—**Azine blue.** Same as *spirit-soluble induline*.—**Azodiphenyl blue.** Same as *spirit-soluble induline*.—**Azonavy blue.** Same as *azo* ★*black-blue*. **Azophor blue.** Same as *dianisidine* ★*blue*.—**Basel blue,** a name given to two basic coal-tar colors of the azonium chlorid type, of similar constitution. They give a bright blue.—**Basel blue S,** an acid color produced by the sulphonation of Basel blue.—**Bengal blue.** (*a*) Same as ★*benzo-azurine*. (*b*) A name sometimes given to water-soluble induline.—**Bengal blue S.** Same as ★*benzo-azurine*.—**Benzidine blue,** a direct cotton coal-tar color similar to benzo-azurine. [Now obsolete.]—**Benzo-pure blue.** Same as *diamine* ★*sky-blue*.—**Benzyl blue,** a basic coal-tar color of the triphenyl-methane type: but little used.—**Brilliant cotton blue.** Same as *Bavarian* ★*blue*.—**Capri blue,** a basic coal-tar color of the oxazin type which dyes tannin-mordanted cotton a bluish green.—**Celestine blue,** a mordant coal-tar color of the oxazin type, derived from gallocyanine. It dyes chromium-mordanted wool a bright blue. Same as ★*coreine 2R*.—**Chicago blue,** the name given to several direct cotton coal-tar colors of the diazo type, derived from benzidine, toluidine, or dianisidine. They dye unmordanted cotton bright blues in a salt bath.—**Chinoline blue.** Same as *quinoline blue*.—**Chlorazol blue,** a direct cotton coal-tar color of the diazo type, derived from dianisidine, which dyes unmordanted cotton blue in a salt bath. It is very fast when after-treated with copper sulphate.—**Cobalt ultramarine blue,** one of the cobalt blues.—**Columbia blue R** and **G,** direct cotton coal-tar colors of the diazo type, derived from benzidine: similar to the Chicago blues. They dye unmordanted cotton in a salt bath, and are well suited for the dyeing of cotton-and-wool union goods.—**Columbia fast blue,** a dye similar to ★*Columbia blue R* and *G*.—**Cresyl blue,** a basic coal-tar color of the oxazin type but of uncertain constitution. It dyes tannin-mordanted cotton a bright blue.—**Cryogen blue,** a coal-tar color of the sulphid type, of unpublished constitution, which dyes unmordanted cotton blue in a salt bath.—**Cyanol blue,** an acid coal-tar color related to triphenyl-methane. It dyes wool and silk a remarkably bright and pure blue in an acid bath. Also called *acid-blue*.—**Delphin blue,** a mordant coal-tar color of the oxazin type. It dyes chromium-mordanted wool a blue resembling indigo which is very fast to light and milling: also used in calico-printing.—**Diamine blue B, 2B, 3B, BX, 3R, RW,** etc., names applied to certain direct cotton coal-tar colors of the diazo type, derived from benzidine or toluidine. They dye unmordanted cotton various hues of blue in a neutral salt bath: similar to the benzo-blues.—**Diamine blue 6G,** a direct cotton coal-tar color of the diazo type, derived from diazotized β-naphthylamine disulphonic acid. It dyes unmordanted cotton blue in a salt bath.—**Diamine brilliant blue,** a direct cotton coal-tar color of the diazo type, derived from dianisidine. In a salt bath it dyes unmordanted cotton a blue resembling indigo.—**Diamine new blue G** and **R,** direct cotton coal-tar colors which dye unmordanted cotton a dull blue in an alkaline salt bath, and unmordanted wool blue or dull blue in a slightly acid salt bath.—**Diamine pure blue.** Same as *diamine* ★*sky-blue*. **Dianil blue,** a direct cotton coal-tar color of the diazo type which dyes unmordanted cotton blue in a salt bath.—**Dianisidine blue,** a reddish-blue ingrain color of the insoluble azo type. It is formed when cotton material prepared with sodium β-naphtholate is passed through a cold solution or printed with a cold paste of diazotized dianisidine in the presence of a copper salt. It is fast to washing and fairly fast to light and chlorin.—**Diazin blue.** Same as *indoin* ★*blue*.—**Diazo blue,** a direct cotton coal-tar color of the diazo type. It dyes unmordanted cotton in a salt bath, but for the best results a subsequent diazotizing and developing is necessary.—**Diphenyl blue B, 2G,** and **2R,** direct cotton coal-tar colors of unpublished constitution which dye unmordanted cotton blue in a salt bath.—**Direct blue B, 2BX,** and **3BX,** direct cotton coal-tar colors of the diazo type, derived from dianisidine. They dye unmordanted cotton blue in an alkaline bath.—**Direct blue R,** a direct cotton coal-tar color of the diazo type, derived from toluidine. It dyes unmordanted cotton violet-blue in a salt bath.—**Electric blue,** a trade name for a light, greenish blue.—**Erie blue,** a direct cotton coal-tar color which dyes unmordanted cotton blue in a salt bath. An after-treatment with copper sulphate renders the blue faster but duller.—**Fast marine blue GM, MM,** and **RM.** Same as the *new* ★*blues*.—**Fast navy blue BM, G, GM, MM, R,** and **RM.** Same as the *new* ★*blues*.—**Fast neutral blue,** a basic coal-tar color of the azonium chlorid type which dyes tannin-mordanted cotton blue.—**Fine blue.** Same as *spirit-blue*.—**Flown blue.** Same as ★*flow-blue*.—**Gallamine blue,** a mordant coal-tar color of the oxazin type. It is an amide of gallocyanine, and dyes chromium-mordanted wool blue: also used in calico-printing.—**Gentian blue.** Same as *spirit-blue*.—**Glycin blue,** a direct cotton coal-tar color of the diazo type, derived from benzidine sulphone. It dyes unmordanted cotton blue in a soap bath.—**Helgoland blue,** a direct cotton coal-tar color which dyes unmordanted cotton blue in a salt bath.—**Hessian blue.** Same as *spirit-blue*.—**Hoechst new blue,** an acid coal-tar color of the triphenyl-methane-carbinol type which dyes wool and silk bright blue in an acid bath.—**Immedial blue,** a coal-tar color of the sulphid type, of unpublished constitution, which dyes unmordanted cotton blue in a sodium sulphid bath.—**Indamine blue,** a basic coal-tar color of the azonium chlorid type.—**Indazin blue,** a basic coal-tar color of the azonium chlorid type.—**Indoin blue,** a Janus coal-tar color prepared by combining diazotized safranine with β-naphthol. It dyes both unmordanted and tannin-mordanted yarn a very fast blue which resembles indigo blue.—**Indol blue.** Same as *indoin* ★*blue*.—**Intensive blue,** the name under which an acid coal-tar color possessing great coloring power is sometimes sold.—**Iridium blue,** a blue pigment composed of iridium oxid.—**Janus blue.** Same as *indoin* ★*blue*.—**Ketone blue,** an acid coal-tar color of the triphenyl-methane type which dyes wool blue in an acid bath.—**King's blue.** (*a*) A blue pigment composed of the carbonate of cobalt. (*b*) Same as *bleu-de-roi* (which see).—**Kongo blue 2B, BB, BX,** and **2BX,** direct cotton coal-tar colors similar to the diamine blues.—**Kongo fast blue B** and **R,** direct cotton coal-tar colors of the triazo type, the former derived from dianisidine, the latter from toluidine. They dye unmordanted cotton blue in a salt bath.—**Kongo pure blue.** Same as *diamine* ★*sky-blue*.—**Kumassi navy blue,** an acid coal-tar color of the diazo type, similar in constitution to Kumassi black. It dyes wool navy blue in an acid bath.—**Lanacyl blue,** an acid coal-tar color of the monoazo type, prepared from diazotized amido-naphthol-disulphonic acid. It dyes wool dark-reddish blue in an acid bath.—**Lichner's blue,** a variety of smalt.—**Light blue.** Same as *diphenyl* ★*blue*.—**Löffler's blue,** an alkaline solution of methylene-blue used for staining bacteria. It is composed of 30 c.c. of a concentrated alcoholic solution of methylene-blue, diluted to 100 c.c. with an aqueous solution of potassium hydrate (1 : 10,000).—**London blue.** Same as *soluble blue*. **Madras blue,** a name sometimes applied to a mixture of gallocyanine and logwood extract.—**Marine blue.** (*a*) Same as *methyl-blue*. (*b*) A mixture of methylene-blue and methyl-violet.—**Meldola's blue.** Same as *new blue*.—**Metamine blue B** or **G.** See ★*metamine*.—**Metaphenylene blue,** a basic coal-tar color of the azonium chlorid type which dyes tannin-mordanted cotton a shade of blue resembling indigo.—**Methyl alkali blue,** an acid coal-tar color of the triphenyl-methane-carbinol type: similar to *alkali blue*.—**Milling blue,** a mordant coal-tar color of the azonium chlorid type which gives blue shades on a chromium mordant.—**Mohammedan blue,** a cobalt blue of a brilliant color, supposed to have been imported by Chinese potters. The Chinese term is *hui hui ching*.

Then followed the Yunglo period (1403 to 1424), during which much white porcelain, with ornamentation in blue under the glaze, was manufactured. The blue employed in these periods is said to have been brought from some Mohammedan country as tribute, and hence was known as "*Mohammedan blue*."
Sci. Amer. Sup., Feb. 28, 1903, p. 22,711.

Molybdenum blue, a blue pigment composed of the dioxid and trioxid of molybdenum.—**Naphthalene blue,** an acid coal-tar color which dyes wool blue in an acid bath.—**Naphthalene blue R.** Same as *new blue*.—**Naphthazin blue,** an acid coal-tar color of the azonium type which dyes wool blue in an acid bath.—**Naphthyl blue,** an acid coal-tar color prepared by sulphonating milling-blue.—**Naphthyl blue 2B,** a direct cotton coal-tar color of the diazo type, derived from diamino-diphenic acid. It dyes unmordanted cotton blue in a salt bath.—**Naphthylene blue.** Same as *new blue*.—**New blue B** or **G,** a basic coal-tar color of the oxazin type, prepared by condensing new blue R with dimethyl-paraphenylene-diamine. It dyes tannin-mordanted cotton a fast deep blue.—**New fast blue,** a basic coal-tar color of the oxazin type. It dyes tannin-mordanted cotton blue.—**Nicholson's blue.** Same as *alkali blue*.—**Night blue.** (*d*) A coal-tar color, the hydrochlorid of tetramethyl-tolyl-triamido-diphenyl-naphthyl-carbinol, used in dyeing silk, wool, and cotton goods: so named on account of the pur-

ity of the color by artificial light. **Nile blue,** the names by which two similar basic coal-tar colors of the oxazin type are known. They dye tannin-mordanted cotton a greenish blue. **Oxamine blue,** a name applied to several direct cotton coal-tar colors. They dye unmordanted cotton blue in a salt bath. **Paraphenylene blue,** a basic coal-tar color of uncertain constitution. **Patent blue,** an acid dyestuff, related to triphenyl-methane, similar in constitution and properties to cyanol blue. **Peacock blue,** a deep, greenish blue. See *peacock blue.* **Pelican blue.** Same as spirit-soluble *induline.* **Phenylene blue.** Same as *new blue.* **Potash blue,** a blue produced on wool by using logwood and potassium ferrocyanide.—**Powder blue,** a blue pigment consisting of smalt ground to a very fine powder.—**Printing blue.** Same as spirit-soluble *induline.*—**Scudder's blue,** an American lycænid butterfly, *Rusticus scudderi,* occurring in Canada and the northeastern United States. Its larva lives on wild lupine.—**Sèvres blue.** Same as ★*bleu de Sèvres.*—**Silvery blue,** an American lycænid butterfly, *Nomiades lygdamus,* occurring east of the Mississippi. Its early stages are unknown.—**Solid blue.** Same as water-soluble *induline.*—**Spirit-soluble blue.** Same as *aniline blue.* **Tailed blue,** an American lycænid butterfly, *Everes comyntas,* dark purplish violet in color, and of very wide distribution, feeding, in the larval state, on the flowers of clover and other leguminous plants.—**Vienna blue,** one of the cobalt blues.—**Zambesi blue,** a direct cotton coal-tar color. It dyes unmordanted cotton in a salt bath a blue which is rendered faster by subsequent diazotizing and developing.

blueback *n.* **5.** The lake-herring, *Argyrosomus artedi,* of the Great Lakes.—**6.** A bank-note of the Confederate States. Compare *greenback.*—**Michigan blueback,** the lake-herring, *Argyrosomus artedi.* [Lake Michigan.]

bluebell, *n.*—**California bluebell,** the baby-blue-eyes, *Nemophila insignis.*—**Peruvian bluebell,** a robust herb of the potato family, *Physalodes Physalodes,* with nodding blue flowers, cultivated and adventive in the United States; the apple of Peru.—**Tasmanian bluebell,** a slender, graceful plant of the campanula family, *Cerwcina marginata* (*Campanula marginata* of Thunberg), bearing blue flowers. Also cultivated under the name of *Australian harebell.*

blueberry, *n.* **2.** In Australia: (*a*) The fruit of the blueberry-tree, or the tree itself. (*b*) The berry-like fruit of *Dianella lævis,* of the lily family.

blueberry-ash (blō′ber-i-ash), *n.* See ★*ash*[1].

blueberry-root (blō′ber-i-rōt″), *n.* The rhizome and rootlets of the blue cohosh, *Caulophyllum thalictroides.* Also called *papoose-root* (which see) and *squawroot.*

blueberry-tree (blō′ber-i-trē), *n.* The palberry, *Myoporum serratum.* Also called *cockatoo-bush, native currant,* and *native juniper.* See ★*palberry.* [Australia.]

blue-black, *n.* **3.** In making black leathers, the foundation for the final color, a bluish black which when finished is a jet-black on the grain side. **Alizarin blue-black,** a name sometimes assigned to *alizarin* ★*black.*—**Blue-black B** and **R,** acid coal-tar colors similar to ★*azo-black.*—**Diamine blue-black,** a direct coal-tar color derived from benzidine which dyes unmordanted cotton a blue-black shade in an alkaline salt bath.—**Diazo blue-black,** a direct coal-tar color of the diazo type. It dyes unmordanted cotton in a salt bath, but for the best results subsequent diazotizing and developing are necessary. **Naphthol blue-black,** an acid coal-tar color of the diazo type, prepared by combining a diazotized mixture of paranitraniline and aniline with amido-naphthol-disulphonic acid. Also called *naphthol black 12B.* **Naphthyl blue-black,** an acid coal-tar color similar to *naphthylamine* ★*black.*

blue-blindness (blō′blīnd″nes), *n.* A supposed form of color-blindness in which the subject is unable to distinguish the fundamental color blue. *Stud. Yale Psych. Lab.,* VIII. 14.

blue-blossom (blō′blos″um), *n.* The blue myrtle or California lilac, *Ceanothus thyrsiflorus.*

bluebottle, *n.,* **1.** (*b*) *pl.* The grape-hyacinth, *Muscari botryoides* and *M. racemosum.* See *Muscari.* [Pennsylvania.]

bluebush, *n.* **2.** A species of salt-bush, *Kochia pyramidata,* belonging to the goosefoot family, native to southeastern Australia. It is a valuable forage-plant in times of drought.

blue-chat (blō′chat), *n.* An Anglo-Indian name for a bird of the genus *Larvivora.*

blue-devil (blō′dev′il), *n.* The blueweed, *Echium vulgare,* a pest in the middle Atlantic States.

blue-dicks (blō′diks), *n.* One of the wild hyacinths (*brodiæas*) of California, *Hookera capitata.* Its violet-colored clusters are much used for decoration.

blue-dyeing (blō′dī-ing), *n.* The process of dyeing with indigo.

bluefish, *n.* **6.** *Girella cyanea,* a hæmuloid fish found in Australian waters.—**Bermuda bluefish,** a labroid fish, *Iridio radiatus,* found from the Florida Keys and Bermuda south to Brazil: common in the West Indies.

bluegill (blō′gil), *n.* One of the largest of the sunfishes, *Lepomis pallidus.*

blue-grass, *n.*—**Alkali blue-grass,** the west American *Poa juncifolia.*—**Apache blue-grass,** the wire bunch-grass, *Aristapogon divergens.*—**California blue-grass,** the mutton-grass, *Poa Fendleriana.*—**Canadian** or **flat-stalked blue-grass,** *Poa compressa.*—**Hungarian blue-grass,** the velvet-grass *Holcus lanatus.*—**Mountain blue-grass.** Same as **Apache** ★**blue-grass.**—**Nevada blue-grass,** *Poa nemoralis.*—**Seaside blue-grass,** *Poa macrantha,* a species native on the sand-dunes of the Pacific coast, valued as a sand-binder and promising for forage.

bluehead (blō′hed), *n.* Same as *blue* ★*groper.* [Tasmania.]

blue-jay (blō′jā), *n.* **1.** See *jay*[2].—**2.** See *road* ★*monkey.*

blue-mope (blō′mōp), *n.* Same as *bluebonnet,* 1.

blue-oil (blō′oil), *n.* A soft, semisolid mixture of paraffin crystals with heavy hydrocarbon oils, one of the commercial products from ozocerite or mineral wax. *Saidler,* Handbook of Indust. Chem., p. 26.

Blue-pigeon flier, one who steals lead pipes and the like. [Thieves' cant.]

blue-point (blō′point), *n.* Same as *Blue Point oyster.*

blue-pointer (blō′poin″tėr), *n.* A shark, *Isuropsis glauca,* of the family *Lamnidæ,* found throughout the Indian region. [Australia.]

blue-poll (blō′pōl), *n.* A trout, *Salmo trutta cambricus,* found in rivers in Wales.

blue-print, *n.*—**Electric blue-print machine,** a machine in which the sensitized paper is exposed behind tracings to a series of electric lights instead of to sunlight.

blue-printing, *n.* **2.** The process of printing on china in blue beneath the glaze (first employed by English potters about 1780), as distinguished from ★*black-printing.*

bluer (blō′ėr), *n.* One whose business it is to blue gun-metal, etc. *Gentleman's Mag.,* XVII. 101.

blue-ribbonism (blō-rib′on-izm), *n.* The wearing of a blue ribbon as a badge of adherence to total-abstinence principles; total abstinence.

blue-ribbonist (blō-rib′on-ist), *n.* A total abstainer who wears a blue ribbon as a badge of his principles.

blue-rock, *n.* **2.** A dark-blue clay pigeon used in trap-shooting.

blue-sighted (blō′sīt-ed), *a.* In *psychol. optics,* seeing as if through blue glasses. The eye which has become adapted to yellow (for example, to lamplight) is *blue-sighted* when placed in the dark or in white light; it sees everything as if tinged with the complementary blue. *E. B. Titchener,* Exper. Psychol., I. i. 22.

blue-stem, *n.*—**Big blue-stem,** *Andropogon furcatus.* **Bushy blue-stem,** the Indian grass, *Sorghastrum avenaceum.*—**Little blue-stem,** *Andropogon scoparius.*

blue-top (blō′top), *n.* The bull-nettle, *Solanum elæagnifolium.*

bluette (blō-et′), *n.* [*blue* + *-ette.*] A breed of oriental frilled pigeons of small size and

Bluette

plump form. The shoulders are clear, pale blue, and the tail blue with white spots or bands. The wing-bars are white, graduating into warm brown and edged with black.

blue-vat (blō′vat), *n.* An indigo-dyeing liquor.

blueweed, *n.* **2.** A cæsal piniaceous plant, *Hoffmanseggia stricta,* introduced from Mexico into Texas in alkali soils and regarded as a pest, though its tubers are eaten by hogs and its foliage, in dry seasons, by cattle. It is the *camote del raton* of the Mexicans.

bluey (blō′i), *n.* [*blue* + dim. *-y*[2].] **1.** An Australian bushman's blanket: so called from the color.—**2.** The material of which the blanket called a *bluey* is made.—**3.** The bundle wrapped up in a bluey, carried by a bushman when he sets out on a tramp.—**4.** A rough shirt or blouse made of bluey, worn over the coat in the wilderness of western Tasmania.

To hump bluey, to go on the tramp as in search of work, carrying one's bundle wrapped in bluey.

bluf, *a., n.,* and *v.* A simplified spelling of *bluff.*

bluff[1], *n.* **2.** An isolated group of trees on the prairie. [Manitoba.]

bluing, *n.* **4.** A disease of pine timber which causes it to assume a blue color. It is due to the pyrenomycetous fungus, *Ceratostomella pilifera.*

blunderhead, *n.* **2.** A dipterous insect of the family *Simuliidæ;* a black-fly. [Local, U. S.]

B. M. An abbreviation (*b*) of *Bachelor of Metallurgy;* (*c*) of *Bachelor of Music.*

b. m. An abbreviation (*a*) of *bay mare;* (*b*) of *bench-mark;* (*c*) of *board-measure.*

B. M. E. An abbreviation (*b*) of *Bachelor of Mechanical Engineering.*

B. M. S. An abbreviation of *Bachelor of Medical Science.*

B'nai B'rith (bnī brith). [Heb., 'children of the covenant' (i.e., circumcision).] An independent Jewish order.

B. N. S. An abbreviation of *Bachelor of Natural Science.*

B. O. An abbreviation of *Bachelor of Oratory.*

boagan (bō′a-gan), *n.* [Manx, = W. *bwgan,* a goblin: cf. *boggard, bogle,* etc.] One of the 'black spirits' or goblins which figure in Manx superstition.

[At an expected birth, men] hang up their hats over the staw to fright the *boaganes.*
Hall Caine, The Deemster, p. 13.

boanthropy (bō-an′thrō-pi), *n.* [Gr. βοῦς, ox, + ἄνθρωπος, man.] A form of madness in which the victim imagines himself to be an ox.

The exact form of the disease, which would be *Boanthropy,* I have not found any notice of. [though] Arnold (on Insanity) suggests that such may have been meant by the story of the Proetidis in Virgil Ecl.
Pusey, Daniel, Lecture VII. 427.

board, *n.* **15.** In an Australian wool-shed, the floor on which the sheep are sheared; hence, the shearers there. [Australia.]—**Ballistic board.** See ★*ballistic.*—**Board and board** (*naut.*), side by side; in parallel courses.—**Duplicate whist board,** a board or tray with 4 pockets, each capable of holding 13 cards, and so marked that one side of it will always be laid on the table to the north and each player will lead in turn: used for whist and bridge.—**Fullers' board,** the best grade of binders' board: not used extensively except in the very best bindings.—**Perforated board,** a thin pasteboard, perforated with small holes at regular distances apart, for embroidery and similar work.—**Take-off board,** in *athletics,* a bar or section of plank set in the ground from or behind which the running broad-jumper must jump.—**To bid to the board.** See ★*bid.* **Trade board,** in Great Britain, a permanent committee of employers and work-people in a particular trade, appointed for the consideration of matters affecting the interests of both sides, with a view to preventing strikes and lockouts.

Voluntary *trade boards,* however (i.e., permanent joint boards representing employers and work-people in particular trades), are at once the most firmly established and the most important agencies in Great Britain for the prevention and settlement of labour disputes.
Encyc. Brit., XXV. 550.

board, *v.* **I.** *trans.*—**To board a card,** to play a card if called for, as must be done when it is shown.—**To board a tack,** (*naut.*), to haul the lower corner of a course down to the deck, bumkin, or chess-trees.

II. *intrans.*—**To board round,** to board in turn at the different houses in a community: a custom to which school-teachers in country districts were in some places expected to conform, their board being charged against their hosts, who thus paid their portion of the school taxes.

boarded (bōr′ded), *p. a.* Specifically said of a card that is played and cannot be taken back.

board-foot (bōrd′fůt), *n.* The cubic contents of a board one foot square and one inch thick (144 cubic inches): used as a unit of measure in selling logs and lumber.

The unit of measure most commonly used in this country for selling logs and lumber is the *board foot.*
Woodsworth's Handbook, I. 9.

boarding-car (bōr′ding-kär), *n.* In *railroads,* a car fitted with bunks and a kitchen and dining-room, or designed either for lodgings or for serving meals: used by the crew of a construction-train or by a wrecking-crew.

boarding-gage (bōr′ding-gāj), *n.* A simple device for keeping weather-boarding even in width: generally a board or strip with a notched edge.

boardman (bōrd′man), *n.*; pl. *boardmen* (-men). A man who perambulates the streets carrying an advertising-board; a sandwich-man.

board-measure (bōrd'mezh ūr), *n.* In *mensur.*, a cubic measure or measure of volume wherein the unit is the board-foot.

The unit of *board measure* is the board foot, which is the contents of a board 1 foot square and 1 inch thick.
Woodsman's Handbook, I. 12.

board-room (bōrd'röm), *n.* **1.** The room or office in which a board meets to transact business.—**2.** In *mining*, the space excavated in driving a board. The term is used in connection with the "nidding" of the fallen stone in old boards when driving roads across them in pillar working. Also *board-room*. *Coal and Metal Miners' Pocket-book.*

board-scale (bōrd'skāl), *n.* Same as ★*board-measure*.

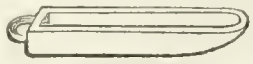
boardy (bōr'di), *a.* Hard and non-flexible: said of the wire teeth of card-clothing when they become worn and stumpy.

boar-grunt (bōr'grunt), *n.* A food-fish, *Hæmulon sciurus*, found in the West Indies. It is supposed by fishermen to be the male of the duller-colored species *H. plumieri*. [Key West.]

boarwood (bōr'wud), *n.* The poison-sumac, *Rhus Vernix*. [Dismal Swamp region, Virginia.]

Boas-Oppler bacillus. See ★*bacillus*.

boat, *n.* **5.** A narrow, shallow vessel of platinum or porcelain which serves to hold a substance that is to be subjected to ultimate analysis, or to the action of gases, and which for that purpose is placed in a glass or porcelain tube.


Combustion boat.

Moissan illustrates the vaporization of carbon by heating the outside of a carbon tube containing a *boat* filled with silicon, with an arc, and describes the formation of silicon carbide from the combination of the vapors of silicon and carbon.
Electrochem. Industry, August, 1904, p. 331.

6. A small device attached to each side of a loom for weaving a plain selvage in a fabric having a twill or figured weave.

By means of a contrivance known as a *boat*, a selvage approximating to plain cloth is readily obtained.
Fox, Mechanism of Weaving, p. 482.

Automobile boat. See ★*autoboat*.—**Boat log.** See ★*log*[2]. -**Combustion boat.** Same as ★*boat*, 5. **Folding boat,** a collapsible boat used in the army for transporting men from one river-bank to another. These boats have a wooden keel and light wooden longitudinal ribs covered with water-tight canvas.—**Loose boat,** in *whaling*, a boat that has not succeeded in striking a whale.

The duty of a *loose boat*, if near by and not certain of a capture, is to keep within hailing distance of the fast boat. *Fisheries of the U. S.*, Sec. 5, II. 262.

Paddle-box boat, a boat of peculiar construction which when inverted, or turned upside down, forms the top section of a paddle-box on a paddle-wheel steamer.—**Umbrella boat.** See ★*umbrella-boat*.

boatbill, *n.* **2.** One of the broadbills, *Eurylæmidæ*, a group of perching birds characteristic of the Indo-Malayan region; in particular, *Cymbirhynchus macrorhynchus*. See cut under *gaper*.

boat-boom (bōt'böm), *n.* A long boom projecting transversely from each side of a war-ship or a yacht at anchor in a harbor, with hanging pendants to which boats may be made fast. In the days of sailing men-of-war the lower studdingsail-booms were used for this purpose; now special booms are fitted. Also called *swinging-boom*.

boat-car (bōt'kär), *n.* A wheeled conveyance used in the life-saving service for facilitating the launching of boats.

boat-crane (bōt'krān), *n.* A rotary crane fitted on each side of a war-ship for lifting the heavier boats out of the water or lowering them into it, particularly the steam-launches and vedette-boats. Such cranes are usually supplied with steam or electric hoisting and turning apparatus. See cut under ★*battle-ship*.

boat-nail (bōt'nāl), *n.* A form of nail, made of soft and ductile iron or steel and tinned, suitable for fastening the strakes or skin of a small boat to the ribs or along the seams. It must be capable of being effectively clinched in the wood of the strakes.

boat-pan (bōt'pan), *n.* A pan of wrought- or cast-iron, shaped like a boat, used, in the Leblanc process for making carbonate of soda, to boil down the crude tank-liquor.

boat-shell, *n.* **2.** The common slipper-limpet or half-deck, *Crepidula fornicata*. [U. S.]

Boatswain's call, pipe, or whistle, a small whistle used by a boatswain in giving signals. **Boatswain's chair** (*naut.*), a piece of board in the shape of a parallelogram, or scup-seat, having a hole in each end through which a short length of rope in the form of a bridle is passed, and the ends knotted on the under side to prevent them from pulling through. It is hoisted aloft by a whip, and is used by seamen to sit on while at work in the rigging where foothold is not obtainable, as when scraping down masts, etc.

boat-yoke (bōt'yōk), *n.* A horizontal piece of wood or metal placed across the head of a boat's rudder. To each end of the yoke a line is secured, known as a *yoke-line*, by means of which the rudder is turned and the boat steered.

bob[1], *n.* **14.** A piece of clay placed beneath a vessel in a kiln. An old English name for *bat*[1], 13 (*b*).

bob[1], *v. t.*—**3.** To transport (a load, as of logs) on a bob or sled.

bobachi (bob'a-chi), *n.* [Hind. *bāwarchī*, popular *bavarchī*, illiterate *bābarchī*, prob. of Turkish origin.] A male cook. [Anglo-Indian.]

bob-apple (bob'ap″l), *n.* The Hallowe'en pastime of 'ducking for apples' while they float in a tub of water, or trying to bite one as it swings from a string. See *bob-cherry*.

bobbery-bob (bob'ėr-i-bob″), *interj.* The Anglo-Indian form of the Hindu exclamation of surprise, *baprebap* ("O Father!"). See *bobbery*.

bobbin-cradle (bob'in-krā'dl), *n.* A horizontal holder for a bobbin upon which is wound the yarn from the hank on a hank-winding machine.

bobbin-lead (bob'in-lēd), *n.* In *textile-manuf.*, the excess of the surface-speed of the bobbin over the speed of the spindle-flier on a roving-frame.

bobbin-rail (bob'in-rāl), *n.* An iron bar or rail supporting the bobbins of a roving-machine.

bobbin-reel (bob'in-rēl), *n.* In *cotton-manuf.*, a machine for winding yarn from bobbins into hanks.

bobbin-wheel (bob'in-hwēl), *n.* In *textile-manuf.*, the principal gear in a series for driving the bobbin on a roving-frame.

bobble, *v. i.* **2.** In *golf*, to run unevenly on a green: said of a ball. *W. Park*, Game of Golf, p. 202.

bobcat (bob'kat), *n.* A popular name for the bay lynx, *Lynx rufus*, and its various subspecies, all of which have short tails.

bobeche (bō-bāsh'), *n.* [F. *bobèche*, OF. *buibeche*; origin unknown.] A glass disk or shallow cup with a central perforation, made to surround the base of a candle or of a gas-light. In the latter case the glass is ground to diffuse the light.

To adapt this to microscopic work we add a '*bobeche*' as used for Welsbach lights made of finely ground imported glass. *Science*, April 3, 1903, p. 536.

bob-fly (bob'flī), *n.* In *angling*, an artificial fly attached to the leader above the stretcher-fly. Also called *bobber*, *dropper*, and *drop-fly*.

Bobierre metal. See ★*metal*.

bobierrite (bō-bi-ār'it), *n.* [Named after *Bobierre*, who first described it.] A hydrated magnesium phosphate from the guano of Mexillones, off the western coast of South America.

bob-jerom (bob-jer'um), *n.* [*Bob*[1], *n.*, 10, + *Jerome*, a proper name.] A bob-wig.

What I say is, let everybody follow their nature; . . . and then if they pay every one his own, who 's a right to call 'em to account, whether they wear a *bob-jerom*, or a pig-tail down to the calves of their legs?
Miss Burney, Cecilia, ix. 1.

bob-lever (bob'lev″ėr), *n.* A lever carrying a bob-weight. The bob-weight is used to balance one or more reciprocating parts on a machine.

bobo (bō'bō), *n.* [A W. Ind. use of Sp. *bobo*, a dolt, fool: see *booby*.] A species of mullet, *Joturus pilchardi*, found in the mountain torrents of the larger islands of the West Indies. It is characterized by the simple stomach and the coarse truncate incisors.

bobong (bō-bōng'), *n.* [Bisaya *bobong*, Tagalog *bobongan*, the roof; *bobong*, cover, roof.] In the Philippine Islands, the roof of a building.

bob-runner (bob'run-ėr), *n.* One of a pair of short runners placed on the arms of an axle instead of wheels, to enable a carriage or wagon to be used as a sleigh. [New Eng.]

bobtail, *n.* **5.** In *poker*, a four-card flush or straight.

bobtailed, *a.* **2.** In *archery*, gradually decreasing in diameter from the point to the nock: said of an arrow.

bocca[2] (bok'ä), *n.* [Native name.] A name applied by the natives of French Congo to a shrub of the dogbane family, *Tabernanthe Bocca*, which is planted about their villages for the sake of its medicinal roots. Compare ★*iboga*.

bocon (bo-kōn'), *n.* [Cuban use of Sp. *bocón*, a wide-mouthed person, < *boca*, mouth.] A Cuban name of a small anchovy, *Anchovia cubana*.

bodenite (bō'den-it), *n.* [Named from *Boden*, near Marienberg, Saxony.] A silicate related to allanite, containing a relatively large amount of the yttrium and cerium metals.

bodhi (bō'di), *n.* [Skt.: see *Buddha*.] Knowledge; enlightenment: a term of Buddhism.

bodhisattva, *n.* **2.** Also, any religious teacher.

Bodianus (bo-di-a'nus), *n.* [NL., < Sp. *bodian* = Pg. *bodião*, a sea-fish so called.] **1.** A genus of large labroid fishes of the West Indies, of numerous species, usually known by the later name of *Harpe*. *B. rufus* is the best-known species.—**2.** A genus of sea-bass, *Serranidæ*, of the warm seas, more properly called *Cephalopholis*.

Bodo (bō'dō), *n.* [NL. (Stein, 1878).] The typical genus of the family *Bodonidæ*: sometimes called the hooked or springing monad.

bodock (bō'dok), *n.* Same as *bodark*.

Bodonidæ (bō-don'i-dē), *n. pl.* [NL. *Bodo*(*n*-) + *-idæ*.] A family of flagellate protozoans of the order *Heteromastigidæ*, consisting of small, naked forms in which there is little, if any, difference between the flagella. It contains the genera *Bodo*, *Phyllomitus*, *Colponema*, and *Oxyrrhis*.

body, *n.* **14.** All the strapping of a harness back of the collar; specifically, that part of the breeching and other straps which bears against the horse.—**15.** In *ceram.*, the substance or base of pottery and porcelain. See *frit body*, *kaolinic* ★*body*.—**16.** An ore body, or pocket of mineral deposit.—**17.** The thickness of a lubricating oil or other liquid: also the measure of that thickness expressed in the number of seconds in which a given quantity of the oil at a given temperature flows through a given aperture. *Coal and Metal Miners' Pocket-book.*—**Alloxur body.** See ★*alloxur base*.—**Anti-immune body.** See ★*anti-immune*.—**Anti-intermediary body.** Same as ★*anti-amboceptor*. **Body blow.** See ★*blow*[3].—**Brown body.** See ★*brown*.—**Central body,** a term used to denote the aggregation of protoplasmic matter in the interior of many bacteria and blue-green algæ. It is believed by some to represent a true nucleus. **Cornalian bodies.** See ★*cornalian*.—**Directive body.** See *directive corpuscle* and ★*polar body*.—**Fat body,** in *entom.*, a more or less lobulated or net-like mass of large cells filled with small drops of fat, covering parts of the viscera and lining the integument.—**Guarnieri body,** a protozoan parasite, *Cytoryctes variolæ* Guarnieri, thought to be the cause of smallpox and vaccinia.—**Harting's bodies,** granular concretions of carbonate of lime obtained by allowing carbonic-acid alkalis to act upon albumin or other nitrogenous substances. This action has been said to explain the mode of formation of the shells of mollusks and protozoa.—**Hassall** or **Hassall's bodies,** in *histol.*, the remains of the epithelium which during embryologic development makes up the main portion of the thymus gland.—**Hyaloid body.** See ★*hyaloid*. **Immune body.** Same as ★*amboceptor*. See ★*immune*.—**Immunizing body.** See ★*immunity*.—**Intermediary body.** Same as ★*amboceptor*. **Kaolinic body,** a porcelain composition consisting largely of kaolin, as hard-paste porcelain. **Leishmann-Donovan body,** a small rounded or ovoid body, occurring singly or in groups of several, embedded in a matrix but not intracorpuscular, in tropical splenomegaly or kala-azar, and probably also in Oriental sore. Ross considers these bodies to belong to a new genus of *Sporozoa* and suggests for them the name *Leishmannia donovani*.—**Lummer-Brodhun body,** a device, used in certain photometers and spectrophotometers, for rectifying or rendering parallel the two beams of light to be compared. It consists of two right-angled prisms of glass cemented together so as to form a cube the diagonal section of which is partly cut away. See *spectrophotometer*.—**Meissner's body,** a tactile corpuscle.—**Melon-seed bodies.** Same as *rice* ★*bodies*.—**Mushroom body,** in *entom.*, one of two stalked and capped bodies arising from the procerebral lobe of an insect's brain, which resemble minute mushrooms. They are more highly developed in bees, ants, and wasps than in other insects, and it is therefore supposed that the intelligence of insects bears a direct relation to the size of these bodies.—**Nissl** or **Nissl's bodies,** in *neurol.*, small bodies which are found in the cytoplasm of nerve-cells and which take on a deep stain with methylene blue.—**Onion body,** a concentrically arranged mass of epithelial cells sometimes seen in carcinomatous tumors. Also called *epithelial pearl* or *nest*.—**Plimmer bodies,** certain cell-inclusions found in malignant growths which were thought to be parasitic protozoa and concerned in the production of the growths.—**Presegmenting bodies,** in *zool.*, the malarial parasites before they undergo segmentation.—**Pyramidal body.** Same as *pyramid*, 4.—**Rice bodies,** small growths, resembling rice-grains, which form in the sheaths of the tendons in hygroma and, becoming detached, float free in the fluid.—**Rosenmüller's body,** the parovarium.—**Russell fuchsin bodies,** hyaline bodies which stain readily with fuchsin, sometimes seen in carcinomatous tumors.—**Spongy body.** Same as *corpus spongiosum*.—**The body Alpha.** See ★*alpha*, 4. **Turbinate body.** See *turbinate bone*, under *turbinate*.

body-brace (bod'i-brās), *n.* **1.** A brace which crosses a whole frame or one parallelogram of a frame diagonally from corner to opposite corner. See ★*brace*[1], 1 (*b*).—**2.** Specifically,

in *car-building*, an inclined timber extending from one end of the body center-plate of a long car to the middle of the car. Two braces, united to a compression-beam, form a truss built into the side of the car under the windows.

body-plasm (bod′i-plazm), *n.* In *biol.*, the substance of the body of an animal or plant, in contradistinction to the *germ-plasm*, or the substance of the reproductive organs. Same as *soma*[1], *somatoplasm*.

body-plate (bod′i-plāt), *n.* A shell-plate for a boiler located anywhere except in heads or domes.

body-wood (bod′i-wŭd), *n.* Cord-wood cut from those portions of the trunks which are clear of branches.

Boehmenism (bē′men-izm), *n.* The theosophical view of God and the world set forth by Jacob Boehme (1575–1624), a mystical German philosopher. He contemplated deity as "the eternal one, the silent nothing," from which nature proceeds as the expression of spiritual principles. He endeavored to show that material powers and moral forces are one, that evil is the manifestation of the wrath of God, and that good will finally be victorious. Also ★*Behmenism*.

Boehmenist (bē′men-ist), *n.* One who follows the teachings of Boehmenism. Also ★*Behmenist*.

Boehmenite (bē′men-īt), *n.* A Boehmenist.

Boethian (bō-ē′thi-an), *a.* Pertaining to or derived from Boethius, a distinguished Roman official, philosopher, and writer on music, who died about 524 A. D. Less correctly ★*Boetian*.

Boetian (bō-ē′ti-an), *a.* Same as ★*Boethian*.

Boettcher's crystals. See ★*crystal*.

bog[1], *n.* **Anchored bog**, an originally floating bog which has become fixed by roots and rhizomes from its bottom or by growths from shore-plants into it, or by both. *C. MacMillan.* **Climbing bog**, the rim of a normal bog, nourished at a higher level by the capillary elevation of water. **Emerged bog**, a bog growing above water-level. **Floating bog**, a natural floating island (see *island*[1]), named "bog" from its morassic character.

In some of the lakes of Minnesota these *floating bogs* are very prominent features and constitute the so-called "floating islands." *C. MacMillan.*

Immersed bog, a bog whose chief growth is below water-level. **Quaking bog**, a bog whose matted, peaty growth has covered comparatively unstable and treacherous ground that shakes under foot. **Sphagnous** or **sphagnum bog**, a stagnant swamp with acid soil, characterized by the growth of sphagnum mosses; a muskeg. A deep swamp of this kind becomes at length a peat-bog.

boga[2] (bō′gä), *n.* [Sp.] A species of small fish of the genus *Orestias*, common in the waters of Lake Titicaca in Bolivia and Peru. There are several species of *Orestias* in the lake, and they constitute the aquatic food of the inhabitants of those regions.

Bogardus mill. See ★*mill*[1].

bogart (bog′art), *n.* See ★*boggard*, 4.

bog-birch (bog′bêrch), *n.* The Carolina buckthorn, *Rhamnus Caroliniana*. [Minnesota.]

bog-burst (bog′bêrst), *n.* An outbreak or flow of peaty materials which are saturated with water, so that barriers no longer restrain them. Also *bog-flow*.

A discussion of *bog-bursts*, with special reference to the great outburst of a bog in the Killarney district in 1896. *Geog. Jour.* (R. G. S.), XI. 206.

bog-flow (bog′flō), *n.* See ★*bog-burst*.

boggard[1], *n.* **4.** The hellgrammite. [Local, U. S.]

bogie[2], *n.* **4.** A small wheelbarrow or box upon wheels, made of light boiler-plate iron, used in the removal from the furnace of black-ash in the manufacture of soda by the Leblanc process.

Bogie, Colonel. See *Colonel Bogie*.

bogie-frame (bō′gi-frām), *n.* The pivoted or swinging frame under the front end of a locomotive; the truck-frame.

bogie-locomotive (bō′gi-lō-cō-mō″tiv), *n.* Same as *bogie-engine*.

bogie-spring (bō′gi-spring), *n.* One of the springs which are interposed between the truck of a locomotive and the parts supported by it, to take up the shocks and jars due to inequalities in the road.

Bognor beds. See ★*bed*[1].

bogong (bō′gong), *n.* [Native Australian.] An Australian noctuid moth, *Agrotis spina*, which occurs in enormous numbers in Victoria, where the hibernating adults were eaten by the aborigines.

bog-ore (bog′ôr), *n.* Same as *bog-iron ore*.

Bogoslovius (bog-ō-slō′vi-us), *n.* [NL., named from the volcanic island of St. John *Bogoslof* (Bogoslovŭ), near which the typical species was dredged.] A genus of macruroid fishes taken in deep water in Bering Sea.

bog-slide (bog′slīd), *n.* Same as ★*bog-burst*.

bog-torches (bog′tôr-ches), *n.* The golden-club, *Orontium aquaticum*: so called from the shape and color of its flower-stalk and flowers. See cut under *Orontium*. *Small*, Flora Southeastern U. S.

bogum (bō′gum), *n.* [*Australian.*] The name in New South Wales of the bean-tree or Moreton Bay chestnut, *Castanospermum australe*. It yields a soft fine-grained, beautifully figured, brown wood, which is not very durable. See *bean* (*b*).

Bohairic (bō-hī′rik), *n.* [*Bohairch, Behcyreh*, a district in the Delta of the Nile, + *-ic*.] One of the main divisions of Coptic; the dialect of the coast district, spoken in the northwestern Delta of the Nile: formerly named *Memphite* (which see). Saïdic and Bohairic are the most important dialects of Coptic. Since the fifteenth century the latter has been the language of the sacred books of Christianity throughout the country. *Encyc. Brit.*, XXVII. 727.

boheic (bo-hē′ik), *a.* [*Bohea* + *-ic*.] Derived from *Thea Bohea*. **Boheic acid**, a bibasic acid, $C_7H_{10}O_6$, obtained from black tea.

Bohemian, *n.* **6.** As employed by the French geologists, the later deposits of Silurian time, from the fine development of these strata in the Bohemian basin: equivalent to *Upper Silurian* or to *Silurian* in its restricted sense.

bohio (bo-he′o), *n.* [Sp. *bohio, bojío*, from a native W. Ind. name.] A West Indian hut; a thatched hut of the kind used by the negroes of the West Indies.

boil[1] *n.*—**Aleppo, Delhi, oriental, tropical boil.** Same as *Aleppo ulcer* (which see, under *ulcer*). **Blind boil**, a sluggish boil in which pus forms slowly and there is no slough or core.—**Bulama boil** [Afr. *Bulama*, island of W. Africa], a phlegmon caused by the presence of a worm or the larva of an insect beneath the skin. **Burmese boil**, an endemic sore, probably of the same nature as the Delhi boil or Aleppo ulcer.

boil[2] *n.* **3.** The period during which the carbon is being burned out of the iron in a puddling-furnace. During this period jets of burning carbonic oxid cover the surface of the bath. *Lockwood*, Dict. Mech. Eng. Terms.

boiler, *n.* **5.** A small isolated reef or atoll below water. [West Indies and Bermuda.] —**Belleville boiler**, a type of sectional boiler much used at one time in the British navy, in which the generating units are water-tubes of moderate diameter: named after its designer.—**Double boiler**, a cooking-utensil consisting of two metal or glazed-ware vessels nesting one within the other. The larger vessel is partly filled with water, the smaller is put inside of it, and both are placed over the fire. The boiling of the water and the resulting partly inclosed steam cook the contents of the inside vessel without danger of burning from direct contact with the fire.—**Drop-flue boiler**, a boiler having flues coming in from the sides and joining a central flue which is open at the bottom. The hot gases come in the horizontal flues and descend the center, or drop, flue.—**Elephant boiler**, a horizontal cylindrical boiler having one or more shells below the main shell and connected to the latter by necks.—**Elliptical boiler.** (*a*) A round-ended or oval-ended boiler. (*b*) A boiler whose cross-section is an oval or an ellipse.—**Field boiler**, a boiler having double tubes, the inner one for getting water to the lower end of the outer tube, in which the steam is generated. These tubes are either vertical or inclined. *Hiscox*, Horseless Vehicles, p. 47.—**Flash boiler.** See ★*flash-boiler*.—**Lancashire boiler**, a horizontal cylindrical boiler having two horizontal flues each containing a furnace. The combustion gases pass through the flues and return to the front end along the outside of the shell, and then pass back underneath the shell.—**Multitubular boiler.** (*a*) A boiler having a large number of small tubes for the hot gases to pass through. (*b*) A boiler made up of a number of tubes in which steam is generated; a water-tube boiler.—**Niclausse boiler**, a type of sectional boiler which has been used in the British navy, in which the generating units are water-tubes of moderate diameter.—**Oval boiler.** Same as *elliptical* ★*boiler* (*a*) and (*b*).—**Sectional boiler**, a steam-generator in which the plan of a single enveloping shell to contain the water and steam is abandoned, and is replaced by a number of small generating vessels so joined together that the steam formed in all of these separate units or sections is delivered from a common disengagement surface into a common steam-space. The units may be spherical or they may be cylindrical water-tubes. Such sectional boilers are safer because stronger to resist internal pressure, and rupture of one unit is not usually followed by a destruction of the structure as a whole.—**Semi-flash boiler.** See ★*flash-boiler*.—**Tubulous boiler.** Same as *water-tube boiler* (which see, under *water-tube*).

boiler-brace (boi′lêr-brās), *n.* A stay or tie-rod between the shell and the flat end of a steam-boiler, or a tension-rod running from end to end of the boiler to tie the flat surfaces together and prevent bulging or other deformation under pressure.

boiler-cement (boi′lêr-sē-ment″), *n.* A mixture of various substances, such as clay, magnesia, etc., which is used for covering boilers and steam-pipes to prevent or check the radiation of heat.

boiler-compound (boi′lêr-kom″pound), *n.* Any substance used to prevent the formation of a hard scale in steam-boilers which use impure feed-water. As the impurities are of so many varieties, the boiler-compounds have to be adapted to each case. Some compounded soda is the most common ingredient of such mixtures.

boiler-felt (boi′lêr-felt), *n.* A non-conducting covering for boilers, steam-pipes, etc., made of matted hair. In appearance it resembles felt.

boiler-maker (boi′lêr-mā″kêr), *n.* **1.** One who makes boilers; a boiler-smith.—**2.** A petty officer in the United States navy.

boiler-palm (boi′lêr-päm), *n.* **1.** A pad or foot on a bracket which is used to fasten or support a boiler.—**2.** The flattened end of a boiler-stay, where it is enlarged to take the rivets; specifically, that part of the knee, bracket, or tension-stay which goes against the boiler and is fastened to it.

boiler-scale (boi′lêr-skāl), *n.* A substance deposited on the surfaces of boilers which are in contact with the water. This scale is due to impurities in the water precipitated as solids on heating, and is sometimes hard and difficult to remove.

boiler-smith (boi′lêr-smith″), *n.* A smith who forges boiler-plates; a boiler-maker.

boiling-basket (boi′ling-bas″ket), *n.* Among primitive races, a water-tight basket in which liquids are boiled. Generally the contents are heated by means of red-hot stones which are thrown into the basket.

boiling-house (boi′ling-hous), *n.* A local West Indian term for the building, at a sugar-mill, in which the cane-juice, expressed in the cane-mill, is boiled down to the syrup from which sugar is made.

Such of the negroes as are employed in the mill and *boiling-houses* often work very late.
Bryan Edwards, A Hist. of the Brit. W. Indies, II. 160.

Boiling-point of the thermometer. (*a*) A small nick on the glass tube of the mercurial thermometer showing the observed height of the mercury when the instrument is wholly immersed in steam from boiling water. Formerly the bulb only was placed in boiling water, but now the whole instrument is immersed in the steam. (*b*) A scale-division near the above-mentioned nick, indicating the boiling-point under standard pressure of one atmosphere. (*c*) The thermometric temperature of standard boiling water or its steam, that is, 100°C., 80°R., or 212°F. (*d*) The correct reading of the thermometer immersed in steam from boiling water under some special low pressure, such as that on the summit of a mountain. This boiling-point depends directly on the atmospheric pressure and is utilized to ascertain the latter when the mercurial barometer is not available.

Bojan gneiss. See ★*gneiss*.

boje (bo′ha), *n.* [Native name.] A name in Porto Rico of a rubiaceous tree, *Antirhea coriacea*, native to the West Indies. It furnishes a heavy, strong, durable yellow wood used for carpenter work, furniture, and the framework of houses. Also called *quina*.

B. O. L. An abbreviation of *Bachelor of Oriental Literature*.

bola (bō′lä), *n.* [Native name.] A name in Bengal of the mahoe or majagua, *Pariti tiliaceum*. See *mahoe*, 1, and ★*majagua*, 1.

bolboporite (bol-bō-pō′rīt), *n.* [NL., < Gr. βόλβος, a bulb, + πόρος, a pore, + *-ite*[2].] One of certain fossil bodies found in the Silurian rocks of Russia, Canada, and New York, inversely conical or clavate in form, and having the narrower end smooth but the broader pitted. They have been regarded by some authors as corals, and probably some of the bodies to which this name has been applied are of this nature; but the affiliations of the typical bolboporites are still dubious, though their microscopic structure is very similar to that of the test of the *Echinodermata*.

Bolderian stage. See ★*stage*.

boldoin (bōl′dō-in), *n.* [*boldo* + *-in*[2].] Same as *boldine*.

bole[2], *n.* **3.** In *medieval* and *early Renaissance art*, an earthy paste added over gesso as a ground for tempera painting and gilding.

Directly on this, and without the usual preparation of *bole*, gold leaf was laid over the whole surface.
Burlington Magazine, II. 89.

Boleichthys (bō-lē-ik′this), *n.* [NL., < Gr. βολή, a throw, + ἰχθύς, fish.] A genus of darter-fishes, typified by the species *B. fusiformis*.

boleite (bō′lē-it), *n.* [*Boleo* (see def.) + *-ite*[2].] An oxychlorid of lead, copper, and silver, occurring in deep-blue cubic crystals and related to percylite: found at Boleo, Lower California.

Bolelia (bō-lē′li-ä), *n.* [NL. (Rafinesque, 1832), an anagram of *Lobelia*.] A genus of dicotyledonous plants of the family *Campanulaceæ*. See *Downingia*.

Boleosoma (bō″lē-ō-sō′mä), *n.* [NL., irreg. < Gr. βολή, a throw, + σῶμα, body.] A genus of tessellated darters, small quick-moving fishes of the brooks of the eastern United States. *B. olmstedi* is the best-known species.

bolero, *n.* **3.** A short jacket, ending about three inches above the waist-line: originally in imitation of the Spanish jacket, but now made in many fashions, and trimmed either simply or with extremely elaborate ornament.

boletoid (bō-lē′toid), *a.* [*Boletus* + *-oid.*] Like or pertaining to the genus *Boletus.*

Boliche furnace. Same as *Spanish furnace.*

bolivar, *n.* **2.** A large ginger-cake. [U. S.]

Bollmannia (bol-man′i-ä), *n.* [NL., from C. H. *Bollman*, an American scientist.] A genus of goboid fishes inhabiting the depths of the tropical Pacific, typified by the species *B. chlamydes.*

bollo (bōl′ō), *n.* A brick of amalgamated silver ore, so shaped that six bricks form a circular cake with a hole in the center to allow the mercurial vapors to escape during the distillation process.

boll-weevil (bol′wē-vl), *n.* See *cotton-boll* ★*weevil.* **Mexican boll-weevil.** Same as ★*cotton-boll weevil.*

bolo (bō′lō), *n.* [Bisaya *bolo.*] **1.** A long knife resembling a Cuban machete, used in the Philippine Islands, for domestic and agricultural purposes, and in war.

Bolo.

(Lent, an original in the Amer. Museum of Nat. History, New York.)

bolochore (bō′lo̧-kōr), *n.* [Irreg. < Gr. *βολή*, a throw, + *φορεῖν*, spread abroad.] In *phytogeog.*, a fruit with some adaptation for the mechanical propulsion of its seeds or spores, or a plant bearing such fruit; a sling-fruit; a ballistic or catapult fruit. Bolochores are divided by F. E. Clements, the author of the term, into ★*pladoboles*, ★*edoboles*, ★*xeriboles*, and ★*tonoboles.* See these terms.

bolochorous (bō-lok′ō-rus), *n.* [*bolochore* + *-ous.*] Having the character of or pertaining to bolochores.

Bologna flask, hemp, vial. See ★*flask*, ★*hemp*, ★*vial.*

bolograph (bō′lo̧-gräf), *n.* [Gr. *βολή*, a throw, + *γράφειν*, write.] An automatic record of the indications of a bolometer. Bolographs of the solar spectrum are made by passing the spectrum at a constant rate over the face of the bolometer and photographing upon a moving sheet the deflections of a sensitive galvanometer in circuit with the bolometer. The result is a curve giving in graphic form the distribution of energy in the sun's spectrum at the time when the bolograph is taken. Such records are termed *spectrobolographs.*

A study of the yearly variations of the selective absorption of the Earth's atmosphere by the aid of a long series of *bolographs.*
S. P. Langley, Astrophysical Jour., March, 1903, p. 93.

bolographic (bō″lo̧-graf′ik), *a.* Of, pertaining to, or effected by means of a bolograph.

The *bolographic* method can be employed, which, being independent of circle readings, and involving instead a clock work of extreme accuracy, gives differences of deviation with extraordinary precision, reaching, as we said in last year's report, to within a second of arc.
Smithsonian Rep., 1898, p. 72.

boloman (bō′lo̧-man), *n.* A man armed with a bolo. [Philippine Is.]

Bolometric curve, a curve indicating the distribution of energy in the spectrum as determined by measurements with the bolometer.

bolsa (bōl′sä), *n.* [Sp. *bolsa*, a purse.] An exchange where merchants and others meet to transact their business. [Spanish-American and the Philippine Is.]

bolson (bōl-sōn′), *n.* [Sp., augm. of *bolso*, a purse, < *bolsa*, a purse: see *burse*, *purse.*] In *phys. geog.*, a basin-shaped depression inclosed on nearly all sides by mountains. [Southwestern U. S.]

bolson-plain (bōl-sōn′plān), *n.* [*bolson* + *plain.*] A plain formed of land-waste occupying basin-like depressions among mountains in Mexico and contiguous portions of the United States. See ★*bolson.*

The *bolson plains* may be considered as sections of an upraised peneplain surface in its earliest infancy, at a stage in which they are as yet untouched by stream-action. They could not exist under present hypsometric conditions except in an arid region, which snow-fed perennial rivers do not traverse. *Amer. Geol.*, Sept., 1904, p. 164.

bolster, *n.*, **2.** (*p*) Same as *bunk*, 2. (*q*) In *arch.*, a horizontal piece of wood set on the top of a post and projecting on one or both sides: intended to diminish the unsupported stretch of a girder or beam, or to act as a corbel, allowing a post to be set upright in false bearing beyond the axis of the lower post. (*r*) In *paleobot.*, same as ★*leaf-cushion.*

bolster-wagon (bōl′stêr-wag″on), *n.* A form of road-wagon used for spreading purposes. The body is hung on side-bars the ends of which rest on bolsters over the axles; no springs are used.

bolt[1], *n.*—**Cremorne bolt,** a casement-fastening consisting of two long bolts, one engaging the top of the window-frame and the other the window-sill, both being inclosed in a casing and operated by a handle at the middle of the casement. It is sometimes provided with a third bolt which locks the casements together and is operated by the same handle. **Espagnolette bolt,** a casement-fastening consisting of a long rod placed on the edge of the casement and fitted with catches at the top and bottom. By means of a handle the rod can be rotated to cause the catches to engage the opposite casements and lock them together at the top and bottom. **In-and-out bolt,** a bolt which extends through the pieces to be joined.

bolt[1], *v. t.* **9.** In *archery*, to loose too soon after drawing the bow. See ★*hold.*—**10.** In *golf*, to putt with so much force that the ball will go some distance past the hole if it fails to go into it.

bolt-die (bōlt′dī), *n.* **1.** A die or hob for cutting the thread on a bolt.—**2.** A die for shaping blanks for bolts.

bolt-dog (bōlt′dog), *n.* An attachment to a lathe for driving bolts.

bolter[1], *n.* **2.** A machine for sawing logs into a size suitable for cutting into small strips. The pieces cut by a bolter are called *bolts*, and these bolts are sawed into laths, pickets, etc., in a gang-saw.—**3.** In *archery*, an archer who, after drawing the bow, looses too soon.

bolting-reel (bōl′ting-rēl), *n.* A reel, covered with bolting-cloth, used in separating flour, etc.

bolting-saw (bōl′ting-sâ), *n.* See ★*bolter*, 2.

bolt-machine (bōlt′ma̧-shēn″), *n.* A machine used for forging the shanks of bolts from stock which has been rolled to the size of the head of the bolt. It consists of a series of forging-dies which vary in size and through which the body of the bolt is passed in a proper succession.

Boltonia (bōl-tō′ni-ä), *n.* [NL. (L'Héritier, 1788), named in honor of James *Bolton* (fl. 1775–95), an English botanist.] A genus of plants of the family *Asteraceæ.* There are 4 or 5 species, natives of the United States. They are sometimes known as *false camomile.* They are tall, leafy, aster-like, glabrous and often glaucous perennial plants, blooming profusely in late summer and autumn, and are excellent for the hardy border. *B. asteroides* and *B. latisquama* are sometimes planted in gardens for their showy bloom.

bolt-ring (bōlt′ring), *n.* A small ring with a spring-and-bolt arrangement, much used in modern jewelry for holding small or large gems or to secure necklaces.

bolt-saw (bōlt′sâ), *n.* A saw for cutting off the bark-covered slabs from a log and forming them into squared bolts; a saw for the rough dressing of logs in the forest.

bolt-threader (bōlt′thred″ėr), *n.* A machine or device used to cut the thread on bolts.

bolt-wire (bōlt′wīr), *n.* Wire which is to be cut into blanks for small bolts.

Bolyaian (bōl-yī′an), *a.* Of or pertaining to John Bolyai (in Hungarian, Bolyai János), a Hungarian geometer who was born at Kolozsvár in 1802, and who died at Maros-Vásárhely in 1860.—**Bolyaian** or **Bolyai geometry.** See ★*geometry.*

bom, *n.* A simplified spelling of *bomb.*

boma (bō′mä), *n.* [Central African.] An inclosure of bushes, thorn, or stakes formed as a protection for a camp or village.

I went out on a sandspit into the lake and camped, cutting down the bush and placing it across the shore end of the bank so as to form a *boma.* At one o'clock in the morning the Turkana attacked and succeeded in breaking through the *boma*, a few of them getting into camp.
Geog. Jour. (R. G. S.), XI. 389.

Bomb calorimeter. See ★*calorimeter.*—**Bread-crust bomb,** a somewhat rounded mass of igneous rock, ejected in a volcanic eruption, whose surface presents an appearance similar to that of baked bread, as if the interior had expanded beyond the stretching capacity of the surface crust. The more or less vitrified surface and the seamed crust are characteristic.

bombardier, *n.* **4.** [*cap.*] A former name, among the Portuguese, for a Fleming or other foreigner.

The whole country spoke of this boat . . . with a crew that spoke like *Bombardiers.*
Geog. Jour. (R. G. S.), XI. 82.

bombardment, *n.*—**Molecular bombardment,** impact of the molecules of a vapor or gas against a submerged body or against any wall which forms a boundary to the gaseous volume. The resultant effect is the pressure which the vapor exerts. Under high electrostatic strain, especially in a high vacuum, such bombardment may exert considerable power on the bodies struck, causing them, for example, to give off X-rays or heat, and even fusing very refractory substances, as platinum.

Bombax, *n.* **3.** [*l. c.*] A plant of the genus *Bombax.* **Bombax cotton,** the seed-hair of the bombax, known in commerce as *vegetable down*, *red-silk cotton*, *God-tree cotton*, *silk-cotton*, etc. The fiber is smooth, glossy, pliable, rectilinear, and from white to yellow-brown in color, but it is without spiral twist, and the cell-walls are thin and weak, making it unsuitable for spinning; hence it is chiefly used for such purposes as stuffing mattresses, etc.

bombed (bomd), *a.* [*bomb* + *-ed*[2]. Cf. F. *bombé.*] Rounded: as, a *bombed* frontal bone. *Keane*, Ethnology, p. 185.

That *bombed* brow, that eye a kindling chrysoprase
Browning, Filine, x. 22.

Bombinæ (bom′bi-nē), *n. pl.* [NL., < *Bombus* + *-inæ.*] The *Bombidæ* considered as a subfamily of *Apidæ.*

bombom (bom′bom), *n.* [Also *bombon*, *bombong.* Philippine Sp.] Same as ★*bongbong.*

bombonne (bom-bon′), *n.* [F. *bombonne*, < Pr. *boumbouno*, < *boumbo*, a bomb, a bottle, = F. *bombe*, a bomb: see *bomb*[2].] A hollow vessel, usually of salt-glazed stoneware, either egg-shaped or cylindric, with three necks at the top and an exit-tap at one side near the bottom: used in the condensation of acids on a manufacturing scale: essentially a Woulfe's bottle.

bomb-signals (bom′sig″na̧lz), *n. pl.* See ★*signal.*

Bombyces (bom-bī′sēz), *n. pl.* [NL., pl. of *Bombyx.*] An old group of *Lepidoptera*, corresponding to the modern family *Bombycidæ.*

Bombylioidea (bom-bil″i-ō-id′ē-ä), *n. pl.* [NL. (Coquillett, 1901), < *Bombylius* + *-oidea.*] A superfamily of dipterous insects comprising the so-called bee-flies of the family *Bombyliidæ* and their allies, including the *Apioceridæ* and *Mydaidæ.*

Bombyx, *n.* **3.** [*l. c.*] A wind-instrument of the ancient Greeks, probably sounded by a reed mouthpiece: so called from its shape.

bonanza, *n.* **II.** *a.* Very extensive and profitable. Compare *bonanza*, *n.*, 2.—**Bonanza farm,** in the great wheat-producing regions of the United States, a farm of great extent, operated on a gigantic scale.—**Bonanza farmer,** one who owns and operates a bonanza farm.

bonasi (bo-nä-sē′), *n.* [Cuban *bonasí*, from a native name (Pichardo).] The Cuban name of a species of grouper, *Mycteroperca bonaci*, a food-fish of the West Indies.

bonaventia (bon-a̧-ven′sha̧), *n.* [Origin unknown.] A buggy with a wooden dash and a standing top. [Pennsylvania.]

Bonaventure formation. See ★*formation.*

Bonaveria (bō-na̧-vē′ri-ä), *n.* [NL. (Scopoli, 1777), named in honor of J. B. *Bonaveria*, an Italian botanical artist of the 18th century.] A genus of dicotyledonous plants of the family *Fabaceæ.* See *Securigera.*

Bonavist bean. See ★*bean*[1].

bonbo (bon′bō), *n.* [Tibetan *Bon* (in Eastern Tibet *Bhön*) the name of this religion, + *Bod* (Eastern *Bhö*), Tibet.] The form of shamanism which forms the indigenous religion of Tibet. It is rapidly waning in the presence of the Lamaistic form of Buddhism which is now the dominant cult.

bonbonnière (boṅ-bon-iâr′), *n.* [F.] A box for holding bonbons or confections.

bond[1], *n.*, **12.** (*c*) Same as *bond-timber.*—**14.** In *elect.*, the rod, heavy copper wire, or weld which is used to connect the abutting rails of a railway-track to form an electric circuit.—**Bond and disposition in security,** an expression equivalent to bond and mortgage on land.—**Double bond.** In certain cases the atoms in chemical compounds do not exhibit their full valency. This behavior can sometimes be expressed by the assumption of a double union or bond between two polyvalent atoms, as in ethylene, $H_2C:CH_2$. The double bond is not stronger than two single bonds, nor in any way equivalent to them, except arithmetically. Compounds assumed to possess them are usually most readily attacked at the position of the double bond, either by reagents or by decomposing agencies, such as heat. In general, organic compounds with a double bond, such as defined, are distinguished by their ability to form derivatives by addition, while those without double unions, as paraffins, form derivatives by substitution.—**Joint bond,** in *law*, an undertaking executed by two or more parties all of whom must be joined as defendants in an action upon the bond.—**Resignation bond.** (*a*) In *eccles. law*, an instrument, usually attested by a notary, by which a beneficed clergyman voluntarily surrenders his benefice. (*b*) In *Scots law*, the surrender of a fee to a superior.—**Tax bond.** See ★*tax.*—**Three-quarter bond.** Same as *heart-bond.*

bond[1], *v. t.* **6.** To unite the ends of (two adjacent rails,) either by copper wires or cables, or by welding, in order to secure a low-resistance return-circuit for the electric current.

Briefly, my experience in *bonding* rails is that in the cast weld made since 1898 the bond at the beginning of

the pour is of lower resistance than a 90-pound rail of the same length as the weld.
Jour. Franklin Inst., April, 1904, p. 287.

Bondon cheese. See ★*cheese*[1].

bond-wire (bond′wīr), *n.* A wire used to make a good joint for the conduction of electricity from one railway rail to another.

bone[1], *n.*, **6.** (*c*) In *card-playing*, a chip of the smallest value.

10. A piece of horn or wood-fiber inserted in the sole of a wooden golf-club to prevent injury to the face of the club at the bottom.—**11.** The midrib of a leaf, especially that of a sugar-cane leaf or the large midrib of a palm-leaf. [Colloq., West Indies.]—**Bone-wire.** See ★*wire*[1]. **Cavalry bone,** a bone sometimes developed in the adductor muscle of the thigh in men who are constantly in the saddle. **Dissolved bone,** bone which has been treated with sulphuric acid so as to produce the soluble monocalcic phosphate for use as a fertilizer. The term has often been used as a trade-name to include mineral phosphates similarly treated, these in some cases consisting of or containing the debris of fossil bone. **Exercise bone.** Same as *cavalry* ★*bone* or ★*drill bone.* **Ground bone.** Same as *bone-dust* and ★*bone-meal.* **Inca bone.** Same as *interparietal bone* (which see, under *interparietal*).—**Ligament bone.** Same as *sesamoid bone.* **Lingual bone,** the hyoid bone. **Riolan's bones,** small detached bones, like Wormian bones, occasionally present in the suture between the occipital bone and the petious portion of the temporal bone.—**Suspensory bones,** in the fish skull, the chain of bones connecting the mandible to the cranium, consisting of the hyomandibular, the symplectic, and the quadrate. **Ungual bone.** See ★*ungual.*

bone[1], *v. t.* **5.** To 'hold up' with a demand or importunate request for something, as for a small loan: as, to *bone* one for a 'fiver.' [Colloq.]

bone-body (bon′bod i), *n.* In *ceram.*, the composition of natural soft-paste porcelain, which contains a certain proportion of calcined bone.

His body was neither that of the French potters nor the true bone of the English, but partook of the characteristics of both, the proportion of phosphate of lime, as shown by analysis, being about eight per cent., a very much smaller percentage than in the English *bone-body.*
E. A. Barber, Pottery and Porcelain of the U. S., p. 126.

bone-cell (bōn′sel), *n.* In *histol.*, one of the stellate cells which produce bone; an osteoblast.

bone-conduction (bōn′ kon-duk″ shon), *n.* Transmission of sound-waves to the auditory apparatus through the bones of the face.

bone-corpuscle (bōn′kôr″pus-l), *n.* Same as ★*bone-cell* or *osteoblast.*

bone-dry (bōn′drī), *a.* Very dry; as dry as a bone. *Modern Amer. Tanning*, p. 189.

bone-fat (bōn′fat), *n.* Fatty matter, of soft, semisolid consistence, extracted from bones by melting or by the use of solvents: used in making cheap soaps. *Jour. Soc. Chem. Industry*, VI. 825.

bone-flour (bōn′flour), *n.* The most finely divided portion of ground bones, separated from the coarser parts by sifting: used as a fertilizer. *Jour. Soc. Chem. Industry*, VII. 821.

bone-heap (bōn′hēp), *n.* **1.** A heap of bones.—**2.** In *archæol.*, a refuse-pile containing bones and other remnants of food of a prehistoric village. Bone-heaps are also found near villages of modern primitive tribes.

bonellein (bō-nel′ē-in), *n.* [*Bonell-ia* + *-e-* + *-in*[2].] A green pigment obtained from *Bonellia viridis.*

bone-meal (bōn′mēl), *n.* Bones reduced to a rather coarse powder by grinding: used in agriculture as a fertilizer. *Jour. Soc. Chem. Industry*, X. 151.

bone-oil, *n.* **2.** Fatty matter, of liquid consistence at common atmospheric temperature, extracted from bones by heating them with water or by the use of solvents: used in soap-making.

bone-painting (bōn′pān″ting), *n.* The custom of painting the bones of skeletons, particularly those of friends and relations. This custom seems to have prevailed in many parts of prehistoric America and also in other continents.

bone-powder (bōn′pou″dėr), *n.* Bones reduced to powder by grinding: used in agriculture as a fertilizer, and in the manufacture of mixed fertilizers. *Jour. Soc. Chem. Industry*, VII. 133.

bonery (bō′nę-ri), *n.* [*bone*[1] + *-ery.*] A place where bones are deposited.

boneset, *n.* **Bastard boneset.** Same as *upland* ★*boneset.*—**Blue boneset,** the mist-flower, *Eupatorium cœlestinum.*—**Climbing boneset,** the climbing hempweed, *Willughbæa scandens.*—**False boneset,** any plant of the genus *Kuhnia.*—**Purple boneset,** the joepye-weed, *Eupatorium purpureum.*—**Upland boneset,** *Eupatorium sessilifolium*, a species with sessile but not connate leaves.

bone-shaker (bōn′shā-kėr), *n.* A humorous name applied to the bicycle before the introduction of rubber or pneumatic tires and other improvements.

He propelled and steered the cycle, known as a *bone-shaker*, by the front wheel (in 1866).
Encyc. Brit., XXVII. 324.

bone-tankage (bōn′tangk″āj), *n.* Meat offal containing more or less bone in fragments: used in the manufacture of fertilizers.

bonga (bong′gä), *n.* [Tagalog and Bisaya *bonga* (*bongga*).] The betel-nut palm (*Areca Cathecu*), the nuts of which, together with the leaves of the betel-pepper and a little lime, form a masticatory called *buyo.* See *areca-nut.* [Philippine Is.]

bongbong (bong′bong), *n.* [Bisaya and Tagalog *bongbong.*] A vessel or pipe for water, made from a joint of bamboo. [Philippine Is.]

bonifacial (bon′i-fā″shal), *a.* [*boniface* + *-ial.*] Of or pertaining to a boniface or the landlord of an inn. *G. A. Sala.*

boning[2] (bō′ning), *n.* A form of machine-sewing in which two or more parallel lines of stitches are made in the fabric: used especially in corset-making as a means of holding the bones in place. See *two-needle machine*, under ★*sewing-machine.*

boning-knife (bō′ning-nīf), *n.* A kitchen-knife with a short, wide, and pointed blade, used in boning.

boning-stick (bō′ning-stik), *n.* Same as *boning-rod.*

boninite (bō-nin′-īt), *n.* [*Bonin* (Islands of Japan) + *-ite*[2].] A term proposed by Petersen (1891) for a glassy andesite containing bronzite, diallage, and olivine, occurring in the Bonin Islands, Japan.

bonism (bō′nizm), *n.* [L. *bon(us)*, good, + *-ism.*] The doctrine that the world is good, but not the best possible. See *optimism.*

bonist (bō′nist), *n.* [*bon(ism)* + *-ist.*] One who believes that the world is good, but not the best possible.

bonito[1], *n.* (*g*) In Australia, the oceanic bonito, *Gymnosarda pelamis.*

bonito[2] (bō-nē′tō), *a.* [Sp., dim. of *bueno*, < L. *bonus*, good: see *boon*[2].] Pretty; nice; fine; graceful: an epithet in use in Spanish-speaking countries or regions originally settled by Spaniards.

bonnet, *n.*, **8.** (*b*) A portion of a coal-seam left for a roof. (*c*) A flat piece of wood on the top of a prop. (*d*) *pl.* Gas-coal or shale overlying a coal-seam or worked with it. [Scotch in senses *b*, *c*, and *d*.]—**15.** The lid or cover of a hole by which access may be had to valves or other apparatus in a closed chamber.—**16.** The protecting hood over the machinery or motor of a motor-vehicle, in front of the dashboard.—**17.** The plate on the motor-crank case, or on the transmission gear, normally closed, through which the cranks and gears of a motor-car can be inspected and cleaned and oiled.—**18.** *pl.* The spatter-dock, *Nymphæa advena* and the other species. See *Nymphæa*[1], 1.

bonnet, *v. t.* **2.** To provide with an iron shield or bonnet: as, to *bonnet* a safety-lamp. *Jour. Inst. Elect. Eng.* (Lond.), 1900–1901, p. 834.

bonnethead (bon′et-hed), *n.* A species of hammerhead, *Sphyrna tiburo*, abundant on the Atlantic coast of the United States. The head is kidney-shaped, rather than hammer-shaped as in the true hammerhead (*S. zygæna*).

bonnet-press (bon′et-pres), *n.* An apparatus for shaping a bonnet by pressing and ironing it.

bonnet-skate (bon′et-skāt), *n.* In *ichth.*, the common skate.

bonnet-stack (bon′et-stak), *n.* A metal chimney-stack having a cover or lid over its top, at a slight distance above the opening, to prevent snow and rain from falling into it. Sometimes the bonnet is made part of a spark-arrester netting over the top.

bonnet-wire (bon′et-wīr), *n.* A wire for stiffening hats and bonnets.

Bononian beds. See ★*bed*[1].

Bonsor's black. See ★*black.*

bont-tick (bont′tik), *n.* [D. *bont*, variegated, + E. *tick.*] A South African ixodid, *Amblyomma hebræum*, parasitic on live stock: so called because of the variegated color of the dorsum of the adult male. See *bont-leg* ★*tick.*

The tick of greatest importance, because of its injuries to stock, is Amblyomma hebræum Koch, commonly known as the *bont tick.* "Bont" is a Dutch word, equivalent to "variegated," and its application in this case has reference to the mixed coloring on the back of the male.
C. P. Lounsbury, in Proc. Assoc. Econ. Ent., 1900, p. 41.

bon voyage (boṅ vwo-yäzh′). [F.] A parting salutation meaning, I wish you 'a pleasant journey' (or 'voyage' if by water).

bony-fish, *n.* **2.** A common name of the tenpounder, *Elops saurus*, of the family *Elopidæ*, an abundant and widely distributed fish in tropical seas.

bony-tail (bō′ni-tāl), *n.* A fish of the Gila river, *Gila elegans.* Also called *Gila trout.*

boobook (bö-bök′), *n.* [In allusion to the cry of the bird.] A small owl, *Athene boobook*, of a rusty red color, found in Australia and Tasmania: so named on account of its peculiar call or hoot.

Booby prize. See ★*prize*[1].

boobyalla (bö-bi-ä′lä), *n.* [Aboriginal name.] A tree of southeastern Australia and of Tasmania, *Acacia longifolia*, a shrubby form of which is common in the coast regions and is of service in binding the sands. Also called *native willow.*

boodle[1], *n.* **4.** Same as *newmarket*, 1.

boodlerism (böd′lėr-izm), *n.* The practice, by persons in public office, of asking or accepting bribes, or of making corrupt bargains for their own profit, as in selling votes for money, office, or influence. [Slang, U. S.]

Boohoo fever. See ★*fever.*

boojery, *n.* See ★*budgeree.*

boojum (bö′jum), *n.* [A made word based unconsciously on *boo*, with a Latin-looking termination, *-jum*, *-ium.*] An imaginary animal introduced by C. L. Dodgson ("Lewis Carroll") as a particularly dangerous variety of 'snark,' into his "Hunting of the Snark."

Book of responses, in *Scots law*, the account, kept by the directors of the chancery, for entering all non-entry and relief duties payable by heirs taking precepts from chancery.—**Book of the Covenant,** a code of laws which, according to Exodus xxiv., is ascribed to Moses. Recent writers consider the substance of the code to be found in Exodus xx. 24–xxiii. 19. Also called *Greater Book of the Covenant.* **Book of the Dead,** a papyrus which the Egyptians placed with the mummy in the coffin, to furnish the deceased with needful directions for the journey to the life beyond.—**Book value,** in *bookkeeping*, the value of any commodity as shown by the books of a firm or commercial concern, as distinguished from its market value (which see, under *market*).—**Caroline Books,** four books written under the direction of Charlemagne, during the controversy of the eighth century concerning image-worship. The books contain a censure of the decrees of the council of Nicæa on the adoration of images, and established the principle of the freedom of Christian art in representing Christian ideas. **Golden book.** See ★*golden.* **Little Book of the Covenant,** the name given by critics to the brief legislative section in Exodus xxxiv. 12–26, the contents of which are similar to parts of the Book of the Covenant.—**Red book.** See ★*red*[1].

Bookbinders' varnish, wire. See ★*varnish*, ★*wire.*

book-buyer (bůk′bī-ėr), *n.* One who buys books.

book-crab (bůk′krab), *n.* Same as *book-scorpion.*

booker (bůk′ėr), *n.* **1†.** A writer of books; a scribe.—**2.** A 'spotter.' *All the Year Round*, July 11, 1863.—**3.** An entry-clerk or bookkeeper.—**4.** One who makes up finished goods into 'books.'

book-gill (bůk′gil), *n.* The respiratory organ of *Limulus*, which is regarded as comparable to the lung-book of a scorpion everted and adapted for aquatic respiration.

booking (bůk′ing), *n.* The act of engaging or securing beforehand (by registry or payment) a box or seat at the opera, a passage on a steamer or train, etc.

book-lung (bůk′lung), *n.* The lung-book of a scorpion. See ★*lung-book.* *Parker and Haswell*, Zoölogy, I. 605.

book-marker (bůk′märk-ėr), *n.* Same as *bookmark.*

book-number (bůk′num-bėr), *n.* In *library-cataloguing*, a particular number (or a number and a letter) designating the book in its proper sequence in the smallest division to which it belongs. It is the number that is individual to the book itself or any copy of it, and with the class-number (which may be borne by a thousand books) makes up its identification-number not only in the given library, but in every library using the same system. The accession-number, which marks the order of receipt, belongs only to the particular copy which bears it. In the Cutter and Dewey systems the book-number consists of the initial letter or letters of the author's name, followed by a number which indicates in a printed list the rest of the name.

book-sewer (bůk′sō″ėr), *n.* One whose occupation is to fasten together with thread the different sections or foldings of a book.

book-stamp (bůk′stamp), *n.* The plate of hard metal (usually of brass) which contains

the decoration or letters selected for stamping the covers of a book.

booky[1] (buk'i), *a.* [*book* + *-y*[1].] **1.** Bookish; given to reading: as, a *booky* person.—**2.** Derived from books: as, *booky* lessons. *Mark Twain.* [Colloq.]

booky (buk'i), *n.* [*book* + *-y*[2].] Same as *bookmaker*, 3. [Slang.]

bool[3] (böl), *n.* [Australian.] Same as ★*beal*[3].

boom[2], *n.* **6.** A pole fastened lengthwise of a load of hay to bind the load. *Stand. Dict.*

Down booms! (*naut.*), an order to send on deck the studding-sail booms from the yard-arms. **Sheer boom,** a boom so secured that it guides floating logs in the desired direction. Also called *fender boom* and *planning boom.*

The formation of the gorge is supposed to have been caused by the driving of piles in the Mississippi River at a point a few miles above Alma, Wis., to hold a *sheer boom* for the purpose of running the logs which had been loosened from the sandbars and shores of the Chippewa and Mississippi rivers by the recent heavy rains into the Zumbra River for safe harbor.
U. S. Monthly Weather Rev., Nov., 1896, p. 407.

boomah (bö'mä), *n.* A false spelling of *boomer*[1], 1 (a kangaroo), used on the supposition that the name was native Australian.

boom-band (böm'band), *n.* A band for the boom of a sail-boat. It is made in two parts held together on the boom by bolts and nuts, and fitted with an extra half-band for holding the hook of a block.

boom-buoy (böm'boi), *n.* Same as ★*boom-stay.*

boom-chain (böm'chan), *n.* A short chain which fastens boom-sticks end to end.

boom-company (böm'kum-pa-ni), *n.* A corporation engaged in handling floating logs, and owning booms and booming privileges. [U. S.]

boom-crane (böm'krān), *n.* A crane having a vertical mast, steadied at the head and foot by proper pivots, and a horizontal boom projecting at right angles from the mast, and braced to it by an inclined strut; a ★jib-crane (which see).

booming[3] (böm'ing), *n.* In *mining*, ground-sluicing on a large scale by emptying the contents of a reservoir at once on material collected below, thus removing boulders. *Coal and Metal Miners' Pocketbook.*

boom-rat (böm'rat), *n.* In *lumbering*, one who works on a boom. [Slang.]

boom-stay (böm'stā), *n.* A heavy weight used to anchor booms in deep water, its position being indicated by a pole or float attached to it. Also called a *boom-buoy.*

boom-stick (böm'stik), *n.* In *lumbering*, a timber which forms part of a boom. [U. S.]

boom-town (böm'toun), *n.* A town or community which has acquired sudden wealth and notoriety through land speculation, etc.; also, a town which originated in a real estate 'boom.' [Western U. S.]

boomy (bö'mi), *a.* [*boom*[1] + *-y*[1].] Hollow; deeply resonant: as, the *boomy* tone of surf, or of a bell. [Colloq.]

Boone formation. See ★*formation.*

boorga (bör'gä), *n.* See ★*burga.*

booster (bö'stèr), *n.* [*boost*[1] + *-er*[1].] **1.** One who boosts.—**2.** In *elect.*, a device by which the electromotive force in an electric circuit is regulated.

boot[2], *n.* **11.** In *agri.*, the uppermost leaf-sheath, just below the brush or head, of a broom-corn plant; also the lowest leaf-bearing internode on a stalk of wheat.—**Junod's boot,** a surgical appliance for exhausting the air surrounding a limb in order to draw blood to it.

boot-grain (böt'grān), *n.* A leather made from cowhide: used for heavy boots. *Modern Amer. Tanning*, p. 114.

boothite (böth'īt), *n.* [Named after Prof. Edward *Booth* of California.] A hydrated copper sulphate ($CuSO_4+7H_2O$), similar in form to melanterite and pisanite: found in California.

boot-leg, *n.* **2.** One of the levers connected with the winding mechanism of a spinning-mule: so named from its shape. *Nasmith*, Cotton Spinning, p. 269.

boot-lick (böt'lik), *n.* A mean, cringing person; a toady. [U. S.]

booz, *v. i.* and *n.* A simplified spelling of *booze*, *boose.*

boquin (bō-kēn'), *n.* [Sp.] A baize of coarse texture.

bora[2] (bō'rä), *n.* [Native Australian.] A ceremony of the natives of eastern Australia by which a boy is admitted to the rights of manhood.

The great mystery of the Blacks is the *Bora*, a ceremony at which the young men found worthy receive the rank of warriors. *R. M. Praed*, Australian Life, p. 24.

boracha (bo-rä'tshä), *n.* [Braz. Pg., a particular use of Pg. *borracha*, a leather bottle, a rubber bag, etc.: see *borachio.*] A conventional weight of crude india-rubber, used to designate, in the Amazonian rubber districts, the bundle in which india-rubber is shipped.

borage, *n.* **Ceylon borage,** a coarse, hardy annual plant, *Boraginoides Zeylanicum* (*Borago Zeylanica* of Burman), a native of southern India and Ceylon, and naturalized in Australia and Tasmania.—**Native borage,** a name in Australia of the *Ceylon borage.*

Borago (bo-ra'gō), *n.* [NL. (Linnæus, 1753, adopted from Tournefort, 1700): see *borage.*]

Borago officinalis L.

a, top of flowering branch (one half natural size), *b*, fruit (enlarged), *c*, a stamen (enlarged). (From Britton and Brown's "Ill. Flora of the Northern States and Canada.")

A genus of dicotyledonous plants, type of the family *Boraginaceæ*, including 3 species all natives of the Mediterranean region. They are annual or biennial herbs, with hirsute or hispid foliage and showy blue flowers in terminal racemes. In some parts of Europe, *B. officinalis* is used as a pot-herb and sometimes with salads. Only the young leaves are palatable. See *bee-bread*, 2.

boragoid (bō'ra-goid), *a.* [*Borago*, type-genus of the *Boraginaceæ*, + *-oid.*] Resembling *Borago:* applied specially to the extreme extra-axillary inflorescence of certain boraginaceous plants, as *Anchusa*. *Schumann.*

borak[1] (bor'ak), *n.* [See ★*barrack*[2].] An aboriginal Australian term for banter; chaff; fun, especially at the expense of another: as, to poke *borak* at one, that is, to make game of him. [Colloq., Australia.]

On telling him my adventures, how Bob in my misery had "poked *borack*" at me.
Australasian Printers' Keepsake, p. 75.

borak[2] (bō'rak), *n.* Spirit distilled from rice.

When quiet had been restored we all sat down, and *borak* (rice spirit) was produced, healths drunk, and speeches made. *Geog. Jour.* (R. G. S.), XVI. 49.

Borate of lime, a salt, more correctly called *calcium borate*, which occurs as the mineral colemanite in great abundance in California, and is used as a material from which to make boracic acid and borax.—**Borate of manganese,** a salt extensively used as a dryer to hasten the absorption of oxygen from the air by linseed-oil and the consequent hardening of paints made with this oil as a vehicle.

borated (bō'rā-ted), *a.* Mixed or treated with boracic acid or borax or with both.—**Borated gauze,** gauze prepared with boracic acid for surgical use in dressing wounds.—**Borated milk,** milk to which boracic acid or borax, or both, have been added as preservatives. Careful experiments, made by the United States Department of Agriculture, have shown that such additions to food, although not in the ordinary sense of the term poisonous, are unwholesome and, in time, injurious.—**Borated talcum,** finely pulverized talc to which boracic acid has been added.

borax, *n.*—**Burned borax,** borax which has been deprived of its water of crystallization by being heated.—**Octahedral borax,** in *chem.*, sodium pyroborate when crystallized under special conditions with 5 molecules of water of crystallization ($Na_2B_4O_7.5H_2O$); it then assumes the form of the regular octahedron. The common or prismatic borax contains 10 molecules of water and crystallizes in monoclinic forms.

Borboridæ (bôr-bor'i-dē), *n. pl.* [NL., < *Borborus* + *-idæ.*] A family of acalyptrate flies, comprising small, stout species, usually of dark color and with clear wings. They occur in large numbers on the dung of animals and breed exclusively in this substance.

Borborus (bôr'bō-rus), *n.* [NL. (Meigen, 1830), < Gr. *βόρβορος*, mud, mire.] A genus of small acalyptrate flies typical of the family *Borboridæ*, containing black or blackish-brown species, some of which have rudimentary wings.

Bordeaux, *n.*—**Alizarin Bordeaux,** a mordant dyestuff derived from anthracene. It is similar in properties to alizarin, but produces colors of a much bluer character.—**Bordeaux B, BL,** and **R,** synonymous names for an acid coal-tar color of the monazo type, prepared by combining diazotized α-naphthylamine with β-naphthol-disulphonic acid. It dyes wool a vinous red in an acid bath.—**Bordeaux BX,** a name applied to two acid coal-tar colors of the diazo type which differ but slightly in composition. They both dye wool a vinous red in an acid bath.—**Bordeaux DH** and **S,** synonymous names for an acid coal-tar color, the same as *fast* ★*red D.*—**Bordeaux extra** and **COV,** synonymous names for a direct cotton coal-tar color, the same as *Kongo* ★*violet.*—**Bordeaux G.** (*a*) An acid coal-tar color similar to ★*Bordeaux BX.* (*b*) Same as ★*Bordeaux B.*—**Bordeaux hammer.** See ★*hammer*[1].—**Bordeaux mixture.** See ★*mixture.*—**Bordeaux Pottery.** See ★*pottery.*—**Brilliant Bordeaux,** an acid coal-tar color which dyes wool a vinous red in an acid bath.—**Cotton Bordeaux,** a direct coal-tar color of the diazo type, derived from diamido-diphenyl-ketoxim. It dyes unmordanted cotton a bluish red in a salt bath.—**Diamine Bordeaux B** and **S,** two direct coal-tar colors of the diazo type, derived from benzidine. They dye unmordanted cotton a claret red in an alkaline salt bath.—**Diazo Bordeaux,** a direct coal-tar color closely allied to primulin. It dyes unmordanted cotton in a salt bath, but for the best results subsequent diazotizing and developing are necessary.—**Fast Bordeaux,** a mordant acid coal-tar color, same as *cloth* ★*red B.*—**Hessian Bordeaux,** a direct coal-tar color of the diazo type, derived from diamido-stilbene. It dyes unmordanted cotton a claret red in an alkaline salt bath.—**Naphthylamine Bordeaux.** Same as *alpha-naphthylamine* ★*red.*

bordereau (bôr-drō'), *n.*: pl. *bordereaus* or *bordereaux* (-drōz'). [F., OF. *borderel*, *bordrel*, < *bord*, edge, strip of paper, etc.: see *board*[2], *border.*] A memorandum or note, especially one containing a more or less detailed list of documents.

bordered, *p. a.* **2.** In *bot.*, having the margin distinct from the rest of the organ either in texture or color.—**Bordered pit,** one of the pits in coniferous and other kinds of wood which are surrounded by a thickened border. They consist of thin spots, pervious to water, and regulate the passage of the sap from one cell to another. They are best seen in radial section. See cuts under ★*Araucarioxylon* and ★*Cupressinoxylon.* **Bordered pore.** Same as ★*bordered pit.*

borderism (bôr'dèr-izm), *n.* A word, an expression, or conduct characteristic of the borders, especially the English and Scottish Border.

border-pen (bôr'dèr-pen), *n.* A drawing-pen having several points, used in making broad decorative edges or borders.

border-shears (bôr'dèr-shērz), *n.* Long-handled clipping-shears for trimming the edges of lawns: often fitted with a small wheel to support their weight.

borealize (bō'rē-a-līz), *v. i.*; pret. and pp. *borealized;* ppr. *borealizing.* To adopt northern manners or ways of thinking and speaking.

Gill gives a Northern origin to *geaun* for gown and Spenser *borealized* in his pastorals.
Lowell, Introduction to Biglow Papers, 2nd ser., p. 174.

bore-bit (bōr'bit), *n.* A piece of steel which forms the cutting-edge of a rock-boring drill.

boree[2] (bō-rē), *n.* [Prob. from aboriginal Australian (in Queensland) *booreah*, fire. It is especially preferred by the natives for firewood.] The weeping myall, *Acacia pendula*, which yields a hard, close-grained, violet-scented wood used by turners and cabinet-makers. [Eastern Australia.]

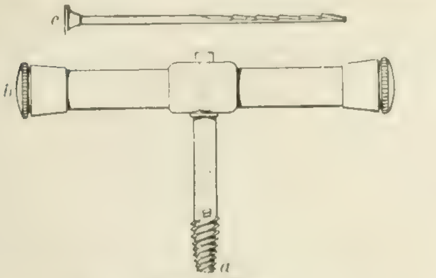
borele (bor'e-le), *n.* [Bechuana.] The native (Bechuana) name of the black rhinoceros, *Rhinoceros bicornis*, used frequently as a book-name.

bore-meal (bōr'mēl), *n.* The fine material taken from a hole which is being bored through rock which is comminuted by the action of the drill.

Boreogadus (bō-rē-og'a-dus), *n.* [NL., < Gr. *βορέας*, the north (*βόρειος*, of the north), + *γάδος*, a fish (see *Gadus*).] A genus of small codfishes of the arctic seas, typified by the species *B. saida.*

borer, *n.* **8.** A marine snail, as *Urosalpinx cinerea:* so named because of its habit of boring through the shells of oysters and other mollusks.—**Accretion borer,** an instrument for determining the growth in diameter of standing trees. It consists of a hollow auger, which, when bored into a tree, extracts a section showing the annual rings.

Apple-tree borer (*a*) The larva of the American cerambycid beetle, *Saperda candida* (which see, with cut); the round-headed apple-tree borer. (*b*) The larva of the American buprestid beetle, *Chrysobothris femorata*



American Borer.

[illegible] hollow auger [illegible] which other parts are [illegible]; c, rod for extracting wood section.

(which see, with cut); the flat-headed apple-tree borer. **Blackberry saw-fly borer,** the larva of an American insect, *Janus fumipennis*. **Clear-wing borer,** any one of several species of moths of the lepidopterous family *Sesiidæ*, whose larvæ bore into trees, as *Sesia acerni*, the clear-wing borer of the maple.—**Cucumber caterpillar borer,** a pyralid moth, *Diaphania nitidalis*, found in North and South America and the West Indies, whose larvæ bore into the fruit of cucumbers and melons. The larva is also called the *pickle-worm*. **Flathead borer,** the larva of any one of many species of beetles of the family *Buprestidæ* which bore into the branches and trunks of trees and which have an enlarged and flattened thorax and head: as, the *flat-headed apple-tree* ★*borer*, larva of *Chrysobothris femorata*. **Hammer-head borer.** Same as *flathead* ★*borer* (which see). **Increment borer.** See *accretion* ★*borer*. **Larger corn-stalk borer.** Same as *sugar-cane borer* (which see). **Long-horned borer,** a name of any wood-boring beetle of the family *Cerambycidæ*. **Pacific peach-tree borer,** the larva of a sesiid moth, *Sanninoidea opalescens*, which bores into the trunks and larger branches of the peach on the Pacific coast of the United States. **Peach-tree borer.** (*b*) Same as *peach-borer*, 1.—**Pear-tree borer,** the larva of a sesiid moth, *Sesia pyri*, which feeds on the inner layer of the bark of the pear-tree in the eastern United States.—**Red borer,** the larva of an oriental cossid moth, *Zeuzera coffeæ*, which bores into the stems of the coffee-plant in the East Indies. **Round-headed borer,** the larva of any one of many species of beetles of the family *Cerambycidæ*, which bore into the trunks and branches of trees: in contradistinction to the flat-headed borers of the coleopterous family *Buprestidæ*; specifically, the round-headed borer of the apple, *Saperda candida*. **Sequoia-borer,** the larva of a sesiid moth, *Vespamima sequoiæ*, which bores into the branches of the sequoias of the Pacific coast.—**Smaller corn-stalk borer,** an American phycitid moth, *Elasmopalpus lignosellus*, occurring in the eastern United States and South America, whose larva bores into the lower sections of corn-stalks. **Sugar-cane borer.** (*a*) See *sugar-cane*. (*b*) The larva of a crambid moth, *Diatræa saccharalis*, which bores in sugar-cane in the West Indies and the southern United States, where it is also known as the *larger corn-stalk borer*. (*c*) A scolytid beetle, *Xyleborus perforans*. (*d*) The larva of the sugar-cane weevil, a calandrid beetle, *Sphenophorus obscurus*, common in the islands of the Pacific. **Sweet-potato borer,** a brenthid beetle, *Cylas formicarius*, also called *sweet-potato weevil*, occurring in Cochin China, Madagascar, the Antilles, and in the southern United States. It bores in the tubers of the sweet potato.—**Tulip-tree borer,** any one of several coleopterous insects which bore into the tulip-tree, notably the cerambycid *Centrodera decolorata*, whose larva bores into the heart-wood.—**Wine-cask borer,** a scolytid beetle, *Xyleborus perforans*, which frequently perforates wine-casks in the East and West Indies. It also attacks sugar-cane.

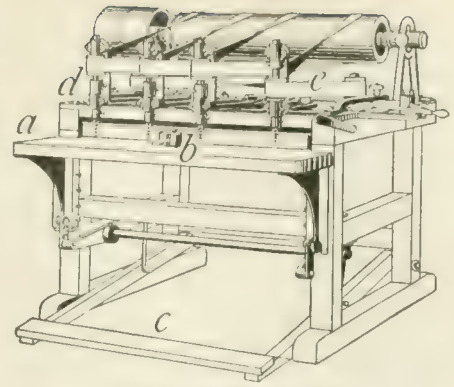
bore-rod (bōr′rod), *n.* A long rod, usually made up in sections, which is used for drilling deep wells, the drill being carried at the lower end of the rod.

Boreus (bọ-rē′us), *n.* [NL. (Latreille, 1825), < Gr. βορειος, boreal.] A genus of curious mecopterous insects of the family *Panorpidæ*, composed of wingless species which look like small wingless grasshoppers. They are often found on snow in the winter.

Borhyænidæ (bō-ri-ē′ni-dē), *n. pl.* [NL. *Borhyæna*, the type-genus, + *-idæ*, family ending.] A family of extinct creodont mammals whose members have some points of resemblance to the living marsupial *Thylacinus*. The angle of the jaw is somewhat inflected, and very few of the teeth are known to have had milk predecessors. The known species are from the Santa Cruz formation (Miocene?) of Patagonia. *Ameghino*, 1894.

borickite (bō′rik-īt), *n.* [Named after Prof. E. *Boricky* of Prague.] A hydrated phosphate of ferric iron and calcium, occurring in reddish-brown reniform masses.

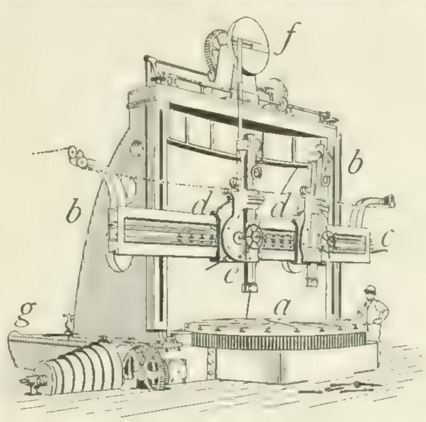
boring-machine, *n.* This term includes a great variety of wood-boring machines used in the building of cars and wagons, in making furniture and agricultural machinery, etc. They are named from the work they do, or from the number and arrangement of the augers. They are often combined with other machines. Many are automatic in action and adjustable for spacing the distances between the holes or for boring holes at different angles, and they range in size from a single auger bench-machine up to very large multiple borers having ten or more augers making holes at different angles and of different sizes.—



Multiple Wood-boring Machine.

a, table with vertical traverse [illegible] for holding work [illegible] augers [illegible] any position [illegible].

Boring-and-drilling machine, a boring-machine that can also be used for drilling, tapping, and screw cutting. Both horizontal and vertical forms are in use. One type has a vertical spindle supported by a saddle which has a traverse on a cross-rail supported between two columns. The saddle and the cross-rail are swiveled, enabling the operator to present the boring-tool to the work in any direction. The cross-rail has a traverse up and down the whole height of the columns to admit large work under the point of the boring-tool. Other types have horizontal spindles, with a fixed or a movable table. When the table is given a feed motion, the machine can also be used in milling.—**Boring-and-facing machine,** a boring-machine having an attachment called a *facing-head* on the boring-bar for facing or finishing the outside surfaces of the work, the ends of cylinders, etc.—**Boring-and-turning machine,** a boring-machine having a horizontal revolving



Boring-and-turning Machine.

a, revolving table; *b*, *b*, housings; [illegible] saddles traversing cross-rail [illegible] tool-bar [illegible] attachment [illegible] bed on which housing travels forward and back [illegible] housing shown in forward position. [illegible] saddle not shown.

table and vertical boring and cutting-tools, upheld by a tool-bar or boring-bar supported from saddles that traverse a cross-rail supported by housings. In essential features it is a modification of a lathe, set on end, the rotary table taking the place of the vertical face-plate of the lathe. The cross-rail carrying cutting-tools is also an adaptation from the planer, the only difference being that in this machine the traversing table has a rotary motion, the cutting being done in circles: hence the name *turning-machine*. In small machines only one tool-bar is used; in the *turret boring-and-turning machine* the tools are carried in a turret over the table. In large machines a boring-bar is placed on the cross-rail between the cutter-bars, boring and cutting being done at the same time. Supplementary horizontal tool-bars at the side of the table and slotting attachments are also used. In large machines the housing has a traverse, forward and back, to bring the boring-bar to the center of the work. See ★*milling-machine* and ★*drilling-machine*. **Boring-, drilling-, and milling-machine,** a machine of which the spindle is supported by a saddle that can traverse up and down a column. In one type the work is placed on a fixed table or on the floor, and the column also has a traverse. This makes it possible to use the machine in milling. In another type the column is fixed and the table has a traverse to right and left and, by the addition of a supplementary table, a rotary motion. Sometimes called *floor drilling-machine*. **Crank boring-machine,** a machine with a single vertical spindle supporting a cutter-head having three cutters working in a circle and cutting a very large hole.—**Cylinder-boring machine,** a machine for boring out and finishing engine-cylinders. The boring-bar may be horizontal or vertical and may have a fixed cutter-head for the tools, the bar being fed to the work; or the cutter-head may travel upon the boring-bar, turning with it and having its own feed. In some machines one of the heads supporting the boring-bar may travel upon the bed of the machine for convenience in adapting the machine to the cylinder; in others two or three boring-bars are used for compound cylinders and valve-chambers. Larger machines have attachments for boring the ports of cylinders and adjusting the boring-bar to various sizes of cylinders.—**Elbow boring-machine,** a single vertical-spindle machine supported by a horizontal jointed arm to enable the workmen to bore holes at irregular distances over a wide surface. **Hub-boring machine,** a large machine for boring holes in blocks of wood preparatory to turning down the blocks in a lathe in making wagon-hubs. In some forms the augers are automatically fed to the work; in others the work is fed to the augers. **Locomotive-rod boring-machine,** a boring-machine having two vertical spindles mounted upon a rail that is supported by massive columns. The spindles travel upon the rail in either direction to bring them to the work laid upon the table. **Post boring-machine,** a boring-machine affixed to a post. It has a single vertical spindle and an adjustable table to bring the work to the auger at any angle.—**Universal boring-machine,** a boring-machine in which the auger may be used to bore a hole in any direction. In one type the auger is supported on a bracketed arm that swings in any direction over a table on which the work is laid; in another the auger is fixed and the table can be so adjusted as to present the work to the auger at any angle; and in still another the auger can be moved up and down on an upright column which is free to turn on its axis. **Vertical chord-boring machine,** a very large machine used for boring holes in bridge-work. It has two spindles carried by vertical heads, one of which travels upon the bed of the machine for convenience of adjustment.

boring-ram (bor′ing-ram), *n.* In *mining*, a machine-drill provided with a hammer-head that can be used for driving wedges.

borize (bō′rīz), *v. t.*, pret. and pp. *borized*, ppr. *borizing*. [*bor(ax)* + *-ize*.] To heat with boracic acid; specifically, to inject a solution of boracic acid into the circulatory apparatus of a slaughtered animal with the object of preserving the meat.

Borkholm beds. See ★*bed*[1].

borlase (bor′läs), *n.* [Origin not ascertained.] The blackfish or black ruff, *Centrolophus niger*, of the coasts of southern Europe.

Borneo camphene, tallow. See ★*camphene*, ★*tallow*.

bornesite (bôr′ne-sīt), *n.* [*Bornese* (< *Borneo* + *-ese*) + *-ite*[2].] The monomethyl ether of inosite, $C_6H_{11}O_6CH_3$. It is found in the caoutchouc of Borneo. It is crystalline, easily soluble in water, and melts at 175° C.

Bornhardt's machine. See ★*machine*.

borofluoric (bō-rọ-flö-or′ik), *a.* Same as *fluoboric*.

borofluoride (bō-rọ-flö′ọ-rid or -rīd), *n.* Same as *fluoboride*.

boroglycerate (bō-rọ-glis′ẹ-rat), *n.* A trade-name for each of two antiseptic preparations made by heating sodium borate (borax) or calcium borate with glycerin.

boroglyceric (bō-rọ-gli-ser′ik), *a.* [*bor(ax)* + *glycer(ol)* + *-ic.*] Derived from boracic acid and glycerol.—**Boroglyceric acid** (H_3BO_3), a compound of boracic acid with glycerol, supposed to exist in solutions containing both substances. It reacts as a monobasic acid, requiring for neutralization one molecule of sodium hydroxid for each molecule of boracic acid.

boroglycerin (bō-rọ-glis′ẹ-rin), *n.* [*bor(ax)* + *glycer(ol)* + *-in*[2].] An antiseptic patented by Barff and used for fruits and wines. It is prepared by heating 92 parts of glycerol and 62 parts of boracic acid to 200° C.

borol (bō′rol), *n.* [*bor(ax)* + *-ol.*] A material, patented under this name in Germany, which is made by melting boracic acid with alkaline bisulphates. It is soluble in water, and is proposed for use in the bating or removal of lime from hides in preparing them for tanning.

Boron nitride, in *chem.*, a curious white solid substance, insoluble in water and in most acids, obtainable by the direct action of the two elements, boron and nitrogen, upon each other at a high temperature, or more conveniently by heating to redness a mixture of borax and sal ammoniac and washing out all matter soluble in water and hydrochloric acid. Its composition is represented by the formula BN. **Boron trioxid,** in *chem.*, the anhydrid of boracic acid, obtained by heating this acid as long as vapor of water is given off. The formula for the oxid is B_2O_3.—**Diamond boron,** an extremely hard crystallized form of boron.

boron-bronze (bō′ron-bronz), *n.* An alloy of aluminium and copper containing some boron, which last makes the alloy more dense and tough than aluminium bronze.

Boronia (bọ-rō′ni-ä), *n.* [NL. (J. E. Smith, 1798), named in honor of Francesco *Borone* (1769–94), an Italian botanist.] A genus of Australian shrubs of the family *Rutaceæ*. They have opposite leaves, odd-pinnate, trifoliate, or simple, pink-purplish, red, or white 4-merous flowers with a rue-like fragrance. There are about 60 species. The horticultural value of these plants is in their fragrance; a small specimen will perfume a whole house for two or three weeks. *B. pinnata*, *B. megastigma*, *B. denticulata*, *B. elatior*, *B. heterophylla*, *B. crenulata*, are some of the species grown.

borophenate (bō-rọ-fē′nāt), *n.* [*bor(ax)* + *phen(ol)* + *-ate*[1].] A mixture of salts of boracic acid and of phenol: as, bismuth *borophenate*, an antiseptic dusting-powder.

Borough council. See ★*council*.—**County borough.** See ★*county*[1].

boroughmongery (bur'o-mung gėr-i), *n.* The buying and selling of parliamentary representation: boroughmongering. *H. Martineau.*

borracha (bo rä'chä), *n.* [Braz., < Pg. *borracha*, a leather bottle. This is the usual form in which the substance is prepared for market.] Caoutchouc or crude rubber when in the form of large balls or bottles. It is composed of many layers of the dried and smoked rubber-milk which have been built up on a central stick or paddle during the smoking process. These layers are easily separated and when stretched are very transparent. The rubber smells not unlike smoked bacon. See *caoutchouc, india-rubber*, and ★*rubber*. [Brazil.]

borroto (bor-ō'tō), *n.* See ★*baroto.*

borrow[1], *n.* **5.** Same as *borrow-pit.*

borrow[1], *v.* **I.** *trans.* **5.** A term used specifically in *organ-building:* (*a*) of a pipe which improperly takes the wind from another and sounds at the latter's expense; (*b*) of a stop or set of pipes which is incomplete in itself, but which is filled out by using some of the pipes of another stop or set: within certain limits the latter arrangement is entirely legitimate, since it renders possible the use of the same pipes in two distinct connections.—**To borrow trouble**, to be needlessly or unduly anxious, especially over misfortunes that are still contingent.

II. *intrans.* **2.** In *golf*, when putting across sloping ground, to play the ball a little up the slope to counteract its effect.

borrowed, *p. a.* **3.** In *organ-building*, said of pipes or a stop. See ★*borrow, v. t.*, 5 (*b*). **Borrowed days**, in Cheshire, the first eleven days of May, regarded as taken, in the change from old style, from April. **Borrowed light**, reflected light, as the light of the moon, which is merely borrowed from the sun.

bort, *n.*—**Dutch bort**, a local name given at the Kimberley diamond-mines to zircon.

Borzor dog. See ★*dog.*

boschveldt (bosh'velt), *n.* [D., 'bush land.'] A South African name for an open plain covered with bush.

Boscovichian (bos-kọ-vich'i-an), *a.* Pertaining to Ruggiero Giuseppe Boscovich (1711–87), an Italian Jesuit philosopher, physicist, and mathematician, and particularly to his "Theory of Natural Philosophy," published in 1758. Discarding the unverifiable metaphysical hypothesis that within a certain spherical surface about the center of each atom its inertia and attractive and repulsive force is distributed through space, so that at that surface there is a discontinuity and an infinite force, he supposed that the matter within that surface was, like the matter we see, to be explained atomically. He therefore made each atom to be confined to an absolute point where its inertia was concentrated, while in its attractive-repulsive force it was diffused throughout space, thus allowing this force to be infinite and repulsive at a spherical surface, should experiment require that hypothesis, although he held that in the existing state of knowledge the force seemed to vary so as to be attractive at some distances and repulsive at others.—**Boscovichian point** or **atom**, an atom, as above described, whose inertia is confined to a point.

bosh-water (bosh'wâ″tėr), *n.* Water which is circulated around the outside of the boshes of a blast-furnace to prevent them from getting too hot.

> Most of the power houses for these plants have their steam boilers supplied by the waste blast gases, no additional fuel being required; the *bosh water* which is circulated around the tuyeres and cooling plates of the furnaces can be used as condensing water, so that power can be generated very economically, as the power plants for this purpose generally use compound condensing engines of good steam economy.
> *Sci. Amer. Sup.*, March 7, 1903, p. 22727.

Bosnian group. See ★*group*[1].

bosom-knee (bůz'um-nē), *n.* A knee secured to a vessel's side and the after side of a deck-beam. Also called *lap-knee.*

boss[1], *n.* **10.** In *geol.*, an irregular knob-like outcrop of eruptive rock, especially of granite. *Geikie*, Text-book of Geol., p. 722.—**Boss of the stern-post**, in *ship-building*, that part of the stern-post of a screw-steamship where it is swelled out to permit the propeller-shaft to pass through it.

boss[1], *v.* **II.** *intrans.*—**To boss up**, to form a boss or projection on the face of a forging, either by upsetting the metal of the forging or by welding on a piece. Sometimes machining the edges of such bosses is also called *bossing up.*

boss[8] (bos), *n.* The worked-out portion of a mine; the goaf. *Barrowman*, Glossary. [Scotch.]

boss[8] (bos), *v. t.* In *mining*, to hole or undercut. *Barrowman*, Glossary. [Scotch.]

Bossardville limestone. See ★*limestone.*

boss-cockie (bos'kok″i), *n.* A slang name in the Australian bush for a farmer whose holding is large enough to require the employment of laborers to assist him in working it. *E. E. Morris*, Austral English.

bossed (bost), *a.* [*boss*[1] + *-ed*[2].] Having a boss or bosses; specifically, in *ship-building*, swelled out or enlarged to form a boss or rounded protuberance.

boss-frame (bos'frām), *n.* See ★*frame*, 5, (*b*).

bossing[2] (bos'ing), *n.* In *mining*, the holing or undercutting of a thick seam, as of limestone, the height of the undercut being sufficient for a man to work therein. [Scotch.]

bossing-machine (bos'ing-ma-shēn'), *n.* A steam-hammer used for welding the bosses on built-up car-wheels.

boss-plate (bos'plāt), *n.* In *ship-building*, one of the sharply curved plates of the outside shell of a screw-steamship, fitted around the boss of the stern-frame and forming an enlargement of the thin part of the dead-wood to receive the propeller-shaft.

boss-roll (bos'rōl), *n.* An iron roll (formed with collars) over which a cylindrical boss, or shell, turns loosely: used in cotton-manufacturing as one of the draft-rolls of a drawing-frame. Also called *shell-roll.*

boss-tool (bos'töl), *n.* A tool called a *sleeker*, used by molders for smoothing the sides and faces of boss-molds. The body of the tool is a crescent in cross-section and a flat foot turns off at right angles at one end; at the other end is a long handle or shank.

Boston de Fontainebleau. See *boston*, 1.—**French boston**, the French method of declaring and paying in the game of boston.

Boston chaise, fern. See ★*chaise*, ★*fern.*

bostonite (bos'ton-īt), *n.* [*Boston* + *-ite*[2].] **1.** A trade-name for Canadian asbestos, a variety of chrysotile or fibrous serpentine.—**2.** In *petrog.*, a term proposed by Rosenbusch (1882) for certain fine-grained igneous rocks of the syenite family, consisting chiefly of alkali feldspars (microcline, microcline-microperthite, anorthoclase or orthoclase). The texture is panautomorphic granular, with common tabular form and fluidal arrangement of the feldspars. Rosenbusch regards bostonite as a leucocratic differentiation-product of syenitic magmas and as a typical 'dike-rock.' It is nearly the same as keratophure. First described from Marblehead Neck, not far from Boston, whence the name.

bostrychid (bos'tri-kid), *a.* and *n.* **I.** *a.* Of or belonging to the coleopterous family *Bostrychidæ.*

II. *n.* A member of the *Bostrychidæ.*

Bostrychoid cyme. Same as *bostryx.*—**Bostrychoid dichotomy.** Same as *helicoid dichotomy* (which see, under *helicoid*).

bosua (bō-sö'ạ), *n.* [Native name.] A tree of the rue family, *Fagara monophylla*, which yields a yellow wood. Its bark contains berberine and is used as a yellow dye. [Venezuela.]

boswellic (boz-wel'ik), *a.* [*Boswellia* + *-ic.*] Derived from plants of the genus *Boswellia.*—**Boswellic acid**, an acid of unknown composition found in olibanum. Also called *boswellinic acid.*

bot[1], *n.*—**Emasculating bot**, the larva of a fly of the family *Œstridæ*, *Cuterebra emasculator*, which lives in the genital and axillary regions of gophers and squirrels.

bot[5] (bot), *n.* [From the initials of "Board of Trade".] The English Board of Trade unit of electrical supply.

bot[6] (bot), *n.* **1.** A dialectal form of *bat*[1] in various senses. Also spelled *bott.*—**2.** In *founding*, a clay plug used to close a hole against molten iron.

B. O. T. An abbreviation of *Board of Trade.*

botallackite (bo-tal'ak-īt), *n.* [*Botallack* + *-ite*[2].] A mineral containing copper as hydroxy-chlorid, found at the Bottallack mines, Cornwall, closely related to if not identical with atacamite.

Botal's duct. Same as *ductus Botalli.*

Botanic physician, a physician who uses no drugs except those of vegetable origin.

botany, *n.*—**Agricultural botany**, that branch of the science of plants which relates to their utility in agriculture.—**Commercial botany**, that branch of botany which relates to plants or plant products which enter into trade.—**Cryptogamic botany**, that branch of botany which relates to the *Cryptogamia*, or flowerless plants.—**Domestic botany**, a body of simplified botanical information suited to home use.—**Economic botany**, the science of plants with reference to their uses, including, therefore, agricultural, commercial, medical, etc., botany.—**Medical botany**, the science of plants with reference to their medical uses.—**Œcological botany**, that division of botany which relates to the correlation of plants with their environment; plant œcology. See ★*phytogeography.*—**Phanerogamic botany**, the botany of the *Phanerogamia* or flowering plants.—**Tropical botany**, that branch of botany which deals with the plants of the tropics.

bote[4] (bō'tā), *n.* [Jap.] The Japanese name of a deep-bodied shiner of the family *Cyprinidæ*, *Acheilognathus rhombeus*, found in the waters of Japan. Also known as *tabira.*

botete (bō-tā'tā), *n.* [Mex. Sp.?] One of the swell-fishes, *Spheroides lobatus*, found from the Gulf of California to the Galapagos.

bothragonus (bọ-thrag'ọ-nus), *n.* [NL., < Gr. βόθρος, a pit, + NL. *Agonus.*] A genus of sea-poachers typified by the species *B. swani* of Puget Sound.

bothridium (bō-thrid'i-um), *n.*; pl. *bothridia* (-ä). [NL., < Gr. βόθρος, a pit, + dim. -ίδιον.] **1.** Same as *bothrium. Van Beneden.*—**2.** In *Cestodea*, the cup or sucker carried by the phyllidium. *Benham.*

bothriocephaline (both″ri-ọ-sef'a-lin), *a.* Having the characters of or resembling the *Bothriocephalidæ.*

Bothriocidaris (both″ri-ọ-sid'a-ris), *n.* [NL., < Gr. βόθριον, dim. of βόθρος, a pit, + κίδαρις, a Persian head-dress.] The only genus representing the extinct echinoids or sea-urchins of the order *Bothriocidaroida.* They are nearly spherical bodies, the ambulacra carrying 2 vertical rows of plates in 5 series, and the interambulacra but a single row. The genus occurs in the Lower Silurian of Esthonia.

Bothriolepis (both-ri-ol'e-pis), *n.* [NL., < Gr. βόθριον, dim. of βόθρος, a pit, + λεπίς, a scale.] A genus of fossil fishes belonging to the family *Asterolepidæ*, of the order *Antiarcha.* They are allied to *Pterichthys*, but have the remarkable pectoral appendages much longer. Like the other members of this family, it is found in the Old Red Sandstone deposits of Europe and America. See ★*Antiarcha*, ★*Asterolepidæ*, and *Pterichthys.*

Bothriothorax (both″ri-ọ-thō'raks), *n.* [NL. (Ratzeburg, 1844), < Gr. βόθριον, dim of βόθρος, a pit, + θώραξ, breastplate.] A notable genus of chalcidoid hymenopterous parasites of the family Encyrtidæ. They have very coarse and thick punctures on the head and scutellum and a long mesoscutum. The species whose habits are known are parasitic on dipterous larvæ, inflating the skin of the host in pupating.

Bothrocara (bọ-throk'ạ-rä), *n.* [NL., < Gr. βόθρος, a pit, + (?) κάρα, head.] A genus of zoarcid fishes typified by the species *B. pusilla* of Bering Sea.

bothrocraspedote (both″rọ-kras'pe-dōt), *a.* [Gr. βόθρος, a hollow, + κράσπεδον, edge.] In *anthrop.*, having a hollow margin: said of the nasal skeleton. *Jour. Anthrop. Inst.*, 1900, p. 147.

bothropic (bọ-throp'ik), *a.* [NL. **bothrops*, a generic name (< Gr. βόθρος, a pit, + ὤψ, eye, face), + *-ic.*] Noting a form of snake poison derived from the genus *Lachesis.*

> Dr. Vital, . . . on further experiment, made the important discovery that there are two classes of snake poison, the *bothropic* and the crotalic, the first belonging to the genus Lachesis and the second to the genus Crotalus.
> *Sci. Amer.*, Aug. 13, 1904, p. 110.

Bothus (bō'thus), *n.* [NL., origin not ascertained.] A genus of flatfishes typified by the European brill, *B. rhombus:* distinguished from the turbot, *Scophthalmus lævis*, by the presence of true scales.

boton (bō-tōn'), *n.*; pl. *botones* (tō'nēz.) [Sp.] A button; specifically, the knot at the end of a rope used as a lariat. [Mex. and south-western U. S.]

Fruit of botong (*Barringtonia speciosa*), about one fifth natural size.

botong (bō-tong'), *n.* [Philippine Sp.; also *bitung, bitoon, bitog*, < Tagalog *botong-botong* (Blumentritt), Bisaya *bitoón.* Not the same as Bisaya *botong*, the name of a large reed and of a liana.] A handsome littoral tree, *Barringtonia speciosa*, belonging to the *Lecythidaceæ*, having large, glossy leaves and white flowers with crimson stamens. The four-angled pyramidal fruit is widely used in the East Indies and on the tropical islands of the Pacific as a fish-intoxicant. In Guam it is called *putting* and in Samoa *futu.* See ★*Barringtonia.* [Philippine Is.]

botoque (bọ-tō'ke), *n.* [Pg. *botoque*, a stone worn by the Indians (Lacerda), appar. connected with *botoque*, a hole in a cask or pipe; a bunghole.] An ornament worn in a perforation of the lower lip; a labret. [Brazil.]

botrycymose (bot-ri-sī'mōs), *a.* [Gr. βότρυς, a cluster of grapes, + E. *cymose.*] Consisting of racemes or any botryose clusters cymosely aggregated. *A. Gray.*

Botryoidal tissue, in certain leeches, a peculiar growth surrounding the enteric canal, blood-vessels, and main lacunæ of the cœloma, and consisting of branched rows of swollen cells containing dark pigment.

botryomyces (bot″ri-om'i-sēz), *n.* [NL., < Gr. βότρυς, a cluster, + μύκης, a fungus.] A micrococcus, *Staphylococcus botryomyces*, which causes the formation of small fibrous tumors in the lungs and other structures in the horse.

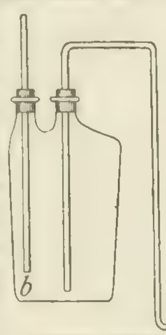
botryomycosis (bot″ri-o-mi-kō'sis), *n.* [NL., < *botryomyc(es)* + *-osis.*] A morbid condition caused by the presence of Botryomyces.

botryotherapy (bot″ri-ọ-ther′a-pi), *n.* [Gr. *βότρυς*, a cluster of grapes, + *θεραπεία*, cure.] Same as *grape-cure*.

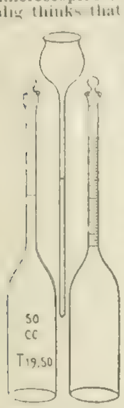
Böttger's test. See ★*test*1.

Bottini's operation. See ★*operation*.

bottle2, *n.* **Cubic-foot bottle,** an egg-shaped metallic vessel having glass tubes at the top and bottom and of a capacity of exactly one cubic foot between the water-lines of the two tubes: used in testing the correctness of gas-meters. *W. L. Dibdin*, Public Lighting, p. 83. **Hicks's bottles,** certain long, delicate tubes, each with a bottle-like inner extremity, found in the antennæ of bees and ants, 12 in the terminal segment and one or two in each of the others. Lubbock suggests that they may be microscopic stethoscopes, and Leydig thinks that they are chordotonal organs. *A. S. Packard*, Text-book of Entom., p. 292. **Jenny Lind bottle,** a bottle with a globular body and long, slender neck, extensively made by American glass-manufacturers. This type was originated in the year 1850, when the famous singer came to America. See cut under ★*blowing-mold*. **Mariotte's bottle,** an apparatus for securing a uniform flow of a liquid, such as water. The liquid is placed in a two-necked bottle (with both necks on the top, or one on the top and the other at the side) fitted with air-tight stoppers, an inlet-tube for air, and a siphon or a stop-cock for outlet. The outflow will be regular, owing to the influence of atmospheric pressure, and the difference of pressure within and without the bottle is always equal to a column of the liquid used whose height equals the difference between the level between *b* and *o*.—**Reischauer's bottle,** a special form of pycnometer in use by brewers.—**Soxhlet bottle,** a special apparatus used for the extraction of fat in milk or other substances.—**Specific-gravity bottle,** a flask for the determination of the specific gravity of gases, liquids, or solids.—**Squibb's specific-gravity bottle,** a special form of pycnometer which permits the liquid to expand without loss of vapor during the process of weighing.



Mariotte's Bottle.



Reischauer's Specific-gravity Bottle.

Squibb's Specific-gravity Bottle.

bottle-atom (bot′l-at″um), *n.* Same as *bottle-tit*.

bottle-butted (bot′l-but″ed), *p. a.* See ★*swell-butted*.

bottle-coal (bot′l-kōl), *n.* Gas-coal. *Barrowman*, Glossary. [Scotch.]

bottle-kiln (bot′l-kil), *n.* A pottery kiln shaped like a bottle.

Bottlenose oil. See ★*oil*.

bottle-pool (bot′l-pöl), *n.* An American game of pool played under various and conflicting rules. Its chief feature is that a leather bottle is placed, bottom upward, in the center of the table. To knock this over, under certain conditions, with the cue-ball increases the score. Two red balls and one cue-ball are used, and pockets and caroms count.

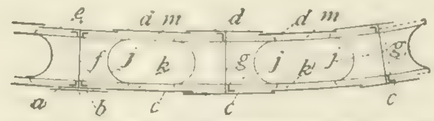
bottle-stone (bot′l-stōn), *n.* [Tr. G. *Bouteillenstein*.] A green and very pure glass, or glassy rock, which is found as rolled pebbles in the Moldau river, Bohemia: otherwise called *moldauite* and *pseudochrysolite*. *Smithsonian Rep.* (Nat. Mus.), 1900, p. 516.

bottle-swallow (bot′l-swol″ō), *n.* A local name for the fairy-martin, *Hirundo* (*Lagenoplastes*) *ariel*, referring to the shape of its nest, which is built under eaves or overhanging rocks like the nests of the American cliff-swallow. The bird is widely distributed through Australia and has been found in Tasmania.

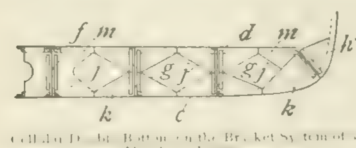
bottle-tight (bot′l-tīt), *a.* So tight as to admit of no leakage: used to signify that a boiler is without a leak at any rivet, seam, or joint when tested under steam pressure.

bottle-tree, *n.* **2.** Any tree with a swollen trunk. In examples of the dry, thorny bush of central Brazil (*Cavanillesia arborea* and other *Bombacaceæ*) the trunks are expanded like a cask up to a thickness of five meters. These trunks serve as water-reservoirs to carry the tree through the dry season.

bottom, *n.*, **4.** (*b*) The lowest landing in a shaft or incline; the lowest working in a mine. (*c*) The lower portion of a seam or bed, as of coal. *Barrowman*, Glossary. [Scotch.] (*d*) In *gold-mining*, the old river-bed upon which the wash-dirt rests, and upon which the richest alluvial gold is found. Sometimes called the *gutter*. *Austral English*.—**18.** In *golf*, a backward rotation of the ball which tends to check its motion after it touches the ground.—**19.** In *saddlery*, the portion of a martingale which passes between the horse's belly and the belly-band.—**American bottom,** an alluvial plain bordering the east side of the Mississippi river in southern Illinois. *Science*, Mar. 18, 1904, p. 450. **Bottom disease.** Same as ★*crotalism*.—**Cellular bottom.** Same as *double* ★*bottom*. **Double bottom,** in *shipbuilding*, the space between the outside and the inner bottom plating of an iron or steel ship. The inner and outer plating are separated by the frames and longitudinals, or framing of the double bottom. A certain number of these frames and longitudinals are made water-tight,



Cellular Double Bottom, on the Bracket System of a Warship.



Cellular Double Bottom on the Bracket System of a Merchant Vessel.

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thus dividing the double bottom into a number of cells, and the whole is sometimes called a *cellular bottom*. The cells are usually arranged to contain water ballast in merchant ships, and are then called *ballast-tanks*. Some of them are fitted for the storage of feed-water for the boilers or drinking-water for the crew. Hence the double-bottom is sometimes called the *water-bottom*.—**Water-bottom.** Same as *double* ★*bottom*.

bottom, *v. i.* **3.** In *bot.*, to form a bulb or other underground expansion, as an onion.—**4.** In *gold-mining*, to get to the bed-rock, or clay, below which it is useless to sink. *E. E. Morris*, Austral English.

bottom-blow (bot′um-blō), *n.* Same as ★*mud-blow*.

bottom-broth (bot′um-brôth), *n.* A fanciful name applied to the ooze or slime found covering the floor of the sea, and formerly supposed to be living matter (called *bathybius* by Huxley).

> Bathybius, then, is now no longer known as Bathybius, but as '*bottom broth*,' an exceedingly suggestive term, and it is supposed to be the inexhaustible supply of nourishment, the basal food store-house of the innumerable creatures that live and move, or simply live without movement, at or near the bottom of the sea.
> *Science*, May 31, 1901, p. 847.

bottomer (bot′um-ėr), *n.* In *mining*, the person who loads the cages at the pit-bottom and gives the signal to bank. *Coal and Metal Miners' Pocketbook*.

bottoming (bot′um-ing), *n.* The act of forming a bottom or of placing on a bottom or foundation, as the fitting of a structure with a bottom, the placing of the ballast for a road-bed, or the Telford foundation for a pavement.

bottoming-piston (bot′um-ing-pis″tọn), *n.* A piston that touches the end of the cylinder and hence has no clearance.

bottom-line (bot′um-līn), *n.* A fishing-line stretched on the bottom and having attached to it short lines with hooks.

bottom-moraine (bot′um-mọ-rān″), *n.* A ground-moraine. *J. Geikie*, The Great Ice Age, p. 39.

bottom-rot (bot′um-rot), *n.* A decay of the base of trees, especially firs and spruces, caused by fungi, particularly *Polyporus Schweinitzii*.

bottom-set (bot′um-set), *p. a.* Deposited conformably upon the sea floor, as in delta-building. See *bottom-set* ★*bed*. *Chamberlin and Salisbury*, Geol., I. 191.

botulism (bot′ụ-lizm), *n.* [NL. *botulismus*, < L. *botulus*, sausage, + *-ism*.] Poisoning with ptomaïnes of decomposing meat, especially potted meat or sausage, referable to a toxin produced by the *Bacillus botulinus*. Also *botulismus*.

> The varieties of meat which have most frequently given rise to poisoning (*Botulismus*) are pork, ham, veal, sausages, brawn, various kinds of meat pies, and potted meats.
> *Encyc. Brit.*, XXX. 609.

botuto (bō-tö′tō), *n.* [S. Amer.] A large clay trumpet formerly used by certain Indian tribes of the Orinoco region. *Smithsonian Rep.*, 1896, p. 652.

boucanelle (bö-ka-nel′), *n.* [Martinique F., < NL. *buccanella*, < (?) L. *bucca*, mouth.] A common name in Martinique of the black-fin snapper, *Lutjanus buccanella*.

boucharde (bö-shärd′), *n.* [F., origin unknown.] A hammer having a head with many points, used by stone-cutters in dressing the surface of stone; also, a similar tool used by sculptors.

boucharde (bö-shärd′), *v. t.* To dress (stone) with a boucharde.

Bouchardia (bö-shär′di-ạ̈), *n.* [NL., < *Bouchard*, proper name.] A genus of brachiopods. They have elongate, smooth, radially colored shells, with elevated beak on the larger valve, the smaller or dorsal valve having a large-lobed cardinal process. The brachidium consists of curved triangular processes uniting with a median septum. They live in the Caribbean Sea.

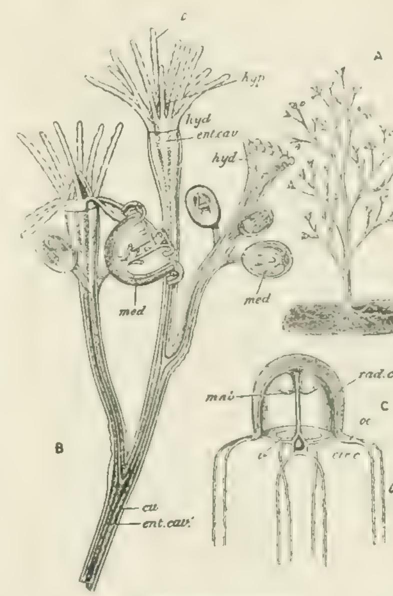
boucherism (bö′shėr-izm), *n.* The practice or process of impregnating timber with sulphate of copper, in order to preserve it. *Notes and Queries*, Sept. 10, 1892.

boucherize, *v. t.* **2.** To impregnate (timber) with any preservative liquid by means of capillary absorption in a still living tree. The liquid is applied at the base of the trunk, beneath the bark, either with or without hydrostatic pressure.

bouclée (bö-klā′), *n.* [F., < *boucler*, buckle: see *buckle*, *v.*] The French name for what in billiards elsewhere is known as the *hook-bridge*, the forefinger of the bridge-hand infolding the cue in its narrowest part. *Broadfoot*, Billiards, p. 109. See cut at ★*bridge*.

bouderie (bö′dė-rē), *n.* [F., < *bouder*, pout: see *boudoir*.] Pouting; sulks. *Thackeray*, Newcomes, II. 239.

Bougainvillia (bö-gān-vil′i-ạ̈), *n.* [NL., < *Bougainville* (1729-1814), a French navigator.] The typical genus of the family *Bougainvillidæ*. *Lesson*, 1843. Same as *Hippocrene*, 2 (*b*). *Mertens*, 1829.



Bougainvillia ramosa.

A, entire colony, about two thirds natural size; *B*, portion of the same magnified; *C*, immature medusa; *circ.*, circular canal; *cu.*, cuticle or perisarc; *ent. cav.*, enteric cavity; *hyd.*, polyp or hydranth; *hyp.*, hypostoma or manubrium; *med.*, medusa; *mnb.*, manubrium; *rad. c.*, radial canal; *t*, tentacle; *v*, velum. (From Parker and Haswell's "Zoology," after Allman.)

Bougainvillidæ (bö-gān-vil′i-dē), *n. pl.* [NL., < *Bougainvillia* + *-idæ*.] A family of tubularian *Hydromedusæ*, with a conical hypostoma having a single row of filiform tentacles around its base. It contains *Bougainvillia*, *Dicoryne*, *Perigonimus*, and several other genera.

bough1†, *v.* **I.** *trans.* **2.** To strip of boughs. *Fitzherbert*, Husb., §132.

II. *intrans.* To send out boughs.

bougie, *n.* **3.** A pencil of paraffin or other material which melts at the temperature of the body, with which some medicinal substance has been incorporated: employed for local medication of the urethra, uterus, or other canal into which it is introduced, the melting of the bougie liberating the drug.—**Bougie à boule** ['ball bougie'], a bougie having a bulbous expansion at its extremity, employed to locate a constriction in a canal. **Bougie décimale,** in *photom.*, a standard of light defined as one twentieth of the Violle platinum standard and represented in practice by the light from a Hefner standard lamp. See *light* ★*standard*.—**Bougie de l'étoile,** a French standard candle formerly used in photometry. See *standard* ★*candle*. **Filiform bougie,** a very slender bougie of whalebone or other elastic material.

bougie-meter (bö-zhē-mē'tėr), *n.* A unit of illumination used in photometry: the illumination produced by the flame of the standard Hefner lamp at a distance of one meter. Same as ★*lux*.

bougong, *n.* See ★*bugong*.

bouillon, *n.* 3. A puff on a lady's dress: a puffed fold of the same material.

bouillotte (bö-lyot'), *n.* [F., a little boiler, < *bouillir*, boil.] A device for heating and moistening the compressed air on a compressed-air locomotive by passing it through a tank of hot water on its way from the storage-reservoir to the motor-cylinder. *Sci. Amer. Sup.*, Oct. 17, 1903, p. 23236.

bouked (bökt), *a.* In *mining*, increased in size: for example, when a winding-drum is increased in diameter by lagging-strips, or the cylinder of a pump is enlarged by wear. Also *bowked*. *Barrowman*, Glossary. [Scotch.]

bouking (bö'king), *n.* In *mining*, segments of wood or other material used for increasing the diameter of a winding-drum (see *lagging*, 3); hence, winding. When a rope is not coiling evenly on a drum it is said not to be *bouking* well. *Barrowman*, Glossary. [Scotch.]

Boulangism (bö-loṅ'jizm), *n.* The political policy and methods represented in France by General Georges Ernest Jean Marie Boulanger (1837-91) from about 1886 to 1889. Its chief features were militarism and revenge upon Germany.

Boulangist (bö-loṅ'jist), *n.* A political follower of General Boulanger.

boulder-bed (bōl'dėr-bed), *n.* See ★*bed*¹.

boulder-belt (bōl'dėr-belt), *n.* A train of boulders deposited by a glacier on melting. *J. Geikie*, The Great Ice Age, p. 742.

boulder-clay, *n.*—**Great chalky boulder-clay**, an unstratified mass of pale, dirty gray clay, more or less abundantly crammed with fragments of chalk and flint. This deposit is one of the lowest members of the glacial series of southern England. *J. Geikie*, The Great Ice Age, p. 342.

boulder-cracker (bōl'dėr-krak"ėr), *n.* A heavy iron rod to be dropped upon a rock encountered by the drill in a deep well-boring. *Stand. Dict.*

boulderet (bōl-dėr-et'), *n.* A small boulder. *R. D. Salisbury*, Geol. Surv. of New Jersey, 1893, p. 291.

boulder-fern (bōl'dėr-fėrn), *n.* See ★*fern*¹.

boulder-pavement (bōl'dėr-pāv"ment), *n.* An exposed bed of boulders such as might result from the removal of sand or clay, by waves or currents, from unsorted glacial deposits. *J. Geikie*, The Great Ice Age, p. 523.

boulder-train (bōl'dėr-trān), *n.* A train of boulders, once a lateral moraine upon a glacier, now left stranded in lineal arrangement by the melting of the ice-sheet.

boulder-wall (bōl'dėr-wâl), *n.* A frontal moraine composed almost entirely of boulders. *J. Geikie*, The Great Ice Age, p. 467.

bouleutai (bö-lū'tī), *n. pl.* [Gr. βουλευταί, pl. of βουλευτής, < βουλεύειν, take counsel, < βουλή, counsel: see *boule*.] In *Gr. antiq.*, members of the council or boule of a Greek city. See *boule*².

bouleutic (bö-lū'tik), *a.* [Gr. βουλευτικός, < βουλευτής, member of a council: see ★*bouleutai*.] In *Gr. antiq.*, pertaining to the boule or council of a Greek city: as, the *bouleutic* oath.

boulevardist (bö'le-vär-dist), *n.* [*boulevard* + *-ist*.] Same as *boulevardier*.

bound³, *p. a.*—**Bound energy.** See ★*energy*.

boundary-rider (boun'da-ri-rī"dėr), *n.* A man employed on an Australian farm or 'station' to ride over the estate, inspecting the fences and gates.

> The manager's lieutenants are the '*boundary-riders*,' whose duty it is to patrol the estate and keep him informed upon every portion of it.
> *Scribner's Mag.*, Feb., 1902, p. 147.

bounder, *n.* 4. A dos-à-dos dog-cart brought out in England in 1843.—5. A four-wheeled cab.—6. A vulgar, ill-mannered swell; a loud, boisterous person. [Eng. slang.]

> The beautiful art [of dancing] . . . has fallen largely into the hands—or perhaps we should say feet—of hoydens, *bounders*, and acrobats. *World* (London).

bouquet, *n.* 3. See the extract. Also called *bouquet of herbs* and *fagot of herbs*.

> Parsley wrapped around peppercorns, cloves, bay-leaves, and other herbs excepting sage, and tied, makes what is called a *bouquet*. In this shape the herbs are more easily removed. *Century Cook Book.*

bouqueted (bö-kād'), *a.* Furnished with a bouquet or with bouquets.

bourbe, burbe (börb), *n.* [F. *bourbe* (Larousse): name in Tunis.] A copper coin and money of account in Tunis, of the value of half an asper.

Bourbon metal. See ★*metal*.

bourdon², *n.* (*c*) In the hurdy-gurdy, the lowest open string, usually tuned to the C below middle C or to the G below that.—**Bourdon lace, tube.** See ★*lace*, ★*tube*.

Bourg la Reine porcelain. See ★*porcelain*¹.

Bourgueticrinus (bör-get-ik'ri-nus), *n.* [NL., < F. *Bourguet*, a proper name, + Gr. κρίνον, a lily (see *crinoid*).] A genus of *Crinoidea*, or encrinites, typical of a family *Bourgueticrinidæ*. They have a small pyriform calyx with remarkably large centrodorsal plate, 5 basal plates, and 5 radials. This member of the family has been found in Jurassic, Cretaceous, and Tertiary rocks, but *Rhizocrinus*, another representative, is found living to-day in the greater depths of the ocean. See *Rhizocrinus*.

bourneene (bör'nẹ-ēn), *n.* A liquid hydrocarbon from *Dryobalanops camphora*: now considered to be a mixture of the decomposition-products of camphene.

bourrelet, *n.*—**Buccal bourrelets**, in certain echinoids or sea-urchins, fossil and recent, especially those belonging to the family *Cassidulidæ*, lip-shaped ridges formed when the ambulacral areas about the peristome are sunken and the interambulacra are swollen. The entire combination forms a floscelle about the mouth.

bourrette (bö-ret'), *n.* [F. *bourrette*, coarse silk, < *bourre*, refuse silk, etc.: see *bur*¹, *n.*, 7.] An inferior grade of spun silk, made from the waste in the manufacture of schappe silk. It is often used as weft for dress-goods, knit goods, fancy fabrics, insulating lagging for steam-pipes, etc.

Boussingaultia (bös-in-gâl'ti-ä), *n.* [NL. (Humboldt, Bonpland, and Kunth, 1825), named in honor of Jean Baptiste Joseph Dieudonné *Boussingault* (1802–87), a French chemist, who traveled in South America.] A genus of plants of the family *Basellaceæ*. It contains about 10 species, all climbing herbs of tropical America. *B. baselloides*, commonly known as *Madeira vine* or *mignonette-vine*, a native of Ecuador, is a popular perennial-rooted but tender twiner, used for porches, in greenhouses, and in window-gardens. It produces a profusion of small white fragrant flowers in racemes. See also *Madeira-vine*.

boutell†, *n.* Same as *boltel*.

boutgate (bout'gāt), *n.* In *mining*, a road by which the miners can reach the surface; a traveling-way around a shaft at a landing; a traveling-road from one seam to another. *Barrowman*, Glossary.

boutique (bö-tēk'), *n.* [F.: see *bodega*, *apothec*.] A shop or place where goods are sold at retail.

bouto (bō'tō), *n.* [Pg. *bouto*, *boto*, *bodo*, from a Brazilian name.] A large dolphin, *Inia geoffrensis*, of the Amazon river. It is of variable color, often pink or pink and black, attains a length of 8 feet, and is regarded with superstitious reverence by the Indians.

bouton, *n.* 2. In *entom.*, the spoon-like or button-like extremity of the tongue of the honey-bee. *A. S. Packard*, Text-book of Entom., p. 80.

boutonnière (bö-ton-iãr'), *n.* [F.] 1. A buttonhole bouquet.—2. In *surg.*, an incision into the urethra for the removal of an impacted calculus.

Bovey-Tracey lignites. See ★*lignite*.

bovicide (bō'vi-sīd), *n.* [L. *bos* (*bov-*), ox, + *-cida*, < *cædere*, kill.] A slayer of oxen; a butcher. *E. Phillips.*

bow², *n.*, 4. (*j*) A curved piece of metal used to make contact with an electric wire to get current for operating a car. This bow is used in place of a trolley.—**Composite bow**, in *archery*, a bow made of two or more pieces of wood, bone, sinew, or other material joined together longitudinally. See *bow*², 2.—**Reflex bow**, in *archery*, a bow, concave on the back when unstrung, the curve of which is reversed in stringing it.—**Springing bow**, in *violin-playing*, same as *saltato*.—**Twilight bow** or **twilight arch.** Same as *twilight curve*. It is most distinct when the sun is only a few degrees below the horizon, and is then reddish at the upper edge. As it rises (after sunset) it becomes more indistinct, and practically disappears before reaching the zenith.

bow³, *n.*—**In bow!** an order given to the bow-oarsman of a single-banked boat, signifying that he is to cease rowing, ship or boat his oar, and stand up with his boat-hook to catch hold of the dock, float-stage, or vessel's side to hold the boat steady after the landing has been made. The plural form, *in bows*, is used in the case of a double-banked boat, where there are two bow-oarsmen.

bowback (bō'bak), *n.* The whitefish, *Coregonus clupeiformis*.

bow-chock (bou'chok), *n.* In *marine hardware*, a chock with two arms which are bent over and nearly touch in the middle: used on yachts to keep the mooring-rope in place.

bow-cithern (bō'sith"ėrn), *n.* See ★*cithern*, 2.

boweled, bowelled (bou'eld), *p. a.* 1†. Disemboweled: as, "a hare already *bowelled*."—2. Having recesses or hollow places: as, "the *bowelled* cavern." *Thomson*, Summer, p. 133.

Bower-Barff process. See ★*process*.

bowl², *n.* 7. The main cylinder or drum of a calico-printing machine, against which are pressed the engraved copper rollers; a calender-roller.—8. An antifriction roller in the pedal-motion of the feeding-device of a cotton-scutcher or picking machine. **Stocks and bowls**, a set of loom-levers, either circular or oblong, connected with the harnesses for operating them, when the same number is required to be lifted at each pick of the weft.

bowl², *v. t.* **To bowl off one's pads**, in *cricket*, to bowl (a batsman) by a ball which strikes him on the leg-guards. *Hutchinson*, Cricket, p. 312.

bowl-ball (bōl'bâl), *n.* A game of the natives of North Australia, consisting in rolling a ball or disk along a sloping place and discharging small spears at it as it rolls.

bowl-disk (bōl'disk), *n.* Same as ★*bowl-ball*.

bow-light (bou'līt), *n.* A large lantern, usually with a Fresnel globe, placed at a ship's bow.

bowlin, *n.* A simplified spelling of bowline.

Bowline lizard. See ★*lizard*.

bowling², *n.* **Break bowling**, in *cricket*, bowling in which the ball, after pitching on the ground, changes its course. *Hutchinson*, Cricket, p. 53. **Length bowling**, in *cricket*, bowling which has the proper length or pitch. See *length* ★*ball*.

bowly (bō'li), *n.*; pl. *bowlies* (-liz). [Also *bowlee*, *bowry*. Hindi *baoli*, *bāorī*, Marathi *bāvaḍi*, Telugu *bāvidi*.] A large rectangular well, provided with steps leading down to the water, and with recesses for travelers to rest in. The providing and maintenance of such tanks is a favorite object of native benevolence. [Anglo-Indian.]

bowmanite (bō'man-īt), *n.* [For H. L. *Bowman* of Oxford, England.] A rare phosphate of aluminium and calcium, related to hamlinite. It occurs in rosettes of thin rhombohedral crystals of honey-yellow color, and is found in the dolomite of the Binnenthal, Switzerland.

bow-mark (bō'märk), *n.* In *archery*, a target or mark to be shot at.

bow-pencil (bō'pen"sil), *n.* See *bow-pen*.

bow-plating (bou'plā-ting), *n.* In *ship-building*, the outside shell-plates of a steel or iron vessel, covering the bows and extending to the stem.

> A portion of the heavy iron stem of the former was nearly wrenched out of place, and the armour and *bow plating*, etc., abutting on the stem were considerably disturbed.
> *White*, Manual of Naval Arch., p. 539.

bow-rest (bō'rest), *n.* An iron projection placed at the rear corner of a carriage-seat as a support for the lower end of the top-joint, and also for the bows when the top is lowered.

bow-rudder (bou'rud"ėr), *n.* A rudder sometimes fitted at the bows or under the fore part of the keel of vessels intended for special purposes, as torpedo-boats, to give great turning power, or to permit the vessel to steer more easily when going astern.

> Of the auxiliary appliances fitted to increase the steering power of ships, the most important are *bow rudders*. These rudders are rarely fitted except in vessels which are required to steam with either end foremost; to avoid the necessity for turning, or to be capable of service in rivers or narrow waters where there is little room for turning, or to meet some other special requirement.
> *White*, Manual of Naval Arch., p. 699.

bow-socket (bō'sok"et), *n.* A long metallic socket used in place of slat-irons on the bows of a carriage-top.

bow-spring (bō'spring), *n.* In *elect. traction*, the spring which keeps the bow spread out, when a bow is used to take current from a trolley-wire. See ★*bow*², 4 (*j*).

Bowsprit bitts, perpendicular timbers which extend above the upper deck, and between which the heel of the bowsprit is secured.

bowstave (bō'stāv), *n.* Same as *bowstaff*.

bowstring-creeper (bō'string-krē"pėr), *n.* Same as ★*jeetee*.

bowstring-truss (bō'string-trus"), *n.* A form of truss in which the upper chord or compression flange is made in the form of a 'bow' or curve, preferably a parabola, and the lower chord or tension-member is a straight line. The truss resembles a bow and string, whence its name.

bow-wave (bou'wāv), *n.* The wave set up at the bows of a vessel under way. The crest of the wave is inclined diagonally outward and aft on each side from the bow.

> During each interval occupied by a ship in advancing through a distance equal to the length of her entrance the sets of particles then contiguous thereto undergo accelerations which lead to the production of the *bow-wave*; and this interval of time depends upon the ratio of the length of entrance to the speed of the ship.
> *White*, Manual of Naval Arch., p. 457.

bowyer[1], *n.* **Master bowyer,** the chief bowyer.

box[1], *n.* **2.** A name in Australia (usually with a distinctive epithet, as *bastard, black, white,* etc.) of many eucalypts, and of a few trees of the genus *Tristania*, belonging to the same family: applied chiefly because of the qualities of their timber, which more or less resembles true boxwood. See the phrases below. In Australia the name is also applied to several shrubs or trees on account of their odor, which resembles that of the true box (see *China* ★*box*), or of their dwarf habit with leaves like the true box (see *heath* ★*box* and *native* ★*box*). **Bastard box,** *Eucalyptus gomocalyx, E. bicolor* (also called *coburn*), *E. longifolia, E. microtheca, E. polyanthemos, E. populnea* (also called *bembil* or *red box*), *Tristania conferta*, and *T. laurina.* **Black box,** *Eucalyptus obliqua, E. bicolor*, and *E. microtheca.* **Box family,** the plant family ★*Buxaceæ* (which see), including the genus *Buxus*, which contains the common box. **Box reaction.** See ★*reaction.* **Brisbane box,** *Tristania conferta.* **Broad-leafed box,** *Eucalyptus hemiphloia.* **Brown box,** *Eucalyptus polyanthemos.* **Brush box,** *Tristania conferta.* **Cape box,** a grayish spiny shrub, *Celastrus buxifolia*, common in South Africa; it resembles the ordinary box in growth. **China box,** *Chalcas Camuneng*, of the rue family, a perfume plant; found also in India and China. **Dwarf** or **flooded box,** *Eucalyptus microtheca.* Also called *goborro* and *swamp-gum*, from its habit of growing on land inundated at flood time. **Gray box,** *Eucalyptus gomocalyx, E. hemiphloia, E. bicolor, E. polyanthemos*, and *E. saligna.* **Heath box,** *Gynmopogon buxifolia*, of the dog's-bane family. **Ironbark box,** *Eucalyptus obliqua.* **Native box,** *Bursaria spinosa*, a forage-plant belonging to the *Pittosporaceæ.* Also called *box-thorn* and *native olive.* **Poplar box,** *Eucalyptus populnea.* **Red box,** *Eucalyptus populnea, E. polyanthemos,* and *Tristania conferta.* See *bastard* ★*box* and ★*bembil.* **Tasmanian box.** Same as *native* ★*box.* See ★*box-thorn,* 2. **Thozet's box,** *Eucalyptus Raveretiana.* **White box,** *Eucalyptus hemiphloia, E. odorata, E. populnea,* and *Tristania conferta.* **Yellow box,** (*b*) *Eucalyptus hemiphloia* and *E. bicolor.*

box[2], *n.*, **9.** In *mach.*: (*g*) A die for cutting the thread on a wooden screw.—**16.** In *irrigation*, a device for measuring water through a small flume of rectangular section.—**17.** In *turpentine-making*, the cavity cut in a pine-tree to receive the resin which flows from the scarified surface above.—**18.** In *mining*, a small mine-car; a hutch; a tub.—**19.** A mix-up of things that should be kept apart, as different flocks or mobs of sheep. [Australia.]

> Great care must of course be taken that no two flocks come into collision, for a *box*, as it is technically called, causes an infinity of trouble, which is the reason that the stations are so far apart.
> *C. H. Eden*, My Wife and I in Queensland, p. 67.

Batsman's box. See ★*batsman.* **Box of tricks.** Same as ★*building-motion.* **Circular box,** a cylinder with chambers for shuttles, attached to the lathe of a loom and moved forward and backward as may be necessary to bring the desired shuttle and yarn within striking range of the picker. Also called *revolving box.* [Eng.] **Clifford's box,** in *math.*, a hollow surface with tubes running through it, into the form of which a Riemann's surface may be distorted. **Three-part box,** a molding-box or -flask consisting of three parts, and used for molding those patterns in which the middle section must be distinct from the top and bottom, as in the case of a grooved pulley. *Lockwood*, Dict. Mech. Eng. Terms.

box[2], *v. t.* **6.** To mix up or allow to be mixed up (things, such as different flocks of sheep, which should be kept apart). [Australia.]

> All the mobs of different-aged lambs which had been hitherto kept apart were *boxed* up together.
> *A. C. Grant*, Bush Life in Queensland, p. 253.

7. To grain or board on the grain side with a graining-board, to give skin a rough or pebbled effect. *Modern Amer. Tanning*, p. 83.

box[4] (boks), *n.* [L. *box*, < Gr. βῶξ, βόαξ, a certain fish, prob. an imitative name. See *bogue*[2].] A sparoid fish, *Box boops*, known from the Mediterranean to the southern coast of England.

box-bill (boks'bil), *n.* A tool for recovering boring-rods.

box-cage (boks'kāj), *n.* A bird-cage opening in front.

box-calf (boks'käf), *n.* Originally, calf leather of a rough or thick variety, as used in *box-toes*; now, a chrome-tanned calfskin, either in black or colors and usually grained or boarded.

box-cañon (boks'kan'yon), *n.* In *phys. geog.*, a narrow, flat-floored valley inclosed by nearly vertical walls or cliffs. [Western U. S.]

box-chisel (boks'chiz'el), *n.* See ★*chisel*[2].

box-chronometer (boks'krō-nom″e-tėr), *n.* A marine clock of great accuracy, set to the time of a certain prime meridian, and employed in the calculation of the longitude at sea. It derives its name from the box inside which it is hung in gimbals, so that it may always maintain a horizontal position irrespective of the rolling and pitching of the ship.

box-colored (boks'kul'ord), *a.* In *leather-manuf.*, colored in a box or tray of dye. *Flemming*, Practical Tanning, p. 80.

box-coupling (boks'kup'ling), *n.* A coupling for connecting two shafts. A collar is fastened on the end of each of the shafts to be joined, the two are brought together, and a box or rim is slipped over them and keyed to both.

Box-dressing machine. See ★*dressing-machine.*

box-drift (boks'drift), *n.* A drift which has been boxed. See ★*drift.*

box-edged (boks'ejd), *a.* With a border of box, as a parterre or path in a garden.

box-elder (boks-el'dėr), *n.* See *elder*[2] and *Negundo.* **Box-elder leaf-roller, plant-bug.** See ★*leaf-roller,* ★*plant-bug.*

boxer[2], *n.* **2.** [*cap.*] A member of a Chinese association known as *Yi Ho Ch'uan Hwuy*, "The Righteousness, Harmony, and Fists Society," organized in China in 1900 or earlier, ostensibly for the practice of athletics, but really as a league for the expulsion of foreigners and the uprooting of Christianity. Aided by the regular army, and egged on and led by officials and persons of the highest standing, the Boxers murdered large numbers of native Christians, missionaries, and other foreigners, destroyed much property, attacked the foreign legations in Peking, and besieged the British legation there for over two months, until the rising was suppressed by the military forces of the principal treaty powers.

boxer[3] (bok'sėr), *n.* A bowler or low-crowned stiff felt hat; a billycock hat. [Australia.]

box-gear (boks'gēr), *n.* A differential gear used on bending-rolls and motor-vehicles. In the former case it prevents a calendering action on the plate by either roll; in the latter it enables the driving-wheels to move over different distances when turning corners or curves, or when for any reason the two wheels are of differing diameter.

box-groove (boks'gröv), *n.* A close groove between two rolls, formed by a collar on one roll fitting between collars on another roll.

boxhead (boks'hed), *n.* The squaw-fish, *Ptychocheilus oregonensis*, one of the largest of the minnows, ranging from British Columbia southward to Oregon.

box-honey (boks'hun″i), *n.* Honey stored by the bees in specially prepared boxes.

boxing[1], *n.* **7.** In *mining*, a method of securing shafts solely by slabs and wooden pegs. *Coal and Metal Miners' Pocketbook.*

boxing-up (bok-sing-up'), *n.* Specifically, the process of constructing large patterns by making them hollow instead of by using solid planks.

box-keel (boks'kēl), *n.* In *iron shipbuilding*, a keel built of plates and angles in box form. Not now used.

box-keelson (boks'kēl'son), *n.* A heavy keelson consisting of plates and angles arranged to give a closed, rectangular section.

box-kid (boks'kid), *n.* See ★*box-calf.*

box-level (boks'lev'el), *n.* A metallic box (generally circular) with a glass cover used as a spirit-level. The bubble of inclosed air is brought into coincidence with a circle engraved at the center of the cover.

box-link (boks'lingk), *n.* A slotted link each side of which is of U-section, so as partly to embrace the sliding-block and prevent it from dropping out.

box-loom (boks'löm), *n.* A loom with two or more shuttle-boxes at either end of the lathe. *T. W. Fox*, Mechanism of Weaving, p. 388.

box-loop (boks'löp), *n.* A long leather loop pressed or worked up square, creased and ornamented, used in a harness in place of a number of short loops.

box-mangle (boks'mang'gl), *n.* A mangling apparatus, consisting of a rectangular wooden box weighted with stone or iron and run to and fro over rollers upon which the fabrics to be mangled are wound. Also called *chest-mangle.* See *mangle*[2].

box-mill (boks'mil), *n.* See ★*box-tool.*

box-motion (boks'mō'shon), *n.* The mechanism for operating the shuttle-boxes of a loom. *Fox*, Mechanism of Weaving, p. 352. **Eccentric box-motion,** a mechanism for operating the drop-boxes for shuttles in a loom by means of two or more eccentrics capable of being moved either independently or conjointly.

Box-nailing machine. See ★*nailing-machine.*

box-nut (boks'nut), *n.* A nut which is closed on one end; one which does not have a hole clear through; a cup-nut. Such nuts are commonly used on the axles of wagons to hold the wheels on.

box-package (boks'pak″āj), *n.* A package in the form of a box: used on the Pacific coast for packing fruit for shipment.

> The *box-package* is preferable to the barrel.
> *Yearbook, U. S. Dept. Agr.*, 1901, p. 606.

box-piston (boks'pis″ton), *n.* A hollow piston made by coring out the interior of the piston when casting it.

box-spanner (boks'span'ėr), *n.* A spanner for turning or holding bolts whose heads are in recesses and so cannot be caught by an ordinary wrench.

box-standard (boks'stan'dārd), *n.* The column or standard which forms the main frame of a machine and is hollow, thus obtaining strength and rigidity with little material.

box-staple (boks'stā'pl), *n.* The staple or keeper into which the bolt of a lock is shot, when the staple is so made as to box in, or cover, the end of the bolt.

box-step (boks'step), *n.* In *car-building*, a step or a short flight of steps inclosed at the sides by a stringer or guard: a platform-step in a passenger car.

boxstones (boks'stōnz), *n. pl.* See *nodule* ★*beds.*

box-stoop (boks'stöp), *n.* A stoop of which the steps are divided into two or more flights, which therefore has a platform and projects into the street as a mass of some height.

box-tappet (boks'tap'et), *n.* A cam on a loom for working the shuttle-boxes. *T. W. Fox*, Mechanism of Weaving, p. 305.

box-thaler (boks'tä'lėr), *n.* A coin made to open like a box and contain objects: confined to certain German states and Savoy.

box-thorn, *n.* **2.** A spiny, bushy tree of Tasmania, *Bursaria spinosa*, yielding a hard white wood resembling boxwood and used in turnery.

box-tool (boks'töl), *n.* An attachment to a lathe for holding cutting-tools used in cutting the exterior surfaces of objects turned in the lathe: a turner. It is named from the shape of the tool-holder. A box-tool used, with special cutter, for finishing the ends of rods is called a *pointing-box.* A modified form carrying several cutters is called a *box-mill.* Another form of box-tool is used on screw-machines.

box-tubular (boks'tū'bụ-lär), *n.* A name applied to tubular boilers in which the enveloping shell was made up of flat surfaces, carefully stayed against bulging, with the hot gases passing through tubes between the parallel surfaces. The shape suggested a box.

box-wallah (boks'wol″ä), *n.* [Hind. *bakaswālā*, < *bakas*, < E. *box*, + *wālā*, a man, agent.] A native peddler or itinerant merchant. [Anglo-Indian.]

boxwood, *n.* **Cape boxwood,** the wood of *Buxus Macowani*, a medium-sized tree of Cape Colony. It is nearly identical with the common boxwood and can be split easily into thin plates. The kamassi is also known commercially by this name and as *knysna boxwood.* See *kamassi.* **Knysna boxwood.** See *cape* ★*boxwood.* **New Zealand boxwood** (Maori *maire*), a species of olive, *Olea lanceolata*, used locally for making woodcuts, and said to be superior to the true boxwood for that purpose. —**Rule boxwood,** the hard golden-yellow wood of *Macaglia Vargasii*, a tree of the dog's-bane family native to Venezuela. It is used for measuring-rules, loom shuttles, etc., and in turning and pyrography. Also called *zapatero* and *amarillo.* **West Indian boxwood.** Same as *rule* ★*boxwood.* The wood usually reaches the markets by way of the West Indies.

boy[1], *n.* **Bowery boy.** A young rowdy of a type once common in the Bowery, in New York city, the analogue of the London ★ Arry (which see). See *Bowery* in the Century Cyclopedia of Names.—**Cape boy.** A South African half-breed resulting from the union of a native black and a settler of another race.

boyla (boi'lä), *n.* An aboriginal Australian sorcerer. [Australia.]

B. P. An abbreviation of (*a*) *Bachelor of Painting*; (*b*) *Bachelor of Philosophy*; (*c*) *British Pharmacopœia*; (*d*) *British public.*

B. P. B. An abbreviation of *Bank post-bill.*

B. Ph. An abbreviation (*a*) of *Bachelor of Philosophy*; (*b*) of *British Pharmacopœia.*

Br. An abbreviation of *British.*

brab (brab), *n.* [Anglo-Indian form of Pg. **braba, brava*, wild (sc. *palmeira*, palm-tree).] The palmyra-palm, *Borassus flabellifer.* See *palmyra*, 1.

brabant (bra-bant'), *n.* A foreign base coin current in England in the time of Edward I.

Brabant crown, sovereign. See ★*crown,* ★*sovereign.*

brab-tree (brab'trē), *n.* Same as ★*brab.*

braça (brä'sä), *n.* See *brass*[2], 2.

brace[1], *n.*, **1.** (*b*) In any frame, a stiff piece, as a bar or strip, put in to prevent a parallelogram or the like from changing its shape under pressure or strain. It acts usually by dividing the parallelogram into triangles or by forming a smaller triangle at one corner of the parallelogram, thus stiffening that part of the frame.
14. (*b*) Same as *brace-head.*—**17.** A short, thick bar lying above the suture between two pyramids in the dental apparatus of *Echinus.* —**18.** In *saddlery*, the short strap which connects the hip-strap and the breeching-body.—

19. An old measure of weight. A Hurley brace was equal to 4 cwt. [Scotch.]—20. In *mining*, a platform at the top of a shaft on which miners stand to work the tackle. *Coal and Metal Miners' Pocketbook.*—**Brace-game.** See ★*game*[1].

brace-box (brās'boks), *n.* A box from which the cards can be taken two at a time at the pleasure of the dealer: used in dealing faro.

Braced arch. See ★*arch*[1].

bracelet-wood (brās'let-wŭd), *n.* A name in the West Indies of a small tree of the family *Myrsinaceæ*, *Jacquinia armillaris*, so called on account of its hard seeds, which are made into bracelets. Also called *currant-tree*, *barbasco*, and *joe-wood*.

brace-wrench (brās'rench), *n.* A tool with a square head boxed out to receive a threaded nut. The head is attached to a branch shank, which is joined at the top and is fitted with a square head tapered to enter the brace-stock: used for turning nuts on bolts.

brachial. I. *a.*—**Brachial cavity,** in a brachiopod, the anterior part of the shell-cavity, in which lie the arms or brachia.—**Brachial disk,** a horizontal structure which occupies the center of the subumbrellar surface of *Rhizostomæ* and which is formed by the fusion of the proximal ends of the arms. The mouth is thus completely closed, and food is ingested through the numerous small suctorial mouths leading into the network of canals in the arms and thence into the stomach. **Brachial ossicles.** Same as *actinosts*.—**Brachial sinuses.** In certain Paleozoic nautiloid cephalopods, the aperture of the shell is greatly contracted about the base of the tentacles and hyponome, giving the opening a T- or Y-shaped figure. The shorter arms of this opening, which may be variously lobed, are termed *brachial sinuses*, the longer arm the *hyponomic sinus*. **Brachial thecæ.** See ★*theca*.

II. *n.* **4.** In the morphology of the *Crinoidea*, one of the calcareous plates which compose the arms. The application of the term has varied with different writers, some restricting it to the plates of the free arms, others applying it to all plates in the radial series lying above the lowermost circlet or true radials. In the latter case the radials include some of the body-plates, and these have been subdivided into *costals*, *distichals*, and *palmars*, whether free or fixed.

brachiation (brak-i-ā'shon), *n.* [NL. **brachiatio*(*n*-), ⟨ **brachiare*, swing by the arms, ⟨ L. *brachium*, arm.] The act of swinging by the arms from tree to tree, a method of locomotion employed by the gibbons. [Rare.]

The hand of the chimpanzee is adapted for *brachiation*.
Proc. Zool. Soc. London, 1899, p. 306.

brachiator (brak'i-ā-tor), *n.* An animal that swings by its arms from tree to tree. [Rare.]

The arm of the chimpanzee is that of the *brachiators*, anthropoids like the orang and gibbon which use the arms as one of the main organs of locomotion.
Proc. Zool. Soc. London, 1899, p. 355.

brachidium (bra-kid'i-um), *n.*; pl. *brachidia* (-ä). [NL., ⟨ Gr. βραχ(ίων) (L. *brachium*), arm, + Gr. -ίδιον.] The shelly calcareous spiral or loop-shaped supports of the fleshy arms or brachia in the *Brachiopoda*; used collectively of the entire apparatus irrespective of division into symmetrical parts.

brachigerous (bra-kij'e-rus), *a.* [L. *brachium*, arm, + *gerere*, bear.] Same as *brachiferous*.

brachiocœle (brak'i-ō-sēl), *n.* [NL., ⟨ Gr. βραχίων, an arm, + κοῖλος, a hollow.] In the *Brachiopoda*, the anterior portion of the cavity of the valves, wherein lie the brachia.

Brachionocephala (bra-kī″ō-nō-sef'a-lä), *n. pl.* [NL., ⟨ Gr. βραχίων, an arm, + κεφαλή, a head.] A name proposed in 1862 by Bronn as a substitute for *Brachiopoda* (Dumeril, 1806).

Brachiopoda, *n. pl.* In recent years extensive studies of the *Brachiopoda* have been made: by Joubin on the anatomy of recent species, by Hall and Clarke on the anatomy and taxonomy of fossil forms, and by Beecher on ontogeny and phylogeny. It is now generally conceded that a classification based on the absence or presence of hinge-teeth, which is the foundation of that introduced by Deshayes, Owen, Bronn, and Huxley, or on the perforation or closing of the anus, as in King's scheme, has a value restricted to fully accomplished phylogenetic phases or ontogenetic conditions. In Beecher's classification, variation in the nature of the pedicle-opening is assumed as the basis of ordinal divisions, and the stages of shell-growth and its accessory developments of those of minor value. This classification establishes the following orders: (1) *Atremata*, in which the valves are unhinged and the pedicle emerges freely between them. These are subcircular or elongate shells in which growth takes place freely in all directions except posteriorly. *Obolus* and *Lingula* are typical genera. (2) *Neotremata*, in which the valves are also hingeless, cone-shaped, with the pedicle restricted to the ventral valve and the pedicle-aperture modified by a deltidium or listrium. These are circular, often largely calcareous shells (*Acrotreta*, *Orbiculoidea*, *Discina*). *Crania* and its allies have lost the pedicle by atrophy and are either attached by cementation of their valves or are wholly free. (3) *Protremata*, in which an articulate hinge is developed in progressed forms, the pedicle is restricted to the ventral valve, the deltidium originates on the dorsal side of the larval body but becomes ankylosed to the ventral shell and modifies the pedicle-passage, and the brachia are unsupported by calcareous processes. (*Strophomena*, *Thecidium*, *Productus*, *Orthis*, *Pentamerus*.) (4) *Telotremata*, in which the pedicle-passage is shared by both valves in early growth, but is confined to the ventral valve at maturity and modified by deltidial plates which are morphologically distinct from the deltidium and have a later origin in ontogeny. The valves are hinged, the brachia supported by calcareous crura, loops, and spirals. (*Rhynchonella*, *Terebratula*, *Spirifer*, *Atrypa*.) With the increased knowledge of the structure, distribution, and vertical range of the extinct brachiopods, the number of genera has been augmented to about 400, living and extinct, represented by some thousands of species, 2000 species being recognized in the Paleozoic rocks of North America alone, while about 150 species are now living.

brachiopodist (brak-i-op'ō-dist), *n.* One who is proficient in knowledge of the *Brachiopoda*.

brachioradialis (brak″i-ō-rā-di-ā'lis), *n.*; pl. *brachioradiales* (-lēz). One of the muscles of the arm, the long supinator of the radius.

Brachiospongia (brak″i-ō-spon'ji-ä), *n.* [NL., ⟨ Gr. βραχίων, an arm, + σπόγγος, a sponge.] A genus of hexactinellid sponges having the form of a broad-mouthed, shallow vase with a single series of broad pouch-like hollow extensions about the base. It occurs in the Silurian rocks of the Mississippi valley.

brachisthode (brak'is-thōd), *n.* [Gr. βράχιστος, shortest, + ὁδός, way.] The shortest line between two points on the earth's surface; the geodetic line. *Rep. U. S. Coast and Geodetic Surv.*, 1896, p. 293.

brachistocephalous (bra-kis-tō-sef'a-lus), *a.* Same as *brachistocephalic*.

brachistocephaly (bra-kis-tō-sef'a-li), *n.* In *anthrop.*, the character, state, or condition of being brachistocephalic.

brachistochronic (bra-kis-tō-kron'ik), *a.* [Gr. βράχιστος, shortest, + χρόνος, time.] That can be traversed, accomplished, etc., in the shortest possible time under the conditions then prevailing; of or pertaining to the brachistochrone: as, a ball may roll from *A* down to *B*, or an earthquake wave may pass from *a* to *b*, by the *brachistochronic* path. *Rep. Brit. Ass'n Advancement of Sci.*, 1900, p. 76.—**Brachistochronic curve,** a curve representing the path which a body moving freely in a field of force must follow in order to reach a given point in the least time. See *brachistochrone*.

Brachium inferius cerebelli, the inferior peduncle of the cerebellum.—**Brachium opticum,** one of the processes which extend from the corpora quadrigemina to the optic thalamus.—**Brachium quadrigeminum.** Same as ★*brachium opticum*.—**Brachium superius cerebelli,** the superior peduncle of the cerebellum.

brachyaxis (brak-i-ak'sis), *n.* [Gr. βραχύς, short, + L. *axis*, axis: see *axis*.] The brachydiagonal axis, that is, the shorter lateral axis of an orthorhombic (or triclinic) crystal.

brachybiostigmatic (brak″i-bī″ō-stig-mat'ik), *a.* [Gr. βραχύβιος, short-lived, + στίγμα for 'stigma.'] In *plant œcol.*, having the stigma short-lived: said of proterogynous flowers in which the stigma quickly withers. Opposed to ★*macrobiostigmatic*. *F. Delpino*.

brachybiostigmatous (brak″i-bī″ō-stig'ma-tus), *a.* Same as ★*brachybiostigmatic*.

brachybioty (brak-i-bī'ō-ti), *n.* [Gr. βραχύς, short, + βίοτος, life.] Brevity of life as contrasted with longevity and considered in relation to inheritance. [Rare.]

Miss Beeton working solely at the material thus provided was enabled to form fairly extensive tables for the inheritance of longevity in the female line, and also with somewhat less extensive data for the deaths of infants to form some appreciation of what we have elsewhere termed the inheritance of *brachybioty*.
Biometrika, Oct., 1901, p. 51.

brachycardia (brak-i-kär'di-ä), *n.* [NL., ⟨ Gr. βραχύς, short, + καρδία, heart.] Same as ★*bradycardia*.

brachycephal (brak-i-sef'al), *n.* One of the brachycephali; a brachycephalic person.

The *brachycephals* had also larger heads than the dolichocephals. *Geog. Jour.* (R. G. S.), XVI. 290.

brachyceral (bra-kis'e-ral), *a.* [Gr. βραχύς, short, + κέρας, horn, + -*al*.] Same as *brachycerous*.

brachycercic[1] (brak-i-sêr'sik), *a.* [Gr. βραχύς, short, + κέρκος, tail.] Having a short tail. *Philos. Trans. Roy. Soc.* (London), ser. B, 189, 173.

brachycercic[2] (brak-i-sêr'sik), *a.* [Gr. βραχύς, short, + κερκίς, the radius, the tibia, a rod or comb of a loom, ⟨ κέρκος, tail, handle.] Having a short forearm; in *anthrop.*, having a radio-humeral index less than 75. *Turner*.

brachycnemic (brak-ik-nē'mik), *a.* [Gr. βραχύς, short, + κνήμη, tibia.] In *anthrop.*, having a tibiofemoral index less than 83. *Turner*.

brachycranial (brak-i-krā'ni-al), *a.* [Gr. βραχύς, short, + κρανίον, cranium, + -*al*.] In *anthrop.*, characterized by or exhibiting a skull of less than middle length.

In both races platycephaly is associated with *brachycranial* characters, the association vanishing, however, for the Naqada males, and being more marked for the French. *Biometrika*, Aug., 1902, p. 462.

brachydactylism (brak-i-dak'ti-lizm), *n.* [*brachydactyly* + -*ism*.] A condition in which the fingers or toes are abnormally short. *'Buck*, Med. Handbook, IV. 493.

brachydactylous (brak-i-dak'ti-lus), *a.* [Gr. βραχύς, short, + δακτύλος, finger.] Having abnormally short fingers.

brachydactyly (brak-i-dak'ti-li), *n.* [Gr. βραχύς, short, + δάκτυλος, finger.] Same as ★*brachydactylism*. *Buck*, Med. Handbook, IV. 494.

Brachydeuterus (brak-i-dū'te-rus), *n.* [NL., ⟨ Gr. βραχύς, short, + δευτερός, second.] A genus of grunts of the family *Hæmulidæ*. *B. waridus* is found in western Africa. The other species are chiefly American.

brachydomal (brak-i-dō'mal), *a.* Same as *brachydomatic*.

brachydont (brak'i-dont), *a.* Same as *brachyodont*. *Philos. Trans. Roy. Soc.* (London), March, 1903, p. 110.

brachydontism (brak'i-don-tizm), *n.* Same as ★*brachyodontism*.

brachyellipsoid (brak-i-e-lip'soid), *n.* [Gr. βραχύς, short, + *ellipsoid*.] In *anthrop.*, a short cranium of ellipsoid form. *G. Sergi*, Var. of the Human Species, p. 49.

brachyfacial (brak-i-fā'shal), *a.* and *n.* [Gr. βραχύς, short, + L. *facies*, face, + -*al*.] **I.** *a.* Having a short face. *Buck*, Med. Handbook, VII. 231.

II. *n.* Same as ★*chamæprosope*. *Deniker*, Races of Man, p. 60.

Brachygenys (bra-kij'e-nis), *n.* [NL., ⟨ Gr. βραχύς, short, + γένυς, chin.] A genus of grunts of the family *Hæmulidæ*, characterized by the small mouth. The one species known, *B. chrysargyreus*, 6 inches in length, is abundant about Key West and Havana.

brachygnathism (bra-kig'na-thizm), *n.* [Gr. βραχύς, short, + γνάθος, jaw, + -*ism*.] The condition of having an abnormally short lower jaw.

brachygraphic (brak-i-graf'ik), *a.* Of or pertaining to brachygraphy, or shorthand: as, *brachygraphic* characters.

brachygraphical (brak-i-graf'i-kal), *a.* Same as ★*brachygraphic*.

brachyhieric (brak-i-hī-er'ik), *a.* [Gr. βραχύς, short, + ἱερόν (ὀστέον), sacrum, + -*ic*.] Having a short sacrum. See ★*platyhieric*. *Amer. Anthropologist*, Jan.–March, 1901, p. 34.

brachyhypsicephalic (brak-i-hip″si-se-fal'ik), *a.* [Gr. βραχύς, short, + ὑψι-, on high, + κεφαλή, head, + -*ic*.] In *anthrop.*, having a short and high head or skull. *Man*, 1901, p. 190.

Brachyistius (brak-i-is'ti-us), *n.* [NL., ⟨ Gr. βραχύς, short, + ἱστίον, sail (alluding to the dorsal fin).] A genus of surf-fishes of the family *Embiotocidæ*. It comprises a single species, *B. frenatus*, a small carnivorous fish, living on sandy shores from Vancouver Island to Guadaloupe.

brachykerkic, *a.* Same as ★*brachycercic*.

Brachymetopus (brak″i-me-tō'pus), *n.* [NL., ⟨ Gr. βραχύς, short, + μέτωπον, front, face.] A genus of trilobites, belonging to the family *Proëtidæ*, having a semioval head and tail-shield (the latter being large), the glabellum small, and the entire surface covered with bead-like ornament. It is found in Carboniferous rocks and is one of the last representatives of these ancient crustaceans.

brachyodontism (brak'i-ō-dont″izm), *n.* The state or condition of being brachyodont or having short-crowned molars: used in describing teeth of mammals. Also *brachydontism*. *Proc. Zool. Soc. London*, 1893, p. 180.

brachyodonty (brak'i-ō-don″ti), *n.* Same as ★*brachyodontism*. *Trans. Linnean Soc. London, Zoöl.*, Nov., 1899, p. 446.

brachyome (brak'i-ōm), *n.* [NL., ⟨ Gr. βραχύς, short, + ὦμος, shoulder (see *humerus*).] In the nomenclature of the spicular parts in the sponge, the abbreviated arm of a ★*trider* (which see).

Brachyopsinæ (brak″i-op-sī'nē), *n. pl.* [NL., ⟨ *Brachyopsis* + -*inæ*.] A subfamily of sea-poachers of the family *Agonidæ*, containing 3 genera, *Stellerina*, *Brachyopsis*, and *Pallasina*.

Brachyopsis (brak-i-op'sis), *n.* [NL., ⟨ Gr. βραχύς, short, + ὄψις, face.] A genus of fishes of the family *Agonidæ*, found in the North Pacific, comprising 2 species, *B. rostratus* and *B. segaliensis*. The latter attains a length of 7 inches.

brachypentagonoides (brak″i-pen″ta-gō″nō-ī′dēz), *n.* [Gr. βραχύς, short, + πεντάγωνος, five-cornered, + εἶδος, form.] In *anthrop.*, a cranium the norma verticalis of which has the form of a pentagon with rounded corners, and with short distances between the parietal and frontal protuberances. *Sergi*, Var. of the Human Species, p. 30.

Brachyphyllum (brak-i-fil′um), *n.* [NL. (Brongniart, 1828), < Gr. βραχύς, short, + φύλλον, leaf.] A genus of fossil coniferous plants characterized by short and thick scale-like leaves tightly appressed to the stems, for the most part rhombic in shape and regularly arranged so as to form a graceful pattern. It is most abundant in the Rhætic, but ranges from the Trias to the Lower Cretaceous, being found in both Europe and America.

Brachyptera (bra-kip′tę-rä), *n. pl.* [NL., < Gr. βραχύς, short, + πτερόν, wing.] An old name for the rove-beetles of the coleopterous family *Staphylinidæ*.

brachyrhomboides (brak″i-rom″bō-ī′dēz), *n.* [Gr. βραχύς, short, + NL. *rhomboides*, rhomboid.] In *anthrop.*, a cranium the norma verticalis of which has a rhomboid form, the rhomboid being wide in transversal direction. *Sergi*, Var. of the Human Species, p. 31.

brachysclereid (brak-i-sklē′rę-id), *n.* [Gr. βραχύς, short, + E. *sclereid*.] In *bot.*, one of the sclereids or stone cells that occur in bark and in fruits.

Brachyscome (bra-kis′kō-mē), *n.* [NL. (Cassini, 1816), < Gr. βραχύς, short, + κόμη, hair; in allusion to the short pappus.] A genus of herbaceous plants of the family *Asteraceæ*. There are about 50 species, chiefly Australian. The only species under cultivation, *B. iberidifolia*, is commonly known as the Swan River daisy, a very graceful aster-like annual of easiest cultivation. It has blue or white daisy-like flowers.

brachystaphyline (brak-i-staf′i-lin), *a.* [Gr. βραχύς, short, + σταφυλή, the (swollen) uvula, + *-ine*[1].] In *anthrop.*, having a short palate, especially having a palate with an index more than 85. *Virchow.*

In both sexes there is sensible correlation between the palate and orbital indices, hypsiconchy being associated with *brachystaphyline* characters.
Biometrika, Aug., 1902, p. 460.

brachystaphyly (brak-i-staf′i-li), *n.* [*brachystaphyl(ous)* + *-y*[3].] In *anthrop.*, the character of having a short palate. *Biometrika*, March–July, 1904, p. 236.

Brachystegia (brak-i-stē′ji-ä), *n.* [NL. (Bentham, 1866–67), < Gr. βραχύς, short, + στέγη, covering. The name refers to the scantiness of the floral protective organs.] A genus of trees of the family *Cæsalpiniaceæ*, with even-pinnate leaves and terminal racemes, or raceme-like panicles of small flowers. These have no calyx and only rudimentary petals. The stamens and pistil are covered in the bud by a pair of bracts. There are about 12 species, natives of tropical Africa. Several of them have tough fibrous inner bark, which is used by the natives for making bark-cloth. The most important are *Brachystegia spiciformis* of the Zanzibar coast and *B. appendiculata* of southeast Africa.

brachytmema (brak-it-mē′mä), *n.* [NL., < Gr. βραχύς, short, + τμῆμα, section.] In *bryol.*, a disk-shaped cell which on rupturing sets free a gemma. *Correns.*

brachyuranic (brak-i-ū-ran′ik), *a.* [Gr. βραχύς, short, + οὐρανός, palate, + *-ic*.] Having a short palate; specifically, in *craniom.*, having a palatomaxillary index of more than 115. *Amer. Anthropologist*, Jan.–March, 1901, p. 42.

bracingness (brās′ing-nes), *n.* Bracing quality or effect.

brack[2]†, *n.* **II.** *a.* Brackish; salt; briny: as, "living upon beef and *brack* water." *Southey*, Quarterly Rev., XXXV. 117.

brack[4] (brak), *v. t.* [G. *bracken*, inspect and assort (goods), < *brack*, inferior goods, refuse: see *brack*[2], *n.* Cf. *cull*[1], *v.* and *n.*] To inspect and assort (produce, etc.) at the Baltic ports by sworn selectors.

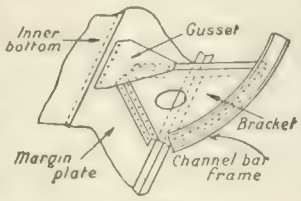
All flax and hemp shipped from Memel must be *bracked* or assorted. *Homans*, Cyclo. of Commerce, p. 1343.

brack[4] (brak), *n.* [*brack*[4], *v.*] A long-established system of official inspection and assorting of produce and other goods at the Baltic seaports.

brackebuschite (brak′e-bush-īt), *n.* [Named after D. Luis *Brackebusch* of Buenos Aires.] A vanadate of lead, iron, and manganese, found in Argentina.

bracker (brak′ėr), *n.* [G. *bracker*, < *bracken*, inspect and assort (goods): see *brack*[4], *v.*] An official inspector and assorter of goods in ports on the Baltic. See ★*brack*[4], *v. t.*

bracket[1], *n.* **1.** (*e*) In carriages, a heavy standard placed at an incline at the front end of the boot of a coach as a support for the foot-board.—**8.** A stiffening-rib on a casting. —**9.** (*a*) In *wood ship-building*, a short crooked timber, resembling a knee, for support or ornament. *Knowles*, Naval Arch. (*b*) In *iron ship-building*, a piece of plate of a triangular shape uniting, at their junction, two parts which meet at an angle to strengthen the joint against flexure. A bracket differs from a gusset in that it meets at least one of the surfaces to which it is attached angularly, being secured thereto by a riveted flange or a piece of angle-bar. The two terms are loosely used interchangeably. See ★*gusset*.—**Pendent bracket**, a shaft-hanger; a fixture projecting below a ceiling to support the journal of a shaft. **Pendulum bracket**, a hinged bracket connected with the winding-motion of a spinning-mule.



Bracket.

bracket[1], *v. t.* **3.** In *ship-building*, to unite by a bracket.

bracket-floor (brak′et-flōr), *n.* In *iron ship-building*, a floor-plate of bracket form uniting the frame, reverse frame, and longitudinal in the framing of a double bottom. See cut under ★*bottom*.

bracket-frame (brak′et-frām), *n.* In *iron ship-building*, a frame composed of a frame-bar, reverse frame-bar, and bracket-floors.

bracket-fungus (brak′et-fung″gus), *n.* A fungus growing on a tree-trunk and forming a bracket or shelf-like projection, as many of the polyporoid fungi. See *Polyporus* (cut *a*).

bracket-plate (brak′et-plāt), *n.* In *ship-building*, same as ★*bracket*[1], 9 (*b*).

At the turn of the bilge there is a continuous water-tight longitudinal frame, and upon this the vertical frames are stopped short, their heels being connected to the longitudinal by *bracket-plates*.
White, Manual of Naval Arch., p. 371.

bracketwise (brak′et-wīz), *adv.* In the manner of a bracket; so as to resemble a bracket.

Bracklesham beds. See ★*bed*[1].

braconid (brak′ō-nid), *n.* A member of the parasitic hymenopterous family *Braconidæ* (which see).

bract, *n.*, **2.** (*b*) The oval distal exite on the appendages of certain segments of phyllopod crustaceans, as *Apus*, probably serving a respiratory function.

bractea (brak′tę-ä), *n.*; pl. *bracteæ* (-ē). [NL.: see *bract*.] One of the scale-like protective structures found on certain *Siphonophora* and considered to be greatly modified medusoids. Same as *bract*, 2.

bracteated (brak′tę-ā-ted), *a.* Same as *bracteate*.

bracteose (brak′tę-os′), *a.* [NL. *bracteosus*, *bractea*, a bract.] Furnished with numerous or large bracts; conspicuously bracteate.

bractiferous (brak-tif′ėr-us), *a.* In *bot.*, bract-bearing.

bract-scale (brakt′skāl), *n.* In *bot.*, a bract constituting a proper scale of the cone in conifers, and bearing or subtending the seed-bearing scale when this is present. It may surpass or be surpassed by the latter.

Bradford clay. See *clay*.

Bradleyanism (brad′lę-an-izm), *n.* The doctrine of F. H. Bradley, an English metaphysician, a mixture of intellectualism, absolute idealism, and skepticism.

This is Aristotelianism in contrast with *Bradleianism* in metaphysics. *Encyc. Brit.*, XXX. 678.

Bradley's process. See *aluminium* ★*processes*.

brad-punch (brad′punch), *n.* A small nail-set; a steel rod about 3 inches long, tapered to a blunt point at one end and used for driving brads, or small nails, so deeply into the wood that the heads will be below the surface.

bradycardia (brad-i-kär′di-ä), *n.* [NL., < Gr. βραδύς, slow, + καρδία, heart.] Abnormally slow pulsation of the heart.

The opposite condition to tachycardia, namely, *bradycardia*, is frequently met with in applicants for life insurance. *Med. Record*, Feb. 7, 1903, p. 206.

bradycrotic (brad-i-krot′ik), *a.* [Gr. βραδύς, slow, + κρότος, rattle (pulse).] Marked by a slow pulse.

bradylecithal (brad-i-les′i-thal), *a.* [Gr. βραδύς, slow, + λέκιθος, the yolk of an egg.] In *embryol.*, applied to certain eggs which have much yolk, such as the eggs of sharks, reptiles, and birds.

bradynosus (bra-din′ō-sus), *n.* [Gr. βραδύς, slow, + νόσος, disease.] A chronic disease.

bradypepsia (brad-i-pep′si-ä), *n.* [NL., < Gr. βραδυπεψία, < βραδύς, slow, + πέψις, digestion, < πέσσειν, digest.] Slow digestion.

bradypepsy (brad′i-pep-si), *n.* Same as ★*bradypepsia*.

bradypeptic (brad-i-pep′tik), *a.* Suffering from bradypepsia, or slow digestion.

bradypnœa (brad-ip-nē′ä), *n.* [NL., < Gr. *βραδύπνοια, < βραδυπνοεῖν, breathing slowly, < βραδύς, slow, + πνεῖν, breathe.] Slowness of respiration.

bradyseism (brad′i-sīzm), *n.* [Gr. βραδύς, slow, + σεισμός, an earthquake.] In *geol.*, a single slow rise or fall of the land. See the extract.

Prof. Milne commences with the discussion of *bradyseisms*, the slow and gentle movements of elevation or depression in the Earth's crust.
Geog. Jour. (R. G. S.), XIII. 544.

bradyseismic (brad-i-sīs′mik), *a.* In *geol.*, pertaining to or characterized by the slow rise and fall of the land with regard to the sea.

The fact that round the borders and upon the summit of hidden domes and tablelands there are at present displays of seismic and volcanic activity, leads to the belief that sub-oceanic *bradyseismic* action is yet in progress.
Geog. Jour. (R. G. S.), X. 131.

bradyseismical (brad-i-sīs′mi-kal), *a.* Same as ★*bradyseismic*.

bradytrophic (brad-i-trof′ik), *a.* [Gr. βραδύς, slow, + -τροφος, < τρέφειν, nourish.] Marked by slowly acting nutritive processes.

bradyuria (brad-i-ū′ri-ä), *n.* [NL., < Gr. βραδύς, slow, + οὖρον, urine.] Slow and difficult urination.

brae, *n.* **2.** An inclined roadway in a mine: commonly used in compounds: as, *cuddy-brae*. *Barrowman*, Glossary.

brag, *n.* **3.** It is played with 3 cards in the hand of each player, something like poker, but the ace and nine of diamonds and the jack of clubs are braggers, and may be called anything the holder pleases, 2 kings and a bragger being equal to 3 kings.

bragger, *n.* **2.** In the game of brag, the ace, the nine of diamonds, the jack of clubs. The holder of any of these cards can call it anything he pleases.

bragite (brag′īt), *n.* [Perhaps from Norw. *brag*, gleam, flicker of light, + *-ite*[2].] A variety of fergusonite from Norway.

braguero (brä-gā′rō), *n.* [Sp., a truss, band, < *braga*, a cord (pl. *bragas*, also breeches).] A girth. [Western U. S.]

Brahmanda (brä-män′dä), *n.* [Skt. *brahmānda*, < *brahman*, Brahma, + *aṇḍa*, egg.] In *Hindu myth.*, the 'egg of Brahma': designating a division of infinite time.

Brahmani, Brahmini, *n.* See *Brahmanee*.

Brahmanian stage. See ★*stage*.

Brahmanization (brä-man-iz-ā′shon), *n.* Conversion to Brahmanism. Also *Brahminization*.

Caste is in a state of transition owing to the rapid *Brahmanization* of the Dravidian races of the mountain region.
Geog. Jour. (R. G. S.), X. 120.

Brahmaputra (brä-ma-pō′tra), *n.* [Named from the *Brahmaputra*, river of northeastern India.] A variety of the domestic hen better known as *brahma*. See *brahma*[3].

Brahminization. Same as ★*Brahmanization*.

Brahmism (brä′mism), *n.* Same as *Brahmanism*.

braid[1], *n.* - **Honiton braid**, narrow machine-made braid of ornamental oval figures connected by narrow bars.

braided (brā′ded), *p. a.* Specifically, anastomosed or interlaced: said of a stream.

This extensive deposit, in some places 500 feet thick, is the product of aggradation by *braided* or laced streams, whose load of material from the mountains could not all be carried across the gentle slope of the plains.
Science, Nov. 15, 1901, p. 778.

braid-fern (brād′fėrn), *n.* See ★*fern*.

braid-stitch (brad′stich), *n.* In *sewing-machine work*, a method of stitching with a coarse thread designed to give to the fabric an ornamental finish resembling braid.

brail, *n.* **3.** A section of a log-raft, six of which make an average tow. [U. S.]- **Foot-brails**, the lowest brails on a sail.

braille (brāl, F. brā′y), *n.* [Named from the French inventor, Louis *Braille*.] A method of writing or printing for the blind in which combinations of tangible dots or points are used to represent alphabetical letters. There

are several systems, which differ considerably in details and have undergone various modifications. Thus in the British system the base is a group of six dots in two columns of three dots each ⠿, from which the letters are made as follows: A ⠁, B ⠃, C ⠉, etc. In the New York point system, which is extensively used in the United States, ⠁ is the first base, ⠉ the second, ⠋ the third, and ⠙ the fourth; and the letters are A ⠁⠀⠀⠀, B ⠁⠃⠀⠀, C ⠁⠉⠀⠀, etc. This notation is adapted to indicate capital and lower-case letters, numerals, punctuation, abbreviations, syllables, and musical notes and signs.

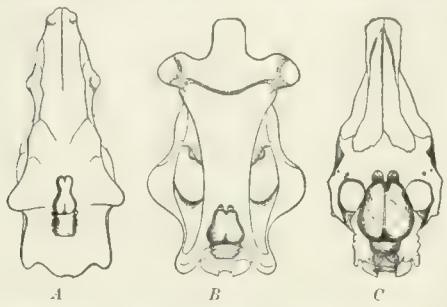
brain, *n.* **Abdominal brain.** See *solar plexus*, under *plexus*. **Brain center.** See ★*center*. **Calyx of the brain.** See ★*calyx*. **Central ganglia of the brain.** See ★*ganglion*.—**Dropsy of the brain,** hydrocephalus.—**Great brain,** the cerebrum.—**Little brain,** the cerebellum.—**Silent regions of the brain.** Same as *association* ★*areas*.—**Viallanes's tritocerebral lobes of the brain,** in *entom.*, a division of the embryonic brain intercalated between the antennal and mandibular segments. *A. S. Packard*, Text-book of Entom., p. 51.

brainal (brān'al), *a.* [*brain* + *-al.*] Of or relating to the brain: as, *brainal* normality. *Science*, May 2, 1902. [Rare.]

brain-cap (brān'kap), *n.* Same as *brain-box*.

The *brain-cap* of many savages has been found to be larger and heavier than that of some higher races.
Keane, Ethnology, p. 46.

brain-cast (brān'kȧst), *n.* A cast or filling, natural or artificial, of the cranial cavity.



Restorations of the Brain in Successive Genera of Ungulates. *A*, Dinoceras (Loucher); *B*, Brontotherium (Miocene); *C*, Modern Horse. (From Marsh.)

Brain-casts are approximate restorations of the brain surface and the principal nerve-trunks departing therefrom.

brain-eye (brān'ī), *n.* In polyclads, one of a group of eyes lying above the brain: distinguished from *tentacular* ★*eyes* and *marginal* ★*eyes*.

The eye-spots have an arrangement very similar to that found in the latter species. There is a dense cluster at the base of each tentacle; the paired group of *brain-eyes* lying in front of the brain is more extensive than that behind it. *Proc. Zool. Soc. London*, 1903, II. 100.

brain-stem (brān'stem), *n.* The crura cerebri, pons Varolii, and medulla oblongata.

braird, *v.* **II.** *trans.* In *coal-mining*, to widen the undercut or holing in a coal-seam. *Barrowman*, Glossary. [Scotch.]

brairding (brār'ding), *n.* In *coal-mining*, the height of undercut or holing in front. *Barrowman*, Glossary. [Scotch.]

brake[3], *n.* **13.** In *cracker-baking*, a machine for rolling dough, to be used in making gingersnaps and other thin cakes, into sheets ready for the panning-machine. It consists essentially of rolls between which the dough is passed to press it into a sheet. A *reversible brake* is one having aprons on each side of the rolls to enable the operator to pass the sheet through in opposite directions by reversing the rolls. See *panning-machine*.

14. In *sheet-metal work*, a machine for bending and forming sheet-metal, used in making larger forms such as metal cornices; a cornice-brake.—**Alden brake,** a device for absorbing and measuring the power developed by an engine. The power is absorbed by overcoming the friction developed by one disk pressing on another against which it is forced by water-pressure which can be varied to suit the power to be absorbed.—**Atmospheric brake.** Same as *vacuum-brake*. **Brake horse-power.** See ★*horse-power*.—**Counter-pressure brake,** an air-brake so constructed that a certain pressure must be overcome to release the brake. This makes a very sensitive brake, particularly suitable for controlling the speed of a train on down grades.—**Differential brake,** a brake which is applied by a differential motion.—**Electric brake,** any brake worked by electricity, either by a magnet or by a solenoid, or otherwise. See *magnetic* ★*brake*.—**Emergency brake,** a brake for use in case it is desired to stop a train or car as quickly as possible, without regard to the inconvenience caused by the shock due to the quick arrest of motion.—**Expanding brake,** a brake, applied to the inner side of a wheel-rim, usually made of two or more parts which are pushed apart or expanded from within, instead of clasping the rim from without.—**Hand-brake,** in *car-building*, a brake operated by hand; the most simple form of brake; a mechanical brake as distinguished from an air-brake. **High-speed brake,** a form of Westinghouse air-brake designed to secure greater safety for high-speed railway-trains from a quick and powerful application of the brakes, if desired. The system uses an air-pressure of 110 pounds per square inch, instead of 70 pounds, in train-pipe and reservoirs. The brake-cylinder under each car has a special reducing-valve, the function of which is to allow high-pressure air from the train-pipe to vent into the brake-cylinder, causing a momentary pressure there in excess of that permissible at the time of the stop. This type, in experiments at 80 miles per hour, reduced the distance required for the stopping of a train by 20 per cent. as compared with the length passed over when the same train was equipped with the quick-action brake only.—**Hydraulic brake,** a form of power train-brake in which the brake-beams that force the brake-shoes against the wheels of the car are actuated by pistons in hydraulic cylinders. When the brakes are to be applied, water or other liquid under pressure is admitted by pipes and valves to the cylinders, and the brakes are applied with the necessary power. The difficulty in getting and keeping the water-pressure and that from freezing in cold weather prevent extensive or satisfactory use of this system.—**Hydropneumatic brake,** a brake which is operated by compressed air and the resistance offered by a liquid flowing through a confined channel. Such brakes are often used to take up the recoil of guns. The first shock is taken up by the compressed air and the rest of the recoil by forcing a liquid through a passage that is smaller at the back end than at the front, thus making an augmented resistance.—**Instep brake,** a crimping-brake which uses a special form of forming-die to shape the shoe to the instep.—**Magnetic brake,** any brake which is actuated by a magnet. Sometimes it is applied by the magnet, and sometimes the magnet is used to release the brake which is applied by a spring.—**Mechanical brake,** a brake which is applied by the action of levers, rods, cranks, etc., and not by an electric current or air-pressure.—**Pneumatic brake,** an air-brake.—**Prony's brake.** Same as *Prony's dynamometer* (which see).—**Reversible brake,** an apparatus used in cracker-bakeries to prepare cake-dough in sheets for the panning-machine. It consists of rollers with a platform, or table, each side of which has an apron on which the dough is run back and forth through the rollers. It is fitted with three pulleys, two loose and one tight, to change the motion of the rolls.—**Westinghouse brake,** a form of air-brake invented by George Westinghouse. See ★*air-brake*.

brake[4], *n.* **Cedar brakes.** See ★*cedar*.

brake[5], *n.*—**Chinese brake,** *Pteris serrulata*, a Chinese species established in the southeastern United States.—**Winter brake,** *Pellæa atropurpurea*: so called because it remains green throughout the winter.

brakeage (brāk'ȧj), *n.* [*brake* + *-age.*] Braking power or action. See *brake*[3], *n.*, 9, and *brake*[3], *v. t.*, 2.

brake-band (brāk'band), *n.* Same as *brake-strap*.

brake-dog (brāk'dog), *n.* The pawl of a brake-ratchet.

brake-finger (brāk'fing″gėr), *n.* Same as ★*brake-dog*.

brake-gear (brāk'gēr), *n.* In *car-building*, the brake-system of a railroad-car, including all its component parts. It includes all the pipes, hose, air-cylinders, chains, rods, brake-shoes, etc.

brake-handle (brāk'han″dl), *n.* In *car-building*, a hand-lever for controlling a brake, used only in a special type of brake-gear. It takes the place of the ordinary brake-wheel.

brake-hose (brāk'hōz), *n.* A superior grade of air-hose, composed of rubber and cotton fabric, used in short lengths to connect the brake-pipes under a railroad-car and to convey compressed air to the brake-gear.—**Armored brake-hose,** brake-hose protected by wire wound tightly round the outside to prevent injury by abrasion. Any hose protected by wire may be termed an *armored hose*.—**Brake-hose coupling,** a self-locking coupler for connecting the ends of brake-hose between railway cars and forming an air-tight connection between them.

brake-pipe (brāk'pīp), *n.* A pipe for carrying compressed air to an air-brake cylinder. *Encyc. Brit.*, XXVI. 342.

brake-power (brāk-pou″ėr), *n.* Same as *brake* ★*horse-power*.

brake-rod (brāk'rod), *n.* The rod by which a brake is operated; the rod connecting the operating lever to the brake.

brake-rubber (brāk'rub″ėr), *n.* A brake-shoe.

brake-sieve (brāk'siv), *n.* A jigger operated by a hand-lever. See *jigger*[1], 2 (*a*).

brake-signal (brāk'sig″nal), *n.* In *car-building* and *railroading*, any signal that the brakes are to be put on; a ★train-signal (which see).

brake-sled (brāk'sled), *n.* A logging-sled so constructed that, when the pole-team holds back, a heavy iron is forced into the road-bed on the side of each runner of the forward sled.

braking-machine (brā'king-ma-shēn″), *n.* A machine used to soften skins. It consists of a large wheel with several dull blades projecting from the rim which come in contact with the skin.

bramathere (brā'ma-thēr), *n.* An animal of the genus *Bramatherium*.

bramble-shark (bram'bl-shärk), *n.* See ★*shark*[1].

branch, *n.* **2.** (*m*) In *math.*, some one determination of a many-valued function selected for consideration. Thus the values $\log. x$, $\log. x + 2\pi i$, $\log. x + 4\pi i$, ... may be said to belong to different *branches* of the function $\log. x$. (*n*) In *coal-mining*, a road in long-wall working leading off a level, heading, or other main road.

branchage (brānch'āj), *n.* [*branch*, *n.*, + *-age.* Cf. *leafage*.] Branches collectively or in the mass.

Leafage and *branchage*, vulgar eyes admire.
Browning, Ring and Book, x. 275.

branch-climber (brānch'klī″mėr), *n.* A liana supported by irritable curling branches, not otherwise different from the ordinary climber, that is, from one bearing leaves and lateral shoots. It is exclusively tropical and subtropical. See ★*tendril-climber*.

branch-cut (brānch'kut), *n.* In *math.*, a line, quite arbitrary (except that it cannot intersect itself), which either passes from a branch-point to infinity or joins two branch-points.

brancher, *n.* **3.** In *flower-making*, one who attaches the branches to the main stems.

branch-grass (brānch'gras), *n.* The creek-sedge, *Spartina stricta maritima*. It grows along channels in salt-marshes. See *Spartina*.

branchiæ, *n. pl.*—**Dermal branchiæ,** prolongations (like glove-fingers) of the interior membrane of echinoderms, as the starfishes, which protrude through the dermal pores and serve as respiratory organs. They are retractile and are covered with ciliated epithelium.—**Secondary branchiæ,** structures of various form which, as in mollusks, perform the respiratory function in case of the absence or atrophy of the true ctenidia.

Branchial cartilage, one of the cartilaginous rods or bars in the branchial arches of sharks or of the embryos of higher animals.—**Branchial filament.** Same as *gill-filament*. **Branchial fistula.** See ★*fistula*. **Branchial formula,** a table showing the number and arrangement of the gills, as in crustaceans.—**Branchial junction,** a transverse band uniting the first-formed or primary septa of the branchial apparatus of the lancelet, *Branchiostoma*.—**Branchial pocket,** in *zoöl.*, a pouch-like dilatation of the branchial slits in the cyclostomes, larval *Balanoglossus*, etc.—**Branchial rod,** a chitinous rod forming the support of the lamella, or septum, between each pair of branchial openings in the lancelet.

branchicolous (brang-kik'ō-lus), *a.* [L. *branchia*, gill, + *colere*, till, dwell.] Living in or on the gills of fishes or other aquatic animals: said of certain parasites, as *Distoma*, etc.

branchihyal, *n.*—**Axial branchihyals,** the basi-branchials; the lower median unpaired bones in the branchial arches or gill-arches of fishes.—**Lateral branchihyals,** the ceratobranchials; bones of the gill-arches of fishes between the hypobranchials and the epibranchials.

branchiogasteropod (brang″ki-ō-gas'tē-rō-pod), *n.* One of the *Branchiogasteropoda*.

branchiomere (brang'ki-ō-mėr), *n.* [NL., ⟨ Gr. βράγχια, gills, + μέρος, part, segment.] In *embryol.*, one of the segments of the vertebrate embryo as indicated by the presence of a visceral arch and cleft; a branchial segment or metamere.

branchiomeric (brang-ki-ō-mer'ik), *a.* Relating to the division of the cranial region into segments, each furnished with a gill-arch or respiratory pouch.

branchiomerism (brang-ki-om'ėr-izm), *n.* In *embryol.*, the development of branchial segments as indicated by the so-called visceral skeleton and the metameric diverticularization of the fore-gut in the vertebrate embryo.

branchiopalatal (brang″ki-ō-pal'a-tal), *a.* Of or pertaining to the chain of palatine bones in the roof of the mouth of bony fishes. *Nature*, Nov. 19, 1903, p. 64.

branchioparietal (brang″ki-ō-pa-rī'e-tal), *a.* [Gr. βράγχια, gills, + L. *paries*, wall: see *parietal*.] Relating to the gills and the wall of the atrium in mollusks.

Branchiopoda, *n.* **3.** An order of entomostracous crustaceans containing the *Phyllocarida*, *Phyllopoda*, *Cladocera*, and *Branchiura*.

branchiosaurian (brang″ki-ō-sâ'ri-an), *n.* and *a.* **I.** *n.* A fossil amphibian of the genus *Branchiosaurus*.

II. *a.* Pertaining to or having the characters of *Branchiosaurus*.

Branchiosaurus (brang″ki-ō-sâ'rus), *n.* [NL., ⟨ Gr. βράγχια, gills, + σαῦρος, a lizard.] A genus of small extinct amphibians of lizard-like form, with broad, obtusely rounded heads and large orbits. The ventral surface of the body was covered with overlapping cycloidal scales arranged in several different series; the tail was long and partly unossified. The genus occurs abundantly in the Permian rocks of Saxony and Bohemia.

branchiostegal, *a.* **II.** *n.* One of the bony rays under the head of a fish below the opercular bones and behind the lower jaw. They are connected by a membrane called the *branchiostegal* or *gill-membrane*.

Branchiostomatidæ (brang ki-o-stō-mat'i-dē), *n. pl.* [NL., < *Branchiostoma(t-)* + *-idæ*.] The family of lancelets, the lowest of known fishes, comprising 2 or 3 genera and 8 or 10 species. They are small translucent creatures found embedded in the sand on warm coasts throughout the world. The recognized genera are *Branchiostoma*, *Epigonichthys*, and *Amphioxides*.

branchiotreme (brang'ki-o-trēm), *n.* [Gr. βράγχια, gills, + τρῆμα, a hole.] Same as *gill-slit*.

branch-island (brånch'ī-land), *n.* The island formed by an ★anabranch (which see). [Australia.]

branch-lacquer (brånch'lak″ėr), *n.* The juice obtained from the branches of the lacquer-tree. See *seshime lacquer* (under *lacquer*).

branch-line (brånch'līn), *n.* Same as ★*branch-cut*.

branch-section (brånch'sek″shon), *n.* Same as ★*branch-cut*.

brand, *n.* **Sugar-cane brand,** a disease of the leaves of sugar-cane caused by the smut, *Ustilago Sacchari*.

brand-book (brand'buk), *n.* In *stock-raising*, a record-book showing the various cattle-brands and their owners.

brander[2], *n.* 3. *pl.* Furnace-bars; the grate-bars of a ventilating-furnace. *Barrowman*, Glossary. [Scotch.]

brander[2], *v. t.* 2. To nail furring-strips or the like to a girder or other timber as a preparation for lathing and plastering.

Brandes's test for quinine. See ★*test*[1].

branding-chute (bran'ding-shöt), *n.* A narrow lane or guideway through which cattle are driven one at a time to be branded.

branding-helmet (bran'ding-hel″met), *n.* A helmet-like cage placed over the head and face in branding the cheek of a criminal who had pleaded benefit of clergy: in use in the sixteenth century.

brandise (bran'dis), *n.* [Ult. < AS. *brandīsen*: see *brand-iron* and *brander*[2].] A trivet on which to set a pot or kettle.

And there was a great black crock upon the *brandise*, with his legs sticking out.
T. Hardy, Madding Crowd, p. 178.

brandisite (bran'dis-īt), *n.* [Said to be named after W. T. *Brande*, an English chemist; if so, with dubious ending, *-is-* (?) + *-ite*[2].] A micaceous mineral closely related to seybertite.

bran-drench (bran'drench), *v. t.* In *leather-manuf.*, to wash in sour bran to remove the lime. *Modern Amer. Tanning*, p. 161.

Brand's method. See ★*method*.

brandtite (brand'tīt), *n.* [Named after Georg *Brandt*, master of the Swedish mint.] A hydrated arseniate of calcium and manganese occurring in from colorless to white triclinic crystals: found at Pajsberg, Sweden.

brandy[1], *n.* **White brandy,** brandy as it comes, colorless, from the still, not having taken up coloring matter from the casks in which it is commonly stored, nor having been artificially colored.

brandy-cowe (bran'di-kou), *n.* In *wine-making*, the washings of a brandy-cask, used to adulterate port-wine. *Encyc. Brit.*, I. 173.

brandy-faced (bran'di-fāst), *a.* Having a face which shows the effects of brandy-drinking.

Where you have to elbow and jostle your way . . . by hulking labourers and *brandy-faced* viragos, squabbling at tavern doors.
G. A. Sala, Twice round the Clock, p. 266.

brandy-oil (bran'di-oil), *n.*—**Marc brandy-oil.** Same as *fusel-oil*.

brandy-smash (bran'di-smash), *n.* A drink made by mixing brandy with crushed ice and putting a few sprigs of mint in the glass. See *smash*, 3.

branner (bran'ėr), *n.* [*bran*[1], *v.*, + *-er*[1].] A machine for applying bran for cleansing purposes. It consists of a box filled with bran and slaked lime, and an endless belt on which tin plates, coated with oil as they come from the tin-pot, are carried through the bran and lime. *Sci. Amer.*, Nov. 1, 1902, p. 290.

branning, *n.* 2. The process of removing the oil from tin plates during their manufacture, by passing them through a mixture of bran and slaked lime.

brant[2], *n.*—**China brant,** a Californian name for Hutchins's goose, *Branta canadensis hutchinsi*, a subspecies of the Canada goose. **Hutchins's brant.** Same as *Hutchins's goose*. **Mexican brant.** Same as *China* ★*brant*.

Brasenia (bra-sē'ni-ä), *n.* [NL. (Schreber, 1789): formation not indicated by the namer.] A genus of dicotyledonous aquatic plants belonging to the family *Nymphæaceæ*. The only spe-

cies, *B. Schreberi*, has alternate, peltate, oval, entire, floating leaves and axillary purple flowers. It is widely distributed in North America, eastern and tropical Asia, western tropical Africa, and Australia. It is sometimes cultivated in ponds, along with water-lilies, chiefly for its floating foliage; the flowers are inconspicuous.

brasero (brä-sā'rō), *n.* [Sp.: see *brazier*[2].] 1. A brazier for holding burning charcoal for heating purposes.—2. In Mexico, a hearth or fireplace.

brash[2], *n.*—**Spaning brash.** Same as *spaning brash* (which see, under *brash*[2]).

brashy[1], *a.* 2. Brittle; crumbly; fragmentary: as, *brashy* sandstone.—3. Showery: as, *brashy* weather; a *brashy*, cold spring.—4. Subject to slight attacks of sickness or indisposition, especially when connected with acidity of the stomach. Hence—5. Acid or bitter: as, a *brashy* taste.

brass[1], *n.* 1. The following are varieties of brass, with the parts, by weight, of their components:

Name.	Copper.	Zinc.	Tin.	Lead.	Iron.
Admiralty metal	87	5	8		
Bell-metal	16		4		
Brazing-metal	16	3			
Brazing solder	50	50			
Bushing-metal	64	8	4		
Common brass	64	36			
Composition, United States Navy	88	2	10		
Coppered brass	99.9				0.1
Gun-metal	92.5	2.5	5		
Gun-metal	83	15	2		
Muntz's metal	60	40			
Naval brass	62	37	1		
Red brass	87	4.4	4.3	4.3	
United States Navy journal-boxes	82.8	3.4	13.8		
White brass	34	66			

Aluminium brass. See ★*aluminium*.—**Brass sleeker, wire.** See ★*sleeker*, ★*wire*[1]. **Brass solder.** See ★*solder*.—**Burnt brass,** a brass or alloy, containing copper and zinc, which has been exposed to so high a temperature that the more volatile zinc element in the compound has begun to start or leave its combination with the copper.—**Calamin brass,** brass prepared by the calamin method—that is, by mixing metallic copper with calcined calamin and charcoal and heating the mixture for twelve hours or more in fire-clay crucibles, till the zinc, reduced by the carbon and carbonic oxid, alloys with the copper. The calamin method, although cheaper than the direct method, has been replaced by the latter which requires less time.—**Naval brass,** a metal consisting of 62 parts of copper, 37 parts of zinc, and 1 part of tin, used in England for surfaces to be exposed to corrosion in sea-water, or in parts of guns and fittings. **Small brass,** a Roman coin the size of a sextans.—**Soft brass,** brass which has not been hardened by hammering or working; brass which has been annealed after being worked: used when ductility is required. **Tough brass,** any brass which is suitable for making bushing or linings for bearings.—**Yellow brass,** a cheap brass used for making castings when strength and ductility are not required: usually made of 70 parts of copper and 30 parts of zinc.

brass[1], *v. t.* **To brass it,** to brazen it out; behave brazenly or with effrontery. [Colloq.]

brassart, *n.* 2. A band of any material worn about the arm above the elbow. Hospital corps men on the battle-field wear a white cloth brassart marked with a red cross.

The private wears on the left arm above the elbow a *brassart* of white cloth, three inches wide, with a cross of red cloth in the centre.
Buck, Med. Handbook, I. 485.

Brass-founders' ague. See ★*ague*.

brassic (bras'ik), *a.* [L. *brass(ica)*, cabbage, + *-ic*.] Same as ★*brassidic*.

Brassicaceæ (bras-i-kā'sē-ē), *n. pl.* [NL. (Lindley, 1836), < *Brassica* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Papaverales*, the mustard family, typified by the genus *Brassica*. It is the same as the *Cruciferæ* (which see), and is the name adopted by botanists who require that family names be derived from those of the type genera.

brassicaceous (bras-i-kā'shius), *a.* Belonging to the *Brassicaceæ*, or mustard family.

brassidic (bra-sid'ik), *a.* [*brass(ic)* + *-id* + *-ic*.] Noting an acid, $C_8H_{17}CH:CHC_{11}H_{22}CO_2H$, formed by the action of nitrous acid on erucic acid and probably stereomeric with the latter. It is monobasic and melts at 66° C. This acid is also called *brassic acid*.

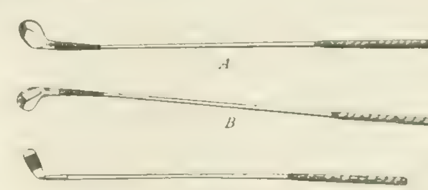
brass-molder (brås'mōl″dėr), *n.* One who makes brass castings. As brass requires quite different treatment from iron, special men do the brass-molding.

brass-shirted (brås'shėr″ted), *a.* Covered or incased with brass: as, a *brass-shirted* roller. *Fox*, Mechanism of Weaving, p. 465.

brassware (brås'wãr), *n.* Things made of brass; brazen utensils.

brass-work (brås'wėrk), *n.* Articles or finishings of brass, as the small mountings or trimmings about a boiler or machine.

brassy[1], *a.* II. *n.* A wooden golf-club shod with brass on the sole.



A, brassy niblick; *B*, brassy-spoon; *C*, brassy-cleik.

brassy-cleik (bras'i-klēk), *n.* An iron golf-club with a wooden or hard-rubber inset, sometimes used in place of a brassy.

brassy-niblick (bras″i-nib'lik), *n.* A wooden golf-club with a small head and a brass sole, used for playing out of bad lies.

brassy-spoon (bras'i-spön), *n.* A wooden golf-club with a long face, lofted, and a brass sole.

Brathay flags. See ★*flag*[4].

bratling (brat'ling), *n.* [*brat*[2] + *-ling*[1].] A little brat; an infant. [Jocose.]

We are all—wife, *bratling*, and self—remarkably well.
Cottle, Reminiscences of Coleridge, p. 75.

bratty[2] (brat'i), *n.*; pl. *bratties* (-iz). [Tamil *varatti* or *virātti*, dried dung.] A cake of dried cows' dung, used as fuel. [Southern India.]

Brauneria (brou-nē'ri-ä), *n.* [NL. (proposed by Necker, 1790), named in honor of *J. J. Bräuner*, author of a German herbal published in 1713.] A genus of dicotyledonous plants belonging to the family *Asteraceæ*. See *Echinacea*.

Braun's solution. See ★*solution*.

Braun tube See ★*tube*.

Brauronia (brâ-ro'ni-ä), *n. pl.* [Gr. Βραυρώνια, neut. pl. of Βραυρώνιος, adj., < Βραυρών, a village of Attica.] In *Gr. antiq.*, a festival in honor of Artemis Brauronia. It was celebrated every fifth year at Brauron, a village of Attica; its chief features were a procession of ten virgins to the temple of the goddess, their consecration to her service, and the sacrifice of a goat. See *Brauronian*.

Bravais's method. See ★*method*.

bravura, *n.* 2. In *painting*, vigorous, brilliant treatment in both color and technique.

Here, instead of *bravura*, we have a careful, almost painstaking, reproduction of the model.
Portfolio, XXII. 175.

brawl[3], *n.* See *brail*[2].

bray[1], *v. t.* 2. In cloth-finishing, to pound (woolen cloth) in a soapy scouring-liquor: same as *full*. See *full*[2] and *fulling*[2].

braza (brä′thä), *n.* [Sp.: see *brace*[1], *n.*] The Spanish fathom (see *brass*[2], 2); in the Philippines, a measure of length somewhat less than 6 feet.

brazenry (brā′zen-ri), *n.* [*brazen* + *-ry.*] Brazen assertion; effrontery.

Coming from Lord Lucan, this language was no vulgar *brazenry*; it represented the impressible strength of his real though mistaken conviction.
Kinglake, Crimea, IV. 57.

braziery (brā′zier-i), *n.* Braziers' work; brassware.

brazilein (bra-zil′ē-in), *n.* [Appar. < *brazil*, + *-ein*[2].] Same as *brazilin*.

Brazilian anime. Same as *anime*, 3. **Brazilian bug** or **beetle.** See ★*bug*[2]. **Brazilian cedar.** See ★*cedar*. **Brazilian cherry.** Same as *Surinam* ★*cherry* (*b*). **Brazilian emerald, ruby,** etc. See ★*emerald*, ★*ruby*, etc.

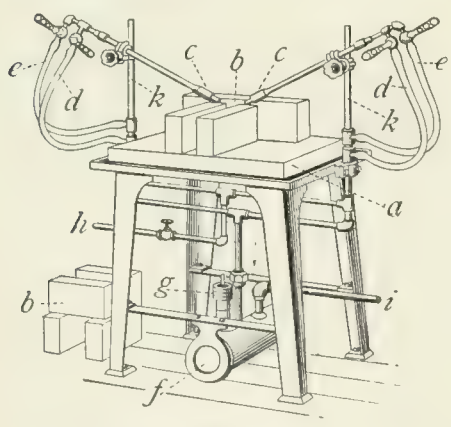
brazilite (bra-zil′īt), *n.* [*Brazil* + *-ite*[2].] See ★*baddeleyite*.

brazing-clamp (brā′zing-klamp), *n.* A clamp used in repairing saws and in brazing together the ends of band-saws. It consists of a strong frame with two or more set-screws for holding the saw-web in position, and is fitted with a screw-press. The ends of the band-saw are beveled to match, placed in the clamp with the ends joined, and supplied with solder under the press. Red-hot irons are then placed above and below the joint and firmly held together by the press. The hot irons cause the solder to flow and make a brazed joint. A pair of brazing-tongs (which see) can be used instead of the press.

brazing-machine (brā′zing-ma-shēn″), *n.* A heating-machine fitted with a conveyer by which small articles to be brazed are carried under the gas-flames in the furnace.

brazing-metal (brā′zing-met″al), *n.* Any metal suitable for brazing; specifically, an alloy used for making flanges for copper steam-pipes and facings for valves. This alloy is usually 98 parts copper and 2 parts tin, the proportion of copper being high, so that the flange will not melt when it is brazed to the pipe.

brazing-table (brā′zing-tā″bl), *n.* An iron table supporting a flat slab of fire-clay and fitted with gas-burners for using producer-gas under an air-blast and giving blowpipe flames that may be concentrated upon any point on the table. The table is also provided with a number of loose fire-bricks that may be used to guide and concentrate the heat upon the metals to be brazed. The illustration shows a simple form of brazing-table. Other and larger tables have several burners and fixed fire-clay bricks arranged in convenient positions for the work. See ★*heating-machine*.



Brazing-table.

a, fire-brick slab on iron table; *b*, loose fire-brick to concentrate heat; *c*, blowpipes; *d*, gas-pipes; *e*, air-pipes; *f*, compressed-air reservoir; *g*, pressure control; *h*, gas supply; *i*, air supply; *k*, standard, with set-screw, supporting pipes.

brazing-wire (brā′zing-wīr), *n.* Soft brass wire of small diameter bound around a joint to be brazed. The joint is then heated, and the flux, usually borax, is sprinkled on the joint, which is then filled by the molten metal from the wire.

brea (brā′ä), *n.* [Sp. tar, resin: cf. F. *brai*, resin, etc.] **1.** A small thorny tree, *Cæsalpinia præcox*, with light-green bark, found in northern Argentina. It yields a pale-brown gum resembling gum arabic and known commercially as *goma brea*.—**2.** A variety of asphaltum which is fluid at ordinary temperatures; maltha.

In regard to *brea* and chapapote, usage seems to make them synonymous, unless it be that the solidity of chapapote is a degree greater than that of *brea*, by no means an assured distinction. *U. S. Geol. Surv.*, 1902, p. 299.

brea-blanca (brā″ä-bläng′kä), *n.* [Sp. *brea*, pitch, + *blanca*, white.] A soft resin obtained from the pilaui-tree (*Canarium Luzonicum*), used in the arts to toughen varnish and prevent it from cracking, but not suitable for varnish alone. Also called *Manila elemi*. See *elemi* and ★*pilaui*. [Philippine Is.]

Breach of faith, betrayal of confidence or implied trust: as, "Vicious *breach of faith*, Massinger, Bashful Lover, iv. 1." **Clean breach** (*naut.*), a boarding sea which strips the deck-furniture from a vessel.—**Clear breach** (*naut.*), a sea that sweeps across the deck without breaking. **To mount a breach,** to assault a breach in a fortification.

bread[1], *n.* **Black bread,** bread made of rye flour, often with the addition of caraway seeds. See *rye*. **Bread oil.** See ★*oil*.—**Feast of unleavened bread.** See *Jewish* ★*festivals*. **Indian bread.** See *tuckahoe*, 2. **Pulled bread,** pieces of the crumb of fresh bread or biscuit dried in a slow oven until slightly colored: served with chocolate, coffee, or bouillon.

bread[1], *v. t.* **2.** To clean by rubbing with dry bread or with a bread-crust, as a drawing.—**3.** To provide with daily bread.

They had enough to *bread* themselves.
Tourgée, Fool's Errand, p. 91.

bread-board (bred′bōrd), *n.* **1.** A board upon which to knead, roll, or mold flour-mixtures; a kneading-board; a molding-board; a rolling-board.—**2.** A board upon which bread is cut on the table during the serving of a meal.

bread-crust (bred′krust), *n.* A crust of bread. —**Bread-crust bomb.** See ★*bomb*.—**Bread-crust structure** or **texture,** in *geol.*, the vesicular structure exhibited by the outer portions of many volcanic bombs, resembling the crust of a loaf of bread. *Geikie*, Textbook of Geol., p. 274.

breadfruit, *n.*—**African breadfruit,** a tree of the mulberry family, *Treculia Africana*. The large round fruits contain numerous starchy seeds, buried in a spongy substance, which are ground into meal and eaten by the natives.

bread-maker (bred′mā″kėr), *n.* A household machine for mixing and kneading dough. It consists of a tin vessel containing a curved blade suspended from a vertical rod passing through the cover of the vessel. By means of a horizontal handle fixed to the rod the blade can be made to turn in the vessel. The materials are placed in the vessel, the cover is placed over it and fastened, and the handle is turned rapidly for a few minutes, when the dough is found to be well kneaded and ready to be left to rise.

bread-nut, *n.* **2.** The seeds of the fertile breadfruit, *Artocarpus communis*, which form a food staple on many Pacific islands and in the East Indies. They are somewhat like European chestnuts in flavor. See *Artocarpus*, *breadfruit*, ★*antipolo*, and ★*dugdug*.

bread-sticks (bred′stiks), *n. pl.* Bread-dough rolled into sticks and baked: served with bouillon, soup, or tea.

Breadth extreme, in *ship-building*, an expression used to designate the greatest breadth of the ship to the outside of planking or plating, whether above or below water.—**Breadth for tonnage,** in *ship-building*, the breadth of a vessel used in calculating the tonnage by an obsolete rule called "builders' old measurement." It differs from breadth extreme in the exclusion of extra thickness of outside plank worked in certain places over the average thickness. **Breadth index.** Same as *cephalic index* (which see, under *cephalic*).—**Internal biorbital breadth,** in *anthrop.*, the distance between the inner sides of the two orbits.—**Interpterion breadth,** the distance between the pteria.—**Minimum frontal breadth,** in *anthrop.*, the minimum distance between the temporal ridges.—**Minimum ramus breadth,** in *anthrop.*, the minimum breadth between the ascending branches of the lower jaw. —**Nasal breadth,** the greatest breadth of the nose.—**Orbital breadth,** in *anthrop.*, the greatest horizontal diameter of orbit; also, the greatest distance from the dacryon to the opposite side of orbit.—**Palatal breadth,** in *anthrop.*, the breadth of the palate, generally measured between the canines as *anterior* and between the second molars as *posterior* palatal breadth.—**Straight of breadth,** in *ship-building*, same as ★*middle-body*. [Great Britain.]

The "middle body" or "*straight of breadth*," is that part of a ship amidships where the cross-sections maintain the form of the midship section.
White, Manual of Naval Arch., p. 457.

breadwinning (bred′win″ing), *n.* The earning of a livelihood.

breadwinning (bred′win″ing), *a.* Serving to earn a livelihood: as, *breadwinning* pursuits or labors.

break, *v.* **I.** *trans.* **14.** In *cricket*, to cause (the ball) to change its course after the pitch, by imparting to it a twist or spin at the moment of leaving the hand. Also used intransitively. —**To break a landing.** See ★*landing*.—**To break a will,** to secure a judicial determination that an instrument purporting to be a will is not a legal will by reason of defects, either in the forms required for its proper execution or in the substance of the instrument.—**To break broadcast,** to plow throughout: in *cotton-growing*, contrasted with merely forming the beds. [Southern U. S.] —**To break (one) all up,** to unsettle or disturb greatly. [Colloq.]—**To break the balls,** to open the game at English billiards or ball-pool.—**To break up.** (*f*) To confuse; disconcert, as a public speaker. [Slang.]—**To break up a fox,** in *hunting*, after the fox is killed, to take him away from the dogs, take off the mask, brush, and pads, and then throw the remains to them to worry.

To break water. (*b*) To soften water for washing, in case it contains much lime or magnesia, by the addition of carbonate of soda or borax.

II. *intrans.* **15.** In *tennis* and other games, to bound: as, the ball *breaks* in a contrary direction.—**16.** In *trap-shooting*, to hit the target. *Forest and Stream*, Jan. 24, 1903, p. 80. **17.** In *cricket*. See **I.** ★**14.**—**To break back,** in *cricket*, said of a ball when it breaks from the off, that is, as the bowler views it, from left to right. See ★*off-break*. *Hutchinson*, Cricket, p. 60. **To break down.** (*f*) To lose homogeneity: said of a composite fluid or semisolid in the first stage of decomposition.—**To break even,** in *faro*, to bet that each card will win or lose an even number of times on the deal.—**To break off.** (*c*) Said of the wind when it comes more ahead, compelling a vessel to go off from her course in order to keep her sails full. **To break up.** (*c*) *Naut.*, of a ship, to go to pieces in a heavy sea; of a storm, to cease.

break, *n.* **20.** An unlucky remark, or a breach of propriety, etiquette, or the like. [Colloq., U. S.]—**21.** In *elect.*, the opening of an electric circuit.—**22.** *pl.* In *phys. geog.*, the broken land at the border of an upland that is dissected by ravines. [Western U. S.]—**23.** An apparatus for breaking the stalks of hemp, etc., with the object of facilitating the separation of the bast from the woody tissue. Also called *breaker*.—**24.** The bound of the ball in tennis service.—**25.** A reduction in the rate of wages. [Scotch.]—**26.** In *cricket*, a ball which, because of a twist or spin imparted to it by the bowler, changes its course after the pitch.—**27.** In *boxing* and *prize-fighting*, the act of separating after the contestants have come to close quarters and seized each other. Certain rules provide whether they may or may not strike at each other upon 'breaking away,' that is, separating.—**All-round break** or **run,** in *billiards*, one into which a variety of billiard-strokes enter, and the balls are never close together for more than three or four shots at a time.—**Hammer break.** See ★*hammer-break*.

breakaway (brak′a-wā), *n.* **1.** An animal which breaks away from a herd or flock.—**2.** A panic rush of sheep, cattle, horses, or other animals at the sight or smell of water; a stampede. [Australian in both senses.]

The smartest stock horse that ever brought his rider up within whip distance of a *breakaway* or dodged the horns of a sulky beast took the chance.
E. E. Morris, Austral English.

break-back (brāk′bak), *n.* An ★off-break (which see). *Hutchinson*, Cricket, p. 64.

breakbones, *n.* **2.** A book-name for the giant fulmar, *Ossifraga gigantea*: usually called *cape-hen* by sailors; also, rarely used in books for the osprey, *Pandion haliaëtus* and the lammergeier, *Gypaëtus barbatus*.

break-club (brāk′klub), *n.* In *golf*, a stone or other obstacle lying near the ball which might break or injure the club in the act of playing.

breakdown, *n.* **II.** *a.* Used or employed in repairing a breakdown, specifically in the railway service: as, a *breakdown* crew; a *breakdown* train. Called *wrecking-train*, etc., in the United States.

When the Westbound's ditched, and the tool-car's hitched,
And it's 'Way for the *Breakdown* gang (Tara-ra!)
'Way for the *Breakdown* gang! *R. Kipling*, .007

We moved off, . . . the first [train] being a short "*breakdown*" pilot train.
Julian Ralph, War's Brighter Side, p. 89.

breaker, *n.*, **1.** (*h*) In *elect.*, a device for opening an electric circuit.

breaker-scutcher (brā″kėr-skuch′ėr), *n.* A machine used in preparing cotton for carding; the first scutching-machine.

breakfaster (brek′fas-tėr), *n.* One who breakfasts.

"Oh, don't you know what has happened?" said the sacred *breakfaster*.
Sydney Smith, Irish Rom. Cath. Church.

breakhead (brāk′hed), *n.* Powerfully reinforced stem and bows, peculiar to certain vessels used for breaking channels through heavy ice.

In order to be able to maintain this ferry service in winter the "Mecklenburg" has been constructed as an ice-breaker. The hull has a *breakhead* such as is usually only carried by ice-breakers, and other important reinforcements. *Sci. Amer. Sup.*, Jan. 9, 1904, p. 23422.

breaking-cap (brā′king-kap), *n.* **1.** A cap placed over an opening in the cylinder of a steam-engine, so that if water collects in the cylinder the cap will be broken and thus open an outlet for it and prevent injury to the engine.—**2.** A cap or cup-shaped casting, used in machines for rolling iron or steel, such that if a piece is fed to the rolls too cool, or too hard, the casting will yield first and save the more costly roll.

breaking-harness (brā'king-här nes), *n.* A harness of special design used in breaking colts to familiarize them with the strapping.

breaking-joint (brā'king-joint), *n.* The joint or surface where an injured portion of the body of an organism is thrown off and a new one regenerated.

There is a definite *breaking-joint* at the base of the crab's leg, at which the separation takes place. *T. H. Morgan*, Regeneration, p. 100.

breaking-pin (brā'king-pin), *n.* In a conveyer or elevator, a small safety-pin inserted at some point between the shafting or gearing which operates the conveyer and a sprocket-wheel which controls the belts or chains. Any unusual strain breaks the pin, releases the wheel, and causes the whole system to stop.

breaking-snaffle (brā'king-snaf'l), *n.* A heavy jointed snaffle with a key-piece at the center and three or more players hanging on it.

breaking-strength (brā'king-strength), *n.* In *mech.*, the strength of a body as measured by the load, per unit of cross-section, necessary to produce rupture.

break-off, *n.* **2.** The act of breaking off, separating, or severing connection, company, or relations.

break-wind (brāk'wind), *n.* A rude shelter, constructed of sticks, bushes, bark, or other material, used by primitive tribes, such as the former natives of Tasmania, and the Athapascans of northwestern North America, in place of a tent or a hut.

Ignorant of agriculture, with no dwellings but rough huts or *break-winds* of sticks and bark, . . . these savages, until the coming of civilized man, roamed after food within their tribal bounds. *Encyc. Brit.*, XXV. 467.

bream[1], *n.* **Black bream.** (*a*) A fish, *Sparus australis*, of the family *Sparidæ*. Called in Tasmania *silver bream*. [Australia.] (*b*) *Girella tricuspidata*, of the family *Kyphosidæ*. [Tasmania.] **Bony bream,** a clupeoid fish, *Dorosoma circlo*, found in Australia. **Red bream.** Same as *red snapper*. **Red-breasted bream,** a species of sunfish, *Lepomis auritus*, of the family *Centrarchidæ*, which reaches a length of from 6 to 8 inches: abundant from Maine to Louisiana in streams east of the Alleghanies. **Silver bream.** (*a*) Same as *black* ★*bream* (*a*). (*b*) Same as *white* ★*bream* (*b*). **White bream** (*b*), a fish of New South Wales, *Xystæma ovatum*, of the family *Percidæ*. Also called *silver-bidla*.

bream-backed (brēm'bakt), *a.* Having the back straight or slightly arched: said of a horse.

He [a horse] was not jogged under the jaw, . . . hollow-backed, *bream-backed*, long-backed or broken-backed. *Southey*, Doctor, V. cxliii.

brean[2] (brean), *n.* [G. **brean*, < Sp. *brea*, resin, + *-an*.] A crystalline resin obtained from elemi.

breast, *n.*, **7.** (*h*) The front part of the first of a set of wool-carding machines for opening the locks of wool preparatory to passing them to the carding-cylinders. **Breast-doffer,** in *wool-carding*, the cylinder that doffs and conveys the wool from the breast, or first part, of the carding-machine to the main cylinder, or drum.—**Broken breast, gathered breast;** abscess of the breast.—**Funnel breast,** a deformity of the chest consisting in a conical depression at the lower end of the sternum. **Hysterical breast,** simulation of a tumor of the breast, sometimes seen in young nervous women.

breast-board, *n.* **2.** *pl.* In *mining*, retaining-boards in the face of a heading in running ground.

breast-bore (brest'bōr), *n.* In *mining*, a bore-hole in front. *Barrowman*, Glossary.

breast-brace (brest'brās), *n.* Any brace having a knob or breastplate, so that the operator can push on it with his breast to feed the drill. See *brace*, 14.

breast-collar (brest'kol-ar), *n.* A harness-strap passing round a horse's breast, to which the traces are attached.

breast-high, *a.* As high as the breast; specifically, in *lumbering*, having a height of 4½ feet above the ground.

breast-hole (brest'hōl), *n.* The arched hole, at the base of a foundry cupola, used for lighting the fire and taking out the cinder and slag after the iron has been drawn off. The hole is covered by a sheet-iron door while the blast is on.

breasting, *n.* **4.** Same as ★*breast-stoping*.

breast-mining (brest'mī'ning), *n.* Same as ★*breast-stoping*.

breastplate, *n.* **7.** The iron plate used for covering the breast-hole of a cupola.

breast-shore (brest'shōr), *n.* In *ship-building*, one of a line of props or shores, nearly horizontal, supporting transversely a ship in dry-dock, in the vicinity of her load water-line. Also called *wale-shore*. *White*, Manual of Naval Arch., p. 324.

breast-stoping (brest'stō'ping), *n.* Mining from a vertical or steeply inclined face of ore. In inclined veins this is a variety of underhand stoping. In flat deposits the term is applied to an extended face of work, as distinguished from *room-work*.

breastwise (brest'wīz), *adv.* Abreast; side by side.

To form the two bridges, two lines of ships . . . were moored across the strait *breastwise*. *Grote*, Greece, II. iv. 38.

breathiness (breth'i-nes), *n.* In a vocal or similar sound, the state, quality, or effect resulting from an escape of unvocalized air with the sound proper, as in clumsy vocalization, apprehension or terror, whispering, etc.: sometimes equivalent to *wheeziness*, which, however, is usually applied to mechanical sounds, as to a poor organ tone.

breathing, *n.* **Abdominal breathing.** See *abdominal respiration*, under *abdominal*. **Cheyne-Stokes breathing.** See *Cheyne-Stokes respiration*, under *respiration*. — **Mouth breathing,** habitual breathing through the open mouth instead of through the nose: often in children a sign of obstruction of the posterior nares by adenoid vegetations.

breathy (breth'i), *a.* [*breath* + *-y*[1].] **1.** Pertaining to or of the nature of breath.—**2.** In *phonetics*, accompanied with breath; pronounced with open glottis; uttered with breath.—**3.** Characterized by a conspicuous use of the breath: said usually of vocal sounds in which breath is needlessly and faultily wasted.

breccial (brech'i-al), *a.* [*breccia* + *-al*[1].] Of, pertaining to, or of the nature of breccia: as, one solid *breccial* mass. *Kane*, Grinnell Exped., p. 269.

brecciate (brech'i-āt), *v. t.*; pret. and pp. *brecciated*, ppr. *brecciating*. [*breccia* + *-ate*[2].] To break or shatter (the solid rock): a process common in the faulting and folding of strata. It is one of the methods of origin of the rock known as *breccia*.

The folding which is almost certainly present would easily joint or *brecciate* the brittle Niobrara limestone to such an extent as to make it no barrier to the accumulation of oil above from the carbonaceous constituents of the beds below. *U. S. Geol. Surv.*, 1902, p. 331.

brecciform (brech'i-fôrm), *a.* [E. *breccia* + L. *forma*, form.] Having the form of a *breccia*. *Geikie*, Text-book of Geol., p. 1071.

Brechitidæ (brē-kit'i-dē), *n. pl.* [NL., < *Brechites* + *-idæ*.] A family of mollusks containing the genus *Brechites*, or *Aspergillum*, now generally included in the *Clavagellidæ*: same as *Aspergillidæ*.

bred, *n.* A simplified spelling of *bread*.

bredbergite (bred'berg-īt), *n.* [Named after B. G. *Bredberg*, a Swedish chemist, who analyzed it.] An iron garnet from Sala, Sweden, peculiar in that it contains a considerable amount of magnesium.

bredi (brā'di), *n.* [Cape Dutch.] In *South Africa*, vegetables stewed with meat.

bredth, *n.* A simplified spelling of *breadth*.

breech, *n.* **5.** The lowest quality or sort of wool from the fleece of the sheep: it is taken from the hinder part.

breech-cloth (brēch'klôth), *n.* Same as *breech-clout*.

breeches, *n. pl.*—**Pair of breeches,** in *Eng. billiards*, making a winning and a losing hazard in two different pockets by the one stroke, when playing from balk only. — **Scotchmen's breeches,** a kilt. It is a popular saying that when enough blue sky appears after a storm to make a pair of *Scotchmen's breeches* the weather will clear. [Humorous.]

breeches-flue (brich'ez-flö), *n.* An uptake; a flue having conduits for gases of combustion which join so as to discharge into one stack.

breeches-pipe (brich'ez-pīp), *n.* A pipe which divides into legs or branches; a Y-pipe.

breeches-tube (brich'ez-tūb), *n.* A boiler-tube or -flue which divides into two parts which either run parallel or diverge.

breeching-body (brich'ing-bod'i), *n.* That part of the breeching of a harness which encircles the rump of a horse. It is held in place by hip-straps. The ends are provided with rings to receive the side or breeching-straps.

breeching-loop (brich'ing-löp), *n.* **2.** A leather or metal loop used as a substitute for the breeching-hook in a harness.

breeching-strap (brich'ing-strap), *n.* A strap by which the breeching is connected with the trace in double harness, or with the shaft in single harness.

breeching-tug (brich'ing-tug), *n.* In a harness, a short tug provided with a buckle and loops, attached to the breeching-body or braces to receive the hip-strap.

breech-plug (brēch'plug), *n.* In *ordnance*, the steel plug which closes the bore of a breech-loading gun at the rear end. Breech-plugs are of various forms, but are usually of the general shape of a cylinder or truncated cone, on the surface of which is an interrupted screw-thread corresponding to a similar female interrupted thread in the breech of the gun. When the plug is entered into the breech of the gun, the threads on the plug enter the blanks between the threads in the breech, and the two parts are locked together by a quarter or sixth turn of the plug which engages the threads. See *breech-block* and *breech-mechanism*, with cut.

breeding, *n.* **Line breeding,** [illegible] another name for *in-and-in breeding*. **Straight breeding,** breeding within the limits of a breed: opposed to *cross-breeding*.

breeding-ground (brē'ding-ground), *n.* A place suitable or used for breeding: as "ducks seeking their *breeding-grounds*," *Kane*, Arctic Expl., I. 268.

breedy (brē'di), *a.* [*breed* + *-y*[1].] Breeding readily, as rabbits; prolific.

Blockheads too are *breedy*, and double themselves every ten years. *Blackwood's Mag.*, XII. 55.

breez, *n.* A simplified spelling of *breeze* (wind).

breeze[2], *n.* **3.** In *electrotherap.*, a discharge of high tension electricity from a pointed or brush electrode, causing a sensation as of a spray falling on the skin.—**Mountain breeze, valley breeze,** cool winds blowing down a mountain-side or through a valley, gorge, or cañon: especially felt during the late hours of clear nights in the summer season.—**Topgallant breeze,** a wind of such power as to permit the carrying of topgallant sails only.

Brehmer arc-lamp. See *electric* ★*arc*.

breidin (brē'i-din), *n.* [Sp. *brea*, resin, + *-id* + *-in*[2].] A compound of uncertain identity described by Baup as occurring in elemi.

brein (brē'in), *n.* [Sp. *brea*, resin, + *-in*[2].] A compound described by Baup as occurring in elemi. It is probably impure amyrin.

breislakite (brīs'lak-it), *n.* [Named after Scipione *Breislak*, an Italian geologist (1748–1826).] A mineral occurring at Vesuvius in wool-like forms. Its exact character is uncertain, but it has been referred to pyroxene, to amphibole, and also to fayalite.

brekfast, *n.* and *v.* A simplified spelling of *breakfast*.

brelan (brā-loṅ), *n.* [F.] **1.** In games, three of a kind.—**2.** An ancient French game very much like poker, but played with only three cards in each player's hand. It is now superseded by bouillotte.

Bremia (brē'mi-ä), *n.* [NL. (Regel, 1843), named for J. J. *Bremi*-Wolf, a Swiss natural-

Bremia lactucæ.

a, a branching conidiophore showing the expansions and processes on which the conidia are borne, much enlarged; *b*, a ripe conidium, highly magnified; *c*, a conidium after germination has begun, highly magnified.

ist (1791–1857).] A genus of peronosporaceous fungi. They have the conidiophores expanded into a cup-like disk, from the margin of which arise short processes bearing the spores. The single species, *B. lactucæ*, is the downy mildew of lettuce. It also occurs on several other closely related plants.

brephalos (bref'a-los), *n.*; pl. *brephaloi* (-loi). [NL., < Gr. *βρέφος*, the young of any animal, + *-αλος*, a mere termination.] The first larval stage of a crustacean after leaving the egg.

brephic (bref'ik), *a.* [Gr. *βρεφικός*, adj. < *βρέφος*, fetus, embryo.] In *biol.*, pertaining to an early developmental stage.

brer (brur, bru), *n.* A dialectal contraction of the word 'brother' in use among the negroes of the southern United States: as, *brer* Fox, *brer* Rabbit, etc. *J. C. Harris*, Uncle Remus.

brest, *n.* and *v.* A simplified spelling of *breast*.

bretas (bret'as), *n.*; pl. *bretea* (-ē-ä). [Gr. [illegible], pl. [illegible].] In *Gr. antiq.*, a small idol or image having slight resemblance to the human form. There may be found indications of a head, and sometimes of hair and drapery. Bretea are often seated.

bretelles (bre-telz'), *n. pl.* [F.] In *dressmaking*, straps running from the belt in front over the shoulders to the belt in the back, with more or less elaboration of trimming and outline. They usually broaden at the shoulder and narrow toward the waist.

breth, *n.* A simplified spelling of *breath*.

Brethrenism (breTH'ren-izm), *n.* The principles or doctrines of the sect known as *Christian Brethren*, *Plymouth Brethren*, and sometimes *Darbyites*. See *Plymouth Brethren*, under *brother*.

Breton, *n.* -**Low Breton.** Same as *Breton*, 2.

Bretonian (brē-tō'ni-an), *a.* and *n.* [Cape *Breton* or Cape *Breton* Island.] In *geol.*, a divisional name applied by Matthew to the uppermost stage of Cambrian deposits in New Brunswick. The rocks carry many fossils, among them *Dictyonema flabelliforme*, a graptolite which in other countries also marks the summit of the sediments of Cambrian time.

bretonne (bre-ton'), *n.* [F., fem. of *breton*, Breton.] A purée of red onions.

Brev. An abbreviation of *brevet*.

breviary, *n.*—**Mozarabic breviary,** the breviary as arranged according to the Mozarabic liturgy, now extant only in the city of Toledo, Spain.

breviconic (brev-i-kon'ik), *a.* [L. *brevis*, short, + Gr. κῶνος, cone.] Having a short cone, as the shells of certain fossil cephalopods.

brevipalatal (brev-i-pal'ā-tal), *a.* Same as ★*brachyuranic*. *Turner*.

Brevoortia, *n.* 2. A genus of California plants of the family *Liliaceæ*. *B. Ida-Maia*, the only species, is a slender, grassy, half-hardy plant with beautiful and lasting scarlet and green flowers often called *floral fire-crackers*.

Brewer's mask. See ★*mask*[3].

brewst (bröst), *n.* A brewing. Same as *browst*.

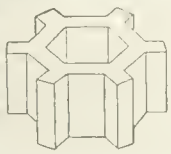
brew-wife (brö'wif), *n.* [ME. *bruewyf*.] A woman who brews; a brewster.

For the sei(d) gold smyth hath maried a *bruewyf*, and keepeth the bruc haus. *Paston Letters*, III. 244.

Brianchon hexagon, luster, point. See ★*hexagon*, ★*luster*[2], ★*point*[1].

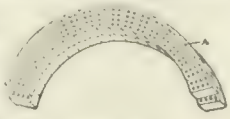
Briasse limestone. See ★*limestone*.

brick[2], *n.* **1.** Commercial bricks are divided into two general classes, *hard brick*, and *soft brick*. A *hard brick* is any brick burned sufficiently hard to resist moisture, heavy pressure, and moderate heat; it ranges in color from deep blue-black, through dark reds, to dark browns and reddish yellows, and is used for pavements, sidewalks, hearths, ovens, foundations, bridges, subways, and exterior walls of buildings. A *soft brick* is a partly burned brick, ranging in color from pale yellow to salmon, used only for interior walls and partitions in dry places, such as the backing of exterior walls, for filling in piers, and in other places exposed to moderate temperature and pressure. Each class is divided into many kinds, chiefly described by their character or use, as *hard building*, *rough hard*, *common hard*, etc., and *pale*, *light*, *filling-in*, *backing-up*, *outside wall*, etc.—**Aluminous bricks,** bricks consisting principally of alumina. These bricks are neutral in character, not being easily attacked by either an acid or a basic slag. They are used as linings of furnaces, where they will come in contact with the slag or other corrosive material, or at a point of junction between an acid and a basic lining. **Bauxite bricks,** refractory bricks made of calcined bauxite, mixed with clay or plumbago. They are used for lining furnaces, and are neutral in character.—**Boston brick,** a rough face-brick much used in old colonial buildings. It is made in shades of red.—**Brown brick,** a hard fire-brick used in constructing coke-ovens. It measures 9 inches long by 4½ by 2⅝ at one end and 4 by 2½ at the other end.—**Face-** or **front-brick,** any hard brick suitable for the front exterior walls of buildings of some architectural character.—**Gage-brick,** a special kind of fire-brick that under the influence of heat changes color: used in bake-ovens to serve as a crude guide to the temperature.—**Glass brick,** a street-paving material made of broken or scrap glass, which is melted and compressed into shape. By this treatment the glass is strengthened and its resisting quality is increased.—**Glazed brick,** brick having one face coated with enamel.—**Honeycomb brick,** fire-brick of a special form, shown in the figure, patented for use in the interior construction of the Cowper regenerative hot-blast stove. Built up together, these bricks form a honeycomb-like structure with hexagonal channels, through which the flame of blast furnace waste gas passes for two or three hours, heating up the fire-brick, and is then replaced by air, which takes up the heat thus stored and is sent on to the furnace at a temperature of about 1,500° F.—**Magnesite brick,** a fire-brick made of impure magnesia mixed with water, dried, and burned. **Muley brick,** a brick-yard term for an imperfect brick.—**Natural brick,** clays baked or sintered by some natural source of heat, such as a molten lava flow or the spontaneous combustion of a coal seam. *Sci. Amer. Sup.*, July 23, 1904, p. 23872.



Honeycomb Brick.

Neutral brick, in *metal.*, a brick containing a large proportion of dumina and capable of resisting well the action of both acid and basic oxids at a high temperature without slagging or melting down.—**Philadelphia brick,** a fine quality of hard smooth faced brick of a deep red color.—**Radial brick,** a form of refractory perforated brick used in building tall chimneys. It is in the form of the keystone of an arch and has two rows of perforations. Built into a circular chimney, radial bricks break joint with each line of perforations in line with those in the bricks below, the mortar filling the perforations through each tier of bricks and binding them together vertically.—**Sand-lime brick,** a brick made from silicious sand, with a small admixture of lime to serve as cementing material, and burned at a very high temperature.—**Sewer-brick,** very hard brick suitable for sewer or other submerged or buried work.—**Stock brick,** any hard brick for general exterior work.—**White brick,** brick made of clay that in burning turns white: a fine decorative brick for interior walls.



Radial Brick.
A, perforation.

brick[2], *v. t.* -**To brick in,** to inclose with brickwork: used of timber constructions the open spaces of which have to be filled in with brickwork.—**To brick up,** to close with brickwork, as an opening; to strengthen with brickwork, as a wall or pier.

brickbat, *n.* **2.** Hornblende schist, which upon weathering breaks up into rectangular blocks from three sets of joints. *Bulletin* 213, *U. S. Geol. Surv.*, 1902, p. 59. [Local name near Dahlonega, Ga.]

brick-chisel (brik'chiz"el), *n.* A short, heavy steel chisel having a wide cutting-edge, used by bricklayers in cutting fine face-brick.

Brick-dust deposit, a urinary sediment of a brick-red color, consisting of urates.

Brickmakers' anemia. See ★*anemia*[1].

bricknogged (brik'nogd), *a.* Filled with brick-nogging, as a timber construction the open spaces of which are to be filled in this way.

brick-top (brik'top), *n.* An edible agaricaceous fungus, *Hypholoma sublateritium*.

bricole, *n.* **4.** In *billiards*, the act of causing the cue-ball to hit a cushion first; cushioning. *Banding*, *banking*, *benching*, and *walling* are all equivalents of *cushioning* in this sense.

brideship (brīd'ship), *n.* The standing or status of a bride.

Wilhelmina's wedding day arrived, after a *brideship* of eight months. *Carlyle*, Frederick the Great, II. viii. 276.

bridge[1], *n.* **13.** (*b*) An arrangement of circuits, electric or magnetic, whereby the bridge circuit connects from a point of one circuit to a point of another circuit, and thereby permits a comparison of the parts of the two circuits. —**14.** In *billiards:* (*a*) A notched piece of wood, attached to a long handle, used as a support for the cue when the ball is in such a position that the hand cannot conveniently be used as a rest. (*b*) The thumb and forefinger used as a rest over which the billiard-cue glides. The best players now use the hooked forefinger, infolding the small end of the cue.—**15.** In *math.*, the crossing-place of two sheets of a Riemann's surface. It may run from 0 to ∞ along an arbitrary line, say along the ray of positive real numbers. Along the bridge the surface intersects itself. **16.** A narrow-railed, movable plank extending across the flies of a theater: used in raising angels, fairies, etc., in spectacular plays, and worked by ropes and pulleys from the gridiron.—**17.** A platform or scaffold hung by ropes, used by mechanics in painting or finishing walls.—**18.** An arched casting fastened to the cover of a pump which guides the free end of the plunger or piston-rod.—**19.** In *mining:* (*a*) A platform on wheels running on rails for covering the mouth of a shaft or slope. (*b*) A track or platform which passes over an inclined haulage-way and can be raised out of the way of ascending and descending cars. (*c*) An air-crossing. *Coal and Metal Miners' Pocketbook.*—**20.** A narrow strip, placed across an opening, for supporting something without closing too much of the opening. Also *bridge-bar*, *bridge-piece*. *Trautwine*, Engin. Pocket-book.—**21.** In a Dow composing-machine, the place on the raceway where the justification of a line of characters begins.

Bridge

Cytoplasmic bridge. See ★*cytoplasmic*. **Flying bridge,** in *ship-building*. (*b*) The uppermost bridge, particularly in war-ships, of light construction, supported from below by open framework. **Hanging bridge.** (*b*) A partition hanging down from a boiler to deflect the hot gases. This is sometimes a water-leg and sometimes is made of fire-brick. **Low bridge!** a cry of warning on a canal-boat to duck the head when about to pass under a bridge.

"Waal," says I, "I was thinkin' 't I'd like to bet you . . . that if all them fellers we seen this afternoon, that air over fifty, c'd be got together, an' some one was suddenly to holler 'Low Bridge,' that nineteen out o' twenty 'd duck their heads." *E. N. Westcott*, David Harum, xxviii.

Natural bridge, a natural span of rock across a stream or hollow, usually a remnant of the former roof of a cave, which after the destruction of adjacent parts of the formation may leave a bridge-like structure. Famous natural bridges occur in Virginia and Utah. **Supracondylar bridge.** See ★*supracondylar*.—**Traveling bridge,** a portable bridge mounted on a form of truck. Such bridges are generally used for transporting materials such as coal or ore from cars to storage-bins or from the storage-bins to cars.

The "Great Arch" Natural Bridge, San Juan County, Utah.
Height, from surface of water to lower center of arch, [illegible] feet; width, from buttress to buttress at bottom of cañon, 208 feet 6 inches; thickness of sandstone arch at highest point, 1.5 feet.

bridge[1], *v.* **I.** *trans.* **4.** In *card-playing*, to bend (a card) so that a confederate can cut the pack wherever the bent card is placed.

II. *intrans.* In *wrestling*, to make a bridge of the body by pressing the head and feet on the ground and bowing up the back, to prevent the opponent from securing a fall.

bridge[2] (brij), *n.* [Short for *bridge whist*, prop. *bridge whist*, < *bridge*[1] + *whist*. The allusion is not determined. It is not the same as in *bridge*[1], *v.* 4. The "Russian *britch*," cited as the source of the Eng. word, must be recently borrowed from the Eng.] A card game for four players, a variant of whist, called also (originally) *bridge whist*. The players cut for partnership and deal, each drawing from a full pack of 52 cards, spread face downward on the table. The two lowest pair against the two highest, and the lowest of the four has the choice of seats and cards and takes the first deal. In cutting, the ace is low; in play it is high, the other cards ranking from the king down to the deuce. Partners sit opposite each other, the positions at the table being as in the diagram:

The leader and the pone are known as the adversaries. The dealer presents the pack to the pone to be cut, and then distributes the cards one at a time until each player has 13. No trump is turned. If any card is found faced in the pack, or if the last card does not come in its proper order to the dealer, or if any player has more or less than 13 cards, there must be a new deal by the same dealer. No matter what irregularity occurs, the dealer cannot lose his deal. The dummy shuffles the still pack for the next deal. The dealer looks at his hand and announces the suit he selects as a trump for that deal, or declares to play without a trump, or passes the declaration over to his partner, who must decide on something without consultation. Should the dummy declare before being asked

to do so, the leader may demand that the declaration shall stand, or that there shall be a new deal. If the dummy asks the dealer to make the declaration, the leader may ask for a new deal or insist on the dummy declaring. If either of the adversaries makes a declaration, the dealer may either deal again or ignore the irregularity. Bridge is played in rubbers, two out of three games of 30 points each winning. If the same partners win the first two games, the third is not played. All tricks over six taken by one side count toward the game, but the value of these tricks varies with the declaration. When spades are trumps, each trick above six counts 2, when clubs are trumps, 4; diamonds, 6, hearts, 8; and when there is no trump, 12. No matter how much more than enough to win the game may be made, it is all counted. In addition to the trick scores there are 5 honors in the trump suit (ace, king, queen, jack, and ten), the value of which varies with the declaration. When there is no trump the four aces are the only honors. The honors count nothing toward the game, but they add to the value of the rubber as follows:

Declaration	S.	C.	D.	H.	No Tr.
3 honors	4	8	12	16	30
4 honors	8	16	24	32	40
4 in one hand	16	32	48	64	100
5 honors	10	20	30	40	
5, 4 in one hand	18	36	54	72	
5 in one hand	20	40	60	80	
Chicane	4	8	12	16	

Grand slam 40, little slam 20
The winners of the rubber add 100

The declaration once legitimately made, the adversaries cannot change it, but they may double the value of the trick points by 'going over.' If the leader does not wish to double, he says, "Shall I play?" If he plays without asking this question, the declaring hand may call a suit. In reply to the question, if the pone does not wish to double he says, "If you please." If either adversary doubles (making hearts, for instance, worth 16 instead of 8), the declaring hand may redouble, making hearts worth 32. If the maker of the trump does not redouble, he says, "Content," and his partner may then redouble, the first chance to redouble always lying with the one who is doubled. Doubling adds nothing to the value of the scores that go into the honor column. The usual expression for doubling is "Over" or "I double." The declaration settled, the leader plays any card he pleases, and the dummy then lays his 13 cards face upward on the table, sorted into suits, the trumps on his right. From that point on the dealer plays the two hands without any assistance or suggestions from the dummy, who is not allowed to take any part in the play except to ask the dealer if he has none of a suit to which he renounces, or to correct the adversaries if they claim a penalty to which they are not entitled. Should the dealer lead from the wrong hand, the adversaries take one of his tricks as penalty. The penalty for a revoke is to take 3 tricks from the revoking side. The penalty if the adversaries lead out of turn is to call a suit. If one side wins 12 out of the 13 tricks, it adds 20 points to its honor score for little slam; if it wins all 13, it adds 40 for grand slam. If any player has a hand dealt him with no trump in it, he scores for chicane, which is equal to 'simple' honors (3 out of 5). At the end of the hand the scores are put down on a score-sheet, all the points made in tricks below the line and all the honor scores above it. When the score of either side reaches or passes 30, a line is drawn under it to show that one game of the rubber is finished. The side that wins two games adds 100 points as bonus, and the scores of each side are then added up, and the difference between them is the value of the rubber, which is always played for so much a point. The player who keeps the score writes "We" at the top of his side of the score-slip and "They" on the other side. In the sample score-slip given the scores put down are: we, 2 by cards and simple honors in hearts; they, 3 by cards and 4 honors in diamonds; we, 4 by cards and 30 aces in no-trumps, winning the first game and drawing a line under it: they, 6 by cards, 30 aces, and little slam at no-trumps, drawing a line under the second game: we, the odd trick at doubled spades and 4 honors in one hand, they having chicane in spades; they, 4 by cards and 4 honors in one hand in hearts, drawing a line under the third game and adding 100 points for winning the rubber. The scores added and the lower deducted from the higher, the difference is found to be 234, and as the points are usually counted to the nearest 10, the value of this rubber would be 230. It is possible for the winners of the rubber to lose a few points, owing to the higher honor score of their opponents. *Dummy bridge* is played by three persons. There are no rubbers, each in turn taking the dummy, and the winning side in each game adding 50 points bonus. If the single player is the dealer and passes the make, he picks up his dummy's cards, and, without showing them to the adversaries, declares according to rule. With 3 or 4 aces, dummy must make it no-trump. With less than 3 aces he cannot call no-trumps, but must select his longest suit. If two suits are equal, the pips are counted, aces being worth 11 and court-cards 10 each; if still equal, the more valuable suit must be declared. The leader is the only one who can double, and he cannot double a dummy declaration. When the opponents of the single player have the deal, the single player changes his seat so as to be the leader on that deal.

WE	THEY
—	—
	100
	64
16	4
30	50
16	24
–	–
16	18
48	
	–
	72
—	—
4	32
—	–
130	364
	130
	—
	234

—**Drive bridge.** Same as *progressive bridge.* See *progressive* ★*games.*

bridge-bar, *n.* 2. Same as ★*bridge*[1], 20.

bridge-bracket (brij'brak″et), *n.* In *cotton-manuf.*, a simple device for removing hanks of yarn from the reel of a reeling-machine.

bridge-coupler (brij'kup″lėr), *n.* In *railroading*, an automatic coupling- and locking-device for a drawbridge. When the bridge is opened the coupler sets the train-signal against the bridge and opens the switch to the derail. The closing of the draw causes the coupler to lock the bridge, release the signals, and close the derail. See ★*bridge-lock* and ★*derail*. **Multiple bridge-coupler,** one which controls two or more signals: used where there are more tracks than one.

bridge-crane (brij'krān), *n.* A stationary crane having an elevated bridge, supported at the ends upon columns, and carrying on top a trolley from which is suspended the hoisting-tackle.

bridge-house (brij'hous), *n.* In *ship-building*, a superstructure of comparatively light construction, above the general line of the hull proper, in the middle part of a merchant steamer. The bridge is located on top of it.

As an example, take the case of a vessel having a long poop, at least 4 feet in height, extending to a *bridge-house* amidships, and a topgallant forecastle.
White, Manual of Naval Arch., p. 18.

bridge-jumper (brij'jum-pėr), *n.* One who, for notoriety or gain, makes a practice of jumping from high bridges. [U. S.]

bridge-lock (brij'lok), *n.* In *railroading*, a self-locking bolt-lock used on a drawbridge to lock the bridge and prevent it from being opened until the signal-man, by the movement of his levers, has withdrawn the bolt. The movement of the bridge then automatically locks the bolt, and this, in turn, through the interlocking signal-system, sets all train-signals against the bridge and keeps them locked at 'danger' until the return of the bridge releases the bridge-lock, locking the bridge in its normal closed position.

bridgeman (brij'man), *n.*; pl. *bridgemen* (-men). A bridge-builder; a workman engaged in bridge-building.

bridge-money (brij'mun″i), *n.* An early Chinese bronze coinage, so called from its appearance. Also called *tin-dangle money*.

bridge-motion (brij'mō″shon), *n.* A form of doffing-motion for facilitating the removal of hanks from the reel of a yarn-reeling machine.

bridge-perch (brij'pėrch), *n.* A species of bass, *Pomoxis annularis*, of the family *Centrarchidæ*. Also called *crappie*.

bridge-piece (brij'pēs), *n.* **1.** A device attached to the end of the reel on a yarn-reeling machine, to facilitate the removal of the hanks. *Nasmith*, Cotton Spinning, p. 363.—**2.** One of the short lengths of studding used in bridging floors. Also *bridging-piece.*—**3.** Same as ★*bridge*[1], 20.

bridge-plate (brij'plāt), *n.* A steel or iron plate of a comparatively low carbon content. These plates have a tensile strength of about 40,000 pounds per square inch and are quite ductile.

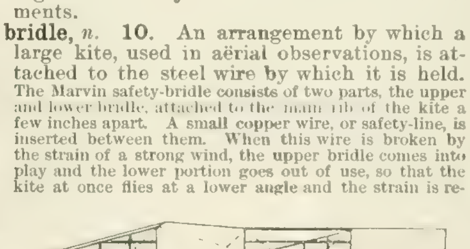
bridge-pot (brij'pot), *n.* The movable socket of a millstone-spindle which rests on the bridge-support.

Bridger group. See ★*group*[1].

bridge-screen (brij'skrēn), *n.* A shelter for the helmsman on the bridge of a war-ship, differing from a pilot-house in that it is open at the back and sides.

bridgework (brij'wėrk), *n.* The adjustment of artificial teeth by attaching the frame holding them to adjacent sound teeth as abutments.

bridle, *n.* **10.** An arrangement by which a large kite, used in aërial observations, is attached to the steel wire by which it is held. The Marvin safety-bridle consists of two parts, the upper and lower bridle, attached to the main rib of the kite a few inches apart. A small copper wire, or safety-line, is inserted between them. When this wire is broken by the strain of a strong wind, the upper bridle comes into play and the lower portion goes out of use, so that the kite at once flies at a lower angle and the strain is re-



Clayton-Hargrave kite with elastic bridle.
[illegible] elastic cord.

laxed. In the Blue Hill automatic elastic bridle an elastic band is introduced into the bridle and an increasing strain gradually alters the angle of flight.
11. A device for controlling the speed of logs on a skid-road. It consists of a stout rope with two hooks at one end which are driven into the first log of the turn; at the other end is a clamp which runs over the cable.
12. In certain cephalopods, one of the bands which attach the tunnel to the head.—**13.** In *pianoforte-making*. Same as ★*bridle-tape*.
Bonaparte bridle, a bridle consisting of a piece of rope looped at one end. A portion of the rope is placed in the horse's mouth as a bit, and the end is passed over the crown and through the loop and extended back as a rein.
Bridoon bridle, a bridle provided with double cheeks, one pair for the driving-bit, the other for the bridoon check-bit.

bridle, *v. t.* **3.** To connect; join as by a bridle: as, draft rollers (in cotton manufacturing) that are yoked together. *Thornley*, Cotton-combing Machines, p. 237.

bridle-cable (brī'dl-kā″bl), *n.* A cable which is shackled or made fast to a bridle along the length of which it is free to play. See *bridle*, 7.

bridle-iron (brī'dl-ī″ėrn), *n.* A steel or wrought-iron loop or frame for supporting the end of a beam from a wall or another beam; a joist-hanger.

bridle-man (brī'dl-man), *n.* One who follows a turn of logs down the skid-road and tends the bridle. See ★*bridle*, 11.

bridle-tape (brī'dl-tāp), *n.* In *pianoforte-making*, a short strip of cloth or leather between parts of the hammer-action, by which motion in excess of a fixed amount is prevented.

bridle-wire (brī'dl-wīr), *n.* In *pianoforte-making*, the wire, projecting from the whip, to which the bridle-tape is fastened. See cut under *pianoforte*.

Brief of title. Same as *abstract of title*, which see, under *abstract*.

Brieger's bases. See ★*base*[2].

brier, *n.* **Chainy brier.** See *china* ★*brier*.—**China brier,** a thorny vine, *Smilax glauca*, which causes trouble in agricultural lands from Pennsylvania to Tennessee. The name (often corrupted to *chainy brier*), is connected with *china-root* (which see). **Running brier,** a species of dewberry, *Rubus subuniflorus*. **Sand-brier,** the horse-nettle *Solanum Carolinense*.—**Saw-brier.** Same as *China* ★*brier*.—**Sensitive brier.** See *Schrankia*.

brier-stitch (brī'ėr-stich), *n.* In *sewing-machine work*, a method of sewing with a two-needle machine in which the combined needles stitch a fine cord or embroidery-thread upon the fabric in a running pattern resembling the figure 8. Sometimes called *figure-of-eight stitching*.

Brig. An abbreviation of (*a*) *Brigade*; (*b*) *Brigadier*.

brigade, *n.* **3.** In *zoöl.*, a division of no fixed value, used in the sense of 'cohort,' as a convenient term for assemblages of animals which may not be included in any of the divisions commonly employed. *Trans. Linnean Soc., London*, Zool., Oct., 1901, p. 240.—**4.** A small squad of engineers or of other technical troops: as, the full sap was executed by a *brigade* of eight sappers.

brigalow (brig'a-lō), *n.* [Also *bricklow*: from a native Australian name, in the Namoi dialect of New South Wales, *buriagalah* = 'place of the *buri*-tree,' < *buri* or *bri*, the name of *Acacia pendula*.] Any one of several species of *Acacia*, especially *A. harpophylla*, which yields a hard, heavy brown wood having a strong odor of violets. It is used in turning and for building purposes, and by the aboriginals for spears, boomerangs, and clubs. [Australia.]

brigantine[1], *n.* **4†.** A quarter-galley, known for its delicate lines, swiftness, and quick handling.

The boats were called galleys, galleots, *brigantines* (*galeotas, bergantines*), [illegible] According to their size, a galleot is a small galley, while a *brigantine* may be called a quarter galley.
Poole, Barbary Corsairs, p. 20[illegible].

Bright-line spectrum. See ★*spectrum*.

brightness equation, sensation. See ★*equation*, ★*sensation*.

brightsmith† (brīt'smith), *n.* A whitesmith. [Rare and artificial.]

brill, *n.* **2.** A small and very bony flounder of New Zealand, *Caulopsetta scaphus*, of the family *Pleuronectidæ*. The name was transferred from the true brill of Europe.

brilliant. **I.** *a.*—**Brilliant** ★**red,** ★**purple,** ★**scarlet,** etc. See [illegible]
II. *n.* **English double-cut brilliant,** the regular full brilliant with [illegible] facets added above or below or both [illegible]. **Full brilliant.** [illegible] cut as a brilliant with [illegible] facets. See ★*brilliant*, I.

brilliantine (bril-yan-tēn′), *n.* [*brilliant* + *-ine*.] 1. A dress-goods for women's wear, similar to alpaca, but superior to it in richness of material and finish. —2. A name freely and generally employed to designate toilet preparations of variable composition for the face or hair.

brimade (bri-mäd′), *n.* [F. slang.] A hazing (at certain civil and military schools in France).

brimborion (brim-bō′ri-on), *n.* [Also *brimborium*. F. *brimborion*, a bauble, a gewgaw, formerly one of a series of prayers that were mumbled over. OF. *breborion*, perhaps a corruption of ML. *breviarium*, a breviary: see *breviary*. Cf. the etym. of *bead*.] A trifling object kept as a charm or gewgaw; a trifle: as, "handing *brimborions*, baubles, knickknacks," etc. *Mme. D'Arblay*, Diary, III. 8.

brin², *n.* 2. One of the two circular fibers that issue from the silkworm. It consists of two parts, the inner of fibroin, or true silk, and the outer of sericin, or silk-glue.

Brindle disease. See ★*disease*.

brine¹, *n.* 4. In *refriger.*, a solution of alkaline salts in water, which has a solidifying point below the temperature at which the solution is to be used. **Leach brine**, the brine which drains away from common salt crystallized by boiling when this is stacked up in piles ready to be returned to the boiling-pans.

brine-cooler (brīn′kö″lêr), *n.* A coil of pipes used for cooling the brine used in a cold-storage warehouse or in an ice-machine. It is identical with the pipe ammonia condenser, except that the pipes are larger and the brine flows downward through a small interior pipe, while the ammonia flows upward through the larger pipe inclosing the brine-pipe, the expansion of the ammonia absorbing the heat of the brine and reducing it to a low temperature. See ★*ammonia condenser*.

brine-fly (brīn′flī), *n.* Any one of a number of insects of the dipterous family *Ephydridæ*, whose larvæ live in alkaline lakes and salt-wells. See *Ephydra* and *Ephydridæ*.

brine-gage (brīn′gāj), *n.* A salinometer.

brine-well (brīn′wel), *n.* A well from which natural brine is obtained.

A description of the great field of *brine-wells* which has accumulated a population of a million people in the town of Tze-liu-tsin. *Geog. Jour.* (R. G. S.), XII. 95.

bring, *v. t.* **To bring in**, in *whist* or *bridge*, to get the lead with (a suit) after establishing it.—**To bring to grass**, to bring to the surface, as ore.

II. *intrans.*—**To bring up all standing**, said of a vessel when she comes to anchor without taking in her sails, or when she strikes an obstruction and is suddenly halted while all sail is set.

brinjaree (brin-jä′rē), *n.* [Also *brinjarry*; a perverted form (perhaps by confusion with Pers. *birinj*, rice) of *binjaree* for *bunjaree*, a grain merchant: see *bunjaree*.] In India, a grain merchant: same as *bunjaree*.

Brinjaree dog, a long-haired, rough-coated, tan-colored East Indian breed of greyhound, used in hunting jackals. [East Indian.]

brio (brē′ō), *n.* [It.: see *con brio*.] Spirit, animation; especially, in *music*, in the expression *con brio*, spiritedly.

Briovarian system. See ★*system*.

briquet¹, *n.*, 2. The production of such blocks now constitutes an important industry. Cohesion is obtained by pressing in heated molds (in the case of bituminous coal), or by addition of tar or pitch, or of clay or hydraulic cement. Balls, solid cylinders, or most commonly brick-shaped blocks are thus formed by molding.—**Petroleum briquet**, a briquet made of a mixture consisting of 1 liter of petroleum, 150 grams of soft soap, 150 grams of resin, and 300 grams of caustic soda-lye wash. This mixture is well heated and allowed to solidify, and then run into molds of the required size, in which it is heated again in a furnace for about 15 minutes. The briquets produced in this way are said to yield three times as much heat as ordinary coal and are much lighter. Their solidity can be increased by adding sawdust or sand to the mixture.

briquet¹ (bri-ket′), *v. t.*; pret. and pp. *briqueted*, *briquetted*, ppr. *briqueting*, *briquetting*. To compress (minerals or mineral dust) into bricks; form into briquets.

The slag is a waste product, and the flue-dust, collected by special devices in dust-chambers, is *briquetted* by machinery. *Encyc. Brit.*, XXX. 173.

briquet² (bri-kā′), *n.* A silver coin of the fifteenth century, current in Holland: so called from the figure it bears of a short thrusting sword (*briquet*) held in a lion's claw.

briquetage (bri-ke-täzh′), *n.* [F., brickwork, ⟨ *briqueter*, brick: see *brick*².] In *prehistoric archæol.*, masses of oven-baked clay found in some parts of western Europe, and supposed to be remains of an ancient salt industry. *Amer. Anthropol.*, Jan.–March, 1902, p. 162.

Brisbane box. See ★*box*¹.

brisling (bris′ling), *n.* [Origin unknown.] A clupeoid fish, *Sardinella pilchardus*, caught in great numbers in the English Channel, in the seas of Spain and Portugal, and in the Mediterranean. They are cooked and packed in oil in tin cans.

Brislington delf. See ★*delf*².

brisque (brisk), *n.* [F., origin unknown, perhaps from *brisk*.] A privileged card in certain games: as, in the game of bezique, the aces and tens of the various suits, all of which count toward the game.

bristle-bird (bris′l-bèrd), *n.* Any one of the Australian reed-warblers of the genus *Sphenura*: so called from the bristles about the corners of the mouth.

bristle-cell (bris′l-sel), *n.* One of the ciliate cells of the auditory-nerve terminations.

bristletail, *n.* 2. One of the many names borne by the ruddy duck, *Erismatura rubida*, given on account of the stiff tail-feathers.

bristling², *n.* Same as ★*brisling*.

Bristol delf. See ★*delf*².

britannia (bri-tan′i-ä), *n.* Same as *Britannia metal* (which see, under *metal*).

britch (brich), *n.* Same as *breech*, *n.*, 5.

britholite (brith′ō-līt), *n.* [So called in allusion to its high specific gravity; ⟨ Gr. βρίθος, weight, λίθος stone.] A rare silicate and phosphate of the cerium metals and calcium, occurring in brown, pseudohexagonal crystals: found in southern Greenland.

British Board of Trade unit, British dollar, British standard candle. See ★*unit*, ★*dollar*, *standard* ★*candle*.

Britishism (brit′ish-ism), *n.* Same as *Britticism*.

Brito-arctic (brit-ō-ärk′tik), *a.* British and arctic.

It is evident, therefore, that the basalts of Cape Flora and Hooker Island are similar to types widely distributed in the *Brito-arctic* volcanic province. *Geog. Jour.*, XI. 154.

brittle-fern (brit′l-fèrn), *n.* See ★*fern*¹.

brittlely† (brit′l-li), *adv.* In a brittle or fragile manner.

briza (brē′zä), *n.* [Sp. *brisa*, Pg. *briza*: see *breeze*².] A local afternoon and evening breeze at San Juan, Porto Rico. It is the regular northeast trade-wind deflected to an east wind by the influence of the land surface.

broach¹, *n.* 21. An occasional name for the *hurdy-gurdy* (which see).—22. In *quarrying*, a tool used in a machine-drill to break down the walls between a row of boreholes in order to form a continuous channel. Also called *broaching-bit*.

broach² (brōch), *n.* [Short for *Broach cotton*, from *Broach*, *Baroach*, Hind. *Bharōch*, *Bhrōch*, orig. (Gujarati) *Bhrigu-kachchha*, *Bhāru-kachchha*, an ancient and modern city of Gujarat (Guzerat) (Yule).] A short-stapled cotton grown in the Broach district of the Bombay Presidency, British India.

broaching-bit (brō′ching-bit), *n.* Same as ★*broach*¹, 22.

Broad Scotch, the unliterary vernacular of the Lowlands of Scotland.

broadcast (brâd′kâst), *v. t.* To sow broadcast. [Recent.]

In the spring wheat districts, the winds tend to lay bare the seeds when *broadcasted*. *T. F. Hunt*, Cereals in America, 1904, p. 85.

broadhead (brâd′head), *n.* The name of a fish, the *Grubber broadhead*, a species of anchovy, *Anchovia producta*, of the family *Engraulididæ*.

broad-headed (brâd′hed″ed), *a.* Same as *brachycephalic*.

broad-headedness (brâd′hed″ed-nes), *n.* Same as *brachycephalism*. The vague term *broad-headedness* has been employed by recent writers, because *brachycephalism* has been used as if implying in all cases racial unity among the persons concerned.

broadleaf, *n.* 2. Also in New Zealand a name for a large tree of the dogwood family, *Decostea littoralis* (*Griselinia littoralis* of Raoul), yielding a hard, red, durable wood. Called by the natives *paukatea*.

broadman, broadsman (brâd-′or brâdz′man), *n.*; pl. *broadmen*, *broadsmen* (*-men*). One who resides near the Norfolk broads. See *broad*, *n.*, 1.

broad-minded (brâd′mīn″ded), *a.* Characterized by breadth of view and freedom from bigotry; liberal and unprejudiced: as, a *broad-minded* man.

broadsheet (brâd′shēt), *n.* Same as *broadside*, 4.

broad-winged (brâd′wing′d), *a.* Having broad wings.—**Broad-winged katydid**, one of the common species of the American katydids, *Cyrtophyllus concavus*. See *katydid*.

brocade (brō-kād′), *v. t.*; pret. and pp. *brocaded*, ppr. *brocading*. To weave with a pattern in relief, for the ornamentation and enrichment of the fabric.

brocaded, *a.* 4. Figuratively, heavily 'embroidered' with pompous diction: as, "much of the language is stiffly *brocaded*," *Athenæum*, Jan. 23, 1904.

Brocard angle, Brocard angle of a polygon, Brocard arcs, points, triangles. See ★*angle*³, ★*arc*, etc.

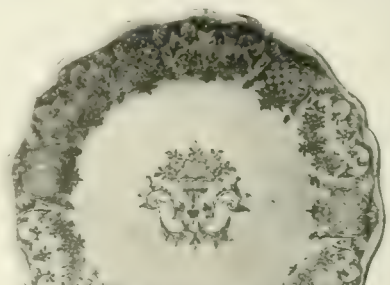
Brocardist (brō-kär′dist), *n.* A geometer who works along the particular line of research concerning the geometry of the triangle started by H. Brocard in 1875 and 1881.

Broca's area, convolution, point, stereograph. See ★*area*, etc. **Broca's center.** Same as *speech-center*. **Broca's gyrus.** Same as *inferior frontal gyrus*. See *frontal gyri*, under *gyrus*.

brochidodrome (brok′i-dō-drōm), *a.* [Gr. βροχίς (βροχιδ-), dim. of βρόχος, a loop, + -δρομος, ⟨ δραμεῖν, to run.] Forming loops within the blade of the leaf: said of the nerves. See *nervation* (*a*) (3).

brockage, *n.* 2. Broken or damaged material; broken glass, pottery, etc.

broderie (brōd-rē′), *n.* [F.] 1. In *ceram.*, a style of decoration first used at Rouen and later at other French factories: suggested by



Broderie. Plate, design in blue, Rouen, France. In the Pennsylvania Museum, Philadelphia.

the embroidery patterns of the same period. —2. *pl.* In *music*, embellishments or highly figured variations or accompaniments.

Brodiæa (brō-di-ē′ä), *n.* [NL. (Smith, 1811), named in honor of James *Brodie*, a Scotch botanist who lived about the year 1800.] 1. An untenable name for *Hookera*, a genus of plants of the family *Liliaceæ*. By some authors the name is used to include also plants of the related genera *Triteleia* and *Milla*. Among the brodiæas sometimes cultivated in the United States are *Hookera coronaria*, *H. terrestris*, *H. Californica*, *Triteleia laxa*, *T. candida*, and *T. peduncularis*.

2. [*l. c.*] A plant of the genus *Hookera*. The brodiæas are bulbous plants of the Pacific coast, some of great beauty and gathered wild or cultivated for ornament. From the habit of some species has arisen the name *California hyacinth*. See ★*blue-dicks*.

broguery (brōg′ēr-i), *n.* [*brogue* + *-ery*.] Characteristic brogue: as, "by dint of swaggering, impudence, and *broguery*," *Fraser's Mag.*, XIX. 443.

broild, *p. a.* A simplified spelling of *broiled*.

broiler¹, *n.* 4. In *railroading*, a parlor-car fitted with a grill kitchen or a kitchen in which broiling of chops, etc., can be done without the more elaborate cooking of a dining-car; a grill-room car.—5. An attachment to a gas-stove, or a special gas-stove, adapted to broiling meat or fish. Two types are in use, the horizontal broiler in which the steak or fish to be broiled is laid on a grid under a broad flat gas-flame; and the vertical broiler in which the steak is placed in a hinged grid on edge between two sheets of metal kept red hot by gas-flames.

Broken hand. See ★*hand*. **Broken over.** (*a*) In *bookbinding*, a phrase applied to the creasing down of a small part of an inserted print near the binding margin, for the purpose of giving support to the binding thread. (*b*) In *printing*, said of the fault of a sheet of paper which shows on its surface the creasing marks of broken fibers.—**Broken weather**, unsettled weather.

broken-backed, *a.* 3. Of a horse, a loose term for ★*hollow-backed*.

He was not . . . long-backed or *broken-backed*. *Southey*, Doctor, cxliii.

broken-haired (brō′kn-hārd), *a.* Rough-coated: said of such dogs as the Scotch and Irish terriers.

broken-knees (brō'kn-nēz), *n. pl.* A condition seen in badly knee-sprung horses in which the animal cannot keep permanently in the upright position but is liable at any time to fall upon the knees.

Broken-wing fever. Same as *dengue*.

broker[1], *n.* **Odd-lot broker**, one who deals in lots of less than 50 or 100 shares of stock.

broker[2] (brō'kėr), *n.* [*broke, p. a.*, + *-er*[1].] One who has 'gone broke': a 'dead broke,' ruined, or bankrupt man. [Slang, Australia.]

brokes (brōks), *n. pl.* [*broke, p. a.*] The lowest grade of wool fleece, taken from the neck and belly of the sheep.

broking (brōk'ing), *n.* [A back-formation from *brok-er* + *-ing*[1].] The business of a broker; the broker's trade: as, furniture-*broking*: pawn*broking*.

bromacetic (brō-ma-set'ik), *a.* [*brom(ine)* + *acetic*.] Derived from acetic acid by the substitution of bromine for hydrogen.—**Bromacetic acid**, an acid made by the action of bromine upon acetic acid. *Monobromacetic acid* is a crystalline substance, $CH_2Br.COOH$, which melts at 50-51° C. *Dibromacetic acid*, $CHBr_2.COOH$, forms crystals which melt at 45-50° C. *Tribromacetic acid*, $CBr_3.COOH$, is a crystalline compound which melts at 135° C.

bromalin (brō'ma-lin), *n.* [*brom(ine)* + *-al*[3] + *-in*[2].] A colorless, nearly tasteless crystalline compound, $(CH_2)_6NH.C_2H_5Br$, obtained by the action of ethyl bromide on hexamethylene-tetramine. It is used as a substitute for alkaline bromides. Also known as *bromethylformin*.

bromamide (brom'am-id), *n.* [*brom(ine)* + *amide*.] A colorless, odorless, and tasteless compound, $C_6H_2Br_3NH_2HBr$, obtained by the action of hydrobromic acid upon amido tribrombenzol. It is analgesic, sedative, and antipyretic.

bromargyrite (brōm-är'ji-rīt), *n.* [*brom(ide)* + *argyrite*.] Same as *bromyrite*.

bromatologist (brō-ma-tol'ō-jist), *n.* [*bromatology* + *-ist*.] One who is skilled in the science of dietetics.

bromatotoxicon (brō″ma-tō-tok'si-kon), *n.* [NL., < Gr. βρῶμα(τ-), food, + τοξικόν, poison.] Any poisonous substance produced in an article of food.

bromatotoxin (brō″ma-tō-tok'sin), *n.* [*bromatotox(icon)* + *-in*[2].] A basic poison generated in food by the growth of bacteria or fungi.

bromatotoxism (brō″ma-tō-toks'izm), *n.* [*bromatotox(ic)* + *-ism*.] Poisoning with bromatotoxin in some article of food.

brome, *n.* 2. Same as *brome-grass*. **Red brome.** Same as *red* ★*chess*.

brome-grass, *n.* **Australian brome-grass.** Same as *fescue-grass*. **Austrian, awnless, beardless, Hungarian brome-grass.** Same as *smooth* ★*brome-grass*. —**Russian brome-grass**, chiefly the *smooth* ★*brome-grass*. **Short-awned brome-grass**, *Bromus brevearistatus*, a Rocky Mountain species, valuable in meadows at high altitudes.—**Smooth brome-grass**, a beardless species, *Bromus inermis*, native in the dry regions of Russia, prized as a hay grass in Europe, and now proving very valuable in the semi-arid parts of the northwestern United States. It is a perennial grass forming a turf in loose soils and very resistant to drought.—**Western brome-grass**, *Bromus Pumpellianus*, a native of the northern Rocky Mountain region, similar to the smooth brome-grass and perhaps of like value.—**Willard's brome-grass**, the chess or cheat, *Bromus secalinus*.

bromeliaceous (brō-mē-li-ā'shius), *n.* Belonging to the *Bromeliaceæ* or pineapple family.

bromelin (brom'ē-lin), *n.* [*Bromelia*, a former name of the pineapple (*Ananas Ananas*), + *-in*[2].] A proteolytic ferment derived from the juice of the pineapple.

bromhydric (brōm-hī'drik), *a.* [An inversion of *hydrobromic*.] Same as *hydrobromic*.

Bromian (brō'mi-an), *a.* [Gr. βρόμιος, noisy, an epithet of Bacchus, < βρόμος, noise, roar, < βρέμειν, roar.] Of or pertaining to Bromius or Bacchus; Bacchic. *Shelley*.

bromide, *n.* **Alkaline bromide**, a compound obtained when bromine acts on alkaline metals.—**Bromide emulsion.** See ★*emulsion*. **Bromide of ethyl**, the old term for *ethyl* ★*bromide*. **Bromide paper.** See ★*paper*. **Ethyl bromide**, a colorless, limpid, inflammable liquid, C_2H_5Br. It is anesthetic.—**Ethylene bromide**, a colorless liquid, $C_2H_4Br_2$, of chloroform odor, used as an anti-epileptic.—**Potassium bromide**, a salt largely prepared and used. In medicine it is employed to allay nervous irritability, and hence as an indirect hypnotic, in epilepsy, hysteria, alcoholic mania, etc. It is also used in photography.—**Radium bromide.** See ★*radium*.

bromin, *n.* A simplified spelling of *bromine*.

brominate (brō'mi-nāt), *v. t.*; pret. and pp. *brominated*, ppr. *brominating*. [*bromine* + *-ate*[1].] To cause to react with bromine; especially, to replace hydrogen with bromine in an organic compound.

Their properties of being chlorinating or brominating agents, of being susceptible to hydrolysis, and of being readily rearranged into acyl derivatives of chlorinated or brominated anilines $NH_2(C_6H_4X)$ would agree equally well with either of the above constitutions (I. and II.). *Amer. Chem. Jour.*, April, 1903, p. 292.

bromination (brō-mi-nā'shọn), *n.* [*bromine* + *-ation*.] The process of treating a substance with bromine: especially, for the introduction of a bromine atom in place of hydrogen (in an organic compound). *Nature*, July 9, 1903, p. 238.

Bromine water, in *chem.*, water holding bromine in solution, often used with advantage in analytical chemistry as a substitute for chlorine water.

bromipin (brō'mi-pin), *n.* A yellow, oily, non-irritating liquid consisting of 10 parts bromine and 90 parts oil of sesame. It is said to be of value in epilepsy and neurasthenia.

bromization (brō-mī-zā'shọn), *n.* [*bromize* + *-ation*.] 1. Impregnation with bromine or the bromides.—2. Induction of a toxic state by means of large doses of the bromides.

bromized (brō'mīzd), *p. a.* Under the influence of large doses of one of the bromides, as bromide of potassium or sodium. *Buck*, Med. Handbook, II. 484.

bromo-albumin (brō″mō-al-bū'min), *n.* A compound of bromine and peptone, albumose, or protogen given internally for general nervous conditions.

bromohematin (brō-mō-hem'a-tin), *n.* [*brom(ine)* + *hematin*.] A substance analogous to hemin, in which hydrobromic acid is combined with hematin in the place of hydrochloric acid.

bromohemol (brō-mō-hem'ol), *n.* A red-brown compound of bromine and hemol containing 2.7 per cent. bromine. It is hematinic and sedative.

bromohydrate (brō-mō-hī'drāt), *n.* [*brom(ine)* + *hydr(ogen)* + *-ate*[1].] Same as *hydrobromate*.

bromol (brō'mōl), *n.* [*brom(ine)* + *-ol*.] Same as *tribromphenol*.

bromomania (brō-mō-mā'ni-ạ̈), *n.* [*brom(ide)* + Gr. μανία, madness.] The condition of being morbidly addicted to the use of any of the medicinal bromides.

bromophenol (brō-mō-fē'nol), *n.* Same as *tribromphenol*.

bronchadenitis (brong″kad-e-nī'tis), *n.* [Gr. βρόγχος, windpipe, + ἀδήν, gland, + *-itis*.] Inflammation of the bronchial glands.

Bronchial asthma, catarrh. See ★*asthma*, ★*catarrh*.

bronchiectasia (brong″ki-ek-tā'si-ạ̈), *n.* [NL.] Same as *bronchiectasis*.

bronchiectatic (brong-ki-ek-tat'ik), *a.* Same as *bronchiectasic*. *Phil. Med. Jour.*, Jan. 31, 1903, p. 200.

bronchiogenic (brong″ki-ō-jen'ik), *a.* [Gr. βρόγχια, the bronchial tubes, + -γενής, produced.] Of bronchial origin. *Buck*, Med. Handbook, IV. 356.

bronchiolitis (brong″ki-ō-lī'tis), *n.* [NL., < *bronchiole* + *-itis*.] Capillary bronchitis.

bronchiospasm (brong'ki-ọ-spȧzm), *n.* [Gr. βρόγχια, bronchia, + σπασμός, contraction.] Spasmodic narrowing of the bronchia.

bronchismus (brong-kis'mus), *n.* [NL., < Gr. βρόγχος, windpipe.] Same as ★*bronchiospasm*.

bronchitis, *n.*—**Catarrhal bronchitis**, simple bronchial inflammation with profuse secretion. **Croupous, exudative bronchitis.** Same as *pseudomembranous bronchitis*.—**Fetid bronchitis**, bronchitis accompanied with a foul-smelling expectoration.—**Fibrinous, membranous bronchitis.** Same as *pseudomembranous bronchitis*. **Potters' bronchitis.** Same as *potters'* ★*asthma*. —**Productive bronchitis**, bronchial inflammation accompanied by an irregular formation of fibrous tissue in and around the bronchial tubes.—**Putrid bronchitis.** Same as *fetid* ★*bronchitis*.—**Staphylococcus bronchitis**, bronchial inflammation excited by the presence of *staphylococci*.—**Streptococcus bronchitis**, bronchial inflammation excited by the presence of *streptococci*. **Suffocative bronchitis.** Same as *capillary bronchitis*. **Verminous bronchitis**, a bronchial inflammation in cattle due to the presence in the bronchial tubes of a parasitic worm, *Strongylus filaria*, called in sheep *husk*, in calves *hoose*.—**Vesicular bronchitis.** Same as *bronchopneumonia*.

bronchocavernous (brong-kō-kav'ėr-nus), *a.* [Gr. βρόγχος, the windpipe, + L. *cavernosus*, cavernous.] Relating to the bronchi and to a pulmonary cavity; noting a quality of sound heard on auscultation of the chest. *Buck*, Medical Handbook, II. 818.

bronchopleuropneumonia (brong″kō-plö″rō-nū-mō'ni-ạ̈), *n.* [NL., < Gr. βρόγχος, windpipe, + *pleuropneumonia*.] Pneumonia complicated by bronchitis and pleurisy.

bronchopneumonic (brong″kō-nụ-mon'ik), *a.* Relating to, caused by, or affected with bronchopneumonia. *Jour. Exper. Med.*, V. 167.

bronchopulmonary (brong-kō-pul'mọ-nạ-ri), *a.* [Gr. βρόγχος, the windpipe, + L. *pulmo(n-)*, lung, + *-ary*.] Relating to the bronchi and the lungs. *Buck*, Med. Handbook, V. 848.

bronchoscope (brong'kọ-skōp), *n.* [Gr. βρόγχος, windpipe, + σκοπεῖν, view.] An instrument used in examining the interior of the trachea and the beginning of the bronchi.

A *bronchoscope*, which consists of a tube the inner surface of which is highly polished to serve as a reflector, with an electric lamp arranged so as to throw a strong light on the tube, was passed into the bronchial tree and then withdrawn. *Elect. World and Engin.*, [illegible] 1903, p. 140.

bronchoscopy (brong-kos'kọ-pī), *n.* [Gr. βρόγχος, windpipe, + σκοπεῖν, view.] Inspection of the larger bronchial tubes by means of reflected light, usually through an opening into the trachea.

Bronchoscopy allows the whole bronchial tree to be searched. *Therapeutic Gazette*, Jan., 1903, p. [illegible]

bronchovesicular (brong″kō-vē-sik'ụ-lär), *a.* Relating to both bronchial tubes and pulmonary air-cells.—**Bronchovesicular murmur**, a sound heard in cases of partial consolidation of the lung in which the normal vesicular murmur is present, but more or less obscured by the bronchial respiration. See *respiration*.

bronco-buster (brong'kọ-bus″tėr), *n.* One who subdues or breaks a bronco to the saddle. [Western U. S. slang.]

He was accordingly given the belt and declared to be the "champion *bronco-buster*" of the world.
Wide World Mag., April, 1903, p. 547.

bronco-busting (brong'kọ-bus″ting), *n.* The process of breaking broncos to the saddle. [Western U. S. slang.]

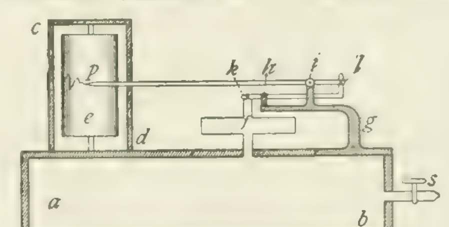
bronco-grass (brong'kō-grȧs), *n.* A brome-grass, *Bromus maximus Gussoni*, native in the Mediterranean region, introduced into California and a troublesome weed in the region of San Francisco bay.

Bronsil shales. See ★*shale*[2].

bronteion (bron-tē'on), *n.*; pl. *bronteia* (-ạ̈). [Gr.] Same as *bronteum*.

brontogram (bron'tọ-gram), *n.* [Gr. βροντή, thunder, + γράμμα, writing.] The record-sheet from the brontometer or brontograph: also any diagram of lines on a map showing the phenomena of thunder-storms.

brontograph (bron'tọ-grȧf), *n.* [Gr. βροντη, thunder, + γράφειν, write.] 1. Same as ★*brontometer*.



Marvin's Brontograph

a b, large metal box to which the frame *c d*, the rapidly revolving cylinder *e*, the aneroid box *f*, the post *g*, the pivot [illegible] are firmly attached. The levers [illegible] and [illegible] carry the pen [illegible] to make a magnified record of the motions of the pivot *k* attached to the upper movable surface of the aneroid box. The air within the box is first brought into equilibrium with the outside air by opening and closing the stopcock [illegible] just before an observation is to be made. A slow wave of compression and expansion causes the external air to contract and expand: the aneroid pivot *k*, and eventually the pen, follows these changes sluggishly but still approximately. Rapid or high pitch sound-waves cannot be recorded by this brontograph.

2. An apparatus devised by Marvin (1899) for recording any wave of sound, as thunder or the discharge of a cannon.—3. A map or diagram showing the progress of the front of a thunder-storm by means of isobronts or equivalent lines for successive hours.

brontometer (bron-tom'e-tėr), *n.* [Gr. βροντη, thunder, + μέτρον, measure.] An instrument devised by G. W. Symons, and constructed in 1888, for registering simultaneously the time of beginning and ending of lightning, thunder, rain, wind, and other phenomena of thunder-storms. More properly a brontograph.

Brontops (bron'tops), *n.* [Gr. βροντη, thunder, + ὤψ, voice.] See *Titanotherium*.

Brontornis (bron-tôr'nis), *n.* [NL., < Gr. βροντη, thunder, + ὄρνις, bird.] A genus of gigantic extinct birds, related to *Phororhacos*, whose bones are found in the Santa Cruz Miocene of Patagonia. See cut under ★*Phororhacos*.

brontothere (bron'tọ-thēr), *n.* An animal of the genus *Brontotherium*.

bronze, *n.* **Bismuth bronze**, a bronze in which bismuth replaces the copper of the copper-tin alloy. **Boron bronze.** See ★*boron-bronze.* **Bronze positive.** See ★*positive.*—**Deoxidized bronze.** See *Tobin* ★*bronze.* **Diamine bronze**, a direct cotton coal-tar color of the trisazo type derived from benzidine. It dyes unmordanted cotton a bronzy brown from an alkaline salt bath. When after-treated with copper sulphate or chromium fluoride the shade is rendered faster and darker. **Magenta bronze.** See *tungsten* ★*bronze.* **Manganese bronze.** (*b*) Same as *manganese brown* (which see, under *brown*). **Nickel bronze.** See ★*nickel-bronze.* **Plastic bronze**, a copper, lead, tin, and nickel alloy which casts readily, gives good castings, and can be easily machined. **Platinum bronze.** See ★*platinum-bronze.*—**Saffron bronze.** See *tungsten* ★*bronze.*—**Tobin bronze**, an alloy resembling in its properties delta-metal (which see), and composed chiefly of copper, zinc, tin, iron, and lead, in varying proportions. Tobin bronze is used extensively for household articles, ornaments, parts of machinery, etc. One sort of Tobin bronze, composed, before oxidation, of 82.67 per cent. copper, 12.40 per cent. tin, 3.23 per cent. zinc, 2.14 per cent. lead, and some iron and silver, is sold under the name of "*deoxidized bronze.*" **Tungsten bronze**, a substance made by dissolving tungsten trioxid in fused potassium or sodium tungstate. With the potassium compound the product is called *magenta bronze*, and consists of violet crystals with a coppery luster. With the sodium compound the product is called *saffron bronze* and the resulting crystals have a golden luster. When ground they are used as pigments.

Bronzed diabetes. See ★*diabetes.*

bronze-steel (bronz'stēl), *n.* A hard, tough alloy of copper, tin, and iron: used as a gun-metal.

bronziness (bron'zi-nes), *n.* Bronze-like quality or color.

> Autumnal browns . . . rise gradually . . . from a sort of buff to *bronziness.*
> *Athenæum*, May 4, 1895, p. 576.

brood[1], *n.* **6.** Oyster spat in the second year of development.—**Foul brood**, a disease of the honey-bee caused by *Bacillus alvei.* It affects both early stages (brood) and adults.

brood[1], *v. t.* **4.** To incubate: as, *brooded* eggs. *Jour. Exper. Med.*, VI. 251.

brood-chamber (bröd'chām″bėr), *n.* A chamber which is folded off from the uterus and closed around each embryo in some species of *Peripatus;* any chamber for holding the developing eggs or young of an animal.

brooder, *n.* **2.** Same as *couveuse*, 2. *Buck*, Med. Handbook, VI. 749.

broodered (brö'dėrd), *a.* Hatched or reared in a brooder; artificially reared: as, *broodered* chickens. [Rare.]

brood-food (bröd'föd), *n.* A prepared food for bees in their early stage: in one form it is a pap prepared from pollen.

broodiness (brö'di-nes), *n.* Inclination to brood or sit, as in a hen.

broodingly (brö'ding-li), *adv.* In a brooding manner; while brooding. *Bulwer*, Pilg. Rhine, xxvi.

brood-lamella (bröd'la-mel″ạ̈), *n.*; pl. *brood-lamellæ* (-ē). In crustaceans, a part of an appendage modified to form a protective cover for the eggs or young.

> In the female of the *Arthrostaca, Schizopoda*, and *Cumacea* the *brood-lamellæ* on the basal joints of the thoracic feet . . . develop at the approach of sexual maturity.
> *Lang* (trans.), Comp. Anat., p. 380.

broodlet (bröd'let), *n.* [*brood* + *-let.*] A young bird: a chick.

brookable (brůk'a-bl), *a.* [*brook*[2] + *-able.*] Capable of being brooked, put up with, or endured; endurable. *Hogg*, Tales and Sketches, v. 41.

brook-grass (brůk'gràs), *n.* *Andropogon glomeratus*, a broom-like species found in low grounds. In the southern United States it is, in its young state, valuable for pasturage.

brook-lamprey (brůk'lam″pri), *n.* Same as *river-lamprey.*

brook-runner (brůk'run-ėr), *n.* The water-rail, *Rallus aquaticus.*

brook-silk (brůk'silk), *n.* A popular name for *Spirogyra, Œdogonium*, and other filamentous algæ.

brook-stickleback (brůk'stik″l-bak), *n.* See ★*stickleback.*

brook-tongue (brůk'tung), *n.* The water-hemlock, *Cicuta maculata*, and perhaps other species.

brook-trout (brůk'trout), *n.* See *trout*[1].

brool (bröl), *n.* [Imitative. Cf. G. *brüll*, *n.*, < *brüllen*, roar.] A murmuring sound as of wind blowing through a forest.

> List to the *brool* of that royal forest-voice.
> *Carlyle*, French Rev., I. v. 2.

broom[1], *n.* **Native broom, swamp-broom**, in Australia, same as *swamp-oak*, 2 (*a*). It yields a soft, spongy wood. **Pneumatic broom.** See ★*pneumatic.* **Purple broom**, *Comesperma retusum*, an Australasian plant of the family *Polygalaceæ*, bearing racemes of small purple flowers. **Sweet broom.** Same as *sweet broomweed* (see *broomweed*) and *licorice-weed.* **Wild broom**, the deer-weed, *Lotus glaber*, a plant somewhat resembling the common broom. [California.]

broomer (bröm'ėr), *n.* One who uses a broom, as in street-cleaning; a street-sweeper; a broom-man. [Rare.] *N. E. D.*

broom-rape, *n.*—**American broom-rape**, the squaw-root, *Conopholis Americana*, a fleshy light-brown root-parasite. **Branched broom-rape.** Same as *hemp* ★*broom-rape.* **Broom-rape family.** See *Orobanchaceæ.* **Clover broom-rape.** Same as **lesser** ★**broom-rape. Hemp broom-rape**, *Orobanche ramosa*, an Old World species, in Kentucky now an annoying parasite on the roots of hemp and tobacco. **Lesser broom-rape**, *Orobanche minor.* See *Orobanche.* **Louisiana broom-rape**, *Orobanche Ludoviciana*, a species native to the western United States. **Naked broom-rape.** (*a*) See *naked.* (*b*) Same as *pale* or *one-flowered* ★*broom-rape.* **Pale** or **one-flowered broom-rape**, *Thalesia uniflora*, a woodland plant of the broom-rape family, widely diffused in North America, sending up from near the ground one to four slender peduncles with single nodding white or violet flowers.

broom-squarer (bröm'skwãr″ėr), *n.* See ★*broom-squire.*

broom-squire (bröm'skwīr), *n.* In certain parts of England, a squatter on a moor who lives by making brooms of heath. Also in West Surrey called *broom-squarer.*

> "*Broom-squires?*" "So we call in Berkshire squatters on the moor, who live by tying heath into brooms."
> *Kingsley*, Two Years Ago, xiv.

broomstick, *n.*—**To marry over the broomstick**, to go through a make-believe marriage ceremony in which both parties jump over a broomstick; a sort of play in which the parties are children or a grown person and a child: hence, by allusion, a mock marriage ceremony.

> There's some as think she was *married over the broomstick*, if she was married at all.
> *J. Hawthorne*, Fort. Fool, iv.

broom-wire (bröm'wīr), *n.* The wire used by broom-makers in binding the head to the broom-stick.

Broseley dragon, porcelain. See ★*dragon*, ★*porcelain*[1].

brosing (brō'zing), *n.* Meal-time. Also *brosing-time.* [Scotch.]

Brosmophycinæ (bros-mọ̄-fi-sī'nē), *n. pl.* [NL., < *Brosmophycis* + *-inæ.*] A subfamily of fishes of the family *Brotulidæ*, including two genera, *Brosmophycis* and *Ogilbia.*

Brosmophycis (bros-mọ̄-fī'sis), *n.* [NL., < Norw. *brosme* (see *Brosmius*), + Gr. φυκής, fem. φυκίς, a fish living in seaweed (the forked hake?), < φῦκος, seaweed.] A genus of fishes of the family *Brotulidæ*, represented by a single species, *B. marginatus*, found on the California coast.

brostenite (bros'te-nīt), *n.* [*Brosténi* (see def.) + *-ite*[2].] A hydrated manganite of ferrous iron and manganese, occurring in black friable masses in crystalline schists near Brosténi in Rumania.

brother, *n.*—**Brethren of the Sack**, an association of mendicant monks in the thirteenth century, who were vulgarly so called from the coarse sack they wore as an outer garment.

Brotherist (bruᴛʜ'ėr-ist), *n.* A follower of Richard Brothers (1757–1824), a fanatic who predicted the destruction of the world. He announced himself as the nephew of the Almighty and prince of the Hebrews, appointed to lead them to a new Jerusalem on the banks of the Jordan.

brotherlike (bruᴛʜ'ėr-līk), *a.* Brotherly; fraternal; like a brother.

> Welcome, good Clarence; this is *brother-like.*
> *Shak.*, 3 Hen. VI., v. 1.

brothership (bruᴛʜ'ėr-ship), *n.* **1.** Brotherliness.—**2.** A fraternity or gild; a brotherhood.

brotochore (brō'tọ̄-kōr), *n.* [Irreg. < Gr. βροτός, a mortal, + χωρεῖν, spread abroad.] In *phytogeog.*, a plant disseminated through the agency of man. *F. E. Clements.*

brotuliform (bro-tū'li-fôrm), *a.* Formed like a brotuloid fish.

brougham-hansom (brö'ạm-han″sum), *n.* A public cab having the driver's seat at the front and the entrance at the rear: originated by a London firm of carriage-builders.

Broun's rule. See ★*rule*[1].

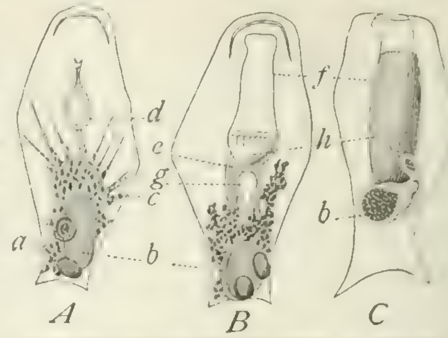
brow-ache (brou'āk), *n.* Supraorbital neuralgia. Also *brow-pang.*

browed (broud), *a.* Having a brow or brows (of some specified kind): as, low-*browed*, dark-*browed*, etc.

Browgill beds. See ★*bed*[1].

brown. I. *a.*—**Brown ash.** See ★*ash*[1].—**Brown body**, the pigmented remnants of the old polypide which breaks down and is replaced by a new polypide in the *Polyzoa.*

> The periodical histolysis of the polypide, leading to the formation of a *brown body*, may partly be due to the accumulation of excretory substances in the cells of the alimentary canal (Harmer, *Quart. J. Micr. Sci.*, xxxiii. p. 123); but the effects of artificially introduced pigments (indigo-carmine, etc.) suggest that the excretory function is in part performed by some of the mesodermic tissues.
> *Encyc. Brit.*, XXXI. 827.



Brown Body. [illegible], Naples. × [illegible]. Illustrating the development of a new polypide after the formation of a brown body.

A. a, two masses formed from the alimentary canal; d, degenerating tentacles; [illegible]; b, young polypide bud. B, Another zooecium, later stage; b, brown body; c, retractor muscles; f, tentacle-sheath; g, stomach; h, tentacle [illegible]. C, The same zooecium, [illegible] hours later; letters as in B. A and B are seen from the front, C from the back.

(After figure in "Cambridge Natural History.")

—**Brown disease.** See ★*disease.*—**Brown NP**, a mordant coal-tar color prepared by combining diazotized para-nitraniline with pyrogallol. It dyes chromium-mordanted wool a brown.—**Brown-print paper.** See ★*paper.* **Brown rot, rust, vitriol.** See ★*rot*, ★*rust*1, ★*vitriol.*

II. *n.*—**Acid alizarin brown**, a mordant-acid coal-tar color. It is rendered extremely fast when subjected to an after-chroming.—**Acid brown.** See ★*acid-brown.* **Alizarin brown.** Same as *anthracene* ★*brown.* **Alkali brown**, a direct cotton coal-tar color of the monoazo type. It dyes unmordanted cotton a reddish brown in an alkaline bath. Also called *benzo-brown 5R.* **Anthracene brown**, a mordant coal-tar color derived from anthraquinone. It is a trihydroxyanthraquinone and is therefore isomeric with anthrapurpurin, flavopurpurin, and purpurin. With a chromium mordant it gives very fast browns, particularly on wool. Sometimes called *alizarin brown.*—**Asphalt brown**, a brown pitch originally obtained from the Dead Sea, but now from the residue of the distillation of bituminous matter. In the powdered form it is used as a pigment. Its solution in turpentine is called *asphalt paint.*—**Benzo dark brown**, a direct cotton coal-tar color of unpublished composition. It dyes unmordanted cotton black-brown shades in a salt bath.—**Catechu brown.** (*a*) A direct cotton coal-tar color of the tetrakisazo type, derived from Bismarck brown. It dyes unmordanted cotton brown in a salt bath. (*b*) A brown produced upon textile material with catechu. Also called *cutch brown.* See *catechu.*—**Chloramine brown**, a direct cotton coal-tar color of unpublished composition.—**Cologne brown**, a pigment of humus-like character, similar to Cassel brown.—**Columbia brown**, a direct coal-tar color used for dyeing cotton. In a salt bath it dyes unmordanted cotton a brown which becomes darker when diazotized and developed with phenylene diamine.—**Cryogen brown**, a coal-tar color of the sulphid type, of unknown constitution. It dyes unmordanted cotton brown in a salt bath.—**Cutch brown.** Same as *catechu* ★*brown.*—**Diamine brown**, the name given to several direct cotton coal-tar colors of the diazo type, derived from benzidine. They dye unmordanted cotton various shades of brown.—**Diamond brown**, a mordant-acid coal-tar color of unpublished composition. It dyes wool brown in an acid bath, the shade becoming exceedingly fast when after-treated with potassium bichromate. It may also be applied upon chromium-mordanted wool.—**Diazin brown**, a basic coal-tar color of unpublished composition, but probably of the monoazo type and derived from safranine. It dyes tannin-mordanted cotton a brown of good fastness.—**Diazo brown**, a direct cotton coal-tar color of the diazo type. It dyes unmordanted cotton brown in a salt bath, but for the best results a subsequent diazotizing and developing is necessary.—**Diphenyl brown**, a direct cotton coal-tar color of the diazo type, derived from benzidine. It dyes unmordanted cotton brown in a salt bath.—**Direct brown J**, a direct cotton coal-tar color of the tetrakisazo type, prepared by combining two molecules of diazotized meta-amido-benzoic acid with Bismarck brown. It dyes unmordanted cotton brown in a salt bath.—**Direct brown R**, a color obtained by dyeing with polychromine and subsequently diazotizing and developing with meta-phenylene diamine.—**Durophenine brown**, a coal-tar color of uncertain composition, prepared by boiling nitroso-phenol with sulphuric acid. It dyes unmordanted cotton brown in a sodium-sulphid bath, the shade being rendered faster by an after-chroming.—**Egyptian brown.** Same as *mummy* ★*brown.*—**Eyed brown**, an American agapetid butterfly, *Satyrodes canthus*, occurring east of the Mississippi and feeding in its larval stages on sedges and grasses. **Fast brown.** Same as *naphthalamine* ★*brown.* **Gemmed brown**, an American agapetid butterfly, *Neonympha gemma*, occurring in the southern United States and feeding in its larval stages on grasses.—**Gold brown.** Same as *phenylene brown* (which see, under *brown*). **Hessian brown**, a direct cotton coal-tar color of the tetrakisazo type, derived from benzidine or toluidine, sulphanilic acid, and resorcinol. It dyes unmordanted cotton brown in an alkaline salt bath. **Janus brown**, a Janus coal-tar color. It dyes tannin-mordanted cotton brown in a neutral bath and unmordanted cotton in an acid bath; similar to *diazin* ★*brown.* **Kongo brown G** and **R**, direct cotton coal-tar colors of the trisazo type, derived from benzidine. They dye unmordanted cotton brown in a salt bath. **Mikado brown**, a direct cotton coal-tar color of the stilbene type, prepared by the action of caustic-soda

solution upon para-nitrotoluene-sulphonic acid. It dyes cotton brown in a salt bath. **Mummy brown,** a brown pigment consisting of a bituminous matter mixed with animal remains brought from the catacombs, where bitumen was employed in embalming. **Naphthylamine brown,** an acid coal-tar color prepared by combining diazotized naphthionic acid with α-naphthol. It dyes wool brown in an acid bath. **Picryl brown,** an acid coal-tar color, now obsolete. **Pigment brown.** Same as *Sudan ★brown.* **Seal brown,** a rich, dark brown. See *seal-brown.* **Sudan brown,** an insoluble colored azo compound prepared by combining diazotized α-naphthylamine with α-naphthol. It is not used in textile-coloring, but is of value for the coloring of oil, soap, and spirit varnishes. **Sulphone brown,** a sulphone coal-tar color of unpublished composition. It dyes wool brown in a salt bath containing ammonium acetate or a little acetic acid. **Toluylene brown G,** a direct cotton coal-tar color of the diazo type, derived from tolylenediamine. It dyes unmordanted cotton a yellowish brown in a salt bath, and is very fast to soaping.—**Toluylene brown R,** a direct cotton coal-tar color of the tetrakisazo type, derived from tolylene diamine and naphthionic acid. It dyes unmordanted cotton brown in a salt bath. **Zambesi brown,** a direct cotton coal-tar color. It dyes unmordanted cotton in a salt bath dull purplish browns, which when diazotized and developed are converted into dark yellowish browns.

browneyed-Susan (broun-īd-sū'zan), *n.* The common cone-flower, *Rudbeckia hirta:* the same as ★*blackeyed-Susan* (which see).

brownie-bug (brou'ni-bug), *n.* Any one of many species of the homopterous family *Membracidæ,* so called on account of their bizarre appearance. *Sci. Amer. Sup.,* Dec. 6, 1902, p. 22520.

browning, *n.* **3.** In *plastering,* the second coat. The first coat, called the scratch coat, is generally deeply scored to receive and hold the browning.—**4.** In *bot.,* the discoloration which takes place in vegetable cells when they are injured, as by cutting. It is probably due to chemical changes.

If a suitable mass of living cells is neatly cut with a sharp razor the first perceptible change is one of color; the white "flesh" of a potato or an apple, for instance, turns brown as the air enters the cut cells, and the microscope shows that this *browning* affects cell-walls and contents alike. *M. Ward,* Disease in Plants, p. 122.

brown-saddler (broun'sad″lèr), *n.* One who makes riding-saddles. [Eng.]

brownstone, *n.* **2.** Decomposed iron pyrites.

browntail (broun'tāl), *n.* A local name for the Tasmanian tit, *Acanthiza diemenensis.*

brown-top (broun'top), *n.* **1.** A panic-grass, *Panicum fuscum,* having the panicle brown. It is native in tropical America, also in Florida and Texas, and is similar in habit and value to the Texas millet (see under ★*millet*).

2. The redtop, *Agrostis alba.*

browny, *n.* **2.** A kind of currant loaf in common use in Australia.

Roast mutton and *brownie* are given us to eat.
Gilbert Parker, Round the Compass, p. 36.

brow-pang (brou'pang), *n.* Same as ★*browache.*

browse[2], *n.*—**Slag-hearth browse,** partly reduced lead ore mixed with cinder, obtained in smelting gray slag in the slag-hearth. The lead from the slag-hearth browse is extracted by resmelting.

brow-skid (brou'skid), *n.* The chief beam in a frame to which tackle for loading logs on cars is fastened. Also called *draw-skid* and *lead-log.*

brow-tined (brou'tīnd), *a.* Having a brow-tine or branch starting just above the bur and bending forward: said of antlers. This condition is characteristic of the genus *Cervus* and related forms. Contrasted with ★*fork-tined.*

If this be not enough, we may refer to p. 291, where it is suggested that the extinct Sedgwick's deer may be allied to the Oriental rusine group. Evidently the author [Sir H. Johnston] does not know the difference between a *brow-tined* and a *fork-tined* antler, as, indeed, may be gathered from certain statements in regard to supposed roe-antlers later on in the work.
Nature, Dec. 31, 1903, p. 194.

Bruce's banana. See ★*banana.*

brucia (brö'si-ä), *n.* [NL.] Same as *brucine.*

Brugère's picrate powder. See ★*powder.*

Brühl's receiver. See ★*receiver.*

bruisable (bröz'a-bl), *a.* [Also *bruiseable; bruise* + *-able.*] Capable of being bruised; friable. *Cotgrave.*

bruise, *v. t.*—**To bruise water** (*naut.*), said of a vessel when she pitches heavily into a head sea.

bruise, *n.*—**Dry bruise,** a bruise without ecchymosis, or subcutaneous effusion of blood.

bruisewater (bröz'wât″èr), *n.* A bluff-bowed vessel which creates much disturbance under the bows when forcing its way through the water.

bruit, *n.* —**Aneurismal bruit,** a murmur heard on auscultating over an aneurism. **Bruit de choc** [F., 'sound of impact'], the second sound of the heart accompanied by an impression of impact, such as is noted in auscultating over an aneurism of the aorta.—**Bruit de cuir neuf** [F., 'sound of new leather'], a sound resembling the creaking of leather sometimes heard in pericarditis. **Bruit de dra peau** [F., 'sound of (flapping) cloth'], a flapping sound produced by the to-and-fro movement of a polypus in the trachea.—**Bruit de pot fêlé** [F., 'sound of cracked pot'], a sound heard on percussion over a cavity in the lung which is filled with air and communicates with the bronchia by a narrow opening.—**Bruit de soufflet** [F., 'sound of bellows'], a blowing sound heard in certain affections of the heart and also over an artery when it is compressed.—**Systolic bruit,** an abnormal sound heard, on auscultation, with the contraction of the heart.

bruiter (brö'tèr), *n.* [*bruit* + *-er*[1].] One who bruits or spreads abroad reports or rumors. *Udall.*

brum[1] (brum), *v. i.*; pret. and pp. *brummed,* ppr. *brumming.* [Imitative var. of *hum*[1], *v.*] To hum; murmur. *Blackwood's Mag.,* LVI. 207.

brum[2] (brum), *a.* and *n.* A slangy contraction of *brummagem.*

brumby (brum'bi), *n.* [Native Australian.] A name used originally in Australia to denote a wild or unbroken horse and adopted in other English colonies.

People who lost money on him called him a *brumby.*
R. Kipling, The Broken-link Handicap.

brummagem, *a.* **II.** *n.* A piece of brummagem ware; hence, an imitation; sham.

In these days one is so used to sham and imitation and *Brummagem,* that when by chance one comes to the real thing it is hard to believe in it.
Miss Thackeray, Village, p. 9.

brummer (brö'mèr), *n.* [G., < *brummen,* hum, buzz: see *bomb*[1], etc.] Same as *bombard,* 6.

brummish (brum'ish), *a.* [*brum*[1] + *-ish*[1].] Brummagem; counterfeit; of counterfeit character: applied to coin. *Colman the Younger.* [Slang.]

brunch (brunch), *n.* [*br(eakfast)* + *(l)unch.*] In Oxford University slang, a meal which takes the place of breakfast and lunch.

brunch-word (brunch'wèrd), *n.* A word made on the model of 'brunch,' that is, by blending parts of two other words; a ★blend-word (which see).

brunella (brö-nel'ä), *n.* [An improper form of *prunella.*] A plant of the genus *Prunella.* These plants are little perennial weeds, sometimes grown in rockeries and slightly shaded parts of the border. *Prunella vulgaris,* commonly called *self-heal* or *heal-all,* is found wild in America, Asia, and Europe, often invading poor lawns and causing annoyance. See *prunella*[2], 2.

brunetness (brö-net'nes), *n.* In *anthrop.,* the character of being brunette.

brunettism (brö-net'ism), *n.* Same as ★*brunetness. Amer. Anthropologist,* Jan.–March, 1902, p. 157.

Brunfelsia (brun-fel'si-ä), *n.* [NL. (Linnæus, 1753, adopted from Plumier, 1703), named in honor of Otto *Brunfels* (1488?–1534), an early German botanist and physician.] A genus of plants of the family *Solanaceæ,* containing about 30 species, native in tropical America. A few of the species are grown in warm glass houses. *B. Hopeana* and *B. pauciflora* are the most common, the latter being a very handsome plant, flowering in succession most of the year. *B. Americana, B. hydrangeæformis,* and others are also in cultivation. See *Franciscea.*

brunissure (brü-ni-sür' or brü'nis-ūr), *n.* [F., browning, < *brunir,* brown: see *burnish, v.*] A disease of grape-vines characterized by the formation of brown spots covering more or less of the surface of the leaves. The cause of it is uncertain.

Brunistic (brö-nis'tik), *a.* Of or pertaining to the doctrines of Giordano Bruno, the Italian philosopher (1548-1600). *Encyc. Brit.,* XXX. 651.

brunneous (brun'ē-us), *a.* [ML. *brunneus, bruneus,* < *brunus,* brown: see *brown.*] Dark brown: used chiefly in entomology: as, *brunneous-gray* wings. *Humphreys,* Brito. Mths, I. 137.

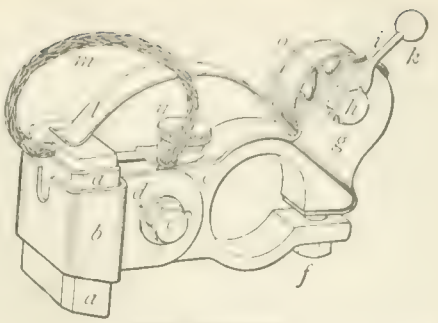
brunsvigite (brunz'vig-īt), *n.* [Dan. *Brunsvig,* Brunswick, + *-ite*[2].] A kind of chlorite occuring in gabbro in the Radauthal, Germany.

Brunswick stew. See ★*stew*[1].

Brunton's calciner. See ★*calciner.*

brush, *n.,* **7.** (*b*) One of the ends of the stationary circuit of an electric machine which receive the current from or supply it to the revolving circuit: so called because they had formerly a brush-like structure. Now the 'brushes' are solid blocks of carbon or graphite, or packages of wire gauze or of metal leaves. The part of the revolving circuit with which the brushes make contact is called the *commutator* or *collector.*

13. The hair on the upper end of a grain of wheat. It furnishes a distinction between varieties. **Ambulacral brush.** See ★*ambulacral.* **Brush discharge, electrode.** See ★*discharge,* ★*electrode.*—**Faradic brush,** a brush-electrode; a wire brush attached to one pole of a battery and used in the application of electricity to the surface of the body.—**To be in the brush,** to be embarrassed or confused, as a public



Electric Brush.

speaker. [Western U.S.]—**Wire brush,** any brush made entirely, or nearly so, of wires. Specifically: (*a*) a hair-brush made with metal wires in place of bristles; (*b*) a gilder's brush of brass wire used for spreading gilding and for cleaning metal surfaces; (*c*) a brush made with iron wires used for street-sweeping; (*d*) a carding brush; etc.

brush, *v. t.* **6.** In *mining,* to remove, by blasting or otherwise, rock from (the floor or roof of a level or roadway) to increase its height.

brush-cherry (brush'cher-i), *n.* **1.** See *cherry*[1].—**2.** An Australian tree, *Caryophyllus myrtifolius* (*Eugenia myrtifolia* of Sims), which yields a light-reddish, elastic timber, used for staves, oars, boat-building, boomerangs, and shields. Its red, acid fruit makes a good preserve.

brush-clutch (brush'kluch), *n.* A clutch in which a semipositive contact is obtained by having wire brushes on one face catch into grooves on the other face.

brush-coal (brush'kōl), *n.* In *mining,* the coal taken down when the top of a level is brushed.

brush-deal (brush'dēl), *n.* A slender Australian tree, *Cupaniopsis anacardioides,* of the soapberry family. It yields a tough, close-grained, pinkish timber, sometimes used for house-building.

brusher, *n.* **3.** A miner who enlarges the roadways by breaking down the roof-rock or by taking up rock from the floor.—**4.** A local Australian name for the small, active kangaroos which inhabit the scrub, or brush.

brusher-off (brush'èr-ôf), *n.* A worker in a pottery who brushes off the ware before it goes to the kiln.

The atmosphere which the *brushers-off,* the finishers, and the porcelain makers generally work in [in the Limoges potteries] contained 640,000,000 of dust-particles to the cubic metre. *Buck,* Med. Handbook, VI. 324.

brush-grain (brush'grān), *n.* In the painting of woodwork, an effect produced when the second coat is made to show through the third, of another color, by passing the brush over it while the second coat is still wet. *N. and Q.* 9th ser., VIII. 310.

brush-harrow (brush'har″ō), *n.* Same as *brush,* 6.

brush-holder (brush'hōl″dèr), *n.* A device for holding the brushes of an electric machine. See ★*brush,* 13, with cut.

brush-hook (brush'hůk), *n.* A bush-hook (which see).

brushing (brush'ing), *n.* In *mining,* that part of the roof or floor of a roadway which is removed to increase its height. *Barrowman,* Glossary.

brush-line (brush'līn), *n.* A fishing-line suspended from a branch of a tree, with the hook immersed in the water beneath: used for catching catfish in a Mississippi river overflow.

Practically all the fishing is done with "trot-lines" and "brush-lines."
Jordan and Evermann, Amer. Food and Game Fishes, p. 18.

brush-scythe (brush'sīтн), *n.* A ★bush-scythe (which see).

brush-turkey, *n.* The name is also loosely applied to various megapods, or mound-builders, besides the curious *Talegallus lathami.* Among these is the mallee, *Leipoa ocellata.* It is also given to the bustard, *Eupodotis australis.*

brush-turpentine (brush'tèr″pen-tīn), *n.* In Australia, either one of two trees of the myrtle family, *Syncarpia laurifolia* and *Rhodamnia trinervia,* both yielding useful timber. The latter is also called *red scrub tea-tree* and *three-veined myrtle.* See *Syncarpia* and compare *turpentine-tree,* 2.

brush-wire (brush'wīr), *n.* Wire which is made especially for coarse brushes such as are used in street-sweepers.

brusk[1], **brusque** (brŭsk), *v. t.*; pret. and pp. *brusked, brusqued*, ppr. *brusking, brusquing* [*brusk*[1], *a.*] To treat with scant courtesy or in a brusk, offhand way: as, "in this first dialogue he *brusques* Tasso." *Fraser's Mag.*, XIII. 530. **To brusk it,** to assume a brusk manner, act with bruskness: as, "I'll *brusque it* a little." *Scott*, Woodstock, I. 150.

bruskly, brusquely (brŭsk'li), *adv.* In a brusk manner; offhandedly and with scant courtesy.

brusque, brusquely. See ★*brusk*[1], ★*bruskly*.

brut (brût), *a.* and *n.* [F. *brut*, fem. *brute*, rude, rough, unfashioned, < L. *brutus*, brute. See *brute*, *a.*] **I.** *a.* Raw; rough; rude; as applied to wines, dry; not sweet.

II. *n.* [F. *diamant brut.*] A rough diamond or other gem. Roughing out a gem is often called *bruting*. *M. Bauer*, Precious Stones, v. 243.

brute, *n.* **3.** *Naut.*, a yacht that to some extent sacrifices fineness of lines to fullness of form, so that great initial stability and sail-carrying power are obtained.

"Reliance, however, is a *brute* of the most pronounced type, the term *brute* being used in its present accepted sense among yachtsmen as meaning a vessel that sacrifices fineness of form to fullness, great initial stability, and large sail-carrying power."

Sci. Amer., May 9, 1903, p. 354.

bruter (brū'tėr), *n.* [*brut*[2] + *-er*[1].] One who roughs out or roughly shapes gems either by chipping or by grinding them. *M. Bauer*, Precious Stones, p. 244.

bruting (brū'ting), *n.* [*brut*[2] + *-ing*[1].] Roughing out or shaping gems by chipping or grinding.

brutting (brut'ing), *n.* [*brut*[1] + *-ing*[1].] **1.** Browsing; nibbling of young shoots.—**2.** The breaking off of young shoots (or branches?). [Provincial in all uses.]—**Brutting crew,** a crew which rolls logs down slopes too steep for teams.

Bruxellian (bruk-zel'i-ąn), *a.* and *n.* [F. *Bruxelles*, E. *Brussels*, in Belgium.] In *geol.*, noting a local division of the Middle Eocene in Belgium, corresponding in part to the lower portion of the limestones of the Paris basin. See ★*Lutetian*.

bryaceous (brī-ā'shius), *a.* Belonging or pertaining to the family *Bryaceæ* or to the order *Bryales*, that is, to the true mosses.

Bryales (brī-ā'lēz), *n. pl.* [NL., < *Bryum* + *-ales*.] An order of mosses, the true mosses, characterized by having the spore-case separated from the wall of the capsule by a hollow cylindrical intercellular space. It is divided into the *Acrocarpi* and *Pleurocarpi* (ranked as suborders) and embraces by far the greater part of all mosses.

Bryanthus (brī-an'thus), *n.* [NL. (Gmelin, 1769), < Gr. βρύον, moss, + ἄνθος, flower, in allusion to the habit of the plant.] A genus of plants of the family *Ericaceæ*. The only species, *B. Gmelini*, is a moss-like or heather-like plant of eastern Siberia. The use of the name is sometimes extended to include the allied genus *Phyllodoce*. This consists of about 6 species, belonging to the arctic-alpine regions of both hemispheres. They are low, evergreen, heath-like shrubs with handsome yellow, red, or purplish flowers. *Bryanthus empetriformis* and other species are occasionally cultivated.

Brycon (brī'kon), *n.* [NL., < Gr. βρύκων, ppr. of βρύκειν, eat greedily.] A genus of fishes of the family *Characinidæ*, of numerous species, the typical one being *B. dentex*, found on the coast of South America.

Bryophyllum (brī-ō-fil'um), *n.* [NL. (Salisbury, 1805), < Gr. βρύον, moss, + φύλλον, leaf.] A genus of succulent plants of the family *Crassulaceæ*, containing 4 species, natives of tropical Africa. *B. pinnatum* (*B. calycinum* of Salisbury) is the only species under cultivation. If the leaves are laid on moist sand or moss, after a time new plants will appear at the indentations; it is therefore frequently grown for students' use. It runs wild in some of the warm countries. Sometimes known as the *life-plant*.

bryophytogeographic (brī-ō-fī-tō-jē-ō-graf'ik), *a.* [NL. *bryophytum*, bryophyte, + *geographicus*, geographic.] Relating to the geographical distribution of mosses or of bryophytes generally.

Bryssetæres (bris-e-tē'rēz), *n.* [NL., irreg. < Gr. βρίσσος, a kind of sea-urchin, + ἑταῖρος, companion.] A genus of cling-fishes of the family *Gobiesocidæ*, represented by a single species, *B. pinniger*, a small fish abundant in the Gulf of California.

Bryssophilus (bri-sof'i-lus), *n.* [NL., < Gr. βρίσσος, a kind of sea-urchin, + φίλειν, love.] A subgenus of cling-fishes of the family *Gobiesocidæ*, typified by the single species *Gobiesox papillifer*.

Brython (brith'on), *n.* [W. *Brython*: see *Briton*.] In *ethnog.*, a Briton of Wales, Cornwall, or ancient Cambria, as distinct from a Gadhelic Celt.

Brythonic (bri-thon'ik), *a.* Of or pertaining to the Brythons.

The god's Irish name Nuada assumes on *Brythonic* ground the form of Nodens, genitive Nodentis, to be found in Latin inscriptions, of which more anon.

Rhys, Celtic Heathendom, p. 125.

B. S. An abbreviation of (*a*) *Bachelor of Surgery*; (*b*) *Bachelor of Science*.

B. S. A. An abbreviation of *Bachelor of Scientific Agriculture*.

B. S. C. An abbreviation of *Bengal Staff Corps*.

B. S. D. An abbreviation of *Bachelor of Scientific Dialectics*.

B. S. F. An abbreviation of *Bachelor of Scientific Forestry*.

B. S. G. An abbreviation of *British Standard Gage*.

Bt. A contraction of *Baronet*.

B. Th. An abbreviation of *Bachelor of Theology*.

B. T. U. An abbreviation of *British Thermal Unit*.

buabua (bō-ä-bō'ä), *n.* [Fijian, also simply *bua* = Tongan *bua* = Samoan and Tahitian *pua*, name of several different trees, = Maori *pua*, Hawaiian *pua*, *puwa*, a flower.] In the Fiji Islands, a small evergreen tree, *Guettarda speciosa*, of the madder family, with opposite obovate leaves and very fragrant jasmine-like flowers, which are strung in garlands by the natives. The tree is widely distributed on tropical shores from East Africa and the adjoining islands to eastern Polynesia. It is highly esteemed on account of its delicious perfume.

buba (bō'bä), *n.* [Swahili *buba*.] *Frambœsia*. *Jour. Trop. Med.*, Feb. 16, 1903, p. 62.

bubal (bū'bal), *n.* [Also *bubale*; < L. *bubalus* < Gr. βοῦβαλος: see *buffle*, *buffalo*, *bubalis*, *Bubalus*.] A large ox-like antelope of South Africa, otherwise known as the *bubalis*.

Bubastic (bū-bas'tik), *a.* Of or pertaining to the ancient Egyptian city Bubastis, in Lower Egypt, the present Tel Basta.—**Bubastic dynasty,** the twenty-second Egyptian dynasty, which was of Semitic origin, had its seat at Bubastis, and lasted through 170 years, beginning with about 980 B. C.

bubble-boy† (bub'l-boi), *n.* Same as *bubble-bow*.

bubble-foot (bub'l-fût), *n.* Any insect of the order *Thysanoptera* or *Physapoda*. *Amer. Inventor*, June 1, 1904, p. 244.

bubo[1], *n.*—**Malignant bubo,** bubo occurring as the characteristic symptom of one of the forms of plague. **Sympathetic bubo,** swelling of the inguinal glands due to an irritation or wound of some part of the leg or foot. —**Venereal bubo,** one associated with venereal disease.

bubonic, *a.* **2.** Accompanied by the formation of bubos; affected with bubos.

From the fact that bacilli are hardly ever found in the blood of *bubonic* cases, it may be inferred that they are arrested by the lymphatic glands next above the seat of inoculation, and that the fight—which is the illness—takes place largely in the bubo. *Encyc. Brit.*, XXXI. 788.

Bubonic plague, a form of the plague characterized by the formation of bubos in the groins and sometimes in the axillæ. See *plague*, 2.—**Bubonic-plague bacillus.** See ★*bacillus*.

bubui (bō-bō-ē'), *n.* [Said to be Tagalog, but not traced.] The silk-cotton, *Ceiba pentandra*, a tree belonging to the family *Bombacaceæ*, with a straight trunk, whorls of radiating branches, digitate leaves, and mallow-like flowers. The seed-pods yield a silky floss, called *pala* in Ceylon and *kapok* in the Malay archipelago, which is brittle and elastic and not suitable for spinning, but is used for stuffing pillows and cushions. It is very inflammable and is used in India in the manufacture of fireworks. See *kapok*, and *silk-cotton tree* under *silk-cotton*. **Bubui gubat** (forest bubui), a name applied to an allied tree, *Bombax Ceiba*, called in the East Indies *simool* or *red* ★*silk-cotton tree*. See *silk-cotton*, under *cotton*[1], and *simool*. [Philippine Is.]

Bubui (*Ceiba pentandra*).

bucan, *n.* **4.** Meat prepared on a bucan. [Guiana.]

Bucania (bū-kā'ni-ä), *n.* [NL., < Gr. βυκάνη, a trumpet; see *buccina*.] A genus of prosobranchiate gasteropod mollusks of the family *Bellerophontidæ*. They have nautiloid, symmetrical, spirally enrolled shells with all the volutions exposed, the final whorl ending in an expansate peristome. Typical species are from the Silurian rocks.

bucaramangite (bō"ka-ra-man'jīt), *n.* [From a local name?] A fossil resin from Colombia. It is like amber in appearance, but does not yield succinic acid.

bucare (bō-kä'rā), *n.* [S. Amer.; orig. language not traced.] The name in Venezuela, Porto Rico, Trinidad, and other islands of the West Indies of several leguminous trees belonging to the genus *Erythrina*, especially *E. umbrosa* and *E. velutina*. These are used as shade-trees in the cultivation of cacao and coffee. See ★*anauca*.

Buccal chamber, in holothurians, the cavity into which the mouth leads. See *buccal cavity*.—**Buccal shield,** in *Ophiuroidea*, a shield-shaped plate, interradial in position, lying in the angle between the two jaws of one segment. Also called *oral plate*, *mouth-plate*, and *scutum buccale*.—**Buccal tube,** in certain trematodes, the passage from the mouth to the pharynx.

buccia (bō'chä), *n.* [It., bark, peel, hull, etc.] The marc or solid residue from the second pressing of olives in the production of olive-oil.

buccinite (buk'si-nīt), *n.* [*Buccin(um)* + *-ite*[2].] A fossil *Buccinum*, or some shell allied to that genus.

bucco[2] (buk'ō), *n.* Same as *buchu*.

buccofacial (buk-ō-fā'shal), *a.* [L. *bucca*, cheek (mouth), + *facies*, face.] Relating to the mouth and adjoining portion of the face. *Philos. Trans. Roy. Soc.* (London), ser. B, 183. 102.

buccopharyngeal (buk-ō-fā-rin'jē-al), *a.* [L. *bucca*, mouth, + Gr. φαρυγξ, pharynx.] Pertaining to the cavity of the mouth and to the pharynx.—**Buccopharyngeal aponeurosis,** a fibrous band stretching between the pterygoid process and the posterior part of the alveolus of the lower jaw, and giving attachment to the superior constrictor pharyngis and the buccinator muscles.—**Buccopharyngeal muscle,** part of the superior constrictor pharyngis muscle.

Bucephalus, *n.* **4.** [*l. c.*] A jocose name for a riding-horse, implying 'a spirited or raging steed,' in allusion to the spirited steed of Alexander the Great.

Buchan's rule. See ★*rule*[1].

Buchiola (bō-kī'ō-lä), *n.* [NL., < G. von *Buch*, a German geologist, + L. dim. *iola*.] A genus of pelecypod mollusks. They have the general form of *Cardium*, but are of very primitive aspect, being without hinge-structure except for minute denticulations along the hinge-line. The surface is usually covered with festooned ribs. On account of the primitive expression of this and some contemporary genera, they were put together by Neumayr into a group termed *Palæoconcha*; but the genus *Buchiola* is not of primitive age and is now regarded as a degenerative pelagic type. Same as ★*Glyptocardia*.

Büchner funnel. See ★*funnel*.

buchnerite (bōk'nėr-īt), *n.* [*Buchner* (Otto Buchner, an authority on meteorites) + *-ite*[2].] In *petrog.*, a name given by Wadsworth (1884) to certain ultrabasic igneous rocks, both terrestrial and meteoric, of granular texture and consisting of olivin, enstatite (or bronzite) and augite. Buchnerite is a kind of peridotite.

Buchu camphor. See ★*diosphenol*.—**Long buchu,** the leaves of *Empleurum crenatum*, a shrub of southwestern Cape Colony, related to the plants which produce the true buchu, and used for adulterating that drug. See cut on following page.

buck[1], *n.*—**Golden buck,** a rabbit with a poached egg placed on the cheese mixture.

buck[2], *v. t.* **3.** To saw (felled trees) into logs. [Western U. S.]—**4.** To bring or carry: as, to *buck* water or wood. [U. S.]—**5.** To cut to a proper shape for a barrel-stave.—**6.** To attempt to control (a bucking or obstreperous beast or a difficult affair or proposition): used only in the phrase *to buck the tiger*. See *to fight the tiger*, under *fight*.

buck[2], *n.* **2.** In *poker*, any article placed in the pool with the chips, to be taken down by the winner, indicating that when he deals it shall be a jack-pot. In straight poker, since the winner of the pool always deals, the buck is passed round to mark whose turn it is to ante for all the players.

buck[4], *v. t.* **5.** In *football*, to charge into (the line of opponents) with the ball.

buck[6], *n.* (*c*) An apparatus used in the northwestern United States for gathering hay from the swath and transferring it directly to the foot of the stack. It consists of a coarse

Long Buchu ([illegible])

rake or cradle with horizontal teeth, supported at the two ends by wheels and propelled by horses at the rear. A *drag buck* used on rougher ground is similar but without the wheels. The hay is elevated by means of a slide (see ★*slide*).

buck^{6} (buk), *v. t.* To cut (wood) with a buck-saw. [Canada.]

buck^{11} (buk), *n.* A dollar. [Slang.]

A man . . passed around some gold watches. . . Twenty *bucks* they cost you over the counter. At three dollars the crowd fought for the tickets.
McClure's Mag., Feb., 1903, p. 428.

buckberry (buk'ber-i), *n.* **1.** The squaw-huckleberry or deerberry, *Polycodium stamineum* and other species. [Southern U. S.]—**2.** The bear-huckleberry, *Gaylussacia ursina*, a species with a sweet fruit, much used in North Carolina. *Lounsberry*, Southern Wild Flowers, p. 396.

buckboard-barouche (buk″bōrd-ba-rösh'), *n.* A large buckboard used as a stage-coach. [Western U. S.]

buckboard-mail (buk'bōrd-māl'), *n.* A form of buckboard wagon with accommodation for six passengers, used for passenger and mail service in the western United States, especially in Yellowstone Park.

buck-brush (buk'brush), *n.* One of several plants associated in the western United States with the feeding of deer: (*a*) In the mountains of California, *Lotus glaber*, also called *deer-weed* and *wild broom*. (*b*) In Oregon, the shrub *Kunzia tridentata*. (*c*) In Colorado, various shrubby composites of the genera *Chrysothamnus* and *Isocoma*.

buckeen^{1} (buk-ēn'), *n.* [Guiana D. *bokin, fem. of *bok*, goat, buck: see *buck*^{1}, *n.*, 4.] An Indian woman: a term adopted from the Dutch in Guiana.

The Indian men and women were called by the Dutch "Bucks" and "*Buckeens*," and these rather inelegant expressions are still in common use.
W. H. Brett, Indian Tribes of Guiana, p. 34, note.

buckeen^{2} (buk-ēn'), *n.* [*buck* + *-een*, an Ir. dim. (*-īn*), used as in *squireen*.] In Ireland one belonging to the less wealthy section of the class known as gentry, who, without a profession or any settled income, tries to play the buck. See *buck*^{1}, *n.*, 3.

bucker^{1}, *n.* **4.** One who saws felled trees into logs. Also called a *cross-cutter*. [Western U.S.]—**5.** One who brings or carries. See ★*buck*^{2}, *v. t.*, 4.

bucker^{4} (buk'ėr), *n.* A machine for shaping staves for barrels or kegs. It consists of a steel carriage into which the stave is clamped by a lever. The carriage is then forced by a ram into such a position that the stave passes between two cutters, which shave it to the proper proportions, the width in the center being greater than at the ends to give the barrel the proper bulge or belly.

bucket^{1}, *n.* **7.** A letter full of abuse. [Local, U. S. slang.]—**8.** A scoop or digger used for taking up loose material such as coal or ore, and often for digging under water. Such buckets are operated by power and can lift a ton or more at a time. The most common form is the clam-shell bucket, which is made in two parts hinged together. It is lowered with the jaws open, and they are closed while the bucket rests on the material to be lifted. It is heavy enough to dig in as the jaws close and so pick up its load. **9.** In turbines and centrifugal pumps, the space between two adjacent vanes on the revolving wheel. **Bucket fever.** See ★*fever*^{1}. **Orange-peel bucket,** a self-filling bucket for a dredging-machine or for a coal-hoisting plant. It consists of four steel leaves hinged together and resembling the sections of half an orange when the skin is cut into four quarters. Dropped upon a mass of coal the pointed ends of the four leaves sink into the coal, and when the bucket is raised by its hoisting-chain the strain causes the leaves to come together, inclosing and lifting one or more cubic yards of coal. It is a modification of the more familiar clam-shell bucket (see *clam-shell*, 3).

bucket, *v. t.*—**To bucket an oar,** to recover the stroke with a hurried forward swing of the body.

bucket^{2} (buk'et), *n.* [Appar. <OF. *buquet*, a balance: see *bucket*^{1}, *n.*] A beam or pole on which anything may be hung or carried. *Levins*, Manipulus Vocab., col. 86.

bucket-conveyer (buk'et-kon-vā″ėr), *n.* A device for transporting material, consisting of a chain on which buckets are fixed at regular intervals. The material to be transported is put in the buckets and carried to the desired point, where it is dumped. See ★*conveyer*, 4.

bucket-door (buk'et-dōr), *n.* The cover of an opening in a pump designed to give access to the pump-buckets.

bucket-elevator (buk'et-el″ē-vā-tor), *n.* An apparatus for raising ore, grain, or other material, consisting of a number of metal buckets attached to an endless belt or chain.

bucket-float (buk'et-flōt), *n.* The float of a paddle-wheel.

bucket-lid (buk'et-lid), *n.* The flap of a bucket-valve.

bucket-light (buk'et-līt), *n.* A very short candle, consisting of stearin poured, in the melted state, into a shallow cylinder of tin-plate with a slender wick in the center: intended for use in bedrooms at night and for outdoor illumination of colored lamps. *Groves and Thorp*, Chem. Technol., II. 96.

bucket-mounting (buk'et-moun″ting), *n.* The leather or rubber packing of a pump-bucket.

bucket-piece (buk'et-pēs), *n.* The casting of a mine-pump which carries the bucket-door.

bucket-pump (buk'et-pump), *n.* A chain or lifting-pump which employs small buckets in place of pistons. See *chain-pump*.

bucket-recall (buk'et-rē-kâl″), *n.* A sphere formed of bucket-hoops and canvas: it is hoisted aloft by whalers as a signal for the boats to return to the ship.

bucket-ring (buk'et-ring), *n.* Same as ★*bucket-strap*.

bucket-shell (buk'et-shel), *n.* The metal frame of the bucket of a pump.

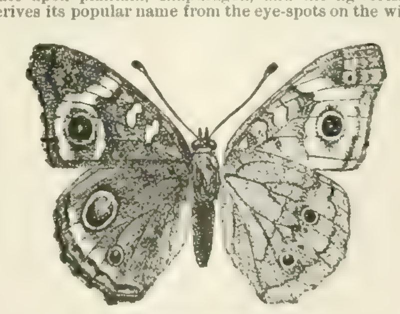
bucket-strap (buk'et-strap), *n.* An iron ring which clasps the leather of a bucket-valve.

bucket-trap (buk'et-trap), *n.* A form of steam-trap in which a bucket or open vessel is used as the float or weight to operate the valve.

bucket-wheel (buk'et-hwēl), *n.* The rotating part of the turbine wheel (using either steam or water) in which a jet impinges upon curved surfaces, called *buckets*, and imparts velocity and energy to the rotor which is fastened to the revolving shaft. These vanes, or buckets, are either cut or molded from the solid edge of the wheel, or are made separately and carefully fitted on the edge.

buckety (buk'et-i), *a.* Like a bucket; clumsy. [Rare.] *N. E. D.*

buckeye, *n.* **4.** In *entom.*, an American nymphalid butterfly, *Junonia cœnia*. It occurs throughout the southeastern United States, and feeds in the larval state upon plantain, snapdragon, and the figworts. It derives its popular name from the eye-spots on the wings.



Buckeye Butterfly ([illegible])

—**Big** or **large buckeye.** Same as *yellow* ★*buckeye*. **Purple** or **purplish buckeye,** a variety (*hybrida*) of the yellow buckeye, which has purplish or pink flowers.—**Red buckeye.** See *red*.—**Shrubby buckeye,** a low species, [illegible] found in low places and prairies west of the Mississippi.—**Small buckeye,** *Æsculus parviflora*, a low southern species with panicled white flowers, sometimes cultivated.—**Stinking buckeye,** the fetid buckeye. See *buckeye*, 1.—**Texas buckeye.** See *Spanish buckeye* (which see, under *buckeye*).—**Yellow buckeye,** *Æsculus octandra*, a large tree of the eastern United States, with yellow flowers.

buck-fly (buk'flī), *n.* Same as *buck-moth*.

buck-heap (buk'hēp), *n.* See the extract.

The great majority of the rabbits captured [in Australia] are sure to be males, because the male rabbits have the habit of congregating in certain spots called "*buck-heaps*." In these spots they are easily caught by the trappers.
Nature, [illegible]

buckhorn, *n.* **3.** See *deerhorn*.

bucking-hammer (buk'ing-ham-ėr), *n.* An iron disk, provided with a handle, used for breaking up minerals by hand. *Coal and Metal Miners' Pocketbook*.

bucking-table (buk'ing-tā″bl), *n.* A strong table, usually of cast-iron, on which crushed ore is placed to be pulverized.

buck-jump (buk'jump), *n.* A leap like that of a buck or a bucking horse or mule. [U. S. and Australia.]

buckjump (buk'jump), *v. i.* To jump in the manner of a bucking horse or mule. Same as *buck*^{2}, 3. [U. S. and Australia.]

buck-jumping (buk'jump-ing), *n.* The plunging and leaping of horses and mules addicted to bucking. See *buck*^{2}, *v. i.*, 3.

bucklandite (buk'lan-dīt), *n.* [Named after W. *Buckland*, an English geologist (1784–1856).] A variety of allanite from Arendal, Norway.

buckle^{1}, *v. t.* **2.** To do up (the hair) in curl-papers: curl; crimp. See *buckle*^{1}, *n.*, 3.

Another word, *buckle*, used in the sense of "to curl," is a localism perhaps. I have heard it used much in Newport, where the ladies spoke of "*buckling* their hair," i. e. rolling it up on a bit of paper or cloth.
Letter from *P. M. C.*

buckler-head (buk'lėr-hed), *n.* Same as *buckler-fish*.

buckling^{2} (buk'ling), *n.* [G. *bückling*.] A large smoked and salted herring.

buck-plate (buk'plāt), *n.* Same as *bucking-plate*.

buck-quartz (buk-kwârts'), *n.* Hard, non-auriferous quartz. *Coal and Metal Miners' Pocketbook*.

Buck's extension apparatus. See ★*apparatus*.

buck-shell (buk'shel), *n.* A dugout canoe with straight sides, the wood not being spread in the middle by heating. See ★*shell*, 19. [Guiana.]

buck-shot, *n.* **2.** A lava of granulated structure, occurring in Australia, embedded in sandy alluvium. [Australia.]

The plain under our feet was everywhere furrowed by dead men's graves, and generally covered with the granulated lava, aptly named by the settlers *buck-shot*, and found throughout the country on these trappean formations. *Buck-shot* is always imbedded in a sandy alluvium, sometimes several feet thick.
Austral. Quart., 1851, p. 459, quoted by E. E. Morris in [Austral English.

Buck-shot cinder. See ★*cinder*.—**Buck-shot land,** land whose soil carries rounded lumps of the size of buck-shot, or that carries or produces concretionary pellets. **Buck-shot soil.** Same as ★*buck-shot land*.

buck-sick (buk'sik), *n.* See the extract.

Epidemic gangrenous rectitis, known here as "caribi" or "*buck-sick*," is said to be common amongst the Aboriginal Indians. I have only seen one or two cases, simply, I presume, because these Indians so rarely come to hospital for treatment.
Jour. Trop. Med., Nov. 15, 1904, p. 357.

buckskinned (buk'skind), *a.* Wearing buck-skin; clothed in buckskin.

Our *buckskinned* justices expound the law.
Scott, The Poacher.

buck-stave (buk'stāv), *n.* Same as ★*buck-stay*.

buck-stay (buk'stā), *n.* One of the vertical beams which are run up the outside of a brick boiler-setting or furnace to keep it from buckling, or cracking.

buckthorn, *n.* **3.** In the southern United States any species of the genus *Bumelia*, particularly *B. lycioides*. The tough buckthorn is *B. tenax*, and the wooly buckthorn of the coast region is *B. lanuginosa*. Both of these are also called *black haw* and *ironwood*. **Cascara buckthorn,** *Rhamnus Purshiana*, the source of the cascara sagrada bark. See *Rhamnus* and *bark*^{2}.

Buckwheat swarm. See ★*swarm*^{1}.—**Copse-buckwheat,** *Polygonum dumetorum*, a climbing species naturalized from Europe in parts of the United States. This and *P. scandens* have been called *hedge-buckwheat*.—**Crested false buckwheat,** *Polygonum cristatum*, a smaller species of the eastern and southern United States, having the wings of the fruiting calyx incised.—**Hedge-buckwheat.** See *copse-*★*buckwheat*.

buckwheater (buk'hwē-tėr), *n.* A novice at lumbering. [Slang, U. S.]

bucolism (bū'kol-izm), *n.* [*bucol(ic)* + *-ism.*] A bucolic phrase or characteristic. *H. N. Coleridge*, Greek Poets, p. 7. [Rare.] *N. E. D.*

bucorvine (bū-kôr'vin), *a.* and *n.* [NL. *bucorvus* (< Gr. βοῦς, ox, + L. *corvus*, crow) + *-ine*[1].] **I.** *a.* Of or pertaining to the hornbills of the genus *Bucorvus* or family *Bucerotidæ*.

II. *n.* A hornbill of this family.

bud[1], *n.* **Imaginal buds,** the slight projections in full-grown larvæ and in pupæ of insects from which the wings and legs are developed. *Packard*, Text-book of Entom., p. 652.

bud-beetle (bud'bē'tl), *n.* A beetle which infests the buds of various plants. **Raspberry-bud beetle,** an American dermestid beetle, *Byturus unicolor*, which feeds on the buds and blossoms of the raspberry and blackberry.

bud-brush (bud'brush), *n.* A species of sage-brush, *Artemisia spinescens*, especially abundant in the Red Desert of Wyoming. It is a low plant with bud-like bunches of leaves and flowers much relished by sheep, and is the most valuable of the sage-brushes. Also called *bud-sage* and *spring sage*.

buddawong-nut (bud'ạ-wông-nut″), *n.* Same as *burrawang-nut*.

Budde effect. See ★*effect*.

Buddeize (bud'īz), *v. t.*; pret. and pp. *Buddeized*, ppr. *Buddeizing*. [Sw. *Budde*, name of the inventor of the process, + *-ize*.] To sterilize (milk) by heating to 48°–55° C. (118.4°–131° F.), with the addition of hydric oxid. At this temperature the enzymes of the milk decompose the hydric oxid, and the nascent oxygen destroys all spores as well as microbes. *Sci. Amer.*, May 30, 1903, p. 413.

Buddhadharma (bö'dä-där-mä), *n.* [Skt.] The ethical code and religious system of Gautama Buddha.

Buddha's rays. See ★*ray*[1].

Buddhic (bö'dik), *a.* [*Buddha* + *-ic.*] Same as *Buddhistic*.

Buddhism, *n.*—**Esoteric Buddhism,** a phrase applied to recent theosophical speculations.

budding, *n.*—**Axial budding,** the multiplication of a bilateral organism by transverse fission accompanied by regeneration.

In the rhabdocœl turbellarians, and in some of the annelids, we often find chains of new individuals produced by a process that is often spoken of as budding. It is convenient, however, to distinguish these cases of *axial budding* from those of lateral budding.
T. H. Morgan, Regeneration, p. 149.

Lateral budding, the production by an organism of buds which become new organisms with their planes of symmetry different from those of the budding organism.

Buddleja (bud-lē'jä), *n.* [NL. (Linnæus, 1737–53), named in honor of Adam *Buddle* (died 1715), an English clergyman and botanist.] A genus of trees or shrubs of the family *Loganiaceæ*, usually with quadrangular branches. There are about 70 species in the tropical and temperate regions of America, Asia, and South Africa. The flowers are in racemes, panicles, or clusters; the corolla is tubular or campanulate and 4-lobed. The shrubs are ornamental and the fruit is a two-celled capsule with numerous seeds. It is not hardy in the north; *B. Japonica*, *B. globosa*, *B. Lindleyana*, *B. variabilis*, and *B. Colvillei*, however, will stand many degrees of frost.

buddler (bud'lėr), *n.* One who uses a buddle in washing ore. See *buddle*[2], *n.* and *v. t.*

buddy (bud'i), *a.* [Also *buddie*.] **1.** Full of buds. *Florio.*—**2.** Like a bud. *Cotgrave.*

budge[2], *n.* **4.** Same as *booze*. [Local, U. S. slang.]

budgeree (buj-e-rē'), *a.* [Also *boojery*, etc. Australian.] An aboriginal commendatory expression meaning 'good': used colloquially in the Australian bush.

budgerigar (buj″ẹ-ri-gär'), *n.* [Also *budgereegah*, *betcherrygah*, *betshuregah*, *beauregarde*, etc. Native Australian *budgery*, good, + *ga*, *gah* (misspelled *gar*), a cockatoo or other bird.] An Australian name of the grass-parrakeet, *Melopsittacus undulatus*.

budgerook (buj'ẹ-rūk), *n.* [Also *budgrook*, *buserook*, *basrook*, etc. Pg. *bazarucco*, *basarucco*, *basaruco*: see ★*bazarucco*.] Same as ★*bazarucco*.

Budge's center. See ★*center of Budge*.

budgetary (buj'e-tā-ri), *a.* Of or pertaining to the budget or governmental financial estimates for the year; relating to or compared with the budget: as, *budgetary* arrangements; a *budgetary* surplus.

budgeteer (buj-et-ēr'), *n.* [*budget* + *-eer.*] One who makes up a budget, as the chancellor of the exchequer of Great Britain when he presents his financial statement for the year.

budgrook (buj'rūk), *n.* [See ★*budgerook*. Also *buserool*, *basrook*, etc. Pg. *bazarucco*, prob. < Canarese *bāzār-rūka* or *bajāra-rokkha*, 'market-money' (see Yule, 1903, p. 121).] A coin of low denomination, made of copper, tin, lead, etc., formerly current on the western coast of India. [Anglo-Indian.]

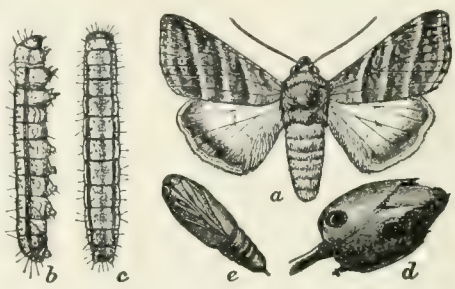
bud-moth (bud'môth), *n.* A tortricid moth, *Tmetocera ocellana*. It is common to Europe and the northern United States, and its larva damages apple-trees by destroying the blossoms, newly formed fruit, and terminal twigs. Also called *eye-spotted bud-moth*.

bud-sage (bud'sāj), *n.* Same as ★*bud-brush*.

bud-scale (bud'skāl), *n.* The scale-like outer leaves of a leaf-bud. See *scale*[1], 2.

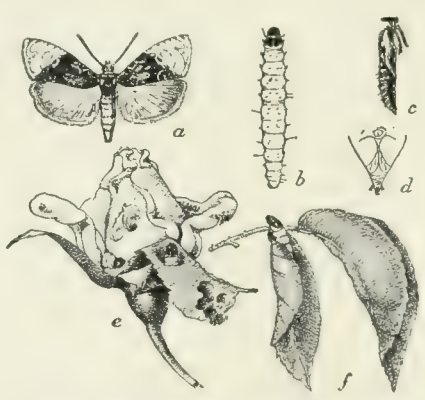
bud-stick (bud'stik), *n.* A twig from which one who practises budding cuts the buds. The twig is not more than one year old, so that the buds have never yet started into growth. These buds, when removed from the twig, or stick, are inserted into the stock, there to grow. See *budding*.

bud-worm (bud'wėrm), *n.* The larva of an American noctuid moth, *Chloridea virescens*, which affects the bud of the tobacco-plant, frequently doing much damage.—**Apple bud-worm,** the larva of a tortricid moth, *Tmetocera ocellana* Schiff., which bores into the blossoms and newly formed fruit of the apple in the eastern United States.—**Rose bud-worm,** the larva of an American tortricid moth, *Olethreutes nimbatana*, which bores into the flower-buds of roses.



Bud-worm (*Chloridea virescens*).

a, adult moth; *b*, full-grown larva, from side; *c*, same, from above; *d*, seed pod bored into by larva; *e*, pupa. Natural size. (Howard, U. S. D. A.)



Rose Bud-worm (*Olethreutes* (*Penthina*) *nimbatana*).

a, moth; *b*, larva; *c*, empty chrysalis skin; *d*, terminal segment of pupa; *e*, rosebud, showing larva at work; *f*, leaves folded by larva. All enlarged one third, except *d*, which is greatly enlarged. (Chittenden, U. S. D. A.)

budzart, *n.* See ★*budzat*.

Why the shaitan didn't you come before, you lazy old *budzart*? *Cholmondeley*, Dawk Bungalow, p. 215.

budzat (bud'zät), *n.* [Also *budzart*; < Hind. *badzāt*, of evil race, low-born.] A blackguard; a low fellow. [Anglo-Indian.]

buf, *n.* and *v. t.* A simplified spelling of *buff*.

buff[1], *v. t.* **2.** In *leather-manuf.*, to grind or shave with a buff-wheel.

buffa (buf'fä), *a.* and *n.* [It.: see *buffo*.] **I.** *a.* Comic: as, *opera buffa*, *aria buffa*.

II. *n.* A female singer of comic music. See *buffo* and *bouffe*[2].

buffalo, *n.*—**Big-mouthed buffalo,** the common buffalo-fish, *Ictiobus cyprinella*, of the family *Catostomidæ*, a species which reaches a weight of 50 pounds or more; found in certain lakes of the Mississippi valley. Also called *gourdhead*.—**Black buffalo,** a buffalo-fish, *Ictiobus urus*, of the family *Catostomidæ*: found in the Mississippi river. **Buffalo cholera.** See ★*cholera*. **Buffalo-clover.** (*a*) See *clover*, 1. (*b*) See ★*buffalo-pea*. —**Gourd-head buffalo,** a name in Louisiana of the buffalo-fish, *Ictiobus cyprinella*. Also called *red-mouthed* and *big-mouthed buffalo*, and *gourdhead*. **Mongrel buffalo,** a fish, *Ictiobus urus*, of the family *Catostomidæ*, found in streams of the Mississippi valley.—**Small-mouthed buffalo,** the most abundant and best-known of the buffalo fishes, *Ictiobus bubalus*, of the family *Catostomidæ*. **White buffalo.** Same as *small-mouthed* ★*buffalo*.

buffalo-bur (buf'ạ-lō-bėr″), *n.* Same as *sand-bur*.

buffalo-fly (buf'ạ-lō-flī″), *n.* Same as *buffalo-gnat*.

buffalo-pea (buf'ạ-lō-pē″), *n.* **2.** In Texas the term is used indiscriminately of species of *Astragalus* and *Lupinus* forming natural pasturage. In the latter sense *buffalo-clover* has also been used. [Western U. S.]

buff-coated (buf'kōt-ed), *a.* Wearing a buff-coat: as, *buff-coated* cavalry.

buffed (buft), *a.* [*buff*[2] + *-ed*[1].] **1.** Clad in buff.—**2.** Coated or covered with buff; having a buffy coat. *N. E. D.*

buffer[1], *n.* **2.** Any instrument or contrivance used in buffing or polishing, such as the thin, sharp-edged steel plate used by woodworkers to bring out the grain; the chamois-covered pad or ball used in polishing the finger-nails; the buffing-lathe, buff-stick, buffing-machine, buff-wheel, etc., used by different workers in different materials, and usually with some kind of powder.

3. One who buffs or polishes (knives, glass, cut precious stones, daguerreotype plates, woodwork, etc.)—**Buffer's consumption,** consumption prevalent among metal-polishers or -buffers.

buffer-beam, *n.* **3.** In *mining*, a beam fixed across a shaft to prevent the pump-rods from moving too far.

buffer-box (buf'ėr-boks), *n.* The casing which incloses the buffer-spring and -rod at the end of a railway-car.

buffer-rod (buf'ėr-rod), *n.* In a railway-car, the rod which carries a buffer; the rod which transfers the shock or bump from the buffer to the spring or cushion which is intended to receive it.

buffer-state (buf'ėr-stāt″), *n.* A state which lies between two larger and supposedly hostile states, and thus serves as a 'buffer.'

buffet-car (buf'et or bü-fā'-kär), *n.* A parlor-car or sleeper fitted with a small kitchen for preparing light meals, which are served on temporary tables placed between the car-seats.

buffet-organ (buf'et or bü-fā'-ôr″gạn), *n.* A small, portable organ.

buffo, *n.* **II.** *a.* Comic: as, *basso buffo*. See *bouffe*[2] and ★*buffa*.

bufidin (bū'fi-din), *n.* [L. *bufo*, toad, + *-id*[2] + *-in*[2].] A poisonous substance formed in the skin-glands of toads.

bufonin (bū'fō-nin), *n.* [L. *bufo*(*n*-), toad, + *-in*[2].] A name given by *Faust* to a substance obtained from the skin and parotid gland of the common toad, *Bufo vulgaris* L. Later investigations indicate that it was impure cholesterol containing some bufotalin.

bufotalin (bū-fot'ạ-lin), *n.* [L. *bufo*, toad, + *-t-* + *-al* + *-in*[2].] An amorphous, bitter, poisonous compound, $C_{119}H_{171}O_{25}$ (?), found in the parotid glands of the toad. It is very poisonous to toads, acting on the heart and stopping it in systole.

bufotenin (bū-fot'e-nin), *n.* [L. *bufo*, toad, + *-t-* + *-en*(*e*) + *-in*[2].] A poisonous compound obtained from the secretion of the parotid glands of the toad. It acts upon the central nervous system, producing paralysis.

bug[2], *n.*—**Abe Lincoln bug,** a name in some parts of Georgia of the harlequin cabbage-bug, *Murgantia histrionica*. See *cabbage-bug*. Also called *third-party bug*, *fire-bug*, and *terrapin-bug*.—**Brazilian bug** or **beetle,** any one of several beautiful Brazilian chrysomelid or curculionid beetles, sometimes worn alive as ornaments, and frequently set in gold and used in scarf-pins and other articles of jewelry. Among the species so used are the chrysomelid *Desmonota variolosa* and the curculionid *Entimus splendidus*.—**Destructive mealy bug,** *Dactylopius destructor*, found commonly on citrus-trees in Florida.—**Electric-light bug,** either one of two large American water-bugs, *Belostoma Americanum* and *Benacus griseus*. See *Belostoma*. **Golden bug,** any one of several species of tortoise-beetles, notably *Coptocycla aurichalcea*, which feed on the sweet potato and other convolvulaceous plants.—**Green bug.** Same as *greenfly*, 2; any one of several species of plant-lice. **Greenhouse-bug,** a scale-insect or coccid *Coccus* (*Lecanium*) *hesperidum* L., a common cosmopolitan species found in greenhouses on various plants. Also called *flat scale*.—**Leaf-foot bug.** Same as *leaf-footed* ★*plant-bug*.—**Long-horned bug,** any heteropterous insect of the series *Gymnocerata* (which see).—**Long-threaded mealy bug,** *Dactylopius longitilis*, a species found in Florida and in northern greenhouses. **Military bug,** an American capsid bug, *Hadronema militaris*, which sometimes damages the sugar-beet plant.—**Miona bug.** Same as *Persian* ★*bug*. **Persian bug,** a tick, *Argas persicus* or *persicus*. See *Argas*. **Sandy-ground bug,** an American lygæid bug, *Emblethis arenarius*, of wide distribution.—**Semiaquatic bug,** any heteropterous insect of the family *Saldidæ*, *Velidæ*, *Hydrobatidæ*, or *Limnobatidæ*.—**Short-horned bug,** any heteropterous insect of the series *Cryptocerata*, including the families *Belostomidæ*, *Corixidæ*, *Galgulidæ*, *Naucoridæ*, *Nepidæ*, and *Notonectidæ*. **Thin-winged bug,** any species of the aberrant heteropterous family *Henicocephalidæ*. **Third-party bug,** *Murgantia his-*

tronica. Also called *Abe Lincoln* ★*bug.* [Local Texas.] **Thread-legged bug,** any member of the family *Emesidæ* (which see). **Toad-shaped bug.** Same as ★*toad-bug.*

bug-agaric (bug'a-gar ik), *n.* Same as *fly-agaric.* See ★ *Amanita.*

bug-fly (bug'flī), *n.* The chinch-bug of the United States, *Blissus leucopterus.* *Kirby and Spence*, Entomol., p. 92.

buggy[2], *n.*—**Concord buggy,** a side-spring, three-perch buggy having a low-sided body. It originated in Concord, New Hampshire, and is the original of side-spring wagons. **Fantail buggy,** a buggy with the rear cut down from the seat back to a shallow depth at the rear end of the body.

buggyette (bug-i-et'), *n.* [*buggy* + *-ette.*] A vehicle of novel design, built at Calcutta, India, by a local firm of coach-builders.

bug-hole (bug'hōl), *n.* A small cavity usually lined with crystals. See *vug.* *Coal and Metal Miners' Pocketbook.*

bug-juice (bug'jös), *n.* Poor liquor. [Slang, U. S.]

buglet (bū'glet), *n.* A small bugle, as that carried by bicyclists. *N. E. D.*

bugle-weed (bū'gl-wēd), *n.* Same as ★*Ajuga.*

bug-light (bug'līt), *n.* A small incandescent electric light, used either in street- or house-lighting, as distinguished from the more powerful arc-light. [Colloq.]

Buhl's disease. See ★*disease.*

Buhrstone formation, a cellular silicious rock from which calcareous shells have been dissolved out, occurring in South Carolina, where it attains a thickness of 200 feet and was formerly largely used for millstones. It is of Eocene Tertiary age. The name was introduced into geological nomenclature by Tuomey.

build, *v. t.* **4.** In *casino*, to combine certain cards so that their total pip-value equals that of a single card in the player's hand.

Builders' hoist, lock. See ★*hoist*, ★*lock*[1].

builder-cam (bil'dėr-kam), *n.* A heart-shaped cam placed on a ring-spinning frame to regulate the wind of the yarn on the bobbin.

builder-screw (bil'dėr-skrö), *n.* A part of the mechanism of a spinning-mule for building or forming the yarn cop.

builder-wheel (bil'dėr-hwēl), *n.* One of the gears of a cotton-roving machine for regulating the wind of the roving on the bobbin.

building, *n.* **4.** In *mining*, a wall or pillar built of stone to support the roof in long-wall mining; a pack-wall. *Barrowman*, Glossary. [Scotch.]

building-berth (bil'ding-bėrth), *n.* In *ship-building*, a place in a shipyard on which a vessel is built, with its accessories of piling, blocking, staging, etc.; a building-slip.

> As an example mention may be made of the overhead cranes fitted at the Union Ironworks of San Francisco. A framework of wood is built up over the entire *building berth*, the structure being well braced in all directions for carrying two travelling girder cranes.
> *Encyc. Brit.*, XXXII. 593, 594.

building-motion (bil'ding-mō"shọn), *n.* A mechanical contrivance on a cotton-roving machine for regulating the speed of the bobbin and the wind of the roving thereon. Sometimes called *box of tricks.*

building-paper (bil'ding-pā"pėr), *n.* Paper intended to be inclosed between the sheathing and clapboards of a wall or the sheathing and shingles of a roof, chiefly to give additional warmth and dryness.

building-wheel (bil'ding-hwēl), *n.* Part of the mechanism of a spinning-mule for building or shaping the cop of yarn on the spindle.

buire (bwer), *n.* [F. *buire*, dial. *buie*, *bue*, OF. *buire*, *buie*, < ML. **buca*, < OLG. **buc*, AS. *buc*, a pitcher, also the belly: see *buck*[5], *bouk*[1].] A jug or flagon with a handle and spout. Compare *burette.*

buitenlander (bī'ten-lan-dėr), *n.* [S. African D.: *buiten*, outside (see *but*[1]), + *land*, land.] A foreigner; an alien.

buko (bö'kō), *n.* Same as *buchu.*

Bukowka sandstone. See ★*sandstone.*

bul, *n.* A simplified spelling of *bull.*

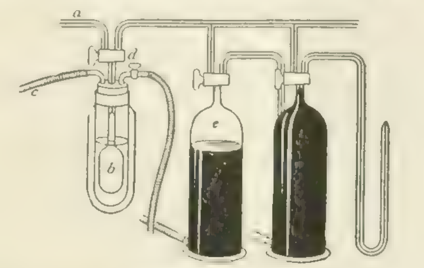
Bul (böl), *n.* [Heb. *būl*, a word of Canaanite origin.] An ancient name of the second month of the Jewish civil year, now called *Hesvan* or *Mar-hesvan.* As the name of a month it occurs only once in the Hebrew Bible (1 Ki. vi. 38). There are several renderings of the word. See *Hesvan.*

bulak (bö'läk), *n.* [Tagalog *bulak*, *bulac*, cotton; = Bisaya *bolac*, a flower, esp. the flower of cotton.] **1.** A general name in the Philippine Islands for cotton (*Gossypium*).—**2.** A name sometimes applied in those islands to the silk-cotton tree, *Ceiba pentandra*, and to other plants yielding down resembling cotton. See ★*bulbul* (with cut). **Bulak-damo** ('cotton-weed'), *Asclepias curassavica*, a milkweed: so called on account of the silky pappus of its seeds. See *kapok.*

bulakan, bulacan (bö-lä-kän'), *n.* [Visayan name.] Either of the species *Thespesia macrophylla* and *T. populnea*, two closely allied trees belonging to the mallow family, yielding fine cabinet-wood. Also called *banago* and *banalo.* See *Thespesia*, ★*banalo*, ★*milo*, and *Polynesian* ★*rosewood.* [Philippine Is.]

Bulama fever. See ★*fever*[1].

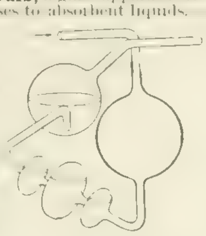
Bulb of percussion, a shell-like projection found on the fractured surface of flints.—**Bulb of the vestibule, vulvovaginal bulb.** Same as *vulvovaginal gland.* **Conjugate bulbs,** a pair of thermometers inclosed in copper globes, respectively bright and black, for the purpose of determining the total effect of daylight (that is, skylight plus sunshine). **Fractionation bulb,** a small



Fractionation Bulb.

[illegible]

glass bulb surrounded by liquid air held in a vacuum-vessel: used in separating the rare gaseous elements of the atmosphere. **Gas-washing bulb,** a glass apparatus especially designed to expose gases to absorbent liquids. **Liebig's bulb,** a form of potash-bulb devised by Liebig for the absorption of the carbon dioxid produced in the combustion of carbon compounds in ultimate analysis: frequently used for the absorption of gases by liquids. **Nitrogen-bulb,** a glass apparatus for the absorption of the ammonia gas set free in the analysis of nitrogenous compounds. The bulbs are filled with standard acid. The various shapes are known by the names of their designers. **Potash bulb,** a light glass apparatus designed to contain a strong solution of potassium hydrate, so arranged that the gas (carbon dioxid) must bubble through several bulbs or through a length of tubing to effect complete absorption. The apparatus increases in weight in proportion to the gas absorbed. There are many forms.



Liebig's Bulb.

Bulb-angle bar. Same as ★*angle-bulb.*

Bulbar apoplexy. See ★*apoplexy.*—**Bulbar arteries,** small arteries, derived from the anterior spinal artery, which supply the medulla oblongata.—**Bulbar myelitis,** a slow inflammatory process in the medulla oblongata, leading to bulbar paralysis.

bulb-bar (bulb'bär), *n.* A rolled section of iron or steel which has a cylindrical rib along one edge of its flange or tension-edge. See ★*bulb-tee.*

bulb-beam (bulb'bēm), *n.* Same as ★*bulb-bar.*

bulbilla (bul-bil'ạ̈), *n.*; pl. *bulbillæ* (-ē). [NL., dim. of L. *bulbus*, bulb.] In hydroid zoöphytes, a bud which becomes detached at an early stage and is capable of independent development.

bulb-iron (bulb'ī"ėrn), *n.* Same as ★*bulb-bar.*

bulb-mite (bulb'mīt), *n.* A tyroglyphid mite, *Rhizoglyphus hyacinthi*, which often does great damage to bulbs in hothouses by burrowing into healthy tissue and giving entrance to destructive fungi and bacteria.

bulbocapnine (bul-bọ̄-kap'nin), *n.* [NL. *Bulbocapnus* + *-ine*[2].] A crystalline alkaloid, $C_{19}H_{19}NO_4$, found in the roots of *Corydalus cava* or *Bulbocapnus cavus.* It melts at 199° C.

bulbocavernosus (bul"bọ̄-kav-ėr-nō'sus), *n.* [NL., < L. *bulbus*, bulb, + *cavernosus*, cavernous.] The accelerator urinæ muscle.

bulbocavernous (bul-bọ̄-kav'ėr-nus), *a.* Pertaining to the enlargement at the root of the corpus cavernosum.—**Bulbocavernous glands.** Same as *Cowperian glands.*

bulbosin (bul'bọ̄-sin), *n.* [*bulb* + *-ose* + *-in*[2].] A poison extracted from certain fungi.

bulbo-urethral (bul"bọ̄-ū-rē'thrạl), *a.* [L. *bulbus*, bulb, + LL. *urethra*, urethra.] Pertaining to the bulb of the urethra.—**Bulbo-urethral glands.** Same as *Cowperian glands.*

bulb-plate (bulb'plāt), *n.* In *iron ship-building*, a rolled plate or bar having on one edge an enlargement or bulb, and used in connection with angle-bars riveted to the other edge for deck-beams, stringers, etc. Modern facilities in steel-rolling have resulted in the general substitution of angle-bulb and T-bulb bars for these purposes.

bulb-rot (bulb'rot), *n.* A disease of bulbs of bacterial or fungous origin: as, the *bulb-rot* of the lily, said to be due to the fungus *Rhizopus necans.*

bulb-scab (bulb'skab), *n.* A fungus disease of *Iris reticulata*, caused by *Mystrosporium adustum*, which produces black patches on the sheath of the bulb.

bulb-scale (bulb'skāl), *n.* One of the fleshy leaves or coats of a bulb.

bulb-tee (bulb'tē), *n.* A deck-beam; a bar, rolled from iron or steel, which has a web with a double flange at one end and a cylindrical head at the other end, thus:

bule, *n.* Same as *boule*[2].

Bulgaria (bul-gā'ri-ạ̈), *n.* [NL. (Fries, 1823), in allusion to the somewhat coriaceous ascomata; < L. *bulga*, a leather sac: see *bouge*[1].] A genus of discomycetous fungi having rather

Bulgaria polymorpha.

a, the fungus, showing the habit, growing between the ridges of oak bark; *B*, fruiting body in longitudinal section. Twice natural size.

large, dark-colored gelatinous ascomata which are hard and horny when dry. The spores are simple and brown. *B. polymorpha* is a common species occurring on oaks and said to cause their decay and death.

bulge, *n.* **3.** A rapid rise in price, of stock, grain, cotton, or the like, followed by an equally rapid fall, owing to some temporary causes. The name has reference to the curve in a diagram of prices. [Colloq.]

bulge, *v.* **II.** *trans.* **1.** To cause to swell out and become protuberant.

> How his Majesty is crushed down; quite *bulged* out of shape in that sad way, by the weight of time and its pressures! *Carlyle*, Frederick the Great, II. x. 7.

2. To bilge or stave in the bottom of, as a ship.

> Here I found the ship was *bulged* and had a great deal of water in her hold. *Defoe*, Robinson Crusoe, p. 51.

bulger (bul'jėr), *n.* That which bulges; in *golf*, a club with a convex face.

bulger-driver (bul-jėr-drī'vėr), *n.* A wooden golf-club with a convex face.

bulging-stress (bul'jing-stres), *n.* The force which tends to make a metal plate bulge, whether the plate is flat or curved.

bulimuloid (bū-lim'ụ̄-loid), *a.* [*Bulimulus* + *-oid.*] Having the characters of or resembling the gastropods of the genus *Bulimulus.*

bulk[1], *n.* **8.** A pile of tobacco laid up in courses for the purpose of sweating.

> Before the sweat is completed the *bulk* is pulled down and built up eight or ten times.
> *U. S. Dept. Agr.*, Farmers' Bulletin, No. 60 (1898), p. 7.

Bulk modulus. See ★*modulus.* **Ton of bulk.** See *ton*[1], 2.

bulk[1], *v. t.* **2.** In the tobacco industry, to form into a bulk or bulks; to leave in the state of bulks: used in this sense with *down.*

> These are tied into hands and *bulked down* for a short time. *U. S. Dept. Agr.*, Farmers' Bulletin, No. 60 (1898), p. 9.

3. To pile in heaps, as fish for salting.

bulker[1], *n.* **2.** One who bulks tobacco, fish, or the like.

bulkhead, *n.* **4.** In *hydraulic mining* the pressure-box or -tank at the end of a water-ditch or flume from which the water-pipes lead to the nozles.—**Partial bulkhead,** in *ship-building*, a bulkhead extending only part way across the ship from the side; also, by extension, a name given to very deep plate-frames (5–10 feet deep) fitted on high-power passenger-steamers between the decks and in the hold at the side. In the longitudinal system proposed by Scott Russell, and carried out on the "Great Eastern," there were no transverse frames except such partial bulk-

heads. In modern steamers they are used in conjunction with ordinary frames.—**Splinter bulkhead**, a bulkhead or partition of thin armor (usually 1 ½ inches thick) of nickel-steel fitted in the interior of large war-ships between the guns in the citadel or casemates, to localize the damage from the explosion of shells in the interior. In the newest ships there are both longitudinal and athwartship splinter bulkheads, dividing the citadel into a number of compartments, in each of which there are one or two medium-caliber guns.

bulkheaded (bulk'hed-ed), *a.* Furnished with (water-tight) bulkheads: applied to ships.

bull[1], *n.* **11.** In *mining*, an iron rod used in ramming clay to line a shot-hole. *Coal and Metal Miners' Pocketbook.*—**Bull in the ring**, a child's game, played by a number joining hands in a circle to prevent one in the center from getting away.

bull[5] (bůl), *n.* Same as ★*beal*[3].

bull-ant (bůl'ant), *n.* Same as *bull-dog* ★*ant*.

bullation, *n.* **2.** In *bot.*, one of the elevations which, with alternating depressions, occur in considerable numbers nearly parallel with the margin of the lamina of *Laminaria bullata*.

bull-berry (bůl'ber-i), *n.* The buffalo-berry, *Lepargyrea argentea.* See *Shepherdia*.

bull-block (bůl'blok), *n.* A machine for tapering a wire so that it can enter a drawing-die.

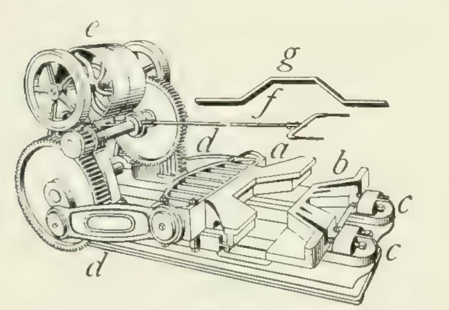
bull-chain (bůl'chān), *n.* **1.** A very heavy chain to which a number of short chains with hooks on one end and dogs on the other are attached: used to draw logs from a mill-pond up a gangway.—**2.** Same as *jack-chain*.

bull-clover (bůl'klō″vėr), *n.* See ★*clover*.

bull-daisy (bůl'dā″zi), *n.* The ox-eye daisy.

bulldog, *n.* **8.** Same as *bulldog* ★*ant*.

bulldozer, *n.* **3.** A horizontal geared press for bending, shaping, forming, upsetting, and welding heavy bars, rods, and other metal shapes. It consists of a massive frame which supports bending-, punching-, and shaping-dies, one die being controlled by crank-shafts from the gearing. By using double dies, two bends may be given to any piece of work at one stroke of the machine.



Bulldozer.

a, forming-die sliding on bed; *b*, fixed die; *c*, *c*, screws for adjustment of *b*; *d*, *d*, connecting-rods operating *a*; *e*, pulley for belt-delivering power; *f*, controller; *g*, sample steel bar bent in machine. Machine 16 feet long.

buller[2] (bůl'ėr), *n.* Same as ★*bull-shot*.—**2.** In *stock-raising*, a cow of irregular reproductive habit. *Rep. Kansas State Board Agr.* 1901–1903, p. 253.

bullet, n. **4.** In *poker*, an ace: as, a pair of *bullets*. [Slang.]—**Bullet gall.** See ★*gall*[3].—**Dumdum bullet**, a half-covered bullet with an expansible soft core: named from the Dumdum ammunition-works at Calcutta.—**Soft-nose bullet**, a bullet in which the nose is made of softer metal than the rest in order that it may flatten out, or mushroom, on impact.

bullet-head (bůl'et-hed), *n.* A round head like a typical bullet; a person having such a head, and, figuratively, a pig-headed, obstinate person.

bulletin. *n.*—**International bulletin**, in *meteor.*: (*a*) The bulletin of weather telegrams published in Paris since 1859 as the *Bulletin International*. (*b*) The bulletin published by the chief signal officer of the United States army from 1875 to 1889, containing the daily reports and charts and monthly and annual summaries of the international simultaneous meteorological observations for the whole northern hemisphere.

bullet-money (bůl'et-mun″i), *n.* A Siamese gold and silver ingot coinage: so called from its form.

bullet-wood, *n.*—**Andaman bullet-wood**, the timber of *Mimusops littoralis*, a tree of the Andaman and Nicobar islands and Tenasserim. It is reddish brown, close-grained, very hard, durable, and heavy, and is used especially for gun-stocks.

bullety (bůl'et-i), *a.* [*bullet* + *-y*[1]]. Bulletlike as regards form; shaped like a bullet: as, a *bullety* brow. *Poe*, Works, III. 111.

bull-fiddle (bůl'fid″l), *n.* A device consisting of a tin can with a string so inserted that when it is twanged a harsh, noisy tone is produced.

bull-fighting (bůl'fīt-ing), *n.* A sport among Spaniards, and peoples of Spanish origin, in which mounted men attack bulls. See *bullfight*.

bullfinch[1], *n.* This name is applied locally to many very different birds, as the pine-grosbeak, *Pinicola enucleator*, the house-finch, *Carpodacus mexicanus frontalis*, the black-breasted plover, *Charadrius squatarola*, the golden-eye, *Glaucionetta clangula americana*, etc.

bullhead, *n.* **1.** (*f*) A shark of Tasmania and South Australia, *Heterodontus phillipii* Lacépède, of the family *Heterodontidæ*, of small size and harmless, with teeth formed for crushing shells. Also called *bulldog shark*, and in Sydney, where it is common, *Port Jackson shark*. The aboriginal name was ★*tabbigan*. *Austral English*.

6. A local name for a river-mussel, *Pleurobema æsopus*, found in the Mississippi, the shell of which is used in the manufacture of pearl buttons.—**Bear Lake bullhead**, a species of sculpin, *Cottus cognatus*, of the family *Cottidæ*, found in Great Bear Lake and in the Yukon.—**Black bullhead**, the common species of horn-pout, *Amiurus melas*, found especially in western New York and southwestward.—**Bullhead shark.** See ★*shark*[1].—**Prickly bullhead**, a species of sculpin, *Cottus asper*, of the family *Cottidæ*, found in streams of the Cascade range.—**Rocky Mountain bullhead**, a species of sculpin, *Cottus semiscaber*, of the family *Cottidæ*, found in clear streams in the Rocky Mountain region.

bull-headed, *a.* **3.** Having a blunt, thick, or massive head.—**Bull-headed rail**, a rail which has a thick, heavy head, over 50 per cent. of the metal in the cross-section being located in its head.

bull-headedness (bůl'hed″ed-nes), *n.* **1.** The quality of being bull-headed.—**2.** Figuratively, blind, unreasoning impetuosity or obstinacy; stupid aggressiveness; blockheadedness.

bull-hide (bůl'hīd), *n.* The hide of a bull; loosely, any very heavy hide or skin.

bull-leader (bůl'lē″dėr), *n.* See ★*bull-ring*, 2.

bull-metal (bůl'met″al), *n.* A form of bronze which is used for hydraulic and marine work, both in rolled sections and castings. The metal becomes tougher and more ductile as its temperature is increased.

bull-nettle (bůl'net″l), *n.* A perennial weed, *Solanum elæagnifolium*, often prickly, which causes trouble in the region from Kansas to New Mexico. The leaves are silvery like those of species of *Elæagnus*.

Bull-nettle (*Solanum elæagnifolium*).

a, upper portion of a plant in flower and fruit; *b*, portion of a leaf magnified to show stellate pubescence.

(From Britton and Brown's "Illus. Flora of the Northern States and Canada.")

bull-oak (bůl'ōk), *n.* Same as ★*belah*.

bullock-puncher (bůl'ọk-punch″ėr), *n.* Same as ★*bull-puncher*.

bullock-sling (bůl'ọk-sling), *n.* A strong, broad sling of canvas, employed for hoisting live cattle in and out of a vessel.

bullock-wagon (bůl'ọk-wag″ọn), *n.* A crude vehicle, with solid plank wheels, drawn by bullocks: used in South Africa.

bullocky (bůl'ọk-i), *n.*; pl. *bullockies* (-iz). The driver of a bullock-cart or -wagon. [Australia.]

> By George, Jack, you're a regular *bullocky* boy.
> *Rolf Boldrewood*, Colonial Reformer, xii. *Austral English*.

Bulloidea (bůl-ō-id'ē-ä), *n. pl.* [NL., < *Bulla* (a genus) + *-oidea*.] A group of tectibranchiate gasteropods of the order *Opisthobranchiata*. They have the more or less spiral shell either external or internal; epipodia more or less well developed; a broad cephalic shield distinct from the dorsal region; usually no tentacles; and the eyes sessile. It includes the *Actæonidæ*, *Bullidæ*, *Doridiidæ*, and other families.

bullon (bö-lōn'), *n.* [Cf. Sp. *bullon*, a kind of knife.] The Cuban name of a species of wrassefishes, *Scarus croicensis*, of the family *Labridæ*, found about the West Indies.

bull-puncher (bůl'punch″ėr), *n.* A bullockdriver. [Australia.]

bull-redfish (bůl'red″fish), *n.* The red-drum, *Sciænops ocellata*, of the family *Sciænidæ*, a well-known and abundant food-fish of the sandy shores from Virginia to Texas. See *redfish*, 4.

bull-ring, *n.* **2.** A bronze or copper ring designed to be inserted in the septum of a bull's nose, and used to lead and control the animal by means of a wooden handle having a snaphook at the end. The snap-hook, when caught in the ring, makes it possible to lead the bull in safety. The handle is called a *bull-leader* or *bull-staff*.

3. The main part of the piston in an engine; the spider of the piston.

bull-rope, *n.* **2.** In *well-boring*, the rope on which the boring-tools are suspended and which operates them: so called from the fact that it passes over the bull-wheel.

bull-rout (bůl'rout), *n.* A scorpænoid fish, *Centropogon robustus*, found in Australian waters.

bull's-eye, *n.* **14.** In *meteor.*: (*a*) A small cloud of ruddy aspect which off the coast of South Africa rapidly develops into a local storm. (*b*) The center of a system of circular isobars, such as characterizes an extensive storm. The isobars suggest the appearance of a target with its bull's-eye. Hence—(*c*) The severest part of a storm or the center of a hurricane.—**15.** A fish of New South Wales, *Priacanthus macracanthus*. *E. E. Morris*, Austral English.—**16.** The labradorite variety of feldspar, with a dusky sheen. Also *œil-de-bœuf*.—**Bull's-eye cringle, lens.** See ★*cringle*, ★*lens*.

bull-shot (bůl'shot), *n.* In *mining*, a blownout shot; a blast that has blown out the tamping. Also *buller*.

bull-staff (bůl'ståf), *n.* See ★*bull-ring*, 2.

bull-tongue (bůl'tung), *n.* In *cotton-culture*, a heavy plow having a vertical mold-board. It is more of a digger than a plow. [Local, southern U. S.]

bull-trout, *n.* **2.** *Salvelinus malma*, of northern and western North America and Kamchatka.

bullule (bul'ūl), *n.* [LL. *bullula*, dim. of *bulla*, a bubble: see *bulla*.] A minute vesicle.

bull-wheel, *n.* **3.** In the machine for boring wells, the wheel on which the part of the bullrope which is not in use is wound. It usually consists of a drum with a wheel on each end.

bully[1], *n.* **6.** In *field-hockey*, the beginning of a game and the starting of each goal. A player from each side stands facing the sideline, and strikes first the ground and then the stick of his opponent alternately three times, after which either player may strike the ball: as soon as it is so struck the ball is in play.—**7†.** A foot-ball scrimmage.—**8.** The foreman or boss of a logging-camp. [U. S.]

bully[3] (bůl'i), *n.* [F. *bouilli*, boiled beef: see *bouilli*. The E. use is prob. often associated with *bull*[1].] Canned or pickled beef. Also attrib., as *bully beef*.

> Anything more ridiculous than the possibility of my return to Africa never occurred to me as I wearily munched my ration of everlasting *bully beef* and rice during the Matabele war of 1896.
> *E. S. Grogan*, in Geog. Jour., Aug., 1900, p. 431.

bully[4] (bůl'i), *n.* [An assumed sing. of *bullis* (sometimes written *bullies*), a form of *bullace*, q. v.] The bullace or sloe.

bully[5] (bůl'i), *n.* [Prob. a different application, alluding to the similar fruit, of *bully*[4], either directly or in the compound *bully-tree*.] Same as *bully-tree*. Also called *bully-bay* and *bully-berry tree*.

bullyism (bůl'i-izm), *n.* The practices and conduct of a bully.

> The Outises who practice this species of *bullyism* are, as a matter of course, anonymous.
> *Poe*, Mr. Longfellow and Other Plagiarists, Works, III. 320.

bully-off (bůl-i-ôf'), *n.* In *field-hockey*, the starting of the game. See ★*bully*[1], 6.

bulpiss (bůl'pis), *n.* [Native in Nicaragua.] A cutaneous affection, probably parasitic, endemic among the Mosquito Indians in Nicaragua. *Buck*, Med. Handbook, II. 516.

bulrush, *n.* **Alkali bulrush.** See *American* ★*bulrush*.—**American bulrush**, *Scirpus Americanus*, a species widely diffused in North America, sometimes called *three-square* in allusion to its triangular stem, and *chair-maker's bulrush*, doubtless with reference to its use. In the West, often called *alkali bulrush* because it endures alkali soils.—**Chair-maker's bulrush.** See *American* ★*bulrush*.—**Great bulrush**, *Scirpus lacustris*. See *Scirpus*.—**Prairie bulrush**, *Scirpus campestris*, a species with a three-angled stem, lower than the stem of the *American bulrush*, found on wet prairies from Mani-

toba to Mexico. **Salt-marsh bulrush,** *Scirpus robustus*, a stout species found on the North American coast from Nova Scotia to Texas.

bultong (bul'tong), *n.* See *biltong*.

Bulwark plain. See ★*plain*1.

bum1, *n.* **II.** *a.* Of poor quality; low-down: as, a *bum* show; a *bum* performance. [Slang, U. S.]

Bumba rubber. See ★*rubber*.

bumbarge (bum'bärj), *n.* Same as *bumboat*.

bumble, *n.* **3.** A jumble or confused heap: confusion.—**4.** An awkward person.

> Hadst thou taen aff some drowsy *bummle*,
> Wha can do naught but fyke an' fumble,
> 'Twad been nae plea.
> *Burns*, On a Scotch Bard, st. 4.

Bumble flower-beetle. See ★*flower-beetle*.

bumblebee, *n.*—**Trumpeter bumblebee,** an individual worker in a colony of bumblebees whose function it is to awaken the others in the early morning.

bumbo2 (bum'bō), *n.* A native name in Sierra Leone for a fragrant resin resembling incense, which is yielded by the bumbo- or bungo-tree, *Daniellia thurifera*, as a result of punctures of the twigs and branches by an insect. See *bungo-tree*.

bumboating (bum'bōt-ing), *n.* The business of a bumboat-man (or -woman). *Marryat.*

bummer, *n.* **3.** A small truck with two low wheels and a long pole, used in skidding logs. Also called a *drag-cart*.

bumming (bum'ing), *n.* In *mining*: (*a*) The heaving or rising of the floor. (*b*) The emitting of a hollow sound when struck. [Scotch.]

bump2, *n.* **6.** In *cricket*, the act of rising higher than usual from the pitch after being bowled: said of the ball.

bumper1, *n.* **3.** A species of pompano-like fish, *Chloroscombrus chrysurus*, of the family *Carangidæ*, found on the South Atlantic coast and about Cuba. Also called *casabe*. [Bahamas.]—**4.** In *felt-hat manuf.*, a machine used for consolidating the felted material.—**5.** In *Eng. whist*, a rubber of 8 points.

bumper2, *a.* Brimming; abundant; very good; as, a *bumper* crop.

bumper2, *v.* **I.** *trans.* **2.** To toast by drinking off a bumper.

II. *intrans.* To drink bumpers: as, "we all sang and *bumpered* away," *M. Scott*, Tom Cringle, p. 510.

bumper3 (bum'pėr), *n.* In *pianoforte-making*, same as ★*counter-check*, 2.

bumping-table (bump'ing-tā″bl), *n.* In *mining*, a concentrating-table with a jolting motion. Also *bump-table*. *Coal and Metal Miners' Pocketbook.*

bump-joint (bump'joint), *n.* A joint for fastening flanges on pipes by expanding or bumping the end of the pipe into a recess in the flange, thus preventing the flange from pulling off.

bumpkinet (bump'kin-et″), *n.* [*bumpkin* + *-et*1.] A little bumpkin. [Rare.]

> Peggy was a little vulgar *bumpkinet*.
> *Times* (London), Jan. 12, 1881.

bunch1, *n.* **7.** In *mining*, the expanded portion of a pipe-line; a place where the pipe does not maintain a uniform cross-section, but is expanded. **Miners' bunches,** circumscribed edematous infiltrations in various parts of the surface in cases of ankylostomiasis. *Nature*, Sept. 22, 1904, p. 520.

bunch1, *v. t.* **2.** In *sugar-beet growing*, see ★*block*1, *v. t.*, 8. **To bunch a load,** in *lumbering*, to encircle several logs with a chain and load them at once, by steam or horse-power.—**To bunch logs,** to collect logs in one place for loading.

buncher (bun'chėr), *n.* One who or that which bunches; specifically, an attachment to a mower designed to collect the clover, grass, etc., as fast as it is cut, and to deliver it in regular lots called bunches. It consists of a series of steel bands trailing on the ground behind the cutter-bar, and a rear stop or gate composed of steel rods resembling a hay-rake. The grass, cut by the mower, falls on the buncher and is prevented from reaching the ground by the gate. When the buncher is full the gate is released by the operator, and the grass is delivered in a compact bundle called a bunch.—**Asparagus-buncher,** a self-locking cylindric, hinged holder in which asparagus-stems are placed and compressed and tied into convenient and uniform bunches for transportation. It has a guide for the knife used in trimming off the end of the bunch.—**Side-delivery buncher,** a form of buncher designed to deliver the grass at the side of the mower instead of at the back. See ★*windrower*.

bunch-evergreen (bunch'ev″ėr-grēn), *n.* See ★*evergreen*.

bunch-grass, *n.* **2.** In general, any grass which grows in scattered tufts or bunches as distinguished from one which forms a continuous sod. *Pound* and *Clements.*—**Black bunch-grass,** principally *Hilaria mutica*; also several other grasses of different genera.—**Early bunch-grass,** a tender grass, *Eatonia obtusata*, readily eaten by cattle, ranging across the American continent and valuable where abundant.—**Feather bunch-grass,** a slender grass, *Stipa viridula*, growing in and along the Rocky Mountains. It is the best of its genus for hay, free from the objectionable awns of *S. spartea*, the porcupine grass.—**Great bunch-grass,** *Festuca scabrella*, a valuable mountain-grass of the western United States. **Pine bunch-grass,** the sheep's fescue, *Festuca ovina*. [Northwestern United States.]—**Wire bunch-grass,** a wheat-grass of the western United States, *Agropyron divergens*, indicating agricultural value.—**Woodland bunch-grass,** *Eragrostis glomerata*, a useful summer grass of moist grounds in the Gulf States.

bunching (bun'ching), *n.* In *sugar-beet growing*, same as *blocking*.

bunch-oyster (bunch'ois″tėr), *n.* A wild oyster found growing in clusters. Same as *coon-oyster*.

bunch-word (bunch'wėrd), *n.* A word formed by 'bunching' several words together, that is, in technical phrase, by agglutination. *Sir D. Wilson*, Prehistoric Man, II. 136.

bund2 (bunt), *n.* [G., < *binden* = E. *bind*. The noun answers in meaning to E. *band*1, *bond*1.] A league, society, or association: as, Sängerbund, a 'singing association'; a shooting *bund*.

> The institution of revolver shooting is regarded likely to create much interest, as many members of the *bunds* favor this sort of work.
> *Forest and Stream*, Jan 24, 1903, p. 78.

bunding (bun'ding), *n.* A staging or scaffold in a mine-level for carrying debris.

bundle, *n.*—**Aberrant bundle,** a collection of nerve fibers in the callosal gyrus.—**Anterior marginal bundle,** the anterior portion of the descending cerebellar tract in the spinal cord.—**Bundle of Vicq d'Azyr,** a collection of nerve-fibers around the anterior nucleus of the optic thalamus.—**Gratiolet's bundle,** a band of nerve-fibers which pass from the optic thalamus to the optic center in the occipital lobe of the brain.—**Ground bundle,** one of two groups of nerve-fibers, anterior and lateral, forming part of the lateral tract of the spinal cord.—**Lenhossek's bundle,** the ascending root of the glossopharyngeal and pneumogastric nerves.—**Meynert's bundle,** a collection of nerve-fibers connecting the ganglion interpedunculare and ganglion habenulæ.

bundling-press (bun'dling-pres), *n.* A machine for compressing yarns or textile materials into packages for shipment.

bundling-wire (bun'dling-wīr), *n.* Baling-wire; wire used for securing bundles or bales.

bundobust (bun'dō-bust), *n.* [Also *bandobast*. Hind. Pers. *band-o-bast*, 'tying and binding.'] System; discipline; orderliness. *Yule; Kipling.* [Anglo-Indian.]

bung3 (bung), *a.* and *adv.* [Also *bong*. Native Australian *bong*, die.] Dead.—**To go bung.** (*a*) To die: as, "suppose you *go bung*, then you go to heaven." [Australia.] (*b*) To fail; go to smash; collapse; become bankrupt: as, the bank has *gone bung*. [Eng. Slang.]

bung-lathe (bung'lāTH), *n.* A lathe specially equipped for turning bungs for barrels.

bungy (bung'i), *n.* [Hind. *bhangī*.] An Anglo-Indian term peculiar to Bombay, denoting a servant of the low class of sweepers: equivalent to *mehtar*, a scavenger in Bengal.

bunjarree (bun-jä'rē), *n.* [Also *bunjary, binjarree, binjarry, benjary* (< Hind. *banjārī*; adj.), prop. *bunjara*, < Hind. *banjārā*, in Bombay *vanjārā*, a grain-merchant, grain-carrier, < Skt. *baṇij*, trade (see *banyan*) + *-kāra*, suffix of agent.] In India, a grain-merchant; a carrier of grain.

bunk, *n.* **3.** The cross-beam on which the logs rest on a log-car or truck. [U. S.]—**4.** A log-car or truck. [U. S.]

bunk1, *v.* **II.** *trans.* To place upon the bunks: as, to *bunk* a log.

bunk2 (bungk), *v. i.* To make off; run away; decamp. [Colloq.]

bunk-chain (bungk'chān), *n.* Same as ★*toggle-chain*.

bunker1, *n.* **4.** *pl.* The coal carried in bunkers for consumption on board ship. See *coal-bunker*.

bunker1 (bung'kėr), *v. t.* **1.** *Naut.*, to load (coal) into a steamer's bunkers for its own use as distinguished from loading it as cargo.

> The export of coal from Natal in 1901 amounted to 204,788 tons, of which 55,757 tons were exported from Durban by sea, 1,865 tons overland to Orange River and Transvaal colonies, and 241,166 tons were *bunkered* by vessels at Durban.
> *Sci. Amer.*, Jan. 17, 1903, p. 36.

2. In *golf*, to place (a ball) in play in a difficult position, from which it must be played out; to strike (a ball) into a bunker: said also of the player whose ball is so placed.—**To be bunkered** (from the meaning in *golf*), to be placed in a situation of difficulty, from which it is hard to extricate one's self. [Colloq.]

> In the long narrow ice-bound valleys which lead up from the Hindu Kush to the Pamirs, where one can only see, towering thousands of feet above, the lower knobs and buttresses of gigantic spurs which intersect the glaciers of the mighty ranges on either hand—where the wind whistles down with the force of steam and the temperature of ice, we *were* once, to use a familiar term, fairly *bunkered*.
> *Geog. Jour.* (R. G. S.), XIII. 1.1

bunker-coal (bun'kėr-kōl), *n.* Coal carried in a steamer for its own use as distinguished from coal carried as cargo.

bunkering (bung'kėr-ing), *n.* The act of stowing the bunkers with coal; the operation of filling the coal-bunkers.

bunk-hook (bungk'hůk), *n.* The hook, attached to the end of the bunk on a logging-car, which may be raised to hold the logs in place or lowered to release them.

bunk-load (bungk'lōd), *n.* A load of logs not over one log deep, that is, one in which every log rests on the bunks.

bunk-spike (bungk'spīk), *n.* One of the sharp spikes set upright in the bunks of a logging-sled to hold the logs in place.

Bunodes (bū-nō'dēz), *n.* [NL., < Gr. βουνώδης, < βουνός, a mound, hill, + εἶδος, form.] A genus of merostomatous crustaceans belonging to the family *Hemiaspidæ* of the order *Synxiphosura*. They have a semicircular cephalothorax, no eyes and no facial sutures, abdomen divided into six anterior broad segments, four posterior narrow segments, and an acuminate telson. The genus occurs in Upper Silurian rocks of the Baltic Sea.

bun-okra (bun'ō-krä), *n.* [Said to be native in Bengal.] The name in India of two cosmopolitan malvaceous shrubs, *Triumfetta rhomboidea* and *Urena lobata*. See ★*aramina*, ★*Cæsar-weed*, *Triumfetta*, and *Urena*.

bunolophodont (bū-nō-lof'ō-dont), *a.* Having tuberculate teeth in which the tubercles are arranged more or less in the form of cross-crests.

bunow (bu-nou'), *n.* [Also *bunnow*. Hind. *banāo*, preparation, embellishment, decoration, < *banānā*, paint, varnish, gild.] A mere fabrication; anything that is fictitious; a sham. [Anglo-Indian.]

Bunsen combustion-furnace, eudiometer, etc. See ★*combustion-furnace*, ★*eudiometer*, etc.

Bunsen's and Roscoe's photometer. See ★*photometer*.

bunt1, *v.* **II.** *trans.* In *base-ball*, to block (the ball) with the bat, so that it goes to the ground and rolls only a short distance.

Bunt

bunt1, *n.* **2.** A blunt stone arrow-head with rounded edge in place of a point.—**Foul bunt,** in *base-ball*, a hit which goes outside of the fair-lines or is hit unfairly.

bunt2, *v. i.*—**Bunt up!** (*naut.*), an order given in furling sail to haul the bunt of the squaresail up on the yard by aid of the buntlines.

buntal (bůn-täl'), *n.* [Philippine name.] A fiber prepared from the petioles, or leaf-stems, of the talipot or buri palm (*Corypha umbraculifera*), from which hats of the finest quality are made in the Philippine Islands. See ★*buri* and *talipot*.

bunter2 (bůn'tėr), *a.* and *n.* [Short for G. *bunter-sandstein*, 'variegated sandstone' (see *bunting*4).] **I.** *a.* In *geol.*, noting the lowest division or group of strata in the Triassic system in Europe. The word has reference to the variegated colors of these strata. The lower division of the Bunter is a sandstone several hundred feet thick (also locally known as the *Vosgesian*, *grès des Vosges*, and *grès bigarré*), resting conformably on the uppermost layers of the Permian (Zechstein) and passing insensibly into them. The middle and upper divisions, from 1,000 to 2,000 feet thick, are sandstones passing into dolomites and red and green marls, the upper beds being known in Germany as the 'Roth.' The Bunter is overlain by the Muschelkalk in the German Triassic Basin and by the Keuper in Great Britain.

II. *n.* [*cap.*] The bunter-sandstein division.

Bunte's azotometer. See ★*azotometer*.

bunting6 (bun'ting), *a.* and *n.* [Related to *bunting*1 as *bunch*1 to bunch2. Cf. *bunting*1, *n.*, 3.] **I.** *a.* Short and thick-set. [Prov. Eng.]

II. *n.* A short and thick-set person. [Prov. Eng.]

bunting7 (bun'ting), *n.* [Prob. another use of *bunting*6, *n.*] The common shrimp, *Crangon vulgaris*. [Gr. Brit.]

Buntline lizard. See ★*lizard*.

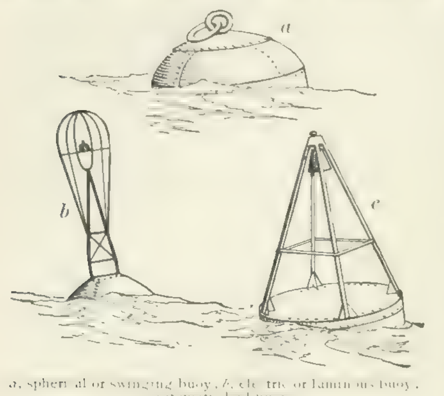
bunt-rush (bunt-rush'), *n.* In *foot-ball*, a rush made by all the attacking side at once.

bunyip (bun'yip), *n.* [Also *bunyup;* aboriginal Australian.] 1. A fabulous animal supposed to inhabit water-holes and rivers. [Australia.]

Certain large fossil bones, found in various parts of Australia Felix, have been referred by the natives, when consulted on the subject by the colonists, to a huge animal of extraordinary appearance, called in some districts the *Bunyup*, in others the Kianpraty, which they assert to be still alive. It is described as of amphibious character, inhabiting deep rivers, and permanent water-holes, having a round head, an elongated neck, with a body and tail resembling an ox.
W. Westgarth, Australia Felix, p. 391. Quoted in Austral English.

2. An impostor. [Australia.]

buoy, *n.* **Automatic buoy**, either a bell-buoy or a whistling-buoy, which is operated by the action of the waves. **Electric buoy**, a buoy which carries an electric lamp. **Luminous buoy**, a buoy provided with



a, spherical or swinging buoy; *b*, electric or luminous buoy; *c*, automatic bell buoy.

either an electric or a gas lamp carried on a stand at the top.—**Spherical buoy**, a buoy in the shape of a globe.—**Swinging-buoys**, a number of mooring-buoys placed more or less in a circle as a convenience in swinging a ship around to different points of the compass when it is being adjusted or compensated for deviation.

buoyancy, *n.*—**Curve of buoyancy**, in *naval arch.*, a curve whose ordinates are the areas of the cross-sections up to the load water-line at each point in the length of a vessel. This curve represents the longitudinal distribution of the buoyancy of the ship, and its area the total buoyancy or displacement.—**Reserve of buoyancy**, in *naval arch.*, the volume of a vessel above the water-line which can be considered as part of the water-tight hull. It is usually expressed as a percentage of the total volume of the vessel or total buoyancy, and is thus a measure of the additional weight which could be placed on the ship before she would sink beneath the surface. It is thus, to a certain extent, a measure of the seaworthiness of the vessel. **Total buoyancy**, in *naval arch.*, the total floating-power of the water-tight hull of a vessel (including its own weight) up to the point where it is about to sink beneath the surface of the water.

buoying (boi'ing), *n.* The act of sustaining or keeping afloat; support.

Without some such *buoying* as M. Simon's he would be likely to let Caro and Chevalier sink altogether.
Athenæum, July 8, 1893, p. 62.

buoy-safe (boi'sāf), *n.* A large, floating metallic vessel divided into compartments for protecting merchandise against water.

buphthalmia (būf-thal'mi-ä), *n.* [NL., < Gr. *βουφθαλμος, ox-eyed, < βοῦς, ox, + ὀφθαλμός, eye.] Forward projection of the iris and cornea caused by an increase in the amount of vitreous humor. See *buphthalmos*.

buphthalmic (buf-thal'mik), *a.* Relating to or affected with buphthalmia. *Lancet*, July 11, 1903, p. 101.

buplever (bū-plev'ėr), *n.* [Appar. from a Sp. form of the NL. *bupleurum*.] Any plant of the umbelliferous genus *Bupleurum*. The most noticeable species is the hare's-ear or thoroughwax, *Bupleurum rotundifolium*, naturalized in parts of the United States.

bur[1], *n.* **14.** An abnormal outgrowth of wood, frequently of large size, occurring on the trunk or branch of a tree, usually as the result of some injury. See *burl*[1], 2.

Turning now to outgrowths of a woody nature, the well-known *burrs*, or "knaurs," so common on elms and other trees are cases in point. They are due to some injury—e. g., bruising by a cartwheel, insects—having started a callus on which adventitious buds arise, or to the destruction of buds at an early stage.
Encyc. Brit., XXXI. 577.

Bathurst bur, the spiny clot-bur or cockle-bur, *Xanthium spinosum*. See *Xanthium*. **Creeping bur**, an ambrosiaceous weed, *Gærtneria discolor*, spreading by creeping rootstocks. It is found over the southern part of the Great Plains region.—**French bur.** Same as *French burstone* (which see, under *burstone*). **Paraguay bur**, either of two composite weeds, *Acanthospermum xanthioides*, from Brazil (also called *sheep-bur*), and *A. humile*, from the West Indies, both introduced into the southern United States. Their bur-like fruits are damaging to wool. **Sheep-bur.** See *Paraguay* ★*bur*. **Spanish bur**, a malvaceous plant, *Urena lobata*, with a bristly fruit. It has become a weed in Florida and Alabama. See *Urena* and ★*Caesar weed*. **Tasmanian bur**, a name applied to several species of *Acæna* or their fruits. See ★*biddy-bid* and *sheep-pest*, 2.

bur[1] (bėr), *v. t.*; pret. and pp. *burred*, ppr. *burring*. [*bur*[1], *n.*] 1. To extract (burs and other extraneous matter) from (wool) by chemical or mechanical means.—2. To use a dental bur in the excavation of (a tooth-cavity).

bur[1] (bėr), *n.* [Also *burr*; < Hind. *bar*.] The native Indian name for the banian-tree.

buranhem (bö-rän-yem'), *n.* [Native name.] A name applied in Brazil to a large tree of the family *Sapotaceæ*, *Pradosia lactescens*, the thick, sweet bark of which is used in medicine under the name of monesia bark. The tree yields a very hard wood, used in ship-building, and from the roasted seeds a beverage like coffee is prepared. Also called *guranhem* and *casca-doce*. See *monesia*.

burbung (bėr'bung), *n.* The ceremony of admitting a young man to the privileges of manhood. Also *burbong*. [New South Wales.]

Some Australian tribes have typical and elaborate initiative ceremonies, called *Burbung* or *Bora*, for their adolescents. *G. S. Hall*, Adolescence, II. 240.

bur-chisel (bėr'chiz″el), *n.* A three-edged chisel used to clear out the corners of mortises.

bur-clover (bėr'klō″vėr), *n.* Either of two species of medic, *Medicago Arabica* and *M. denticulata*, so called from their prickly spiral seed-cases. Both are valuable forage-plants, the former extensively introduced in the eastern United States, the latter in California, where it furnishes an important late-summer feed. Since the burs become entangled in wool, the *smooth bur-clover*, more properly *snail-clover*, *M. rugosa*, is preferred for sheep-ranges.

bur-cucumber (bėr'kū″kum-bėr), *n.* See ★*cucumber*.

burdekin-vine (bur'de-kin-vīn), *n.* A name applied in Australia to a grapevine, *Vitis opaca*, bearing large edible tubers and pungent berries.

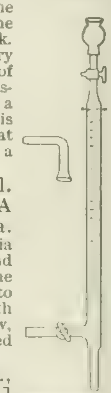
Burdiehouse group. See ★*group*[1].

Burdigalian stage. See ★*stage*.

bureau, *n.*—**Bureau of Accounts**, a division of the United States Department of State, charged with department appropriations and property, and with indemnity funds and bonds.—**Bureau of Animal Industry**, a division of the United States Department of Agriculture, charged with investigation of matters relating to the raising of live stock, with inspection of live stock, and with the collection and dissemination of information of value to this industry and allied industries.—**Bureau of Appointments**, a division of the United States Department of State, charged with appointments to office, with commissions, etc., and with the care of the great seal.—**Bureau of Chemistry**, a division of the United States Department of Agriculture, charged with investigation of food-products and fertilizers.—**Bureau of Construction and Repair**, a division of the United States Navy Department, charged with the construction and repair of vessels.—**Bureau of Corporations**, a division of the United States Department of Commerce and Labor, charged with the investigation of corporations and joint-stock companies, and with the publication of information relating to them.—**Bureau of Equipment**, a division of the United States Navy Department, charged with the equipment of vessels and with the care of the Naval Observatory, the Nautical Almanac, the Hydrographic Office, etc.—**Bureau of Fisheries.** Same as *United States Commission of Fish and Fisheries*. See *commission*.—**Bureau of Foreign Commerce**, a division of the United States Department of State, charged with the publication of consular and other foreign trade reports.—**Bureau of Forestry**, a division of the United States Department of Agriculture, charged with the investigation of matters relating to forestry. Officially known as the *Forest Service*.—**Bureau of Immigration**, a division of the United States Department of Commerce and Labor, charged with the execution of the laws relating to immigration and Chinese exclusion and to alien contract-labor.—**Bureau of Indexes and Archives**, a division of the United States Department of State, charged with the care of the department correspondence and with the archives.—**Bureau of Insular Affairs**, a division of the United States War Department, charged with matters relating to the civil government of the Philippine Islands, and with certain records of various insular affairs. **Bureau of Intelligence.** Same as *intelligence department* (which see, under *intelligence*).—**Bureau of Labor**, a division of the United States Department of Commerce and Labor, charged with the investigation of matters pertaining to labor, and with the publication of bulletins and other information relating to labor.—**Bureau of Medicine and Surgery**, a division of the United States Navy Department, charged with laboratories, hospitals, dispensaries, and medical supplies.—**Bureau of Navigation.** (*a*) A division of the United States Navy Department, charged with fleet orders, enlistment and discharge, various branches of naval education, and various codes, records, etc. (*b*) A division of the United States Department of Commerce and Labor, charged with a general superintendence of many matters connected with the merchant marine.—**Bureau of Plant Industry**, a branch of the United States Department of Agriculture, devoted to the investigation of plants in their economic aspects. Its subjects include plant diseases, plant-breeding, fiber, forage, and stock-poisoning plants, fruit-growing, etc. It introduces foreign seeds and plants, operates experiment-grounds, conducts seed-tests, and manages the congressional seed-distribution. **Bureau of Rolls and Library**, a division of the United States Department of State, charged with the promulgation of laws and with the care of treaties and various other documents.—**Bureau of Soils**, a branch of the United States Department of Agriculture, charged with the investigation of soils in their relation to agriculture. Among its subjects are the physical and chemical properties of soils, the materials and methods of artificial fertilization, the reclamation of old lands, alkali problems, and the adaptations of particular soils, the study of the last involving a soil survey, in which are mapped the soils of particular agricultural regions.—**Bureau of Standards**, a division of the United States Department of Commerce and Labor, charged with the custody and investigation of the standards of weight and measure. **Bureau of Steam Engineering**, a division of the United States Navy Department, charged with matters relating to the steam-machinery of vessels.—**Bureau of Supplies and Accounts**, a division of the United States Navy Department, charged with matters relating to clothing, provisions, and other stores.—**Bureau of the Census**, a division of the United States Department of Commerce and Labor, charged with the taking of the census.—**Bureau of Trade Relations**, a division of the United States Department of State, charged with the instructions for consular reports and with the transmission of such reports, and with the compilation of various information with regard to trade.—**Bureau of Yards and Docks**, a division of the United States Navy Department, charged with the care of docks, wharves, navy-yards, and similar matters.—**Consular Bureau**, a division of the United States Department of State, in charge of consular correspondence.—**Credit Bureau.** See *mercantile* ★*agency*. **Diplomatic Bureau**, a division of the United States Department of State, in charge of diplomatic correspondence.—**International Bureau of the American Republics**, a bureau established to promote closer relations among the republics in America. It is charged with carrying out the mandates of the international American conferences, and is the custodian of their archives.—**Passport Bureau**, a division of the United States Department of State, charged with the issuing of passports.

bureaucratism (bū-rō'kra-tizm), *n.* Government by bureaus; officialism: as, Russian *bureaucratism*.

burette, *n.*—**Constant-volume burette**, a burette connected directly with a mercury reservoir and with a barometer. By adjusting the reservoir the gas in the burette is made to occupy the volume indicated by some fiducial mark. The difference of level between the mercury in the burette and the top of the column of mercury in the barometer indicates the pressure exerted by the gas when occupying a known or definite volume. From this it is possible to calculate the volume of the gas at normal pressure.—**Explosion burette**, a form of burette used in gas analysis.


Explosion Burette.

burga (bör'gä), *n.* [Appar. a dial. var. of Russ. *purga*: see *purga*.] A storm of wind and sleet in Alaska. This storm is similar to the purga of Russia and Siberia in which fine snow or snow-sand is raised by the wind a few feet from the ground and whirled rapidly around. Not to be confounded with the blizzard of North America which is characterized by less snow, greater cold, and fiercer winds. Also spelled *boorga*.

burgator (bėr-gā'tor), *n.* [NL., equiv. to *burgulator*: see *burglar*.] A burglar.

burgher, *n.* **3.** In South Africa, a citizen of the former Transvaal Republic or of the Orange Free State.

The British troops under my command having entered the Orange Free State, I feel it my duty to make known to all *Burghers* the cause of our coming, . . . I therefore warn all *Burghers* to desist from further hostility.
Lord Roberts, Proclamation to the Burghers, etc.

bur-head (bėr'hed), *n.* A plant of the alismaceous genus *Echinodorus*. The fruits form small, bur-like heads.

burhel, *n.* Same as ★*bharal*.

buri (bö-rē'), *n.* [Philippine name.] The talipot palm, *Corypha umbraculifera*, of great economic importance. The blades of the large fan-shaped leaves yield a material for mats, sacks, and thatch; the vascular fiber of their petioles, called *buntal*, is the material from which the celebrated buntal hats are braided; the sap, collected by cutting off the immature inflorescence, yields a cider-like drink, molasses, sugar, vinegar, and a distilled liquor called *vino*; the small edible fruit is made into preserves; and the starchy pith of the trunk yields a kind of sago called *yoro*. It is from this palm that the island of Burias in the Philippine archipelago takes its name. See *talipot*. [Philippine Is.]

Burial society. See ★*society*.

burial-aisle (ber'i-al-īl″), *n.* An aisle, in a church or other religious building, under which bodies are buried.

To send his body and his heart to be buried in Avenal *burial aisle*, in the monastery of Saint Mary's.
Scott, The Abbot, xxxvii.

burial-hill (ber'i-al-hil), *n.* Same as *burial-mound*.

burial-robe (ber'i-al-rōb), *n.* A dress or robe for the dead; a shroud.

burial-vault (ber'i-al-vâlt), *n.* A vault in which the dead are buried.

burk, *v. t.* A simplified spelling of *burke*.

burking, *n.* **2.** Killing by suffocation; figuratively, a private suppression of a proposition, bill, or the like.—**3.** Specifically, in *med.*, suffocation due to tonic spasm of the muscles of respiration.

If we had diaphragm spasm alone, the symptoms then would rather resemble *burkism*.
Buck, Med. Handbook, I. 588.

burkism (bêrk'izm), *n.* [*Burke* (see *burke*, *v.*) + *-ism*.] The practices of Burke, the murderer (see *burke*, *v.*); that is, murder of kidnapped victims by smothering.

burkundaz (bêr'kun-däz), *n.* [Hind. (< Ar.) Ar. Pers. *barkandaz*, lit. 'lightning-darter.'] An armed retainer, policeman, or other unmounted armed employee of a civil department in India. Also spelled *burkendoss*. [Anglo-Indian.]

burley[2] (bêr'li), *n.* [Prob. from a proper name *Burley*.] A well-known American variety of tobacco, having two subvarieties, red and white.

Burlington group. See ★*group*[1].

burly-boned (bêr'li-bōnd), *a.* Having large, massive bones; of massive build; stout: as, *burly-boned* soldiers. *Nashe*.

burly-headed (bêr'li-hed″ed), *a.* Massive-headed; of great or commanding intellect.

Destiny has work for that swart *burly-headed* Mirabeau.
Carlyle, French Rev., I. iv. 4.

Burmannia (bêr-man'i-ä), *n.* [NL. (Linnæus, proposed 1737, established 1753), named in honor of Johannes *Burman* (1706–79), professor of botany at Amsterdam.] A genus of monocotyledonous plants, type of the family *Burmanniaceæ*. They are annual, erect herbs with ensiform basal leaves, or with these sometimes wanting, and scape-like stems, the cauline leaves being reduced to bracts or scales. There are about 20 species, natives of the warmer parts of the world. Two species, *B. biflora* and *B. capitata*, occur in the United States from Virginia southward to Florida and Louisiana.

A, *Burmannia biflora*, in flower; *a*, an anther, enlarged; *b*, a seed, enlarged; B, *Burmannia capitata*, an entire plant.

Burmanniaceæ (bêr-man-i-ā'sē-ē), *n. pl.* [NL. (Blume, 1827), < *Burmannia* + *-aceæ*.] A family of monocotyledonous plants of the order *Orchidales*, typified by the genus *Burmannia*, and characterized by flowers with a double 3-merous perianth, 6 stamens, 3 styles, and capsular many-seeded fruits. There are 13 genera and about 60 species, natives of the tropics of both hemispheres, with a few in temperate Australasia. They are herbs growing from rhizomes or tubers, sometimes saprophytic and destitute of chlorophyl, and with flowers in racemes, often nodding or pendulous.

burmanniaceous (bêr-man-i-ā'shius), *a.* Belonging to the plant family *Burmanniaceæ*.

Burmese gold, ringworm. See ★*gold*, ★*Tinea imbricata*.

burmite (bêr'mīt), *n.* [*Burma* + *-ite*[2].] A variety of amber, often of a light-sherry color, pale red and yellow, found in Burma, occasionally in masses of ten pounds or more. Many Chinese art-objects are made of it.

burn[1], *v.* **I.** *trans.* **9.** To vulcanize (india-rubber) by mixing it with sulphur or metallic sulphids and heating to a properly determined temperature. *Sadtler*, Handbook of Indust. Chem., p. 106.—**10.** To alter by means of heat, as a gem. Thus yellow topaz may be burned to pink, smoky quartz to brown and yellow (so-called Spanish topaz), chalcedony to carnelian, yellow or bluish zircon to the colorless variety, etc.—**11.** To injure (plants) as if by scorching: said of the action of strong fertilizers. —**To be burned out,** to have one's house or shop gutted by fire.—**To burn a hole in one's pocket,** said of money when the owner is eager to spend it.—**To burn away,** to remove by burning.—**To burn on,** in *foundry-work*, to add a fresh part to an injured or incomplete casting by running a stream of molten iron through the mold of the new part. The molten metal fuses the surface on which it is to be joined and produces perfect union between the two.—**To burn one's boats or bridges,** to cut off all chances of retreat (usually in order to prevent one's self from considering that policy in case of adverse conditions).

II. *intrans.* **10.** To become acidified as the effect of an excess of green herbage which has been plowed under: said of a soil.

burn[1], *n.* **5.** In the tobacco trade: (*a*) The quality of leaf considered with reference to the completeness or incompleteness of its reduction to ash in being smoked. *Yearbook U. S. Dept. Agr.*, 1901, p. 165. (*b*) A damage sometimes suffered by tobacco in the process of curing (drying), due to excessive moisture in the air. Specifically termed *house-burn* when it takes place indoors, and *pole-burn* when the leaves are dried hanging on poles.

burn-baiting (bêrn'bā-ting), *n.* Same as *burn-beating*. See *burn-beating* and ★*burn-beat*.

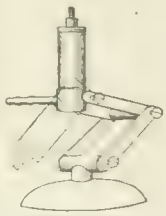
The paring of land is a practice of long standing in this island, particularly in the west of England, where it is also denominated (in conjunction with *burning*) den-shring, *burn-baiting*, or sod-burning.
W. Fream, The Complete Grazier, p. 861.

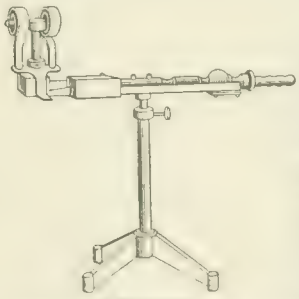
burn-baking† (bêrn'bā-king), *n.* Same as *burn-beating*.

burn-beat (bêrn'bēt), *v. i.* To perform the operation of burn-beating, or paring and burning (see under *paring*). See also ★*burn-baiting*.

burned, *a.* **Burned coating,** a technical term applied, in a figurative sense, by electroplaters to a metallic deposit of unsatisfactory appearance and character.

burner, *n.* **3.** A device for heating a painted surface so that the paint can be removed. It has a lamp to which a blowpipe is attached, by which the flame from naphtha is driven with great force against the paint, softening it so that it can be scraped off.—**Albo-carbon burner.** See ★*albo-carbon*.—**Asbestos burner.** See ★*asbestos*.—**Auer burner.** Same as *Welsbach* ★*burner*.—**Clamond burner,** an inverted air-and-gas burner so arranged that a conical basket made of twisted threads of calcined magnesia, supported by platinum wire, is heated to incandescence.—**Friedburg burner,** a form of gas-burner in which the air to be mixed with the gas is admitted at the top and is preheated. The regulation of air is effected by sliding the outer tube up and down. Either a luminous or a non-luminous flame is thus obtained.—**Incandescent oil-vapor burner,** a burner which uses an oil vapor mixed with air for fuel and in which the flame heats a mantle of an infusible substance to incandescence.—**Koch burner,** a special form of gas-burner with a safety-device. As long as the flame continues it heats two spiral springs which control a lever attached to the stop-cock of the gas-supply. Whenever the flame is extinguished the cooling of the springs releases the lever and the stop-cock is automatically closed. It is of especial use where flames are left burning overnight, as under bacteriological ovens.—**Maletra burner,** a simple and valuable arrangement for burning off the sulphur from iron pyrites in the manufacture of sulphuric acid. The pyrites small (dust and coarse powder) having been placed on a succession of superposed shelves of fire-clay, and the combustion started by flame from ordinary fuel, the hot gases are led from one shelf to another over the material, the burning of the sulphur producing heat enough to keep the process going. **Mantle burner,** a gas-burner in which a non-luminous flame impinges on a mantle, making it incandescent. See *Welsbach* ★*burner*.—**Naphtha burner,** a burner so arranged as to vaporize or atomize the naphtha and then burn it with an admixture of air.—**Petroleum burner,** any burner which atomizes and vaporizes petroleum and, mixing the finely divided particles with air, burns the oil as a vapor.—**Ratchet-wheel burner,** a burner the valve of which is operated by a ratchet and pawl.—**Recuperative burner,** a burner in which the gas or the air or both are preheated before reaching the point of inflammation.—**Scott-Snell burner,** a self-intensifying mantle burner in which heated air is fed to the burner under pressure. The air is compressed by the aid of a displacer attached to a diaphragm, which forms a small caloric engine operated by the waste heat of the gas flame.—**Self-intensifying burner,** a form of mantle burner provided with a draft-chimney which forces all of the gas and all the air introduced at the base of the burner to pass through the mantle.—**Siemens burner,** a form of regenerative burner specially useful in the illumination of large spaces, the large sizes (100–200 candle-power) being the most efficient. The light is diffused downward.—**Sugg burner,** an Argand gas-burner of standard form sometimes used in the photometry of illuminating gas.—**Suvio burner,** the trade name of a gas-heater. It is a Bunsen burner having a small drum attached to radiate the heat generated by the burner. Also called *Suvio heater*.—**Welsbach burner,** a burner for illuminating gas devised by Auer von Welsbach. It consists essentially of a Bunsen burner about the non-luminous flame of which a mantle of cotton gauze impregnated with certain metallic oxids (chiefly thorium oxid) is placed. When first ignited the cotton burns away and leaves a skeleton of the oxids, which becomes incandescent and emits a brilliant light.


Friedburg Burner.


Koch Burner.

burner-dome (bêr'ner-dōm), *n.* A metallic dome-shaped plate used in connection with an Argand lamp to deflect the ascending current of air, throwing it on the flame, and thus increasing the temperature, and hence the brightness of the light.

burner-gas (bêr'nêr-gas), *n.* In the manufacture of sulphuric acid, the mixture of gases from the kiln or burner in which sulphur as such, or the sulphur of iron pyrites, is converted into sulphur dioxid by union with atmospheric oxygen. This mixture consists mainly of sulphur dioxid, surplus oxygen, and the whole of the nitrogen of the air used. *G. Lunge*, Sulphuric Acid, I. 579.

burnet[2], *n.*—**Native burnet** (of Australia), the sheep-pest or biddy-bid, *Acæna ovina*. See *sheep-pest*, 2, and ★*biddy-bid*.

Burnetan (bêr-net'an), *n.* [*Burnet*, a town and county in Texas.] The lowest subdivision of the Precambrian series of Texas. As used by T. W. Comstock, probably equivalent to Laurentian of eastern Canada.

burnet-rose, *n.* See *rose*[1], **I,** 1 (2), and *cantrobin*.

burnettism (bêr-net'izm), *n.* The impregnation of wood with Burnett's liquid as a preservative. *N. and Q.*, Sept. 10, 1892.

burning, *n.* **4.** Oxidation of iron by keeping it too long at a welding heat. Burnt iron is practically worthless, although it is sometimes used after repeated reheatings and hammerings, which partially remedy the damage.

burning-oil (bêr'ning-oil), *n.* A trade-name for all liquid products distilled from petroleum which are used for illuminating purposes. [U. S.]

burning-point (bêr'ning-point), *n.* The temperature at which the vapor from the free surface of an illuminating-oil contained in an open vessel, when ignited by contact with a flame, will continue to burn: distinguished from the *flashing-point* which is the temperature at which the first momentary ignition becomes possible.

Burn-nose tree. Same as *bonace-tree*.

burn-out (bêrn'out), *n.* The melting of a wire or other electric conductor by an electric current of too great quantity.—**Burn-out fuse, alloy,** in *elec. wiring*, a fuse or alloy which melts readily at a comparatively low temperature when placed in circuit. The melting of the fuse forms an arc across the space for an instant, and the current is cut out from the main line before other harm is done.

burnsides (bêrn'sīdz), *n. pl.* A style of beard such as that affected by General Burnside (1824–81), consisting of a mustache, whiskers, and a clean-shaven chin.

Burnt amethyst, brass, card, coal. See ★*amethyst*, ★*brass*[1], etc.—**Burnt logwood.** Same as *over-aged logwood*. See ★*over-aged* and ★*aging*, 4.

burnt-stuff (bêrnt'stuf), *n.* A miners' term for the oxidized surficial facies of certain ore-deposits. [Australia.]

burnut (bêr'nut), *n.* [Appar. from *bur*[1] + *nut*, in an allusion reflected also in its other name, *caltrop*.] A plant of the genus *Tribulus* (which see).

Burow's veins. See ★*veins of Burow*.

burra-khana (bu-rä-kä'nä), *n.* [Hind. *barā khāna*, 'big dinner.'] A 'big spread': an entertainment or feast; a banquet. [Anglo-Indian.]

burring-saw (bêr'ing-sâ), *n.* A thin circular plate with a serrated edge, used in a burring-machine.

burring-wheel (bêr'ing-hwēl), *n.* A drum having teeth on the outside, used in burring wool.

burrito (bō-rē'tō), *n.* [Sp., so called from its grunting noise; dim. of *burro*, a donkey.] A species of grunt, *Pomadasis branicki*, of the family *Hæmulidæ*, found on the sandy shores of the Pacific coast of America and reaching a length of 7 inches. The name is also applied to other related species, as *Brachydeuterus leuciscus*, also of the family *Hæmulidæ*.

burro[2], *n.*—**2.** A name of species of grunts of the family *Hæmulidæ*, as *Pomadasis macracanthus* of the Pacific coast of tropical America. —**Burro blanco,** a species of grunt, *Brachydeuterus axillaris*, of the family *Hæmulidæ*, found only about Guaymas and Mazatlan.

bur-rubber (bėr'rub ėr), *n.* A block of emery and cement used in facing and dressing millstones.

Burrum formation. See ★*formation.*

bursa, *n.* 2. [*cap.*] A genus of dicotyledonous plants of the family *Brassicaceæ.* See *Capsella* and *shepherd's-purse.* —**Adventitious** or **artificial bursa,** a bursa formed over a bony surface when the part is subjected to intermittent pressure. **Boyer's bursa,** a bursa between the thyrohyoid membrane and the hyoid bone. **Bursa virilis,** the scrotum. — **Luschka's bursa,** a sac in the mucous membrane of the posterior wall of the pharynx. **Rider's bursa,** an adventitious bursa formed in the thigh from pressure of the saddle.

Bursal apertures. Same as ★*bursal fissures.* **Bursal fissures,** in the *Ophiuroidea,* or brittle-stars, slits bordering each margin of the arms and communicating with the bursæ or pouches, which receive the genetative products. These fissures are sometimes discontinuous and, in fossil species, are known to be reduced to rows of pores. — **Bursal scales,** in the *Ophiuroidea,* or brittle-stars, the scales or plates which bound the ★bursal fissures (which see). — **Bursal slits.** Same as ★*bursal fissures.*

bursatti (bėr-sat'i), *n.* Same as ★*bursautee.*

bursautee (bėr-sō'tē), *n.* [Also *bursatti, bursattee;* < Hind. *barsāti,* adj. < *barsāt,* the rains.] 1. A disease of horses thought to be caused by a fungus. It is characterized by peculiar swellings under the skin which finally rupture and are converted into chronic ulcers.—2. A waterproof coat; a rain-coat. [Anglo-Indian.]

burseed (bėr'sēd), *n.* A species of stickseed, *Lappula Lappula,* introduced into the United States from Europe.

burst, *v. i.* 4. In *pin-pool billiards,* to go beyond a score of 31; in *ball-pool,* to smash at the pyramid.

burster, *n.* 2. In *mining,* a blast-hole bored in solid coal not previously made ready for blasting by shearing or holing.

bur-thimble (bėr'thim″bl), *n.* A dentists' thimble.

burweed, *n.*—**Yellow burweed,** an annual boraginaceous weed, *Amsinckia intermedia,* troublesome in California grain-fields and vineyards. The burs are formed by the hispid calyces.

bus[2] (bus), *n.* Short for ★*bus-bar.* Same as ★*bus-bar.*

busain, *n.* Same as ★*busaun.*

busaun (bō-zoun'), *n.* [G. ★*busaun, posaune,* etc., trombone: see *posaune.*] In *organ-building,* a soft reed stop, usually of 16-feet pitch.

bus-bar (bus'bär), *n.* [(*omni-*)*bus* + *bar*[1].] A system of conductors, in an electric generating-station, on which the power of all the generators is collected for distribution into the system, or (in an electric receiving-station) on which the power from the generating-station is received for distribution to the apparatus consuming it.

busenna (bō-sen'ą), *n.* Same as *mesenna.*

bush[1], *v. t.*—**To bush a road,** to mark the course of a logging-road across a marsh or the ice by setting up bushes. [U. S.]

bush[2], *n.* 3. In *milling,* a packing of wooden blocks placed in the eye of the bedstone and forming the upper bearing of the spindle.

bush[3] (bůsh), *v. t.* 4. To dress a stone with a bush-hammer.

busha (bůsh'ą), *n.* [Negro? Appar. not native W. Ind.] The manager or overseer of an estate in Jamaica. [West Indies.]

bush-beater (bůsh'bē″tėr), *n.* Same as *bush-whacker,* 1.

Such was the legion of sturdy *bush-beaters* that poured in at the grand gate of New Amsterdam.
Irving, Knickerbocker, vi. 5.

bush-boy (bůsh'boi), *n.* An Australian bushman.

bush-bred (bůsh'bred), *a.* Bred or reared in the bush. [Australia.]

bushbuck, *n.* 2. The harnessed antelope, *Tragelaphus pictus;* also, the rare *T. bor.*

Bushbuck (*Tragelaphus bor*).

bush-cattle (bůsh'kat″l), *n.* In Australia, cattle lost from a herd and running wild in the bush.

bush-clover (bůsh'klō-vėr), *n.* Any species of the genus *Lespedeza* (which see). The bush-clovers are either erect, prostrate, or ascending plants, with numerous yellowish or purplish pea-like flowers. The only species of special economic value is the *Japan clover* (which see, under *Japan*).

bush-coral (bůsh'kor ąl), *n.* A bushy gorgonian, *Acanella normani,* found in the North Atlantic.

bush-cow (bůsh'kou), *n.* The tapir. [British Guiana.]

Of the quadrupeds found in these forests, the largest is the tapir, or maipuri, commonly called the *bush-cow.*
W. H. Brett, Indian Tribes of Guiana, p. 20.

bush-drive (bůsh'drīv), *n.* A hunt or shooting expedition in which the game is driven from cover in the bush toward the sportsmen. [South Africa.]

At the *bush-drives* so common in the [Cape] Colony Blue-buck are seldom turned out.
Proc. Zool. Soc. London, 1899, p. 831.

bushed, *a.* Hence—2. Bewildered; at a loss; 'lost'; all at sea.

The poor youth, new to the wilds, had, in the expressive phrase of the colonials, got *bushed,* that is, utterly bewildered, and thus lost all idea of the direction that he ought to pursue. *W. Howitt,* Australia, I. 283.

busheling (bůsh'el-ing), *n.* In *iron-working,* the process of heating iron scrap and forming it into a solid block in a furnace.

busheling-furnace (bůsh'el-ing-fėr″nąs), *n.* A furnace used in working scrap-iron into a solid block. The scrap, consisting of turnings, chips, nails, etc., is heated to a welding heat, and gathered into a ball about as large as a bushel basket. While still hot and soft it is taken to a hammer and welded by hammering into a billet or is blown.

bush-faller (bůsh'fâl″ėr), *n.* A bushman who fells or cuts down timber in the bush. [Australia.]

bush-fighter (bůsh'fī″tėr), *n.* One who fires from the shelter of bushes; a bushwhacker.

bush-fruit (bůsh'frōt), *n.* A term recently adopted in the United States from English usage to designate those cultivated fruits which are borne on bushes or shrubs, as the raspberry, blackberry, gooseberry, and currant. The term *small-fruit* comprises the same and also the strawberry.

bushhammer (bůsh'ham″ėr), *v. t.* To break or dress (stones) by means of a bush-hammer.

bush-harrow (bůsh'har-ō), *v. t.* To treat with a bush-harrow.

Bush-harrow after sowing.
W. Fream, The Complete Grazier, p. 826.

bush-hawk (bůsh'hâk), *n.* One of the smaller hawks of New Zealand and Australia, *Hieracidea novæ-zealandiæ.*

bush-hog (bůsh'hog), *n.* 1. Same as ★*bush-pig.* —2. A name given in British Guiana to the peccary, *Dicotyles* (or *Tayassu*) *tajacu.*

bush-honeysuckle (bůsh″hun'i-suk-l), *n.* 1. A plant of the genus *Diervilla.* See *honeysuckle,* 2. —2. Any species of true honeysuckle with a bushy habit, including, therefore, the fly-honeysuckles; particularly, *Lonicera Tatarica,* the Tatarian bush-honeysuckle, an ornamental species native in southeast Russia and Siberia.

bush-horse (bůsh'hôrs), *n.* A horse which is lost and running wild in the bush. [Australia.]

bushido (bō'shi-dō″), *n.* [Chino-Jap., < *bu* (Chin. *wu*), military, warrior, + *shi,* officer, + *do* (Chin. *tao*), way.] The code of moral principles which the knights and warriors of feudal Japan were required to put into practice in all circumstances and relations of life; knightly spirit and conduct; chivalry; gentlemanly politeness and honor; integrity, devotion, and duty to one's superiors, and unswerving loyalty to the mikado.

Bu-shi-do means literally 'Military-knight-ways'—the ways which fighting nobles should observe in their daily life as well as in their vocation; in a word, the 'precepts of knighthood,' the *noblesse oblige* of the warrior class.
Nitobe, Bushido, p. 7.

bushloper (bůsh'lō″pėr), *n.* [New York D. *'bosch-looper?*: see *bush*[1], *lope*[1], and *loper.* Cf. *interloper.*] One who tramps through the bush or wilderness; a peddler: as, "a romantic young *bushloper*" (of the earlier period of the Dutch occupation of New York). *E. Eggleston,* Duffels, Preface.

bush-magpie (bůsh'mag″pī), *n.* A name of the Australian piping-crows, or crow-shrikes, belonging to the genus *Gymnorhina,* from their black-and-white coloration.

bushman, *n.* 3. A settler in the bush of Australia, as distinguished from one who dwells in a town or city; specifically, one who is acquainted with the bush and its ways.

bushmanite (bůsh'mąn-it), *n.* [Also *bosjesmanite* and *boschjesmanite.* *Bushman* (D. *Bosjesman*) + *-ite*[2].] A native alum, in composition intermediate between pickeringite and apjohnite.

bushmanship (bůsh'mąn-ship), *n.* Knowledge and experience of the bush and its ways; skill in the methods and practical work of the bushman.

bush-pea (bůsh'pē), *n.* A plant of the leguminous genus *Thermopsis;* false ★lupine (which see). The Montana bush-pea, *T. Montana,* a tall herb with a cluster of erect stems, is regarded as possessing some value as forage.

bush-pig (bůsh'pig), *n.* An African pig of the genus *Potamochœrus,* either *P. africanus* or *P. porcus;* a boschvark. Also *bush-hog.*

bush-ranging (bůsh'rān″jing), *n.* The lawless life of a bush-ranger.

bush-rider (bůsh'rī″dėr), *n.* One employed in riding over a bush farm, or station, rounding up the cattle, inspecting the fences, etc. [Australia.]

bush-rope (bůsh'rōp), *n.* A name given to various species of woody vines (bejuco, etc.), the stems of which (lianas) are used as a substitute for ropes, and in the place of nails for securing to one another the timbers of a house. [West Indies and British Guiana.]

bush-scrubber (bůsh'skrub″ėr), *n.* A bumpkin; a boor; a slattern: as, she's a lady! she's no *bush-scrubber.* See *scrubber*[1]. [Bushman's Eng., Australia.]

bush-scythe (bůsh'sīтн), *n.* A scythe having a short, wide, and strong blade for cutting brush and briers.

The primitive reaping knife or hemp cutter, which is something between a corn-cutter and a *bush-scythe.*
Yearbook U. S. Dept. Agr., 1901, p. 547.

bush-tamarind (bůsh'tam″ą-rind), *n.* A tall tree of Guiana, *Machærium Schomburgkii,* which yields a valuable wood. See *itaka-wood* and *Machærium.*

bush-telegraph (bůsh'tel″ę-gráf), *n.* A confederate of the bush-rangers of Australia, who keeps them informed with regard to the movements of the police, etc. [Australia.]

bush-turkey (bůsh'tėr″ki), *n.* A name in Guiana of the larger curassows.

bush-warbler (bůsh'wâr″blėr), *n.* 1. See *warbler.*—2. Any species of *Gerygone,* a genus of small birds generally placed with the flycatchers. They are inhabitants of the Australian region.

bush-water (bůsh'wâ″tėr), *n.* Rain-water which collects in low places in forests. [West Indies.]

bushwhack (bůsh'hwak), *v. i.* 1. To act in the manner of a bushwhacker: (*a*) sojourn in or beat about the bush; (*b*) engage in guerrilla warfare and fire from behind the bushes. —2. To cut bushes with a bushwhacker.—3. To hunt ducks by approaching them in a boat which has a screen around it to conceal the occupants. *Forest and Stream,* Feb. 21, 1903.

bushwoman (bůsh'wům″an), *n.*; pl. *bushwomen* (-wim″en). A woman living in the bush and playing her part in the settlement and development of the country.

bushwood (bůsh'wůd), *n.* See ★*woodland.*

bush-wren (bůsh'ren), *n.* A small passerine bird, *Xenicus longipes,* of New Zealand: so called from its general resemblance to the wren of England.

bushy[2] (bůsh'i), *n.* [*bush* + dim. *-y*[2].] A countryman. [Australia.]

business-wagon (biz'nes-wag″on), *n.* A wagon, with or without an inclosed top, used for carrying merchandise.

busk[3], *v. i.* 3. To cruise as a pirate.—4. To earn a livelihood by going about singing, playing, and selling ballads, or as an acrobat, juggler, etc., in public houses, steamboats, on the street, etc. [Slang, Eng.]

busker (busk'ėr), *n.* [*busk*[3] + *-er*[1].] A strolling singer, player, ballad-seller, or the like. See ★*busk*[3], 4.

The words and tune of which I remember hearing from the lips of a *busker* at Margate.
Referee, June 29, 1884. [*Encyc. Dict.*]

busking (busk'ing), *n.* [*busk*[3] + *-ing*[1].] The practice of going about as an itinerant singer, player, juggler, ballad-seller, or the like, in pursuit of a livelihood. *Mayhew,* London Labour, I. 215. [Slang, Eng.]

Bussira rubber. See ★*rubber*.

bust[1], *v. t.* **2.** To break to the saddle, as an intractable bronco. [Slang, western U. S.]

It is upon the cowboys that the task falls of breaking to the saddle, or *busting*, the almost untractable "broncbos" that are raised both for this purpose and for the open market. *Wide World Mag.*, April, 1903, p. 545.

bustamite (bŏs'tą-mīt), *n.* [Named after its discoverer, *Bustamante*.] A variety of the manganese silicate, rhodonite, peculiar in containing calcium.

bustard-quail (bus'tärd-kwāl), *n.* Any of the small, three-toed quails or hemipods of the family *Turnicidæ*, found in the Old World; in particular, the East Indian *Turnix taigoor*.

buster, *n.* **5.** In Australia, a sudden violent squall from the south.

The cold wind or southerly *buster* which . . . carries a thick cloud of dust . . . across the city.
F. Fowler, in Athenæum, Feb. 21, 1863, p. 264.

6. One who breaks intractable horses to the saddle; a bronco-buster. [Slang, U. S.]

Naturally, on a large ranch which employs many cowboys, there is much rivalry among them as to who is the best rider, or *buster*.
Wide World Mag., April, 1903, p. 545.

bustite (bus'tīt), *n.* [*Bustu*, in India, + *-ite*[2].] See ★*meteorite*.

busy, *a.* **8.** In *decoration*, full of detail; overcrowded; fussy. [Trade cant.]

The decoration, in dealer's language, being too *busy* for broad effects. *Burlington Mag.*, III., p. 86.

busybodied (biz'i-bod″id), *a.* Of the nature of a busybody; meddlesome. *N. E. D.*

butalanine (bū-tal'ą-nin), *n.* [Gr. *βοῦς*, ox, + *-t-* + *-al* + *-ine*[2].] Alpha-aminoisovaleric acid, $(CH_3)_2CHCHNH_2CO_2H$: found in the pancreas of the ox.

butane (bū'tān), *n.* [L. *but(yrum)*, butter, + *-ane*.] In *chem.*, the fourth member of the paraffin series of hydrocarbons, C_4H_{10}. Two isomeric forms are known, normal butane and isobutane; both are at ordinary temperature and pressure gaseous, colorless, almost odorless, very slightly soluble in water, and readily combustible. Normal butane occurs in small quantity in American petroleum, and has been to a limited extent condensed from the most volatile portion, by means of a freezing mixture, as a colorless, very light liquid boiling at 1° C. (or about 34° F.), forming almost the whole of the commercial product *chymogene*.

butcha (bu'chą), *a.* [Hind. *bachā*.] A young one; a boy, babe, bairn, urchin, chit, chicken, sapling, etc. [Anglo-Indian.]

butcher, *n.* **5.** A long drink of beer. *Austral English.* [Slang, South Australia.]

butcher-bird, *n.* **2.** In Australia, a name of birds of the genus *Cracticus*. *Gould*, Birds of Australia.

butene (bū'tēn), *n.* [L. *but(yrum)*, butter, + *-ene*.] The official name of the hydrocarbon C_4H_8. It exists in three isomeric forms. Also called *butylene*.

butenyl (bū'te-nil), *n.* [L. *but(yrum)*, butter, + *-en(e)* + *-yl*.] The radical C_4H_7: as in *butenyl glycerol*, $C_4H_7(OH)_3$.

butic (bū'tik), *a.* [L. *but(yrum)*, butter, + *-ic*.] Derived from butine.—**Butic acid.** Same as ★*tetrolic acid*.

butine (bū'tin), *n.* [G. *butin*, < L. *but(yrum)*, butter, + *-ine*[2].] The official name of the hydrocarbon C_4H_6. Four isomeric forms are possible, and at least three of these are known.

Butomaceæ (bū-tō-mā'sē-ē), *n. pl.* [NL. (S. F. Gray, 1821), < *Butomus* + *-aceæ*.] A family of monocotyledonous plants of the order *Naiadales*, typified by the genus *Butomus*, and characterized by regular, hermaphrodite, 3-merous flowers, usually with a larger number of stamens and carpels and many seeds. They are swamp or aquatic herbs with linear leaves or with a broad blade having a lattice-like nervation. There are 4 genera, 3 of which are monotypic, and 6 species, widely distributed.

Butomaceous (bū-tō-mā'shius), *a.* [< *Butomaceæ* + *-ous*.] Belonging to the plant family *Butomaceæ*.

Butomus (bū'tō-mus), *n.* [NL. (Linnæus, 1753, adopted from Tournefort, 1700), < Gr. *βουτομος*, some aquatic plant, probably the flowering rush.] A genus of plants, type of the family *Butomaceæ*. *B. umbellatus*, the only species, is a hardy perennial aquatic, easily grown on the margins of ponds. It is known as *flowering rush*. See *rush*[1].

butt[2], *n.*, **1.** (*e*) In *archery*, the end of an arrow which is held against the bowstring in shooting: opposed to *point*.—**14.** A shelter or concealment, built of blocks of peat or turf, for the gunner in grouse-driving on English and Scotch moors. Also called a *battery*.

Where possible, the *butts* should always be placed in a hollow of the ground; this not only helps to conceal them from the birds, but also produces higher and prettier shots. . . . He [the sportsman] should not crouch in his *butt* nor seek to conceal himself by stooping, but remain perfectly motionless, until the moment when he throws his gun up to his shoulder to fire.
Encyc. Brit., XXXII. 604.

15. In the tobacco trade, a box 12 inches square, holding from 15 to 50 pounds. *Stand. Dict.*—**16.** *pl.* The ends or 'cuttings' of jute rejected by the manufacturer of cloth or bagging. They are used in making coarse kinds of paper. *Saidler*, Handbook of Indust. Chem. p. 282. **Butt cut.** (*a*) The first log cut above the stump. (*b*) In gathering tan-bark, the section of bark taken from the butt of a tree before felling it for further peeling. **Shift of butts,** in *ship-building*, an arrangement of any extensive surface of plating or planking by which the various butts between plates or planks are distributed over the surface in a regular manner to give the greatest possible strength to the plating as a whole. In iron ship-building, for outside plating, the rule is that butts in adjacent strakes of plating must not be less than two frame-spaces apart and that there must be at least two solid passing-strakes between butts over each other in the same frame-space.

butt[2], *v.* **I.** *trans.* **3.** To challenge to a trial of skill in wood-cutting.

I had an uncle . . . who was a famous chopper. . . . When he was past seventy, he had a man working for him who thought himself pretty smart, and my uncle offered to *butt* him.
E. Ingersoll, Country Cousins, i.

II. *intrans.* **2.** In *lumbering*, to undertake, as a trial of skill, to cut off the butt-end of a prostrate log while an opponent is cutting through the smaller end.

butt-box (but'boks), *n.* The bearing or box at the cross-head end of a connecting-rod.

butted (but'ed), *a.* Furnished with a butt (of some specified kind): as, *butted* with ivory. Used chiefly in combination: as, brass-*butted*.

butter[1], *n.* - **Bambara, bambui,** or **bambuk butter.** Same as *shea-butter*.—**Blue butter.** Same as *mercurial ointment* (which see, under *ointment*).—**Butter bacillus.** See ★*bacillus*.—**Butter substitute** or **surrogate.** Same as *oleomargarin*.—**Cay-cay butter,** the fat obtained from the seeds of *Irvingia Malayana* of Malacca and *I. Oliveri* of Cochin China. It is used in the manufacture of soaps and candles.—**Dika butter,** the fat obtained from the roasted seeds of *Irvingia Gabonensis*, used as food by the natives of tropical West Africa, and in Europe for the manufacture of soaps and pomades. See *dika-bread* and *Irvingia*. **Diseased butter,** in *dairying*, a general though not strictly correct term applied to several kinds of altered, contaminated, infected, or fermented butter, the so-called diseased condition originating in milk or appearing first in the butter itself as a fermentation arising from some bacterial forms added accidentally to the butter through want of cleanliness in its manufacture or care. The following are recognized varieties of contaminated butter: *Bitter butter*, a fermented condition that appears in butter made from bitter milk or fermented milk having a bitter taste. *Blue butter*, butter made from the infected milk called *blue milk* (which see). *Dappled butter*, butter marked by grayish spots originating from the contamination of the milk in the barn. The bacteria causing the abnormal condition of the butter can be removed by heat. It is sometimes called *mottled butter* or *mottles*. *Moldy butter*, butter infected by mold-fungi. *Off-flavor butter*, dry, soft, and unclean butter. *Oily butter*, a condition marked by a disagreeable oily odor and the presence of a white coagulum. *Root-* or *turnip-taste butter*, butter marked by a disagreeable bitter taste suggestive of a raw turnip. It has been commonly supposed to be caused by turnips fed to the cow, but is now known to be of bacterial origin. *Rotten-taste butter*, a fermentation in butter caused, according to Jensen, by the presence of *Bacillus fœtidus lactis*.—**Dutch butter.** Same as *oleomargarin*. *Thorpe*, Dict. Applied Chem., I. 702. [Colloq.]—**Goa butter.** Same as *cocum-butter*.—**Illipé butter.** Same as *shea-butter*.—**Kafir butter,** a solid fat obtained from the seeds of *Combretum butyrosum* by the natives of southeastern Africa.—**Lard butter,** artificial or imitation butter the basis of which has been obtained from lard; butterin.—**Laurel butter.** Same as *bay-oil*.—**Mineral butter,** in early *chem.*, a name given to certain soft, semi-solid metallic chlorids: as *butter of antimony* (antimonious chlorid), etc.—**Nungu butter.** Same as *shea-butter*.—**Print-butter,** in *dairying*, butter pressed in a mold to give it a convenient shape and weight for sale and transportation: so named because the mold prints the maker's name or trade-mark on the butter. The opposite of *tub-butter*, or butter packed in bulk in tubs.—**Process butter,** an inferior imitation or adulterated butter. Also called *renovated butter*.—**Renovated butter.** Same as *process* ★*butter*. **Tub-butter.** See *print*-★*butter*.—**Whey butter,** in *dairying*, an inferior butter made from the fat in whey: sometimes used as a dressing in the manufacture of cheese and called *cheese-grease*. *Yearbook U. S. Dept. Agr.*, 1897, p. 328.

butter[1], *v. i.* **2.** In *cricket*, to fail to make a simple and easy catch; to muff. [Slang.]

butter-bush (but'ėr-bŭsh), *n.* The name in Australia of a small tree, *Pittosporum phylliræoides*, bearing bitter, non-poisonous berries, which were pounded into flour by the aborigines for use as food. It yields a very hard, close-grained, light-colored wood, useful for turnery. The leaves furnish an excellent fodder, and cattle are so fond of it that the trees are in danger of extinction.

butter-carrier (but'ėr-kar″i-ėr), *n.* A refrigerator-box or -case for transporting print-butter in ice without bringing the ice into contact with it.

butter-cloth (but'ėr-klôth), *n.* A thin, loosely woven cloth, like cheese-cloth, but with a slightly finer mesh.

Butter-cloth or *cheese-cloth* is almost universally used at present for a wound dressing. *Buck*, Med. Handbook, I. 568.

butter-cross (but'ėr-krôs), *n.* A market-cross near which butter is sold. [Eng.] *N. E. D.*

buttercup, *n.* **2.** A small, square sugar-plum, colored in a variety of tints, and somewhat creamy inside. **Acrid buttercup.** Same as *tall buttercup*. **Bulbous buttercup,** *Ranunculus bulbosus*, a species with the stem arising from a bulbous-thickened base, native in Europe and now common in fields, etc., in the eastern United States.—**Buttercup oil-beetle.** See ★*oil-beetle*. **Creeping buttercup,** *Ranunculus repens*, in England a bad weed creeping by runners, introduced in the eastern United States.—**Meadow buttercup.** Same as *tall buttercup*. **Swamp-** or **marsh-buttercup.** (*a*) See *marsh-buttercup*. (*b*) *Ranunculus septentrionalis*, a vigorous species growing on wet ground in the eastern half of the United States, with the later branches prostrate and rooting.

butter-daisy (but'ėr-dā″zi), *n.* See ★*daisy*.

butter-dish (but'ėr-dish), *n.* **1.** A small plate or dish, often with a cover and strainer, for holding and serving butter; also an individual plate for butter.—**2.** In *dairying*, a thin wooden dish or platter for packing or delivering tub- or print-butter.

butter-drier (but'ėr-drī″ėr), *n.* In *dairying*, a centrifugal drier used to extract the water from newly made butter.

butter-extractor (but'ėr-eks-trak″tor), *n.* A combined milk-separator and churn for making butter directly from fresh milk; a butter-making machine.

butter-fat (but'ėr-fat), *n.* The fat which enters the composition of butter: essentially a mixture of 68 per cent. of palmitin and 30 per cent of olein.

butterfly, *n.* **5.** A local name for a mussel, *Plagiola securis*, found in the Mississippi river: so called from the shape of the valves. The shell is used in the pearl-button industry.—**American copper butterfly,** an American lycænid butterfly, *Heodes hypophlæas*, common in the eastern United States, where its larva feeds on sorrel and clover.—**Antiopa butterfly,** a common European and North American nymphalid butterfly, *Euvanessa antiopa*, also called *mourning-cloak* from its somber colors. The wings are purplish brown with a yellow outer margin. The larvæ live gregariously on the willow, elm, poplar, and hackberry. **Argus butterfly.** See ★*argus-butterfly*.—**Atalanta butterfly,** a nymphalid butterfly, *Vanessa atalanta*, also known as the *red admiral*, which occurs in Europe and the United States.—**Brush-footed butterfly,** any one of the butterflies in which the front legs are imperfect, including those of the families *Agapetidæ*, *Heliconiidæ*, *Nymphalidæ*, and *Lymnadidæ*.—**Butterfly lupus.** See ★*lupus*.—**Clicking butterfly,** any butterfly of the South American nymphalid genus *Ageronia*. These butterflies make a clicking noise when in flight or by moving the wings when at rest, probably by means of two hooks at the base of the fore wings and two other hooks on the thorax.—**Cosmopolitan butterfly,** a nymphalid butterfly, *Vanessa cardui*, of general distribution, whose larvæ feed on thistles and other *Compositæ*.—**Cresphontes butterfly,** a large black-and-yellow swallow-tailed butterfly, *Papilio cresphontes*, extending up the Atlantic coast of the United States from Florida to New England. Its larvæ feed on the leaves of orange- and lemon-trees, prickly-ash, Lombardy poplar, and other trees.—**Dead-leaf butterfly,** any one of the Oriental nymphalid butterflies of the genus *Kallima*. The under sides of the wings are so colored and marked that the butterflies when at rest almost precisely resemble dead leaves.—**Gossamer-winged butterfly,** any butterfly of the family *Lycænidæ* (which see).—**Harris's butterfly,** an American nymphalid butterfly, *Cinclidia harrisii*, resembling the species of *Phyciodes*. It occurs in the northeastern United States, and its larvæ feed on asters.—**Little sulphur butterfly,** an American pierid butterfly, *Eurema euterpe*, of wide distribution, and feeding in the larva stage on *Cassia* and other leguminous plants.—**Milkweed butterfly.** See *archippus*.—**Monarch butterfly,** a large red cosmopolitan lymnadid butterfly, *Anosia plexippus*, whose larvæ feed on milkweed. It is especially common all through the United States and Canada, but hibernates only in the Southern States, migrating northward in the spring and early summer, and returning southward in the autumn. **Roadside butterfly,** an American pierid butterfly, *Eurymus philodice*, yellow in color with black-margined wings, common on roadsides from Canada to South Carolina and west to the Rocky Mountains. Its larvæ feed on clover, vetch, lupine, and similar plants. **Southern dog-face butterfly,** an American pierid butterfly, *Zerene cæsonia*, of wide though principally southern distribution, yellow in color, bordered with black. Its larvæ feed on clover and false indigo.—**White Mountain butterfly,** an American agapetid butterfly, *Œneis norna*, of Arctic distribution and occurring also on the tops of the White Mountains of New Hampshire and among the Rocky Mountains in Colorado. Its larvæ feed on *Carex vulgaris*.—**Wood-white butterfly.** See the extract.

Again, a contributor to the Speaker recently pointed out the resemblance of the resting "*wood white*" *butterfly* (*Leucophasia sinapis*) to the flower buds of the corn wheat—a plant invariably abundant in the woods frequented by this dainty insect.
Sci. Amer. Sup., Apr. 29, 1905, p. 24520.

butterfly-conch (but'ėr-flī-kongk), *n.* A marine univalve mollusk of Tasmania, *Voluta papillosa.*

butterfly-damper (but'ėr-flī-dam″pėr), *n.* A thin plate of metal which turns on an axis across a pipe so that it controls the amount of the passage left open in the pipe. The pipe may be of various cross-sections, but, if round, the axis of the plate or damper is at the middle of the pipe.

butterfly-dock (but'ėr-flī-dok), *n.* Same as ★*butter-dock* 1.

butterfly-fish, *n.* **3.** The common name of the species of fishes of the family *Chætodontidæ* found in tropical seas, noted for their singular form, bright colors, and great activity. The family comprises 8 or 10 genera and nearly 200 species.

butterfly-lesion (but'ėr-flī-lē″zhon), *n.* A common form of the eruption of lupus erythematosus, in which there is a patch on each side of the nose, joined by a narrow strip across the bridge, suggesting a butterfly in shape.

butterfly-lily (but'ėr-flī-lil″i), *n.* The mariposa-lily; any species of *Calochortus.* The more appropriate name *butterfly-tulip* seems to be gaining favor.

butterfly-lobster (but'ėr-flī-lob″stėr), *n.* A crustacean, *Ibacus peronii,* in which the carapace is broadly extended into wing-like projections. [Tasmania.]

butterfly-nut (but'ėr-flī-nut), *n.* A thumb-nut.

butterfly-tulip (but'ėr-flī-tū″lip), *n.* See ★*butterfly-lily.*

butter-ladle (but'ėr-lā″dl), *n.* A wooden spoon used in handling newly made butter. One type is called a *spoon-ladle,* and another form (used in England), having a perforated bowl, a *butter-scoop.*

Butterman schooner. See ★*schooner.*

butter-oil (but'ėr-oil), *n.* The part of refined cotton-seed oil which is used in making oleomargarin, or butter substitute. *U. S. Dept. Agr., Bulletin* 33, 1896, p. 372.

butter-paddle (but'ėr-pad″l), *n.* Same as ★*butter-spade.*

butter-paper (but'ėr-pā″pėr), *n.* A tough, semitransparent waterproof paper used for wrapping print-butter, cream-cheese, and other materials requiring protection from air, water, or oil.

butter-pear (but'ėr-pār), *n.* Same as ★*aguacate.*

butter-press (but'ėr-pres), *n.* In *candy-making,* a screw or hydraulic press for extracting the essential oil or cacao-butter from ground cacao. A common type is a filter-press.

butter-print, *n.* **2.** The Indian mallow, *Abutilon Abutilon.* The name alludes to the large round seed-capsule, which is neatly marked above with radiating furrows. Also called *stamp-weed.*

butter-salt (but'ėr-sâlt), *n.* Common salt in small crystals, obtained by rapid evaporation of brine at the boiling temperature. On account of its fine texture it is preferred for use in salting butter.

butter-scoop (but'ėr-sköp), *n.* See ★*butter-ladle.*

butter-spade (but'ėr-spād), *n.* A wooden spatula used in cutting butter from a firkin or other vessel. When grooved in parallel lines, butter-spades are used, in pairs, for rolling lumps of butter into balls for the table.

butter-tree, *n.*—**Indian butter-tree,** the fulwa, *Madhuca butyracea.*

butter-worker, *n.,* A creamery apparatus for pressing the buttermilk out of freshly made butter, working in the salt, and bringing the butter to a condition for use or shipment to market. There are several types of such machines, all consisting essentially of one or more plain or fluted rolls that traverse with a rolling motion over or through the butter, which is spread out in a thin cake upon a tray. In small hand-machines the trays are stationary; in power-machines the trays revolve and carry the butter under rolls revolving in a fixed position. In one type of machine the butter is placed in a revolving drum. Butter-workers and churns are sometimes united in one machine. See *churn.*

butter-yellow (but'ėr-yel″ō), *n.* A monoazo coal-tar color produced by combining diazotized aniline with dimethylaniline. It is used for coloring butter, oils, etc.

butt-gage (but'gāj), *n.* A measuring- and marking-tool used, in hanging doors, to mark the positions of the hinges upon the door and upon the door-frame.

butt-hook (but'hůk), *n.* In *lumbering,* the hook by which the cable is attached to the tackle on the logs. [U. S.]

butt-lap (but'lap), *n.* In *ship-building,* a junction of plates or bars at their ends or butts by lapping the end of one over the adjacent end of the other and riveting the lapped parts together.

butt-measurement (but'mezh″ūr-ment), *n.* Measurement from a shoulder or projection; a measurement taken by placing one end of the rule against the projection from which the measurement is taken.

button, *n.,* **4.** (*d*) A finger-knob or key on the concertina and some accordions.—**15.** In *pathol.,* any small, rounded, circumscribed elevation on the cutaneous or mucous surface.

According to Welch and Clement, more characteristic lesions, but less often met in experimental cases, are the so-called *buttons,* viz., certain elevated, circumscribed, round or oval areas of necrotic inflammation of firm consistence, which implicate the mucous and submucous coats, and sometimes all of the coats of the bowel.
Jour. Exper. Med., V. 259.

Amboyna button or **pimple.** An affection of the skin, possibly of syphilitic origin, endemic in the island of Amboyna.—**Button- and buttonhole-marking machine,** in *shoe-manufacturing,* a machine for marking on the edges of a partly made shoe the positions of the buttons to be stitched on and those of the corresponding buttonholes to be cut.—**Button-sewing machine,** a machine having a device for clamping the button to the machine while it is sewed down on the fabric. One type of machine employs the vibrating needle-bar of the ★overseaming machine (which see) and sews two- and four-hole flat buttons and bar-buttons, and fastens and cuts the thread when the work is done. Another type makes a barring-stitch on four-hole and bar-buttons. It is also adapted to sew on buckles, curtain-rings, etc.—**Mescal button.** See ★*mescal.*—**Murphy's button,** an instrument consisting of two button-shaped pieces joined by a screw employed to retain in apposition the two ends of divided intestine in the operation of intestinal anastomosis or that of gastro-enterostomy.—**Naples button,** a bubo of venereal origin.—**To press the button,** to push an external button or knob, and thereby, according to its connections with a prepared system, to close an electric circuit, or to release a spring that operates the shutter of a camera in instantaneous photography; hence, colloquially, to start by a simple act what may be followed by important results.

button, *v. i.* **2.** To bud or form imperfect heads, offsets, rosettes, tubers, or bulbs: for example, the cauliflower buttons when the head sends up imperfect and irregular glomerules, thus destroying the symmetry and solidity of the head.

button-balance (but'n-bal″ans), *n.* A small, very delicate balance used for weighing assay-buttons. *Coal and Metal Miners' Pocketbook.*

button-blanket (but'n-blang″ket), *n.* A blue blanket, generally bordered with red, set with numerous pearl buttons which either edge the blanket or are arranged in patterns. Such blankets are worn by the Indians of British Columbia and Alaska at festivals.

Button-bush dodder. See ★*dodder*[1].

button-cautery (but'n-kâ″tėr-i), *n.* Same as *Corrigan's button* (which see under *button*).

button-eared (but'n-ērd), *a.* Having button-ears, as certain dogs.

button-gage (but'n-gāj), *n.* A slide caliber-rule having two sets of gage-marks, used in precise measurements of button-blanks, -dies, etc.

button-grass (but'n-gras), *n.* A name applied in Tasmania to a sedge, *Gymnoschœnus sphærocephalus,* covering barren, boggy land and bearing a capitate flower-cluster on the end of a slender stalk 4 or 5 feet in length.

buttonhold† (but'n-hōld), *v. t.*; pret. and pp. *buttonheld,* ppr. *buttonholding.* An obsolete form of *buttonhole.*

buttonholder† (but″n-hōl-dėr), *n.* An obsolete form of ★*buttonholer.*

buttonhole, *n.* **3.** In *surg.,* any small straight incision into a cavity or canal. See ★*boutonnière,* 2.—**4.** A buttonhole bouquet. [Eng.]—**Buttonhole stitch,** the stitch used in making buttonholes. The edge of the buttonhole is sewed over and over, leaving a knot on the inside edge with each stitch, to strengthen it and prevent fraying against the button.

buttonhole, *v. t.* **3.** To sew with the stitch used in making buttonholes: used in sewing, lacework, and embroidery.

buttonhole-machine (but'n-hōl-ma-shēn″), *n.* A machine for cutting, sewing, and finishing buttonholes in leather and fabrics. In buttonhole-making the slit in the fabric may be cut with a knife by hand, or by a pivoted knife attached to the machine, or by a knife operated by the machine, and either before or after sewing up the hole. Two types of machine are used. In one the needle, as in an ordinary sewing-machine, remains in a fixed position, and the work, by a suitable mechanism attached to the machine, is fed forward and backward at each stroke of the needle to form the over-seaming-stitch, and is also carried round the ends of the slit to sew up the opposite side. This feed-mechanism is adjustable to all sizes of buttonholes. In the other type the work is held in one position while the sewing is done, and the needle-bar supporting the needle vibrates to and fro in forming the stitch, as in the ★overseaming-machine (which see). With this machine the ends of the buttonhole are reinforced by barring or a band of long stitches.

buttonholer (but'n-hōl-ėr), *n.* **1.** One who makes buttonholes; also, a machine designed to be used in making buttonholes.—**2.** One who buttonholes another.

button-press (but'n-pres), *n.* A machine for making buttons. It is usually an upright press which can be fitted to cut the blanks, impress a design on a blank, or assemble the parts.

button-scar (but'n-skär), *n.* A scar drawn up into a button-shape, used for ornamentation of the body by African negroes and corresponding to the tattoo-marks of people with lighter skin. *Ratzel* (trans.), Hist. of Mankind, II. 394.

button-shell (but'n-shel), *n.* A small marine gastropod of the genus *Rotella,* having a rounded, lenticular polished shell.

button-valve (but'n-valv), *n.* A valve in which the plug has a head or button forged on the end of the stem.

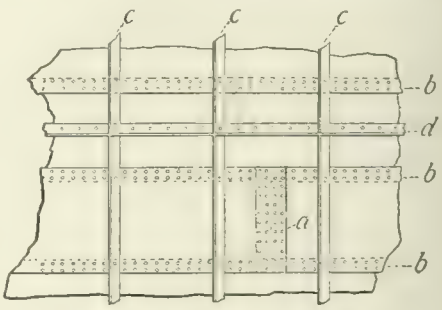
buttress, *n.* **4.** A wall or abutment built along a stream to prevent the logs in a drive from cutting the bank or jamming. [U. S.]—**5.** The angle formed on the plantar surface of the hoof by the junction of the wall with the bar.

buttressed (but'rest), *p. a.* Furnished with a buttress or buttresses: said of an arch, or of a building or part of a building, as a Gothic church.

buttress-thread (but'res-thred), *n.* A thread intended to resist a force in one direction only, and hence having one face at right angles to the axis of the shaft or bolt.

butt-riveting (but'riv″et-ing), *n.* A term used instead of *butt-connected,* when two plates have their edges brought against each other and are each riveted into a covering-plate or -strap: distinguished from ★*lap-riveting.*

butt-strap (but'strap), *n.* The covering-plate which is used for connecting two plates which are to be butt-riveted; in *ship-building,* a piece of plate or bar covering the joint of two plates or bars at their ends where they abut against each other, to give continuity of strength. The strap covers the two adjacent ends and is riveted to each. When plates are thus joined, a strap is sometimes placed on each surface of the plates, and the two straps together are called a *double-butt strap.* Straps are further distinguished according to the number of rows of rivets in them on each side parallel to the butt-joint, as a *single-riveted butt-strap,* a *double-riveted butt-strap,* a *treble-riveted butt-strap,* or a *quadruple-riveted butt-strap.*



Butt-strap and Seams in Outside Plating.
a, double-riveted butt-strap; *b, b, b,* double-riveted seam-laps; *c, c, c,* frames; *d,* longitudinal bar.

butt-strip (but'strip), *n.* Same as ★*butt-strap.*

butty, *n.* **3.** In *archery,* one of a pair of archers who shoot together at a target: as, when the leader has shot his first arrow his *butty* takes his place.

butyroin (bū-tir'ō-in), *n.* [L. *butyrum,* butter, + *-o-* + *-in*[2].] Octanol-4-1-5, $C_3H_7COCHOHC_3H_7$. It is an oil which can be distilled with slight decomposition under a low pressure.

butyrometer (bū-ti-rom'e-tėr), *n.* [Gr. βούτυρον, butter, + μέτρον, measure.] An apparatus for ascertaining the amount of butter-fat in milk.

The *butyrometer* is extremely useful, alike for measuring periodically the fat-producing capacity of individual cows in a herd, for rapidly ascertaining the percentage of fat in milk delivered to factories and paying for such milk on the basis of quality, and for determining the richness in fat of milk supplied for the urban milk trade.
Encyc. Brit., XXVII. 360.

butyrone (bū'ti-rōn), *n.* [L. *butyrum,* butter, + *-one.*] Four-heptanone or dipropylketone, $(C_3H_7)_2CO$. It is prepared by the distillation of calcium butyrate.

butyro-refractometer (bū″ti-rō-rē-frak-tom'e-tėr), *n.* [L. *butyrum,* butter, + *refractometer.*] A refractometer adapted for the measurement

of the refractive power of butter-fat, whereby evidence as to its degree of purity can be obtained.

butyrousness (bū'ti-rus-nes), *n.* Buttery or butyraceous quality. *H. Stubbe.* [Rare.]

Buxaceæ (bux-ā'sē-ē), *n. pl.* [NL. (Dumortier, 1822), ⟨ *Buxus* + *-aceæ.*] A family of dicotyledonous archichlamydeous (apetalous) plants of the order *Sapindales*, the box family, typified by the genus *Buxus*, the box. It is characterized by unisexual regular bracted flowers, the staminate with four or more stamens and sometimes a rudimentary pistil, the fertile with a 2-4-celled ovary and as many simple styles. It embraces 6 genera and 30 species — trees, shrubs, or perennial herbs, chiefly with evergreen leaves, widely scattered over the globe. See *box*[1], *Buxus*, and *Pachysandra*.

buxaceous (buks-ā'shius), *a.* Belonging to the *Buxaceæ*, or box family of plants.

buxinidine (buk-sin'i-din), *n.* [*Buxus* + *-in* + *-id* + *-ine*[2].] An amorphous alkaloid of uncertain composition, found in the green leaves of *Buxus sempervirens*.

buxum, *a.* A simplified spelling of *buxom*.

buyo (bō'yō), *n.* [Tagalog.] In the Philippine Islands the leaves of the betel-pepper (*Piper Betle*), which, together with the nuts of the betel-palm (*Areca Cathecu*) and a pinch of slaked lime, are used by the natives as a masticatory. Also called *itmo*. See *betel* and ★*bonga*.

Buys Ballot's law, system of weather-signals See ★*law*[1], ★*signal*.

buz, *v.* and *n.* A simplified spelling of *buzz*.

buzz[1], *v.* **I.** *intrans.* **3.** To move hurriedly or with fuss; run; fuss about: as, to *buzz* along; to *buzz* about; to *buzz* against a person. [Prov. Eng.] **4.** To pick pockets. [Slang, Eng.] *Hotten.*

II. *trans.* **4.** To throw with violence. [Prov. Eng.)—**5.** To drink (a bottle) till it is empty. [Prov. Eng.]

buzz[1], *n.* **4.** In *angling*, a beetle or its artificial imitation used as bait.

buzz[4] (buz), *n.* [Assumed sing. of **buzzes*, dial. pronunciation of **burses*, double pl. of *bur*[1]. Compare dial. *fur* and *fuzz* for *furze*.] A bur; prickly calyx. [Prov. Eng.]

buzz[5] (buz), *a.* [Also *buz*: a vague use of *buzz*[1], *v.*, in composition, implying something large, as in ★*buzz-wig* (q. v.), but sometimes written detached, as an adjective.] **1.** See ★*buzz-wig*.—**2.** Of an artificial fly, having the hackle wrapped closely under the wings.

A fly is said to be *buz* when the hackle is wrapped on thick and it looks bushy, as we Americans would term it.
T. Norris, Sportsman's Gazetteer, p. 599.

buzz-cove (buz'kōv), *n.* A pickpocket. [Thieves' cant.]

buzzer, *n.* **4.** A pickpocket. [Thieves' cant.]

buzz-fly (buz'flī), *n.* A yellow Australian sarcophagid fly.

buzzing (buz'ing), *n.* **1.** The act or sound of anything that buzzes; humming.—**2.** The picking of pockets. [Slang, Eng.]

Buzzing is the name given to the crime. A gang of thieves surround a man and while one robs him the rest maintain a *buzzing* noise.
Standard (England), May 23, 1904.

buzz-planer (buz'plā″nėr), *n.* A machine for smoothing or planing wood. It consists simply of a table and a revolving head which carries two or four knives. The head or spindle makes about 3,500 revolutions per minute, and the wood is passed over it. One part of the table can be raised or lowered to get the depth of cut desired.

buzz-wig (buz'wig), *n.* [*buzz*[1], used vaguely to imply something large or imposing (cf. *humming*, *whopping*, etc.), + *wig*[3].] **1.** A large wig. [Colloq. or slang.]

The reverend gentleman was equipped in a *buzz wig*.
Scott, Antiquary, xvii.

2. A person wearing a buzz-wig; hence, a bigwig.

Whom the old Spanish *buzzwigs* doated on.
De Quincey, Works, III. 69.

B. V. M. An abbreviation of *Blessed Virgin Mary*.

B. W. G. An abbreviation of *Birmingham wire-gage*.

by[1], **bye**[1], *n.*—**To draw a by,** to go up into the next round without play.

by-act (bī'akt), *n.* An act that is secondary or incidental to a main act.

by-alley (bī'al″i), *n.* An alley at the side or somewhat out of the way.

by-bill (bī'bil), *n.* An incidental bill, or a bill for incidentals; a casual item.

by-blow, *n.* **3†.** A calamity or disaster out of the common.—**4†.** A blow that misses its aim. *Bunyan*, Pilg. Prog., II. 103.

by-ceremony (bī'ser″ē-mō-ni), *n.* A secondary or incidental ceremony; a ceremony that has its origin in an afterthought or is suggested or rendered necessary by some incidental circumstance.

by-chamber (bī'chām″bėr), *n.* A chamber; a secluded chamber.

by-channel (bī'chan″el), *n.* A side-channel or -stream apart from the main channel: as, a network of *by-channels*.

by-chapel (bī'chap″el), *n.* A chapel subordinate to the principal church.

by-day (bī'dā), *n.* A leisure day; an off day.

by-effect (bī'e-fekt″), *n.* A secondary or unintended effect.

byerite (bī'ē-rīt), *n.* [Appar. ⟨ *Byers*, a town in Arapahoe county, Colorado.] A caking bituminous coal resembling albertite and torbanite: first found in Colorado.

by-form (bī'fôrm), *n.* A collateral or minor form.

The English masque is a *by-form* of the English drama which flourished between the years 1597 and 1658, and is absolutely definite in its nature and characteristics.
Science, May 26, 1905, p. 802.

bygon, *a.* and *n.* A simplified spelling of *bygone*.

by-hint (bī'hint), *n.* An indirect hint; a side-hint.

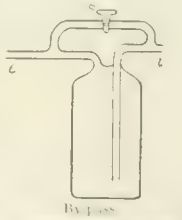
by-letter (bī'let″ėr), *n.* In the early history of the postal service of England, a letter forwarded by a local postmaster 'to any place but London or beyond.'

The *by-letters* occasioned uneasiness to Whitley [deputy postmaster-general 1672–77] because he was entirely in the hands of the postmasters for the accounting of them.
Hyde, The Post in Grant and Farm, p. 315.

by-note (bī'nōt), *n.* In *music*, either a grace-note or an overtone.

byon (bī'on), *n.* A name given by the natives of Upper Burma to a clay which there contains rubies and other gems. The byon is supposed to result from the decomposition of a marble which has been affected by contact-metamorphism.

by-pass, *n.* **2.** In wash-bottles and similar apparatus for the handling of gases, a tube with a stop-cock connecting the ingress and egress tubes, so that by opening the stop-cock the gas may pass without flowing through the apparatus itself.—**3.** Any passage for conducting around an obstruction, such as a closed valve, a part of the fluid or material which goes through the main channel. A by-pass is frequently placed on large steam- or water-valves to relieve the pressure on the valve so that it can be opened and closed easily. Also *bye-pass*.



By-pass

by-pass, *v. t.* **2.** To permit (a liquid) to flow through an auxiliary channel, around a valve or a cylinder or back into a reservoir, instead of pursuing the usual or direct course through the main or normal channel.

by-pit (bī'pit), *n.* In *coal-mining*, a shaft nearer the outcrop than the hoisting-shaft; an air-shaft.

by-production (bī'prō-duk″shon), *n.* Same as *by-product*.

by-regard (bī'rē-gärd″), *n.* A side-look or -glance; a mere glimpse.

Byronian (bī-rō'ni-an), *a.* and *n.* **I.** *a.* Of or pertaining to Byron, the poet; resembling Byron.

II. *n.* An admirer or imitator of Byron: as, the French *Byronians*.

Byronical (bī-ron'i-kal), *a.* Same as *Byronic*.

Byronize (bī'ron-īz), *v.*; pret. and pp. *Byronized*, ppr. *Byronizing*. **I.** *trans.* To invest with the characteristics of Byron.

Let others prepare their parchment-bound portfolios, throw their visages into the *penseroso*, fling their curls back from their brows, unbutton their shirt-collars, and, thus *Byronised*, begin. *Blackwood's Magazine*, LXI. 430.

II. *intrans.* To imitate Byron in person, habits, or style.

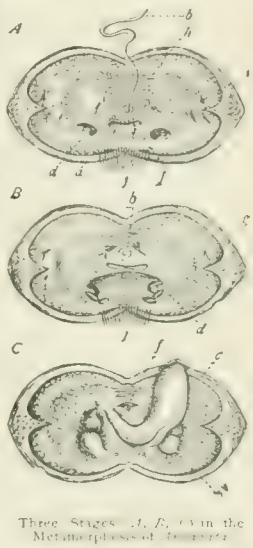
Indeed, under any circumstances, his [Kirke White's] gentleness and devoutness would have *Byronized* but ill.
Edinburgh Review, LXII. 299.

byrsoid (bėr'soid), *n.* [Gr. *βύρσα*, a skin (> L. *bursa*, a skin bag, a purse: see *bursa*, *burse*, *purse*), + *εἶδος*, form.] In *anthrop.*, a cranium the norma verticalis of which shows an elongated, rounded form, narrow in front but with wide forehead, widest near the occiput, similar in form to an elongated purse. *G. Sergi* (trans.), Var. of the Human Species, p. 37.

bysmalith (biz'ma-lith), *n.* [Ignorantly formed as if from **bysma*, deep, depth, or bottom, wrongly assumed as the stem of *abysm*, + Gr. *λίθος*, stone.] In *geol.*, a large and rudely cylindric mass of igneous rock which has been driven upward through overlying strata as a punch goes through a sheet of metal.

byssinosis (bis-i-nō'sis), *n.* [NL., ⟨ *byssinus*, of cotton, + *-osis.*] A form of pneumonoconiosis due to the inhalation of cotton-fibers.

Byssus gland. See ★*gland*. **Byssus silk,** mussel silk. It is made from the filamentous beard of a mussel inhabiting the Mediterranean, particularly near the Dalmatian and Italian coasts. The silk is golden brown in color, very soft and elastic, and is manufactured into small garments, purses, gloves, and fancy goods. —**Provisional byssus,** a thread secreted by a gland in the midventral region of the body of the *Glochidium* larva of fresh-water mussels (*Anodonta*, *Unio*).



Three Stages (A, B, C) in the Metamorphosis of the Mussel

a, enteric canal; *b*, provisional byssus; *c*, foot; *d*, lateral pits; [illegible] shell; [illegible] organs [illegible] from Parker and Haswell's "Zoology," after Kerschelt and Heider.

by-start (bī'stärt), *n.* A deviation from the right direction.

by-station (bī'stā″shon), *n.* A way-station.

by-step (bī'step), *n.* A step to one side or in the wrong direction.

bythium (bith'i-um), *n.* [NL., ⟨ Gr. *βυθός*, depth.] A supposed new element, said to have been obtained from sulphur by electrolysis. The alleged facts in regard to it have been completely disproved.

by-touch (bī'tuch), *n.* An incidental or unintended touch or stroke.

by-work (bī'wėrk), *n.* **1.** Work done at odd times or in addition to one's regular work; an occasional task or performance.

To make Religion the great business and concern of their Lives, and not as most do a *By-work*.
Norris, Chr. Prud., p. 385.

2†. A work that has failed in the doing; a work that has proved a failure.

Aristotle thinketh that the female is a *by-work*.
Crooke, Body of Man, p. 271.

Byzantine Greek, Greek of Byzantium, especially of the later Byzantine empire; practically, medieval Greek.

Byzantinesque (bi-zan-ti-nesk'), *a.* In the Byzantine style.

Byzantinize (bi-zan'tin-īz), *v. t.*; pret. and pp. *Byzantinized*, ppr. *Byzantinizing*. To render Byzantine; impart a Byzantine character to; affect or influence by Byzantinism.

C 3. (*a*) (4) The tone given by such a key, or a tone in unison with such a tone. What is called *middle C* has (at French pitch) about 256 vibrations per second. (5) The staff-degree assigned to such a key or tone, as, with the treble clef, the third space or the first added line below. (6) A note placed on such a degree and indicating such a key or tone. (7) The key-note of the major key of no sharps or flats (C major), or of the minor key of three flats (C minor); also, in medieval music, the final of the Ionian and Hypoionian modes. (8) In the fixed system of solmization, the first tone of the scale, technically called either *ut* or *do*: hence, *C* is called *ut* absolutely by French, Italian, and Spanish musicians. (*c*) In *elect.*: (1) The symbol for electrostatic capacity. (2) An abbreviation of *current*.

4. An abbreviation of *Court* and [*l. c.*] of *centimeter*.—**C clef.** See *clef*.—**White C,** an American nymphalid butterfly, *Polygonia faunus*, common in the northern United States and Canada. Its larvæ feed on the alder, willow, black birch, currant, and gooseberry. Also known as the *green comma*.

C. A. An abbreviation (*a*) of *Court of Appeal*; (*b*) of *Court of Arches*; (*c*) of *Chancery Appeals*; (*d*) of *commercial agent*; (*e*) of *Confederate army*; (*f*) of *county alderman*.

ca. An abbreviation (*b*) of *cases*; (*c*) of *centare*.

caable (kä-ä′bl), *n.* [OF. *caable, chaable*, a ballista, also throwing down, prostration, = Pr. OSp. *calabre* (ML. reflex *cadabula*, **cadabulus, cabulus*), ‹ ML. **catabola* (recorded as *catabolum*, payment), ‹ Gr. καταβολή, a throwing down, paying down, etc.: see *catabolism*.] In medieval (French) use, a ballista or catapult.

caapeba (kä-ä-pā′bä), *n.* [Tupi.] 1. Either of two plants, *Heckeria peltata* and *H. umbellata*, of the pepper family, natives of South America and the Antilles. Their aromatic roots are used medicinally, and their edible berries yield an oil resembling anise-oil.—2. Same as *pareira*.

caatinga (kä-ä-tēn′gä), *n.* [Also *catinga*; ‹ Tupi *caatinga*, 'white leaf,' 'light (that is, open, leafless) forest': *caa*, leaf, plant, tree, etc.] A type of sparse, stunted woodland occupying extensive tracts, alternating with savanna, in the dry region of eastern and central Brazil. The vegetation consists of thorny bushes (chiefly *Mimosaceæ*), with some low trees of several families, including different bottle or barrel-trees (see ★*bottle-tree*, 2) and columnar *Cactaceæ*, with prickly *Bromeliaceæ* (herbaceous). During the dry season all is nearly or quite leafless and as if dead, but with the advent of rain it bursts into leaf and flower. Phytogeographically this belongs to the category of *bush-wood*. Also (by translation), *light forest*.

cab[6] (kab), *n.* [Short for *cabbage*[3], *n.*] A translation (usually literal) of a classical or other work in a foreign language, surreptitiously used by school-boys and students in preparing their lessons or recitations; a crib. [Eng. school slang.]

cab[6] (kab), *v. t.* [Short for *cabbage*[3], *v.*] To appropriate dishonestly and on the sly; crib; purloin. [Eng. school slang.]

caba[2] (kä′bä), *n.* [Philippine Sp.] In the Philippine Islands, a measure of capacity equal to about one and one third United States bushels.

cabalic (ka-bal′ik), *a.* [Also *cabbalic, cabbalick*, ‹ ML. *cabbalicus*, ‹ *cabbala*, cabala.] Same as *cabalistic*.

caballada (kä-bäl-yä′dä), *n.* [Sp., a stud of horses, ‹ *caballo*, a horse.] A reserve stud or 'mob' of horses from which remounts may be drawn by cavalry or any mounted expedition while on the march. [Spanish America.]

caballerote (kä-bäl-ye-rō′tä), *n.* [Cuban use of Sp. *caballerote*, a gentleman, ‹ *caballero*, a gentleman: see *cavalier*.] A Cuban name of a food-fish called the *gray snapper*, *Lutianus griseus*.

cabal-system (ka-bal′sis″tem), *n.* A mnemonic system by which one remembers a vocable whose letters (or all except certain vowels) are the initials of the words to be remembered. The name alludes to the fancy mentioned under *cabal*[1], 4.

Cabbage, gall-weevil, leaf-miner, Pionea, web-worm. See ★*gall-weevil*, etc.

cabbage[1], *n.*—**Kerguelen cabbage,** the cabbage-like *Pringlea antiscorbutica*. See *Pringlea*.—**Native cabbage,** in Australia, the yellow-flowered marsh-cress, *Rorippa palustris*.—**Savoy cabbage.** Same as *savoy*.

cabbage[3], *v. t.* or *i.* 2. To crib or appropriate dishonestly; use surreptitiously; cab. [School-boy slang.]

cabbage[3], *n.* 2. A cab or crib, used surreptitiously by a school-boy in preparing his lessons or writing his exercises.

cabbage-aphis (kab′āj-ā″fis), *n.* Same as *cabbage* ★*plant-louse*.

cabbage-bark (kab′āj-bärk), *n.* See ★*bark*[2].

cabbage-beetle (kab′āj-bē″tl), *n.* Same as *cabbage-flea*.

cabbage-butterfly, *n.*—**Large cabbage-butterfly,** an American pierid butterfly, *Pontia monuste*, white in color, and of tropical and subtropical distribution. Its larvæ feed on cabbage, lettuce, and turnip.

cabbage-curculio (kab′āj-kėr-kū″li-ō), *n.* A curculionid beetle, *Ceuthorhynchus rapæ*, common to Europe and North America. It bores into the crown and roots of young cabbage- and cauliflower-plants, and attacks the stems of kale and mustard.

cabbage-head (kab′āj-hed), *n.* 1. The mass of crowded and incurved leaves which form the edible part of the cabbage.—2. Figuratively, a brainless fellow; a blockhead. *N. E. D.*

cabbage-looper (kab′āj-lö″pėr), *n.* The larva of a noctuid moth, *Autographa brassicæ*, common in the United States where it feeds on cabbage and other cruciferous plants.

cabbage-louse (kab′āj-lous), *n.* Same as *cabbage* ★*plant-louse*.

cabbage-oil, *n.*—**Chinese cabbage-oil,** oil expressed from the seeds of *Brassica sinensis*.

cabbage-patch (kab′āj-pach), *n.* A patch of ground where cabbages are grown.

The Wiggses lived in the *Cabbage Patch*. It was not a real *cabbage patch*, but a queer neighborhood, where ramshackle cottages played hop-scotch over the railroad tracks.

A. C. Hegan, Mrs. Wiggs of the Cabbage Patch, p. 4.

cabbage-red (kab′āj-red), *n.* The coloring-matter of red cabbage. See ★*cauline*.

Cabbage-root maggot. See ★*maggot*.

cabbage-thrips (kab′āj-thrips), *n.* Any one of several species of thrips found on cabbage-leaves: usually, and most abundantly, *Thrips tritici*.

Cabbage-tree hat, a large, low hat made of the leaves of the cabbage-tree. [Australia.]

cabbage-worm, *n.*—**Cross-striped cabbage-worm,** the larva of an American pyralid moth, *Evergestis rimosalis*.—**Southern cabbage-worm,** the larva of an American pierid butterfly, *Pontia protodice*.

cabbagy (kab′āj-i), *a.* [*cabbage*[1] + *-y*[1].] Cabbage-like: as, a *cabbagy* green.

cabbalism, *n.* Another spelling of *cabalism*.

cabber (kab′ėr), *n.* 1. A cab-horse, or a horse well suited for use as a cab-horse.—2. One much given to riding in cabs.

cabbing (kab′ing), *n.* The business of owning, letting, or driving cabs. *N. E. D.*

cab-bit (kab′bit), *n.* A French bit, the cheeks of which are made up of a series of rings solid upon one side.

cabcaban (käb-kä′bän), *n.* [Bisaya *cabcában*.] An epiphytal fern, *Drynaria quercifolia*. See ★*pakpak-lauin*.

cabecera (kä-bā-thā′rä), *n.* [Sp., ‹ *cabeza*, a head, chief.] In the Philippine Islands, a provincial capital.

cabeceria (kä-bā-thā-rē′ä), *n.* [Sp. *cabeceria*, ‹ *cabecera*: see *cabecera*.] In the Philippine Islands, the taxpaying population of a barangay; also, a barangay.

cabestro (ka-bes′trō), *n.* [Sp., a halter, etc., ‹ L. *capistrum*, a halter: see *capistrum*.] A hair lariat.

cabeza (kä-bā′thä), *n.* [Sp., = Pg. *cabeça*, head, chief: see *cabeca*.] In the Philippine Islands, a chief.

cabezon, *n.* 2. *Larimus breviceps*, a sciænoid fish of the West Indies.

cabezote (kä-bā-thō′tä), *n.* [Sp. *cabezota*, a big-headed person, ‹ *cabeza*, head.] The broad-head silverside, *Atherina stipes*. [Cuba.]

cabildo (ka-bil′dō), *n.* [Sp., ‹ L. *capitulum*, chapter: see *chapter*.] The chapter-house of a cathedral or collegiate church. [Southern U. S., etc.]

The cathedral, and standing beside it, like Sancho beside Don Quixote, the squat hall of the *cabildo* with the calabozo in the rear.

G. W. Cable, The Grandissimes, p. 320.

cabin, *n.* 5. In *mining*, a small room partitioned off inside the mine for the use of the mine officials.

Cabinet finish, finish with delicate joinery, as in hard wood finely polished or varnished.—**Cabinet picture,** in *photog.*, a small and generally highly finished picture about 4½ by 6½ inches in size.

cabinet-beetle (kab′i-net-bē″tl), *n.* Any one of several species of injurious beetles of the family *Dermestidæ*, as *Dermestes cadaverinus*, *Anthrenus varius*, or *Anthrenus museorum*, which infest cabinets of natural history.

cabinet-maker, *n.* 2. One who busies himself unauthorizedly with constructing a governmental cabinet; a politician or busybody who speculates on or needlessly troubles himself with the selection of cabinet ministers and the formation of a cabinet.

cabinet-making (kab′i-net-mā″king), *n.* 1. The occupation of a cabinet-maker; the making of fine furniture and the like.—2. The selection of cabinet ministers; the formation of a political cabinet.

cabinet-work (kab′i-net-wėrk), *n.* Fine woodwork used in cabinet-making: thus, veneered doors or polished paneled dados, mantelpieces, and the like are spoken of as fine cabinet-work.

Cabiria (ka-bi′ri-ä), *n. pl.* [NL., also *Cabeiria*, ‹ Gr. Καβείρια, neut. pl., ‹ Κάβειροι, Cabiri.] In *Gr. antiq.*, mysteries connected with the cult of the Cabiri, or Pelasgic gods of the Ægean Sea. Their chief seat was Samothrace.

Cabirion (ka-bir′i-on), *n.* [Gr. Καβείριον, ‹ Κάβειροι, Cabiri.] In *Gr. antiq.*, a temple or shrine sacred to the Cabiri. The most important was that near Thebes in Bœotia, which was excavated in 1888, yielding vases and terra-cottas.

Cabirops (ka-bī′rops), *n.* [NL.; formation not certain; appar. ‹ Gr. Κάβειροι, Cabiri, + ὤψ, eye, face.] The typical genus of the family *Cabiropsidæ*. *Kossmann*, 1884.

Cabiropsidæ (kab-i-rop′si-dē), *n. pl.* [NL., irreg. for **Cabiropidæ*, ‹ *Cabirops* (*Cabirop-*) + *-idæ*.] A family of parasitic isopod crustaceans typified by the genus *Cabirops*.

cable, *n.* 4. A long, narrow strip of land. [Prov. Eng.]—5. A cablegram; a cable message: as, a *cable* announcing their departure has just been received.—6. An abbreviation of *cable-car*: as, to take the *cable* up-town.—**Concentric cable,** in *elect.*, a cable containing two or more conductors, of which the inner one is a wire and the others are concentric tubes surrounding the inner wire and insulated therefrom and from the outer armor.—**Pupin cable,** in *elect.*, a cable the telegraphic or telephonic transmission of which is enhanced by the insertion of inductance at stated intervals.—**Telodynamic cable,** a transmission-rope; an endless rope used as a belt for the transmission of power.—**Ten cables,** an English nautical measure, equal to 1,000 nautical fathoms, or 6,080.3 feet; a nautical mile.—**Three-wire cable,** in *elect.*, a cable consisting of three insulated conductors, for use in three-wire or three-phase circuits.

cable, *v. t.* 4. To make into a cable; specifically, to twist two threads together and then to twist three of these doubled threads into one, as in the manufacture of sewing-thread.

cable-bell (kā′bl-bel), *n.* In *elect.*, a bell-shaped enlargement at the end of the cable armor, filled with an insulating compound.

cable-box (kā′bl-boks), *n.* A box or fixture in which the ends of an electric cable are fastened.

cable-buoy (kā′bl-boi), *n.* A small buoy which rests upon the surface of the water over the anchor, to the ring of which it is secured by a

length of line. The position of the buoy betrays the resting-place of the anchor, over which it is also left as a sentinel in case it becomes necessary to slip the cable.

cabled, *a.* 3. In *her.*, formed of a cable: applied to a cross formed of the two ends of a ship's cable.

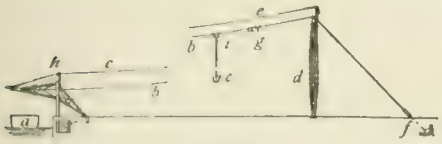
cable-grip (kā'bl-grip), *n.* A clutch or jaw attached to a car for the purpose of gripping the moving cable by which the car is propelled.

cable-hanger (kā'bl-hang″ėr), *n.* A person who unlawfully dredges for oysters. [Colloq., Eng.]

cable-rope (kā'bl-rōp), *n.* A cable; a cable-laid rope.

cable-tank (kā'bl-tangk), *n.* A strong, water-tight tank placed on a cable-ship and provided for holding a coiled section of cable that is ready for laying. *Houston*, Dict. Elect.

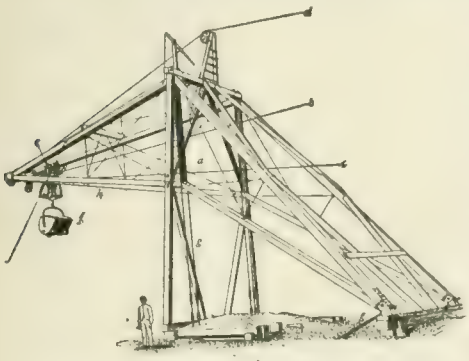
cableway, *n.* In general, any conveying apparatus in which the load is carried in a bucket



Cableway.

a, barge from which coal is hoisted up to cable; *b*, fixed cable on which trolley supporting hoisting bucket travels; *c*, bucket suspended from trolley; *d*, tower supporting cable; *e*, small return cable hauling trolley (drawing-cable not shown); *f*, anchorage; *g*, supports for drawing cable; *h*, combined tower and crane; *i*, trolley.

or carrier traveling with or on a wire cable which is suspended between struts or towers. The most simple type is an endless cable which is supported by means of pulleys or sheaves, placed at the tops of two head towers, and is made to travel continuously in one direction or alternately forward and back between the towers. The material to be transported is placed in a bucket which is suspended under the cable and moves with it from one tower to the other. On reaching the tower the bucket may be removed or unloaded and is then carried by the cable back to the loading-tower. If the cable moves in one direction two or more buckets may be used by transferring the buckets when unloaded to the returning cable. Where the cableway descends a hillside, and the traffic is down grade, the weight of the loaded buckets may be used to operate the plant without the aid of a motor, the movement of the cable being controlled by a brake. In another type, largely used in the construction of docks, breakwaters, canals, subways, and reservoirs, a single cable is suspended between struts or towers and the bucket is suspended from a trolley having flanged wheels which travel on the cable, the trolley and its bucket being hauled in either direction by means of an endless wire rope passing through blocks at the tops of the towers and controlled by a winding engine. Two cables are also used with two haulage ropes, and, to prevent the sagging of the ropes, they are passed through carriers that travel on a separate cable. When the bucket is at the tower the rope-carriers are bunched near the tower, and when the bucket is drawn over, the carriers



Cableway Head-tower.

a, open tower at loading point of cableway; *b*, cable extending to unloading tower (not shown); *c*, haulage-cable; *d*, returning cable; *e*, trolley, with hoist; *f*, bucket with load; *g*, *g*, anchor rods; *h*, overhanging crane which brings bucket over car or boat.

are automatically distributed along the cable sustaining the ropes. The haulage-ropes are also passed through blocks on the trolley and can be used to raise or lower the buckets at any point of the cable. The cable may also be connected by overhead switches to run the buckets from the cable to the tracks of a telpherage system. The towers may be stationary, as in building a dam; or may be mounted upon trucks and moved along parallel tracks, as in digging canals; or one tower may be stationary and the other may travel upon a circular track. Self-filling buckets and automatic dumping-buckets are extensively used in handling sand, coal, etc. Cableways are also used in coaling war-ships at sea, the masts of the collier and the battle-ship acting as the towers of the cableway. The coal, in sacks, is hoisted to the cable, hauled to the ship, and lowered to the deck, while the war-ship tows the collier. Another type employs very long cables supported at intervals upon towers, with the haulage-rope resting on brackets that are placed at short distances apart or running over guide-rollers on the towers. This type is used for transporting large quantities of material over rough and mountainous countries, rivers, and valleys.

cab-master (kab'más″tėr), *n.* One who owns a cab or cabs; one who maintains a public cab-service.

cabochon, *n.* **Double cabochon,** a gem which is domed, that is, convex on the upper and lower sides with a girdle-line separating the two.—**Single cabochon,** a stone which is cut with a flat or slightly rounded back and a convex top.

cabo-negro (kä-bō-nā'grō), *n.* [Sp.: *cabo*, rope (see *cable*) + *negro*, black (see *negro*).] A name, in the Philippines, of *Saguerus pinnatus*, a palm yielding a beautiful black, horsehair-like fiber which is very durable under water and is used for making cables for towing and ropes for the standing rigging of vessels. The name is also applied to the jaggery-palm, *Caryota urens*, which yields the kittul fiber of commerce. See *gomuti*, 2, *ejoo*, *medrinack*, and *kittul*, 2.

caboose, *n.* 3. An inclosed wagon for conveying workmen to mines. [Western U. S.]

Cabotian (ka-bō'ti-ạn), *a.* Of or pertaining to either or both of the navigators and explorers, John and Sebastian Cabot (father and son), who, in the fifteenth century, discovered the mainland of North America.

cab-phaëton (kab'fā″e-tọn), *n.* A combination of the cabriolet and the phaëton in which the driver's seat was placed at the rear. It was one of a class of vehicles originating in a fashion in vogue in the middle of the nineteenth century in accordance with which styles of carriages designed for two wheels were combined and suspended on four wheels, the cabriolet being used for the rear portion and the phaeton for the front of the body.

cab-rank (kab'rank), *n.* A row of cabs on a cab-stand.

cabrilla, *n.* (*d*) *Epinephelus maculosus*, an American grouper. (*e*) In Chile, the rockfish, *Sebastodes oculatus*. —**Cabrilla verde,** the green grouper of the genus *Paralabrax*, a bass-like fish of the Pacific coast. **Spotted cabrilla,** *Paralabrax maculatofasciatus*, a bass-like fish of California.

cabriolet, *n.* 2. In furniture, a light arm-chair. Cabriolets are first mentioned in a French inventory of 1759.

cabriolet-phaëton (kab-ri-ō-lā' fā″e-tọn), *n.* A carriage similar to the ★cab-phaëton (which see), except that the driver's seat was placed at the front.

cab-runner (kab'run″ėr), *n.* A tout who, in expectation of a fee, calls cabs for travelers at a railway-station, steamboat-landing, and the like.

cab-signal (kab'sig″nạl), *n.* In *railroading*, an adaptation of the automatic block-signaling system by which signal-lights are displayed in the cab of an engine. The electric rail-circuit, controlled by a train (as in the block-system), causes the proper signals to be displayed in the cab of the next following engine, the current following the rails and the wheels of the engine into the cab to the signal.

cabureiba (kä-bö-rā-ē-bä'), *n.* [Braz., < Guarani *cabure*, name of a bird, + *iba*, tree, fruit.] A tall leguminous tree, *Myrocarpus fastigiatus*, a native of southern Brazil and northern Argentina. It yields a fine cabinet-wood and a balsam resembling balsam of Peru. Also called *incienso*, the balsam having been used for incense.

cabuya (kä-bö'yä), *n.* [Sp., agave, < W. Ind. *cabuya*, a cord of vegetable fiber, as of the agave, etc.; Galibi *cabuyo*, a species of pine-apple.] 1. A species of agave, *Agave rigida*, which yields sisal hemp.—2. In Central America and the West Indies, the cajun, *Furcræa Cubensis*.

cacafuego (kä-kä-fö-ā'gō), *n.* [Sp., < *cagar*, < L. *cacare* (see *cack*), + *fuego*, fire. This was the name of a Spanish galleon taken by Drake in 1579.] A spit-fire; a bragging, vaporing fellow.

cacahuate (kä-kä-hwä'te), *n.* [Nah. *tlalcacahuatl*, earth-cacao, < *tlalli*, earth, + *cacahuatl*, cacao.] The name in Mexico and the Philippine Islands of the peanut, *Arachis hypogæa*.

cacanthrax (ka-kan'thraks), *n.* [NL., < Gr. κακός, bad, + ἄνθραξ, anthrax.] Malignant pustule.

cacao, *n.*—**Cacao-pod disease.** See ★*disease*.—**Crème de cacao.** See ★*crème*.

cacao-beetle (ka-kā'ō-bē″tl), *n.* A longicorn beetle, *Stirastoma depressum*, which attacks cacao-trees, boring into the trunks and branches. In some parts of the West Indies and Guiana it has been very destructive. Also *cocoa-beetle*.

cacao-disease (ka-kā'ō-di-zēz″), *n.* See ★*disease*.

cacao-powder (ka-kā'ō-pou″dėr), *n.* The product obtained after pressing out a portion of the cacao-butter from roasted and shelled cacao-beans and pulverizing the resultant hard mass.

Cacara (ka-kā'rä), *n.* [NL. (Thouars, 1806, adopted from Rumph, 1747), < Malay *kakara*, name of the edible sim bean of India, *Dolichos Lablab*.] A genus of dicotyledonous plants of the family *Fabaceæ*. See *Pachyrhizus*.

cacesthesia (kak-es-thē'si-ä), *n.* [NL. *cacæsthesia*, < Gr. κακός, bad, + αἴσθησις, feeling.] Malaise.

cachectic, *a.* **II.** *n.* One who suffers from a cachexy.

cachet, *n.* 2. A distinguishing mark or stamp.

All his works have a grand *cachet*; he never did anything mean. *Thackeray*, Paris Sketch Book, p. 61.

3. In *phar.*, a hollow wafer containing medicine in powder form. *Buck*, Med. Handbook, III. 1.

Cachexia thyreopriva. Same as *myxœdema*. **Cachexia virginum,** chlorosis. **Cancerous cachexia,** a morbid condition marked by emaciation, weakness, etc., accompanying the growth of a malignant tumor. **Malarial cachexia,** chronic malaria, marked by enlarged spleen, anemia, sallow complexion, and little or no fever. —**Saturnine cachexia,** chronic lead-poisoning, marked by anemia, the presence of a bluish line at the edge of the gums, obstinate constipation, often wrist-drop or paralysis of other parts, and arteriosclerosis. **Splenic cachexia,** a state of malnutrition accompanying disease of the spleen.—**Strumous cachexia,** scrofula.—**Thyroid cachexia.** Same as *exophthalmic goiter* (which see, under *exophthalmic*).—**Venous cachexia.** Same as *venosity*, 3.—**Verminous cachexia,** constitutional symptoms (anemia, debility, etc.) accompanying the presence of intestinal parasites, especially of *Ankylostoma*.

cachexy, *n.* 2. A perverted or depraved habit of thought or feeling.

cachil (kä-chēl'), *n.* [Philippine Sp., prob. ult. < Malay *kechil*, little, small. Cf. *cachila*, applied by the natives to the Spaniards.] A prince of the reigning house in the Mohammedan parts of western Mindanao. [Philippine Is.]

cachimilla (kach-i-mēl'yä), *n.* [Mex. Sp.] A west American composite shrub, *Pluchea sericea*, called *arrow-wood* by travelers because it is used by the Indians in making arrows. It ranges from western Texas to California and northern Mexico. Also called *arrow-weed*.

cachinnate (kak'i-nāt), *v. i.*; pret. and pp. *cachinnated*, ppr. *cachinnating*. [L. *cachinnare*, laugh: see *cachinnation*.] To indulge in loud, continued laughter; to laugh immoderately. *De Quincey*.

cachinnator (kak'i-nā-tọr), *n.* [NL. **cachinnator*, < L. *cachinnare*, laugh.] One who cachinnates; one who indulges in loud or immoderate laughter.

cachou de Laval (ka-shö'de la-väl'). [F., 'Laval's cachou.'] An artificial dyestuff, first prepared in 1873 by fusing various vegetable and animal products, such as sawdust, bran, blood, and horn, with sodium sulphid. It dyes unmordanted cotton brown in a salt bath, and the color is fixed by an after treatment in a warm solution of some acid, as sulphuric, or a metallic salt, as copper sulphate or potassium bichromate. Various shades of a fast brown are produced, depending in character upon the after treatment. It is of interest as being the first of that important class of dyestuffs known as the sulphid colors.

cachucho (kä-chö'chō), *n.* [Sp. *cachucho*, an earthen pot, a cartridge, etc.] A Cuban name for a food-fish, *Etelis oculatus*, of the family *Lutianidæ*, remarkable for its brilliant red color.

caciqueship (ka-sēk'ship), *n.* The position of a cacique or chief.

cack[1], *v.* **II.**† *trans.* To void, as excrement.

cackle[2] (kak'l), *v. t.* *Naut.*, to wind right and left alternately: as, to *cackle* a cable.

cacochylous (kak-ō-kī'lus), *a.* [Gr. κακός, bad, + χυλός, juice, chyle.] Relating to or affected with cacochylia; indigestible.

cacochymic, *a.* 2. Dyspeptic.

cacochymical† (kak-ō-kim'i-kạl), *a.* Same as *cacochymic*.

cacochymious† (kak-ō-kim'i-us), *a.* Same as *cacochymic*.

cacochymy (ka-kok'i-mi), *n.* Same as *cachochymia*.

cacodemonia (kak″ō-dē-mō'ni-ä), *n.* [NL., *cacodæmonia*, < Gr. κακοδαιμονία, < κακοδαίμων, possessed by an evil spirit: see *cacodemon*.] 1. Possession by an evil spirit: possibly originally an alteration of personality.—2. The delusion that one is possessed by an evil spirit.

cacodemoniac (kak-ō-dē-mō'ni-ak), *n.* One possessed by an evil spirit. *N. E. D.*

cacodemonic (kak-ō-dē-mō'nik), *a.* [Gr. κακοδαιμονικός, bringing evil fortune, < κακοδαίμων, possessed by an evil spirit: see *cacodemon*.] Of or pertaining to a cacodemon.

cacodemonomania (kak-ō-dē-mo-nō-mā'ni-ä), *n.* Same as ★*cacodemomat.*

cacodorous (kak-o'dor-us), *a.* [Gr. *κακόν*, bad, + L. *odor*, odor, + *-ous.*] Ill-smelling; malodorous.

He paid his shilling at the hideous door of the Alhambra, made his way through a *cacodorous* crowd to the supper-room, and ordered some grilled oysters.
Mortimer Collins, Marq. and Merch. xxii.

cacodoxian (kak-ō-dok'si-an), *a.* Same as *cacodoxical.*

cacodyl, *n.*—**Cyanide of cacodyl,** a compound of cyanogen and cacodyl: an extremely poisonous substance, more powerful in its action than prussic acid.

cacodylate (kak-ō-dil'āt), *n.* [*cacodyl(ic)* + *-ate*[1].] A salt of cacodylic (dimethyl arsenic) acid.

Cacodylic acid. This remarkable compound of arsenic is now used, or its salts are used, in medicine, much larger doses than of the ordinary arsenical preparations being prescribed without poisonous effects.

cacoëpistic (kak-ō-e-pis'tik), *a.* [*cacoep-y* + *-ist* + *-ic.*] Characterized by cacoëpy or erroneous pronunciation; mispronounced.

This is a very . . . complex subject which . . . requires entirely new treatment in reference to . . . those abnormal, *cacoepistic*, rare, vulgar, and dialectic forms.
A. J. Ellis, Early Eng. Pron., I. 224.

cacofony, *n.* A simplified spelling of *cacophony.*

cacogalactic (kak-ō-ga-lak'tik), *a.* [*cacogalactia* + *-ic.*] Characterized by cacogalactia or a bad condition of the milk.

cacogenesis, *n.* **2.** The quality, common in mixed breeds, of having a low vitality and of being infertile.

cacografy, *n.* A simplified spelling of *cacography.*

cacographer (ka-kog'ra-fêr), *n.* A bad writer or a bad speller.

cacomagician (kak″ō-mā-jish'an), *n.* [Gr. *κακός*, bad, + E. *magician.*] One who is skilled in the black art; a magician in league with the devil.

The great adversary of Fludd . . who denounced the Rosacrusian to Europe as a *caco-magician.*
I. D'Israeli, Amenities of Lit., II. 281.

cacophonize (ka-kof'ō-nīz), *v. t.*; pret. and pp. *cacophonized*, ppr. *cacophonizing.* [*cacophon-y* + *-ize.*] To render cacophonous or ill-sounding.

cacorhythmic (kak-ō-rith'mik), *a.* [Gr. *κακός*, bad, + *ῥυθμός*, rhythm, *rhythm-y* + *-ic.*] Ill-modulated; characterized by irregularity of rhythm; in bad rhythm: as, a *cacorhythmic* production; a *cacorhythmic* pulse.

cacothanasia (kak″ō-tha-nā'si-ä), *n.* [NL., < Gr. *κακοθανασία*, < *κακός*, bad, + *θάνατος*, death.] A painful or distressing death.

Cacotopia (kak-ō-tō'pi-ä), *n.* [NL., < Gr. *κακός*, bad, + *τόπος*, place; formed in contrast to *Utopia*, prop. 'no place,' but understood and formerly often written as *Eutopia*, 'a place where all is well.'] An imagined place where government is of the worst; the opposite, in the character of its political institutions, of the ideal commonwealth which Sir Thomas More (1516) placed on his imaginary island Utopia ('No-where'). See *Utopia.* [A nonce-word used by Bentham.]

cacotrophia (kak-ō-trof'i-ä), *n.* [NL., < Gr. *κακοτροφία*, < *κακός*, bad, + *τροφή*, nourishment.] Defective nutrition.

cacotrophy (ka-kot'rō-fi), *n.* [NL. *cacotrophia.*] Same as ★*cacotrophia.*

cacotype (kak'ō-tīp), *n.* [Gr. *κακός*, bad, + *τύπος*, type.] A bad type or imperfect reproduction.

How tame my *cacotype* of these words compared with what they were! *C. Reade*, Peg Woffington, p. 54.

Cactales (kak-tā'lēz), *n. pl.* [NL. (Lindley, 1847), < *Cactus* + *-ales.*] An order of dicotyledonous plants containing the family *Cactaceæ* only.

cactoid (kak'toid), *a.* [*cactus* + *-oid.*] Having the aspect of a cactaceous plant: said, for example, of fleshy euphorbias. *Hooker and Ball*, Marocco, p. 328.

Cactus ladybird. See ★*ladybird.* **Prickly-pear cactus.** Same as *prickly-pear.* **Russian cactus.** Same as *Russian* ★*thistle.* **Yucca cactus,** the Joshua-tree, *Yucca arborescens.* See *Yucca.*

cacuminal, *a.* **2.** In *anat.*, relating to the cacumen or upper surface of the vermis of the brain.

cacuminous (ka-kū'mi-nus), *a.* [*cacumen* (*-min-*) + *-ous.*] Having a conical or pointed top.

cad[1], *n.* **1.** (*g*) A young fellow of the town or vicinage who hangs about a college or university and does chance services for the collegians. [Eng.]

cad[2] (kad), *n.* [Appar. a capricious use ('native cads') of *cad*[1]. Not a reduction of *cicada* as pronounced si-cad'ä ?.] A name in Queensland for the cicada.

From the trees sounds the shrill chirp of large green cicada (native *cads*, as the bushmen call them).
Australasian, Jan. 11, 1896, quoted by *E. E. Morris*, [Austral English.

Cadaveric or **putrefactive alkaloid.** See ★*alkaloid.*

cadaverin (ka-dav'ėr-in), *n.* [Also *cadaverine*; *cadaver* + *-in*[2].] A ptomaïne first found in decomposing cadavers: a product of bacterial action in most instances, but sometimes formed in the body in the absence of microbes in cases of cystinuria. It is a derivative of lysin, and is known as pentamethylene-diamine ($CH_2(NH_2)(CH_2)_4(NH_2)$).

cadaverize (ka-dav'ėr-īz), *v. t.*; pret. and pp. *cadaverized*, ppr. *cadaverizing.* [*cadaver* + *-ize.*] To make cadaverous or corpse-like.

To effect a temporary suspension of the circulation, and *cadaverise* his countenance.
Fraser's Mag., April, 1841, p. 421.

cad-bit (kad'bit), *n.* Same as *cad-bait.*

cad-bote (kad'bōt), *n.* The caddis-worm. [Prov. Eng.]

cad-catcher (kad'kach-ėr), *n.* A picture intended to 'catch' or attract 'cads' or undiscriminating persons. [Artists' cant.]

caddie[2] (kad'i), *n.* An Australian bushman's name for a slouch hat, usually worn with the brim turned down at the back.

caddie-bag (kad'i-bag), *n.* A bag, about three feet long, usually made of leather or canvas, for carrying golf-clubs.

caddow[2] (kad'ō), *n.* [Also *caddo*, *caddoe*, *cadow*; cf. *caddis*[1].] A woolen garment or covering of a rough or coarse texture.

caddy[4], *n.* **4.** A tin can with a lid, for holding water, etc. [U. S.]—**5.** In the tobacco trade, a box 6 to 8 inches square, holding from 10 to 20 pounds. *Stand. Dict.*

cade[2] (kād), *v. t.*; pret. and pp. *caded*, ppr. *cading.* To put into a cade or keg; pack in a cade: as, to *cade* herring. *Nash.*

cadeau (kä-dō'), *n.*: pl. *cadeaux* (dō '). [F.] A present or gift; a gratuity; a cumshaw.

cadence, *n.* **9.** The modulation or manner of utterance peculiar to a particular locality or language.

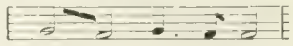
I returned an answer in that language, hoping at least that the *cadence* might be more agreeable to his ears.
Swift, Gulliver, III. ii.

10. In *music*, a trill-like ornament, the reverse of the *battement* (which see).—**Immediate cadence,** in *music*, a cadence that is not prolonged or extended; one in which the dominant or subdominant chord passes at once into that of the tonic.—**Inverted cadence,** in *music*, a cadence in which the penultimate chord is inverted.

cadenced (kā'denst), *p. a.* Measured; rhythmical; regular; expressed or executed with measured regularity: as, a *cadenced* step; *cadenced* sound; "the *cadenced* surges of an unseen ocean," *Lowell.*

cadent, *a.* **II.** *n.* In *old music*, a grace or embellishment consisting of an after-note one degree below the principal note: as,

Written. Played.



cadential (kā-den'shal), *a.* [L. *cadentia*, cadence, + *-ial.*] Relating or pertaining to cadence, or a cadence.

cadet[1], *n.* **5.** A young man who, for the sake of the practical experience to be gained, works with the men on a sheep- or cattle-farm without pay. [Australia.]—**6.** A student in engineering or any of the applied sciences who, in completion of his course (or earlier), seeks practical experience by entering the service of some large establishment where the principles he has been studying are applied, and works there for little or no pay.—**7.** One who prostitutes a woman and lives on her earnings as a prostitute while cohabiting with her; also, one who seduces young women and sells them to houses of prostitution. [New York.]

The most degraded class that ever disgraced the name of man—the creatures who live upon the earnings of individual prostitutes, with whom they cohabit. They are called souteneurs in France, louis in Germany, *cadets* in New York, and by various slang names in Great Britain.
Encyc. Brit., XXXII. 32.

Cadet engineer. See ★*engineer.*

cadette (ka-det'), *n.* [F., fem. of *cadet*, cadet.] A younger daughter or sister; a female cadet. See *cadet*, 2.

cadging (kaj'ing), *n.* The occupation or practices of a cadger.

Cadie gum. See ★*gum*[2].

cadière (kä-dyär'), *n.* [South F. *cadière*, Prov. *cadeira*, < L. *cathedra*, chair: see *chair*, *chaise.*] A name given to a gold currency of Brittany and to a billon coinage struck under Charles VI. of France for Dauphiny, containing a figure seated on a chair. Compare *chaise*, *n.*, 3.

cadillo (kä-dēl'yō), *n.* [Sp. *cadillo*, a name of several plants bearing burs.] A name in Venezuela of the Cæsar-weed, *Urena lobata.* See ★*Cæsar-weed*, ★*guaxima*, and *Urena.*

cadjan (kaj'an), *n.* [Malay and Jav. *kājang.*] **1.** The matted cocoa-palm leaves used in southern India for thatch.—**2.** A section or strip of palm-leaf prepared for use as writing-material. The leaf generally used for this purpose is that of the palmyra-palm or the talipot (*Corypha umbraculifera*) of Ceylon. [Anglo-Indian in both uses.]

Cadjen (kaj'en), *a.* and *n.* [Also *Cajun*; from F. *l'Acadien*, taken as *Cadien* with the article *la*, *le.*] An Acadian; a descendant of the French Acadians. [Louisiana.]

cadju (kaj'ö), *n.* Same as *cashew.*

cadmic (kad'mik), *a.* [*cadmium* + *-ic.*] Pertaining to or containing cadmium: as, *cadmic* chlorid or sulphid.

Cadmium cell, a voltaic cell (invented by Weston) in which the metal cadmium is employed for the positive metal. It is extensively used as a standard of electromotive force.—**Cadmium ocher,** cadmium sulphid occurring as a deposit of earthy texture on the surface of other minerals.

Cadogan tea-pot. See ★*tea-pot.*

Cadorine (ka-dō'rin), *a.* Of or pertaining to Cadore (more fully Pieve-di-Cadore), in Northern Italy, the birthplace of the painter Titian.

Cæcal appendage. Same as *appendix vermiformis.*—**Cæcal pouches,** in *entom.*, the cæca of the mid-intestine.

cæciform (sē'si-fôrm), *a.* [NL. *cæcum* + L. *forma*, form.] Of the nature or having the form of a cæcum: as, *cæciform* appendages.

cæcocolic (sē-kō-kol'ik), *a.* Relating to the cæcum and the colon, the *cæcocolic valve* being the valve between the two.

cæcum, *n.*—**Cæca of the mid-intestine,** in *entom.*, a number of blind diverticula from the anterior end of the stomach, differing in shape and number. In the *Locustidæ* they are two in number and are large and short; in the *Blattidæ* there are 8 and in the *Acridiidæ* 6. Certain *Diptera* have two long, slender cæca, while in the *Coleoptera* there are very numerous minute villi or tubules. They are probably pancreatic in function. *A. S. Packard*, Text-book of Entom., p. 300.—**Hepatic cæcum,** in *embryol.*, the outpouching or evagination from the embryonic intestine that gives rise to the liver.—**Pyloric cæca.** (*a*) and (*b*) See *pyloric.* (*c*) In starfishes, the bifurcated multilobular prolongations of the pyloric region of the stomach, the walls being glandular and secreting a digestive fluid.—**Siphonal cæcum,** in cephalopods, the blind end of the siphuncular tube.—**Spiral cæcum,** in cephalopods, the cæcal appendage, which in some species is arranged in a more or less spiral manner.

Cælum Sculptorium (sē'lum skulp-tō'ri-um). [NL., 'the sculptor's sky.'] The 'Graver,' a constellation introduced by Lacaille between Eridanus and Columba: not to be confounded with the Sculptor.

cænogenesis, cænogenetic, etc. Same as *kenogenesis*, *kenogenetic*, etc.

Cænolestes (sē-nō-les'tēz), *n.* [NL., < Gr. *καινός*, recent, + *λῃστής*, robber.] A genus of small diprotodont marsupials, belonging to the family *Epanorthidæ*, having a shrew-like form and long skull. The genus is remarkable from the fact that two species are found living in the highlands of Ecuador and Colombia, while others are found fossil in the Miocene of Patagonia. The genus was first named *Hyracodon*, but this was originally applied to a genus of ungulates and is hence untenable.

Cænopithecus (sē″nō-pi-thē'kus), *n.* [NL., < Gr. *καινός*, recent, + *πίθηκος*, ape.] An extinct genus of lemurid monkeys from the Upper Eocene beds of Switzerland.

cænostylic (sē-nō-stil'ik), *a.* Relating to that condition of the visceral arches known as *cænostyly.*

cænostyly (sē-nos'ti-li), *n.* [Gr. *καινός*, recent, + *στῦλος*, a pillar.] That state or condition of the cephalic skeleton in which the first and second visceral arches do not bear gills, but are modified to serve in taking food and have one or more of their parts attached to the cranium. It occurs in amphibians, chimæras, and sharks. *W. K. Gregory*, 1904.

cænozoölogy, *n.* Same as ★*cenozoölogy.*

Cæoma (sē-ō'mä), *n.* [NL. (Link, 1809), irreg., < Gr. *καίειν*, burn, + *-oma.* The allusion is to its effect in giving a burnt or scorched appearance to the leaves on which it grows.] A

name formerly applied to certain æcidia of the *Uredinales* which lack a peridium about the sorus.

cæomospore (sē-ō′mō-spōr), *n.* [NL., *Cæoma* + σπορά, seed (spore).] A term sometimes applied to the æcidiospores of the form-genus *Cæoma*. See ★*Cæoma*.

Cæretan (sē-re′tan), *a.* [L. *Cæretanus*, ⟨ *Cærētes* (also *Cærites*), inhabitants of Cære, ⟨ *Cære*, Cære.] Pertaining to Cære, an ancient Etruscan town, now Cerveteri, in Italy: usually applied to a collection of so-called Corinthian vases which were discovered in Cerveteri and are now in the museum of the Louvre.

In the hydriæ of the *Cæretan* fabric we have constant evidence of Egyptian influence.
Cecil Smith, Jour. Hellenic Studies, XIII. 112.

Cæsalpiniaceæ (ses-al-pin″i-ā′sē-ē), *n. pl.* [NL. (Klotzsch and Garcke, 1862), ⟨ *Cæsalpinia* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Rosales*, the senna family, typified by the genus *Cæsalpinia*. It is characterized by clustered, mostly hermaphrodite 5-merous flowers, the petals imbricated in the bud, and alternate stipulate leaves which are sometimes simple and when compound are zygomorphous. There are 107 genera and over 1000 species, trees, shrubs or herbs, chiefly tropical, but including such genera as *Cassia*, *Cercis*, and *Gleditsia* that are found in temperate regions. See *Leguminosæ*.

cæsalpiniaceous (ses″al-pin″i-ā′shius), *a.* Belonging to the plant-family *Cæsalpiniaceæ*.

Cæsar, *n.* **3.** [*l. c.*] A name in the Bahamas of the small grunt or Tom Tate, *Bathystoma rimator*, a food-fish of the family *Hæmulidæ*.

Cæsarist (sē′zär-ist), *n.* An imperialist.

Cæsar's mushroom. See ★*mushroom*.

Cæsar-weed (sē′zär-wēd), *n.* A shrubby tropical weed, *Urena lobata*, introduced into Florida, where it is thus called, and where it is sometimes taken for the ramie-plant. See *Urena* and *Spanish* ★*bur*.

Café au lait (ka-fa′o lā′) [F., coffee with milk], a light yellowish-gray color. **Café frappé.** See ★*frappé*. **Café parfait.** (*a*) After-dinner coffee. (*b*) A form of ice-cream consisting chiefly of a well-beaten mixture of yolks of eggs, sugar syrup, and drained whipped cream, flavored with strong coffee and frozen without stirring.

caffea (ka-fē′ä), *n.* [NL.: see *coffee*, *café*.] Same as *caffein*.

caffeidine (ka-fē′i-din), *n.* [*caffe(a)* + *-id*[1] + *-ine*[2].] A crystalline alkaloid, $C_7H_{12}ON_4$, formed by the action of barium hydroxid on caffein. It melts at 94° C.

caffeol (kaf′ē-ōl), *n.* [*caffe(a)* + *-ol*.] An oil, $C_8H_{10}O_2$, with a pleasant odor like that of coffee, obtained in roasting the green coffee-berries. It boils at 196° C. Later observers have failed to obtain the compound.

caffuric (ka-fū′rik), *a.* Derived from coffee and related to uric acid.—**Caffuric acid,** a crystalline acid, $C_8H_9O_4N_3$, which is formed, together with apocaffein, by the oxidation of caffein. It is easily soluble in water.

cafuso (kä-fō′sō), *n.* [Brazilian.] In Brazil, an Indian and negro half-breed.

cag[2] (kag), *v. t.*; pret. and pp. *cagged*, ppr. *cagging*. [Origin obscure.] To affront; offend. [Prov. Eng.]

cage, *n.* **7.** A drum or cylinder in a cotton-scutching machine, covered with wire netting, against which the cotton is thrown in the form of a sheet, the dust being removed by a suction-fan.—**8.** In *base-ball*, the mask worn by the catcher. **Steel cage.** See ★*steel*[1].

cage-mount (kaj′mount), *n.* In ordnance, a gun-mount for light guns in which the lower fixed part is a stand or pedestal having heavy bars radiating in a conical shape downward to the base and roughly resembling a cage.

cage-stand (kāj′stand), *n.* The lower fixed part of a cage-mount.

cageway (cāj′wa), *n.* **1.** The guides for a mine-cage.—**2.** The part of a mine-shaft in which the cage is hoisted and lowered.

cagework (kāj′wèrk), *n.* **1.** Openwork like that of a cage.—**2.** The carved upper works of a ship's hull, especially on the poop and forecastle. [Obsolete.]

caggy (kag′i), *a.* [Cf. *cagmag*.] Decaying; tainted; unwholesome; loathsome. [Vulgar.]

Mouldy bread, *caggy* mutton.
Marryat, Rattlin the Reefer, xv., *N. E. D.*

cagmag, *n.* **II.** *a.* Unwholesome; decaying; caggy: as, *cagmag* meat; hence, inferior: as, *cagmag* wares. [Vulgar or dialectal.]

cago (kä′gō, Fijian pron. thäng′ō), *n.* [Fijian.] A name in the Fiji Islands of turmeric, *Curcuma longa*. See *Curcuma*, 2, *huldee*, *turmeric*, ★*olena*, and ★*rea*.

cahar (kä′här), *n.* [Jav. and Malayan *kāhar*, ⟨ D. *kar* = E. *car*[1].] In Malayan countries, a one-horse carriage or cart; a one-horse spring-cart for the conveyance of passengers. *Forbes*, Nat. Wand. in East. Arch., 1885, p. 51.

Cahenslyism (ka-hens′li-izm), *n.* A plan, proposed in 1891, and attributed to Peter Paul Cahensly (a member of the German Reichstag and president of the Leo Society for the protection of German immigrants in the United States), to appoint to those Roman Catholic sees and parishes in the United States, where there might be a dominant or large foreign population, bishops and priests of the same nationality, in order to preserve their religious traditions and practices; by extension, the propagation of foreignism among Roman Catholics in the United States.

cahincin (ka-hin′sin), *n.* [*cahinca* + *-in*[2].] A glucoside, $C_{40}H_{64}O_{18}$, found in the root-bark of *Chicocca racemosa*. It has an astringent, bitter taste and acid reaction. Also *caincin*.

cahot (kä-hō′), *n.* [*F. cahot*, a jolt or jerk, also dial. as def.; origin unknown, but prob. interjectional, ⟨ *ca-*, introductory syllable, + *ho*, interjection.] A bank or ridge of snow which has been heaped up across a road by passing sleighs, leaving a corresponding depression behind; hence, a surface-undulation or ridge-like inequality which, with the corresponding depression, is known in the United States as a '*thank-you-ma'am*.' [Canadian French.]

Corresponding undulations sometimes produced by sledge-driving on snow-covered roads are familiar in Canada, where they are called *cahots* (jolts). The author saw these in and near Montreal in the winter 1900-1901. They averaged 13 feet in length from crest to crest, and 8 inches appeared to be a not uncommon amplitude.
Rep. Brit. Ass'n Advancement of Sci., 1902, p. 731.

cahow† (ka-hou′), *n.* [Also *cahowe*; origin unknown.] A local name for a sea-bird, presumably a species of *Puffinus*, formerly abundant on the Bermudas, now supposed to be extinct. By some ornithologists it is considered to be the existing *Puffinus obscurus*.

cahuy (kä-hō′i), *n.* [Tagalog.] A tree; also, wood; fire-wood. [Philippine Is.]

caidos (kä′ē-dōs), *n. pl.* [Sp.] Unpaid or overdue rents or taxes. [Philippine Is.]

cailcedrin (kīl-sed′rin), *n.* [*Cailcedr(a)* + *-in*[2].] A resinous compound present to a minute extent in the bark of the cailcedra.

cailian (kä-i-lē-än′), *n.*; pl. *cailianes* (-ä′näz). [Philippine Sp. *cailián* (pl. *cailianes*), ⟨ Ilocan *caylián*.] Among the Ilocans and Igorrotes of Luzon, a poor man who dwells as a denizen in a commune, without tribal rights, and is in effect a serf or peon.

caillasses (kä-ē-yäs′), *n. pl.* [F., gravels.] In *geol.*, a name given by French geologists to the upper part of the Middle Eocene or Upper Calcaire grossier of the Paris Tertiary basin.

caimito (kī-mē′tō), *n.* [Peruv. *caymita*.] **1.** A tree of the family *Sapotaceæ*, *Pouteria Caimito*, or its fruit, which resembles the marmalade-plum, but is smaller and superior in flavor.—**2.** Sometimes the same as *cainito* (which see) and *star-apple* (see cut).

cainana (kī-nä′nä), *n.* [Given as Braz.] The Brazilian snakeroot, *Chiococca brachiata*, a rubiaceous plant the root of which is used in medicine.

Cainitic (kā-nit′ik), *a.* Of or pertaining to Cain or the Cainites.

cainosite (kī′nō-sīt), *n.* See ★*cenosite*.

cainozoölogy (kī-nō-zō-ol′ō-ji), *n.* See ★*cenozoology*.

caiquejee (kī′ēk-jē), *n.* [Turk. *qāyiqji*, ⟨ *qāyiq*, caique.] One of the oarsmen of a caique.

cairdman (kārd′man), *n.* Same as *caird*.

Caissa (kā-is′ä), *n.* [NL., artificially formed from *chess*, appar. on the model of *chase*[2] = F. *caisse*, with *-issa* conforming to the L. and Gr. fem. suffix *-issa* (E. *-ess*).] The goddess of chess: a modern invention of chess-players.

caitif, *n.* A simplified spelling of *caitiff*.

cajeput, *n.* **2.** The spice-tree of California: so named on account of the properties of its oil. See *spice-tree*.—**Essence of cajeput.** See ★*essence*.

cajeputene (kaj′ē-pū-tēn″), *n.* Same as *cajuputene*.

cajeputol (kaj′ē-pū-tōl″), *n.* [*cajeput* + *-ol*.] Same as ★*cineol*.

caji (kä-hē′), *n.* [Cuban, of native origin.] A Cuban name of the snapper, *Lutianus apodus*, called the *schoolmaster*.

cajon, *n.* **2.** In *phys. geog.*, a small basin inclosed on nearly all sides by steep hills or mountains. [Southwestern U. S.]

cajun (kä-hön′), *n.* [Sp. Amer.] A fiber-plant, *Furcræa Cubensis*, of the amaryllis family, a native of tropical America. It yields a strong white fiber used for cordage. Compare ★*cocuiza*.

Cajun, *n.* See ★*Cadjen*.

cajuputol (kaj″jū-pū-tōl′), *n.* [*cajuput* + *-ol*.] Same as ★*cineol*.

cake[1], *n.* **7.** A stupid fellow; a noodle. [Dialectal, Eng.]—**8.** [Figurative extension of def. 2.] A good thing; a dainty or delicacy, as in the phrase 'cakes and ale'.—**Cakes and ale,** dainties; the good things and the enjoyments of life; 'all play and no work or worry.'

Dost thou think, because thou art virtuous, there shall be no more *cakes and ale*?
Shak., Twelfth Night, ii. 3.

Genoa cake. (*a*) A currant-cake with almonds on top for ornament. (*b*) A rich cake glazed and filled with nuts.—**Genoese cake,** a sponge-cake, sometimes baked as a layer-cake, or used as a jelly-roll.—**Kungu cake.** See ★*kungu*.—**Savoy cakes,** lady's-fingers.—**Soul-mass cake**†, a *soul-cake* (which see).—**The Land o' Cakes,** Scotland. *Burns.*—**To take the cake,** to take the prize; carry off the honors: as, for downright impudence he *takes the cake*. See ★*cake-walk*. [Slang.]—**Venetian cake,** a small almond-cake.

cake-house (kāk′hous), *n.* **1**†. A place where cakes are made or sold. *Pepys*, Diary.—**2.** A place where cakes, as of soap, indigo, etc., are stored.

cake-ink (kāk′ingk), *n.* China or India ink, which is made into cakes or slabs.

cake-meal (kāk′mēl), *n.* Same as *cotton-cake*.

cake-mold (kāk′mōld), *n.* A mold in which cakes, as of ink, soap, lac, etc., are formed.

cake-walk (kāk′wâk), *n.* A promenade or march in which a number of couples walk in competition before judges and an audience, the most graceful, eccentric, or fantastic performers receiving cakes as prizes. It originated among the negroes of the southern United States.

Caking-coal. See ★*coal*.

caky (kā-ki), *a.* [*cake* + *y*[1].] Cake-like; of the nature of or in the form of a cake.

cal. An abbreviation (*a*) of *calory*; (*b*) of *calcium*; (*c*) of *calender*; (*d*) of *calomel*.

calabacilla, *n.* See *calabazilla*.

Calabar swelling. See ★*swelling*.

calabash, *n.* **5.** The head, with an implication of emptiness. [Slang, U. S.]

calabazita (kal-a-bä-zē′tä), *n.* [Mex. Sp. (?), either a parallel form (dim. *-ita*) or a mistake for *calabazilla*.] Same as *calabazilla*.

calabozo (kä-lä-bō′thō), *n.* [Sp.] The Spanish form of *calaboose*.

calabrasella, *n.* The Spanish pack is used, which has no 8's, 9's, or 10's. The cards rank 3, 2, A, K, Q, J, 7, 6, 5, 4. Twelve cards are given to each player, 4 at a time, and 4 are left on the table. There are 35 points to play for, the lower score being deducted from the higher on each hand. There are no trumps. The 6 highest cards in each suit count 1 each, except the ace, which counts 3, and the last trick counts 3, all counts being to those who win the tricks with counting cards in them. Each player in turn declares to play or pass. If he plays he may ask for the 3 of any suit in exchange for one of his own cards. If the 3 asked for is in the stock, the player loses his ask. After asking he may discard from 1 to 4 cards. He then turns the stock face up and takes from it as many as he has discarded. Those left in the stock and the discards go to the winner of the last trick. The eldest hand always leads. If the bidder fails to reach 18 he loses to both adversaries; if he passes 18 he wins from both.

calafate (kä-lä-fä′te), *n.* [Cuban Sp. (also ★*galafate*, q. v.), thief, rogue, lit. 'calker.'] A Cuban name of the black oldwife, *Melichthys piceus*, a fish of the family *Balistidæ*.

calalu (kä-lä-lō′), *n.* [Also *calalue*, *calaloo*, *calaloe*, *caleloe* ⟨ Cuban Sp. *calalú*.] A West Indian name for various plants, both wild and cultivated, which are used as pot-herbs and culinary vegetables. **Branched calalu,** *Solanum nigrum*. **Prickly calalu,** *Amaranthus spinosus*. **Spanish calalu,** *Phytolacca octandra*.

calamansanay (kä-lä-män-sä′nī), *n.* [Also *kalamansanay*; ⟨ Tagalog *calamansanay*.] A timber-tree of the Philippine Islands.

Calamariaceæ (kal″a-mā-ri-ā′sē-ē), *n. pl.* [NL. (Potonié, 1899), ⟨ ★*Calamaria*, a nominal genus included in *Calamites*, fem. of *Calamarius*, pertaining to a reed (see *calamary*), + *-aceæ*.] A family of Paleozoic plants, the probable ancestors of the modern *Equisetaceæ*, but attaining greater dimensions and often exhibiting an exogenous structure. They are found in great abundance in the coal-measures of all countries, but range from the Devonian to the Permian. A large number of gen-

era are recognized, most of which were formerly included in the group called *Calamites* (which see), but *Annularia* has always been regarded as distinct. See ★*Annularia* and *Asterophyllites*.

calamariaceous (kal″ạ-mā-ri-ā′shius), *a.* Belonging or relating to the *Calamariaceæ*.

Calamariales (kal″ạ-mā-ri-ā′lēz), *n. pl.* [NL. (Potonie, 1900), ⟨ *Calamaria* (see *Calamariaceæ*) + *-ales*.] An order of pteridophytic fossil plants of the class *Equisetineæ*, coördinate with the order *Equisetales*, of which they are the probable ancestors. They are characterized by having their reproduction take place by means of microspores and macrospores, by their superposed leaves, and frequently by an exogenous structure. The order contains the two families *Calamariaceæ* and *Protocalamariaceæ*.

calamarian[2] (kal-ạ-mā′ri-ạn), *a.* [NL. **Calamaria* + *-an*.] Same as ★*calamariaceous*.

calamay (kä-lä-mī′), *n.* [Tagalog.] A dish, made of cocoanut flour or rice, used as a dessert by natives of the Philippine Islands.

calameon (ka-lā′mē-ọn), *n.* [*calamus* + *-eon*, a mere ending.] A neutral crystalline compound, $C_{15}H_{26}O_2$, obtained from the high-boiling fractions of calamus-oil. It melts at 168° C.

calamiform (kạ-lam′i-fôrm), *a.* [L. *calamus*, reed, pen, + *forma*, form.] Having the form of a reed or feather.

Calamin brass. See ★*brass*1.—**Electric calamin**, a name sometimes used to distinguish zinc hydrogen silicate from zinc carbonate as naturally occurring minerals, or ores of zinc. The silicate becomes electric on being heated.

calamin (kal′ạ-min), *v. t.* [*calamin*, *n.*] To wash or coat (pottery) with calamin.

calamine[2] (kal′ạ-min), *n.* [*calamus* + *-ine*2.] An alkaloid contained in the rhizome of sweet-flag, *Acorus Calamus*, and found to be identical with choline.

calaminthone (kal-ạ-min′thōn), *n.* [*Calamintha* + *-one*.] A ketone, $C_{10}H_{16}O$, obtained from the volatile oil of *Clinopodium Nepeta* or marjolaine, which is found in France. It is a colorless oil which boils at 209° C.

calamitean (kal-ạ-mī′tē-ạn), *a.* [*Calamites* + *-ean*.] Belonging or relating to *Calamites* or to the *Calamariaceæ*.

Thus such transitions are well known, though of a relatively simplified form, in the structure of the *calamitean* stem. *Amer. Nat.*, April, 1904, p. 250.

calamographer (kal″ạ-mog′rạ-fẽr), *n.* [Gr. **καλαμογράφος*, implied in *καλαμογραφία*, writing with a reed, ⟨ *κάλαμος*, reed, + *γράφειν*, write.] One who writes with a reed. *G. Smith.*

Calamospermæ (kal″ạ-mọ-spẽr′mē), *n. pl.* [NL. (Ward, 1904), ⟨ Gr. *κάλαμος*, a reed, + *σπέρμα*, a seed.] A class of fossil plants of the phylum *Pteridospermaphyta*. They have the external aspect of the *Calamariales*, but bear seeds instead of macrospores. The genus *Arthropitys* seems to be an example, as it probably bore the seeds called *Stephanaspermum*.

calamus, *n.* **8.** [*cap.*] A genus of fishes, the porgies, belonging to the family *Sparidæ*. The group is characterized by the great development of the interhemal bone at the base of the anal spines. This is greatly enlarged and quill-shaped, its open end receiving the posterior end of the large air-bladder. To this structure the Spanish name *pez de pluma* (quill-fish) and the name *Calamus* refer. The species are all confined to tropical America and are all esteemed as food.

calan (kä-län′), *n.* [Philippine Sp. *calan*, ⟨ Tagalog *calan*.] In the Philippine Islands, a native brazier, hearth, fireplace, or kitchen fire.

Calandrinia (kal-an-drin′i-ä), *n.* [NL. (Humboldt, Bonpland, and Kunth, 1823), named in honor of J. L. *Calandrini* (1703–1758), a chief magistrate of Geneva.] An untenable name for *Baitaria*, a genus of plants of the family *Portulacaceæ*.

calantas, *n.* See ★*kalantas*.

calapia, *n.* See ★*kalapia*.

calasag (kä-lä′säg), *n.* [Tagalog.] A large shield used by the natives of Nueva Vizcaya and Benguet in Luzon.

calash, *n.* **4.** A primitive one-horse springless cart of the island of Nantucket, Massachusetts, house-chairs being used for seats. It is still used to a limited extent.—**Calash coach**, a coach having a bow top over the rear seat. The doors are in two parts, hinged separately. It can be converted from a closed into an open carriage.

calash (kạ-lash′), *v. t.* [*calash*, *n.*] To furnish with a calash.

Well *callash'd* without, and well bolster'd within.
Irving, Salmagundi, p. 33.

Calathea (kal-ạ-thē′ä), *n.* [NL. (Meyer, 1818), ⟨ Gr. *κάλαθος*, a basket. The Indians of the Essequibo river use the split stems of some of the species for basket-making.] A genus of perennial foliage-plants, of the family *Marantaceæ*, which are commonly cultivated as marantas, from which they differ in having a three-seeded instead of a one-seeded fruit. The genus includes about 60 species, mostly from tropical America, but a few from tropical Africa. The leaves, for which the plants are grown, are marked with shades of green, red, brown, yellow, and white; they are among the handsomest of ornamental stove-plants.

Calathian (kạ-lā′thi-ạn), *a.* [L. *Calathiana* (sc. *viola*) in Pliny, otherwise taken as *Calatiana* and *Calatina*, appar. from a proper name, perhaps identical with **Calatina*, fem. of *Calatinus*, in pl. *Calatini*, ⟨ *Calatia*, a town in Campania.] An epithet (see etym.) in *Calathian violet*, a plant-name in Pliny, which modern writers identify with *Gentiana Pneumonanthe*.

calavance (kal-ạ-vạns′), *n.* [Also *callevance*, *callivancy*, etc., *caravance*, etc., orig. *garvance*, ⟨ Sp. *garbanzo*, chick-pea.] In the West Indies, a name for several species of beans belonging to the genus *Dolichos*, especially *D. sphærospermus*.

When I was in the Navy, haricot beans were in constant use as a substitute for potatoes, and, in Brazil and elsewhere, were called *calavances*.
J. D. Hooker, in Yule and Burnell Gloss.

Calaveras skull. See ★*skull*.

calcaneus (kal-kā′nē-us), *n.* [NL.] Same as *talipes calcaneus*.

calcar[1], *n.* **9.** In *entom.*, one of the spines at the tips of the tibiæ of certain insects, especially the *Hymenoptera*. Also called *spur*.

calcarenite (kal-kar′e-nīt), *n.* [L. *calx* (*calc-*), lime, + *arena*, *harena*, sand, + *-ite*2.] In *petrog.*, a term proposed by A. W. Grabau (1903) for a limestone or dolomite composed of coral- or shell-sand, or of lime-sand derived from the erosion of older limestones. In structure it resembles psammites or silicious sandstones, being generally known by the term *sandstone*.

Calcarine complex, ordinarily synonymous with *hippocampus minor*. G. Elliot Smith applies the term to a triradiate pattern of sulci situated behind the splenium of the corpus callosum; the ventral limb he distinguishes as *calcarine*, the caudal as *retrocalcarine*, and the dorsal as *paracalcarine*.

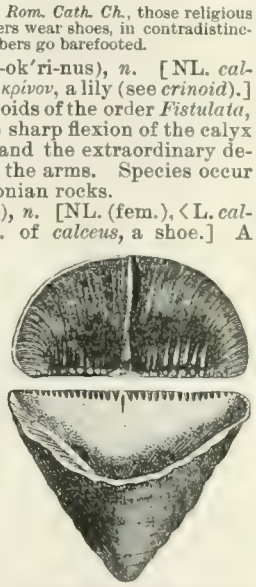
Calcarius (kal-kā′ri-us), *n.* [NL., ⟨ L. *calcar*, spur.] A genus of fringilline birds whose members have the hind claw exceedingly long. The typical species is the Lapland longspur, *Calcarius lapponicus*.

calcation (kal-kā′shọn), *n.* [NL. **calcatio*(*n-*), ⟨ L. *calcare*, trample upon.] The act of trampling under the heel; a treading or stamping. *Blount.*

Calceate fathers, in the *Rom. Cath. Ch.*, those religious fraternities whose members wear shoes, in contradistinction to those whose members go barefooted.

Calceocrinus (kal-sẽ-ok′ri-nus), *n.* [NL. *calceus*, a slipper, + Gr. *κρίνον*, a lily (see *crinoid*).] A genus of fossil crinoids of the order *Fistulata*, characterized by the sharp flexion of the calyx against the column and the extraordinary development of two of the arms. Species occur in Silurian and Devonian rocks.

Calceola (kal-sē′ō-lä), *n.* [NL. (fem.), ⟨ L. *calceolus* (masc.), dim. of *calceus*, a shoe.] A genus of fossil operculate corals growing as simple, slipper-shaped coralla and very abundant in the Middle Devonian rocks of Europe. — **Calceola group**, in *geol.*, a division of the Middle Devonian in the Rhineland, taking its name from the prevalence of the coral *Calceola sandalina*.



Calceola sandalina, Lam. Devonian, Eifel. Natural size. (From Zittel's "Paläontologie.")

calceolus (kal-sē′ō-lus), *n.*; pl. *calceoli* (-lī). [NL. use of L. *calceolus*, dim. of *calceus*, a shoe, a boot: see *calceate*.] One of the sense-organs, possibly olfactory or auditory, on the antennæ of amphipods. *Trans. Linnean Soc. London, Zoöl.*, May, 1897, p. 39.

calcicole, *a.* Same as ★*calcicolous*.

calcicolous (kal-sik′ō-lus), *a.* [L. *calx* (*calc-*), lime, + *-cola*, ⟨ *colere*, dwell.] In *phytogeog.*, inhabiting calcareous soils.

calcicosis (kal-si-kō′sis), *n.* [NL., irreg. ⟨ L. *calx* (*calc-*), limestone, + *-ic-* + *-osis*.] Pneumonoconiosis occurring in stone-cutters.

Calciferous canals, small canals containing lime salts in cartilage undergoing ossification.—**Calciferous sandrock.** See ★*sandrock*.

calciform[2] (kal′si-fôrm), *a.* [L. *calx* (*calc-*), heel, + *forma*, form.] Having a projection like a heel. *Syd. Soc. Lex.*

calcifugal (kal-sif′ū-gạl), *a.* Same as *calcifugous*.

calcifuge (kal′si-fūj), *a.* [L. *calx* (*calc-*), lime, + *fugere*, flee.] In *phytogeog.*, avoiding limestone or lime-containing soils; calciphobous; calcifugous.

Calcigerous cells, osteoblasts in which calcareous deposits occur in the process of ossification.

calcilutite (kal-sil′ū-tīt), *n.* [L. *calx* (*calc-*), lime, + *lutum*, mud, + *-ite*2.] In *petrog.*, a term proposed by A. W. Grabau (1903) for a limestone or dolomite made up of rock-flour, the composition of which is typically non-silicious, though many calcilutites have an intermixture of clayey material. They correspond to the pelites among the silicious rocks. The purest calcilutites have generally a compact structure with a conchoidal fracture.

calcimiric (kal-si-mir′ik), *a.* [*calci*(*c*) + *m*(*agnesium*) + *ir*(*on*) + *-ic*. Cf. ★*miric*.] In *petrog.*, equally calcic and miric, or nearly so; that is, having magnesia and ferrous iron in a ratio to the femic lime between the limits ⟨ $\frac{2}{3}$ ⟩ $\frac{3}{2}$: used in the quantitative system of classifying igneous rocks.

calcination, *n.* **3.** The reduction to ashes of combustible substances by burning; a turning into ashes by combustion. *Bullokar.*—**4.** A calcined state or condition. *Lyell*, Prin. of Geol.—**5.** A product of calcination, a calcinate.

calcinatory, *n.* **II.** *a.* That is or may be used in the process of calcination: as, a *calcinatory* furnace.

calcine, *v. t.* **4.** To consume by burning; burn to ashes.

Calcining the cities of Sodom and Gomorrah condemned them with overthrow.
Farrar, Early Days of Christianity, I. x.

5. To purify or refine by fire.—**6.** To desiccate by subjection to heat so as to destroy contained organisms, etc.: as, to *calcine* air. —**Calcining kiln**, a kiln or furnace in which a metallic ore, as iron ore, is heated, with or without access of air, but without undergoing the reducing or deoxidizing action of the fuel.

calcine (kal′sin), *n.* [*calcine*, *v.*] Fragments of already burnt fire-clay vessels, as the saggars of porcelain manufacture, ground up and used in making new vessels, with addition of fresh fire-clay. Also *chamotte*.—**Calcine plaster.** See ★*plaster*.

Calcinea (kal-sin′ē-ä), *n. pl.* [NL., ⟨ L. *calx* (*calc-*), lime, chalk, + *-in-* + *-ea*.] A subdivision of *Calcarea*, including sponges like the *Clathrinidæ*, having the form reticulate, triradiate spicules equiangular, collar-cells with basal nucleus, and the larva a parenchymula.

calcined (kal′sind), *p. a.* **1.** Reduced by fire to powder or ashes.—**2.** Prepared by calcination: as, *calcined* magnesia; *calcined* ore.—**3.** Refined or purified by subjection to heat or the action of fire: as, *calcined* air.

calciner, *n.*—**Brunton's calciner**, a reverberating furnace for roasting tin ore, in which the bed of fire-brick rests on a cast-iron frame and is turned by power. The bed makes about 1½ revolutions an hour, and the furnace has a capacity of from 2 to 2½ tons of ore in 24 hours. The calciner has been abandoned in many works.

calcino (käl-chē′nō), *n.* [It.] A disease of silkworms, probably synonymous with the French muscardine.

It is a microscopic parasite, composed of white fungoid flocculi, analogous to the Botrytus or parasitic fungus that produces "*calcino*" in the silkworm.
Knowledge, Nov., 1904, p. 261.

calcioferrite (kal″si-ō-fer′īt), *n.* [*calcium* + *ferr*(*ic*) + *-ite*2.] A hydrated phosphate of ferric iron and calcium, occurring in from yellow to green nodular forms.

calciothorite (kal″si-ō-thō′rīt), *n.* [*calcium* + *thorium* + *-ite*2.] A thorium silicate from Norway. It is near thorite, but contains a considerable amount of calcium.

calciovolborthite (kal″si-ō-vol′bôr-thīt), *n.* [*calcium* + *volborthite*.] A vanadate of copper and calcium, occurring in green or yellow tabular crystals and in gray granular masses.

calciphilous (kal-sif′i-lus), *a.* [L. *calx* (*calc-*), lime, + Gr. *φιλεῖν*, love.] Lime-loving: said of plants which grow chiefly or wholly in calcareous soils.

calciphobous (kal-sif′ō-bus), *a.* [L. *calx* (*calc-*), lime, + Gr. *φοβεῖν*, fear.] Averse to lime: said of plants which avoid calcareous soils.

calciphyre (kal′si-fīr), *n.* [L. *calx* (*calc-*), lime, + (*por*)*phyr*(*ites*), porphyry.] A calcareous

rock which has become recrystallized by metamorphism.

calcirudite (kal-sir′u-dīt), *n.* [L. *calx* (*calc-*), lime, + *rudus*, rubble, + *-ite*[2].] In *petrog.*, a term proposed by A. W. Grabau (1903) for a limestone or dolomite composed of broken or worn fragments of coral or shells or of limestone fragments, the interstices filled with lime-sand or mud and with a lime cement. It corresponds to psephite among the silicious rocks. Calcirudites embrace rocks known as coral-, shell-, or limestone-breccia and conglomerate.

calcisponge (kal′si-spunj), *n.* [L. *calx* (*calc-*), lime, + *spongia*, sponge.] A sponge whose skeleton consists of calcareous spicules; one of the *Calcarea*.

calcitestaceous (kal′si-tes-tā′shius), *a.* [L. *calx* (*calc-*), lime, + *testaceus*, of a shell: see *testaceous*.] Having a shell of lime carbonate. *Amer. Geol.*, April, 1903, p. 202.

Calcium acetate, a substance saved in large quantity as a by-product in the manufacture of wood-alcohol, and employed in making acetone, acetic acid, and the acetates of aluminium and iron used as dyers' mordants.—**Calcium bicarbonate,** a substance, $CaH_2(CO_3)_2$. Calcium carbonate dissolves in much larger proportion in water containing carbon-dioxid gas or carbonic acid than in pure water. It is very commonly assumed that in the former case calcium acid-carbonate or bicarbonate is formed. Such a compound, however, cannot be obtained in a separate state; the solution, on being heated or simply exposed at common temperature, gives off carbon-dioxid gas, and normal calcium carbonate separates in solid form. This separation occurs in the softening of some natural waters by boiling, in the production of one kind of scale on the interior surface of steam-boilers, and in the formation of stalactites in limestone caverns. A like behavior is observed in magnesium bicarbonate (used medicinally), manganese bicarbonate, and iron (ferrous) bicarbonate. The last-named occurs in natural chalybeate waters, which cannot long be kept clear, but must be used at the source or soon after removal from it.—**Calcium bisulphite,** a salt of calcium prepared in solution by passing an excess of sulphur-dioxid gas into milk of lime, largely used in making paper-pulp from wood, as a means of preventing acid fermentation in the manufacture of cane-sugar and in brewing.—**Calcium carbide.** This material is produced on a very large scale by applying the intense heat of an electric furnace to a mixture of anthracite or coke with limestone. The action of water on the product causes an abundant evolution of acetylene gas, which is used for illuminating purposes.—**Calcium carbonate,** a substance, often called *carbonate of lime*, both found in nature (see *calcite* and *limestone*) and artificially prepared. It is of great industrial importance, and finds numerous applications, both mechanical and chemical.—**Calcium chlorid,** a waste-product on a large scale of the Solvay process for making carbonate of soda: not to be confounded with chlorid of lime or bleaching-powder. It is used in the scientific laboratory for drying gases, and to some extent industrially to remove moisture from the air in drying fruits, etc.—**Calcium-chlorid tube.** See ★*tube*.—**Calcium cyanamide,** a recent and probably very valuable product of the electric furnace, obtained by the action of atmospheric nitrogen on a mixture of anthracite or coke with lime. The reaction is $CaO + C_2 + N_2 = CO + CaCN_2$. This substance may by simple treatment be made to yield ammonia or alkaline cyanides, or may itself be used as a fertilizer, furnishing nitrogen in available form for growing plants.—**Calcium fluoride,** a compound occurring in nature as the mineral fluor-spar. It is the chief source from which hydrofluoric acid and other fluorin compounds are obtained.—**Calcium hydroxid.** Same as *slaked lime*.—**Calcium hypochlorite.** See *hypochlorite*.—**Calcium permanganate,** a salt used, under special circumstances, in freeing drinking water from unwholesome organic matter.—**Calcium phosphate,** in *chem.*, a salt in which calcium, the metallic basis of lime, partially or wholly replaces the hydrogen of phosphoric acid. All such salts as found in nature and all those usually met with in commerce are derivatives of orthophosphoric acid. The replacement of 1, 2, and 3 atoms of hydrogen gives rise to monocalcic phosphate ($CaH_4(PO_4)_2$), dicalcic phosphate ($CaHPO_4$), and tricalcic or normal calcium phosphate ($Ca_3(PO_4)_2$). The first of these is pretty freely soluble in water; the second and third are practically insoluble. Monocalcic phosphate is prepared upon a very large scale by the action of sulphuric acid in proper quantity upon the normal phosphate of bones, coprolites, "phosphate rock," etc., and in admixture with the calcium sulphate produced at the same time forms the so-called superphosphate of lime so largely used in agriculture.—**Calcium phosphide,** a compound produced by the action at a red heat of phosphorus on lime. On contact with water it evolves phosphureted hydrogen gas which at once takes fire in the air and burns with a bright light. It has been proposed to make use of this fact in rendering visible the position of a life-buoy thrown overboard at sea.—**Calcium plumbate,** a salt, Ca_2PbO_4, which gives off oxygen on being strongly heated, and has been utilized for the preparation of that gas on a large scale by Kassner's process.—**Calcium silicate,** a substance which forms the essential constituent of hydraulic cement after it has become set and hardened. It also constitutes the binding material which unites the grains of quartz-sand in artificial stone made of a mixture of such sand with a strong solution of sodium silicate, molded into shape, and hardened by immersion in a solution of calcium chlorid. Also called *lime silicate*.—**Calcium sulphate.** See *gypsum*.—**Calcium sulphid,** CaS, a substance which becomes luminous after exposure to sunlight. See *Balmain's* ★*paint*.—**Calcium sulphite.** See ★*calcium bisulphite*.—**Calcium tungstate,** a crystalline powder used to form the fluorescent surface of a screen on which images produced by the Röntgen rays are rendered visible.

calc-nodule (kalk′-nod″ūl), *n.* [L. *calx* (*calc-*), lime, + E. *nodule*.] A nodule of rock composed largely of lime carbonate.

calcoglobulin (kal-kō-glob′ū-lin), *n.* [Irreg. < L. *calx* (*calc-*), lime, + E. *globulin*.] A combination of an albumin with calcium salts formed during ossification. *Ramey.*

calcographic (kal-kō-graf′ik), *a.* Same as *calcographical*.

calcosphæritic (kal-kō-sfē-rit′ik), *a.* [L. *calx* (*calc-*), lime, E. + *sphærite* + *-ic*.] Consisting of lime and spherical: used only in the following phrase.—**Calcosphæritic body,** a concretion sometimes found in the mantle or other tissues of a pearl-producing mollusk, formed apparently by free crystallisation, and not, as a true pearl is formed, in a cuticular sac.

"Concretions" are, again, distinguished from pearls as *calcosphæritic bodies* which have not a cuticular origin from an epithelium, but seem to arise by free crystallisation in the mantle or other tissues.
Nature, Jan. 22, 1903, p. 280.

calcrete (kal′krēt or kal-krēt′), *n.* [*cal*(*careous*) + *(con)crete*.] A calcareous mass of considerable size formed on the sea-bottom by calcareous incrusting *Polyzoa* which cement the sand and other loose material together.

In the Gulf of Manaar, calcareous masses ("*calcretes*") of great extent are formed in situ on the sea-bottom by the cementing of sand and other loose material by calcareous incrusting Polyzoa. *Nature*, Oct. 22, 1903, p. 614.

calc-sac (kalk′sak), *n.* [L. *calx* (*calc-*) + E. *sac*.] Same as *dart-sac*. *Proc. Zool. Soc. London*, 1895, p. 247.

calcular (kal′kū-lär), *a.* [*calculus* + *-ar*[3].] In *math.*, of or pertaining to a calculus or algorithm.

calculational (kal-kū-lā′shon-al), *a.* [*calculation* + *-al*[1].] Used in calculations.

Knowing well the numerical value and *calculational* quantity of π. *Piazzi Smyth*, Our Inheritance, I. ii.

calculator, *n.*—**Bar calculator,** any one of a class of computing-machines (rarely performing more than addition and subtraction) in which movable bars bearing inscribed numbers are caused by prescribed movements to actuate dials or figure-wheels in a manner that indicates totals or differences.—**Single-axis calculator,** a sliding-rule mechanism in which the numbered scales are rotated on a single supporting axial shaft or journal, according to a prescribed system. See *sliding rule*.

calculifrage (kal′kū-li-frāj), *n.* [L. *calculus*, a little stone, + *-fragus*, < *frangere*, break.] Same as *lithotrite*.

calculist (kal′kū-list), *n.* [*calculus* + *-ist*.] A computer or calculator.

Mathesis, of which it has been said, many a great *Calculist* has not even a notion.
Carlyle, For. Rev. and Cont. Misc., iv. 138. *N. E. D.*

calculograph (kal′kū-lō-gräf), *n.* [Irreg. < L. *calculare*, calculate, + Gr. γράφειν, write.] An apparatus for recording elapsed time, consisting essentially of a clock combined with two printing-stamps operated by means of levers. To record the number of hours and minutes between the beginning and the end of any piece of work or other operation, a card is inserted in the apparatus and by a movement of the first lever is stamped with the exact time at that instant. On the completion of the work the same card is inserted in the apparatus and the second lever is moved, when the card is stamped with the elapsed time, or the difference in hours and minutes between the two printings on the card. In place of the actual elapsed time, the apparatus may be used to record the money value of the time, expressed in dollars and cents, according to any predetermined ratio.

calculus, *n.*—**Alternating calculus,** a urinary calculus formed of successive layers of differing chemical composition.—**Alvine calculi.** See ★*alvine*.—**Calculus of extension,** a special algebra invented by Grassmann for space-analysis.—**Coral calculus,** a calculus formed in the pelvis of the kidney, with branches extending into the calyces. **Directional calculus.** Same as ★*calculus of extension*.—**Hedonic calculus,** or **calculus of pleasure,** a systematic method of deducing consequences from assumed principles of economics and ethics by exact reasoning, so as to take advantage of mathematical results concerning continuous variations wherever such results are germane. Such a calculus exists, and its results have sometimes been of value; but great caution is needed in interpreting results. Of course, as in the less difficult problems of bridge-building, the steam-engine, and the like, no such calculation can take into account all the features of an actual situation.—**Hemp-seed calculi,** renal calculi of small size and smooth exterior, formed of calcium oxalate.—**Sect calculus,** a geometric algorithm for sects; a graphic algebra for pieces of straight lines.

He constructs a *sect Calculus* in which he shows that the theory of proportion can be founded without the introduction of irrational numbers.
J. W. Withers, Euclid's Parallel Postulate, p. 56.

calcumeter (kal-kū′me-tèr), *n.* [Irreg. < L. *calcu*(*lare*), calculate, + Gr. μέτρον, measure.] An adding-machine which has a perforated plate supporting stationary dials superimposed over movable dials operated with a stylus. *Engin. Mag.*, July, 1904, p. 611.

caldarium (kal-dā′ri-um), *n.*; pl. *caldaria* (-ä). [L., also *calidarium*, < *calidus*, *caldus*, hot: see *calid*.] **1.** The Roman name for a stove or heating apparatus.—**2.** A room in the Roman thermæ, or public baths, in which water was heated to the highest temperature. See *bath*[1], 5.

calderilla (käl-de-rēl′yä), *n.* [Sp., dim., also a holy-water pot, dim. of *caldera*, a kettle.] A Spanish copper coin, the cuarto; also, any copper coin current among Spanish-speaking people.

calderite (kal′de-rit), *n.* A massive iron-garnet from India.

caldron-bottom (kâl′dron-bot′um), *n.* The fossil remains or cast of the trunk of a plant of the genus *Sigillaria* which have remained vertical above or below a coal-bed.

Caldwell's crucible, extractor. See ★*crucible*, ★*extractor*.

calean (kä-lē-än′), *n.* [Also *callean*, *kalean*, etc. Pers. *qaliyán*, also *qaliyūn*, whence E. *calcoon*.] The Persian 'waterpipe' otherwise known as *narghile*.

calendal (kal′end-al), *a.* [*calend* + *-al*[1].] Relating to the calends: as, the most ancient *calendal* system.

Calendar year, the year as given in the accepted or legal calendar, namely, at present, the interval between midnight of December 31–January 1 and the same hour a year later. The beginning of the calendar year has varied widely in different countries and at different times. For many years before 1751 it began in England on March 25. In 1751 a legal enactment placed the beginning at January 1, in accordance with the usage then prevalent in most other Christian nations.—**Greek calendar.** The Greek year was lunar, and consisted of 12 months of 29 or 30 days each—354 days altogether, 11 days short of the solar year. To establish some correspondence between the lunar and solar years, every third, sixth, and eighth year an extra month of 29 or 30 days was inserted, bringing those years to the excessive number of 383 or 384 days. The month itself was divided into three periods of 10 (or 9) days each.—**Mexican calendar,** a combination of an astrological and solar calendar which was in use in Mexico and Yucatan in pre-Columbian times. The days were arranged in groups of 20, each day being designated by the name of an object. There were thirteen numbered periods of this kind, giving an astrological period of 260 days, called *tonalamatl* in Mexico, *ch'ol k'ih* in Guatemala, and *kin katun* by the Maya. Eighteen periods of 20 days each formed a year of 360 days, to which were added 5 days to fill the solar year. While the 360 days were all assigned to certain deities, the 5 remaining days were not so assigned, and were considered unlucky. According to this system the same combination of name and number for the first day of the year occurs every 52 years.—**Perpetual calendar,** a calendar with movable parts, which can be easily adjusted so as to be correct for any date, past, present, or future.

calendarer (kal′en-där-èr), *n.* One who calendars, or who registers or enters in a calendar.

To a *calendarer* the work of writing a Preface must be something like a holiday in Switzerland to an overworked lawyer. *S. R. Gardiner*, Academy, Jan. 29, 1881, p. 74.

calendarian (kal-en-dā′ri-an), *a.* and *n.* [*calendar* + *-ian*.] **I.** *a.* Of or pertaining to the calendar: as, *calendarian* festivals.

II. *n.* A calendar-maker.

calendaric (kal-en-dar′ik), *a.* Same as *calendary*.

One of the most interesting features of aboriginal culture to the scholars of the world is the series of highly developed *calendaric* systems extending from Mexico on the north to Peru on the south.
Smithsonian Rep., 1900, p. 67.

calendarium (kal-en-dā′ri-um), *n.*; pl. *calendaria* (-ä). [L.] **1.** A calendar.—**2.** An apparatus for showing the variations in the temperature of the air; specifically, the large, crude air-thermometer first erected in the open air by Otto von Guericke, about 1655, at Magdeburg.

calender-house (kal′en-dèr-hous), *n.* An establishment where calendering operations are carried on; a calendry.

calender-mill (kal′en-dèr-mil), *n.* A calendering-machine.

calender-roll (kal′en-dèr-rōl), *n.* Same as ★*calender-roller*.

calender-roller (kal′en-dèr-rō″lèr), *n.* A compression-roller used on textile-machinery to smooth and condense the fleece, lap, sliver, or fabric.

calendry (kal′en-dri), *n.*; pl. *calendries* (-driz). An establishment where the process of calendering is carried on: same as *calender*[1], 2.

calends, *n. pl.* **3†.** In some translations of the Old Testament, the Jewish festival of the new moon.

David seide to Jonathan, Loo! *Kalendis* ben tomorwe.
Wyclif, 1 Sam. xx. 5.

4. A calendar or orderly record, primarily of dates, but also sometimes of other facts.

For eternity,
Measured by ages limitless to man,
Has intervals and periods of bliss
And high recurring festivals that stand
On the sidereal *calends* mark'd in light.
Beckerstath, Yesterday, To-day and Forever, xii. 317.

5. An appointed day; a day set for the payment of a debt or the payment of interest due.

While our enemies expect to see the expectation of the Church tired out with dependencies and independencies, how they will compound and in what *calends*.
Milton, Divorce.

calentural (kal'en-tū-ral), *a.* [*calenture* + *-al*[1].] Relating to or of the nature of a calenture. *Carlyle.*

calenture, *n.* 2. Figuratively, fever; burning passion or zeal; heat: as, the "*calenture* of primitive devotion," *Jer. Taylor*; "the *calentures* of baneful lust," *Bp. Ken.*

caleoon (kä-lē-ön'), *n.* [Also *kalioun*; < Pers. *qaliyūn*, var. of *qaliyān.*] Same as ★*calean.*

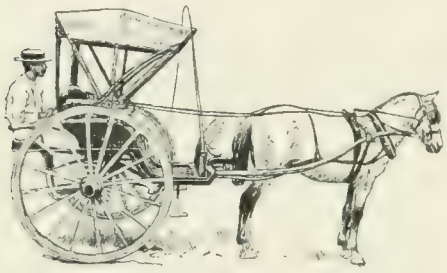
calepine (kal'e-pin), *n.* [Also *calepin, calapyne*; < F. *calepin*, < *Calepin*, < It. *Calepino*, NL. *Calepinus*, < *Calepio*, a town in Italy (see the def.).] 1. A dictionary; one's main dictionary or book of reference: in allusion to a polyglot dictionary originally compiled by Ambrogio Calepino, an Augustine friar. It was first printed in 1502, and constituted, in many enlarged editions, one of the lexicographic standards of the sixteenth century. An edition in one huge volume, published in 1590 and 1605, included eleven languages in its scope, English being the very last, after Hungarian and Polish.

Taxations, monopolies, tolls . . . and such impositions as would trouble many *calepines* to give names unto.
Drummond of Hawthornden, Magic Mirror, p. 174.

2. A memorandum-book; a note-book.

calesa (kä-lā'sä), *n.* [Sp. See *calash.*] A springless one-horse vehicle with a bamboo body, used in the Philippine Islands.

calescent (ka-les'ent), *a.* [L. *calescens*, ppr. of *calescere*, grow warm, inceptive of *calere*, be warm.] Increasing in warmth; growing warm.



Calesin.

calesin (kä-lā-sēn'), *n.* [Sp. dim. of *calesa*; see ★*calesa*.] In the Philippine Islands, a two-wheeled chaise or gig.

calesso (kä-les'ō), *n.* [It.: see *calash.*] A modern Italian two-wheeled gig with a bow top.

calf[1], *n.*—**Golden calf**, the idol made by Aaron which the Israelites worshiped (Exod. xxxii), or either of the two similar idols which Jeroboam placed, one at Bethel, and the other at Dan (1 Ki. xii. 28, 29); figuratively, wealth regarded as an object of undue regard.—**In calf**, bound in calf.—**Ooze calf**, leather which is given a plush-like finish on the flesh side.

calf[2], *n.* 2. The part of a stocking which covers the calf of the leg.

calf-kill, *n.* 2. *Leucothoë Catesbæi*, a shrub of the southern Alleghanies, poisonous to cattle and sheep. Also called ★*dog-hobble* (which see).—3. The velvet-grass, *Holcus lanatus.*

calf-lymph (käf'limf), *n.* The lymph, used in vaccination, obtained from calves.

calhun (kal'hön), *n.* [Aboriginal name in Queensland.] Same as *blue* ★*fig.*

Caliban (kal'i-ban), *n.* [A name either borrowed or formed by Shakspere, prob. originating in *canibal, cannibal.*] In Shakspere's play "The Tempest," a "savage and deformed" slave of Prospero, represented as the offspring of the devil and the witch Sycorax; hence, figuratively, a person of a low, bestial nature.

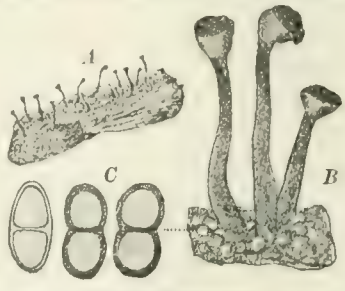
calibrater (kal'i-brā-tèr), *n.* [*calibrate* + *-er*[1].] An instrument for determining the caliber of any tube, specifically, in *pathol.*, the caliber of the urethra or of its orifice.

Calibration of anemometer, calibration shunt. See ★*anemometer*, ★*shunt.*

calibration-chamber (kal-i-brā'shon-chām″-bèr), *n.* A small vacuous bulb at the top of the stem of a normal mercurial thermometer, in which a part of the mercury may be stored temporarily to facilitate calibration.

Caliciales (ka-li-si-ā'lēz), *n. pl.* [NL., < *Calicium* + *-ales.*] An order of discolichens having crustaceous thalli and usually stipitate black apothecia. See ★*Calicium.*

caliciform, calicinal, calicinated, calicine. See *calyciform, calycinal*, ★*calycinated, calycine.*



Calicium hyperellum.

A, a number of plants showing the habit of growing on decaying wood; *B*, three fruiting bodies; *C*, spores. (From Engler and Prantl's "Pflanzenfamilien.")

Calicium (ka-lis'i-um), *n.* [NL. (Persoon), < L. *calix* (*calic-*), a cup.] A genus of crustaceous lichens of the order *Caliciales*, having black stipitate, gregarious apothecia and two-celled dark-colored spores. The species are widely distributed, occurring chiefly on the bark of trees.

calico disease, marble. See *mosaic* ★*disease*, ★*marble.*

calico-aster (kal'i-kō-as″tèr), *n.* See ★*aster*[1].

calico-back, *n.* 2. In *entom.*, the harlequin cabbage-bug (which see, under *cabbage-bug*). *Comstock*, Manual of Insects, p. 145.

calico-ball (kal'i-kō-bâl″), *n.* A ball at which the ladies are gowned in calico.

calico-bird (kal'i-kō-bèrd), *n.* Same as *calico-back.*

calicoblast (kal'i-kō-blâst), *n.* [L. *calix* (*calic-*), cup, + Gr. βλαστός, germ.] One of the cells of ectodermic origin which secrete the calcareous particles of the skeleton in *Anthozoa.*

calico-bug (kal'i-kō-bug), *n.* The harlequin cabbage-bug. See *cabbage-bug.*

calico-flower (kal'i-kō-flou″èr), *n.* Same as *calico-bush.*

calico-jacket (kal'i-kō-jak″et), *n.* Same as *calico-back* and ★*calico-bird.*

calico-salmon (kal'i-kō-sam″un), *n.* A name in Alaska of the dog-salmon, *Oncorhynchus keta*, in allusion to its mottled coloration in the summer, the body being silvery with reddish blotches and obscure blackish cross-bands.

calicular. See *calycular.*

caliculated, *a.* See *calyculated.*

calidarium (kal-i-dā'ri-um), *n.* See ★*caldarium.*

califal, caliphal (kā'lif-al), *a.* [*calif* + *-al.*] Of or pertaining to a calif.

California alder, black walnut, etc. See ★*alder*[1], *black* ★*walnut*, etc.—**Californian centaury.** Same as *canchalagua.*

californite (kal-i-fôr'nīt), *n.* [*California* + *-ite*[2].] A compact, massive variety of vesuvianite, of an olive-green to grass-green color, resembling some kinds of jade. It is found in California and has been used as an ornamental stone.

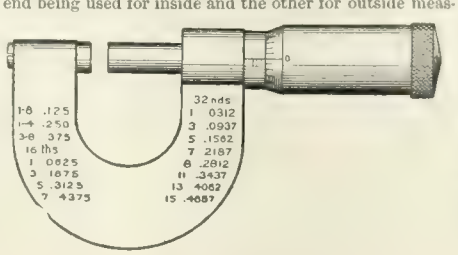
Caligo corneæ, an opacity of the cornea which obscures vision.—**Caligo lentis**, cataract.—**Caligo pupillæ.** Same as *synizesis*, 1.

cali-nut (käl'lē-nut), *n.* A flattened circular seed, about one inch in diameter, obtained from the African plant *Mucuna cylindrosperma.* It is occasionally found as an adulterant of Calabar bean, but contains no physostigmine.

caliologist (kal-i-ol'ō-jist), *n.* [*caliolog-y* + *-ist.*] A student of birds' nests.

caliology, *n.* 2. In *bot.*, the dynamics of the young cell; juvenescence. *J. C. Arthur.*

caliper, *n.* 2. In *forestry*, an instrument for measuring the diameter of trees or logs. It usually consists of a graduated beam to which are attached one fixed and one sliding arm.—**Combination caliper**, a caliper the legs of which are pivoted at or near the center, one end being used for inside and the other for outside measurements. Usually the pivot is midway between the points of the two ends, so that if an outside measurement be made with one end, the other end will be set to an equal inside dimension.—**Compass caliper**, a two-legged jointed tool having one leg curved as in a caliper, the other straight as in a compass, and pointed. It is used for scribing lines from the edge or outline of a piece of work, the curved leg being slid along in contact with the edge, while the point of the straight leg draws a line parallel therewith; a scriber. **Double calipers**, calipers having secondary legs pivoted to the end of the first pair of legs.—**Micrometer caliper**, an instrument for measuring thickness (as of wire or sheet-metal) with precision.—**Spherometer caliper.** See ★*spherometer.*



Micrometer Caliper.

calipeva, callipeva (kal-i-pē'vä), *n.* [Also *calipeever, callipiver*, etc.: appar. from a native name.] A mullet, *Mugil curema*, found in the West Indies.

Calippic cycle. Same as *Calippic period* (which see, under *Calippic.*)

calk[1], **caulk** (kâk), *n.* [*calk*[1], v.] A calking; in a slang use, a surreptitious nap; a snooze.

It was my middle watch and I was signal man at the time, so of course I had no time to take a *caulk* if I was inclined. *Marryat*, Peter Simple, p. 284.

calkage (kâ'käj), *n.* *Naut.*, oakum, cotton fiber, or other material used in calking the seams of a vessel's planking.

calking-boot (kâ'king-böt″), *n.* Same as ★*calking-roll.*

calking-iron, *n.* 2. A broad-bladed, dull-edged chisel used in driving waterproofing material between the cracks of a stone sidewalk.

calking-roll (kâ'king-rōl), *n.* A horse-boot used to prevent a horse from calking himself. It consists of a heavy leather disk which surrounds the horse's ankle and is secured to it by straps and buckles.

calking-strip (kâ'king-strip″), *n.* A strip of malleable sheet-metal interposed between the body of a wrought- or cast-iron structure and a cast-iron piece attached thereto, which can be upset into the joint by hammering on its edge to make a tight joint. Its employment is rendered necessary by the impossibility of calking the cast-iron itself. Calking-strips are used between boiler-shells and the flanges of brittle cast-iron manhole, safety-valve, and stop-valve seatings.

call[1], *n.*—**A close call**, a narrow escape. [Colloq.]—**Adjutant's call**, See ★*adjutant.* **Call ball-and-pocket.** See ★*call game.*—**Call game**, in *billiards*, a game in which the striker must name the balls as well as the mode of play before his shot. In *pool* the ball is now called but not the pocket, unless by agreement in special contests or in the opening shot of some games.

calla, *n.*—**Wild calla**, the spoon-flower, *Peltandra sagittæfolia.*

callais (kal'ā-is), *n.* [Gr. κάλλαϊς, or κάλαϊς, a precious stone of a greenish blue, thought to be turquoise.] A blue- or yellow-green variety of gem found in prehistoric graves of England. It is identified with turquoise, discolored either before or after burial.

callapa (kä-lyä'pä), *n.* [Native name in Bolivia.] A double, long, flat-bottomed raft with low sides, made of balsa-wood, much in use on the streams of the india-rubber districts of central South America. It will accommodate a considerable cargo and is the only craft still used on the smaller rivers of the Beni region in Bolivia.

call-circuit (kâl'sèr″kit), *n.* See ★*circuit.*

call-duck (kâl'duk), *n.* A decoy-duck.

Callechelys (ka-lek'ē-lis), *n.* [NL. for ★*Callenchelys*, < καλλ(ι-), beautiful, + ἐγχέλυς, an eel.] A genus of snake-eels of the family *Ophichthyidæ*, comprising a few species widely distributed in tropical seas.

callesthetical (kal-es-thet'i-kal), *a.* Same as *esthetic*: as, *callesthetical* truth. Also *callæsthetical.* *H. Whewell.*

Callianassa (kal-i-a-nas'ä), *n.* [NL., < Gr. καλλι-, beautiful, + ἄνασσα, queen.] The typical genus of the family *Callianassidæ.* *C. Stimpsoni* is found in deep burrows along the eastern coast of the United States. *Leach*, 1814.

Callianassidæ (kal-i-a-nas'i-dē), *n. pl.* [NL., < *Callianassa* + *-idæ.*] A family of macrurous decapod crustaceans, having the carapace laterally compressed, the rostrum small or absent, only thoracic gills, and the external maxillipeds operculiform. The typical genus is *Callianassa.*

callianassoid (kal-i-a-nas'oid), *a.* [*Callianassa* + *-oid.*] Resembling or having the form of the *Callianassidæ.*

Calliclinus (kal-i-klī'nus), *n.* [NL., < Gr. καλλι-, beautiful, + NL. *Clinus.*] A genus of blennies, found in tropical seas.

calligrafy, *n.* A simplified spelling of *calligraphy.*

calligraph (kal'i-gräf), *n.* 1. One skilled in the art of beautiful writing; a calligrapher.—2. A transcriber of manuscripts.—3. A specimen of beautiful penmanship.

calligraph (kal'i-gráf), *v. t.* To write or transcribe in a beautiful manner; produce or reproduce in the best style of the calligrapher's art: as, "a roll finely *calligraphed* and illuminated," *Athenæum.*

calligrapher, *n.* 2. One whose business is the transcribing of manuscripts.

I would have taught him in three weeks a firm, current, clear, and legible hand—he should have been a *calligrapher.* *Scott,* Guy Mannering, xv.

Calliopsis (kal-i-op'sis), *n.* [NL. (Reichenbach, 1824), < Gr. καλλι-, beautiful, + ὄψις, appearance.] 1. A former genus name of a group of plants of the family *Asteraceæ,* now referred to *Coreopsis.*—2. [*l. c.*] A popular name of various cultivated species of *Coreopsis,* especially *C. tinctoria* (*Calliopsis marmorata* of florists) and *C. lanceolata.*

callisthenical (kal-is-then'i-kal), *a.* [*callisthenic* + *-al.*] Fond of callisthenic exercises; practised in callisthenics.

callithump (kal'i-thump), *n.* [See *callithumpian.*] A charivari (which see). [U. S.]

callithump (kal'i-thump), *v. t.* To treat to a callithumpian concert. [U. S.]

Callitrichaceæ (ka-lit-ri-kā'sē-ē), *n. pl.* [NL. (Lindley, 1836), < *Callitriche* + *-aceæ.*] A family of dicotyledonous achlamydeous plants of the order *Geraniales,* the water-starwort family, containing the genus *Callitriche* only (which see).

callitrolic (ka-li-trol'ik), *a.* [*Callitris* + *-ol* + *-ic.*] Obtained from *Callitris quadrivalvis.* — **Callitrolic acid,** an amorphous acid, $C_{30}H_{48}O_5$, obtained from sandarac.

callitypy (kal'i-tī-pi), *n.* [Gr. καλλι-, beautiful, + τύπος, type.] A method of forming connected lines by a type-writing machine, applicable to the production of music and other forms of difficult type-setting.

The comparatively difficult and expensive kind of type-composition known as intersecting-rule and rule-and-figure work, which has always been a stumbling block to line-casting and type-setting machines, seems to be the destined particular field of *callitypy.* *Sci. Amer.,* Sept. 26, 1903, p. 222.

Calliurus (kal-i-ū'rus), *n.* [NL., < Gr. καλλι-, beautiful, + οὐρά, tail.] An obsolete name of the black bass of the family *Centrarchidæ.*

Callocystites (kal″ō-sis-tī'tēz), *n.* [NL., < Gr. κάλλος, beauty, + κύστις, a bladder, + *-ίτης, -ite*[2].] A genus of *Cystoidea* having four pinnulate arms, three or four pairs of pore-rhombs, and a short tapering stem. It is characteristic of the Upper Silurian of North America.

call-office (kâl'of'is), *n.* In *telephony,* an office or central station where the call-signals from the various telephones of the system are received and transmitted, and where the connections necessary to intercommunication are made.

Callogobius (kal-ō-gō'bi-us), *n.* [NL., < Gr. καλλι-, beautiful (κάλλος, beauty), + L. *gobius,* goby.] A genus of small gobies found in the East Indies.

callomania (kal-ō-mā'ni-ä), *n.* [NL., < Gr. κάλλος, beauty, + μανία, madness.] Excessive love of beauty.

calloo (ka-lö'), *n.* [So called from the sound of its evening call.] The oldwife or long-tailed duck (*Harelda glacialis*) of the arctic regions. See *Harelda.*

Callorhynchus (kal-ō-ring'kus), *n.* [NL., < Gr. καλλι-, beautiful (κάλλος, beauty), + ῥύγχος, snout, beak.] A genus of chimæras found in the antarctic seas. The common species is *C. Callorhynchus.* It ranges northward to Peru.

Callosal fissure. See ★*fissure.*

callosity, *n.*—**Sternal callosity,** a thickening and hardening of the skin beneath the breast-bone, occurring in animals that habitually rest upon the breast, notably the camel and ostrich.

Callovian (ka-lō'vi-an), *a.* and *n.* [NL. *Callovia,* E. *Kelloways.*] In *geol.,* noting a division of the Jurassic system, derived from Kelloways in Wiltshire. The term is not as much in use in Great Britain as on the continent of Europe, where it is applied to beds generally regarded as equivalent to the lower part of the Oxford Clay and the Kelloways Rock. In France the Callovian is divided into a lower and an upper (Divesian) division, and its position in the Jurassic series is below the Oxfordian and above the Bathonian, lying at the base of the Middle Oolite.

callow[1], *n.* 2. In *entom.,* an insect just emerged from its cocoon: especially applied to ants.

The queen manifestly recognized the odor borne by the *callows,* and at once snuggled with them. They each recognized in her and in each other the only ant-odor they had ever known, that of their own bodies. *Biol. Bulletin,* Oct., 1904, p. 231.

call-slip (kâl'slip), *n.* The slip used by a reader or borrower in a library, in calling for a book or books. It is a blank form with spaces for the name and address of the borrower (or the number of the borrower's card), the shelf-number, a brief title of the book called for, the date, etc.

callum (kal'um), *n.*; pl. *calla* (-ä). [L. *callum,* a callus: see *callus.*] In the burrowing pelecypod mollusk *Pholas,* a calcareous septum secreted after the completion of the burrow and occupying the pedal gape of the valves.

callunetum (kal-ū-nē'tum), *n.* [*Calluna,* heather, + *-etum.*] In *phytogeog.,* a formation consisting of heather, *Calluna vulgaris.*

callus, *n.*—**Definitive** or **permanent callus,** material exuded between the ends of a broken bone, which later is converted into true osseous tissue. - **Provisional** or **temporary callus,** callus thrown out around the ends of a broken bone and in the medullary cavity, which serves as a splint and is later in great part or wholly absorbed.

callutannic (kal-ū-tan'ik), *a.* [*Callu(na)* + *tannic.*] Derived from *Calluna vulgaris,* and having a tannic relation. **Callutannic acid,** an amorphous compound, $C_{14}H_{14}O_9$(?), obtained from *Calluna vulgaris.*

call-wire (kâl'wīr), *n.* In *telephony,* a wire over which call-signals between the call-office or central station and any individual instrument or between individual instruments are transmitted; a call-circuit.

calm[1], *n.*—**Calms of Cancer,** the region of high pressure and light wind under the greater part of the tropic of Cancer in the Atlantic and Pacific oceans, but a little north of it over the eastern and western continents. On the Atlantic Ocean this calm region was known to the early English navigators as the *horse latitudes.*

Calomel electrode. See ★*electrode.*

Calonectria (kal-ō-nek'tri-ä), *n.* [NL. (De Notaris), < Gr. καλός, beautiful, + *Nectria,* a genus of fungi.] A genus of pyrenomycetous fungi having membranous, bright-colored perithecia and mostly two or more septate, hyaline spores. *C. pyrochroa* is said to cause the death of young leaves of the sycamore, *Platanus occidentalis.*

calool (kä-löl'), *n.* [Aboriginal name in northern New South Wales.] An Australian tree, *Sterculia quadrifida.* See *Sterculia,* 1.

Caloric theory of heat. See *heat.*

Calorific capacity, the capacity of a body for heat, usually expressed in calories per degree centigrade; thermal capacity.—**Calorific intensity,** the heating effect of a fuel, expressed by means of the temperature that may be attained from it by complete combustion. Also called *pyrometric effect.*—**Calorific power,** the quantity of heat, in gram-calories, obtained by the complete combustion of a gram of a fuel; heat of combustion.—**Calorific value,** the heat-value; the calories or thermal units contained in one unit of the substance, and released when it is burned.

calorifier (ka-lor'i-fī-ėr), *n.* An apparatus for heating fluids.

calorify (ka-lor'i-fī), *v. t.* [L. *calor,* heat, + *-i-fy.*] To make hot; affect with heat.

calorimeter, *n.* The calorimeter is used to determine, in thermal units, the heat liberated or absorbed in the course of any physical or chemical process, such as change of temperature, change of state, the solution of a solid in a liquid, the mixture of liquids, chemical action, or any mechanical, electric or magnetic process involving transformations of energy. The thermal unit almost universally employed is the calory, that is, the amount of heat required to raise one gram, or sometimes one kilogram, of water from 0° C. to 1° C.; but other thermal quantities, the relation of which to the calory is definitely known (such as the heat of fusion of ice, or the heat of vaporization of water), are sometimes used. For the determination of specific heat the calorimeter commonly consists of a metal vessel, the water-equivalent of which is known, containing a known quantity of water of known temperature. The substance the specific heat of which is to be determined is weighed, heated to some carefully measured higher temperature, and plunged into the water, and the change in the temperature of the latter is observed. The most serious error in this operation is that arising from the exchange of heat between the calorimeter and its surroundings, and numerous devices have been employed to reduce this error to a minimum. For this purpose the calorimeter (*C*) is sometimes suspended within an outer chamber (*o, o*) by non-conducting supports as shown in Fig. 1. The outer surface of the calorimeter and the inner surface of the containing-vessel, both of which are metal, are highly polished in order to diminish radiation. In the *Waterman calorimeter* the substance to be tested is heated in a vessel surrounded by a coil of wire through which an electric current flows. It is then placed in a cup (*C,* Fig. 2) with double walls, which serves as the bulb of an air-thermometer. Ice-cold water is added in quantity just sufficient to counterbalance the rise of temperature. The mercury column in the manometer tube (*m*) indicates the temperature of the cup. Much more perfect isolation may be obtained by using as a calorimeter a Dewar flask. This consists of a glass vessel (Fig. 3) with double walls, from the space between which the air has been carefully removed. The outer surface of the inner flask and the interior of the outer one are silvered. The exchange of heat under these conditions is exceedingly slow, and such flasks form excellent calorimeters. The determination of specific heats by means of

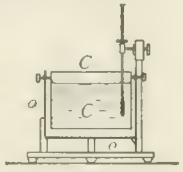


Fig. 1.

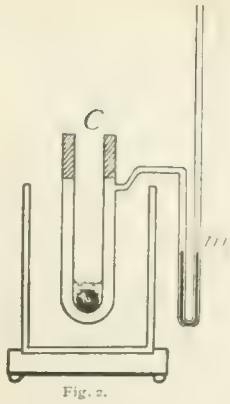


Fig. 2.

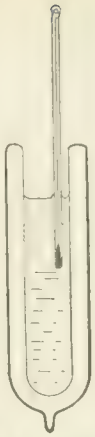


Fig. 3. Dewar flask.

the fusion of ice was first suggested by Black, in the eighteenth century, who employed for this purpose a block of

Fig. 4

clear ice (Fig. 4). The substance the specific heat of which is desired is heated and then placed in a cavity (*C*) within the block. A slab of ice (*S*) serves as a cover. The amount of water melted by the inclosed body in cooling to 0°C. measures the specific heat. Lavoisier and Laplace substituted for Black's ice-block a calorimeter consisting of an inner cage containing the body to be tested, surrounded by a double-walled vessel packed with broken ice at the melting-point. The ice melted by the heat liberated from the cooling body was collected and weighed. In *Bunsen's ice-calorimeter* the amount of ice melted is determined by the change in volume which that substance undergoes when converted into the liquid form. The apparatus, which is shown in Fig. 5, consists of an inner tube of glass (*a*) sealed into a larger vessel of the same substance (*b*), the neck of which (*n*) is bent upward and ends in a horizontal capillary tube (*c*). The upper portion of the outer vessel surrounding the tube *a* is filled with water, below which is mercury extending continuously through the neck into the capillary tube. By means of a freezing-mixture in *a*, a mantle of ice is formed around the outside of the inner tube, after which the freezing-mixture is removed and the whole apparatus is packed in melting ice. If now a body the specific heat of which is to be determined is introduced into *a*, a portion of the ice-mantle will be melted, and, in consequence of the diminution of volume, the mercury column in the capillary tube will recede toward the neck of the calorimeter. Its movement affords a measure of the volume of ice melted, and thus of the heat liberated by the cooling body. The Bunsen ice-calorimeter is an instrument of great delicacy and is specially adapted for the measurement of very small quantities of heat. Unfortunately, the density of the ice depends somewhat upon the rapidity with which it is formed, and considerable errors are thus introduced. The heat of vaporization of water has been utilized by Joly and others for calorimetric purposes. The *Joly steam-calorimeter* depends upon the determination of the amount of moisture condensed upon the surface of a substance when the latter is plunged into an atmosphere of steam. This apparatus consists of a steam-chamber with thin metal walls, within which, suspended from an arm of a balance, hangs a small platinum scale-pan of conical form. A known weight of the substance the specific heat of which is to be determined is placed on the pan, and its temperature is noted. Steam is then introduced into the chamber, and condensation occurs on the surface of the cool body, adding to its weight. When the substance has attained the temperature of the steam, and condensation is complete, the increase of weight is determined. For the determination of the specific heat of liquids and gases, various forms of calorimeter have been devised. One of these, the *continuous-flow calorimeter* of Callendar and Barnes, which has been employed in the determination of the specific heat of water at various temperatures, is shown diagrammatically in Fig. 6. It consists essentially of a

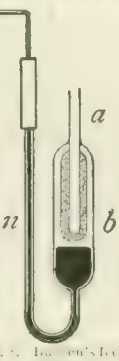
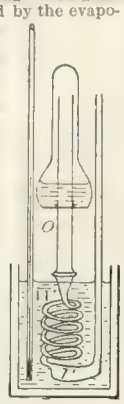


Fig. 5. Bunsen's ice-calorimeter.

Fig. 6. Continuous-flow calorimeter of Callendar and Barnes.

capillary tube (*AB*) connecting at the ends with larger tubes and sealed into a glass vacuum-jacket. The liquid the specific heat of which is to be determined enters the tube at *i* and flows out at *o* at a measured rate. By means of a fine wire stretched through the bore of the capillary tube and supplied with a known electric current, heat is imparted to the liquid. The temperatures of the inflowing liquid at *A* and of the outflowing liquid at *B* are de-

termined by means of the resistance of coils of platinum wire inserted in the larger tubes. From the amount of liquid passing in a given time and the amount of heat delivered to it electrically from the heating wire, together with the difference of temperature at the ends of the tube, the specific heat of the liquid can be determined with great accuracy. For the determination of heats of combustion, heats of solution, and other thermochemical processes, a number of special forms of calorimeter have been devised. Among these are the *Favre and Silbermann calorimeter*, in which the heat of a chemical reaction is imparted to mercury contained in a bulb with a capillary neck, and the expansion of the liquid is noted; the *Junker calorimeter* and the *bomb calorimeters* of Berthelot and Stohmann, for the study of heats of combustion; and the *respiration calorimeter*, for the determination of the heat evolved by animals or by human subjects. Other forms, called *electrocalorimeters*, are employed for measuring the heat developed by the electric current. **Berthelot calorimeter.** (*a*) An apparatus for measuring the latent heat of vaporization. It consists essentially of a glass vessel with central outlet-tube (*o*) connecting with a glass worm (*w*) for condensing the vapor formed by the evaporation of the liquid in the vessel. The worm and receiver (*r*) for the condensed vapor are submerged in a water-bath, the rise of temperature of which is noted. (*b*) A form of bomb calorimeter for the determination of the heat of combustion. See ★*calorimeter*.—**Respiration calorimeter**, a calorimeter for measuring the heat given off by a man or other animal, with appliances for respiration such that the heat and chemical components of the products of respiration which are carried away in the ventilating current of air may be measured; or the carbon dioxid and water-vapor of respiration may be absorbed and removed and a measured quantity of oxygen supplied in lieu of fresh air. The apparatus has been used to investigate problems in physiological chemistry both with man and with domestic animals such as the horse, cow, and sheep. The best-known form of respiration calorimeter is that of Professors Atwater and Rosa, with which they carried out an extended series of investigations at Wesleyan University, Middletown, Connecticut, to verify the law of conservation of energy in the human body. Such a test involves a determination of the total energy received by the body, during a given period, in the food and drink taken, and the total energy given off by the body in the same time, chiefly heat radiated from the body and carried away in respired air, but to some extent contained in the solid and liquid excreta of the body. If muscular work is done by the body, it also must be measured and included in the output of energy. The law of the conservation of energy requires that the total energy supplied to the body in a given time shall equal the total energy given out in the same time, plus whatever increase of energy there may have been in the body during that period, or minus any decrease of energy, as the case may be. A series of experiments extending through several years gave very close balances of income and outgo, and demonstrated, as was of course expected, that the law is fulfilled in animals as well as in inorganic systems. The essential features of the calorimeter are the following: (1) a metal chamber, furnished with a chair, table, and bed, in which the subject of the experiment (usually a man) lives, eats, drinks, sleeps, and sometimes works, during a period of several days and nights. (2) Arrangements for ventilating the chamber and for analyzing and measuring the air supplied to and received from the chamber. (3) Facilities for passing food and drink into the chamber and for removing excreta. These materials are weighed and analyzed by sample, and their heat of combustion determined. (4) Facilities for measuring the heat given off by the body and the heat-equivalent of any muscular work done. The income and outgo of energy of the body are expressed in terms of heat, the total heat of combustion of the food eaten being compared with the total heat given off by the body. The analyses of the food and excreta also show the digestibility of the food; that is, the proportion of the nutrients actually utilized in the body. The complete apparatus is complicated, and each experiment is laborious and expensive. Observations are taken constantly, day and night, by several observers during the entire period of the experiment, usually lasting from four to eight days. The results obtained have been of the highest scientific value.—**Throttling calorimeter**, a device for ascertaining the moisture in steam by throttling the steam and then allowing it to expand to about atmospheric pressure. The expanded steam is somewhat superheated, the degree of superheating depending on the moisture in the steam before throttling.



Berthelot Calorimeter.

Calorimetric bomb. Same as ★*explosion-bomb*.

caloripuncture (kal″ō-ri-pungk′tūr), *n.* [L. *calor*, heat, + *punctura*, puncture.] Same as *ignipuncture*.

caloristic (kal-ō-ris′tik), *a.* [*calorist* + *-ic*.] Of or pertaining to the calorists, a school of physicists, chiefly of the eighteenth century, who assumed as the basis of their theory of heat the existence of an imponderable fluid called *caloric*.

caloritropic (kal″ō-ri-trop′ik), *a.* [L. *calor*, heat, + Gr. τρόπος, a turn: see *tropic*.] Same as *thermotropic*. *Klercker*.

caloritropism (kal-ō-rit′rō-pizm), *n.* [*caloritropic* + *-ism*.] Same as *thermotropism*. *Klercker*.

calorizator (kal″ō-ri-zā′tor), *n.* [L. *calor*, heat, + *-ize* + *-ator*.] A cylinder, used in the diffusion process for the extraction of sugar from beets, which serves to warm the juice to the proper temperature in passing from one diffusion-cylinder to another. *Sadtler*, Handbook of Indust. Chem., p. 139.

calory, *n.* **15° water calory,** a calory in which the water used as a standard of thermal capacity is taken at 15° C., mean temperature, and the thermometric scale is that of the hydrogen thermometer.—**Gram-calory.** See *lesser* ★*calory*. **Greater calory,** the quantity of heat necessary to raise a kilogram of water from 0° to 1° C.; 1,000 gram-calories.—**Kilogram calory,** a unit of heat in which the quantity of heat designated is that necessary to raise one kilogram of water 1° C. Usually called a *large* or *greater calory* as distinguished from the *gram-calory* or *lesser calory*. **Lesser calory,** the quantity of heat necessary to raise a gram of water from 0° to 1° C. Also called *small calory* and *gram-calory*. See *calory*.—**Ostwald calory,** the amount of heat required to heat one gram of water from the freezing-point to the boiling-point: a unit called by Ostwald the *rational calory*, which is nearly equal to one hundred common calories.

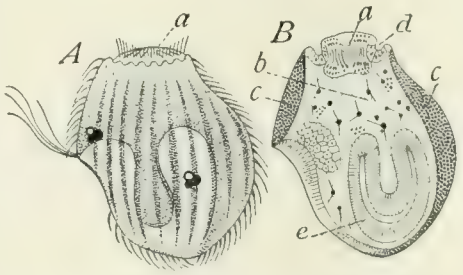
Calosoma, *n.*—**Copper-colored Calosoma.** Same as ★*copper-spot* (which see).

Calosphæria (ka-lō-sfē′ri-ä), *n.* [NL. (Tulasne), < Gr. καλός, beautiful, + σφαῖρα, sphere (cf. *Sphæria*).] A genus of pyrenomycetous fungi having the perithecia arranged in groups beneath the outer bark of the host. The spores are one-celled, hyaline, and sausage-shaped. About 35 species have been described. *C. princeps* is common on the cherry and plum in Europe and America.

Calostoma (ka-los′tō-mä), *n.* [NL. (Desvaux), < Gr. καλός, beautiful, + στόμα, mouth.] A genus of terricolous puffballs of the order *Lycoperdales*, having the peridium at the apex of a stalk composed of interlaced strands of gelatinous hyphæ and opening by means of a stellate mouth which is bright-colored in one species, *C. cinnabarinum*.

Calostoma lutescens. A fruiting body showing the habit in the developed state. (From Engler and Prantl's "Pflanzenfamilien.")

calotte, *n.* **6.** In *geol.*, an ice-cap or a glacier covering a large land area. *J. Geikie*, The Great Ice Age, p. 711.—**7.** In *zoöl.*: (*a*) The pole of attachment of *Dicyemidæ* which are parasitic in the kidneys of certain cephalopods; the polar cap. (*b*) In *Polyzoa*, a retractile disk formed at the aboral pole in the developing larva.



A, Larva of *Bugula plumosa*: *B*, Sagittal Section of Larva of *Bugula* (diagrammatic). *a*, calotte or retractile disk; *b*, parenchyma; *c*, corona; *d*, ectodermal groove; *e*, sucker. (From Parker and Haswell's "Zoology," after Korschelt and Heider.)

calotypic (kal-ō-tip′ik), *a.* [*calotype* + *-ic*.] Of or pertaining to a calotype picture: as, *calotypic* impressions.

Calpicarpum (kal-pi-kär′pum), *n.* [NL. (G. Don, 1838), < Gr. κάλπις, pitcher, urn, + καρπός, fruit.] A genus of dicotyledonous plants of the family *Apocynaceæ*. The fruit consists of two obovoid, obliquely quadrate, coriaceous, or somewhat fleshy carpels. See *Kopsia*.

calpis, *n.* See *kalpis*.

calpulli (käl-pöl′yē), *n.* [Nahuatl, aug. of *calli*, house.] A quarter of a town; a district; also, the people inhabiting a quarter of a town.

caltrop, *n.* **4.** In the nomenclature of the spicular elements of sponges, a tetraxial spicule having the form of a caltrop, with four equal simple smooth arms radiating from a central point.—**5.** *pl.* In *entom.*, the short, sharp, curved spines which occur in scattered groups in the integument of certain lepidopterous larvæ of the family *Limacodidæ*, and which are responsible for the urticating effect produced on the human skin by these larvæ. *A. S. Packard*, Text-book of Entom., p. 189.

calumba, *n.*—**American calumba.** Same as *American columbo* (which see, under *columbo*).

calumbin (ka-lum′bin), *n.* Same as *columbin*.

calumny, *n.*—**Oath of calumny.** See ★*oath*.

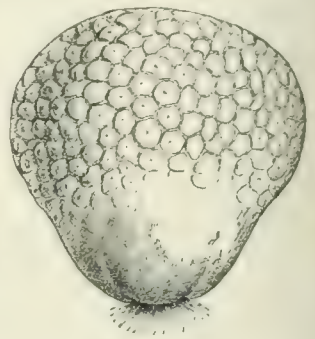
calumpang (kä-lum′päng), *n.* [Also *kalumpang*: Philippine Sp. *calumpang*, *calompang*, *calumpan*; < Pampanga *calumpang*.] See ★*kalumpang*.

calumpit (kä-lum-pēt′), *n.* [Also *kalumpit*: Philippine Sp., from an untraced native name.] See ★*kalumpit*.

calut (kä-löt′), *n.* [Philippine Sp. *calut*, also *carut*, *carot* (see ★*carot*), < *Pampanga calut*.] A plant (*Dioscorea triphylla*) of the Philippine Islands the root of which is sometimes cooked and eaten, and in times of scarcity may become the staple article of food among the mountaineers. Also *carote* and *nama*.

calvarial (kal-vā′ri-äl), *a.* [L. *calvaria*, the skull, + *-al*.] Of or pertaining to that portion of the skull which is known as the calvarium, or calvaria: as, the *calvarial* sutures; cranial.

Calvatia (kal-vā′shiä), *n.* [NL., (Fries, 1849), < L. *calvus*, bald, from the manner in which the mass of spores is laid bare.] A genus of gasteromycetous fungi of the order *Lycoperdales*. The peridium is sessile and has a more or less thickened sterile base, which at maturity breaks away in angular fragments from the top, leaving exposed the powdery mass of spores. This genus includes the largest of the puffballs. *C. maxima*, an edible species, sometimes called the *giant puffball*, has been reported as attaining a size of three feet in diameter. *C. cælata* and *C. cyathiformis* are common species growing in old pastures.


Calvatia cælata. Fruiting body, three quarters natural size. (From Engler and Prantl's "Pflanzenfamilien.")

Calvinistic Methodists. See ★*Methodists*.

calx, *n.*—**Blue calx,** a kind of Thenard's blue made by roasting a mixture of cobalt oxid with a china-clay and quartz, and grinding the resulting mass to great fineness in water. *Langenbeck*, Chem. of Pottery, p. 120.

calycanth (kal′i-kanth), *n.* A plant of the genus *Butneria* (*Calycanthus*) or family *Calycanthaceæ*.

calycanthaceous (kal″i-kan-thā′shius), *a.* [*Calycanthaceæ* + *-ous*.] Belonging to the plant family *Calycanthaceæ*.

calycanthin (kal-i-kan′thin), *n.* [*Calycanth-us* + *-in*².] A glucoside, $C_{25}H_{28}O_7$, found in *Butneria florida* (*Calycanthus floridus*). It is easily soluble in water, giving a fluorescent solution.

calycanthine (kal-i-kan′thin), *n.* [*calycanthus* + *-ine*².] An alkaloid, $C_{11}H_{14}N_2 + \frac{1}{2}H_2O$, found in *Butneria* (*Calycanthus*) *fertilis*. It is a monacid base and is a violent poison, somewhat resembling strychnine in its action. The anhydrous alkaloid melts at 244° C.

Calycilepidotus (kal″i-si-lep″i-dō′tus), *n.* [NL., < Gr. κάλυξ, cup, + λεπιδωτός, scaled, scaly.] A genus of sculpins with rough scales, found on the coast of California. The known species is *C. spinosus*.

calycin (kal′i-sin), *n.* [Gr. κάλυξ (καλυκ-), cup, + *-in*².] A crystalline reddish-yellow compound, $C_{18}H_{12}O_5$, found in a number of lichens. It melts at 243° C.

Calycina (kal-i-sī′nä), *n. pl.* [NL.: see *calycine*.] A suborder of *Diademoida* in which the apical system is very large and includes one or more supplementary supra-anal plates.

Calycinal gemmation, in the *Anthozoa*, the production of new individuals by the process of budding within the calice of the parent polyp. This may be effected in two ways: either certain septa become enlarged and produced so that they inclose a new calycinal disk (septal gemmation) or tabulæ are produced upward in the form of pockets from which new calices are developed (tabular gemmation). **Calycinal theory,** a theory of the origin of the echinoderms based upon the opinion that they all show evidence of the presence, or former presence, of a system of symmetrically placed polygonal calcareous plates comparable to, or homologous with, the calycinal system of a stalked crinoid. According to this theory all the classes are the more or less modified descendants of a primitive, probably stalked, ancestral form which is best exemplified in the stalked crinoids, which are held to be the most primitive of all known echinoderms. See ★*Pentactæa theory*, ★*Pelmatozoic theory*.

calycinated (ka-lis′i-nā-ted), *p. a.* [*calycine* + *-ate*¹ + *-ed*².] Made cup-shaped; fashioned in the form of a cup.

Calyconectæ (kal″i-kō-nek′tē), *n. pl.* [NL., < Gr. κάλυξ, cup, + νηκτής, swimmer.] A section

or suborder of siphonanthous *Siphonophora*, having one or more nectocalyxes, no pneumatocyst or palpons, and with the cormidia ordinate.

calyculate, *a.* 2. In *zoöl.*: (*b*) Having the surface furnished with depressions formed by the reticulate folding of the skin: specifically applied by Cope to the structure of the hemipenes of various snakes.

"Hemipenis *calyculate*, spinous; sulcus simple; no disc . . . *Colubrinæ*.'
Cope, in Rep. U. S. Nat. Mus., 1898, p. 732.

Calyptospora (ka-lip-tos′pō-rä), *n.* [NL. (J. Kuhn), < Gr. καλυπτός, covered, + σπορά, seed (spore).] A genus of fungi of the order *Uredinales*.

Calyptospora Gœppertiana.
a, branch of the cranberry deformed by the fungus; *b*, longitudinal radial section through the bark of a stem of the cranberry showing the germinating teleutospores. (From Engler and Prantl's "Pflanzenfamilien.")

The æcidial stage occurs on leaves of conifers, especially *Abies Picea* in Europe. The teleutospore form attacks the branches of various species of *Vaccinium*, forming a smooth brown elevated layer. The single species, *C. Gœppertiana*, is widely distributed in Europe and North America.

calyptrogen, *n.* (*b*) The layer of tissue covering the young embryo, as in ferns. *Jackson*, Glossary.

Calystegia (kal-i-stē′ji-ä), *n.* [NL. (Robert Brown, 1810), irreg. < Gr. κάλυξ, calyx, + στέγη, roof, covering. The name alludes to the two large bracts covering the base of the calyx.] **1.** A former genus name of several plants of the family *Convolvulaceæ*, now referred to *Convolvulus*.—**2.** [*l. c.*] A plant of this group. The species are annual or perennial herbs, sometimes suffrutescent, twining, trailing, erect, or ascending, with filiform creeping rootstocks. The commonest cultivated plants of this group are the California rose (*Convolvulus Japonicus*) and Rutland beauty (*C. sepium*), both herbaceous perennial twiners with pink or white flowers, resembling in form those of the morning-glory.

calyx, *n.*, **3.** (*f*) The expanded, cup-like, deciduous structure on the ends of the stems of certain entoproctous *Polyzoa*, containing most of the organs and hence practically an individual. (*g*) A depression formed by the more or less reticulate folding of the skin, as in the intromittent organs of snakes.

"The surface is reticulate like tripe, the inclosed areas forming *calyces*, which may have a suctorial function." *Cope*, in Rep. U. S. Nat. Mus., 1898, p. 701.

4. A cup-shaped excavation on the surface of the ovary which remains after the rupture of a Graafian vesicle.—**5.** Any circular piece which resembles in form the calyx of a flower.

Calyx drill. See ★*drill*[1].—**Calyx of the brain**, in *entom.*, the cap of one of the mushroom bodies. See *mushroom* ★*body*. *A. S. Packard*, Text-book of Entom., p. 233.

calzada (käl-thä′dä), *n.* [Sp.: see *causey*, *causeway*.] A paved road or highway; a causeway.

cama[2] (kä′mä), *n.* [Sp., a couch, lair.] In *phys. geog.*, a prairie-like basin-floor inclosed by hills or uplands. [Western U. S.]

camagon, *n.* See ★*kamagon*.

Camaldolensian (ka-mal″dō-len′si-an), *a.* and *n.* [ML., **Camaldulensis*, adj., < *Camaldules*, name of the order. See *Camaldolite*.] **I.** *a.* Of or pertaining to the Camaldolites.
II. *n.* A Camaldolite.

Camaldolese (ka-mal-dō-lēs′ or -lēz), *n.* and *a.* **I.** *n.* Same as *Camaldolite*.
II. *a.* Of or pertaining to the Camaldolites.

Camaldoli (ka-mal′dō-lī), *n. pl.* [ML. See *Camaldolite*.] Same as *Camaldolites*.

camalig (kä-mä-lig′), *n.* [Tagalog.] In the Philippine Islands, a warehouse for storing goods; also a small house or cabin.

camanchile (kä-män-chē′le), *n.* A Mexican tree introduced into the Philippines. See ★*kamachiles*.

camansi (kä-män′sē), *n.* See ★*kamangsi*.

camarasaur (kam′a-ra-sâr), *n.* A member of the genus *Camarasaurus*.

Camares ware. See ★*ware*[2].

camarilla, *n.* 2. A small chamber or cell, as in the brain. *Emerson*.

camaron (kä-mä-rōn′), *n.* [Sp., < *camaro*, < L. *cammarus*, *camarus*, a sea-crab.] Same as *cammaron*. [West Indies.]

camarostome (kam′a-rō-stōm), *n.* [Gr. καμάρα, a vault, + στόμα, mouth.] Same as *labrum*: used by writers on the *Arachnida*.

camass, *n.*—**Poison camass, white camass**, the death camass, *Zygadenus venenosus*, a plant which causes severe losses of sheep in Montana and elsewhere. In cases of poisoning, a solution of permanganate of potash and sulphate of aluminium has been found an effective remedy. According to some the death camass includes several species.

cambism (kam′bizm), *n.* The theory and practice of exchange. See *cambist*.

Cambodian (kam-bō′di-an), *a.* and *n.* [*Cambodia* + *-an*.] **I.** *a.* Of or pertaining to Cambodia, a French dependency in southeastern Asia.
II. *n.* A native of Cambodia.

cam-box (kam′boks), *n.* 1. A frame surrounding a cam and designed to compel the rod which the cam drives to follow the return motion of the projecting lobe.—**2.** A casing inclosing the cam and its rollers in order that copious lubrication may be secured by having the cams revolve in a bath of oil.

Cambridge cheese, greensand. See ★*cheese*[1], ★*greensand*.

cameist (kam′ē-ist), *n.* [*cameo* + *-ist*.] A gem-engraver; one who cuts or carves cameos; also, one who is a collector or connoisseur of cameos.

camel, *n.*—**Giraffe camel, giraffe-necked camel**, an extinct species of camel, having the neck and leg-bones as long as those of a giraffe. Remains of it are found in the White River Oligocene.

camel-back (kam′el-bak), *n.* **1.** A form of steam-boiler, of large water-capacity, in which a second drum or shell is placed over the principal one, somewhat as is done in an elephant-boiler.—**2.** A form of locomotive engine in which the fire-box has an unusual width so as to secure a low rate of combustion per square foot of grate. The engineer's cab has to be placed in front of the fire-box, and is somewhat in the same relative position on the boiler as is the hump of the camel on its back.

Camelina oil. See ★*oil*.

camel-kneed (kam′el-nēd), *a.* Having callosities on the knees like those of a camel.

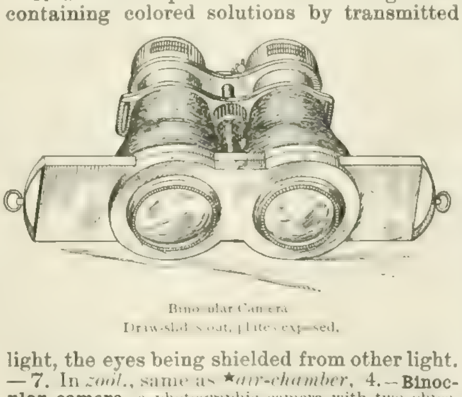
Camellia scale. See ★*scale*[1].

camellin (ka-mel′in), *n.* [*Camellia* + *-in*[2].] A glucoside, $C_{53}H_{84}O_{19}$ (?), found in the seeds of *Thea* (*Camellia*) *Japonica*.

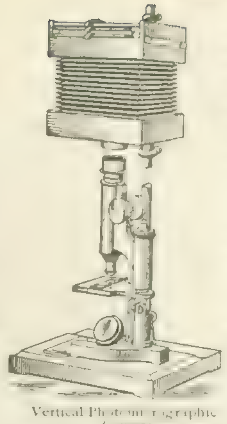
camelopard, *n.* **3.** [*cap.*] In *astron.*, the constellation *Camelopardalis* or *Camelopardus*.

camel-wasp (kam′el-wosp), *n.* Any one of the horntails of the genus *Xiphydria*. All have large heads and long necks.

camera, *n.* **5.** A chamber, as of a house, a mine, a gun, etc.; any inclosure with a roof. —**6.** A box-shaped device for viewing tubes containing colored solutions by transmitted

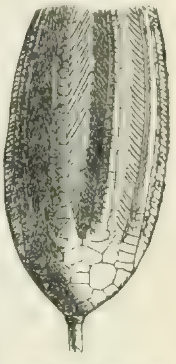

Binocular Camera.
Draw-slide out, plates exposed.

light, the eyes being shielded from other light. —**7.** In *zoöl.*, same as ★*air-chamber*, 4.—**Binocular camera**, a photographic camera with two objectives, used in obtaining stereoscopic pictures.—**Cycloramic camera**, a camera designed to make a complete panoramic picture at one exposure. This is accomplished by means of a mechanism which revolves the camera in one direction about a pivot directly below the center of the lens, while the film is simultaneously moved by clockwork in the opposite direction.—**Kite-camera**, a photographic camera attached to a kite for taking views from an elevation. The shutter is operated through


Vertical Photomicrographic Camera.

the burning of a fuse.—**Magazine-camera**, a camera in which batches of sensitive plates are inserted and exposed in succession.—**Panoramic camera.** See *panoramic*.—**Photomicrographic camera**, a photographic camera used in conjunction with a microscope, the image of the object under the microscope being focused on the sensitive plate.—**Pinhole camera**, a photographic camera in which a pinhole in the front board replaces the objective, the rays of light being brought to a focus on the ground glass or sensitive surface and producing an image.—**Polariscopic camera**, a camera provided with polarizing apparatus, usually a double-image prism interposed in the path of the light-rays, and used to investigate the polarization of the light from an object: especially used in investigating the solar corona.—**Prismatic** or **spectroscopic camera**, a form of objective prism spectroscope (which see), consisting of a photographic camera with a lens of rather long focus, and a prism or series of prisms in front of the lens. It is of especial use in photographing the phenomena of a solar eclipse during the time of total obscuration.—**Watch-camera**, a camera of the size and shape of a watch.

Camerata (kam-e-rā′tä), *n. pl.* [NL., neut. pl. of L. *cameratus*, arched, vaulted.] In Wachsmuth and Springer's classification of the *Crinoidea*, now generally adopted, the second and largest of the five orders of these organisms. It is characterized by having the lower radial plates incorporated into the dorsal cup, the tegmen vaulted, with mouth and food-grooves covered, and the anal opening frequently at the end of a proboscis-like tube inclosed by the free arms. These forms occur only in the Paleozoic rocks. The accompanying illustration shows a fossil crinoid, *Patelliocrinus leptodactylus* (Angelin), of the Silurian system, and order *Camerata*.


Patelliocrinus leptodactylus. Ang. sp. Silurian; Gotland.
Natural size (after Angelin). (From Zittel's "Palæontology.")

camerate (kam′e-rāt), *a.* [L. *cameratus*, vaulted: see *camerate*, *v.*] Same as *camerated*.

camerated, *p. a.* **3.** Bearing cameras, as the shells of the *Cephalopoda*, *Foraminifera*, etc.

camerist (kam′e-rist), *n.* [*camera* + *-ist*.] One who operates a photographic camera; a photographer.

Then, when a high wind is encountered, the cloth at one end can be buttoned around the camera, and at the other around the head or face of the *camerist*.
Boston Transcript, Feb. 23, 1900.

camfene, *n.* A simplified spelling of *camphene*.

camfor, *n.* A simplified spelling of *camphor*.

cam-gear (kam′gēr), *n.* A gear which is set eccentrically on the shaft; a gear the outline of which is not circular.

camik (kä′mik), *n.* [Eskimo *kamik*, a pair of boots.] A native boot made of soft sealskin, used by the Labrador and New England whalers.

Camillus shale. See *Salina* ★*beds*.

camino (kä-mē′nō), *n.* [Sp. = F. *chemin*, a road.] A road.

camisa (kä-mē′sä), *n.* [Sp.: see *camis*, *chemise*.] A shirt; a chemise; specifically, a waist made of piña, white or dyed, embroidered, and with loose sleeves, worn by the native women of the Philippine Islands.

camlee, camly (kum′li), *n.* [Hind. *kamli*, < Skt. *kambala*.] Same as *cumbly*.

camlet-fly† (kam′let-flī), *n.* A fly with mottled wings. *N. E. D.*

camline (kam′lin), *n.* [Shortened from *camelina*: see *camelina*[3] and *cameline*[3].] The false flax, *Camelina sativa*.

cam-loom (kam′lōm), *n.* A loom whose heddle-shafts are operated by means of cams.

cammac (kam′ak), *n.* A copper halfpenny current in Ireland in the early part of the nineteenth century: so called from the name of the maker, a proprietor of copper-mines.

Cammarum (kam′a-rum), *n.* [NL. (Hill, 1756), < Gr. κάμμαρος, a kind of aconite.] A genus of dicotyledonous plants of the family *Ranunculaceæ*. See *Eranthis*.

camomile, *n.*—**False camomile.** Same as ★*Boltonia*.

camomile-oil (kam'ō-mīl-oil), *n.* A light-blue volatile oil of strong but pleasant odor, obtained by the distillation of the flower-heads of Roman camomile, *Anthemis nobilis.* Under the influence of light and air it changes to greenish and brownish yellow.

camomile-shark (kam'ō-mīl-shärk), *n.* A British collectors' name for a noctuid moth, *Cucullia chamomillæ,* whose larva feeds on the wild camomile or feverfew.

camote (kä-mō'te), *n.* [Mex. Sp., < Nahuatl *camotli.*] A name in Mexico and other Spanish-speaking countries of the sweet potato, *Ipomœa Batatas.*

camp[1], *v.* **II.** *trans.* To surpass, excel, or outrank (others) in a contest. Compare *kemp*[1]. [Australia.]

camp[2], *n.* **4.** A mustering-place for cattle. [Australia.]—**5.** [*cap.*] In the early history of Australian colonization, the name popularly applied to Sydney, New South Wales, and to Hobart in Tasmania, the British forces being stationed in those places.

It is the old resident — . . . who still calls Sydney . . . the *Camp,*—that can appreciate these things.
P. Cunningham, Two Years in New South Wales, II. 70.

6. A camping-out expedition, as for fishing, shooting, recreation, or the like; a camp-out. [Australia.]—**Camp diarrhea.** See ★*diarrhea.*—**Camp duty,** the special duties, guard and police, which devolve on soldiers in camp.—**Camp royal,** the main body of an army when under the direct orders of the commander-in-chief; the chief body of troops with the commander-in-chief; hence, a large number; a host: as, a *camp royal* of false witnesses. *Nashe.*—**Concentration camp,** a camp in which are collected the hostile non-combatants of a country to prevent them from giving aid and information to the hostile armed forces.

campagna (käm-pän'yä), *n.* [It.: see *campaign, champaign, campania.*] **1†.** The open country; the plain.

To Marino, 6 miles through the like flat *campagna,* though ascending insensibly. *Berkeley,* Works, IV. 568.

2†. Same as *campaign, n.,* 2.—**Campagna di Roma.** See the Century Cyclopedia of Names.

campaign, *n.* **5.** A more or less extended trip, excursion, or journey for a definite purpose, such as for botanizing or geologizing.—**Astrophotographic campaign.** See ★*astrophotographic.*

campaigned (kam-pānd'), *p. a.* That has been sent on or has taken part in military campaigns: as, "an old soldier . . . *campaigned* . . . to death in the service," *Sterne,* Sentimental Journey.

campanarian (kam-pa-nā'ri-an), *a.* [LL. *campanarius,* a bell-maker (< L. *campana,* a bell), + *-an.*] Pertaining to the making or the use of bells.

Campanian[2] (kam-pā'ni-an), *a.* and *n.* [ML. *Campania,* F. *Champagne.*] **I.** *a.* Of or pertaining to Campania (modern Champagne): applied specifically to a geological formation.

II. *n.* In the extensive development of the Cretaceous system in France and Belgium, the uppermost division of the Senonian, equivalent to the uppermost Cretaceous of Great Britain, where the final stage, the Danian, is wanting.

campanist (kam'pa-nist), *n.* [L. *campana,* a bell, + *-ist.*] Same as *campanologist.*

campanistic (kam-pa-nis'tik), *a.* Of or pertaining to a campanist or to campanology.

campanologer (kam-pa-nol'ō-jėr), *n.* Same as *campanologist.*

campanological (kam-pa-nō-loj'i-kal), *a.* Of or pertaining to campanology or to campanologers: as, *campanological* literature.

Campanulales (kam-pan-ū-lā'lēz), *n. pl.* [NL. (Britton, 1901), < *Campanula* + *-ales.*] An order of dicotyledonous sympetalous plants, regarded as the most highly developed in the vegetable kingdom and last to make their appearance in the geological history of the globe. It is characterized by 5-merous flowers, the stamens connivent and frequently united (syngenesious). It contains the families *Cucurbitaceæ, Campanulaceæ, Goodeniaceæ, Candolleaceæ, Calyceraceæ, Cichoriaceæ, Ambrosiaceæ,* and *Asteraceæ.* They are chiefly herbs, but occasionally shrubs, and occur in all warm and temperate regions.

campanular (kam-pan'ū-lär), *a.* [NL. **campanularis,* < ML. *campanula,* a bell: see *campanula.*] Same as *campanulate.*

campanulated (kam-pan'ū-lāt-ed), *a.* Same as *campanulate.*

campanulin (kam-pan'ū-lin), *n.* [*campanula* + *-in*[2].] A basic coal-tar color: same as ★*muscarine,* 2.

campanulous (kam-pan'ū-lus), *a.* Same as *campanulate.*

Camper's angle. Same as *facial angle of Camper.* See *craniometry.*

campestrian, *a.* **II.** *n.* [*cap.*] A zoögeographic region proposed by J. A. Allen as a subprovince of the arid or western province of North America.

camphane (kam-fān'), *n.* [*camph*(*or*) + *-ane.*] A hypothetical hydrocarbon, $C_{10}H_{18}$, known only by its derivatives. It is assumed to be constituted by the substitution of two hydrogen atoms for the oxygen atom of camphor.

camphanic (kam-fan'ik), *a.* [*camphane* + *-ic.*] Derived from camphane.—**Camphanic acid,** the lactone or anhydrid, $C_{10}H_{14}O_4$, of hydroxycamphoric acid. It is formed by the oxidation of camphoric acid, or by treating bromcamphoric anhydrid with water. It melts at 201° C.

camphene, *n.* **1.** *Dextrocamphene* (*austracamphene*) and *levocamphene* (*terecamphene*) are made by heating oil of turpentine, saturated with hydrochloric acid gas, with alcoholic potash. They are crystalline and melt at 51–52° C. They rotate plane-polarized light in opposite directions. *Inactive α-camphene* is similar to the preceding, but it is optically inactive and melts at 47° C.—**Borneo camphene** or **camphor camphene,** camphene made from Borneo camphor or from ordinary camphor. It melts at 53.5–54° C., and is optically inactive. When fused it is dextrorotatory.

camphidone (kam'fi-dōn), *n.* [*camph*(*or*) + *-id*[1] + *-one.*] A crystalline compound, $C_8H_{14}\langle{CO \atop CH_2}\rangle NH$, obtained by the electrolytic reduction of camphoric imide in acid solution, using a lead cathode. It has a faint odor like that of camphor and melts at 220° C.

camphoid (kam'foid), *n.* A thick colorless liquid obtained by dissolving 1 part of gun-cotton (pyroxylin) in a saturated alcoholic solution of 20 parts of camphor. It dries rapidly, leaving a thin elastic film when applied to the skin, and is used as a vehicle for tannic acid, iodoform, etc.

campholene (kam'fō-lēn), *n.* [*camphol* + *-ene.*] A hydrocarbon, C_9H_{16}, obtained by the decomposition of campholenic acid. It is an oil which boils at 134° C. and has an odor like that of turpentine.

campholenic (kam-fō-len'ik), *a.* [*campholene* + *-ic.*] Pertaining to or derived from *campholene*: as, *campholenic* acid.—**Alpha-campholenic acid,** an acid, $C_9H_{15}CO_2H$, obtained by saponifying the nitrile formed by the action of dilute sulphuric acid on camphoroxime. It is an oil which boils at 256° C.—**Beta-campholenic acid,** an isomeric compound obtained by saponifying the β-nitrile which is formed by the action of acids on the α-nitrile. It melts at 53° C. and boils at 248° C.

campholid, campholide (kam'fol-id), *n.* [*camphol* + *-id.*] A crystalline compound, $C_8H_{14}\langle{CH_2 \atop CO}\rangle O$, obtained by the oxidation of camphor. It melts at 211° C.

campholytic (kam-fō-lit'ik), *a.* [*camph*(*or*) + (*electro*)*lytic.*] Obtained from camphor by an electrolytic method.—**Alpha-campholytic acid,** an acid obtained in its optically active form by the decomposition of dihydroamino-campholytic acid with nitrous acid. It is an oil which boils at 240–242° C.—**Beta-campholytic acid,** an isomer which melts at 133° C. and boils at 256° C.

camphor, *n.*—**Anemone camphor,** a crystalline substance found in *Anemone pulsatilla.* It has a strong, pungent odor and decomposes spontaneously into anemonic and isoanemonic acid.—**Asarum camphor.** Same as *asarin.*—**Barosma camphor.** Same as ★*diosphenol.*—**Barus camphor.** Same as *Borneo camphor.*—**Buchu camphor.** Same as ★*diosphenol.*—**Cedar camphor.** Same as *cedrene camphor* (which see, under *camphor*).—**Chloral camphor,** a thick, somewhat pungent, colorless liquid resulting when equal parts of chloral hydrate and camphor are mixed. Upon addition of water, camphor is thrown out of solution. It is used externally for neuralgia and internally as a nerve sedative.—**Colophene camphor,** a crystalline compound, $C_{10}H_{18}O$, resembling Borneo camphor, which separates from that portion of the product of the action of sulphuric acid on turpentine which is volatilized with steam.—**Cubeb camphor,** a colorless, crystalline compound, $C_{15}H_{26}O$, which separates from old oil of cubeb on refrigeration.—**Inactive camphor,** a substance obtained by mixing equal parts of dextro- or ordinary camphor and levo-camphor in alcoholic solution, or by oxidizing inactive camphene and borneol. It melts at 178.6° C.—**Inula camphor.** Same as *alant camphor* (which see, under *camphor*).—**Ledum camphor,** a colorless, feebly dextrorotatory, alcoholic sesquiterpene, $C_{15}H_{26}O$, contained in oil-of-Labrador tea from *Ledum palustre, Lin.* It crystallizes in long needles, melts at 104–105° C., and boils at 282–283° C.—**Matico camphor,** a white, nearly odorless, crystalline compound, $C_{12}H_{20}O$, which separates from matico-oil, obtained from *Piper angustifolium.* It melts at 94° C.—**Mentha camphor.** Same as *menthol.*—**Patchouli camphor,** a name formerly applied to patchouli alcohol.—**Pichurim camphor,** an oleoresin, consisting mainly of laurostearin, which is found in Pichurim beans. Also called *Pichurim fat.*—**Pyrethrum camphor.** Same as ★*pyrethrin.*—**Sage camphor,** a term first applied to a stearoptene which Geoffroy separated from oil of sage in 1720. It is now applied to a borneol-like substance which is derived from and probably also exists in oil of sage, *Salvia officinalis.* **Salol camphor,** an aromatic, colorless liquid resulting when 20 parts of camphor are intimately mixed with 30 parts of salol and warmed: a stimulating antiseptic.—**Sandalwood camphor,** a compound, $C_{15}H_{24}O_2$, contained in the oil of sandalwood. It melts at 104–105° C.—**Tar camphor.** Same as *naphthalene.*—**Thyme camphor,** a term sometimes applied to *thymol.*

camphorated (kam'fo-rā-ted), *p. a.* Impregnated or treated with camphor.

camphor-glass (kam'for-glàs), *n.* A small glass tube filled with a solution of camphor or other chemicals and hermetically sealed so that neither hygrometric nor barometric changes can affect it. The camphor becomes flocculent at low temperatures and dissolves at high temperatures, so that the camphor-glass is essentially a thermoscope or crude thermometer.

camphorid (kam'fo-rid), *n.* A yellow, crystalline compound, $C_{18}H_{12}O_6 + H_2O$, found in galangal root. It melts at 229° C.

camphorize (kam'fo-rīz), *v. t.*; pret. and pp. *camphorized,* ppr. *camphorizing.* To impregnate or medicate with camphor: as, *camphorized* tincture of opium.

camphorous (kam'for-us), *a.* [*camphor* + *-ous.*] Camphor-like; resembling camphor: as, a *camphorous* smell.

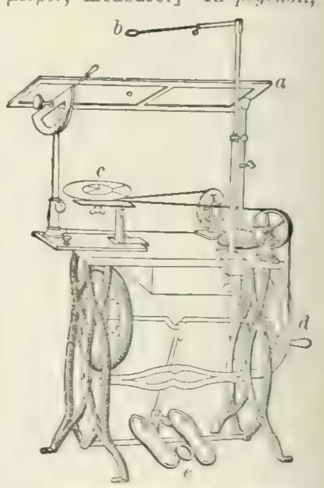
camphory (kam'for-i), *a.* [*camphor* + *-y*[1].] Somewhat camphor-like.

camphylamine (kam-fil-am'in), *n.* [*camphyl* + *amine.*] A base, $C_{10}H_{17}NH_2$, formed by the reduction of campholenic nitrile. It is an oil which boils at 196° C.

campilan (käm-pi-län'), *n.* [Tagalog.] In the Philippine Islands, a sword of the Tagalogs, having a straight single-edged blade, a broad back, and a triangular point.

Campil beds. See ★*bed*[1].

campimeter (kam-pim'ē-tėr), *n.* [L. *campus,* field, + Gr. μέτρον, measure.] In *psychol.,* a vertical or horizontal screen for the mapping, in plane projection, of the area of the blind spot of the eye, the range of color-sensitivity of the retina, etc. The campimeter is related to the perimeter as the plane-table is to the theodolite.



The Hering Campimeter with Color-mixer.
a, campimeter screen; b, eye rest; [illegible] disks mounted in [illegible] color-mixer, which may be rotated by hand [illegible]

campimetry (kam-pim'e-tri), *n.* In *psychol.,* the mapping, in plane projection, of retinal zones or areas; the use of the campimeter. *E. B. Titchener,* Exper. Psychol., I. ii. 17.

Campinian (kam-pin'i-an), *a.* [F. *Campine,* Flem., *Kempenland,* in Belgium.] Of or pertaining to Campine (see the etymology).—**Campinian sands,** in *geol.,* a division of the Quaternary deposits of Belgium.

campit (käm-pēt'), *n.* [Tagalog *campit.*] In Luzon, a short knife.

cam-plate (kam'plāt), *n.* A plate having an irregular outline which gives an irregular motion to the elements which it drives; a plate having projections on its face which act as cams; a cam.

camp-marshal† (kamp'mär"shal), *n.* An officer who supervised the camp or quarters of an army; a quartermaster-general.

Campobello yellow. Same as ★*chryseinic acid.*

campodean (kam-pō'dē-an), *a.* [*Campodea* + *-an.*] Resembling or belonging to the genus *Campodea.*

campodeiform (kam-pō-dē'i-fôrm), *a.* Resembling the thysanurous insects of the genus *Campodea* or family *Campodeidæ* (which see).

campodeoid (kam-pō'dē-oid), *a.* [*Campodea* + *-oid.*] Same as ★*campodeiform.* *A. S. Packard,* Text-book of Entom., p. 600.

campoo (kam-pö'), *n.* [Hind. *kampū,* < Pg. *campo,* a camp: see *camp*[2].] **1.** A camp.—**2†.** A brigade of native Mahratta troops drilled and commanded by European officers. [Anglo-Indian.]

camp-robber (kamp'rob"ėr), *n.* A local name of the Canada jay, *Perisoreus canadensis.*

camp-shed (kamp'shed), *v. t.* To face or bank up with piles and planks, as the soft bank of a river, the foot of an embankment, etc.; protect by piles and planks. See *camp-sheathing.*

campsho, *n.* See ★*camshoch.*

camptodrome (kamp'tọ-drōm), *a.* [Gr. καμπτος, curved, + -δρομος, ‹ δραμεῖν, run.] Having a curved course: said of the nerves of a leaf. See *nervation* (*a*) (2), with cut (Fig. 1).

camptodromous (kamp-tod'rọ-mus), *a.* Same as ★*camptodrome.*

camptonite (kamp'ton-it), *n.* [*Campton,* a township in the Pemigewasset valley, New Hampshire, + *-ite*2.] In *petrog.,* a name given by Rosenbusch (1887) to certain porphyries and aphanitic rocks composed of abundant hornblende and lime-soda feldspars, with augite and sometimes biotite. When porphyritic the phenocrysts are chiefly hornblende, with subordinate biotite and augite. The feldspar is confined to the ground-mass, and is generally andesine or a more calcic variety. Camptonite usually occurs in dikes.

Camptosaurus (kamp-tọ-sâ'rus), *n.* [NL., ‹ Gr. καμπτός, curved, + σαῦρος, a lizard.] A genus of extinct iguanodont dinosaurian reptiles, of great size, found in the Upper Jurassic rocks of Colorado and Wyoming and also in England. The genus had short cervical ribs, amphiplatyan dorsal vertebræ, the sacrals not ankylosed, and large pendent inner fourth trochanter of femur. It is described by Marsh.

camptotrich (kamp'tọ-trik), *n.* [Gr. καμπτός, bent, + θρίξ (τριχ-), hair.] A bony, branched, jointed, dermal fin-ray of the *Dipnoi. E. S. Goodrich,* Quart. Jour. Micros. Sci., March, 1904, p. 486.

Campylaspidæ (kam-pi-las'pi-dē), *n. pl.* [NL., ‹ *Campylaspis* + *-idæ.*] A family of sessile-eyed crustaceans having a strongly vaulted carapace, which sometimes partly overarches some of the free segments of the trunk, and no telson. The typical and sole genus is *Campylaspis.*

Campylaspididæ (kam″pi-las-pid'i-dē), *n. pl.* [NL., ‹ *Campylaspis* (*aspid-*) + *-idæ.*] Same as ★*Campylaspidæ.*

Campylaspis (kam-pi-las'pis), *n.* [NL., ‹ Gr. καμπύλος, bent, + ἀσπίς, shield.] The typical genus of the family *Campylaspidæ. Sars,* 1865.

campylodrome (kam'pi-lọ-drōm), *a.* [Gr. καμπύλος, bent, + -δρομος, ‹ δραμεῖν, run.] Curving gently outward and inward from the base to the apex of a leaf: said of nerves. See *nerration* (*a*) (10), with cut (Fig. 9).

campylodromous (kam-pī-lod'rọ-mus), *a.* Same as ★*campylodrome.*

campylograph (kam-pil'ọ-graf), *n.* [Gr. καμπύλος, bent, + γράφειν, write.] An instrument designed for drawing geometric figures and algebraic curves.

Campyloneuron (kam″pi-lọ-nū'ron), *n.* [NL. (Presl, 1836), ‹ Gr. καμπύλος, arched, + νεῦρον, nerve, from the character of the nervation.] A genus of polypodiaceous ferns, related to *Polypodium.* In most of the species the fronds are simple, linear-lanceolate or somewhat elliptical, 1 to 3 feet long, the parallel primary veins being connected by numerous transverse veins, with one or several once-soriferous, excurrent, free veinlets included within each areola. The genus is essentially middle American. *C. Phyllitidis* and *C. angustifolium* occur in Florida.

campylorhynchous (kam″pi-lọ-ring'kus), *a.* [Gr. καμπύλος, curved, + ῥύγχος, a snout.] Having a curved snout or mandible, as some extinct saurians.

camshachle (kam-shä'ćhl), *v. t.* [Also *camshauchel;* ‹ *cam*2 + Sc. *shachle,* distort.] To twist out of shape; distort; make crooked. [Scotch.]

camshell (kam'shel), *n.* [Also *camshall;* origin not ascertained.] Cuttlefish-bone. [Orkney and Shetland Islands.]

camsho, *n.* See ★*camshoch.*

camshoch (kam'shoćh), *a.* [Also *camsheugh, camsho,* etc.; ‹ *cam*2 + *-shoch,* perhaps ‹ AS. *scεoh,* skew (cf. Sc. *shachle, shochle,* distort); see *skew*1.] 1. Camshachled; crooked; deformed.—2. Perverse; contrary. [Scotch in both uses.]

camsin, *n.* See *khamsin.*

camstone (kam'stōn), *n.* 1. A term used in Scotland for a common compact, whitish limestone.—2. A white or bluish-white clay used for whiting purposes on hearths, door-steps, etc.

Can you? in *Eng. long whist,* when one side is within 2 points of game, and either partner holds 2 honors, the conventional question asked by him of his partner, meaning, 'Have you a third?' If he has, the two partners win the game.—**Can you one?** Same as ★*can you?*

can2, *n.* 4. A chimney-pot.

can. An abbreviation (*a*) of *canon;* (*b*) of *canto;* (*c*) of *cantoris.*

Canada ashes. See ★*ash*2.

Canadian, *a.* 2. In *Amer. geol.,* noting a period which includes the epochs of the calciferous sandrock (Beekmantown limestone) and the Chazy limestone, and constitutes the earliest time-division of the Silurian: it also notes the rock-formations of this period.—**Canadian blue-grass, skipper.** See ★*blue-grass,* ★*skipper*1.

canadine (kan'a-din), *n.* [*Canadensis*) + *-ine*2.] A crystalline alkaloid, $C_{20}H_{21}O_4N$, found in small amounts in *Hydrastis Canadensis.* It melts at 132.5° C., and is related in structure to berberine.

canadol (kan'a-dol), *n.* A trade-name for gasolene or petroleum ether having a boiling-point of 70–90° C.

cañafistula (kän-yä-fis'tū-lä), *n.* [Sp. adaptation of the botanical name.] A name applied in Guam and the Philippine Islands, and in other tropical countries settled by the Spanish, to the purging cassia (*Cassia fistula*). See *Cassia,* 1, and cut.

canage (kān'āj), *n.* [*cane*2, *n.,* + *-age.*] 1. In Scotland, the payment of rent in kind (now discontinued), or the amount so paid.—2. The exaction of the tax or duty called *cane:* as, the *canage* of wool or hides. See *cane*2.

canaglia (kä-nä'lyä), *n.* [It.] Same as ★*canaille,* 3. *B. Jonson,* Volpone, ii. 1.

canagua (ka-nä'gwä), *n.* A shiny earth of volcanic origin found in certain South American localities. Also called *koth.*

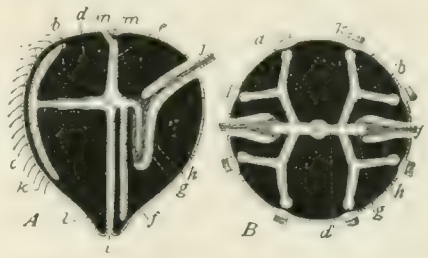
canaigre, *n.* It is native on the arid plains from Texas to California, and has become prominent as a commercial source of tannin. The tuberous roots contain about 35

Canaigre (*Rumex* [illegible]). Plant, one-eighth natural size. Root, three-fourths natural size.

per cent. of tannic acid. These had long been utilized by the Mexicans as a medicine and for tanning saddle-leather when an export trade in them was started, at first in bulk, then as dried chips, then as extract. The natural supply being insufficient, cultivation with irrigation has been undertaken on a large scale.

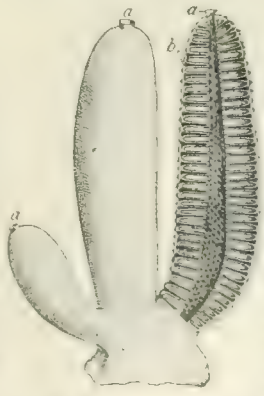
canaille, *n.* 3. A pack (as of hounds): as, the whole *canaille* of miscreants; a *canaille* (or canaglia) of poltroons.

canal1, *n.* 6. A long, narrow arm of the sea penetrating far inland: as, Lynn *canal,* Portland *canal,* etc.—**Apertural canal,** in *biol.,* a canal found in some *Gasteropoda,* for example *Aturia,* extending from the anterior peristome: caused by an inbending of the margin and serving for the lodgment of the siphon.—**Arnold's canal,** a canal in the petrous portion of the temporal bone through which passes Arnold's nerve.—**Biliary canal.** Same as *hepatic duct* (which see, under *duct*).—**Calciferous canals.** See ★*calciferous.*—**Canal of Botal.** Same as *ductus Botalli.*—**Canal of Cuvier.** Same as *ductus Cuvieri.*—**Canal of Ferrein,** a channel formed between the edges of the eyelids, when closed, and the eyeball.—**Canal of Hensen,** a minute communication between the ductus cochlearis and the sacculus in the membranous labyrinth of the ear: also called *canalis reuniens.*—**Canal of Laurer,** in certain platyhelminths, a canal leading from the oviduct to the dorsal surface, where it opens by a minute pore.—**Canal rays.** See ★*ray*1.—**Canals of Mars,** certain long, narrow dark lines upon the surface of the planet discovered by Schiaparelli in 1878. At one time they were imagined by some to be actual artificial canals. Their real nature is quite unknown.—**Canals of Recklinghausen.** (*a*) The system of canals in the cornea. (*b*) The juice-canals or ultimate radicals of the lymph-vessels.—**Canals of Schiaparelli,** Schiaparellian canals. See ★*canals of Mars.*—**Canal system.** (*a*) In corals, the network of canals permeating the porous thecæ and placing the cavities of the various zooids in communication with one another. (*b*) In sponges, all of the cavities of the body, taken collectively, traversed by the currents of water which nourish the sponge from the time they enter at the pores until they pass out at the osculum.—**Catapophysial canal.** See ★*catapophysial.*—**Centripetal canals,** in *Hydromedusæ,* canals which, in old specimens of many species, grow backward from the circular canal toward the apex of the bell but end blindly and never reach the gastric cavity.—**Cervical canal,** the passage through the neck of the womb.—**Circular canal,** in medusoids of the *Hydromedusæ,* a canal which runs around the circumference of the bell and communicates with the gastric cavity through the four perradial canals.—**Cystic canal.** Same as *cystic duct* (which see, under *duct*). **Dorsal canal,** in the arms of crinoids, the canal in which lies the nerve known as the *axial cord.* **Hemal canal.** (*a*) The canal in the vertebrate tail inclosed by the hemal ridges on the ventral side of the perichordal tube. The hemal canal contains the caudal artery and caudal vein, and in some of the lower vertebrates also a vestige of the postanal gut. See *hemal cavity.* (*b*) A channel which passes through the series of hemal arches beneath the backbone of a fish.—**Infundibular canal,** in certain ctenophorans, a tube leading from the infundibulum to the aboral pole where it branches and opens to the exterior through excretory pores.—**Jacobson's canal,** a canal in the petrous portion of the temporal bone giving passage to Jacobson's nerve.—**Juice-canals,** minute channels in the connective tissue, believed to constitute the ultimate radicals of the lymphatic system.—**Laurer's canal,** in trematodes, a small paired or unpaired canal, of undetermined function, opening externally in the dorsal middle line by a minute pore or laterally through two warts on the sides of the body, and internally into the oviduct, where it joins the yolk-ducts, or into the yolk-ducts near this point.—**Medullary canal.** Same as *medullary cavity* (*b*).—**Meridional canal,** in ctenophorans, one of the branches of



Meridional Canal, *Hormiphora plumosa,* diagrammatic longitudinal (*A*) and transverse (*B*) sections. The ectoderm is dotted, the endoderm striated, the mesoglea black, and the muscular axis of the tentacles gray. *a,* meridional canal; *b,* interradial canal; *c,* adradial canal; *d,* perradial canal; *e,* infundibular canal; *f,* stomodeal canal; *g,* tentacular canal; *h,* tentacular sheath; *i,* mouth; *j,* tentacle; *k,* swimming-plate; *l,* stomodæum; *m,* sense-organ; *n,* excretory pore; *o,* infundibulum. (From Parker and Haswell's "Zoology.")

the enteric system extending upward and downward beneath the corresponding swimming-plate.—**Nutrient canal.** Same as *Haversian canal.*—**Obstetric** or **parturient canal,** the channel formed, after complete dilatation of the os, by the cavity of the uterus and the vagina.—**Pore-canal,** a canal leading from the cavity of the proboscis, collar, or other part of the body of *Adelochorda* and opening to the exterior by a pore.—**Pulp-canal,** the canal which runs through the root of a tooth and gives passage to the nerves and blood-vessels of the pulp-cavity.—**Radial canal.** (*a*) In echinoderms, one of the aquiferous canals running from the circumoral water-canal to the tube-feet. (*b*) In sponges, one of the canals which are continuous with the paragastric cavity, as distinguished from an incurrent canal.—**Sensory canal,** any of the numerous tubes found just beneath the skin of fishes, as the lateral-line canal. They contain nerve-endings and are usually filled with mucus. *Proc. Zool. Soc. London,* 1897, p. 271.—**Serous canals.** Same as *juice-*★*canals.* **Stomodeal canal,** in ctenophorans, one of the two canals given off by the perradial canals and passing downward, parallel to and in close contact with the stomodæum.—**Subtentacular canal,** in crinoids, one of a pair of canals, prolongations of the cœlom into the arms and pinnules, separated from each other by a median septum underlying the ambulacral groove.—**Tentacular**



Radial canal. [illegible] the osculum, and the position of the incurrent and radial canals; the former indicated by the black bands, the latter [illegible] (From Parker and Haswell's "Zoology.")

canal. (*a*) See *tentacular.* (*b*) In ctenophorans, a branch of the peradial canal extending into the base of the corresponding tentacle. **Tympanic canal.** Same as *Jacobson's* ★*canal.* **Vestibular canal.** Same as *nasogenital sinus.* **Volkmann's canal,** one of the nutrient canals in the periosteal layer of bone which does not form the center of a Haversian system.

canalage (ka-nal′āj), *n.* [*canal* + *-age.*] 1. Canals as a means of transportation.—2. Canal dues.—3. The cost of transportation by canal.

canal-boat, *n.*—**Canal-boat scales,** an arrangement of a canal-lock which makes it possible to weigh a canal-boat.

canal-cell (ka-nal′sel), *n.* See ★*cell.*

canaler, canaller (ka-nal′ėr), *n.* [*canal* + *-er*[1].] 1. A canal-boat.

At the wharf-boat were one or two dim lanterns, and near the bow of each *canaler* was a lantern of uncertain hue, but intended to be white.
The Century, Aug., 1887, p. 487.

2. One employed on a canal boat or engaged in the business of canal transportation.

After making a tour of the water front with Captain C., the old-time *canaller*, Mr. C. announced that he would call a meeting of maritime interests next week to frame a petition to the special session of the Legislature.
N. Y. Times, June 29, 1905.

canalete (kä-nä-lā′tā), *n.* [Venezuelan.] Same as *paddlewood.*

canaliculation (kan-a-lik″ū-lā′shon), *n.* A minutely grooved or chambered formation.

canalicule (ka-nal′i-kūl), *n.* [L. *canaliculus*, a small channel.] A small canal.

canaliculization (kan-a-lik″ū-li-zā′shon), *n.* [*canaliculus* + *-ize* + *-ation.*] The formation of canaliculi in cartilage, constituting the preliminary stage of ossification.

Canaliculus laqueiformis, the loop-tubule of Henle; that part of the uriniferous tubule which bends upon itself.

canaliform (ka-nal′i-fôrm), *a.* [L. *canalis*, a canal, + *forma*, form.] Having the form of a canal or of a tube.

canalization, *n.* 3. In *neurol.*, figuratively, the formation or opening of a path of nervous conduction or nervous discharge.

Under suitable conditions, the stimulation may strike out new paths within the central substance; we may accordingly designate this latter effect of practice, in contradistinction to direct practice by repetition of function, as path-making or *canalization.*
W. Wundt (trans.), Physiol. Psychol., p. 100.

4. In *surg.*, drainage by means of artificially formed channels without the insertion of tubes.

canalize, *v.* **II.** *intrans.* To form a channel or canal. *Buck*, Med. Handbook, II. 255.

canaller, *n.* See ★*canaler.*

canapés (kan-ä-pā′), *n. pl.* [F., lit. 'canopies': see *canopy.*] Narrow slices of thin bread toasted or fried in hot fat or dipped in melted butter, browned in the oven, and then covered with a seasoned mixture of cheese, ham, sardines, or anchovy and served hot.

canard (ka-närd′), *v. i.* [F. *canarder*, < *canard*, duck, false report: see *canard*, *n.*] 1. To fly or float about, or circulate as a canard or false report: as, certain stories *canarding* about the hotels.—2. To imitate or produce the peculiar harsh cry of the duck, as an unskilled player on a wind-instrument.

Right before the window . . . is a ragged starveling *canarding* on a clarionet. *Fraser's Mag.*, XXIII. 399.

canary. **I.** *n.* 8. In Australia, a name of *Clitonyx ochrocephala*, a relative of the lyre-bird.—**Belgian canary,** a breed of canary-birds of Dutch origin, bred chiefly for shape and pose, and having a small head and a long body.—**Norwich canary,** a breed of canary-birds named from Norwich, England, bred for size and color rather than for song. There are three varieties, the clear yellow, the variegated, and the crested.

II. *a.* **Canary archil.** See ★*archil.*

canary-grass, *n.* The reed canary-grass (also called *reed-grass*) is widely diffused in wet places over the northern hemisphere. In the northwestern United States it is called *crazy-grass*, on account of its supposed effect on horses, which, however, is probably due to ergot with which it is infested. The *Southern* or *American canary-grass*, *Phalaris Caroliniana*, ranging through the Southern States to California, is regarded in the Eastern States as valuable for winter and spring pasture. This, or a form with an inflorescence appearing much like *Phleum*, is called *Southern* or *Apache timothy.* The blue or purple canary-grass is *Phalaris amethystina*, a native Californian species of moderate value. *P. minor* and *P. paradoxa* are Mediterranean species introduced into California.

canary-vine (ka-nā′ri-vīn), *n.* [Supposed to have been brought from the Canary Islands.] The climbing fumitory, *Adlumia fungosa.* See *Adlumia.*

canaut, kanaut (ka-nât′), *n.* [Hind., Ar. *qanāt.*] The side of a tent, or of a canvas inclosure. *Yule and Burnell.* [Anglo-Indian.]

cancan (kan′kan), *v. i.*; pret. and pp. *cancanned*, ppr. *cancanning.* [*cancan*, *n.*] To perform the dance known as the *cancan* (which see).

cancel, *n.* 4. An order canceling or countermanding a previous order.

If an order is fairly executed it is a rare thing to receive a *cancel.* *Manchester Examiner*, May 12, 1884.

cancel, *v. t.* 5. (*a*) In *printing*, to mark on copy or proof (words or lines that are to be omitted). (*b*) In *bookbinding*, to destroy (a leaf or section that is to be entirely suppressed).

cancelable, cancellable (kan′sel-a-bl), *a.* That may be canceled; capable of being canceled, crossed out, or rendered null or void.

canceler†, *v. t.* 2. Figuratively, to turn aside; digress.

canceling-press (kan′sel-ing-pres″), *n.* A machine for defacing the stamps on letters or postal matter in order to prevent their re-use.

cancellation, *n.* 3. In gastropods, the system of intersecting ridges on the surface of the shell.

Of the ten or twelve examples we have examined, two only possess the epidermis; this is dark fuscous, covering the whole surface, and emitting a bristle at regular intervals on the three spiral ribs, viz. at the point of junction with the *cancellations.*
Proc. Zool. Soc. London, 1901, II. 361.

cancer, *n.* 3. The term *cancer*, as commonly employed, includes those new growths which possess certain attributes that render them especially dangerous to life, and which are therefore called *malignant.* Malignant tumors growby infiltration and destruction of the surrounding tissues, and are characterized by a tendency to recur after removal, by the property of spreading to other parts of the body by a process of dissemination known as *metastasis*, and by producing a general disturbance of health termed *cachexia.* From the standpoint of the pathologist two chief groups of cancerous tumors are recognized: the carcinomata, or true cancers, and the sarcomata. The fundamental difference between these two is the fact that carcinoma originates in the epithelial tissues of the body, whereas sarcoma develops from the connective tissues. This difference in origin gives rise to certain structural characteristics which enable the microscopist readily to distinguish one type from the other. Carcinoma is rare before the age of thirty; it is somewhat commoner in women than in men; and it is most often seen in the uterus, skin, breast, and stomach. Sarcoma is a disease of early adult life, is more prone to attack men than women, and is commonly found in the subcutaneous tissue, bony structures, and lymph-nodes. Carcinoma is conveyed from one part of the body to another through the lymphatic vessels, sarcoma by way of the blood-stream. In spite of an enormous amount of research devoted to this subject, the exciting cause of cancer is still unknown. The influences of heredity, climate, food, race, social condition, and local injury have all been invoked as factors concerned, but without arriving at any degree of certainty. The theory referring the development of malignant tumors to the presence of minute animal or vegetable organisms has numerous adherents, but it has not been definitely established, and many prominent authorities consider that the explanation is to be sought for in a disturbance of some still undiscovered fundamental law governing the growth of cells. Although it appears that cancer is increasing somewhat in frequency, the percentage of cures is increasing much more rapidly, owing to the earlier diagnoses and more thorough operations which are now possible. Extirpation by the knife as promptly and as completely as possible, when the growth is accessible, is regarded as the method of treatment that offers the greatest hope of a cure; but the employment of the X-rays or other form of radioactivity has in a number of instances given excellent results.

5. Figuratively, a moral or social evil likened to a cancer in its malignant character and corroding tendency: as, "sloth is a *cancer*," *Bp. Ken.*—**Acinous cancer,** a malignant growth originating in the epithelium of acinous glands.—**Areolar cancer,** Same as *colloid cancer.*—**Calms of Cancer.** See ★*calm*[1].—**Cancer aquaticus.** Same as *noma.*—**Cancer en cuirasse** or **cuirass cancer,** a superficial scirrhous cancer involving a wide area of the anterior chest-wall, it resembles remotely a shield.—**Cancer Galeni.** Same as *Galen's* ★*bandage.*—**Cellular cancer, cerebriform cancer.** Same as *encephaloid cancer.*—**Chimney-sweeps' cancer,** epithelioma of the scrotum. **Chondroid cancer,** a form of scirrhous cancer having a texture like that of cartilage.—**Cylinder-cell cancer.** Same as *cylindroma.*—**Cystic cancer.** Same as *colloid cancer.* **Dendritic cancer,** malignant papilloma.—**Epithelial cancer,** a malignant growth originating in squamous or cylindrical epithelium; epithelioma.—**Fungous cancer.** Same as *fungus hematodes.* **Glandular cancer.** Same as *adenocarcinoma* and *adenosarcoma.* **Green cancer.** Same as *chloroma.* **Hard cancer.** Same as *scirrhus.* **Hematoid cancer.** Same as *fungus hematodes.*—**Mucous cancer.** Same as *colloid cancer.* **Papillary cancer,** malignant papilloma.—**Pigmentary cancer.** Same as *melanocarcinoma* and *melanosarcoma.* **Rodent cancer.** Same as *rodent* ★*ulcer.* **Soft cancer.** Same as *encephaloid cancer.*—**Spider cancer,** a form of nævus marked by a central red area with red lines radiating from it. It is not of a cancerous or malignant nature. Also called *spider nævus.*—**Tubular cancer.** Same as *cylindroma.*

cancer (kan′sėr), *v. t.* To corrode or eat into, in the manner and with the steadily destructive persistency of a cancer.

Other things advance per saltum—they do not silently *cancer* their way onwards.
De Quincey, Works, III. 280.

cancer-drops (kan′sėr-drops), *n. pl.* Same as *beech-drops.*

cancered (kan′sėrd), *a.* Affected with a cancer.

Your lordship must have taken notice of a paragraph in the papers with regard to the application of toads to a *cancered* breast.
Goldsmith, Hist. Fishes, Reptiles, Insects, p. 215.

cancer-jalap (kan″sėr-jal′ap), *n.* The pokeweed, *Phytolacca Americana.*

cancer-nest (kan′sėr-nest), *n.* A rounded mass of concentrically arranged cells found in certain cancerous growths.

The second is the finding of *cancer nests* in the stomach contents; but several of these should be found before a positive diagnosis is made.
Med. Record, Feb. 14, 1903, p. 280.

Cancerous cachexia. See ★*cachexia.*

cancer-parasite (kan′sėr-par″a-sīt), *n.* A general name, of no classificatory value, given by different observers to various bodies found in or among the cells of cancerous growths, on the supposition that they were parasitic organisms and the cause of the growths.

cancer-serum (kan′sėr-sē″rum), *n.* An antitoxic serum supposed to be curative of cancer.

cancha (kän′chä), *n.* [Quichua (of Peru and Bolivia) *cancha*, a yard, cattle-yard, churchyard, etc. (Tschudi).] An inclosure for cattle, etc.

cancrite (kang′krīt), *n.* [L. *cancer*, a crab, + *-ite*[2].] A fossil crab or other crustacean, or a fossil body resembling a crab.

cancro, *interj.* [It.] An imprecation meaning originally 'the cancer (take you)!'

Cancro! What, thy husband's body!
Chapman, Widow's Tears, vi. 1.

Cancroid corpuscles. Same as ★*cancer-nests.*

c. and b. In *cricket*, an abbreviation of *caught and bowled*, a phrase applied to the batsman when he is caught out by the bowler.

candescence, *n.* 2. The luminescence of radioactive substances; autoluminescence. *The Reader*, May, 1904, p. 620.

Candia carrot. See ★*carrot.*

candicans (kan′di-kanz), *n.* [L., ppr. of *candicare*, be whitish, < *candere*, be white: see *candent*, *candid.*] Same as *albicans.*

candid, *a.* 4. Pure; clear; fair.

Where does the figment touch her *candid* fame?
Browning, Ring and Book, IX. 475.

candidate, *n.* 2. One who seeks or is an aspirant for something other than office or preferment: as, a *candidate* for literary fame; "a *candidate* of heaven." *Dryden.*

And whether the happiness of a *candidate* for literary fame be not subject to the same uncertainty.
Johnson, Rambler, No. 21.

3†. A member of the white-robed body-guard of the Roman emperors, established about 237 A. D. by Gordianus the Younger. *Blount.*

candier (kan′di-ėr), *n.* One who candies. *Florio.*

candil (kän-dēl′), *n.* [Sp., a lamp, < Ar. *qandīl*, a lamp, < L. *candēla*, a candle: see *candle.*] In the West Indies, a Spanish name of the flame-colored fish *Myripristis jacobus*, of the family *Holocentridæ.* The name is also applied to the common red soldier-fish or squirrel-fish, *Holocentrus ascensionis.*

can-disk (kan′disk), *n.* In *cotton-manuf.*, the revolving plate on which a sliver-can is placed as part of the coiler-motion.

candle, *n.*—**Association candle.** Same as *German candle.* See *standard* ★*candle.*—**British standard candle.** See *standard* ★*candle.*—**Composite candle,** a candle made of two materials of different fusibility, as hard stearic acid from tallow and stearin from cocoanut-oil. **Decimal candle.** Same as *bougie décimale* (which see, under ★*light standard*). **Drawn candle,** a candle made by winding a long wick off one cylindrical drum to another, drawing it through a pan of melted wax, and stripping off the excess of wax which adheres to the wick by passing it through holes of proper diameter in a perforated plate. The process is applied chiefly to the manufacture of lighting-tapers, or spills, and the small candles used on Christmas trees, and for these stearic acid or paraffin is often substituted for wax. **English candle.** See *standard* ★*candle.* **German standard candle.** See *standard* ★*candle.* **Green candle,** in *photom.*, a standard of light sometimes used in the comparison of dissimilar light-sources. It consists of a standard candle the rays from which pass through a screen of green glass.—**Hemispherical candle,** a unit of light-flux in which the source is a standard candle and the unit of solid angle is the angle subtended by a hemisphere. The British hemispherical candle is approximately 7.14 lumens. The term is sometimes used as the equivalent of *mean hemispherical intensity*, in which case the mean radius vector of the surface of hemispherical distribution is meant. See ★*illumination.* **Iodine candle,** a candle in which iodine has been intermixed with the grease or paraffin, so that as the candle burns the disinfecting vapor of iodine is given off.—**Medicated candle,** a candle made from combustible material to which some substance,

such as iodine or eucalyptus-oil, has been added, in order to evoke disinfectant vapor when the candle is burned in a sick-room. **Munich candle.** See *standard* ★*candle*.

Red candle, a photometric candle screened with red glass to permit an unpractised eye more readily to compare the relative intensity of lights. **Spherical candle,** a unit of light-flux in which the source is a standard candle and the unit of solid angle is the angle subtended by a sphere. The British spherical candle is approximately 14.28 lumens. The term is sometimes used as the equivalent of *mean spherical intensity*, in which case the mean radius vector of the surface of spherical distribution is meant. See ★*illumination*. **Standard candle,** a candle used in photometry as a standard of illuminating power. For many years the recognized legal standard in England and the United States has been the light of the British standard candle, and in Prussia that of a standard candle known as the 'union-candle' (*Vereinskerze*). In France a standard candle called the 'star-candle (*bougie de l'étoile*) has been much used in photometry. The British standard candle is made of spermaceti wax extracted from crude sperm-oil and having a melting-point between 112° and 115° F. A sufficient quantity of beeswax is added to prevent undue brittleness. The candle is made in a conical mold 10 inches long and .9 inch in diameter at the bottom and .8 inch in diameter at the top. The wick is of plaited cotton so constructed as to supply 1.20 grains of the melted wax per hour, under normal conditions of burning. The German candle (*Vereinskerze*) is made of paraffin having a melting-point of 55° C. It has a diameter of 20 millimeters and is 314 millimeters long. The wick is of twisted cotton consisting of 25 threads, and when burning under normal conditions the height of the flame should be 50 millimeters. Another standard candle, formerly used in Germany, is the Munich candle. It is a conical candle of stearin, 20.5 millimeters in diameter at the top and 23 millimeters at the base. The wick is made of 50 strands. The normal consumption is from 10.2 to 10.6 grains an hour and the normal flame-height 56 millimeters. The French star-candle is also of stearin, of which material it should burn 10 grains an hour and have a flame-height of 52.4 millimeters. It is impossible to give a definite comparison of the various standard candles, on account of the variable performance of these sources of light. Candles taken from the same package often differ in brightness by from 10 to 15 per cent. The following table contains the results of the attempts of three well-known observers to compare the candles used in different countries, taking the Munich candle as a unit. (The data are from Palaz, "Industrial Photometry," p. 131.)

Candle	Schilling.	Kress	Vernon
Munich	100.00	100.00	100.00
German (*Vereinskerze*)	88.7	97.6	96.5
British	90.7	85.8	94.4

For other standards of photometric intensity, see ★*light standard*. **Star-candle.** See *standard* ★*candle*. **Sulphur-candle,** a medicated candle with the fatty material of which sulphur has been mixed, so that as the candle burns sulphur dioxid is given off, serving as an atmospheric disinfectant. For this purpose cylinders made of sulphur and charcoal in powder, with the addition of a very little niter, are also sometimes used.

candle (kan'dl), *v. t.*; pret. and pp. *candled*, ppr. *candling*. To examine (an egg) in an egg-tester by means of a lighted candle to determine its freshness. See ★*egg-candling*.

candle-carriage (kan'dl-kar″āj), *n.* In *photometry*, a carriage supporting the standard candle or pair of candles. *W. L. Dubdin*, Public Lighting, p. 48.

candled (kan'dld), *p. a.* Tested by means of a lighted candle: as, *candled* eggs.

candle-foot (kan'dl-fût), *n.* A unit of illumination; the illumination from one standard candle at a distance of one foot. The British candle-foot is about 12.2 luxes. See ★*illumination*, 1. Also *foot-candle*.

candle-hour (kan'dl-our), *n.* In *photom.*, a unit of quantity of light; the energy derived in one hour from the total light-flux from a source of light of one candle-power.

candle-meter (kan'dl-mē″tèr), *n.* A unit of illumination; the illumination from a standard candle at a distance of one meter. See ★*illumination*, 1. Also called *meter-candle*.

candlenut-oil (kan'dl-nut-oil), *n.* A limpid fixed oil with properties similar to castor-oil, obtained from the nuts of *Aleurites Moluccana* (*Euphorbiaceæ*), a tree growing in the tropics. The natives of the South Sea Islands tie the nuts, which contain over 50 per cent. of oil, on the ends of sticks and use them as candles. Also known as *chinese-oil*, *artist's oil*, and *country-walnut oil*.

candle-power, *n.*—**Horizontal candle-power,** the intensity of a source of light as determined by photometric measurements in the horizontal plane.—**Mean horizontal candle-power,** the mean value of the radius vector of the polar curve of horizontal distribution of light; the average value, expressed in candle-power, of the horizontal intensity of a source of light. **Mean spherical candle-power,** the mean spherical intensity of a source of light, expressed in candle-power; the mean radius vector of the surface of spherical light-distribution of a source of light. See ★*illumination*. **Spherical candle-power.** See ★*light standard*. **Zonal candle-power,** the photometric intensity, in candles, of a source of light, averaged for a given zone upon the imaginary sphere of which the source is the center; the zonal light-flux from a source divided by the area of the zone.

candler (kan'dlèr), *n.* One who candles (eggs). See ★*egg-candler*.

candle-snuff (kan'dl-snuf), *n.* The burnt wick of a candle.

candle-waster, *n.* **2.** A small part of burnt wick that comes into contact with the melting wax or tallow of a candle and causes it to run.

candle-wick (kan'dl-wik), *n.* [ME. *candylweke*, AS. *candelweoca*.] The wick of a candle.

Beg my pardon, or be sure a kindly bullet through your skull
Lets in light and teaches manners to what brain it finds;
Choose quick—
Have your life snuffed out or, kneeling, pray me trim you *candle-wick!* *Browning*, Clive, l. 124.

candlewood, *n.* **3.** Any resinous wood used for torches or as a substitute for candles.

Candollea (kan-dō'lē-ä), *n.* [NL. (Labillardière, 1805), named after the Swiss botanist Augustin Pyramus de Candolle (1778–1841).] A genus of dicotyledonous plants belonging to the family *Candolleaceæ*, of which it is the type. See *Stylidium*.

Candolleaceæ (kan-dō-lē-ā'sē-ē), *n. pl.* [NL. (Schönland, 1889), < *Candollea* + *-aceæ*.] A family of dicotyledonous sympetalous plants of the order *Campanulales*, typified by the genus *Candollea*.

candolleaceous (kan-dō-lē-ā'shius), *a.* Belonging to the plant-family *Candolleaceæ*.

cane[1], *n.* **6.** A slender stick or rod of some substance such as sealing-wax, sulphur, glass, or tobacco.

Letters . . . concerning the effects of a *Cane* of black sealing-wax, and a *Cane* of brimstone in Electrical Experiments. *Philos. Trans.*, XLIV. i. 27.

African cane, the pearl-millet, *Pennisetum spicatum*. **Maiden cane,** a panic-grass, *Panicum dichotomum*, affording good grazing in wet places in the southern United States. **Mutton cane.** (*a*) The seedlings of the large and small canes which furnish good pasture and which are specially sought by bears. [Alabama.] (*b*) A slender panic-grass, *Panicum dichotomum*, a valuable native forage for sheep in the southern United States.—**Ribbon-cane,** a variety of sugar-cane native to America in which the stems are striped longitudinally with red and purple.—**Spanish-cane,** the reed *Arundo Donax*. **Sweet-cane.** Same as *sweet-flag*.

cane-ash (kān'ash), *n.* See ★*ash*[1].

cane-blight (kān'blīt), *n.* A disease which attacks the canes or branches of small fruits, such as currants or raspberries, ascribed to fungus parasites.

cane-borer (kān'bōr-èr), *n.* An insect which bores in the canes of plants.—**Blackberry cane-borer,** an American buprestid beetle, *Agrilus ruficollis*, which bores the canes of the raspberry, forming swellings known as gouty-galls. See *Agrilus*, with cut.—**Raspberry cane-borer,** an American longicorn beetle, *Oberea bimaculata*, whose larva bores in the canes of the raspberry and the blackberry.

Cane-brake region, specifically, an extensive belt in central Alabama and extending into Mississippi, formerly dominated by cane-brakes, but highly adapted to agriculture, and especially celebrated for the production of cotton. Also called the *black belt*, on account of the color of the soil, and (also chiefly from the character of the soil) the *prairie region*. **Cane-brake soil,** the soil of the cane-brake region, consisting typically of disintegrated rotten limestone combined with abundant humus, giving it a very black color.

cane-fruit (kān'früt), *n.* A commercial name for fruits borne by plants of the genus *Rubus*, chiefly blackberries and raspberries.

cane-knife (kān'nif), *n.* A large knife, with a wide blade and a sharp barb or hook at the back of the blade, used in cutting sugar-cane.

canellin (ka-nel'in), *n.* [*canella* + *-in*[2].] A name given to the mannite found in *Canalla alba* by Petros and Roninet, who mistook it for a peculiar kind of sugar.

canello (kä-nel'ō), *n.* [Pg. *canelo*, piece of a horseshoe, < *canela*, *canella*, cinnamon: see *cannel*[2].] A name at Goa for the pataca, equal to 4 crusados.

canephora (ka-nef'ō-rä), *n.* [L.] Same as *canephore*.

cane-press (kān'pres), *n.* In *sugar-manuf.*, a cane-mill. See *sugar-mill*.

cane-rush (kān'rush), *n.* In some American colleges, a concerted tussle between two classes in which they struggle for the retention or capture of a cane.

cane-rust (kān'rust), *n.* **1.** The anthracnose of blackberry and raspberry. See ★*anthracnose*.—**2.** The red rust of blackberries, due to the æcidial stage of *Puccinia interstitialis*.

canestrella (kan-es-trel'ä), *n.* [It., fem., < *canestrello*, m., dim. of *canestro*, < L. *canistrum*, a basket: see *canister*.] A majolica fruit-basket, usually with openwork sides.

Canes venatici (kā'nēz vē-nat'i-sī). [L.] The hunting dogs or hounds, Asterion and Cleara, a modern constellation formed by Hevelius between Boötes and Ursa Major.

Canet gun. See ★*gun*[1].

canework (kān'wèrk), *n.* **1.** Interwoven or braided strips of cane used to form or fill in the seats or backs of chairs or settles, panels in carriage-bodies, etc.—**2.** In *carriage-painting*, an imitation of braided cane painted upon a carriage-panel.

canfieldite (kan'fēld-īt), *n.* [Named after F. A. *Canfield* of Dover, New Jersey, a mining engineer.] A rare sulphid of tin and silver, containing also a small amount of germanium, found in black octahedrons with brilliant metallic luster at La Paz, Bolivia.

can-filler (kan'fil'èr), *n.* A machine used for filling cans, as with soups or vegetables, prepared paints, etc. The tank may also be fixed in one position and the cans placed on a traveling-apron or conveyer and pass under the tank to be filled.

cangenett, *n.* A distortion or misprint of *canzonet*. *Shak.*, L. L. L., iv. 2.

cangiante (kän-jē-än'te), *a.* [It. *cangiante*, changing in color.] Changeable; in *ceram.*, noting a metallic luster of changing tints, when viewed from different points, found on old Moorish and majolica wares.

cangue (kang), *v. t.*; pret. and pp. *cangued*, ppr. *canguing*. To sentence to the cangue.

can-hoop (kan'höp), *n.* An American shrub, the smooth winterberry. Also called *hoop-wood*.

canicide (kan'i-sīd), *n.* [NL. **canicida*, < L. *canis*, dog, + *-cida*, < *cædere*, kill.] A dog-killer.

The dead dog is hung by his heels, so that his nose just touches the ground, and the *canicide* is compelled to heap wheat about him, till he is entirely covered.
N. P. Willis, Summer Cruise in Medit., xli.

canicular, *a.* **2.** Relating to the dog: as, a *canicular* tale.

It is well if your friend or mistress be content with these *canicular* probations.
Lamb, Essays of Elia, Pop. Fallacies.

Canicular cycle or **period,** otherwise **Sothiac** or **Sothic period** [tr. Gr. Σωθιακὴ περίοδος, 'the dog-star period,' < Σῶθις or Σῶθις, the Egyptian name of the dog-star], a cycle recognized in ancient Egypt, equal to 1,461 years of 365 days each, or 1,460 Julian years of 365¼ days each.

canin (kä'nēn), *n.* [Tagalog *canin*, food, bread.] Rice boiled in water, eaten by the natives in place of bread. [Philippine Is.]

canine, *n.* **4.** One of the sharp teeth which project beyond the others in the jaw of a fish.

caninity (ka-nin'i-ti), *n.* Canine nature; a canine trait.

canivorous (ka-niv'ō-rus), *a.* [L. *canis*, dog, + *-vorus*, < *vorare*, devour.] Dog-devouring. *N. E. D.*

canjar (kän'jär or kun'jär), *n.* [Also canjiar, cangiar, *cunjar*, *cunger*, < Hind. **khanjar*, < Ar. *khanjar*, a dagger. The Ar. word also appears in European use as *handjar*.] A small two-edged Arab cutlass or poniard.

The marabout . . . sprung forward with the bound of a tiger, . . . and brandished aloft the *cangiar*, or poniard, which he had hidden in his sleeve.
Scott, Talisman, xxi.

canker, *n.* **1.** (*b*) (2) An irregular excrescence on the trunks or branches of woody plants, caused by the perennial effort of the tissues to overcome an injury. Cankers may be originated by various causes, such as accidental wounds, injuries by frost, insects, fungi or bacteria, or various combinations of these.

But undoubtedly the most important of the woody excrescences on trees are *cankers*. A *canker* is the result of repeated frustrated attempts on the part of the callus to heal up a wound. . . . The dead parts, of course, remain unthickened, and the portion in which the fungus is at work may for the time being grow more rapidly. Such *cankers* often commence in mere insect punctures, frosted buds, cracks in the cortex, &c., into which a germinating spore sends its hypha. *Encyc. Brit.*, XXXI. 577.

(*d*) A disease of fowls affecting the mouth and windpipe. It produces ulceration and often ends in death.—**Apple-tree canker,** a disease of the apple-tree which usually causes the rupture of the bark and the death of larger or smaller areas of the wood. One form is attributed to the fungus *Sphæropsis Malorum*, another to *Nectria ditissima*. It has been shown that some cankers are produced by bacteria.—**Hemp canker,** a destructive disease of hemp due to a species of *Sclerotinia*. **Ivy canker,** a disease of unknown origin producing cankerous growths upon ivy twigs, which may result in the death of the plant.—**Larch canker,** a cankerous formation on the larch, said to be due to the discomycetous fungus *Dermatea Willkommii*.—**Oak canker,** a disease of twigs and young stems of oak, attributed to the pyrenomycetous fungus *Diaporthe Taleda*. **Plum canker,** a disease of plum trees said to be due to *Nectria ditissima*.

canker-sore (kang'kèr-sōr), *n.* Aphthous ulcer of the mucous membrane in the angle between the lip and the gum.

cannabin, *n.* **2.** A brown liquid alkaloid said to be isolated from Indian hemp, *Cannabis Indica*. It is hypnotic. **Cannabin tan-**

nate, a yellowish-gray bitter and astringent powder of undetermined composition, prepared by precipitating a solution of cannabin with tannic acid. It is hypnotic and narcotic.

cannabinaceous (kan-a-bi-na'shius), *a.* Of the nature of or resembling plants of the hemp family.

cannabindone (kan-a-bin'dōn), *n.* [Appar. < NL. *cannab(is) ind(ica)* + *-one.*] A red syrup-like compound, $C_8H_{12}O$, obtained from Indian hemp. It has a narcotic effect.

cannabinine (kan-a-bin'in), *n.* [*cannabin* + *-ine*².] A volatile alkaloid found in small quantities in Indian hemp.

cannabinol (kan'a-bi-nōl), *n.* [*cannabin* + *-ol.*] A colorless resinous and very poisonous compound, $C_{21}H_{26}O_2$, found in Indian hemp (*Cannabis Indica*).

cannabism (kan'a-bizm), *n.* [L. *cannab(is)* + *-ism.*] Addiction to the use of Indian hemp or hashish.

Cannaceæ (ka-nā'sē-ē), *n. pl.* [NL. (Link, 1821), < *Canna* + *-aceæ.*] A family of monocotyledonous plants of the order *Scitaminales*, the canna family, containing the single genus *Canna* (which see).

canna-disease (kan'ä-di-zēz'), *n.* See ★*disease.*

canned (kand), *p. a.* Packed in cans or tin boxes. **Canned goods**, articles of food, chiefly meats, fish, vegetables, and fruit, preserved by inclosure in tin cans or other vessels, which are heated to or somewhat beyond the boiling-point of water and while at that temperature are sealed, generally by soldering, thus destroying the vitality of ferment-organisms and excluding air. The manufacture of such goods is now very extensive, some 72,000,000 cans of peas, 235,000,000 cans of tomatoes, 264,000,000 cans of sweet corn, and 206,000,000 cans of salmon alone being put up annually in the United States. Called in Great Britain *tinned goods.*

cannelon (kä-nel-on'), *n.* [F. *cannelon*, a channeled mold for cheese; Pg. *canelões*, pl. (see def. 2) < *canela*, cinnamon: see *cannel*².] **1.** Puff-paste baked in the form of a cane.—**2.** A sort of cake. See the extract.

Canelões, s. pl. *canelons*, great long comfits, with pieces of cinnamon mixed in them; so they also called the pieces of citron covered with sugar and some other dainties which made part of a festival.
Lacerda, New Dict. Port. and Eng. Lang., p. 191.

canner (kan'ėr), *n.* One who cans fish, meat, fruit, or other things for preservation.

Cannibal apple. See ★*apple.*

cannibal-bug (kan'i-bal-bug), *n.* Any one of the predatory heteropterous insects of the family *Reduviidæ*. Also called *pirate-bug* and *assassin-bug*. Familiar examples are the 'cone-noses' (*Conorhinus*), and the 'kissing-bug.'

cannibalic (kan-i-bal'ik), *a.* Of or pertaining to a cannibal; characteristic of a cannibal.

cannibality (kan-i-bal'i-ti), *n.* Cannibalism; the eating of human flesh. *N. E. D.*

Cannon dollar. See ★*dollar.*—**Nursery cannons**, in English *billiards*, caroming by keeping the balls together. **Revolving cannon.** See *machine-gun.*

cannon, *v.* **II.** *trans.* In loading logs by steam- or horse-power, to send up (a log) so that it swings crosswise, instead of parallel to the load.

cannonarchy (kan'on-ärⁿki), *n.* [*cannon* + Gr. *-αρχία*, rule.] Government by military force: as, "the *cannonarchy* of Napoleon," *Mrs. Gore.* [Rare.]

cannoned (kan'ond), *p. a.* Furnished with or defended by cannon.

There, where Gibraltar's *cannon'd* steep
O'erfrowns the wave.
M. Arnold, Southern Night, st. 6.

Cannstatt skull. See ★*skull*¹.

Canoe landau. See ★*landau.*—**Double canoe**, a peculiar form of canoe used in some of the Polynesian islands, consisting of two canoes connected by a platform. Only one of the canoes is provided with a sail, while the other serves the purpose of an outrigger.

canoe-burial (ka-nō'berⁿi-al), *n.* The custom of depositing corpses in canoes, practised by the Indians of the coast of Washington.

canomai (kä-nō'mī), *n.* [Bisaya.] In the Philippine Islands, a tree, *Diospyros multiflora*, belonging to the ebony family, having dark, ebony-like heart-wood striped with lighter bands. The fruit is used by the natives to intoxicate fish.

canon¹, *n.*—**Double canon**, in *music*, a canon with two subjects used nearly simultaneously.—**Infinite canon.** Same as *circular canon* (which see, under *canon*¹).

Cañon spring. See ★*spring.*

cañon, *v. i.* **2.** To become narrow and steep-walled: said of a valley.

cañon-finch (kan'yon-finch), *n.* The southwestern towhee, *Pipilo fuscus mesoleucus*. Also called *cañon-towhee.*

canonic, *n.* **2.** (*a*) The theory of music. (*b*) One who practises music.

Canonical distribution, in *math.*, a distribution of groups of systems in statistical mechanics, such that the index of probability of phase is a linear function of the energy.

This distribution, on account of its unique importance in the theory of statistical equilibrium, I have ventured to call *canonical*. *J. W. Gibbs*, Statistical Mech., p. xi.

Canonical ensemble, in *statistical mechanics*, an ensemble of systems so distributed that the index of probability of phase is a linear function of the energy.

canonics (ka-non'iks), *n.* In *theol.*, the study of the formation and authority of the canon of Scripture.

canonist, *n.* **2.** One who lays down canons or laws for guidance in the systematic or scientific treatment of a subject. *Horne Tooke.*

canonistical (kan-o-nis'ti-kal), *a.* Relating to canonists or to their expositions of the canons.

cañon-towhee (kan'yon-tou'ⁿhē), *n.* Same as ★*cañon-finch.*

cañon-valley (kan'yon-valⁿi), *n.* A narrow, steep-walled valley.

Mother-Lode (Cal., Ransome) exhibits parts of the uplifted and dissected peneplain of the Sierra Nevada; it was strewn with gravels and flooded with lavas and volcanic conglomerates before uplift; it is now trenched by *canyon-valleys.* *Science*, June 14, 1901, p. 950.

canoodle (ka-nō'dl), *v.*; pret. and pp. *canoodled*, ppr. *canoodling.* [Origin obscure.] **I.** *trans.* **1.** To pet; fondle.—**2.** To paddle (a canoe). [A punning use.]

II. *intrans.* **1.** To bill and coo; spoon.

Now Emperor William wants to kiss his majesty, the Sultan, who he says is a daisy of moderation. The first thing Germany knows, William will be rushing off to *canoodle* with Mr. Gladstone's "Assassin!"
Daily Newspaper.

2. To go snacks; share the profits. [Slang in all uses.]

canoodler (ka-nōd'lėr), *n.* One who canoodles. [Slang.]

canope (ka-nōp'), *n.* Same as ★*canopus*².

Under a block of stone I came across a chest containing *canopes.* *J. de Morgan*, Smithsonian Rep., 1896, p. 602.

canophilist (ka-nof'i-list), *n.* [L. *canis*, dog, + Gr. *φιλεῖν*, love, + *-ist.*] One who loves dogs.

A distinguished author, well known as a *canophilist.*
Lindsay, Mind in the Lower Animals, I. 24.

canopus² (ka-nō'pus), *n.* [NL., also *canopos*; a back-formation from *Canopicus*, Canopic: see *Canopic.*] In *Gr. archæol.*, a modern name for a cinerary jar representing the human figure, somewhat like the ancient Egyptian Canopic vases.

Canopy standard, in *carriage-making*, a light iron or steel post with bolts and nuts on the lower end and flat-turned lugs at the top. **Canopy top**, in *carriage-making*, a light top made with ribs like an umbrella, or on a light frame, and attached to the carriage-body by one or more iron posts.

canroy (kan'roi), *n.* [Origin not ascertained.] A machine for brushing the lint from the surface of cotton cloth: used in calico-printing establishments preparatory to printing. *G. Duerr*, Bleaching and Calico-printing, p. 26.

cant¹, *n.* **11.** An oblique line which cuts off a corner of a rectangle; an oblique side of a polygon; an oblique plane which cuts off the corner of a cuboid; an oblique face of a crystal; a slanting face of a bank.—**12.** A sudden movement, as on board ship, resulting in a tilting up.—**13.** One of the pieces which form the ends of the buckets on a water-wheel.

cant¹, *v. t.*—**Canting motion.** See ★*motion.*

cant², *n.* **6.** A canting person.

cant⁶ (kant), *n.* **1.** A portion, share, or division; a parcel or bundle: as, a *cant* of hay; a *cant* of growing grain assigned to a reaper. [Chiefly dialectal.]—**2.** In *civil law*, a method of partitioning property the title to which is vested in two or more parties in common.

Cant. An abbreviation of *Canticles.*

cantabile, *a.* **II.** *n.* A piece or passage of music in a flowing, song-like style.

Cantabrize (kan'ta-brīz), *v. i.* [NL. *Cantabr(igia)*, Cambridge, + *-ize.*] To imitate or pattern after Cambridge or its university. *Fuller*, Ch. Hist., IX. vii. § 47.

Cantal cheese. See ★*cheese*¹.

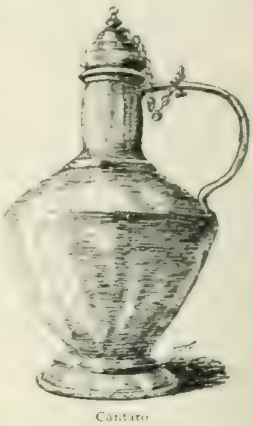
Cantaliver crane. See ★*crane*².

cantankerate (kan-tang'ke-rāt), *v. t.*; pret. and pp. *cantankerated*, ppr. *cantankerating.* To make cantankerous; provoke to anger; 'rile.'

You may happify your enemies, *cantankerate* your opponents, and injure your own cause by it.
Haliburton, Clockmaker, XXIV.

cantankersome (kan-tang'kėr-sum), *a.* Cantankerous. [U. S.]

cantaro (kän'tä-rō), *n.* [Sp. *cántaro* = It. *cantaro*, < L. *cantharus*, < Gr. *κάνθαρος*, a pot, tankard: see *cantharus.*] A vessel of hammered brass or copper used in Spain for holding or carrying water.


Cantaro

Cantate Sunday. See ★*Sunday.*

cantator (kan'ta-tōr), *n.* [L.] A male singer. [Rare.]

cantatorium (kan-ta-tō'ri-um), *n.*; pl. *cantatoria* (-ä). [ML.] A Roman Catholic service-book including the antiphons and the gradual.

cant-board, *n.* **2.** In *carriage-making*, a board upon which are placed the geometrical lines that govern the framing and the exterior curved surface of a coach or other carriage-body of a similar character.

cantem, kantem (kan'tem), *n.* [Belgian, appar. from a Picard form of F. *centime.*] The Belgian centime.

canter¹, *v. i.*—**Cantering rhythm.** See ★*rhythm.*

canter⁴ (kan'tėr), *n.* In a *sawmill*, a machine placed over the carriage and used to cant or roll over the log on the carriage in making the first cuts; a canting-machine. It consists of a chain wound round a drum or shaft and carrying, at the end, a cant-hook that engages the log, the revolution of the shaft lifting the chain and hook and turning the log.

Canterburian (kan-tėr-bū'ri-an), *a.* **1.** Of or pertaining to the city of Canterbury in England, the seat of the Anglican archbishop who is also the Primate of all England.—**2.** Of or pertaining to the archiepiscopal see itself.

Canterburianism (kan-tėr-bū'ri-an-izm), *n.* [*Canterburian* + *-ism.*] The High-churchism of England during the seventeenth century as represented by the see of Canterbury.

The *Canterburianism* of the times of Charles the First did that hapless monarch much harm.
Hugh Miller, First Impressions, xx.

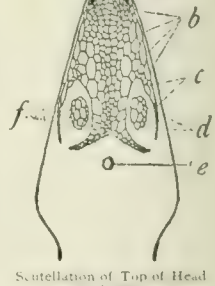
Canterbury tale. See ★*tale*¹.

canteroy (kan'te-roi), *n.* [In Mysore *Kanthiravi kun*, named from *Kanthiravā Rāyā*, 'the lion-voiced king,' who reigned in Mysore from 1638 to 1659 (Skt. *kanthīrava*, lion, < *kantha*, throat, + *rava*, noise).] A name in Mysore for an Indian gold coin, the sultani fanam.

canthal (kan'thal), *a.* [Gr. *κανθός*, the angle of the eye, + *-al*¹.] **1.** Of or relating to a canthus, in any use of that word.

A black *canthal* and temporal streak [is] sometimes present.
Proc. Zool. Soc. London, 1903, p. 126.

Canthal scale, canthal shield, a scale covering or lying on the *canthus rostralis*, that angular part of a reptile's head which lies in front of the eye and between the top and side of the head. The relations of this scale or scales are much used in giving the characters of reptiles.



Scutellation of Top of Head of Anolis

a, rostral; *b*, canthus rostralis; *c*, superciliaries; *d*, scutellum; *e*, occipital; *f*, supraorbital semicircle.

cantharene (kan'tha-rēn), *n.* [*canthar(ic)* + *-ene.*] Dihydro-orthoxylene, $C_6H_6(CH_3)_2$. It is obtained by heating cantharic acid with lime. It has an odor like that of turpentine and camphor and boils at 135° C.

cantharic (kan-thar'ik), *a.* [*canthar(is)* + *-ic.*] Pertaining to or derived from cantharidin.—**Cantharic acid**, a crystalline, monobasic acid, $C_{10}H_{12}O_4$, obtained by treating cantharidin with hydriodic acid. It melts at 278° C.

Cantharidal collodion. See ★*collodion.*

cantharidate (kan-thar'i-dāt), *v. t.*; pret. and pp. *cantharidated*, ppr. *cantharidating.* [*cantharid* + *-ate*².] To treat or impregnate with cantharides or any of its preparations.

cantharidated (kan-thar'i-dā-ted), *p. a.* Containing cantharides.

cantharidism (kan-thar'i-dizm), *n.* [*cantharid* + *-ism.*] A state induced by the use of cantharides in poisonous amount, the chief symptoms of which are strangury and the passage of blood in the urine.

cantharidize (kan-thar'i-dīz), *v. t.*; pret. and pp. *cantharidized*, ppr. *cantharidizing.* [*cantharid* + *-ize.*] To treat with cantharides.

cantharoid (kan'tha-roid), *a.* Resembling a cantharus, or large two-handled cup: said of Greek vases. See *cantharus*, 1.

cantharophilous (kan-tha-rof'i-lus), *a.* [Gr. *κανθαρο*, beetle (see *Cantharis*), + *φίλος*, loving.] In *bot.*, pollinated, or having the flowers pollinated, by beetles.

cantharus, *n.* 5. A chandelier used in churches, described as a disk of metal having candles fixed upon it.

canthectomy (kan-thek'tō-mi), *n.* [Gr. *κανθός*, the corner of the eye, + *ἐκτομή*, excision.] In *surg.*, excision of a portion of the canthus of the eye.

Cantherines (kan-the-rī'nēz), *n.* [NL., prop. *Cantherhinus*, < L. *canthus*, wheel (?), + Gr. *ῥίς* (*ῥιν-*), nose.] A genus of file-fishes of the family *Monacanthidæ*, found in the tropical seas, distinguished by the smooth dorsal spine. *C. sandwichensis* of the Hawaiian Islands is the typical species.

cantholysis (kan-thol'i-sis), *n.* [NL., < Gr. *κανθός*, the corner of the eye, + *λύσις*, dissolution.] An operation for division of the canthus.

canthorrhaphy (kan-thor'a-fi), *n.* [Gr. *κανθός*, the corner of the eye, + *ῥαφή*, sewing, stitching.] The stitching together of the two edges of the divided canthus of the eye.

canthotomy (kan-thot'ō-mi), *n.* [Gr. *κανθός*, the corner of the eye, + *-τομία*, < *τέμνειν*, cut.] In *surg.*, division of either canthus of the eye.

Canthus rostralis, the angular portion of the head of a reptile in front of the eye and between the top and side of the head.

canticle, *n.* 5. Any song or hymn, properly one that is brief and simple.

cantico, canticoy, *n.* See *kantikoy.*

canting, *p. a.* 3. Of the nature of professional cant or jargon: used by or peculiar to a particular class, profession, or subject: as, *canting* terms; *canting* language.—**Canting coat.** (*b*) A term opprobriously applied in the seventeenth century to the Geneva gown worn by Presbyterian ministers, and others.

canting (kan'ting), *n.* [*cant*[2], *v.*, + *-ing*[2].] 1. The act of speaking in a whining tone; an apparently insincere use of religious or pious phraseology.—2. The use of the terms or phraseology of a particular class, as of beggars, thieves, gipsies, tramps, etc., or of a particular profession or subject.—3. Sale by auction.

canting-machine (kan'ting-ma-shēn''), *n.* Same as ★*canter*[4].

cantion†, *n.* 2. Incantation; a magic spell.

The Arcane *Cantion* . . . harps much upon this Point. *Cudworth*, Intell. Syst., I. 349.

cantline (kant'lin), *n.* *Naut.*, the space between the sides or ends of barrels when they are stowed side by side. Should the bilge of one barrel be stowed so that it rests in the cantline of two other barrels, it would be said to be stowed *bilge and cantline.* Also called *cutline.*

canton[1], *n.* 6. In *arch.*, a thickened or emphasized corner of a building, as where two pilasters are set one on each side of the extreme angle. See *cantoned* (with cut).

canton[1], *v.* I. *trans.* 3. In *her.*, to furnish with a canton, or furnish a canton with: as, a cross argent *cantoned* with four scallop-shells.

II. *intrans.* To quarter one's self in a temporary hut or cantonment.

cantonalism (kan'ton-al-izm), *n.* [*cantonal* + *-ism.*] The cantonal system of administrative government. See *canton*[1], *n.*, 3.

Canton china. See ★*china.*

Cantonese (kan-ton-ēs'), *a.* and *n.* I. *a.* Of or pertaining to Canton.

II. *n.* 1. A native of Canton.—2. The Chinese dialect of Canton.—3. A person who speaks the Cantonese dialect.

cantonist (kan'ton-ist), *n.* A child born in a Russian military cantonment. *N. E. D.*

The so-called military *cantonists*, who supply a yearly contingent of recruits. *Fraser's Mag.*, L. 481.

cantonment, *n.* 3. The placing of troops in temporary quarters.

Canton's phosphorus. See ★*phosphorus.*

cantor, *n.* 2. Specifically, in Germany, the music-master in a choir-school or similar institution, or the kapellmeister of a church. See *kapellmeister.*

Cantorian (kan-tō'ri-an), *a.* Of or pertaining to Dr. Georg Cantor, mathematical professor in the University of Halle-on-the-Saale.—**Cantorian ordinal number,** one of a collection of designations which distinguish individually all the positions of members in each Cantorian series, the first number designating the first position both between all the numbers and all the positions and between any part of the numbers and the positions designated by them. The first class of Cantorian ordinals consists of those numbers of the series which are not preceded by innumerable others. The second class is composed of those numbers of the series only each of which is preceded by a denumeral collection of others.—**Cantorian series,** a series of objects, called its *members*, so arranged that every part of the series has a first member, called by Cantor himself a *well-ordered collection* (*wohlgeordnete Menge*).

cant-purchase (kant'pér''chas), *n.* *Naut.*, a tackle having one of its blocks secured to the masthead and the other to the hook in the blubber of a dead whale alongside: used for turning the whale over while it is being stripped or flensed.

cant-rail, *n.* 4. The top rail of a coach- or other heavy carriage-body. The outer side determines the curve lengthwise, and by it the turn-under of the standing pillars and all other curves of the body are defined.

cant-splice (kant'splīs), *n.* Same as *contsplice.*

Cantuar. An abbreviation of the Latin *Cantuarensis*, 'of Canterbury': used, for example, in the abbreviated signature of the Archbishop of Canterbury.

cantuta (kan-tö'tä), *n.* [Also *kantuta.* Peruvian (Quichua and Aymará).] A flowering shrub, *Kantuta buxifolia*, from the high plateaus of southern Peru and Bolivia, where it grows in clusters in altitudes not exceeding 13,000 feet. There are red, scarlet, yellow, and white varieties. The flower is often represented on ancient pottery and textiles.

cant-window (kant'win''dō), *n.* A projecting bay- or oriel-window the sides of which are canted, that is, sloped with relation to the main wall.

canun, *n.* Same as *kanun.*

canvas, *n.*, 1. (*c*) In *cricket*, a sheet of white canvas stretched on the boundary as a background behind the bowler, to aid the batsman in seeing the ball. [Colloq.]—4. A painting executed on canvas.

A much damaged *canvas* of this subject in the Wallace collection, at Hertford House, may be the larger of these. *Claude Phillips*, in Portfolio, N. S., XXV. 99.

5. Words written to an air without reference to the sense, simply to indicate to the poet or song-writer the measure of the verses he is to supply. [Chiefly French.]—**Roofing-canvas,** a thick, heavy duck used to cover the roofs of street-cars, the decks of steamboats, etc. It is nailed down on thick fresh paint and is given several coats of paint to make it water-tight.—**Willesden canvas,** a compact waterproof and rot-proof canvas prepared by passing ordinary canvas through a bath of Schweitzer's reagent and then drying it. It is of a green color.

caoutchouc, *n.* Products more or less resembling caoutchouc are obtained by the application of the vulcanizing process to colza and other oils, and are employed to mix with or partly replace real india-rubber. A substance which seems to be identical with natural caoutchouc has been obtained in the scientific laboratory by polymerization of isoprene, a hydrocarbon derived from turpentine; but the process has not become commercially practical.—**Caoutchouc naphtha,** a mixture of liquid hydrocarbons obtained by subjecting india-rubber to destructive distillation.

caoutchouc-oil (kö'chuk-oil), *n.* A mixture of hydrocarbons obtained by the destructive distillation of caoutchouc, and consisting of isoprene (C_5H_8), kautschin ($C_{10}H_{16}$), and hevene (C_5H_8).

cap[1], *n.*, 2. (*a*) (2) The calyptra of a moss. (*m*) A cover of leather or other material for the lens of a camera to exclude light and dust. If a shutter is not used, the exposure is usually made by removing and replacing the cap. (*n*) In *carriage trimming*, a funnel-shaped leather pocket used to cover the lower ends of carriage-bows and the ends of the bow-irons. (*o*) In *arch.*: (1) Same as *capital*: in common use among masons. (2) A coping or other finish of the top of a post or pier or wall, especially anything projecting slightly beyond the vertical faces. Hence (3) The horizontal molding finishing at the top a window-trim, door-trim or architrave. (4) The uppermost member of a hand-rail, as in a balustrade or the like; that part of a hand-rail which is molded to allow the hand to grasp it. (*p*) One of the white spots which appear at the poles of Mars and increase and decrease with the changes of the planet's seasons. (*q*) In *steam-skidding*, a cone of sheet-iron or steel, with a hole in the end through which a chain passes, which is fitted over the end of a log before snaking it, to prevent it from catching on stumps, roots, or other obstacles. (*r*) In *mining*, a horizontal timber resting on a prop or on one or more legs, used to support the roof.—**Cap and bells.** (*a*) A head-dress consisting of a cap set with bells, worn by court fools in the middle ages. (*b*) Same as *marotte.*—**Cap and gown,** the cap (mortar-board) and scholastic gown worn by students in English and some American universities and colleges; hence, a scholar or professional man.—**If the cap fits,** if the remark applies.—**Invisible cap,** a cap the wearing of which is supposed to render one invisible.—**Nuclear cap.** In *neurol.*, a mass of staining-substance found on one side of the nucleus in nerve-cells.—**Pitch cap,** a firm pitch plaster applied to the scalp until it is set, and then quickly torn off: used formerly as a rapid depilatory.—**Polar cap of cold air,** the mass of cold air which covers the north or the south polar region of the earth, flowing equator-ward into the westerly currents and combining with them to make the general circulation of the atmosphere.—**Polar cap of Mars.** See ★*cap*[1], 2 (*p*).—**To put on one's thinking** (or **considering**) **cap,** to pause and consider carefully before deciding or acting.

cap[1], *v. t.*—**To cap all,** to crown all; in addition to everything else.—**To cap the hocks,** so to injure the hocks of a horse as to cause the formation of swellings over their prominences behind.

cap[2], *n.* **To kiss caps with,** to drink out of the same cup or bowl with. [Scotch.]

capacitance (kā-pas'i-tans), *n.* [*capacit(y)* + *-ance.*] In *elect.*, a term proposed for capacity reactance. See *capacity of a conductor* and ★*reactance.*

capacity, *n.* 7. The ability of a stream to transport land-waste, measured by the quantity carried past a given point in a given time.—**Atomic capacity.** See ★*atomic.*—**Calorific capacity.** See ★*calorific.*—**Capacity for vapor.** See ★*vapor.*—**Capacity ratio,** ratio of volume, ratio of cubic contents: used in referring to the relative volume of engine-cylinders.—**Capillary storage capacity.** See ★*storage.*—**Dynamical capacity.** See ★*dynamical.*—**Evaporative capacity.** See ★*evaporative.*—**Testamentary capacity,** legal ability to make a valid will.

cap-bar (kap'bär), *n.* In *cotton-spinning*, an attachment to a drawing-frame for supporting the bearings of draft-rolls.

cap-cell (kap'sel), *n.* See ★*cell.*

cap-cloud (kap'kloud), *n.* A smooth white cloud surmounting the summit of a mountain; a cloud-cap.

cape[2], *n.* 3. A Cape diamond.—**Cape artichoke-flower,** *Leucadendron Conifrondes.* See *Leucadendron.*—**Cape bar, bass, boys, box, cart, cotton, cowslip, honeysuckle.** See ★*bar*[1], etc.—**Cape diamonds,** diamonds from the Cape of Good Hope (South Africa): distinguished elliptically as *Cape, fine Cape, silver Cape.*—**Cape Girardeau sandstone.** See ★*sandstone.*—**Cape gum, hansom, harness.** See ★*gum*[2], etc.

capeador (kä'' pä-ä-dōr''), *n.* [Sp., < *capear*, < *capa*, cape: see *cape*[1].] In bull-fights, the person who excites the bull and distracts his attention by using a red cape.

cape-chisel (kāp'chiz''el), *n.* [*cape for *chape* + *chisel.*] A narrow cold-chisel; a narrow chisel used for cutting grooves or slots in metal.

cape-cloud (kāp'kloud), *n.* A stationary cloud or cloud-mass above a cape or promontory, at the summit of a standing wave of air pushed up by the resistance of the cape to the wind; specifically [*cap.*], the cloud-bank around the Cape of Agulhas at the southern end of Africa.

cape-hen (kāp'hen), *n.* A name given by sailors to the giant fulmar, *Ossifraga gigantea*, and to the great southern skua, *Megalestris antarcticus.*

capellone (kä-pel-lō'ne), *n.* [It. dial., < *capello*, < L. *capillus*, hair.] A silver coin of Modena, equal to 6 soldi or 8 denarii.

capelocracy (kap-e-lok'ra-si), *n.* [Gr. *κάπηλος*, a tradesman, huckster, chapman, + *-κρατια*, < *κρατεῖν*, rule.] The shopkeeping class or their interests. *Bulwer.*

cape-net (kāp'net), *n.* [*cape*[1] + *net*[1].] A kind of netting similar to bobbinet.

caper-berry (kā'pér-ber''i), *n.* The fruit of the common caper-bush, *Capparis spinosa*, or of an African species, *C. decidua*: sometimes used like capers.

caperer, *n.* 2. The caddis-fly: so named from its dancing flight.

caperidin (ka-per'i-din), *n.* [*caper(ata)* (see def.) + *-id* + *-in*[2].] A crystalline neutral compound, $C_{24}H_{40}O_2$, obtained from the lichen *Parmelia caperata.* It melts at 262° C.

caperin (kā'pe-rin), *n.* [*caper(ata)* + *-in*[2].] A crystalline compound, $C_{36}H_{60}O_3$, found in the lichen *Parmelia caperata.* It melts at 243° C.

Capernaism (ka-pér'na-izm), *n.* The materialistic doctrine of transubstantiation held by the Capernaites. Also *Capharnaism.*

Capernaite (ka-pér'na-īt), *n.* [NL. **Capernaites*, < L. *Capernaum*, Gr. Καπερναούμ.] 1. An inhabitant of Capernaum.—2. A designation applied figuratively, in the sixteenth and seventeenth centuries, to those who, from John vi. 52, 59, held to the doctrine of transubstantiation in its gross form. Also *Capharnaite.*

Capernaitic (ka-pér-na-it'ik), *a.* Characterized by materialistic conceptions like those of the Capernaites.

Capernaitical (ka-pér-na-it'i-kal), *a.* Same as *Capernaitic.*

Capernaitically (ka-pêr-na-it'i-kal-i), *adv.* After the manner of the Capernaites.

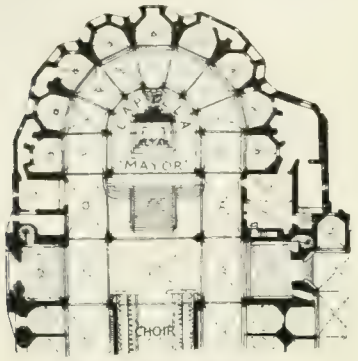
caper-tree, *n.* **Florida caper-tree,** *Capparis Jamaicensis*, a shrub or small tree of peninsular Florida and the Keys, ranging to Jamaica.

cap-fungus (kap'fung gus), *n.* A fungus having an expanded pileus or cap at the apex of the stipe or stem, as an agaric or mushroom.

Capharnaitic (ka-fär-na-it'ik), *a.* Same as ★*Capernaitic.*

Capias ad audiendum judicium, a writ to bring a prisoner to judgment after conviction of a misdemeanor, if he is not in court when called. **Capias ad testificandum,** a writ to compel the attendance of a witness who has refused or neglected to obey a subpœna. **Capias utlagatum,** in *old Eng. law*, a writ to arrest an outlaw: when general it directs the outlaw to be brought to court on a general return-day, when special it directs, in addition to the arrest, the seizure of the property of the outlaw, and the summoning of a jury to assess its value. *Bouvier*, Law Dict.

capilla mayor (kä-pēl'yä mä-yōr'). [Sp., larger chapel.] In Spanish churches, a secondary choir, or else the eastward part of the



Capilla Mayor, Barcelona Cathedral

choir, separated from the western part usually by the whole width of the transept, which is left open. In no other land is this feature common. The high altar stands in the capilla mayor, which is raised by steps above the aisles, while the choir proper remains on their level, as at Barcelona, Avila, and Leon. Also called *back-choir*.

capillaritis (kap″i-la-rī'tis), *n.* [NL., < L. *capillaris* + *-itis*.] Inflammation of the capillary vessels.

capillarity, *n.*—**Constant of capillarity.** See *capillary* ★*constant*. **Laplace's theory of capillarity,** a mathematical theory of surface-tension based upon the assumption of molecular attraction, very intense at small distances, but diminishing rapidly as the distance increases. At a certain distance, called the range of molecular attraction, it becomes negligible. Laplace's work forms the basis of nearly all modern theories.

Capillary analysis. See ★*analysis*.—**Capillary circulation,** the passage of blood through the capillaries from the arteries to the veins during which it gives up its oxygen to the tissues and takes from them the waste products.—**Capillary depression of the barometer.** See ★*barometer*. **Capillary dimple.** See ★*dimple*.—**Capillary lake,** the entire mass of blood contained within the capillary vessels of the body.—**Capillary nævus, pulse,** etc. See ★*nævus*, ★*pulse*[1], etc.

capilliculture (ka-pil'i-kul-tūr), *n.* [L. *capillus*, hair, + *cultura*, culture.] Methodical care of the hair.

capischol (kap'i-skōl), *n.* Same as ★*capischolus*.

capischolus (ka-pis'kō-lus), *n.* [ML., also *capiscolus*, a popular form of *caput scholæ*, head of the school.] A precentor or kapellmeister. Also *capiscolus*.

capital[3], *n.*—**Lotus capital** or **column,** in *Egypt. arch.*, a capital or column the form or decoration of which is suggested by the blue lotus of the Nile. There are two common types, the open or bell-shaped and the closed or bud-shaped. See *lotus*, 3.

In 1885 Marcel Dieulafoy made the first systematic effort to connect the volutes of the Egyptian *lotus capitals* with the volutes of the Greek Ionic.
Goodyear, Grammar of the Lotus, p. 72.

Syrian capital, a corbeled capital of one of the forms used in Syria during the fourth century and later. *H. C. Butler*, Arch. and Other Arts, p. 29.—**Tuscan capital,** a capital of the *Tuscan order* (which see).

capitan (kap-i-tän'), *n.* [Sp.: see *captain*.] 1. A leader; a captain.—2. Same as *capitaine*.

capitate (kap'i-tāt), *v. t.*; pret. and pp. *capitated*, ppr. *capitating*. [See *capitate*, *a.*] To put a head upon; specifically, in *math.*, to prefix to (a symbol) a number not less than the highest digit contained in it: thus 12 may be *capitated* into 212.

Capitelliformia (kap″i-tel-i-fôr'mi-ä), *n. pl.* [NL., < L. *capitellum*, a capital (in architecture), + *forma*, form.] A suborder of *Polychæta*. They have a conical prestomium, without prestomial processes, but with a pair of large retractile ciliated organs, no cirri, buccal region eversible, pharynx not armed, and setæ uniponted. They are blood-red burrowing worms.

Capitolina (kap-i-to-li'nä), *n. pl.* [L.] Same as *Capitoline games*.

capitoul (kä-pi-töl'), *n.* [Pr.] The head or chief of the Félibres in the south of France.

capitular, *a.* **Vicar capitular.** See ★*vicar*.

capitulum, *n.* 6. In actinians, the upper part of the column as distinguished from the scapus.

cap-jewel (kap'jö el), *n.* Same as *end-stone*.

Capnodium (kap-nō'di-um), *n.* [NL., alluding to the color, < Gr. καπνώδης, smoky, < καπνός, smoke.] A genus of fungi proposed by Montagne, apparently not distinct from *Apiosporium*.

Capnoides (kap-nō-ī'dēz), *n.* [NL. (Adanson, 1763, adopted from Tournefort, 1700), < Gr. καπνός, smoke, the name applied by Theophrastus and Dioscorides to the fumitory plant on account of its sooty odor, + εἶδος, form.] A genus of dicotyledonous plants of the family *Papaveraceæ*. See *Corydalis*.

caporal (kä-pō-räl'), *n.* [Sp. and F.: see *corporal*[2].] 1. A chief; a leader.—2. An overseer; one who has charge of a cattle-ranch. [Mexico.]—3. A brand of tobacco (alluding perhaps to *le petit caporal*, "the little corporal," a nickname of Napoleon): often qualified as *sweet caporal*.

Couldn't find a bit of tobacco fit to smoke till we came to Strasburg, where I got some *Caporal*.
Thackeray, Pendennis, II. xxxi.

capote, *n.* 3. A small bonnet, shaped somewhat like a nightcap.

capotement (ka-pōt'ment), *n.* [F. *capotement*, < *capoter*, upset.] A splashing sound sometimes heard in cases of dilatation of the stomach.

capped (kapt), *p. a.* Having a cap; covered with a cap.—**Capped elbow,** in *vet. surg.*, a swelling composed of fibrous tissue, occurring at the point of the elbow. It is caused by repeated injuries from lying on hard floors or with the front feet doubled under the body. See ★*shoe-boil*.—**Capped hock,** a swelling at the point of the hock, due to injury.—**Capped knee,** in *vet. surg.*, an abnormal condition of the knee following an injury. It consists of a swelling due first to a collection of inflammatory serum under the skin, and later to fibrous tissue formation.—**Capped nut.** See ★*nut*.—**Capped shot** or **shell,** a projectile to the point of which a short cylindrical piece of soft steel is fastened, to facilitate penetration of armor.

cappelenite (ka-pel'ē-nīt), *n.* [Named after D. *Cappelen* of Holden, Norway.] A borosilicate of yttrium and barium occurring in greenish-brown hexagonal crystals: found in Norway.

capper[1], *n.* 3. The workman who takes the filled molds away from a brick-machine.

capping (kap'ing), *n.* 1. A cover used to finish or protect anything; in *building*, a coping.—2. In *mining*, the rock between a vein of ore and the overlying soil.—3. In *geol.*, the uppermost formation of an area, usually a more resistant stratum than those immediately underlying: sometimes used also to designate the Quaternary covering of drift or alluvium.

The gravel *capping* of the Navesink Highlands, with a maximum altitude of about 300 feet, is to be correlated with that of the other localities mentioned.
R. D. Salisbury, Geol. Surv. of New Jersey, 1893, p. 40.

Caprellidea (ka-pre-lid'ē-ä), *n. pl.* [NL., < *Caprella* + *-id-ea*.] A tribe of amphipodous crustaceans having the maxillipeds elongated and palpiform and the abdomen obsolete.

Capri blue, green, etc. See ★*blue*, ★*green*, etc.

Capricorn, *n.* 3. [*l. c.*] A member of the coleopterous family *Cerambycidæ*.

II. *a.* [*l. c.*] Of or belonging to the coleopterous family *Cerambycidæ*.

caprilic (ka-pril'ik), *a.* [*capr(ic)* + *-il* + *-ic*.] Derived from a like source with capric acid.—**Caprilic acid,** a colorless, crystalline compound, $CH_3(CH_2)_6COOH$, found, in combination with glycerol, in butter, cocoanut-oil, Limburger cheese, and fusel-oil. It melts at 17° C. and boils at 237° C. Also called *octoic acid*.

Caprimulgi (kap-ri-mul'jī), *n. pl.* [NL., pl. of *Caprimulgus*.] The goatsuckers considered as a superfamily or suborder.

Caprina limestone. See ★*limestone*.

Capriola (ka-prī'ō-lä), *n.* [NL. (Adanson, 1763), a name among early botanical writers for Bermuda grass, < L. *caper*, goat; cf. *capriole*.] A genus of monocotyledonous plants belonging to the family *Poaceæ*. See *Cynodon*.

Caprodon (kap'rō-don), *n.* [NL., < Gr. κάπρος, boar, + ὀδούς (ὀδοντ-), tooth.] A genus of fishes belonging to the family *Serranidæ*, found in the Pacific Ocean.

Capriola Dactylon.

a, top of a plant, showing the digitate spikes; *b*, a single flower; *c*, longitudinal section through a portion of a spike, enlarged; *d*, exterior view of a portion of a spike, enlarged. (Drawn from Engler and Prantl's "Pflanzenfamilien.")

Caproidea (ka-prō-id'ē-ä), *n. pl.* [NL., < Gr. κάπρος, a sea-fish, + *-oidea*.] A group of fishes containing a single family, *Antigonidæ*. They are probably related to the chætodonts, but their affinities are somewhat uncertain. Also called *Caproidæ*, or *boar-fishes*.

Caprotina limestone. See ★*limestone*.

caproylamine (kap″rō-il-am'in), *n.* [*capro(ic)* + *-yl* + *amine*.] Same as ★*hexylamine*.

caprylene (kap'ri-lēn), *n.* [*capr(ic)* + *-yl* + *-ene*.] Same as *octylene* or ★*octene*.

caps. An abbreviation of *capitals*.

capsacutin (kap-sa-kū'tin), *n.* [*caps(icum)* + *acute* + *-in*[2].] A crystalline, neutral compound, $C_{35}H_{54}O_4N_3$, extracted from *Capsicum annuum*, or Spanish pepper. It has a very sharp taste.

capsaicin (kap-sā'i-sin), *n.* The crystalline, active principle ($C_{18}H_{27}NO_3$) of Spanish and Cayenne pepper (*Capsicum annuum* and *C. minimum*).

capsitis (kap-sī'tis), *n.* [*caps(ule)* + *-itis*.] Inflammation of the capsule of the crystalline lens of the eye.

capsizal (kap-sīz'al), *n.* [*capsize* + *-al*[1].] The act or the fact of capsizing; overturning; an upset; a capsize.

capsize, *v. i.* 2. See the extract.

Sometimes a wine will "*capsize*": the alcohol and the acid disappear and what was wine becomes an insipid undrinkable liquid. *Encyc. Brit.*, XXIV. 603.

capsomania (kap-sō-mā'ni-ä), *n.* [Gr. κάψα, a box (taken for an ovary or pistil), + μανία, mania.] In *bot.*, an abnormal multiplication of pistils.

cap-spinning (kap'spin″ing), *n.* A method of spinning worsted yarn with a cap or cup over the spindle and bobbin.

capstan, *n.*—**Electric capstan,** a dock capstan operated by an electric motor inclosed in a suitable structure below the level of the dock, the motor being geared directly to the base of the capstan. It can also be used in a railroad-yard for hauling cars for short distances.

capstan-lathe (kap'stan-lāтн), *n.* A lathe having a revolving tool-head; a turret-lathe.

capstan-screw (kap'stan-skrō), *n.* An elevating screw; a small screw provided with a collar having holes in its periphery in which a wrench or pin may be inserted: used for leveling a plate or an instrument. There are usually three or four such screws for one plate.

capsular, *a.* 2. In *bot.*, having for fruit a dry dehiscent seed-vessel or capsule: as, a capsular plant.

capsulation (kap-sū-lā'shon), *n.* [*capsulate* + *-ion*.] The act of inclosing a drug in a capsule in order that it may be swallowed more easily.

capsule, *n.*—**Auditory capsule.** See ★*auditory*.—**Capsule of Müller.** Same as *Bowman's capsule*.—**Nasal capsule.** Same as *olfactory* ★*capsule*.—**Olfactory capsule,** in *embryol.*, the cartilaginous case inclosing the olfactory bulbs in sharks and in the embryos of higher vertebrates.—**Optic capsule,** in *embryol.*, the cartilaginous case inclosing the eye in sharks and the embryos of the higher vertebrates.—**Spermatic capsule,** a capsule ejected by the males of certain gamasid mites in copulation, containing a liquid and also minute spermatophores or spermatocysts. *Michael*, 1892.—**Stinging-capsule.** Same as *urticating capsule* and *stinging-cell*.

capsule (kap′sūl), *v. t.*; pret. and pp. *capsuled*, ppr. *capsuling*. [*capsule, n.*] To furnish (a bottle, medicinal powder, etc.) with a capsule.

capsuligenous (kap-sū-lij′e-nus), *a.* [NL. *capsula*, capsule, + L. *-genus*, -producing.] In *bot.*, producing capsules.

capsulotome (kap′su-lo-tom), *n.* [L. *capsula*, capsule, + Gr. *-τομος*, ‹ *τεμνειν*, cut.] A small knife used to divide the capsule of the crystalline lens in operations for cataract.

captaculum (kap-tak′u-lum), *n.*; pl. *captacula* (-lä). [NL., ‹ L. *captare*, take, + *-culum*, as in NL. *tentaculum*, tentacle.] One of the numerous ciliated, contractile filaments, swollen at the end, which spring from each side of the mouth in *Dentalium*. They appear to act as tactile organs for seizing the food.

captain, *n.*, **1.** (*g*) In *archery* (1) The winner of a captaincy at a shooting-match. (2) A competitor at a shooting-match or public meeting assigned to a particular target to score for the other archers and to keep order.

Captain of industry, an employer of many laborers; one who controls a large industrial establishment; a leader in the industrial world.

The Leaders of Industry, if Industry is ever to be led, are virtually the Captains of the World; if there be no nobleness in them, there will never be an Aristocracy more. But let the *Captains of Industry* consider.
Carlyle, Past and Present, iv. 4.

captaincy, *n.* **2.** In *archery*, a rank or prize usually awarded to the archer who makes the most hits in a shooting-match, without regard to his score, or who first hits the innermost circle or the gold.

captation, *n.* **3.** In *French law*, influence brought to bear upon one party by another so that the will of the former becomes subject to that of the latter: generally used in an opprobrious sense.

captioned (kap′shond), *a.* Headed; entitled; having the heading or title of: as, an effective poem *captioned* the "Song of the Innuit." *Science*, Nov. 22, 1901, p. 808.

captivative (kap′ti-vā-tiv), *a.* [*captivate* + *-ive*.] Serving or fitted to captivate.

captol (kap′tōl), *n.* [L. *cap(u)t*, head, + *-ol*.] A dark-brown powder soluble in water and alcohol, a condensation-product of tannic acid and chloral: used in the form of a lotion or wash to remove dandruff.

capture, *n.* **3.** In *phys. geog.*, the process by which a stream, lengthening its valley by headward erosion and thus encroaching upon a neighboring drainage-basin of greater altitude, eventually taps another stream, whose upper waters are thus diverted and whose lower waters are left 'beheaded': said also of glaciers.

M. Meunier explains the distribution of erratics in the neighbourhood of the Alps by the "*capture*" of one glacier by another, the head of which was eaten back through the dividing wall, and thus tapped the ice-supply.
Geog. Jour. (R. G. S.), XI. 441.

capture, *v. t.* **3.** In *phys. geog.*, to divert part of (a river) to a new course: said of the action of a stream that erodes its valley headward into the basin of another river and thus captures or diverts the upper waters of the latter to its own course.

It may then have happened that whole basins, like that of Lake Mascardi, drained formerly towards Nahuelhuapi, have been *captured* towards the Pacific slopes.
Geog. Jour. (R. G. S.), XVI. 36.

Caput Draconis, in *astrol.*, the ascending node of the moon; also, a figure in geomancy. See *dragon's head and tail* (under *dragon*).

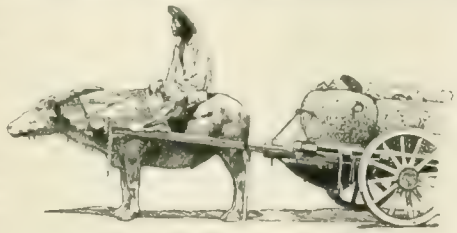
car[1], *n.* **Alexandra car,** a dos-à-dos pleasure-cart in which the body has a cut-under, to permit it to be hung very low without coming in contact with the axle. **Combination car,** on a railroad, any car designed to be used for more than one purpose, as a combined day-coach and baggage-car, a smoker and express-and-baggage car. A *combination baggage-car* is one having compartments for mail or express matter. **Convertible car,** an electric street or suburban car of which the sides are divided into sliding-panels which can be pushed up into pockets in the roof, thus changing it from a closed to an open car. — **Double-decked car,** a car having seats on top as well as inside; one having a second or upper deck for carrying passengers or live stock. See also *double-decker*, 3.— **Electric car,** any car which is operated by electric power.— **Foreign car,** a railroad car which does not belong to the company operating the line, but is borrowed or hired for temporary use. **Governess car,** a two-wheeled vehicle with side seats but no outside seat, the driver sitting sidewise inside; a pony-carriage. The body is generally of basketwork and the entrance is at the back. **Pile-driver car,** See ★*pile-driver*.— **Private car,** a passenger- or freight-car owned by private persons or by corporations other than the railroad companies who haul them for specified payment.— **Push-pole car,** a flat-car having a permanent push-pole hinged to the sill and used between the engine and the cars to be drilled by poling.— **Refreshment car,** a buffet- or dining-car on a railway.— **Tourist car.** See ★*tourist*.

car[1] (kär), *v.* **I.** *trans.* To carry or transport on a car.

II. *intrans.* To travel by car; go in a car: sometimes with an indefinite *it*.

car[6] (kär), *n.* [Perhaps another use of *car*[3].] A yellowish brown sediment deposited from water which contains salts of iron, as in the drainage from coal-mines. Also *carr*. [North of Eng.]

carabao (kä-rä-bä′ō), *n.* [Philippine Sp. *carabao*, Bisaya *calabao*, ‹ Malay *kerbau*.] The



Carabao (Bubalus buffelus).

common local name of the small water-buffalo, *Bos* (*Bubalus*) *buffelus*, peculiar to the Philippine Islands.

carabinero (kä-rä-bi-nā′rō), *n.* [Sp.] **1.** A carbineer.—**2.** A soldier appointed to prevent smuggling; a custom-house guard or coast-guard. [Philippine Is.]

caracho (kä-rä′chō), *n.* [Porto Rican.] A kind of musical instrument made from a gourd, *Lagenaria lagenaria*, on which have been cut a number of grooves.

caracoa (kä-rä-kō′ä), *n.* [Philippine Sp., ‹ Malay *kōrakōra*, etc.] A large, fast boat used particularly in the southern parts of the Philippine Islands.

caracolillo (kä-rä-kō-lēl′yō), *n.* [Sp., dim. of *caracol*, a snail: see *caracole*.] **1.** Coffee-seeds which are round instead of having the ordinary flat form. This is the form taken by the seed when but one develops in the berry. Also called *peaberry coffee*.—**2.** A Porto Rican leguminous shrub, *Sabinea punicea*.

Caradoc group. See *Bala* ★*group*.

caraguata (kä-rä-guä-tä′), *n.* [Tupi, also written *caragoatá*, *caraquatá*, *caraota*, said to mean 'scratcher of wayfarers,' ‹ *caránhe*, scratch, prick, + *goatá*, *oatá*, go.] The name in Paraguay and northwestern Argentina for a plant of the pineapple family, *Bromelia Serra*, which yields a long silky fiber resembling pineapple fiber. It is used by the natives for making cordage, sacks, etc.

carambole, *n.* **2.** [F.] The écu of Flanders struck by Louis XIV. for 80 sols, with the quartered arms of France and Burgundy.

caramel (kar′a-mel), *v. i.* and *t.* In *candy-* and *cheese-making*, to become burned and browned: said of the sugar dissolved in milk or syrups under the influence of heat; caramelize. See *caramel, n.*

The sugar in the milk *caramels* in baking and browns the crust. *Yearbook U. S. Dept. Agr.*, 1897, p. 515.

caramel-cutter (kar′a-mel-kut″ėr), *n.* In *candy-making*, a machine for cutting flat cakes of caramel, or other confection, into blocks, squares, dominoes, and other forms. It consists of revolving circular knives placed side by side on an arbor over a traveling apron or table.

caramousal, *n.* See ★*caramusal*.

caramusal (kä-rä″mō-säl′), *n.* [Also *caramousal*, *caramoussal*, *caramuzel*, *caramozil*, etc.; also *carmousal*, *carmizale*, *carmozell*, etc.; F. *carmoussal*; Sp. *caramuzal*; Cat. *caramussal*; It. *caramusali*, *caramusalino*; ML. *caramussallus*; Turk. *qarāmūsāl*: ult. origin uncertain.] A Turkish merchant vessel.

When you are alongside, if you see the *caramuzel's* mainsail being furled. *Poole*, Barbary Corsairs, p. 231.

carang (kä′räng), *n.* [Tagalog, a cover.] In the Philippine Islands, a mat woven of palm leaves, used as a cover for the banca or dug-out canoe.

Carangoides (ka-rang-gō-ī′dēz), *n.* [NL., ‹ *Carangus* + Gr. *εἶδος*, form.] A genus of fishes of the family *Carangidæ*, differing from *Carangus* in the weak teeth.

Carangops (ka-rang′gops), *n.* [NL., ‹ *Carangus* + Gr. *ὄψ* (*ὠπ-*), face.] A genus of fishes of the family *Carangidæ*, allied to *Carangus*.

Carangus (ka-rang′gus), *n.* [NL., ‹ Sp. *carangue*, *caranga*, Pg. *caranga*.] A genus of fishes of large size, widely distributed throughout the tropics, some of them excellent as food-fishes. *C. hippos* and *C. latus*, called *horse-mackerel* or *cavally*, are abundant in the western Atlantic. *C. forsteri* is the ulua of the Pacific, one of the best and most valued of food-fishes. The genus is often called *Caranx*, but the original type of the latter, *C. speciosus*, is without teeth and belongs to a different genus.

carapacic (kar-a-pā′sik), *a.* Of or relating to the carapace: as, the *carapacic* portion of the dorsal scute. *Annals and Mag. Nat. Hist.*, 1903, p. 442.

carapato (kä-rä-pä′tō), *n.* Same as *garapata*.

Carapato disease, a disease of tropical Africa, probably due to the presence of a protozoan organism in the blood. *Jour. Trop. Med.*, Nov. 2, 1903, p. 341.

carapo (kä-rä′pō), *n.* [Tupi.] The Brazilian name of *Giton fasciatus*, a fish of the family *Gymnotidæ*.

Carapus (kar′a-pus), *n.* [NL., ‹ Tupi *carapo*.] **1.** The obsolete generic name of a Brazilian fish of the family *Gymnotidæ*, properly *Sternarchus*.—**2.** A generic name of the pearl-fishes commonly called *Fierasfer*.

carasa (kä-rä′sä), *n.* [Philippine Sp. *carasa*, also *caraza* (Morga), also *calasag*, ‹ Bisaya *calasag*, Igorrote *calata* (Blumentritt).] In the Philippine Islands, a light wooden shield with fixed handles.

carassin (ka-ras′in), *n.* [F. *carassin*, *carrassin*: see *carassius*.] A name of *Carassius vulgaris*, a carp found in the fresh waters of central and northern Europe and closely related to the common goldfish.

carat, *n.* **5.** An Arabian coin of base silver, current in Mecca, Medina, and Mocha.

caratch† (ka-rach′), *n.* [Prop. **kharaj*, ‹ Turk. *kharāj*, tribute.] Tribute exacted by the Turks from their Christian subjects and from heretical Mohammedans.

carat-goods (kar′at-gudz), *n. pl.* Parcels of diamonds which are of an average weight of about one carat each. *M. Bauer*, (trans.) Precious Stones, p. 242.

carau (kä-rä-ō′), *n.* [Tupi *caraú*, otherwise recorded as *coraú*, *carao*, *carão*.] A South American bird, the courlan.

caravel, *n.* **2.** The floating marine gastropod *Ianthina*. *N. E. D.*

caraway-worm (kar′a-wā-wėrm″), *n.* The larva of an American papilionid butterfly, *Papilio polyxenes*, which feeds on caraway, celery, parsley, wild carrot, and other umbelliferous plants.

carballylic (kär-ba-lil′ik), *a.* [*carb(on)* + *allyl* + *-ic*.] Same as ★*tricarballylic*.

Carbamic (or **carbaminic**) **chlorid,** the chlorid of carbamic acid, NH_2COCl. Also called *chloroformamide*.

carbamidin (kär-bam′i-din), *n.* [*carb(on)* + *amide* + *-in*[2].] Same as ★*guanidin*, the amidin of carbonic acid.

carbamine (kärb-am′in), *n.* Same as ★*isocyanide*. The name was due to an erroneous belief that the isocyanides are bases. Also called *carbylamine* and *isonitrile*.

carbaminic (kärb-a-min′ik), *a.* Same as *carbamic*.

carbanil (kär′ba-nil), *n.* [*carb(on)* + *anil*.] The anil of carbonic acid, $C_6H_5N{:}CO$. It is an oil with a powerful, irritating odor. It boils at 166° C. Also called *phenyl carbimide* or *carbonimide* and *phenyl isocyanate*.

carbanilic (kär-ba-nil′ik), *a.* [*carbanil* + *-ic*.] Derived from carbonic acid and aniline.—**Carbanilic acid,** the half-anilide of carbonic acid, $HO.CO.NHC_6H_5$. It exists only in the form of its esters. Also called *phenyl carbamic acid*.

carbanilide (kärb-an′i-lid), *n.* [*carb(on)* + *anilide*.] The anilide of carbonic acid, $CO(NHC_6H_5)_2$. It is crystalline and difficultly soluble in water. It melts at 235° C. Also called *symmetric diphenyl urea*.

carbazide (kär′ba-zīd), *n.* [*carb(on)* + *az(ote)* + *-ide*[2].] A crystalline, volatile, and very explosive compound, $CO(N_3)_2$, formed by the action of sodium nitrite on the hydrochlorid of carbohydrazide.

carbazin (kär′ba-zin), *n.* [*carb(on)* + *az(ote)* + *-in*[2].] A hypothetical compound, $CO{<}^{NH}_{NH}$, whose derivatives were once supposed to have been formed by the action of phosgen on derivatives of phenyl hydrazin.

carbazol (kär′ba-zōl), *n.* [Also *carbazole*; ‹ *carb(on)* + *az(ote)* + *-ol*.] A substance, $C_{12}H_8.NH$, which occurs in colorless, easily sublimable plates obtained in the distillation of coal-tar in the fractions between 320° C. and 360° C. **Carbazol yellow.** See ★*yellow*.

carbazoline (kär-ba-zō'lin), *n.* [*carbazol* + *ine*[2].] A base, $C_{12}H_{15}N$, formed by the reduction of carbazol with hydriodic acid and phosphorus. It melts at 99° C. and boils at 296° C.

Carbide black. See ★*black.* **Carbide of iron.** See ★*iron.* **Iron carbide,** a chemical compound of iron with carbon. More than one such compound exists in ordinary cast-iron and in steel.

carbimide (kär'bi-mid), *n.* [*carb(on)* + *imide.*] Isocyanic acid or the imide of carbonic acid, CO:NH. It is uncertain whether free cyanic acid has this or an isomeric structure, or is a mixture of both forms. The esters of isocyanic acid are derivatives of a compound of the structure given. Also called *carbonimide.*

carbinol (kär'bi-nōl), *n.* [*carb(on)* + *-in* + *-ol.*] Methyl alcohol, CH_3OH. The name is used almost exclusively in designating derivatives of methyl alcohol: as, triphenyl *carbinol,* $(C_6H_5)_3COH$.

carbinyl (kär'bi-nil), *n.* [*carb(on)* + *-in* + *-yl.*] A designation for an alkyl or aryl corresponding to a carbinol: as, triphenyl *carbinyl,* $(C_6H_5)_3C$.

carblot (kär-blō'), *n.* A cartridge containing calcium carbide for use in acetylene lamps. *Sci. Amer.,* April 15, 1899.

carbo, *n.* **2.** In *phar.,* charcoal.—**Carbo animalis,** animal charcoal; bone-black, or ivory-black.—**Carbo ligni** or **vegetabilis,** wood charcoal.

carbo-azotin (kär-bō-az'ō-tin), *n.* [*carbo(n)* + *azote* + *-in*[2].] A trade-name for an explosive designed to be used in blasting. It consists of potassium nitrate, sulphur, lampblack, sawdust, and ferrous sulphate.

carbocyclic (kär-bō-sik'lik), *a.* [*carbo(n)* + *cyclic.*] Containing a ring of carbon atoms: used especially of carbon compounds, which contain rings composed exclusively of carbon atoms, as distinguished from *heterocyclic* compounds, which contain rings composed of the atoms of two or more elements. Also called *isocyclic* compounds.

The second part of the work is concerned with stereochemistry unaccompanied by stereoisomerism, under which head are treated such matters as the stability of *carbocyclic* and heterocyclic chains.
Nature, Aug. 11, 1904, p. 341.

carbodynamite (kär-bō-dī'na-mīt), *n.* [*carbo(n)* + *dynamite.*] A patented explosive for use in blasting, consisting of 90 parts (or less, for lower grades) of nitroglycerin and 10 parts of a very absorbent charcoal made from cork, to which are added for each 100 parts of the explosive 1½ parts of sodium or ammonium carbonate.

carbogelatin (kär-bō-jel'a-tin), *n.* A low-grade dynamite containing from 37 to 40 per cent. of nitrocellulose and nitroglycerin.

carbohemoglobin (kär''bō-hem-ō-glō'bin), *n.* [*carbo(n)* + *hemoglobin.*] A compound of carbon dioxid with hemoglobin. Also *carbohæmoglobin.*

carbohydrazide (kär-bō-hī'dra-zīd), *n.* [*carbo(n-)* + *hydr(ogen)* + *az(ote)* + *-ide*[1].] Same as ★*carbazide.*

carbolate (kär'bō-lāt), *n.* [*carbol(ic)* + *-ate*[1].] A salt of carbolic acid.

carbol-broth (kär'bōl-brôth), *n.* A medium occasionally used in testing water for sewage-bacteria. It consists of ordinary meat-broth to which about one tenth of one per cent. of carbolic acid is added. The carbolic acid inhibits the growth of many common water-bacteria and permits the development of *Bacillus coli.*

carbol-fuchsin (kär''bōl-fōk'sin), *n.* A solution of basic fuchsin in which the staining power of the dye has been enforced by the addition of carbolic acid. As a rule, the solution has the composition: 1 part of fuchsin, 100 parts of a 5-per-cent. aqueous solution of carbolic acid, and 10 parts of absolute alcohol.

carbolineum (kär-bō-lin'ē-um), *n.* [*carboline* + L. *-eum.*] Anthracene oil which has been heated and treated with chlorin. It is used, especially in Germany, for preserving wood. *Sci. Amer.,* Jan. 31, 1903, p. 73.

carbolism (kär'bō-lizm), *n.* [*carbol(ic)* + *-ism.*] Poisoning with carbolic acid.

carbolite (kär'bō-līt), *n.* [*carbol* + *-ite*[2].] A product obtained by the interaction of blast-furnace slag and coke in an electric furnace, patented as a mixture of the carbides of calcium, aluminium, and silicon: a substitute for calcium carbide.

carbolutite (kär-bō-lū'tīt), *n.* [L. *carbo(n-),* coal, + *lutum,* clay, mud, + *-ite*[2].] A clastic rock of very fine grain and carbonaceous composition; a bed of coal-dust or mud.

carbolxylol (kär-bōl-zī'lōl), *n.* [*carbol* + *xylol.*] A mixture of phenol and xylene.

carbon, *n.*—**Asymmetric carbon atom.** See ★*asymmetric.* **Carbon dioxid.** This term is very commonly used as synonymous with *carbonic acid.* In modern chemistry, however, carbon dioxid (CO_2) is assumed to form carbonic acid (H_2CO_3) by union with the elements of water, and the term *carbonic acid* should be restricted to the product of such union. **Carbon disulphid.** See ★*disulphid.* **Carbon monoxid.** Same as *carbonic* or *carbonous acid.* **Carbon pencils.** Same as *carbon-points* (which see under *carbon*). **Carbon stars.** See ★*star*[1]. **Carbon temper.** See *temper.* **Carbon tetrachlorid,** CCl_4, a compound of great value as a non-inflammable solvent for grease, paint, etc.: used also as a surgical anesthetic, though not as available for this purpose as chloroform or ether.—**Carbon theory,** in *biol.,* the theory that living substance or protoplasm arose from inorganic carbonates.—**Carbon wool,** a material, composed of a mass of fine thread-like filaments of carbon, which is obtained as a by-product from some forms of coke-furnaces.—**Combined carbon,** carbon in a state of chemical combination with some other element or elements; specifically, the carbon of iron carbide (see ★*cementite*). If the carbon exists in solid solution in iron or steel it is not usually designated as combined carbon, although the state of solution is in one sense a form of chemical combination. The dissolved state is distinguished from the chemically combined state by the fact that the carbon may be in any proportion from zero to 2 per cent. and sometimes up to 4 per cent. or slightly more, under special conditions, while cementite has a constant percentage of carbon and iron. The combination is effected either by heating the iron in contact with gaseous fuel, or by exposing it to a high temperature in contact with solid carbon. Pig iron containing carbon chiefly in the combined form is known as 'white iron'; if free carbon, or graphite, is predominant, it is called 'gray iron.' In some varieties of iron the carbon is partly combined and partly free, and the fractured iron has a speckled appearance and is known as 'mottled iron.'—**Effect-carbon, flame-carbon.** See *electric* ★*arc.* **Graphitic carbon,** carbon crystallized in rhombohedral forms and having the other properties of natural graphite. It separates from solution in metallic iron on cooling, and hence is found in gray cast-iron, and often in masses of considerable size in the slag of blast-furnaces: now manufactured on a commercial scale by intensely heating amorphous carbon in an electric furnace.—**Retort-carbon.** Same as *gas-carbon* (which see, under *carbon*).

carbon (kär'bon) *v. t.* [*carbon, n.*] To put carbons in (an arc lamp). *W. L. Dibdin,* Public Lighting, p. 445.

carbonate, *n.*—**Lead carbonate,** the chief constituent in white lead as used by painters: this pigment contains also lead hydroxid.

carbonating-column (kär'bo-nā-ting-kol''um), *n.* A part of the plant for making carbonate of soda from common salt by the Solvay or ammonia process. It consists of an iron cylinder, 40 or 50 feet high and 6 or 7 feet in diameter, containing a number of dome-shaped partitions perforated with small holes. It is filled with strong brine charged with ammonia, and carbon-dioxid gas is then forced in at the bottom, which forms and precipitates the acid carbonate of soda to be afterward converted by heating into the normal carbonate.

carbonating-tower (kär'bo-nā-ting-tou''ér), *n.* Same as ★*carbonating-column.*

carbonation, *n.* **2.** In the Leblanc process for the manufacture of carbonate of soda, the treatment with carbon-dioxid gas of the crude liquor obtained by leaching the black ash, or, after evaporation of this crude liquor to dryness, the roasting of the residue, to which sawdust has been added. The object of the process is the conversion of some caustic soda and sodium sulphid present into sodium carbonate.—**3.** In *petrog.,* the union of carbonic acid and a base, or the substitution of carbonic acid for another combined acid, in either case producing carbonates.

carbonatization (kär''bo-nā-ti-zā'shon), *n.* The process by which, from the action of circulating subterranean waters containing carbonates, the feldspars and other rock-forming silicates are replaced by calcite, dolomite, or some other carbonate.

carbonemia (kär-bō-nē'mi-ä), *n.* [NL., *carbonæmia,* < L. *carbo(n-),* coal (carbon), + Gr. αἷμα, blood.] Poisoning with carbonic oxid.

carbonero (kär-bō-nā'rō), *n.* [Sp., charcoal-man, coal-man.] A Cuban name of the fish *Carangus ruber.*

Carbonic acid. This gas, liquefied by pressure and transported in strong steel cylinders, is now prepared on a commercial scale, chiefly as a by-product of brewing, and is used in rendering beverages effervescent, as a means of extinguishing fire, in making aërated bread, and for various other purposes.—**Carbonic-acid apparatus.** See ★*apparatus.*—**Carbonic anhydrid.** Same as ★*carbon dioxid.*—**Skatol carbonic acid,** $C_{10}H_9NO_2$, a product of albuminous putrefaction: a derivative of skatol.

carbonification (kär''bo-nif-i-kā'shon), *n.* Conversion into carbon or coal.

carbonify (kär-bon'i-fī), *v. t.* [*carbon* + *-i-fy.*] Same as *carbonize.*

carbonigenous (kär-bo-nij'e-nus), *a.* [*carbon* + L. *-genus,* -producing.] Producing carbon.

carbonimide (kär-bon-ī'mid), *n.* [*carbon* + *imide.*] Same as ★*carbimide.*

carbonist (kär'bo-nist), *n.* [*carbon* + *-ist.*] One who holds a certain theory with regard to carbon; specifically, an advocate of the theory that the hardness of quickly cooled steel is due altogether to the carbon contained therein, as opposed to an ★*allotropist* (which see). At the present time there are very few metallurgists who are either allotropists or carbonists; the majority agree that the hardness of quickly cooled steel is due both to allotropic modifications of iron and the influence of carbon. *Nature,* May 5, 1904, p. 2.

carbonite (kär'bo-nīt), *n.* [*carbon* + *-ite*[2].] **1.** A trade-name of an explosive for use in blasting, consisting of nitroglycerin, sodium nitrate, wood-meal, and a little sodium carbonate.—**2.** Same as *native* ★*coke.*

carbonitride (kär-bo-nī'trid), *n.* [*carbo(n)* + *nitr(ogen)* + *-ide*[1].] A compound of carbon and nitrogen with some other element: as, silicon *carbonitride,* Si_2C_2N, which is formed by heating silicon, carbon, and nitrogen together.

carbonizable, (kär'bo-nī-za-bl), *a.* [*carbonize* + *-able.*] Capable of conversion into charcoal.

carbonization, *n.* **4.** In *cytol.,* a method of reducing the cell-wall in plants by charring.

carbonize, *v. t.* **4.** To destroy (the vegetable matter mixed with wool or other animal fibers) by chemical means (as a dilute solution of sulphuric or hydrochloric acid) and high temperature (210° F.).—**Carbonizing-furnace.** (*b*) A gas-furnace used for carbonizing the filaments of electric lamps. The filaments are placed in an air-tight fire-clay retort which is put in the furnace and raised to a high temperature by the gas-flames.

carbonizing (kär'bo-nī-zing), *n.* Specifically, in the treatment of textile materials, the process by which wool and similar animal fibers are freed from vegetable matter such as cotton, burs, straw, etc. It consists in saturating the material with a solution of some acid (as sulphuric acid) or other chemical compound (as aluminium chlorid), and drying it at a high temperature while thus saturated. As a result the vegetable matter becomes carbonized and drops away from the wool as a gray powder. This is known as *wet carbonizing. Dry carbonizing* consists in subjecting the material for some time to the action of dry hydrochloric-acid gas at a temperature of 100° C. Dry carbonizing is chiefly employed for the carbonization of rags in the preparation of shoddy.

carbon-printing (kär'bon-prin''ting), *n.* Same as *carbon process* (which see, under *carbon*).

carbonyl, *n.*—**Iron carbonyl.** See ★*iron.*—**Nickel carbonyl.** See ★*nickel.*

carbopyridic (kär''bō-pi-rid'ik), *a.* [*carbo(n)* + *pyrid(ine)* + *-ic.*] Pertaining to pyridine and carbon.—**Carbopyridic acid.** Same as ★*pyridinecarboxylic acid.*

carbora (kär bō'rä), *n.* [Native Australian.] A wood-burrowing worm which lives between high and low water in a tidal river. [Australia.]

carborudite (kär-bō-rū'dīt), *n.* [L. *carbo(n-),* coal, + *rudus,* rubble, + *-ite*[2].] A coarse fragmental rock of carbonaceous matter; a coal-breccia or conglomerate.

carborundum (kär-bō-run'dum), *n.* Silicon carbide, SiC, a product of the electric furnace used as an abrasive material. The reaction of the furnace is $SiO_2+3C = SiC+2CO$. This substance is manufactured in powerful electric furnaces upon a large scale. It is used as a powder of various degrees of fineness and is also consolidated into blocks for grinding-wheels. Carborundum is substituted for ferrosilicon in steel-making and is mixed with a strong solution of water-glass (sodium silicate) to form a paste for application to the lining of a furnace, protecting it from injury by very high temperature. It has been identified in the meteoric iron of Cañon Diablo, Arizona, and named *moissanite.*

carbosilicon (kär-bō-sil'i-kon), *n.* A trade-name for a fused material consisting of silicon and silicon carbide (carborundum), possibly combined, more probably merely mixed with each other. It is compact and very hard and tough.

carboxid (kär-bok'sid), *n.* [*carb(on)* + *oxid.*] In *chem.,* a compound consisting of carbonyl or carbon monoxid united to an electropositive metal.

carboxylic (kär-bok-sil'ik), *a.* [*carboxyl* + *-ic.*] Containing carboxyl, CO.OH.—**Carboxylic acid,** an acid containing the carboxyl group.

carbuncle, *n.*—**Contagious carbuncle.** Same as *malignant pustule.*

carbunculo (kar-bön'kö-lō), *n.* [Sp.: see *carbuncle.*] A fabulous animal, the existence of which is generally believed in some parts of South America. The myth is of Spanish introduction, but the Indians believe in it even more than the mestizos. The animal is represented as a large wildcat having in its forehead a carbuncle-stone of large size, or a red gem of great value. This gem the animal covers up at will with a lid. At night the stone, when uncovered, is believed to emit a brilliant light like that of a red lantern.

carbunculosis (kär-bung-kū-lō'sis), *n.* [NL. *carbunculus* + *-osis.*] The morbid state characterized by the occurrence of carbuncles.

carbunculus (kär-bung'kū-lus), *n.*; pl. *carbunculi* (-li). [NL.] Same as *carbuncle.*

carburant (kär'bū-rant), *n.* [*carbur(et)* + *-ant*[1].] A substance, supplied as gas or vapor, serving to add carbon to a gaseous mixture to be burned, with a view to either the production of light or, as in internal-combustion engines, the production of mechanical energy.

carburation (kär-bū-rā'shon), *n.* [*carbur(et)* + *-ation.*] The process of impregnating with a mist of particles of liquid hydrocarbon, which vaporize in their finely divided state either at atmospheric temperatures or on heating. Atmospheric air so impregnated forms a gas which may be ignited and used in internal-combustion motors. See ★*carbureter.*

carbureter, *n.* **1.** Carbureters are also used for impregnating a current of atmospheric air with a mist or vapor from a liquid hydrocarbon so that it becomes a combustible or explosive mixture suitable for use in internal-combustion motors. In the early forms of carbureter the air moved over a surface like a wick, by the capillary action in which gasolene was evaporated into the air. In later forms the air was caused to bubble through a thin layer of liquid gasolene, or was blown over the surface of the latter. In those now in use a small jet of gasolene is forced through a needle-hole, by difference of pressure, into the current of moving air at each aspiration of the working cylinder. In the float-carbureters the jet is controlled by a valve actuated by a float. As the float rises, when the float-chamber fills, the needle-hole is closed. In others the gasolene inlet is opened by the same difference in air-pressure which causes the air-valve to lift. The same valve-surface may control and close both inlets. Carbureters may use alcohol or kerosene as sources of carbon, but with the less volatile liquids the carbureters must be vaporizers as well as atomizers, that the fuel may not separate from the air by liquation or condensation. This vaporization is effected by using heat above that of the atmosphere, either from an outside flame or by conducting waste heat from exhaust gases. When the carbureter supplies too much fuel, the mixture burns badly in the cylinder, and unburned fuel in the exhaust gases makes them visible as smoke and produces an offensive odor. When the needle-hole becomes clogged, the motor gets no fuel and will not run.—**Compensating carbureter,** a carbureter which automatically regulates the amount of fuel supplied to the engine as the demand for fuel varies with speed or power of the motor.

carbylamine (kär-bil-am'in), *n.* [*carb(on)* + *-yl* + *amine.*] A basic substance found in the venom of toads.

carcake (kär'kāk), *n.* [Also *carecake, kercake:* < *care*, as in *Care Sunday*, + *cake.*] A small cake baked on a griddle and eaten on Shrove Tuesday in parts of Scotland.—**Blood carcake,** a cake made of blood and oatmeal, formerly used in the south of Scotland. *Jamieson.*

carcana (kär-kä'nä), *n.* [Also *carconna, karkana*; < Hind., *kārkhāna* < Pers. *kārkhāna*, < *kār*, work, business, + *khāna*, house.] A workshop; a departmental establishment in the military service. [Anglo-Indian.]

carcass (kär'kas), *v. t.* To erect or set up the carcass or framework of a building or a ship.

carcel (kär-sel'), *n.* [See *Carcel lamp.*] A French unit of illuminating power, equal to the light emitted by a standard lamp with a flame 40 millimeters high and burning 42 grams of colza-oil an hour.

carcel-hour (kär-sel'our), *n.* A unit of luminous energy; the quantity of light-energy emitted in one hour by a source whose light-flux equals that from a Carcel standard lamp.

carcel-meter (kär-sel'mē"tėr), *n.* A unit of illumination in which the source of light is the flame of a Carcel lamp placed at a distance of one meter. The carcel-meter is approximately 10.9 *luxes.* See ★*illumination.*

carcel-second (kär-sel'sek"und), *n.* A unit of luminous energy in which the Carcel lamp is taken as the standard of intensity.

carcer (kär'sėr), *n.* L. pl. *carceres* (-ēz) [L.] **1.** A prison; a lock-up; especially, one in a German school or university.—**2.** One of the 8 to 12 stalls, closed with bars, from which races were started in a Roman circus. They were arranged with slanting axes in order not to give an unfair advantage to any competitor.

carceration (kär-se-rā'shon), *n.* [See *incarceration.*] Incarceration; imprisonment. *Trollope.*

Carcharodontinæ (kär-kar"ō-don-tī'nē), *n. pl.* [*Carcharodon(t-)* + *-inæ.*] A subfamily of sharks, including the great man-eater, typified by the genus *Carcharodon.*

carcinemia (kär-si-nē'mi-ä), *n.* [NL. *carcinæmia*, < Gr. καρκίνος, cancer, + αἷμα, blood.] Cancerous cachexia.

carcinoma, *n.* **2.** In *bot.*, a disease of trees characterized by the separation of the bark and the exudation of an acrid sap. *Treas. Bot.*

carcinomatoid (kär-si-nom'a-toid), *a.* [Gr. καρκίνωμα(τ-), carcinoma, + εἶδος, form.] Resembling carcinoma. *Med. Record*, Feb. 14, 1903, p. 271.

carcinomatosis (kär-si-nō-ma-tō'sis), *n.* [NL., < *carcinoma(t-)* + *-osis.*] Generalized cancer disseminated throughout the body. Also called *carcinosis.*

carcinosis (kär-si-nō'sis), *n.* [NL., < Gr. καρκίνος, cancer, + *-osis.*] Same as ★*carcinomatosis.*

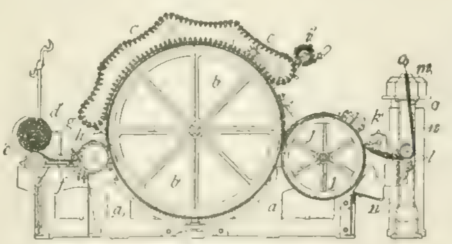
carcinous (kär'si-nus), *a.* [Gr. καρκίνος, cancer, + *-ous.*] Cancerous.

carcoon (kär-kön'), *n.* [Also *corcon, corcone*; < Mahr. *kārkūn*, Pers. *kārkun.*] A clerk. [Anglo-Indian.]

car-cylinder (kär'sil"in-dėr), *n.* The cylinder for an air-brake system in which air under pressure is stored under each car.

card[1], *n.*—**Birthday card,** a complimentary card, usually of an artistic design, sent to one on the anniversary of his birthday.—**Burnt card,** the card which is turned face up on the bottom of the pack, in some banking games. In baccara the banker may burn two cards if he pleases. **By cards,** in *whist* and *bridge*, noting the number of tricks over the book won by the same side: as, two *by cards* at no trump.—**Card of reëntry,** in *whist* and *bridge*, a winning card in one suit which will bring the established cards of another suit into play. **Card-repeating machine,** a machine for copying or repeating a set of pattern-cards for a Jacquard loom after they have been cut by the piano-machine.—**Christmas card.** See *Christmas.* **Doubtful card,** in *whist*, a card led which may or may not win the trick. **Dumb-card,** a compass-card to which no magnetic needle is attached. **Easter card,** a card containing suitable emblems and greetings sent to friends and presented to Sunday-school scholars, etc., at Easter.—**Established cards,** cards which have become the best of the suit from the fact that the higher cards have been played.—**Exposed card,** any card played in error or dropped on the table, which must be left on the table and can be called by the adversary in a partnership game.—**Faced card.** See ★*faced.*—**False card,** any card played with the object of deceiving the adversary as to the true holding in the suit: as, to win a trick at bridge with the ace while holding the king.—**Glass card,** a transparency of gelatin in the form of a card. **Hockelty-card.** See *soda* ★*card.*—**Indifferent cards,** cards of the same value, so far as winning tricks is concerned: as the king and queen.—**King-card.** See *master* ★*card.*—**Long cards,** all the cards of a suit that are left, when they are in the hand of one player.—**Losing cards,** in *whist* and *bridge*, cards which will lose tricks if they are not got rid of early.—**Master card,** the best remaining card of a suit in which the better cards have been played.—**New-year card,** a more or less elaborately ornamental complimentary card with the season's greetings and best wishes for the New-year.—**Short-card player.** See ★*player.*—**Soda card,** in *faro*, the card which shows face up in the box before the deal begins: the opposite of *hockelty-card.*—**Strengthening card,** in *whist* and *bridge*, a card led from one hand for the purpose of giving the third hand some advantage, as a jack led through dummy's queen or king.—**Sure card,** something which when called into play will insure success.—**The card,** the correct thing.—**Thirds card,** the usual size in the United Kingdom for a man's calling-card—3 inches in length and 1½ in breadth.—**To be put to a card,** said of a player when he is obliged to discard one of two cards and does not know which to keep.—**To have the cards in one's own hand,** to possess the means of winning if they are rightly used.—**To play one's best card,** to use one's best endeavor; take the step which it is thought will be most likely to result in success. **To play one's cards well,** to make a judicious use of the means at one's command.—**To throw up one's cards,** to abandon the game (or the hand) through lack of winning cards or of the means of attaining success. **Wide cards,** in *cribbage*, cards which cannot be connected so as to form sequences by the play of any intermediate card.

card[2], *n.*—**Revolving-flat card,** a cotton-carding machine in which the top flats revolve or travel over the top



Revolving-flat Card.

a, frame; *b*, main cylinder; *c*, flats; *d*, lap of cotton; *e*, lap-roller; *f*, dish-plate; *g*, feed-roll; *h*, taker-in; *i*, brush; *j*, doffer; *k*, comb; *l*, calender-rollers; *m*, coiler; *n*, can; *o*, sliver.

of the main cylinder.—**Roller-and-clearer card,** a cotton-carding machine equipped with revolving rollers or cylinders for working the stock: chiefly used for carding cotton waste and coarse yarns.—**Set of cards,** a series of two or more carding-engines consisting, if of three (which is the usual number), of a breaker, a second breaker or intermediate, and a finisher. This series is the statistical unit or unit of capacity of a woolen-factory.—**Stationary flat card,** a cotton-carding machine having its top carding-surfaces or flats stationary.

Card. An abbreviation of *cardinal.*

cardamine, cardamin (kär'da-min), *n.* A plant of the genus *Cardamine* (which see).

Cardan joint, shaft. See ★*joint*, ★*shaft*[1].

Cardanic (kär-dan'ik), *a.* Of, pertaining to, or devised by Cardan (Girolamo Cardano, 1501–1576), a noted physician, mathematician, and astrologer of Italy: as, *Cardanic* suspension (suspension from gimbals).

card-board[2] (kärd'bōrd), *n.* A thin board, with a short handle, 5 inches wide and 12 inches long, to which is fastened card-clothing for carding wool, cotton, and the like by hand.

cardboard-press (kärd'bōrd-pres), *n.* Calendering-rolls for surfacing and finishing press-board or smooth, hard cardboard used for book-covers and Jacquard cards.

card-case, *n.* **2.** A case of drawers in which catalogue-cards are arranged.

card-cheat (kärd'chēt), *n.* One who cheats at cards.

card-cradle (kärd'krā"dl), *n.* A curved metal frame secured beneath the card-cylinder of a Jacquard loom to receive the cards as they are discharged from the cylinder.

card-cutter, *n.* **2.** One who operates a machine for cutting pattern-cards for a Jacquard loom.

card-cylinder (kärd'sil"in-dėr), *n.* Same as *cylinder*, 2 (*h*).

cardenal (kär-de-näl'), *n.* [Sp.] See ★*cardinal-fish.*

carder[2], *n.* **3.** Same as *carder-bee* (which see).

card-gatherer (kärd'gaŧн"ėr-ėr), *n.* A gatherer of teazels or carding-thistles.

Cardiac diuretic, dropsy, etc. See ★*diuretic*, ★*dropsy*, etc. **Cardiac inadequacy.** Same as ★*cardiac insufficiency.* **Cardiac insufficiency,** inability of the heart to perform its function of maintaining the circulation of the blood in an adequate manner.—**Cardiac neuralgia.** See ★*neuralgia.*—**Cardiac sac.** (*b*) In *Annulata*, a bulb-like contractile portion of the dorsal blood-vessel. **Cardiac valvule,** in *entom.*, an invagination of the esophagus into the proventriculus, producing a valvule which prevents the larger bits of food from passing into the chylific stomach. *A. S. Packard*, Text-book of Entom., p. 312.

Cardiacea, *n. pl.* **3.** A suborder of *Eulamellibranchiata*, having the gills much folded, foot cylindric and more or less elongate, and siphons generally lacking. It contains the families *Cardiidæ, Tridacnidæ, Chamidæ*, and others.

cardiacean (kär-di-ā'sē-an), *a.* and *n.* **I.** *a.* Having the characters of the *Cardiacea.*

II. *n.* A bivalve mollusk belonging to the suborder *Cardiacea.*

cardiagraph (kär'di-a-gráf), *n.* Same as *cardiograph.*

cardial (kär'di-al), *a.* [Gr. καρδία, heart, + *-al*[1].] Of or pertaining to the heart; cardiac.

cardialgic (kär-di-al'jik), *a.* Relating to or suffering from cardialgia.

cardiameter (kär-di-am'e-tėr), *n.* Same as ★*cardiometer.*

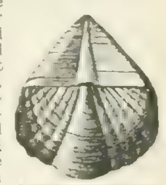
cardianeuria (kär-di-a-nū'ri-ä), *n.* [NL., < Gr. καρδία, heart, + ἄνευρος, without sinews or nerves, < ἀ- priv. + νεῦρον, sinew, nerve.] In *pathol.*, lack of tone in the heart.

cardiant (kär'di-ant), *n.* [Gr. καρδία, heart, + *-ant.*] A remedy which acts upon the heart.

cardiataxia (kär-di-a-tak'si-ä), *n.* [Gr. καρδία, heart, + ἀταξία, disorder: see *ataxy.*] Irregular action of the heart.

cardiatrophy (kär-di-at'rō-fi), *n.* Same as *cardiatrophia.*

cardinal. **I.** *a.*—**Cardinal area,** in the structure of the shells of the *Brachiopoda*, a flattened or curved triangular area between the hinge-line and the beaks of the valves, specially prominent on the ventral valve, and medially divided by the delthyrial opening. A true cardinal area is not present in all orders of *Brachiopoda*, but in the orders *Atremata* and *Neotremata* it is represented by a posterior flattening of the valves termed a *false cardinal area.* **Cardinal number.** (*b*) Multitude; the degree in which the members of a collection are many: so used erroneously by some logicomathematicians.—**Cardinal point.** See ★*point*[1].—**Cardinal process,** in brachiopods, a projection at the posterior edge of the dorsal valve which interlocks with the hinge-teeth on the ventral valve, thus forming the hinge.—**Cardinal septa.** See ★*septum.*—**Cardinal value.** See ★*value.*



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II. *n.*—**Alizarin cardinal.** Same as *alizarin* ★*garnet.*—**Cardinal in petto,** one whom the Pope intends to create a cardinal, but whose name has not been formally published.

cardinal-fish (kär'di-nal-fish"), *n.* A fish of the family *Apogonidæ*, the red species of which is called *cardenal* in Spanish: they are found

in tropical waters, and are especially abundant in the East Indies.

cardinalic (kär-di-nal'ik), *a.* Of or pertaining to the office of a cardinal; like a cardinal.

cardinalism (kär'di-nal-izm), *n.* [*cardinal* + *-ism.*] The system of the college of cardinals; the theory of the institution of the college of cardinals.

cardinalist (kär'di-nal-ist), *n.* **1.** An advocate or adherent of the system of the college of cardinals.—**2.** A follower of Cardinal Antoine Perrenot, prime minister to Margaret of Parma in the sixteenth century.

cardinalitian (kä"di-na-lish'ian), *a.* Same as *cardinalitial.*

card-index (kärd'in"deks), *n.* An index consisting of cards arranged alphabetically.

carding-scale (kär'ding-skāl), *n.* A scale or table, used by those who card wool on commission, giving the amount of carding to be done and the relative price.

carding-stock (kär'ding-stok), *n.* A bench, upon one end of which is nailed card-clothing, the other end serving as a seat for the operator in carding fibrous material, as wool and cotton, with hand-cards in conjunction with the fixed card.

carding-surface (kär'ding-sér"fās), *n.* In *textile-manuf.*, the extremities of the card-clothing teeth on the carding-machine that card the stock.

cardio-arterial (kär"di-ō-är-tē'ri-al), *a.* Relating to both the heart and the arteries. —**Cardio-arterial interval,** the difference in time, sometimes quite appreciable, between the apex-beat of the heart and the pulse at the wrist or elsewhere.

cardioblast (kär'di-ō-blāst), *n.* [Gr. καρδία, heart, + βλαστός, germ.] In *insect embryol.*, any one of a long row of cells bordering the mesodermal layer of the primitive band and affording the first indication of the dorsal vessel. *A. S. Packard*, Text-book of Entom., p. 572.

cardioclasis (kär"di-ok'la-sis), *n.* [Gr. καρδία, heart, + κλάσις, breaking.] Rupture of the heart.

cardiocœlomic (kär"di-ō-sē-lom'ik), *a.* In *insect anat.*, pertaining to the pericardial cœloma or heart-cavity.

These openings, called *cardio-cœlomic* apertures, are visible to the naked eye, being situated on conical papillæ of the walls of the heart.
A. S. Packard, Text-book of Entom., p. 400.

cardioconch (kär'di-ō-kongk), *n.* [Gr. καρδία, heart, + κόγχη, a molluscan shell.] One of the so-called *Cardioconchæ.*

Cardioconchæ (kär-di-ō-kong'kē), *n. pl.* A factitious group of pelecypod mollusks characterized by their tenuous shells and the absence of dentition and other critical structures. It was conceived by Neumayr that this apparently primitive condition was actual, and he designated the group by the name *Palæoconchæ*, which was subsequently changed by Benshausen to *Cardioconchæ* because shells of this type are not of primitive age. Clarke has shown that the *Cardioconchæ* or *Palæoconchæ* represent merely a condition of degeneration or convergence largely due to pelagic life, and similarly affecting genera of diverse phylogeny. Such pelecypods are specially characteristic of the Bohemian Upper Silurian and of the lower Upper Devonian throughout the northern hemisphere.

cardiogram, *n.* **Electric cardiogram,** a tracing showing the electric currents which traverse the animal body with every heart-beat.

cardiographic (kär"di-ō-graf'ik), *a.* Of or pertaining to cardiography.

cardio-inhibition (kär"di-ō-in-hi-bish'on), *n.* Slowing of the action of the heart. *Philos. Trans. Roy. Soc.* (London), ser. B, 182. 242.

cardiokinetic (kär"di-ō-ki-net'ik), *a.* [Gr. καρδία, heart, + κινητός, ⟨κινεῖν, move.] Causing or accelerating the action of the heart.

cardiolith (kär'di-ō-lith), *n.* [Gr. καρδία, heart, + λίθος, stone.] A calcareous deposit in or upon the heart.

cardiolysin (kär-di-ol'i-sin), *n.* [*cardiolysis* + *-in*[2].] A cytotoxin directed against heart-muscle tissue.

cardiolysis (kär-di-ol'i-sis), *n.* [NL., ⟨ Gr. καρδία, heart, + λύσις, dissolution.] Resection of a portion of the sternum and of the costal cartilages in the cardiac area, in order to permit of greater freedom of movement in cases of adhesions following chronic mediastinopericarditis. *Lancet*, July 18, 1903, p. 188.

cardiometer (kär-di-om'e-tèr), *n.* [Gr. καρδία, heart, + μέτρον, measure.] **1.** An instrument for measuring the intracardiac blood-pressure. —**2.** An instrument for recording the extent and frequency of the cardiac pulsations.

cardiometric (kär"di-ō-met'rik), *a.* Of or pertaining to cardiometry. *Nature*, May 26, 1904, p. 88.

cardiometry, *n.* **2.** Measurement of the blood-pressure.

cardiopathy (kär-di-op'a-thi), *n.* [Gr. καρδία, heart, + -παθεια, ⟨ πάθος, disease.] Disease of the heart. *Phil. Med. Jour.*, Jan. 31, 1903, p. 207.

cardioplegia (kär"di-ō-plē'ji-ä), *n.* [Gr. καρδία, heart, + πληγή, stroke. Cf. *apoplexy.*] **1.** Paralysis of the heart muscles.—**2.** Irregular muscular contractions of the esophageal orifice of the stomach.

cardioptosis (kär-di-op-tō'sis), *n.* [NL., ⟨ Gr. καρδία, heart, + πτωσις, falling.] Downward dislocation of the heart. *Med. Record*, Jan. 24, 1903, p. 157.

cardiopuncture (kär"di-ō-pungk'tūr), *n.* [Gr. καρδία, heart, + L. *punctura*, puncture.] Same as *cardiocentesis.*

cardiorespiratory (kär"di-ō-rē-spīr'ä- or res'-pi-rā-tō-ri), *a.* [Gr. καρδία, heart, + E. *respiratory.*] Relating to change in the rhythm and frequency of respiration dependent upon varying heart-action; relating to or caused by both respiratory and cardiac movements: as, a *cardiorespiratory* murmur. *Med. Record*, Feb. 7, 1903, p. 202.

cardiosclerosis (kär"di-ō-sklē-rō'sis), *n.* [NL., ⟨ Gr. καρδία, heart, + σκλήρωσις, hardening.] Overgrowth of fibrous connective tissue in the walls of the heart.

cardiospasm (kär'di-ō-spazm), *n.* [Gr. καρδία, heart, + σπασμός, contraction: see *spasm.*] Irregular muscular contractions at the esophageal opening of the stomach.

Cardiospermum (kär"di-ō-spér'mum), *n.* [NL. (Linnæus, 1735–53), ⟨ Gr. καρδία, heart, + σπέρμα, seed. The name alludes to the heart-shaped aril on the seeds of some species.] A genus of plants of the family *Sapindaceæ*, which comprises about 30 tropical American species of climbing herbs, with alternate biternate leaves, coarsely serrate leaflets, and small white flowers. The most popular species is the balloon-vine (*C. Halicacabum*), a rapid-growing, easily cultivated tender annual, curious for its inflated seed-vessels. See *balloon-vine* (cut), *Indian-heart*, and *heartseed.*

cardiosphygmograph (kär"di-ō-sfig'mō-gräf) *n.* [Gr. καρδία, heart, + E. *sphygmograph.*] A combined cardiograph and sphygmograph.

cardiostenoma (kär"di-ō-stē-nō'mä), *n.* [NL., ⟨ Gr. καρδία, heart, + στένωμα, a narrow place, ⟨ στενόειν, make narrow, ⟨ στενός, narrow.] Same as *cardiostenosis.*

cardiotoxic (kär"di-ō-tok'sik), *a.* [Gr. καρδία, heart, + τοξικόν, poison.] Having a poisonous effect upon the heart.

cardiovalvulitis (kär"di-ō-val-vū-lī'tis), *n.* [NL., ⟨ Gr. καρδία, heart, + NL. *valvula*, valve, + *-itis.*] Inflammation of the valves of the heart.

cardiovasal (kär"di-ō-vā'sal), *a.* [Gr. καρδία, heart, + L. *vas*, vessel, + *-al*[1].] Same as ★*cardiovascular.*

cardiovascular (kär"di-ō-vas'kū-lär), *a.* [Gr. καρδία, heart, + L. *vasculum*, a vessel: see *vascular.*] Relating to both the heart and the blood-vessels. *Med. Record*, March 28, 1903, p. 508.

cardiovisceral (kär"di-ō-vis'e-ral), *a.* Connected with the heart and the viscera.—**Cardiovisceral vessel,** in ascidians, a vessel arising from the dorsal end of the heart and breaking up into branches which run over the surface of the alimentary canal and other organs.

Cardita (kär-dī'tä), *n.* [NL., ⟨ Gr. καρδία, heart, + *-ιτης*, E. *-ite*[2].] The typical genus of the family *Carditidæ. Bruguières*, 1791.

cardite (kar'dīt), *n.* [NL. *Cardita.*] A bivalve mollusk of the genus *Cardita.*

carditian (kär-dit'i-an), *a.* Of or allied to the genus *Cardita.*

Carditidæ (kär-dit'i-dē), *n. pl.* [NL., ⟨ *Cardita* + *-idæ.*] **1.** A family of *Pelecypoda* with a cockle-like shell, external parivincular ligament, and fully developed hinge with long posterior cardinal tooth. The genera are all marine. They began their existence in the Triassic and have continued to the present.—**2.** A family of bivalve mollusks of the order *Eulamelli-branchiata.* They have a single mantle-fusion, branchiæ large and unequal, the foot keeled and often byssiferous, and the shell radiately grooved. The family includes the genera *Cardita*, *Carditella*, *Venericardia*, and others.

Cardium clay, in *geol.*, a late division of the Pleistocene deposits in Scandinavia containing fossils of the genus *Cardium.*

card-lacing (kärd'la-sing), *n.* The act of tying together the pattern-cards of a Jacquard ready for the loom.

card-money (kärd'mun"i), *n.* A kind of paper-currency issued by the French in Canada in 1685.

card-nippers (kärd'nip"èrz), *n. pl.* A hand-punch for making holes in the pattern-cards of a Jacquard loom.

cardo, *n.* **4.** In the pelecypod mollusks, the primitive hinge: contrasted with the *articulus* or adult hinge.—**5.** One of the two intersecting central streets of the Roman military camp or castrum, the other being the decumanus. A similar arrangement is found in the prehistoric pile-settlements of northern Italy.

First a rectangular space was marked out with the help of two straight lines (the *Cardo* and Decumanus) intersecting at right angles, their direction being probably determined by some simple astronomical observations.
F. von Duhn, in Jour. Hellenic Studies, XVI. 129.

cardol, *n.* **2.** Tribrom-salol, made by the action of bromine, in excess, upon salol. It is a crystalline substance used for allaying gastric uneasiness, cramps, etc.

cardon (kär-dōn'), *n.* [Mex. use of Sp. *cardón*, teazel: see *cardoon.*] Either of two species of giant cactus, *Cereus pecten-aboriginum* and *C. Pringlei*, which in the arid cape region of Lower California form extensive leafless forests known as *cardon forests.* The dead wood is used for fuel, etc., and the seeds are ground to mix with meal.

card-pocket (kärd'pok"et), *n.* A pocket for carrying cards; specifically, a pocket in the inside cover of a book for holding the reader's library-card.

card-recorder (kärd'rē-kôr"dèr), *n.* A clock which is correlated with mechanism for recording on cards the time spent in any special piece of work: used in card-systems of industrial cost-keeping.

card-room (kärd'röm), *n.* A room devoted to card-playing or in which card-playing is carried on.

card-sharping (kärd'shär"ping), *n.* The practice of cheating at cards; the profession of the card-sharper.

card-system (kärd'sis"tem), *n.* **1.** A system of keeping records, in which each item is entered on a separate card. The cards for any series are of uniform size, are arranged in alphabetic order, and, in series of any length, are marked by division-cards at appropriate points. Cards (items) can be inserted or withdrawn at will.

card-teazel (kärd'tē"zl), *n.* The wild teazel, *Dipsacus sylvestris.*

card-thistle (kärd'this"l), *n.* Same as ★*card-teazel.*

Carduaceæ (kär-dū-ā'sē-ē), *n. pl.* [NL. (Necker, 1770), ⟨ *Carduus* + *-aceæ.*] The name adopted for the plant-family *Asteraceæ* by authors who take the genus *Carduus* as the type of the family. It has priority over all other properly formed names, but *Carduus* is not typical, and would require it to be called the thistle family. See ★*Asteraceæ*, 2, and *Compositæ*[1].

card-wiring (kärd'wīr"ing), *n.* The insertion of straight wires at regular intervals between the pattern-cards of a Jacquard loom, in such a manner as to cause the cards to be suspended from the card-cradle.

careen, *n.* **2.** The submerged figure or body which is cut off from a floating vessel by the plane of the surface of the water; the submerged portion of a floating vessel; a figure bounded by the plane of the surface of the water and the wetted surface of a floating body. —**3.** A careening or lurching motion or movement; a lurch.

The charm [of the camel] is not in the figure . . . nor in the movement, the noiseless stepping, or the broad *careen.*
L. Wallace, Ben-Hur, I. i.

careless-weed (kär'les-wēd), *n.* One of several coarse species of amaranth springing up in neglected gardens, as *Amaranthus retroflexus* (pigweed) and *A. hybridus.* The spiny careless-weed is the same as the spiny amaranth, *A. spinosus.*

Careliparis (kar-e-lip'a-ris), *n.* [NL., ⟨ Gr. κάρα, (Ionic καρη), head, + *Liparis.*] A subgenus of snail-fishes of the genus *Liparis.*

Caremitra (kar-e-mī'trä), *n.* [NL., ⟨ Gr. κάρα (Ionic κάρη), head, + μίτρα, girdle.] A subgenus of snail-fishes of the genus *Careproctus.*

Carenchelyi (ka-reng-kē'lī-ī), *n. pl.* [NL., ⟨ Gr. κάρα, head, + ἐγχελυς, eel.] An order of long-necked eels found in the deep sea: distinguished by the well-developed bones of the

jaw, which are joined immovably to the cranium. Only one species is known, *Derichthys serpentinus*, constituting the family *Derichthyidæ*.

Carentonian (kar-en-tō'ni-an), *a.* [ML. *Carentonus*, Charente, + *-ian.*] In the geology of northern France and Belgium, noting a substage of the Middle Cretaceous or Cenomanian: named from the river Charente. It is in part equivalent to the Lower Chalk of England. Also used substantively.

Careproctus (kar-ē-prok'tus), *n.* [NL., < Gr. κάρα, (Ionic κάρη), head, + πρωκτός, anus.] A genus of snail-fishes, of the family of *Liparidæ*, distinguished by the attenuated body and small disk.

ca. resp. An abbreviation of the Latin *capias ad respondendum*. See *capias*.

caressant (ka-res'ant), *a.* Caressing: as, the *caressant* airs of heaven. *N. E. D.*

caressive (ka-res'iv), *a.* Of the nature of a caress or caresses; caressing.

carette (kär-et'), *n.* [Irreg. < *-car*[1] + *-ette.*] 1. A street-car consisting essentially of the body of an ordinary street-car mounted on wooden spoke-wheels, with crank-axles. It is low, runs easily, and does not require rails.—2. A motor-vehicle like a wagonette. There are seats on both sides of the body, with a door at the rear, and the operator's seat is in front.

Carey act. See ★*act.*

carferal (kär'fe-ral), *n.* [L. *car(bo)*, charcoal, + *fer(re)*, bear, + *al(umina).*] A trade-name for a mixture of charcoal, metallic iron, and clay intended for filtering and purifying sewage and also drinking-water.

Cargile membrane. See ★*membrane.*

cargo-book (kär'gō-bůk), *n.* The book in which are entered the particulars of a ship's cargo.

cargo-port (kär'gō-pōrt), *n.* A large rectangular port or opening in a ship's side for use in loading or discharging cargo.

car-haul (kär'hâl), *n.* In *transportation*, any short industrial railroad in which the cars, or skips, are hauled by means of endless cables or chain-belts running on sheaves laid directly on the surface between the rails. The cars are pushed or pulled along by lugs on the chain that engages the body of the car. On inclines, as in coal-breakers, the lug may drag the car up the incline or merely hold it back from running away as it is lowered by the moving chain. In standard-gage drill-yards an endless wire cable carhaul is often used in moving cars or to bring coal-cars to the elevator of a coal-storage plant. The cable runs over sheaves placed beside the track, a clip and rope or other device being used to connect the cars with the traveling-cable. **Carhaul chain,** a special type of chain having lugs or projections inserted at intervals among the links.

Carib basket. See ★*pegall.*

carib-fish (kar'ib-fish), *n.* Same as *caribe.*

caribou, *n.* No fewer than 10 species of caribou have been described from North America, some being restricted to a comparatively limited area. Such are *Rangifer terranovæ* of Newfoundland and *R. dawsoni* from the Queen Charlotte Islands. The most eastern species is *R. grœnlandicus* from Greenland, the westernmost *R. granti* from the end of the Alaska peninsula.

caricatural (kar'i-ka-tūr-al), *a.* Of the nature of caricature; caricature-like: as, a *caricatural* biography.

Caricature photograph. See ★*photograph.*

caricology (kar-i-kol'ō-ji), *n.* [L. *carex (caric-)*, sedge, + Gr. *-λογια*, < λέγειν, speak.] That department of botany which is concerned with a study of the sedge family. See *caricography* and *caricologist.*

Caricyphidæ (kar-i-sif'i-dē), *n. pl.* [NL., < *Caricyphus* + *-idæ.*] An ill-defined family of macrurous decapod crustaceans containing the genera *Caricyphus*, *Rhomaleocaris*, and *Anebocaris*, of which the first is the type.

Caricyphus (kar-i-sī'fus), *n.* [NL., < Gr. καρίς, a small crustacean, prob. a shrimp or prawn, + κυφός, bent, humped.] The typical genus of the family *Caricyphidæ*. *C. Spence Bate*, 1888.

caridoid (kar'i-doid), *a.* [Gr. καρίς (καριδ-), a small crustacean, prob. a shrimp or prawn, + εἶδος, form.] Resembling in form the shrimps or members of the crustacean family *Caididæ*.

caries, *n.*—**Dry caries** or **caries sicca,** molecular disintegration of bone not attended by suppuration.

carillonneur (kä-ri-lon-nèr'), *n.* [F., < *carillonner, v.*, < *carillon*, a carillon.] A bell-ringer or player on a carillon or chime.

carina, *n.*, 1. (*c*) [*cap.*] In *astron.*, one of the four parts into which the constellation Argo is divided. See *Argo.*

2. One of the vertical cross-bars on the septa of a coral.—4. In *entom.*, any keel-like elevation of the body-wall of an insect, as the pronotal carina of many grasshoppers. *Proc. Zool. Soc. London*, March, 1899, p. 340.—**Carina tracheæ,** the projecting ridge at the point of bifurcation of the trachea.

Carinate folds, in *geol.*, isoclinal folds.

carinately (kar'i-nāt-li), *adv.* In a keeled or carinate manner; with a carina or keel.

carination (kar-i-nā'shon), *n.* [*carinate* + *-ion.*] A keeled condition: used in descriptive biology and anatomy to express the existence of ridges or carinæ on the organic body or test.

Behind they are long and narrow, showing a double *carination* with a concavity dividing them.
Amer. Nat., Jan., 1904, p. 28.

Carinthian process, stage. See *Bleiberg* ★*process*, ★*stage.*

carisquis, *n.* See ★*kariskis.*

carking, *p. a.* 2. Worrying; fretful; anxious; solicitous.

Every where you may find the selfish and the sensual, the *carking* and the careful, the cunning and the credulous, the worldling and the reckless. *Southey*, Doctor, lxv.

carline[5] (kär'lin), *n.* A Russian game of billiards which employs five balls, one of them blue and another black or yellow. It scores for both caroms and pockets and is cumulative in its counts and penalties. It was a favorite in the United States when pocket tables were in fashion.

carline-box (kär'lin-boks), *n.* A shallow, portable box, for storage of miscellaneous articles, secured under the deck of a ship, in the rectangular spaces between the beams and the carlines.

car-loader (kär'lō″dèr), *n.* In *transportation*, any machine used in loading a freight-car with grain, coke, sand, coal, or other material in bulk. The most common form is a combined delivery- and trimming-spout, used in loading a box-car with wheat, corn, etc. It may be a single flexible spout or a two-way spout for filling both ends of the car at the same time. In one type a pair of fans placed at the end of the delivery-pipe is used to blow the grain in equal quantities into each end of the car, trimming the load as fast as delivered. It will load 6,000 bushels an hour. Belt- and bucket-conveyers, fitted to a swinging-boom, are also used as car-loaders. In loading flat- or hopper-cars with sand or broken stone a short conveyer may extend from the ground to the car to deliver the material to the car as fast as it is shoveled into the conveyer. Conveyers, supported on swinging-booms over a hopper-car or in the door of a box-car, are also used to load coke, ashes, coal, etc., upon cars. See ★*conveyer*, ★*coaling-station*, and ★*coal-storage.*

Carlylesque (kär-lil-esk'), *a.* [*Carlyle* + *-esque.*] Characteristic of Thomas Carlyle or his style.

Carmelitess (kär'mel-i-tes), *n.* [*Carmelite* + *-ess.*] A member of the Carmelite order of women.

carmeloite (kär-mel'ō-īt), *n.* [*Carmelo* Bay, California, + *-ite*[2].] A name given by A. C. Lawson to eruptive rocks at Carmelo Bay, California, having the character of andesitic basalt. The texture is like that common in andesite, the phenocrysts being pyroxene, lime-soda feldspar, and olivin altered to iddingsite.

car-mile (kär'mil), *n.* The unit in which the number of miles covered by the rolling-stock of a railway system within a certain time is measured.

carmilion (kär-mil'yon), *n.* [*carm(ine)* + *(verm)ilion.*] A carmine preparation in which the coloring properties are not brought to a dry state, as with other pigments.

carminaph (kär'mi-nâf), *n.* [Also *carminnaph*: < *carmi(ne)* + *naph(tha).*] Same as ★*Sudan I.*—**Carminaph garnet.** Same as *alpha-naphthylamine* ★*red.*

carmine, *n.*—**Alizarin carmine,** a mordant coal-tar color related to anthracene. It is the sodium salt of alizarin monosulphonic acid, and is prepared by the action of fuming sulphuric acid upon alizarin. Also called *alizarin red S* and *alizarin powder.* **Carmine lake,** a pigment made from the second washing of carmine. **Carmine red.** See ★*red*[1].—**Orseille carmine,** a dyestuff made by treating lichens with an aqueous solution of ammonia, exposing the liquid to the air until a crimson color has developed, and heating with alum.

carmoisin, carmoisine (kär'mō-i-sin), *n.* [*car(mine)* + *(cra)mois(y)* + *-in*[2].] An acid coal-tar color: same as *fast* ★*red C.*

carmoot (kär-möt'), *n.* [Ar. *garmūt.*] A fish, *Clarias anguillaris*, found in the Nile.

carnation[1], *n.*—**Bacteriosis of carnation.** See ★*bacteriosis.*—**Carnation disease.** See ★*disease.*—**Carnation fairy-ring.** See ★*Heterosporium.*

carnelian, *n.* 2. The beautiful red or reddish color of this stone. The distinctive colors of Cornell University are *carnelian* and white.

carnic (kär'nik), *a.* [L. *caro (carn-)*, flesh, + *-ic.*] Pertaining to or derived from flesh.—**Carnic acid,** a substance, $C_{10}H_{15}O_5N_3$, isolated by Siegfried from the end-products of proteolytic digestion.

carniferous (kär-nif'e-rus), *a.* [L. *caro (carn-)*, flesh, + *-ferus*, < *ferre*, bear.] Flesh-bearing.

There is also a milk tree, but we nowhere find a *carniferous*, a flesh-bearing tree.
Leigh Hunt, Seer, p. 27. *N. E. D.*

carniferrin (kär-ni-fer'in), *n.* [L. *caro (carn-)*, flesh, + *ferrum*, iron, + *-in*[2].] A bland, tasteless powder said to be a compound of iron and phosphocarnic acid containing 30 per cent. of iron.

carnificial (kär-ni-fish'al), *a.* [L. *carnifex (-fic-)* + *-ial.*] Of or pertaining to a carnifex or executioner, or a butcher.

See my poor dexter, abridged to one thumb, one finger and a stump, by the blow of my adversary's weapon, however, and not by any *carnificial* knife.
Scott, Fortunes of Nigel, II. xiii.

carniform (kär'ni-fôrm), *a.* [L. *caro (carn-)*, flesh, + *forma*, form.] Flesh-like; resembling flesh.

Carniolan (kär-ni-ō'lan), *a.* [*Carniola* + *-an.*] Of or pertaining to Carniola, an elevated Alpine province of Austria.—**Carniolan bee,** one of a race of very gentle large gray honey-bees from Carniola. The abdomen presents a ringed appearance due to bands of silvery-white hairs.

Carnosa (kär-nō'sä), *n. pl.* [NL., neut. pl. of *carnosus*, fleshy: see *carnose.*] An order of *Demospongiæ* containing *Tetraxonida* with spicules greatly reduced in size or wanting, and no diactinal megascleres or triænes with long rhabdomes. It contains the families *Corticidæ*, *Plakinidæ*, *Chondrosidæ*, and others.

Carniolan Bee (*Apis mellifera*) (Benton, U. S. D. A.)
A, drone; *B*, queen.

carnosin (kär'nō-sin), *n.* [*carnose* + *-in*[2].] A leucomaine ($C_9H_{14}N_4O_3$) belonging to the purin group.

carnotine (kär'nō-tin), *n.* [A. *Carnot*, a member of the School of Mines, Paris, + *-ine*[2].] Same as ★*primulin.*

carnotite (kär'nō-tīt), *n.* [A. *Carnot* (see *carnotine*) + *-ite*[2].] A more or less impure hydrated vanadate of uranium and potash, occurring somewhat abundantly in Montrose county and elsewhere in Colorado: found as a yellow crystalline powder or in loosely coherent masses. It contains radium and is said to be highly radio-active.

caro (kä'rō), *n.* [Porto Rican.] Any one of several vines indigenous to Porto Rico, belonging to the genus *Cissus*, as *C. sicyoides.*

caroba (kä-rō'bä), *n.* [Braz.] The name of several Brazilian trees of the family *Bignoniaceæ*, especially *Jacaranda procera* and *J. Caroba.* The leaves are bitter and astringent and are used in the treatment of syphilitic and scrofulous affections.

carobin (kar'ō-bin), *n.* [*caroba* + *-in*[2].] A crystalline constituent, not well studied, contained in the leaves of caroba (*Jacaranda Caroba* and *J. procera*), a tree native to Guiana and belonging to the family *Bignoniaceæ.*

caroid (kar'oid), *n.* [*Car(ica)* + *-oid.*] A medicinal preparation containing a proteolytic ferment, papayotin. It is obtained from the fruit of *Carica Papaya* (papaw).

Carolina beech-drops, locust. See ★*beech-drops*, ★*locust*[1].

Caroline, *a.* **II.** *n.* [*l. c.*] 1. A small éclair with coffee filling and fondant icing.—2. A Swedish silver coin of the value of about 38 United States cents.

Caroline Books. See ★*book.*

Carolinian area, satyr. See ★*area*, ★*satyr*[1].

carolinium (kar-ō-lin'i-um), *n.* [NL. *Carolina* (North Carolina) + *-ium.*] A name given by Baskerville to a supposed element of which the chlorid was obtained by heating in chlorin a mixture of carbon and what had generally been regarded as the oxid of thorium. A second new substance, which has been named berzelium, was at the same time separated as chlorid, so that the thorium of earlier chemistry apparently contains these two supposed elements, along with a third, for which the name *thorium* is retained. The atomic weight of carolinium is apparently higher than that of either of the others. The oxid is said to have a pinkish color.

Carolus dollar. See ★*dollar.*

caromata, *n.* Same as ★*carromata.*

caromic (ka-rom'ik), *a.* In *billiards,* of or pertaining to caroms or the making of caroms.

carone (kar'ōn), *n.* A ketone, $C_{10}H_{16}O$, prepared by the addition of hydrochloric acid to dihydrocarvone and its subsequent removal by alcoholic sodium hydroxid.

carosa (kä-ro'sä), *n.* [Philippine Sp. (?), < Sulu *karosah,* a cart, a wagon, < Sp. *carroza,* a coach: see *carochi.*] In the Philippine Islands, a sled for conveying goods, used particularly in the country.

carot (kä-rōt'), *n.* [Philippine Sp. ★*carot,* < Bisaya ★*calot* (= Pampanga *calut*) Ilocan *carót,* a root eaten after steeping in water to improve it.] In the Philippine Islands, a tuber which is steeped or cooked and eaten by the natives.

caroticum (ka-rot'i-kum), *n.*; pl. *carotica* (-kä). [NL.] In *craniom.,* the extreme medial or lateral point of the carotid canal on the outer surface of the skull. *Von Torok.*

Carotid triangles. See ★*triangle.*

carotidean (kar-ọ-tid'ē-an), *a.* and *n.* [*carotid* + *-e-an.*] Same as *carotid.*

carotte (ka-rot'), *n.* [French Creole, introduced through Louisiana.] Same as *carrot,* 4.

carp[2], *n.* **6.** A name of various fishes of the genus *Chilodactylus* in Australia, New Zealand, and Tasmania. These fishes are not related to the European carp, which is a cyprinoid fish.—**Lake-carp,** a sucker, *Carpiodes thompsoni,* found in the Great Lakes.—**Looking-glass carp,** a variety of the true carp having a few large scales scattered irregularly over the body. **Murray carp,** a common name of *Murrayia cyprinoides,* a percoid fish found in Australia.

carp[3] (kärp), *v. i.* To prepare teazels for the napping-machine for dressing woolen cloth.

carpaine (kär'pā-in), *n.* [*Car(ica) Pa(paya)* + *-ine*[2].] A crystalline, intensely bitter alkaloid, $C_{14}H_{25}NO_2$, found in the leaves of *Carica Papaya,* the melon-tree of South America. It is a not very powerful poison affecting the heart, spinal cord, and respiration.

carpal. I. *a.*—**Carpal arches,** various small arteries which supply the region of the wrist.

II. *n.* **2.** In *ichth.,* same as *actinost.*

Carpathian balsam. See *stone-pine* (*b*), under *pine*[1] and ★*balsam.*

carpellized (kär'pel-īzd), *a.* In *bot.,* converted or transformed into carpels: said of other organs of a flower.

Carpellised stamens of the wall-flower.
Nature, July 28, 1904, p. 312.

carpene (kär'pēn), *n.* [(*podo*)*carp*(*ic*) + *-ene.*] A hydrocarbon, C_9H_{14}, prepared by distilling the calcium salt of podocarpic acid. It boils at 156° C.

carpenter, *n.* **3.** In *entom.,* same as ★*carpenter-ant* or *carpenter-bee.*—**Carpenters' gage, rule of three-four-five.** See ★*gage*[2], ★*rule*[1].

carpenter-ant (kär'pen-tèr-ant″) *n.* Any wood-working ant, such as *Camponotus æthiops, Lasius flavus,* or *L. fuliginosus* of Europe, or *C. Pennsylvanicus* of America.—**Black carpenter-ant,** *Camponotus Pennsylvanicus,* a common species in the United States, where it forms large colonies in dead trees, stumps, and logs, and sometimes even in the large beams of buildings.—**Pennsylvania carpenter-ant.** Same as *black* ★*carpenter-ant.*

carpenter-bird (kär'pen-tèr-bèrd″), *n.* The California red-headed woodpecker, *Melanerpes formicivorus,* which cuts holes in dead branches, in which it inserts acorns.

carpenter's-herb, *n.* **2.** The name of several labiate plants, as *Ajuga reptans* (bugle), *Lycopus Virginicus* (bugleweed), and the rouge-berry, *Rivina humilis.*

carpenter-worm (kär'pen-tèr-wèrm), *n.* The wood-boring larva of a lepidopterous insect of the family *Cossidæ* (the goat-moths).

carper[2] (kär'pèr), *n.* One who prepares thistle-teazels for the cloth-napping machine.

carpet, *n.* **4.** A British collectors' name for any one of several species of geometrid moths whose wings bear a carpet-like design, as the *flame-carpet* (*Coremia propugnata*) and the *hazel-carpet* (*Cidaria corylata*).

carpet-baggery (kär'pet-bag″ē-ri), *n.* Same as *carpet-baggism.*

carpet-beetle, *n.*—**Black carpet-beetle.** Same as ★*tapestry-beetle.*

carpet-bug (kär'pet-bug), *n.* Same as *carpet-beetle.*

carpet-grass (kär'pet-gras), *n.* A grass, *Axonopus compressus,* of a dense spreading growth, highly valued in the southern United States for pasture and lawns. The name is also applied to the ★smut-grass (which see), to *Panicum clandestinum* of Texas, and probably to other grasses of a matted habit.

carpet-loom (kär'pet-lōm), *n.* A loom for weaving carpets, usually having a Jacquard equipment.

carpet-pick (kär'pet-pik), *n.* In *weaving,* a form of picking-motion directly connected with the crank-shaft for throwing the shuttle across the loom.

carpet-sewing machine. See ★*sewing-machine.*

carpet-shark (kär'pet-shärk), *n.* A shark, *Orectolobus barbatus,* of the family *Hemiscylliidæ*: found in Australia.

carpet-shell (kär'pet-shel), *n.* A small edible clam, *Tapes staminea,* found along the Pacific coast.

carpet-stitch (kär'pet-stich), *n.* A stitch used in sewing carpets: for ingrain an over-and-over stitch, for Brussels a through-and-through stitch.

carphospore (kär'fō-spōr), *n.* [Gr. *κάρφος,* a stalk, chip, bit, + *σπορά,* seed (spore).] In *phytogeog.,* a plant bearing achenes with a scaly or chaffy pappus which aids in dissemination. *F. E. Clements.*

Carpiodes (kär-pi-ō'dēz), *n.* [NL., < *carpio,* carp, + Gr. *-ειδής,* -like.] The generic name of the group of fishes called carp-suckers, of the family *Catostomidæ. C. cyprinus* is found in the Potomac, and several other species in the Mississippi valley streams.

carpitis (kär-pī'tis), *n.* [NL., < *carp*(*us*) + *-itis.*] An inflammation of the synovial membranes covering the articular surfaces of the bones of the carpus or knee-joint of domestic animals (wrist of man), causing pain, swelling, and lameness.

Carpoasci (kär-pō-as'ī), *n. pl.* [NL., < *καρπός,* fruit, + *ἀσκός,* a sac: see *ascus.*] A group of ascomycetous fungi including all those provided with a sporocarp, as the *Pyrenomycetes* and the *Discomycetes.*

carpoascous (kär-pō-as'kus), *a.* [*Carpoasc*(*i*) + *-ous.*] Belonging to the fungus-group *Carpoasci.*

Asci enclosed in "fructifications," i. e., *carpoascous.*
Encyc. Brit., XXVIII. 558.

carpocarpal (kär-pō-kär'pal), *a.* [*carpus* + *carp*(*us*) + *-al.*] Relating to two parts of the carpus: said of the articulation between the two rows of carpal bones.

carpodermis (kär-pō-dèr'mis), *n.* [NL., < Gr. *καρπός,* fruit, + *δέρμα,* skin.] Same as *pericarp. Bischoff.*

carpodite (kär'pō-dīt), *n.* [*car*(*po*)*podite.*] Same as *carpopodite.*

carpogam (kär'pō-gam), *n.* [Gr. *καρπός,* fruit, + *γαμος,* marriage.] In *bot.,* the organ of a procarp which produces the cystocarp.

carpogamy (kär-pog'ạ-mi), *n.* [Gr. *καρπός,* fruit, + *-γαμια,* < *γάμος,* marriage.] In *bot.,* the process in the procarp which produces the cystocarp.

carpognathite (kär-pog'na-thīt), *n.* [*carpus* + *gnathite.*] In *crustaceans,* the fifth joint of a gnathite.

carpogonial (kär-pō-gō'ni-al), *a.* [*carpogonium* + *-al.*] Of or pertaining to the carpogonium of the red seaweeds.

carpolith (kär'pō-lith), *n.* [NL. *Carpolithus,* < Gr. *καρπός,* fruit, + *λίθος,* stone.] Same as *carpolite.*

Carpolithus (kär-pol'i-thus), *n.* [NL. (Allioni, 1757), < Gr. *καρπός,* fruit, + *λίθος,* stone.] A genus name for fossil fruits, originally based on specimens from the Upper Miocene of Piedmont, Italy, probably belonging to the genus *Juglans,* and perhaps identical with *J. Nux-Taurinensis,* later described by Brongniart. The name has since been indiscriminately but unwarrantably applied to fossil fruits in general.

carpomania (kär-pō-mā'ni-ạ), *n.* [NL., < Gr. *καρπός,* fruit, + *μανία,* mania.] In *agri.* and *hort.,* the excessive bearing of fruit. [Rare.]

carpophalangeal (kär″pō-fā-lan'jē-al), *a.* [*carpus* + *phalanges* + *-al.*] Relating to the wrist and the phalanges: as, the *carpophalangeal* articulation. *Buck,* Med. Handbook, I. 547.

carpophyte (kär'pō-fīt), *n.* [Gr. *καρπός,* fruit, + *φυτόν,* plant.] In *bot.,* same as *phanerogam.* See *Phanerogamia* and ★*Spermatophyta.*

carpos (kär'pos), *n.* [NL., < Gr. *καρπός,* fruit.] Same as *carpopodite.*

carposperm (kär'pō-spèrm), *n.* [Gr. *καρπός,* fruit, + *σπέρμα,* seed.] In algæ, same as *carpospore.*

carposporangial (kär-pō-spō-ran'ji-al), *a.* [*carposporangium* + *-al*[1].] **1.** In *algæ,* bearing carpospores.—**2.** In *mycol.,* having the sporogenic organs furnished with an integument of hyphæ, as fungi of the family *Mortierellaceæ.* Compare ★*exosporangial.*

carposporangium (kär-pō-spō-ran'ji-um), *n.*; pl. *carposporangia* (-ạ). [NL., < Gr. *καρπός,* fruit, + E. *sporangium.*] A specially differentiated body containing sexually formed spores in certain of the red algæ.

carposporous (kär-pō-spō'rus), *a.* In *bot.,* producing carpospores, as certain red algæ.

carpostrote (kär'pō-strōt), *n.* [Gr. *καρπός,* fruit, + *στρωτός,* strewn.] In *phytogeog.,* a plant in which the fruit (achene, perigynium, etc.) is the unit of distribution. *F. E. Clements.*

carpotropic (kär-pō-trop'ik), *a.* [Gr. *καρπός,* fruit, + *τροπικός,* of or pertaining to a turn or change.] In *bot.,* executed for the protection of fruit or the dissemination of seed: said of certain changes in the position of flower-stalks made only once.

car-puller (kär'pul″èr), *n.* In *transportation,* a small portable capstan having a horizontal winding-drum, used in hauling grain-cars in the yard of a grain-elevator; a ★car-haul (which see). It is operated by means of a belt from the elevator and has winding-ropes to control the cars.

carpus, *n.* **4.** In *entom.*: (*b*) The club of the stigmal vein in the fore wing of an insect of the family *Chalcididæ.*—**5.** In *ichth,* same as *actinost.*

car-pusher (kär'push″èr), *n.* **1.** A hand-lever having a pivoted fulcrum, used as a pinch-bar to move a railroad-car by pinching the face of a wheel and causing it to revolve slowly.—**2.** A machine used to push heavy cars; specifically, a machine used to push cars carrying very hot material, such as steel ingots which have just been poured. In its ordinary form it is a hydraulic machine having a ram or head which pushes the cars carrying the ingot-molds in front of the steel furnace. It can be worked by other than hydraulic power, electricity being sometimes used, and it is operated from a convenient platform at some distance from the machine.

carrao (kä-rä'ọ), *n.* Same as ★*carau.*

carré, *n.* **2.** In *roulette,* a bet that takes in four numbers in a square, the money being placed on the intersecting lines.

carreau, *n.* **4.** A kind of cushion upon which lace is made. It has the front part lower than the back and holds from 6 to 28 pairs of small spools or spindles, the lace as it is made being wound on a cylinder. *Sci. Amer. Sup.,* June 25, 1904, p. 23817.

car-replacer (kär'rē-plā″sèr), *n.* See *replacer.*

carreta (kä-rā'tä), *n.* [Sp., a narrow cart, < *carro,* a car, cart: see *car*[1].] A rudely built cart having a long bottom-frame provided with large rings for ropes that hold the load in place: used in the southwestern United States and Mexico.

carretela (kä-re-tā'lä), *n.* [Sp. ★*carretela* (in Philippine Islands?), < *carreta,* a narrow cart: see ★*carreta.*] A carriage or coach.—**Carretela de Pasay,** a name given in the Philippine Islands to a two-wheeled cart used by the natives of Luzon. Also called *flecha.*

carretera (kä-re-tā'rä), *n.* [Sp., < *carreta*: see ★*carreta.*] In Spanish-speaking countries, a wagon-road or highway.

carreton (kä-re-tōn'), *n.* [Sp., aug. of *carreta,* a cart: see ★*carreta.*] A heavy two-wheeled cart or dray used in Spanish-speaking countries.

carretonero (kä-rā-tō-nā'rō), *n.* [Sp., < *carreton*: see ★*carreton.*] The driver of a carreton. [Philippine Is.]

carriage, *n.* **15.** In *saddlery,* a long handle fitted at one end with a knob and at the other with a branch for receiving a small circular tool: used for ornamenting leather.—**Hydraulic-recoil carriage,** a gun-carriage provided with one or more cylinders filled with glycerin and water, and having pistons attached to the carriage and its slide so as to take up the recoil of the gun.—**Motor-carriage,** an automobile carriage.

carriage-bridle (kar'āj-brī″dl), *n.* A very light bridle with square winkers and without a nose-band or chin-piece.

carriage-cloth (kar'āj-klôth), *n.* A woven fabric with a short, stiff nap, differing from other nap-cloths in that the nap cannot be brushed down smooth.

carriage-gain (kar'āj-gan), *n.* In *mule-spinning*, the gain over the delivery of the roving in the outward traverse of the carriage which carries the spindles.

carriage-gear (kar'āj-gēr), *n.* The various pieces of wood used in building a carriage, cut to shape but not ironed.

carriage-hoist (kar'āj-hoist), *n.* A set of sheers for lifting locomotives or car-bodies from their trucks to facilitate making repairs. In the United States, a gauntree or traveling-crane is generally used for the same purpose.

carriage-horse (kar'āj-hôrs), *n.* A horse more lightly built than a draft-horse, and suitable for use with a carriage. The typical carriage-horse stands 15.1–15.3 hands high and weighs 950–1,150 pounds.

carriage-jack (kar'āj-jak), *n.* A special type of wagon-jack adapted to lifting light carriages: made in several forms. See *wagon-jack*.

carriage-lamp (kar'āj-lamp), *n.* Any form of lamp designed to be carried on a carriage. Such lamps are made, in many forms, to burn candles, oil, or acetylene gas, or to employ electricity.

carriage-porch (kar'āj-pōrch), *n.* A porch projecting over the carriage-drive at the entrance-doorway of a building. It differs from the marquise in being a solid structure, usually of masonry. The ground story of a tower sometimes serves as a carriage-porch.

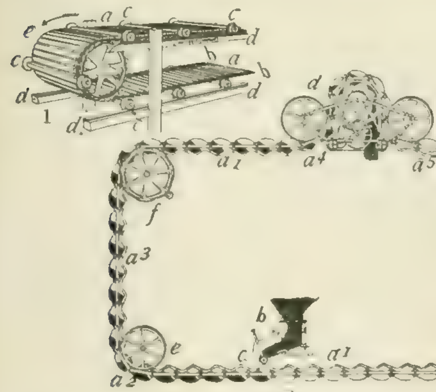
carriage-robe (kar'āj-rōb), *n.* A robe or blanket for use in carriages, made either of furs or of textile materials.

carriage-varnish (kar'āj-vär"nish), *n.* Any varnish used for carriages. The name does not designate varnish of a special composition.

Carrickmacross lace. See ★*lace*.

carricoche (kä-ri-kō'che), *n.* [Sp., < *carro*, cart, + *coche*, coach.] A two-wheeled vehicle common in Buenos Aires. The body resembles the square coach. It has a door at the rear and sliding windows in the sides, and is suspended upon ropes made of untanned hides. When used in towns it is drawn by one or two horses, with a postilion. It has accommodations for six passengers, sitting three on a side as in an omnibus.

carrier[1], *n.*, 5. (*g*) In *transportation*, a system of endless traveling-chains supporting slats, trays, or buckets, used in transporting various materials or articles in bulk or in packages over short distances, as in a factory. The most simple or *platform* type consists of two chains supported by flanged wheels running upon rails at each side and carrying steel or wooden slats that form a moving platform on which the load is placed. See fig. 1. The traveling-sidewalk and the ramp are carriers of this type. Another form consists of a series of platform-trucks moving upon rails, the trucks being secured to a single chain which travels between the rails, hauling the trucks in either direction, carrying them round the wheel at the turn of the carrier (see wheel in fig. 1), and, when reversed, on the return trip. Other types have broad slats which lap one over another to prevent the material from falling between them. Buckets of various shapes are used in place of slats, either fixed to the chains or suspended from pivots on the chains and free to adjust themselves to changes in the travel from a horizontal to a vertical direction. The buckets, when moving in a horizontal direction,



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1. Platform-carrier: *a*, endless [illegible] wooden slats fastened to link-belt chains; [illegible] chains; [illegible] wheels [illegible] pairs; *c*, tracks; *e*, driving wheel and point of discharge of load. Arrow shows travel of load. 2. Bucket-carrier: *a*, bucket pivoted to link-belt chain; *a*1, moving [illegible]; *a*2, changing position and direction; *a*3, traveling vertically; *a*4, passing through discharger; *a*5, inverted, returning empty; [illegible] automatic feed; [illegible] guide-wheel [illegible] controlling feed-gate; [illegible] wheel; *f*, [illegible] gear [illegible]. Flanged wheels on chains travel on horizontal tracks not shown.

overlap to form a continuous series, and are of various shapes to prevent the spilling of the load when changing direction of travel. This is clearly shown in fig. 2, where the loaded buckets are seen moving in three different directions between the feeding-point and the point of discharge. This use of pivoted buckets allies the carrier to both the conveyer and the elevator, and makes it possible to use one system or machine as a conveyer in a horizontal direction and as an elevator in a vertical direction. In one type of bucket-carrier, used in handling coal, the buckets are provided with a hinged bottom for convenience in unloading and a tipping device causing each bucket to open and discharge its load at any desired point. All types of carriers are fed at intervals or continuously, and by hand or by means of automatic feeders, and all are automatic unloaders or are fitted with tripping and discharging appliances. See fig. 2. Carriers are given, various names, as *apron-carrier*, *pivoted bucket-carrier*, *slat-carrier*, etc. See ★*conveyer*, ★*elevator*, ★*ramp*, ★*feeder*, and ★*discharger*. (*h*) In tube systems for post-office or store use, the cylindrical vessel or holder in which the letters or packages are inclosed. The holder, being inserted into the tube, is forced by air-pressure to the intended point.—7. In *photog.*: (*a*) A device for holding films or sensitive paper for exposure in a camera. (*b*) A framework which adapts the holder for carrying a smaller-sized plate than that for which the camera is intended.—8. A local name in Australia for a water-bag so contrived as to be suitable for transportation on the back of a pack-animal, with or without a pack-saddle.—9. Same as *carriage*, 13.—10. One who serves as a scout for robbers and highwaymen, and who carries information to them in regard to likely victims; a robbers' lookout. [Thieves' cant.]

carrier-pigeon, *n.* 2. A breed of domesticated pigeon, having as its most apparent characteristic a huge wattle, like a miniature cauliflower, about the base of the stout beak, and a small wattle around the eye. The skull is narrow, the general build slender, and the length about 17 inches. The favorite color is solid black or dun; but there are silver and blue breeds. This breed does not carry messages, being bred for points only; not only does the bird fly indifferently, but its sight is partly obscured by the wattles. The birds used during the Franco-German war were largely Antwerps, and the birds now trained for long-distance flights are homers.

carrier-pulley (kar'i-ėr-pu̇l"i), *n.* A pulley or band-wheel, intermediate between shafts which are connected by an endless driving-belt, used to support the weight of the belt and prevent undue sagging; in belt-conveying machinery, a supporting wheel which steadies and guides the endless moving belt and its load.

Carrington's law of solar rotation. See ★*law*[1].

carriole (kar'i-ōl), *n.* [F.: see *cariole*.] A cart for passengers, used in the north of France. The body is suspended upon long poles which serve both as shafts and as springs.

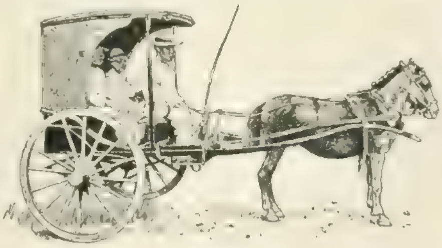
carrion-beetle, *n.*—**Beet carrion-beetle**, a European silphid beetle, *Silpha opaca*, which feeds on the leaves of mangolds.

carritch, *n.*—**To give one his carritch**, to put one through his catechism or give him a scolding. [Scotch.]

carritch (kar'ich), *v. t.* To catechize: as, to *carritch* the bairns. [Scotch.]

carroche, carroch, *n.* Same as *caroche*. *Browning*.

carromata (kä-rō-mä'tä), *n.* [Philippine Sp. *carromata* (fem.), an insular form (cf. Bisaya *calomáta*, a brooch) of Sp. *carromato*,



Carromata.

a one-horse vehicle, a long, narrow cart, < *carro*, cart, + *mato*, rough, coarse, poor: see *mate*[2].] A light, two-wheeled covered vehicle, usually drawn by a single horse. [Philippine Is.]

Recourse [in the Philippines] was therefore had to light native wagons, *carromatas*, and to litters carried by hired coolies. *Buck*, Med. Handbook, I. 481.

carrot, *n.*—**Candia carrot.** Same as *Candy carrot*, under *carrot*, which is a corruption of *Candia carrot*.—**Carrot rust-fly.** See ★*rust-fly*.—**Cuban carrot**, a carrot of tobacco-leaves consisting of four hands tied with Cuba bast. **Peruvian carrot**, the arracacha, *Arracacia Arracacha*. See *arracacha*.

carrot, *v. t.* 2. To prepare, for felting purposes, plucked fur on skins by subjecting it to a solution of quicksilver and nitric acid or chlorid of mercury, and then drying it by exposure to the open air or by artificial heat, the former method of drying producing a whitish color (white carrot), and the latter method a yellowish color (yellow carrot). *Sci. Amer. Sup.*, June 4, 1904, p. 23767.

Carrot-beetle (*Ligyrus gibbosus*). Adult, enlarged. (Chittenden, U. S. D. A.)

carrot-beetle (kar"ot-bē'tl), *n.* A scarabæid beetle, *Ligyrus gibbosus*, whose larva damages the tubers of the carrot.

carrot-disease (kar'ot-di-zēz'), *n.* See ★*disease*.

carrot-fly (kar'ot-flī), *n.* Same as *carrot* ★*rust-fly*.

carrotin, *n.* Same as *carotin*.

carrot-weed (kar'ot-wēd), *n.* The common ragweed, *Ambrosia artemisiæfolia*: so called from some resemblance in the foliage to that of the carrot.

carry, *v.* I. *trans.*—**To carry down.** In *chem.*, when a precipitated saline or other solid substance is found to be accompanied by another solid, of itself soluble in the liquid, the former is said *to have carried down* the latter. Thus barium sulphate when formed by precipitation is apt to be accompanied by small quantities of salts of iron and other metals, although these salts are soluble when alone.—**To carry up**, to extend upward as by the addition of successive courses: as, the building was *carried up* as high as the law allows.—**To carry weight.** (*a*) To have influence. (*b*) To be handicapped by carrying additional weight, as in horse-racing.

II. *intrans.*—**To carry through**, in *golf* and *tennis*, to allow the bat or club, in making a stroke, to 'follow' the ball, that is, to keep it in contact with the ball as long as possible.

carry, *n.* 8. In *golf*, the distance from the spot from which a ball is driven to the place where it first alights. *W. Park, Jr.*

carse-clay (kärs'klā), *n.* The clay deposited at the bottom of a fen; swamp-clay. See ★*carse-deposit*.

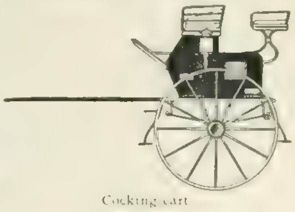
carse-deposit (kärs'dē-poz"it), *n.* An estuarine deposit, partly refilling an erosion valley. The chief constituents are clay and silt, and on the upstream margin they pass gradually into fluviatile deposits of sand, gravel, and silt. *J. Geikie*, The Great Ice Age, p. 295.

carse-land (kärs'land), *n.* The land surface formed by the reëlevation of a drowned valley; an emerged carse-deposit. *J. Geikie*, The Great Ice Age, p. 291.

car-sickness (kär'sik"nes), *n.* A condition analogous to seasickness sometimes affecting travelers on a railway.

Carstone (kär'stōn), *n.* [*Carstone*, a local name.] In *geol.*, a minor division of the Cretaceous system in Norfolk and Lincolnshire, England, constituting the uppermost member of the Neocomian or Lower Cretaceous.

cart, *n.*—**Battlesden cart**, a two-wheeled pleasure-vehicle of English origin.—**Cape cart**, a two-wheeled vehicle peculiar to South Africa. The body is generally of the dog-cart type, the seat being made to slide, and is provided with a canvas-covered bow-top. It is fitted with a pole for two horses.—**Cocking-cart**, an English sporting-cart with a short body: originally fitted to carry game-cocks to the pits. It was built very high from the ground and used only for tandem.



Cocking-cart.

cartan (kär-tän'), *n.* [Native name.] Same as ★*balaustre*.

Carth. An abbreviation of *Carthaginian*.

carthamin, *n.*—**Plate carthamin**, the trade-name of an extract of safflower of superior quality which has been dried as a film or crust on the surface of an earthenware plate.

cartilage, *n.* **Aortic cartilage.** See ★*aortic*.—**Auricular cartilage**, cartilage of the pinna of the ear. **Branchial cartilage.** See ★*branchial*.—**Calcified cartilage**, cartilage hardened by the deposition in or on it of spicules of bone, as in the sternal ribs of old mammals or the crania of sharks. It has a granular structure very different from true bone.—**Cartilage of ossification.** Same as *temporary cartilage*. **Cephalic cartilage.** Same as *cranial* ★*cartilage*.—**Ciliary cartilage.** Same as *tarsal cartilage*. **Cranial cartilage**, in cephalopods, a portion of the internal skeleton that protects the principal nerve-centers, incloses the auditory organ and gives support to the eyes. Also called *cephalic cartilage*.—**Investing cartilage.** Same as *articular cartilage*. **Jacobson's cartilage**, a small independent cartilage in the nasal septum. **Luschka's cartilages**, small cartilaginous nodules in the vocal cords.—**Nasal cartilages.** See ★*nasal*. **Nuchal cartilage.** See *nuchalcartilage*. **Reichert's cartilage**, a cartilage in the fetus from which

is developed a part of the hyoid bone. **Septal cartilage**, the cartilaginous portion of the nasal septum. **Sternal cartilage**, in man, one of the seven costal cartilages on each side articulating with the sternum. **True cartilage.** Same as *hyaline cartilage*.

cartilage-pit (kär′ti-lāj pit), *n.* In the pelecypod mollusks, one of the resilifers, or concave, often spoon-shaped, depressions into which are fitted the ends of the resilium or internal ligament.

cartilaginiform (kär″ti-lạ-jin′i-fôrm), *a.* [L. *cartilago* (*-gin-*), cartilage, + *forma*, form.] Same as *cartilaginoid*.

cartographical, cartographically. See *chartographical, chartographically*.

cartographist, *n.* See ★*chartographist*.

cartridge, *n.* **2.** A case of metal, paper, or other material containing some chemical preparation used in photography, such as magnesium mixture for flash-light or material for developing, toning, or fixing solutions.—**Hydraulic mining-cartridge,** a device for breaking down coal in mines by the application of hydraulic pressure, thus avoiding the danger attending the use of explosives for this purpose.

cartridge-clip (kär′trij-klip), *n.* A light sheet-metal device for clasping several cartridges at the base and so arranged as to permit the quick insertion of all the cartridges into the magazine of a repeating firearm.

cartridge-fuse (kär′trij-fūz), *n.* In *elect.*, a fuse consisting of a conductor which at overload melts and so opens the circuit. It is inclosed in a cartridge-like insulating-tube, usually of fiber, intended as a protection from the melted metal which, when the fuse blows out, would be thrown around.

cartridge-stick (kär′trij-stik), *n.* In *mining*, a round stick on which cartridge-paper is rolled to form a case for blasting-powder.

cart-wheel (kärt′hwēl), *n.* A wheel of a cart, or, figuratively, something resembling one, as, by exaggeration, the United States silver dollar (1873–1900).—**To turn** (or **make**) **a cart-wheel,** to move like a rotating wheel, by turning somersaults sidewise, touching alternately upon the hands and feet.

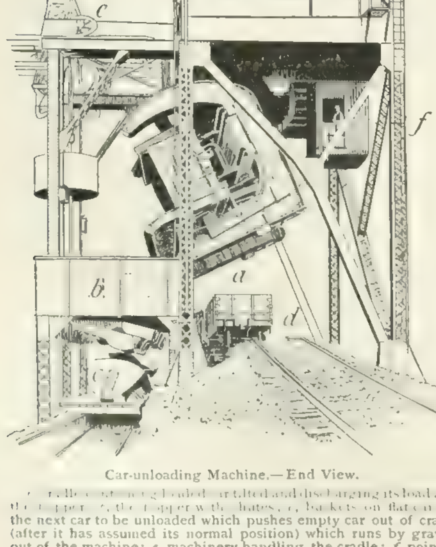
cart-whip (kärt′hwip), *n.* A teamster's whip, made with a short, stiff handle and heavy thong.

carua (kä-rö′ä), *n.* [S. Amer.] A plant of the pineapple family, *Neoglaziovia variegata*, found in northern Brazil, and yielding an important fiber called by the same name.

carubio (kä-rö′bē-ō), *n.* [Porto Rican.] Same as ★*bosua*.

caruncle, *n.*, **2.** (*b*) A small horny protuberance, at the tip of a young bird's beak, which serves to break the egg-shell at the time of hatching: same as *egg-tooth*.—**5.** A peculiar leaf-like sense-organ found on the dorsal side of the segments at the anterior end of certain polychætous annelids, especially those belonging to the family *Amphinomidæ*.

car-unloader (kär′un-lō″dėr), *n.* In *railroading*, a machine for unloading flat- or gondola-cars. Two types are in use, one in which the load is pushed or plowed off the car while it is at rest or in motion, and another in which the car itself is tilted up or turned over to discharge the load. The first type is used in railroad construction and the second to unload ore- and coal-cars. The railroad-construction machine consists of a double-share or single-share plow, as wide as the top of the car, which is drawn along the whole length of a train by means of a cable. The gondola-cars are made without end-frames and have the brake-wheel at the side, and the side-frames have doors which are hinged at the top and swing outward, a train thus forming, with the flat iron bridges between the cars, a continuous trough for its whole length. A complete train consists of a locomotive, a flat-car carrying a winding-engine (using steam from the locomotive), sixteen or more cars, and the plow and its cable. When the filled train reaches the point of discharge, it may stop to distribute the load along the length of the train, or may be kept in motion to deposit the load over a greater distance, or may be backed at the same speed as the unloading, when the entire train-load will be deposited at one point. Whatever plan is used, the operation of the machine is the same, the winding-engine by means of the cable dragging the plow along the length of the train, and the two plow-shares throwing off the load, through the swinging doors, on each side of the track. With flat-cars a plow having one share is used, which discharges the load on one side only. Another plan is to place a guide-rail on the top of a train of flat-cars and to use a double plow, the locomotive being detached and the train anchored. The engine then drags the plow along the train by means of the cable. The car-unloading machines are massive structures supporting a section of track upon a cradle. The loaded car is run into the machine, locked in the cradle, and then turned over to discharge the load.



Car-unloading Machine.—End View.

a, cradle containing loaded car tilted and discharging its load into the hopper; *b*, the hopper with chutes; *c*, buckets on flat-car; *d*, the next car to be unloaded which pushes empty car out of cradle (after it has assumed its normal position) which runs by gravity out of the machine; *e*, machinery handling the cradle; *f*, point of control.

carv, *v.* A simplified spelling of *carve*.

carve[1]. **I.** *trans.* **7**†. To make a private sign to, at table. See II., 3.

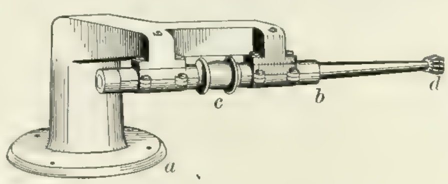
II. *intrans.* **3**†. To make a private sign with the little finger at table, as when one carves (def. II., 2) or pretends to carve, or raises a glass to one's lips.

> He can *carue* too, and lispe: Why this is he
> That kist away his hand in courtesie.
> *Shak.*, L. L. L., v. 2 (ed. 1623).

carvenone (kär′vē-nōn), *n.* [G. *carve*, caraway (see *carvy*), + *-ene* + *-one*.] A ketone, $C_{10}H_{16}O$, prepared by dropping dihydrocarvone into cold concentrated sulphuric acid and diluting the solution with ice-water. It may also be prepared from camphor. It is an oil which boils at 237° C.

carver, *n.* **3.** A carving-machine.—**Panel carver and friezer,** a carving- or shaping-machine consisting of a table on which the work is laid and a vertical cutter-head carrying the cutters, hung from a bracket over the table. See *shaper*, 4.

carving-machine (kär′ving-mạ-shēn″), *n.* In *wood-working*, a machine for making ornamental carvings in wood.—**Spindle carving-machine,** the most simple form of carving-machine, consisting of a horizontal spindle supported in bearings at the top of a column or a bench-stand, and carrying at the end a cutting-tool which may be of any form required in carving foliage, scrolls, flutings, rosettes, etc. The cutters resemble, except in size, the cutters of a milling-machine. It may be operated at a speed of 7,000 revolutions a minute. Larger machines are practically shapers (which see).



Spindle Carving-machine.

a, bench-stand supporting horizontal spindle; *b*, spindle; *c*, place where the belt is applied; *d*, cutter.

carving-table (kär′ving-tā″bl), *n.* A heated table on which meats are kept warm.

carvone (kär′vōn), *n.* [G. *carve*, caraway, + *-one*.] A ketone, $C_{10}H_{14}O$, which occurs in the two optically active forms—the dextrogyrate form in the oils of dill and caraway, and the levogyrate form in the oils of spearmint and kuromoji. It is an oil which smells of caraway and boils at 228° C. Formerly called *carrol*.

carvotanacetone (kär″vọ-tan-as′ẹ-tōn), *n.* [G. *carve*, caraway, + *tan*(*nic*), + *acetone*.] A ketone, $C_{10}H_{16}O$, prepared by the reduction of carvonehydrobromide. It is an oil which boils at 228° C.

caryatidal (kar-i-at′i-dạl), *a.* Having the characteristics of a caryatid: as, a *caryatidal* figure or statue.

caryatidic (kar i-a-tid′ik), *a.* Same as ★*caryatidal*.

Caryocaraceæ (kar-i-ō-ka-rā′sẹ-ē), *n. pl.* [NL. (Szyszylowicz, 1893), < *Caryocar* + *-aceæ*.] A family of dicotyledonous, archichlamydeous plants of the order *Hypericales*, typified by the genus *Caryocar* (which see), and containing one other tropical American genus. It was formerly included in the family *Theaceæ*, from which it differs in its coherent petals and separate styles.

caryocerite (kar″i-ō-sē′rīt), *n.* [Gr. κάρυον, nut, + *cer-ium* + *-ite*[2].] A silicate of thorium, the cerium metals, yttrium, and other elements, found in Norway.

caryochrome (kar′i-ọ-krōm), *a.* and *n.* [Gr. κάρυον, nut, kernel (nucleus), + χρῶμα, color.] **I.** *a.* In *neurol.*, staining when treated by the Nissl method.

II. *n.* In *neurol.*, a term applied to certain nerve-cells in the cerebellum, reticular membrane, and olfactory bulbs which exhibit a staining of the nucleus only when treated by the Nissl method.

Caryocrinus (kar-i-ok′ri-nus), *n.* [NL., < Gr. κάρυον, a chestnut, + κρίνον, a lily.] A genus of cystid *Echinodermata* or cystideans established by Say and highly characteristic of the Upper Silurian beds of New York and Tennessee. They are nut-shaped bodies, the calyx plates being large and generally perforate. The summit bears a crown of short, feeble arms, and the stem is long and free.

caryolymph (kar′i-ō-limf), *n.* [Gr. κάρυον, nut, + L. *lympha*, lymph.] The liquid portion of the substance of the nucleus of a cell; the nuclear sap. *Haeckel* (trans.), Wonders of Life, p. 141.

caryolysis (kar-i-ol′i-sis), *n.* [NL., < Gr. κάρυον, nut, kernel (nucleus), + λύσις, dissolution.] Same as *caryocinesis*.

caryomicrosome (kar″i-ō-mī′krọ-sōm), *n.* [Gr. κάρυον, nut, kernel (nucleus), + μικρός, small, + σῶμα, body.] In *cytol.*, one of the minute granules of which the nucleus of the cell is supposed to consist.

caryophyllic (kar″i-ọ-fil′ik), *a.* [*caryophyll-in* + *-ic*.] Derived from caryophyllin.—**Caryophyllic acid,** a crystalline, bibasic acid, $C_{20}H_{32}O_6$, obtained by oxidizing caryophyllin with nitric acid.

caryoplasm, *n.* Same as *karyoplasm*.

Caryopteris (kar-i-op′tẹ-ris), *n.* [NL. (Bunge, 1835), in allusion to the wings on the fruit-carpels; < Gr. κάρυον, nut, + πτερόν, wing.] A genus of plants of the family *Verbenaceæ*, containing about 10 species, native in Japan, China, and the Himalayas. They are shrubby or suffrutescent, with opposite, entire or toothed leaves, and cymes of blue, violet, or red flowers situated either in the axils of the leaves or grouped opposite each other toward the ends of the branches. The four carpels of the fruit have one margin incurved about the seed, the other forming a wing. *C. incana* is in cultivation under the name *Japanese beni*, which see, under ★*beni*.

caryorrhexis (kar″i-ọ-rek′sis), *n.* [NL., < Gr. κάρυον, nut, + ῥῆξις, breaking.] Rupture of the cell-nucleus.

caryotheca (kar″i-ọ-thẹ′kạ), *n.*; pl. *caryothecæ* (-sē). [Gr. κάρυον, nut, kernel (nucleus), + θήκη, case, box.] In *cytol.*, the wall of the nucleus in the animal or plant cell. Also *karyotheca*.

caryozymogen (kar″i-ọ-zī′mọ-jen), *n.* [Gr. κάρυον, a nut, kernel (nucleus), + *zymogen*.] Small masses of nuclear material which enter into the composition of the zymogens.

C. A. S. An abbreviation of *Fellow of the Connecticut Academy of Arts and Sciences*.

casabe (kä-sä′be), *n.* [Cuban Sp., prob. < *casabe, cazabe*, cassava.] The Cuban name of *Chloroscombrus chrysurus*, a small fish of the family *Carangidæ*.

casanthrol (ka-san′thrōl), *n.* [*cas*(*ein*) + *anthr*(*acene*) + *-ol*.] A thick, neutral, gelatinous emulsion consisting of casein ointment and certain constituents of coal-tar soluble in benzol and ether. It constitutes a water-soluble varnish applied to the skin in chronic eczema and other skin affections.

cascade[1], *n.* **5.** In *manuf. chem.*, a series of vessels, frequently of stoneware, from one to the next of which a liquid successively overflows, thus presenting a large absorbing surface to a gas with which it is to be charged.—**Cascade method,** in the liquefaction of gases, the method of continuous cooling by means of a refrigerant such as carbon dioxid. The refrigerant, compressed and subsequently cooled, is caused to flow around the receptacle containing the gas to be liquefied until the lowest temperature thus attainable is reached. The final cooling, necessary to liquefaction, is then produced by the sudden expansion of the gas itself.

cascade-bottle (kas-kād′bot″l), *n.* In *manuf. chem.*, a hollow vessel, commonly of stoneware, having an opening at the top through which passes a moderately wide tube filled with coke or other suitable porous material, over which water or some other liquid flows so as to become charged with a gas or vapor passed through the vessel.

casca-doce (käs-kä-dō′sā), *n.* [Pg. *casca*, bark, + *doce*, sweet, < L. *dulcis*, sweet.] Same as ★*buranhem*.

cascalote (käs-kä-lō'ta), *n.* [Sp. Amer.] Same as *diri-diri*, 1.

Cascara buckthorn. See ★*buckthorn.*

cascara[2] (käs'kä-rä), *n.* [Sp. *cáscara*, bark.] A bark canoe. [Spanish America.]

cascarin (kas'ka-rin), *n.* [*cascara* + *-in*[2].] A name given to a compound, $C_{12}H_{10}O_5$, supposed to be found in cascara sagrada. Later investigators question its identity.

cascaron (käs-kä-rōn'), *n.* [S. Amer. Sp., appar. < Sp. *cascarón*, an egg-shell.] A tall leguminous tree of Argentina, *Cascaronia astragalina*, having a corky bark under which is found a red gum. Its leaves, flowers, and pods possess a strong odor of rue.

case[1], *n.* **9.** In the tobacco trade, the state of the leaf, during and after the process of curing, with respect to moisture-content and pliability: common in such phrases as *in case* (more or less moist), *in good case* (with the right degree of moisture), *too high case*, etc. See ★*order*, 17.

> It must be stretched gently over the ends of the fingers and knuckles, and if it is *in good case*, i. e. plight, or condition, it will discover an elastic capacity, etc.
> *W. Tatham*, Cult. and Com. of Tobacco, p. 37.

Case system, an inductive method of teaching law. It was first introduced at the Harvard Law School in 1869 by Professor Langdell and has since been widely adopted by various law schools. By this system students are required to deduce legal principles from the study of reported cases, rather than taught such principles by the use of text-books and commentaries. Also called *Langdell system*. **Leading case**, a reported case which is regarded by the legal profession generally as finally establishing or settling the point or points determined in the case.—**Test case.** (*a*) One of several causes pending in the same court the determination of which will be held to apply to the several causes. (*b*) An action brought, usually by agreement between parties, in which the constitutionality or validity of an act will be brought in question and judicially determined.

case[1], *v. t.* **2.** To bring into the desired 'case' or condition; specifically, in the tobacco trade, to bring the leaf into the desired condition as to moisture and pliability, and the admixture of ingredients to give flavor, etc. See ★*case*[1], *n.*, 9, ★*caser*, *n.*, and ★*casing*[2], *n.* Also spelled in the trade, *kase.*

case[2], *n.* **16.** In the *postal service*, a series of open boxes or large pigeonholes in which letters are placed in assorting them for distribution. Each box is for a particular place, and the distributor, standing at a table in a post-office or railway postal car, throws each letter into the proper box in the case.—**17.** *Naut.*, the outside planking of a vessel.—**18.** In *whaling*, the well or hole in the head of a sperm-whale, which contains, in a free state, the most valuable oil given by it.—**19.** In *faro*, a card when it is the only one of its denomination remaining in the dealing-box.—**Case examination**, in civil-service examinations, a test of the ability of an applicant for the position of postal clerk to read the addresses of letters and to distribute the letters in a case rapidly and accurately.

casease (kā'sē-ās), *n.* [*case*(*in*) + *-ase.*] A proteolytic ferment, found in the cell-sap of many plants and in the culture-fluids of *Tyrothrix*, capable of digesting casein beyond the peptone to the acid amide stage.

case-bearer, *n.*—**Apple case-bearer**, *Coleophora malivorella*, a moth of the family *Elachistidæ*, whose

Apple case-bearer [illegible]
[illegible]
d, moth — enlarged. (Riley.)

case-bearing larva sometimes skeletonizes the leaves of the apple in the eastern United States. Also *pistol case-bearer.*—**Cigar case-bearer**, the larva of an American tineid moth, *Coleophora fletcherella*, which feeds on the foliage of the apple and pear and constructs for itself a cigar-shaped case which protects it from its natural enemies.

case-book (kās'bůk), *n.* A book in which a physician keeps the medical record of his cases.

case-fly (kās'flī), *n.* A caddis-fly.

casefy (kā'sē-fī), *v. t.* and *i.*; pret. and pp. *casefied*, ppr. *casefying.* [L. *caseus*, cheese, + *-ficare*, make.] To render or become cheesy.

case-hardening, *n.* **2.** A process of induration affecting surfaces of rocks. It accompanies evaporation of moisture from the capillary system of exposed surfaces, and consequent deposition of such mineral matter as is held in solution. The result is a hard film or layer produced by extra cementation. In arid regions such hardened films, polished by blown sand, are known as *desert varnish*. *Van Hise*, U. S. Geol. Surv., Monograph 47, p. 547.

caseid (kā'sē-id), *n.* [*case*(*in*) + *-id.*] A name given to any of those nitrogenous compounds contained in cheese which remain after the water and fat have been removed.

caseiform (kā'sē-i-fôrm), *a.* [L. *caseus*, cheese, + *forma*, form.] Same as *caseous.*

Casein lime, a preparation made from inferior skim-milk cheese and used in the arts as a glue. It consists of dried and powdered cheese mixed with burnt chalk. Also called *casein cement*. **Casein ointment.** See ★*ointment.*

casein-dyspeptone (kā"sē-in-dis-pep'tōn), *n.* An insoluble substance obtained when milk-casein is digested with pepsin and hydrochloric acid.

caseinogen (kā-sē-in'ō-jen), *n.* [*casein* + L. *-gen*, -producing.] A substance contained in milk which forms casein in the presence of a digestive ferment.

case-keeper (kās'kē"pėr), *n.* In *faro*, the player who marks the cards as they come from the dealing-box, so that the number of each card still to come shall be known. Small buttons are pushed along wires for this purpose, as in an abacus.

casement, *n.*—**French casement**, a casement or a casement-window fitted with an espagnolette and opening nearly to the floor.

case-mold (kās'mōld), *n.* In *ceram.*, an exact replica of an original clay model, as a jug, covered dish, etc., made in clay or plaster from the block-mold or hollow cast of the model. From this case or case-mold, plaster casts, or working-molds, are taken as frequently as they are needed. See ★*block-mold* and ★*working-mold.*

caseoiodine (kā"sē-ō-ī'ō-din), *n.* [L. *caseus*, cheese, + E. *iodine.*] A white powder, similar to thyroiodine, prepared from periodocasein and containing 8.7 per cent. of iodine: used internally in myxedema.

caseone (kā'sē-ōn), *n.* [L. *caseus*, cheese, + *-one.*] A name given to those compounds in cheese which are extracted by strong alcohol and by water. A recent authority proposes to apply the name to the compounds extracted by alcohol only. The amount of these compounds is an indication of the progress of the ripening of the cheese.

caseose (kā'sē-ōs), *n.* [*case*(*in*) + *-ose.*] An albumose resulting from casein.

caseoserum (kā"sē-ō-sē'rum), *n.* An antiserum which results on immunization with casein.

Caseous pneumonia. See ★*pneumonia.*

caser (kā'sėr), *n.* [Also spelled, in the trade, *kaser*; < *case*[1], *v. t.*, 2, + *-er*[1].] In the tobacco trade, a device for moistening the tobacco leaf. See ★*case*[1], *v. t.*, 2, and ★*casing*[2].

case-smoother (kās'smö"ᴛʜėr), *n.* A machine which passes glued cloth and its stiffening-board between calendering-rollers, and firmly attaches them together.

cash[2], *n.*—**Spot cash**, cash paid or to be paid on the spot, upon actual or constructive delivery of the thing sold; cash 'on the nail.' See *nail.*

cash. An abbreviation of *cashier.*

Cashaqua shale. See ★*shale*[2].

cashaw[2] (ka-shâ'), *n.* See ★*cushaw.*

cashew[2], *n.* See ★*cushaw.*

cashew-apple (ka-shö'ap"l), *n.* The pear-shaped edible stalk which bears the cashew-nut. See *Anacardium* and *cashew-nut.*

Cashmere goat. See ★*goat*[1].

cash-register (kash'rej"is-tėr), *n.* A cash-box fitted with a hand-operated mechanism for exhibiting to the purchaser the amount of his purchase, unlocking and opening the cash drawer and recording and adding up all sums deposited in the drawer. Some machines also record and add up sums paid out. Closing the drawer locks the mechanism. The autographic cash-register is a small cabinet containing a cash-drawer and a recording-ribbon placed upon a spool in the cabinet and carried under a narrow opening in the top of the cabinet to a second spool which is controlled by a hand-lever. After a sale, or other transaction, a record is made in pencil on the ribbon through the opening; then, on moving the lever, the cash-drawer is unlocked and automatically opened and the ribbon is moved onward under a glass plate where it can be read but cannot be changed; on closing the cash-drawer the cabinet is locked and cannot be used again until a new record is made or the lever moved. In some registers, combination locks control the lever and the record may be duplicated or manifolded, one record being delivered outside the cabinet as a receipt or bill of sale, and another being retained in the cabinet. More complicated machines have one or more drawers controlled by separate locks, for one or more salesmen. Larger machines employ keys or levers of various forms for recording sales on accounts or other data.—**Cash-register bank**, a steel box for small savings in which the value of each coin is registered as it is deposited in the box, the index on the outside showing the total sum in the box.

cash-sword (kash'sōrd), *n.* A Chinese ornament or charm made of coins or cash tied with cord.

cash-tree (kash'trē), *n.* A number of Chinese coins united by connecting bands of metal, as originally cast in stone or metal molds.

> This, indeed, appears also to be the case with a large number of the specimens of tin cash. They are cast in the form of trees, which are called *cash-trees*, the three specimens of which, obtained by the expedition, are, I believe, unique in this country. The general type is that of the round cash, with a circular hole in the centre, though one kind, the half-cash of Trengganu, is a solid round coin (without the hole).
> *Rep. Brit. Ass'n Advancement of Sci.*, 1901, p. 420.

Casimiroa (kaz-i-mir'ō-ä), *n.* [NL. (La Lave, 1825), named in honor of *Casimiro* Gomez Ortega (1740–1818), a Spanish botanist.] A genus of trees of the family *Rutaceæ.* There are four species, native in Mexico and Nicaragua. They have alternate digitately 3–7-foliolate leaves with stalked leaflets, and small greenish flowers in short axillary panicles. For *Casimiroa edulis*, see ★*cochilsapote.*

casing[2] (kā'sing), *n.* [Also spelled, in the trade, *kasing*; < *case*[1], *v. t.*, 2, + *-ing*[2].] The process of putting tobacco leaf into the desired 'case' or condition, namely by moistening, and adding the ingredients used to give flavor, etc. See ★*case*[1], *n.*, 9.

casing-boards (kā'sing-bōrdz), *n. pl.* In *mining*, planks spiked to buntons or dividing-timbers to form a partition or brattice in a mine-shaft. *C. Le N. Foster*, Ore and Stone Mining, p. 238.

casino, *n.*—**Royal casino**, a variety of casino in which the king, queen, and jack have a pip-value of 13, 12, and 11, respectively, and may be combined with smaller cards, or may win them,—a jack, for instance, winning a 9 and 2.—**Spade casino**, a variety of casino in which every spade counts a point and the scores are pegged as fast as made, usually on a cribbage-board, 61 points being game.—**Twenty-one-point casino**, a variety of casino in which the game is twenty-one points, the points going out in order if it is a tie at the end, cards first, then spades, big casino, little casino, aces, and sweeps. If the aces have to decide it, their order is: spades, clubs, hearts, and diamonds.

casoy, *n.* See ★*kasoi.*

cassabanana (kas"a-ba-nan'ä), *n.* A plant of the family *Cucurbitaceæ* (*Sicana odorifera*), a native of the American tropics, and sometimes grown as an herbaceous arbor-plant in the Southern States. The fruit is sometimes two feet long, and squash-like, orange or crimson in color, and with a very aromatic odor. There are two or three related species, all tall-climbing by means of tendrils.

cassage (ka-säzh'), *n.* The process of change known as 'casse' which wine sometimes undergoes. See ★*casse*[2], 3.

casse[2] (kas), *n.* [F. *casse*, breaking, < *casser*, break.] **1.** A bridle for a kite; also, a check-piece or fastener by which the string of a subordinate kite is attached to the line of the main kite.—**2.** A safety-line; technically, a small copper wire inserted into the bridle of a kite by Marvin, in order that when the strain becomes too great in strong winds the wire may break and save the main structure of the kite and the line-wire. See ★*bridle*, 10.—**3.** The breaking down or incipient souring of wine, even in closed vessels.

Cassel earth. See ★*earth*[1].

cassette, *n.* **2.** In *photog.*, a flat box holding one or two plates which are to be exposed in a camera; a plate-holder.

Cassia-flower oil. See ★*oil.*

Cassidulina (ka-si-dū-lī'nä), *n.* [NL., < *Cassidula* + *-ina.*] The typical genus of the family *Cassidulinidæ.* *D'Orbigny*, 1839.

Cassidulinidæ (ka-si-dū-lin'i-dē), *n. pl.* [NL., < *Cassidulina* + *-idæ.*] A family of *Foraminifera*, of the order *Textularidea.* The test consists of a series of alternating chambers, more or less coiled upon itself in a planispiral manner. It contains the genera *Cassidulina* and *Ehrenbergina*.

cassiduloid (ka-sid'ū-loid), *n.* and *a.* **I.** *n.* An echinoid or sea-urchin allied or belonging to the family *Cassidulidæ.*

II. *a.* Resembling sea-urchins of the family *Cassidulidæ.*

cassie (kas'ē), *n.* [F. *cassie* < Prov. *cacio* < L. *acacia*; see *Acacia.*] In the southern United States and in France, the flower-heads of *Acacia Farnesiana.* See *Acacia* and *sponge-tree.*

cassimere-twill (kas'i-mēr-twil''), *n.* A four-harness twill-weave. Also called *blanket-, crow-, Florentine, kerseymere-, serge-, swan's-down- (etc.) twill.*

cassine² (ka-sēn'), *n.* [N. Amer. Ind.] A ceremonial drink of the Indians of eastern North America.

Cassini division. See ★*division.*

cassio-berry (kas'i-o-ber i), *n.* A shrub, *Viburnum obovatum*, of the southeastern United States, with shining evergreen leaves and black, edible drupes. The yapon, *Ilex vomitoria*, which somewhat resembles it, is called *cassio-berry bush* in South Carolina, and that name has been applied to the smooth winterberry, *Ilex lævigata.*

cassonic (ka-son'ik), *a.* Noting a bibasic, noncrystalline acid, $C_5H_8O_7$, formed by the oxidation of cane-sugar.

cast¹, *v. t.* **21.** In *agri.*, to replow (old ridges) with the furrows all in one direction. See ★*casting*, 13. [Great Britain.] —**Casting-and-setting machine**, that part of the monotype type-setting and -casting machine which casts the types, sets the letters in the proper sequence to form the words of the copy, spaces and justifies the lines, and places the finished line on the galley. It weighs about 1,500 pounds, and occupies a floor space of about 4 by 5 feet. **Casting of the withers**, eversion of the womb in a mare after foaling.

To cast on end, to make (iron castings) with the long dimension vertical. This is usually done in the case of cast-iron pipes or other long, hollow pieces, because it is easier to hold the core in position than when casting on the side, and also because the castings are sounder. When castings are made in this manner, it is customary to pour the iron into a vertical gate at one side of the mold and let it flow into the mold at the bottom. This method is less liable to injure the mold than that of pouring direct, and gives a chance for air carried down by the falling iron to escape.

cast¹, *n.* **14.** Specifically, the impression of the interior surface of the test or skeleton of an organism, usually animal: contradistinguished from *mold* or *imprint*, which is the impression of the exterior. By the removal, through solution, of the substance of the fossil the filling of the cavity from within may produce an impression of the interior carrying also some of the features of the exterior surface, and this combination is termed a *sculpture-cast.* **29.** In *archery*, the act or property of throwing or propelling an arrow: thus a bow is said to have a good or a bad *cast.*—**Fatty casts**, renal tube-casts containing oil-globules.

cast³, *n.* A simplified spelling of *caste*².

castagnole (kȧs-tȧn-yōl'), *n.* [F.] The *Brama rayi.* See *pomfret*, 3.

Castalia, *n.* **5.** (Salisbury, 1805.) In *bot.*, see *Nymphæa*, 2.

castanean (kas-tā'nē-an), *a.* [*Castanea* + *-an.*] Belonging to the genus *Castanea*, or relating in any way to the chestnut.

castaneopiceous (kas-tā''nē-ō-pish'ius), *a.* [L. *castanea*, chestnut, + *piceus*, pitchy.] Blackish-chestnut or blackish-brown in color. *Proc. Zool. Soc. London*, 1901, II. 523.

castanha-nut (käs-tän'yä-nut), *n.* [Pg. *castanha*, chestnut: see *chesten.*] Same as *Brazil-nut.*

castanin (kas'ta-nin), *n.* [L. *castanea*, chestnut, + *-in*².] A globulin found in Spanish chestnuts.

castanite (kas'ta-nīt), *n.* [L. *castanea*, a chestnut, + E. *-ite*¹.] A hydrated ferric sulphate occurring in chestnut-brown prismatic crystals and crystalline aggregates: found in Chile.

caste², *n.* **3.** In *entom.*, any one of the distinct forms found among the polymorphic social insects, especially the true ants and the white ants or termites.—**4.** Same as *half-caste.*—**Caste production**, the producing or intensifying of polymorphism among social insects, caused by the workers through differentiation of the food given to the young.

Castellanos powder. See ★*powder.*

castellate (kas'te-lāt), *v.*; pret. and pp. *castellated*, ppr. *castellating.* **I.** *trans.* To give a castle-like form or appearance to; furnish with turrets and battlements in the manner of a castle.

II. *intrans.* To assume castle-like forms, as moving clouds.

castellate (kas'te-lāt), *a.* Same as *castellated.*

caster, *n.*, **1.** (*e*) In *angling*, one who casts the fly as distinguished from one who fishes with bait.

It is more successful; your fish will average larger, and although at times you will not get a long string, you will get sufficient to reward your patience and skill. The big fish is what we are all after, and the *caster* gets them if any one does. *Forest and Stream*, Feb. 21, 1903, p. 150.

6. One of the small callosities on the inner side of a horse's leg: more commonly known as *chestnut.*

More remarkable still are the callosities, "chestnuts" or "*castors*" found on the inner sides of both limbs in the horse, but only on the forelegs of other species, which are likewise rudimentary, or vestigial, structures. *Amer. Inventor*, June 1, 1904, p. 250.

caster-and-setter (kȧs''tėr-and-set'ėr), *n.* In *printing*, a machine (or two mutually dependent machines) that casts and composes type. The linotype combines the two operations in one machine; the Lanston, the Goodson, and others require two separate machines. *Census Bulletin* 216, June 28, 1902, p. 59.

caster-sugar (kas'tėr-shůg ạr), *n.* Powdered sugar: so called from the caster with a perforated top in which it is sometimes served. *N. and Q.*, IX. 418.

castigable (kas'ti-gạ-bl), *a.* Worthy or deserving of castigation or chastisement.

castigative (kas'ti-gā-tiv), *a.* Of or pertaining to castigation or chastisement; castigatory.

Castila (käs-tē'lä), *n.* [Philippine Sp.] A Spaniard; also, any person of white race. [Philippine Is.]

castillon (käs-tēl-yōn'), *n.* [Sp.] A Spanish gold coin: probably so named from its bearing the arms of Castile.

casting, *n.* **10.** *pl.* The pellets of hair and bones cast up by owls and hawks.—**11.** A premature shedding or falling of leaves which may be due to any one of various causes, but especially to drought, crowding of plants, or the attacks of parasitic fungi. See ★*Lophodermium.*

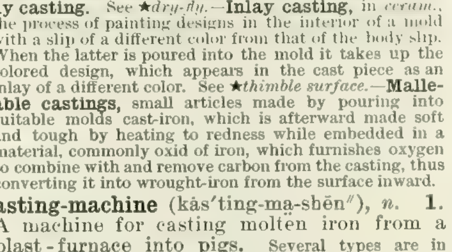
Casting or premature withering and fall of needles is not uncommon in nurseries of pine. *Jubeuf and Smith*, Diseases of Plants, p. 236.

12. In the *fine arts*, the arrangement of draperies and accessories.

Note, in the draped female statues, the *casting* of the drapery; surely that was not copied from the folds which the garment made as it was worn in daily life. *R. Sturgis*, Appreciation of Sculpture, p. 25.

13. In *agri.*, replowing old 'ridges' or 'lands,' with all the furrows of each in one direction. By this method two adjoining ridges are made into a single broad one, the crown occupying the place of the old water-furrow; or each retains its form, the water-furrow being kept clear. [Great Britain.]—**Casting hall roller**, in *glass-manuf.*, same as *running-roll* (which see). **Dry-fly casting.** See ★*dry-fly.*—**Inlay casting**, in *ceram.*, the process of painting designs in the interior of a mold with a slip of a different color from that of the body slip. When the latter is poured into the mold it takes up the colored design, which appears in the cast piece as an inlay of a different color. See ★*thimble surface.*—**Malleable castings**, small articles made by pouring into suitable molds cast-iron, which is afterward made soft and tough by heating to redness while embedded in a material, commonly oxid of iron, which furnishes oxygen to combine with and remove carbon from the casting, thus converting it into wrought-iron from the surface inward.

casting-machine (kȧs'ting-ma-shēn''), *n.* **1.** A machine for casting molten iron from a blast-furnace into pigs. Several types are in use. One is a conveyer, controlled by means of endless chains, and having overlapping, pressed-steel buckets, supported by wheels which travel on a track, each bucket being a mold for the metal. The machine may be placed in the casting-house and fed directly from the furnace, or it may be placed outside in any convenient place that can be reached by a ladle-car on an industrial railroad. When ready for operation the conveyer is set in motion, and the buckets pass under the pouring-spout of the ladle at a speed that enables the operator to fill each in turn with the hot metal. As the filled buckets move away horizontally in the open air (under slight protection from the rain) the metal solidifies, and at the delivery end the conveyer travels up an incline until it reaches the turning-wheel where each bucket is inverted, discharging its contents as a hot yet solid casting of the general shape and size of a blast-furnace pig. The castings then slide down an incline and fall into a long and narrow tank filled with water. In the tank is a traveling apron, and the pigs fall upon this apron and are carried by it under water to the end of the tank. Here the apron travels up an incline out of the water and, turning over a large wheel, delivers the now cold pigs direct to a car. The process is continuous and comparatively rapid, and the machine saves all the hard and costly labor of casting pig-iron in sand. As the empty molds travel back



Casting-machine.

[illegible]
second conveyer traversing long water-tank (to cool pigs) and then upward to point of discharge to chute; *e*, water-tank; *f*, chute delivering cold pigs to car.

to the feeding-point they are passed through a smoky fire or treated by some other process to coat the inside of each with a refractory film to prevent the hot metal from clinging to the molds. The process of cooling the pigs is also hastened by spraying the castings with cold water while in the molds. A second type employs a conveyer having sheet-steel molds. As fast as they are filled the molds are gradually submerged in water under which they travel until the pigs are sufficiently solid to be delivered. When the metal is solid, the buckets are caused to travel up an incline to the delivery-point where they are upset and deliver the castings directly to the car. A third type employs a large number of molds which are placed radially on the edge of a large, horizontal turntable. The turning of the table causes the molds to pass in order under the ladle-car to be filled, when they travel in a circular path until the castings are sufficiently solid to be discharged by the upsetting of the molds. Pig-iron cast in such machines is said to be cleaner and in better condition for immediate use than that cast by hand labor in sand. The name is also sometimes given to small machines used in casting metals in foundries. Such machines are properly called *molding-machines* (which see).

2. A mechanism which founds types.

The monotype produces single types cast in the order of their use, and set in automatically justified lines. It consists of two machines—a perforating device operated by a keyboard, and a *casting-machine.* *Census Bulletin* 216, June 28, 1902, p. 58.

casting-on (kas'ting-on), *n.* The process of casting iron around a wrought-iron core or of making a cast-iron addition to a forging.

cast-iron, *n.*—**Malleable cast-iron.** See *malleable iron-castings*, under *iron.*

castle, *n.*—**The Castle**, Dublin Castle, the seat of the viceroy of Ireland, and of the high officials who are at the head of the administrative machinery of the country; hence, the governmental authority centered there. Frequently used attributively: as, *Castle* influence; *Castle* government. [Anglo-Irish.]

Castleford ware. See ★*ware*².

cast-line (kast'līn), *n.* Same as *casting-line.* See *line*².

cast-me-down (kȧst'mē-doun), *n.* [A corruption of *cassidony*: see *cassidony*².] Same as *cassidony*². From this transformed name corresponding properties were ascribed to the plant.

Castner process. See ★*process.*

castor¹, *n.* **6.** Glove-leather made from goatskins. The grain of the skin is removed and it is given a very soft finish, usually gray in color. *Flemming*, Practical Tanning, p. 55.

Castor ware. See ★*ware*².

Castor-bean tick. See ★*tick*².

castoromorph (kas'tọ-rọ̄-môrf), *a.* [Gr. κάστωρ, a beaver, + μορφή, form.] Having characters similar to those of the beavers.

The *Castoromorph* characters, on the other hand, appear to be such as would indicate real relationship. . . . *Bulletin Amer. Mus. Nat. Hist.*, XVI. 295.

castor-pomace (kȧs'tọr-pum''ạs), *n.* Same as *pomace*, 3. Castor-pomace is sold as a nitrogenous fertilizer.

castral (kas'trạl), *a.* [L. *castra*, camp.] Of, characteristic of, or peculiar to, a camp: as, *castral* life; *castral* arrangements. *Kinglake.*

castration, *n.* **2.** In *bot.*: (*a*) The removal of anthers in the artificial crossing of plants. (*b*) The destruction of the pollen in the anthers of certain flowers by parasitic fungi, as in the case of *Lychnis dioica* and other silenaceous plants attacked by the smut, *Ustilago violacea.*

castrator (kas'trā-tọr), *n.* Same as *castrater.* *Southey.*

castrensic (kas-tren'sik), *a.* [L. *castrensis*, belonging to a camp.] Of or pertaining to a camp.

cast-steel, *n.*—**Cast-steel furnace**, a furnace capable of bringing iron containing carbon to a temperature of fusion, and keeping the metal molten long enough for the chemical reactions and mechanical separation of impurities to take place.—**Soft cast-steel**, a form of iron made by a fusion process, such as the open-hearth or Bessemer process, in which the percentage of carbon or other hardening elements is so low that the metal is ductile or non-brittle and has a low modulus of elasticity: suitable for use where shocks or deforming strains must be resisted, rather than where hardness of surface or edge is required.

Casual water, in *golf*, any temporary accumulation of water (whether caused by rainfall or otherwise) which is not one of the ordinary and recognized hazards of the course.

casualty, *n.* **4.** *pl.* In the military service, the losses in a command due to any cause whatsoever, as resignation, discharge, dismissal, desertion, capture, wounds, or death.

casuarinaceous (kas-ū-ar-i-nā'shius), *a.* [*Casuarinaceæ* + *-ous.*] Belonging to the plant family *Casuarinaceæ*; resembling the genus *Casuarina.* Also *casuarineous.*

Casuarinales (kas-ụ̄-ar-i-nā'lēz), *n. pl.* [NL. (Britton, 1901), < *Casuarina* + *-ales.*] An order of dicotyledonous, archichlamydeous plants. It is characterized by monœcious flowers, the staminate, with two sepal-like organs and one central stamen, arranged in terminal spikes or catkins; the fertile, destitute of floral envelops, arranged in short heads at the ends of lateral branchlets. The order is coextensive with the family *Casuarinaceæ*, which contains the genus *Casuarina* only, with about 23 species, chiefly Australa-

sian, but found also in tropical Asia and the Sunda and Mascarene islands. One species, *Casuarina equisetifolia*, has become established in many tropical countries and occurs in peninsular Florida and the Keys.

casuarineous (kas″ū-ą-rin′ē-us), *a.* Same as ★*casuarinaceous.*

casuistics, *n.* 2. The record and study of individual cases of disease.

On the *casuistics* of malignant growths of the abdominal cavity. *Phil. Med. Jour.*, Jan. 31, 1903, p. 203.

casuistry, *n.* 3. In *med.*, a recent, rare, and improper use for *casuistics.*

casus (kā′sus), *n.* [L.] In *law*, a chance, an accident, or an event: used frequently with other words to express some technical meaning.

Casus fœderis. (*a*) In *international law*, the precise situation, event, or occurrence contemplated by a treaty, stipulated for in a treaty, or made to come within its terms. (*b*) In *commercial law*, that which is contemplated by the parties to a contract, or that which is stipulated for or brought within the terms of the contract. **Casus fortuitus,** in *civil law*, inevitable accident, an act of God; the happening of an event that could not be foreseen and guarded against by the highest exercise of prudence or care. **Casus major,** in *civil law*, an extraordinary accident, as shipwreck, fire, etc. **Casus omissus,** a case not provided for; an event or contingency not covered by a statute on the general subject, and which must be left to be governed by the common law.

caswellite (kaz′wel-īt), *n.* [After John H. *Caswell* of New York.] A copper-red micaceous mineral of bronze-like luster, probably derived from the alteration of biotite; found at Franklin Furnace, New Jersey.

cat[1], *n.* 18. In *mediæval warfare*, a machine resembling the pluteus, under the protection of which soldiers worked in sapping walls and fosses.—19. *pl.* In *mining*, burnt clay used for tamping. [Scotch.] **Bashaw cat,** the long-jawed catfish, *Leptops olivaris.* **Brown cat,** a species of catfish, *Ameiurus platycephalus*, of the family *Silurida*, found in streams of the Carolinas and Georgia. **Cat's auricle.** See ★*auricle.* **Chartreuse cat,** a variety of cat said to have been developed by the monks of Chartreuse. It is of a bluish-gray or Maltese color.—**Chinese cat,** a variety of cat with hanging ears. **Chuckle-headed cat,** the fork-tailed channel catfish, *Ictalurus furcatus.* **Flat-headed cat,** the mud catfish of Carolina, *Ameiurus platycephalus.* **Florida cat,** in Florida, the channel catfish, *Ictalurus furcatus.*—**Gay cat,** that member of a bank-burglar gang whose business it is to enter a bank as a crippled beggar, peddler, or the like, in order to ascertain if the bank is protected by burglar-alarms, etc.; a burglar's 'pathfinder.' See ★*measman.* [Thieves' cant.]—**Great forktailed cat,** the great catfish of the Lakes, *Ameiurus lacustris.* **Little yellow cat,** a common name of *Notnrus dæcus*, a catfish found in the Great Lake region and south and westward to Montana, Wyoming, and Texas. **Malay cat,** a variety of cat from the Malay Peninsula having a peculiar bend, or kink in the tail as if it had been broken.—**Mississippi cat.** Same as *chuckle-headed* ★*cat.*—**One old cat,** a game of ball in which only a pitcher, catcher, and batsman are necessary, though more may play.—**Opelousas cat,** the long-jawed catfish, *Leptops olivaris.* **Pied cat.** Same as *Opelousas* ★*cat.* **Potomac cat,** the common fork-tailed catfish of the Potomac river, *Ameiurus catus.*—**Russian cat.** Same as *Opelousas* ★*cat.* **Sacramento cat,** the catfish or horn-pout, *Ameiurus nebulosus*, introduced from the Potomac into the Sacramento.—**Schuylkill cat,** the common horn-pout or small catfish of the northeastern United States, *Ameiurus nebulosus.*—**Siamese cat,** a variety of cat said to be bred by the nobility of Siam, of small size, fawn-colored body, and chocolate-colored face and legs. Occasionally the entire animal is chocolate-colored. **Spanish cat.** Same as *tortoise-shell* ★*cat.* **Spotted cat.** (*a*) See *spotted.* (*b*) Same as *channel-cat.* **Thieves' cat,** the cat-o'-nine-tails.—**To let the old cat die,** to let a swing stop of itself: a phrase used by children. **Tortoise-shell cat,** a variety of cat marbled with black, yellow, and white. Occasionally called *Spanish cat.* **Yellow cat.** *Ameiurus natalis*, a catfish found from the Great Lakes southward to Texas.

cat[1], *v.* **I.** *trans.*—**To cat and fish,** to lift (the anchor of a vessel) to the cat-head and draw up its fluke so that the latter rests on the rail or on the anchor-rest.

II. *intrans.* 2. To act after the manner of soft clay or mortar in filling crevices.

Similar lesions cannot be produced by the injection of tuberculin into the lungs of a healthy animal; in animals, it is true, the conditions are different. The tuberculin when injected is rapidly absorbed, and produces generally toxic instead of local lesions. The material which *cats* here is in a state not capable of ready absorption, and must act locally. It represents the soluble products mixed with mucus, possibly with particles of tissue.
Buck, Med. Handbook, VII. 901.

Cat. An abbreviation (*a*) of *Catalan*; (*b*) [*l. c.*] of *catalogue*; (*c*) of *catechism.*

cata. An abbreviation of *catalogue.*

catabasial (kat-ą-bā′si-ąl), *a.* [Gr. κατά, down, + βάσις, basis (see *basion*), + -*al*[1].] In *anthrop.*, having a skull-base in which the basion is lower under the assumed horizontal than the opisthion.

catabatic (kat-ą-bat′ik), *a.* [Gr. καταβατικός, ⟨ κατάβασις, descent: see *catabasis.*] Declining: said of the stage of defervescence of an acute disease.

catabibazon (kat″ą-bi-bā′zon), *n.* [Gr. καταβιβάζων, ppr. of καταβιβάζειν, bring down, cause to go down, ⟨ κατά, down, + βιβάζειν, cause to go, ⟨ βαίνειν, go: see *basis.*] In *astrol.*, the moon's descending node; the dragon's tail. See *dragon.* *Lilly.*

catabiosis (kat″ą-bī-ō′sis), *n.* [NL., ⟨ Gr. κατάβιωσις, passing life, living, ⟨ κατά, down, + βίωσις, mode of life.] In *physiol.*, that property of living substance which enables it to make adjoining cells or structures develop adaptively or in harmony with itself.

catabiotic (kat″ą-bī-ot′ik), *a.* Of or pertaining to catabiosis.

catachthonian (kat-ak-thō′ni-ąn), *a.* [Gr. κατάχθονιος, underground, ⟨ κατά, down, + χθόνιος, ⟨ χθών, the ground: see *chthonic.*] Underground; subterranean.

cataclasm (kat′ą-klazm), *n.* [Gr. κατάκλασμα, a breakage, ⟨ κατακλᾶν, break down, break off, ⟨ κατά, down, + κλᾶν, break.] A violent disruption or breaking up. *Southey.*

cataclastic (kat-ą-klas′tik), *a.* and *n.* [Gr. κατακλαστός, broken (see ★*cataclasm*), + -*ic.*]

I. *a.* 1. Of, pertaining to, or resulting from, a cataclasm.—2. In *petrog.*, noting a structure produced in rocks by crushing or shearing, whereby the minerals are broken into fragments. *Kjerulf.*

II. *n.* A fragmental texture in a rock or mineral produced by crushing instead of sedimentation. *Geikie*, Textbook of Geol., p. 135.

cataclinal (kat-ą-klī′nąl), *a.* [Gr. κατακλινής, sloping, + -*al*[1].] Sloping: a descriptive term applied to a dip-slope; that is, a land-surface which follows the dip of the underlying strata.—**Cataclinal valley,** a valley whose course follows the dip of the strata.

cataclysmatic (kat″ą-kliz-mat′ik), *a.* Of the nature of a cataclysm; of or relating to the cataclysmists or their theories.

Cataclysmic theory, in *geol.*, a theory promulgated by Cuvier, and generally accepted in the early days of the science, which maintained that "each period in the earth's history is marked by distinctively characteristic faunas and floras; that no species is common to two successive periods; that tremendous convulsions of nature (cataclysms) occurred at the close of each cycle and annihilated the whole organic world; and that by means of special creative acts the renovated earth became time and again populated with new animals and plants which bore absolutely no connection either with previous or with subsequently introduced types." *Zittel* (trans.), Textbook of Paleon., I. i. Also *theory of cataclasms* (which see, under *cataclasm*).

Catacrotic pulse. See ★*pulse*[1].

catacrotism (kat-ak′rō-tizm), *n.* [*catacrot*(*ic*) + -*ism.*] The occurrence of a catacrotic pulse.

catacumbal (kat-ą-kum′bąl), *a.* [LL. *catacumba*, catacomb, + -*al*[1].] Of, pertaining to, resembling, or characteristic of, a catacomb. [Rare.]

Catadicrotic pulse. See ★*pulse*[1].

catadicrotism (kat-ą-dik′rō-tizm), *n.* [Gr. κατά, down, + δί-, two-, + κρότος, beating, pulse, + -*ism.*] The condition of the pulse in which the descending line of the sphygmographic tracing is broken by an upward notch representing a faint beat following the main pulsation.

catadidymus (kat-ą-did′i-mus), *n.*; pl. *catadidymi* (-mī). [NL., ⟨ Gr. κατά, down, + δίδυμος, double.] In *teratol.*, a monster double below but single above.

catadromous, *a.* 2. In *bot.*, having the first set of nerves (in each segment of a fern frond) given off on the basal side of the midrib, as in *Osmunda.* Compare *anadromous* (*b*).

Catætyx (ka-tē′tiks), *n.* [NL., ⟨ Gr. καταιτυξ, a low helmet or cap of leather.] A genus of deep-sea fishes of the family *Brotulidæ.*

cataforite, *n.* Same as ★*cataphorite.*

catagenetic (kat″ą-jē-net′ik), *a.* Of or pertaining to catagenesis.

The *catagenetic* energies tend to the creation of a stable equilibrium. *A. Hyatt*, Biol. Lect., p. 146.

catalase (kat′ą-lās), *n.* [Also *katalase*; ⟨ *catal*(*ysis*) + -*ase.*] An oxidation-ferment which decomposes hydrogen peroxid catalytically with the liberation of oxygen.

catalects (kat′ą-lekts), *n. pl.* [L. *catalecta.*] A collection of short poems ascribed to Vergil; in general, short pieces or fragments of literature. *Holland.*

catalina (kä-tä-lē′nä), *n.* [Mex. Sp., from the fem. name *Catalina.*] The Mexican name of *Anisotremus tæniatus*, a fish of the Pacific coast allied to the pork-fish of the Atlantic.

catalineta (kä-tä-li-nā′tä), *n.* [Cuban Sp., dim. of the fem. name *Catalina.*] 1. The Cuban name of the striped pork-fish, *Anisotremus virginicus*, of the family *Hæmulidæ.*—2. Any of the fishes belonging to the genus *Holacanthus.*

catallactic (kat-ą-lak′tik), *a.* [See *catallactics.*] Pertaining to exchange, or to the science of exchanges.

catalo (kat′ą-lō), *n.* [*cat*(*tle*) + (*buff*)*alo.*] The offspring of a cross between the American bison and domesticated cattle: in common use in the southwestern United States.

Vernon Bailey spoke on 'The Goodnight Herd of Buffaloes and *Cataloes* in Texas,' saying that this comprised fifty buffaloes and about seventy *cataloes*, or crosses between the buffalo and domesticated cattle.
Science, March 6, 1903, p. 386.

catalogd, *pp.* A simplified spelling of *catalogued.*

cataloger, *n.* A simplified spelling of *catalogueer.*

catalogic (kat-ą-loj′ik), *a.* Of the nature of or pertaining to a catalogue.

catalogical (kat-ą-loj′i-kąl), *a.* Same as ★*catalogic.*

catalogistic (kat-ą-lō-jis′tik), *a.* Enumerative: as, "the Sankhya, the *catalogistic* philosophy." *W. H. Mill*: so called from its numerical classifications, and the importance attached by Sankhyans to the establishment of their twenty-five principles. See *Sankhya.*

catalogue, *n.*—**Argentine General Catalogue,** a star-catalogue made from observations at the National Observatory of Argentina (at Cordoba), and including stars in all portions of the southern heavens: in distinction to the "zones," catalogues which are limited to certain belts of the celestial sphere.—**Author-catalogue,** a catalogue in which the various works composing a library are arranged alphabetically according to their authors.—**Dictionary catalogue,** a catalogue arranged alphabetically.—**Subject-catalogue,** a catalogue of books or the like arranged according to subjects.—**Systematic catalogue,** a catalogue which is logically arranged.

catalona (kä-tä-lō′nä), *n.* [Philippine Sp., taken as fem. of *catalonan*, which is then treated as masc.: see ★*catalonan.*] Tagalog sorceress or witch.

catalonan (kä-tä-lō′nän), *n.* [Philippine Sp., ⟨ Tagalog *catalonan*, a sorceress or witch.] Among the pagan Tagalogs, a sorceress or witch; also (in Spanish use), a male sorcerer or priest.

catalpic (ka-tal′pik), *a.* [*catalpa* + -*ic.*] Pertaining to or derived from the catalpa.—**Catalpic acid,** a crystalline bibasic acid, $C_{14}H_{14}O_6$, found in the unripe seeds of *Catalpa bignonioides.* It melts at 207° C.

catalpin (ka-tal′pin), *n.* [*catalpa* + -*in*[2].] A crystalline glucoside obtained from the seeds and bark of *Catalpa bignonioides.*

catalufa (kä-tä-lō′fä), *n.* [Cuban Sp. use of Sp. *catalufa*, a kind of carpet, = Pg. *catalufa*, a sort of woolen cloth.] A Spanish name of a bright red bass-like fish of the genus *Priacanthus*, known in English as the big-eye.—**Catalufa de lo alto,** a name applied to species of the genus *Pempheris*, deep-water fishes of a red color which bear a superficial resemblance to *Priacanthus.*

catalysotype (kat-ą-lis′ō-tīp), *v. t.*; pret. and pp. *catalysotyped*, ppr. *catalysotyping.* Same as ★*catatype.*

catalyst (kat′ą-list), *n.* [*cataly*(*sis*) + -(*i*)*st.*] In *phys. chem.* Same as *catalytic agent* (which see).

The change, however, does not occur spontaneously, but is undoubtedly dependent on the presence of a *catalyst*, as equilibrium is established with great rapidity if a trace of alkali be added. *Nature*, Sept. 3, 1903, p. 431.

catalytic, *a.* 2. A term applied to evolutionary stages or conditions in which organisms are degenerating toward sterility, as a result either of too wide cross-breeding or of too narrow inbreeding. Aberrant or mutative hybrids and abrupt mutative variations or sports appear in the catalytic stages. Compare ★*dialytic*, 4, ★*hemilytic*, and ★*prostholytic.* *O. F. Cook.*

II. *n.* Same as *catalytic agent.*

catalyzator (kat″ą-lī-zā′tor), *n.* [*catalyze* + -*ator.*] A substance which acts catalytically, causing by its presence chemical changes while apparently remaining itself unchanged: a catalytic agent. Also *catalysator.*

Free hydrogen-ions are therefore without doubt exceedingly active *catalysators* of a general character.
Smithsonian Rep., 1893, p. 237.

catalyze (kat′ą-līz), *v. t.*; pret. and pp. *catalyzed*, ppr. *catalyzing.* [Also *catalyse*; ⟨ *catalysis* (cf. *analyze*).] In *phys. chem.*, to act upon by catalysis: said of a substance which accelerates a chemical reaction while it is itself left unchanged at the end of the reaction.

. . . the prevalent view that an enzyme acts as a *catalyzing* agent and that the action of a catalyzer is the formation

of a labile intermediate product which instantly decomposes, restoring the catalyzer to its original condition. *Science*, April 3, 1903, p. 558.

catalyzer (kat'a-li-zer), *n.* In *phys. chem.*, a catalytic agent; a catalyzator.

Measurements were made of the effect of *catalyzers* on the formation of C_6H_5Cl and $C_6H_4Cl_2$ from benzene and chlorine. *Jour. Phys. Chem.*, May, 1904, p. 353.

catamaran, *n.* **4.** In *lumbering*, a small raft carrying a windlass and grapple, used to recover sunken logs. [U. S.]

Catamblyrhynchidæ (kat-am-bli-ring'ki-de), *n. pl.* [NL., ⟨ *Catamblyrhynchus* (⟨ Gr. κατα, down, + αμβλυς, blunt, + ῥυγχος, snout, beak) + *-idæ*.] A family of South American passerine birds related to the sparrows.

catan (kä-tän'), *n.* [Philippine Sp. *catán* (Morga), ⟨ Jap. *katana*, a sword, a knife.] A kind of Japanese or Chinese cutlas.

catapetasma (kat″a-pe-taz'mä), *n.* [Also *katapetasma*; ⟨ Gr. καταπετασμα, a veil, ⟨ καταπετάννυναι, spread out, ⟨ κατα, down, + πετάννυναι, spread out.] **1.** In the *Gr. Ch.*, the veil or curtain of the holy doors.—**2.** The veil which is used in Oriental churches to cover the chalice and paten.—**3.** In the *Gr. Ch.*, the veil which is hung on the canopy standing over the altar.

cataphebe (kat'a-fēb), *n.* [Origin unknown.] *Hypoplectrus unicolor*, a serranoid fish of the West Indies. Also called *vaca*.

cataphoresis (kat″a-fō-rē'sis), *n.* [NL., ⟨ Gr. καταφορειν, carry down, ⟨ κατά, down, + φέρειν, carry.] The action of conveying something downward or through something else; specifically, electrical endosmosis, especially electric endosmosis employed to cause medicinal substances (such as cocaine, quinine, or the like) to pass through or into living tissues in the direction of flow of a positive electric current, or from the anode to the cathode. See *endosmosis*.—**Anemic cataphoresis,** cataphoresis in which the action of the remedy is limited to the seat of application, in consequence of the temporary arrest of the blood-supply to the part.

cataphoretic (kat″a-fō-ret'ik), *a.* [*cataphoresis* (*-ret-*) + *-ic*.] Pertaining to or of the nature of cataphoresis; cataphoric.—**Cataphoretic demedication,** the withdrawal of foreign material from the tissues by cataphoresis.—**Cataphoretic medication,** the impregnation of the tissues of a part with any material by cataphoresis.

cataphoria (kat-a-fō'ri-ä), *n.* [NL., ⟨ Gr. καταφορος, bearing or going down, ⟨ καταφορειν, bear down, ⟨ κατά, down, + φέρειν, bear.] Inclination of the visual axis below the horizontal plane.

cataphoric, *a.* **2.** Relating to ★cataphoresis, to ★cataphoria. See these words.

The *cataphoric* electrode, covered with a thickness of lintine, or similar material saturated with adrenalin, is connected with the positive pole of the battery, or other electric source. *Med. Record*, March 7, 1903, p. 363.

cataphorite (ka-taf'ō-rīt), *n.* [Gr. κατάφορος, bearing or going down, + *-ite*[2].] An alkali-iron amphibole near barkevikite, first described from Norway. Also written *kataphorite*.

cataplasis (ka-tap'la-sis), *n.* [NL., ⟨ Gr. κατά, down, + πλάσις, ⟨ πλάσσειν, form, mold.] In *evolution*, the stage of the decline or decadence of an organic type, in distinction from the stage of its rise (*anaplasis*) and the stage of its full vigor (*metaplasis*). *Haeckel*.

catapophysial (kat″a-pō-fiz'i-al), *a.* [*catapophysis* + *-al*.] Of or pertaining to a catapophysis.—**Catapophysial canal,** in *ornith.*, the canal on the ventral face of the cervical vertebræ, bounded by the catapophyses and containing the carotid artery. *Proc. Zool. Soc. London*, 1901, I. 370.

catapophysis (kat-a-pof'i-sis), *n.*; pl. *catapophyses* (-sēz). [NL., ⟨ Gr. κατά, down, + ἀπόφυσις, an outgrowth, a process.] **1.** In *anat.*, any process, usually of bone or of brain tissue. Also called *hypapophysis*.—**2.** One of a pair of processes developed on the sides of the ventral face of the cervical vertebræ in birds. They vary in size from a slight projection near the base of a transverse process to a long incurved process that almost or quite meets its fellow of the opposite side to form the catapophysial canal. On the posterior cervicals the catapophyses may be moved downward on to the hypapophysis. *Proc. Zool. Soc. London*, March, 1899, p. 406.

Catapult fruit. Same as ★*ballistic fruit*.

catapult (kat'a-pult), *v.* **I.** *trans.* **1.** To hurl, as a missile, as from a catapult.

At last . . . the throne itself was *catapulted* into the square, and the last symbol of royalty reduced to a heap of ashes. *Blackwood's Mag.*, LXIII. 499.

2. To shoot at with a catapult: as, to *catapult* birds.

II. *intrans.* To use a catapult in hurling missiles.

cataract, *n.* **7.** In *mech.*, a device for regulating the number of strokes per minute in a Cornish pumping-engine, in which the velocity of a falling weight, or a spring-weighted piston, is governed by the flow of water through a variable opening, whose cross-section can be controlled at will, so that the period of the stroke or the interval between strokes can be made longer or shorter.—**Black cataract,** opacity of the crystalline lens discolored by the absorption of pigment from the blood.—**Cortical cataract,** opacity of the crystalline lens beginning at the margin and extending toward the center.—**Diabetic cataract,** a cataract occurring prematurely in one suffering from diabetes.—**Glacier cataract,** an abrupt precipitous descent in the course of a glacier, analogous to a cataract in a river. *Dana*, Manual of Geol., 4th ed., p. 238.—**Lamellar cataract.** Same as *zonular cataract* (which see, under *zonular*).—**Senile cataract,** a hard opacity of the lens-nucleus of the eye, occurring not infrequently in the aged.—**Soft cataract,** a cataract of the eye in which the opaque lens is of semi-fluid consistency, as happens when the opacity occurs before the nucleus of the lens has formed.—**Zonular cataract.** See *zonular*.

cataract (kat'a-rakt), *v.* **I.** *intrans.* To form cataracts.

II. *trans.* To pour, like a cataract.

My poems have been reviewed. The Monthly has *cataracted* panegyric on me; the Critical cascaded it, and the Analytical dribbled it with civility.
Coleridge, Letter in Sup. Biographia Literaria, II. 739.

cataract-box (kat'a-rakt-boks), *n.* A dash-pot; a damper or retarder in the form of a piston which must move a liquid whenever it changes position. The movement of the liquid through an orifice of adjusted size determines the rate at which the piston moves.

cataract-knife (kat'a-rakt-nīf″), *n.* A knife for section of the cornea in operations for cataract: it is so shaped as to prevent the escape of the aqueous humor while the incision is being made and the knife remains in the wound.

cataract-lens (kat'a-rakt-lenz), *n.* A powerful spectacle-lens used after an operation for cataract.

cataract-needle (kat'a-rakt-nē″dl), *n.* A fine steel rod, set in a handle, with a pointed or lance-shaped extremity: used to disintegrate a lenticular cataract and so promote its absorption.

catarinite (kat'a-rin-īt), *n.* See ★*meteorite*.

catarrh, *n.*—**Acute nasal catarrh,** coryza.—**Atrophic nasal catarrh,** chronic inflammation of the nasal mucous membrane leading to atrophy: usually the underlying condition of ozæna.—**Autumnal catarrh,** hay-fever.—**Bronchial catarrh,** bronchitis.—**Epidemic catarrh,** influenza.—**Gastric catarrh,** simple inflammation of the mucous membrane of the stomach.—**Lightning catarrh,** a severe and rapidly developing nasal catarrh.—**Nasal catarrh.** Same as *coryza* (acute form) and *ozæna* (chronic fetid form).—**Russian catarrh,** influenza.—**Suffocative catarrh,** capillary bronchitis.—**Vernal catarrh,** a form of conjunctivitis which prevails in the spring.

catarrhal croup, gastritis, jaundice. See ★*croup*[1], *gastric* ★*catarrh*, ★*jaundice*.

Catasetum (kat-a-sē'tum), *n.* [NL. (L. C. Richard, 1822).] A genus of plants of the family *Orchidaceæ*, several species of which are grown in choice collections. They have globose expanded flowers and plaited membranaceous leaves; the flowers are in racemes, and the columns are provided with sensitive appendages which, when touched, cause the pollen-masses to fly out. There are some 30 species in the American tropics, either terrestrial or epiphytic. *C. Bungerothi*, *C. macrocarpum*, *C. discolor*, and others are under cultivation. They require a high temperature.

catasta (ka-tas'tä), *n.* [L., a corruption of Gr. κατάστασις, a setting down: see *catastasis*.] **1.** A stage or block on which slaves were formerly exposed for sale.

She will be taken to Rome, and sold as a slave. And in spite of a few discomforts in the transfer, and the prejudice . . . against standing an hour on the *catasta* to be handled from head to foot in the minimum of clothing, she will most probably end in being far better housed.
Kingsley, Hypatia, xiii.

2. A bed or rack of torture.—**3.** An obsolete English name for the stocks.

catastrofe, *n.* A simplified spelling of *catastrophe*.

catastrophal (ka-tas'trō-fal), *a.* Same as *catastrophic*.

catastrophical (kat-as-trof'i-kal), *a.* Same as *catastrophic*.

catastrophically (kat-as-trof'i-kal-i), *adv.* In a catastrophic manner; with the suddenness and the disastrous effect of a catastrophe.

catasyllogism (kat-a-sil'ō-jizm), *n.* [ML. *catasyllogismus* (cf. Gr. κατασυλλογίζεσθαι, have a conclusion drawn against one), ⟨ Gr. κατά, down, + συλλογισμός, syllogism.] A syllogism by which the principal contention of an opponent is absolutely refuted from premises supplied by him. Eisler attributes the introduction of the term to John of Salisbury; but, in fact, Boethius has it, the corresponding infinitive having been used by Aristotle in the nineteenth chapter of the second "Prior Analytics."

catatasis (kat-at'a-sis), *n.* [NL., ⟨ Gr. κατάτασις, stretching, straining, extension, ⟨ κατατείνειν, stretch, strain, draw tight, ⟨ κατά, down, + τείνειν, stretch.] Extension employed in the reduction of a dislocation or of the deformity attending fracture of one of the long bones.

catatonia, *n.* See *katatonia*.

catatonic, *a.* See ★*katatonic*.

catatricrotism (kat-a-trik'rō-tizm), *n.* [Gr. κατα, down, + τρι-, three-, + κροτος, a beating, clapping (pulse), + *-ism*.] A condition of the pulse in which the descending line of the sphygmographic tracing is broken by two upward notches representing two faint beats after the main pulsation.

catattut (kä-tä'töt), *n.* [Said to be a native name in Amboina.] The cocoanut crab, *Birgus latro*.

catatype (kat'a-tīp), *n.* [Also *katatype*; ⟨ Gr. κατά, down, + τύπος, type.] In *photog.*, a print made from a negative without the aid of light, but by the use of a chemical catalyzer or accelerator. Ostwald and Gros of Leipzig found that by flowing a negative with an ethereal solution of hydrogen peroxid the peroxid is instantly decomposed more or less completely wherever it comes in contact with the silver of the film, which acts as a catalyte, and on the evaporation of the resulting water leaves on the plate an invisible picture in unaltered peroxid which is densest where the negative is least dense, and is therefore a positive. The negative is next pressed on paper flowed with ferrous sulphate, which is then washed and developed by gallic acid to produce a dark-violet picture in writing-ink. Other chemicals, as manganese salts, may be used instead of the iron solution. A similar process is employed for the production of gelatin plates for printing in lithographic ink. *Sci. Amer.*, Nov. 28, 1903, p. 382.

catatypic (kat-a-tip'ik), *a.* [*catatype* + *-ic*.] In *photog.*, of or pertaining to a catatype, or to the process of inducing chemical change without the use of light.

catatypy (kat'a-tī-pi), *n.* [*catatype* + *-y*[3].] In *photog.*, a printing process which utilizes the chemical agents which act as does light to accelerate changes of a chemical character. See ★*catatype*. *Sci. Amer. Sup.*, Aug. 1, 1903, p. 23,055.

catavertebral (kat-a-vèr'tē-bral), *a.* [Gr. κατά, down, + E. *vertebral*.] Situated below the centrum of the vertebræ.—**Catavertebral element,** in *ichth.*: (*a*) One of the bones attached to the sides of the vertebræ, usually surrounding the abdominal cavity. (*b*) The hemapophysis, or arch below the centrum of the vertebræ.

catawampous (kat-a-wom'pus), *a.* [A made word, from *cata-* + *wamp-*, vaguely imitative (cf. *wap*, *whop*), + *-ous*.] Fierce; voracious; devouring; destructive. [Slang, U. S.].

catberry (kat'ber″i), *n.* **1.** The mountain holly, *Nemopanthes mucronata*.—**2.** The wild gooseberry.

catbird, *n.* **2.** An Australian name of members of the genus *Ælurœdus*: so called on account of the resemblance of their notes to the calls of a cat.

The *cat-bird* (*Ælurœdus maculosus*) which makes its appearance towards evening, and has a voice strikingly like the mewing of a cat.
C. Lumholtz, Among Cannibals, vii.

catch[1], *v. i.* **8.** In *agri.*, to germinate and grow, as a crop: as, the wheat will *catch* if the seed and season are good and the land well prepared.—**To catch and bowl,** in *cricket*, to bowl the ball to a batsman and catch him out on the hit: said of the bowler.

catch[1], *n.* **13.** In *agri.*, the extent or condition of the germination of a crop: as, a good *catch* of clover; if a good *catch* continues to thrive it will result in a good stand.—**14.** In *lock-making*, a small lock-case containing a sliding bolt but having no key. The beveled- or latch-bolt is kept in an extended position by a spring or by gravity, and is controlled by a knob which slides in a slot in the case.—**Dolly catch,** a ball mis-hit by the batsman, which goes slowly in the air to one of the fielders; an apparently easy catch. [Cricket slang.]—**Fair catch,** in *foot-ball*, a ball so caught as to entitle the catcher's side to a free kick.—**Holding-out catch,** a device attached to a spinning-mule for retaining the carriage in position at the end of its outward run.—**Knocking-off catch,** a tappet; stop; trip; part of a machine used to strike another piece at a particular time in its travel, so as to operate a stop or reverse.

catch-block (kach'blok), *n.* A block having teeth which engage with teeth on another part of the mechanism to form a temporary connection: sometimes used on the valve-gear of certain automatic cut-off engines.

catch-bolt, *n.* 2. The pin or bolt on the valve-arm of the admission-valve of a Corliss engine which is caught by the crab or claw.

catch-boom (kach'böm), *n.* A boom fastened across a stream to catch and hold floating logs.

catch-box (kach'boks), *n.* A clutch in which one element enters a box-like cavity and is there caught by projections which cause one part to drive the other. *Nasmith*, Cotton Spinning, p. 320.

catch-cropping (kach'krop-ing), *n.* The employment of a catch crop in a system of fallowing. See *catch* ★*crop*.

catch-fake (kach'fāk), *n.* *Naut.*, an accidental turn or tangle in a poorly coiled rope.

catch-pan (kach'pan), *n.* A pan, usually of thin sheet metal, placed under a machine to catch the oil or water which drips from it.

catch-pawl (kach'pâl), *n.* A swinging catch provided on a winch to hold the crank-shaft endwise in either of its two possible positions. Also used to hold the feed-shafts of some machines in either the ahead or the reverse position.

catch-piece (kach'pēs), *n.* A stop; a buffer; a spring-bumper used to limit the stroke of a Cornish pump.

catch-pit (kach'pit), *n.* A pit or depression in which water is collected; a deep catch-basin.

The late Devonian subsidence then culminated in the formation of a profound *catchpit*, where sank the coarse sand and pebbles. *Amer. Geol.*, Aug., 1903, p. 101.

catch-plate (kach'plāt), *n.* 1. A plate or block so placed as to be caught by a claw when the latter reaches a certain position. Such a part is used on many forms of tripping-valve gear.— 2. A small face-plate used on a lathe to carry a pin which engages a straight-tailed dog and so drives the piece to be turned.

catch-rack (kach'rak), *n.* A form of straight-toothed rack into the teeth of which a wheel may be slid from the side, so that the teeth engage and the wheel drives the rack, or the reverse.

catch-rod (kach'rod), *n.* A horizontal connecting-rod; part of the arrangement for holding the carriage of a spinning-mule in position when at the end of its outward run.

catch-siding (kach'sī-ding), *n.* A siding along a steep railway grade so placed as to catch runaway cars. [Eng.]

catch-station (kach'stā-shọn), *n.* A railroad way-station where mail-pouches are dropped from passing trains.

catchwater, *n.* 2. In *phys.*, a conical receiver placed beneath a bulb, flask, or other vessel to catch the water which is condensed upon its outer surface. *M. W. Travers*, Exper. Study of Gases, p. 33.

catch-wheel (kach'hwēl), *n.* A ratchet-wheel; a wheel having a catch to prevent it from turning in one direction.

Catchword entry, an entry of a book in a library-catalogue by some prominent word in the title which can be easily remembered and which will readily catch the eye of a reader who is not quite certain of the exact title.

catchwork, *n.* 2. Any mechanical appliance used to arrest motion by means of ratchets, pawls, dogs, and friction gripping-surfaces. Such are elevator safety-appliances which come into action when cables break, overwinding safety-devices in collieries, pile-driving weight-clutches, and the like.

catchy (kach'i), *a.* Same as *catching*, 2. [Colloq.]

cat-crane (kat'krān), *n.* *Naut.*, an overhanging iron beam stepped like a boat-davit, situated on the forecastle. It takes the place of a cat-head in catting the anchor.

cat-davit (kat'dav it), *n.* Same as ★*cat-crane*.

catechesis (kat-ē-kē'sis), *n.* [LL. *catechesis*, < Gr. κατήχησις, oral instruction, < κατηχεῖν, teach by word of mouth: see *catechism*.] 1. Oral instruction given in the early church to candidates for baptism. It consisted of lectures or addresses, chiefly on the ten commandments, the Apostles' Creed, and the Lord's Prayer, and formed a kind of outline or summary of Christian doctrine.
2. A book prepared for such instruction, as the sixteen books of catechetical discourses by Cyril of Jerusalem.

Specimens of these addresses and their contents are preserved in the *Catecheses* of Cyril of Jerusalem (315–386 A. D.). *Riddle*, Christian Antiquities, p. 460.

catechin, *n.* **Diamine catechin B** and **G**, two direct cotton coal-tar colors of unpublished composition which dye unmordanted cotton brown in a salt bath. An after-treatment with potassium bichromate or copper sulphate renders the brown faster.

catechizable (kat'ẹ-kī-za-bl), *a.* That may be catechized or instructed catechetically: as, *catechizable* persons.

catechol (kat'e-chol), *n.* Same as ★*pyrocatechol* or ★*pyrocatechin*.

catechu, *n.* It is used extensively in cotton-dyeing, under the name of *cutch*, for the production of tan shades. It consists chiefly of two principles, catechu-tannic acid, and catechin or catechuic acid, which are accompanied by a brown amorphous substance called *japonic acid*. Japonic acid is the final oxidation-product of catechuic acid, and catechu-tannic acid is an intermediate oxidation-product. *Bombay catechu*, obtained from the heart-wood of the catechu palm, *Areca Catechu*, is considered the best quality for dyeing purposes; its principal constituent is catechu-tannic acid. *Bengal catechu*, obtained from the pods and twigs of the acacia, is less soluble than Bombay catechu. *Cube catechu* is the same as *gambier catechu*, which is a product of the leaves of *Ourouparia Gambier* and is sold in the form of yellow cubes.—**Catechu brown.** See ★*brown*.—**Terra catechu.** Same as *catechu*.

catechumenism (kat-ẹ-kū'men-izm), *n.* The system of instruction and discipline preparatory to the reception of baptism.

catechumenize (kat-ē-kū'me-nīz), *v. t.*; pret. and pp. *catechumenized*, ppr. *catechumenizing*. [*catechumen* + *-ize*.] To instruct in the doctrines and practices of the church in preparation for baptism.

catechumenship (kat-ẹ-kū'men-ship), *n.* The state of being a catechumen.

catechu-tannic (kat″e-chö-tan'ik), *a.* Pertaining to catechu and tannin.—**Catechu-tannic acid**, a tannin, $C_{13}H_{12}O_5$, found in catechu and forming about one half its weight. See ★*catechu*.

categoric (kat-ẹ-gor'ik), *a.* and *n.* Same as *categorical*.

categorico-alternative (kat-ẹ-gor″i-kọ-al-tėr'-nạ-tiv), *a.* Having for its premises an alternative proposition and a categorical proposition which denies one of the members of the former. The term was introduced in 1890 by E. E. Constance Jones. A categorico-alternative inference is what is ordinarily called a *disjunctive syllogism*.

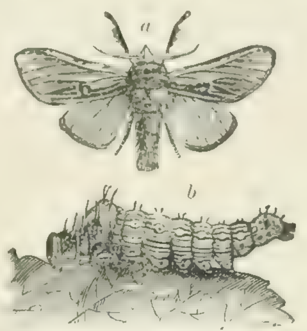
category, *n.* 1. The categories are those general concepts or ideas which mark the most fundamental distinctions. Such are those of different attitudes of thought which may, or may not, be supposed to correspond to differences in things, regardless of how anybody thinks. The different schemes of categories that are influential in philosophy may be classified according as they make divisions into two, three, four, or more members. Of dualistic, or dyadic, schemes, those which distinguish two modes of thought have never been successfully attacked; especially the distinction between affirmation and negation, under which head are to be ranged a multitude of dyadic distinctions, such as the *true* and the *false*, the *good* and the *bad*. Other dyadic distinctions of fundamental importance depend upon special metaphysical theories, such as the distinction of *body* and *soul*. Still others are open to doubt on the ground that one of the two members may be a name for a heterogeneous collection, such as the distinction of *things* and *thought*, where, under 'thought,' there may be included both physical phenomena and general agencies, not in themselves phenomena and yet not things. Of triadic systems of categories, the most remarkable is that of Hegel, which very few students now accept in all its details, but which is marked throughout by profound analyses. Hegel's governing idea is a philosophical unitarianism. As soon as he finds himself forced to admit that absolute reality involves a rational element, this unitarianism compels him to deny that there is any other element but rationality in it. Accordingly, he affirms that the real is the rational, and the rational is the real. Thence (largely influenced by experiments) he is led to believe that any abstract idea, allowed to brood over itself, will hatch out of itself a flat denial of itself; and from the struggle between the two is generated a more complex or involved conception nearer to the very reality. This he not only asserts in general terms, but he boldly attempts to give an actual epitome of the evolution of reality out of the barest abstraction of thought, marking the stages at which thought makes its chief halts. The concepts which mark those halts are called by Hegel the *categories*. Of course the list will be fuller or more meager according to the degree of detail with which the march of thought is described. As given by him, it falls into triads. He sometimes seems to speak as if this triadic character were merely a feature of the style of description, but he must have thought that the different conceptions were of three kinds, which he might well enough have called categories of another order. In his list are: *quality*, *quantity*, *measure*, *essence* (as reason of existence), *appearance*, *actuality*; the *subjective concept*, the *object*, the *idea*; etc. A large number of triads of categories have been signalized at different times. Such are: *beginning*, *middle*, *end*; *body*, *spirit*, *soul*; *matter*, *energy*, *consciousness*; *substance*, *attribute*, *relation*; *objects*, *events*, *relations* (B. Erdmann); *time*, *space*, *causality* (Paul Deussen); *identity in diversity*, *similarity in otherness*, *unity of whole and parts* (E. E. Constance Jones), etc. Schelling and others have advocated quadrate schemes of categories. Other notable lists of categories are: J. S. Mill's "things denoted by names," which are *feelings*, *substances*, *qualities*, *relations*, *quantity*; H. A. Aikins's five fundamental relations, *individual identity*, *subject and attribute*, *causal relations*, *non-causal relations between different things*, *thought and its object*; Herbert Nichols's categories, *quality*, *quantity*, *changeableness*, *tangibleness*, *presentativeness*, *personality*.

catelectrotonically (kat″ẹ-lek-trō-ton'i-kal-i), *adv.* In a catelectrotonus manner. *Buck*, Med. Handbook, III. 780.

catenoid (kat'e-noid), *a.* and *n.* [L. *catena*, a chain, + Gr. εἶδος, form.] I. *a.* Chain-shaped; catenary. A catenoid colony of *Protozoa* is such as would arise from the union of cells end to end, or side to side, or through the continuous division of cells in one plane.
II. *n.* The surface of revolution of the catenary. Meusnier found (1776) that every minimal surface of revolution is the catenoid.

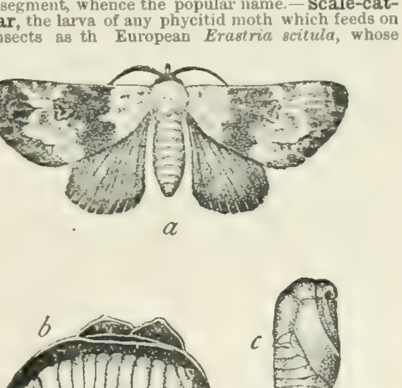
catenulate, *a.* 3. In *zool.*, same as *catenate*. *Annals and Mag. Nat. Hist.*, May, 1903, p. 452.

caterpillar, *n.* **Black caterpillar**, the larva of a European saw-fly, *Athalia spinarum*, known as the *turnip saw-fly*. The larvæ are also known as *blacks*, *black palmers*, and *niggers*. They feed on turnip, charlock, and mustard.—**Blue-spangled peach-tree caterpillar**, a velvety-black caterpillar, with an orange stripe along the back and steel-blue warts, the larva of the arctiid moth *Haploa colona* or *fulvicosta*, which feeds upon the foliage of peach and other rosaceous fruit-trees in the eastern United States.—**Bulrush caterpillar.** Same as ★*plant caterpillar*.—**Geometric caterpillar**, any one of very many larvæ of the lepidopterous family *Geometridæ*, which, lacking abdominal prolegs, move with a looping motion as though measuring the surface over which they walk.—**Harlequin caterpillar**, the larva of an American arctiid moth, *Euchætes egle*, which is found commonly on milkweed and is clothed with tufts of orange, black, and white hair.—**Hedgehog caterpillar**, the larva of an arctiid moth, *Isia isabella*, also called *woolly bear*.—**Hickory horned-devil caterpillar.** See *walnut-moth*. Also called *royal horned walnut-caterpillar*.—**Moth-borer caterpillar**, a name used by the planters in the British West Indies for the larva of the sugar-cane borer-moth, *Diatræa saccharalis*. *Nature*, Sept. 3, 1903, p. 423.—**Orange-dog caterpillar**, the larva of an American papilionid butterfly, *Papilio thoas*, found commonly on citrus-trees in Florida and Louisiana and also in Mexico and Central America.—**Processionary caterpillar**. (*a*) See *processionary*. (*b*) The larva of an Australian lymantriid moth, *Teara melanosticta*, which forms in columns like the European *Cnethocampa processionea*.—**Red-humped apple-tree caterpillar**, the larva of a notodontid moth, *Schizura concinna*.



Red-humped apple-tree caterpillar (*Schizura concinna*). *a*, moth; *b*, caterpillar. Natural size.

It feeds on the leaves of the apple, pear, and other rosaceous trees. Its body is longitudinally striped with slender white, black, and yellow lines, the head is coral-red, and there is a coral-red hump on the back of the fourth segment, whence the popular name.—**Scale-caterpillar**, the larva of any phycitid moth which feeds on scale-insects as th European *Erastria scitula*, whose



Scale-caterpillar (*Erastria scitula*). *a*, moth; *b*, larva in case; *c*, pupa. (All more or less enlarged size.) (After Riley, U. S. D. A.)

larva preys on the black scale and which has been imported into California, and the American *Laetilia coccidivora*, whose larva feeds on the cottony maple-scale.—**Vegetable caterpillar**, a name applied to certain species of *Cordyceps* which grow upon caterpillars. See *Cordyceps* and *caterpillar-fungus*.

H. Hill publishes a historical and descriptive account of this fungus which has been called the *vegetable caterpillar*. It is found all over the North Island of New Zealand. The author has not been able to determine the species of caterpillar attacked by the fungus, and his attempts to germinate the spores on other caterpillars have been as yet unsuccessful. *Jour. Roy. Micros. Soc.*, Feb., 1903, p. 69.

Wheat false caterpillar, the larva of an American saw-fly, *Dolerus arvensis*.—**Yellow-necked appie-tree caterpillar**, the larva of a notodontid moth, *Datana ministra*. It feeds gregariously on the leaves of the apple, and

Yellow-necked Apple-tree [illegible]

has other food-plants as well. The body is longitudinally striped with black and yellow except the neck, which is uniformly orange-yellow. The head is black.

caterpillar-fern (kat'ėr-pil-ạ̈r-fėrn), *n.* See ★*fern*[1].

caterpillar-hunter, *n.*— **Green caterpillar hunter,** an American predatory carabid beetle, *Calosoma scrutator*, of a metallic green color. See *Calosoma*, with cut.

cateye (kat'ī), *n.* A scorpænoid fish, *Helicolenus maderensis*, found in Madeira. Also *boca negra*.

cat-face (kat'fās), *n.* In *forestry*, a partly healed-over fire-scar on the stem of a tree. [U. S.]

cat-faced (kat'fāst), *a.* **1.** Full of knots: applied to sawn timber.—**2.** An opprobrious or contemptuous epithet used in the north of England. [Slang.]

catfish, *n.* **7.** In Victoria and New South Wales, a fresh-water fish, *Copidoglanis tandanus*. It inhabits the rivers of the Murray system, but not those of the center of the continent. Also called *eel-fish* and *tandan*. In Sydney the same name is applied also to *Cnidoglanis megastoma*.— **Bermuda catfish.** Same as ★*rabbit-fish*, 4 (of Madeira).— **Electric catfish,** *Malapterurus electricus*, a catfish found in the Nile, having the power of giving an electric shock. The electric organ is said to extend over the entire body.

cat-flea (kat'flē), *n.* See *Pulex*.

cat-fluke (kat'flök), *n.* A trematoid worm, *Opisthorchis felineus* (Rivolta, 1884), from 8 to 13 millimeters long, found in the liver in cats, dogs, and men, and producing Siberian opisthorchiasis.

cat-foot (kat'fůt), *adv.* With silent foot, as a cat; in the manner of a cat; stealthily; [Prov.]

He [a bear] catches the dinin'-room deserted . . . an' goes romancin' over, *catfoot* and surreptitious, an' cleans up the tables. *A. H. Lewis*, Wolfville Nights, xv.

catgut, *n.*— **Chromic** (or **chromicized**) **catgut,** catgut impregnated with chromic acid, in consequence of which it is less quickly absorbed when used for sutures or ligatures in surgical operations. **Iodized catgut,** catgut steeped in iodine whereby it is rendered aseptic and less readily absorbable.

Cath. An abbreviation (*b*) of *cathedral*.

cathamma (ka-tham'ạ̈), *n.*; pl. *cathammata* (ạ-tä). [NL., < Gr. κάθαμμα, a knot, < καθάπτειν, fasten, < κατά, upon, + ἅπτειν, touch, fasten.] In *zoöl.*, a place at which the dorsal and ventral walls of the umbrella are grown together, as in certain jellyfishes.

cathammal (ka-tham'ạl), *a.* [*cathamma* + *-al*[1].] **1.** Relating to a cathamma.—**2.** Of or pertaining to rudimentary endoderm. The layer of degenerated endoderm which persists in some medusæ, in areas where the endodermal canal-system has been obliterated, is termed a *vascular lamella* or *cathammal plate*.

Catharistic (kath-ạ-ris'tik), *a.* Of or pertaining to the Catharists (which see); puritanical.

catharsis, *n.* **2.** Used in English to express whatever Aristotle is supposed to have meant by the same word. But he has been understood in five different ways. A passage of his "Poetics" to which we are referred in his "Politics" for the full explanation of his meaning does not appear in the "Poetics," as extant. The word was applied in Greek to the ritual purification of temples, etc. Plato and Xenophon (the latter using only the adjective καθαρός, clean), both disciples of Socrates, use it to mean a clarification of the mind induced by dying and even at the near approach of death. Aristotle means by his phrase καθαρσις των παθηματων (often translated 'a purging of the passions') a mental effect of the contemplation of works of high art, especially of the choral but severely simple and solemn Greek tragedies. He has been supposed to mean a cleansing from sin, but it is certain that he does not mean this or any strictly moral effect. On the other hand, he was of a medical family, and himself compares *catharsis* to the effect of a cathartic. He probably means the brightening and clearing of the emotional state by relieving the thoughts of the burden of sordid cares and of sensual desires; and something like this is now usually understood by the word.

cathartic, *a.* **Compound cathartic pills.** See ★*pill*[3].

cathartin (ka-thär'tin), *n.* [*cathart-ic* + *-in*[2].] **1.** A name once given to a mixture of substances obtained from senna.—**2.** A bitter substance found in buckthorn berries, *Rhamnus cathartica*.

cathartogenin (kath-är-toj'e-nin), *n.* [*cathart-ic* + *-gen* + *-in*[2].] Same as *cathartic acid*.

cat-head, *n.* **4.** An attachment to a lathe to assist in supporting long bars when they are being turned. It is a ring having set-screws that bind the work, when not circular, and hold it in a ★centering-rest (which see).

cathedralesque (kạ-thē-drạ-lesk'), *a.* Cathedral-like: as, *cathedralesque* churches.

cathedralism (kạ-thē'drạl-izm), *n.* The system that arises from the administration and regulations of a diocese.

cathedralist (kạ-thē'drạl-ist), *n.* **1.** An advocate or supporter of cathedralism.—**2.** A clergyman attached to a cathedral church.

cathedralized (kạ-thē'drạl-īzd), *p. a.* Converted into a cathedral: as, a *cathedralized* church.

cathedratically (kath-ẹ-drat'i-kạl-i), *adv.* With the authority of one who speaks *ex cathedra*; authoritatively.

catheter, *n.*— **Elbowed catheter,** a catheter with an angular bend near the tip: used in cases of enlarged prostate.— **Female catheter,** a short, nearly straight catheter for passage into the female bladder.— **Prostatic catheter,** a catheter with a wide curve, employed in certain cases of enlarged prostate.

catheterostat (kath-e-ter'ọ-stat), *n.* [Gr. καθετήρ, catheter, + στατός, < ἱστάναι, place, stand.] A receptacle for holding and sterilizing catheters. *Buck*, Med. Handbook, II. 754.

cathetometric (kath-e-tọ-met'rik), *a.* Of, pertaining to, or obtained by means of a cathetometer.

cathion (kath'i-on), *n.* An erroneous form of *cation*.

Cathode photograph. Same as *sciagraph*, 2.— **Cathode photography, rays.** See ★*photography*, ★*ray*[1].— **Cathode streams.** Same as *cathode* ★*rays*.

cathodic, *a.* **2.** Of or pertaining to the cathode: as, the *cathodic* discharge in a vacuum-tube. Also spelled *kathodic*.— **Cathodic dark space,** the dark space in a vacuum-tube traversed by the electric discharge which surrounds the cathode. See *Crookes's* ★*space*.

cathodograph (ka-thō'dọ-grȧf), *n.* [*cathode* + Gr. γράφειν, write.] A photograph taken with the X-rays. See ★*ray*[1].

cathodography (kath-ọ-dog'rạ-fi), *n.* [*cathodograph* + *-y*[3].] The taking of sciagraphs by means of the Röntgen, or X-, or cathode rays.

cathodo-luminescence (ka-thō"dọ-lū-mi-nes'ens), *n.* A phosphorescent or fluorescent glow excited by the action of cathode rays. See ★*luminescence*.

cathography (ka-thog'rạ-fi), *n.* An erroneous form for ★*cathodography*.

Catholic Epistles, a title given to a group of seven epistles in the New Testament, namely, the first and second epistles of Peter, the first, second, and third of John, and those of James and Jude. The term 'catholic' probably refers to the destination of the epistles as encyclical letters, addressed to the church universal or to scattered readers.— **Christian Catholic Church,** a church organized in 1896 by John Alexander Dowie, a Scotchman, who claimed to be the promised Elijah, come to establish the kingdom of God on earth. The characteristic tenets of the church are faith-healing, literal interpretation of the Bible, strict morals, and abstinence from the use of tobacco, alcohol, and medicinal remedies.

catholically (ka-thol'i-kạl-i), *adv.* In a catholic manner; as a Catholic.

The Duchess . . . stated expressly that Augustus of Saxony was to consent that his niece "should live *Catholically* after the marriage." *Motley*, Dutch Republic, I. 304.

catholyte (kath'ọ-līt), *n.* [*cath*(*ode*) + (*electr*)*olyte*.] In *phys. chem.*, that portion of the electrolyte which adjoins the cathode. *Electrochem. Industry*, March, 1904, p. 99.

cat-hop (kat'hop), *n.* In *faro*, two cards of the same denomination left in the dealing-box for the last turn. See *faro*.

cathoscope (kath'ọ-skōp), *n.* [*catho*(*de*) + Gr. σκοπεῖν, view.] A machine for exhibiting the optical effects of the X-rays. It comprises a fluoroscope, a vacuum-tube, batteries, etc.

cativa (kä-tē'vä), *n.* [Panama.] The large edible seeds of *Prioria copaifera*, a leguminous tree of Jamaica and Central America.

catjang (kat'jang), *n.* [A Dutch spelling of *kachang*, a pulse plant, as Malay *katjan*, the *Cajan Cajan*, etc. See *Cajanus*.] **1.** The pigeon-pea or Kongo pea, *Cajan Cajan*. See ★*Cajan* and *dhall*.—**2.** The cow-pea or chowlee, *Vigna Sinensis*. See *Vigna*, and *cow-pea*, under *pea*.

Catlin's River series. See ★*series*.

catmon, *n.* See ★*katmon*.

catnep (kat'nep), *n.* Same as *catnip*.

Catocala (ka-tok'ạ-lạ̈), *n.* [NL., < Gr. κάτω, below, + καλός, beautiful.] A notable genus of noctuid moths containing many very beautiful species. They are known as *underwing moths*, from the fact that the hind wings are often striped and colored in striking contrast to the fore wings. The genus is widely distributed, but North America is its metropolis, more than 100 species occurring on that continent.

catoctin (ka-tok'tin), *n.* [*Catoctin*, a local name in Maryland, of Indian origin. Cf. *monadnock*.] A boss of rock which rises above the general level because of its greater resistance to erosion.— **Catoctin schists.** See ★*catoctin type*.— **Catoctin type,** the type of ore-deposit occurring in the Catoctin schists, a belt of metamorphosed basic volcanic rocks of Algonkian age, forming the mountain-core of Maryland and Virginia.

Catonic (kạ-ton'ik), *a.* [NL. *Catonicus*, < L. *Cato*, a Roman cognomen, < *catus*, sagacious.] **1.** Of or pertaining to, or having the character of, Cato the Censor, a type of old-fashioned, prejudiced, pragmatical, ungracious, hard Roman virtue.—**2.** Of or pertaining to Cato of Utica, a type of stubborn but impractical virtue.—**3.** In the style of a medieval book of apothegms which goes by the name of Cato or Caton.

catoptromantic (ka-top-trọ-man'tik), *a.* [*catoptromancy*.] Of, pertaining to, or of the nature of catoptromancy.

cat-piece (kat'pēs), *n.* In *logging*, a small stick, in which holes are made at regular intervals, placed on the top of uprights firmly set in floating booms. The uprights are fitted to enter the holes in the cat-piece so as to narrow or widen the space between the booms at the entrance to a sluice-way or sorting-jack. The cat-piece is held by the uprights high enough above water to allow logs to float freely under it.

cat's-blood (kats'blud), *n.* Same as ★*bloodberry*.

cat's-claw, *n.* **3.** See ★*bayag-kambing*.

cat's-eye, *n.* **3.** In *pathol.*, an opalescent appearance of the eye in certain cases of amaurosis.—**4.** See ★*tiger's-eye*.—**5.** The operculum of a marine mollusk, *Turbo smaragdus*. [Australia.]— **Cat's-eye shutter.** See ★*shutter*.

Cat's-head molding, in *Romanesque arch.*, a molding, as that under the cornice, adorned with the heads of beasts or grotesque monsters. Compare ★*bird's-beak*.

cat's-nose (kats'nōz), *n.* **1.** A strong, cool, dry northwest wind which pushes under and lifts up a warmer southwest wind. *Dunwoody*, Popular Phrases, p. 30.—**2.** The cloud at the front of such a wind. [Colloq., Eng., in both senses.]

cat's-tail, *n.*, **3.** (*b*) A form of cirrus in which the delicate cloudy filaments resemble a bushy, curved cat's tail.

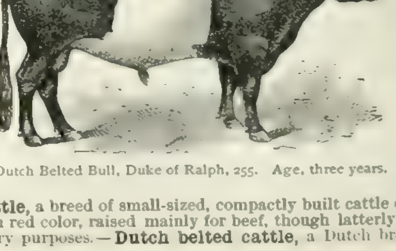
cat-stitch (kat'stich), *n.* A variety of ornamental stitching used in fancy sewing-machine work.

cat's-tongue (kats'tung), *n.* A slender, worthless oyster: also called *strap-oyster*.

cattail, *n.* **5.** In *cotton-manuf.*, any corded, stringy tuft of cotton, due to faulty setting of a machine.

Cattaraugus beds. See ★*bed*[1].

cattle, *n.*— **Banded cattle.** See *Dutch belted* ★*cattle*.— **Cattle and game disease.** See ★*disease*.— **Devon**



Dutch Belted Bull, Duke of Ralph, 255. Age, three years.

cattle, a breed of small-sized, compactly built cattle of a rich red color, raised mainly for beef, though latterly for dairy purposes.— **Dutch belted cattle,** a Dutch breed

of cattle, noted for their milk giving qualities. They are of a jet-black color, with the exception of a broad belt or blanket of pure white around the middle of the body. Hence also called *blanket-* or *banded cattle*. **Holstein-Friesian cattle**, a breed of dairy-cattle of large size, from North Holland and Friesland, reputed to be of great antiquity. Its most evident color-character is the striking mixture of large blotches of pure white and jet-black. They have been variously called *Dutch cattle*, *Holland cattle*, *North Hollanders*, *Holsteins*, and *Dutch-Friesians*, but the name now adopted is *Holstein-Friesian*, as above. – **Malarial fever of cattle.** Same as *Texas fever*. **Pandolian cattle**, an Italian breed of long-horned cattle. **Red polled cattle**, a red, hornless breed of cattle. It is the only hornless English breed, and was formerly known as *East Anglian polls*.

cattle-bush (kat′l-bůsh), *n.* An Australian shrub or small tree, *Atalaya hemiglauca*, belonging to the *Sapindaceæ*. The leaves are greedily eaten by cattle and are utilized for fodder in the dry season.

cattle-camp (kat′l-kamp), *n.* A halting- or mustering-place for cattle; a rounding-up place. [Australia.]

cattle-car (kat′l-kär), *n.* A stock-car (which see).

cattle-duffer (kat′l-duf″ėr), *n.* One who alters the brand on cattle and steals them; a cattle thief who 'duffs' the cattle by altering the brand. [Australia.]

cattle-farm (kat′l-färm), *n.* A farm on which cattle are raised; a ranch.

cattle-fever (kat′l-fē″vėr), *n.* Same as *Texas fever*. **Southern cattle-fever.** Same as *Texas fever*.

cattle-gate (kat′l-gāt), *n.* In *Eng. law*, right of pasturage in the land of another. It is a distinct and several interest in land, and passes by lease and release.

The right [a right of common in gross] is then generally known as a *cattle-gate* or beast-gate.
Encyc. Brit., XXVII. 168.

cattle-louse (kat′l-lous), *n.* Any one of several pediculid or mallophagous insects which infest cattle: as, (*a*) *Hæmatopinus eurysternus*, sometimes called *short-nosed ox-louse;* (*b*) *Hæmatopinus vituli*, sometimes called *long-nosed ox-louse;* and (*c*) *Trichodectes scalaris*.

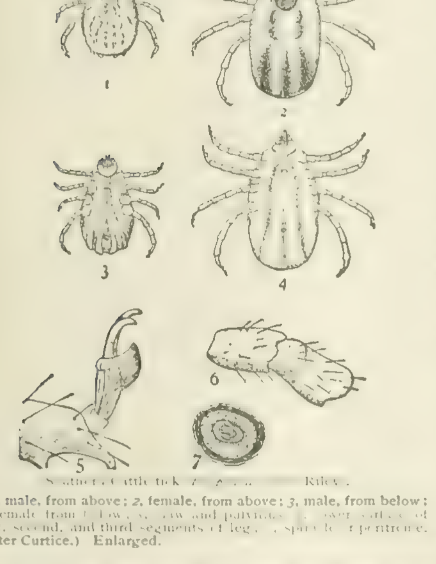
cattleman (kat′l-man), *n.* One who is engaged in rearing cattle on a ranch; a ranchman.

cattle-ranch (kat′l-ranch), *n.* A ranch or farm on which cattle are reared.

cattle-scab (kat′l-skab), *n.* A contagious skin disease of cattle, caused by a parasitic mite and characterized by the loss of hair and the formation of crusts or scabs.

cattle-station (kat′l-stā″shon), *n.* A cattle-run with a homestead and all the necessary buildings. [Australia.]

cattle-tick (kat′l-tik), *n.* Same as ★*cow-tick*. — **Australian cattle-tick**, an Australian ixodid, *Boophilus australis*, common throughout Australasia, and especially abundant in Australia and the Philippine Islands, where it attacks cattle. **Southern cattle-tick**, an American ixodid, *Boophilus bovis*, that carries the



Southern Cattle-tick (*Boophilus annulatus*). (From Riley.)
1, male, from above; *2*, female, from above; *3*, male, from below; *4*, female from below; *5*, claw and pulvillus; *6*, lower surface of first, second, and third segments of leg; *7*, spiracle or peritreme. (After Curtice.) Enlarged.

blood-inhabiting parasite of Texas fever from Texas cattle to non-immune cattle in northern States.

cattle-track (kat′l-trak), *n.* A route formed merely by the treading of herds: used in contradistinction to *cattle-way*, a road formed by man for the use of his cattle.

cattle-trade (kat′l-trād), *n.* The rearing, buying, selling, or transportation of cattle.

cattle-way (kat′l-wā), *n.* See ★*cattle-track*.

cattyman (kat′i-man), *n.* In *lumbering*, an expert river-driver.

caturai (kä-tö′rī), *n.* [Philippine name.] See ★*Faturan*.

cat-witted (kat′wit″ed), *a.* Having the wits of a cat; small-minded and spiteful.

Very *cat witted* woman.
Carlyle, Frederick the Great, IV. 260. *N. E. D.*

Caucasian, *n.*—**Black Caucasians**, the dark people of North Africa who resemble in features the Caucasian race. In this group are included the Gallas, the Abyssinians, and many tribes of the Sudan.

Caucasic (kä-ka′sik), *a.* and *n.* Same as *Caucasian*.

Caucasoid (kâ′ka-soid), *a.* and *n.* Same as *Caucasian*, including Huxley's divisions *melanochroic* and *xanthochroic*. *Encyc. Brit.*, XXV. 372.

caucho (kä-ō′chō), *n.* [Peruvian *cahuchu:* see *caoutchouc*.] A commercial variety of rubber prepared on the Peruvian rivers tributary to the Amazon, and particularly on the Juruá. It comes to market in the form of balls, strips, or slabs, and is not cured by smoking as is the Pará rubber, to which it is inferior, although it is included in the exports of rubber from the Amazon region, which are generally known as Para rubber. Caucho is obtained from several species of trees belonging to the genus *Sapium* of the spurge family, and from *Castilla Ulei* of the mulberry family. The rubber obtained from the latter species is usually distinguished as *caucho negro*, and that from the species of *Sapium* as *caucho blanco*.

cauda, *n.*—**Cauda draconis**, in *astrol.*, lit. 'dragon's tail,' the descending node of the moon; also, a figure in geomancy. See *dragon's tail*, under *dragon*.

Caudal artery, in lower vertebrates, as the fishes, the continuation of the aorta into the tail. **Caudal gland, peduncle.** See ★*gland*, ★*peduncle*. **Caudal ray**, a ray of the posterior fin, or tail-fin, of fishes.—**Caudal style**, one of the long processes borne by the anal segment of certain arthropods, as *Apus*. **Caudal vertebræ.** See ★*vertebra*.—**Caudal vesicle**, the posterior, swollen end of a cysticercus, forming the 'bladder' of a bladder-worm. **Caudal vomer.** Same as *paravostule*.

caudally (kâ′dal-i), *adv.* Toward the tail; caudad.

caudate, *a.* **II.** *n.* A member of the amphibian order *Caudata;* a tailed batrachian.

caudiciform (kâ-dis′i-fôrm), *a.* [L. *caudex* (*caudic*), caudex, + *forma*, form.] In *bot.*, having the form of a caudex.

caudiform (kâ′di-fôrm), *a.* [L. *cauda*, a tail, + *forma*, shape.] Resembling or having the shape of a tail.

caudle-pot (kâ′dl-pot), *n.* Same as ★*caudle-urn*.

caudle-urn (kâ′dl-ėrn), *n.* A vessel with a lid, handles, and spout, for holding caudle, made by English potters in the seventeenth and eighteenth centuries: usual in tin-enameled ware or Delftware. See *caudle*.

caudodorsal (kâ-dō-dôr′sal), *a.* Relating to the tail and the back.

caudofemoral (kâ-dō-fem′ō-ral), *a.* Relating to the tail and the thigh: as, the *caudofemoral* membrane of a bat, which is the membrane between the tail and the leg.

caudolateral (kâ-dō-lat′e-ral), *a.* Behind and toward the side of the body.

cauliculus, *n.* **3.** In *insect anat.*, the larger of the two elements of the double stalk of the so-called mushroom bodies in the brain of certain insects. See *mushroom* ★*body*. *A. S. Packard*, Textbook of Entom., p. 233.

caulifloral (kâ′li-flō-ral), *a.* Same as ★*cauliflorous*.

caulifloria (kâ-li-flō′ri-ä), *n.* Same as ★*cauliflory*.

cauliflorous (kâ-li-flō′rus), *a.* [NL. **cauliflorus*, < L. *caulis*, stalk, + *flos* (*flor-*), a flower: see *flower*.] Bearing flowers on trunk or branches. See ★*cauliflory*.

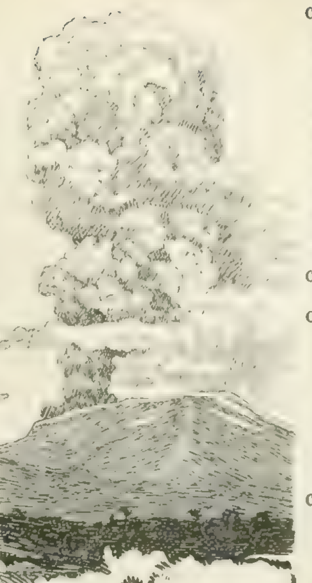
cauliflory (kâ′li-flō-ri), *n.* [NL. **caulifloria*, < **cauliflorus:* see ★*cauliflorous*.] The bearing of flowers directly on the trunk or branches. See cut under *Crescentia*.

In *cauliflory* the flowers appear sometimes only on main stems, sometimes only on branches, sometimes, and this is most usual, on both main stem and branches alike.
A. F. W. Schimper (trans.), Plant Geog., p. 336.

cauliflower, *n.* **2.** A cloud (especially a volcanic cloud) having the form of a cauliflower.

The reddish dust 'cauliflowers' accumulated about every half-hour and rolled down the gorge of the Rivière Blanche from the cone. Sometimes this phenomenon was followed by a low rumbling roar.
Amer. Jour. Sci., Jan., 1904, p. 34.

Cauliflower ear, pyralid, ware. See ★*ear*1, ★*pyralid*, ★*ware*2.



Cauliflower Cloud.
Eruption of Mont Pelé

cauline[2] (kâ′lin), *n.* [Also *caulin;* < L. *caulis*, a stalk, cabbage, + *-ine*2.] The coloring matter of red cabbage. It is largely used in the coloring of bogus wines.

caulkage, *n.* See ★*calkage*.

caulobulb (kâ′lō-bulb), *n.* [L. *caulis*, Gr. καυλός, stem, + L. *bulbus*, bulb.] The bulbous base of a stem.

caulomic (kâ-lō′mik), *a.* [*caulome* + *-ic*.] Of or pertaining to a caulome.

causa (kâ′zạ), *n.* [L.] A cause.—**Causa causans**, a causing cause, that is, a primary cause; the first cause. **Causa causata**, a caused cause, that is, a secondary cause; an effect which has in turn become a cause. – **Causa sui**, literally, the cause of itself, in the philosophy of Spinoza, that whose essence involves existence. **Honoris causâ**, for the sake of honor, in order to honor, out of respect, as, a university degree conferred *honoris causa*. **Vera causa**, a true or real cause.

causability (kâz-a-bil′i-ti), *n.* The capability of being caused.

Causal conjunction, in *gram.*, a coordinate conjunction that implies cause, such as *for*, *because*, *since*, *therefore*, etc. **Causal sequence**, the succession of events in the order of causation. **Causal treatment.** See ★*treatment*.

cause, *n.* –**Accidental cause**, in *med.*, a cause of disease which acts only occasionally and which does not always then give rise to the same morbid condition. **Cause of itself.** See ★*causa sui*.—**Centrifugal cause**, in *biol.*, the interaction between a cell and the other cells of the body, considered as a cause of its development. Hertwig, who holds that all the cells of the body of a multicellular organism are identical, attributes the specialization and differentiation of a cell during development in part to centrifugal causes, or the interaction between it and its fellow cells, and in part to centripetal causes, or the interaction between it and the external environment.—**Centripetal cause**, in *biol.*, the external environment of a cell, or of an organism, considered as a cause of its development. See *centrifugal* ★*cause*. **Short cause**, in *law*, a cause which may be advanced for hearing by either party, under a rule of the court allowing such advancement upon proof that the trial will not occupy more time than that specified in the rule.—**Testamentary cause**, in *law*, a cause within the jurisdiction of a probate court. It relates to the probate of wills, the granting of administration, and generally to any proceedings necessary to the settlement and distribution of the estate of a decedent.—**Title of a cause.** See ★*title*.

causerie (kōz′rē), *n.* [F., < *causer*, talk, chat, < L. *causari*, plead, dispute, < *causa*, a cause, case, suit.] Chat; familiar conversation; informal talk; free and unconventional discussion and criticism, such as the *Causeries du lundi* ("Monday Chats") of the French critic and essayist Sainte-Beuve (1804–69). See *Sainte-Beuve* in the Century Cyclopedia of Names.

caustic. I. *a.*—**Caustic arrow**, a slim, sharp-pointed pencil of dried caustic paste inserted into a tumor or tissue which is to be deeply cauterized. **Caustic collodion.** See ★*collodion*. **Caustic dart.** Same as ★*caustic arrow*.—**Caustic lime**, calcium hydroxid; also, calcium oxid.—**Caustic liquor**, in the manufacture of soda by the Leblanc process, the solution of caustic soda before its evaporation to dryness. **Caustic paste.** See ★*paste*1.—**Caustic silver**, lunar caustic.—**Caustic surface**, in *optics*: (*a*) The curved surface to which all the rays reflected from a concave mirror are tangential. (*b*) The curved surface to which all the rays of a conical pencil of light entering a refractive medium are tangential. *R. W. Wood*, in Nature, Aug. 9, 1900, p. 344.—**Greenbank caustic soda**, caustic soda made at the Greenbank alkali works in England.

II. *n.*—**Canquoin's caustic.** Same as *Canquoin's paste*.—**Cream caustic**, a particular grade of caustic soda, made by the Leblanc process, of a faint yellowish tinge and usually containing from 60 to 70 per cent. of real sodium hydroxid.—**Mitigated caustic**, nitrate of silver which has been fused with an equal amount of nitrate of potassium in order to lessen the caustic effect.

causticize (kâs′ti-sīz), *v. t.*; pret. and pp. *causticized*, ppr. *causticizing*. [*caustic* + *-ize*.] Same as *causticy*. *G. Lunge*, Sulphuric Acid and Allied Industries, II. 465.

causticly (kâs'tik-li), *adv.* Like caustic; in the manner of caustic.

cauterant, *n.* **II.** *a.* Having a caustic or cauterizing action.

cautery, *n.* **Solar cautery,** a lens for concentrating the heat rays of the sun and directing them upon any part where a cauterizing effect is to be produced. **Virtual cautery,** cautery by means of a caustic substance, as distinguished from actual cautery. Also *potential cautery.*

cautery-knife (kâ'tèr-i-nīf), *n.* A knife the blade of which is connected with an electric battery, so that it can be made incandescent and thus sear the tissues, preventing bleeding while cutting.

Cautionary signal. See ★*signal.*

Cautivos, *n. pl.* [Sp., pl. of *cautivo,* < L. *captivus,* captive.] **1.** The name of an order (Orden de la Merced) established in Barcelona, Spain, by San Pedro Nolasco (1189–1256) for the purpose of liberating the Christian captives from the Saracens. It was confirmed by Pope Gregory IX. (1230).—**2.** The name given to a fund established at a later date among Spanish Jews, having for its object the ransom of their brethren captured by Mohammedan pirates under Barbarossa.

Cav. An abbreviation of *cavalry.*

cavaletta (kav-a-let'ä), *n.* Same as *cabaletta.*

cavalla (kä-väl'yä), *n.* [Cf. *cavally.*] A scombroid fish, *Scomberomorus cavalla,* found in the open seas. It comes in large numbers to the American South Atlantic coasts, and ranges southward to Africa and Brazil.

Cavalry bone. See ★*bone*[1].

cavate (kā'vāt), *a.* [L. *cavatus,* pp.: see *cavate, v.*] That has been made hollow; hollowed; hollow; produced by excavation. The term has been applied somewhat specifically to a class of prehistoric habitations, in the southwestern parts of the United States, consisting of an artificial cave dug into the face of a cliff, the entrance often closed with masonry, but the side-walls, rear wall, and roof formed of the natural rock.

cavation, *n.* **2.** (*b*) In *modern fencing,* also a side-blow, delivered after quitting the opponent's blade, carrying the guard to left or right in an effort to reach around his position. The move exposes the fencer dangerously, and should be employed only with careless opponents.

cave[1], *n.* **7.** A cave-in.—**Cave period.** See ★*period.* **Trophonian cave.** See ★*Trophonian.*

cave-beetle (kāv'bē″tl), *n.* One of the blind or partly blind beetles which live in caves. Many of them belong to the silphid genera *Bathyscia* and *Adelops* and to the carabid genus *Anophthalmus.*

cave canem (kā'vē kā'nem). [L.] Beware of the dog! A warning frequently inscribed at the entrances of Roman houses, as in the Casa del Poeta Tragico in Pompeii.

cave-drawing (kāv'drâ″ing), *n.* One of the specimens of rude pictorial art which have been found in caves in different parts of the world. They are supposed to be the work of the prehistoric cave-dwellers; some of those found in France are thought to have been preglacial.

cave-dwelling (kāv'dwel″ing), *n.* **1.** A cave used as a dwelling by primitive, prehistoric, and recent tribes.—**2.** In Colorado and the adjoining region, a cliff-dwelling.

cave-earth (kāv'èrth), *n.* In *geol.,* the earthy deposit on the floor of a cave, including traces and remains of animals which have made it a shelter or a home. The use of such natural retreats by primitive man has led to numerous discoveries of human remains in these deposits.

That position in *cave-earth* under thick stalagmite beds does not of itself alone necessarily imply great age.
Keane, Ethnology, p. 76.

cave-hunter (kāv'hun″tèr), *n.* A student of prehistoric archæology who pays special attention to the remains of the cavemen and makes special search for their caves.

It is more than probable that they offer as wide a field for the research of the *cave-hunter* as caves do in any other country, and from them a rich harvest of facts relating to prehistoric times has yet to be reaped.
Keane, Ethnology, p. 94.

cave-in (kāv'in), *n.* A caving in of the roof strata of a mine, or of the sides of a shaft or pit, sometimes extending to the surface. Also *cave.*

If inspection of the vault roof reveals displacements and fissures therein, the only thing to be done is to desert the chamber, which will thus become unworkable because of these cracks and threatened *cave-ins.* Such *cave-ins* have many chances of extending to the surface and of involving the ruin of the entire work as well as that of the hoisting machines installed above on the surface.
Sci. Amer. Sup., Dec. 6, 1902, p. 22512.

Cavern period. Same as *cave* ★*period.*

cavernous, *a.* **3.** In *petrog.,* porous or vesicular: applied to rocks some of whose minerals have been removed by solution. *Geikie,* Textbook of Geol., p. 133.—**Cavernous angioma.** See ★*angioma.*—**Cavernous voice,** in *auscultation,* a hollow sound heard when the patient speaks, indicative of a cavity in the lung-substance or of a dilated bronchus.

cavernously (kav'èr-nus-li), *a.* In a cavernous manner.

cavernulated (ka-vèr'nū-lā-ted), *a.* [*cavernule* + *-ate*[1] + *-ed*[2].] Formed with cavernules or minute cavities: as, a *cavernulated* structure.

cave-tomb (kāv'töm), *n.* A tomb cut directly in the solid rock. Such tombs are abundant in the

Lycian Cave-tomb.

ruins of many early civilizations, the Mycenæan in Greece, the Egyptian, and the Indian. The cave-tombs in the hills of Asia Minor are especially interesting.

Cavitary myelitis. See ★*myelitis.*

cavitate (kav'i-tāt), *v. i.;* pret. and pp. *cavitated,* ppr. *cavitating.* [*cavity* + *-ate*[2].] To form holes or cavities within an agitated liquid; react upon the water with ★cavitation (which see): said of a screw propeller.

cavitation (kav-i-tā'shon), *n.* [*cavitate* + *-ion.*] The formation of holes or cavities within an agitated liquid. Cavitation results from violent motion which breaks up the liquid into independently moving masses, each with its surface of separation, as when water is churned by the screw of a steam-vessel. The phenomenon is specially noticeable in the high-speed propellers of torpedo-boats and turbine-propelled vessels.

The name *cavitation* is given to the phenomenon met with when a screw is driven in water at speeds above a certain limiting value. *Nature,* Nov. 6, 1902, p. 24.

cavity, *n.* **3.** In *hort.* See ★*basin,* 12.—**Atrial cavity.** Same as ★*peribranchial cavity.*—**Cavity tone.** See ★*tone*[1].—**Neural, peribranchial, peripodal, pulmonary, subgerminal cavity.** See ★*neural,* etc.

cavoscope (kav'ō-skōp), *n.* [Improp. *cavascope,* < L. *cavus,* hollow, + Gr. σκοπεῖν, view.] In *med.,* an instrument for illuminating a cavity to facilitate its examination.

cawdy† (kâ'di), *n.* An obsolete form of *caddie.*

Caxton, *n.* **2.** A printing-type of Flemish design used by William Caxton in 1477.

This is modernized Caxton type.

Caxtonian (kaks-tō'ni-an), *a.* and *n.* **I.** *a.* Of or pertaining to William Caxton, the printer (1422–91).

II. *n.* An admirer of Caxton, his books, devices, or methods.

Cay-cay butter. See ★*butter*[1].

cayenne (kī-en'), *n.* **1.** Same as *Cayenne pepper* (which see, under *pepper.*)—**2.** A card turned up in cayenne whist to determine the rank of the suits, but not as a trump.—**Cayenne cherry.** Same as *Surinam* ★*cherry* (*b*). **Cayenne whist.** See ★*whist*[2].

cayenne (kī-en'), *v. t.;* pret. and pp. *cayenned,* ppr. *cayenning.* To season with Cayenne pepper.

Cayleyan, *n.* **II.** *a.* Of or pertaining to Arthur Cayley, an English mathematician (1821–95).

cayman, *n.* **2.** A gobioid fish, *Dormitator maculatus,* found in great abundance on both coasts of America. It lives in fresh and brackish water, ranges from South Carolina, through the West Indies, to Pará, Cape San Lucas and Panama, and is much used for food. See *sleeper*[1], 8 (*c*).

cayo (kī'yō), *n.* [Sp.] Same as *cay.*

cayolac (kī'ō-lak), *n.* [Malay *kāyu,* wood, + *lāka,* the name in western Java for the tree *Myristica iners.*] A fine red wood, especially the aromatic heart-wood, of *Myristica iners,* a tree of the Dutch East Indies: used as incense.

Cayugan (kā-yū'gan), *a.* and *n.* In *geol.,* noting a period or group of New York formations which includes the Salina beds at the bottom, the Cobleskill limestone, Rondout water-lime, and the Manlius limestone, and constitutes the uppermost division of the Ontaric or Upper Silurian.

cazadores (kä-thä-dō'res), *n. pl.* [Sp., pl. of *cazador,* hunter.] Certain nomadic ants of Peru. They lead a nomadic life, entering the houses of the natives in immense armies, killing rats, mice, snakes, and all sorts of vermin, playing the part of scavengers, and passing on, when the dispossessed natives return. *The Atlantic,* Feb., 1892, p. 179.

C. B. An abbreviation (*b*) of *Cape Breton;* (*c*) of *Chief Baron* (*of the Exchequer*) (see *baron,* 2); (*d*) of the Latin *Chirurgiæ Baccalaureus,* Bachelor of Surgery: a degree conferred by certain institutions at the end of the third year of a four years' course for the degree of M. D.; (*e*) of *Common Bench;* (*f*) *Milit.,* of *confined to barracks.*

C. B. S. An abbreviation of *Confraternity of the Blessed Sacrament.*

C. C. An abbreviation (*b*) of *Caius College;* (*c*) of *Catholic clergyman;* (*d*) of *cepi corpus;* (*e*) of *Chancery cases;* (*f*) of *Circuit Court;* (*g*) of *City Court;* (*h*) of *Civil Code;* (*i*) of *Civil Court;* (*j*) of *consular clerk;* (*k*) of *contra credit;* (*l*) of *county clerk;* (*m*) of *county councilor;* (*n*) in *ceram.,* of *cream-colored;* (*o*) of *Cricket Club;* (*p*) of *crown cases;* (*q*) of *crown clerk;* (*r*) in Freemasonry, of *Celestial Canopy.*

c. c. An abbreviation (*a*) of the French *compte courante* (account current); (*b*) of *cubic centimeter.*

C. C. A. An abbreviation of *Chief Clerk of the Admiralty.*

C. C. C. An abbreviation of *Corpus Christi College.*

c. c. m. Same as ★*c. c.* (*b*).

C. C. P. An abbreviation of *Code of Civil Procedure.*

C. Cr. P. An abbreviation of *Code of Criminal Procedure.*

C. C. S. An abbreviation for *Ceylon Civil Service.*

C. D. An abbreviation of *cathodal duration.*

C. D. S. O. An abbreviation of *Companion of the Distinguished Service Order.*

c. d. v. An abbreviation of the French *carte de visite* (visiting-card).

C. E. An abbreviation (*b*) of *Canada East.*

ceanothine (sē-a-nō'thin), *n.* [*Ceanoth-us* + *-ine*[2].] A difficultly crystallizable alkaloid contained in redroot, *Ceanothus Americanus.*

cebian (sē'bi-an), *a.* [L. *cebus,* < Gr. κῆβος, monkey, + *-ian.*] Same as ★*cebine:* contrasted with ★*pithecian.* [Rare.]

cebine (sē'bin), *a.* [NL. *cebinus,* < L. *cebus,* < Gr. κῆβος, monkey: see *Cebus.*] Relating to or characteristic of the monkeys of the family *Cebidæ,* which includes the larger species of America; cebian: contrasted with ★*pithecine.*

cebocephalic (sē″bō-se-fal'ik or -sef'a-lik), *a.* [Gr. κῆβος, monkey, + κεφαλή, head.] Having an ape-like head.

ceboid (sē'boid), *a.* [Gr. κῆβος, monkey, + *-oid.*] Resembling or pertaining to the *Cebidæ:* as, a *ceboid* type of dentition: correlative with *lemuroid* and *pithecoid.*

cecidia, *n.* Plural of ★*cecidium.*

cecidiological (se-sid-i-ō-loj'i-kal), *a.* Of or pertaining to cecidiology.

cecidiologist (se-sid-i-ol'ō-jist), *n.* A student of galls and gall-insects.

cecidiology (se-sid-i-ol'ō-ji), *n.* [Gr. κηκίς (κηκιδ-), a gallnut, + *-λογία,* < λέγειν, speak.] The scientific study of galls and gall-insects.

cecidium (sē-sid'i-um), *n.;* pl. *cecidia* (-ä). [NL., < Gr. κηκίδιον (found only in sense of 'ink from galls'), dim. of κηκίς (κηκιδ-), a gallnut, a dye made therefrom, orig. anything that oozes forth; cf. κηκίειν, gush, bubble, or ooze forth.] An abnormal growth in a plant caused by gall-making insects, mites, and fungi; a gall; a gallnut.

A great variety of deformations and growths produced by insects and mites as well as by fungi have been described.... The whole are now included under the term *Cecidia;* a prefix gives the name of the organism to which the attacks are due, e. g., Phytoptocecidia are the galls formed by the Phytoptid mites. *Encyc. Brit.,* XXIX. 499.

cecidomyiid, *n.* **II.** *a.* Of or belonging to the dipterous family *Cecidomyiidæ.*

cecily, *n.* Same as *cicely.*

cecomorphous (sē-kō-môr'fus), *a.* Same as *cecomorphic.*

Cecropia chalcis-fly. See ★*chalcis-fly.*

cedar, *n.* **Alaska cedar,** the yellow cedar, *Chamæcyparis Nootkatensis.* See *yellow cypress* under *yellow.* **Brazilian cedar,** a tall tree, *Cedrela australis,* of southern Brazil and Argentina. It yields a valuable timber used for building purposes, furniture, cabinet-work, and interior decoration. **Brown cedar,** a small tree of the bonage family, *Ehretia acuminata,* of eastern Australia. It yields a light-brown coarse-grained wood which resembles that of the elm. **Cedar brakes, cedar glades,** a type of forest in Tennessee and Alabama found on dry limestone uplands. It consists of a dense, almost unmixed growth of red cedar (*Juniperus Virginiana*), *C. Mohr.* **Cedar hammock.** See ★*hammock*[2]. **Chilean cedar,** a valuable timber-tree, *Fitzroya Patagonica,* of the pine family, native in the island of Chiloe. **Cigar-box cedar,** the Spanish cedar, *Cedrela odorata.* See *Cedrela.* **Cypress cedar.** Same as *New Zealand* ★*cedar.* **Ground cedar,** the common juniper, *Juniperus communis.* **Japan cedar,** *Cryptomeria Japonica,* a graceful tree, of large size, a native of China and Japan, where it is planted as an ornamental tree and also for reforesting mountains and treeless areas. It is much planted in Europe and America in parks and lawns, and is hardy as far north as New York. The wood resembles that of the white pine, but takes a fine polish. See ★*Cryptomeria.*—**Moulmein cedar,** a commercial name for the timber of the toon, *Toona Toona.* See *toona*[3], *cedar,* 3, and *East Indian mahogany,* under *mahogany.*—**New Zealand cedar,** *Libocedrus Doniana,* a fine timber-tree from 60 to 100 feet high, yielding a heavy, fine-grained, useful wood. The name is sometimes applied to another species, *L. Bidwillii,* which yields a soft wood useless for timber. Called by the natives *kawaka.* **Pink cedar,** the timber of the shingle-tree, *Acrocarpus fraxinifolius,* used by the tea-planters of northeastern India for tea-boxes.—**Prickly cedar,** an ornamental evergreen shrub, *Stylidia Oxycedrus,* of the epacrid family, from Tasmania and Victoria, with erect branches, linear leaves, and white flowers. **Queensland cedar,** a large rutaceous tree, *Apocerasaustralis,* yielding close-grained, tough, firm wood. Also called *scrub white cedar.* See *Pentaceras.* **Rock cedar,** the mountain juniper, *Juniperus sabinoides.*—**Salt cedar,** creeping wiry grass, *Monanthochloe littoralis,* with many short bristle-pointed leaves on short branches, forming a good sand-binder. It is found along the coast of southern California and Lower California, and in southern Texas and southern Florida.—**Scrub white cedar.** Same as *Queensland* ★*cedar.* **Singapore cedar.** Same as *Moulmein* ★*cedar.*

cedar-elm (sē′där-elm), *n.* A valuable American tree, *Ulmus crassifolia,* of the lower Mississippi valley and Texas. It is the principal elm of Texas, and sometimes attains a height of 80 feet, free from branches for nearly half that distance. The wood is hard, heavy, and strong, and is used for wagon-hubs and for furniture. It is a very good shade-tree.

Cedarville limestone. See ★*limestone.*

cedula, *n.* 2. (*a*) In *old Eng. law,* a schedule. (*b*) In *Sp. law:* (1) An act by which a debtor acknowledges his debt and binds himself to pay at a specified time or on demand. (2) The notice or summons fixed to the door of a fugitive criminal requiring his appearance before the court.

cee (sē), *n.* **1.** The name of the third letter of the alphabet, *C, c.* Also *ce.*—**2.** An old name in the English universities for a certain quantity of beer (probably an abbreviation of the Latin *cerevisia,* beer): as, to eat *cees* and drink *cees.* See *cue*[2], 2 (*b*).

cefalic, *a.* A simplified spelling of *cephalic.*

cefalo (sef′a-lō), *n.* [Sp. *cefalo* < NL. *cephalus* < Gr. κεφαλή, head.] The common mullet, *Mugil cephalus.*

cefalopod, *n.* A simplified spelling of *cephalopod.*

ceile (kyā′le), *n.* [Ir.; OIr. *cēle.*] In the ancient organization of Irish society, a free tribesman who became a vassal.

It is by taking stock that the free Irish tribesman becomes the *Ceile* or Kyle, the vassal or man of his chief, owing him not only rent but service and homage.
Maine, Early Hist. of Institutions, p. 158.

ceiling, *n.*—**Metallic ceiling,** an ornamental fire-proof ceiling made of embossed and stamped sheets of metal used in place of lath and plaster.

ceiling-plate (sē′ling-plāt), *n.* A protective ring placed round a steam-pipe at the point where it passes through the ceiling. It is made in various ornamental forms. A plate used for the same purpose where a steam-pipe passes through a floor is a *floor-plate.*

ceja (thā′hä), *n.* [Sp., lit. 'eyebrow,' < L. *cilium,* pl. *cilia,* eyebrow: see *cilium.*] In *phys. geog.,* the brow or cliffed margin of a mesa or upland. [Southwestern U. S.]

cel, *n.* and *v.* A simplified spelling of *cell.*

Cel., Cels. Abbreviations of *Celsius.*

Celadon de cuivre, a pale sea-green color in the glaze of Chinese stoneware or hard-paste porcelain, replacing the red or copper-green color intended. It is caused by imperfect oxidization in the firing. **Celadon fleuré,** a variety of Chinese stoneware or coarse porcelain with relief decoration of flowers, geometric figures, etc., covered with a celadon or sea-green glaze. Designs are frequently engraved in the paste and filled in with a paste of a different tone.

celadonite (sel′a-don-īt), *n.* [*celadon* + *-ite*[2].] A green earthy silicate of iron, magnesium, and potassium, first described from cavities in amygdaloid near Verona: hence called *green earth of Verona.*

celandine, *n.* **Brook celandine,** the jewel-weed, *Impatiens biflora.* **Wild celandine,** the pale touch-me-not, *Impatiens aurea.*

celastrineous (sel-as-trin′ē-us), *a.* Same as *celastraceous.*

celation (sē-lā′shon), *n.* [NL. **celatio*(*n*-), < L. *celare,* conceal, hide.] In *med. juris.,* the concealing of pregnancy or delivery of a child.

celative (sel′a-tiv), *a.* [NL. **celativus,* < L. *celare,* hide: see *conceal.*] Of or pertaining to the concealment of an organism from enemies or from its prey.

celebe, *n.* See *kelebe.*

Celebesian (sel-ē-bēz′i-an), *a.* [*Celebes* + *-ian.*] Of or pertaining to Celebes; specifically, noting a zoogeographical subregion proposed by Sclater to include only the island of Celebes.

celebrative (sel′ē-brā-tiv), *a.* [*celebrate* + *-ive.*] Serving to celebrate.

celelminth, *n.* See *cœlelminth.*

celery, *n.* **Wild celery.** (*a*) Alexanders, *Smyrnium Olusatrum.* (*b*) See *Vallisneria.* (*c*) On the Pacific coast, an aquatic umbelliferous plant, *Œnanthe sarmentosa,* the stems of which have the taste of celery and were eaten by the Indians. The poisonous Oregon water-hemlock is said to be sometimes mistaken for this.

celery-caterpillar (sel′ē-ri-kat″ėr-pil-ăr), *n.* The larva of an American papilionid butterfly, *Papilio polyxenes.* Also called *parsley-worm.*

celery-cutter (sel′ē-ri-kut″ėr), *n.* A knife for cutting the stalks of celery. It has a long handle and a blade placed at the end at right angles to it.

celery-fly (sel′ē-ri-flī″), *n.* A European trypetid fly, *Tephritis onoperdinis,* whose larvæ mine

Celery-fly (*Tephritis onoperdinis*).
Adult, enlarged; larvæ and method of work, natural size.
(After Curtis.)

the leaves of celery and the parsnip. Also called *parsnip-fly.*

celery-hiller (sel′ē-ri-hil′ėr), *n.* In *agri.,* a double-shovel plow used to lift the earth between two rows of celery and throw and pack it against the plants on each side.

celery-looper (sel′ē-ri-lō″pėr), *n.* The larva of an American noctuid moth, *Autographa simplex,* which is widely distributed throughout the United States.

celesta (sē-les′tä), *n.* [Irreg. Latinized from F. *céleste,* < L. *cælestis,* heavenly.] A musical instrument, played from a keyboard of five octaves, in which the sound is produced by the blows of hammers upon steel plates placed over resonators of wood. It was invented by Mustel of Paris in 1886, and has been introduced into some orchestral and operatic scores.

celeste (sē-lest′), *n.* [F. *céleste,* heavenly: see *celest.*] **1.** In *organ-building,* same as *vox angelica.* See *vox.*—**2.** In *pianoforte-making,* a variety of soft pedal.

celestial, *a.*—**Apparent celestial latitude.** See ★*latitude.* **Celestial mechanics, sphere.** See ★*mechanics,* ★*sphere.*

Celestialism (sē-les′tial-izm), *n.* [*Celestial* + *-ism.*] The characteristics of 'Celestial' or Chinese life.

celestialite (sē-les′tial-īt), *n.* [*celestial* + *-ite*[2].] A supposed sulphohydrocarbon obtained from some meteoric irons, as those from Sevier, Tennessee, and Alais, France.

celestiality (sē-les-ti-al′i-ti), *n.* [*celestial* + *-ity.*] **1.** Heavenly quality; heavenliness.

But, throw off hate's *celestiality,*—
Show me, apart from song-flash and wit-flame,
A mere man's hand ignobly clenched against
You supreme calmness.
Browning, Aristoph. Apol., Works, V. 136.

2. [*cap.*] A Chinese dignitary; a dignitary of China, the 'Celestial Empire.' [Humorous.]

Celestine, *n.* **4.** [*l. c.*] In *mineral.,* same as *celestite.* **Celestine blue.** See ★*blue.*

Celiac artery. Same as *celiac axis* (which see, under *axis*).—**Celiac flux,** diarrhœa with the discharge of undigested food and chyle.—**Celiac ganglion.** Same as *semilunar ganglion* (which see, under *ganglion*).

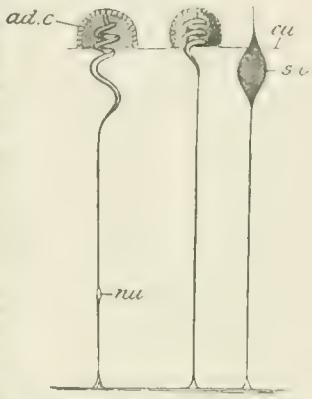
celibatory (sel′i-ba-to-ri), *n.* [*celibate* + *-ory.*] A celibate or one who favors celibacy.

celiotomy (sē-li-ot′ō-mi), *n.* [Gr. κοιλία, a cavity, + *-τομία,* < τέμνειν, cut.] Same as *laparotomy.*

cell, *n.* **11.** One of the water-tight compartments into which the space between the inner and outer shells of a war-vessel, or other metal ship, is divided.—**12.** In *archæol.,* the inner chamber of megalithic structures, which consists of a space walled by large stones and covered with a slab.—**13.** In *spectroscopy,* a small glass vessel with parallel sides designed to hold liquids for examination by transmitted light.—**14.** In *kinematics,* a symmetrical combination of an even number of links.

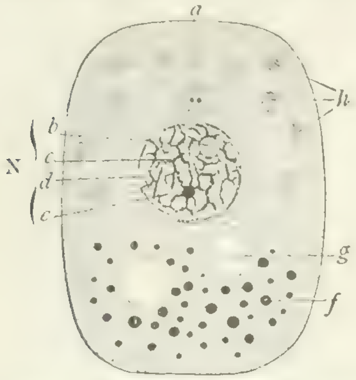
A very good idea of the form and operation of a negative *cell* may be gained by putting together the four fingers and ring-fingers of the two hands, and placing one middle finger a little over the other so as to keep all six fingers in the same plane.
Sylvester, On Conversion of Motion, p. [illegible]

Accessory cell, in *bot.,* the sister-cell of a guard-cell in a stoma.—**Adhesive cell,** a peculiar gland-like lasso-cell found on the tentacles of the *Ctenophora.*—**Aluminium cell,** in *elect.,* a battery-cell which consists of two aluminium plates immersed in a solution of Rochelle salt, alum, citric acid, or other substance, and which with alternating currents acts in somewhat the same manner as an electrostatic condenser.—**Archesporial cells.** See ★*archesporial.*—**Auditory cells.** See ★*auditory.*—**Auxiliary cell,** a specialized cell in certain of the red algæ, with which the oöblastema filament unites, carpospores being formed as a result of this conjugation.—**Axial cell.** See ★*axial.*—**Bast-cells.** See *bast*[1], 2.—**Calcigerous cells.** See ★*calcigerous.*—**Canal cell,** in *bot.,* one of the cells of the axial row in the neck of the archigonium, which, by the disappearance of the septa, ultimately form a canal for the passage of the antherozoids.—**Cap-cell,** in *bot.,* one of the upper sister-cells of the embryo-sac in the ovule, which for a time form a cap on its apex.—**Cell-complex.** See ★*complex, n.*—**Cell doctrine.** Same as ★*cell theory.*—**Cells of Corti,** hair-cells on the organ of Corti (which see, under *organ*[1]).—**Cell theory.** Progress in our knowledge of cytology, embryology, and general biology has led to a revision of the cell theory and to a distinction between two classes of opinions in regard to the relation between the constituent cells of the body of a multicellular organism and its structure and activity considered as a whole: (*a*) According to one view, which is sometimes called the *cell standpoint,* construction out of cells is the primary, fundamental, essential characteristic of the multicellular organism, and its unity or individuality is a secondary, dependent, incidental characteristic. The cells are regarded as the units of construction and of physiological activity, while the unity and individuality of the whole are features that have been added. The advocates of this conception in its extreme form regard the multicellular organism as a community or aggregation of unicellular organisms centralized or integrated into a whole by a process of differentiation or divergent specialization which has been brought about by means of cell-multiplication and division of labor; as ancestrally or phylogenetically the united and differentiated descendant of some remotely ancestral aggregation of unspecialized cells; as embryologically or ontogenetically the product of the integration and differentiation of unspecialized embryonic cells; as structurally or morphologically a compound of morphological units or plastids; and as physiologically the arithmetical sum of the physiological activities of its constituent cells. This doctrine or opinion appears in literature in many forms, which have these points in common: (1) the fundamental nature of the difference between the unity of a unicellular organism and that of a multicellular organism; (2) the dependent nature of the latter and the primacy of the cell; and (3) the resolution of the physiological activities of the multicellular organism into those of the constituent cells. See *plastid, idioplasm,* and *person.* (*b*) According to a second view, which is sometimes called the *organism standpoint,* the essential primary distinctive characteristic of a multicellular organism is its individuality or unity, while its composition out of cells is an indication of its organization, but not the means through which organization has been brought about; its individuality is directly comparable with, or of the same grade as, that of a unicellular organism, and there is no reason why it may not have arisen, in the remote past, through the growth



Two adhesive cells (*ad. c*) and a sensory cell (*s. c*) from one of the branches of a tentacle of *Hormiphora pennata,* highly magnified. (*cu,* cuticle; *nu,* nucleus.) (From Parker and Haswell's "Zoology," after Hertwig and Chun.)

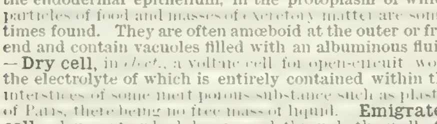
and increasing complexity of a unicellular ancestor which gradually became multicellular in adaptation to its increasing size and complexity. The unity of the egg is regarded as the same as that of the adult and as regulating instead of being controlled by cell-division, which makes no change in the grade of its individuality. Physiologically it is regarded as a coordinated whole, not as an aggregation of cells. (c) While there is much to be said in support of each of these opinions, there are grave objections to the acceptance of either of them without compromises with the other, and there is a third view which regards the distinction between the cell standpoint and the organism standpoint as dependent upon the purpose for which the comparison is made, and as in the mind of the interpreter instead of in nature. For many of the



[illegible] "The Cell.")

purposes of the histologist, the pathologist, the embryologist, and the physiologist the multicellular organism is best considered as a cell-community, while for other purposes it is best considered as a unit or coordinated whole. From the morphological standpoint the cell may properly be regarded apart from the organism, as an individual, but it is not to be forgotten that it is by abstraction that this is done. Physiologically the cell is an individual only when actually isolated and independent of an organism. From this point of view every abstraction is a blunder.—**Columnar cell,** in *histol.*, an epithelial cell which is higher than broad.—**Companion cell,** in *bot.*, a cell which accompanies another cell and is cut off from it, such as the cells in plants which lie in contact with the segments of the sieve-tubes and communicate with these by means of delicate protoplasmic strands. **Conducting cells,** in *bot.*, long, narrow cells with perforated walls, associated with sieve-tubes. **Contractile cell,** in sponges. Same as *myocyte*. **Cuboid cell,** in *histol.*, an epithelial cell in which the vertical and transverse diameters are equal: distinguished from *columnar* and *pavement* ★*cells*.

Digestive cells, in *Hydromedusæ*, certain large cells of the endodermal epithelium, in the protoplasm of which particles of food and masses of excretory matter are sometimes found. They are often amœboid at the outer or free end and contain vacuoles filled with an albuminous fluid.—**Dry cell,** in *elect.*, a voltaic cell for open-circuit work the electrolyte of which is entirely contained within the interstices of some inert porous substance such as plaster of Paris, there being no free mass of liquid. **Emigrated cell,** a leucocyte which has passed through the wall of a blood-vessel into the surrounding tissue.—**Endothelial cell.** See *endothelium*. **Epithelial cell.** See *epithelium*.—**Ethmoidal cells,** the cavities, lined with mucous membrane, in the ethmoid bone.—**False cell,** in *entom.*, the postdiscoidal areola in the wings of *Lepidoptera*. **Ganglionic cell,** one of the cells composing a ganglion; a nerve-cell. **Germinal cell,** one of the large spherical cells which in the embryonic brain and spinal cord give rise by division to the neuroblasts or primitive ganglion-cells: not to be confounded with *germ-cell*. **Giant cell.** (a) See *giant*. (b) One of the multinucleate cells which occur in the red marrow of the bones, or one of the ganglionic cells in the deeper layers of the brain-cortex.—**Hart's cell,** a crossed parallelogram (contraparallelogram) formed of 4 links jointed at their ex-



Hart's Cell.

tremities, the alternate sides of which are equal.—**Interstitial cell,** specifically, one of the small rounded cells which occur in the ectoderm of hydroid polyps and give rise, in some cases, to the nematocysts.—**Jacques cell,** a battery cell which consists of carbon, fused sodium hydrate, and iron: supposed to act as an oxygen-hydrogen gas cell.—**Mounted Peaucellier cell,** a linkwork which consists of a Peaucellier linkage, the extra link of which pivots a third vertex of the rhombus to a fixed point. See *Peaucellier cell*, under *cell*.—**Parietal cells.** See *oxyntic cells* (under *oxyntic*) and ★*delomorphic*. **Pavement cells,** the flattened polygonal cells composing pavement epithelium (which see, under *epithelium*).—**Pericardial cell,** in *insect anat.*, any one of a row of cells which are arranged along the heart on both sides and whose function is supposed to be the purification of the blood. *A. S. Packard*, Text-book of Entom., p. 405.—**Polarization cell,** in *elect.*, an electrolytic cell, or any cell containing liquid and developing polarization of the electrodes when traversed by an electric current. **Polyhedral cell,** in *histol.*, any cell of polyhedral shape, as distinguished from spherical or spheroidal cells.—**Proteid cell,** in *bot.*, a parenchymatous cell with abundant proteid contents, such as the cells connected with the sieve-tubes in plants.—**Provost cell,** in the British service, a prison for military prisoners guilty of minor offenses.—**Psychic cells,** the cells in the cortex of the brain upon whose functional activity the mental processes are believed to depend. **Pyramidal cell,** in *neurol.*, one of the large multipolar neurons or ganglion-cells in the cortex of higher vertebrates.

Round cell, in *histol.*, any spherical or spheroidal cell. **Royal cell,** a cell in which a young queen-bee is reared; a queen-cell. **Ruhmer cell,** an exhausted glass bulb containing two conductors separated by a film of selenium which under the influence of light increases in electric conductivity, and so can be used for signaling by light rays.—**Scavenger cells,** lymph-cells in nervous tissue. They are supposed to remove waste material.—**Schwann cell,** in *neurol.* and *histol.*, one of the cells composing the 'sheath of Schwann,' a delicate envelop inclosing the axis-cylinder or neuraxon of certain nerve-cells in vertebrate animals.—**Sensory cells,** nerve-cells found in the peripheral sense-organs.—**Somatic cell.** See ★*somatic*. **Stellate cell,** a cell with a star-shaped body of cytoplasm: a common name for mesenchyme cells, glia or neuroglia cells, etc.—**Supporting cells,** Deiters's cells in the organ of Corti.—**Sustentacular cells,** ordinary epithelial cells serving as a support to more highly specialized cells, such as the hair-cells in the labyrinth of the ear.—**Tipping-cell,** in *electrolysis*, a form of cell supported so as to rock to and fro periodically. By means of the flow of the mercury, which forms one of the electrodes, an interrupted or intermittent electrolytic action is thus produced.—**Transition cell,** in insects, one of the cells which represent the transition from the cells of the tracheal tubes proper to the tracheolar network.—**Wandering cells.** See *wandering* and ★*amœbocyte*.—**Weston cell.** See ★*cadmium cell*.

cellared (sel'ärd), *p. a.* **1.** Kept in a cellar.

> The greater part of the *cellared* fish are exported.
> *C. A. Johns*, Week at Lizard, p. 54. *N. E. D.*

2. Housed in a cellar.

> *Cellared* wretchedness and disease.
> *I. Taylor*, Restoration in Belief, p. 298. *N. E. D.*

cellate (sel'āt), *a.* and *n.* [NL. *cellatus*, ‹ *cella*, cell.] **I.** *a.* Having cells.

II. *n.* A cellate structure. See quotation.

> We have already found that the earth has a *cellate* structure, in the air, the sea, the land, and the nucleus; the elements of this structure we have called spheres or *cellates*. We call the structural elements of the cell, the seed and the plant, blasts or *cellates*.
> *Powell*, Truth and Error, p. 140.

cellated (sel'ā-ted), *a.* [*cellate* + *-ed*².] Same as ★*cellate*.

cell-division (sel'di-vizh"on), *n.* The division of a cell, especially in the process of growth.—**Differential cell-division,** division of cells into daughter-cells which are different from one another in their hereditary tendencies; ★heterokinesis (which see).—**Direct cell-division,** in *cytol.*, division of the cell without karyokinetic figures. Same as ★*akinesis*, ★*amitosis*, and ★*karyostenosis*.—**Qualitative cell-division,** ★heterokinesis (which see).—**Quantitative cell-division,** that in which the daughter-cells do not differ in quality from the mother-cell; homœokinesis.

cellepore (sel'e-pōr), *n.* [NL. *cellepora*.] One of the *Celleporidæ*.

celleporite (se-lep'ọ-rīt), *n.* [*cellepore* + *-ite*².] Same as ★*cellepore*.

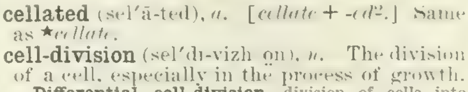
cell-formation (sel-fôr-mā'shọn), *n.* Same as *cytogenesis*.

cellicolous (se-lik'ọ-lus), *a.* [L. *cella*, cell, + *colere*, dwell.] Living in cells.

cellifugal (se-lif'ū-gal), *a.* [L. *cella*, cell, + *fugere*, flee.] In *neurol.*, moving away from the body of a cell along one or more of its processes: said of the nerve-currents in a ganglion-cell.

cellipetal (se-lip'e-tal), *a.* [L. *cella*, cell, + *petere*, seek.] In *neurol.*, moving toward the body of a cell along one or more of its processes: said of the nerve-currents in a ganglion-cell.

cell-layer (sel'lā"ėr), *n.* In *embryol.*, a layer of cells; specifically, the same as *germ-layer*, or one of the embryonic layers of cells—ecto-



Cell-layer.

[illegible] From Marshall's "Vertebrate Embryology."

derm, mesoderm, entoderm—from which the organs of the animal body are developed.

cell-mass (sel'mas), *n.* A mass of cells.—**Embryonic cell-mass,** in *embryol.*, a general term for any collection of cells of common origin in the embryo.

cell-nesting (sel'nes"ting), *n.* The formation of epithelial pearls. *Buck*, Med. Handbook, II. 685.

cellobiose (sel-ọ-bī'ōs), *n.* [*cell(ulose)* + *biose*.] A biose, $C_{12}H_{22}O_{11}$, obtained from cellulose by the action of acetic anhydrid and sulphuric acid and subsequent saponification. When heated, it decomposes at 225° C. It reduces Fehling's solution, is dextrorotatory, and gives glucose on hydrolysis.

celloid (sel'oid), *a.* [L. *cella*, cell, + Gr. εἶδος, form.] Cell-like; cellular.

celloidal (se-loi'dal), *a.* Same as ★*celloid*.

celloidin (se-loi'di-din), *n.* [*celloid* + *-in*².] A pure form of pyroxylin (guncotton). Dissolved in ether and absolute alcohol in varying proportions, it is extensively used in the histological laboratory for the purpose of embedding tissues for sectioning.

celloxin (sel'ok-sin), *n.* [*cell(ulose)* + *ox(ygen)* + *-in*².] A compound, $C_6H_{10}O_6$ or $C_6H_8O_6$, supposed to be formed by the oxidation of cellulose with hydrogen peroxid and forming a constituent of oxycellulose. The latter is supposed to consist of one molecule of celloxin with one to four molecules of cellulose.

cell-plate (sel'plāt), *n.* In *cytol.*, a plate arising, toward the close of cell-division, from a thickening of the spindle-fibers in the equatorial or division plane. The cell-plate is well developed in plant cells, but small or vestigial in those of animals. See cut under ★*dispireme*.

cell-spot (sel'spot), *n.* A color-spot within the area of the wing-cells of certain lepidopterous insects.

> The black *cell-spots* on the primaries are considerably larger and the apical area is black with scarcely a trace of metallic scaling. *Proc. Zool. Soc. London*, 1902, I. 49.

cellular, *a.* **2.** Filled with cavities, as pumice. *Geikie*, Textbook of Geol., p. 133.—**Cellular bottom.** Same as *double* ★*bottom*.—**Cellular cancer.** Same as *encephaloid cancer*.—**Cellular cooler,** a box which is divided into a series of small cells to increase its radiating surface, so that the material which is to be circulated through it to be cooled will give up its heat quickly. These cells are usually of hexagonal copper pipe through which air is allowed to pass.—**Cellular digestion.** See ★*autolysis*.—**Cellular pathology,** the doctrine of Virchow that the cells are the seat or point of origin of all vital processes.—**Cellular system.** (b) In *shipbuilding*, a system of framing, in iron and steel ships, in which the bottom is divided up into a number of water-tight cells or compartments. See *double* ★*bottom*. **Cellular texture,** in *petrog.*, the texture produced in volcanic lavas by gas-bubbles, which may be of various shapes and sizes. When the cavities are comparatively few and small, the texture is called *vesicular*; when they vary much in size and shape and are about equal in volume to the solid part of the rock, it is *scoriaceous*; when they are minute and very abundant, it is *pumiceous*.

cellularity (sel-ū-lar'i-ti), *n.* [*cellular* + *-ity*.] The state or condition of being composed of cells.

cellulase (sel'ū-lās), *n.* [*cellul(ose*²) + *-ase*.] A ferment which causes the decomposition of cellulose. *Jour. Roy. Micros. Soc.*, Feb., 1905, p. 98.

cellulate (sel'ū-lāt), *a.* Same as *cellulated*.

cellulation (sel-ū-lā'shọn), *n.* [*cellulate* + *-ion*.] The development or production of cells.

cellulic (sel'ū-lik), *a.* [*cellule* + *-ic*.] Derived from cells or cellules.—**Cellulic acid,** an acid of doubtful composition, supposed to have been produced by the action of acids or bases on cellulose.

cellulicidal (sel"ū-li-sī'dal), *a.* [L. *cellula*, a little cell, + *-cida*, ‹ *cædere*, kill.] In *pathol.*, cell-destroying or -killing: said of substances in the blood-serum or of other substances noxious to living protoplasm.

cellulicolous (sel-ū-lik'ọ-lus), *a.* [L. *cellula*, a little cell, + *colere*, dwell.] Living in little cells, as the spiders of the group *Cellulicola*.

cellulifugal (sel-ū-lif'ū-gal), *a.* [L. *cellula*, cell, + *fugere*, flee, + *-al*.] Moving away from the cell.—**Cellulifugal current,** nervous influence which proceeds from the body of the neuron through the axis-cylinder processes.

cellulifugally (sel-ū-lif'ū-gal-i), *adv.* In a cellulifugal manner.

cellulipetal (sel-ū-lip'e-tal), *a.* [L. *cellula*, cell, + *petere*, seek, + *-al*.] Moving toward the cell.—**Cellulipetal current,** a nerve-current which proceeds toward the body of the neuron.

cellulipetally (sel-ū-lip'e-tal-i), *adv.* In a cellulipetal manner.

cellulith (sel'ū-lith), *n.* [L. *cellu(la)*, cellule, + Gr. λίθος, stone.] A material made by continuing the beating of paper pulp, usually wood-pulp, with water until all trace of fibrous structure has disappeared, adding coloring-material if desired, heating, and gradually evaporating the viscid liquid product to dryness. The material has the mechanical character of

horn or ebonite, and may be worked like either of these. It has the advantage, as compared with celluloid, of burning with difficulty.

cellulofibrous (sel″ụ-lo-fī′brus), *a.* [L. *cellula*, cell, + NL. *fibrosus*, fibrous.] Same as *fibrocellular*. *Buck*, Med. Handbook, II. 106.

celluloid[2] (sel′ụ-loid), *a.* [L. *cellula*, a cell, + Gr. *εἶδος*, form.] Having the shape or semblance of cells.

cellulose[2], *n.* 2. A light material used as a packing in coffer-dam compartments of war-ships in the vicinity of the water-line. In the United States navy, cellulose from the husk of the cocoanut and that from the pith of corn-stalks have been used for this purpose. See ★*coffer-dam*, 3. **Cellulose nitrates.** Same as *nitrocellulose*. **Corn-pith cellulose,** the pith of corn-stalks. It swells rapidly in water and is therefore sometimes used at the back of the armor of battle-ships to prevent water from entering through a shot-hole.

cellulosin (sel′ụ-lōs-in), *n.* [*cellulose*2 + *-in*2.] A carbohydrate, $C_6H_{10}O_5 + 1\frac{1}{2}H_2O$, formed in small amount by the action of the butyric-acid ferment on starch. It is crystalline and will not ferment, but gives glucose on hydrolysis.

cellulosity (sel-ụ̄-los′i-ti), *n.* [NL. **cellulositas*, < *cellulosus*, full of cells: see *cellulose*1.] The state or property of consisting of cells; the state of having a cellular structure.

cellulous (sel′ụ̄-lus), *a.* [NL. *cellulosus:* see *cellulose*1.] Consisting of cells; cellulose.

celluvert (sel′ụ-vėrt), *n.* [*cellu(lose*2) + L. *vertere*, turn.] A trade-name for a plastic material used for the casters of household furniture.

celo (sē′lọ̄), *n.* [L. *cel(er)*, swift, + *-o*, after *velo*.] An acceleration of one foot per second per second. The celo has been proposed as the unit of acceleration in the system of which the foot is the measure of length, and the velo (a velocity of one foot per second) the unit of velocity.

celsianite (sel′si-an-īt), *n.* [Named after Anders *Celsian*, a Swedish naturalist.] A rare silicate of aluminium and barium, occurring in cleavable masses at the manganese-mines of Jakobsberg, Sweden. It is related to the feldspars.

Celtic architecture, cross. See ★*architecture*, ★*cross*1. **Celtic ornament,** a peculiar style of decoration found in the Irish manuscripts and in the early monumental crosses of Great Britain. Its chief peculiarities are the entire absence of foliage or other phyllomorphic ornament, and the extreme intricacy and elaboration of interlacing and geometrical patterns.

Celtindic (selt-in′dik), *a.* The same as ★*Indo-Celtic* (with the elements reversed).

Celtologist, Keltologist (sel-, kel-tol′ọ̄-jist), *n.* One who studies the Celtic languages and peoples.

Celtologue, Keltologue (sel′-, kel′tọ̄-log), *n.* Same as ★*Celtologist*.

Celtomaniac, Keltomaniac (sel-, kel-tọ̄-mā′-ni-ak), *n.* One who is over-enthusiastic about the Celtic languages and peoples, ascribing to them a disproportionate importance, influence, and antiquity, in disregard of evidence.

Celtophil, Keltophil (sel′-, kel′tọ̄-fil), *n.* [L. *Celtæ*, Celts, + Gr. *φίλος*, loving.] One who is fond of the Celts or is devoted to Celtic studies and interests.

Celto-Slavic, Kelto-Slavic (sel-, kel-tọ̄-slav′ik), *a.* and *n.* **I.** *a.* Of or pertaining to both the Celts and Slavs.

II. *n.* The type of man inhabiting the region of the Alps and the districts to the east and to the west, which in olden times were inhabited by Slavic and Celtic peoples. Also called *Alpine*. See ★*Alpine*, 2.

Celto-Teuton, Kelto-Teuton (sel-, kel-tọ̄-tū′tọn), *n.* An individual of mixed Celtic and Teutonic descent.

cembalo, *n.*—**Cembalo d'amore,** a musical instrument of the clavichord species, having unusually long strings that were struck at their middle points, so that both halves vibrated. It was sparingly used in the eighteenth century. Not to be confused with the clavicembalo, which was a harpsichord.

cement, *n.* **Beeswax cement,** a cement made of 5 parts of beeswax, 8 parts of rosin, and a varying proportion of Venetian red: used for uniting glass to metal, as in chemical apparatus.—**Diamond cement,** cement used in setting diamonds. That used by American jewelers is composed of gum mastic and isinglass dissolved in spirits of wine. *G. W. Cox*, Cyc. Com. Things, p. 117.—**Keene's cement,** a cement made by calcining very pure gypsum, treating with a solution of alum, drying, recalcining at a high temperature, and grinding to a fine powder: used as stucco, and capable of a high polish.—**Parian cement,** a cement made by a process similar to that for Keene's cement, substituting borax for alum: used as stucco.—**Pozzuolana cement,** a mixture of fat lime and pozzuolana: an early form of hydraulic cement.—**Rust cement,** a material used for making tight joints in cast-iron construction, as in lines of iron pipe, socketing iron pillars into their bases of the same metal, etc., which consists of iron turnings moistened with a watery solution of sal ammoniac or with dilute hydrochloric acid, a little sulphur being sometimes added. The turnings rapidly rust and soon set into a compact mass.—**Silicious cement,** a mixture of soluble glass, in syrupy solution, and chalk, marble dust, or other materials.—**Slag cement,** hydraulic cement made from blast-furnace slag and lime.—**Sorel's cement,** a builders' cement produced by mixing thoroughly calcined magnesia with a concentrated solution of magnesium chlorid, the mixture soon setting to a hard, solid mass, which may be polished. It consists essentially of magnesium hydroxychlorid. **Sorel's magnesia cement,** an oxychlorid of magnesium: used as stucco.

cementation, *n.* 3. In *petrog.*, the cementing of fragments or grains of a porous or incoherent rock by infiltration and deposition of mineral matter from solution. The commonest cementing-materials are carbonates, silica (usually as quartz), and silicates.—4. The solid fixation to extraneous objects by the substance of the shell or test, as in the entire class of corals and sporadically in the *Brachiopoda*, *Pelecypoda*, *Vermes*, etc. Cementation is the cause of, or is followed by, symmetrical growth accompanied by a high development of loose cellular calcareous tissue. Brachiopods and pelecypods thus attached assume an obconical form and often present the aspect and structure of a coral, as they bear similar relations to the surrounding medium.
5. In *bot.*, the growing together of the hyphæ of fungi. Same as *concrescence*, 4.—6. A process in which two solid substances in contact, upon being heated, pass into and penetrate one another without melting.

cementation-steel (sem-en-tā′shọn-stēl), *n.* Steel made by the process of cementation.

cement-gland, *n.* 2. A gland which serves to fasten its possessor to a foreign body. Specifically—(*a*) in platyhelminths, one of the glands whose secretion causes the eggs to adhere together or to a foreign body, or incloses them in a cocoon; (*b*) in *entom.*, one of a pair of cement-secreting glands occurring in the bees and ants and discharging their secretion through the sting. They correspond to the tubular glands of the *Orthoptera*.

cement-gold (sẹ̄-ment′gōld), *n.* Gold precipitated in fine particles from liquid solution.

cementing-machine (sẹ̄-men′ting-ma-shēn″), *n.* In *shoe-manuf.*, a machine for distributing hot cement upon the soles of shoes, removing the surplus, and pressing the pieces of leather together; a cementer.

cementite (sẹ̄-ment′īt), *n.* [*cement* + *-ite*2.] A carbide of iron having the formula Fe_3C. All unhardened steels (except a few alloy steels) contain more or less cementite, and all the carbon of unhardened steels (omitting certain alloy steels) is present in the form of cementite. Cementite confers strength and hardness on steel and lessens its ductility. It is the hardest, strongest, and most brittle of all the constituents of steel now known. It crystallizes in thin white plates and may be isolated by chemical means or distinguished under the microscope. The name *cementite* was given to this compound by H. M. Howe, because what used to be called 'cement carbon' or 'carbon of cementation' occurred in the form of Fe_3C.

cementoblast (sẹ̄-men′tọ̄-blȧst), *n.* [L. *cæmentum*, in NL. cement, + Gr. *βλαστός*, germ.] In *embryol.*, one of the cells which take part in producing the cement-layer of the developing tooth.

cementoma (sẹ̄-men-tō′mạ̈), *n.*; pl. *cementomata* (-ma-tạ̈). [NL. **cæmentoma*, < *cæmentum*, cement, + *-oma*.] A tumor resembling in structure the dental cementum.

cementome (sem′en-tōm), *n.* [L. *cæmentum*, in NL. cement, + *-oma*.] In *pathol.*, one of the neoplasms or odontomata derived from the cement-organ of a tooth. *Sutton*, 1893.

cement-organ (sẹ̄-ment′ôr-gạn), *n.* In *embryol.*, the mass of cells which gives rise to the cement-layer of the developing tooth.

cement-silver (sẹ̄-ment′sil″vėr), *n.* Silver precipitated by cementation.

cement-steel (sẹ̄-ment′stēl), *n.* Same as ★*cementation-steel*.

Cement-stone group. See *Tuedian*.

cement-tester (sẹ̄-ment′tes″tėr), *n.* A testing-machine especially designed to test samples of cement which have been molded in certain standard molds so as to make a specimen of a definite cross-section. The machine is provided with shackles to grasp the specimen.

cen. An abbreviation (*a*) of *central;* (*b*) of *century*.

cenacle (sen′a-kl), *n.* [L. *cenaculum*, a dining-room, usually in the upper story, hence an upper room; < *cena*, dinner.] A dining-room; specifically, the room in which the Last Supper was eaten.

cenacolo (che-nä′kọ̄-lō), *n.* [It., < L. *cenaculum*.] The Italian name for the last supper of Jesus and his disciples, a favorite subject with painters. Important examples are the pictures by Leonardo da Vinci at the church of Santa Maria delle Grazie in Milan, by Andrea del Sarto at the convent of San Salvi in Florence, and by Tintoretto in the Church of San Giorgio Maggiore in Venice.

Cenangiaceæ (sẹ̄-nan-ji-ā′sẹ̄-ē), *n. pl.* [NL., < *Cenangium* + *-aceæ*.] A family of discomycetous fungi characterized by dark-colored, leathery ascomata and more or less elongate one-celled or many-celled spores.

Cenangium (sẹ̄-nan′ji-um), *n.* [NL. (Fries), < Gr. *κενός*, empty, + *ἀγγεῖον*, vessel.] A large genus of discomycetous fungi, type of the family *Cenangiaceæ*, having the ascomata ses-

sile, more or less irregular in shape, dark-colored, and of a leathery or waxy texture. The spores are hyaline and one-celled. The species are widely distributed, and occur mostly on woody plants. Many are regarded as parasitic.

cenobian (sē-nō′bi-ạn), *a.* and *n.* [*cœnobi(um)* + *-an*.] **I.** *a.* Pertaining to the life of a cenobite.

The *cenobian* rule to which many of the monasteries still adhere was established by St Athanasius, the founder of the great monastery of Laura, in 963.
Encyc. Brit., XXX. [illegible]

II. *n.* A monk living in a community under rule.

cenocyte (sen′ọ̄-sīt), *n.* [Gr. *κοινός*, common, together, + *κύτος*, a hollow (a cell).] In *bot.*, a vegetative body consisting of a number of nuclei with the surrounding protoplasm and other cell-constituents inclosed within a cell-wall. The *Phycomycetes* among the fungi and the *Siphonales* among the algæ are common examples.

cenocytic (sen-ọ̄-sit′ik), *a.* [*cenocyte* + *-ic*.] In *bot.*, of or pertaining to, or of the nature of, a cenocyte.

cenogenesis, cenogenetic, etc. See *kenogenesis*, *kenogenetic*, etc.

cenogenic (sen-ọ̄-jen′ik), *a.* Same as ★*kenogenic*.

Cenomanian (sen-ọ̄-mā′ni-ạn), *a.* [ML. *Cenomania*, now Le Mans, in France, < L. *Cenomani*, Gr. *Κενομανοί*, a Gallic people of northern Italy.] **1.** Of or pertaining to the ancient Celtic tribes of Gaul known as the *Cenomani* (which see in the Century Cyclopedia of Names.)—**2.** In *geol.*, noting a subdivision of the Upper Cretaceous period represented in France by the gravels of the department of Perche, the glauconitic chalk of Rouen, and the gray chalk of Boulogne, corresponding in Great Britain to the Lower Chalk and Upper Greensand, and in the United States to the Dakota epoch.

cenopsychic (sen-ọ̄-sī′kik), *a.* [Gr. *καινός*, recent, + *ψυχή*, mind.] In *psychol.*, of recent or late appearance in mental evolution: opposed to ★*palæopsychic*. *G. S. Hall*, Adolescence, II. 358.

cenopythagorean (sen″ọ̄-pi-thag-ọ̄-rē′ạn), *a.* [Gr. *καινός*, recent, + E. *Pythagorean*.] Of or pertaining to a modern doctrine which resembles Pythagoreanism in accepting universal categories that are related to and are named after numbers.

cenorescent (sen-ọ̄-res′ẹnt), *a.* [Appar. irreg. < Gr. *καινός*, recent, new, + *(flu)orescent*.] Same as *fluorescent*. [Rare.]

cenosite (sen′ọ̄-sīt), *n.* [Irreg. < Gr. *καινός*, recent, + *-ite*2.] A silicate and carbonate of the yttrium metals and calcium, occurring in yellowish-brown prismatic crystals: found in Norway and Sweden. Also *cainosite* and *kainosite*.

cenotaph (sen′ọ̄-taf), *v. t.* [*cenotaph*, *n.*] To honor or commemorate with a cenotaph. *J. H. Boner*, Poe's Cottage, st. 7.

cenotaphic (sen′ọ̄-taf-ik), *a.* Pertaining to or of the nature of a cenotaph.

cenote (se-nō′te), *n.* [Yucatan Sp., < Maya *conot*.] A natural underground reservoir of water, such as is found in the limestone of Yucatan, used by the natives for drawing water: the presence of such reservoirs determines the location of the larger villages.

The most notable examples of sacrifices of this general class are recorded by explorers of Central and South America, where offerings of gold and precious things of various kinds were cast into lakes, streams, springs, and the deep *cenotes*, or natural wells, to appease the gods believed to dwell therein.
Amer. Anthropologist, Jan.–March, 1902, p. 128.

cenozoölogy (sē″nọ̄-zọ̄-ol′ọ̄-ji), *n.* [Gr. *καινός*, recent, + E. *zoology*.] That branch of biological science which treats of living, as contrasted with extinct, animals. Also *cænozoölogy* and *cainozoölogy*.

cenquad (sen′kwod), *n.* [L. *cen(tum)*, hundred, + *quad(rus)*, four-sided.] A quadrilateral whose diagonals bisect each other.

censor (sen′sọr), *v. t.* To subject to the examination, revision, or expurgation of a censor: as, to *censor* a book, periodical, play, or the like; especially (*milit.*), to subject (press despatches, etc.) to scrutiny with a view to suppressing information which, if made public, might embarrass military operations.

censored (sen′sọrd), *p.a.* Passed upon, revised, or expurgated by a censor: as, *censored* war news.

censorize (sen′sọr-īz), *v. t.* To subject to the inspection and revision of the censor.

census, *n.* **3.** In *topical geom.*, a number referring to a geometrical figure and formed by subtracting the sum of the cyclosis and apeiry of the figure from the sum of the choresis and periphraxis. If the figure is composed of parts of different dimensionality, the census should be taken separately for the points, lines, surfaces, and solids, and the final census formed by subtracting the sum of the censuses of the lines and the solids from the sum of the censuses of the points and the surfaces. This use of the word was introduced by J. B. Listing.—**Bureau of the Census.** See ★*bureau*.

cent, *n.* **5.** A name of various coins reckoned as the hundredth part of a dollar. (*a*) A current subsidiary coin of British North America, British Guiana, British Honduras, the Danish West Indies, Hawaii, Fiji, Liberia, Cuba, Guam, the Philippine Islands, and Porto Rico, equal to one United States cent. (*b*) A current subsidiary coin of North Borneo, Hong-Kong, Labuan, Sarawak, and Straits Settlements, equal to about one half of a United States cent. (*c*) A current coin of Ceylon, Mauritius, and Seychelles, the hundredth part of a rupee, equal to about thirty-two hundredths of a United States cent. (*d*) A current subsidiary coin of the Netherlands and the Dutch colonies, the hundredth part of a florin or gulden, equal to forty hundredths of a United States cent.—**Cent de escudo,** a subsidiary coin of Spain and the Spanish colonies, the hundredth part of an escudo.—**Cent de peseta,** a subsidiary coin of Spain and the Spanish colonies, the hundredth part of a peseta.—**Cent de peso,** a subsidiary coin of the Spanish colonies, the hundredth part of a peso or dollar.—**Elephant cent,** an English copper token bearing the device of an elephant, struck in 1694 for the Carolinas.—**Franklin cent, ring cent, sun-dial cent.** Same as *fugio* ★*cent*.—**Fugio cent,** a copper coin struck by act of Congress in 1787: so called from the inscription ("Fugio"). Also called *Franklin cent, ring cent, sun-dial cent,* etc.—**Silver-center cent,** a pattern cent struck in 1792, with a small silver plug in the center.—**Wreath cent,** a copper cent of the United States first struck in 1793: so called from the wreath on the reverse.

cent. An abbreviation (*b*) of *central*; (*c*) of *centigrade*; (*d*) of *century*.—**Cent. per cent.,** a hundred for every hundred; interest equal in amount to the principal.—**Three per cents., four per cents., five per cents.,** etc., public securities bearing that rate of interest.

Cental system, the system of buying and selling grain by the *cental*, in use in the Liverpool corn-market since 1859, approved by an Order in Council in 1879, and proposed for general use in the United Kingdom.

centare (sen′tãr), *n.* Same as *centiare*.

centaurdom (sen′târ-dum), *n.* [*centaur* + *-dom*.] The union of two diverse natures as typified by the centaur of classic mythology.

There are here and there certain literary and intellectual heresies and heretics refusing to recognize *Centaurdom* as the highest of human good.
W. J. Stillman, in The Century, Oct., 1883, p. 826.

centauresque (sen-târ-esk′), *a.* [*centaur* + *-esque*.] In the style or manner of a centaur; centaur-like.

Something *centauresque* and of twofold nature.
Mrs. Browning, Greek Chr. Poets, p. 160. *N. E. D.*

centauric (sen-tâ′rik), *a.* [*centaur* + *-ic*.] Of, pertaining to, or of the nature of the centaur; typified by the centaur.

Centauridium (sen-tâ-rid′i-um), *n.* [NL. (Torrey and Gray, 1841), < *Centaurea* + Gr. *εἶδος*, form; from the resemblance of the flower-heads to those of some species of *Centaurea*.] The old generic name of *Xanthisma Texanum*, an annual or biennial flower-garden composite with large yellow heads. It is known to florists as *Centauridium Drummondii*. There is only one species, and this is native to the southwestern region of the United States.

centaurin (sen′tâ-rin), *n.* [*Centaur(ca)* + *-in*[2].] Same as ★*erythrocentaurin*.

Centaurion (sen-tâ′ri-ọn), *n.* [NL. (Adanson, 1763, adopted from Tournefort, 1700), < Gr. *κενταύριον*, a plant said to have cured an arrow-wound in the foot of the centaur Chiron.] A genus of dicotyledonous plants belonging to the family *Gentianaceæ*. See *Erythræa*.

centaury, *n.*—**Californian centaury.** Same as *canchalagua*.

centavo, *n.* **2.** A current coin of Bolivia, the hundredth part of a boliviano.—**3.** A current coin of Ecuador, the hundredth part of a sucre, equal to forty-nine hundredths of a United States cent.

centenarial (sen-te-nā′ri-ạl), *a.* [*centenary* + *-al*.] Of or pertaining to a centenary, or space of a hundred years; completing or commemorating the completion of a hundred years: as, a *centenarial* day; a *centenarial* celebration.

centenier, *n.* **2.** A police officer in the island of Jersey.

centenionalis (sen-ten″i-ọ̄-nā′lis), *n.* [LL. (sc. *nummus*), < **centenio(n-)*, < *centeni*, a hundred each: see *centenary*.] A Roman silver coin of Constantine the Great.

centennial, *n.* **2.** A dice game in which the object is to secure pips, or multiples of pips, which will make the figures from 1 to 12, and then from 12 to 1, in numerical order.

centennium (sen-ten′i-um), *n.*; pl. *centennia* (-ä). [NL. *centennium*.] The space of one hundred years; a century.

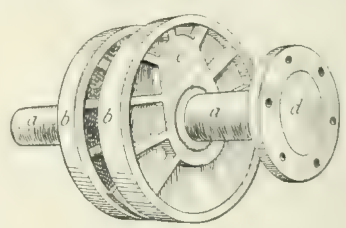
center[1], *n.* **13.** A point so situated with regard to a locus that all chords of the locus, drawn through the point, are bisected in it. The pole of a straight at infinity with respect to a certain conic is the center of the conic.

The *center* of a hyperbola lies without the curve, since the figurative straight crosses the curve.
Merriman and Woodward, Higher Mathematics, p. 95.

14. In foot-ball, roller-polo, basket-ball, hockey, and other games, the one who plays in the middle of the forward line; in foot-ball, the snap-back.—**Accelerating center,** a point in the medulla oblongata whence pass nerve-fibers stimulation of which causes increased rapidity of the heart's action.—**Apperception center,** an inhibitory cortical center, hypothetically placed by Wundt in the frontal lobes, subserving the elementary function of apperception. *W. Wundt* (trans.), Physiol. Psychol., I. 315.—**Association center, auditory center.** See ★*association*, ★*auditory*.—**Brain center.** (*a*) A cortical center; a region or area of the cerebral cortex, more or less sharply delimited by structure and function. (*b*) Any group or collection of cells, within the brain, that subserves a single function.—**Broca's center.** Same as *speech-center*.—**Center of action,** in *meteor.*, a large area of high or low barometric pressure which forms a prominent feature of the daily weather-map.—**Center of aspiration,** in *meteor.*, the region in a cyclonic storm where air is ascending, toward which the lower air rushes or is being pushed, and near which it also will ascend, cool, and become a center of condensation and a new center of aspiration or 'center of power.'—**Center of Budge,** a nervous center existing in the spinal cord in the region of the second lumbar vertebra. In the male it is the erection center, in the female the parturition center. Also called *genital* or *genitospinal center*.—**Center of compression,** that point in the section of a body under stress at which the resultant of the compressive forces can act without disturbing the equilibrium of the system of forces; the center of gravity of the compressive forces.—**Center of contact.** See ★*contact*.—**Center of flotation,** the geometrical center of the plane figure bounded by the line in which a liquid cuts a body floating in it: said of ships and other vessels. See ★*flotation*.—**Center of form,** the geometrical center of a body.—**Center of immersion.** Same as *center of buoyancy*.—**Center of inversion.** See *geometrical inversion*, under *inversion*.—**Center of involution.** See *involution*, 6 (*c*).—**Center of lateral resistance.** See ★*resistance*.—**Center of moments,** the fulcrum, or that point about which a force, or a system of forces, is supposed to act at a given instant with a motion of rotation.—**Center of population,** a point on the map of a country or region about which the population considered numerically is conceived to be equally distributed in all directions.—**Center of power,** a term applied by Ferrel to that region in a storm-area or cyclone where the condensation of aqueous vapor is proceeding most effectively. This center is continually being renewed a little in advance of its former position.—**Center of pressure.** (*a*) and (*b*). See *pressure*. (*c*) The point at which a body must be supported in order to remain quietly balanced when the wind is blowing on it. For plane plates the location of the center as determined by Kümmer varies with the dimensions of the plate, but is always in front of the center of the figure.—**Center of projection.** (*b*) Any one of the various sensory and motor regions of the brain.—**Center of tension,** that point in the section of a body under stress at which it can be assumed that the resultant of all the tensile stresses is acting without disturbing the equilibrium of the forces acting; the center of gravity of the tensile stresses acting on the section. **Center of vision.** (*a*) Same as *point of vision* (which see, under *point*[1]). (*b*) The visual center of the retina, where sight is keenest. Also called the *yellow spot*. See *macula lutea*, under *macula* and also under *retina* (10).—**Center stroke.** See ★*stroke*[1].—**Curve of centers of buoyancy.** See ★*curves of ship calculations*.—**Diabetic center,** a point in the floor of the fourth ventricle of the brain, injury or irritation of which gives rise to glycosuria.—**Direct center of similitude,** a center of similitude having the corresponding perspective sects on the same side of it. See *center of similitude*.—**Eruptive center,** a point or district where the greatest volcanic activity of a region has taken place. **Genital** or **genitospinal center.** Same as ★*center of Budge*.—**Gustatory center,** the center for taste, supposed to be located in the uncinate gyrus of the brain.—**Heat center,** the nervous center which presides over the production of heat in the body.—**Instantaneous center.** (*a*) When motion is considered in only two dimensions, the point at which the instantaneous axis intersects the guide-plane. (*b*) The center about which any moving piece or assemblage of pieces in a mechanism can be supposed to be rotating at any instant. Notwithstanding that the relative positions of such pieces or links may be constantly changing, yet at any instant they will be turning round a common center, which, however, shifts in space with each new relative position of the links. The determination of the virtual center, as it is sometimes called, is of use in estimating the relative velocity-ratios and forces acting on the bodies.—**Kinetic center,** in *cytol.*, a term applied to the centrospheres derived from the spermatozoön after its entrance into the egg; they constitute the poles of the first cleavage-spindle.—**Motor center,** the area in the cerebral cortex, in the convolutions around the upper end of the fissure of Rolando, where originate the nervous impulses which cause muscular contraction.—**Olfactory center,** the center for smell in the cortex of the brain.—**Oval center.** Same as *centrum ovale*.—**Phrenic center,** the central aponeurosis of the diaphragm.—**Psychical center,** in current *physiol.*, and *psychol.*, any center of the cortex (using 'center' in the sense defined under *brain* ★*center* (*a*)) which is not directly sensory, motor, or sensory-motor: identical with the '*association center*' of Flechsig.—**Thermolytic center,** one of the heat-centers stimulation of which inhibits the production of heat.—**Virtual center.** Same as *instantaneous* ★*center*.

center-bearing (sen′tėr-bãr″ing), *n.* In *car-building*, the chief system of supporting the weight of a car upon its truck: distinguished from a *side-bearing*, or a *fixed bearing*, as in a small car having no trucks; also the place where the weight of the car-body rests upon the center-plates and where the center-pin joins the car to the truck. The *center-bearing beam* is the beam which supports the truck center-plate and, in six-wheel trucks, is supported by the *center-bearing bridge*. See *body center-plate, center-plate block*, and cut under *car-truck*.

center-crank (sen′tėr-krank), *n.* A form of double crank in which the arms are replaced by two solid disks, coupled together by the crank-pin on which the connecting-rod is fitted. Such crank-shafts have bearings on each side of the double crank.



Center-crank.
a, a, engine-shaft journals; *b, b*, crank-disks; *c*, end of crank-pin; *d*, flange to couple crank-shaft to generator-shaft.

centering-chuck (sen′tėr-ing-chuk), *n.* A form of face-plate for a lathe, which carries three or four jaws for holding work. These jaws are so connected by gearing as to move radially together equally from or toward the center, so that work in the jaws is automatically brought into the axis around which they revolve. Also used for holding drills in drill-presses.

centering-machine (sen′tėr-ing-mạ-shēn″), *n.* A device for marking or drilling the holes for the centers of a lathe, so that these holes shall be in the center of figure of the piece to be marked or drilled.

centering-rest (sen′tėr-ing-rest″), *n.* A V-rest made of two straight pieces placed at an angle to one another, used in a lathe for marking centers in cylindrical pieces. It is fastened to the tool-carriage, the piece to be centered resting in the angle formed by the straight sides. A cutting-tool in the tail-stock marks the center exactly concentrically with the outside as the piece is revolved.

center-line (sen′tėr-līn), *n.* **1.** A line dividing any symmetrical plane figure or surface of revolution into two symmetrical halves.—**2.** The line around which any figure may be revolved to generate a volume of revolution.—**3.** The line in a drawing on each side of which points in the diagram or figure lie at equal distances. In all designing of symmetrical constructions the center-lines are drawn first, and from these all dimensions are laid off.—**4.**

pl. The lines through the center of mass or center of gravity of a body parallel to the three coördinate axes used in analytical geometry. —5. The line joining the centers of two parallel shafts in the same plane, or perpendicular to both axes if they are not in the same plane, in the design of toothed gearing. See also *line of center*, under *line*[2].

center-plate, *n.* 2. One of the metal plates fastened to the ends of jointed patterns to furnish a suitable bearing for the lathe-centers and to hold the pattern together while it is being turned.

center-square (sen′tėr-skwãr), *n.* An instrument used for finding the center of a circle or of an arc of a circle. It comprises two straight-edges which make about a right angle with one another and a third straight edge one side of which bisects the angle between the other two. When the two outer edges are placed against the circumference of a circle, the bisecting edge points to the center. By drawing a line along the bisector and then shifting the instrument to a new position and drawing another line along the bisector, intersecting the former line at a considerable angle, the center of the circle will be determined by the intersection of the two lines.

center-tester (sen′tėr-tes″tėr), *n.* An appliance for finding the exact center of any piece of work in a lathe or for testing the accuracy of lathe-centers. It consists of a fine steel needle pivoted to a steel plate that fits the tool-post of the lathe.

centesis (sen-tē′sis), *n.* [NL., < Gr. κέντησις, puncture, < κεντεῖν, puncture, prick.] Same as *paracentesis*.

centgener (sent′jē-nėr), *a.* and *n.* [L. *centum*, hundred, + *genus* (*gener-*), kind.] **I.** *a.* Concerning or pertaining to one hundred or any considerable number of representatives of a race, variety, or strain of domesticated animals or cultivated plants, when considered as a type or pure sample of the whole.

The American trotter is being rapidly improved, because distance does not hinder the transmission of individual records, of *centgener* records (here the number of progeny which each sire or dam has in the fast trotting list).
Yearbook U. S. Dept. Agr., 1901, p. 230.

II. *n.* 1. One hundred or any considerable number of representatives of a race, variety, or strain of domesticated animals or cultivated plants, considered as a type or true sample of the whole.

The second year 100 plants, called for convenience a *centgener*, from each of the 100 mother plants chosen as above, are similarly grown in the nursery plats.
Yearbook U. S. Dept. Agr., 1901, p. 225.

2. Specifically, the separately planted seminal or klonal progeny of a single parent, as a nursery-plat from one wheat plant, or the progeny of an animal so raised that their average values may be secured as a measure of the breeding-value of the parent.—**Centgener power,** the hereditary power of parents expressed in the terms of the average values of their progeny: for example, the average progeny of one wheat plant is 8.4 grams of seed, of another 7.7 grams of seed, or the progeny of one flax-plant stands 26 inches high, of another, 35 inches; one horse produces colts weighing 1,500 pounds, another, colts weighing 1,250 pounds.—**Centgener tests,** tests of the centgener powers, or breeding ability, of numerous parents: as, by planting, under like conditions, centgeners of wheat, corn, etc.; comparing the average of the progeny of one animal with the progeny of another; or contrasting the speed of the colts of a racing stallion, or the producing-power of the heifers of dairy sires or dams.

centig. An abbreviation of *centigrade*.

centigraph (sen′ti-gráf), *n.* [L. *centum*, a hundred, + Gr. γράφειν, write.] An adding-machine having a figure-wheel with serial numbers (0 to 100, inclusive) and a dial which indicates hundreds. It is operated by a wound spring escapement and fingered keys.

centile (sen′til), *n.* [L. *centum*, a hundred, + *-ile*.] An object or term occupying a place whose ordinal corresponds to 100 or a multiple of 100.

centillion (sen-til′ỵon), *n.* In the French enumeration, used also in the United States, the hundredth power of 1,000; in the United Kingdom, the hundredth power of 1,000,000.

centillionth (sen-til′ỵonth), *n.* and *a.* **I.** *n.* One of a centillion equal parts; the quotient of unity divided by a centillion.

II. *a.* 1. Coming last in a set of a centillion terms: an ordinal numeral.—2. Being one of a centillion equal parts.

centim (sent′im), *n.* [*centim*(*eter*).] A centimeter; the second metret or decimal submultiple of a meter in the scheme of magnitudes, devised, about 1860, by G. J. Stoney. The decim or decimeter is the first metret, and the millim (or millimeter) the third. See ★*metro* and ★*metret*.

centime, *n.* 2. A current money of account in Haiti, the hundredth part of a gourde or dollar, equal to ninety-seven hundredths of a United States cent.

Centimeter-gram-second system. In *elect.*, two systems of such units exist, namely, the *electromagnetic system*, based on unit magnetism as that magnetism which acts upon an equal amount of magnetism at unit distance with unit force, and the *electrostatic system*, based on unit electric quantity as that quantity which acts upon an equal quantity at unit distance with unit force. The electromagnetic system of absolute units is commonly used. Many of its units, however, are inconveniently small or inconveniently large, and therefore decimal multiples or fractions are used as practical units. These practical units are named after famous scientists: as, *ampere*, *volt*, etc. **Cubic centimeter.** (*a*) A unit of volume equal to a cube whose edge is one centimeter. (*b*) More commonly, the thousandth part of a liter. The liter was intended to equal one thousand cubic centimeters and the weight of one liter of distilled water at the temperature of its maximum density was intended to equal the kilogram. The mass of the kilogram definitely adopted differs from the intended mass by one or more parts in a hundred thousand: since the liter is always determined by weighing, it also differs from its intended volume by a similarly small fraction. When this small fraction is negligible, the thousandth part of a liter is commonly called a cubic centimeter. The name *milliliter* is preferred by many for the thousandth part of the liter.

centimo (then′te-mō), *n.* [Sp.: see *centime*.] 1. A current subsidiary coin of Costa Rica, the hundredth part of a colon, equal to forty-six hundredths of a United States cent. Silver pieces of 5, 10, 25, and 50 centimos are coined.—2. A current subsidiary coin of Venezuela, the hundredth part of a bolivar, equal to nineteen hundredths of a United States cent.—3. A subsidiary coin of the Dominican Republic, the hundredth part of a franco, or franc, equal to seventeen hundredths of a United States cent.

centinormal (sen-ti-nôr′mal), *n.* [L. *centum*, hundred, + E. *normal*.] In *chem.*, containing in each liter, as a solution, a number of grams of the dissolved substance numerically equal to one hundredth part of its molecular weight, or, in some cases, of its equivalent weight.

centiplume (sen′ti-plūm), *a.* [L. *centum*, hundred, + *plūma*, feather.] Having a hundred feathers: applied to most of the moths of the family *Pterophoridæ* (which see).

centoism (sen′tọ-izm), *n.* Same as *centonism*.

centoize (sen′tọ-īz), *v. t.*; pret. and pp. *centoized*, ppr. *centoizing*. [*cento* + *-ize*.] To make into a cento.

Eudocia . . . wife of Theodosius, and empress of the world, thought good to extend her sceptre . . . over Homer's poems, and *cento-ize* them into an epic on the Saviour's life.
Mrs. Browning, Greek Christian Poets, p. 66.

centonical (sen-ton′i-kạl), *a.* [*cento*(*n*) + *-ic-al*.] Of the nature of a cento.

centonize (sen′tō-nīz), *v. t.* [L. *cento*(*n-*), a cento, + *-ize*.] Same as ★*centoize*.

centractinate (sen-trak′ti-nāt), *a.* [Gr. κέντρον, center, + ἀκτίς (ἀκτιν-), ray.] In sponge-spicules, having a projection or actine at the center: as, a *centractinate* sigma.

centradenia (sen-tra-dē′ni-ä), *n.* [NL., < Gr. κέντρον, center, + ἀδήν, a gland.] A cellular mass, the so-called liver or central organ, found in certain *Siphonophora*. *E. R. Lankester*, Treatise on Zoöl., ii. 4.

central, *a.* 4. In *anat.*, of or relating to the centrum of a vertebra.—5. In *neurol.*, pertaining to a nerve-center: opposed to *peripheral*, or pertaining to the nerve-fibers or to the nervous terminations in sense-organs and muscles.—**Central arteries of the brain,** branches from the circle of Willis which pass to the central ganglia.—**Central body, disk.** See ★*body*, ★*disk*. **Central granule,** in *bot.*, one of the slime-globules or -granules in the cytoplasm of certain alga cells, *Cyanophyceæ*. **Central gyri, nervous system.** See ★*gyrus*, ★*nervous*. **Central particle,** in *cytol.*, same as ★*centrosome*. **Central reaction.** See ★*reaction*.—**Central symmetry,** in *geom.*, symmetry with respect to a center.

II. *n.* In a *telephone system*, the office from which the public and private lines radiate and in which the connections are made between the different lines, by means of a central switchboard.

central[2] (sen-träl′), *n.*; pl. *centrales* (-trä′lās). [Sp.] Cane-grinding apparatus which serves for several sugar plantations. [Cuba and Porto Rico.]

centrale, *n.* 2. In *crinoids*, same as *centrodorsal*.

centralistic (sen-tral-is′tik), *a.* Of, pertaining to, or favored by the centralists.

centrality, *n.* 2. In the Hegelian logic, firstness; native character; the total character which belongs to an object regardless of anything else.

centrangulate (sen-trang′gū-lạ̄t), *a.* [L. *centrum*, center, + NL. *angulatus*, angled.] In sponge-spicules, having a bend or angle at the center: as, a *centrangulate* sigma.

centraporia (sen-trạ̈-pō′ri-ạ̈), *n. pl.* [NL., < Gr. κέντρον, center, + ἄπορος, without passage: see *aporia*.] Organisms that are without fixed axes or planes, and are hence irregular in shape: for example, the sponges. *Haeckel*.

centraxonia (sen-trak-sō′ni-ạ̈), *n. pl.* [NL., < Gr. κέντρον, center, + ἄξων, axis.] Organisms, of radial structure, having a median axis represented by a line, like the *Cœlenterata*.

centraxonial, *a.* 2. Of or pertaining to the centraxonia.

centric, *a.* 3. In *petrog.*, applied by Becke (1878) to rock fabrics formed by the grouping of crystals about a center, radially or concentrically.

centricality (sen-tri-kal′ị-ti), *n.* [*centrical* + *-ity*.] Central position or situation.

centrifugal. I. *a.* 4. Obtained (as milk or cream) by the ★centrifugal method (which see).

Fresh butter, made from sweet *centrifugal* cream.
Yearbook U. S. Dept. Agr., 1900, p. 61.

Centrifugal concentrator, governor, machine. See ★*concentrator*, *governor*, *b*, ★*centrifugal*, *n.*, 3. **Centrifugal method,** in *dairying*, the separating of cream from milk by means of a separator (centrifugal), as distinguished from the separation of cream by allowing the milk to stand and then removing the cream by skimming.

II. *n.* 3. A trade-name for any machine which employs centrifugal force to separate a liquid from a solid or to separate liquids of different specific gravities. In all, the liquids to be separated, or the liquids and solids, are placed in a vessel which is rotated at a high speed, the lighter liquids being thrown off to the sides of the vessel where they overflow and escape, or the liquids mingled with the solids being thrown outward through perforations in the sides of the vessel. The cream-separator is an example of the first and the laundry extractor an example of the second method. Machines which are essentially centrifugal are given different names in different trades, as *centrifugal extractor* (or simply *extractor*), *hydro-extractor*, *cream-separator*, *centrifugal drier*, *hydro-extractor*, *Babcock's centrifugal* or *milk-tester*. See *drier*, ★*extractor*, ★*hydro-extractor*, ★*milk-tester* (with cut), and *separator*.—**Babcock's centrifugal.** See *Babcock's* ★*milk-tester*.

centrifugalization (sen-trif″ụ̄-gal-ī-zā′shọn), *n.* [*centrifugalize* + *-ation*.] The process of centrifugalizing.

Our examinations were made on very fresh organ juices, blood, etc., taken at various stages of the disease, with and without *centrifugalization*, and on specimens fixed and stained in appropriate ways.
Science, March 29, 1901, p. 513.

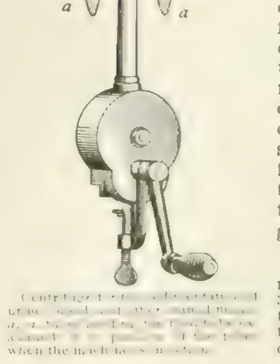
centrifugalize (sen-trif′ụ̄-gạl-īz), *v. t.*; pret. and pp. *centrifugalized*, ppr. *centrifugalizing*. [*centrifugal* + *-ize*.] To subject to centrifugal action; cause the separation of two liquids, or of solids suspended in a fluid, by rapid rotation in a centrifugal machine. See ★*centrifugal*, *n.*, 3.

He also *centrifugalized* dogs and rabbits. When the feet were directed outwards the rabbits died in 6–15 minutes, and dogs in 10–15 minutes. When the head was placed outwards death took place after a period more than twice as long.
Philos. Trans. Roy. Soc. (London), ser. B, 1900, p. 76.

centrifugate (sen-trif′ụ̄-gāt), *v.*; pret. and pp. *centrifugated*, ppr. *centrifugating*. [*centrifuge* + *-ate*[2].] **I.** *trans.* To drive from the center or from the circumference; specifically, to expose to centrifugal action in a centrifuge.

The fluid should be *centrifugated*, the sediment spread on cover slips. *Buck*, Med. Handbook, I. 564.

II. *intrans.* To fly off from the center; scatter or disperse in all directions. *Mrs. Whitney*, Sights and Insights, vii.



Centrifuge [illegible] when the machine [illegible]

centrifugation (sen-trif′ụ̄-gā′shọn), *n.* The driving of anything from the center or circumference; specifically, the separation of two immiscible liquids of different densities, or of suspended solid particles from a liquid, by the use of a centrifuge or centrifugal machine.

An hour later the mixture was expressed, 30 c.m. of this quantity taken, the solid particles separated by *centrifugation* and the

amount of the nitrogen in the solid and liquid parts determined by Kjeldahl's method.
Phil. Med. Jour., Jan. 31, 1903, p. 201.

centrifuge (sen'tri-fūj), *n.* [NL. *centrifugus*, adj.: see *centrifugal*.] A centrifugal machine; specifically, a form of centrifugal machine employed to separate the solid particles suspended in a fluid, such as the blood or urine.

centrifuge (sen'tri-fūj), *v. t.*; pret. and pp. *centrifuged*, ppr. *centrifuging*. To submit to very rapid rotatory motion in a centrifuge or centrifugal machine in order to separate suspended solid particles from a liquid, or two immiscible liquids of different densities from one another.

By mixing bacteria with the white cells of the blood obtained by *centrifuging* and adding blood serum (1) unheated, i. e. in the natural condition, (2) heated to 60° C. for ten to fifteen minutes, it is found that, under the same conditions, phagocytosis is much more active in the presence of the unheated than of the heated serum.
Nature, Dec. 3, 1903, p. 111.

centriole (sen'tri-ōl), *n.* [NL. *centriolum*, dim. of L. *centrum*, center.] In *cytol.*, a minute granule in the center of the astrosphere of the dividing-cell.

Centripetal canals. See ★*canal*[1].

centripety (sen-trip'e-ti), *n.* [NL. *centripetus*, centripetal, + *-y*[3].] A centripetal tendency or condition; a state opposed to rotular diffusion from a center. This term has been employed in descriptive paleontology to designate the absence of any manifestation, in a plane-coiled cephalopod shell, of a tendency to become evolute or to broaden its umbilicus.

centroclinal (sen-trọ-klī'nal), *n.* [Gr. κέντρον, center, + κλίνειν, bend, + *-al*.] In *geol.*, a dome; a quaquaversal; an area with dips radiating from it as a center of uplift.

centrode (sen'trōd), *n.* [Gr. κέντρον, center, + ὁδός, path.] In *math.*, a locus of the instantaneous center of no velocity, for motion in two dimensions.—**Fixed centrode.** For motion in two dimensions, the group of fixed lines, indicating the position which each instantaneous axis will occupy as its turn arrives, constitutes a cylindrical locus, fixed relatively to the reference-system. Its intersection with the guide-plane is the *fixed centrode*.—**Moving centrode.** As motion in two dimensions proceeds, different lines in the solid become in turn the instantaneous axis, each at its own epoch. This group of lines may be determined in advance as a cylindrical locus moving with the solid. Its intersection with the guide-plane is the *moving centrode*.

centrodesmus (sen-trọ-des'mus), *n.*; pl. *centrodesmi* (-mī). [NL., < Gr. κέντρον, center, + δεσμός, a band.] In *cytol.*, the delicate bridge which connects two centrosomes or centrioles in the cell and is supposed to give rise to the central spindle.

centrodeutoplasm (sen-trọ-dū'tọ-plazm), *n.* [Gr. κέντρον, center, + δεύτερος, second, + πλάσμα, anything formed.] In *cytol.*, the granular substance of the testis-cells which may contribute to the formation of the idiozome. *Erlanger*, 1897.

centrodorsal, *n.* 2. In *paleont.*, a pentagonal plate found in many non-pedunculate crinoids (for example, *Uintacrinus*) at the base of the cup and probably representing an atrophied stalk.

centrogen (sen'trọ-jen), *a.* [Gr. κέντρον, center, + -γενης, -produced.] Proceeding or radiating from the center, as, specifically, the skeleton of acantharians, which radiates from the central capsule.

centrogenesis (sen-trọ-jen'ẹ-sis), *n.* [Gr. κέντρον, center, + γένεσις, genesis.] 1. Historical progress or evolution through the acquisition and elaboration of axial or central organization.—2. The radiate or peripheral type of form assumed by plants and also by some of the lower forms of the animal kingdom: distinguished from *dipleurogenesis* or bilaterality prevailing in animals.

We may, therefore, contrast these two great lines of ascent, which, with so many vicissitudes, have come up through the ages, as Dipleurogenesis and *Centrogenesis*.
L. H. Bailey, Survival of the Unlike, p. 17.

centrogenetic (sen-trọ-je-net'ik), *a.* Originated or developed on the rotate or peripheral type; pertaining to centrogenesis.

centrogenic (sen-trọ-jen'ik), *a.* Characterized by centrogenesis: as, a *centrogenic* structure.

Centrogenys (sen-troj'ẹ-nis), *n.* [Gr. κέντρον, center, + γένυς, chin.] A genus of serranoid fishes of the Indian and western Pacific oceans.

centroid, *n.* 2. In *kinematics*, same as ★*centrode*. *Reauleaux*.—3. A point of emphasis or increased energy in a series of speech-sounds, or in any series of impulses. Also used attributively.

Just as in the case of an irregular solid body, we are driven to pick out points at which we can consider the whole mass to be located without altering the result under discussion. This is the *centroid* theory of the auditory and motor nature of speech that corresponds to the *centroid* theory of the course of thought.
Scripture, Exper. Phonetics, p. 448.

Centroid of a coil, the curve formed by the axis of any closed coil such as a coil wound upon a ring where the axis is a closed curve.

centroidal (sen-troi'dal), *a.* [*centroid* + *-al*.] Pertaining to or of the nature of a centroid. *Stud. Yale Psych. Lab.*, IX. 19.

centrolecithal, *a.* 2. In *embryol.*, noting that type of cleavage in which the dividing nuclei pass to the surface of the ovum, leaving the yolk in the center. This form of cleavage is characteristic of the *Arthropoda*, especially of the insects.

Centrolepidaceæ (sen-trọ-lep-i-dā'sē-ē), *n. pl.* [NL. (Hieronymus, 1873), < *Centrolepis* + *-aceæ*.] A family of monocotyledonous plants of the order *Xyridales*, the bristlewort family, typified by the genus *Centrolepis* (which see). It embraces 6 genera and about 38 species, all natives of Australasia, small herbs chiefly growing in swamps, having bristle-shaped leaves and distichous flower-spikes or heads.

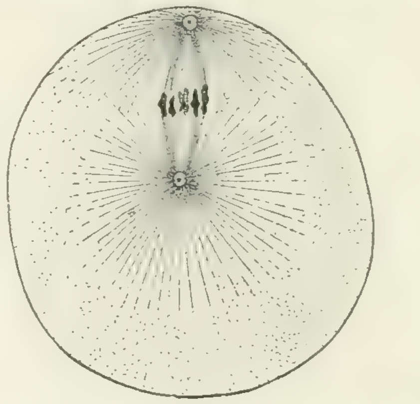
centrolepidaceous (sen'trọ-lep-i-dā'shius), *a.* Belonging to the plant-family ★*Centrolepidaceæ* (which see).

centroplana (sen-trọ-plā'nạ̈), *n. pl.* [NL., < Gr. κέντρον, L. *centrum*, center, + *planus*, plane.] Organisms that are symmetrical with reference to a median plane, that is, that are bilateral. *Haeckel*.

centroplasm (sen'trọ-plazm), *n.* [Gr. κέντρον, center, + πλάσμα, anything formed.] In *cytol.*, the substance of the centrosphere; the protoplasm which forms the attraction-sphere or central portion of the aster.

centrosoma (sen-trọ-sō'mạ̈), *n.*; pl. *centrosomata* (-ma-tạ̈). [NL., < Gr. κέντρον, center, + σῶμα, body.] Same as ★*centrosome*.

centrosome (sen'trọ-sōm), *n.* [NL. *centrosoma*, < Gr. κέντρον, center, + σῶμα, body.]



Centrosome.

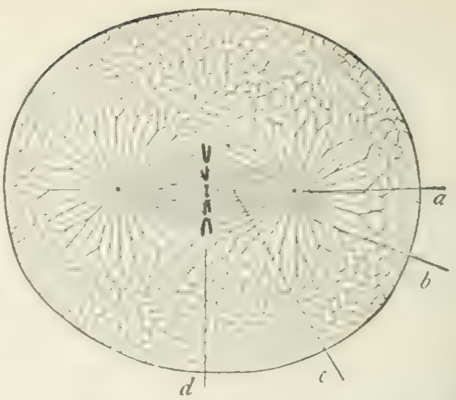
Structure of the centrosome in the polar asters of a gasteropod, [illegible] Mitotic figure, [illegible] (MacFarland.) (From Wilson's "The Cell.")

In *cytol.*, a body of indeterminate nature in the center of each astrosphere of the dividing-cell.—**Cleavage centrosome**, the centrosome of the cleavage nucleus or that which forms the poles of the spindle for the division of the egg into the first two blastomeres.—**Sperm centrosome**, a centrosome supposed to be brought into the egg by the spermatozoon during fertilization.

centrosphere (sen'trọ-sfēr), *n.* [Gr. κέντρον, center, + σφαῖρα, sphere.] 1. In *cytol.*, a spherical, differentiated mass of cytoplasm surrounding the centrosome and constituting a pole of the karyokinetic spindle during cell-division. Also called *attraction-sphere*.—2. The central or interior portion of the earth, beginning at a somewhat indefinite depth, and involving materials and pressures of which we have no actual experience; contrasted with the successive outer shells, *lithosphere*, *hydrosphere*, and *atmosphere*.

The Earth consists of three parts: there is the vast unknown interior, or "*centrosphere*," concerning which physicists have not come to any unanimous decision, some saying that it is throughout solid and rigid, others that it is partly fluid, and others again that it is partly gaseous.
Geog. Jour. (R. G. S.), XIII. 228.

centrospore (sen'trọ-spōr), *n.* [Gr. κέντρον, a point, spine, + σπορά, seed.] In *phytogeog.*, a plant whose fruit is provided with spines which aid in dissemination by attachment. *F. E. Clements*.



Centrosphere.

[illegible]

centrostomatous (sen-trọ-stō'ma-tus), *a.* [Gr. κέντρον, center, + στόμα, mouth.] Having the mouth placed centrally, as a starfish.

centrosymmetrical (sen″trọ-si-met'ri-kal), *a.* [Gr. κέντρον, center, + συμμετρικός, symmetrical.] Having symmetry with respect to a point or center: said of crystals.

centrosymmetry (sen-trọ-sim'e-tri), *n.* [Gr. κέντρον, center, + συμμετρία, symmetry.] Symmetry with respect to a point or center, as in most crystals. See ★*symmetry*, 6.

centroxylic (sen-trok-sil'ik), *a.* [*centroxyl-y* + *-ic*.] Relating to centroxyly.

centroxyly (sen-trok'si-li), *n.* [Gr. κέντρον, center, + ξύλον, wood.] In *bot.*, primary centrifugal woody structure. *Van Tieghem*.

centrum, *n.* 3. In *geol.*, the focus or place of origin of an earthquake.

centuplicate (sen-tū'pli-kạt), *a.* and *n.* [LL. *centuplicatus*, pp. of *centuplicare*, increase a hundredfold, < *centuplex*, a hundredfold.] **I.** *a.* Hundredfold.

II. *n.* One of a hundred things which correspond in every respect to one another.

centuplication (sen-tū-pli-kā'shọn), *n.* [NL. **centuplicatio(n-)*, < *centuplicare*, increase a hundredfold: see *centuplicate*.] The act of centupling; reduplication a hundredfold.

centuply (sen-tū'pli), *adv.* A hundredfold.

century[1], *n.* 4. In *bot.*, a set of dried plants containing a hundred sheets.—**To score a century**, in *cricket*, to score a hundred runs or more in a single inning.

The M. C. C. give a bat to every amateur or professional who *scores a century* for them. *Encyc. Brit.*, XXVII. 276.

cèpe (sep), *n.*; pl. *cèpes* (sep). [F., < L. *cepa*, onion.] A name sometimes given to edible species of *Boletus*.

To this genus [Boletus] belong the fungi known in France as *cèpes*, under which name they are imported into this country, but not in any great quantities.
Yearbook U. S. Dept. Agr., 1897, p. 465.

cephaëline (se-fā'e-lin), *n.* [NL. *Cephaelis*, a genus of plants, + *-ine*[2].] An alkaloid, $C_{14}H_{20}NO_2$, found with emetine in ipecacuanha. It crystallizes in needles which melt at 96–102° C. The salts are amorphous.

cephalalgia, *n.*—**Cephalalgia periodica**, megrim.—**Cephalalgia spasmodica**, sick-headache.

cephalanthine (sef-a-lan'thin), *n.* [*Cephalanth-us* + *-ine*[2].] A white, amorphous, very bitter glucoside found in *Cephalanthus occidentalis*. It is dextrorotatory and melts at about 180° C.

cephalanthous (sef-ạ-lan'thus), *a.* [Gr. κεφαλή, head, + ἄνθος, flower.] In *bot.*, having the flowers in heads, as composite plants.

cephalematocele (sef-a-lē'ma-tọ-sēl), *n.* [Gr. κεφαλή, head, + αἷμα (τ-), blood, + κήλη, tumor.] An effusion of blood between the skull and the scalp; communication with one of the cerebral sinuses.

cephalhydrocele (sef-al-hī'drọ-sēl), *n.* [Gr. κεφαλή, head, + ὑδροκήλη, hydrocele.] A collection f serous fluid beneath the scalp.

cephalic. I. *a.*—**Cephalic eye.** See ★*eye*[1].—**Cephalic race**, a race whose kinship is indicated by the form of the head: as long, *dolichocephalic*, or broad, *brachycephalic*. Negroes are long-heads; Mongolians, broad-heads; the Mediterranean and Baltic whites of Europe, in general long-heads; the Alpine whites, in general broad-heads. See ★*ethnic race*, ★*Baltic race*, and ★*chromatic race*. *Giddings*, Inductive Sociol., p. 53.—**Cephalic slits**, a peculiar pair of organs, of unknown function, found on most nemerteans. They usually have the form

of lateral furrows or pits situated on the head and in close connection with the brain.

II. *n.* **2.** In *phonetics*, a so-called 'head' or 'cerebral' sound. *Whitney*, Sansk. Gram., § 45.

cephalin (sef'a-lin), *n.* [Gr. κεφαλή, head, + -*in*².] One of a group of organic phosphorized bodies obtained by Thudichum from brain tissue.

Cephalina (sef-a-lī'nä), *n. pl.* [NL., < Gr. κεφαλή, head, + -*ina*².] A group of *Gregarinida*, consisting of *Eugregarina*, which always possess an epimerite either as a transitory or as a permanent portion of the body. The body is divided typically by a septum into protomerite and deutomerite, but it may be non-septate. The group includes forms which are chiefly parasites of *Arthropoda*.

cephalism (sef'a-lizm), *n.* [Gr. κεφαλή, head, + -*ism*.] In *anthrop.*, characterization by the form of the head, particularly by the cephalic index.

cephalium (se-fal'i-um), *n.*; pl. *cephalia* (-ä). [NL., < Gr. κεφάλιον, dim. of κεφαλή, head.] The woody enlargement at the summit of the stem of some *Cactaceæ*, from which the flowers are developed.

cephalization, *n.* **2.** A supposed tendency to a gradual increase in the size of the brain correlative with cultural development. *Amer. Anthropologist*, N. S., I., 410.

cephalo-auricular (sef″a-lō-â-rik'ū-lär), *a.* Relating to the skull and the external ear.—**Cephalo-auricular angle,** the angle which the plane of the auricle makes with the side of the head.

cephalocathartic (sef″a-lō-ka-thär'tik), *a.* and *n.* [Gr. κεφαλή, head, + καθαρτικός, purging: see *cathartic*.] **I.** *a.* Occasioning discharges from the nose; errhine.

II. *n.* A remedy which promotes the discharge of watery mucus from the nose.

cephalocentesis (sef″a-lō-sen-tē'sis), *n.* [NL., < Gr. κεφαλή, head, + κέντησις, puncture.] Puncture of the skull to give exit to accumulated fluid.

Cephalocereus (sef″a-lō-sē'rē-us), *n.* [NL. (Pfeiffer, 1838), < Gr. κεφαλή, head, + *cereus*.] A genus of plants of the family *Cactaceæ*, closely allied to *Cereus*. It is characterized by a globular or cylindrical enlargement, together with the presence of copious hairs or bristles in the fruiting area. They are all Mexican. *C. senilis* is the familiar old-man cactus, so named from the white hair-like covering.

cephalocyst (sef'a-lō-sist), *n.* [Gr. κεφαλή, head, + κύστις, bag (cyst).] A cestoid worm.

Cephalodiscus (sef″a-lō-dis'kus), *n.* [NL., < Gr. κεφαλή, head, + δίσκος, disk.] A remarkable colonial deep-sea animal associated by some with *Balanoglossus* and *Rhabdopleura* in the class *Adelochorda*. It resembles *Balanoglossus* in having the three regions of the body (proboscis, collar, and trunk), and in the presence of a structure resembling a notochord with the same relations to the nervous system as in *Balanoglossus*. It differs from the latter in having the alimentary canal so bent upon itself that mouth and anus are in close proximity, in having tentacles on the collar, in the small size of the proboscis, and in the presence of only one pair of openings that can be regarded as gill-slits. The individuals in the colony are not in organic connection but are surrounded by a common gelatinous sheath.

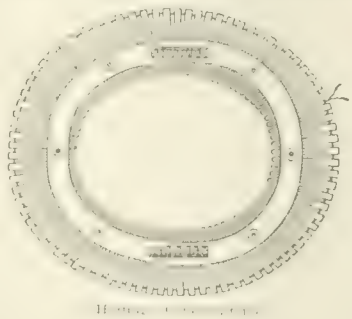
Cephalodiscus [illegible] From [illegible] after M[illegible]

cephalofacial (sef″a-lō-fā'shal), *a.* [Gr. κεφαλή, head, + L. *facies*, face, + -*al*¹.] Pertaining to the head or, more particularly, the cranium and the face.—**Cephalofacial index,** the ratio of the capacity of the skull to that of the orbits, nasal fossæ, and accessory sinuses.

cephalogaster (sef″a-lō-gas'tèr), *n.* [Gr. κεφαγή, head, + γαστήρ, belly.] A sac-like expansion of the alimentary canal in the females of many parasitic isopod crustaceans, as *Portunion mænadis*, in which the inner wall projects into the lumen in the shape of numerous long processes covered with chitinous intima. In this region the absorption of food takes place.

cephalogram (sef'a-lō-gram), *n.* [Gr. κεφαλή, head, + γραμμή, a line.] In *anthrop.*, an outline of the head drawn by means of the cephalograph. *Amer. Anthropologist*, Jan.-March, 1902, p. 153.

cephalograph (sef'a-lō-graf), *n.* [Gr. κεφαλή, the head, + γράφειν, write.] In *anthrop.*, an



[illegible]

instrument designed for drawing outlines of the head, particularly the horizontal contour of the head.

cephalohemometer (sef″a-lō-hē-mom'e-tèr), *n.* [Gr. κεφαλή, head, + αἷμα, blood, + μέτρον, measure.] An instrument for measuring blood-pressure in the head.

cephalolateral (sef″a-lō-lat'e-ral), *a.* [Gr. κεφαλή, head, + L. *lateralis*, of the side: see *lateral*.] Toward the head and to the side.

cephalomancy (sef'a-lō-man-si), *n.* [Gr. κεφαλή, head, + μαντεία, divination.] Divination by means of a head. See also ★*cephalonomancy*.

cephalomere (sef'a-lō-mēr), *n.* [Gr. κεφαλή, head, + μέρος, part.] One of the segments of the head region of arthropods.

cephalon (sef'a-lon), *n.* [Gr. κεφαλή, head. Cf. *encephalon*.] The head region; the cephalic region; specifically. (*a*) In the *Trilobita*, the cephalic shield together with that part of the animal which it covers. (*b*) The anterior portion of the body of certain crustaceans, as the *Malacostraca*. *C. Spence Bate*.

cephalone (sef'a-lōn), *n.* [Gr. κεφαλή, head, + -*one*.] In *anthrop.*, a skull or head of unusually large capacity, but without pathological characteristics; also, a person having a head or skull of unusually large capacity.

cephalonoid (sef'a-lō-noid), *a.* [*cephalone* + -*oid*.] In *anthrop.*, similar to a cephalone, or a healthy skull of extraordinary size.

cephalonomancy (sef-a-lon'ō-man-si), *n.* [Gr. κεφαλή, head, + ὄνος, ass, + μαντεία, divination.] Divination by means of an ass's head.

cephalopathy (sef-a-lop'a-thi), *n.* [Gr. κεφαλή, head, + -παθεια, < πάθος, disease.] Disease of the head, especially of the brain.

cephalophyma (sef'a-lō-fī'ma), *n.*; pl. *cephalophymata* (-ma-tä). [NL., < Gr. κεφαλή, head, + φῦμα, a tumor.] A tumor of the head.

cephalopodal (sef-a-lop'ō-dal), *a.* [*Cephalopoda* + -*al*¹.] Pertaining to or having the characters of the *Cephalopoda*.

Cephalorachidian fluid. Same as *cerebrospinal fluid*.

cephalosome (sef'a-lō-sōm), *n.* [Gr. κεφαλή, head, + σῶμα, body.] In arthropods, the head region.

cephalostyle (sef″a-lō-stil), *n.* [Gr. κεφαλή, head, + στῦλος, pillar.] The anterior or cranial end of a notochord.

Cephalotaceæ (sef-a-lō-tā'sē-ē), *n. pl.* [NL. (Lindley, 1835), < *Cephalotus* + -*aceæ*.] A family of dicotyledonous archichlamydeous plants of the order *Rosales*, found in the swamps of King George Sound in western Australia. It contains the monotypic genus *Cephalotus*. This anomalous plant was regarded by Lindley as related to the pitcher-plants on account of the sac-like radical leaves. Later authors placed it in the *Saxifragaceæ*. Engler restores it to family rank, chiefly on account of its rudimentary (haplochlamydeous) flowers.

cephalotic (sef-a-lot'ik), *a.* [Gr. κεφαλή, head, + οὖς (ὠτ-), ear.] In *biol.*, of, pertaining to, or exhibiting the presence of the ears on the middle line of the head.

Dareste also declares that the *cephalotic* state is similarly first indicated by a premature union of the folds in the region of the medulla, taking place before this part of the brain has widened out. In this way the auditory involutions are approximated.

Bateson, Study of Variation, p. 458.

cephalotractor (sef″a-lō-trak'tor), *n.* [Gr. κεφαλή, head, + NL. *tractor*.] An obstetrical forceps.

Cepheid (sē-fē'id), *a.* and *n.* [L. *Cepheus*, < Gr. Κηφεύς, Cepheus, a mythical king, whose name was given to a constellation, + -*id*².]

I. *a.* Pertaining to or resembling the star δ Cephei. **Cepheid star,** one of a class of variable stars of punctual periodicity which in the character of their variation resemble δ Cephei.

II. *n.* A variable star of the type of δ Cephei.

cepotaph (sep'ō-tàf), *n.* [Gr. κῆπος, garden, + τάφος, tomb.] A cinerary urn deposited in a garden. *C. Maitland*.

ceppo (chep'pō), *n.* [It., a stump, block, < L. *cippus*, a stump.] The cemented fluvioglacial gravels of northern Italy.

The presence, however, of the highly denuded *ceppo* underlying the great terminal moraines of Ivrea, Como, etc., shows that these latter cannot be the product of the second and greatest extension of the alpine glaciers.

J. Geikie, The Great Ice Age, p. [illegible]

ceptor (sep'tor), *n.* [L. -*ceptor* in *acceptor*, *receptor*, etc., a form, in comp., of *captor*, taker: see *captor*.] Same as ★*haptene*.

Cera alba, white or bleached wax.—**Cera flava,** yellow wax.

ceradia (sē-rā'di-ä), *n.* [NL. *Ceradia* (see def.).] A yellow oleoresin obtained from *Ceradia furcata*.

ceradin (ser'a-din), *n.* [*Ceradia* + -*in*².] An amber-colored oleoresin obtained from *Ceradia furcata*. It has the odor of elemi.

ceragate (ser'a-gāt), *n.* [L. *cera*, wax, + E. *agate*².] The normal form would be **cerachate*.] A yellow variety of carnelian: generally produced artificially by impregnating or dyeing chalcedony with a chromium solution.

ceraginous (sē-rā'ji-nus), *a.* Of the nature of cerago or bee-bread.

ceral, *a.* **2.** Pertaining or relating to wax.

ceram. An abbreviation of *ceramics*.

ceramiaceous (se-rā-mi-ā'shius), *a.* Of or pertaining to the *Ceramiaceæ*.

Ceramic photography. See ★*photoceramics*.—**Ceramic stone,** a trade-name for a building-material made from broken glass ground to powder, devitrified, and in a second furnace softened by heat and pressed into any desired form.

cerasin¹, *n.* **2.** A name of two coal-tar colors, otherwise known as *fast red A* and *Bordeaux B*. **Cerasin orange.** See ★*orange*¹. **Cerasin red.** See ★*red*.¹

cerasin² (ser'a-sin), *n.* [Appar. based on *cer(ebrin)*?] A compound, $C_{70}H_{138}O_{12}N_2$, obtained in small amounts by warming cows' brains with a solution of barium hydroxid. It is neutral and resembles cerebrin in its properties.

cerasinose (ser'a-sin-ōs), *n.* [*cerasine* + -*ose*.] A sugar, $C_5H_{10}O_5$ (?), formed by the action of dilute acids on cherry gum. It is crystalline, very hydroscopic, and reduces Fehling's solution.

cerat. An abbreviation of Latin *ceratum*, (ointment).

cerate¹, *n.*—**Blistering cerate,** a mixture of spermaceti cerate and cantharides.—**Goulard's cerate,** cerate containing subacetate of lead.—**Hufeland's cerate,** cerate containing oxid of zinc.—**Spermaceti cerate,** a mixture of spermaceti, olive-oil, and white wax.

ceratectomy (ser-a-tek'tō-mi), *n.* [Also *keratectomy* (and *kerectomy*); < Gr. κέρας (κερατ-), horn (ὑμὴν κερατοειδής, the cornea), + ἐκτομή, excision.] Excision of the cornea.

cerated, *a.* **2.** In *ornith.*, same as *cerate*¹.

ceratenchyma (ser-a-teng'ki-mä), *n.* [NL., < Gr. κέρας (κερατ-), horn, + ἐγχυμα, infusion.] In *bot.*, the tissue which consists of effete sieve-tubes and has a horny texture.

Ceraterpetum (ser-a-tèr'pē-tum), *n.* [Gr. κέρας (κερατ-), horn, + ἑρπετόν, a reptile.] A genus of extinct microsaurian amphibians with a pair of large backward-pointing horns attached to the posterior cranial bones. It has been found in the coal-measures of Ireland and Ohio.

ceratiasis (ser-a-tī'a-sis), *n.* [NL., also *keratiasis*; < Gr. κέρας (κερατ-), horn, + -*iasis*.] A condition in which there are a number of warts of horny consistence on the skin.

ceratina, *n.* [*cap.*] **3.** A genus of dicotyledonous plants belonging to the family *Solanaceæ*. See *Solandra*.

Ceratinidæ (ser-a-tin'i-dē), *n. pl.* [NL., < *Ceratina* + -*idæ*.] A family of true bees.

ceratinization (ser'a-tin-i-zā'shön), *n.* [Also *keratinization*; < *ceratinize* + -*ation*.] The act of becoming of horny hardness.

ceratinize (se-rat'i-niz), *v. i.*; pret. and pp. *ceratinized*, ppr. *ceratinizing*. [Also *keratinize*; < *ceratinous* + -*ize*.] To become of a horny hardness.

ceratinoid (se-rat'i-noid), *a.* [*ceratin* + *-oid.*] Resembling ceratin or horn in physical or chemical structure. Also *keratinoid.*

ceratinose (ker'a-ti-nos), *n.* [Also *keratinose*; < *ceratin* + *-ose.*] An albumose derived from ceratin.

ceratinous (ser-at'i-nus), *a.* [Gr. κερατινος, of horn, < κέρας (κερατ-), horn.] Having a horny structure or consistency.

Ceratiomyxa (se-rat″i-ō-mik'sä), *n.* [NL. (Schröter, 1889), < Gr. κεράτιον, dim. of κέρας, horn, + μύξα, slime.] A genus of myxomycetous fungi having the spores white or yellowish and developed on the outside of the plasmodium. *C. mucida* occurs on logs, producing small tufted, branched white fructifications.

Ceratiomyxaceæ (se-rat″i-ō-mik-sā'sē-ē), *n. pl.* [NL., < *Ceratiomyxa* + *-aceæ.*] A family of myxomycetous fungi named from the genus *Ceratiomyxa.* Same as *Ceratiaceæ,* which is an invalid name.

ceratitic (ser-a-tit'ik), *a.* [*ceratite* + *-ic.*] Pertaining to or having the characters of the genus *Ceratites.*

Ceratitida (ser-a-tit'i-dä), *n. pl.* [NL.] A division of the ammonoid cephalopods or ammonites represented by the family *Ceratitidæ* and genus *Ceratites.*

ceratitis, *n.* Specifically—**2.** An infectious disease of the eyes of cattle and sheep, characterized by an intense inflammation of the conjunctiva, swelling of the eyelids, and an early opacity with later ulceration of the cornea.

In certain localities great numbers of cows were found dead or dying, all of them exhibiting symptoms of suppurative *keratitis* and conjunctivitis.
Rep. Bur. Animal Industry, 1901, p. 29.

Ceratitis bullosa, inflammation of the cornea, marked by the formation of minute blisters which break and result in ulceration. **Interstitial ceratitis,** chronic corneal inflammation, with the formation of opacities in the substance of the cornea which later usually disappear more or less completely.—**Mycotic ceratitis.** Same as ★*ceratomycosis.*—**Oyster-shuckers' ceratitis,** acute inflammation of the cornea in oyster-openers, caused by wounding of the eye with pieces of shell.—**Parenchymatous ceratitis,** inflammation of the cornea marked by the formation of opacities: the latter usually disappear as the disease, which is exceedingly slow in its course, subsides. **Reapers' ceratitis,** inflammation of the cornea caused by the irritation of sharp spicules of grain which wound the eyes of reapers.—**Vascular ceratitis,** inflammation of the cornea accompanied by a formation of new blood-vessels beneath the conjunctiva and in the outer layers of the cornea: usually a precursor of pannus.

cerato-angioma (ser″a-tō-an-ji-ō'mä), *n.* [NL., also *kerato-angioma.*] Same as ★*angioceratoma.*

Ceratobranchial of the fifth arch, one of a pair of bones, usually bearing teeth, situated just behind the gill-arches of fishes: they represent a fifth arch, the inferior *pharyngeal* arch. See *pharyngeal. Starks,* Synonymy of the Fish Skeleton, p. 519.

Ceratocampa (ser-a-tō-kam'pä), *n. pl.* [NL., < Gr. κέρας (κερατ-), horn, + κάμπη, caterpillar.] A genus of moths typical of the family *Ceratocampidæ,* formed by Harris to contain the regal walnut-moth, now known as *Citheronia regalis.*

ceratocampid (ser-a-tō-kam'pid), *n.* One of the family *Ceratocampidæ.*

Ceratocampidæ (ser-a-tō-kam'pi-dē), *n. pl.* [NL., < *Ceratocampa* + *-idæ.*] A family of American moths, containing only a few genera, but very striking forms, like the regal walnut-moth, *Citheronia regalis,* whose larva is known as the *hickory horned devil.*

ceratoconus (ser″a-tō-kō'nus), *n.* [NL., also *keratoconus*; < Gr. κέρας (κερατ-), horn, + κῶνος, cone.] A form of staphyloma corneæ, of the same nature as buphthalmos, in which the bulging of the cornea has a conical shape. Also called *conical cornea.*

ceratoderma (ser″a-tō-dēr'mä), *n.* [NL., also *keratoderma*; < Gr. κέρας (κερατ-), horn, + δέρμα, skin.] Disease of the skin marked by horny thickening of the epidermis.

ceratodermia (ser″a-tō-dēr'mi-ä), *n.* [NL., also *keratodermia.*] Same as ★*ceratoderma.*

ceratohyalin (ser″a-tō-hī'a-lin), *n.* [Also *keratohyalin*; < Gr. κέρας (κερατ-), horn, + ὑαλος, glass, + *-in*[2].] A peculiar substance which forms the granules in the stratum granulosum of the epidermis.

ceratohyaline (ser″a-tō-hī'a-lin), *a.* [Also *keratohyaline*; < Gr. κέρας (κερατ-), horn, + ὑαλος, glass, + *-ine*[1].] Of glassy appearance and horny consistence, as the cells in the stratum granulosum of the skin.

ceratoid. **I.** *a.* **3.** Shaped like a horn.
II. *n.* Same as *cornea.*

ceratoiditis (ser″a-toi-dī'tis), *n.* [NL., also *keratoiditis*; < *ceratoid* + *-itis.*] Same as *ceratitis. Lancet,* May 30, 1903, p. 1515.

cerato-iridocyclitis (ser″a-tō-ir″i-dō-si-klī'tis), *n.* [NL., also *kerato-iridocyclitis*; < Gr. κέρας (κερατ-), horn, + ἶρις (ἰριδ-), iris, + κύκλος, circle, + *-itis.*] Inflammation of the cornea, iris, and ciliary body.

cerato-iritis (ser″a-tō-i-rī'tis), *n.* [NL., also *kerato-iritis*; < Gr. κέρας (κερατ-), horn, + ἶρις, iris, *-itis.*] Inflammation of both iris and cornea.

ceratolysis (ser-a-tol'i-sis), *n.* [NL., also *keratolysis*; < Gr. κέρας (κερατ-), horn, + λύσις, loosening.] **1.** Loosening and partial separation of the epidermis from the deeper layers of the skin. **2.** Atrophy of the horny layer of the epidermis.

ceratoma (ser-a-tō'mä), *n.*; pl. *ceratomata* (-ma-tä). [NL., < Gr. κέρας (κερατ-), horn, + *-oma.*] A horny growth. Also spelled *keratoma.*

ceratomalacia (ser″a-tō-ma-lā'si-ä), *n.* [NL., also *keratomalacia*; < Gr. κέρας (κερατ-), horn, + μαλακία, softness.] Softening of the cornea.

ceratomania (ser″a-tō-mā'ni-ä), *n.* [NL., < Gr. κέρας (κερατ-), horn, + μανία, madness.] In *vegetable teratol.,* the abnormal production of horn-like or hooded structures in flowers.

ceratometer (ser-a-tom'e-tèr), *n.* [Also *keratometer*; < Gr. κέρας (κερατ-), cornea, + μέτρον, measure.] A device for determining the irregularities in curvature of the cornea, and the resultant astigmatism.

ceratomycosis (ser″a-tō-mi-kō'sis), *n.* [NL., also *keratomycosis*; < Gr. κέρας (κερατ-), horn, + μύκης, fungus, + *-osis.*] Inflammation of the cornea associated with a fungoid growth. *Lancet,* July 11, 1903, p. 101.

ceratophore (ser'a-tō-fōr), *n.* [Gr. κέρας (κερατ-), horn, + -φορος, < φέρειν, bear.] An organ or a region bearing cerata, as in certain worms.

ceratophyllaceous (ser″a-tō-fi-lā'shius), *a.* Belonging to the plant-family *Ceratophyllaceæ*; resembling or pertaining to the genus *Ceratophyllum.*

ceratophyllin (ser-a-tof'i-lin), *n.* [*Ceratophyll-um* + *-in*[2].] Same as ★*atraric acid.*

ceratophyllous, (ser″a-tō-fil'us), *a.* [NL. *ceratophyllus,* < Gr. κέρας (κερατ-), horn, + φύλλον, leaf.] In *bot.,* horn-leaved; having long, slender, pointed leaves.

Ceratopogon (ser-a-tō-pō'gon), *n.* [NL. (Meigen, 1803), < Gr. κέρας (κερατ-), horn, + πώγων, beard.] A notable genus of midges, of the family *Chironomidæ,* containing very minute species which bite severely. *C. nocivum* is the punky, well known to hunters and fishermen in the north woods of New England and in Canada. See *punky.*

Ceratopogon stellifer, highly magnified. (U. S. D. A.)

Ceratops (ser'a-tops), *n.* [Gr. κέρας (κερατ-), horn, + ὀψ, face.] A genus of dinosaurian reptiles from the Laramie Cretaceous beds of America. The skull carried a pair of large horn-cores and the body was covered with dermal scutes.—**Ceratops beds,** in *geol.,* a name given by Marsh to deposits of the Laramie Cretaceous in Wyoming, because of the abundance of the dinosaurian reptiles *Ceratops* contained in them.

Ceratopsia (ser″a-top'si-ä), *n. pl.* [Gr. κέρας (κερατ-), horn, + ὄψις, view, appearance.] The *Ceratopsidæ* considered as a suborder.

ceratopsid (ser-a-top'sid), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the *Ceratopsidæ.*
II. One of the *Ceratopsidæ.*

Skull of *Triceratops,* a typical member of the family *Ceratopsidæ.*

Ceratopsidæ (ser-a-top'si-dē), *n. pl.* [NL., < *Ceratopsis* + *-idæ.*] In *paleont.,* a family of predentate Cretaceous dinosaurs. They had the cranium developed into a shield overhanging the neck, and a large horn over each eye. There was sometimes a small horn on the nose. The family contains such species as *Triceratops, Torosaurus,* and *Agathaumas.*

Ceratopteridaceæ (ser″a-top-ter-i-dā'sē-ē), *n. pl.* [NL. (Underwood, 1900), < *Ceratopteris* (*Ceratopterid-*) + *-aceæ.*] A family of annual aquatic ferns of the order *Filicales.* It comprises the genus *Ceratopteris,* which embraces a single species, *C. thalictroides,* with fragile bi- or tripinnate fronds of two sorts, the sterile ones, which are floating, and the fertile ones, which are reduced and have the ultimate divisions pod-like, *i.e.,* with revolute margins, and in which the sori are scattered, with a broad ring.

Ceratopteris (ser-a-top'te-ris), *n.* [NL. (Brongniart, 1821), < Gr. κέρας (κερατ-), horn, + πτερίς, a fern. The allusion is to the antler-like appearance of the fertile fronds.] A genus of floating ferns, constituting the family *Ceratopteridaceæ. C. thalictroides,* the only species, occurs in Florida and Louisiana and widely in the tropics.

Ceratopteris thalictroides.
a, an entire plant showing habit; *b,* portion of a fruiting branch enlarged to show the sori. (Drawn from Engler and Prantl's "Pflanzenfamilien.")

ceratopycnidium (ser″a-tō-pik-nid'i-um), *n.*; pl. *ceratopycnidia* (-ä). [Gr. κέρας (κερατ-), horn, + NL. *pycnidium.*] A horn-shaped pycnidium such as is produced by species of *Apiosporium.*

Ceratosaurus (ser″a-tō-sâ'rus), *n.* [Gr. κέρας (κερατ-), horn, + σαῦρος, lizard.] A genus of dinosaurian reptiles of great size, from the Upper Jurassic rocks of Colorado. They were characterized by a large skull with a median horn and over-hanging prefrontals, very short and small fore legs, large hind legs, and extended tail. The animal had the aspect of a kangaroo, standing erect on its hind legs with the help of its tail. It attained a length of 20 feet.

Nose-horned Lizard (Ceratosaurus).
After a restoration by Knight.

ceratoscope (ser'a-tō-skōp), *n.* See ★*keratoscope.*

ceratoscopy (ser-a-tos'kō-pi), *n.* See *keratoscopy.*

Ceratostomella (ser″a-tō-stō-mel'ä), *n.* [NL. (Saccardo, 1879), < κέρας (κερατ-), horn, + στόμα, mouth, + dim. *-ella.*] A genus of pyre-

nomycetous fungi having small globose, mostly superficial perithecia provided with slender elongate necks. The asci are ovoid and the sporesome-celled and hyaline. The name refers to the resemblance of the neck of the perithecium to a horn. The species are saprophytic on lumber. *C. pityera* causes a blue color on lumber. See ★*bluing*, 4.

ceratotrich (sē-rat'ō-trik), *n.* [NL. *ceratotrichum*, < Gr. κέρας (κερατ-), horn, + θρίξ (τριχ-), hair.] A horny, flexible, fibrous, unjointed, and usually unbranched fin-ray of *Elasmobranchii* and *Holocephali*.

ceratotrichium (ser'a-tō-trik'i-um), *n.*; pl. *ceratotrichia* (-ä). [NL.] Same as ★*ceratotrich*.

In the Elasmobranchii and Holocephali, and probably also in the Acanthodii and Ichthyotomi, these rays [dermal fin-rays] are unjointed, occasionally branched and composed of a fibrous substance of horny consistence without bonecells. When placoid scales are present, they are quite independent of the rays and more superficial. The author calls these rays "*Ceratotrichia*." Their origin is unknown, but for the present they must be considered as special developments of the connective tissue. *Jour. Roy. Micros. Soc.*, Oct., 1904, p. 519.

ceraunian (se-rā'ni-an), *a.* Same as *ceraunic*.

ceraunograph (se-rā'no-gräf), *n.* [Gr. κεραυνός, thunder, + γράφειν, write.] An instrument by means of which the occurrence of a thunderstorm or of lightning is chronographically recorded.

In the Annual Report for 1901-02 of St. Ignatius College, Cleveland, Ohio, the Reverend F. L. Odenbach publishes an appendix on the work of his meteorological observatory during the past year. This begins with an account of his new lightning recorder, or *ceraunograph*. . . . The various parts of the instrument were a relay, a telegraph sounder, a coherer, choking coil, two batteries, a recording drum, or chronograph, a copper collector on the roof of the college, and a copper wire leading from it down to the instrument in the observatory. *U. S. Monthly Weather Rev.*, June, 1902, p. 313.

ceraunophobia (se-râ-nō-fō'bi-ä), *n.* [NL., < Gr. κεραυνός, thunder, + -φοβία, < φοβεῖν, fear.] A morbid fear of thunder-storms.

ceraunoscopy (se-râ-nos'kō-pi), *n.* [Gr. κεραυνοσκοπία, < κεραυνός, thunder, + σκοπεῖν, view.] Divination by observation of lightning.

Cerberic (sėr'be-rik), *a.* Of or pertaining to Cerberus; resembling or befitting Cerberus.

cerbiretin (sėr-bi-rē'tin), *n.* [*cerberin*.] An amorphous citron-yellow compound formed by the hydrolysis of cerberin.

cercarial (sėr-kā'ri-al), *a.* [*cercaria* + -*al*[1].] Of or pertaining to a cercaria or larval distome.

cercocystis (sėr-kō-sis'tis), *n.* [Gr. κέρκος, tail, + κύστις, bladder (cyst).] A tailed cysticercoid.

cercopid (sėr'kō-pid), *a.* Of or belonging to the homopterous family *Cercopidæ*.

cercopod (sėr'kō-pod), *n.* [Gr. κέρκος, a tail, + ποῦς (ποδ-), a foot.] In the phyllocarid and allied forms of *Crustacea*, one of the two caudal spines adjoining and articulated to the terminal segment or telson.

Cercosporella (sėr'kō-spō-rel'ä), *n.* [NL. (Saccardo), < Gr. κέρκος, tail, + σπορά, seed (spore), + dim. -*ella*.] A genus of parasitic hyphomycetous fungi having simple or branched hyaline fertile hyphæ and elongate many-celled hyaline conidia. *C. persica* attacks peach-leaves. See *frosty* ★*mildew*.

cerealism (sē'rē-al-izm), *n.* [*cereal* + -*ism*.] The practice of eating nothing or little but cereals.

cerealist (sē'rē-al-ist), *n.* [*cereal* + -*ist*.] One who makes a special study of cereals; a botanist or agriculturist who is versed or engaged in the production of edible grains: as, A. B., *cerealist* of the United States Department of Agriculture.

cerealose (sē'rē-a-lōs), *n.* [*cereal* + -*ose*.] A mixture of dextrin, maltose, and glucose formed by the action of glucose on starch.

cereal-rust (sē'rē-al-rust''), *n.* Any one of the species or varieties of rust which attack the cereals, wheat, oats, rye, etc., especially *Puccinia graminis* and its varieties.

Cerebellar gait, an irregular gait associated with disease of the cerebellum.

cerebellic (ser''ē-bel'ik), *a.* Same as *cerebellar*.

cerebellifugal (ser''ē-be-lif'ū-gal), *a.* [L. *cerebellum*, cerebellum, + *fugere*, flee, + -*al*.] Moving in a direction away from the cerebellum.

cerebellipetal (ser''ē-be-lip'e-tal), *a.* [L. *cerebellum*, cerebellum, + *petere*, seek, + -*al*.] Moving in a direction toward the cerebellum.

cerebellopontile (ser-ē-bel-ō-pon'til), *a.* [L. *cerebellum*, cerebellum, + *pons* (*pont-*), bridge, + -*ile*.] Relating to the cerebellum and the pons Varolii.

The occurrence of a tumor in the *cerebellopontile* angle in many of these cases of sarcomatosis was mentioned, and the question of operation was raised. *Med. Record*, July 11, 1903, p. 77.

Cerebral apophysis, diabetes, flexure, meningitis. See ★*apophysis*, etc.—**Cerebral neurasthenia.** Same as *cerebrasthenia*.—**Cerebral organ**, one of the sense-organs in nemerteans and gephyreans. It is a ciliate neuroglandular pit found at the side of the head, in close relation to the hinder part of the brain.—**Cerebral pneumonia, sinuses.** See ★*pneumonia* and ★*sinus*.—**Cerebral trigone.** Same as *lateral ventricle*.

cerebralgia (ser-ē-bral'ji-ä), *n.* [NL., < L. *cerebrum*, brain, + Gr. ἄλγος, ache.] Severe and deep-seated headache.

cerebrational (ser-ē-brā'shon-al), *a.* [*cerebration* + -*al*[1].] Relating to cerebration or brain-action.

cerebrationist (ser-ē-brā'shon-ist), *n.* [*cerebration* + -*ist*.] One of a former school of philosophers who, at a time when the anatomy of the brain was but little known, held that the brain is the seat of all mental processes. *Buck*, Med. Handbook, II. 300.

cerebriform cancer. See ★*cancer*.

cerebrifugal (ser-ē-brif'ū-gal), *a.* [L. *cerebrum*, brain, + *fugere*, flee, + -*al*.] Passing from the brain: said of nervous impulses and nerve-fibers.

cerebripetal (ser-ē-brip'e-tal), *a.* [L. *cerebrum*, brain, + *petere*, seek, + -*al*[1].] Passing toward the brain: said of nervous impulses and nerve-fibers.

cerebrobuccal (ser''ē-brō-buk'al), *a.* [L. *cerebrum*, brain, + *bucca*, mouth, + -*al*.] Pertaining to the cerebral and the buccal ganglia: as, the *cerebrobuccal* connective in mollusks. *Parker and Haswell*, Text-book of Zool., I. 679.

cerebrology (ser-ē-brol'ō-ji), *n.* [L. *cerebrum*, brain, + Gr. -λογία, < λέγειν, speak.] The science of the brain in its anatomical, functional, and pathological relations.

cerebromalacia (ser''ē-brō-ma-lā'si-ä), *n.* [NL., < L. *cerebrum*, brain, + μαλακία, softness, < μαλακός, soft.] Same as *softening of the brain*.

cerebromeningeal (ser''ē-brō-me-nin'jē-al), *a.* [L. *cerebrum*, brain, + Gr. μῆνιγξ, membrane, + -*e*-*al*.] Relating to the brain and its membranes. *Med. Record*, Feb. 7, 1903, p. 226.

cerebromeningitis (ser''ē-brō-men-in-ji'tis), *n.* [NL., < L. *cerebrum*, brain, + NL. *meningitis*.] Inflammation of the brain and its membranes.

cerebrometer (ser-ē-brom'e-tėr), *n.* [L. *cerebrum*, brain, + Gr. μέτρον, measure.] A device for recording variations in the volume of the brain under special conditions.

cerebropleural (ser''ē-brō-plö'ral), *a.* [L. *cerebrum*, brain, + NL. *pleura* + -*al*.] A term applied to the ganglion formed by the union of the cerebral and the pleural ganglia in certain lamellibranch mollusks.

The supra-œsophageal ganglion of Anodonta is usually regarded as representing both the cerebral and pleural ganglia, and is commonly spoken of as the "*cerebropleural*." *Nature*, Oct. 29, 1903, p. 623.

cerebropsychic (ser''ē-brō-sī'kik), *a.* [L. *cerebrum*, brain, + ψυχή, mind.] Relating to the brain as the organ of the mind, together with its functions as such.

Victims of spinal injury concussion and *cerebro-psychic* shock. *Alien. and Neurol.*, Feb., 1903, p. 21.

cerebroscopy (ser-ē-bros'kō-pi), *n.* [L. *cerebrum*, brain, + Gr. -σκοπία, < σκοπεῖν, view.] Examination of the fundus of the eye for the purpose of obtaining data concerning the circulation of blood in the brain.

cerebrose[2] (ser'ē-brōs), *n.* [L. *cerebrum* + -*ose*.] A variety of sugar, isomeric with glucose, found in brain-tissue.

cerebroside (ser'ē-brō-sīd), *n.* [*cerebrose* + -*ide*[1].] One of a group of decomposition-products of protagon, of the type of cerebrin.

cerebrospinant (ser''ē-brō-spī'nant), *n.* [*Cerebrospin*(*al*) + -*ant*.] A therapeutic agent which acts upon the brain and the spinal cord.

cerebrosuria (ser''ē-brō-sū'ri-ä), *n.* [NL., < *cerebrose* + Gr. οὖρον, urine.] A form of diabetes in which the urine contains cerebrose.

Cerebrum abdominale, the abdominal brain or solar plexus.

ceremonial. **I.** *a.*—**Ceremonial stone**, in *archæol.*, a somewhat indefinite term applied to any one of a large class of variously shaped stone implements, many of which are finely finished and show great care in their manufacture. They have been variously classified and subdivided, but their use is almost entirely conjectural.

The so-called *ceremonial stones* are variously subdivided and named by different writers. They are supposed to have been devoted to religious, superstitious, medical, emblematic, or ceremonial purposes; to be badges of authority, insignia of rank, tokens of valorous deeds, or perhaps some sort of heraldic device; in short, the uses to which they might, in their different forms, be assigned, are limited only by the imagination. *Smithsonian Rep.*, 1892, p. 115.

II. *n.* **3.** A prehistoric stone implement supposed to have been used for ceremonial purposes.

He [Mr. Moorehead] called attention to the necessity of an archeological nomenclature for the various 'unknown forms' in slate and granite which have hitherto been called '*ceremonials*'—a meaningless term in the opinion of the author. *Science*, Jan. 24, 1902, p. 124.

ceremonialist (ser-ē-mō'ni-al-ist), *n.* [*ceremonial* + -*ist*.] One who favors or is given to ceremonial observances in religion; one who lays stress on external forms in religious worship; a ritualist.

ceremonialize (ser-ē-mō'ni-al-īz), *v. t.*; pret. and pp. *ceremonialized*, ppr. *ceremonializing*. [*ceremonial* + -*ize*.] To make ceremonial or ritualistic.

ceremony, *n.*—**To stand upon ceremony**, to be punctilious or insistent on the due observance of polite usages, or formalities.

You know I never *stand upon ceremony* with such people. *Jane Austen*, Northanger Abbey, viii.

cerer (sēr'ėr), *n.* [*cere*, *v.*, + -*er*[1].] One who ceres a corpse, or wraps it in cerecloth.

cerevisial (ser-ē-vis'i-al), *a.* See ★*cervisial*.

ceria[3] (sē'ri-ä), *n.* [NL. *ceria*, < *cerium* (which see).] Cerium oxid: used in small proportion, with thoria or thorium oxid, in the mantles of Welsbach incandescent gas-lamps.

cerianthid (ser-i-an'thid), *n.* One of the *Cerianthidæ*, as the vestlet.

Cerianthidea (sē''ri-an-thid'ē-ä), *n. pl.* [NL., < L. *cera* (Gr. κηρός), wax, + Gr. ἄνθος, flower, + -*id*-*ea*.] An order of *Zoantharia*. It consists of solitary forms which retain the primitive bilateral symmetry of the zooid, without a skeleton, and with numerous mesenteries which are arranged symmetrically in pairs and devoid of muscle-banners.

ceric[2] (ser'ik), *a.* [L. *cera*, wax, + -*ic*.] Derived from wax.—**Ceric acid**, an amorphous acid, $C_{42}H_{68}O_{13}$, formed by the action of nitric acid on cerin.

cerigerous (sē-rij'e-rus), *a.* [L. *cera*, wax, + *gerere*, bear.] **1.** Producing wax.—**2.** In *ornith.*, having a cere: same as *cerate*.

cerilla (thā-rēl'ya), *n.* [Sp., < L. *cera*, wax: see *cere*.] A match; a wax taper. [Spanish America.]

cerinin (ser'i-nin), *n.* [Gr. κήρινος, < κηρός, wax, + -*in*[2].] A wax-like or fat-like substance obtained from the lignite of Gerstewitz near Merseburg in Germany.

cermatiid (sėr-mat'i-id), *a.* and *n.* **I.** *a.* Of or belonging to the myriopod family *Cermatiidæ*.

II. *n.* One of the *Cermatiidæ*.

cern[2] (sėrn), *v. i.* [L. *cernere*, decide, judge: see *concern*, *decern*, *discern*, etc.] To elect and make known an intention to enter upon an inheritance: a modern term used in reference to Roman law.

cernier (ser-nyā'), *n.* [F., connected with Sp. *cherna*.] The stone-bass.

cerniture (sėr'ni-tūr), *n.* [Irreg. *cern*, *v.*, + -*iture*. The right word would be *cretion*, < L. *cretio*(*n*-).] The act of formally resolving to enter upon an inheritance: a modern term used in reference to Roman law.

cerografy, *n.* A simplified spelling of *cerography*.

cerolin (ser'ō-lin), *n.* [Gr. κηρός, wax, + -*ol* + -*in*[2].] A fatty substance found in yeast. It has laxative properties.

ceroline (ser'ō-lin), *n.* [Prob. < L. *cera*, wax, + *ol*(*eum*), oil, + -*ine*[2]. The allusion would be to the waxy or oily character of these plants which prevents water from adhering to their leaves.] Either of the two American jewel-weeds, *Impatiens aurea* and *I. biflora*.

Ceromya (ser-o-mī'ä), *n.* [NL., < Gr. κῆρ, heart, + μυς, a muscle.] A genus of extinct pelecypods with elongate-cordate inflated valves and edentulous hinge: abundant in Jurassic rocks.

ceroplast (sē'rō-plast), *n.* [Gr. κηρός, wax, + πλαστός, < πλάσσειν, form.] A mold, properly in wax, but sometimes in other substances. *De Morgan*.

ceroplasty (sē-rō-plas'ti), *n.* Same as *ceroplastic*.

cerosic (sē-rō'sik), *a.* [*ceros*(*in*) + -*ic*.] Derived from cerosin.—**Cerosic acid**, a crystalline acid, $C_{24}H_{48}O_3$, obtained by heating cerosin with soda-lime.

cerosiline (sē-rō'si-lin), *n.* [*cerose* + -*il* + -*ine*[2].] Palm-tree wax from the common Andes wax-palm, *Ceroxylon andicola*, or from the Klop-

stock palm, *Klopstockia cerifera*. It softens easily, but melts only at a temperature above 102–105° C. It is used for candles.

cerotene (ser'ọ-tēn), *n.* [*cerote* + *-ene*.] A solid hydrocarbon, $C_{27}H_{54}$, obtained by the distillation of Chinese wax. It melts at 57–58° C.

cerotin (ser'ō-tin), *n.* [*cerot(ic)* + *-in*².] Same as ★*ceryl alcohol*, $C_{27}H_{55}OH$.

cerotype (ser'ọ-tīp), *n.* [Gr. κηρός, wax, + τύπος, type.] The art or process of engraving through a coating of prepared wax spread over a smooth plate from which a printing surface can be produced by the plaster process of stereotyping or by electrotyping.

cerous (sē'rus), *a.* [*cer(ium)* + *-ous*.] In *chem.*, containing the metal cerium with apparent triad valence: as, *cerous* sulphate, *cerous* oxid, etc.

cerro (ther'rō), *n.* [Sp. Pg., a hill, ridge.] A hill; a ridge; a hogback.

cert., certif. Abbreviations (*a*) of *certificate*; (*b*) of *certify*; (*c*) of *certified*.

certainty, *n.* **Objective certainty**, properly, certainty in sense 1. It consists in the accordance of the real facts with an assertion that might be made. Venn (1834–83) uses the term, in a sense closely approaching that of reality, for that character of a fact which consists in its not only being independent of our opinion as to its truth (which constitutes its reality), but also in its being independent of our spatial and temporal relation to it. **Of a certainty**, assuredly; beyond doubt. *Dan.* ii. 8.

certifiable (sėr'ti-fī-ạ-bl), *a.* Capable of being certified or attested: as, *certifiable* results.

certificate, *n.* 2. (*b*) An official written representation that some act has or has not been done, or that some event has occurred, or that some formal legal requirement has been fulfilled. It usually issues from some court for the purpose of giving notice of things done in the court, or to authorize or warrant some act upon the part of some other court or judge. (*c*) A document used in the British custom-house by which certain goods formerly imported can be exported and the duties paid upon importation refunded. **Attorney's certificate.** See ★*attorney*¹.—**Audit certificate.** See ★*audit*. **Certificate of merit**, a certificate issued to an enlisted man who has distinguished himself in service. It is granted by the President of the United States upon the recommendation of the corps or regimental commander and entitles the bearer to extra pay. His name is also enrolled in the annual Army Register. **Certificate of service**, a certificate issued by the War Department to replace a certificate of discharge lost by a soldier. **Judge's certificate**, in *Eng. law practice*: (*a*) A written statement of the judge presiding at a trial that a party is entitled to costs. (*b*) The opinion of the court, signed by the judges, upon a question of law submitted to them by the chancellor for their decision.—**Tax certificate.** Same as *tax deed* or *tax lease* (which see).

certificator (sėr'ti-fi-kā-tọr), *n.* One who certifies; one who makes or gives a certificate.

certificatory (sėr-tif'i-kā-tọ-ri), *a.* and *n.* **I.** *a.* Of the nature of a certificate; that serves to certify: as, a letter *certificatory*, or written testimonial.

II. *n.* A letter certificatory.

cerulean, *a.* **II.** *n.* **1.** Blue; cerulean color.—**2.** A blue-stocking. [Humorous.]

> Oh! ye, who make the fortune of all books!
> Benign *Ceruleans* of the second sex!
> Who advertise new poems by your looks,
> Your "imprimatur" will ye not annex?
> *Byron*, Don Juan, iv. 108.

ceruleite (sẹ-rö'lẹ-īt), *n.* [*cerule(an)* + *-ite*².] A hydrated arseniate of aluminium and copper, occurring in bright blue clay-like masses: found in Chile.

cerulic (sẹ-rö'lik), *a.* [L. *cærul(us)*, blue, + *-ic*.] Of a blue color.—**Cerulic acid**, an acid of doubtful identity supposed to be formed by the oxidation of caffetannic acid by the air.

cerulignol (sē-rö-lig'nol), *n.* [L. *cærul(us)*, blue, + *lign(um)*, wood, + *-ol*.] The methyl ether of 3, 4-dihydroxypropylbenzene, $HO.C_6H_3(C_3H_7)OCH_3$. It is an oil with an odor which resembles that of creosote; it boils at 241° C.

cerulin, *n.* See *cerulein*.

ceruminal (sẹ-rö'mi-nạl), *a.* [*cerumen* (*min-*) + *-al*¹.] Same as *ceruminous*.

Cervical canal. See ★*canal*¹. **Cervical cross**, a structure, on the embryo of *Pentastoma tænioides*, shaped like a raised cross and situated in a cup-shaped groove. It is the trace of the so-called 'dorsal cone' which connected the two chitinous thickenings surrounding the embryo.—**Cervical flexure, glands, ligaments, pregnancy.** See ★*flexure*, etc.—**Cervical triangles.** See *anterior triangle of the neck* and *posterior triangle of the neck*, under *triangle*. **Cervical vertebræ.** See *vertebra*, 1 (*b*).

cervico-axillary (sėr"vi-kọ-ak'si-lạ-ri), *a.* Pertaining to both the neck and the axilla.

cervicodorsal (sėr"vi-kọ-dôr'sạl), *a.* [L. *cervix*, neck, + *dorsum*, back, + *-al*¹.] Relating to the neck and back. The cervicodorsal region comprises the neck and back; the cervicodorsal vertebræ are those of the neck and thorax considered collectively.

cervicoscapular (sėr"vi-kọ-skap'ụ-lạr), *a.* [L. *cervix*, neck, + *scapula*, shoulder-blade.] Pertaining to both the neck and the scapula.

cervicothoracic (sėr"vi-kọ-thọ-ras'ik), *a.* [L. *cervix*, neck, + *thorax*, chest, thorax.] Relating to the neck and thorax, considered collectively. *Proc. Zool. Soc. London*, 1903, p. 272.

cervisial, cerevisial (sėr-, ser-ẹ-vis'i-ạl), *a.* [L. *cervisia*, beer.] Relating or pertaining to beer.

cervisious (sėr-vis'i-ụs), *a.* Same as ★*cervisial*.

cervoid (sėr'void), *a.* [L. *cervus*, a deer, + Gr. εἶδος, form.] Deer-like; resembling a deer.

Ceryl alcohol, a white crystalline alcohol, $C_{27}H_{55}OH$, occurring in Chinese wax as the ester of cerotic acid. It melts at 79° C. When fused with caustic potash it yields cerotic acid. Also called *cerotin*.—**Ceryl ester**, an ester derived from ceryl alcohol and an acid. Chinese wax, or cerotin, is the ceryl ester of cerotic acid.

cespitellose (ses-pit'e-lōs), *a.* Somewhat tufted.

cespitin (ses'pi-tin), *n.* [L. *cæspes* (*cæspit-*), turf, + *-in*².] An oily base, $C_5H_{13}N$, found in coal-tar and peat-tar.

Cessation of arms. See ★*arm*².

cession, *n.*—**Benefit of cession.** See ★*benefit*. **Treaty of cession**, a treaty by which territory is ceded or made over by one country or sovereign to another.

cestid (ses'tid), *n.* A ctenophoran of the family *Cestidæ*.

Cestodariidæ (ses-tō-dạ-rī'i-dē), *n. pl.* [NL., < *Cestodaria* + *-idæ*.] A family of *Platyhelmintha*, of the order *Cestoda*, having the body unsegmented and the generative organs not repeated. The family includes the genera *Amphilina Archigetes*, *Caryophyllæus*, *Gyrocotyle* and *Wageneria*. Same as ★*Monozoa*, 2.

Cestoidea, *n. pl.* **2.** A group of tentaculate *Ctenophora* having a compressed, bandlike body and containing the single family *Cestidæ*.

cetane (sē'tān), *n.* Same as ★*hexadecane*. $C_{16}H_{34}$.

ceteosaur (sē'tẹ-ọ-sâr), *n.* [NL. *ceteosaurus*, *cetiosaurus*, q. v.] Same as *cetiosaurian*.

Ceteosauria, *n.* See ★*Cetiosauria*.

ceterach, *n.* **2.** [*cap.*] A genus of small pinnatifid polypodiaceous ferns related to *Asplenium*. There are 3 or 4 species of like habit, the best known being *C. Ceterach* (*Ceterach* of the old herbalists, *Asplenium Ceterach* of Linnæus, or *C. officinarum* of most later writers), an Old World species long regarded as othcinal.

cetiosaur (sē'ti-ọ-sâr), *n.* [NL. *Cetiosaurus*.] Same as *cetiosaurian*.

Cetiosauria, Ceteosauria (sē"ti-, sē"tẹ-ọ-sâ'ri-ạ̈), *n. pl.* [NL.: see *Cetiosaurus*.] An order or suborder of *Dinosauria*, which contains the largest members of the group. Synonymous with *Sauropoda*, Seeley, 1888, and Marsh; antedated by *Opisthocœlia*, Owen, 1860.

Cetomimidæ (sē-tọ-mim'i-dē), *n. pl.* [NL., < *Cetomimus* + *-idæ*.] A family of deep-sea fishes of uncertain relationship. Two species are known, each represented by a single specimen taken in the North Atlantic at a depth of over 1,000 fathoms.

Cetomimus (sē-tọ-mī'mus), *n.* [NL., < Gr. κῆτος, whale, + μῖμος, mimic.] A genus of deep-sea fishes. See ★*Cetomimidæ*.

Cetonia, *n.* **Indian cetonia**, an American beetle, *Euphoria inda*, formerly placed in the genus *Cetonia*. It feeds on overripe fruit and sometimes on Indian corn. Also called the *brown fruit-chafer*.—**Melancholy cetonia**, an American beetle, *Euphoria melancholica*, formerly placed in the genus *Cetonia*. Also called the *melancholy sap-chafer*.

cet. par. An abbreviation of the Latin *ceteris paribus* (which see).

cetylid (sē'til-id), *n.* [*cetyl* + *-id*².] A derivative of cerebrin, of composition $C_{64}H_{120}O_{75}$.

Cevenole (sev'ẹ-nōl), *a.* [F. *Cévennes* (mountains).] Of or pertaining to the Cévennes, in central France; specifically, relating to a type of man of western Europe, found in its most characteristic form in the Cévennes. The type is dark, very short-headed, and of short stature.

Ceylon borage. See ★*borage*.

C. F. An abbreviation (*a*) of *canto fermo*, and (*b*) of *chaplain to the forces*.

cf. An abbreviation (*b*) of *calf* (binding).

C. F. and I. An abbreviation of *cost, freight, and insurance* (which see, under ★*cost*²).

C. G. An abbreviation (*c*) of *captain-general*; (*d*) of *captain of the guard*; (*e*) of *coast-guard*.

cg. An abbreviation of *centigram*.

C. G. S. An abbreviation of *commissary-general of subsistence*.

Ch. An abbreviation (*a*) of *China*; (*b*) of *Chinese*; (*c*) of *check* (in chess).

C. H. An abbreviation (*c*) of *clearing-house*.

chabootra (chạ-bö'trạ̈), *n.* [Hind. *chabutra*.] A paved or plastered terrace-platform attached to a house or in a garden. [Anglo-Indian.] *Yule and Burnell*.

chabot (shä-bō'), *n.* [F. *chabot*, dial. *cabot*, OF. *cabot*, lit. 'big-headed,' < LL. **capum*, L. *caput*, head: see *chief*.] The miller's thumb or bullhead: sometimes used in heraldry as a bearing.

chac-chac (chäk'chäk), *n.* [Imitative of a light rattling sound.] A rude rattle, consisting of a bladder filled with loose objects, used by the negroes of the West Indies.

chackur (chậk'ẹr), *n.* [Also *chauker*, < Hind. Pers. *chākar*.] A servant: a menial servant: not now in use in India except in the (Hind.) phrase *naukar-chackur*, meaning 'the whole body of servants from the highest (*naukar*) to the lowest (*chackur*).' *Yule and Burnell*.

chacu-ayllu (chä"kọ-ä'ē-lyö), *n.* [Quichua *chacu*, the taking of wild animals by surrounding them; *ayllu*, clan.] A dance of the Indians of Peru and Bolivia, symbolizing the capture and killing of the vicugna; also a rain-dance.

chætigerous (kē-tij'ẹ-rus), *a.* Bearing or provided with chætæ: as, the *chætigerous* segments of an annelid.

Chætochloa (kẹ-tọk'lọ-ạ̈), *n.* [NL. (Scribner, 1897), < Gr. χαίτη, mane, + χλόη (χλόα), grass.] A genus of monocotyledonous plants of the family *Poaceæ*. See *Setaria*.

Chætochloa glauca.
a, a spike; *b*, mature spikelet with scales partially removed to show the grain; *c*, flower showing the palese ...; *d*, a spikelet with bristles, showing a second rudimentary staminate flower. (Drawn from Engler and Prantl's "Pflanzenfamilien.")

chætoderm (kē'tọ-dėrm), *n.* [NL. *chætoderma*.] One of the *Chætodermatidæ*.

chætodontiform (kē-tọ-don'ti-fôrm), *a.* Having the form of a chætodontoid fish.

Chætomiaceæ (kē"tọ-mi-ā'sẹ-ē), *n. pl.* [NL., < *Chætomium* + *-aceæ*.] A family of pyrenomycetous fungi named from the genus *Chætomium*, and characterized by membranous superficial perithecia having the upper portion, especially, covered with elongated, more or less branched hairs and simple dark-colored spores.

chætophoraceous (kē"tọ-fọ-rā'shius), *a.* [*Chætophoraceæ* + *-ous*.] Belonging or pertaining to the *Chætophoraceæ*.

chætopodan (kē-top'ọ-dạn), *a.* [*chætopod* + *-an*.] Having the characters of the *Chætopoda*. *Encyc. Brit.*, XXV. 452.

chætopterin (kē-top'tẹ-rin), *n.* [*Chætopter-us* + *-in*².] A pigment found in *Chætopterus*.

Chætostroma (kē-tọ-strō'mạ̈), *n.* [NL. (Corda, 1829), < Gr. χαίτη, mane, bristle, + στρῶμα, covering.] A genus of hyphomycetous fungi having the conidiophores arranged in black pulvinate masses surrounded by black septate bristles. The conidia are one-celled and dark-colored. *C. Sacchari* occurs on withered spots on leaves of sugar-cane.

chætotaxy (kē'tọ-tak-si), *n.* [NL., **chætotaxia*, < Gr. χαίτη, bristle, + τάξις, order.] The arrangement of bristles on the different parts of the body of dipterous insects.

> This contains a careful exposition of the *chætotaxy* of the Muscidæ, which Dr. Hough considers one of his principal contributions to entomology.
> *Entomological News*, 1903, p. 247.

chaf, *v.* and *n.* A simplified spelling of *chaff*.

chafant (chā'fạnt), *a.* [*chafe* + *-ant*.] In *her.*, chafing; enraged; furious: applied to an enraged boar when used as a bearing.

chafe-iron (chāf'ī"ėrn), *n.* An iron affixed to the body or gear of a vehicle to protect it from injury by the wheel when the vehicle is turning.

chaff[1] (chăf), *v. t.* [*chaff*[1], *n.*] 1. To cut into chaff. See *chaff*[1], *n.*, 2.

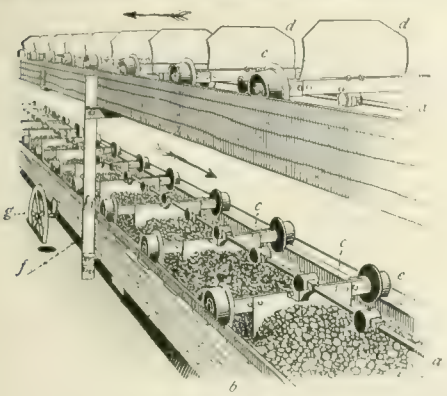
How long does it take to *chaff* a ton of ensilage? *Return of* [British] *Ensilage Commissioners* (1886), I. 5.

2. To mix with chaff.—3. To furnish with chaff.

chaguar (chä-guär′), *n.* [Native name.] A name in northwestern Argentina for the ★caraguata (which see).

chai (chī), *n.* [Also *chy*; Gipsy.] A Gipsy girl or woman.

chain, *n.* 8. A ruff of recurved feathers adorning the neck of some breeds of pigeons, such as the jacobin.—9. An abbreviation of *mountain-chain* and *volcanic chain.*—10. A collection or continuum which has reference to a certain mode of correspondence such that no one individual or point corresponds to more than one individual or point, this mode of correspondence being thought of as a sort of mapping such that one part of the map may coincide with another, but no part of the collection or continuum mapped is represented twice over on the map. If the map is a part or the whole of what is mapped, that which is mapped is called a *chain.* Moreover, if P is any part of what is mapped, there may be many parts of the whole collection or continuum mapped, each of which contains P and is a chain. Now that chain which forms a part (or the whole) of every possible chain that contains P is called *the chain of P.* The term (G. *kette*) was introduced by R. Dedekind, who restricted it to collections; but the idea had long before been derived by Gauss by generalizing the ordinary concept of a map. See ★*mapping.* It is evident that if to P be joined the representation of P on the map, and also the representation of that on the map and so on endlessly, the sum of all these will be the chain of P.—**Closed chain,** in *chem.*, several atoms united in such a manner as to form a ring. See ★*cyclic compounds.* **Ladies' chain** [F. *chaîne des dames*], a part of the second figure in a quadrille. **Lateral-chain theory.** See ★*immunity* and ★*receptor.*—**Monobar chain,** a conveyer-chain composed of a series of straight bars joined together by flexible knuckle-joints which allow a certain amount



Monobar-chain.

a a, chain; *b*, conveyor; *c c*, flights, pushing load; *d d*, flights returning inverted; *e*, flanged wheels supporting flights and chain; *f*, dumping point in colliery or trough; *g*, control of dumper. Lower arrow, working direction; upper arrow, idle direction.

of lateral play in passing wheels and curves, while preserving a rigid connection in line with the movements of the conveyer. It is used with conveyers that employ flights to push the load along a fixed trough, the chain supporting the weight of the flights in both positions. See ★*conveyer* and ★*flight*[1].—**Open chain,** in *chem.*, three or more atoms united to form a chain the ends of which are not further united to form a ring.—**St. Peter's chains.** See ★*saint*[1].—**Side-chain.** Same as ★*receptor.*—**Silent chain,** a trade-name of a power-transmission chain composed of a series of links placed in groups side by side and riveted to form a broad band: so-called because of its noiseless action in passing over a sprocket-wheel.—**Steeple-top chain,** a conveyer-chain in which each link has a hood or cover. Two or more chains placed side by side in sunken channels can be used to form a carrier. The covers project above the channels and serve as a platform on which freight may be transported for short distances.

chain-block (chān′blok), *n.* A trade-name of a hand-power hoist for lifting heavy weights; a chain-hoist. It is essentially a hoisting-tackle which employs blocks or gearing operated by hand or by means of an endless chain. Two or more blocks are used for the hoisting-chains, and different types of gearing are used in the dozen or more types of block in common use. Some forms of block are self-locking, and others use a rope instead of a chain. **Chain-block crane.** See ★*crane*[2].

chain-board (chān′bōrd), *n.* In an arithmachine, a flat surface composed of flat, parallel, movable, endless chains bearing numbers in relief, and actuated manually by the use of a stylus.

chain-brake (chān′brāk), *n.* An early form of power train-brake in which the levers attached to the brake-beams and acting to press the brake-shoes against the wheels were actuated by chains which were wound up on drums driven by the revolution of the axles of the trucks of the car. These drums were made to revolve and wind up the chain on them by throwing in a friction-clutch which compelled them to turn with the revolving wheel and axle. The wheel was thus made to retard its own motion. When the chains were wound up tight, the clutch slipped enough to prevent breakage.

chain-cover (chān′kuv″ėr), *n.* In an arithmachine, a movable metal strip used to cover any one of the chains in the chain-board. See ★*chain-board.*

chain-drive (chān-driv), *n.* A method of transmitting power from the motor of a motor-car or motor-cycle to the driving-axle or driving-wheels by means of chains the links of which engage the teeth of sprocket-wheels: distinguished from *belt-drive* or *shaft-drive.* The chains are usually of the flat or block-chain type. Roller-chains are also much used, the pins passing through the center of short rollers which, by turning as the links pass on and off the teeth, greatly prolong the life of the chain and prevent wear on the elements which carry the stress of driving. Chain-drives may be single, when one chain only is used to connect the two shafts; or double, when one chain is used on each side, and each wheel is separately connected by its chain to the differential or counter-shaft. The flexibility yet positiveness of the chain-drive adapts it for high-speed and high-powered cars, but it is much exposed to mud and dirt in service.

chain-feed (chān′fēd), *n.* In *mach.*, a feed consisting of an endless chain running over sprockets: used for a great variety of purposes, such as feeding balks of timber to frame-saws, hoisting ice, coal, etc., on inclined runways, and feeding metal pieces to tempering furnaces.

chain-fern, *n.*—**Giant chain-fern,** *Woodwardia spinulosa*, a western American ally of the old-world *W. radicans.*

chain-grapples (chān′grap″lz), *n. pl.* See ★*grapple*, 4.

chain-hoist (chān′hoist), *n.* 1. A lifting or hoisting apparatus in which the stress of lifting the load is borne by a chain over pulleys or on winding-barrels instead of by a rope.—2. A form of power- or hand-hoist using a chain instead of having either hydraulic or pneumatic pressure lift the load directly without pulleys or winding-barrel.

chaining-machine (chā′ning-ma-shēn″), *n.* A machine for forming into links a long cotton warp or chain of yarn, to facilitate the handling of it in the processes of bleaching or dyeing. Sometimes called a *chain-warping machine.*

chainless, *a.* 2. In *mach.*, without a chain: used to describe machines or vehicles in which at one time a chain-gear or chain-drive was used, but in which it has been replaced by direct gears and shafting: as, a *chainless* bicycle, a *chainless* motor-car, etc.

chain-oiler (chān′oi″lėr), *n.* A device for the continuous oiling of a shaft, consisting of a loose, endless chain which hangs from the shaft, reaches down into a reservoir of oil, and, as it revolves with the shaft, carries oil up upon it as long as the shaft revolves.

chain-pillar (chān′pil″är), *n.* In *mining*, a pillar of coal left to protect the gangway and air-course, and running parallel to these passages.

chain-pipe, *n.* 2. A long leather tube for covering the trace-chains of harness as a protection against injury from the chains themselves.

chain-riveting (chān′riv″et-ing), *n.* A mode of double or triple riveting in which two or more rivets are in a line perpendicular to the edge of the plate, instead of the second rivet being placed half-way between two front rivets as in staggered riveting.

chain-road (chān′rōd), *n.* An underground wagon-way worked by an endless chain.

chain-tackle (chān′tak′l), *n.* A tackle in which a chain is used in place of a rope; a chain-hoist: a small hoisting-device much used in shops for raising heavy pieces by manual labor. It is usually a differential-geared tackle.

chain-tender (chān′ten″dėr), *n.* Same as ★*sled-tender.*

chain-trace (chān′trās), *n.* A chain used in place of a leather trace. In addition to a hook and ring at each end, it has, at a central point, a swivel which serves to keep it from becoming twisted.

chain-wall, *n.* A method of mining coal similar to that called variously *pillar and breast*, (which see under *pillar*), *room and rance, pillar and stall, stoop and room*, etc.

chain-work, *n.* 3. Metal-work consisting of interlacing or intertwined rings or loops, as in chain-mail.

chair, *n.* 2. (*c*) The office or dignity of chief magistrate of a city or corporate town in England, especially of the City of London: as, an alderman below the *chair* is one who has not yet served as lord mayor.

The Lord Mayor, Alderman, and Principal Officers of the City of London. . . . All the above have passed the Civic *Chair.* *Whitaker's Almanack*, 1885, p. 251.

7. In *glass-blowing*, a seat of special construction in which the glass-blower sits, using the elongated and horizontal arms as supports for the pontil as he rolls it backward and forward; hence, the gang of men who work in and about such a chair.—**Boatswain's chair.** See ★*boatswain.*

Double chair, a short sofa long enough to seat two persons. **Electric chair,** a chair designed to be occupied by a condemned criminal which put to death by electricity. **Locomotive chair,** a wheel-chair or invalid's chair which can be operated by the occupant. See *wheel-chair.*

Morris chair, a low, deep-seated chair, with flat, almost straight arms which are continued backward for a little distance beyond the body of the chair and there notched on top, and a hinged back which may be placed at any angle and kept in position at that angle by a movable cross-bar or rod which rests in the notches. The cushions for the seat and back are separate and thick. So called because devised, as is alleged, by William Morris, the poet.—**Obstetrical chair,** a chair of special construction formerly in use for women during confinement.—**The Chairs!,** the chairman and deputy chairman of the East India Company.—**To appeal from the chair.** See ★*appeal.*—**To take the chair,** to assume the duties of presiding officer at a meeting.—**Whirling chair,** a pivoted chair into which, formerly, unruly insane persons were sometimes strapped and whirled round rapidly to confuse and subdue them.

chair-balance (chär′bal″ans), *n.* A weighing apparatus in which a chair-seat is suspended from the hook or movable part of a spring-balance. The person to be weighed is seated in the chair, while the balance is supported overhead at a convenient height.

chair-board (chär′bōrd), *n.* Same as *chair-rail.*

chair-car (chär′kär), *n.* A railroad-car fitted with reclining chairs, often used on night trains instead of a regular sleeping-car.

chairmaker (chär′mā″kėr), *n.* A maker of chairs.—**Chairmaker's bulrush.** See *American* ★*bulrush.*—**Chairmaker's saw.** See ★*saw*[1].

chairman, *n.* 3. One who wheels an invalid's or other similar chair.

chaise, *n.*—**Boston chaise,** a two-wheeled carriage invented by Chauncey Thomas of Boston, Massachusetts. The body, which is of the chaise-type, is suspended at the rear end upon leather braces attached to the ends of the shafts, which are bent to half-circles back of the shaft-bar. These half-circles are attached to the axle by long, flat, half-elliptic springs. The portions between the spring-attachments pass under the axle without being connected with it.

chakanani (chä-kä-nä′ni), *n.* [Aymará of Bolivia.] A society of Indian dancers representing originally the warriors.

chakra (chä′krą), *n.* [Skt. *chakra*, a wheel, circle, etc.: see *cycle.*] A circle; a discus or mystic circle placed in the hands of pictured Hindu gods. Also *chackra.*

chakravartin (chä-krą-vär′tin), *n.* [Skt. *chakravartin*, turning on wheels, < *chakra*, wheel, + *vartin*, being, abiding, etc., < √ *vrt*, turn, be, abide, etc.: see *verse.*] In *Sanskrit myth.*, a universal sovereign, 'the wheels of whose chariot roll everywhere without obstruction.'

The portents troubled, till his dream-readers
Augured a Prince of earthly dominance,
A *Chakravartin*, such as rise to rule
Once in each thousand years.
Edwin Arnold, Light of Asia, i. 86.

chal[1] (chal), *n.* [Gipsy.] A gipsy boy; a lad; a fellow.

chal[2] (chäl), *n.* [Beng.] In India, husked rice.

Chal., Chald. Abbreviations (*a*) of *Chaldaic*; (*b*) of *Chaldean*; (*c*) of *Chaldee*; (*d*) [l. c.] of *chaldron.*

chalana (chä-lä′nä), *n.* [Argentine.] A long, shallow, flat-bottomed boat used on the rivers of Argentina.

There were, besides, three *chalanas*, 22 feet long by 7 feet beam by 1 foot 9 inches deep. *Geog. Jour.* (R. G. S.), XV. 299.

Chalarothoraca (kal-ą-rō-thor′ą-kä), *n. pl.* [NL., < Gr. χαλαρός, loose, + θώραξ, breast-plate, breast.] An order of *Heliozoa* in which the skeleton is composed of loosely arranged, isolated silicious spicules. It includes the genera *Raphidiophrys, Acanthocystis*, and others. Also *chalarathoracida.*

chalazian (ka-lā′zi-an), *a.* In *bot.*, resembling or pertaining to a chalaza. See *chalaza*, 1.

chalazodermia (ka-la-zō-dėr′mi-ą), *n.* (NL., < Gr. χάλαζα, a hailstone, knot, tubercle, + δέρμα, skin.] Same as *dermatolysis.*

chalazogam (ka-laz′o-gam), *n.* A plant in which fertilization takes place through the chalaza, as in *Casuarina*.

chalazogamic (ka-laz′o-gam′ik), *a.* Characterized by chalazogamy.

chalazogamy (kal-a-zog′a-mi), *n.* [NL. *chalaza*, chalaza, + Gr. *-γαμια*, ‹ *γαμος*, marriage.] In *bot.*, fertilization through the chalaza.

Chalcas (chal′kas), *n.* [NL. (Linnæus, 1767), prob. (in reference to the markings of the wood) ‹ Gr. *χαλκος*, copper.] A genus of dicotyledonous trees of the family *Rutaceæ*. The wood of *C. panculata*, which shows brown veins and spots, is highly prized for knife-handles by the Malays. See *Murraya*.

chalcedonize (kal-sed′ō-nīz), *v. t.*; pret. and pp. *chalcedonized*, ppr. *chalcedonizing*. [chalcedony + *-ize*.] To preserve in or replace by chalcedony: a term frequently applied to the fossils, especially the sponges, of the Chalk beds.

chalchal (chäl-chäl′), *n.* [Argentine.] The name in Argentina of a tree of the soapberry family, *Allophylus edulis*, or of its edible fruit. It is found from southern Brazil to Argentina and yields a wood suitable for carpentry, cabinet work, and turning.

chalchuite (chal′chō-it), *n.* [Nah. *chalchihuitl*.] The bluish-green turquoise of New Mexico.

chalcidian[2], *n.* **Blue yellow-cloaked chalcidian,** a minute hymenopterous parasite, *Signiphora flavopalliata*, of the chalcidoid family *Encyrtidæ*, which destroys the eggs of the purple scale of the orange, *Lepidosaphes beckii*.

chalcidid (kal′si-did), *n.* Of or belonging to the hymenopterous family *Chalcididæ*.

chalcidoid (kal′si-doid), *n.* and *a.* **I.** *n.* A member of the hymenopterous superfamily *Chalcidoidea*.

II. *a.* Of or belonging to the hymenopterous superfamily *Chalcidoidea*.

Chalcidoidea (kal″si-dō-id′ē-ä), *n. pl.* The *Chalcididæ* considered as a superfamily.

chalcis-fly (kal′sis-flī), *n.* A hymenopterous parasitic insect, usually minute, belonging to the family *Chalcididæ*.—**Cecropia chalcis-fly,** a large black and yellow American chalcidid parasite, *Spilochalcis mariæ*, which attacks many large caterpillars, and especially the cecropia, polyphemus and promethea larvæ. —**Clover-seed chalcis-fly.** Same as *clover-seed worm* (which see, under ★*seed-worm*).

chalcography, *n.* **2.** A collection of engraved plates and prints. The chalcography of the Louvre was established by Louis XIV. and contains now about 6,000 plates from which impressions are still made and sold.

chalcoite (kal′ko-īt), *n.* [Irreg. ‹ Gr. *χαλκός*, copper, + *-ite*[2].] Same as *chalcocite*.

chalcolamprite (kal-kō-lamp′rīt), *n.* [Gr. *χαλκος*, copper, + *λαμπρός*, shining, + *-ite*[2].] A niobate and silicate of zirconium, the cerium metals, calcium, and other metals. It occurs in dark brown to red octahedrons in southern Greenland.

chalcolite (kal′kō-līt), *n.* [Gr. *χαλκός*, copper, + *λίθος*, stone.] Same as *torbernite*.

chalcolithic (kal-kō-lith′ik), *a.* [Gr. *χαλκός*, copper, bronze, + *λίθος*, stone, + *-ic*.] Pertaining to the bronze age, as the third of the four periods of man's development, namely, the *paleolithic*, the *neolithic*, the *chalcolithic*, and the *iron*.

The Neolithic vase-types, the oldest of which is the well-known red and black ware, gradually progress until they merge insensibly into those of the earliest dynastic period, which was *Chalcolithic* in character, i.e. copper had then come into general use. *Nature*, Sup., Nov. 6, 1902, p. iii.

chalcosin (kal′kō-sin), *n.* [Gr. *χαλκός*, copper, + *-ose* + *-in*[2].] Same as *chalcocite*.

chalcotheca (kal-kō-thē′kä), *n.* [Gr. *χαλκοθηκη*, ‹ *χαλκός*, bronze, + *θηκη*, depository.] In *Gr. antiq.*, a depository for bronzes. The chalcotheca on the Acropolis at Athens is known from inscriptions of the fourth century B. C. Traces of the building are supposed to have been found immediately west of the Parthenon. It contained the bronze treasures of Athena, and various arms and other objects belonging to the state. There were similar buildings at Delos and elsewhere.

chalet, *n.* **4.** [Short for F. *chalet de nécessité*.] A more or less ornamental structure placed at convenient points in cities, containing urinals, lavatory, etc., for public convenience; a modern street 'necessary.'

chalice, *n.* **3.** A cup-shaped globe for diffusing light. *W. L. Dibdin*, Public Lighting, p. 406.

chalice-flower (chal′is-flou″ėr), *n.* The daffodil: so named from the cup-shaped tube of the inner perianth.

chalinine (kal′i-nin), *a.* [*Chalina* + *-ine*[1].] Resembling a sponge of the genus *Chalina*: as, the *chalinine* type of fiber. *E. A. Minchin.*

chalk, *n.*, **1.** In geological nomenclature the term *chalk* has been employed with a variety of meanings. In the English subdivisions of the Cretaceous system the Chalk constitutes the upper part of this system, resting on the Gault and Greensand, which in turn lies on the basal division of Wealden. The Chalk is divided into (1) Lower Chalk, including the Chalk marl and the Gray Chalk of Folkestone; (2) Middle Chalk without flints, including the Nodular Chalk, Chalk without flints, and Chalk Rock of Dover, and (3) Upper Chalk with flints, including many local subdivisions. The *Red Chalk* is a ferruginous rock lying at the base of the Chalk series in northern England. See the extract.

The *White Chalk* of England and northwest France forms one of the most conspicuous members of the great Mesozoic suite of deposits. It can be traced from Flamborough Head in Yorkshire across the southeastern counties to the coast of Dorset. . . . Composed mainly of crumbled foraminifera, urchins, mollusks, etc., it must have been accumulated in a sea tolerably free from sediment, like some of the foraminiferal ooze of the existing sea-bed. There is, however, no evidence that the depth of the water at all approached that of the abysses in which the present Atlantic globigerina-ooze is being laid down. Indeed, the character of the foraminifera, and the variety and association of the other organic remains, are not like those which have been found to exist now on the deep floor of the Atlantic, but present rather the characters of a shallow-water fauna. *Geikie*, Textbook of Geol., p. 827.

Brown chalk, umber or chalk colored with umber.—**Chalk mixture,** chalk suspended in flavored water, used in the diarrhea of infants, and as an antacid. **Chalk process,** a process for producing a printing-surface in relief from a block or plate of prepared chalk. The design is written or painted in an ink that hardens the chalk, and the surface not to be printed is removed with a stiff brush. From the surface so prepared a stereotype is made.—**Comanche Peak chalk,** in *geol.*, a subdivision of the Lower Cretaceous deposits of Texas. See *Comanche* ★*series* and *Caprina* ★*limestone*. **Fullers' chalk.** Same as *fullers' earth*.—**Margate chalk,** in *Eng. geol.*, a local division of the Upper Cretaceous series, typically exposed at Margate in Kent, but attaining greater thickness (400 feet) in the Hampshire basin. It occupies about the middle of the Upper Cretaceous, being underlain by the Broadstairs and St. Margaret's chalk and overlain by the Norwich chalk. On the continent it is known as the marsupite zone from the prevalence of the crinoid *Marsupites*. **Red chalk.** (*b*) [*cap.*] In *Eng. geol.*, a hard, nodular chalk, tinted red-brown by iron oxids, which in Norfolk, Lincolnshire, and Yorkshire lies at the base of the Lower Chalk or Cenomanian and rests on the Upper Neocomian Carstone. It is regarded as representing the Gault which is otherwise absent in this region.

chalk-body (châk′bod″i), *n.* A decorative white earthenware of a dry, chalky appearance, quite thin and exceedingly brittle, made by Robert Wilson at Hanley, England, toward the end of the eighteenth century. The mark was the letter C beneath a crown.

chalk-gland (châk′gland), *n.* In *bot.*, a multicellular gland which deposits calcareous matter, the secretion escaping through a special channel called a *water-pore*. Such glands are found in some saxifrages and other plants.

challenge, *n.* **10.** In the East Indies, an exception taken by a ryot to the assessment of a neighbor's holding when it is less than that of his own poorer holding, accompanied by an offer to take over the neighbor's holding at a higher assessment, and a claim for the assessment on his own to be correspondingly reduced.—**Challenge for cause,** in *law*, same as *principal challenge* (which see, under *challenge*, 9).

challie (chal′i), *n.* [Ceylon.] A subsidiary copper coin of Ceylon, equal to one twelfth of an anna or one pie.

chalmersite (chä′mėr-zit), *n.* [Named for G. *Chalmers*, superintendent of the mine, in Brazil, where the mineral was found.] A sulphid of iron and copper of a bronze-yellow color, related in form to chalcocite.

chalona (chä-lō′nä), *n.* [Origin not ascertained.] In South America, sun-dried meat in general. See *charqui*.

chaloupe (shä-löp′), *n.* [F.: see *shallop*.] Same as *shallop*.

chaluka, *n.* Same as ★*halukah*.

Chalukyan architecture. See ★*architecture*.

chamæcephalous (kam-ē-sef′a-lus), *a.* Same as *chamæcephalic*.

chamæconchic (kam-ē-kong′kik), *a.* Characterized by or exhibiting chamæconchy. *Biometrika*, Aug., 1902, p. 460.

chamæconchous (kam-ē-kong′kus), *a.* Same as ★*chamæconchic*.

chamæconchy (kam-ē-kong′ki), *n.* [Gr. *χαμαί*, low, + *κόγχη*, shell.] In *anthrop.*, a low form of the orbits, showing an orbital index of 80 and less: used by German anthropologists. *Biometrika*, March–July, 1904, p. 214.

chamæcranial (kam-ē-krā′ni-al), *a.* [Gr. *χαμαί*, low, + *κρανίον*, skull.] Characterized by or exhibiting a low skull, of a length-height index of 70 and less: used by German anthropologists. *Biometrika*, March–July, 1904, p. 240.

chamæcristoid (kam-ē-kris′toid), *a.* [NL. *chamæcrista* (‹ Gr. *χαμαί*, on the ground, low, + L. *crista*, crest (referring to NL. *Crista pavonis*, 'peacock's crest,' a pre-Linnæan name of a cæsalpiniaceous plant)), + E. *-oid*.] Having the characters of *Cassia Chamæcrista*; belonging to the section *Chamæcrista* of the genus *Cassia*.

Chamædaphne (kam-ē-daf′nē), *n.* [NL. (Moench, 1794, adopted from Buxbaum, 1728), ‹ Gr. *χαμαιδαφνη*, dwarf laurel, ‹ *χαμαι*, on the ground, + *δαφνη*, the laurel.] A genus of dicotyledonous shrubs of the family *Ericaceæ*. See *Cassandra*.

chamæprosope (kam-ē-pros′ōp), *n.* [Gr. *χαμαί*, low, + *πρόσωπον*, face.] A skull or a person with a broad, low face. *Deniker*, Races of Man, p. 60.

chamæprosopic (kam″ē-prō-sop′ik), *a.* [*Chamæprosope* + *-ic*.] Characterized by or exhibiting chamæprosopy. *Buck*, Med. Handbook, VII. 231.

chamæprosopy (kam″ē-pros-ō′pi), *n.* [As *chamæprosope* + *-y*[3].] In *anthrop.*, a low form of face, having a facial index of 90 and less. *Biometrika*, Aug., 1902, p. 434.

chamasite, *n.* Same as *kamacite*.

chamber, *n.* **8.** The place where the moneys due the government (municipal or other) are received and kept; the treasury; the chamberlain's office. See *chamberlain*, 2.—**Aqueous chamber.** See *chambers of the eye*. **Chamber of accounts,** a French court analogous to the English Court of Exchequer. It exercised jurisdiction over matters relating to the revenue of the crown.—**Chamber of dais** (or **deas**), a best bedroom. [Scotch.] **Chamber process.** Same as *lead chamber* ★*process*.—**Jerusalem chamber,** a large hall in the deanery of Westminster Abbey, noted as the meeting-place (1) of the famous Westminster Assembly of Divines (1643–52); (2) of the British and American Divines who in 1870 and following years produced the present Revised Version of the Bible; and (3) of the Upper House of Convocation of the Province of Canterbury: so named from its tapestried walls which show many scenes from Jerusalem. Here Henry IV. died. —**Lead chamber,** a large receptacle made of sheet-lead burned together without solder (autogenous soldering), and supported outside by wooden or iron framework: used in the manufacture of sulphuric acid.—**Moist** or **wet chamber,** a circular glass dish with a glass cover for bacteriological cultures in a moist atmosphere.—**Suprabranchial chamber,** in bivalve mollusks, a cavity on the dorsal side of the gills into which the water-tubes open and through which the water passes into the cloaca. —**Vitreous chamber,** the hollow of the eyeball between the crystalline lens and the retina, containing the vitreous humor.

chamber-acid (chām′bėr-as″id), *n.* and *a.* **I.** *n.* Sulphuric acid in the condition and of the strength at which it is removed from the lead chambers in which it is commonly produced on the large scale, before it has been purified and concentrated by evaporation.

II. *a.* Having the character and strength of the acid as removed from the lead chambers: as, of *chamber-acid* strength.

Chambered fibers, ovary. See ★*fiber*[1], ★*ovary*. —**Chambered veins,** mineral veins with large cavern-like development.

chamber-gas (chām′bėr-gas), *n.* The gas, or mixture of gases, contained in the large lead chambers commonly used in the manufacture of sulphuric acid. *G. Lunge*, Sulphuric Acid, I. 369.

chamberlain, *n.* **3.** In Great Britain, the factor or high steward of a nobleman or great landed proprietor.

chamberlainry (chām′bėr-lān-ri), *n.* The office of chamberlain; chamberlainship. [Scotch.]

chamber-tomb (chām′bėr-töm), *n.* An underground burial-vault.

chameleon, *n.* **4.** Same as *chamæleon*, 3. —**Chameleon top.** See ★*top*[3].

chameleon-fly (ka-mē′lē-on-flī″), *n.* A European black and yellow stratiomyid fly, *Stratiomys chamæleon*. According to Goedart it will live nine months without food, hence the popular and specific names.

chameleonic (ka-mē-lē-on′ik), *a.* [*chameleon* + *-ic*.] Given, like the chameleon, to frequent change; inconstant; fickle.

Poets — the best of them, are a very *chameleonic* race. *Shelley*, Letter to Mr. and Mrs. Gisborne, July 13, 1821. [*N. E. D.*

chameleon-moth (ka-mē′lē-on-môth), *n.* A vernacular name for a South African noctuid moth, *Actæa chamæleon*: so named on account of its extreme variability in color.

chamelerin (ka-mel′ėr-in), *n.* [G. *chamälerin*, ‹ NL. *Chamælar(ium)* + *-in*[2].] An amorphous, intensely bitter glucoside, $C_{36}H_{62}O_{18}$, found in *Chamælarium luteum*, which is used as a uterine tonic. It resembles saponin.

chamelognathous (kam-e-log'na-thus), *a.* [Gr. χαμαιγνάθος, low, + γνάθος, jaw.] In *anthrop.*, having a low face, with reference to the distance from alveolar point to nasion. *Sergi.*

chamfer, *n.* **Chamfer attachment,** a guide designed to be affixed to the blade of a draw-knife to enable the operator to cut uniform chamfers.

chamfer-bit (cham'fêr-bit), *n.* A bit in which a cutting-edge, set at an angle with the axis of the tool, cuts a conical entrance by chamfering the edges of the cylindrical hole. Also *chamfering-bit.*

chamfered joint. See ★*joint.*

chamfering-machine (cham'fêr-ing-ma-shēn'), *n.* A machine for cutting the bevel on a nut or on the head of a bolt and for rounding off the end of a bolt. It is customary to use a turret-machine for this purpose.

chamfer-plane (cham'fêr-plān), *n.* A plane in which the forward section, or end, is movable up or down for convenience in making chamfers. By the use of supplementary sections, with special bits, the plane can be used to make ornamental chamfers.

chamiform (kam'i-fôrm), *a.* Same as *chamæform.*

chamois, *n.* **3.** A very soft leather made from sheepskin; the flesh side of split sheepskin (the grain side being used for fancy leather). This is the so-called 'chamois-skin' sold in the shops. Probably no genuine chamois-skins are used commercially.

4. In textile coloring, a name sometimes applied to iron buff because of its resemblance in color to chamois-skin. See *iron buff,* under *buff*[1], *n.*

chamois (sham'wo or sham'i), *v. t.* To tan or dress by means of repeated oiling and milling. *Flemming,* Practical Tanning, p. 165.

chamotte (sha-mot'), *n.* [Origin not ascertained; appar. F. in factory use (?).] Fragments of already burnt fire-clay, as of the old saggars of a porcelain factory, ground to powder and used, in admixture with fresh fire-clay, in making new vessels. The old material serves to diminish the shrinkage of the mixture in the burning. *Thorpe,* Dict. Applied Chem., I. 502.

champ (champ), *a.* [Related to *champ*[1], *v.*] Hard; firm: as, a good *champ* road. [Prov. Eng.; chiefly Surrey and Sussex.]

champaca (chäm-pä'kä), *n.* [Philippine Sp. *champaca* (Tagalog and Bisaya *sampaga*), < Skt. *champaka:* see *champak.*] A name in the Philippines of *Michelia Champaca,* a tree whose fragrant, magnolia-like flowers together with those of *Canangium odoratum,* yield an essential oil highly valued for perfumery, and when digested in cocoanut-oil yield the Macassar oil of commerce. See *champak* and *Michelia.*

champacol (cham'pa-kol), *n.* [*champaca* + *-ol.*] A camphor-like body, $C_{15}H_{26}O$, found in the oil of champaca wood, and in guaiacum wood. Also called *guaiol.*

Champagne frappé. See *frappé.*—**Whey champagne,** an effervescing alcoholic beverage made from the whey of milk by fermentation of the lactose or milk-sugar which it contains. *S. P. Sadtler,* Handbook of Indust. Chem., p. 265.

champagnize (sham-pān'īz), *v. t.*; pret. and pp. *champagnized,* ppr. *champagnizing.* [*champagne* + *-ize.*] To impart a champagne quality to (other wines).

A very interesting apparatus [has been invented] by which wines are rapidly *champagnized* without resorting to the complicated processes that have hitherto been employed. The apparatus is christened the "Moussogène" ("froth-generator"), and is used by the inventor for *champagnizing* his wines in order to render them salable at more remunerative prices.
Sci. Amer., Dec. 31, 1904, p. 477.

champana (chäm-pä'nä), *a.* [Pg. *champana,* also *champão,* = Sp. *champan,* < Malay *sampan.*] Same as *sampan.*

champart (shan-pär'), *n.* [F.: see *champerty.*] In *French law,* a particular estate in land granted upon condition that the grantee shall share crops with the grantor.

champi (chäm'pē), *n.* [Quichua *champi,* a club (of wood, lead, etc.).] Copper, bronze, and brass. [Bolivia.]

champion[1], *n.* **4.** An animal or a plant to which, or to its owner, the first prize has been awarded in any general competition, as at a horse-, cattle-, bench-, or other show, or which has taken a number of prizes.—**5.** Some variety of vegetable, fruit, implement, or the like, for which the highest excellence is claimed.

championize (cham'pi-on-īz), *v.*; pret. and pp. *championized,* ppr. *championizing.* [*champion* + *-ize.*] **I.** *trans.* To champion: as, to *championize* one's cause.

II. *intrans.* To play the champion.

championship, *n.*—**Amateur golf championship,** open golf championship. See ★*golf.*

Champlain epoch. Same as ★*champlain period.*—**Champlain period,** in *Amer. geol.,* a term introduced by E. Hitchcock, and adopted and promulgated by Dana, for the period of general northern continental depression concomitant with or effecting in part the final breaking up of the ice-sheet of the glacial period, and characterized by high level deposits and beaches and terraces on the margins of present active or extinct waterways and the sea. It is one term in the Quaternary, Post-pliocene, or Pleistocene series as employed in America, being equivalent to the post-glacial or terrace epoch, but graduating imperceptibly into the recent or human period.

Champosaurus (kam-pō-sâ'rus), *n.* A genus of extinct rhynchocephalian aquatic reptiles of large size, with elongate snout and double-headed cervical ribs. Its remains have been found in the Lower Eocene of Europe and America and also in the Laramie Cretaceous beds.

champy (cham'pi), *a.* [*champ* + *-y*[1].] Made miry and soft through much trampling by cattle or the like: as, a *champy* way.

chamsin, *n.* See *khamsin.*

Chan., Chanc. Abbreviations of *chancellor.*

chañar (chän-yär'), *n.* [Native name in Argentina.] A small, thorny, leguminous tree of Argentina, *Gourliea decorticans,* the hard wood of which is used for tool-handles. The pods are sweet and edible and form the principal food of the Indians of the Gran Chaco. A fermented beverage is prepared from the pods, which is known as *algarrobe de chañar.* See ★*algarrobe.*

chance, *n.*—**A fighting chance,** a possibility of succeeding by putting forth great effort. [Colloq.]

chanceable, *a.* **2.** Non-essential; merely incidental and subsidiary; accidental or of the nature of an accident.

Reason . . . thinketh pleasuer a *chanceable* thing to honestee. *Cheke,* Matt. xvi. 68. *N. E. D.*

chancellorate (chän'sel-or-āt), *n.* Same as *chancellorship.*

chancelloress (chän'sel-or-es), *n.* A chancellor's wife. [Nonce-word.]

'Is it pleasing to go to bed . . . and have your wife nagnagging you because she has not been invited to the Lady *Chancelloress's* soirée? *Thackeray,* Lovel the Widower, iii.

chancellorism (chän'sel-or-izm), *n.* [*chancellor* + *-ism.*] Government through a chancellor, as in Germany.

chancre, *n.* **2.** In *bot.,* a disease of the tobacco-plant attributed to *Bacillus æruginosus.*

On a bacterial disease of tobacco *chancre* or "anthracnose," by M. G. Delacroix. This disease is due to a bacillus, not previously described, and to which the name of *Bacillus æruginosus* is given, on account of the coloration it develops in certain culture media.
Nature, Sept. 17, 1903, p. 492.

chancred (shang'kerd), *a.* Affected with a chancre.

chancriform (shang'kri-fôrm), *a.* Of the nature of a chancre; having the form of a chancre.

changa (chan'gä), *n.* [Porto Rico.] A mole-cricket of Porto Rico, *Scapteriscus didactylus,*

which is very injurious to cultivated crops. It also occurs in Georgia.

The "changa" [illegible] a kind of a mole cricket, which has become very troublesome. It is believed this insect was introduced from South America in guano. It is very destructive to a wide range of plants during the period of their early growth, being especially troublesome to vegetables on sandy soils; it is also destructive on the sugar and tobacco plantations, often necessitating numerous replantings. *Yearbook U. S. Dept. Agr.,* 1901, p. 510.

change, *n.* **Metataxic change,** the result of shearing movement, in dynamic metamorphism, under conditions more favorable to fracture and development of cleavage than to flowage and recrystallization. By certain writers this is held to be a fundamental difference between the slates, which cleave so readily, and the schists, which are so perfectly foliated. See ★*metataxic.*

Any disturbance in a given portion of the lithosphere of the equilibrium thus existing must result in shearing movement if the disturbance be small, and in flow in a given direction if the relief in that direction from pressure is great and rapid enough. In the former case we should get "*metataxic change,*" in the latter schistosity.
Nature, May 4, 1905, p. 8.

Rayless change, in *radioactivity,* a transformation of matter following the same law as other radioactive changes, but unaccompanied by the emission of α or β-rays. **Secondary change,** specifically in *biol.,* a modification of a life-history that is new or kenogenetic as contrasted with one that is ancestral or palingenetic.

When these things are so, who shall determine which developmental process is ancestral and which is due to *secondary change?*
Bateson, Materials for the Study of Variation, p. 9.

change, *v. t.*—**To change front.** (*a*) To change, by military movement, the direction in which the men of a command face. (*b*) To change, radically, one's views on any question.—**To change the rounds,** in *golf,* to play the course the reverse way, in order to preserve the greens. This is done at St. Andrews every alternate week during the active season.

changeant (shoṅ-zhoṅ'), *n.* [F., 'changing.'] An occasional name for labradorite, alluding to the appearance and disappearance of its play of color.

change-gear (chānj'gēr), *n.* The toothed wheels, or the train of them, by which the speed of the feeding or cutting apparatus of a lathe or other machine-tool is adjusted relatively to the speed of the spindle or the work. In screw-cutting on cylindrical pieces, the work must turn as many times, while the tool is moving laterally through one inch, as it is desired that there shall be threads to the inch. This adjustable relation is secured by the change-gear.

change-house, *n.* **2.** In *mining,* a house in which miners keep their mine clothes and make the necessary changes of clothing before entering and on leaving the mine: usually provided with facilities for bathing, and for drying the mine clothes.

change-pinion (chānj'pin″yon), *n.* One of a train of gears, on a roving- or spinning-machine, which is substituted for another of a different size to effect a change in the speed of the drafting-rolls.

change-point (chānj'point), *n.* Any point in the movement of a mechanism where the motion is not constrained and where it is therefore possible for a part of the mechanism either to stand still or to take some other motion than that which is desired or intended. An example of this is the dead-center of a single-crank engine. The usual method of constraining the mechanism is to duplicate as much of it as is necessary, and so to place the duplicate parts that they are completely constrained while the other similar parts are at a change-point; for example, an engine having two cranks on the same shaft at right angles to each other.

changer, *n.* **4.** One who keeps a change-house. [Scotch.]

change-speed (chānj'spēd), *n.* **1.** The mechanism by which a constant speed of rotation in a motor may cause a varying speed of the driving-wheels, and hence of the whole of the motor-vehicle. While the speed of the motor can be varied, the range of limits is not very wide, and when the speed diminishes at the motor the power diminishes also. The change-speed gearing gives greater leverage to the motor for hill-climbing while exerting its maximum effort; it enables the same motor on a level to drive the car at a high rate of speed when developing the same power as on the grade. Usually in motor-cars there are three speeds forward and one speed backward, the latter a slow and powerful combination. In motors where the motor fluid drives the piston by expanding at constant pressure up to a point of variable cut-off, change-speed gears are not required.

2. The train of wheels used in feed-mechanisms for lathes and similar tools, by which changes can be made in the relative number of turns per minute for the driving and driven shafts. Sometimes called *change-gear.* **Change-speed gear,** a mechanism for changing the speed of a motor-car or other machine.—**Change-speed lever,** a lever for operating the speed-changing device of a motor-car or other machine.

change-valve (chānj'valv), *n.* A valve for admitting water under pressure into one or more cylinders of a hydraulic crane or lift, in order that the power used shall be proportional to the load. In its usual form it is a slide-valve which by continual motion in one direction opens successively all the ports, but which, being under the control of the operator, can be stopped at will.

changing-note (chān'jing-nōt), *n.* See ★*note*[1].

Chanidæ (kan'i-dē), *n. pl.* [NL., < *Chanos,* typical genus, + *-idæ.*] A family of large isospon-

dylous fishes found in the warmer parts of the Pacific, containing one known genus and three species.

channel[1], *n.* 9. A tubular passage or duct, such as the pancreatic duct, for liquids or fluids: as, the poison *channel* of a snake's fangs. Sometimes called *canal*.

channel-bar (chan'el-bär), *n.* Any bar rolled so as to have a lengthwise channel or groove: thus an I-beam is a channel-bar channeled on both sides. Channel-bars are much used in steel structural work for columns, and in shipbuilding for frames and deck beams.

channel-board, *n.* 2. In *organ-building*, same as ★*groove-board*.

channeling-machine, *n.* **Rounding-and-channeling machine,** a channeling-machine which also automatically rounds and shapes the sole; a sole-fitting and -channeling machine.

channel-iron, *n.* 3. In a vehicle, the concave metal tire of a wheel which is used with rubber tires.

channelization (chan″el-ī-zā'shon), *n.* Same as ★*canalization*, 3.

The problem is how to give normal emotional *channelization*, the safety valve of this biological heredity.
C. J. France, Amer. Jour. Psychol., XIII, 405.

channel-turner (chan'el-tėr″nėr), *n.* In *shoe-manuf.*, a machine for turning back the flap of the channel cut in the leather to leave it open for the sewing-machine; a channel-flap turner or opener. After sewing, the channel-flap is turned back and cemented down by a channel-laying machine.

channelway (chan'el-wā), *n.* 1. A stream-way; a stream-course.

At Aswan, foundations had to be laid across *channel-ways* through which, in times of flood, the river rushed with a speed of 15 miles an hour.
Sci. Amer., Feb. 28, 1903, p. 148.

2. The pipe which connects a condenser with an air-pump and through which the condensed steam and air are drawn off.

chant, *n.*—**Mountain chant,** a ceremonial of the Navajo Indians connected with their Shamanistic rites. *Smithsonian Rep.* 1891, p. 434.

chantage (shäṅ-täzh'), *n.* [F., a fig. use of *chantage*, a method of fishing in which the fish is scared within reach by means of noise, < *chanter*, sing, etc.: see *chant*, *v.*] The extortion of money under threat of making public charges of misconduct or the like; blackmail.

chanterelle, *n.* 3. In the hurdy-gurdy, one of the two strings which may be stopped by keys and on which melodies are played. Their proper tone is usually the G above middle C.

chantey, *n.* Specifically, a song sung by sailors when at work together, as in hauling or heaving, etc., the better to secure a united pull at the proper moment, which is indicated by the ictus or beat of the music. See ★*chantey-man*.

chantey-man (shan'ti-man), *n.* The leader of a chantey, who usually sings one or two lines while the men get their breath and a new hold, the crew singing the chorus and pulling together when the accented syllable is reached.

chantier (shan-tyā'), *n.* A Canadian-French equivalent of *shanty*[2].

chaogenous (kā-oj'e-nus), *a.* [Gr. χάος, chaos, + -γενής, -born.] Chaos-born: as, *chaogenous* deities.

chaos, *n.* 5. [*cap.*] The void of unformed matter personified and deemed by some among the Greeks as the oldest of the gods.

chaotheistic (kā″ō-thē-is'tik), *a.* [Gr. χάος, chaos, + θεός, god, + *-ist-ic.*] Identifying chaos or the primordial unformed matter with God. *F. Hall. N. E. D.*

chaotical (kā-ot'i-kal), *a.* Same as *chaotic*.

chap[5] (chap), *n.* The act of picking and choosing; selection: as, '*chap* and choice.' [Scotch.] See *chap*[5], *v. t.*

Chap. An abbreviation (*b*) of *chaplain*.

chapao (chä-pou'), *n.* [Turki *chapāo*, a plundering, *chapāul*, a plundering raid, a charge of cavalry, Hind. *chhāpā*, a raid, a night attack.] A raid, foray, or night attack (of Baluchis or Afghans).

The *chapaos* of the Baluchis have been checked by the division of Baluchistan between Persian and British rule.
Nature, Aug. 28, 1902, p. 418.

chaparejos (chä-pä-rā'hōs), *n. pl.* [Mex. Sp.] Strong leather breeches or overalls worn by horsemen, particularly by cow-boys, in the Western States, for protection against bushes and thorns. Generally abbreviated to *chaps*.

A bit farther on we saw some cowpunchers, or what seemed such, for they sat in cow saddles and wore *chaparejos*.
Forest and Stream, Feb. 21, 1903, p. 147.

Chaparral lily, millet, pea. See ★*lily*, ★*millet*, ★*pea*.

chaparreras (chä-pä-rā'räs), *n. pl.* [Mex. Sp.] Same as ★*chaparejos*.

Chapeau chinois, a jingle of small bells, mounted on a staff and frame, occasionally used in military music; a Chinese pavilion (which see, under *pavilion*).

Chapel royal. (*b*) The body of clergy and assistants, including singers, attached to a royal court. The chapel royal of England dates from at least the fifteenth century. —**Minion chapel,** a chapel which has never been consecrated, and which may be used, therefore, for other than religious purposes.—**Mortuary chapel,** an oratory or small chapel connected with a tomb and forming a part of the memorial structure; also, less properly, the chapel of a public cemetery.—**Parochial chapel.** (*a*) A chapel belonging to and within a parish, but apart from the parish church. (*b*) The place of worship of an ancient division of a parish, attached to it by custom or repute. **Proprietary chapel,** a private chapel. Though consecrated, it may be converted to secular uses at any time.

chapelwarden (chap'el-wâr″dn), *n.* One who holds the same office in a chapel (of the established church of England) as a churchwarden holds in a church: now commonly replaced by *churchwarden*. *N. E. D.*

chaperon, *n.* 6. A conductor or guide; escort. Compare def. 4.

chaperonee (shap″e-rō-nē'), *n.* A young lady who is chaperoned. [Colloq.]

chapin (chä-pēn'), *n.* [Cuban Sp.] A name of several species of the genus *Lactophrys*, especially of *L. bicaudalis*, of the family *Ostraciidæ*, found in tropical seas.

chapl. An abbreviation of *chaplain*.

chaplet[1], *n.* 12. In *foundry-work*, a sheet-metal form used in adjusting the core in a mold and fused into the casting when the metal flows into the mold.

chapmanship (chap'man-ship), *n.* The occupation or business of a chapman; buying and selling; merchandizing.

chappa (chap'ä), *n.* [Origin not ascertained; perhaps W. African.] A disease of some natives of West Africa, characterized by multiple cutaneous nodules, which later ulcerate, and destructive inflammation of the joints.

chapparos, *n. pl.* Same as ★*chaparejos*.

chappaul (cha-pâl'), *n.* [Perhaps N. Amer. Indian.] Same as ★*squaw-fish*.

chappee (cha-pē'), *n.* [Hind. *chhāp*, *chhapā*, a mark, stamp, impression: see *chop*[4].] In India, a marked rupee.

chaps (chaps), *n. pl.* An abbreviated form of ★*chaparejos*. [Western U. S.]

chaptalization (chap″tal-ī-zā'shon), *n.* [*chaptalize* + *-ation.*] In *wine-making*, a process of adjusting or correcting the percentages of free acid and sugar in the must of any vineyard in which, as in 'bad years,' the proportion has changed. Chaptal's method was to add the calculated weight of sugar and to neutralize the excessive acid by means of powdered marble. See ★*gallization*. *Sadtler*, Handbook of Indust. Chem., p. 205.

chaptalize (chap'tal-īz), *v. t.*; pret. and pp. *chaptalized*, ppr. *chaptalizing*. [*Chaptal*, a French chemist, + *-ize.*] In *wine-making*, to adjust, improve, or correct the proportions of free acid and sugar in the must. See ★*chaptalization*.

chapter, *n.* 9. A division of the acts of Parliament of a single session.—10. Head; subject; category: as, to have much to say on some *chapters*.—**Patristic chapters.** See ★*patristic*, *a.*

chapter-house, *n.* 2. The house or building which a chapter of a college fraternity uses as a club-house. [U. S.]

chaqueta (chä-kā'tä), *n.* [Sp.: see *jacket*.] A jacket, particularly a leather jacket, worn by cow-boys as a protection when traveling through the chaparral. [Western and southwestern U. S.]

char[2], *v.* I. *trans.* 3. To scorch; burn; 'singe' (liquids): as, to *char* the wort in brewing.

II. *intrans.* To become charcoal.

Billets that blaze substantial and slow;
Pine-stump split deftly, dry as pith;
Larch-heart that *chars* to a chalk-white glow.
Browning, Heretic's Tragedy, st. 4.

char[2], *n.* 2. In *sugar-manuf.*, concentrated sweet water or liquor highly charged with dissolved sugar.

char[4], *n.* **Greenland char,** the European char, *Salvelinus alpinus*. **Oregon char.** Same as *Dolly Varden trout*.

characetum (kā-ra-sē'tum), *n.*; pl. *characeta* (-tä). [*Charac(eæ)* + *-etum.*] A zone of vegetation found in the cold deeper waters not far from shore, characterized by the *Characeæ*.

characine[2] (kar'a-sin), *n.* [*Charac(eæ)* + *-ine*[2], so called from the odor of *Chara* which it exhales.] A kind of camphor obtained from certain terrestrial algæ, as *Palmella* and *Oscillaria*.

charact, *n.* 2. A magical sign or emblem.

Dig under thy feet and thou shalt find a bow of brass and three leaden arrows, inscribed with talismans and *characts*.
R. F. Burton, Arab. Nights, I. 125.

character, *n.*—**Acquired character,** a change of structure or of function that is brought about in an organism during its individual life, as contrasted with one that comes to it from its parents through the egg from which it is born.

By *acquired characters* I mean those which are not preformed in the germ, but which arise only through special influences affecting the body or individual parts of it. *Weismann* (trans.), Germ plasm, p. 392.

Aggressive character, a peculiarity of color or form or marking that serves to favor an animal in its aggressions, namely, one that serves to conceal it from its prey, as contrasted with one that is protective and serves to hide it from its enemies.—**Aposematic character.** See ★*aposematic*.—**Compound character,** in *biol.*, according to Bateson, a character which may either be transmitted entire as a single character, in inheritance, or broken up into its integral constituent characters or hypallelomorphs. See ★*hypallelomorph*. **In character.** (*a*) With costume etc., appropriate to the rôle or part assumed: as, to sing a song *in character*. Hence—(*b*) Appropriate; fitting. —**Out of character,** at variance or out of keeping with the character or part assumed.—**Protective character,** in *zool.*, any peculiarity of form, color, markings, or habit which serves to hide its possessor from enemies. **Pseudaposematic, pseudepisematic, pseudosematic, recessive, sematic character.** See ★*pseudaposematic*, etc.—**Signaling character.** Same as ★*sematic character*.—**Warning character,** any characteristic of a dangerous, poisonous, or unpalatable organism which, when displayed, serves to warn or alarm enemies; an aposematic character. See ★*aposematic*.—**Wedge-formed characters,** cuneiform characters. See *cuneiform*, 1 (*a*).

characterial (kar-ak-tē'ri-al), *a.* Pertaining to the characters (of a drama).

One of Shakespeare's most wonderful gifts was his unlimited power of a *characterial* invention to suit any kind of plot. *Halliwell*, Life of Shakespeare, p. 116.

characterist (kar'ak-tėr-ist), *n.* [*character* + *-ist.*] 1†. One who employs characts or magical signs.—2. One who depicts character, as distinct from a mere caricaturist or funmaker.

Mr. Du Maurier, *characterist* rather than caricaturist, gives this sheep face to his typical Duchess of Stilton, and to her two daughters.
R. G. White, England Without and Within, p. 205, note.

characteristic. I. *a.*—**Characteristic geometry.** See ★*geometry*.

II. *n.*—**Characteristic of a surface,** the curve of intersection of a surface with a neighboring surface of the same family.

characterology (kar″ak-tėr-ol'ō-ji), *n.* [Gr. χαρακτήρ, character, + -λογία, < λέγειν, speak.] The science of character; the study of types, genesis, etc., of character; ethology.

In the process of emancipation from traditional and untenable views of man, an iconoclastic attitude towards all attempts at practical *characterology* and theories of constitution was probably the only safe procedure.
Amer. Jour. Psychol., July-Oct., 1903, p. 356.

character-plant (kar'ak-tėr-plant), *n.* In *phytogeog.*, that species, or one of the species, in a given plant-formation to which it owes its physiognomic character; a facies.

charadriiform (ka-rad'ri-i-fôrm), *a.* Belonging to the order of birds known as *Charadriiformes*.

Charales (kā-rā'lēz), *n. pl.* [NL. (Lindley, 1833), < *Chara* + *-ales.*] An order of cryptogamous plants which contains the family *Characeæ* or *Charaphyceæ* only. See *Characeæ*.

Charaphyceæ (kar-a-fis'ē-ē), *n. pl.* [NL., < *Chara* + φῦκος, seaweed, + *-eæ.*] Same as *Characeæ*.

charbon, *n.* 3. In *bot.*, a name formerly applied to the smut of wheat; also, sometimes applied to the black rot of the grape, especially in France.—**Charbon roux.** See *red* ★*charcoal*.

charco (chär'kō), *n.* [Sp. Pg.; origin unknown.] A pond or pool of standing water; a small lake.

charcoal, *n.*—**Red charcoal,** a kind of charcoal of a dark reddish-brown color, made by heating wood with the exclusion of air to a lower temperature than would produce ordinary black charcoal. The volatile matter is not entirely removed. It is used in France in the manufacture of sporting gunpowder, and recently in England in cocoa-powder for heavy artillery service.

charcoal (chär'kōl), *v. t.* [*charcoal*, *n.*] 1. To blacken, write, or draw with charcoal; execute in charcoal: as, to *charcoal* one's eyebrows.

And I decipher still
Half a lame couplet *charcoaled* on the wall.
Thackeray (trans.), The Garret, st. 2.

2. To suffocate with the fumes of charcoal.

A shoemaker who was jealous of a young girl . . . because she wouldn't shut herself up in an air-tight three-pair of stairs, and *charcoal* herself to death with him.
Dickens, Nicholas Nickleby, xxxvii.

charcoaler (chär′ko-lẽr), *n.* A charcoal-burner; one who deals in charcoal.

Ah! friendless in death!
Rude forest-hands fling
On the *charcoaler's* wain
What but now was the king!
F. T. Palgrave, Death in the Forest, st. 6.

charcoaling (chär′kō-ling), *n.* Killing by means of the fumes of burning charcoal.

The other day the papers contained an account of a wholesale *charcoaling*, in which a father, mother, and two children sought death in this way.
Tuke, Med. Handbook, VII. 555.

charcoal-pencil, *n.* **2.** A little stick molded from a mixture of wood charcoal in powder, gum, or starch paste, and a small quantity of saltpeter. When lighted at one end it continues to burn, and the red-hot point is used to lead a crack in thin glass, as of a tube or beaker, in any required direction, broken pieces of chemical apparatus being thus adapted to new uses.

charcoal-pig (chär′kōl-pig), *n.* A kind of pig-iron made by using charcoal as a fuel to reduce or smelt the ore in the blast-furnace. It was formerly considered the best grade of iron, being free from sulphur and some other impurities usually found in iron made with coal or coke as a fuel. Other forms of iron or steel, purified in the process of manufacture, have largely taken its place.

Charcot-Leyden crystal. See *Charcot's crystals*, under *crystal*.

Charcot's arthropathy. See ★*arthropathy*.

charcuterie (shär-küt-rē′), *n.* [F., ⟨ *charcutier*, a pork butcher, earlier *charcuitier*, *chercuitier*, ⟨ *char cuite*, cooked meat; *char*, ⟨ L. *caro*, flesh, meat; *cuite*, ⟨ L. *cocta*, cooked.] **1.** The occupation of a pork-butcher; the curing and dressing of pork in its various salable forms—hams, bacon, cutlets, sausages, etc.—**2.** Table delicacies of pork or into which pork largely enters.

charcutier (shär-kü-tyā′), *n.* [F.] A pork-butcher.

Chardonnet silk. See ★*silk*.

Charegite (kar′ē-jīt), *n.* [Ar. *khārijīyah*, aliens, ⟨ *kharaja*, go out.] A member of a puritanical Mohammedan sect which dates from the seventh century.

The *Charegite*, for such was the seeming Marabout, dealt the Nubian a blow with the dagger.
Scott, Talisman, xxi.

charge, *v. t.* **16.** To paint too heavily; to over-express.

charge, *n.* **23.** In *ordnance*, the powder contained in a bag or case in quantity suitable for loading a gun, or the powder filling the interior of a projectile. A *service* or *ordinary charge* is that ordinarily used in the gun. A *reduced charge*, containing less powder, is sometimes used in target practice to save expense. A *bursting* or *shell charge* is the explosive in the interior of a shell.—**Effective charge,** the amount of money required for or expended on the effective militant forces of a country, that is, on those fit for or actually engaged in service as distinguished from non-effectives, such as the retired, the pensioned, etc. *Macaulay*.

chargé (shär-zhā′), *n.* Short for *chargé d'affaires*.

charged, *p. a.* **3.** In *art*, heavily painted; over-expressed.

chargé d'affaires. *n.* **3.** An officer or other person left in charge of any business or office during the temporary absence of the chief.

chargee (chär-jē′), *n.* [*charge* + *-ee*[1].] One who holds, as security, a charge upon property: analogous to *mortgagee*.

chargeling (chärj′ling), *n.* [*charge* + *-ling*[1].] A young charge. See *charge*, *n.* 10.

At this period Jesuits stamp the future of their *chargeling* flocks. *G. Meredith*, Richard Feverel, xii.

chargeman (chärj-man), *n.* A workman who has charge of the men engaged in doing a certain piece of work; a foreman. In some establishments the chargeman is given a contract for the work which he directs, so that he will have the greatest possible interest in the speedy and economical performance of it.

charging-box (chär′jing-box), *n.* A box in which ore, scrap, pig-iron, fluxes, etc., are conveyed to the furnace by means of a charging-machine.

charging-current (chär′jing-kur″ent), *n.* In *elect.*, the current used in charging a storage battery, condenser, or cable.

charging-machine (chär′jing-ma-shēn″), *n.* A machine for delivering coal, ore, or metals to a furnace, gas-retort, or coke-oven. It is made in many different forms, all essentially loading-machines which take up the material and push it by means of a ram into the furnace, retort, or oven; the ram distributes it, and is then withdrawn to permit the closing of the door. In gas-charging-machines steam is sometimes used to blow the coal into the retort. In one sense a mechanical stoker is a charging-machine, but it is not usually classed as such. See *mechanical stoker*.

charging-scale (chär′jing-skal″), *n.* A scale for weighing the various materials used in a blast-furnace. It has a series of beams, one for each kind of material. To obtain the right proportion, each beam is weighted to the amount required, and each load is made to balance the weight of its special beam, the object being to mix the materials in the right proportions and weigh and deliver each as rapidly as possible without disclosing the formula on which the combined proportions are based.

charging-spoon (chär′jing-spön″), *n.* In *mining*, a hollow half-cylinder of copper or zinc at the end of a copper or wooden rod, used for introducing loose gunpowder in blast-holes nearly or quite horizontal. *C. Le N. Foster*, Ore and Stone Mining, p. 161.

charging-tube (chär′jing-tūb″), *n.* Any tube for charging a chamber or tank with a fluid under pressure; specifically, a tube for charging an air-chamber on a pump with air. Water under a pressure greater than the atmospheric takes up air very readily; hence, some means should be provided for supplying air to the air-chamber on the discharge side of a pressure-pump.

Chari group. See ★*group*[1].

chariotry (char′i-ọt-ri), *n.* [*chariot* + *-ry*.] **1†.** The art of charioteering.

Chariotry is one of the antiquated Modes of Chivalry. Heretofore, as it was used in Triumphs, so in field service and Games.
Aubrey, Remaines of Gentilisme and Judaisme, p. 120.

2. The soldiers who fought from chariots.

And deep ruts are yet visible on all the bogs, moors and mosses . . . indented . . . by the wheels of Fingal's *chariotry*. *Blackwood's Mag.*, XXIV. 260.

charismatic (ka-riz-mat′ik), *a.* [*charism* + *-atic*.] Of or pertaining to charism or charismata.

charisticary (ka-ris′ti-kā-ri), *n.* [NL. **charisticarius*, ⟨ Gr. χαριστικός, given of grace, freely given, ⟨ χάρις, grace, favor.] Originally, the recipient of a prebend, the allowance of food which a monk or cleric received from the common store: same as *prebendary*.

charityless (char′i-ti-les), *a.* [*charity* + *-less*.] Devoid of charity.

Such people there are living and flourishing in the world—Faithless, Hopeless, *Charityless*.
Thackeray, Vanity Fair, viii.

charivari, *n.* **2.** [*cap.*] The name of a satirical journal founded in Paris in 1832.—**The London Charivari,** the secondary title of "Punch," a humorous weekly journal published in London.

charivari (shar-i-var′i), *v. t.* To treat to a charivari.

chark[2], *n.* **2.** The fire-drill; an instrument for producing fire.

charlatanish (shär′la-tan-ish), *a.* [*charlatan* + *-ish*[1].] Savoring somewhat of the charlatan.

charlatanistic (shär′la-tan-is-tik), *a.* Having a tendency to charlatanism; inclined to quackery; somewhat quackish.

Charley, *n.* **2.** A small pointed beard such as that worn by Charles I. of England and by men of his time: hence the name. It extended from the under-lip and ended in a point just below the chin.—**3.** The fox.

charlock-weevil (chär′lok-wē″vil), *n.* An English gardeners' name for a European curculionid beetle, *Ceuthorhynchus contractus*, which feeds on charlock.

Charlton white. See ★*white*[1].

Charmouthian (chär-mouth′i-an), *a.* Of or pertaining to *Charmouth*, in Dorset, England.—**Charmouthian stage,** in *geol.*, a division of the Lower Jurassic rocks or Lias of France and Switzerland; it corresponds essentially to the Middle Lias of England.

charnel[2] (chär′nel), *n.* [Cf. *carnel*.] **1.** A hinge, as of a door, window, chest, etc.—**2.** The pivot or hinge on which the beaver or vizor of a helmet moved.

charneled (chär′neld), *p. a.* [*charnel*[2] + *-ed*[1].] Hinged; jointed.

The bassenet pece whereunto the Barbet . . . is *charneled*. *Hall*, Chron., p. 674.

charnockite (chär′nok-īt), *n.* [Named after Job *Charnock*, associated with the early history of Calcutta.] In *petrog.*, a name given by T. H. Holland (1893) to a group of phaneric igneous rocks in India, which range from acid to basic varieties and agree in containing hypersthene; the type rock is hypersthene-granite.

Charonic (kā-ron′ik), *a.* Of or pertaining to Charon, the ferryman, in Greek mythology, of the lower world.

Charrinia (ka-rin′i-ä), *n.* [NL. (Viala and Ravaz, 1894), named for Dr. *Charrin*, a French physician.] A genus of pyrenomycetous fungi. The single species, *C. Diplodiella*, is said to be the ascigerous form of *Coniothyrium Diplodiella*, which causes the white rot of the grape. See ★*Coniothyrium*, *grape-rot* and *rot*, 2 (*b*).

chart, *n.* **Astrographic chart,** a chart of a region of the stars, specifically, one of the star-charts of the systematic astrophotographic survey of the heavens.—**Cosmogony chart,** a birch-bark chart on which a pictographic record of the creation myth is engraved: used by the Ojibwa Indians in connection with their religious ceremonial.—**Cotidal chart.** See ★*cotidal*.—**Halley's chart,** a chart showing the curves of compass variation.—**Heliographic chart,** a chart which shows the sun's spots at any particular time and their physical peculiarities.—**Hydrographic chart,** a chart showing especially the hydrographic features of the ocean, such as the depth of water, the currents at the surface and beneath, the density or saltness of the water, the temperature, and the changes of these with the seasons.—**Meteorological chart.** See *weather-map*.—**Physical chart,** a map or diagram designed to illustrate certain features of physiography or physical geography.—**Thermal chart,** a chart showing the temperature of the air or land or water, usually by means of isothermal lines.

charta, *n.* **2.** In *pharm.*; (*a*) A folded paper containing a powder; also, a dose of any medicinal powder. (*b*) A piece of bibulous paper impregnated with some medicinal substance.—**Charta cantharidis** or **epispastica,** blistering-paper; a paper spread with a mixture of cantharides, Canada turpentine, and olive-oil, used for counter-irritation or to make a blister.—**Charta potassii nitratis.** Same as ★*asthma-paper*.—**Charta sinapis,** mustard-paper or -leaf; a paper spread with a mixture of black mustard and gutta-percha solution, used as a substitute for a mustard-plaster, to produce counter-irritation.—**Charter colony,** a colony under charter government.—**Charter government,** government of a colony under authority of a written charter granted by the sovereign power.—**Charter member,** one whose name appears in the charter of an organization as one of its founders.—**Charter of pardon,** in *Eng. law*, an instrument under the great seal by which a pardon is granted to a man for felony or other offense.

Chartered accountant. See ★*accountant*.

charterer, *n.* **3.** A freeman of a chartered borough.

charter-school (chär′tèr-skōl″), *n.* One of the schools established in Ireland by a society chartered in 1733 to provide a Protestant education for the Roman Catholic poor. These schools were of two kinds, day-schools and boarding-schools; the boarding-schools were supported by Parliament after 1745, when a special tax was devoted to them. The charter-schools failed in their purpose and came to an end in 1825.

chartographist (kär-tog′ra-fist), *n.* [*chartography* + *-ist*.] One who is versed in chartography, or is engaged in map-making; a chartographer.

chartology (kär-tol′ọ-ji), *n.* [Gr. χάρτης, a leaf (L. *charta*, a map), + *-λογία*, ⟨ λέγειν, speak.] The science of map-making.

chartreuse, *n.* **3.** In *cookery*, a preparation usually of game, fillets, etc., incased in a mold of rice; also, fruits inclosed in blanc-mange or puddings. These preparations were invented, it is said, by the monks of the monastery of Grande Chartreuse to disguise meat.—**Chartreuse cat.** See ★*cat*[1].

Chartreux (shär-trē′), *n.* [F., earlier *charteus*, ⟨ ML. *Carthusius*: see *Carthusian*.] A monk of the Carthusian order which was founded by St. Bruno in the eleventh century. The name was derived from the valley of the Chartreuse, where the order's first monastery was founded.

charvolant (shär-vọ-lań′), *n.* [F. **char volant*, 'flying car.'] A four-wheeled vehicle with a kite attachment, designed to be propelled by the force of wind: patented in England in 1826.

chary (chär′i), *adv.* Charily; carefully.

Thy heart, which I will keep so *chary*
As tender nurse her babe from faring ill.
Shak., Sonnet xxii.

Great thanks, mighty Lucifer!
This will I keep as *chary* as my life.
Marlowe, Faustus, ii. 2.

chase[1], *v.* **I.** *trans.* **4.** To push the bottle toward one and thus call upon him to fill up his glass.

"Above all, why, when I fill this very glass of wine, cannot I push the bottle to you, and say, 'Fairford, you are *chased*'!" *Scott*, Redgauntlet, Letter i.

II. *intrans.* **4.** To exceed a given customary standard of production. [Workmen's slang.]

chase[1], *n.* **Hazard chase.** See ★*hazard-operator*.—**To have a good chase** (*naut.*), to be so constructed and to have guns so mounted as to be able to fire at an object dead ahead or dead astern.

chase[2], *n.* **7.** The conical apex of a spinning-machine cop or bobbin, or the extent of the traverse of the winding-faller wire on a spinning-mule. Sometimes called the *nose*.

The apex of the cop is the nose or *chase*; this extends from the shoulder of the cop to its apex. The shoulder acts as a good support to the *chase* of the cop in winding.
Hannan, Textile Fibres of Commerce, p. 124.

8. In *carp.*, a score or shallow cut in a mortise. [Local, Eng.]

chasee (chas-ē′), *n.* One who is chased. [Rare.]

chaser[1], *n.* **4.** The sip of water or mild drink with which tipplers 'chase' or wash down their dram of spirits. [Slang.]

chaser[2], *n.* **3.** Same as *edge-runner mill* (which see under *mill*[1]). Also called *chaser mill.*

chasmal (kaz′mal), *a.* [*chasm* + *-al*[1].] Of the nature of a chasm; chasm-like: as, a *chasmal* difference.

chasmantherous (kaz-man′thēr-us), *a.* [Gr. χάσμα, opening, + NL. *anthera*, anther, + *-ous.*] In *bot.*, hemiclistogamous with the stamens exserted: said of a class of flowers.

chasmoclistogamous (kaz-mo-klis-tog′a-mus), *a.* [Gr. χάσμα, an opening, + *clistogamous.*] In *bot.*, bearing both open and closed flowers.

chasmogamous (kaz-mog′a-mus), *a.* [*chasmogam-y* + *-ous.*] Exhibiting the phenomenon of chasmogamy.

chasmophyte (kaz′mō-fīt), *n.* [Gr. χάσμα, an opening, + φυτόν, plant.] In *phytogeog.*, a plant inhabiting the crevices of rocks. *Schimper.* (trans.) Plant Geog., p. 178.

chasse[1] (shäs), *n.* [F., short for *chasse-café*, lit. 'chase coffee.'] A small glass of brandy or liqueur taken after coffee, at dinner, to remove its taste or odor or as a digester. See *pousse-café.*

chasse[2] (shäs), *n.* [F. *châsse*: see *chase*[2], *n.*] A shrine or receptacle for relics of a saint.

chassé (shä-sā′), *v.*; pret. and pp. *chasséd*, ppr. *chasséing.* [Also *chassée, chassey*, and orig. *chassez*, < F. *chassez* (used as a direction in teaching dancing), impv. of *chasser*, chase: see *chase*[1]. The spelling *chassé* (as if from the F. pp.) appears to be a mistake. See the noun, which is much later in English. Cf. the F. nouns *chassez-déchassez*, and *chassez-huit*, names of dance steps.] **I.** *intrans.* **1.** In *dancing*, to execute a step or gliding motion (known as the *chassé*) in which one foot is kept in advance of the other.—**2.** To move or make one's way with gliding steps, as across a crowded room: as, before long he *chasséd* up to me. [Colloq.]

II. *trans.* To cause to chassé toward the door; dismiss. [Slang.]

He was *chasséd* on the spot. *Thackeray.*

chassé (shä-sā′), *n.* [Also *chassez*; from the verb. The F. *chassé* in the same sense is late, and may have been suggested by the E. use of the spelling *chassé.*] In *dancing*, a step or gliding motion in which one foot is kept in advance of the other.

chasse-café (shäs-kä-fā′), *n.* [F.] See ★*chasse*[1].

chassis, *n.* **2.** In *fort.*, the foundation-frame or bed-plate upon which a gun-carriage is supported or adjusted.—**3.** The frame of a motor-car or motor-vehicle, exclusive of the seats or body. It includes the structural elements, the motor and its generator of power, the tanks, transmission-gear, wheels, axles, and springs.—**Carrosserie chassis** [F.], a carrying or supporting chassis or frame; specifically, the rear frame of a motor-car which has a frame for each axle.

chastend, *pp.* A simplified spelling of *chastened.*

chastenment (chās′n-ment), *n.* The act of *chastening.*

chastize, chastizement. See *chastise, chastisement.*

chastizment, *n.* A simplified spelling of *chastisement.*

chat[1], *n.* **3.** Impudence or impudent talk. [Scotch.]—**4.** The point or question to be settled. [Colloq.]

Has the gentleman any right to be in this room at all, or has he not? Is he commercial, or is he miscellaneous? That's the *chat*, as I take it. *Trollope*, Orley Farm, vi.

chat[4], *n.* **3.** A small potato of inferior quality. [Prov. Eng.]—**4.** A small piece of coal. [Prov. Eng.]—**5.** In *mining*, a piece of ore with stone adhering to it; in the plural (also singular), ore in this state (usually called in the United States *raggings*): a middle product made in the concentration of ore, consisting of particles of gangue containing included grains of valuable mineral.—**6.** *pl.* The tailings or waste product from the concentration of ore.

Château d'eau, a form of fountain in which the monumental architectural setting is especially elaborate.

chatelainry (shat′e-lān-ri), *n.* [*chatelain* + *-ry.*] The district or territory under a chatelain; a castellany.

Chattahoochee beds. See ★*bed*[1].

Chattanooga shale. See ★*shale.*

Château d'Eau (Fontana dell' Acqua Felice, Rome). (From "Baudenkmäler in Rom," pub. by Wasmuth, Berlin.)

chattelization (chat″el-ī-zā′shon), *n.* **1.** The act or practice of chattelizing real property.—**2.** The act or practice of chattelizing human beings; ownership of human beings; the fact of being chattelized.

chattelship (chat′el-ship), *n.* The state of being held in slavery as property.

chatter-mark (chat′ėr-märk″), *n.* **1.** A mark left on a piece of metal by a cutting-tool, when the latter is so adjusted that it alternately cuts and is forced back, thus cutting intermittently and making a chattering noise.—**2.** Irregular gouges made on surfaces over which a glacier passes, by the slipping of rock fragments held in the lower portion of the ice. *Chamberlin and Salisbury*, Geol., I. 276.

chatterment (chat′ėr-ment), *n.* Chattering; chatter.

chattery (chat′ė-ri), *a.* Chattering, as with cold; shivery.

Chaucerian (châ-sē′ri-an), *a.* and *n.* **I.** *a.* Of, pertaining to, or characteristic of the English poet Chaucer or his writings: as, *Chaucerian* English.

II. *n.* A student of Chaucer.

Chaudfroid sauce. See ★*sauce.*

chauffeur (shō-fėr′), *n.* [F., a fireman, a stoker: hence, recently, the 'fireman' or controller of a steam or other automobile, < *chauffer*, heat, fire up: see *chafe, v.*] The driver of an automobile.

chauffeuse (shō-fėz′), *n.* [F., fem. of *chauffeur.*] A woman who operates an automobile.

Chauliognathus (kâ-lī-og′na-thus), *n.* [NL., < Gr. χαυλιόδους, with outstanding (teeth), + γνάθος, jaw.] An important genus of malacodermid beetles, comprising 40 or more American species: known popularly as 'soldier-beetles.' See cuts under *soldier-beetle. Hentz*, 1830.

chaulmugric (châl-mug′rik), *a.* Derived from chaulmugra.—**Chaulmugric acid,** an acid, $C_{18}H_{32}O_2$, obtained from chaulmugra-oil expressed from the seeds of *Hydnocarpus Kurzii.*

chaussée[2] (shō-sā′), *n.* [F.: see *causey, causeway.*] A causeway; a highway.

Two roads lead westwards from Brusa. The one, a regular *chaussée* with bridges, kilometre posts, and telegraph, runs about due west through the plain.
Geog. Jour. (R. G. S.), IX. 151.

chaussure (shō-sür′), *n.* [F., < *chauser, v.*, shoe, < *chausse*, a shoe.] A covering for the feet, such as shoes, boots, sandals, etc.

Chautauqua maskalonge. See ★*maskalonge.*

Chautauquan (châ-tâ′kwan), *a.* and *n.* **I.** *a.* **1.** Of or pertaining to the lake or the county of Chautauqua, in southwestern New York.—**2.** Of or pertaining to the Chautauqua Literary and Scientific Circle, founded for the promotion of home reading and study in connection with the summer school which meets at Chautauqua Lake, or its courses of study.—**3.** In *geol.*, noting a division of the Devonian of North America, which comprises the last period (Chemung beds) of the Neodevonian.

II. *n.* A member of the Chautauqua Circle, or one who takes or has taken its course of study and examinations.

Chavannesia (shav-a-nē′zi-ä), *n.* [NL., named by Alphonse de Candolle in 1844, in honor of his friend Edouard *Chavannes*, a Swiss botanist.] A genus of dicotyledonous plants of the family *Apocynaceæ.* See *Urceola.*

chavellery†, *n.* **1.** Same as *cavalry.*—**2.** The Cavaliers or Cavalier party of the seventeenth century.

Chayota (chä-yō′tä), *n.* [NL. (Jacquin, 1780), < Amer. Sp. *chayote*, < Aztec *chayotl.*] A genus of dicotyledonous plants which belong to the family *Cucurbitaceæ.* See *chayote* and *Sechium.*

chayro (chī′rō), *n.* [Aymará of Bolivia.] A soup made of mutton and jerked meat, chuñu, potatoes, maize, and various condiments: a Bolivian national dish.

Ch. B. An abbreviation of the Latin *Chirurgiæ Baccalaureus*, Bachelor of Surgery.

Ch. Ch. An abbreviation of *Christ Church.*

Ch. D. **1.** An abbreviation of the Latin *Chirurgiæ Doctor*, Doctor of Surgery.—**2.** See ★*D. Ch.*

Ch. E. An abbreviation of *Chemical Engineer.*

cheat[1], *n.* **7.** In *bot.*: (*a*) The darnel, *Lolium temulentum.* (*b*) Same as *chess*[2].

cheater, *n.*—**Tame cheater,** a tame animal, such as a duck, used as a decoy.

He's no swaggerer, hostess; a *tame cheater*, i' faith; you may stroke him as gently as a puppy greyhound. He'll not swagger with a Barbary hen, if her feathers turn back in any show of resistance. *Shak.*, 2 Hen. IV., ii. 4.

chebec[2] (chē-bek′), *n.* [Prob. imitative.] A name for the least flycatcher, *Empidonax minutus*: used chiefly in New England.

chebog (chē-bog′), *n.* [Of New England Amer. Ind. origin (Narragansett?).] A menhaden.

chebule (ke-böl′), *n.* [F. *chebule*, It. *chebuli*, < Hind. *Kābulī*, 'of Kabul,' whence it is imported into India.] The dried, astringent, prune-like fruit of *Terminalia Chebula*, used as a tan, dye, and medicine. See *myrobalan* and *Terminalia*[2].

chebulic (ke-bö′lik), *a.* [*chebule* + *-ic.*] Obtained or derived from *chebule*: as, the *chebulic* or black myrobalan of commerce.—**Chebulic acid,** a crystalline acid with a sweet taste found in the stones of *Terminalia Chebula.*

check[1], *n.* **19.** A longitudinal crack in timber due to too rapid seasoning. Also called *season-check.* See *check*[1], *v. i.*, 5.—**20.** In *irrigation*, a small levee or dike for holding the water on irrigated fields.—**21.** In experimentation, a part of the material of the experiment left untreated for the sake of comparison. Thus in fertilizer-tests one or more plats are left without fertilizer in order to know what results are due to fertilization in the others.—**22.** Same as ★*checkers*[1], **11.**—**23.** A joint having two parts which fit one into the other and so form a guide. A dowel-pin is a common example. It is customary in high-pressure hydraulic piping to check the flanges, that is, to turn a groove in the face of one flange and make a tongue to correspond on the other.

24. In *card-playing* and *banking games*, a counter sold by the banker which can be redeemed at any time. A stack of checks is 20. When of various colors, the white are always of least value, red next, and then blue and yellow.

25. In *hunting*, a stoppage of the hounds owing to temporary loss of the scent.—**Discovered check,** in *chess*, a check administered by the moving of a piece and the opening thereby of the range of another piece upon the adverse king. The piece or pawn moved does not, however, check directly. See *check*[1], *n.*, 1, and *double* ★*check.*—**Double check,** in *chess*, a check from two pieces at the same time, resulting from a move which checks the king and unmasks another piece, which also checks; a direct check and a discovered check.—**Perpetual check,** in *chess*, the position of a player when he cannot parry a check without subjecting himself to another check on his adversary's next move, and when his adversary insists upon administering those checks. Under such circumstances the game is declared drawn.—**Simple check,** in *chess*, ordinary check, when the adverse king is attacked by a single piece or pawn.—**To discover check,** in *chess*, to unmask a check by moving a piece. See *discovered* ★*check.*

check[1], *v.* **I.** *trans.* **9.** To fit or fasten together (two pieces) in such a manner that they can be separated only by a motion perpendicular to the plane of the joint.

II. *intrans.* **6.** To crack or split without falling apart.

Wherever they have been opened the coal beds of the Washington Creek Basin show no evidence of faulting, and the coal is not crushed, but can be obtained in large pieces which "*check*" but do not break up readily on exposure to the air.
Contrib. to Econ. Geol., U. S. Geol. Surv., 1902, p. 277.

7. In *hunting*, to stop (as dogs do) because of loss of the scent.—**8.** To draw a check.

Had *checked* for nothing until the day before her death, when she took out in person the sum of 4,000 francs.
Poe, Works, I. 100.

checkage (chek′āj), *n.* [*check* + *-age.*] The act or process of checking (the items of an account, list, invoice, etc.), or the fact of having been checked.

check-band (chek′band), *n.* In *textile-manuf.*, a device attached to a spinning-mule as a drag

or check upon the varying velocity of the spindle-carriage during its traverse. *Nasmith*, Cotton Spinning, p. 275.

check-bar (chek′bär), *n.* A metal bar with loops on each end for retaining the ends of the check-reins of a harness-bridle, and a rear loop at the center by which it is attached to the check-hook.

check-battery (chek′bat″ėr-i), *n.* In *mining*, a timber construction which closes the lower part of a chute, acting as a check to the flow of coal and as an air-stopping.

check-bit (chek′bit), *n.* A harness-bit used with the over-check, with or without a lever.

check-book, *n.* **2.** A book in which items of control are entered.

check-damper (chek′dam″pėr), *n.* A door or slide by which cold air may be admitted to the base of the flue or chimney behind the fire and without passing through or over the latter. The effect of opening the check-damper is to lower the temperature of the gases in flue and chimney, and therefore more nearly to equalize the pressure of the cool atmosphere below the fire, and hence to check the draft and diminish the rate of combustion.

check-easer (chek′ē″zėr), *n.* In a harness, a device for relieving the steady strain of the over-check. It interposes an elastic web or spiral spring between the check and the hook-loops.

checker[1], *n.* **11.** One of many spots or markings, somewhat triangular in shape, on the wings of a pigeon. A checker is larger than a spangle. The term is generally used in combination, as *blue-checker*, *red-checker*, etc., the qualifying word referring to the general color of the bird and not to that of the spots, which are usually white. Also often *check*.

checker-board, *n.* **2.** In *American foot-ball*, a term sometimes applied to the field of play. See ★*gridiron*.

checkered, *p. a.* **3.** Having the wing marked with numerous white spots, larger in size and fewer in number than in the condition termed *spangled*: used in describing breeds of pigeons. — **Checkered beetle.** See ★*beetle*[2].

checkerwork, *n.* **2.** In a regenerative furnace or water-gas plant, a mass of loose bricks inclosed in an upright cylindrical chamber and loosely piled in alternate layers to form an open mass. When submitted to a hot blast the checkerwork becomes intensely heated and, when the blast is shut off, can be used to heat an air-blast or a stream of gas passing through its open spaces. See *regenerator*.

check-experiment (chek′eks-per″i-ment), *n.* A control-experiment; an experiment devised to confirm the results of other experiments: for example, an experiment made under normal conditions, the result of which enables the experimenter to estimate the effect, in a parallel series of experiments, of a determinate variation of conditions.

check-flooding (chek′flud″ing), *n.* In *irrigation*, a method of controlling water by means of low levees or dikes when flooding fields.

check-gate (chek′gāt), *n.* A small gate, or movable dam, placed in the low levees extending across irrigated fields.

check-greeve (chek′grēv), *n.* In *mining*, a person who checks the weights of coal on behalf of the landlord. [Scotch.]

checking, *n.* **2.** The assembling of the parts of a checked joint.— **3.** In *agri.*, the planting of seeds or plants at regular distances apart in the row or line, to allow of cultivation both ways, instead of *drilling* in a continuous or 'solid' row.

check-out (chek′out), *n.* The termination of a coal-seam by the meeting of roof and floor.

check-rail, *n.* **2.** A guard-rail; an extra rail on the inner side of the inner rail of a railway curve, so laid as to leave sufficient room for the flanges of the wheels to pass freely between the heads of the two rails. As the train rounds the curve, the inner wheels bear against this extra rail, thus relieving the pressure of the wheels against the outer rail and preventing the derailing of the train.

check-row (chek′rō), *v. t.* To plant (Indian corn) with a check-rower.

Particularly for use on growing *check-rowed* and listed corn. *Sci. Amer.*, N. S., LVIII. 298.

check-spring (chek′spring), *n.* In *hardware*, an extension-spring used to keep a door or gate closed, or for any similar purpose. See cut under ★*extension-spring*.

checkstone (chek′stōn), *n.* A small round pebble, called in the United States *jackstone* and in Scotland *chuckie* or *chuckie-stane* or *-stone*, used in the children's game of chucks or jackstones.

check-strap, *n.* **3.** A leather strap, extending from the bottom of the body of a carriage to the perch, to check the upward movement of the body.

check-system (chek′sis-tem), *n.* **1.** A system for keeping the time of workmen, largely used in factories. It has many forms, but is essentially as follows: A board is placed just within the entrance-gate, on which are hung numbered checks, one for each man. As each workman passes in, he takes his check from the board and places it in a box, thus showing that he has gone in to work. The timekeeper takes the checks from the box and, by means of the numbers, knows what men are at work. The checks are placed on the board in readiness for the men each half-day, and, since no man can leave without a pass signed by his foreman or at the end of the half-day, it enables the timekeeper to keep a record of the men.

2. The network or system of checks or small levees constructed in fields to be irrigated.

check-weigher (chek′wā′ėr), *n.* One who checks or verifies weights; specifically, in *mining*, the man who verifies the tally, or record of weight of the coal or other mineral which comes up from workings where the miner is paid by the ton, and who credits the output to the account of the individual worker.

checkwork (chek′wėrk), *n.* In *mach.*, the regular release of an obstruction which takes place by means of an even-timed body; an escapement. The wheel and pendulum of an ordinary clock are a common example.

cheek, *n.* — **Fixed cheeks,** in the anatomy of the trilobites, the lateral parts of the cephalon between the dorsal furrows and the facial sutures which separate them from the free cheeks. — **Free cheeks,** in the anatomy of the trilobites those parts of the cephalon which lie outside the facial sutures and are separated thereby from the fixed cheeks.

cheeker (chēk′ėr), *n.* One who gives cheek or who talks impudently, saucily, or with unbecoming boldness and lack of respect to some one. [Slang.]

cheekiness (chē′ki-nes), *n.* Cheeky conduct or speech; cool impudence. [Colloq.]

cheek-piece, *n.* **3.** A crank; a driving-wing; usually, a crank having parallel sides, and hence as large at its outer end as where it joins the shaft.— **4.** One of a pair of curved liners for a shaft-bearing. This form of liner is fitted to the shaft and forms the actual bearing-surface, instead of being placed outside the journal-box as in the case of a flat liner. See *liner*[2], 3.

cheepy (chē′pi), *a.* Ready to cheep; puling.

What a humiliated, broken-down, poor *cheepy* wretch I am. Condemned to live among the pots.
Carlyle, in Froude, Carlyle's Life in London, II. 237.

cheese[1], *n.* — **Basswood cheese.** Same as *sapsago* ★*cheese* (*b*). — **Bondon cheese,** a trade-name for a variety of soft cheese. — **Cambridge cheese,** a variety of soft cheese made in England. — **Cantal cheese,** a hard cheese made in the south of France. — **Cheshire cheese,** an old trade-name for a dry, pale red cheese made in England. — **Coulommier cheese,** a variety of soft cheese. — **Derby cheese,** a local name for an old variety of English cheese. **Edam cheese.** Same as *Dutch cheese* (*a*). — **Emmenthal cheese,** a hard Swiss cheese. — **Enriched cheese,** a cheese made with an excess of cream, or made from very rich cream; also, a trade-name for an adulterated or filled cheese. — **Filled cheese,** a trade-name for adulterated cheese. — **Flat cheese,** a trade-name for a thin cheese of only moderate weight. — **Gorgonzola cheese,** an Italian hard-pressed cheese. Also called *Stracchino cheese*. — **Gouda cheese,** a small, thin, disk-shaped cheese of a mild flavor which resembles that of Edam cheese. It is made in Holland and is usually colored yellow. — **Green cheese.** (*a*) See *green*[1]. (*b*) See *sap cheese*. (*c*) A term sometimes used to describe a poor thin cheese made from whey. — **Lard cheese,** an imitation of cheese made from lard. — **Margarin cheese,** in England, a cheese adulterated with any form of fat not derived from milk; in the United States, a filled ★cheese (which see). — **Sapsago cheese.** (*a*) See *sapsago*. (*b*) A local derisive name for any skim-milk cheese of poor quality. Also called *white-oak cheese* and *basswood cheese*. **Skim cheese,** a trade-name for any variety of cheese made from skim-milk. — **Sour-milk cheese,** any cheese in which the coagulation of the milk is caused by natural souring assisted by heat. — **Swiss cheese,** a cheese between the hard and soft varieties, made in Switzerland. It resembles Gruyère cheese. **White-oak cheese.** Same as *sapsago* ★*cheese* (*b*).

cheese[1] (chēz), *v. i.* To become cheese: as, the *cheesing* of milk.

cheese[2] (chēz), *v. i.* To stop. [Thieves' slang.] — **Cheese it!** make off! run! [A warning command; slang.]

cheese-basket (chēz′bas″ket), *n.* In *dairying*, a wooden box or bowl having a perforated bottom in which curd is placed to drain.

cheese-block (chēz′blok), *n.* Same as *chock-block*.

cheese-clack (chēz′klak), *n.* In *mining*, a temporary clack-valve inserted between two pipes. *Barrowman*, Gloss.

cheese-cutter (chēz′kut″ėr), *n.* An implement for cutting cheese. — **Computing cheese-cutter,** a combined cheese-knife and price-computing machine. It consists of a revolving platform on which the whole cheese is placed, a pivoted knife designed to make radial cuts in the cheese as the platform is revolved, and a price-computing device which controls the movements of the platform. When the computator is set for any particular price per pound, it can be so adjusted that the operator cuts a quantity corresponding in weight and value to the price shown on the register of the computator.

cheese-finger (chēz′ fing″gėr), *n.* Same as ★*cheese-stick*.

cheese-grease (chēz′grēs), *n.* See *whey* ★*butter*.

cheesemongering (chēz′mung″gėr-ing), *n.* The buying and selling of cheese; the business of a cheese-merchant.

cheesemongery (chēz′mung″gėr-i), *n.* **1.** The commodities dealt in by a cheesemonger. **2.** The shop or store in which such commodities are dealt in.

cheesery (chēz′ē-ri), *n.* [*cheese* + *-ery*.] A cheese-factory.

From the upper stories of these *cheeseries* were long wooden gutters leading to the ships in dock, and along these troughs trickled a never-ceasing rill of the ripened and matured article.
G. H. Boughton, in Harper's Mag., April, 1883, p. 692.

cheese-skipper (chēz′skip″ėr), *n.* The larva of the cheese-fly.

cheese-stick (chēz′stik), *n.* A strip of whole-wheat bread, puff-paste, dough made of flour, bread-crumbs, or other material, with grated cheese spread on or rolled in and baked until crisp: served with salad. Also called *cheese-straw*, *cheese-finger*.

cheese-straw (chēz′strâ), *n.* Same as ★*cheese-stick*.

cheese-trier (chēz′trī″ėr), *n.* A cheese-pale (which see).

cheesewood (chēz′wud), *n.* In Victoria, the hard yellowish-white wood of the Australian tree *Pittosporum bicolor*. It is used for turning and is prized for ax-handles, billiard-cues, etc. Also called *tolosa-wood*, and in Tasmania *white wood* and *waddywood*.

cheesewring (chēz′ring), *n.* **1.** A cheese- or cider-press. [Cornwall, Eng.]— **2.** [*cap.*] One of the natural curiosities of Cornwall, England, which receives its name from a supposed resemblance to the wring or press used in squeezing the liquor from the cheese or alternate layers of pounded apples and straw from which cider is made. It stands on a hill of considerable elevation near Liskeard, in that county, and consists of a pile of great tabular blocks of granite, 10 to 12 feet in diameter, heaped one upon another to a height of about 32 feet. As the blocks near the bottom of the pile are less than half the diameter of those they support, it has been likened to a gigantic mushroom.

cheesine (chēz′in), *n.* [Irreg. < *cheese*[1] + *-ine*[2].] The trade-name of a material made in imitation of cheese.

cheesy[2] (chē′zi), *a.* [*cheese*[2] + *-y*[1].] Stylish; fine; showy; 'quite the cheese.' [Slang.]

cheet[2], (chēt), *n.* [Also *cheat*; an imitative or dial variation of *chit*[2].] A word used in calling a cat; usually repeated, 'cheet, cheet,' like 'puss, puss.' [Scotch and North. Eng.]

cheetal, cheetul, *n.* Same as *chital*.

cheety (chē′ti), *n.* [Also *cheetie*; dim. of *cheet*[2].] Pussy! See ★*cheet*[2].

cheficat, *n.* See ★*sheficat*.

cheilitis, *n.* See ★*chilitis*.

cheirization, *n.* See ★*chirization*.

Cheiroglossa (kī-rō-glos′ä), *n.* [NL. (Presl, 1847), < Gr. χείρ, hand, + γλῶσσα, tongue.] A genus of epiphytic ferns sometimes joined with *Ophioglossum*, from which it differs externally in having several fertile spikes, and these pendent from a palmately divided (instead of simple) leaf. There is a single species, *C. palmata*, of Florida and tropical America. See *Ophioglossum*.

chekako (chē-kä′kō), *n.* [Said to be a native rendering of *Chicago* (man).] A novice or tenderfoot. [Alaskan slang.]

Chekh, *n.* Same as *Czech*.

chela[1], *n.* **4.** In sponge-spicules, a microsclere consisting of a more or less curved shaft bearing at each end a variable number of recurved processes.

chelem (shlem), *n.* [F. spelling of E. *slam*.] In *card-playing*, a slam (which see).

chelerythrin (kel-ē-rith′rin), *n.* [*Chel(idonium)* + Gr. ἐρυθρός, red, + *-in*[2].] An alkaloid, $C_{21}H_{17}NO_4$, found in the plants *Chelidonium majus*, *Stylophorum diphyllum*, *Sanguinaria Canadensis*, *Macleaya cordata*, *Glaucium Glaucium*, and other plants of the poppy family (*Papaveraceæ*): colorless in the free state, but forming lemon-yellow salts on the addition of acids. It is not identical with sanguinarin, as was once supposed.

chelicerate (kē-lis′ē-rāt), *a.* [*chelicera* + *-ate*[1].] Bearing cheliceræ, or small pincers, as the appendages of the merostome crustaceans.

chelidamic (kel-i-dam'ik), *a.* [*chelid(onic)* + *ammonia*) + *-ic.*] Derived from chelidonic acid and ammonia. **Chelidamic acid,** 4-pyridinol-2, 6-dicarboxylic acid, $HOC_5H_2N(CO_2H)_2 + H_2O$. It is prepared from chelidonic acid and ammonia. It decomposes at about 220° C.

chelidonin (kel-i-dō'nin), *n.* [*Chelidon(ium)* + *-in*[2].] A white crystalline alkaloid, $C_{20}H_{19}NO_5 + H_2O$, contained in the plants *Chelidonium majus* and *Stylophorum diphyllum.*

chelidonius (kel-i-dō'ni-us), *n.* [L., sc. *lapillus,* < Gr. χελιδόνιος, of the swallow, < χελιδών, swallow.] A stone from the crop of a swallow, worn in ancient times as a charm.

Chelidoperca (kel″i-dō-pėr'kä), *n.* [NL., < Gr. χελιδών, swallow, + περκη, a perch.] A genus of fishes of the western Pacific and Indian oceans.

chelidoxanthin (kel-i-dok-san'thin), *n.* [*Chelido(nium)* + Gr. ξανθός, yellow, + *-in*[2].] Until recently this has been applied to a yellow crystalline bitter principle of undetermined composition contained in the plant *Chelidonium majus.* It is now found to exist also in the plant *Stylophorum diphyllum* and to be identical with the alkaloid berberine ($C_{21}H_{17}NO_4$).

Chelifera (kē-lif'ę-rä), *n. pl.* [NL., < Gr. χηλή, claw, + L. *ferre,* bear.] A small tribe of isopod crustaceans, characterized by having the first pair of trunk-limbs or gnathopods like a forceps. It contains the families *Apseudidæ* and *Tanaidæ.*

cheliferid (kē-lif'ę-rid), *a.* and *n.* **I.** *a.* Having the characteristics of or belonging to the family *Cheliferidæ.*

II. *n.* A member of the family *Cheliferidæ.*

Chellean (shel'ę-an), *a.* [Also *Chellian;* < *Chelles* + *-an.*] **1.** Of or pertaining to Chelles in France, a place a few miles east of Paris, on the right bank of the Marne.—**2.** Of or pertaining to the earliest paleolithic period (the Chellean age) of Europe.—**Chellean deposits,** in *geol.* and *archæol.,* paleolithic deposits of earliest date, in which the most primitive type of worked flint implements are found.

chelonite, *n.* **2** A turtle-stone: a name given to certain fossils supposed to resemble turtles, but which are, for the most part, teeth of fishes.

Chelopus (kel'ō-pus), *n.* [NL., said to be formed (if so, erroneously for **Chelypus*) < Gr. χέλυς, a turtle, + ποῦς, foot; but the first element may be χηλή, claw.] A genus of small fresh-water turtles containing the common sculptured turtle, *Chelopus insculptus,* of the eastern United States and also the spotted turtle, *C. guttatus.*

Chelsea-Derby porcelain. See ★*porcelain*[1].

Chelsea pottery. See ★*pottery.*

Cheltenham beds. See ★*bed*[1].

chem. An abbreviation of *chemist, chemistry, chemical.* See ★*chemist,* 4.

chemæsthesis (kem-es-thē'sis), *n.* [NL., < *chem(icus),* chemic, + Gr. αἴσθησις, perception.] The stimulation of an organism by external or internal stimuli; the sensation of matter.

chemawinite (chē-mâ'win-īt), *n.* [*Chemawin,* Amer. Ind. name of a neighboring Hudson Bay post.] An amber-like resin found associated with woody debris on the shore of Cedar Lake in Canada.

chemiater (kem-i-ā'tėr), *n.* [NL. **chemiater,* < *chemia, chimia,* chemistry, + Gr. ἰατρός, physician.] A medical practitioner of the Paracelsian school, according to which all the processes of the body in health and in disease are of a chemical nature.

chemiatric (kem-i-at'rik), *a.* [NL. **chemiatricus,* < **chemiatria,* < MGr. χημια, alchemy, chemistry, + Gr. ἰατρεία, medicine. Cf. *iatrochemical.*] Of or pertaining to a theory of Paracelsus and others, according to which medical treatment should be directed to the chemical conditions (fermentations, etc.) which in this theory are the causes of disease.

chemiatry (kem'i-at-ri), *n.* [NL. **chemiatria,* < *chemia, chimia,* chemistry, + Gr. ἰατρεία, medical treatment.] Treatment of disease founded upon the Paracelsian doctrine of the chemical nature of physiological and pathological processes.

chemic, *n.* Specifically—**3.** A solution or liquor of chlorid of lime or bleaching-powder for bleaching vegetable matter, as cotton.

chemical, *a.* **3.** Versed in chemistry; engaged in the study of chemistry or in chemical research or investigation: as, a *chemical* philosopher; a *chemical* friend.—**4†.** Of or pertaining to alchemy or alchemists. Also *chymical.*—**Chemical actinometer.** See ★*actinometer.* **Chemical analysis.** By this term is understood, sometimes the actual separation of a substance into its different constituents, and sometimes merely the ascertainment of the kinds or quantities of the constituents into which it is separable. **Chemical antidote, denudation, dynamics, engineer, equilibrium, focus, fog.** See ★*antidote, denudation,* etc. **Chemical formula.** See *constitutional* or *structural* ★*formula.*—**Chemical fuse, gilding, induction, irritability, photometer, rectifier.** See ★*fuse*[2], etc.—**Chemical restraint,** the quieting of the violently insane by means of narcotic drugs. **Chemical styptic, thermometer, ware.** See ★*styptic,* etc.

chemically, *adv.* **2†.** By alchemy or alchemical means or processes.

Ernestus Burgravius, a disciple of Paracelsus, hath published a discourse in which he specifies a lamp to be made of man's blood, . . . which *chemically* prepared forty days, and afterwards kept in a glass, shall show all the accidents of his life. *Burton,* Anat. Mel., II. §ii. Mem. 4.

chemicking (kem'ik-ing), *n.* The process of bleaching with chlorid of lime.

chemicking-machine (kem'ik-ing-ma-shēn″), *n.* A machine for bleaching cotton cloth with chlorid of lime or bleaching-powder.

chemicobiologic (kem'i-kō-bī-ō-loj″ik), *a.* [*chemicobiolog-y* + *-ic.*] Of or pertaining to chemicobiology.

The results of bacteriologic and of *chemicobiologic* research as applied to the pathology of midwifery.
Lancet, Aug. 22, 1903, *adv.*

chemicobiology (kem″i-kō-bī-ol'ō-ji), *n.* [NL. *chemicus,* chemic, + *biologia,* biology.] The chemistry of living substance.

chemicodynamic (kem″i-kō-dī-nam'ik), *a.* Operating to transform chemical energy into the energy of motion.

chemico-electric (kem″i-kō-ē-lek'trik), *a.* Operating to transform chemical energy into electrical energy: as, a *chemico-electric* change.

The best evidence yet secured by research seems to indicate that the method of energy transformation in the vital machine is one which directly transforms the potential energy of the food, as developed by chemical combinations, into kinetic form, sometimes perhaps simply by chemico-dynamic change, sometimes by *chemico-electric* transformation.
R. H. Thurston, in Smithsonian Rep., 1896, p. 337.

chemicomineralogical (kem″i-kō-min-ę-ra-loj'i-kal), *a.* Involving both chemical and mineralogical characters: as, a *chemicomineralogical* classification of rocks. *Geikie,* Textbook of Geol., p. 201.

chemicophysical (kem″i-kō-fiz'i-kal), *a.* Both chemical and physical; relating to both the chemistry and the physics of a substance or organism.

If a constant battery current flows continuously through a muscle or a nerve, it will so alter the *chemico-physical* condition of the living substance that its physiological properties will be greatly modified.
Buck, Med. Handbook, III. 767.

chemico-physics (kem″i-kō-fiz'iks), *n.* Physical chemistry. *Buck,* Med. Handbook, VII. 758.

chemicophysiological (kem″i-kō-fiz-i-ō-loj'i-kal), *a.* Having reference to the science of physiological chemistry, or biochemistry.

chemigraph (kem'i-graf), *n.* A print obtained by a process of chemigraphy. See ★*chemigraphy,* 2.

chemigrapher (ke-mig'ra-fėr), *n.* One who uses chemigraphy.

chemigraphy (ke-mig'ra-fi), *n.* **1.** A process of making zinc etchings without the aid of photography.—**2.** A process of obtaining halftones by printing, from the same plate, in two colors, or two shades of the same color, one of which is slightly out of register.

chemiluminescence (kem″i-lū-mi-nes'ens), *n.* Luminescence associated with chemical changes in the luminous substance and probably due to those changes. See ★*luminescence.*

Wiedemann has shown that the shining of Balmain's luminous paint, and generally of the sulphides of the alkaline earths, is accompanied with chemical action. A long period of luminosity after the removal of the source renders highly probable the existence of what he now calls *chemi-luminescence.* *Smithsonian Rep.,* 1895, p. 121.

chemin-de-fer (shė-maṅ″dė-fâr'), *n.* [F. railroad, lit. 'iron road.'] A variation of baccara in which each player in turn becomes the banker. See *baccara.*

chemin-de-ronde, *n.* **2.** A sentry-path around a fortification, along the scarp or counterscarp, protected by a loopholed wall or the glacis. See *covered way,* under *cover*[1].

chemiotactic (kem″i-ō-tak'tik), *a.* A collateral form of ★*chemotactic.*

chemiotaxis (kem″i-ō-tak'sis), *n.* [NL., < *chemia,* chemistry, + Gr. τάξις, order.] Same as ★*chemotaxis.*

chemisal (chem'i-sal), *n.* A corrupt form of *chamisal,* sometimes used as a local name.

So local and strikingly characteristic are these chaparral areas that they have become landmarks, the word chamisal, sometimes corrupted into *chemisal,* chemise, or chimese, being adopted as a local name. Thus, we find on the map of Humboldt County a "*Chemisal* Creek" and "Chimese Ridge" in the vicinity of Harris, and a "Chemise Mountain," near Shelter Cove.
U. S. Dept. Agr., Bur. Plant Industry, Bulletin 12, 1902, [p. 31.

chemise, *n.* **6.** In *mech.,* a sheath or covering of sheet-metal; specifically, a sheet-iron cylinder placed around the tubes in a vertical boiler.

chemist, *n.* **4.** A degree conferred by some institutions upon the completion of a stated course in chemistry.—**5.** Same as ★*chemiater.*—**Technical chemist,** a chemist engaged in directing or conducting the operations of some branch of industry essentially or mainly chemical in character.

chemistry, *n.* **2.** Same as ★*chemiatry.*—**Bureau of Chemistry.** See ★*bureau.* **Color chemistry.** That department of chemistry which deals with the study of coloring matters and dyestuffs. Also known as *tinctorial* chemistry.—**Industrial chemistry,** chemistry as applied to industrial processes and operations. See *chemical* ★*engineering.*—**Inorganic chemistry.** Although it is in the main correct to say that organic chemistry is the chemistry of the compounds of carbon and inorganic chemistry that of the other elements and their compounds, it would in many respects be inconvenient to observe this classification rigidly. Some carbon compounds, such as carbon monoxid and dioxid, carbon disulphid, silicon carbide, and iron carbides which occur in cast-iron and steel, are practically always treated as inorganic substances. On the other hand, a few substances which do not contain carbon, such as silicon and chloroform, are more advantageously classed as organic.—**Photographic chemistry.** Same as *photochemistry.*—**Physical chemistry,** the study of chemical substances and chemical processes with reference to the physical phenomena witnessed or to the physical energies concerned. Many of its chapters had been fairly developed long before the name was first used, such as those concerned with the doctrines as to atoms and molecules, or as to the solid, liquid, and gaseous states of aggregation. But other chapters, such as those on thermochemistry, electrochemistry, chemical statics, and chemical dynamics, have received most of their development since the beginning of the last quarter of the nineteenth century, and the new name has been required to describe the fruit of a coöperation of physics and chemistry.

During the past fifteen years the border-land between chemistry and physics has been very successfully cultivated, and a new department of chemistry has resulted. This is the department known as *physical chemistry.*
Science, May 24, 1901, p. 809.

Pure chemistry, chemistry considered as a branch of human knowledge, without reference to its practical or industrial applications: opposed to *practical chemistry.*—**Sanitary chemistry,** chemistry in its relations to health, especially to public health or the health of large communities.—**Social chemistry,** assimilation of diverse elements, especially nationalities and races, in a social population. *L. F. Ward,* Pure Sociol., p. 210.—**Tinctorial chemistry.** See *color* ★*chemistry.*

chemoæsthesia (kem″ō-es-thē'si-ä), *n.* [NL. (*Czapek*), < *chem(icus),* chemic, + Gr. αἴσθησις, perception.] In *bot.,* the capacity of a plant-organ to respond to chemical stimuli.

chemocentrum (kem″ō-sen'trum), *n.*: pl. *chemocentra* (-trä). [ML. *chem(icus),* chemic, + L. *centrum,* center.] In *cytol.,* the nucleus considered as the center which controls the chemical activities of the living cell: opposed to ★*kinocentrum.*

chemokinesis (kem″ō-ki-nē'sis), *n.* [NL., < NL. *chem(icus),* chemic, + Gr. κίνησις, movement.] A state of increased activity of organisms in relation to chemical substances.

Garry finds that certain chemicals "cause the organism to become restless, very swift shooting movements being caused." As a result of these movements the organisms soon leave the area of the operation of the chemical causing the reaction. This phenomenon Garry calls *chemokinesis.*
H. S. Jennings, in Amer. Jour. Physiol., April, 1900, p. 398.

chemokinetic (kem″ō-ki-net'ik), *a.* Pertaining to or exhibiting chemokinesis.

chemolyse, *v. t.* See ★*chemolyze.*

chemolyze (kem'ō-līz), *v. t.*; pret. and pp. *chemolyzed,* ppr. *chemolyzing.* [*chemoly(sis)* + *-ize.*] To decompose or separate into different constituents by chemical action; subject to chemolysis.

chemoreflex (kem-ō-rē'fleks), *n.* [NL. *chem(icus),* chemic, + E. *reflex.*] A response to a chemical change in the environment by a motor reaction.

[The] complicated activities of such highly developed organisms as ants and bees may be subsumed, with surprising completeness, under some such heading as the 'chemoreflex.' *Pop. Sci. Mo.,* March, 1902, p. 465.

chemosed (kem'ōzd), *a.* [*chemos(is)* + *-ed*[2].] Marked by chemosis. *N. E. D.*

chemosynthesis (kem-ō-sin'the-sis), *n.* [NL. *chem(icus),* chemic, + Gr. σύνθεσις, synthesis.] The formation of carbohydrates out of inor-

ganic compounds by an organism in darkness or in the absence of sunlight: contrasted with ★*photosynthesis*. *Haeckel* (trans.), Wonders of Life, p. 215.

chemotactic (kem-ō-tak'tik), *a.* [*chemotaxis* (*-tact-*) + *-ic.*] 1. Concerning or pertaining to the motion of cells or of organisms in relation to chemical substances; exhibiting chemotaxis.—2. Inciting chemotaxis.

Since Cohnheim's great discovery in 1867 we have known that the central phenomenon of what is termed by pathologists *inflammation* is what would now be called a *chemotactic* one; for it consists in the gathering together, like that of vultures to a carcass, of those migratory cells which have their home in the blood stream and in the lymphatic system, to any point where the living tissue of the body has been injured or damaged, as if the products of disintegration which are set free where such damage occurs were attractive to them.
Smithsonian Rep., 1893, p. 4.8.

chemotactism (kem-ọ-tak'tizm), *n.* Same as ★*chemotaxis*.

So with the fly. Certain chemical stimuli from meat cause a fly to lay its eggs. In the fat these stimuli are lacking. They can be produced artificially. In the short-hand jargon of science, it is simply a chemical reaction between certain substances in the skin or sense organs of the fly and the meat, a case of *chemotactism*.
C. Snyder, New Conceptions in Sci., p. 202.

chemotaxic (kem-ọ-tak'sik), *a.* A bad form for ★*chemotactic*. *Med. Record*, March 7, 1903, p. 392.

chemotaxis (kem-ọ-tak'sis), *n.* [NL. *chem*(*icus*), chemic, + Gr. τάξις, arrangement.] The locomotion of organisms or of cells in relation to chemical substances, or the property of certain chemical substances to attract or repel living cells at the point of action: in the first instance there is *positive* chemotaxis, in the second *negative* chemotaxis. The peculiar response of the white blood-corpuscles to chemotactic stimulation is of fundamental importance in the defense of the animal organism against bacterial invasion.

Among stimuli acting unilaterally, perhaps none has proved more interesting, in late times, than what is known as *Chemotaxis*. By it is meant the property an organism endued with the power of movement has to move towards or away from a chemical stimulus applied unilaterally. *Encyc. Brit.*, XXXI. 518.

chemotic (ke-mot'ik), *a.* Of or pertaining to chemosis.

chemotropic (kem-ō-trop'ik), *a.* [NL. *chem*(*icus*), chemic, + Gr. τρόπος, a turning.] Of or pertaining to the growth or bending of organisms in relation to chemical substances; exhibiting chemotropism. Also *chemotropical*.

chemotropically (kem-ọ-trop'i-kal-i), *adv.* In a chemotropic manner; by and with chemotropism.

chemotropism (ke-mot'rọ-pizm), *n.* [*chemotrop-ic* + *-ism.*] The growth or bending of organisms, or of the parts of organisms, in relation to chemical substance.

The chemical effects of the diffusing molecules on certain elements of the skin influence the tension of the muscles, as the rays of light influence the tension of the muscles in heliotropic animals. The orientation of an organism by diffusing molecules is termed *chemotropism*, and we speak of positive *chemotropism* when the animal is forced to bring its axis of symmetry into the direction of the lines of diffusion and to turn its head toward the centre of diffusion.
J. Loeb, Compar. Physiol. of the Brain, p. 186.

chêne (shān), *n.* [F., 'oak.'] An oak-leaf design printed on any textile fabric.

chenille, *n.* 3. A name given to the cotton leaf-worm or cotton caterpillar, the larva of *Alabama argillacea*, by Louisiana planters of French descent, and adopted by many others.

chenocholalic (ken"ọ-kọ-lal'ik), *a.* [Gr. χήν, goose, + χολή, bile, + *-al*[3] + *-ic.*] Same as ★*chenocholic*.

chenocholic (ken"ọ-kol'ik), *a.* [Gr. χήν, goose, + χολή, bile.] Derived from goose-bile.—**Chenocholic acid**, an amorphous bibasic acid, $C_{27}H_{44}O_4$, formed by boiling taurochenocholic acid with barium hydroxid.

Chenopodiales (kē"nọ-pọ-di-ā'lēz), *n. pl.* [NL. (Britton, 1901), < *Chenopodium* + *-ales.*] An order of dicotyledonous archichlamydeous, chiefly apetalous, plants. It is generally herbaceous, with hermaphrodite flowers, superior ovary, and utricular, capsular, or baccate fruit. It includes 10 families, of which the most important are the *Chenopodiaceæ*, *Amaranthaceæ*, *Portulacaceæ*, and *Silenaceæ*.

chenotaurocholic (kē"nọ-tâ-rọ-kol'ik), *a.* [Gr. χήν, goose, + ταῦρος, bull, + χολή, bile, + *-ic.*] Relating to a form of taurocholic acid present in goose-bile.—**Chenotaurocholic acid**, a biliary acid, $C_{29}H_{49}NSO_6$, found in the bile of geese.

cherem, *n.* Same as ★*herem*.

chernites (kėr-nī'tēz), *n.* [L. *chernites*, < Gr χερνίτης.] A variety of marble, resembling ivory, used by the ancients for making sarcophagi.

cherridary† (cher'i-da-ri), *n.* [Also *cherredery*, *cherridary*, *charadares* (pl.), *carradarees* (pl., Yule): of E. Indian origin.] An Indian cotton fabric, usually having narrow stripes. *A. M. Earle*, Costume of Colonial Times, p. 83.

cherried (cher'id), *p. a.* [*cherry* + *-ed*[2].] Cherry colored: as, *cherried* lips. *Goldsmith*.

cherry[1], *n.* **Bitter cherry**, *Prunus emarginata*, a wild cherry of the northwestern United States which ranges from Montana to California. Its bark, leaves, and fruit are intensely bitter.—**Black cherry.** Same as *rum-cherry* and the more usual name.—**Brazilian cherry, Cayenne cherry.** Same as *Surinam* ★*cherry* (*b*).—**Cherry fruit-maggot.** See ★*fruit-maggot*.—**Cherry leaf-beetle.** See ★*leaf-beetle*.—**Cherry leaf mildew.** Same as *cherry blight*.—**Cherry leaf-spot.** See ★*leaf-spot*.—**Cherry-scale**, an American diaspine scale insect, *Aspidiotus forbesi*.—**Fire cherry**, the wild red cherry or pin-cherry, *Prunus Pennsylvanica*: so called because it springs up freely on lands recently devastated by fire. See *pin-cherry*.—**Herbert River cherry.** Same as *Queensland* ★*cherry*.—**Holly-cherry**, the holly-laurel or islay. Also called *holly-leaf cherry* and *holly-leaved laurel*.—**Indian cherry.** (*a*) The Carolina buckthorn, *Rhamnus Caroliniana*. (*b*) The service-berry, *Amelanchier Canadensis*.—**May-cherry.** Same as *June-berry*. Also called *service-berry* and *shad-bush*.—**Mexican cherry**, the form of rum-cherry, *Prunus serotina*, found in Mexico and adjoining regions: by some thought to be a distinct species.—**Native cherry**, an Australian tree, *Exocarpus cupressiformis*, of the sandalwood family, the edible fruit of which consists of a fleshy, cherry-like pedicel bearing a single-seeded nut. See *cherry*[1], 3 (*b*).—**New Mexican cherry.** Same as *Mexican* ★*cherry*.—**Oak-leaf cherry.** Same as *islay*.—**Pigeon-cherry.** Same as *pin-cherry*.—**Poison black cherry**, the deadly nightshade, *Atropa Belladonna*: so called from the resemblance of the berries to black cherries.—**Queensland cherry**, the fruit of a shrub or small tree of the spurge family, *Antidesma Dallachyanum*. It is the size of a large cherry, and has a sharp, acid flavor resembling that of the red currant, and, like it, makes a good jelly.—**Quinine cherry.** Same as *bitter* ★*cherry*.—**Sour cherry**, *Prunus Cerasus*, the fruit of which is sour in a wild state.—**Spanish wild cherry.** Same as *islay*.—**Surinam cherry.** (*a*) See *Surinam cherry*. (*b*) A shrub or small tree, *Eugenia uniflora*, a native of South America, which produces luscious, bright-red, cherry-like fruit about an inch in diameter and agreeably acid. Also called *Cayenne* or *Brazilian cherry* and *pitanga*.—**Sweet cherry**, *Prunus avium*. It bears sweet fruit even in a wild state.—**Western choke-cherry**, *Prunus demissa*, a wild cherry of the western United States which ranges from the Rocky Mountains to the Pacific coast; it is a small tree and bears pleasantly flavored fruit somewhat resembling that of the choke-cherry.—**West Indian cherry.** (*a*) See *Barbados cherry* under *cherry*[1]. (*b*) *Prunus sphærocarpa*, a small evergreen tree which ranges from southern peninsular Florida to the West Indies and Brazil.—**Wild black cherry**, the black cherry or rum-cherry, *Prunus serotina*.—**Wild cherry**, a name applied (*a*) specially to the sweet cherry, *Prunus avium*, in a wild state, and (*b*) generally to any of the native American cherries, as *P. serotina*, *P. Virginiana*, *P. Pennsylvanica*, etc., and particularly to the less-known species, such as *P. emarginata*, *P. Alabamensis*, and *P. australis*.—**Wild red cherry.** (*a*) See *pin-cherry*. (*b*) Improperly, *P. angustifolia*, the Chickasaw plum (which see, under plum1).—**Willow-leaf cherry**, *Prunus salicifolia*. It has willow-like leaves, and ranges from southern New Mexico and Arizona to Colombia and Peru.

cherry-aphis (cher'i-ā'fis), *n.* A plant-louse, *Myzus cerasi*, which infests the leaves of the cherry in the early summer.

cherry-birch (cher'i-bėrch"), *n.* See *birch*, 1.

cherry-borer (cher'i-bōr"ėr), *n.* The larva of an Australian tortricid moth, *Maroga gigantella*, which bores into the trunk and limbs of the cherry, plum, apricot, nectarine, and quince in Australia.

cherry-bug (cher'i-bug), *n.* An American coreid bug, *Metapodius femoratus*, which attacks the fruit of sweet varieties of cherry in the southwestern United States. Also known as the *thighed metapodius* (which see, under *thighed*).

cherry-fair (cher'i-fār), *n.* [ME. *chery feire.*] A fair held in cherry-orchards, in some parts of England, for the sale of the fruit: long regarded as typical of the shortness and uncertainty of life and the fleeting nature of its pleasures: as,

Al is but a *chery feire*. *Gower.*

Cherry-fairs are still held in Worcestershire . . . on Sunday evenings, . . . and being almost always a resort of lovers, and the gay portion of the lower classes [they] may appropriately retain their significant type of the uncertainty and vanity of the things of this world.
Halliwell.

cherry-louse (cher'i-lous), *n.* An aphidia, *Myzus cerasi*, which attacks the buds and young foliage of the cherry.

cherry-red (cher"i-red'), *a.* Clear, moderately dark red in color.—**Cherry-red heat**, a temperature higher than dull red and lower than bright red, as these colors appear in heated iron in daylight.

cherry-seeder (cher'i-sē"dėr), *n.* A machine for removing the pits from cherries and other fruits. It is essentially a double-bladed knife which moves

Cherry-seeder.
a, knife for cutting out [illegible]

in guides, and is operated by hand. It cuts out and removes the pits and delivers the pits and the fruit separately.

cherry-slug (cher'i-slug), *n.* The larva of an American saw-fly, *Eriocampoides limacina*.

Cherry-slug (*Eriocampoides limacina*).
a, adult saw-fly; *b*, *c*, slug, *a*, *b*, *c*, enlarged; *d*, leaves showing slugs at work, reduced. (Marlatt, U. S. D. A.)

cherry-stoner (cher'i-stō"nėr), *n.* Same as ★*cherry-seeder*.

Cherry-tree bark-louse, an American lecaniine, *Lecanium cerasifex*, which lives on the twigs and small branches of the cherry-tree.—**Cherry-tree plant-louse**, an aphidid, *Myzus cerasi*, which lives on the leaves and buds of the cherry-tree.—**Cherry-tree scale-insect.** Same as *scurfy* ★*bark-louse*.—**Cherry-tree Thecla.** Same as ★*coral hairstreak*.—**Cherry-tree ugly-nest tortricid**, an American tortricid moth, *Archips cerasivorana*, whose larvæ make unsightly webs among the leaves of the choke-cherry and sometimes of the cultivated cherry.

Chersydridæ (kėr-sid'ri-dē), *n. pl.* [NL., < *Chersydrus*, a genus of snakes (< χέρσος, dry land, + ὕδρα, a water-snake), + *-idæ.*] A family of ugly but harmless snakes, of aquatic habits. They have the postfrontals bounding the orbits posteriorly and extended forward to form their superior borders, to the exclusion of the frontals. The species are Asiatic.

cherubic, *a.* 2. Of, pertaining to, or exhibiting the childish innocence of the 'cherubs' or winged child-angels represented by painters and sculptors. See *cherub*, 2.—**Cherubic friar**, a Dominican friar: so called because it was assumed that the Dominicans were given especially to the pursuit of knowledge, a quality ascribed in angelology to the cherubim.

cherubimical (cher"ö-bim'i-kal), *a.* Same as *cherubimic*.

chervil, *n.*—**Sweet chervil.** (*b*) Same as *sweet cicely* (*b*).

Cheshire cheese. See ★*cheese*[1].

chess[1], *n.* 2†. Dice. *Pope* (trans.), Odyssey, I. 143.—**Blindfold chess**, a game of chess conducted by a player who does not see the board. The eyes of the player are seldom or never actually blindfolded.

chess[2], *n.*—**Red chess**, a brome-grass, *Bromus rubens*, introduced into the Pacific States from southern Europe. It is noxious in sheep-pastures because its awns become entangled in wool. The panicle is tinged with reddish brown. Also called *red brome*.

chessy (ches'i), *a.* Characteristic of good chess-play: as, *chessy* situations. *N. E. D.*

chest[1], *n.* 6. The funds of a public institution, or the strong box, coffer, or place where such funds are, or are supposed to be, kept; the treasury: as, a military *chest*; the uni-

versity *chest*: the *chest* for the relief of maimed mariners; etc. — **7.** In *organ-building*, see *wind-chest*. **Barrel-shaped chest**, a general rounded body and the chest which moves but little during respiration, a condition present in emphysema of long duration. **Cobbler's chest**, a deformity of the chest marked by a sinking in at the lower extremity of the sternum. **Dropsy of the chest**, hydrothorax. **Funnel-chest.** See ★*tunnel chest*. — **German chest**, an inclined rectangular box used in washing ore, having several rows of holes closed by pegs, which are inserted in succession from the bottom as the chest fills up; a square buddle. The heads of rich mineral settle near the upper end of the box, the middlings are found at the lower end, and the tailings or waste flow out at the end holes. When the box is full the different products are shoveled out. **Keeled chest.** Same as ★*chicken-breast*. **Phthinoid chest**, a narrow chest markedly flattened anteriorly. **Pigeon-chest.** Same as ★*chicken-breast*.

chest-bars (chest'bärz), *n. pl.* A pair of fixed vertical bars used in exercising the chest and arms. They are placed parallel to each other so that they may be grasped while the chest is thrown forward between them.

chested (chest'ed), *a.* **2.** In *archery*, gradually decreasing in diameter from a point between the nock and the center to both ends: said of an arrow.

Chester limestone. See ★*limestone*.

chestiness (ches'ti-nes), *n.* The feelings, attitude, or manner of a 'chesty' person; defiant self-assertiveness on the part of an ignorant and pretentious person. [Recent slang, U. S.]

chest-machine (chest'ma-shēn″), *n.* A machine used in gymnasiums to develop the muscles of the chest.

chest-mangle (chest'mang″gl), *n.* See *mangle*², *n.*

chestnut, *n.* — **Chestnut disease.** See ★*disease* and ★*Acrospora*. **Golden-leaved chestnut**, the western chinkapin, *Castanopsis chrysophylla*. See *chinkapin*, 2. — **Guiana chestnut**, the seeds of *Pachira aquatica*, a large tree of Guiana and the lower Amazon. — **Kafir chestnut.** Same as *wild chestnut*.

chestnut-blight (ches'nut-blīt), *n.* A fungus, *Diaporthe parasitica*, very destructive of the chestnut-tree in the eastern United States.

chestnut-borer (ches'nut-bōr'ėr), *n.* An insect which infests the chestnut. — **Two-lined chestnut-borer**, the larva of an American buprestid beetle, *Agrilus bilineatus*.

chesty (ches'ti), *a.* [*chest*¹, *n.*, + -*y*¹.] Inflated with an undue feeling of one's importance, and inclined to show it in an impudently aggressive way; ignorantly and pretentiously self-assertive. [Recent slang, U. S.]

cheval, *n.* — **A cheval,** (*b*) in *gambling*, betting on two events at the same time. — **Petits chevaux**, a substitute for roulette, in places where roulette is forbidden. Nine models of horses with jockeys on them, each numbered, are rapidly revolved in concentric circles, and the players bet on the number of the horse that will have his nose nearest the wire when they all come to rest. Bets may be made on single numbers, paying 7 for 1, or on the numbers 1, 2, 3, 4, or 6, 7, 8, 9, paying even money.

chevalet, *n.* **2.** In *glass-manuf.*, a grooved bench for holding cylinders of broad glass before they are spread out.

Chevalier crab. See ★*crab*¹. — **Chevalier d'or**, the French louis d'or which has on it a Maltese cross. — **Chevalier of fortune**, one who lives by his wits: same as *chevalier d'industrie*. — **The Chevalier**, James Francis Edward Stuart, son of James II. of England, the Old Pretender; also, *Chevalier de St. George*. — **The Young Chevalier**, Charles Edward Stuart, or Prince Charlie, the Young Pretender.

chevered† (shev'ėrd, chev'ėrd), *p. a.* [Also erron. *chivelled* (in the one quot. known, 1658); a reduced form in ignorant use of *chevroned* (spelled *cheverned* in 1543): see *chevroned*.] Same as *chevroned*. *Alice M. Earle*, Costume of Colonial Times, p. 141.

Chevé system. See ★*system*.

cheville, *n.* **2.** A meaningless or redundant syllable, word, or phrase used to complete a verse or round off a period.

> The genius of prose rejects the *cheville* no less emphatically than the laws of verse.
> *Contemporary Rev.*, April, 1885, p. 551.

Cheviot finish, a coarse, closely curled nap given to wooden cloth, as cheviot.

chevron, *n.* **5.** *pl.* In *carp.*, a pair of rafters set up and meeting at the ridge; or two rafters held together at the foot by a tie of some kind and therefore ready to put into place as a truss.

chevronelly (shev'rō-nel-i), *a.* Same as *chevronné*.

chevy, *n.* **2.** The game of prisoners' base.

Chevy-chase (chev″i-chās′), *n.* A scampering noise or chasing about; a running pursuit. See *Chevy Chase* in the Century Cyclopedia of Names.

chew, *v. t.* — **To chew oakum** (*naut.*), said of a vessel when it grinds the calking out of its seams by its working. This occurs either from weak construction or from heavy laboring.

chew-stick, *n.* **2.** In Sierra Leone, the root of the cola, *Bichea acuminata*, which is chewed for the purpose of cleaning the teeth and sweetening the breath.

ch. g. An abbreviation of *chestnut gelding*.

Ch. hist. An abbreviation of *church history*.

chi¹ (kī, ċhe), *n.* The twenty-second letter of the Greek alphabet, Χ, χ, corresponding to the English *ch*.

chi² (chī), *n.* [Also *chigh*: appar. California Indian. Cf. *hitch*².] A fish, *Lavinia exilicauda*: same as ★*hitch*².

chiaroscuro, *n.* **4.** A style of painting on enameled pottery practised by the Italian potters.

chiasmal (kī-az'mal), *a.* [*chiasm* + -*al*¹.] Of the nature of a chiasm; crosswise: as, *chiasmal* interpositions.

chiasmic (kī-az'mik), *a.* [*chiasm* + -*ic*.] Same as ★*chiasmal*. *Buck*, Med. Handbook, II. 252.

chiaster (kī'as-tėr), *n.* [Appar. < Gr. χ, the letter X, + ἀστήρ, star.] In sponge-spicules, an aster with slender cylindrical rays.

chiastically (kī-as'ti-kal-i), *adv.* In the manner of a chiasmus.

chiastoneury (kī-as-tō-nū'ri), *n.* [Gr. χιαστός, arranged X-wise, + νεῦρον, nerve.] The condition of having the pleurovisceral connectives crossed, as in the prosobranchiate gastropods.

chibinite (chi'bi-nīt), *n.* [Finnish *Chibinä*, on the Kola Peninsula, Finland, + -*ite*².] In *petrog.*, a name given by W. Ramsay (1899) to a variety of nephelite-syenite containing ægirite, acmite or arfvedsonite, and eudialyte, and having a somewhat laminate texture.

chicago (shi-kä'gō), *v. t.* [In allusion to the assumed meaning of *Chicago*, namely, 'skunk' (it really means 'at the place of the skunk or skunks').] In *card-playing* and other games, to 'skunk' or 'whitewash' (an opposing side); that is, to prevent it from scoring any runs or points. [Slang, U. S.]

Chicago blue, gray, orange, pool. See ★*blue*, etc.

chicane, *n.* **3.** A quibble: as, a *chicane* about words. — **4.** In *bridge whist*, a hand which is void of trumps; it entitles the holder to score simple honors. When the hands of two partners are both void of trumps it is called *double chicane*.

chicayote (chē-kä-yō'te), *n.* [Also *chilacayote*, *chilicayote*, *chilicothe*, etc.; Nah. *chachac*, bitter, + *ayotli*, gourd or squash.] A name in Mexico of several wild gourd-like plants, especially of *Cucurbita fœtidissima*, which is also known as *calabacilla amarga* ('bitter gourd'), and of *Cucurbita radicans*. The name appears in various forms. In California, as *chilicothe*, it is applied to *Micrampelis macrocarpa*. See ★*chilicothe* and *calabazilla*.

chicharo (chē'chä-rō), *n.* [Sp. *chícharo*, pea or pea-vine.] In Porto Rico, a name applied to a number of small leguminous vines, especially the lablab, *Dolichos Lablab*.

chicharro (chē-chär'rō), *n.* [Sp., prob. < *chicharra*, an imitative var. of *cigarra* = It. *cigala*, *cicala*, < L. *cicada*, a cicada.] A carangoid fish, *Trachurops crumenopthalmus*, found on both coasts of tropical America. Also called *goggler*, *goggle-eyed jack*, and *big-eyed scad*.

chicken-berry (chik'en-ber″i), *n.*; pl. *chicken-berries* (-iz). [A substitution for *checkerberry*.] Same as *checkerberry*, in both senses.

chicken-bill (chik'en-bil), *n.* The sora, *Porzana carolina*, so called from its short bill. [Local southern U. S.]

chicken-breast (chik'en-brest), *n.* A condition in which the sternum projects forward, the arch of the ribs on either side being flattened.

chicken-bug (chik'en-bug), *n.* A bug that infests chickens. — **Mexican chicken-bug**, a cimicid or bedbug, *Acanthia inodora*, which attacks poultry in Mexico and has also been found in southern New Mexico. See ★*coruco*.

chicken-corn (chik'en-kôrn), *n.* A form of durra, *Andropogon Sorghum cernuus*, with the densely flowered panicle abruptly bent or recurved so as to point downward. It is largely cultivated as a cereal in Africa and to some extent in Asia, and is sometimes planted in America, its seed being valued as chicken feed. Also called *white Egyptian corn*. See *sorghum*, 2.

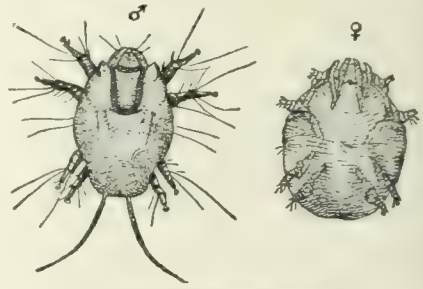
chicken-fixings (chik'en-fik singz), *n. pl.* Something nice in the way of food, or better than usual. [Colloq., U. S.]

chicken-flea (chik'en-flē), *n.* A tropical and subtropical insect of the family *Pulicidæ*, *Sarcopsylla gallinacea*, of wide distribution. It is especially attracted to poultry but also attacks young kittens, puppies, calves, colts, and even children.

chickenhood (chik'en-hud), *n.* The state or condition of a chicken.

chicken-louse (chik'en-lous), *n.*; pl. *chicken-lice* (lis). Any one of several mallophagous parasitic insects, as, (*a*) *Goniocotes abdominalis*, the large chicken-louse; (*b*) *Goniodes dissimilis*, the chicken *Goniodes*; (*c*) *Lipeurus heterographus*, the *Lipeurus* of the chicken and pheasant; and (*d*) *Lipeurus variabilis*, the variable chicken-louse.

chicken-mite (chik'en-mīt), *n.* **1.** A minute, almost microscopic mite, *Cytoleichus* (formerly *Cytodites*) *nudus*, of the family *Cytoleichidæ*, which infests the air-passages and air-cells, and other portions of the domestic fowl. It is called the *internal chicken-mite*. — **2.** A similar mite of the same family, *Laminosioptes cystícola*, which occurs on the skin, but commonly penetrates also the subcutaneous connective tissues, where it gives rise to a calcareous cyst. It infests chickens, geese, and pheasants, and is called the *cystic fowl-mite*. — **3.** The itch-mite of fowls, *Sarcoptes* (*Cnemidocoptes*) *mutans* and *gallinæ*, serious enemies of domestic fowls. — **4.** Same as ★*chicken-tick*, 1.



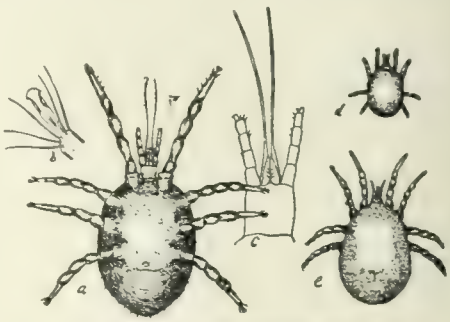
Chicken-mite (*Sarcoptes mutans*). Male and Female. (After Robin.)

chicken-pecked (chik'en-pekt), *p. a.* Ruled, controlled, or worried by wilful children. Compare *henpecked*. [Humorous, U. S.]

chicken-pepper (chik'en-pep″ėr), *n.* The small-flowered crowfoot, *Ranunculus abortivus*, of the United States, which has numerous small achenes in globular heads.

chicken's-toes (chik'enz-tōz), *n.* The glasswort, *Salicornia herbacea*; also the coralroot, *Corallorhiza odontorhiza*. The allusion is to the fruiting spikes of the former and the roots of the latter.

chicken-tick (chik'en-tik), *n.* **1.** *Dermanyssus gallinæ*, a mite of the family *Dermanyssidæ*, a most pernicious pest of the hennery, which gathers on the fowls at night and sucks their blood. Sometimes they infest human beings, causing acariasis. Also called *chicken-mite*. —



Chicken-tick (*Dermanyssus gallinæ*).
a, adult; *b*, tarsus; *c*, mouth-parts; *d*, and *e*, young. All enlarged. (Osborn, U. S. D. A.)

2. An ixodid mite, *Argas miniata* (*americana* Pack.) which does great damage among poultry, especially in the Southern States, where it ranges from Texas to California. Infested chickens droop, refuse to eat, and finally drop and die.

chicken-turtle (chik'en-tėr″tl), *n.* A small, common, fresh-water turtle, *Chrysemys reticulata*, of the southern United States. See *chicken-tortoise*.

chickweed, *n.* — **Barren chickweed,** *Cerastium arvense*, *oblongifolium*, of the eastern United States. **Chickweed geometer.** See ★*geometer*. — **Germander chickweed**, the field-speedwell, *Veronica agrestis*. **Great chickweed.** See *Stellaria*. — **Ivy-chickweed.**

Same as *germander* ★*chickweed*. **Sea-chickweed.** See *sea-chickweed*. **Star-chickweed.** Same as *great* ★*chickweed*. **Star-flowered chickweed.** Same as *star flower* (*a*). **Water-chickweed.** See *water chickweed*. **Water mouse-ear chickweed,** one of the water-chickweeds, *Alsine aquatica*.

chicle (chik'l, Sp. chē'klā), *n.* [Amer. Sp.] Same as *chicle-gum*.

chico[2] (chē'kō), *n.* [Short for. Sp. *chicozapote*, < Nah. *xicotzapotl*.] In the Philippine Islands, the sapodilla, *Sapota zapotilla*, a tree of Mexican origin. See *sapodilla*.

Chico group. See ★*group*[1].

chicolar (chik-ō-lär'), *n.* [Perhaps a variation of *escolar*.] A deep-water tropical fish. Same as ★*escolar*.

chicot (shē-kō'), *n.* [F., a stump or stub.] A French-Canadian name of the Kentucky coffee-tree, *Gymnocladus dioica* (which see, under *coffee-tree*).

chidra group. See ★*group*.

chief. **I.** *n.* **Chief of ordnance,** the senior officer of the ordnance department in the United States army. **Chief of staff.** (*a*) In the United States army, a general officer temporarily detailed by the President to exercise general supervision over all troops of the line and the staff-corps and departments of the army. (*b*) The senior general-staff officer on the staff of the commander of an army, army-corps, division, or department. (*c*) The senior officer on the personal staff of a flag-officer in command of a fleet or squadron. When practicable, he is senior in rank to all other officers under command of the flag-officer. **Chief petty officer.** See ★*officer*. **Maori chief,** *Notothenia corriceps*, a fish of the family *Trachinidæ* found in the waters of Australia and New Zealand.

II. *a.*—**Chief officer** (*naut.*), the deck-officer next below the captain in rank; the first mate; the officer on whom would devolve the command in the event of the disability or removal of the captain.

chiffon, *n.* **2.** A thin gauze.—**Chiffon lace,** silk-embroidered chiffon.

chi-fu (chē-fō), *n.* Same as *chih-fu*.

chiga (chē'gä), *n.* [Native name.] A tree of the senna family, *Campsandra comosa*, found in the Guianas and Venezuela. Its large flat seeds contain starch and are used as food by the natives.

chigger (chig'ėr), *n.* A perverted form of *chigoe*. Compare *jigger*[2]. *Cambridge Nat. Hist.*, VI. 525.

chigh (chi), *n.* Same as ★*chi*[2] or ★*hitch*.

chigoe, *n.* **2.** A larval harvest-mite, as the so-called *Leptus irritans*. Same as *red-bug* and *jigger*[2], 2.

chigoe-poison (chig'ō-poi″zn), *n.* The strangler-trees, *Clusia alba* and *C. rosea*. See *Clusia* and ★*aralie*.

Chihuahuan (chē-wä'wan), *a.* Of or pertaining to Chihuahua, Mexico: in *biogeog.*, inhabiting the region in the neighborhood of Chihuahua, a portion of the Sonoran subregion of the austro-occidental life-district of the American continent.

chi-hwan (chē-whän), *n. pl.* [Chinese *chi*, raw, untamed, + *hwan*, in Mandarin dial. *fan*, barbarians.] The aborigines of Formosa who have not been assimilated by the Chinese, or one of them. They occupy the mountainous portions of the island.

chikore (chi-kōr'), *n.* [Also *chickore*, *chikor*, *chuckoor*, *chukore*, *chukor* (NL. *chukor*), prop. *chakor*, < Hind. *chakōr*, < Skt. *chakōra*, the red-legged partridge.] The red-legged partridge of the Western Himalaya, Northern Punjab, and Afghanistan. The name is also applied by sportsmen to the snow-cock of Ladak, *Tetraogallus himalayensis*, and *Ortygornis gularis*, a handsome partridge of eastern Bengal.

chilacayote (chi″lä-kä-yō'tä), *n.* [One of the modifications of Mex. *chicayote*, bitter-gourd.] A name in California and northern Mexico of several wild cucurbitaceous plants. See *calabazilla* and ★*chicayote*.

chilarium (kī-lā'ri-um), *n.*; pl. *chilaria* (-ä). [NL., < Gr. χείλος, lip, + L. *-arium*.] **1.** The stylet-shaped process behind the mouth in *Limulus*.—**2.** In *bot.*, a structure in the seed-coat of *Phaseolus*, consisting of two valves which by hygrometric movements cause its rupture.

childhood, *n.*—**Second childhood,** the childishness often incident to old age; dotage.

childie (chīld'i), *n.* [*child* + *-ie*[2].] A little child: a fond diminutive.

childing daisy. See ★*daisy*.

children's-bane (chil'drenz-bān), *n.* The American water-hemlock, *Cicuta maculata*: so called because its root causes death to children who mistake it for an edible root. Also called *children's-death*.

children's-death (chil'drenz-deth), *n.* Same as ★*children's-bane*.

child-study (chīld'stud-i), *n.* Systematic physiological and psychological study of children and their ways, especially in regard to their educational adaptabilities and capacities, with a view to determine effective methods of teaching and of overcoming disabilities.

Chilean cedar. See ★*cedar*.

Chilhowee sandstone. See ★*sandstone*.

chiliadic (kil-i-ad'ik), *a.* [*chiliad* + *-ic*.] Of or pertaining to a chiliad.

chiliarchy, *n.* **2.** The post of chiliarch.

chiliastical (kil-i-as'ti-kal), *a.* Chiliastic; also inclined to favor the views of the chiliasts.

chiliastys (kil-i-as'tis), *n.* [Gr. dial. χιλιαστύς, in dialects of Ephesus and Samos, < Gr. χίλιας, a thousand: see *chiliad*.] In *Gr. antiq.*, in Ephesus or Samos, a tribe or division of one thousand citizens. *Jour. Hellenic Studies*, VIII. 107.

chilicote (chē-li-kō'tā), *n.* [Mex. Sp.: see ★*chicayote*.] A name in northern Mexico of *Erythrina coralloides*, a small thorny trifoliate tree belonging to the *Fabaceæ*, the hard scarlet seeds of which were formerly strung into necklaces by the Indians. They are ground to a powder and are used medicinally in some parts of Mexico, both as an external application for headache and internally as an emetic. Like other bright-colored seeds used for beads they are also called *colorin* and *peonia*.

chilicothe (chi-li-kō'thē), *n.* [One of the modifications of the Mex. *chicayote*, bitter-gourd.] A name in California of several wild cucumbers, especially of *Micrampelis macrocarpa*. The fruit, when green, is a large prickly ball, but when ripe it becomes lily-like through the rolling back of the segments of the capsule, which are internally pure white. The large brown hard seeds resemble beans. They are strung into necklaces by the Indians. This plant and others resembling it have enormous tuberous roots, on account of which they are sometimes called man-root, or old man-in-the-ground. See ★*chicayote* and ★*chilicote*.

chilicoyote, *n.* Same as *chilacayote*.

chilidium (kī-lid'i-um), *n.*; pl. *chilidia* (-ä). [NL., < Gr. χείλος, a beak, + dim. *-idium*.] In the *Brachiopoda*, a convex plate which appears in mature stages of some of the species as an outside envelop of the cardinal process of the dorsal valve. It is analogous to the deltidium of the ventral valve, but is not homologous therewith either in origin or function.

Chiliferidæ (kī-li-fer'i-dē), *n. pl.* [NL., < Gr. χείλος, lip, + L. *ferre*, bear.] A family of ciliate *Protozoa*, of the order *Holotrichida*. They have the mouth in the anterior part of the body or near the middle, the pharynx undeveloped or small, and undulating membranes at the edge of the mouth or in the pharynx. The family includes the genera *Leucophrys*, *Glaucoma*, *Colpoda*, and others.

chiliomb (kil'i-om), *n.* [Gr. χιλιόμβη, formed in imitation of ἑκατόμβη, hecatomb.] A sacrifice of a thousand (oxen). *N. E. D.*

chilitis (kī-lī'tis), *n.* [NL., < Gr. χείλος, lip, + *-itis*.] Inflammation of the lip.

Chilled iron. See ★*iron*.—**Chilled meat,** etc., meat, fish, poultry, and other food material kept at a moderately low temperature, but not always frozen, in a cold-storage warehouse or in the cold-room of a steamer.

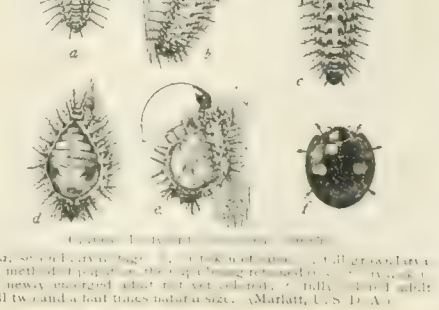
chill-harden (chil'här″dn), *v. t.* To harden (steel) by heating it to a cherry-red heat and cooling it suddenly by water or a jet of air. The carbon enters into combination with the iron and the steel is resistant to abrasion, and has a high elastic limit. See *chill-hardening* and *chilled casting*.

Chilli sauce, a highly-seasoned tomato sauce flavored with chillies.—**Chilli vinegar,** vinegar flavored with red peppers and used as a sauce.

chill-room (chil'röm), *n.* A cold-storage room or refrigerator chilled by pipes in which cold brine circulates: used to chill meats, etc.

In the preservation of meat, from the time that the beef, sheep, or hog is killed, it is kept in cold storage or *chill rooms*, until the time that it is taken from the refrigerator to be prepared for the table.

Sci. Amer. Sup., Jan. 24, 1903, p. 22629.



[illegible] All two and a half times natural size. (Marlatt, U. S. D. A.)

Chilocorus (kī-lok'ō-rus), *n.* [NL., < χείλος, lip, + (appar.), κόρος, sprout, shoot.] An important genus of coccinellid beetles, of wide distribution and comprising more than 30 species, all of which are important enemies of scale-insects. *C. bivulnerus* is the 'twice-stabbed ladybird' of the United States, and *C. similis* is the Chinese ladybird imported into the United States by the United States Department of Agriculture, from China, to destroy the San José scale.

chilomalacia (kī-lō-ma-lā'si-ä), *n.* [NL., < Gr. χείλος, lip, + μαλακία, softness.] Same as *noma*.

chiloschisis (kī-los'ki-sis), *n.* [NL., < Gr. χείλος, lip, + σχισις, cleavage, separation, < σχίζειν, cleave, separate: see *schism*.] Same as *harelip*.

chilostome (kī'lō-stōm), *n.* and *a.* **I.** *n.* Any member of the *Chilostomata*.

II. *a.* Pertaining to or resembling the *Chilostomata*.

chiltern (chil'tėrn), *n.* and *a.* [*Chiltern*, a local name.] **I.** *n.* A kind of dry, open soil characteristic of certain parts of England.

II. *a.* Characterized by the prevalence of the soil known as chiltern: as, *chiltern* counties.

chimborazite (chim-bō-rā'zīt), *n.* [*Chimborazo* (where found) + *-ite*[2].] Same as *aragonite*.

chime[1], *v. t.* **3.** To announce, indicate, summon, or bring about by chiming or stroke of bell: as, to *chime* (or strike) some particular hour; to *chime* one to sleep, or to supper, etc.

Chime-and-chime, end to end: said of barrels so ranged that the head of one butts against the head or bottom of another.

chimney, *n.* **4.** (*c*) A vent through which volcanic eruption has taken place.

He [De Launay] believes that since the cavities which contain the serpentine pipes are in the nature of volcanic *chimneys*, water, penetrating to the contact of a molten metallic bath charged with various carburets, caused the sudden formation of carburets of hydrogen, and by their explosion the opening of the volcanic *chimneys*.

Smithsonian Rep. (*Nat. Mus.*), 1900, p. 505.

5. A very narrow cleft in a cliff.

I lowered myself through the *chimney*, however, by making a fixture of the rope, which I then cut off, and left behind, as there was enough and to spare.

Whymper, Scrambles among the Alps, p. 119.

chimney-sweep, *n.* **4.** In *angling*, an artificial fly used in salmon-fishing: named from its black color.—**Chimney-sweep's cancer.** See ★*cancer*.

chimopelagic (kī″mō-pē-laj'ik), *a.* [Gr. χεῖμα, winter, + πέλαγος, sea.] Rising to the surface of the sea in winter, but living in the depths of the sea during the warm season. Many *Radiolaria*, *Medusæ*, *Siphonophora*, pteropods, and heteropods are chimopelagic. See ★*allopelagic*, ★*bathypelagic*, ★*nyctipelagic*.

chin, *v. i.* **2.** In *gymnastics*, to lift the weight of the body by the arms on a horizontal bar until the chin is brought over the bar. Also used transitively: as, to *chin* the bar.

Chin. An abbreviation of (*a*) *China*; (*b*) *Chinese*.

china, *n.*—**Alabama china,** ironstone china tableware made in Burslem, England, for the warship Alabama of the Confederate States navy, about 1862. It was decorated with a central design of two crossed cannon surrounded by a wreath of the cotton- and tobacco-plants and the motto of the vessel. Several services of this now celebrated pattern were produced, and pieces are sought as historical relics.—**Antislavery china,** Anglo-American pottery made by Staffordshire potters for the promotion of the antislavery cause in the United States. Forming part of the decoration is a quotation from the first amendment to the Constitution of the United States, with eagles and appropriate mottoes in the border design. In some pieces the name of Elijah P. Lovejoy, who became a martyr to the cause at Alton, Ill., in 1837, appears. Also called *Lovejoy china*.—**Canton china.** Same as *India* ★*china*.—**China mark,** a collector's name for an aquatic moth of the genus *Hydrocampa*.—**Cincinnati china,** pieces of a white stoneware table-service decorated with the figure of Fame holding a trumpet in one hand and the insignia of the order of the Cincinnati in the other: made in China, about 1784, for the Society of the Cincinnati in the United States.—**Columbian Star china,** table-services made extensively by John Ridgway, of Hanley, and William Adams and Sons, of Tunstall, England, for the American market during the presidential campaign of 1840. The design consists of a view of the celebrated 'log cabin,' the birthplace of William Henry Harrison, surrounded by a border of stars, printed in blue, pink, and other colors. This pattern was also copied by Petrus Regout, a potter of Maestricht, Holland. Also called *log cabin china* and *Harrison china*. **Erie Canal china,** pottery or cream-colored ware made by Staffordshire potters for the American market in commemoration of the completion of the Erie Canal in 1825. It was produced in a great variety of designs, printed in dark blue and other colors, showing various views of the canal and portraits of eminent Americans.—**India china,** a variety of Chinese porcelain or stoneware, usually with blue decorations, carried by the East India Company to England, Holland, and the United States, during the eighteenth century; also modern Chinese ware of the same character. See *India ware*.—**Ironstone china.** See

ironstone.—**Log-cabin china.** See *Columbian Star* ★*china.*—**Lovejoy china.** See *antislavery* ★*china.*—**Martha Washington china,** French porcelain tableware decorated with a chain of fifteen links, each contain-

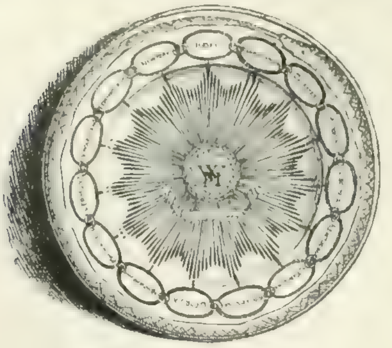


Plate of Martha Washington China.

ing the name of one of the States, and, as a central device, the monogram M. W. in a golden sunburst. Around the edge of each piece is a painted serpent, forming a complete circle. This service is supposed to have been presented to Mrs. Washington by the French officers who had fought with the Continental army. The design has been extensively copied.—**Masonic china,** china decorated with emblems of the order of Freemasons. Hard-paste porcelain punch-bowls, jugs, and other articles so ornamented were made in China and taken to England and the United States by the East India Company. Masonic cream-ware was also produced in Staffordshire early in the nineteenth century, with transfer-printed symbols and inscriptions. Pitchers and mugs of this character, with black and green devices, were also made in Liverpool for the British and American trade, many of which survive in private and public collections.—**Millenium china,** plates and other pieces of a table-service bearing a printed device in color showing a lion led by a child, surrounded by lambs, the all-seeing eye, and quotations from the Bible: a popular design produced by Staffordshire potters about 1835.—**Nanking china.** Same as *India* ★*china.*—**Stone china.** Same as *ironstone* ★*china* and *white* ★*granite.* **Syntax china,** blue china with printed designs after Rowlandson's illustrations of William Combe's Tours of Dr. Syntax: made at Cobridge, Staffordshire, by James Clews, early in the nineteenth century.

china[2] (kē'nạ̈), *n.* [Erroneous spelling of *kina* or *quina*, perhaps suggested by the unrelated *chinchona, cinchona.*] **1.** Cinchona bark.—**2.** Quinine.

China box, brier. See *box*[1], ★*brier.*

chinaldine (ki-nal'din), *n.* Same as ★*quinaldine.*

chinamania (chī'nạ̈-mā″ni-ạ̈), *n.* A craze for collecting china.

> Like other mild forms of insanity, *chinamania* has its peculiar phases, and attacks different individuals in very different ways. *All the Year Round,* April 3, 1875, p. 11.

chinamaniac (chī'nạ̈-mā″ni-ak), *n.* One who is smitten with the chinamania; one who has a craze for collecting china.

china-metal† (chī'nạ̈-met″ạl), *n.* An old name in Europe for porcelain and majolica ware before their true nature had become known.

> Their Venice-glass, and Purslane and *China-Metal,* cracks with as slight a blow as pots of coarser Clay. *A. Walker,* Leez Lachrymans, p. 13. *N. E. D*

chinamine (kīn'a-min), *n.* Same as *quinamine.*

china-root, *n.* **3.** *Smilax Pseudo-China.* See *china* ★*brier.*

chinaseptol (kin-a-sep'tōl), *n.* A yellowish, crystalline compound ($C_9H_5(OH).SO_3H.N$) bearing the same relation to chinoline that phenol-sulphonic acid does to benzol: used as an antiseptic as a substitute for salol. Also called *diaphtol.*

china-steps (chī'nạ̈-stepz″), *n. pl.* A pyramidal stand consisting of two or more steps on which china was formerly displayed. It was usually placed on the top of a high-boy.

China-town (chī'nạ̈-toun), *n.* A section of a town in the United States occupied chiefly by Chinese and in which they live more or less in accordance with their own customs.

China wood-oil. See ★*wood-oil.*

chinch-bug, *n.* **False chinch-bug.** (*a*) An American anthocorid bug, *Triphleps insidiosus,* which resembles the true chinch-bug, but is carnivorous, preying upon plant-lice and other small soft-bodied insects. (*b*) An American lygæid bug, *Nysius angustatus,* frequently mistaken for the chinch-bug. It is wide-spread and damages grape-vines, strawberry-plants, and garden vegetables. See *Nysius,* with cut.—**Minute false chinch-bug,** a bug, *Nysius minutus,* of the family *Lygæidæ,* somewhat resembling the chinch-bug. It feeds on cruciferous plants.

chin-chin[1] (chin'chin'), *n.* [A corruption of Chinese *ts'ing, ts'ing* (or *ch'ing, ch'ing*), in which *ts'ing* means beg, pray, request, have the goodness or the kindness to, please. The reduplication is much used in Chinese formal intercourse to introduce many polite phrases which are seldom completed: as, "I pray you" (do not stir); "allow me" (to refill your wine-cup); "please! please!" (no more for me); "I pray you" (to allow me to take my departure), that is, "to say good-by," etc.] **1.** A Pidgin-English form of salutation: as, *chin-chin!* old man, what place you go?

> On the thirty-sixth day from Charing Cross a traveller can . . . be making his *chin-chin* to a Chinese mandarin. *Pall Mall Gaz.,* April 15, 1885.

2. One's greetings, respects, or regards: as, please give my *chin-chins* to A when you see him.—**3.** A parting salute; 'good-by.'

chin-chin[1] (chin'chin'), *v. t.* To greet; salute; pay respects.

> The belle of the tankas arrives first; and showing her beautiful white teeth as she "*chin-chins*" the captain, makes fast to our paddle-box. *All the Year Round,* April 30, 1859, p. 18.

chinchin[2] (chin-chin'), *n.* [Chilean.] **1.** An evergreen shrub or small tree, *Azara microphylla,* of the family *Flacourtiaceæ,* or its hard wood. It is often cultivated as an ornamental plant and bears exceedingly fragrant small green flowers.—**2.** An ornamental shrub, *Polygala thesioides,* native of Chile and Bolivia, bearing blue flowers. See *Polygala.*

chincof, *n.* A simplified spelling of *chincough.*

chine-gall (chīn'gâl), *n.* Rheumatism of horses and cattle which becomes localized in the muscles of the loins. Also called *lumbago* and *chine-felon.*

chinela (chẹ̄-nā'lā), *n.* [Sp. *chinela, chanela* = Pg. *chinela* = Cat. *chinella* = It. *pianella,* a slipper, dim. of Sp. **chano* (otherwise *llano*) = Pg. *chão* = It. *piano,* flat, level, plane: see *plane*[1], *plain,* and *piano.*] In Spanish-speaking countries, a slipper; in the Philippine Islands, a native slipper without a heel and with a very small upper which barely covers the toes: worn by women.

Chinese artichoke. See ★*chorogi.*—**Chinese banana, brake, cat,** etc. See ★*banana,* ★*brake*[5], ★*cat*[1], etc. **Chinese potato, Chinese yam.** See ★*cinnamon-vine* and *yam,* 1.

chin-fly (chin'flī), *n.* A horse bot-fly, *Gastrophilus nasalis,* possibly so called because its eggs are laid about the horse's mouth where they can be reached by the tongue of the horse and thence carried to its stomach.

Ch'ing porcelain. See ★*porcelain*[1].

chinin (kin'in), *n.* [*china*[2] + *-in*[2].] Same as *quinine.*

chink[1], *n.* **2.** The variegated pattern shown by oak and other woods when cut across the grain.

> In discussing with my agent the difference between the wood of the sweet chestnut and that of the oak, he spoke of the *chink* of these woods, meaning the variegated pattern which they present when sawn. *N. and Q.,* June 2, 1900, p. 432.

chink[6] (chingk), *n.* [Appar. a var. of *kink*[1].] A sprain of the back. [Eng. dial.]

Chink[7] (chingk), *n.* A Chinaman. [U. S. slang.]

chin-key (chin'kē), *n.* In *psychophys.,* an electric key which is closed or opened by the movement of the lower jaw: used in reaction experiments. *Scripture,* Exper. Phonetics, p. 154.

Chinkie (ching'ki), *n.* [*Chink*[7] + *-ie*[2].] A Chinaman. [Australian slang.]

> The pleasant traits of character in our colonialised *Chinkie,* as he is vulgarly termed (with the single variation 'Chow'). *A. J. Boyd,* Old Colonials, p. 233.

chinkle[1] (chingk'l), *n.* [Var. of *kinkle*[1].] *Naut.,* a turn or kink in a rope.

chinkle[2] (chingk'l), *v. t.* [Freq. of *chink*[2].] To tinkle or cause to tinkle; produce a continued 'chinking' sound: as, to *chinkle* the small coins in one's pocket.

chin-music (chin'mū″zik), *n.* Persistent chatter or talk. [Slang.]

chinny (chin'i), *a.* [*chin* + *-y*[1].] Talkative; given to talk. [Colloq.]

> I forgot all about the old lady, though she was more *chinny* than the young one. *Bread-winners,* vii.

Chino (chē'nō), *n.* [Appar. orig. Sp. *chino,* a Chinese.] A person of one quarter Indian and three quarters negro blood. [Mexico.]

> An Indian marrying a negress produces a "Sobo," and the latter engenders with a negress a "*Chino.*" *Deniker,* Races of Man, p. 542.

Chinois†, *n.* [F.: see *Chinese.*] A Chinese or the Chinese. *Purchas.*

> The *Chinoys* who live at the bounds of the earth. *Sir T. Browne.*

chinoiserie (shē-nwoz-rē'), *n.* [F., < *Chinois,* Chinese.] **1.** Chinese conduct, methods, or ways of doing things; a Chinese characteristic.

> The men occupied the carved teakwood stools about a large table. . . . The women stood by and served them. . . . The whole was a bit of bright *chinoiserie* worth in itself a journey to witness. *W. H. Bishop,* in Harper's Mag., May, 1883, p. 830.

2. A Chinese curio, knickknack, or product: as, "Japanese tea-trays, *chinoiseries,*" etc., *Miss Braddon.*

Chino-Japanese (chī'nọ̄-jap-a-nēs or -nēz″), *a.* and *n.* **I.** *a.* Relating to both China and Japan: as, *Chino-Japanese* relations; *Chino-Japanese* trade.

II. *n.* The Chinese language as used and pronounced in Japan: as, *kai* for Chinese *hai,* the sea; *Tō Kiō* for Chinese *Tung King,* Eastern capital (the city formerly known as Yedo); *dō* for Chinese *tao,* road, circuit; *mei* or *mio* for Chinese *ming,* bright, clear, distinguished, etc. Also called *Sinico-Japanese.*

Chinoline blue. See ★*blue.*

Chinologist (chī-nol'ọ̄-jist), *n.* Same as *sinologist.*

Chinology (chī-nol'ọ̄-ji), *n.* [*China* + *-ology.*] Same as *sinology.*

Chinook salmon. Same as *quinnat.*

chinoral (ki-nō'rạl), *n.* [★*china*[2] (*quina*) + (*-chl*)*oral.*] An oleaginous, very bitter liquid containing quinine and chloral hydrate: used internally as a hypnotic and externally as an antiseptic. Also *quinoral.*

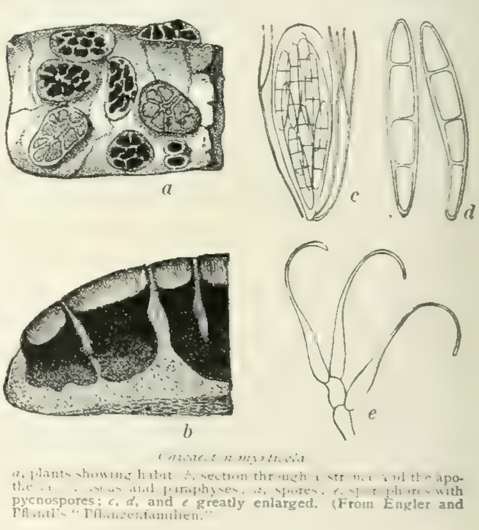
chinosol (kin'ọ̄-sol), *n.* [★*china*[2] (*quina*) + *-ose* + *-ol.*] Same as ★*quinosol.*

chinovic (ki-nō'vik), *a.* [★*china*[2] (*quina*) + L. *ovum,* egg, + *-ic.*] White, and derived from china (quina) or cinchona bark.—**Chinovic acid,** a white, finely crystalline powder of undetermined composition, contained in cinchona bark and also obtained by decomposing chinovin by boiling with dilute acids.

chinovin (chin'ō-vin), *n.* [*chinov*(*ic*) + *-in*[2].] A whitish, intensely bitter glucoside of uncertain composition, extracted from cinchona bark.

chin-strap, *n.* **2.** A strap which passes under the jaw of a horse and connects with the nose-piece and bridle-checks.

Chiodecton (kī-ọ̄-dek'ton), *n.* [NL. (Acharius, 1814), so called in allusion to the white thallus,



Chiodecton myrtacea

a, plants showing habit; *b,* section through a stroma and the apothecia, asci and paraphyses; *d,* spores; *e,* spermophores with pycnospores; *c, d,* and *e* greatly enlarged. (From Engler and Prantl's "Pflanzenfamilien.")

< Gr. *χιων,* snow, + (appar.) *δεκτός,* acceptable (pleasing?).] A large genus of crustaceous lichens with *Chroölepus* gonidia and more or less disciform apothecia, either sunken in or seated upon a stroma. Most of the species occur upon bark in tropical or subtropical regions.

Chiodectonaceæ (kī-ọ̄-dek-tọ̄-nā'sẹ̄-ē), *n. pl.* [< *Chiodecton* + *-aceæ.*] A family of crustaceous lichens, named from the genus *Chiodecton* and having the apothecia mostly sunken in stromata.

chionablepsia (kī″ō-na-blep'si-ạ̈), *n.* [NL., < Gr. *χιων,* snow, + *ἀβλεψία,* blindness.] Same as *snow-blindness.*

Chionaspis (kī-ō-nas'pis), *n.* [Gr. *χιων,* snow, + *ἀσπίς,* a shield.] A genus of scale-insects.

Orange Chionaspis (*Chionaspis citri*), illustrating a group of the female and of the scales as they occur on a leaf. Enlarged about seven diameters. (After Marlatt.)

-**Orange Chionaspis,** a diaspine scale-insect, *Chionaspis citri*, of wide distribution, which affects the foliage and bark of citrus plants.

This species (*Chionaspis citri* Comstock) occurs in the orange groves of the Eastern United States, and is also especially troublesome in Louisiana, as first shown by the observations of Dr. Howard, and, later, of Professor Morgan. The latter reports it as being very prevalent from New Orleans to the Gulf, and that its presence on the trees causes a bursting of the bark and very ugly wounds.
Yearbook U. S. Dept. Agr., 1900, p. 270.

Chionodoxa (kī″ō-nō-dok′sạ̈), *n.* [NL. (*Boissier*, 1844), in allusion to their early-blooming habit, < Gr. χιών, snow, + δόξα, glory.] A small genus of hardy bulbous plants of the family *Liliaceæ*; the genus includes 4 species which are natives of Crete and Asia Minor (Mt. Tarsus). The flowers are small and blue (running into white and red forms), with recurved, spreading, acute segments, dilated filaments, and small or capitate stigma. They are among the best of early flowering plants, blooming in February, March, and April, according to the locality, with the early snowdrops and scillas. Since their introduction to cultivation in 1877, they have been widely cultivated under the name *glory of the snow*.

chionophilous (kī-ō-nof′i-lus), *a.* [Gr. χιών, snow, + φιλεῖν, love.] Preferring the winter: applied specifically by Ludwig to the winter-leaves of *Helleborus fœtidus*.

chionophobous (kī-ọ-nof′ō-bus), *a.* [Gr. χιών, snow, + φοβεῖν, fear.] Shunning the winter: applied specifically by Ludwig to the summer-leaves of *Helleborus fœtidus*.

chip[1], *v. i.* 4. In *poker*, to bet a counter of the smallest value, in order to keep in the pool until others declare.

chip[1], *n.* 9. Specifically, in *gem-cutting*, a cleavage which weighs less than three fourths of a carat.—**Chip bark,** the broken pieces and chips of cinchona bark, used principally by manufacturers of quinine and other alkaloids, in distinction from *druggist's bark*, which consists of the finer unbroken quills.—**Saratoga chips,** potatoes cut into thin slices, crisply fried, and dried in an open oven.

chip[3] (chip), *n.* 1. In *wrestling*, a special mode of throwing one's opponent; a trick. *N. E. D.*—2. A quarrel; a falling out; a 'spat.' [Prov. Eng.]

chipa (chē′pä), *n.* [Quichua *chipa*, Aymará *cchipa*, cover, wrap around, as a bundle.] In South America, a net made of leather thongs, used for transporting fruit and also heavier loads. Trunks and boxes are usually covered with a chipa to protect them on long and difficult journeys.

A Chippendale Chair. After a design by Thomas Chippendale.

chipped (chipt), *a.* [Also *chipt*, < *chip*[1] + *-ed*[2].] Having small pieces or flakes broken off; made by a process of chipping: said of stone implements made of flint, jasper, obsidian, and other brittle stones. Chipped stone implements are generally roughly shaped with a small hammer and then fashioned by chipping or flaking with a bone flaker which is pressed against the surface of the stone, small chips being taken off by pressure. The edges of stone implements are also chipped by nipping.

Very unlike . . . to a set of *chipped* instruments belonging to the . . . period of the cromlechs in France and England.
E. B. Tylor, Early Hist. of Mankind, viii.

Chippendale (chip′en-dāl), *n.* The name of an English designer and maker of furniture, Thomas Chippendale, who published a book of designs in 1752, and whose name became attached to a style of furniture prevalent from the middle to the end of the eighteenth century. The designs were an English adaptation of contemporary French styles. The general characteristics were elaboration and delicacy, with an affectation of simplicity not founded on solidity. A style of book-plates is also known by this name. See ★*furniture*.

The earlier examples [book-plates] of this *Chippendale* manner are tolerably ponderous and simple.
Encyc. Brit., XXVI. 304.

chipper[1], *n.* 2. A large marble used by boys in Scotland to chip at and scatter a row of marbles while standing at a certain distance. Also called a *plunker*. **Pneumatic chipper,** a small impact-machine worked by compressed air, used for chipping or cutting metal; a pneumatic hammer used for chipping. The pneumatic chipper replaces the hammer and cold-chisel and does the work more quickly and with less exertion on the part of the operator.

chipper[2] (chip′ėr), *n.* [From *chipper[2], *v.*, freq. of *chip*[2].] Twitter; chatter. [Dialectal.]

The wreaths of foam [of the sea] . . . made a mirthful *chipper* and laugh under the song of the soaring larks.
E. Burritt, Walk to Land's End, p. 314.

chipper[3] (chip′ėr), *v. t.* To make 'chipper'; cheer up.

Perhaps the hardest thing that Sylvia did through the day, was the setting to work to *chipper* her mother up.
Mrs. Whitney, Other Girls, xviii.

Chippewayan (chip-e-wā′yan), *a.* and *n.* I. *a.* Of or pertaining to the Chippeway, Chippewa, or Ojibwa tribe, one of the Athapaskan tribes of Canada.

II. *n.* A member of that tribe.

chipping-hammer (chip′ing-ham″ėr), *n.* 1. A hammer weighing about a pound and a half, used for striking the head of a chipping- or cold-chisel.—2. A pneumatic hammer used for chipping; a pneumatic chipper (which see, under ★*chipper*[1]).

chipping-machine, *n.*—**Pneumatic chipping-machines,** hand-held machines in which the chisel-edge is driven against the surface to be chipped by the action of air upon a piston with great frequency and intensity.

chipping-strip (chip′ing-strip), *n.* Same as *chipping-piece*.

chip-syringe (chip′sir inj), *n.* A rubber bulb with a fine nozle attached, used for blowing or washing away the dust (chips) during the excavation of a tooth-cavity.

chiquechique (chē″kā-chē′kā), *n.* [Carib name.] In Venezuela, the bast-palm, *Attalea funifera*, or its fiber, piassava. See *Attalea* and *piassava*, 1.

chiral (kī′ral), *a.* [Gr. χείρ, hand, + *-al*.] Of or pertaining to the hand. See ★*chirality*.

chirality (kī-ral′i-ti), *n.* [*chiral* + *-ity*.] In *optics*, the power possessed by certain crystals and optically active substances of turning the plane of polarization of light to the right or left hand.

The book is largely a new creation. It surveys a vast range, all the cognate subjects on which the author feels that he has something new to communicate — laws of diffusion of gases, transparency of the sky, detailed dynamics of optical *chirality*, motion of molecules through æther, etc.
Nature, May 5, 1904, p. 5.

chirapsia (kī-rap′si-ạ̈), *n.* [NL., < Gr. χειραψία, a touching or rubbing with the hands, < χείρ, hand, + ἅπτειν, touch.] Friction with the hands; rubbing; massage.

chirarthritis (kī-rär-thrī′tis), *n.* [NL., < Gr. χείρ, hand, + ἀρθρῖτις, inflammation of the joints: see *arthritis*.] Inflammation of the joints of the hand and fingers.

chiratin (kī-rā′tin), *n.* [NL. *chirata* + *-in*[2].] A neutral, yellow, resinous, intensely bitter compound, $C_{26}H_{48}O_{15}$, found in the stalks of chiretta (*Swertia Chirata*).

chiratogenin (kir-a-toj′e-nin), *n.* [NL. *chirata* + *-gen*, produced, + *-in*[2].] An amorphous, neutral compound, $C_{13}H_{24}O_3$, formed, together with ophelic acid, by the hydrolysis of chiratin.

Chir. B. An abbreviation of the Latin *Chirurgiæ Baccalaureus*, Bachelor of Surgery.

Chir. D. An abbreviation of the Latin *Chirurgiæ Doctor*, Doctor of Surgery.

chirivita (chē-rē-ve′tạ̈), *n.* [Cuban Sp. *chiribita*, also *chiribico*, a fish so called; a West Indian fish, *Pomacanthus arcuatus*: cf. Sp. *chiribitas*, pl., floating specks in the eyes (*muscæ volitantes*).] A fish, the same as *black* ★*angel*.

chirization (kī-ri-zā′shọn), *n.* [Also *cheirization*, < **chirize* (Gr. χείρ, hand, + *-ize*) + *-ation*.] The process of development by which the hand has become a more and more important element in human activities; also a supposed correlated process of development of mobility and of increasing importance of centrifugal over centripetal movements.

Now pedal development is one of the special processes of peripheral (or centrifugal) functioning and growth involved in the general process of *chirization*, which, coordinately with cephalization, defines human progress; and this developmental process explains the specialization of the Seri along one or more lines, and connects the special development directly with environing conditions.
17th An. Rep. Bur. Amer. Ethnol., i. 157.

chirk[3] (chėrk), *n.* A perverted form of *chert*.

chirl (chėrl), *v.* [An imitative var., in freq. form, of *chirk*[1], *chirm*. The Sp. *chirlar*, prattle, *chirriar*, chirp, are imitative words of independent origin.] I. *intrans.* To sing; warble; chirm.

II. *trans.* To warble like a bird.

chirl (chėrl), *n.* [*chirl*, *v.*] 1. A kind of musical warble.

His [Leigh Hunt's] voice, in the finale of it, had a kind of musical warble (*chirl* we vernacularly called it) which reminded me of singing birds.
Carlyle, in Mrs. Carlyle's Letters, I. 2.

2. Same as *chirm*, *n.*, 2.

chirls (chėrlz), *n.* In *mining*, coal which passes through a harp or screening-shovel; small coal free from dirt. Also *churrels*. [Scotch.]

chirognomist (kī-rog′no-mist), *n.* [*chirognom-y* + *-ist*.] One who tells fortunes or reads character by an inspection of the hand or the lines on it; a palmist.

chirograf, *n.* A simplified spelling of *chirograph*.

chirografy, *n.* A simplified spelling of *chirography*.

chirograph, *n.* 2. A contrivance for holding a beginner's hand in a prescribed position while he is learning to write.

chirographal (kī-rog′rạ-fạl), *a.* [*chirograph* + *-al*[1].] 1. Relating to chirography.—2. In one's own handwriting; autographic.

chirographary (kī-rog′rạ-fạ-ri), *a.* [ML. *chirographarius*, < *chirographum*, chirograph.] Of or pertaining to, or given in, one's own handwriting: as, a *chirographary* creditor, that is, one who holds an acknowledgment of indebtedness in the debtor's own handwriting.

chirol (kī′rōl), *n.* [Gr. χείρ, hand, + *-ol*.] An antiseptic varnish consisting of an ethereo-alcoholic solution of various antiseptic oils and resins.

chiromegaly (kī-rọ̄-meg′ạ-li), *n.* [Gr. χείρ, hand, + μεγαλία, largeness.] Enlargement in all dimensions of the hands.

chirometer (kī-rom′e-tėr), *n.* [Gr. χείρ, hand, + μέτρον, measure.] An instrument used to measure slopes and angles of elevation, as the angle of elevation of a rifle, or the angle of heel when a ship rolls.

chironomid (kī-ron′ọ̄-mid), *a.* and *n.* I. *a.* Of or belonging to the dipterous family *Chironomidæ*.

II. *n.* A member of the dipterous family *Chironomidæ*.

chiropodalgia (kī″rọ̄-pō-dal′ji-ạ̈), *n.* [NL., < Gr. χείρ, hand, + πούς (ποδ-), foot, + ἄλγος, pain.] Severe pains in the hands and feet occurring in acrodynia.

chiropodical (kī″rọ̄-pod′i-kạl), *a.* Of, pertaining to, or involving chiropody.

As we passed rapidly over a woodland space, . . . something hurt my foot, and taking off my shoe, I found that a small *chiropodical* operation was necessary.
Geo. MacDonald, Wilfred Cumbermede, xvii.

chiropodism (kī-rop′ō-dizm), *n.* [*chiropod-y* + *-ism*.] Same as *chiropody*.

chiropodistry (kī-rop′ō-dis-tri), *n.* [*chiropodist* + *-ry*.] Same as *chiropody*.

chiropodology (kī-rop-ō-dol′ọ-ji), *n.* [Gr. χείρ, hand, + πούς (ποδ-), foot, + -λογία, < λέγειν, speak.] 1. Same as *chiropody*.—2. A treatise on, or the sum of knowledge regarding, chiropody.

chiropterophilous (kī-rop-te-rof′i-lus), *a.* [NL. *chiroptera*, bats, + Gr. φιλεῖν, love, + *-ous*.] In *bot.*, pollinated by the agency of bats.

Chirosaurus (kī-rọ̄-sâ′rus), *n.* [Also *Cheirosaurus*: NL., < Gr. χείρ, hand, + σαῦρος, lizard.] Same as ★*Chirotherium*.

chirospasm (kī′rọ-spazm), *n.* [Gr. χείρ, hand, + σπασμός, contraction: see *spasm*.] Same as *writers' cramp*.

Chirotherium (kī-rō-thē'ri-um), *n.* [Also *Cheirotherium*; NL., < Gr. χείρ, hand, + θηρίον, a wild beast.] An extinct reptile, or, as now supposed, a stegocephalian amphibian, whose usually five-toed tracks (indicating a large hind foot and smaller fore foot) occur in the Triassic sandstones of Germany and Great Britain. Also *Charosaurus*.

Chirotrichidæ (kī-rō-trik'i-dē), *n. pl.* [NL., < *Chirothrix* (*-trich-*) + *-idæ*.] A family of extinct malacopterygian fishes known geologically from the Cretaceous period.

chirotype (kī'rō-tīp), *n.* [Gr. χείρ, hand, + τύπος, type.] A specimen upon which a manuscript name, or chironym, is based.

chirper, *n.* **2.** A chirping cup; 'the cup that cheers.' [Colloq.]

> Hand up the *chirper!* ripe ale winks in it;
> Let's have comfort and be at peace.
> *G. Meredith,* Juggling Jerry, st. 11.

chirpiness (chêr'pi-nes), *n.* A chirpy state or quality; liveliness.

> He saluted us with a cricket-like *chirpiness* of manner.
> *W. D. Howells,* Italian Journeys, p. 248.

chirping (chêr'ping), *p. a.* **1.** That which chirps (as a bird or cricket).—**2.** That which cheers or enlivens: as, a *chirping* cup or glass. —**3.** Merry; hilarious; lively.

> This carol plays, and has been in his days
> A *chirping* boy and kill-pot;
> Kit Cobbler it is, I'm a father of his,
> And he dwells in the lane called Fill-pot.
> *B. Jonson,* The Masque of Christmas, st. 8.

4. Talkative.

> He liked drink, too, which made him *chirping* and merry. *Thackeray,* Catherine, viii.

chirpling (chêrp'ling), *n.* [*chirp* + *-ling*[1].] A little chirper; a young bird. *N. E. D.*

chirr (chêr), *n.* [*chirr, v.*] A monotonous, sharp, stridulous sound such as that made by the cricket or cicada.

chirrup[2], *v.* **I.** *trans.* **2.** To cheer or applaud (a public singer or the like, and for pay).—**3.** To produce or utter chirpingly.

> If part of their [ants'] building is destroyed, an official is seen coming out to examine the damage; and after a careful survey of the ruins, he *chirrups* a few clear and distinct notes.
> *Livingstone,* Exped. to Zambesi, ix.

II. *intrans.* **1.** To produce with compressed lips and suction a sharp explosive chirping sound by way of greeting or pleasing an infant or a cage-bird, or of coaxing and encouraging a dog or a horse, etc.—**2.** To converse or sing in a lively manner or in sprightly tones.

> Then she is so accomplished—so sweet a voice—so expert at her harpsichord— . . . how she did *chirrup* at Mrs. Piano's concert! *Sheridan,* Rivals, ii. 1.

chirruper (chir'up-ėr), *n.* [*chirrup*[2], *v. t.*, 2, + *-er*[1].] One who chirrups or applauds; a professional applauder.

> Did poet or painter . . . ever have a *chirruper* in their employment? The players and singers in music-halls cannot, it seems, do without him. It is his generous office . . . to inaugurate the applause.
> *J. Payn,* in Illus. London News, March 17, 1888, p. 268.

chisel[2], *n.*—**Blacksmith's chisel,** a heavy hammer having a chisel-shaped peen.—**Box-chisel,** a double-bladed chisel for opening packing-boxes.—**Cow-mouthed chisel,** a round-nosed cold-chisel ground to a blunt angle, used for chipping hollows in metal.—**Mortising-machine chisel,** one of the special types of chisel used in power mortising-machines.

chiseled, *p. a.* **2.** Shaped like a chisel: as, a crowbar with a *chiseled* edge.

chisel-edged (chiz'el-ejd), *a.* Having the shape of a wedge, with the cutting edge at the base: said of an arrow-head.

chiseler, chiseller (chiz'el-ėr), *n.* [*chisel*[2], *v.*, + *-er*[1].] One who works with a chisel; one who carves, cuts, or shapes with a chisel.

chisel-gage (chiz'el-gāj), *n.* A depth-gage adapted to a chisel: used in making slivers or chips in flooring where the chips are to be turned back again and glued down to hide a nail-head.

chiseling, chiselling (chiz'el-ing), *n.* Chiseled work.

> Do we not shun the street version of a fine melody?—or shrink from the news that the rarity—some bit of *chiselling* or engraving perhaps . . . is really not an uncommon thing, and may be obtained as an every day possession? *George Eliot,* Middlemarch, v. 47.

chiselmouth (chiz'el-mouth), *n.* A cyprinoid fish, *Acrocheilus alutaceus,* found in the lower Columbia river and its tributaries, as far up as Shoshone and Spokane Falls. Also called *chiselmouth jack.*

chisel-rod (chiz'el-rod), *n.* A steel rod rolled to a suitable section for the forging of cold or other chisels.

chit[1], *n.* **3.** *pl.* Small rice.

> In the Carolina mills the [rice] product is divided into 'prime,' 'middling' (broken), 'small' or *chits,* and 'flour' or 'douse.' *F. L. Olmsted,* Seaboard Slave States, vii.

chit[2], *n.* **3.** Also used attributively. See *chitty-faced*[2].

> But no thanks to that little jilting devil, Jenny Dennison, who deserves a tight skelping for trying to lead an honest lad into a scrape, just because he was so silly as to like her good-for-little *chit* face.
> *Scott,* Old Mortality, x.

chitarra (kē-tär'rä), *n.* [It.: see *cithara* and *guitar.*] An Italian musical instrument of the lute family, but with a flat back and wire strings, like the guitar. It was first used in the sixteenth century.

chitarrino (kē-tär-rē'nō), *n.* [It., dim. of *chitarra.*] A small chitarra, especially popular in Naples.

chitarrone (kē-tär-rō'ne), *n.* [It., aug. of *chitarra.*] A large chitarra, usually with a double neck, much extended, very similar to that of the theorbo and archlute. For a time from the latter part of the sixteenth century the chitarrone was much used as the bass instrument in groups of stringed instruments. The distinction between chitarrone and archlute is not always observed in usage. Properly the latter was a true lute, while the former was closer to the guitar.

Chitarrone.

> The *chitarrone* with its very long open bass strings dates from 1589 and was used in orchestras in 1607.
> *Science,* May 29, 1903, p. 870.

chitenidine (ki-ten'i-din), *n.* [*chiten(ine)* + *-id* + *-ine*[2].] A crystalline alkaloid, $C_{19}H_{22}O_4N_2 + 2H_2O$, formed by the oxidation of quinidine in an acid solution of potassium permanganate. It melts with decomposition at 246° C.

chitenine (kī'ten-in), *n.* [Appar. < *chi(na*[2]) + *-t* + *-en* + *-ine*[2].] A crystalline alkaloid, $C_{19}H_{22}O_4N_2 + 4H_2O$, formed by the oxidation of quinine sulphate with potassium permanganate. The anhydrous base melts at 228° C.

chitinous, *a.*—**Chitinous degeneration.** Same as *amyloid degeneration.*

chiton, *n.* **3.** In *zoöl.*, an investing membrane or sheath.

Chitonelloidea (kī-tō-ne-loi'dē-ä), *n. pl.* [NL., < *Chitonellus* + *-oidea.*] A group of irregular chitons having the posterior valve funnel-shaped and the laminæ thrown forward. It contains the genera *Chitonellus* and *Choneplax.*

chitosamin (kī-tō-sam'in), *n.* [*chit(in)* + *-ose* + *amin(e).*] Same as ★*glucosamin.*

chitosan (kī'tō-san), *n.* [*chit(in)* + *-ose* + *-an.*] An amorphous compound, $C_{14}H_{26}O_{10}N_2$, obtained by heating chitin to 180° C. with a very concentrated solution of potassium hydroxid.

chitosarc (kī'tō-särk), *n.* [Gr. χιτών, chiton, + σάρξ (σαρκ-), flesh.] That region of the body of protozoans, as the *Sarcodina,* in which the shell is formed. *Wallich.*

chitose (kī'tōs), *n.* [*chit(in)* + *-ose.*] A simple sugar, $C_6H_{12}O_6$, obtained on oxidation of chitosamin (glucosamin).

chitter[1] (chit'ėr), *n.* [*chitter*[1], *v.*] The chattering or twittering of birds. *Mrs. Whitney.*

chittering-bite (chit'ėr-ing-bīt), *n.* A bit of bread eaten by boys who have been swimming, to prevent shivering or the chattering of their teeth with the cold; a shivering-bite. Also called *chittering-crust* and *chittering-piece.* [Scotch.]

chittering-crust (chit'ėr-ing-krust), *n.* Same as ★*chittering-bite.*

chittering-piece (chit'ėr-ing-pēs), *n.* Same as ★*chittering-bite.*

chiule (kē-ūl'), *n.* [ML. *chiula* (Nennius), *cyula* (Gildas), < AS. *cīol, cēol,* ON. *kiöll, kjöll,* a ship: see *keel*[1].] An artificial term representing a Middle Latin form, in medieval British historians, of the Anglo-Saxon and Norse name for a 'long ship' or ship of war.

chivalry, *n.*—**Age of chivalry,** the period, from the eleventh to the fourteenth century, during which the system of knightly military service, with all its privileges and its high ideals of valor, generosity, courtesy, etc., prevailed.—**The flower of chivalry,** the more illustrious portion or most illustrious member of any company of armed knights.

chivarras, chivarros (chē-vär'räs, -rōs), *n. pl.* [Mex. Sp.] Leggings. [Southwestern United States.]

chivo (chē'vō), *n.* [Sometimes erroneously read or written *chiro;* < Sp. *chibo,* a kid, in Cuba also a goat. Names of the goat are often transferred to fish.] A mulloid fish, *Upeneus grandisquamis,* found from Guaymas to Panama.

Ch. J. An abbreviation (*a*) of *chief justice,* (*b*) of *chief judge.*

Chlamydobacteriaceæ (klam″i-dō-bak-tē-ri-ä'se-ē), *n. pl.* [NL. (Migula). < Gr. χλαμύς (χλαμυδ-), mantle, + *Bacteriaceæ.*] A family of filamentous bacteria consisting of rod-shaped cells surrounded by a distinct sheath. Reproduction is by means of either motile or non-motile spores.

Chlamydomonadidæ (klam″i-dō-mō-nad'i-dē), *n. pl.* [NL., < *Chlamydomonas* (*-nad-*) + *-idæ.*] A family of *Protozoa,* of the order *Phytoflagellida.* They have usually a greenish body with a delicate membranous shell, 1 or 2 contractile vacuoles at the base of the flagella, and a single stigma or eye-spot. This family includes the genera *Chlamydomonas, Chlorogonium, Polytoma, Hæmatococcus,* and others.

Chlamydomonadina (klam″i-dō-mon″ä-di'nä), *n. pl.* [NL., < *Chlamydomonas* (*-nad-*) + *-ina.*] A suborder of flagellate *Protozoa,* of the order *Phytoflagellida,* including the families *Chlamydomonadidæ* and *Phacotidæ.*

Chlamydomonas (klam″i-dom'ō-nas), *n.* [NL., < Gr. χλαμύς (*-υδ-*), mantle, + μονάς, a unit.] The typical genus of the family *Chlamydomonadidæ. Ehrenberg,* 1834.

Chlamydothrix (kla-mid'ō-thriks), *n.* [NL. (Migula, 1900) (in allusion to the sheathed filaments), < Gr. χλαμύς (χλαμυδ-), a mantle, + θρίξ, hair.] A genus of filamentous bacteria consisting of cylindrical cells arranged in non-motile, unbranched, sheathed filaments. Reproduction is by means of non-motile, spherical or ovoid spores, originating directly from the vegetative cells. *C.* (*Cladothrix*) *ochracea* is a common species occurring in water impregnated with iron. See *iron-bacteria,* under ★*bacterium.*

Chlamysporum (kla-mis'pō-rum), *n.* [NL., (Salisbury, 1808), < Gr. χλαμύς, mantle, + σπορά, seed. The seed of the type species is hooded by an aril.] A genus of monocotyledonous plants of the family *Liliaceæ.* The type species, *C. juncifolium,* is a native of Australia and is sometimes cultivated. See *Thysanotus.*

Chloasma cachecticorum, discoloration of the skin occurring in the subjects of chronic disease.—**Chloasma hepaticum,** liver-spots; cutaneous discolorations accompanying hepatic disorders. **Chloasma uterinum,** brownish-yellow patches on the skin occurring in pregnant women.

chloracid (klō-ras'id), *n.* [*chlor(in)* + *acid.*] In *chem.*, an acid of which the electro-negative radical is or contains chlorin.

Chloræmidæ, *n. pl.* See ★*chlorhæmidæ.*

Chloral camphor. See ★*camphor.*

chloral-acetophenonoxime (klō″ral-as″ē-tō-fen-ō-noks'im), *n.* Colorless prismatic crystals, $C_6H_5.CH_3.C{=}ON.CH.OH.CCl_3$, obtained by the interaction of chloral and acetophenonoxime at low temperatures. Upon contact with acids it decomposes into its components. Used in medicine in cases of epilepsy and tetanus.

chloralamide (klō-ral-am'id), *n.* [*choral* + *amide.*] A colorless crystalline compound, $CCl_3\text{-}CH < \begin{smallmatrix} OH \\ NH_2 \end{smallmatrix}$, obtained by conducting dry ammonia into a solution of chloral anhydrid in chloroform. It is an analgesic and hypnotic remedy. It is official in the U. S. Pharmacopœia (eighth edition) under the name *chloralformamidum.*

chloral-ammonium (klō″ral-a-mō'ni-um), *n.* A colorless, crystalline compound obtained by passing dry ammonia gas into a chloroformic solution of chloral. It is almost insoluble in water, but when boiled with water decomposes into chloroform and ammonium formate; used as an analgesic and hypnotic.

chloralic (klō-ral'ik), *a.* [*chloral* + *-ic.*] Derived from chloralose.—**Chloralic acid,** a crystalline acid, $C_7H_9Cl_3O_6$, formed by the oxidation of chloralose. It crystallizes in needles which melt at 212° C.

chloralimide (klō-ral-ī'mid), *n.* [*chloral* + *imide.*] A colorless crystalline powder, $(CCl_3CH{=}NH)_3$, obtained by heating chloral hydrate and dry ammonium acetate to boiling, and pouring into cold water. It is used as a hypnotic.

chloralose (klō'ral-ōs), *n.* [*chloral* + *-ose.*] A name given to two compounds, $C_8H_{11}O_6Cl_3$, formed by the union of chloral and glucose.

One is difficultly soluble in water, is tasteless, and melts at 230° C. The other is easily soluble, tastes bitter, and melts at 186° C. Chloralose is used as a hypnotic.

chloraloxime (klō-ral-ok'sim), *n.* A class of crystalline compounds, employed in medicine, obtained by the action of various oximes upon chloral: as chloral-acetaldoxime ($CCl_3.CHO-CH_3.CH.N.OH$), chloral-benzaldoxime ($CCl_3.CHO-C_6H_5.CH.N.OH$), chloral-acetoxime ($CCl_3.CHO-(CH_3)_2.CN.OH$), chloral-camphoroxime ($CCl_3.CHO-C_{10}H_{16}.N.OH$), and others. When heated with water these compounds decompose. They are used as hypnotics.

chloramine (klōr-am'in), *a.* [*chlor(in)* + *amine.*] Pertaining to an amine which contains chlorin.—**Chloramine** ★**brown,** ★**green,** ★**orange,** ★**yellow.** See the nouns.

chloramylite (klō-ram'i-lit), *n.* [Gr. χλωρός, green, + ἄμυλον, starch.] Chlorophyl granules derived from the transformation of starch. *Belzung.*

chloranemia (klō-ra-nē'mi-ä), *n.* [Also *chloroanemia*; NL. *chloronæmia* < Gr. χλωρός, green, + ἀναιμία, bloodlessness (see *anemia*).] In *med.*, same as *chlorosis.*

chloranemic (klō-ra-nem'ik), *a.* [*chloranemia* + *-ic.*] Same as *chlorotic. Buck*, Med. Handbook, VII. 608.

Chloranthaceæ (klō-ran-thā'sē-ē), *n. pl.* [NL. (Blume, 1830), < *Chloranthus* + *-aceæ.*] A family of dicotyledonous, archichlamydeous (largely achlamydeous) plants of the order *Piperales*, typified by the genus *Chloranthus*, and characterized mainly by the 1–3 stamens united with each other (when more than one) and with the ovary. There are 3 genera and about 33 species, natives of eastern Asia, India, the Pacific islands, and tropical America. They are herbs, shrubs, or trees with opposite stipulate leaves, and inconspicuous flowers in spikes or paniculate heads.

chloranthaceous (klo-ran-thā'shius), *a.* Belonging to the plant-family *Chloranthaceæ.*

chlorapatite (klōr-ap'a-tit), *n.* [*chlor(in)* + *apatite.*] An apatite containing chlorin. The common varieties of apatite contain fluorin and are called *fluorapatites.* See *apatite.*

chlorate, *n.* Potassium and sodium chlorates are now manufactured on a large scale by electrolysis of strong solutions in water of the corresponding chlorids.

chloraurate (klōr-â'rāt), *n.* [*chlor(in)* + *aur(ic)* + *-ate*[1].] Same as ★*aurichlorid.*

chlorazol (klōr-az'ōl), *n.* [*chlor(in)* + *az(o)* + *-ol.*] A substance containing chlorin and one or more azo- and hydroxyl-groups. **Chlorazol blue.** See ★*blue.*

Chlorella (klō-rel'ä), *n.* [NL. (Beyerinck, 1890), < Gr. χλωρός, greenish yellow, + dim. *-ella.*] A genus of unicellular grass-green algæ occurring in symbiotic relationship with *Hydra*, *Paramæcium*, *Ophrydium*, and similar forms; the 'yellow cell' of *Radiolaria.*

chloremia, chloræmia (klō-rē'mi-ä), *n.* [NL. *chloræmia*, < Gr. χλωρός, green, + αἷμα, blood.] Same as *chlorosis.*

chloretone (klō're-tōn), *n.* [*chlor(oform)* + *-et* + *-one.*] A colorless crystalline condensation-product, $(CH_3)_2 : C < \begin{matrix} OH \\ CCl_3 \end{matrix}$, of chloroform and acetone. It is hypnotic and antiseptic. Same as ★*acetone chloroform.*

The majority of deaths occurred in rabbits, after chloretone or urethane. The fatal dose for *chloretone* by stomach catheter, lies slightly above 16 cc. of a saturated solution per kilo. *Jour. Exper. Med.*, VI. 247.

Chlorhæma (klōr-hē'mä), *n.* [NL., irreg. < Gr. χλωρός, green, + αἷμα, blood.] The typical genus of the family *Chlorhæmidæ. Dujardin*, 1838.

Chlorhæmidæ, Chloræmidæ (klōr-hē'mi-dē, klo-rem'i-dē), *n. pl.* [NL., < *Chlorhæma* + *idæ.*] A family of chætopod annelids, of the order *Polychæta*, having an elongated cylindrical body with green blood, the color being due to the presence of chlorocruorin. Also called *Pherusidæ.*

chlorhydrin (klor-hī'drin), *n.* [*chlor(in)* + *hydr(ogen)* + *-in*[2].] A compound formed by replacing with chlorin one or more hydroxyl-groups in a compound containing several such groups, especially the compounds formed from glycerol in this manner: as *monochlorhydrin*, $CH_2OH.CHOH.CH_2Cl$; *trichlorhydrin*, $CH_2Cl.CHCl.CH_2Cl$.

chlorhydroquinone (klōr-hī″drō-kwin'ōn), *n.* [*chlor(in)* + *hydro(gen)* + *quinone.*] A colorless crystalline compound, $C_6H_3Cl(OH)_2$, made by treating quinone with concentrated hydrochloric acid. It melts at 106° C.

chlorid, *n.* **Alkaline chlorid,** a compound obtained by the action of chlorin on alkaline bases. **Chlorid emulsion.** See ★*emulsion.* **Chlorid-of-gold cure.** Same as ★*gold-cure.* **Chlorid paper, plate.** See ★*paper,* ★*plate.* **Ethyl, ethylene, ethylidene, methyl, nitrogen, nitrosyl, stannic, stannous chlorid.** See ★*ethyl,* etc.

chloridation (klo-ri-dā'shon), *n.* The act of chloridizing or combining chemically with chlorin. Silver is chloridized for the purpose of transforming it from a refractory compound to a compound (AgCl) which can be dissolved by suitable reagents and the precious metal so recovered. The operation of chloridizing is usually carried on in a roasting-furnace. During the operation a small amount of ordinary table salt (NaCl) is mixed with the ore, and this reagent effects the chloridation of the silver.

chloriden (klō'ri-den), *n.* [*chlorid* + *-en* for *-ene.*] Ethylidene chlorid or ethidene bichlorid, CH_3CHCl_2.

chlorimetry (klo-rim'e-tri), *n.* Same as *chlorometry.*

chlorin, *n.* Chlorin is now obtained on a great scale by electrolysis of a solution of common salt, the Castner process being that chiefly used. See *Castner* ★*process.* **Chlorin peroxid,** a dark-yellow gas, with a peculiar smell, obtained by cautiously warming potassium chlorate with strong sulphuric acid. It decomposes with violent explosion on being heated or on contact with organic substances. **Chlorin water,** water containing chlorin in solution: used in analytical chemistry.

chlorinate (klō'ri-nat), *n.* [*chlorin* + *-ate*[1].] A term sometimes applied to the soluble bleaching-compounds obtained from caustic soda or potash by the action of chlorin.—Labarraque's fluid and Javelle water respectively.

chlorine[2] (klo'rin or -rīn), *a.* [Gr. χλωρός, light green, + *-ine*[1].] Of the color of young leaves; light green.

chloriniferous (klō-ri-nif'e-rus), *a.* [E. *chlorin* + L. *ferre*, bear.] Containing and capable of furnishing chlorin.

chlorinous (klō'ri-nus), *a.* [*chlorin* + *-ous.*] Related to or resembling chlorin: as, a *chlorinous* smell or taste.

chloris, *n.* **3.** Same as *flora*, 2 (*b*).—**4.** [*cap.*] [NL. (Swartz, 1788).] A genus of plants of the family *Poaceæ.* They are mostly perennials, with flowers in digitately arranged spikes. There are about 40 species, widely distributed in tropical and warm regions, variously known as *finger-grass, dog's-tooth grass, feather-grass, windmill-grass,* etc. Several species are cultivated as ornamental plants. See ★*finger-grass,* 3.

Chloritic marl, in *geol.*, a former designation of a division of the Lower Chalk of England.

chloritization (klo-ri-ti zā'shon), *n.* [*chloritize* + *-ation.*] In *petrog.*, the alteration of minerals in a rock into chlorite.

chloritize (klō'ri-tīz), *v. i.*; pret. and pp. *chloritized*, ppr. *chloritizing.* [*chlorite* + *-ize.*] In *geol.*, to alter, as the ferromagnesian rock-forming silicates (augite, hornblende, biotite, etc.), into the secondary mineral, chlorite.

At both walls of each apophysis the essential and normally abundant bisilicates of the granite are absent or are represented by rare shreds or plates of *chloritized* biotite. *Amer. Jour. Sci.*, Aug., 1903, p. 123.

chloritous (klō-rī'tus), *a.* [*chlorite* + *-ous.*] Same as *chloritic.*

chlormethane (klōr-meth'ān), *n.* Same as ★*methyl chlorid.*

chloroanemia (klō'rō-a-nē'mi-ä), *n.* Same as ★*chloranemia.*

chlorobrom (klō'rō-brōm), *n.* A trade-name of a mixture of bromide of potassium and chloralamide in licorice water, employed as a hypnotic and in seasickness.

chlorocarbon (klō-rō-kär'bon), *n.* Carbon tetra-chlorid, CCl_4.

chlorochromic (klo-rō-krō'mik), *a.* Obtained from chlorin and chromic acid.

Chlorococcaceæ (klō-ro-ko-kā'sē-ē), *n. pl.* [*Chlorococcum* + *-aceæ.*] A subfamily of the *Protococcacea* (which see).

Chlorococcum (klo-rō-kok'um), *n.* [NL., < Gr. χλωρά, green, + κόκκος, berry (spore).] A genus of grass-green algæ formerly called *Cystococcus* (which see).

chlorocruorin (klo-ro krō'o-rin), *n.* [Gr. χλωρός, green, + L. *cruor*, blood, + *-in*[2].] A green coloring-matter found in the blood of certain invertebrates.

chloroform, *n.* **Acetone chloroform.** See ★*acetone.* **Methyl chloroform,** the trade-name of 1,1,1- or α-trichloroethane, CH_3CCl_3, a colorless liquid prepared by the action of chlorin on ethyl chlorid. It boils at 74.5° C. and resembles chloroform in anesthetic properties.

chloroformamide (klō″rō-fōrm-am'id), *n.* [*chloroform* + *amide.*] Same as ★*carbamic chlorid.*

chlorogonidium (klō″rō-gō-nid'i-um), *n.*; pl. *chlorogonidia* (-ä). [NL., < Gr. χλωρός, green, + NL. *gonidium.*] A green gonidium, as of certain lichens. Compare *chrysogonidium.*

chlorohematin (klo-rō-hem'ä-tin), *n.* [Gr. χλωρός, green, + E. *hematin.*] Same as ★*hemin.*

chlorol (klō'rol), *n.* [*chlor(in)* + *-ol.*] An aqueous solution containing 1 part each of mercuric chlorid, sodium chlorid, and hydrochloric acid, and 3 parts of copper sulphate: a disinfectant and deodorizer.

chlorometrical (klo-rō-met'ri-kal), *a.* Same as *chlorometric.*

Chloromonadina (klō rō-mon-a-dī'nä), *n. pl.* [NL., < Gr. χλωρός, green, + μονάς (μονάδ-), a unit, + *-ina*[2].] A group or suborder of flagellate *Protozoa*, of the order *Phytoflagellida*, having the body somewhat plastic and without a distinct membrane, and with numerous discoid chromatophores but no stigmata. It includes the genera *Vacuolaria* and *Calomonas.*

Chloropeltina (klō″rō-pel-tī'nä), *n. pl.* [NL., < Gr. χλωρός, green, + πέλτη, shield, + *-ina*[2].] A family of euglenoid *Mastigophora*, of the order *Flagellata*, resembling *Euglena*, but having a thicker cuticle. It includes the genera *Phacus* and *Lepocinclis.*

chlorophanic (klō rō-fan'ik), *a.* [*chlorophane* + *-ic.*] Pertaining to or derived from chlorophane. **Chlorophanic acid,** a black crystalline organic acid obtained as a decomposition-product of chlorophane.

chlorophenin (klō-rō-fen'in), *n.* [*chlor(in)* + *phen(yl)* + *-in*[2].] A direct cotton coal-tar color. It is closely related to chloramine yellow. **Chlorophenin orange.** See ★*orange.*

chlorophore (klō'rō-fōr), *n.* [Gr. χλωρός, green, + -φορος, < φέρειν, bear.] Same as *chromatophore.*

Chlorophyceæ (klō-rō-fī'sē-ē), *n. pl.* [Gr. χλωρός, grass-green, + φύκος (φυκ-), seaweed, + *-eæ.*] One of the principal classes of the algæ containing the majority of the grass-green forms: formerly called *Confervoideæ*, *Confervaceæ*, and *Chlorosporeæ.*

chlorophyceous (klō-rō-fī'sē-us), *a.* In *bot.*, of or pertaining to the *Chlorophyceæ* or grass-green algæ.

Chlorophyl body, corpuscle, vesicle, a chlorophyl-grain or -granule.

chlorophyl-grain (klo'rō-fil-gran'), *n.* In *bot.* one of the small bodies which bear the chlorophyl, the green coloring-matter of plants.

chlorophyl-granule (klo' rō-fil-gran'ul), *n.* Same as ★*chlorophyl-grain.*

chlorophyllic (klō-rō-fil'ik), *a.* [*chlorophyl(l)* + *-ic.*] Of or pertaining to chlorophyl, the green coloring-matter of plants. *Simon*, Physiological Chem., p. 21.

chlorophyllin (klō-rō-fil'in), *n.* [*chlorophyl* + *-in*[2].] A chlorophyl-like coloring-substance found in the *Dinoflagellidia*; the green principle of chlorophyl.

chlorophyllose (klō-rō-fil'ōs), *a.* [*chlorophyl* + *-ose.*] Containing chlorophyl; chlorophyllaceous. *Science*, June 12, 1903, p. 936.

chlorophyr (klo'rō-fir), *n.* [Gr. χλωρός, light green, + (*por*)*phyr*(*y*).] In *petrog.*, a name given by A. Dumont (1850) to porphyritic diorite or diorite-porphyry with quartz and an orthorhombic pyroxene: found at Quenast and Lessines, Belgium.

chloroplast (klō'rō-plāst), *n.* Same as *chloroplastid.*

chloroplastin (klō-rō-plas'tin), *n.* A proteid constituting the ground substance of the chlorophyl-granule. *Schwarz.*

chloroplatinate (klō-rō-plat'i-nāt), *n.* [*chlor(in)* + *platin-um* + *-ate*[1].] Same as ★*platinchlorid.* Sometimes incorrectly written *platinochlorid*, the name of a different compound: as, potassium *chloroplatinate*, K_2PtCl_6.

chloroplatinite (klō-rō-plat'i-nit), *n.* [*chloroplatin-ic* + *-ite*[2].] A salt derived from chloroplatinous acid. **Chloroplatinite process,** in *photog.*, a process in which paper sensitized by a mixture of potassium chloroplatinite and ferric oxalate is changed on exposure to light, the ferric salt being reduced to ferrous salt, which acts on the potassium chloroplatinite to liberate metallic platinum when the exposed paper is treated with a bath containing potassium oxalate. **Potassium chloroplatinite,** a double salt of potassium and platinum, K_2PtCl_4, obtained as reddish deliquescent crystals, very soluble in water and slightly so in alcohol, by the reducing action of neutral potassium oxalate on a solution of platinic chlorid. This salt is employed in photography in the platinotype process.

chloroproteinochrome (klō-rō-pro-tē-in'ō-krōm), *n.* [E. *chlorin* + *protein* + Gr. χρῶμα, color.] A chlorin substitution-product of tryptophane.

Chlorops, *n.* 2. [*l. c.*] A fly of the genus *Chlorops*. **Beet chlorops,** an American oscinid fly, *Chlorops assimilis*, whose larva mines the leaves of the sugar beet.

chloropsia (klō-rop'si-ä), *n.* [NL., < Gr. χλωρός, green, + ὄψις, view.] In *pathol.*, a condition in which objects seen are of a green color.

chlororufin (klō rō-rō'fin), *n.* [Gr. χλωρος, green, + L. *rufus*, red, + *-in*[2].] The red pigment of the *Chlorophyceæ*, which is a reduced chlorophyl. *Rostafinski.*

chlorosarcoma (klō rō-sär-kō'mä), *n.*; pl. *chlorosarcomata* (-ma-tä). [NL., < Gr. χλωρος, green, + σαρκωμα, sarcoma.] Same as *chloroma.*

chlorosis, *n.*—**False chlorosis,** the yellow condition induced in a plant by the water-logging of the roots.

chlorospinel (klō-rō-spin'el), *n.* [Gr. χλωρος, grass-green, + E. *spinel.*] A grass-green variety of spinel in which iron replaces part of the aluminium.

chlorotic, *a.* **II.** *n.* One who suffers from chlorosis. *Buck*, Med. Handbook, I. 644.

Chlorous oxid, a mixture of chlorin with chlorin peroxid: formerly believed to exist as a distinct oxid of chlorin.

chlorovaporization (klō rō-vā'por-ī-zā'shon), *n.* [*chloro(phyl)* + *vaporization.*] In *bot.*, a process analogous to transpiration taking place in chlorophyl-granules. *Van Tieghem.*

chlorozincate (klō-rō-zing'kāt), *a.* [*chlor(id)* + *zinc* + *-ate*[1].] In the case of creatinine, in combination with zinc chlorid: as, creatinine *chlorozincate.*

chlorozone (klōr-ō'zōn), *n.* [*chlor(in)* + *ozone.*] The trade-name of a bleaching material of essentially the same character as Labarraque's fluid, but in solid form. It contains 11 or 12 per cent. of sodium hypochlorite. *G. Lunge*, Sulphuric Acid, III. 490.

chlorsalol (klōr'sal'ol), *n.* A white crystalline compound, $C_6H_4(OH)CO.OC_6H_4Cl$, obtained by the action of phosphorus pentachlorid on a mixture of ortho- and para-chlorophenol; chlorophenol salicylate; salicylic-chlorophenol-ester. It is insoluble in water, but soluble in alcohol. It differs from salol in containing an atom of chlorin in place of one of hydrogen. It is used internally as an intestinal antiseptic.

chlorsulphic (klōr-sul'fik), *a.* [*chlor(in)* + *sulph(ur)* + *-ic.*] In *petrog.*, a term used in the quantitative classification of igneous rocks (see ★*rock*) to describe a subdivision of igneous rock magma having equal or nearly equal proportions of chlorin, Cl, and sulphur trioxid, SO_3. The proportions may vary within the limits, $\begin{matrix} Cl \\ SO_3 \end{matrix} < \begin{matrix} 5 \\ 3 \end{matrix} > \begin{matrix} 3 \\ 5. \end{matrix}$

chlorutahlite (klōr-ū'tä-lit), *n.* [Gr. χλωρός, green, + *utahlite.*] Same as ★*utahlite.*

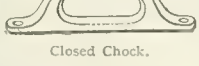
Chm. A little-used abbreviation of *chairman.*

Choanoflagellida (kō'a-nō-fla-jel'i-dä), *n. pl.* [NL., < Gr. χοανος, a funnel, + L. *flagellum*, a whip (see *flagellum*), + *-ida.*] An order of *Protozoa*, of the class *Mastigophora*, having one or more collar-like processes about the base of the single flagellum. It includes the families *Phalansteridæ* and *Craspedomonadidæ.*

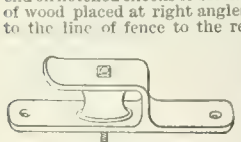
choca (chō'kä), *n.* [*choc(olate)* + *-a.*] A beverage made of coffee and chocolate mixed.

chocho (chō'cho), *n.* [W. Ind. Sp.] A name in the British West Indies and Australia of the cheyote. See *Sechium*, *cheyote*, and ★*christophine.*

chock[4], *n.* 5. A block of wood, especially one for burning. See *chuck*[4], 1. [Prov. Eng.]—6. A thick unsawed block of wood. See ★*chock and log.* [Australia.]—7. *pl.* Blocks of wood or stone placed on a harrow, roller, or other machine to give it weight or steadiness.—8. In *turnery*, same as *chuck*[4], 5.—9. A rut-like hole in a road. [Prov. Eng.]—**Chock and log,** a kind of fence used on the great sheep and cattle stations or ranches of Australia, consisting of successive layers of rough-hewn logs resting at each end on notched chocks or blocks of wood placed at right angles to the line of fence to the required height. Also used attributively: as, a *chock-and-log* fence. —**Closed chock,** a chock having the arms united or closed together. — **Combination chock,** a chock having a pivoted arm that may be used to keep the rope from jumping out if the boat pitches.—**Roller chock,** a bowsprit chock having only one arm and supporting a roller or guide-roll for a rope.



Closed Chock.



Roller Chock.

chock[4], *v. t.* 2. To check the motion of, as by a chock.

chock-block (chok'blok), *n.* A small wedge or block used to prevent a wheel or a log from rolling.

chocky (chok'i), *a.* [*chock* + *-y*[1].] Full of chocks, ruts, or holes: as, a *chocky* road. [Prov. Eng.]

chocolate. *n.* **Alizarin chocolate,** a chocolate-color obtained by applying alizarin with a mixture of aluminium and iron mordants: a term used chiefly by calico-printers. It is similar to alizarin puce.

chocolate-bean (chok'ō-lāt-bēn'), *n.* The seed of the cacao, *Theobroma Cacao.*

chocolatier (chok-ō-lą-ter'), *n.* [F.] A chocolate-maker or -dealer.

choffer, *n.* A dialectal form of *chauffer.*

Choice oil. See ★*oil.*

choice-reaction (chois'rē-ak'shon), *n.* In *psychophys.*, a reaction in which the movement made in response to stimulus is the expression of an act of choice.

We cannot pass from the sensorial reaction to the *choice-reaction* . . . at one step.
E. B. Titchener, Primer of Psychol., p. 259.

choil (choil), *n.* [Origin obscure.] In *cutlery*, the indentation in the blade of a knife where it joins the tang.

choil (choil), *v. t.* To make a choil in (the blade of a knife).

choiler (choi'lėr), *n.* One who makes choils in knife-blades.

choir, *n.*, 3. (*b*) All that part of a cruciform church which is beyond, eastward of or farther from the main entrance than the transept; the eastern arm of the cross: so named because the choir proper (see def. 3) is usually in that part of the church and occupies nearly all of it. Thus, without reference to the interior, one may say of a great church that the choir is fourteenth-century work, while the nave and transepts remain twelfth-century, as at Tournai in Belgium.

5. A group of instruments of the same class or of related organ-stops, as a *trombone choir*, a *diapason choir*, etc.

choir-aisle (kwīr'īl), *n.* One of the aisles which flank the choir of a church. It often includes the deambulatory or passage around the chevet.

choir-book (kwīr'bůk), *n.* A book containing music for a choir or chorus.

choir-gallery (kwīr'gal'e-ri), *n.* A gallery or balcony in a church where the choir is stationed, usually at the end of the building opposite the chancel or pulpit.

choir-leader (kwīr'lē'dėr), *n.* Same as ★*choirmaster.*

choir-man (kwīr'man), *n.* A man who sings in a choir or chorus.

choirmaster (kwīr'más-tėr), *n.* The trainer or leader of a choir or chorus; a kapellmeister, precentor, or cantor. Sometimes the offices of choirmaster and organist are separate, sometimes united.

choir-room (kwīr'rōm), *n.* In a church or similar building, a room reserved for the use of the choir, as for practice, robing, etc.

choir-seats (kwīr'sēts), *n. pl.* The seats for the choir of a church, whether in the chancel, on a platform, or in a gallery: used collectively of the location of the singers in general.

choir-singer (kwīr'sing'ėr), *n.* One who sings in a choir or chorus.

choir-stall (kwīr'stâl), *n.* A seat built into the chancel or ritual choir of a church or cathedral for the use of singers or other officiants.

choka (chō'kä), *n.* [Bolivian.] A large and handsome species of water-hen (*Fulica gigas*) having dark metallic plumage and a red bill: common in the waters of Lake Titicaca and other mountain lakes of Bolivia and southeastern Peru.

chokage (chōk'ąj), *n.* [*choke* + *-age.*] A choked up or obstructed state.

choke[1], *v.* **I.** *trans.*—**To choke the luff,** to jam the hauling part of a tackle close against the block so as to prevent it from rendering.

II. *intrans.* **3.** To stop or cease working: said of electrical apparatus.

choke[1], *n.* 4†. *pl.* Tonsillitis.—**Pharyngeal choke,** an obstruction in the pharynx of an animal.—**Thoracic choke,** an obstruction in the lumen of that portion of the esophagus which is within the chest cavity.

choke-coil (chōk'koil), *n.* In *elect.*, same as *reactive* ★*coil.*

choke-crushing (chōk'krush'ing), *n.* A method of operating crushing-rolls by feeding ore under pressure, so that the crushed material issues in a more or less solid band or cake. This produces an increased proportion of fine dust.

choker, *n.* 5. In *lumbering*, a noose of wire rope by which a log is dragged.

choker-man (chō'kėr-man), *n.* In *lumbering*, the man who fastens the choker on the logs.

choking-coil (cho'king-koil), *n.* A coil of many turns of insulated copper wire surrounding a heavy soft-iron core. When interposed in an electric circuit it allows steady currents to pass freely, but chokes off or greatly weakens all rapid fluctuations. It can be made more or less effective by altering the size of the core, or the depth to which it is inserted in the coil. See *reactive* ★*coil.*

cholangiostomy (kō-lan-ji-os'tō-mi), *n.* [Gr. χολή, bile, + αγγειον, vessel, + στομα, mouth.] Incision into one of the bile-ducts through the substance of the liver for the purpose of liberating an impacted gall-stone.

cholangitis (kō-lan-jī'tis), *n.* Same as *cholangioitis.*

cholanic (kō-lan'ik), *a.* [*chol(ic)* + *-an* + *-ic.*] Derived from cholic acid.—**Cholanic acid,** a crystalline acid, $C_{24}H_{40}O_7$, obtained by the oxidation of either cholic or choleic acid. It melts at 285° C.

cholechloin, cholechlorin, *n.* See ★*cholochloin.*

cholechroin (kol-ē-krō'in), *n.* [Gr. χολή, bile, + χρωμα, color, + *-in*[2].] A mixture of biliverdin with other substances found in the bile.

cholechrome (kol'ē-krōm), *n.* [Prop. ★*cholochrome*; < Gr. χολή, bile, + χρῶμα, color. The proper combining form of Gr. χολή, bile, is χολο-, E. *cholo-.*] A reddish-yellow lipochrome found in the so-called livers of many invertebrates. Also called *hepatochrome.*

cholecyanine (kol-ē-sī'a-nin), *n.* [Gr. χολή, bile, + κυανος, blue, + *-in*[2].] Same as *bilicyanine.* See ★*cholocyanine.*

cholecystalgia (kol'ē-sis-tal'ji-ä), *n.* [Gr. χολή, bile, + κύστις, bladder, + ἄλγος, pain.] Biliary colic.

cholecystectomy (kol'ē-sis-tek'tō-mi), *n.* [Gr. χολή, bile, + κυστις, bladder, + ἐκτομη, excision.] In *surg.*, an incision into the gall-bladder.

cholecystocolostomy (kol ē-sis'tō-kō-los'tō-mi), *n.* [Gr. χολή, gall, + κύστις, bladder, + κῶλον, colon, + στόμα, mouth.] In *surg.*, the establishment of a permanent communication between the colon and the gall-bladder.

cholecystoduodenostomy (kol-ē-sis tō-dū ō-dē-nos'tō-mi), *n.* [Gr. χολή, gall, + κύστις, bladder, + NL. *duodenum* + Gr. στομα, mouth.] In *surg.*, the establishment of a permanent direct communication between the duodenum and the gall-bladder.

cholecystorrhaphy (kol'ē-sis-tor'a-fi), *n.* [Gr. χολή, gall, + κύστις, bladder, + ῥαφή, sewing.] In *surg.*, an incision into the gall-bladder and suture of the edges to the external wound.

cholecystostomy (kol'ē-sis-tos'tō-mi), *n.* [Gr. χολή, gall, + κύστις, bladder, + στομα, mouth.] In *surg.*, the establishment of a permanent opening into the gall-bladder through the abdominal wall.

choledochitis (kol'ē-dō-kī'tis), *n.* [NL., < Gr. χοληδόχος (sc. κύστις), the gall-bladder (< χολή, gall, + -δοχος, < δέχεσθαι, receive), + *-itis.*] Inflammation of the common bile-duct.

choledochoduodenostomy (ko-led ō-kō-dū'ē-ō-dē-nos'tō-mi), *n.* [Gr. χοληδοχος, the gall-bladder, + NL. *duodenum* + Gr. στομα, mouth.] In *surg.*, the establishment of a permanent communication between the common bile-duct and the small intestine. *Encyc. Brit.*, XXXIII. 78.

choledochoenterostomy (ko-led' ō-kō en-teros'tō-mi), *n.* [Gr. χοληδοχος, the gall-bladder, + ἐντερον, intestine, + στομα, mouth.] In *surg.*, the establishment of a permanent communication between the common bile-duct and the intestine.

choledocholithotomy (ko-led ō-kō-li-thot'ō-mi), *n.* [Gr. χοληδοχος, the gall-bladder, + λιθοτομία, lithotomy.] In *surg.*, the removal of an impacted gall-stone from the common bile-duct.

choledochostomy (kol'ē-dō-kos'tō-mi), *n.* [Gr. χοληδοχος, gall-bladder, + στόμα, mouth.] In *surg.*, the establishment of a permanent opening into the common bile-duct through the abdominal wall.

choledochotomy (kol'ē-ō-kot'ō-mi), *n.* [Gr. χοληδοχος, gall-bladder, + -τομία, < τεμνειν, cut.] In *surg.*, an incision into the common bile-duct.

cholefulvin, *n.* See ★*cholofulvin.*

choleglobin (kol-ē-glō'bin), *n.* [Gr. χολή, bile, + L. *globus*, globe, + *-in*[2].] A supposed antecedent of bilirubin.

cholelith (kol'e-lith), *n.* [Gr. χολή, gall, + λίθος, stone.] Same as *gall-stone.*

cholelithiasis (kol″e-li-thī′a-sis), *n.* Same as *cholelithiasis.*

cholelithic (kol″e-lith′ik), *a.* Same as *cholelithic.*

cholelithotomy (kol″ē-li-thot′ō-mi), *n.* [Gr. χολή, gall, + λιθοτομία, lithotomy.] In *surg.*, an operation for the removal of a gall stone.

choleocamphoric (kol″e-o-kam-for′ik), *a.* [*cholic*(*acid*) + *camphoric.*] Related to cholalic acid and camphor. **Choleo-camphoric acid,** an oxidation product of cholalic acid, $C_{10}H_{16}O_4$.

cholepoetic (kol″ē-pō-et′ik), *a.* [Gr. χολή, gall, bile, + ποιητικός, ⟨ ποιεῖν, make. Cf. Gr. χολοποιός, forming bile.] Secreting bile. Also *cholepoietic.*

cholepoietic (kol″e-poi-et′ik), *a.* Same as *cholepoetic.*

cholepyrrhin† (kol-ē-pir′in], *n.* [Gr. χολή, bile, + πυρρός, reddish, + *-in*².] Same as *bilirubin.*

cholera, *n.* **Bilious cholera.** Same as ★*cholera nostras.* **Buffalo cholera,** a fatal contagious disease of buffaloes, identical with the hemorrhagic septicemia of cattle. It is caused by a minute polar-stained organism of the swine-plague group. See also ★*barbone.* **Cholera nostras,** sporadic cholera or cholera morbus, as distinguished from epidemic or Asiatic cholera. **Cholera reaction,** the production of cholera-like by the addition of a mineral acid to filtered cholera discharges. **English cholera.** Same as *sporadic cholera.* **Indian cholera.** Same as *Asiatic cholera.* **Serous cholera.** Same as *Asiatic cholera.* **Summer cholera.** Same as *cholera morbus* or *cholera infantum.* **Typhoid cholera,** a malignant type of Asiatic cholera accompanied by extreme depression of the vital forces.

cholera-gnat (kol′e-rā-nat′), *n.* The turkey-gnat, *Simulium meridionale*, supposed to cause chicken-cholera. [U. S.] *Stand. Dict.*

choleraphobia (kol″e-rā-fō′bi-ä), *n.* [NL., prop. *choleraphobia*, ⟨ Gr. χολέρα, cholera, + -φοβία, ⟨ φοβεῖν, fear.] Extreme and unreasonable fear of contracting cholera. *Flint,* Principles of Med., p. 563.

cholera-red (kol″e-ra-red′), *n.* A red color which develops upon the addition of concentrated sulphuric acid to a bouillon or peptone culture of the cholera bacillus. It is referable primarily to the production of indol and nitrites during the growth of the organism, and the consequent formation of nitroso-indol upon the addition of the sulphuric acid. To the nitroso-indol the color is due.

choleric², *n.* and *a.*—**II.** *a.* Same as *choleraic.* *Syd. Soc. Lex.*

cholerigenous (kol-e-rij′e-nus), *a.* [Gr. χολέρα, cholera, + -γενής, -producing.] Producing cholera.

choleromania (kol″e-rō-ma′ni-ä), *n.* [NL., ⟨ Gr. χολέρα, cholera, + μανία, madness.] A morbid dread of Asiatic cholera.

cholerythrin (kol-e-rith′rin), *n.* Same as *bilirubin.*

cholesteatomatous (kol″es-tē-a-tō′ma-tus), *a.* [*cholesteatoma*(*t-*) + *-ous.*] Pertaining to or of the nature of a cholesteatoma.

In this way there will usually be removed large quantities of pus, broken-down cells and *cholesteatomatous* material, leaving granulation tissue, softened bone and, frequently, much adherent epithelium.
Phil. Med. Jour., Jan. 31, 1903, p. 223.

cholestenic (kol-es-ten′ik), *a.* [*cholest*(*erin*) + *-en* + *-ic.*] Derived from cholesterol.—**Cholestenic acid,** a monobasic acid, $C_{27}H_{40}O_4$, or $C_{26}H_{42}O_4$, formed by the oxidation of cholesterol. It melts at 60°–70° C.

cholesteric, *a.*—**Cholesteric acid.** (*b*) A crystalline tribasic acid, $C_{19}H_{16}O_7$, formed by the oxidation of cholic acid or of cholesterol. It loses carbon dioxid when heated above 100° C.

cholesteride (ko-les′tēr-id), *n.* [*cholester*(*in*) + *-ide.*] An ester of cholesterol with an acid; as *cholesteride palmitate*, $C_{16}H_{31}O_2.C_{27}H_{43}$.

cholesterilene (kol-es-ter′i-lēn), *n.* [*cholester*(*in*) + *-il* + *-ene.*] A hydrocarbon, $C_{27}H_{42}$, formed by heating cholesteryl chlorid with an alcoholic solution of sodium ethylate. It melts at 80° C.

cholesterilin (kol-es-ter′i-lin), *n.* [*cholester*(*in*) + *-il* + *-in*².] A hydrocarbon formed by the action of sulphuric acid on cholesterol. There are three forms, α- and β-cholesterilin, $C_{27}H_{42}$, and γ-cholesterilin, $(C_{27}H_{42})_2$.

cholesterinic (ko-les-tē-rin′ik), *a.* [*cholesterin* + *-ic.*] Pertaining to or derived from cholesterin.—**Cholesterinic acid,** an oxidation-product of cholesterin.

cholesterol (ko-les′tē-rōl), *n.* [*cholester*(*in*) + *-ol.*] Same as *cholesterin.* The termination *-ol* is used to indicate that chemically the substance belongs to the class of alcohols.

cholesterone (ko-les′tē-rōn), *n.* A name given to two compounds, one of which is probably cholesterilene and the other cholesteryl ether, $(C_{27}H_{43})_2O$.

cholesteryl (ko-les′tē-ril), *n.* [*cholester*(*in*) + *-yl.*] The $C_{26}H_{43}$ radical of cholesterin.

cholestrophan (ko-les′trō-fan), *n.* [Gr. χολή, bile, + στροφή, a turning, + *-an.*] Dimethylparabanic acid, $CO < \begin{matrix} N(CH_3) \\ N(CH_3) \end{matrix} > CO$. It is formed by heating caffein with nitric acid. It melts at 145° C. and is not an acid.

choletelin (ko-let′e-lin), *n.* [Gr. χολή, bile, + τέλος, end, + *-in*².] A brown, amorphous compound found in normal urine, and also obtained by treating bilirubin with nitrous acid.

choliambist (kō-li-am′bist), *n.* [*choliamb* + *-ist.*] A writer of choliambs.

Not to mention the *choliambist* Hipponax, who seems to have been possessed with the devil of Archilochus, and in part also with his genius. *Grote,* Greece, IV. 97.

cholinic (ko-lin′ik), *a.* [*choline* + *-ic.*] Derived from the bile.—**Cholinic acid,** a name given by Berzelius to a resinous decomposition-product of ox-gall. It was probably a mixture.

cholla (chōl′yä), *n.* [Mex.] In the Southwestern United States and Mexico, a name

given to several species of *Opuntia* with stout cylindrical joints and abundant spines, such as *O. prolifera*, *O. Bigelovii*, and *O. Cholla.* One of the species, *O. fulgida*, often attains the dimensions of a small tree, and forms one of the most conspicuous objects of the Southern Arizona Desert. It is noted for its formidable armor of barbed spines almost hiding the surface of the plant. The flowers are pink, nearly or quite an inch across, succeeded by clusters of light green globose hanging fruits. Also called *cholla-cactus.*

cholo, *n.* **2.** Any half-breed, but especially one of European and Indian descent.

cholochloin (kō-lok′lō-in), *n.* [Also *cholechloin*; ⟨ Gr. χολή, bile, + χλόη, verdure, + *-in*².] The green pigment, also called *biliverdin*, *cholochlorin* and *cholechlorin.* See *biliverdin.*

cholochlorin (kol-ō-klō′rin), *n.* [Also *cholechlorin*; ⟨ Gr. χολή, bile, + χλωρός, green, + *-in*².] Same as ★*cholochloin.*

cholocyanine (kol″ō-sī′a-nin), *n.* [Also *cholecyanine.* Gr. χολή, bile, + κυανός, blue, + *-in*².] A blue pigment derived from the bile and closely related to biliverdin. Same as *bilicyanin.*

cholofulvin (kol″ō-ful′vin), *n.* [⟨ Gr. χολή, bile, + L. *fulvus*, yellow, + *-in*².] A yellow pigment derived from the bile. Also *cholefulvin.*

chologenetic (kol″ō-jē-net′ik), *a.* [Gr. χολή, bile, + *-genetic.*] Producing bile.

All point to an arrest more or less complete of the *chologenetic* function of the liver.
Lancet, May 30, 1903, p. 1499.

cholohematin (kol-ō-hem′a-tin), *n.* [Gr. χολή, bile, + αἷμα(τ-), blood, + *-in*²: see *hematin.*] A pigment obtained from the bile of sheep or oxen. When dry it is green, but it forms an olive-brown solution in alcohol.

choloid (kol′oid), *a.* [Gr. χολοειδής, ⟨ χολή, bile, + εἶδος, form.] Resembling bile.

Choloïdic acid, an acid formerly supposed to be intermediate between cholic acid and dyslysin, but now believed to be a mixture of the two.

choloïdinic (kol″ō-i-din′ik), *a.* Noting an acid, $C_{24}H_{38}O_4$, formed as an intermediary product during the transformation of cholalic acid into dyslysin.

chololith (kol′ō-lith), *n.* Same as ★*cholelith.*

cholology (kol-ol′ō-ji), *n.* [Gr. χολή, bile, + -λογία, ⟨ λέγειν, speak.] The proper form for *choledology.*

cholonic (ko-lon′ik), *a.* [Gr. χολή, bile, + *-on-* + *-ic.*] Noting an acid, $(C_{26}H_{41}NO_5)$, an anhydride of glycocholic acid, which results from the latter on heating with concentrated sulphuric acid.

cholter-headed (chōl′tēr-hed″ed), *a.* [Also dial. *chowder-headed*; cf. *potter-headed.*] Dull-minded; stupid. [Prov.]

choltry, *n.* **3.** A pillared colonnade. [Anglo-Indian.]

cholum (chō′lum), *n.* [Tamil.] The Indian millet, African millet, Guinea-corn, or Kafir-corn, *Andropogon Sorghum.* See *durra*, and *Indian millet*, under *millet.*

chomatocephalus (kō″ma-tō-sef′a-lus), *n.* [Gr. χῶμα, a bank, mound, promontory, + κεφαλή, head.] In *anthrop.*, a very high, rounded cranium. *G. Sergi* (trans.), Var. of the Human Species, p. 44.

chondrarthrocace (kon-drär-throk′a-sē), *n.* [Gr. χόνδρος, cartilage, + ἄρθρον, joint, + κακή, badness. Cf. *arthrocace.*] Disease of the articular cartilages.

chondre (kon′dēr), *n.* [F., ⟨ NL. *chondrus.*] Same as *chondrus* or *chondrule.*

chondrenchyma (kon-dreng′kī-mä), *n.* [NL.] Same as *chondrenchyme.*

chondric (kon′drik), *a.* [Gr. χόνδρος, cartilage, + *-ic.*] Of or pertaining to cartilage; cartilaginous.

Chondrilla, *n.* **2.** [NL. (Linnæus, 1753, adopted from Tournefort, 1700). The name alludes to the lumps of gum found on *Chondrilla juncea.*] A genus of plants of the family *Cichoriaceæ.* There are about 18 species, biennial or perennial herbs, natives of Europe and extratropical Asia, with rod-shaped, scantily leaved branches and yellow flowers. For the widely distributed *C. juncea*, the only species occurring in the United States, see *gum succorum*, under *succorum.*

chondrinogen (kon-drin′ō-jen), *n.* Same as *chondrigen.*

chondro-adenoma (kon″drō-ad-e-nō′mä), *n.*; pl. *chondro-adenomata* (-ma-tä). [NL., ⟨ Gr. χόνδρος, cartilage, + ἀδήν, gland, + *-oma.*] A tumor which contains the elements of chondroma and adenoma.

chondro-angioma (kon″drō-an-ji-ō′mä), *n.*; pl. *chondro-angiomata* (-ma-tä). [NL., ⟨ Gr. χόνδρος, cartilage, + ἀγγεῖον, vessel, + *-oma.*] A tumor which contains the elements of chondroma and angioma.

chondroblast (kon′drō-blast), *n.* [Gr. χόνδρος, cartilage, + βλαστός, germ.] A cell in embryonic tissue which later develops into cartilage.

chondroclast (kon′drō-klast), *n.* [Gr. χόνδρος, cartilage, + κλαστός, ⟨ κλᾶν, break.] A cell which is concerned in the absorption of cartilage.

chondrocostal (kon-drō-kos′tal), *a.* [Gr. χόνδρος, cartilage, + L. *costa*, rib, + *-al.*] Of or pertaining to the cartilages of the ribs and to the ribs themselves.

chondroditic (kon-drō-dit′ik), *a.* Pertaining to or containing chondrodite.

chondrodystrophy (kon-drō-dis′trō-fi), *n.* [Gr. χόνδρος, cartilage, + δυς-, ill, + τροφή, nourishment (see *dystrophy*).] An arrest in the production and development of cartilage in the fetus and infant, resulting in dwarfism. *Med. Record*, June 27, 1903, p. 1046.

chondro-endothelioma (kon″drō-en″dō-thē-li-ō′mä), *n.*; pl. *chondro-endotheliomata* (-ma-tä). [NL., ⟨ Gr. χόνδρος, cartilage, + NL., *endothelioma.*] A tumor which contains the elements of chondroma and endothelioma.

chondrofibroma (kon″drō-fī-brō′mä), *n.*; pl. *chondrofibromata* (-ma-tä). [NL., ⟨ Gr. χόνδρος, cartilage, + NL. *fibroma.*] A tumor which contains the elements of chondroma and fibroma.

chondroglucose (kon-drō-glō′kōs), *n.* A difficultly crystallizable sugar of doubtful identity, which was obtained by the action of hydrochloric acid on chondrin.

chondroid, *a.*—**Chondroid cancer.** See ★*cancer.*

chondroitic (kon-drō-it′ik), *a.* [Irreg. ⟨ Gr. χόνδρος, cartilage, + *-ite*² + *-ic.*] Relating to, derived from, or like cartilage.

chondroitin (kon-drō′i-tin), *n.* [*chondroit*(*ic*) + *-in*².] An organic substance, $(C_{18}H_{27}NO_{14})$, found in cartilage, in combination with sulphuric acid, as, chondroitin-sulphuric acid. On decomposition it gives rise to acetic acid and chondrosin.

chondrolipoma (kon-drō-li-pō'mä), *n.*; pl. *chondrolipomata* (-ma-tä). [NL., < Gr. χόνδρος, cartilage, + NL. *lipoma*, lipoma.] A tumor which contains the elements of chondroma and lipoma.

chondromalacia (kon″drō-ma-lā'si-ä), *n.* [NL., < Gr. χόνδρος, cartilage, + μαλακία, softening.] Softening of cartilage.

chondromucoid (kon-drō-mū'koid), *n.* [Gr. χόνδρος, cartilage, + *mucoid*.] A mixture consisting of chondroitin-sulphuric acid (namely, sulphates) in combination with albumins and collagen.

Chondromyces (kon-drom'i-sēz), *n.* [NL. (Berkeley, 1857), < Gr. χόνδρος, cartilage, + μύκης, a fungus (mushroom).] A genus of the *Myxobacteriaceæ* in which the rod-like bodies of the organism remain unmodified and form free cysts, either sessile or borne on a more or less highly developed cistophore. *C. crocatus*, which forms orange-colored colonies and produces pale straw-colored cysts, has been found, in America, on decaying rinds and old straw. See ★*Myxobacteriaceæ*.

chondromyoma (kon-drō-mī-ō'mä), *n.*; pl. *chondromyomata* (-ma-tä). [NL., < Gr. χόνδρος, cartilage, + μῦς, muscle, + *-oma*.] A tumor composed of muscular and cartilaginous elements.

chondromyxoma (kon″drō-mik-sō'mä), *n.*; pl. *chondromyxomata* (-ma-tä). [NL., < Gr. χόνδρος, cartilage, + μυξα, mucus, + *-oma*.] A tumor composed of cartilaginous and mucoid elements.

chondromyxosarcoma (kon″drō-mik″sō-särkō'mä), *n.*; pl. *chondromyxosarcomata* (-ma-tä). [Gr. χόνδρος, cartilage, + μυξα, mucus, + σαρκωμα, sarcoma.] A tumor which contains the elements of chondroma, myxoma, and sarcoma.

chondro-osseous (kon″drō-os'ē-us), *a.* [Gr. χόνδρος, cartilage, + L. *osseus*, bony.] Consisting of both cartilage and bone.

Chondrophora, *n. pl.* 2. *sing.* A genus of dicotyledonous, perennial herbs, which belong to the family *Compositæ*, and are characterized by their alternate, entire leaves and numerous, rayless heads of yellow flowers. One or two species are recognized natives of moist pine-lands in North America, from New Jersey to Florida and Texas. See *Bigelovia*.

chondrophore (kon'drō-fôr″), *n.* [NL., < Gr. χόνδρος, cartilage, + -φόρος, < φέρειν, bear.] In the pelecypod mollusks, a shelly, spoon-shaped plate developed in one or both valves within the umbonal region: it carries the chitinous internal ligament or resilium, through the action of which the valves are pressed apart.

Chondrophoridæ (kon-drō-for'i-dē), *n. pl.* [NL., < *chondrophorus* + *-idæ*.] A family of dibranchiate cephalopods having a proöstracum composed of conchiolin or of alternating layers of calcareous and organic matter. It includes a number of genera, all from the Jurassic rocks.

chondroplast (kon'drō-plâst), *n.* [Gr. χόνδρος, cartilage, + πλαστός, < πλάσσειν, form.] A cartilage-cell developed from the cartilage-forming layer of the perichondrium.

chondrose (kon'drōs), *n.* [Gr. χόνδρος, cartilage, + *-ose*.] Same as ★*chondroglucose*.

chondrosidin (kon-dros'i-din), *n.* [*chondrose* + *-id*[1] + *-in*[2].] The hyalin corresponding to chondrosin.

chondrosin (kon'drō-sin), *n.* [Gr. χόνδρος, cartilage, + *-ose* + *-in*[2].] A decomposition-product of chondroitin, $C_{12}H_{21}NO_{11}$.

chondroskeleton (kon″drō-skel'e-ton), *n.* [NL., < Gr. χόνδρος, cartilage, + σκελετόν, skeleton.] A cartilaginous skeleton. See *chondrosteous*.

chondrostean (kon-dros'tē-an), *a.* [Gr. χόνδρος, cartilage, + ὀστέον, bone, + *-an*.] Of or pertaining to the *Chondrostei*, or cartilaginous ganoids, which include, among living forms, the paddle-fishes (*Polyodontidæ*) and sturgeons (*Acipenseridæ*). The skeleton is chiefly cartilaginous (the vertebral column entirely so), and the vertebral segments little developed and arranged along the notochord.

chondrosteoma (kon-dros-tē-ō'mä), *n.*; pl. *chondrosteomata* (-ma-tä). [NL., < Gr. χόνδρος, cartilage, + ὀστέον, bone, + *-oma*.] An outgrowth of cartilage upon the periosteum which subsequently turns to bone, as the antler of a stag.

chondrosternal (kon″drō-stêr'nal), *a.* [Gr. χόνδρος, cartilage, + L. *sternum*, sternum.] Relating to both the sternum and the costal cartilages.

chondroxiphoid (kon-drok'si-foid), *a.* [Gr. χόνδρος, cartilage, + ξιφοειδής, sword-shaped (see *xiphoid*).] Relating to the xiphoid cartilage.

Chonetes (kō'nē-tēz), *n.* [NL., < Gr. χώνη, χωνή, a funnel.] A genus of extinct brachiopods characterized by its thin valves which unite at a long straight hinge-line. Along the upper edge of this line the ventral valve bears a row of spines which are the exterior continuation of tubes leading through the substance of the valve from the internal shell cavity. The genus abounds in paleozoic rocks.

chonetiform (kō-net'i-fôrm), *a.* [*Chonetes* + L. *forma*, form.] Having the form or aspect of *Chonetes*, an extinct genus of brachiopods.

chonta (chōn'tä), *n.* [Quichua *chunta*, *chonta*, a general name for hard-wood palms.] 1. In Ecuador and Peru, the name of *Guilielma speciosa*, *Astrocaryum Chonta*, and other prickly, pinnately leaved palms with heavy hard black wood, which is used by the Indians of the Marañon and its tributaries for making spears, war-clubs, bows, and arrow-points.—2. A wooden hoe used in Peru and Bolivia; also, now an iron of similar shape.

C-hook (sē'hůk), *n.* In a harness, a pad-hook shaped like the letter C.

chop[1], *v. t.* 6. In *tennis*, *base-ball*, and other games, to strike (the ball) with a short, sharp, glancing stroke.—7. In *cricket*, to strike down hard, with a horizontal bat, a low ball on the off-side.—8. To cut into short pieces, as straw or silage material; to chaff: sometimes with *up*.—9. To dig, or dig out, by a downward stroke of the hoe, as opposed to a horizontal movement: often with *out*.

Ninety per cent of the growing [cotton] plants to be afterwards "*chopped*" *out*.
Yearbook U. S. Dept. Agr., 1901, p. 291.

Then hoed, not *chopped* but scraped, the hoe never being raised more than 18 inches from the ground.
U. S. Dept. Agr., The Cotton Plant, 1896, p. 239.

chop[1], *n.* 6. Material which has been chopped or chaffed. See ★*corn chop*.

Accustomed to cut rye and straw together and throw the "*chop*" back into a barn.
J. Wrightson, Farm and Fodder Crops, p. 199.

7. In *cricket*, a stroke in which the bat, held horizontally, is brought down hard upon a low ball on the off-side. *Hutchinson*, Cricket, p. 69.

chop[4], *n.*, 1. (*c*) An authenticated or authenticating writing or inscription.

In a Chinese temple . . . in Penang . . . I saw about fifty tortoises, belonging to five species; many of them had *chops* or Chinese characters stamped on their shells.
Proc. Zool. Soc. London, 1889, p. 609.

chopa[2] (chō'pä), *n.* [Sp. *chopa*, perhaps < L. *clupea*, a herring.] A name in the West Indies and elsewhere of many different fishes, especially of fishes of the genus *Cyphosus* (*Kyphosus*), as *chopa blanca* (*K. sectatrix*) of Bermuda (the Bermuda chub); *chopa amarilla* (*K. incisor*) of the West Indies; *K. elegans* of the tropical American coast of the Pacific; etc.

chopag (chō'päg), *n.* [Native name.] A name in Guam of *Ochrocarpus obovalis*, a littoral tree belonging to the family *Clusiaceæ*, yielding a hard fine-grained wood, suitable for cabinet work, and a red dye resembling that obtained from sapan-wood.

chop-chop (chop'chop), *interj.* [Remotely imitative.] Be quick; make haste. [Pidgin-Eng.]

chopper[4] (chop'ėr), *n.* [Also *chappor*, *chupper*, chuppar, < Hind. *chhappar*.] A thatched roof. See *chopper-cot* and ★*choppered*. [Anglo-Indian.]

These cottages had neat *choppers*, and some of them wanted not small gardens, fitly fenced about.
Mrs. Sherwood, Stories, p. 258. *Yule and Burnell*.

chopping-bowl (chop'ing-bōl″), *n.* A wooden bowl in which meat and other foods are chopped.

chopping-grate (chop'ing-grāt), *n.* A grate in which the bars are armed with projections which, when the bar is rotated on its axis, tear or break the cinder into fragments.

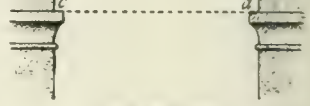
choppy[2], *a.* 3. Uncertain as to direction; subject to frequent and sudden change; unsteady: as, a *choppy* wind.—4. Irregular; unstable; fluctuating as to prices or rates: as, *choppy* markets.

chop-sticks, *n. pl.* 2. *sing.* In deep-sea fishing-tackle, a cross-stick, fastened to the line above the sinker, from which the short lines bearing the hooks are hung.

chop-suey (chop-sö'i), *n.* [Appar. formed (by English-speaking Chinese restaurant-keepers) from E. *chop*[1], + Chin. *sui*, bits, fragments, pieces, that is, meat, etc., chopped into small pieces and cooked.] A mixed dish served in Chinese restaurants in New York and elsewhere, as a Chinese dish (but apparently not known in China), consisting of some kind of meat (chicken, pork, beef), with vegetables (celery, onions, green bean sprouts, mushrooms, green peppers, etc.), cut small, seasoned, and cooked.

choragium (kō-rā'ji-um), *n.*; pl. *choragia* (-ä). [L. *choragium*, < Gr. χορήγιον, χορηγία, < χορηγός, the leader of a chorus: see *choragus*.] 1. The school in which the chorus of the Greek drama was trained.—2. The space where the choral dance was performed.

chord, *n.*, 4. Written with a figured bass or so conceived, the first inversion of any common chord is known as the *chord of the sixth*, and the second inversion as the *chord of the fourth and sixth* or *of* 6 4. Similarly, the first inversion of any seventh chord is known as the *chord of the fifth and sixth* or *of* 6-5; the second inversion as the *chord of the third, fourth, and sixth* or *of* 6 4 3, or simply *of* 4 3; and the third inversion as the *chord of the second, fourth, and sixth* or *of* 6 4 2, or simply *of* 4 2 or *of* 2. (In all these cases the numerals indicate the intervals of the tones measured from the bass.) The *chord of the eleventh* is essentially like that of the ninth, but with an eleventh (from the root) added, and the *chord of the thirteenth* is like that of the eleventh, with a thirteenth added. **Altered chord.** See ★*altered*.—**Characteristic chord.** Same as *tonic chord*.—**Chord of an arch**, the horizontal width of an arch, usually taken between the innermost surfaces on both sides; an imaginary horizontal line drawn from one impost to the other. The term is used very loosely. Thus, in the illustration, *ab*, passing through the center, and *cd*, below the center, but connecting the imposts, may each be called the *chord*, but this only in the case of true vertical imposts from *a* to *c* and *b* to *d*. See *stilted arch*, under *stilted*. **Essential chord.** Same as *common chord* (which see, under *chord*, 4).—**Secondary chord** or **triad**, in *music*, a chord or triad of any kind when not based on the dominant, as contrasted with a *dominant chord* or *triad*; especially, the secondary chord of the seventh, a seventh chord based on some other tone than the dominant.—**Sensitive chord.** Same as *dominant chord*.



Chord of an Arch.

chorda-neuroplasm (kôr″dä-nū'rō-plazm), *n.* In *embryol.*, the common rudiment from which the chorda, or notochord, and the medullary, or neural plate arise during the development of the vertebrate embryo.

Chorda pistillaris, in *bot.*, the line of tissue leading from the stigma to the ovary.

chorditis (kôr-dī'tis), *n.* [NL., < Gr. χορδή, cord, + *-itis*.] Inflammation of a cord, as of one or both of the spermatic cords or of the vocal cords.

chordocentra (kôr-dō-sen'trä), *n. pl.* [NL., < Gr. χορδή, chord, + κέντρον, center.] Vertebral centra formed by the calcification of the notochord.

chordoid (kôr'doid), *a.* [L. *chorda*, a string, + Gr. εἶδος, form.] In *histol.*, having the peculiar vacuolated appearance of the cells which form the chorda dorsalis, or notochord, in the vertebrate embryo.

chordoma (kôr-dō'mä), *n.*; pl. *chordomata* (-ma-tä). [NL., < Gr. χορδή, cord, + *-oma*.] A tumor of peculiar formation sometimes found in the median line of the vermis of the cerebellum.

chordorrhizal (kôr-dō-rī'zal), *a.* [Gr. χορδή, string, cord, + ῥίζα, root, + *-al*[1].] In *bot.*, producing numerous successive flowering stems from the sides of the rootstock, as in *Carex chordorrhiza*.

chordoskeleton (kôr-dō-skel'e-ton), *n.* [L. *chorda*, string, + NL. *skeleton*.] In *embryol.*, that portion of the embryonic vertebrate skeleton which is formed around the chorda, or notochord; the embryonic spinal column and basis cranii.

chorea, *n.*—**Automatic chorea**, chorea in which the movements have the appearance of being voluntary.—**Chorea cordis**, chorea associated with extreme irregularity in the action of the heart.—**Chorea electrica**, a convulsive affection of childhood and early youth, marked by sudden muscular jerks of the neck and shoulders such as might be excited by the passage of a current of electricity.—**Chorea saltatoria**, a form of chorea marked by rhythmical leaping movements when the patient stands.—**Chorea senilis**. See *senile* ★*chorea*.—**Electric chorea**. See ★*chorea electrica*.—**Epidemic chorea**, the dancing mania of the middle ages.—**Facial chorea**. Same as ★*tic non-douloureux*. **Hereditary** or **Huntington's chorea**, a disease affecting adults, often familial or hereditary, marked by mental disturbance tending toward dementia, disorders of speech, and choreic move-

ments.- **Huntington's chorea.** See *hereditary* ★*chorea.* -- **Laryngeal chorea,** spasmodic contraction of the laryngeal muscles and muscles of respiration, giving rise to a peculiar short, sharp sound like the bark of a dog. **Malleatory chorea,** a form of chorea in which the movements of the arms resemble those of a person using a hammer. **Saltatory chorea,** a form of chorea marked by involuntary dancing or leaping. **Senile chorea.** (*a*) A muscular tremor occurring in the aged. (*b*) Same as *paralysis agitans.*

choreatic (kō-rē-at'ik), *a.* [Irreg. < *chorea* + *-atic*[2].] Same as *choreal.*

choreic, *a.* **II.** *n.* One who suffers from chorea. *Buck,* Med. Handbook, III. 42.

choreograph (kō'rē-ō-gräf), *n.* A choreographer; one who arranges a ballet.

choreographer (kō-rē-og'ra-fèr), *n.* The designer or arranger of a ballet.

choreographic (kō″rē-ō-graf'ik), *a.* Of or pertaining to choreography.

choreography (kō-rē-og'ra-fi), *n.* [See *choreography*[2].] The art of designing and arranging dances, especially ballet-dances.

choreutes (kō-rū'tēz), *n.* [NL., < Gr. χορευτής < χορεύειν, dance in a chorus, < χορός, a chorus: see *chorus.*] A choral dancer.

chorial (kō'ri-al), *a.* [*chorion* + *-al*[1].] Of or pertaining to the chorion.

choriocapillary (kō″ri-ō-kap'i-lā-ri), *a.* [*chorion* + *capillary.*] Relating to the capillary vessels of the choroid coat of the eye. *Buck,* Med. Handbook, IV. 73.

choriocarcinoma (kō″ri-ō-kär″si-nō'mä), *n.*; pl. *choriocarcinomata* (-ma-tä). [NL., < *chorion* + *carcinoma.*] Same as ★*syncytioma.*

chorioid (kō'ri-oid), *a.* Same as *choroid.*

chorioiditis (kō″ri-oi-dī'tis), *n.* Same as *choroiditis.*

chorioma (kō-ri-ō'mä), *n.*; pl. *choriomata* (-ma-tä). [NL., < *chorion* + *-oma.*] Same as ★*deciduoma malignum.*

chorion, *n.* **3.** Same as *corium.*—**4.** In *bot.,* the pulpy matter which fills the young ovule and is absorbed during development. *Malpighi.*

chorionitis (kō″ri-ō-nī'tis), *n.* [NL., < *chorion* + *-itis.*] In *pathol.*: (*a*) Inflammation of the chorion, especially of the part in relation with the placenta. (*b*) Inflammation of the corium or true skin.

Chorioptes (kō-ri-op'tēz), *n.* [NL., appar. < Gr. χόριον, membrane, + ὀπτ- (in ὀπτικός, etc.), see.] A genus of acarines or mites.—**Chorioptes bovis,** an acarine or mite belonging to the family *Sarcoptidæ*; it is an external cutaneous parasite on cattle, causing chorioptic acariasis or mange. *Hering,* 1845. —**Chorioptes spathiferus.** Same as ★*Chorioptes bovis. Mégnin,* 1872.

Choripetalæ (kō-ri-pet'a-lē), *n. pl.* [NL., < Gr. χωρίς, separate, + πέταλον, leaf (petal).] A division of dicotyledonous archichlamydeous plants in which the corolla consists of separate petals coördinate with the *Apetalæ.* In modern systems of classification it virtually begins with the order *Ranales,* but the order *Chenopodiales,* next below, contains many choripetalous genera, and higher orders contain apetalous genera. Some authors make it include the *Apetalæ* and to be thus equivalent to the *Archichlamydeæ.* See *Apetalæ, Polypetalæ,* and ★*Archichlamydeæ.*

chorisis, *n.* **2.** In *geom.,* a number associated with a place which indicates how many different places it contains, such that a particle could not by an ordinary motion within it pass from one to another. A place which is continuously connected throughout is of chorisis 1, and in general the number of the chorisis is the number of separate places in which there is room for particles. The chorisis of all space is, of course, 1.

chorist, *n.* **2.** In *Gr. antiq.,* a member of the chorus.

In the Lenæan festival of Athens one of his [Dionysius's] tragedies had been rewarded with the first prize. A *chorist* who had been employed in the performance . . . was the first to communicate the news.
Grote, Greece, XI. ii. 46.

choristership (kor'is-tèr-ship), *n.* The office or function of a chorister.

Choristoceras (kor-is-tos'e-räs), *n.* [NL., < Gr. χωριστός, separated, + κέρας, a horn.] A genus of phylogerontic ammonoid cephalopods or ammonites, of the family *Choristoceratidæ,* in which the later volutions become uncoiled and the septal sutures are degenerate and simple. With other members of this family, it occurs in the Jurassic rocks.

Choristodera (kor″is-tod'e-rä), *n. pl.* [NL., < Gr. χωριστός, separated, + δέρη, δειρή, neck.] A suborder of *Rhynchocephalia* containing extinct reptiles of large size, with flattened vertebræ and teeth on palatines and pterygoids.

choristry (kor'is-tri), *n.* The singing of a choir or chorus; choral music.

This that everywhere I hear,
Rolling a sea of *choristry*
Up and down the jewel of Heaven.
S. Dobell, Harps of Heaven, l. 66.

Chorizema (kō-ri-zē'mä), *n.* [NL. (Labillardière, 1799), apparently < Gr. χωρίζειν, to separate. The allusion is to the distinctness of the stamens.] A genus of plants of the family *Fabaceæ,* consisting of about fifteen species, all Australian. They are shrubs of a diffuse or half-climbing habit, with thick and shining simple evergreen leaves and pea-like red or yellow flowers. *C. varium* and *C. ilicifolium* are two of the species grown in the United States as greenhouse subjects.

chorizont (kō'ri-zont), *n.*; pl. *chorizonts* (-zonts) or *chorizontes* (kō-ri-zon'tēz). [Gr. χωρίζων (pl. χωρίζοντες), a separator, ppr. of χωρίζειν, separate.] One of the ancient Greek grammarians who ascribed the Iliad and Odyssey to different authors; in a general sense, one who assumes or asserts separate authorship of works commonly ascribed to one author.

The *Chorizonts,* so called because they separate the authorship of the Iliad from that of the Odyssey, found themselves mainly, (*a*) On supposed discrepancies in the mythology of the two Poems respectively; (*b*) On differences of manners and institutions; (*c*) On differences in the language. *Gladstone,* Juventus mundi, i.

chorizontal (kor-i-zon'tal), *a.* Pertaining to or characteristic of the ancient chorizonts; chorizont-like; separatist.

chorizontes, *n.* A plural of ★*chorizont.*

chorizontic (kor-i-zon'tik), *a.* Of or pertaining to the chorizonts or to their belief in the separate authorship of the Iliad and Odyssey.

The Essayist adopts a *chorizontic* or separatist position, and an attempt is made to differentiate the Iliad from the Odyssey in age and authorship.
W. D. Geddes, Homeric Poems, p. 15.

chorizontist (kor-i-zon'tist), *n.* One who favors the views of the chorizonts.

chorogi (chō'rō-gē), *n.* [Jap.] *Stachys Sieboldi* (also known as *S. tuberifera* and *S. affinis*), an erect, hairy plant belonging to the mint family: applied particularly to the small white tubers, which are two or three inches long and edible. The plant is also known by the French name *crosnes.* See *Stachys.* Also called *Chinese* or *Japanese artichoke.*

chorografy, *n.* A simplified spelling of *chorography.*

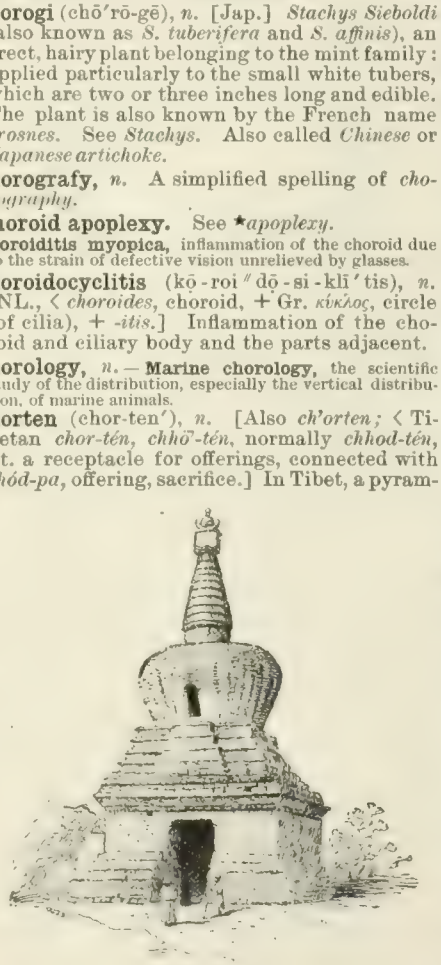
Choroid apoplexy. See ★*apoplexy.*

Choroiditis myopica, inflammation of the choroid due to the strain of defective vision unrelieved by glasses.

choroidocyclitis (kō-roi″dō-si-klī'tis), *n.* [NL., < *choroides,* choroid, + Gr. κύκλος, circle (of cilia), + *-itis.*] Inflammation of the choroid and ciliary body and the parts adjacent.

chorology, *n.*—**Marine chorology,** the scientific study of the distribution, especially the vertical distribution, of marine animals.

chorten (chor-ten'), *n.* [Also *ch'orten;* < Tibetan *chor-tén, chhö'-tén,* normally *chhod-tén,* lit. a receptacle for offerings, connected with *chód-pa,* offering, sacrifice.] In Tibet, a pyram-



Tibetan Chorten.

idal structure of solid stone masonry which corresponds, as far as use is concerned, to the Indian chaitya or stupa. Originally intended to contain relics, they were also raised as cenotaphs in memory of a Buddha or of a Buddhist saint, and came to be regarded as themselves symbols of the Buddhist doctrine.

chortle (chôr'tl), *v. i.*; pret. and pp. *chortled,* ppr. *chortling.* [A factitious word, humorously formed from *ch(uck)le* + *(sn)ort.* See ★*brunch-word.*] To exclaim exultingly, with a noisy chuckle: a vaguely suggestive word used in the first passage quoted, and since taken up by other writers in the sense defined.

And hast thou slain the Jabberwock?
Come to my arms, my beamish boy!
O frabjous day! Callooh! Callay!
He *chortled* in his joy.
Lewis Carroll, Through the Looking-Glass (Jabberwocky, [st. 6).

A stone cot . . . within which the two Americans hugged themselves and *chortled* in their joy continually "How very romantic we are!"
Outlook, Feb. 1, 1896, p. 294.

chorus-singer (kō'rus-sing-èr), *n.* One who sings in a chorus.

Chosen people. See *people.*

chota-hazri (chō'tä-häz″rē), *n.* [Hind. *chhoṭī-hāzarī,* little breakfast.] In India, a light early-morning refreshment served before breakfast: otherwise called *early tea.*

chou (shö), *n.*; pl. *choux* (shö). [F.: see *cole*[2] and *cabbage.*] **1.** A cabbage.—**2.** In *dressmaking,* a small, close rosette of any suitable material: so called from the crumpling of its loops of ribbon or lace, which resemble the crinkled leaves of a cabbage.

chough, *n.*—**Alpine chough,** one of the smaller crows, *Monedula pyrrhocorax* or *Pyrrhocorax alpinus,* related to the common *chough,* but smaller and with a yellow bill. It inhabits the mountainous regions of northern Europe. *Science,* Feb. 8, 1901, p. 232.

Chouteau limestone. See ★*limestone.*

chow[6] (chou), *n.* [Origin obscure, but prob. supposed by the users to be Chinese.] A Chinaman. [Colloq., Australia.]

chowder-headed (chou'dèr-hed-ed), *a.* [Also *chouder-headed.*] A dialectal form of ★*choltter-headed.* *Scott.*

choze, *pp.* A simplified spelling of *chose.*

chozen, *p. a.* A simplified spelling of *chosen.*

chr. An abbreviation of *chrestomathy.*

Chr. An abbreviation (*a*) of *Christ;* (*b*) of *Christian.*

chrematist (krē'ma-tist), *n.* [Gr. χρηματιστής, a man of business, a money-getter, < χρηματίζειν, transact business. The Eng. use depends on *chrematistics.*] A political economist; a student of, or one who is versed in, chrematistics or the science of wealth.

According to the *chrematists,* the wealth of a nation, as of an individual producer, is to be measured by the excess of the value of production over its cost.
Sismondi (trans.) in Blackwood's Mag., LVII. 536.

chrestic (kres'tik), *a.* and *n.* [Gr. χρηστικός, able to use things, < χρηστός, adj. < χρήσθαι, use.] **I.** *a.* Referring to skill in the use of implements, tools, and artificial instruments generally, as distinguished from the arts of designing and manufacturing such things.

II. *n.* That department of art and practical science which is concerned with skill in the use of artificial objects.

chrestomathics (kres-tō-math'iks), *n.* [Gr. χρηστός, useful, + *-μαθής,* < μανθάνειν, learn. Cf. *chrestomathy.*] The science of useful matters. [Rare.] *N. E. D.*

chrismatite (kriz'ma-tīt), *n.* [Gr. χρῖσμα (χρισματ-), ointment, + *-ite*[2].] A semi-fluid or butter-like resin, found on crystals of calcite from Saxony. It varies in color from yellow to oil-green.

chrismatize (kriz'ma-tīz), *v. t.*; pret. and pp. *chrismatized,* ppr. *chrismatizing.* [Gr. χρῖσμα (χρισματ-), chrism, + *-ize.*] To anoint with holy oil; chrism.

What spectacle could one behold more Antichristian? "To see a man in those Sacerdotal disguises, all of them consecrated and dedicated to the purpose, . . . whose churchyard is wholly by the consecration and benediction of sprinkled Holy-water, . . . nay whose very Bells of his Steeple are Christned and *Chrismatized* for the chasing the foul fiends out of the Aire at the departure of a Soul."
Dr. H. More, Mystery of Iniquity, p. 62.

chrismon (kris'mon), *n.*; pl. *chrismata* (-mä). [A modern term, apparently formed from *Chris(t) mon(ogram).*] A name given to a monogram found in the catacombs and in later use appearing in many forms, for example, ☧ or ☨, and consisting of the first two letters, XP, of the Greek word ΧΡΙΣΤΟΣ, Χριστός, Christ. Sometimes A (alpha) and Ω (omega) appear in the design. The date of its origin is unknown. The monogram appears with many variations and additions in royal signatures of the ninth and later centuries.

Christed (kris'ted), *a.* [*Christ* + *-ed*[2].] United with Christ by being completely possessed by

his spirit. The Familists in the seventeenth century used the expression to signify the deification which they imagined they attained by direct communion with the Deity.

christen, *v. t.* 5. To engrave new names and marks on (stolen watches, silver plate, etc.) after obliterating the old, in order to prevent identification. [Thieves' cant.]

Christendie † (kris'n-di), *n.* [A var. of *Christenty*, see *Christianity*.] Christendom. *Burns.*

Christiad (kris'ti-ad), *n.* [*Christ* + *-iad* as in *Iliad*.] An epic of Christ.

Christian Catholic Church. See ★*catholic.*—**Christian Reformed Church,** a body that separated from the established church in Holland in 1834, endeavoring to maintain the old system of reformed doctrine. Numbers of this body emigrated to America in 1846 and settled in Michigan. The church in the United States has seven classes and one synod, with nearly 100 churches and 13,000 communicants. Its doctrine and polity are identical with those of the Reformed Church of America. **Christian Science,** a system of religious teaching, based on the Scriptures, which originated with Mary Baker Eddy about 1866. Its most notable application is in the professed cure of disease by mental and spiritual means. —**Christian Scientist,** one who believes in Christian Science. **Christian year.** Same as *ecclesiastical year.* **Most Christian,** a title of the kings of France. —**United States Christian Commission,** an organization founded in the city of New York, November 14, 1861, for the purpose of supplementing the labors of the chaplains of the army and navy in caring for the spiritual needs of the Union forces during the Civil War (1861-65). See *United States Sanitary Commission,* under *sanitary.*

Christiana period. See ★*period.*

Christianizer (kris'tian-ī-zêr), *n.* 1. One who converts to Christianity. — 2. One who professes Christianity.

Christiansen's colors. See ★*color.*

Christic (kris'tik), *a.* [*Christ* + *-ic.*] Relating or pertaining to Christ. *J. W. Vale.*

Christlike (krist'līk), *a.* Resembling Christ; in accordance with his spirit.

It would have been in glaring disaccord with the gentleness and moderation which is now shown, even towards absolute unbelievers, by the wisest, gentlest, and most *Christ-like* of God's saints.

F. W. Farrar, Early Days of Christianity, p. 500.

Christmas evergreen. See ★*evergreen.*—**Christmas green,** a trailing club-moss, *Lycopodium complanatum,* the flat, light-green fronds of which adapt it specially for Christmas decoration.—**Christmas tree.** (*b*) In Australia, the Christmas-bush; in New Zealand, the fire-tree or pohutukawa. These trees bloom at the Christmas season, and are used for decoration in the place of holly and other greens of the northern countries.

Christmas-berry (kris'mas-ber″i), *n.* The California holly or toyon, *Heteromeles arbutifolia,* a handsome evergreen shrub whose bright-red berries, contrasting with the shining green foliage, admirably adapt it for Christmas decoration.

Christmas-bush (kris'mas-bush), *n.* An Australian tree of the saxifrage family, *Ceratopetalum gummiferum.* It yields a fine-grained reddish wood used in turning and for tool-handles. Called also *Christmas tree* and *officer-bush.*

Christmassy (kris'mas-i), *a.* [*Christmas* + *-y*[1].] Christmas-like: as, *Christmassy* cheer; a *Christmassy* scene. [Colloq.]

Christologist (kris-tol'ō-jist), *n.* [*Christolog-y* + *-ist.*] One who is versed in Christology.

Another view . . . favored by several . . . modern *Christologists* is that Jesus was not entirely dead, but was revived from some form of trance.

Amer. Jour. Relig. Psychol. and Education, May, 1904, p. 54.

Christologize (kris-tol'ō-jīz), *v. t.*; pret. and pp. *Christologized;* ppr. *Christologizing.* To bring into relation with Christology.

A constantly increasing number of persons are coming to the conviction that the results already reached by the Church in other departments of doctrine, require what Dr. Henry B. Smith affirmed to be a necessity — a *Christologizing* of Eschatology; and that when this is thoroughly done, the ultimate destiny of all men will be found to turn on their personal relation to God as revealed in Christ.

E. C. Smyth, in Homiletic Review, April, 1886, p. 288.

christophine (kris-tō-fēn'), *n.* [Creole F., from the name *Christophe,* Christopher.] A name in the West Indies of the cheyote, *Chayota edulis.* This name is the one used by the French-speaking creoles, while *chocho* is used by the English-speaking and *chayote* by the Spanish-speaking people. See *Sechium* and *cheyote.*

Christ's-eye (krīsts'ī), *n.* Same as *oculus Christi* (which see, under *oculus*).

chroatol (krō'a-tōl), *n.* [Gr. χρόα, skin, + *-ate*[1] + *-ol.*] Terpeniodohydrate, $C_{10}H_{16}.2HI$. It forms greenish-yellow aromatic crystals, and is used as a dermal application.

chromacea (krō-mā'sē-ä), *n pl.* [NL., ⟨ Gr. χρῶμα, color, + *-acea.*] A group of organisms of extreme simplicity, allied to the bacteria, and regarded by Haeckel as the oldest and most primitive of living beings.

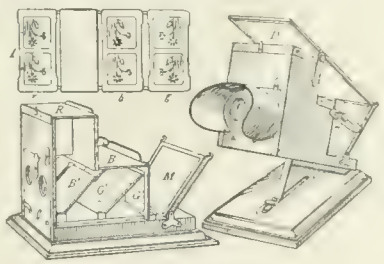
chromæsthesia (krō-mes-thē'si-ä), *n.* [NL., ⟨ Gr. χρῶμα, color, + αἴσθησις, perception.] 1. The perception of color.— 2. In *psychol.*, the constant association of colors with words, letters, musical tones, noises, etc. It is sometimes termed *pseudochromæsthesia,* the colors being 'imaginary.' The commonest form is 'colored hearing,' though chromæsthesia occurs in other departments of sense, for example, in taste and smell. It is probable that the tendency to chromæsthesia is, at least in many cases, congenital, preformed in the nervous system of the infant; though strongly affective experiences of actual association in early childhood may contribute largely to its realization. No wholly satisfactory explanation of the phenomena can at present be offered.

chromanil (krōm-an'il), *a.* [*chrom(ium)* + *anil(ine).*] Pertaining to chromium and aniline: applied to certain coal-tar colors that are usually after-treated with chromium.—**Chromanil black.** See ★*black.*

chromaphore (krō'ma-fōr), *n.* Same as *chromatophore.*

chromasciopticon (krō-ma-s ī-op'ti-kon), *n.* [NL. irreg. ⟨ Gr. χρῶμα, color, + σκιά, shadow, + ὀπτικόν, ⟨ ὀπτ-, see: see *optic.*] An apparatus which throws shadows of various colors, used in the test for color-blindness. *Buck,* Med. Handbook, III. 211.

chromascope, *n.* 2. In *photog.*, an apparatus devised by Ives in which the image of the object photographed is seen in colors. It consists of a stereoscopic camera provided with green, blue, and red transparent glasses marked *G*, *B*, and *R* respectively. *G′* and *B′* are green and blue transparent glasses placed at an angle of 45 degrees. A mirror, *M*, reflects light into the camera, while the ground-glass *D* serves to diffuse light. Three negatives are taken of the object by the use of blue, yellow, and red screens, and from these are printed three positives. These are shown mounted on hinges. (See Fig. *1.*) That marked *g* is inserted in a groove at *G*, while *b* and *r* rest on *B* and *R* respectively. When the apparatus is adjusted, the images of the three positives are superposed and the model is seen stereoscopically, remarkably reproduced in color.



The Ives Chromascope.

chromatic, *a.* 3. In *cytol.*, of or pertaining to chromatin, the stainable substance of the cell-nucleus.

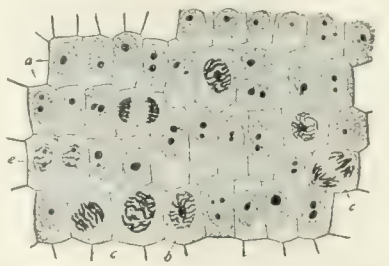
The equatorial *chromatic* wreath resolves itself into loops arranged with their closed ends directed inwards towards a central point and their free ends outwards. These loops undergo horizontal cleavage from looped to free end, and the looped ends pass along the surface of the spindle towards pole and antipole.

Encyc. Brit., XXV. 393.

Chromatic audition. See ★*audition.*—**Chromatic function,** the faculty of adjusting the color of the body to that of the environment. *Pouchet.*—**Chromatic granules,** granules in the cell which are easily stained by the usual dyes.—**Chromatic letter.** Same as *chromatic type.*—**Chromatic race,** that degree of kinship which is marked by the color of the skin and the type of the hair. The chromatic races usually distinguished by anthropologists are the white (Europeans), yellow (Asiatics), red (aboriginal Americans), brown (Pacific islanders), and black (Africans). Compare *ethnic* ★*race, glottic* ★*race,* and ★*cephalic race. Giddings,* Inductive Sociol., p. 53.—**Chromatic scale.** (*b*) In *painting,* a term used to express degree of intensity and contrast in color.

The painters of India, who have a truer feeling for color than many Persian artists, have greatly simplified the rich, sometimes too rich, *chromatic scale* of those miniatures, and have brought them back to a generally more sober tonality.

E. Blochet, in Burlington Mag., III. 279.



Chromatin.

General view of cells in the growing root-tip of the onion, from a longitudinal section, enlarged about [illegible] diameters. *a*, non-dividing cells, with chromatin network and deeply stained nucleoli; *b*, nuclei preparing for division (spireme stage); *c*, dividing cells showing mitotic figures; *c*, pair of daughter-cells shortly after division. (From Wilson's "The Cell.")

chromaticism (krō-mat'i-sizm), *n.* [*chromatic* + *-ism.*] In *music:* (*a*) The use of chromatic melodies or harmonies, especially when extended or excessive. (*b*) A chromatic melody, harmony, or passage.

Secular music had long displayed very free use of *chromaticisms* similar to the modern style of writing.

C. H. H. Parry, in Grove Dict. Music, I. 675.

chromaticity (krō-ma-tis'i-ti), *n.* [*chromatic* + *-ity.*] In *cytol.*, the state or amount of the chromatin contained in the cell-nucleus. *Jour. Roy. Micros. Soc.,* April, 1904, p. 169.

chromatin, *n.* 3. In *cytol.*, that portion of the cell-nucleus in animals and plants which takes on a deep color in certain stains (carmine, hematoxylin, etc.): opposed to *achromatin.*

chromatinic (krō-ma-tin'ik), *a.* [*chromatin* + *-ic.*] Of or pertaining to the chromatin of the cell-nucleus.

The centrosome . . . cannot be the bearer of the hereditary characteristics. Therefore, if present, the idioplasm must be looked for in the *chromatinic* element of the nucleus. *Buck,* Med. Handbook, IV. 648.

chromatin-segment (krō'ma-tin-seg″ment), *n.* In *cytol.*, a piece or fragment of chromatin; a chromosome.

chromatoblast (krō-mat'ō-blâst), *n.* Same as ★*chromoblast.*

chromatogen (krō-mat'ō-jen), *a.* [Gr. χρῶμα(τ-), color, + *-γενής,* -producing.] Color-producing; chromatogenous.—**Chromatogen organ,** in *Echinoderma,* same as axial ★*organ.*

chromatograph, *n.* 2. A colored print.

chromatograph (krō'ma-tō-grâf), *v. t.* To represent in colors; do in colors.

Having been photographed, and stereographed, and *chromatographed,* or done in colors, it only remains to be phrenologized.

O. W. Holmes, Professor at the Breakfast-Table, viii.

chromatoid (krō'ma-toid), *a.* [Gr. χρῶμα(τ-), color, + εἶδος, form.] Having an affinity for dyes, or capable of being intensely stained: as, the *chromatoid* granules of the *Coccidiida. Calkins,* Protozoa, p. 144.

chromatokinopsia (krō″ma-tō-ki-nop'si-ä), *n.* [NL., ⟨ Gr. χρῶμα(τ-), color, + κιν(εῖν), move, + ὄψις, view.] In *psychol.*, the 'fluttering heart,' a visual illusion of movement. If a row of small blue circles is pasted on a strip of red cardboard, and the diagram, held in a dark corner of the room, is given a short to-and-fro motion in its own plane, the circles will appear to slip or spring from side to side. Better effects are obtained if the eye is adapted to darkness and a candle or low gas flame is used for illumination. *E. C. Sanford,* Exper. Psychol., p. 318.

chromatolysis (krō-ma-tol'i-sis), *n.* [NL., ⟨ Gr. χρῶμα(τ-), color (see *chromatin*), + λύσις, dissolution.] Dissolution of the nuclear chromatin: an evidence of coagulation necrosis on the part of cells. *Vaughan and Novy,* Cellular Toxins, p. 143.

chromatolytic (krō-ma-tō-lit'ik), *a.* Of or pertaining to chromatolysis, or the breaking down of the chromatin during the degeneration of cells.

chromatophil (krō-mat'ō-fil), *a.* and *n.* [Gr. χρῶμα(τ-), color + φίλειν, love.] I. *a.* Taking color easily; staining readily: said of cells and other histological elements.

II. *n.* A substance which stains readily.

chromatophilic (krō″ma-tō-fil'ik), *a.* Same as ★*chromatophil.*

chromatophilous (krō″ma-tof'i-lus), *a.* Same as ★*chromatophil, chromophilous.*

chromatophore, *n.* 4. One of the colored masses of protoplasm found in *Protozoa.* It may be either a living part of the cell, as in *Mastigophora,* or a symbiotic alga inhabiting the body of the protozoan. *Calkins,* Protozoa, p. 117.—**Chromatophore system,** that portion of the nervous system of an animal which controls the movements of the chromatophores or pigment-cells.

chromatophoric (krō″ma-tō-for'ik), *a.* Possessing or relating to chromatophores. *Philos. Trans. Roy. Soc.* London, ser. B, 1904, p. 322.

chromatophoroma (krō″ma-tō-fō-rō'mä), *n.*; pl. *chromatophoromata* (-ma-tä). [*chromatophore* + *-oma.*] Melanoma; a pigmented sarcoma.

chromatoplasm (krō'ma-tō-plazm), *n.* [Gr. χρῶμα, color, + πλάσμα, anything formed.] In *bot.*, the protoplasm of coloring substances. *Strasburger.*

chromatoptometer (krō″ma-top-tom'e-têr), *n.* [Gr. χρῶμα, color, + ὀπτ-, see, + μέτρον, measure.] An instrument constructed for ascertaining the development of the color-sense, particularly for the discovery of color-blindness.

chromatoptometry (krō-ma-top-tom′e-tri), *n.* Determination of the acuteness of color-vision by means of the chromatoptometer.

chromatosciameter (krō-ma-tō-si-am′e-tėr), *n.* [Gr. χρῶμα, color, + σκιά, shadow, + μέτρον, a measure.] Same as ★*chromascopticon.*

chromatoscopy (krō-ma-tos′kō-pi), *n.* [Gr. χρῶμα(τ-), color, + -σκοπια, ⟨ σκοπεῖν, view.] The art or process of combining or comparing colors by means of the chromatoscope.

chromatospherite (krō″ma-tō-sfēr′īt), *n.* [Gr. χρῶμα(τ-), color, + σφαῖρα, sphere, + -ite2.] A deeply staining mass found in the nuclei of certain *Sporozoa.*

chromatrope2 (krō′ma-trōp), *n.* [Of same formation as *chromatrope*1.] One of a group of acid coal-tar colors: as, *chromatrope 2B*, 6*B*, 8*B*, 10*B*, *F*, *R*, 2*R*, *S*, *SB*, and *SR*. They are all related to dihydroxynaphthalene-disulphonic acid and dye wool bright red to violet colors from an acid bath. They all give shades ranging from dark blue to black, when after-treated with potassium bichromate, and may therefore be classed as mordant-acid colors.

chromatroposcope (krō-ma-trop′ō-skōp), *n.* [Gr. χρῶμα, color, + τρόπος, a turn, + σκοπεῖν, view.] An apparatus consisting of a disk with apertures in front of colored surfaces, used in illustrating certain optical effects.

chrome emerald-green, fast yellow tannage. See ★*green*1, etc.

chrome, *v. t.* **Chromed colors,** colors that are developed, or raised, by bichromate of potash.

chrome-black, *n.* **Anthracene chrome-black,** a mordant acid dyestuff derived from anthracene, which gives a very fast black when combined with a chromium mordant, used in wool-dyeing. **Benzo chrome-black** a direct cotton coal-tar color of unpublished composition. It dyes unmordanted cotton black in a slightly alkaline salt bath and is rendered faster by an after-treatment with potassium bichromate and copper sulphate.

chrome-blue (krōm′blö), *n.* A mordant coal-tar color of the triphenyl-methane type. It dyes chromed wool blue, but is chiefly used in cotton-printing.

chrome-Bordeaux (krōm″bōr-dō′), *n.* A mordant coal-tar color, especially suited for calico-printing with an acetate-of-chromium mordanting principle.

chrome-brown (krōm′broun), *n.* A mordant coal-tar color of the monoazo type, related to pyrogallic acid. It dyes chromed wool brown and is used in calico-printing.

chrome-diopside (krōm″dī-op′sid), *n.* A variety of diopside containing chromium. It occurs with the diamond in South Africa and is also found elsewhere.

chrome-silver (krōm-sil′vėr), *n.* Same as *silver chromate:* used as a stain in preparing histological specimens for examination under the microscope.

chrome-spinel (krōm″spin′el), *n.* Same as *picotite.*

chrome-tan (krōm-tan′), *v. t.* To prepare by means of chrome tannage. See ★*tannage.* *Flemming*, Practical Tanning, p. 214.

chrome-violet (krōm-vī′ō-let), *n.* A mordant coal-tar color of the triphenyl-methane-carbinol type. It is used chiefly in calico-printing.

Chromic catgut. See ★*catgut.*—**Chromic myopia,** ability to distinguish colors near at hand, with color-blindness for distant objects.

chromicize (krō′mi-sīz), *v. t.* [*chromic* + *-ize.*] To impregnate with chromic acid: said of catgut which, when so treated, is less easily absorbed in the tissues. *Med. Record*, April 11, 1903, p. 563.

chromine (krō′min), *n.* [*chrom(ium)* + *-ine*2.] A direct cotton coal-tar color derived from primulin.

chromiole (krō′mi-ōl), *n.* [NL. **chromiolum*, dim. ⟨ Gr. χρῶμα, color.] In *cytol.*, a small fragment or granule of chromatin.

chromite, *n.* **2.** Any compound of chromium sesquioxid with a monoxid of another metal.

Chromium dioxychlorid. Same as ★*chlorochromic acid.*

chromoartotypy (krō-mō-är′tō-tī-pi), *n.* [Gr. χρῶμα, color, + E. *artotypy.*] In *photog.*, a collographic process for obtaining prints in color. Four negatives are made, representing the red, blue, and yellow of the object and a neutral tint, suitable color-screens being used. From these negatives collotype plates are made and a print is obtained accurately reproducing the object.

chromoblast (krō′mō-blast), *n.* [Gr. χρῶμα, color, + βλαστός, germ.] A cell which produces pigment: a pigment-cell.

chromocollograph (krō-mō-kol′ō-graf), *n.* [Gr. χρῶμα, color, + E. *collograph.*] In *photog.*, same as ★*chromocollotype.*

chromocollographic (krō″mō-kol-ō-graf′ik), *a.* In *photog.*, of or pertaining to chromocollography.

chromocollography (krō″mō-ko-log′ra-fi), *n.* In *photog.*, a photomechanical process for obtaining prints in color, in which a gelatin-coated glass plate is used instead of the lithographic stone.

chromocollotype (krō-mō-kol′ō-tīp), *n.* [Gr. χρῶμα, color, + E. *collotype.*] A print in colors taken upon the lithographic printing-press from a gelatin surface hardened by bichromate of potash. Separate gelatin surfaces are needed for the three primary colors yellow, blue, and red. These colors are dissected by photography. Intermediate colors are produced by the careful selection of inks of required intensity and the skilful overlapping of the primary colors.

chromocrater (krō′mō-krā-tėr), *n.* [NL. *chromocrater*, ⟨ Gr. χρῶμα, color, + κρατήρ, a large bowl.] In *pathol.*, a crater-shaped blood-corpuscle.

chromocyanine (krō-mō-sī′a-nin), *n.* [Gr. χρῶμα, color, + κύανος, blue, + *-ine*2.] A mordant coal-tar color related to gallocyanine. It gives bright blues. Also called *brilliant gallocyanine.*

chromocyclite (krō-mō-sik′līt), *n.* [Gr. χρῶμα, color, + κύκλος, circle, + *-ite*2.] A name given by Klein to a variety of apophyllite, the axial interference figure of which shows brightly colored rings. Another variety in which the rings are white and violet-black was early called *leucocyclite* by Herschel.

chromocytometer (krō″mō-sī-tom′e-tėr), *n.* [Gr. χρῶμα, color, + κύτος, a hollow (a cell), + μέτρον, a measure.] An instrument for ascertaining the number of the corpuscles and the amount of coloring-matter in blood.

chromogen, *n.* **2.** In *color-chemistry*, a compound containing a chromophorous group which is capable of being converted into a dyestuff by the introduction of a salt-forming group designated as an auxochromous group.

> Benzene, for example, is colourless, whereas nitro-benzene and azo-benzene are yellow. Such compounds containing chromophorous groups are termed *chromogens*, because, although not dyestuffs themselves, they are capable of generating such by the further introduction of salt-forming atomic groups. *Encyc. Brit.*, XXVII. 564.

Chromogen I, a name sometimes given to dihydroxynaphthalene-disodium sulphonate. It may be applied to wool in the same manner as an acid dyestuff, and upon subsequent oxidation with potassium bichromate a brown color is developed.

chromogenesis (krō-mō-jen′ē-sis), *n.* [Gr. χρῶμα, color, + γένεσις, production.] The production of color by minute organisms: particularly applied to bacteria.

chromogram (krō′mō-gram), *n.* [Gr. χρῶμα, color, + γράμμα, anything written.] **1.** A photograph in colors.

> So long as an instrument [the photochromoscope] is needed to help in viewing *chromograms*, the popular appreciation of these will be limited. *Amer. Jour. Sci.*, Nov., 1895, p. 380.

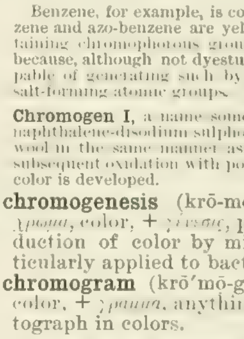
2. In *photog.*, the assemblage of three monochrome positives which control the colored lights of an Ives ★chromascope (which see). *Wall*, Dict. of Photog., p. 138.

chromol (krō′mōl), *n.* [Gr. χρῶμα, color, + *-ol.*] A trade-name for a specially prepared fat-liquor. *C. T. Davis*, Manuf. of Leather, p. 244.

chromolith (krō′mō-lith), *n.* [Short for *chromolithograph.*] A chromolithograph.

chromolithotint (krō-mō-lith′ō-tint), *n.* A design printed in tints or pale colors by lithographic process.

> Next ranks the recently issued history of the birds of Lombardy; the lithographs by Herr Oscar Dressler, superb, but the coloring (*chromo-lithotint*) poor. *Ruskin*, Love's Meinie, I. iii.



Segmented double spireme-

chromomere (krō′mō-mēr), *n.* [Gr. χρῶμα, color, + μέρος, part.] In *cytol.*, one of the minute chromatin granules which go to make a chromosome: same as an *id* of Weismann. *Buck*, Med. Handbook, I. 317.

chromometer (krō-mom′e-tėr), *n.* [Gr. χρῶμα, color, + μέτρον, measure.] An instrument for the determination of colors, as of petroleum and other oils, or, in another form, of metals by examination of their ores. See *chromatometer.* **Stead's chromometer.** See *Stead's* ★*colorimeter.*

Chromomonadina (krō-mō-mon-a-dī′nä), *n. pl.* [NL., ⟨ Gr. χρῶμα, color, + μονάς (μοναδ-), a unit, + *-ina*2.] A group or suborder of flagellate *Protozoa*, of the order *Phytoflagellida.* It consists mostly of colonial organisms, with the bodies inclosed in a gelatinous mass or capsule; the chromatophores, if present, yellow or yellowish brown, and the one or two flagella, if any, invariably directed forward. It includes the families *Chrysomonadidæ* and *Cryptomonadidæ.*

chromoparous (krō-mop′a-rus), *a.* [Gr. χρῶμα, color, + L. *parere*, produce.] A term applied to pigment-bacteria the coloring matter of which is not contained within the cell wall but is diffused between the individual organisms. See ★*chromophorous*, 2.

chromophil, chromophile (krō′mō-fil), *a.* and *n.* [Gr. χρῶμα, color, + φιλεῖν, love.] **I.** *a.* Chromophilous; same as ★*chromatophil.*

II. *n.* Any chromophilous substance, such as the granules in certain white blood-corpuscles.

Niessl's chromophils, certain bodies contained in the somatochromes which surround the nuclei of the nerve-cells of the gray matter.

chromophobe (krō′mō-fōb), *a.* [Gr. χρῶμα, color, + -φοβος ⟨ φοβεῖν, fear.] In *histol.*, insusceptible to color-staining: opposed to ★*chromophil.*

chromophore (krō′mō-fôr), *n.* [Gr. χρῶμα, color, + -φορος, ⟨ φέρειν, bear.] A chromophorous substance.

chromophoric (krō-mō-for′ik), *a.* Pertaining to a chromophore; chromophorous. *Athenæum*, July 15, 1893.

chromophorous, *a.* **2.** Applied to pigment-bacteria when the color is within the cell. See ★*chromoparous.*

chromophotographic (krō″mō-fō-tō-graf′ik), *a.* Of or pertaining to chromophotography.

chromophototype (krō-mō-fō′tō-tīp), *n.* [Gr. χρῶμα, color, + E. *phototype.*] In *photog.*, a style of picture which results in applying various colors in place of the lampblack of the carbon process. *Wilson*, Cyc. of Photog., p. 85.

chromophyl, chromophyll (krō′mō-fil), *n.* [Gr. χρῶμα, color, + φύλλον, leaf.] **1.** Any coloring substance in plant cells.—**2.** A respiratory pigment having a special affinity for carbon dioxid, such as chlorophyl.

> Under certain conditions the chloroplastid may likewise undergo a transformation into a yellow orange-colored body, known as a chromoplast, the pigment associated with it being called by the author, *chromophyl.* These plastid pigments are distinguished from all other plant colors by their solubility in such solvents as benzol, ether, volatile oils, etc. *Science*, May 6, 1904, p. 727.

chromophytosis (krō″mō-fi-tō′sis), *n.* [Gr. χρῶμα, color, + φυτόν, plant, + *-osis.*] Tinea versicolor (which see, under *tinea*).

chromoplasm (krō′mō-plazm), *n.* [Gr. χρῶμα, color, + πλάσμα, anything formed.] In *cytol.*, protoplasm which stains readily with certain dyes. Same as *karyoplasm.*

chromoplasmic (krō-mō-plaz′mik), *a.* Of or pertaining to chromoplasm.

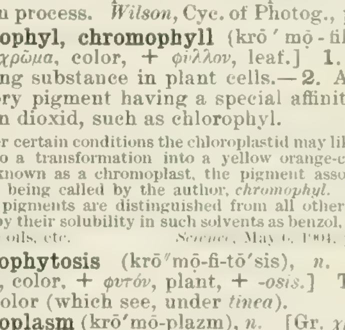
chromoproteid (krō-mō-prō′tē-id), *n.* [Gr. χρῶμα, color, + E. *proteid.*] A proteid in which an albuminous group is in combination with a pigment radical—for example, hemoglobin.

chromoptometer (krō-mop-tom′e-tėr), *n.* Same as ★*chromatoptometer.*

chromoptometrical (krō″mop-tō-met′ri-kal), *a.* Pertaining to or obtained by the use of a chromatoptometer.

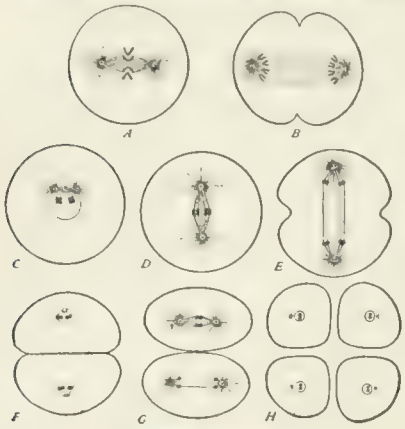
chromoscope, *n.* See ★*chromascope*, 2.

chromosomal (krō-mō-sō′mal), *a.* [*chromosome* + *-al*1.] Of or pertaining to the chromosomes.



chromosomatic (krō″mō-sō-mat′ik), *a.* Same as ★*chromosomal.*

chromosome (krō′mō-sōm), *n.* [Gr. χρῶμα, color, + σῶμα, body.] In *cytol.*, one of the definite segments or pieces of chromatin of the cell-nucleus. The chromosome normally divides into two equal parts, by either longitudinal or transverse splitting, before or during cell-division, and each of the parts thus arising becomes a chromosome of a daughter-nucleus. The number of chromosomes in the cells of a given animal or plant appears to be definite and constant. See cut on p. 245. **Bivalence of the chromosomes.** See ★*bivalence.* **Chromosome reduction,** the process by which the number of chromosomes of the embryonic



Chromosome Reduction.

Figure to show reduction in the male as it occurs in the round worm of the horse, *Ascaris megalocephala*, var. *bivalens.*

A B, division of one of the spermatogonia, showing the full number (four) of chromosomes; *C*, primary spermatocyte preparing for division (the chromatin forms two tetrads); *D E F*, first division to form two secondary spermatocytes each of which receives two dyads; *G H*, division of the two secondary spermatocytes to form four spermatids. Each of the latter receives two single chromosomes and a centrosome which passes into the middle-piece of the spermatozoon. (From Wilson's "The Cell.")

germ-cells (oogonia and spermatogonia) is reduced by half in the egg (ootid) and spermatozoon (spermatid).

chromosomic (krō-mō-sō′mik), *a.* Same as ★*chromosomatic* and ★*chromosomal.*

chromotypy, *n.* **2.** The art of printing in colors. This is done by the arts of typography and lithography, often in conjunction with photo-engraving. Distinct processes are common in each method. See *chromotype*, 3.

chromoxylograph (krō-mō-zil′ō-gräf), *n.* [Gr. χρῶμα, color, + ξύλον, wood, + γράφειν, write.] A pictorial print in colors, taken from blocks of wood engraved in high relief for the typographic press. As wood is liable to shrink and warp unequally on blocks of different colors, metal surfaces are now preferred.

chromyl (krō′mil), *n.* [*chrom(ium)* + *-yl.*] In *chem.*, chromium dioxid when regarded as a compound radical color: as, *chromyl* chlorid (CrO_2Cl_2).

Chron. An abbreviation of *Chronicles.*

chron., chronol. Abbreviations (*a*) of *chronological*; (*b*) of *chronology.*

chronal (krō′nal), *a.* [Gr. χρόνος, time, + *-al*[1].] Relating to time; as regards time.

chronist (kron′ist), *n.* [Gr. χρόνος, time, + *-ist.*] A chronologer.

chronocrator (krō-nok′ra-tor), *n.* [Gr. χρονοκράτωρ, < χρόνος, time, + -κράτωρ, ruler, < κρατεῖν, rule.] In *mundane astrol.*, the lord of the year; the planet ruling the ascendant at the moment of the sun's ingress into Aries.

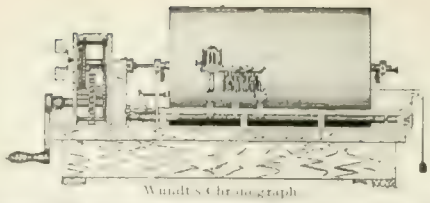
chronogenesis (kron-o-jen′e-sis), *n.* [Gr. χρόνος, time, + γένεσις, genesis.] The developmental history of a definite group of allied organisms.

No classification can be natural and permanent unless based on the history of the class (*chronogenesis*) and the ontogeny of the individual.

Zittel (trans.), Textbook of Paleon., I. 304.

chronograf, *n.* A simplified spelling of *chronograph.*

chronograph, *n.*—**Drop-chronograph,** an instrument in which time-intervals are recorded in distances traversed by a body falling between vertical guides. It is used in ballistics and the study of explosives.—**Wundt's chronograph,** a recording chronograph, much used for exact time-records in psychological laboratories. It consists essentially of a horizontal drum, revolved by clockwork, and a carriage which travels along the drum upon an endless screw. The carriage holds a recording tuning-fork, accurately adjusted to give 500 vibrations per second, and three electromagnetic writing levers. The tuning-fork is actuated by way of a standard fork of 250 vibrations per second, and the simultaneity of movement of the three levers is checked by a specially constructed hammer. The chronograph may be employed for the reaction experiment; as a control of the Hipp chronoscope; for the determination of the temporal difference of ap-



Wundt's Chronograph.

parently simultaneous movements (for example, of the right and left hands); and, in short, for any purpose for which a precise record of brief intervals of time is required.

chronographic projector. See ★*projector.*

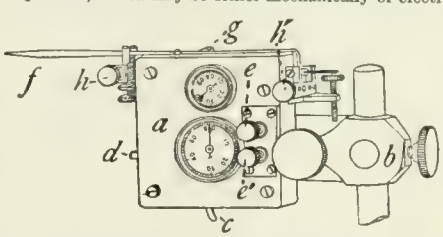
chronographical (kron-ō-graf′i-kal), *a.* Of or pertaining to chronology; chronological: as, a *chronographical* table.

chronographically (kron-ō-graf′i-kal-i), *adv.* **1.** In chronological order.—**2.** By means of the chronograph: as, *chronographically* recorded.—**3.** In a chronogram: as, a date *chronographically* (or chronogrammatically) expressed.

chronoisotherm (kron-ō-ī′sō-thèrm), *n.* [Gr. χρόνος, time, + E. *isotherm.*] A diagram of lines showing the progress of temperature at any place; a thermal iso-pleth, showing by curves the hours and days when the same temperature occurs.

chronoisothermal (kron″ō-ī-sō-thèr′mal), *a.* [*chronoisotherm* + *-al*[1].] Of or pertaining to a chronoisotherm; relating to a method of indicating the relations between temperature and time.

Chronometer tables, tables which make it easy for a mariner in any latitude to determine the chronometer-correction from an observed altitude of the sun, without the usual tedious computation.—**D'Arsonval chronometer,** a portable and practically noiseless clockwork, recording time in units of 0.01 second, and controlled, like the Hipp chronoscope, by an electromagnet. The chronometer is sometimes used in psychological laboratories as a less expensive substitute for the Hipp chronoscope; it was primarily intended for the use of physicians in visiting their patients.—**Jacquet's recording chronometer,** a stop-watch, which may be either mechanically or electri-



Jacquet's Recording Chronometer.

a, watch-case, with minute- and second-dials; *b*, clamp for adjusting the chronometer, vertically or horizontally, upon the arm of the standard; *c*, lever for bringing the hands of the dials to zero; *d*, lever for starting and stopping the chronometer. The movement of starting makes electrical contact between the posts *e*, *e′*, so that the moment at which the observation begins can be exactly marked upon the drum; *f*, recording-lever; *g*, push-button for setting the record to seconds or fifths of a second; *h*, *h′*, binding-posts for the electric registration of time intervals at a distance from the instrument.

cally controlled, and which is furnished with a writing lever for the marking of seconds or fifths of a second on the moving surface of the kymograph.

chronometerer (kro-nom′e-tèr-èr), *n.* One who by use of time-measuring apparatus, such as stop-watches, electric timers, chronographs, etc., is expert in measuring rates of speed, time-intervals, and time consumed in races, speed-trials, and similar events.

chrononomy (krō-non′ō-mi), *n.* [Gr. χρόνος, time, + νόμος, custom, law.] Method of reckoning time: as, the lunar *chrononomy* of the Chinese. *Max Müller.*

chronophotogram (kron-ō-fō′tō-gram), *n.* Same as ★*chronophotograph.*

chronophotograph (kron-ō-fō′tō-gräf), *n.* [Gr. χρόνος, time, + E. *photograph.*] In *photog.*, a single photograph of a series taken at equal intervals, usually on a moving film. These films are used in the cinematograph for the scientific investigation of a moving object.

2. A series of photographs representing phases of a cycle. (See cuts at *rack*, *run*, *trot*, and *walk.*)—**3.** An apparatus for obtaining a succession of photographs at regular intervals of time.

chronophotographic (kron-ō-fō-tō-graf′ik), *a.* [*chronophotograph* + *-ic.*] Pertaining to or connected with chronophotography.

By means of a *chronophotographic* apparatus, a series of pictures of the illuminated parts was taken, their appearance in the picture being that of dotted lines.

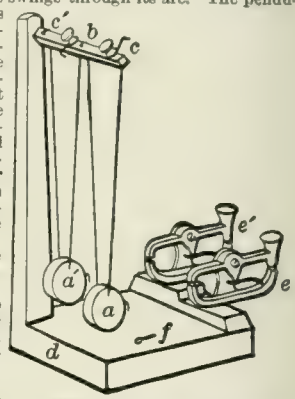
Nature, March 26, 1903, p. 487.

chronophotography (kron″ō-fō-tog′ra-fi), *n.* Continuous or kinetoscopic photography; the photographing of successive phases of a scene, movement, etc., at such short intervals that the whole is reproduced with apparent continuity.

A new method, which is called *chronophotography.* It was M. Janssen who first conceived the idea of taking automatically a series of photographic images in order to determine the successive positions at different times of the planet Venus in its passage across the sun. It was Janssen also who, in 1876, first suggested the idea of applying successive photograms to the study of animal locomotion. The analyzing of such movements was first accomplished by Muybridge, of San Francisco.

Science, Dec. 27, 1901, p. 991.

chronoscope, *n.* **Gravity chronoscope,** in *psychophys.*, a time-measuring instrument, consisting of a heavy metal plate sliding vertically between posts, with electrical contacts so arranged that the plate, when released from a magnet at the top of the apparatus, at a certain point in its fall breaks and at a later point remakes an electric circuit. The gravity chronoscope was devised by J. McK. Cattell. It is frequently used in psychological laboratories for the control of the Hipp chronoscope.—**Münsterberg's chronoscope,** in *psychophys.*, a clock, recording time in units of 0.01 second, the hand of which can be started and stopped mechanically like that of a stop-watch. The instrument is used in psychological laboratories—for example, for the measurement of reaction-times—when the use of an electrically controlled chronoscope is unnecessary or inadvisable.—**Pendulum chronoscope,** in *psychophys.*, a time-measuring instrument, consisting of a heavy pendulum fitted with electrical contacts, by means of which it breaks and remakes an electric circuit as it swings through its arc. The pendulum chronoscope is sometimes employed, after standardization, in place of the Hipp chronoscope; sometimes it is used, like the gravity chronoscope, as a control of the Hipp instrument. — **Vernier chronoscope,** in *psychophys.*, an instrument for the measurement of reaction-times. The chronoscope, devised by E. C. Sanford, consists of two pendulums, whose periods of vibration are 0.8 and 0.78 seconds respectively, and of two release-keys. If the longer pendulum is released by a rap on the button of its key, and the shorter pendulum by a finger-movement made in response to the sound of this rap, the number of vibrations occurring before coincidence of the pendulum-swings represents the reaction-time in units of 0.8 – 0.78 seconds, or fiftieths of a second. The instrument can be adapted to various forms of the reaction experiment.



View of Vernier Chronoscope.

a and *a′*, brass pendulums suspended by inelastic threads from bar *b*, bar; *c* and *c′*, set-screws holding threads fast to bar; *d*, cast-iron base; *e* and *e′*, release-keys; *f*, brass-wire hook, attached to counter-hook on pendulum *a*, released by pressure on button of key *e*.

chronoscopic (kron-ō-skop′ik), *a.* [*chronoscope* + *-ic.*] Of or pertaining to the chronoscope; measuring duration.

chronostichon (kron-os′ti-kon), *n.* A line of poetry containing a chronogram (which see).

chronothermal (kron-ō-thèr′mal), *a.* [Gr. χρόνος, time, + θέρμη, heat, + *al.*] Pertaining to temperature considered as a function of time.

chronotropism (krō-not′rō-pizm), *n.* [Gr. χρόνος, time, + τρόπος, a turn, + *-ism.*] Interference with the frequency of the heart's action. *Encyc. Brit.*, XXXI. 733.

chroöcoccaceous (krō″ō-ko-kā′shius), *a.* Resembling or allied to the alga *Chroöcoccus*; belonging to the family *Chroöcoccaceæ.*

chroöcoccoid (krō-ō-kok′oid), *a.* Resembling *Chroöcoccus.*

chrysalidal (kris-al′i-dal), *a.* [*chrysalis* (*-id-*) + *-al*[1].] Of, belonging to, or resembling a chrysalis.

chrysaline (kris′a-lin or -lin), *a.* [*chrysal(is)* + *-ine*[1]. The strict form would be *chrysalidine.*] Of or resembling a chrysalis. *N. E. D.*

chrysalism (kris′a-lizm), *n.* [Irreg. < *chrysal(is)* + *-ism.*] A chrysalis condition.

chrysalis-shell, *n.* **2.** A land-snail of the genus *Pupa.*

chrysaloid (kris′a-loid), *a.* [Irreg. < *chrysal(is)* + *-oid.*] Like a chrysalis. *Lindley.*

Chrysamphora (kris-am′fō-rä), *n.* [NL. (Greene, 1891), < Gr. χρυσός, gold, + ἀμφορείς (L. *amphora*), a jar.] A genus of dicotyledonous plants of the family *Sarraceniaceæ.* See *Darlingtonia.*

chrysanthemous (kri-san′thē-mus), *a.* Same as ★*chrysanthous.*

chrysanthemum-fly (kri-san'thē-mum-flī'), *n.* A cosmopolitan syrphid fly, *Eristalis tenax*. Also called *drone-fly* (which see).

chrysanthine (kri-san'thin), *a.* See ★*chrysanthous*.

chrysanthous (kri-san'thus), *a.* [Gr. χρυσός, gold, + ἄνθος, flower.] Having yellow flowers. Also *chrysanthemous* and *chrysanthine*.

Chrysaora (kri-sa'ō-rä), *n.* [NL., < Gr. χρυσάωρα, also χρυσάωρ, with golden sword, < χρυσός, gold, + ἄορ, sword.] A genus of jellyfishes of the family *Pelagiadæ*, held by Haeckel to be transitional between *Pelagia* and *Dactylometra*.

chrysatropic (kris-ạ-trop'ik), *a.* [Gr. χρυσός, gold, + *Atropa* + *-ic*.] Derived from *Atropa Belladonna*. -**Chrysatropic acid.** Same as ★*scopolatin*.

chrysaurin (kris-â'rin), *n.* [Gr. χρυσός, gold, + L. *aurum*, gold, + *-in*[2].] An acid coal-tar color. Same as *orange II*. Also *chrysauramine*.

chrysean (kris'ē-an), *n.* [Gr. χρύσεος, golden, + *-an*.] A glistening yellow crystalline compound, $C_4H_5N_3S_2$, obtained by passing H_2S into a concentrated solution of KCN.

chryseinic (kris-ē-in'ik), *a.* Noting an acid, the sodium salt of 4-nitro-*a*-naphthol, $NO_2C_{10}H_6ONa$; also called *French yellow* and *Campobello yellow*.

chrysenic (kri-sēn'ik), *a.* [Gr. χρυσός, gold, + *-ene* + *-ic*.] Derived from chrysoquinone.—**Chrysenic acid,** 2-phenylnaphthalene-1-carboxylic acid, $C_6H_5.C_{10}H_6CO_2H$. It crystallizes in leaflets which melt at 186.5°C.

chryseoline (kris'ē-ō-lin), *n.* [Gr. χρύσεος, golden, + *-ol* + *-in*[2]. Cf. *chrysolin*.] Same as *tropæolin*.

chrysidine (kris'i-din), *n.* [Gr. χρυσός, gold, + *-id* + *-ine*[2].] A name given to two bases, $C_{17}H_{11}N$, obtained respectively by passing benzylidene-*a*- and *β*-naphthalene through a heated tube. The *a* base melts at 108° C., the *β* base at 131° C.

chrysin (kris'in), *n.* [Gr. χρυσός, gold, + *-in*[2].] A crystalline yellow phenol, $C_{15}H_{10}O_4$, found in various species of *Populus*.

chrysoaristocracy (kris″ō-ar-is-tok'rạ-si), *n.* [Gr. χρυσός, gold, + ἀριστοκρατία, aristocracy.] The aristocracy of gold.

chrysocarpous (kris-ō-kär'pus), *a.* [Gr. χρυσός, gold, + καρπός, fruit.] Having yellow fruit.

chrysocetraric (kris″ō-sē-trar'ik), *a.* [Gr. χρυσός, gold, + *cetraria* + *-ic*.] Derived from cetraria.—**Chrysocetraric acid.** Same as ★*pinastric acid*.

chrysocrat (kris'ō-krat), *n.* [Gr. χρυσός, gold, + -κρατης, < κρατεῖν, rule.] 1. A plutocrat.—2. A supporter of the economic policy of making gold the monetary standard. [A newspaper usage.]

chrysocreatinine (kris″ō-krē-at'i-nin), *n.* [Gr. χρυσός, gold, + E. *creatinine*.] An orange-yellow, crystalline, poisonous alkaloid, $C_5H_8ON_4$, found in lean meat. It resembles creatinine.

chrysogen (kris'ō-jen), *n.* [Gr. χρυσός, gold, + -γενης, - produced.] An orange-colored hydrocarbon of unknown composition found in crude anthracene. It melts at 280–290° C. and is almost insoluble in benzene and glacial acetic acid.

chrysolite, *n.* 2. Goldstone. See *aventurin*, 1.

> Nay, had she been true,
> If heaven would make me such another world
> Of one entire and perfect *chrysolite*,
> I'ld not have sold her for it.
>
> *Shak.*, Othello, v. 2.

Ceylonese chrysolite, a jeweler's name for yellowish-green tourmalin from Ceylon.—**Saxon chrysolite,** a dark variety of true topaz from Schneckenstein, in the Saxon Vogtland.

Chrysomela, *n.*—**Cloaked Chrysomela,** an American chrysomelid beetle, *Glyptoscelis cryptica*, which devours the foliage of apple and oak.

Chrysomyxa (kris-ō-miks'ä), *n.* [NL. (Unger, 1840), < Gr. χρυσός, gold, + μυξα, slime.] A genus of fungi of the order *Uredinales*. The æcidia are produced on leaves of conifers, the uredospores and teleutospores on ericaceous plants. *C. Ledi* is a widely distributed species.

chrysophanate (kri-sof'ạ-nāt), *n.* [*chrysophan* + *-ate*[1].] A salt of chrysophan.—**Bismuth chrysophanate,** an amorphous yellow-colored compound of chrysarobin and bismuth hydroxid, $Bi(C_{15}H_9O_4)_3Bi_2O_3$. It is antiseptic for skin-diseases. Also called *dermol*.

chrysophanin (kri-sof'ạ-nin), *n.* [*chrysophan* + *-in*[2].] A bitter substance found in senna-leaves.

Chrysophanus (kri-sof'ạ-nus), *n.* [NL., < Gr. χρυσοφανής, shining like gold: see *chrysophan*.] A widespread genus of lycænid butterflies. Only one species, *C. thoi* Boisduval, occurs in the United States. It is found only in the more eastern States.

chrysophenin, chrysophenine (kris-of'e-nin), *n.* [Gr. χρυσός, gold, + *phen(yl)* + *-in*[2].] A direct cotton coal-tar color of the disazo type, related to stilbene. It dyes unmordanted cotton in a salt bath. It is very fast.

chrysophilist (kri-sof'i-list), *n.* Same as *chrysophilite*.

Chrysophlyctis (kris-ō-flik'tis), *n.* [NL. (Schilbersky, 1896), < Gr. χρυσός, gold, + φλύκτις, blister.] A genus of chytridiaceous fungi, so named from its yellow vesicular zoösporangia. The mycelium is lacking. Swarm-spores and resting-spores are produced in the interior of the host (endobiotic). *C. endobiotica*, the only species, is said to cause a rot or chytridiose of potato tubers in Hungary.

chrysopoëtic (kris-ọ-pō-et'ik), *a.* [Gr. χρυσός, gold, + ποιητικός, < ποιεῖν, make.] Capable of producing gold from base materials, as was assumed by the alchemists to be possible. *Southey*.

chrysopoëtics (kris-ọ-pō-et'iks), *n.* The imagined art of producing gold from base materials, as was attempted by alchemists.

chrysoprase, *n.* 2. The ancient name of a golden-green precious stone, now generally believed to have been a variety of the beryl or possibly a green variety of fluor-spar (chlorophane), which possesses the property of shining in the dark or by the heat of the hand.

Chrysops, *n.* 2. [*l. c.*] An insect of the genus *Chrysops*.—**Blinding chrysops,** a European dipterous insect, *Chrysops cæcutiens*, of the family *Tabanidæ*, so called because it seems to prefer to bite animals around the eyes. *Jour. Trop. Med.*, Jan. 15, 1903, p. 26.

chrysoretin (kris-ō-rē'tin), *n.* [Gr. χρυσός, gold, + ῥητίνη, resin.] A name given by Bley and Diesel to a yellow resin obtained from senna-leaves. Later investigations showed that this is closely related to chrysophanic acid.

chrysosplene (kris'ō-splēn), *n.* [*Chrysosplenium*.] A plant of the genus *Chrysosplenium*; golden saxifrage.

chrysostomic (kris-ō-stom'ik), *a.* [Gr. χρυσόστομος, golden-mouthed, applied to popular orators (as in the surname *Chrysostom*), < χρυσός, gold, + στόμα, mouth.] Golden-mouthed; eloquent.

Chrysothamnus (kris-ō-tham'nus), *n.* [NL. (Nuttall, 1840), < Gr. χρυσός, gold, + θάμνος, bush.] A genus of dicotyledonous plants of the family *Asteraceæ*. There are about 25 species, natives of western North America, low-branching shrubs with linear, entire leaves, and clusters of golden-yellow flowers.

chrysotoluazin (kris″ō-tol-ū-az'in), *n.* [Gr. χρυσός, gold, + E. *tolu* + *az(ote)* + *-ine*[2].] A base formed by the condensation of chrysoquinone with 3, 4-toluylene diamine. It crystallizes in yellow needles which melt at 176° C.

chrysotoxin (kris-ō-tok'sin), *n.* [Gr. χρυσός, gold, + τοξ(ικόν), poison, + *-in*[2].] A supposed chemical principle, said to be one of the active constituents of ergot (*Claviceps purpurea*).

chrysotype (kris'ō-tīp), *n.* [Gr. χρυσός, gold, + τύπος, type.] In *photog.*: (*a*) A photographic process in which paper sensitized by ferric ammonium citrate is exposed behind a negative and the picture is developed by a neutral solution of gold chlorid and fixed by potassium iodide. The process is due to Sir John Herschel. (*b*) A picture made by this process.

cht. An abbreviation of *chest* (in plural *chts*).

chthonography (thō-nog'ra-fi), *n.* [Gr. χθών, earth, + -γραφία, < γράφειν, write.] A descriptive treatise upon soils. *Syd. Soc. Lex.*

chub, *n.*—**Indian chub.** Same as *hornyhead*.

Chubb lock. See ★*lock*[1].

chub-headed (chub'hed″ed), *a.* Having a large, thick head.

chuck[3], *n.* 3. In *cricket*, a ball thrown instead of bowled.

chuck[3], *v. t.* 3. In *lawn-bowls*, to strike (a counting ball) out of range, or to strike (a ball of one's own side) into a counting position.

chuck[3] (chuk), *adv.* [*chuck*[3], *v.*] With full force; so as to hit; closely.

> Our progress was rather a devious one; . . . now getting into a sharp trot, and then suddenly pulling up at a dead stop, or running the machine *chuck* against a wall, to enable us to stand still and gain breath.
>
> *Lever*, Charles O'Malley, lxviii.

chuck[4], *n.* 6. The part of a beef-animal that lies between the neck and the shoulder-blade: used as a roast. **Geometric chuck,** a form of holder for work in the face-plate of a lathe, by which the work receives two or more motions besides the primary rotation of the plate. Such aggregation of motions causes the point of the tool to describe epicyclic curves or other geometric curves on the work, used to produce the tracery on watch-cases and the fine curved ornamental lines in dies for postage-stamps or bank-bills. **Magnetic chuck,** a chuck in which the attractive force of an electromagnet is used to hold castings of steel or iron, drop-forgings, disks, saws, dies, scales, etc., while they are in process of finishing in a lathe, grinder, or other machine tool. The most simple form is an electromagnetic table fitted with a cable and a switch for conveying and controlling the current. The casting is laid on the table, and, when the current is turned on, is held in place by it under all ordinary strains while in the machine tool. The action of the chuck is automatic, the current being supplied at the instant the grinding wheel starts, and the articles being released from the chuck when the motor stops. Articles placed in a magnetic chuck are afterward placed upon a ★demagnetizer (which see).—**Split chuck,** a form of chuck or holder for thin disks of metal which are to be turned or finished on their faces. A hollow cup-shaped cylinder with parallel walls is split along the walls at two or more elements, the disk inserted in place being held by the edges when a ring outside the cup draws the walls together upon the disk. **Upright chuck,** an angle bolted to a face-plate; a wooden chuck having a pair of slotted jaws, used for holding work which would not be held conveniently in the ordinary or hollow form.

chuck-block (chuk'blok), *n.* In *gold-milling*, a wooden block placed under the screen-frame of the mortar of a stamp-battery to permit adjustment of the screen as the dies wear, and thus maintain the proper height of the discharge-opening.

chuck-button (chuk'but″n), *n.* The game of pitch-and-toss played with buttons.

chucker[2] (chuk'ėr), *n.* In *cricket*, a bowler who is inclined to throw the ball instead of bowling it. [Colloq.]

chucker-luck. See ★*chuck-luck*.

chuck-hole (chuk'hōl), *n.* The small hole in the ground into which the farthing is to be thrown in the game of chuck-farthing; also, the game itself.

chucking (chuk'ing), *n.* A long, stout, coarse hemp, rather foul, used for making inferior rope. *Rigging and Seamanship. N. E. D.*

chucking-machine, *n.* Now applied to a special machine which is essentially a ★boring-and-turning machine (which see). The work is placed upon a horizontal revolving table, called the *chucking-table*, under a bracket which supports the turret carrying the tools.

chucking-table (chuk'ing-tā″bl), *n.* See ★*chucking-machine*.

chuck-luck (chuk'luk), *n.* [Also *chuck-a-luck*, *chucker-luck*; < *chuck*[3], *v.*, + *luck*.] A game played with three dice and a lay-out, at which the players bet that certain numbers will come on one die, or that the total of the three dice will be a certain number, or that the throw will be odd or even, high or low, etc.

chuck-plate (chuk'plāt), *n.* In *gold-milling*, an amalgamated copper plate attached to the chuck-block on the inside of the mortar of a stamp-battery, used to collect the gold.

chuck-ring (chuk'ring), *n.* A heavy steel ring for holding the ends of barrel-staves while the groove for the head is being cut.

chuck-roast (chuk'rōst), *n.* A roast cut from the chuck. See ★*chuck*[4], *n.*, 6.

chuckrum (chuk'rum), *n.* [Also *chuckram*; < Malayalam *chakram*, Telugu *chakramu* (< Skt. *chakra*, a wheel, a circle: see *wheel*).] A subsidiary coin still current in Travancore, equivalent to one and one tenth cents or one half of an anna (or 28½ to one rupee). The coin was once generally current in the south of India.

chuck-steak (chuk'stāk), *n.* A steak or inferior cut from that part of a beef-animal that is known as the chuck. See ★*chuck*[4], *n.*, 6.

chuckwalla (chuk'wä-lä), *n.* [California Indian.] A local name for *Sauromalus ater*, a large, dark-colored lizard, belonging to the iguana family and inhabiting the desert regions of southern California, Utah, and Nevada, and portions of Arizona and New Mexico. It reaches a length of a foot or more, feeds on plants, and is esteemed for food by the Indians.

chucky-chucky (chuk'i-chuk i), *n.* [Corruption of the Australian aboriginal name for a berry.] The fruit of species of the genus *Gaultheria*, especially the edible white berry of the Australian or Tasmanian wax-cluster, *Gaultheria hispida*. See *wax-cluster*.

chuf, *n.* A simplified spelling of *chough*.

chukpa (chök'pä), *n.* [Tibetan.] A Tibetan robber.

> They also informed us that a large body of *chukpas* were in our vicinity; whereupon our brave guides, after due consultation amongst themselves, formed up and suggested that we should attack the robbers, whose property was to be divided between them and ourselves.
>
> *Geog. Jour.* (R. G. S.), XVI. 153.

chullpa (chöl'pä), *n.* [Also *chulpa*; Aymará *chullpa*, a basket or bag in which the bodies of the dead were placed for burial.] In the mountains of Bolivia and Peru, one of the aboriginal towers used partly as burial-places,

but also as the abodes of the people, who buried their dead under the floors while continuing to occupy the building, as the forest tribes of the

Chullpas.

upper Amazon do to-day. Some of these stone towers are handsomely constructed, and these were used chiefly for burial.

chullu (chö'lyö), *n.* [Quichua of Peru.] The pointed bonnet or cap, similar to a nightcap but of colored wool, worn by the Indian men of the shores of Lake Titicaca. In Bolivia *llucha*.

chultun (chöl'tun), *n.* [Yucatan.] In Yucatan, a subterranean rounded structure, with a rounded roof and an opening in the middle of the roof, probably used as a water-reservoir.

chumble (chum'bl), *v. t.* [Freq. of ★*chump*[2].] To gnaw or nibble, as rats and mice do. [Prov. Eng.]

chummage, *n.* **2.** The system, formerly common in some English prisons of assigning a new-comer to a room with another or others.

chump[1], *n.* **3.** The blunt end of anything. See *chump-end.*—**4.** The head. [Vulgar.]—**Off his chump,** off his head; out of his senses. [Vulgar.]

chump[2] (chump), *v. t.* [A varied form of *champ*[1]. Cf. *chumble.*] To munch. *Thackeray.*

chumpi (chöm'pi), *n.* [Quichua.] Among the Indians of Bolivia, a belt.

chunk[1], *n.* **3.** Specifically, a range-bred horse of the western United States, suitable for draft purposes, standing 15 hands or over, and weighing from 1,100 to 1,400 pounds.

chunk[3] (chungk), *v. t.* In *lumbering,* to clear (ground) with an engine or horses of obstructions which cannot be removed by hand.—**To chunk up,** to collect and pile for burning: said of slash left after logging.

chuñu (chö'nyö), *n.* [Quichua and Aymará *chuñu* or *chunu.*] Dried potatoes, the chief vegetable food of Bolivia. As the people have no cellars to keep their potatoes during winter, these are set out to freeze, and then, after repeated soaking, the water is pressed out and the starchy residue dried in the sun. It is, of course, tasteless. The white kind is called *tunta.*

chupa-chupa (chö"pä-chö'pä), *n.* [Native name.] In Colombia, the large, greenish, edible fruit of a tree, *Matisia cordata,* of the silk-cotton family, native of the Andes region and cultivated in Peru and Colombia.

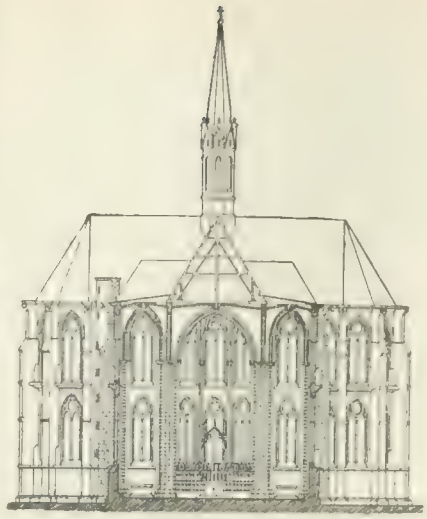
chupagallo (chö-pä-gäl'yō), *n.* [Porto Rico.] A tree, *Cinnamodendron macranthum,* of the family *Canellaceæ,* native to Porto Rico. It bears greenish-white, orange-scented flowers and yields a strong light-colored wood used in house-construction.

chupon (chö-pōn'), *n.* [Sp., a sucker.] In the West Indies, same as *sucker,* 5 (*b*). See ★*gormandizer,* 2. *Nature,* June, 1902, p. 185.

chuppah, chuppa (chup'pä), *n.* [Heb., < *chappah, happah,* cover, surround.] In the Jewish marriage ceremony, the canopy under which the reading of the kethuba, or marriage contract, and the nuptial ceremonies are performed. The chuppah is generally made of the curtain which is in front of the holy ark that contains the scrolls of the law. The four corners of the curtain are supported by four staffs or poles which are held by young male relatives or intimate friends of the bridal couple. The bridegroom is first ushered in under it; the bride and the parents soon follow and remain there until the end of the ceremony.

church. **I.** *n.*—**Abyssinian Church,** the church founded in Abyssinia in the middle of the fourth century. See *Abyssinian, n.,* 2.—**Christian Catholic Church.** See ★*catholic.*—**Church of Scotland,** the church which was established in Scotland in 1592. Its doctrine is to be found in the Westminster Confession of Faith. In government it is presbyterian, and, though legally established, is not subject to the state in spiritual matters.

Constitution Church. See ★*constitution.*—**Free Methodist Church.** See *Free Methodists,* under *Methodist.*—**Hall church,** in European Christian architecture, especially that of Germany, a church whose three or more parallel divisions are nearly of the same height. Thus in St. Stephen's, Vienna, the aisle on each side of the nave is lower than the nave by a few feet, but the difference is not enough to allow of clearstory windows. The cathedral at Erfurt and the church of St. Elizabeth at Marburg are still more strictly hall churches, the nave being in each of the same height as the aisles.—**Institutional church,** a church which maintains social, charitable, and educational institutions as a part of its organization, mainly for the purpose of reaching the poorer classes in large cities.—**Reformed Church of France,** a church established in France in 1555. At its first synod, in 1559, it adopted a presbyterian form of government and a strictly Calvinistic confession of faith. Under the decree of 1802 it enjoyed state support.—**Reformed German Church,** the church that sprang up in the Palatinate during the religious movement of the sixteenth century, of which Zwingli and Calvin were leaders. Its doctrine was set forth in the Heidelberg Catechism (1563) and corresponds with the Calvinistic system somewhat modified. Its history in America began with the great German immigration of the seventeenth century.—**Reformed Methodist Church,** an American offspring of the Methodist Episcopal Church, having its origin in a body of local preachers in the Vermont conference, in 1814, who opposed the tendency toward 'prelacy' in the parent body. The sect was never strong and later became absorbed in other Methodist churches.



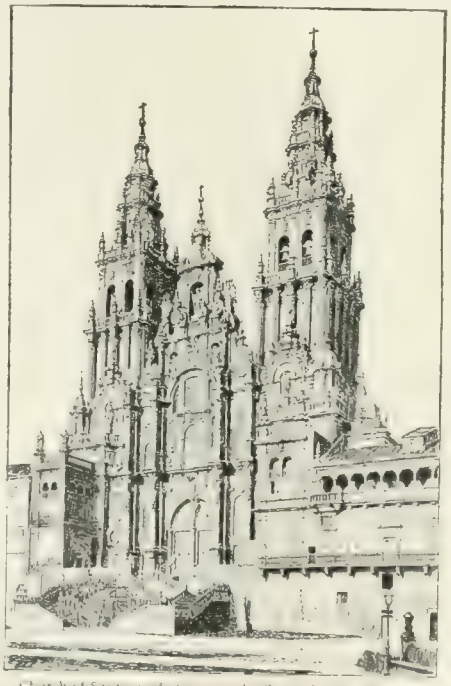
Hall Church.
Section of the Church of St. Elizabeth at Marburg.

II. *a.*—**Church conference,** the name given by the Wesleyans of England and Ireland, and the Freewill Baptists, to the annual meeting of the ministers of the churches.—**Church house** or **settlement.** See *college* ★*settlement.*—**Church year.** (*a*) Same as *ecclesiastical year* (see *year*). (*b*) See ★*year.*

church-bell (chèrch'bel), *n.* The bell of a church, which is rung to call the people, or to mark festivals or funerals.

church-door (chèrch'dōr), *n.* The outer door of a church. It was customary in early times to post upon it the names of excommunicated persons, the names of persons intending to marry, proclamations of the church, and other public notices.

church-flag (chèrch'flag), *n.* *Naut.,* a blue cross on a white pennant field raised on board a ship while religious services are being held.



Church of Santiago de Compostela, Spain, by Churriguera.
From "Baudenkmäler in Spanien," pub. by Wasmuth, Berlin.

Church-warden Gothic. See ★*Gothic.*

churinga (chö-ring'gä), *n.* [Australian.] Something sacred or secret, applied both to an object and to the quality possessed by it. It is most frequently used to signify the sacred stones and sticks of the Arunta tribe of central Australia. *Spencer and Gillen,* Native Tribes of Central Australia, p. 648.

churka (chèr'kä), *n.* [Hind. *charkhah, charkhā,* a spinning-wheel, distaff, reel, < Skt. *chakra,* wheel: see *wheel.* Cf. ★*chuckram.*] The Oriental roller cotton-gin, made of two round pieces of hard wood fixed in a rude frame.

churn, *n.* **2.** A block or chuck on a potter's turning-lathe.

churn-butted (chèrn'but"ed), *a.* Same as ★*swell-butted.*

churrels (chèr'elz), *n.* Same as ★*chirls.*

Churrigueresque (chö"ri-gā-resk'), *a.* and *n.* [Named in reference to Don José *Churriguera* of Salamanca and his two sons.] Noting an elaborate phase of the baroque style in architecture which originated in Spain in the seventeenth century. The style was transplanted to Mexico, where it became typical. See cut in middle column.

chute, *n.*—**To shoot the chute,** to slide down a chute in a car, or in a boat that at the foot of the chute glides into the water.

There is here, indeed, almost enough material for an Earl's Court exhibition, though it might be a little undignified to combine amusement with instruction, in the way beloved of the Londoner, by giving him an opportunity of *shooting the chute* on a milkman's barrow or by converting the great wheel into a gigantic churn.
Lancet, May 30, 1903, p. 1534.

chute (shöt), *v. t.* [*chute, n.*] To send down or through a chute, as logs.

chutkarry (chut'kar-i), *n.* [Also *chattagar;* < Tamil *shatti-kar,* 'one who wears a waistcoat.'] In southern India, a person of mixed European and Indian blood. [Anglo-Indian.]

chutt (chut), *n.* [Hind. *chādar-chhat,* 'sheet-ceiling,' < *chādar,* sheet, cloth, *chhat,* a roof or ceiling.] A ceiling for a room, composed of coarse cotton sheeting stretched on a frame and whitewashed. [Anglo-Indian.]

chuttrum (chut'rum), *n.* [Tamil *shattiram,* < Skt. *sattrá,* hospital, asylum, lit. 'seat,' < √*sad,* sit: see *sit.*] In southern India, a house where pilgrims and travelers of the higher castes are accommodated free for a short time. [Anglo-Indian.] Compare *choltry.*

chyak (chī'ak), *v. t.* [Also *chyack;* origin obscure.] To chaff; make game of: as, to *chyak* the police. [Australian slang.]

chyazic (kī-az'ik), *a.* [*c*(*arbon*) + *hy*(*drogen*) + *az*(*ote*) + *-ic.*] Containing carbon, hydrogen, and nitrogen.—**Chyazic acid,** an old name for hydrocyanic acid.

chylangioma (kī-lan-ji-ō'mä), *n.*; pl. *chylangiomata* (-ma-tä). [Gr. χυλός, chyle, + ἀγγεῖον, vessel, + *-oma.*] A tumor formed of dilated lymphatics containing chyle.

chylariose (kī-lā'ri-ōs), *n.* [Gr. χυλάριον, dim. of χυλός, juice, + *-ose.*] A name given to 1-fructose obtained from honey.

chyle-stomach, *n.* **2.** In *entom.,* the second of the three prime morphologic divisions of the alimentary canal, the mid-intestine or ventriculus. It is furnished with cæcal glands. *A. S. Packard,* Text-book of Entom., p. 297.

chylifacient (kī-li-fā'shient), *a.* [Gr. χυλός, chyle, + L. *faciens* (*-ent-*), making.] Same as *chylifactive.*

chyliform (kī'li-fôrm), *a.* [NL. *chylus,* chyle, + L. *forma,* form.] Resembling chyle; having the composition of chyle.

The left pleural cavity was half full of *chyliform* fluid similar to that in the abdomen.
Lancet, April 4, 1903, p. 961.

chylocauly (kī'lō-kâ-li), *n.* [Gr. χυλός, juice, + καυλός, stem, + *-y*[3].] The phenomenon of stem-succulence, in which the stem becomes short, thick, even spheroidal, and is filled with a mucilaginous sap, as in some *Cactaceæ.* *Schimper.*

chylocele (kī'lō-sēl), *n.* [NL. **chylocēlē,* < Gr. χυλός, chyle, + κήλη, tumor.] Presence of lymph in the tunica vaginalis testis.

chyloid (kī'loid), *a.* [Gr. χυλοειδής, like juice, < χυλός, juice, chyle, + εἶδος, form.] Resembling chyle.

chylopericarditis (kī"lō- or kil"ō-per-i-kär-di'tis), *n.* [NL., < Gr. χυλός, chyle, + NL. *pericardium.*] In *pathol.,* a condition in which chyle is present in the pericardial sac.

chyloperitoneum (kī"lō- or kil"ō-per-i-tō-nē'um), *n.* [NL., < Gr. χυλός, chyle, + NL. *peritoneum.*] In *pathol.,* a condition in which chyle is present in the peritoneal cavity.

chylophylly (ki-lof′i-li), *n.* [Gr. χυλός, juice, + φύλλον, leaf, + -y³.] In *phytogeog.*, the phenomenon of leaf-succulence, in which the leaves of a plant become fleshy as a protection against conditions of physiological dryness.

chylopoesis (kī-lọ- or kil-ọ-pọ-ē′sis), *n.* [Gr. χυλός, chyle, + ποίησις, a making.] Same as *chylifaction*.

chylorrhea, chylorrhœa (kī-lọ-rē′ạ̈), *n.* [NL. *chylorrhœa*, < Gr. χυλός, chyle, + ῥοία, a flow.] An escape of chyle from the lymphatics.

chylothorax (kī-lō-thō′raks), *n.* [Gr. χυλός, chyle, + θώραξ, thorax.] In *pathol.*, a condition in which chyle is present in the pleural cavity.

chymaqueous (kī-mā′kwẹ-us), *a.* [Gr. χυμός, juice (chyme), + L. *aqua*, water (see *aqueous*).] Composed of chyme and water, as the fluid in the digestive cavity and its branches in polyps.

chymogene (kī′mọ-jēn), *n.* See ★*butane*.

chymosin (kī′mọ-sin), *n.* [Gr. χυμός, juice, + *-ose* + *-in*².] The milk-curdling ferment of the gastric juice. Also called *rennin*.

chymosinogen (kī-mọ-sin′ọ-jen), *n.* [*chymosin* + *-gen*.] The proenzyme of chymosin, which in itself is inactive. In this form the ferment supposedly exists in the cells. Also called *renninogen*.

chytra (kit′ra), *n.* [Gr. χύτρα, dial. κύθρα, κύτρα, (also χύτρος, κύθρος, κύτρος), < χεῦ(√χυ), pour.] In *Gr. antiq.*, a two-handled earthen pot for heating water or cooking. It was usually without decoration. The proverb "to paint a *chytra*" was applied to any useless occupation.

Chytra

Chytridiales (ki-trid-i-ā′-lēz), *n. pl.* [NL., < *Chytridium* + *-ales*.] An order of fungi of the class *Oömycetes*, coextensive with the family *Chytridiaceæ*. Also *Chytridieæ* and *Chytridineæ*.

Chytridieæ, Chytridineæ (ki-trid-i-ē′ẹ̄, -nē′ẹ̄), *n.* Same as ★*Chytridiales*.

chytridiose (ki-trid′i-ōs), *n.* [*Chytridium* + *-ose* (*-osis*).] Any disease of plants caused by chytridiaceous fungi. The leaves are usually attacked, and reddish or yellowish, warty or vesicular swellings are produced on the surface, accompanied by some wrinkling or other slight deformation. Chytridiose of alfalfa and chytridiose of beet are caused by *Physoderma leproides*; chytridiose of grape by *Cladochytrium viticolum*; chytridiose of the mulberry by *C. Mori*, chytridiose of the potato by *Chrysophlyctis endobiotica*, and chytridiose of violet by *Cladochytrium Violæ*.

chytridiosis (ki-trid-i-ō′sis), *n.* Same as ★*chytridiose*.

C. I. The authorized abbreviated form of *Imperial Order of the Crown of India.* See *Order of the Crown*, under *crown*.

cib. An abbreviation of the Latin *cibus*, food.

cibory, *n.* Same as *ciborium*, 1.

Cibotium (si-bō′ti-um), *n.* [NL. (Kaulfuss, 1820), in allusion to the form of the indusium; < Gr. κιβώτιον, dim. of κιβωτός, a box.] A genus of mainly arborescent cyatheaceous ferns, allied to *Dicksonia*, but distinguished technically from that genus by having the outer valve of the bivalvate indusium larger, more highly modified, decidedly coriaceous and cucullate. There are about 10 species, confined to the tropics of both hemispheres. *C. Barometz*, an Asiatic species, has long been known as the *Scythian lamb*. See *Agnus Scythicus*, under *agnus*.

cicada, *n.* **Large dog-day cicada,** an American cicadid, *Tibicen pruinosa* (*Cicada tibicen*). See *dog-day harvest-fly*, under *harvest-fly*.

cicada-killer (si-kā′dạ̈-kil″ėr), *n.* A large American digger-wasp, *Sphecius speciosus*, which stings the annual cicada or dog-day harvest-fly, *Tibicen pruinosa*, and stores it in its burrows as food for its young. See *Sphecius*, with cut.

cicadid (si-kad′id), *a.* and *n.* **I.** *a.* Of or belonging to the homopterous family *Cicadidæ*.
II. *n.* One of the *Cicadidæ*.

cicatricular (sik-a-trik′ụ̄-lạ̈r), *a.* Of or pertaining to the cicatricula.

cicatricule (sik-at′ri-kūl), *n.* In *embryol.*, same as *cicatricula*.

cicatriform (sik′a-tri-fôrm), *a.* [Erroneously for **cicatriciform*, < L. *cicatrix*(*tric-*), a scar, + *forma*, form.] Resembling a cicatrix; scar-like.

cicatrizate, *a.* See *cicatrisate*.

cicely, *n.* **Fool's cicely,** the fool's parsley, *Æthusa Cynapium*.

cicerone (sis′ẹ-rōn), *v. t.*; pret. and pp. *ciceroned*, ppr. *ciceroning*. Same as ★*ciceronize*.

Ciceronic (sis-ẹ-ron′ik), *a.* Same as Ciceronian.

ciceronism (sis′e-ron-izm), *n.* The occupation or office of cicerone or guide.

> Frederick . . . who seems an easy-going man-about-town sort of cockney delighted to have the pretext of *ciceronism* to revisit all manner of queer haunts.
> *Blackwood's Mag.*, LXXIV. 289.

ciceronize (sis′ẹ-rō-niz), *v. t.*; pret. and pp. *ciceronized*, ppr. *ciceronizing*. To act as cicerone or guide to; play the cicerone to.

cichlomorphous (sik-lọ̄-môr′fus), *a.* Same as *cichlomorphic*.

cicutoxin (sik-ụ̄-tok′sin), *n.* [*Cicu*(*ta*) + *toxin*.] A poisonous compound found in the water-hemlock. It is an uncrystallizable resin with an acid reaction and bitter taste.

Cidaroida (sid″a-rō-ī′dạ̈), *n. pl.* [NL., < *Cidaris* (a genus) + *-oida*.] An order of regular endocyclic branchiate *Echinoidea*. They have the peristome central, the periproct central on the aboral surface of the body and surrounded by the apical system of plates; the ambulacra consisting of 2 vertical series of simple, narrow plates, some of which may be demi-plates, the interambulacral plates unituberculate, with large spines, and a dental apparatus. The order includes the families *Lepidocentridæ*, *Archæocidaridæ*, *Diplocidaridæ*, and *Cidaridæ*, the first three of which are extinct.

cider-gum (sī′dėr-gum), *n.* Same as *cider-tree*.

C. I. F. An abbreviation of *carriage, insurance, and freight* (used in contracts relating to direct shipments of cotton to spinners, when these charges are prepaid).

cifer, *n.* and *v.* A simplified spelling of *cipher*.

cigala (si-gä′lạ̈), *n.* [Pr. and It.; see *cicala*, *cicada*.] A cicada.

cigale (si-gäl′), *n.* [F., < Pr. *cigala*.] Same as ★*cigala*.

Cigaliers (sẹ̄-gä-lyā′), *n. pl.* [F. *cigalier*, < *cigale*, a cicada.] A Félibrien society maintained in Paris by the natives of the South of France, its emblem being a cicada (*cigale*).

> A . . . far more picturesque decoration was the enamelled cigale worn by the *Cigaliers*, . . . at once the emblem of their Society and of the Félibrien movement, and of the glowing South where that gayest of insects is born and sings his life out in the summer days.
> *T. A. Janvier*, A Feast Day on the Rhone, ii.

cigar-beetle (si-gär′be″tl), *n.* Same as ★*cigarette-beetle*.

cigarette-bast (sig-a-ret′bast), *n.* The thin, paper-like layers of the inner bark of *Lecythis Ollaria*. See *Lecythis* and *kakaralli*.

cigarette-beetle (sig-a-ret′bē″tl), *n.* An insect, *Lasioderma serricorne*, of the coleopterous family *Ptinidæ*. It is of wide distribution, and is a serious pest in tobacco factories and warehouses. It perforates cigars and cigarettes and, in the larval stage, feeds on cut tobacco and on the dried leaf. It also feeds on pepper, insect powder, and many drugs and stored foods.

Cigarette-beetle (*Lasioderma serricorne*). *a*, larva; *b*, pupa; *c*, adult. All greatly enlarged. (Chittenden, U. S. D. A.)

cigar-tail (si-gär′tāl), *n.* A (horse's) tail entirely denuded of hair. *Buck*, Med. Handbook, V. 482.

cigua (thē′gwä), *n.* [Cuban.] A lauraceous tree of Florida and the West Indies, *Dambur-neya Catesbyana*. It is called *lancewood* in Florida and *timber-sweetwood* in Jamaica.

ciguatera (thē-gwä-tā′rä), *n.* [Sp.; cf. *aciguatar*, affect with this disease, < *ciguato* (Dominguez), a fish of a yellow color: said to be Mex.] An affection believed by the natives of Central and South America to be caused by eating poisonous fish.

cil (sil), *n.* [F. *cil*, eyelash, < L. *cilium*, eyelid.] Same as *cilium*.

ciliary flame. See ★*flame*.

Cilicism (sil′i-sizm), *n.* [Gr. Κιλικισμός, Cilician behavior, < Κιλικίζειν, to act like a Cilician, < Κίλιξ, a Cilician.] A Cilician mode of speech. *N. E. D.*

ciliolate (sil′i-ọ̄-lāt), *a.* [NL. **ciliolatus*, < *ciliolum*, ciliolum.] Covered or provided with minute cilia or ciliola.

ciliophagocytic (sil″i-ō-fag-ọ̄-sit′ik), *a.* [*cilium* + *phagocytic*.] Relating to the phagocytic action of cilia.—**Ciliophagocytic organs,** various ciliated or vibratile structures which have the function of collecting and removing granules of debris and degenerated cells from the cœloma of different invertebrates, especially worms, leeches, and echinoderms. *Jour. Roy. Micros. Soc.*, Feb., 1895, p. 41.

cilioretinal (sil″i-ō-ret′i-nạl), *a.* Relating to the ciliary body and to the retina of the eye.

cimarron, *n.* **2.** [*cap.*] In the Philippine Islands, a name given to members of various poor wandering tribes, mostly descendants of civilized natives who have fled to the mountain forests.—**3.** A West-Indian name for a wild (feral) dog. **Cimarron series.** See ★*series*.

cimicoid (sim′i-koid), *a.* [L. *cimex* (*cimic-*), bug, + *-oid*.] Resembling a bug. *Syd. Soc. Lex.*

ciminite (chim′i-nīt), *n.* [(*Monti*) *Cimini*, in Italy, + *-ite*².] In *petrog.*, a name given by H. S. Washington (1897), to porphyritic lavas characterized by phenocrysts of augite, olivin, and sometimes feldspars, the ground-mass consisting of feldspar with augite and magnetite. The feldspars are orthoclase and labradorite in nearly equal amounts. Ciminite embraces some of the rocks called trachydolerites.

cimline (sim′lin), *n.* [D. *sim*, a fishing-line.] The top line of a drift-net. [Local, U. S.]

> The ordinary gill or drift net used for shad fishing in the Hudson is from a half to three-quarters of a mile long, and thirty feet wide . . . The fishermen have terms and phrases of their own . . . The top-cord or line of the net is called a "*cimline*."
> *J. Burroughs*, in Scribner's Mag., Aug., 1880, p. 492.

Cimolestidæ (sim-ọ̄-les′ti-dē), *n. pl.* [NL., < *Cimolestes* + *-idæ*.] A family of extinct marsupial mammals, containing species of small size, with sharply tuberculate teeth; known from teeth from the Laramie Cretaceous of the western United States. *Marsh*, 1889.

Cimonian (sī-mō′ni-ạn), *a.* Pertaining to Cimon, an Athenian statesman (d. 449 B.C.), or to the works executed on the Acropolis under his direction. These were the retaining wall on the south side and the substructures of the Parthenon.

cinamomo (thin-a-mō′mō), *n.* [Sp., the bead-tree.] A name in the Philippines and Guam of the camphire, or henna (*Lawsonia inermis*). See *henna*.

cinch, *n.*—**2.** A firm hold or grip on anything.—**3.** A fine position or situation; an easy job; a 'snap.' [Slang, U. S.]—**4.** A variety of all-fours, sometimes called *double pedro* and *high-five*. In addition to the points for high, low, jack, and game, the five of trumps (right pedro) is worth 5, and the five of the same color (left pedro) is also worth 5, so that 14 points are made in every deal, all in the trump suit. Nine cards are dealt to each player, three at a time. Each player, in turn, has one bid for the privilege of naming the trump suit, the number offered being what the player thinks he can make with his partner's assistance, but no one is allowed to mention the suit he purposes to select. The highest bidder names the trump, and then each player, in turn, discards everything but trumps, the dealer giving him cards from the top of the pack to make the hand up to six cards, with which he plays. The maker of the trump leads any card he pleases, and the object of the players is to secure the counting cards and also to 'cinch' tricks, so that an opponent cannot save a pedro by trumping in. After the hand is played the points are counted and, if the bidder has made as many as he offered, the lower score is deducted from the higher, the difference counting toward game, which is 51 points. If the bidder fails, the adversaries add the amount of his bid to any points they make, the unsuccessful bidder scoring nothing.

cinchamidine (sin-kam′i-din), *n.* [*cinch*(*ona*) + *amide* + *-ine*².] A crystalline bitter alkaloid, $C_{19}H_{24}ON_2$, contained in cinchona bark in small quantities.

cinchene (sin′kēn), *n.* [*cinch*(*ona*) + *-ene*.] A base, $C_{19}H_{20}N_2$, obtained by boiling cinchonine chlorid with alcoholic potash. It crystallizes in plates which melt at 123–125° C.

cinchocerotin (sin-kọ̄-sē′rọ̄-tin), *n.* [*cincho*(*na*) + *cerote* + *-in*².] A crystalline cholesterin derivative, $C_{20}H_{34}O + H_2O$, contained in cinchona.

cinchol (sin′kōl), *n.* [*cinch*(*ona*) + *-ol*.] An alcohol, $C_{20}H_{34}O + H_2O$, resembling cholesterol, found in all true cinchona barks. When anhydrous it melts at 139° C.

cincholine (sin′kō-lin), *n.* [*cinchol* + *-ine*².] An oily base, $C_{10}H_{21}N_4$, found in the paraffin-oil from brown coal. It boils at 237° C.

Cinchona red. See ★*red*[1].

cinchonibine (sin-kon'i-bin), *n.* [*cinchona* + *-ib-*, varied from *-il*, + *-ine*[2].] An alkaloid, $C_{19}H_{22}N_2O$, obtained by heating cinchonine sulphate with sulphuric acid. It was probably a mixture of cinchotine and apocinchonine.

cinchonifine (sin-kon'i-fin), *n.* [*cinchona* + *-if-*, varied from *-il*, + *-ine*[2].] An alkaloid obtained from cinchonine by heating it with sulphuric acid: now known to be identical with cinchotine.

cinchonine-herapathite (sin″kō-nin-her-a-path'it), *n.* [Second element named from Dr. *Herapath.*] Same as ★*antiseptol.*

cinchonization (sin-kō-ni-zā'shon), *n.* [*cinchonize* + *-ation.*] The act of bringing under the influence of cinchona or quinine; the induction of cinchonism.

cinchonology (sin-kō-nol'ō-ji), *n.* [*cinchona* + Gr. *-λογία*, < *λέγειν*, speak.] The study of cinchona in its botanical, pharmaceutical, and therapeutical relations.

cinchonometry (sin-kō-nom'e-tri), *n.* The process of determining the amount of alkaloids in cinchona bark.

cinchotine (sin'kō-tin), *n.* [*cincho(na)* + *-t-* + *-in*[2].] Same as *hydrocinchonine.*

Cincinnati china. See ★*china.*

Cincinnatian (sin-si-nat'i-an), *a.* and *n.* [*Cincinnati* + *-an.*] Of or pertaining to the city of Cincinnati, in Ohio; specifically, in *geol.*, noting a group or period of late Lower Silurian age, construed to embrace the Utica and Lorraine beds of New York and the Richmond beds of the Ohio valley. Originally, as *Cincinnati beds*, the term was employed as equivalent in part to the Trenton, Utica, and Lorraine beds, or the so-called Hudson-River beds of New York. See *Cincinnati group*, under *group.*

cincinnulus (sin-sin'ū-lus), *n.*; pl. *cincinnuli* (-lī). [NL., dim of L. *cincinnus*, a curl.] A small hook or process attached to the stylamblys in crustaceans.

cinclisis (sing'kli-sis), *n.* [NL., < Gr. *κιγκλισις*, a wagging, jerking, < *κιγκλίζειν*, wag the tail, < *κίγκλος*, a bird identified as the wagtail or as the dunlin.] Rapid winking; also rapid respiratory movements in dyspnœa.

cinct (singkt), *p. a.* [L. *cinctus*, pp. of *cingere*, gird.] Girt; cinctured; surrounded.

> Thus girt
> With circumstance, next change beholds them *cinct*
> Quite otherwise. *Browning*, Sordello, vi. l. 450.

cinder, *n.*—**Buck-shot cinder,** cinder containing grains of iron, from the iron blast-furnace.

cinder-box (sin'dèr-boks), *n.* A cast-iron box riveted to the bottom of the extension front of a locomotive-boiler, to form an opening through which the cinders can be cleaned out.

cinder-plate (sin'dèr-plāt), *n.* A plate on which the cinder from a furnace is allowed to collect. The heat of the cinder is given up to air which mixes with the hot gases and completes the combustion.

cinder-tap (sin'dèr-tap), *n.* The hole through which cinder is tapped from a furnace; a cinder-notch.

cinematograph (sin-ē-mat'ō-gräf), *n.* [Gr. *κίνημα*, movement, + *γράφειν*, write.] An instrument devised in France for projecting on a screen photographs showing objects in motion. It consists essentially of a lantern fitted with a mechanism for projecting, in rapid succession, many hundred photographs representing the consecutive stages of the moving picture. These photographs are on a long ribbon or film which is wound from one spool to another, each picture being before the objective for an instant, at which moment light passes through it to the screen. The term is also applied to the instrument used for taking the pictures. Also *kinematograph.*

cinematograph (sin-ē-mat'ō-gräf), *v. t.* To photograph with a cinematograph; to make a succession of photographic pictures of objects in motion. Also *kinematograph.*

> M. Camille Flammarion has undertaken to *cinematograph* the sky. He takes 3,000 photographs a night when it is clear and expects to show realistic pictures of the movements of moon and stars.
> *Sci. Amer. Sup.*, Feb. 26, 1898, p. 18481.

cinematographer (sin-ē-ma-tog'ra-fèr), *n.* One who uses a cinematograph. Also *kinematographer.*

> If there was no *cinematographer* in the French Chamber on Saturday there ought to have been.
> *Pall Mall Gazette*, Jan. 24, 1898.

cinematographic (sin-ē-mat-ō-graf'ik), *a.* **1.** Pertaining to, or suitable for exhibition in, a cinematograph.—**2.** Adapted, as an instrument, for taking a series of instantaneous pictures. Also *kinematographic.*

cinematographical (sin-ē-mat-ō-graf'i-kal), *a.* Same as *cinematographic.* Also *kinematographical.*

cinematography (sin-ē-ma-tog'ra-fi), *n.* The art of taking a succession of photographic pictures representing objects in movement, and of showing the same by projection or otherwise. Also *kinematography.*

> An expert in photography and *cinematography* (or biographic methods of photography).
> *Photo-Miniature*, July, 1903, p. 174.

cinemograph (sin'ē-mō-gräf), *n.* [Gr. *κίνημα*, movement, + *γράφειν*, write.] An apparatus devised by Richard of Paris for registering the velocity of the wind at each moment. It records the velocity of rotation of the vertical shaft of the anemometer instead of recording its accumulated total movement. The velocity of the wind is some multiple of that of the shaft. Also *kinematograph.*

cineograph (sin'e-ō-gräf), *n.* [Irreg. < Gr. *κινεῖν*, move, + *γράφειν*, write.] A picture representing objects in motion. Owing to the persistence of vision many separate pictures brought before the eye in rapid succession are blended into one. Also *kinograph.*

cineol (sin'ē-ōl), *n.* [*cin(namon)* + *-e-* + *-ol.*] A volatile compound, $C_{10}H_{18}O$, found in eucalyptus, milfoil, rosemary, wormseed, cajeput, peppermint, and many other oils. Also called *eucalyptol* and *cajeputol.*

cingular (sing'gū-lär), *a.* [NL. *cingularis*, < L. *cingulum*, a girdle: see *cingulum.*] Of or relating to the cingulum or ridge of enamel around the base of the crown of a tooth.

> This is seen in the continuation of the cingulum forward, around the internal face of the crown, and the development of a distinct *cingular* cuspule internal to the main antero-internal cusp.
> *Amer. Jour. Sci.*, March, 1904, p. 204.

cingulum, *n.* **5.** In *bot.*, same as *collar*, 2 (*b*) (3).—**6.** The zone of a diatom frustule where the two halves are joined.

cinnabar, *n.*—**Austrian cinnabar,** a misleading trade-name for basic lead chromate used as a pigment. Also called *chrome-red, Persian red, American vermilion*, etc.

cinnabar-moth (sin'a-bär-môth″), *n.* A collector's name, in Great Britain, for an arctiid moth, *Euchelia jacobæa.*

cinnamein (sin-a-mē'in), *n.* [*cinnam(ic)* + *-e-in*[2].] The benzyl ester of cinnamic acid, $C_6H_5CH:CHCO_2C_7H_7$: found in Peru balsam. It melts at 30° C.

cinnamite (sin'a-mīt), *n.* [*cinnam(on)* + *-ite.*] Same as *cinnamon-stone.*

cinnamon, *n.*—**Santa Fé cinnamon,** the ishpingo, *Acrodiclidium cinnamomoides*, the bark of which is used by the natives of Colombia as a spice and a medicine.

cinnamon-bark (sin'a-mon-bärk″), *n.* The bitter, acrid, but somewhat aromatic inner bark of *Canella Winterana*, a small tree of Florida: used as a stimulant and tonic; also, the tree itself, otherwise known as wild cinnamon and whitewood.

cinnamonic (sin-a-mon'ik), *a.* Same as *cinnamic.*

cinnamon-sedge (sin'a-mon-sej″), *n.* Sweet-flag.

cinnamon-vine (sin'a-mon-vīn″), *n.* A name of species of *Dioscorea*, particularly of *D. divaricata* (better known as *D. Batatas*). The very large tuberous root of this plant is edible, and is known as *Chinese yam* and *Chinese potato.* The plant is frequently grown as an ornamental twiner. It is native to the Philippine Islands, but is now widely distributed. See *yam.*

cinnolin (sin'ō-lin), *n.* [*cinn(amic)* + *-ol* + *-in*[2].] A poisonous base, $C_8H_6N_2$, prepared by the gentle oxidation of dihydrocinnolin. It melts at 39° C. Also called *phenohexa-1, 2-diazadiene.*

cinometry (si-nom'e-tri), *n.* [Irreg. < Gr. *κινεῖν*, move, + *μέτρον*, measure.] The art or process of measuring speeds. Also *kinometry.*

cinquain, *n.* **2.** A stanza of five lines.

cinquedea (ching-ke-dā'ä), *n.* [It. (Venetian).] A short, broad, two-edged sword, sometimes splendidly decorated. It was especially esteemed in Venice.

Cintractia (sin-trak'ti-ä), *n.* [NL. (Cornu, 1883), named for Désiré Auguste *Cintract*, a French botanist.] A genus of smuts of the family *Ustilaginaceæ*, in which the sori form black, rather firmly agglutinated masses of simple spores. It is very closely related to *Ustilago*, in which it is included by some authors. *C. Caricis* is a very common species infesting the ovaries of species of *Carex.*

Cinulia (si-nū'li-ä), *n.* [NL.] A genus of opisthobranchiate *Mollusca* having inflated, spirally grooved shells with plicated columella, but without opercula. It occurs in Cretaceous rocks.

cipher, *v. t.* **5.** To put (a batsman) out without scoring; also, to put a cipher opposite to (a batsman's name) to indicate that he has failed to score.

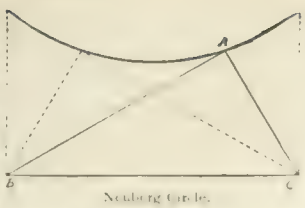
ciralillo (thē-rä-lēl'yō), *n.* [Porto Rican.] Same as ★*guayrote.*

circ. An abbreviation (*a*) of Latin *circiter* (about); (*b*) of *circum*; and (*c*) of *circus.*

Circassic (sér-kas'ik), *a.* Same as *Circassian.*

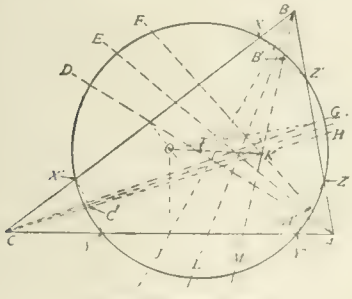
circle, *n.* **14.** A bookbinders' wheel-shaped tool, having a design engraved on the rim or edge.—**Altitude circle,** a graduated circle upon which is read the altitude of a body above the horizon. **Azimuth circle.** (*b*) A graduated circle upon which horizontal angles, or azimuths of a heavenly body are measured. **Circle about a pair of points,** a circle as to which they are inverse points.—**Circle of Apollonius,** the circle containing all the vertices of triangles on a given base and whose other two sides are as *m* to *n*, that is, are in a given constant ratio. Every triangle has three such circles.—**Circle of declination.** (*b*) The circle attached to the declination axis of an equatorial instrument. Its graduations give the declination of the object under observation.—**Circle of Haller.** (*a*) Same as *circulus venosus.* (*b*) A circle of communicating arterioles on the sclerotic surrounding the optic nerve. (*c*) A ring of fibrocartilage which gives support to the auriculoventricular valve on each side of the heart. Also called *circulus callosus Halleri.*—**Circle of longitude,** an imaginary great circle passing through the poles of the earth.—**Circle of similitude.** (*a*) See *similitude.* (*b*) The circumcircle of the triangle of similitude of three figures directly similar.—**Circle of the gorge,** in *geom.*, the circumference of a minimum right cross-section of a solid of revolution.—**Cosine circle.** If through the symmedian point of a triangle straight lines be drawn antiparallel to the sides, the six points in which they intersect the sides lie on a circle, which is called the *cosine circle* of the triangle. Its center is the symmedian point (the Lemoine point) K; hence it is called the circle K.—**Declination circle.** See ★*circle of declination.*—**Defensive circle,** in *pathol.*, the addition of a secondary disease which limits or arrests the progress of the primary affection, as when pneumothorax supervenes on pulmonary tuberculosis, the two affections exerting a reciprocally antagonistic reaction.—**Discriminating circle,** in *function-theory*, a finite circle on which are all the singularities of another connected function.—**Dispersion circle,** in *physiol. optics*, the retinal area illuminated by a bright point without the eye for which the lens is not accommodated. The term is also used for the appearance of such a point, that is, for the dispersion image.—**Distance-circle,** in *projective geom.*, a circle in the picture-plane whose radius is the distance of the projection-vertex from the picture-plane and whose center is the orthographic projection of the projection-vertex.—**Divided circle,** a circle marked with degrees, minutes, and seconds.—**Double circle of an elliptic Kleinian substitution,** a circle such that every point on it is unmoved by the substitution.—**Generating circle.** In *math.*, if a curve be described by a given point in the circumference of a circle, as the circle, keeping always in the same plane, rolls without sliding along a fixed line, the rolling circle is called the *generating circle.*—**Great circle of Hevelius,** the halo of 90° radius which is sometimes, but rarely, seen surrounding the sun. Like the other halos, it is due to ice-crystals in the air.—**Great-circle sailing,** sailing along the arc of a great circle; which is the shortest course between two places on the globe. A great-circle track drawn on a Mercator's chart represents a curve, except on the meridians and on the equator, which are great-circle tracks. According to a great-circle track plotted on a Mercator's chart a ship in following it would constantly change the direction of her head, but in reality she would sail in a straight line, owing to the fact that the chart gives a distorted view of the earth's surface. When a vessel is navigated on a straight-line course on a Mercator's chart, her head is never pointed in the direction of the port to which she is bound until that port comes into sight; but when following a great-circle track her head is always pointed for the destined port. When a vessel is navigated on a straight-line course on a Mercator's chart, her head, at starting, points toward the equatorial side of the port to which she is bound, and, as the voyage progresses, her head turns more and more in the right direction. Besides shortening the distance between places that lie more or less east and west of one another, the great-circle track is of the highest importance for sailing-vessels, since it may happen that an apparently head wind for a straight-line course on a Mercator's chart may be made a fair wind on a great-circle course. Within the tropics, great-circle sailing is of no practical importance, since the distortion of the Mercator's chart in latitudes so close to the equator is too small to be considered.—**Helm circle,** the circle that a ship describes while going ahead with her rudder hard aport or hard astarboard—the smallest circle that a steamship can turn in without the use of sails or outside help.—**Law of the circle,** a name occasionally given to the often-used generalization of Euclid III. 35; namely, that the product of the distance along any straight line from a given point to the two intersections by that line of the circumference of a given circle is the same along whatever straight line the measurements are made. All properties of the circle can thence be easily deduced.—**Lemoine circles.** (*a*) *First Lemoine circle* (discovered in 1873 by the French geometer Émile Lemoine), the circumcircle of the Lemoine hexagon, that is, the circle through the six crosses of the Lemoine parallels and the sides of a triangle—the six points where the sides of any triangle are cut by parallels to the other sides through the Lemoine point (symmedian point). (*b*) *Second Lemoine circle.* Same as *cosine* ★*circle.*—**Lexell's circle,** the small circle on which are the vertices of equivalent spherical triangles (triangles of the same angle-sum) on the same base. Their *Lexell's circle* is copolar with the great circle bisecting their sides.—**McCay's circles,** three circles each of which passes through two vertices of Brocard's second triangle and the centroid of the primitive triangle.—**Neuberg circles** On the side BC of the triangle ABC construct, toward

A, triangles having the same Brocard angle ω as ABC. The locus of their vertices opposite BC is the *Neuberg circle* (Na). (Nb). (Nc) are the *Neuberg circles* of the triangle ABC.



Neuberg Circle.

Nodal circle, that nodal line upon a vibrating disk which takes the form of a concentric circle. The formation of nodal circles was described by Chladni in his Traité d'Acoustique in 1809. — **Numerical rectification of the circle,** the calculation of the number which represents approximately the transcendental irrational π, the ratio of the circumference of a circle to its diameter. **Orthocentroidal circle,** the circle of similitude of the circumscribed and nine points circles of a triangle. It has the sect whose end-points are the centroid and orthocenter as its diameter.— **Postulate of the circle,** the postulate that about any point as center with a radius equal to any given line a circle may be described (or exists, or may be brought into existence). **Primitive circle.** (*a*) The first circle; the original circle of a group. (*b*) In *gearing*, the pitch-circle.— **Right ascension circle,** or **hour-circle,** the circle attached to the polar axis of an equatorial, giving the hour-angle of the object under observation.— **Root circle,** in spur-gearing or cylindrical gearing, that circle in the drawing or cutting of the teeth which limits the bottoms of the spaces between the teeth, or from which the teeth appear to take root. The space within the pitch-line must be deep enough to allow the projection or addendum of the tooth of the other wheel to pass the line joining the centers without bottoming against the metal between the teeth.— **Sensation-circle, sensory circle,** in *psychophys.*, the retinal or cutaneous area within which it is impossible to distinguish two impressions as two. It was believed by some of the earlier modern physiologists that the retina and the skin might be mapped out as a sort of mosaic of overlapping circular areas, each of them supplied with a single sense-fiber; so that, if two stimuli were to be sensed as two, they must fall within distinct sensation-circles. The hypothesis was variously modified, and has now been given up; though the term 'sensory circle' is still in use, especially as applied to the skin. *E. C. Sanford*, Exper. Psychol., p. 4.— **Small circle,** a circle on a sphere the plane of which does not pass through the center of the sphere.— **Stone circle,** a megalithic monument which consists of large stones in a circular arrangement. Also called *cyclolith*.— **Taylor's circle,** the circle through the six perpendicular projections of the feet of its altitudes on the other sides of a triangle: named for its discoverer (1882), H. M. Taylor. It is a Tucker's circle.— **Triplicate-ratio circle,** Tucker's name for the *first Lemoine* ★*circle*.— **Tucker's system of circles,** the system of circles obtained by taking different points T on the sect KO. If on the sect OK joining the circumcenter of a triangle ABC to its Lemoine point any point T be taken, and if points A′, B′, C′ be taken on the sects KA, KB, KC respectively, so that KA′ : KB′ : KC′ : KT = KA : KB : KC : KO, then straight lines through A′, B′, C′ antiparallel to BC, CA, AB will meet the sides of the triangle in six points on a circle.— **Vertical circle.** (*c*) See ★*vertical*.— **Vicious circle.** (*b*) A sequence of events of such a nature that the effect reacts



Tucker's System of Circles.

upon the cause, increasing its energy, and this in turn produces a greater effect. (*c*) In *surg.*, the passage of chyme, after gastro-enterostomy, through the artificial opening into the intestine, and then its regurgitation, in consequence of antiperistaltic action, through the pylorus back into the stomach. (*d*) The mutually accelerating action of two independent but coexisting diseases. *Med. Record*, March 7, 1903, p. 397.

circle-brick (sêr′kl-brik), *n.* Brick cast to a circular form, either convex or concave: used for facing or lining a wall of circular plan.

circle-tomb (sêr′kl-töm), *n.* A tomb surrounded by a megalithic stone circle.

circloid (sêr′kloid), *a.* [*circle* + *oid*.] Resembling a circle.

A cross-section of such a one shows a *circloid* area composed of twenty or more polyhedral, cuboidal, or short columnar cells, arranged in a single row about a common center. *Trans. Amer. Micros. Soc.*, Nov., 1903, p. 78.

circuit, *n.*— **Call-circuit,** in *telephony*, a circuit used for the transmission of call-signals, as distinguished from the transmission of speech, between individual instruments or between such instruments and the call-office or central station.— **Circuit court of appeals.** See ★*appeal*.— **Closed circuit operation,** in *elect.*, operation of a signal system in which the circuit is normally closed and the signal is given by opening the circuit. It has the advantage of greater reliability, since any defect in the circuit is immediately noticed by its opening, but it has the disadvantage of continuously consuming battery power.— **Closed magnetic circuit,** in *elect.*, a magnetic circuit in which the magnetic flux throughout its entire length traverses iron or other magnetic materials. — **Derived circuit,** in *elect.*, a circuit containing no source of electromotive force, such as a battery or dynamo, and traversed by induced currents only; a secondary circuit.— **Divinity circuit,** in *bookbinding*, flexible leather binding the flaps of which extend beyond the squares all round the cover, so that when pressed together the ends will nearly meet in the center of the edges; the corners and the part that encircles the back of the book are generally rounded and pinched or creased.— **Magnetic circuit,** the total space in which a magnetic field exists, that is, in which magnetic attractions and repulsions, electromagnetic induction, etc., occur.— **Multiple circuit,** in *elect.*, a divided circuit the parts of which are arranged in parallel, so that the current is distributed, in accordance with Kirchhoff's law, each part taking an amount of current proportional to its conductivity.— **Open-circuit operation,** in *elect.*, the operation of a signal system by closing the circuit when signaling. See *closed* ★*circuit operation*.— **Open magnetic circuit,** in *elect.*, a magnetic circuit which contains one or several air-gaps.— **Phantom circuit,** an imaginary circuit virtually existing in systems of multiplex telegraphy or in telephony. Same as *phantom wires* (which see, under *phantom*).— **Resonant circuit,** in *elect.*, a circuit timed by adjustment of its capacity and inductance so as to respond to certain electrical oscillations.— **Series circuit,** in *elect.*, any circuit of which the parts are arranged in series, so that all parts are traversed by the whole current. In a series circuit the parts — which may be, for example, telephones, arc- or glow-lamps, dynamos, motors, or the cells of a battery — are said to be arranged in series.

circuit-breaker, *n.* One of the best-known forms consists of a switch which is closed against the pull of a powerful spring. The lock by means of which it is kept closed is released by an electromagnet operated by the current.

circuiteer, *n.* **2.** Specifically, in *Eng. law*, one of the judges appointed to hold court in the different circuits.

circuition, *n.* **3.** A name proposed by C. S. Peirce for so much of any self-returning change as brings about the original state of those characters which are not altered by the reversal of a difference, while it does not bring about the return of such characters as are so altered. A half-revolution is a *geometrical circuition*. See ★*bicircuition*.

Circular bandage, foot, inch. See ★*bandage*, etc.— **Circular millimeter.** See ★*cross-section units*.— **Circular pitch, scale.** See ★*pitch*[1], ★*scale*[1].— **Circular suture, triangle.** See ★*suture*, *triangle*.— **Circular unit, units, vibration.** See ★*unit*, ★*cross-section units*, ★*vibration*.

circularize, *v. t.* **2.** To bring to the notice or attention of by means of circulars; send circulars to (possible patrons) by way of advertisement: as, to *circularize* the clergy; to *circularize* investors.

The fact that the verb "to *circularize*" was first used in 1848 sufficiently indicates the very recent origin of the practice of plying possible purchasers with printed letters and pamphlets. *Encyc. Brit.*, XXV. 98.

circulation, *n.*— **Derivative circulation,** the passage of blood directly from the arteries to the veins without going through the capillaries.— **Ferrel's theory of the circulation of the atmosphere,** a theory of the circulation of an atmosphere on a globe of a uniform roughness equal to the average roughness of the earth, and under the influence, at any season, of the average amount of sunshine and heat. It was deduced by Ferrel, analytically, from the observed barometric pressures and other general considerations, and was represented graphically in successive editions of his diagrams (1854, 1858, 1861, 1881, 1885). This system includes as its principal features equatorial calms below with easterly winds above; northeast and southeast trades below with anti-trades above; northeast and southeast cold winds below in the polar regions with anti-trades above; and a series of eddies or cyclones in the region of strong westerly winds between the regions of polar winds and trade-winds. See *Ferrel's* ★*law*.— **Fetal circulation.** See ★*fetal*.— **General circulation of the atmosphere,** those movements of the atmosphere which depend upon the general gradient of temperature between the poles and the equator. According to Ferrel, the atmospheric currents produced by the flow of cold air from the poles to the equator and the return flow of warm air should, if the surface of the earth were a perfectly smooth sphere, produce low pressures at the poles, a belt of low pressure at the equator, and belts of high pressure near the tropics of Cancer and Capricorn. However, this ideal system is greatly altered by the present distribution of continents and oceans, so that the actual gradients of temperature between continents and oceans are even more important than those between the poles and the equator; the true general circulation must take account of them.— **Greater circulation.** Same as *systemic circulation*.— **Lesser circulation.** Same as *pulmonary* ★*circulation*. **Pulmonary circulation.** See *pulmonary*, and *circulation of the blood*, under *circulation*.— **Sinusoidal circulation,** the flow of blood through cavities in the tissues which are lined only with endothelium and lack the muscular and fibrous coats of the arteries.— **Tropical circulation,** in *meteor.*, the general circulation of the winds around areas of high and low pressure in the tropics. When the tropical high pressure over the Atlantic in the summer season moves westward, sultry southerly winds are brought to the Atlantic States by the tropical circulation.

circulational (sêr-kū-lā′shon-al), *a.* Of or pertaining to circulation.— **Circulational sensation.** See ★*sensation*.

circulatory sensation. See ★*sensation*.

circumadjacent (sêr″kum-a-jā′sent), *a.* Adjacent to and lying round about: as, *circumadjacent* land.

circumaxal (sêr-kum-ak′sal), *a.* Same as ★*circumaxial*.

circumaxial (sêr-kum-ak′si-al), *a.* [L. *circum*, about, + *axis*, axis, + *-al*[1].] Situated about an axis.— **Circumaxial contact,** contact of two surfaces such that there is contact in every section made by a plane which contains a certain axis through the point of contact.

circumaxile (sêr-kum-ak′sil), *a.* [L. *circum*, about, + *axil*, axis, + *-ile*.] In *bot.*, surrounding a central axis, as the cells and seeds of many fruits.

circumboreal (sêr-kum-bō′rē-al), *a.* [L. *circum*, around, + *borealis*, boreal.] Belonging to the zone next outside the boreal or Arctic region.

Through stress of climate, this *circumboreal* flora has been driven southward. *Pop. Sci. Mo.*, July, 1901, p. 289.

circumcallosal (sêr″kum-ka-lō′sal), *a.* [L. *circum*, about, + *callosum* + *-al*[1].] Lying about the corpus callosum.

circumcize, *v.* Another spelling of *circumcise*.

circumcloacal (sêr″kum-klō-ā′kal), *a.* [*circum* + *cloaca* + *-al*[1].] Surrounding or encircling the cloaca.

circumcorneal (sêr-kum-kôr′nē-al), *a.* [*circum* + *cornea* + *-al*[1].] Surrounding the cornea. *Buck*, Med. Handbook, I. 440.

circumcrescent (sêr-kum-kres′ent), *a.* [L. *circum*, around, + *crescens*, growing.] In *embryol.*, growing over or around: said of the movement of the ectoderm, or epiblast during epibolic gastrulation.

circumdenudation, *n.*— **Mountains of circumdenudation.** See ★*mountain*.

circumequatorial (sêr″kum-ē-kwā-tō′ri-al), *a.* [*circum-* + *equator* + *-ial*.] Around or encircling the equator: as, a *circumequatorial* current. *Encyc. Brit.*, XXXIII. 937.

Circumesophageal nerve-ring. See ★*nerve-ring*.

Circumference gage, scale, tape. See ★*gage*[2], etc.

Circumferential pitch. Same as *circular* ★*pitch*.

circumflux (sêr′kum-fluks), *n.* [L. *circum*, around, + *fluxus*, flow: see *flux*.] In *elect.*, the product of the total number of conductor-turns on the armature of a dynamo or motor into a current carried by it. *Standard Elect. Dict.*

circumgenital (sêr-kum-jen′i-tal), *a.* [*circum* + *genital*.] About the genitalia: as, the *circumgenital* glands of the *Coccidæ*, a series of grouped glands which open in the anal plate of female diaspine scale-insects about the genital opening. *Annals and Mag. Nat. Hist.*, April, 1901, p. 333.

circumhorizontal (sêr″kum-hor-i-zon′tal), *a.* Surrounding the horizon.— **Circumhorizontal arc,** in *meteor.*, a short band of rainbow colors, nearly horizontal, but curving downward very slightly, which passes through the lowest point of the ordinary halo of 46° and therefore tangent to it: due to the refraction of sunlight through dihedral angles of 90° at the lower ends of prismatic ice crystals floating nearly vertically in the air. It is seen only when the sun is 59°–78° above the horizon, hence quite rarely. First described by Galle, 1847.

circumintestinal (sêr″kum-in-tes′ti-nal), *a.* [*circum-* + *intestine* + *-al*[1].] Encircling the intestine: as, the *circumintestinal* plexus of blood-vessels in some annelids.— **Circumintestinal sinus.** See ★*sinus*.

circumjovian (sêr-kum-jō′vi-an), *a.* Same as *circumjovial*.

circumlateralism (sêr-kum-lat′e-ral-izm), *n.* Same as ★*centrogenesis*: opposed to *bilateralism*.

By making bilateralism the symbol of animal evolution and *circumlateralism* (if I may invent the term), the symbol of plant evolution.
L. H. Bailey, Survival of the Unlike, p. 16.

circumlental (sêr-kum-len′tal), *a.* [L. *circum*, around, + NL. *lens* (*lent-*), lens, + *-al*[1].] Surrounding a lens, usually referring to the crystalline lens of the eye.

circum-Mediterranean (sêr-kum-med″i-te-rā′-nē-an), *a.* [*circum-* + *Mediterranean*.] Surrounding the Mediterranean: as, a species native to the *circum-Mediterranean* region.

circummedullary (sêr-kum-med′u-lā-ri), *a.* Same as ★*permedullary*.

circummeridional (sêr″kum-mē-rid′i-ō-nal), *a.* [*circum* + *meridian* + *-al*[1]: see *meridional*.] Following around a meridian.

circummundane (sêr-kum-mun′dān), *a.* [L. *circum*, about, + *mundus*, world: see *mundane*.] Surrounding the world: as, an open *circummundane* sea.

circumnutatory (sėr-kum-nū'tạ-tō-ri), *a.* Of or pertaining to circumnutation: as, a *circumnutatory* tendency.

circumpallial (sėr-kum-pal'i-al), *a.* [*circum-* + *pallium* + *-al*[1].] Surrounding or encircling the pallium or mantle, in mollusks.

circumpass (sėr-kum-pȧs'), *v. t.* [*circum-* + *pass.*] To move through the circumference of: travel entirely around.

The description given by the pious Cavendish of his commercial circumnavigation of the globe. "It has pleased Almighty God to suffer me to *circumpass* the whole globe of the world. *Smithsonian Rep.*, 1890, p. 272.

circumpolarization (sėr″kum-pō″lär-ī-zā'shọn), *n.* In *optics*, the rotation, by passage through an optically active substance or through a magnetic field, of the plane of polarization of a beam of light.

circumpolarize (sėr-kum-pō'lạr-īz), *v. t.*; pret. and pp. *circumpolarized*, ppr. *circumpolarizing.* In *optics*, to rotate the plane of polarization of light.

circumscind (sėr-kum-sind'), *v. t.* [L. *circumscindere*, cut or tear around, < *circum*, around, + *scindere*, cut.] To cut around.

circumsciss (sėr-kum-sis'), *a.* [L. **circumscissus*, pp. of *circumscindere*: see *circumscind.*] Same as *circumscissile.*

circumscript, *a.* 2. In the *Echinoidea* as applied to the ambulacra, not continuous from one pole of the body to the other, but confined to the area above the equatorial circumference or ambitus, enlarging at first and subsequently contracting within this space and thus assuming a petaloid outline.

circumsiphonal (sėr-kum-sī'fọn-al), *a.* [*circum* + *siphon* + *-al*[1].] Surrounding the siphon, as of a cephalopodous mollusk.

circumspatial (sėr-kum-spā'shal), *a.* [L. *circum*, about, + *spatium*, space, + *-al*[1].] Relating or pertaining to surrounding space. *P. J. Bailey*, Festus.

circumstantiator (sėr-kum-stan'shi-ā-tọr), *n.* One who circumstantiates.

circumterrestrial (sėr″kum-te-res'tri-al), *a.* Round the earth: as, the moon's *circumterrestrial* movement.

circumumbilical (sėr″kum-um-bil'i-kạl), *a.* [*circum-* + *umbilicus* + *-al*[1].] Surrounding the umbilicus.

circumumbonal (sėr″kum-um-bō'nạl), *a.* [L. *circum*, about, + *umbo(n-)*, beak, + *-al*[1].] Situated about the beak or umbo: used with reference to structural details in descriptive zoölogy, especially among the *Mollusca.*

circumvascular (sėr-kum-vas'kū-lär), *a.* [L. *circum*, around, + *vasculum*, vessel, + *-ar*[3].] Surrounding in whole or in part a blood-vessel or lymphatic. *Jour. Exper. Med.*, Feb. 5, 1902, p. 170.

circumvolute (sėr″kum-vọ-lūt'), *v. t.*; pret. and pp. *circumvoluted*, ppr. *circumvoluting.* **1.** To roll; turn: as, to *circumvolute* a period. *Burns.*—**2.** To encircle or enwrap: as, *circumvoluting* twine.

circumvolv, *v.* A simplified spelling of *circumvolve.*

circumzenithal (sėr-kum-zē'nith-al), *a.* [*circum-* + *zenith* + *-al*[1].] About or near the zenith; relating to objects or observations near the zenith. *Nature*, Aug. 20, 1903, p. 376.—**Circumzenithal arc**, in *meteor.*, a short band of rainbow colors, nearly horizontal but curving slightly upward which passes through the highest point of the ordinary halo of 46° and therefore tangent to it: due to the refraction of sunlight through dihedral angles of 90° at the upper ends of prismatic ice crystals floating nearly vertically in the air.

Cirolana (sir-ō-lā'nä), *n.* [NL. (Leach, 1818), a made word.] The typical genus of the family *Cirolanidæ.* *C. borealis*, of British waters, lives mainly upon fish. *C. concharum* is an American species often feeding on the blue crab, *Callinectes hastatus.*

Cirolana borealis. Slightly magnified.

Cirolanidæ (sir-ō-lan'i-dē), *n. pl.* [NL., < *Cirolana* + *-idæ.*] A family of isopod crustaceans.

ciron† (sī'rọn), *n.* [F. *ciron*, OF. *cirun*, for **siron*, **suiron* (= Pr. *soiro*), < OHG. *siuro*, m., *siurrā*, f., the itch-mite.] The itch-mite, *Sarcoptes scabiei.*

ciron-worm† (sī'rọn-wėrm″), *n.* Same as ★*ciron*

Cirratulidæ (sir″a-tū'li-dē), *n. pl.* [NL., < *Cirratulus* + *-idæ.*] A family of *Chætopoda*, of the order *Polychæta.* They have a cylindrical body pointed at both ends, prostomium elongate and conical, tentacles 2 or none, and parapodia small, with simple setæ. It includes the genera *Cirratulus*, *Audouinia*, *Chætozone*, and others.

Cirratulus (si-rat'ū-lus), *n.* [NL., dim. of L. *cirratus*, cirrate: see *cirrate.*] The typical genus of the family *Cirratulidæ.* *Lamarck.*

cirrholite (sir'ọ-līt), *n.* [Also *cirrolite*; < Gr. κιρρός, tawny, + λίθος, stone.] A hydrated phosphate of aluminium and calcium, occurring in pale-yellow compact masses: found in Sweden.

cirrhosis, *n.* **Atrophic cirrhosis**, a late stage of cirrhosis marked by a reduced size of the liver.—**Cardiac cirrhosis**, chronic inflammation of the heart-muscle associated with cirrhosis of the liver. **Hanot's cirrhosis**, a form of cirrhosis of the liver in which there is such an excessive new formation of connective tissue that the organ is increased in size, instead of diminished as in ordinary cirrhosis.—**Hypertrophic cirrhosis**, an early stage of cirrhosis marked by an increase in size of the liver.—**Laënnec's cirrhosis**, the usual form of cirrhosis of the liver, in which the organ is diminished in size.—**Pigmentary cirrhosis**, a form of cirrhosis of the liver seen in cases of bronzed diabetes.

cirrocumular (sir-ọ-kū'mụ-lạr), *a.* Same as ★*cirro-cumulous.*

cirrocumulative (sir-ọ-kū'mụ-lā-tiv), *a.* Becoming like the cirro-cumulus cloud.

cirro-cumulo-stratus (sir-ọ-kū″mụ-lō-strā'tus), *n.* A cloud from which rain is falling but whose structure is not clearly apparent.

cirro-cumulous (sir-ọ-kū'mụ-lus), *a.* Having the form or nature of the cirro-cumulus cloud.

cirro-filum (sir-ọ-fī'lum), *n.* One of a number of long, thin stripes of cirrus cloud, apparently all at the same level. These move at an angle with the isobars and are important indicators of coming weather changes.

cirrolite, *n.* See ★*cirrholite.*

cirro-nebula (sir-ō-neb'ū-lạ), *n.* A haze in the higher strata of clouds; a nebulous mass in which striation or reticulation is barely perceptible. See ★*cirrus-haze.*

cirrorhinal (sir-ō-rī'näl), *a.* [L. *cirrus*, filament, + Gr. ῥίς (ῥιν-), nose, + *al*-[1].] Having the fore part of the skeleton formed of an unpaired cartilaginous ring, which represents the nasal region of the skull and bears filaments or cirri. [Rare.]

cirrorhiny (sir-ọ-rī'ni), *n.* The state or character of being cirrorhinal.

cirrostrative (sir-ọ-strā'tiv), *a.* [*cirro-stratus* + *-ive.*] Serving to form, designate, or indicate cirro-stratus clouds.

cirrostratous (sir-ō-strā'tus), *a.* Having the form or character of a cirro-stratus cloud.

cirro-velum (sir-ō-vē'lum), *n.* A horizontal sheet of high cloud without much structure, but possibly with a wavy under-surface; the thinnest high layer of cirro-stratus in which any structure can be detected.

cirrus, *n.*, **2.** (*k*) One of the solid contractile tentacle-like organs on the margin of the medusoid of *Hydromedusæ.* Each cirrus is shorter than the tentacles, is provided with a terminal battery of cnidoblasts, and is perhaps an organ of offense or of defense. **Dorsal cirri**, in feather-stars, the slender, curved, cylindrical appendages arranged in whorls on the dorsal side of the disk, as in *Antedon*, by means of which the animal attaches itself temporarily to rocks or seaweeds.—**False cirrus**, a delicate white cloud streaming away from the summit of a tall cumulus and closely resembling some forms of cirrus. Other formations are apt to be so named, but this is strictly a part of the cumulus cloud. See *cloud*[1].—**Magnetic cirrus**, a formation of cirrus clouds in systematic parallel bands; a polar band, or "Noah's ark." The term 'magnetic' is entirely improper, since the formation and arrangement of the clouds are wholly due to the currents and moisture of the atmosphere.—**Nuchal cirrus**, a special name given to a dorsal cirrus which occurs on the second segment of certain polychætous worms.—**Reticulated cirrus**, a network or interlacing of lines, threads, or striæ in a mass of dense cirrus cloud.—**Undulate cirrus**, layers of cirrus arranged in gentle curves; specifically, the layers whose under-surfaces have a wave-like undulation as seen in the vertical section.

cirrus-haze (sir'us-hāz″), *n.* An indefinite haze among the highest cirrus clouds (possibly extending far above them), ordinarily the locus of delicate sunset-sky colors, a nebulous mass of cirrus in which separate forms or structures cannot easily be distinguished: same as ★*cirro-nebula.* See ★*cloud*[1].

ciruela (sē-rö-ā'lä), *n.* [Sp. *ciruela*, plum.] In tropical countries settled by the Spanish, a name given to several plum-like fruits, especially to *Spondias purpurea*, *S. Mexicana*, and allied species; also to the fruit of *Cyrtocarpa procera.* See *hog-plum*, *Spondias*, and ★*copalcocote.*

cis-. **2.** On this side of (a designated period of time): as, "*cis*-Reformation," *Fuller*, "*cis*-Elizabethan," *Lowell.* Better expressed by *post-*.—**3.** In *chem.*, a prefix used, in contrast with *trans-* or *cis-trans-*, to designate a compound in which two atoms or groups are supposed to be situated on the same side of some plane of symmetry passing through the compound.

cis. (sis). An abbreviation (in *cis θ* for (cos θ + *i* sin θ): in function theory: as, $x = \xi + i\eta = \rho(\cos\theta + i\sin\theta) = \rho\ cis\ \theta$.

cisalpinism (sis-al'pin-izm), *n.* Cisalpine doctrine; specifically, the theory of the supremacy or independence of a national over the universal church, at least in disciplinary matters.

cisandine (sis-an'din or -dīn), *a.* [*cis-* + *Andes* + *-ine*[1].] On this (the speaker's) side of the Andes: as, *cisandine* forests.

ciscaucasian (sis-kâ-kā'sian or -kâ-kash'ian), *a.* [*cis-* + *Caucasus* + *-ian.*] Of or relating to the country north of the Caucasus, Russia.

ciscoette (sis'kō-et), *n.* [A Frenchified rendering of *siscowet*, Ojibwa *siskawet.* Cf. *cisco.*] A lake-herring. *Jour. Amer. Folk-lore*, Oct.–Dec., 1902, p. 244.

cisium (sis'i-um), *n.*; pl. *cisia* (-ä). [L.] **1.** A light two-wheeled Roman vehicle; a cabriolet.—**2.** In recent use, a cart with a step at the rear.

cispontine (sis-pon'tin), *a.* [NL. **cispontinus*, < L. *cis*, on this side, + *pons* (*pont-*), bridge.] On this (the speaker's) side of the bridge or bridges: specifically, in London, on the north side of the Thames: as, *cispontine* churches; the *cispontine* population.

cisrhenane (sis-rē'nān), *a.* [L. *cisrhenanus*, < *cis*, on this side, + *Rhenus*, Rhine.] On this (the speaker's) side of the river Rhine. *N. E. D.*

cist[2], *n.* **2.** A recess in a cliff-house, walled off from the main room.

A marked feature of the whole series is the existence here and there of small, often inaccessible, stone *cists* of masonry plastered to the side of the rocky cliff like swallows' nests. *17th An. Rep. Bur. Amer. Ethnol.*, II. 543.

cistern, *n.* **7.** In *mining*, a tank in a deep shaft, serving an upper pump with water from a lower one.

cistfaen, *n.* See *cistvaen.*

cistic[2] (sis'tik), *a.* [*cist*[2], *n.*, + *-ic.*] Of, pertaining to, or of the nature of a cist, or prehistoric place of interment: as, a *cistic* tomb.

cistula, *n.* **3.** In *bot.*, the small cup-shaped conceptacle of certain lichens. *Syd. Soc. Lex.*

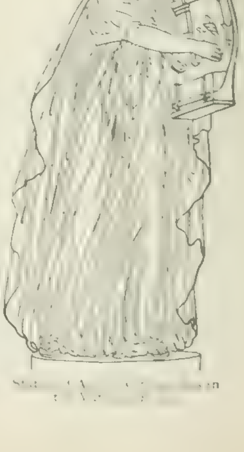
cit. An abbreviation (*a*) of *citation*; (*b*) of *cited*; (*c*) of *citizen.*

citadel, *n.*—**Central citadel**, an arrangement of the armor on a war-ship in which it is concentrated in the central parts, forming a heavily armored box in which the heavy guns are mounted, or on top of which they are placed in barbettes or turrets, the ends of the ship being unprotected by vertical armor. This type is now virtually abandoned, but the term is sometimes applied to the armored box-casemate in more recent designs, in which the guns of the secondary battery are carried.

citharœdic (sith-a-rē'dik), *a.* [L. *citharœdicus*, < *citharœdus*: see *citharœdus.*] Pertaining to a player on the cithara, especially to Apollo.

It seems to me impossible to avoid the conviction that here the *Citharœdic* Apollo is represented as in a melancholy mood.
P. Gardner, in Jour. Hellenic Studies, XXIII. 120.

citharœdus (sith-ạ-rē'dus), *n.* [L., < Gr. κιθαρῳδός, < κιθάρα, cithara, + -ῳδός, < ᾄδειν, sing: see *ode.*] A player on the cithara; especially, in *Gr. antiq.*, an epithet of Apollo in this character, represented in art as dressed in long flowing robes and leading the Muses.



cithern, *n.* **Bow cithern**, a modern musical instrument combining features associated with several different types. Its body is obscurely heart-shaped, somewhat like that of the viola d'amore, but broader and with a flat belly and back. It has a neck like the violin, but broader and with a fret-board and head like a guitar. The strings are usually four in number and tuned to correspond with the violin or its close relatives, but none of them is of gut. It is made in three or four sizes, like the usual string-

quartet. Larger varieties are sometimes called *viola-zither*, or *philomèle*. In playing, the instrument is held slantingly in the lap, with a projection in the back of its head resting on a table. It is sounded by means of a bow like a violin-bow, and the tone is brilliant and powerful. In Germany it is called *streichzither*, to distinguish it from the *schlagzither* or zither proper.

citified (sit′i-fīd), *a.* Having the manners, dress, etc., of city life. [Colloq.]

citoyenne (sē-two-yen′), *n.* [F.] A female citizen or inhabitant.

For a number of years a Mrs. ——, a *citoyenne* of the United States, has been closely studied by the learned, as by Prof. William James, Dr. Hodgson, and Prof. Oliver Lodge. *A. Lang*, in Smithsonian Rep., 1900, p. 651.

citra-. [L. *citra*, adv. and prep., on this side (of), prop. abl. fem. of *citer*, adj., hither, compar. from √ *ci*, this, here.] A prefix of Latin origin, meaning 'on this side of,' and equivalent to *cis-* (which see): as in *citracaucasian*, on this side of the Caucasus; *citramontane*, on this side of the mountains (opposed to *ultramontane*, which see).

citracetic (sit-ra-set′ik or -sē′tik), *a.* [*citr(ic)* + *acetic*.] Related to citric and to acetic acid. **Citracetic acid**, an uncrystallizable, tribasic acid, $C_6H_6O_6$ (?), whose ethyl ester is formed together with aconitic ester by the action of sodium on bromacetic ester.

citral (sit′ral), *n.* [*citr(ic)* + *-al*³.] A colorless liquid aldehyde of strong lemon odor, the flavor-giving constituent of oil of lemon, of which it forms from 5 to 8 per cent.: also present in oil of limes, mandarin, orange, etc.

citramide (si-tram′id), *n.* [*citr(ate)* + *am(monia)* + *-ide*.] In *chem.*, a crystalline compound, $C_6H_{11}N_3O_4$, obtained by the action of alcoholic ammonia on citrate of methyl, or citrate of ethyl. *Watts*, Dict. Chem.

citrange (sit′ranj), *n.* [< *citr(us)* + *(or)ange*.] A hybrid fruit produced by crossing the hardy trifoliolate orange (*Citrus trifoliata*) and the common sweet orange.

citrazinic (sit-ra-zin′ik), *a.* [*citr(ic)* + *az(ote)* + *-in* + *-ic*.] Derived from citramide. **Citrazinic acid**, $(HO)_2C_5H_2N.CO_2H$. It is formed by the action of sulphuric acid on citramide.

citronellal (sit-rō-nel′al), *n.* [*citronella* + *-al*³.] A substance, $CH_2 = C(CH_3)(CH_2)_3CH(CH_3)CH_2CHO$, found in citronella-oil, eucalyptus-oil, and lemon-oil. It boils at 205–208° C.

citronellol (sit-rō-nel′ōl), *n.* An alcohol, $CH_2 = C(CH_3)(CH_2)_3CH(CH_3)CH_2CH_2OH$, found in its levogyrate form in rose-oil, pelargonium-oil, and geranium-oil. It is also formed by the reduction of citronellal. It boils at 117–118° C. under 17 millimeters.

citronellone (sit-rō-nel′ōn), *n.* An incorrect name for *citronellal*, given to it before its chemical nature was understood.

citronene. See ★*citronin*.

citronin (sit′ron-in), *n.* [*citron* + *-in*².] A name of several acid coal-tar colors, all of which dye wool yellow in an acid bath. Also *citronene*.

citrophen (sit′rō-fen), *n.* [*citr(ic)* + *phen(yl)*.] The primary citrate of para-phenetidin, $C_2H_5OC_6H_4NH_2.C_6H_8O_7$. It crystallizes in prisms which are easily soluble in water and melt at 186° C. It is used in medicine as an antipyretic and antineuralgic.

citrullin (si-trul′in), *n.* [*citrull(us)* + *-in*².] A yellow resin derived from *Citrullus Colocynthis*: used in medicine as a purgative.

City company. See ★*company*.

city-state (sit′i-stāt), *n.* A single city which is an independent sovereign state, or a sovereign state which embraces only one town or city. The city-state was the characteristic political organization of Greek and early Italian civilization. Athens, Rome in the days of the republic, and Florence and Venice in the days of their greatness were *city-states*.

civ. An abbreviation (*a*) of *civic*; (*b*) of *civil*; (*c*) of *civilian*.

civicism (siv′i-sizm), *n.* The civic spirit or civic condition; citizenship and equal rights and duties for all, as a principle of civil organization and government.

civicultural (siv′i-kul″tūr-al), *a.* [L. *civis*, citizen, + *cultura*, culture, + *-al*.] Being, serving, or originating in one of those instincts which subserve less the welfare of the individual than that of a stock, community, association, or other class of animals, human or brute: government, religion, armies, and marriage are *civicultural* developments.

Civil code, process. See ★*code*, ★*process*. **Civil lord**, the only civilian member of the British Board of Admiralty except the 'first lord,' who is a cabinet minister and the responsible head, the other three being known as 'naval' lords. The civil lord is charged with the supervision of the civil affairs of the Admiralty, including the Works Department. See *admiralty*.

Civ. Serv. An abbreviation of *civil service*. See *civil service*, under *civil*.

C. J. C. P. An abbreviation of *Chief Justice of the Common Pleas*. See *chief justice*, under *justice*.

C. J. K. B. An abbreviation of *Chief Justice of the King's Bench*.

C. J. Q. B. An abbreviation of *Chief Justice of the Queen's Bench*.

C. J. U. B. An abbreviation of *Chief Justice of the Upper Bench*. See *Upper Bench*, under *upper*.

ck. A contraction of *cask*.

cl. An abbreviation (*a*) of *centiliter*; (*b*) of *clause*; (*c*) of *clerk*; (*d*) of *cloth* (in bookbinding); (*e*) of *clergyman*.

C. L. An abbreviation of *Commander of the Order of Leopold*. See *Order of Leopold*, under *order*.

clabber² (klab′ėr), *n.* [Var. of *claver*³.] Idle or noisy talk; jabber.

I could not abide them [the gypsies' yellow faces, or their ceaseless *clabber*. *Borrow*, Lavengro, lxxvi.

clabbery (klab′ėr-i), *a.* [*clabber*¹, *n.*, + *-y*¹.] Muddy; full of mud: as, a *clabbery* road; *clabbery* shoes. [Scotch and Irish.]

clack, *v. i.* **3.** To cluck or cackle, as a hen.

But ah! the more the white goose laid
It *clack'd* and cackled louder.
Tennyson, The Goose, st. 6.

clack, *n.* **Cornish clack,** a clack with two lids, the upper hinged and seated on the lower.

clack-guard (klak′gärd), *n.* A ring which prevents undue opening of the clack-valve.

clack-lid (klak′lid), *n.* The flap of a clack-valve.

claco (klä′kō), *n.* [Mex.] The eighth part of a Spanish silver shilling.

cladautoicous (klad-â-toi′kus), *a.* [Gr. κλάδος, branch, + αὐτός, self, same, + οἶκος, dwelling. Cf. *autœcious*.] In *mosses*, having the male inflorescence on a special branch.

cladisk (klad′isk), *n.* [NL. *cladiscus*, < Gr. κλαδίσκος, dim. of κλάδος, a branch.] In the nomenclature of the spicular elements of sponges, one of the equal arms in the cladome of a triaene. See *cladome* and *triaene*.

Cladistia (kla-dis′ti-ä), *n. pl.* [NL., < Gr. κλάδος, a branch, + ἱστίον, a web.] The family *Polypteridæ* considered as a suborder of ganoid fishes.

cladoceran (kla-dos′e-ran), *n.* [*Cladocera* + *-an*.] One of the *Cladocera*.

Cladochytriaceæ (klad-ō-kit-ri-ā′sē-ē), *n. pl.* [NL., < *Cladochytrium* + *-aceæ*.] A family of phycomycetous fungi, named from the genus *Cladochytrium*. The genera differ chiefly in the presence or absence of resting-spores and in their saprophytic or parasitic condition.

Cladochytrium (klad-ō-kit′ri-um), *n.* [NL. (Nowakowski, 1876), < Gr. κλάδος, a branch, + χυτρίον, dim. of χύτρα, a pot: see ★*chytra*. The allusion is prob. to the pits produced on the host.] A genus of phycomycetous fungi of the family *Cladochytriaceæ*, having a well-developed mycelium in the tissues of the host and producing uniciliate zoöspores, but no resting-spores, so far as is known. *Cladochytrium tenue* is parasitic upon sweet-flag, *Acorus Calamus*, and produces swellings on submerged parts of the plant.

cladocopous (kla-dok′ō-pus), *a.* [Gr. κλάδος, a branch, + κώπη, a handle.] Having branched posterior antennæ, as certain crustaceans.

cladohepatic (klad″ō-hē-pat′ik), *a.* [Gr. κλάδος, a branch, + ἧπαρ (ἡπατ-), liver, + *-ic*.] Having the liver branched or lobulated, as certain nudibranchiate mollusks.

Cladohepatica (klad-ō-hē-pat′i-kä), *n. pl.* [NL., < Gr. κλάδος, a branch, + ἧπαρ (ἡπατ-), liver.] A section of nudibranchiate mollusks. They have the cerata usually on the sides of the dorsal surface and elongated or arborescent; the buccal mass strong; jaws present; and the liver usually ramified, the branches generally extending into the cerata. The section includes a number of families, among them the *Eolididæ*, *Dendronotidæ*, *Phyllirrhoidæ*, and *Tritoniidæ*.

cladomic (kla-dom′ik), *a.* Pertaining to or resembling a cladome.

Cladoniaceæ (klad″ō-ni-ā′sē-ē), *n. pl.* [NL., < *Cladonia* + *-aceæ*.] Same as *Cladoniei*, the proper form of the name.

Cladophiuræ (kla-dof-i-ū′rē), *n. pl.* [NL., pl. of *Cladophiura* < Gr. κλάδος, branch, + ὄφις, snake + οὐρά, tail.] An order of *Stelleroidea* in which the vertebral ossicles articulate with one another by means of hour-glass shaped surfaces and are covered by granular deposits in the thick integument. The arms may be simple or separately branched.

cladophiuran (kla-dof-i-ū′ran), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the order *Cladophiura* of the *Ophiuroidea*.

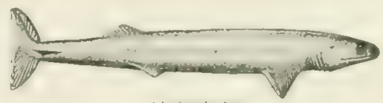
II. *n.* A member of the *Cladophiura*.

cladophiuroid (kla-dof-i-ū′roid), *a.* and *n.* **I.** *a.* Cladophiuran; of or pertaining to the order *Cladophiura* of the *Ophiuroidea*.

II. *n.* A member of the *Cladophiuræ*.

cladorhabd (klad′ō-rabd), *n.* [Gr. κλάδος, a twig, + ῥάβδος, a rod.] In the nomenclature of the spicular elements of sponges, a much-divided tetraxial form derived from the caltrop.

Cladoselache (klad-ō-sel′a-kē), *n.* [Gr. κλάδος, a twig, + σελάχη, pl. of σέλαχος, a shark.] A genus of primitive selachians or sharks, believed to have had an unsegmented vertebral axis, long smooth shagreen-covered body, blunt snout, two dorsal fins without spines, and strongly heterocercal tail. It has been found in the Upper Devonian rocks of Ohio.



Cladoselache.

Restoration of *Cladoselache fyleri*, Dean. Cleveland Shale, Upper Devonian, Ohio. A continuous fold runs along the ventral side of the fish. From Zittel's "Paleontology."

cladoselachian (klad″ō-sē-lāk′i-an), *n.* A selachian of the genus *Cladoselache*.

chadoselachid (klad-ō-sel′a-kid), *n.* A selachian allied to *Cladoselache*; a cladoselachian.

cladosiphonic (klad″ō-sī-fon′ik), *a.* In *bot.*, having a tubular stele interrupted at the insertion of branches. *Jeffreys.*

cladostyle (klad′ō-stīl), *n.* [Gr. κλάδος, a twig, + στῦλος, a pillar.] In the nomenclature of the spicular elements of sponges, a tetraxial spicule of many sharp-pointed branches, derived from the caltrop.

cladotyle (klad′ō-tīl), *n.* [Gr. κλάδος, a twig, + τύλη, a lump.] In the nomenclature of the spicular elements of sponges, a monaxial form having many branches each ending in a rounded knob.

claggum (klag′um), *n.* [Cf. *clag*¹.] Toffy. [Scotch.]

claik (klāk), *n.* **2.** The shell of the barnacle. [Scotch.]

claim¹, *n.*—**Continual claim,** in *Eng. law*, a formal claim made annually to lands or tenements to prevent the acquirement of title by prescription. This effect has been abolished by statute. **Court of claims.** See *court* and ★*court*. **Court of Private Land Claims.** See *private land* ★*claims*. **Private land claims.** The treaties by which the United States obtained possession of the territory which now includes California, Colorado, Utah, Wyoming, Nevada, New Mexico, and Arizona, provided that the United States should recognize and protect the rights of property of every kind belonging to Mexicans in the ceded territory. These rights originated from grants and cessions made by Spain to various settlers, emigrants, etc., and from grants made by Mexico after independence from Spain. By reason of this double source and of the many revolutions and counter-revolutions in Mexico, titles to land in this territory became hopelessly confused, and the United States, in order to carry out as far as possible the terms of her treaties, established in 1891, the Court of Private Land Claims. All persons claiming title to any part of the land before mentioned were entitled to present their claims to this court. The claims of such claimants are known as private land claims.—**Stale claim.** See *Stale* ★*demand*.

clairce (klãrs), *n.* [F., < *claircer*, clarify, < *clair*, clear: see *clear*, *a.*] A saturated solution of pure sugar in water, used in the process of refining sugar.

The cooled molds are then placed on a centrifugal spindle or in a centrifugal basket, and the syrup spun out. While spinning the sugar plates are washed with *clairce* — a saturated solution of pure sugar in water — and when this too is spun out the molds are removed and taken asunder. *Sci. Amer. Sup.*, Feb. 28, 1903, p. 22,706.

clair-de-lune (klãr-de-lün′), *n.* [F., moonlight.] A shade of color seen in the glaze of certain Chinese porcelains; a pale gray-blue or 'moonlight' white.

claire (klãr), *n.* [F., fem. of *clair*, clear.] A reservoir of clear sea-water, protected from tidal currents, where oysters are fattened for the market or kept under observation for scientific purposes.

The experiments are made in an enclosed and tideless *claire* and have achieved a definite measure of success in demonstrating the possibility of fattening oysters to marketable condition by this means.
Science, Jan. 18, 1901, p. 107.

clairolfactance (klär-ol-fak'tans), *n.* The supposed faculty of being clairolfactant.

That the *clairolfactant* or hyperosmic soul perceives more than the clairaudient or clairvoyant.
G. S. Hall, Adolescence, II. 16.

clairolfactant (klär-ol-fak'tant), *a.* [F. *clair*, clear, + E. *olfact(ory)*, + *-ant*[1]. Cf. *clairvoyant*.] Pertaining to or characterized by an abnormally delicate olfactory sensitivity and sensible discrimination.

clairschach (klär'shäch), *n.* [Also *clairseach*, *clarshach*, *clerschew*, *clersha*, *clarishoa*, *clearsach*, *clairsach*, etc., < Gael. Ir. *clairseach*.] A form of Celtic harp once used in Scotland and Ireland. *N. E. D.*

clairschacher (klär'shäch-er), *n.* One who plays upon the clairschach; a harper. *N. E. D.*

clairvoyancy (klär-voi'an-si), *n.* Same as *clairvoyance*.

clairvoyantly (klär-voi'ant-li), *adv.* As a clairvoyant; in the manner of a clairvoyant.

clam[3], *n.*—**Bloody clam**, an ark-shell, *Arca pexata*, which has red blood. [North America.] **Painted clam**, an edible bivalve, *Macrocallista maculata*, found abundantly in the southern United States; so called because of the colored markings on its porcelain-like shell.

clam[3] (klam), *v. i.* [*clam*[3], *n.*] To gather clams; as, to go *clamming*. [Colloq.]

clam-hook (klam'hůk), *n.* A short-handled fork which has strong round hooks or tines and is used to rake clams out of the mud along the shore. A similar tool with flat tines is a *clam-digger*.

clamjamfry (klam-jam'fri), *n.* **1.** Same as *clan-jamfrie*.—**2.** Rubbish; trumpery. Also *clam-jamphrie*.

clammy-weed (klam'i-wēd″), *n.* Any plant of the genus *Polanisia*, especially *P. graveolens*. See *Polanisia*.

clamp[1], *n.*—**Pedicle clamp.** See ★*clamp-forceps*. *Buck*, Med. Handbook, I. 253. **Test-tube clamp**, a wooden handle, with a clamp of wood or brass by which a test-tube may be grasped; used in chemical laboratories to support such a tube over a flame while protecting the hand from heat. The clamp is sometimes made to slide up and down on a vertical rod upon a foot, with a screw arrangement by which to fix it at any desired height.

clamp[3], *n.* **2.** A clamp-shell. *Tridacna*; a chama.

clamp-forceps (klamp'fôr″seps), *n.* A clamp shaped like a forceps, with an automatic lock, used in surgical operations to compress arteries, the pedicle of a tumor, or other structures. *Buck*. Med. Handbook, II. 38.

clamp-kiln, *n.* **2.** A brick-kiln built with temporary walls which are rebuilt after each burning, the outside of the walls being plastered or daubed with clay mortar.

clamp-shell (klamp'shel), *n.* Same as ★*clamp*[3], 2.

clamp-tongs (klamp'tôngs), *n.* Roofing-tongs that can be used to clamp and hold the edges of tin plates.

clam-shell, *n.* **II.** *a.* Resembling in form or appearance the shell of a clam: as, a *clam-shell* dredging-bucket; a *clam-shell* dredging-machine.

clan, *n.* **3.** A social unit in a tribe in which descent is reckoned in the maternal line; a group of people supposed to be descended from a common ancestor, descent being reckoned in the female line. In this sense it is opposed to *gens*, the social unit in a tribe in which descent is reckoned in the paternal line.

A *clan* is an organized group of persons who reckon kinship through females from an ancestral mother, real or eponymous; it has well-defined rights and duties.
An. Rep. Bur. Amer. Ethnol., 1897-98, p. xlix.

Totem-clan. See ★*totem-clan*.

clan-ancient (klan'ān″shent), *n.* The ancestor of a clan.

The objective cultus of Katcinas is made up of representations of these animas (breath bodies) of *clan-ancients* by masked men, by images, by pictures, and ceremonial dramas.
J. W. Fewkes, in Jour. Amer. Folk-lore, March, 1902, p. 14.

clanfellow (klan'fel-ō), *n.* In *anthrop.*, a member of a clan in his relation to another member of the same clan.

Clang affinity or **relationship**, the identity of the pitch of the fundamental of one tone with that of an overtone of another tone of different clang, or the identity in pitch of two or more overtones.

clan-horde (klan'hōrd), *n.* A horde which has gradually assumed the status of a clan by coming into clan relations with other hordes.

Finally it might be assumed that each horde in a cluster or group of hordes becomes practically a clan by retaining a majority of all members of that clan and by including with them only a few individuals of other clans, and that such *clan-hordes* presently draw together into a tribal organization. *Giddings*, Prin. of Sociol., p. 258.

clank, *v.* **I.** *trans.* **3.** To deposit, put, place, or set down with a clanking sound.

When she brought up the tea-tray she *clanked* it on the lobby-table. *Mrs. Carlyle.*

II. *intrans.* **2.** To move with a clanking sound.

"Not bad news, I hope?" cried Ivo, as Ascelin *clanked* into the hall. *Kingsley*, Hereward, xxi.

clan-name (klan'nām), *n.* **1.** The name by which a clan is known.—**2.** One of a set of names belonging to a clan by which the bearer of the name is recognized as a member of the clan.

In the clan system descent was probably at first reckoned only through the female line; consequently uterine ties alone constituted kinship, the father not being regarded as related even to his own children, and not considered as a member of the family, as still amongst the Chi (Tshi) people of the Gold Coast and elsewhere. In this system all the children bear the *clan-name* transmitted through the mother, and the *clan-name* thus becomes the test of blood-relationship. *Keane*, Ethnol., p. 6.

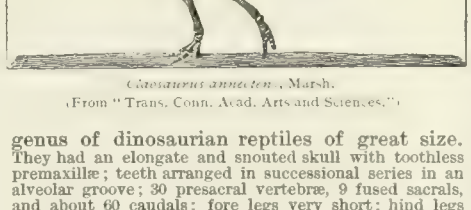
clanship, *n.* **2.** Membership in a clan.—**3.** The feeling or spirit of attachment and loyalty to one's clan or fraternity.

clan-standard (klan'stan-dard), *n.* The emblem of a clan, by the use of which the members of the clan may be recognized.

The devices are at once blood-signs, definite as the face-marks of gregarious animals, and *clan-standards*, significant as tartan or pibroch. *Smithsonian Rep.*, 1900, p. 62.

clanswoman (klanz'wům-an), *n.* In *ethnol.*, an adult female member of a clan. *Giddings*, Prin. of Sociol., p. 173.

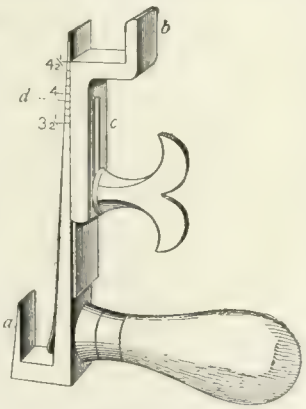
Claosaurus (klā-ō-sâ'rus), *n.* [NL., said to have been formed (if so, irregularly) from Gr. κλάω (inf. κλᾶν), break, + σαῦρος, a lizard.] A



Claosaurus annectens, Marsh.
(From "Trans. Conn. Acad. Arts and Sciences.")

genus of dinosaurian reptiles of great size. They had an elongate and snouted skull with toothless premaxillæ; teeth arranged in successional series in an alveolar groove; 30 presacral vertebræ, 9 fused sacrals, and about 60 caudals; fore legs very short; hind legs very large, with massive digits; both fore and hind legs three-toed, and the fore feet with a rudimentary fourth toe. *Claosaurus annectens*, from the Upper Cretaceous of the Rocky Mountains, attained a length of more than 30 feet.

clapboard-gage (klap'bōrd-gāj), *n.* A carpenters' gage used to measure the distance between one line of clapboards and the next above it. It is adjustable to various widths of clapboard to be exposed to the weather.



Clapboard-gage.
a, abutment for clapboard already in place; *b*, sliding abutment for clapboard to be placed next above; *c*, slot with set-screw to hold *b* in place; *d*, index showing width of clapboard exposed to the weather.

clap-netter (klap'net-er), *n.* One who catches birds with a clap-net. *Athenæum*, Oct. 31, 1891, p. 587.

clapper[1], *n.* **8.** In *bot.*, the auricle in hepatics. See *auricle*, 3 (*c*).

claret-cheek (klar'et-chēk), *n.* Same as *capillary* ★*nævus*.

clarinet, *n.* **2.** In *organ-building*, a reed-stop imitating the tone of the clarinet.

Clark process. See ★*process*.

clash-gear (klash'gēr), *n.* A form of change-gear for motor-cars, in which the differing speeds of the driven shaft are secured by sliding or shifting tooth-wheels lengthwise on parallel shafts until the desired pair comes into mesh. When the driving-gear is turning and the one to be driven is moving at a different rate, the engagement of the sets of teeth takes place with a jar or clash. Sometimes called *slide-gear transmission*.

clashy (klash'i), *a.* [*clash* + *-y*[1].] **1.** Wet and disagreeable with drenching dashes of rain: applied to the weather: as, a *clashy* day.—**2.** Given to gossiping and tale-telling. [Dialectal in both senses.]

clasmatocyte (klas-mat'ō-sīt), *n.* [Gr. κλάσμα(τ-), a fragment, a morsel, + κύτος, a hollow (a cell).] A large branching cell resembling a mast-cell, but containing no basophilic granules. *Med. Record*, June 27, 1903, p. 1046.

clasmatosis (klas-ma-tō'sis), *n.* [NL., < Gr. κλάσμα(τ-), a fragment, a morsel, + *-osis*.] The process of breaking up into small fragments: applied to cell changes. *C. S. Minot*, in Science, March 29, 1901, p. 492.

clasp, *v. t.* **3.** To attach holdfasts of metal to the outer edges of (a book-cover) to prevent its yawning or warping.

clasp, *n.*, **1.** (*e*) The riveted shackle of a hemp or wire rope.

4. In the British army, a narrow flat bar of metal forming part of a military decoration, and bearing the name of some action at which the bearer was present.

For his [Earl Roberts's] services in the Mutiny war he was seven times mentioned in despatches, received the medal with three *clasps*, the Victoria Cross, and on his promotion to captain in October, 1860, a brevet majority.
Encyc. Brit., XXXII. 268.

Vachette clasp, a small piece of wire with curved pointed ends for clamping the edges of the wall of a horse's hoof together in cases of cracked hoof.

clasper, *n.* (*c*) The operator who makes clasps or attaches them to books or other articles.—**Frontal clasper**, a name applied to a peculiar appendage found on the head of the male chimæra. Also *frontal spine*. *Parker and Haswell*, Zoology, I. 175.

clasp-nut (klasp'nut), *n.* A split nut which can be opened or closed to permit of its engaging or disengaging a screw at any point of its travel. Such a nut is commonly used to operate the carriage of an engine-lathe when cutting a thread. Sometimes called *clam-nut* and *clip-nut*.

class, *n.* **7.** In *petrog.*, in the quantitative classification of igneous rocks (see ★*rock*), the highest division. All igneous-rock magmas are divided into 5 classes, according to the proportions of salic and femic constituents. The salic minerals are quartz, feldspars, leucite, nephelite, sodalites, corundum, and zircon; the femic minerals are all other minerals except the aluminous ferromagnesian ones. These minerals are calculated from the chemical composition of each rock. The 5 classes are called *persalane*, *dosalane*, *salfemane*, *dofemane*, and *perfemane*.

8. (*a*) In *shipbuilding*, the indication of the character, style of construction, and quality of workmanship and outfit of a merchant vessel, as determined by the rules and inspection of a registration society. The class to which a vessel is assigned is indicated in the register of each society by a conventional character such as 100A, 90A, etc. See *A*, 2 (*f*). (*b*) the indication of the size and power of any given type of war-ship: as, a first-*class* battle-ship, a first-, second-, or third-*class* cruiser, etc.—**9.** In *crystallog.*, one of the thirty-two groups in which crystals are divided in accordance with the special type of symmetry which characterizes them. See ★*symmetry*.—**Age class**, in *forestry*, all the trees in a stand of which the ages are within given limits.—**Crown class**, in *forestry*, all the trees in a stand which occupy a similar position in the crown cover. Dominant, intermediate, overtopped, and suppressed trees each constitute a crown class.—**Diameter class**, in *forestry*, all the trees in a stand whose diameters are within prescribed limits.—**Form class**, in *forestry*, all the trees in a stand so similar in form that the same form factor is applicable in determining their actual volume.—**Height class**, in *forestry*, all the trees in a stand whose heights are within prescribed limits.—**Locality class**, in *forestry*, all localities with similar forest-producing power.—**Personality classes**, classes in the social population distinguished by differences of mental and moral endowment; in particular, the men of genius and talent, the normally endowed, and the mentally and morally defective. *Giddings*, Prin. of Sociol., p. 125.—**Social classes**, classes in the social population distinguished by differences of social instinct or feeling: they include the altruistic or philanthropic, the merely non-social or indifferent, the dependent or pauperized, and the anti-social or criminal classes. *Giddings*, Prin. of Sociol., p. 126.—**Stand class**, in *forestry*, all stands of similar density, height, and volume for a given age or diameter and a given locality class. The index stand may constitute the first *stand class*.—**Tree class**, in *forestry*, all trees of approximately the same size. The following tree classes are distinguished: *seedling*, *shoot*, *small sapling*, *large sapling*, *small pole*, *large pole*, *standard*, *veteran*.—**Vitality classes**, classes in the social population distinguished by different degrees of vitality, as shown in birth-rates, death-rates, and longevity. *Giddings*, Prin. of Sociol., p. 125.

class, *v.* **I.** *trans.* **3.** In *shipbuilding*, to assign to a class of a registration society, such as Lloyd's: said of a merchant vessel. A vessel not *classed* is one which has not been inspected and assigned a class by any registration society, or the classification of which has been refused for some reason, not necessarily involving deterioration or inferior quality.

II. *intrans.* **2.** To be assigned to a class. See ★I., 3.

class. An abbreviation (*a*) of *classic* or *classical*; (*b*) of *classification*.

class-consciousness (klȧs-kon'shus-nes), *n.* The feeling and perception of unity which pervade any social class and include a sense of common nature, identity of interests, and similarity of manners.

classer (klȧs'ėr), *n.* [*class* + *-er*1.] One who classifies or sorts according to certain qualities or characteristics: as, a *classer* of wool or cotton.

classiary (klȧs'i-ā-ri), *a.* [L. *classiarius*, < *classis*, a fleet: see *class*.] Of or pertaining to the fleet or navy, its personnel, or its exploits.

A gallery was opened . . . for the display of inscriptions mentioning officers and men of the Roman "Channel Squadron," *classiary* tiles . . . bearing the stamp Cl. B.R. and a votive offering. *Athenæum*, Aug. 29, 1891, p. 290.

Classic landscape. See ★*landscape*.

classical1, *a.* **6.** In *music*, belonging or pertaining to a style of composition in which regularity of form is conspicuous, particularly to the style developed in the latter part of the eighteenth century: opposed to *romantic*. Thus Haydn's music is classical, while Schumann's is mostly romantic. The term is also loosely used of all music that is elaborate, difficult, or abstruse: opposed to *popular*.—**Classical school**, in *music*, the group of composers who, from Haydn onward, emphasized orderliness of form rather than richness of emotional content: opposed to the *romantic school* (which see, under *romantic*).

classicalize (klȧs'i-kal-īz), *v. t.* and *i.*; pret. and pp. *classicalized*; ppr. *classicalizing*. [*classical* + *-ize*.] To conform, or cause to conform, to classical usages: as, to *classicalize* the modern spelling of Greek and Roman names.

classicism, *n.* **3.** Classical scholarship or learning.

So far as all the *classicism* then attainable was concerned, Shakespeare got it as cheap as Goethe did, who always bought it ready made.
Lowell, Among my Books, 1st ser., p. 188.

classicistic (klȧs-i-sis'tik), *a.* Conformed to or characterized by classicism: as, the *classicistic* drama; the *classicistic* period of architecture.

classifiant (klȧs-i-fī'ant), *a.* Same as *classific*, 3.—**Classifiant concept.** Same as *classific* ★*concept*.

classifically (klȧ-sif'i-kal-i), *adv.* As a classifier: as, a word used *classifically*.

classification, *n.* **2.** In *shipbuilding*, the assignment to and arrangement of merchant vessels in classes by registration societies. See ★*class*, *n.*, 8. **Sympodial classification**, classification based on the successive branchings of phenomena; classification growing out of differentiation in various directions, in contrast to hierarchical classifications, which recognize only one straight line of succession or progress.

classifier, *n.* **4.** In *ore concentration* and *milling*, an apparatus for subdividing ore-pulp, according to the size and density of the mineral articles, in moving currents.

class-marriage (klȧs'mar"āj), *n.* In *ethnol.*, a system of marriage in which a person of one class is restricted in the choice of his or her mate to a definite class of individuals. *Keane*, Man Past and Present, p. 153.

class-number (klȧs'num"bėr), *n.* In *library-cataloguing*, the number, or number and letter, which shows the class (as literature, history, philosophy, or science) to which a book belongs or the subject of which it treats. It is usually followed by other figures which indicate the particular division, subdivision, or section of the subject treated, and the number of the book.

Clasterosporium (klas"tėr-ō-spō'ri-um), *n.* [NL. (Schweinitz, 1831), < Gr. κλαστός, broken, + σπορά, seed (see *spore*). The allusion is to the manner in which conidiophores break up.] A genus of hyphomycetous fungi characterized by dark-colored hyphæ and conidiophores which bear brownish, three- (or more) celled cylindrical or spindle-shaped conidia. *C. Amygdalearum* is parasitic on the leaves of the peach, plum, cherry, etc., in Europe.

clastic, *a.* **II.** *n. pl.* In *petrog.*, sedimentary rocks composed of fragments of older rocks.

This main structural feature, supported by the evidence afforded by the intrusive character of the contact between the crystallines and the *clastics*, by the marmorization and deformation of the adjacent country rock, and by the occurrence of an unusually complete series of typical contact metamorphic minerals, is conclusive as to the part this intrusive mass has played in the history of the region.
Econ. Geol., *U. S. Geol. Surv.*, 1902, p. 36.

clastogene (klas'tọ-jēn), *a.* [Gr. κλαστός, broken, + γένος, kind (see *genus*).] In *petrog.*, a term used by Renevier (1881) for coarsely clastic rocks, such as conglomerates and breccias.

Clathraceæ (klath-ra'sẹ-ē), *n. pl.* [NL., < *Clathrus* + *-aceæ*.] A family of fungi of the order *Phallales*, named from the genus *Clathrus*: characterized by having the receptacle latticed or irregularly branched and inclosing the gleba.

Clathraria (klath-rā'ri-ä), *n.* [NL. (Stokes and Webb, 1824), < L. *clathri*, lattice: see *clathrate*.] A genus name formerly given to fossil trunks with clathrate markings.

clathrarian (klath-rā'ri-ạn), *a.* [*Clathraria* + *-an*.] Of the nature of *Clathraria* (that is, of clathrate fossil trunks).

Olynthus of *Clathrina primordialis*, H., seen with a low-power. (After Haeckel.)

Clathrina (klath-rī'nä), *n.* [NL., < L. *clathri*, lattice, + *-ina*1.] The typical genus of the family *Clathrinidæ*. *Gray*, 1867.

Clathrinidæ (klath-rin'i-dē), *n. pl.* [NL., < *Clathrina* + *-idæ*.] A family of homocœlous sponges, of the class *Calcarea*. They have the form reticulate, triradiate systems always present and equiangular, the monaxons present or absent, and the collar-cells with the nucleus at the base. The family contains the genera *Clathrina*, *Ascandra*, and *Dendya*.

Clathrodictyon (klath-rọ-dik'ti-on), *n.* [NL., < L. *clathri*, Gr. κλῇθρα, lattice, + Gr. δίκτυον, net.] A genus of massive hydrocoralines which grew in extensive reefs in the seas of Silurian and Devonian times. In structure they were composed of successive fine laminæ with radial pillars between.

clatter, *n.* **3.** A heap of loose boulders or broken rocks. Compare *clutter*2.

Under shelter of the biggest rocks in the whole *clatter* . . . the word is good Moorland English for a mass of loose, weathered boulders on the skyline summit of a saddle-back ridge. *Pall Mall Gazette*, July 28, 1882.

4. Noisy gabble or talk; confused din of many jabbering tongues.

By degrees, as the hour grew later, and the barrel [of beer] less heavy, the conversation changed into one universal *clatter*. *Bulwer*, Disowned, ii.

clatter-bones (klat'ėr-bōns), *n. pl.* Same as *bone*1, *n.*, 6 (*c*), and *clapper*1, 1 (*f*).

claudication, *n.*—**Intermittent claudication**, a limp which occurs suddenly while one is walking and disappears with rest: it is caused by defective circulation in the extremities, due usually to arteriosclerosis, and may terminate in gangrene of the limb. Also called *intermittent limping*. *Jour. Exper. Med.*, V. 104.

claus (klous), *n.* [Named from R. J. E. *Clausius* (1822–88), a German physicist. *Clausius* is a Latinized form of G. *Claus*, *Klaus*, ult. < L. *Nicolaus* (see *Santa Claus*).] In *physics*, a name proposed for the unit of entropy when the joule is the unit of energy.

clause, *n.*—**Memorandum clause**, in *marine insurance*, a clause added to an insurance policy which exempts the underwriters from risk as to goods of a peculiarly perishable nature and from minor damages.—**Overreaching clause**, in a resettlement, a clause which saves the powers of sale and leasing annexed to the estate for life created by the original settlement, when it is desired to give the tenant for life the same estate and powers under the resettlement. *Bouvier*, Law Dict.—**Penal clause**, in *law*: (*a*) That part of a statute which provides for punishment for its violation. (*b*) That part of a bond which defines the amount of the penalty.

Clausius cycle. See ★*cycle*1.

claustration (klȧs-trā'shọn), *n.* [NL. *claustratio*, < L. *claustrum*, cloister.] Confinement in a cloister.

Clavariaceæ (klạ-vā-ri-ā'sẹ-ē), *n. pl.* [NL., < *Clavaria* + *-aceæ*.] Same as *Clavariei*, and now the regular form.

clavelization (klav-e-lī-zā'shọn), *n.* [F. **clavelisation*, < *clavelée* or *claveau*, sheep-pox, < ML. **clavellus*, dim. of L. *clavus*, a nail, also a tumor or diseased part on sheep or other animals: see *clavus*, *clove*4.] Inoculation with the virus of sheep-pox.

clavicithern (klav-i-sith'ėrn), *n.* Same as *clavicitherium*.

And wanteth there grace of lute or *clavicithern*, ye shall say to confirm him who singeth.
Browning, Heretics' Tragedy, st. ii. (prose direction).

clavicle, *n.* **3.** The columella of a univalve shell.—**4.** In *ichth.*, usually the largest bone of the shoulder-girdle. The supraclavicle, when present, is attached to its upper end, and the coracoid elements are attached to its posterior surface. It borders the gill-opening behind. **Clavicula anterior**, in *ichth.*, the clavicle proper of the shoulder-girdle, bordering the gill-opening behind: doubtless not a homologue of the bones so called in mammals.—**Clavicula posterior**, in *ichth.*, the lower of the two bones which support the actinosts, the hypercoracoid.

claviculohumeral (kla-vik"ụ-lọ-hū'mẹ-ral), *a.* In *anat.*, relating to both the clavicle and the humerus.

clavier, *n.* **4.** A dumb keyboard made for finger-gymnastics, as the Virgil *clavier*.

clavierist (kla-vēr'ist), *n.* A player on a clavier. *N. E. D.*

claviole (klav'i-ōl), *n.* [Also *claviol*; < *cla*(*vis*) + *viol*.] A musical instrument invented by Dr. Hawkins of Bordentown, New Jersey, in 1802. It had strings and a keyboard like an upright pianoforte, but by a roller mechanism it produced sustained tones by friction instead of by the blows of hammers.

clavipectoral (klav-i-pek'tọ-ral), *a.* [L. *clavis*, representing NL. *clavicula*, clavicle, + *pectus*, breast, thorax.] Relating to both the clavicle and the thorax.

clavism (klā'vizm), *n.* [NL. **clavismus* (It. *clavismo*), < L. *clavus*, a nail.] A nail-like appearance, as of an excrescence. Same as *ergotism*1, 2.

Clavulina (klav-ụ-lī'nä), *n. pl.* [NL., < *clavula*, 2 (*b*), + *-ina*2.] A group of hadromerine monaxonidan sponges having monactinal megascleres.

Clavulinæ, *n. pl.* Same as *Clavulina*.

clavus, *n.* **3.** In *pathol.*: (*b*) A corn. (*c*) A nail-shaped excrescence.—**4.** In *entom.*: (*b*) The club of the antenna. (*c*) The knob at the end of the stigmal or radial rein of a chalcidid or proctotrypid hymenopterous parasite.—**Clavus hystericus**, an acute localized boring pain in the head sometimes complained of by the hysterical.

claw, *n.*—**Extensor of the claw**, in *entom.*, a muscle peculiar to the terminal sclerite of the foot. It occupies a superior position and in operation extends the claw.—**Flexor of the claw**, in *entom.*, a muscle peculiar to the terminal sclerite of the foot. It occupies the upper and under surface of the posterior part of the sclerite and flexes the claw in contraction.

claw, *v. i.*—**To claw to windward** (*naut.*), to work a vessel to windward.

claw-clutch (klâ'kluch), *n.* A device for coupling shafts which require instant connection or separation. It is somewhat similar in outline to a flange-coupling, but, instead of the abutting faces being plain, projections or claws are cast on each face and engage in corresponding recesses in the face opposite. The claws usually number 2 or 4. The clutch is thrust in and out of gear through a pin or fork which works in a groove turned in the circumference of a boss cast on one coupling.

claw-coupling (klâ'kup"ling), *n.* Same as ★*claw-clutch*.

claw-footed (klâ'fu̇t-ed), *a.* Same as *claw-foot*.

claw-lever (klâ'lev"ėr), *n.* A lever which forks or divides like the claw of a hammer, so as to get on both sides of the article to be lifted. *Nasmith*, Cotton Spinning, p. 266.

claw-nut (klâ'nut), *n.* The split nut which engages the lead screw on a screw-cutting lathe.

claw-tool (klâ'töl), *n.* A saddler's tool, fitted to a handle, used for drawing tacks.

clay, *n.* **Abysmal** or **abyssal clay**. See ★*abyssal*.—**Arca clay**, one of the series of clay deposits laid down during the Pleistocene or ice age in Scandinavia and Finland: so named from the presence of pelecypod mollusks of the genus *Arca*. At the bottom of these deposits is the Yoldia clay, above which comes the Arca clay, followed by the Mytilus and the Cardium clays. In the Arca clay Brögger finds that the shells of the lowest part are chiefly arctic, while in the upper part there is an advent of southern forms, indicating increasing warmth of the seas.—**Astringent clay**, a clay which usually contains alum.

Where these porous sands and gravels lie upon the impervious chocolate-colored and *astringent clays*, the conditions are highly favorable for yielding large volumes of water.
R. D. Salisbury, Geol. Survey of New Jersey, 1900, p. xvii.

Atherfield clay [*Atherfield* Point, a cape on the south coast of the Isle of Wight], a deposit of clays in the stratigraphic rock section of the Cretaceous formation of the Isle of Wight. It rests on the Wealden formation.—**Ball clay**, white-burning plastic sedimentary clay, used chiefly in the manufacture of the fine grades of pottery which have a white body. *Geol. Survey of New Jersey*, 1904, p. 214.—**Barton clay.** See *Bartonian* ★*group*. **Blue clay**, deep-sea mud.—**Bradford clay**, in the Jurassic system of England, a local subdivision of the Bathonian or upper part of the Lower Oölite. It lies above the ragstones and below the cornbrash, at the base of a series of clays and limestones, the latter called *forest-marble*.—**Cardium clay.** See ★*cardium*. **Clay-faced paper.** See ★*paper*. **Clay-surface process**, in *photog.*, a process for quickly preparing line-printing blocks. Sheet-metal is coated with a composition of pipe- or china-clay, after which a drawing is made through the clay to the surface of the metal with hooked tools. A stereotype of the plate is then made which furnishes the block for the press.

Damp-clay process. Same as *Prosser's* ★*process*. Egyptianized clay. See ★*Egyptianize*. **Erie clay**, in *geol.*, a series of unstratified clays of pleistocene age in the Lake Erie region. They lie on the glacial till and contain small scattered scratched boulders. The deposit is regarded as made by subglacial streams after their escape from the ice and by discharged water during the general melting of the ice-sheet. **Fairlight clays**, in *geol.*, the lowest division of the Wealden Cretaceous series in Sussex and Kent, England. **Fatty clay**, a soft and unctuous clay rich in kaolin and poor in sand. **Glen Rose clay**, in *geol.*, a division of the lower Cretaceous rocks in Texas. **Grinstead clay**, in *geol.*, a division of the Wealden Cretaceous rocks in Sussex and Kent, England. **Hessle clay**, a local name for the upper boulder-clay at Hessle, England. *Geikie*, The Great Ice Age, p. [illegible] **Joint clay**, in *geol.*, a name sometimes applied to those clays which on exposure develop marked systems of joints. **Kimmeridge clay**, in *geol.*, a subdivision of the Jurassic system in England. It attains a thickness of 600 feet, is underlain by the Coral Rag, overlain by the Portland Sands, and constitutes the lower part of the Upper or Portland Oölites.— **Raritan clay**, in *geol.*, the clays of the Raritan formation in the Atlantic coast region of North America. They are of light color and arenaceous. See *Raritan* ★*formation*. **Red clay**, an extremely fine reddish-brown mud which covers the ocean-bottom at depths below 2,000 fathoms. It results from the decomposition of pumice and fine volcanic dust, and sometimes contains *Foraminifera* and *Radiolaria*. **Sangeen clay**, in *geol.*, a subdivision of the Pleistocene series in Canada. It is regarded by Canadian geologists as probably equivalent to the Upper Leda-clay. **Speeton clay**, in *geol.*, a deposit of argillaceous strata on the Yorkshire coast which has been shown by its fossils to be continuous from the Kimmeridge clay of the Upper Jurassic to the top of the Lower Cretaceous or even into the Upper Cretaceous series.— **Walnut clay**, in *geol.*, a division of the Lower Cretaceous of Texas.— **Weathered clay**, clay rendered friable by exposure to the air in order that it may be more easily worked with water.— **Yoldia clay**, in *geol.*, a division of the Pleistocene deposits of Norway. It contains a shallow water fauna now submerged to great depths in the Norwegian seas and indicating a depression of the land of not less than 9,000 feet.

clay-burning (klā′bėr ning), *n.* In *agri.*, the roasting of clay for use in ameliorating the soil, practised in parts of Great Britain. The stiff subsoil is dug up, mingled with waste fuels, and burnt like charcoal. The resulting ashes, if the burning is not excessive, are said to benefit some classes of soils, both mechanically and chemically.

clay-dike (klā-dīk′), *n.* A name given by Scottish coal-miners to a buried stream-course filled with clay, sand, and gravel, which traverses coal strata. *J. Geikie*, The Great Ice Age, p. 114.

clay-dog (klā-dog′), *n.* See *clay-stone*.

In the vicinity of Pleasant Plains, seven miles or so south of Morristown, the low plain (about 230 feet) is covered to a considerable depth with similar laminated clay, equally rich in concretions, which are locally known as "clay-stones," "*clay-dogs*," "stone-dogs," &c.
R. D. Salisbury, Geol. Survey of New Jersey, 1892, p. 138.

clay-eater (klā′ē″tėr), *n.* A person who is in the habit of eating or chewing clay. This habit prevails among primitive tribes and degraded people in many parts of the world, particularly among the Indian tribes of the Orinoco and Amazon rivers, and among some 'poor whites' in the southern United States.

claying-iron (klā′ing-ī ėrn), *n.* Same as *claying-bar*.

claypan (klā′pan), *n.* In *geol.*, a shallow, saucer-like depression with a bottom of clay: a feature of the dry interior of Australia. *Smithsonian Rep.* 1896, p. 253.

clay-press (klā′pres), *n.* In *ceram.*, a machine which consists of a screw that connects with a series of horizontal trays or plates, between which canvas bags containing the prepared clay or slip are placed and the surplus moisture is expelled by pressure. Also called *screw-press*.

claystone-porphyry (klā′stōn-pôr″fi-ri), *n.* In *petrog.*, a porphyry whose ground-mass has been somewhat altered to kaolin.

Clayton gas. See ★*gas*.

Clayton's apparatus. See ★*apparatus*.

cleading, *n.*, **4.** (*b*) The wood composing the box of a mine-car. (*c*) The wooden portion of a rope-drum on which the rope is coiled.

clean, *a.* **13.** In good or wholesome condition: said of fishes which have neither recently spawned nor are about to spawn and are fit for food.—**14.** Unfeathered: said of pigeons which have no feathers on the feet, in distinction from those which are muffled, or have feathered feet.—**15.** *Naut.*: (*a*) said of a ship's form when it has acute or fine tapering lines: as, a *clean* entrance; a *clean* run. (*b*) Free from obstruction, as a coast, harbor, etc.— **Clean cutting, scrap.** See ★*cutting*, etc.— **Clean ship.** (*a*) A vessel without cargo. (*b*) A whaler without oil on board. (*c*) A ship in good condition; a cleanly vessel. **Clean off the reel**, sailing so fast as to pull the log-line off the reel without the necessity of feeding it to the chip-log.

clean, *v. t.* **3.** In *agri.*, to clear (land) of weeds.

Now, the way in which farmers *clean* their land is by ploughing it up. *R. H. Wallace*, Agriculture, p. 142.

To clean the board, to take or win everything; make a clean sweep.

cleaner, *n.* (*d*) A special preparation, either saponaceous, ethereal, or both, used for removing grease-spots, ink-stains, etc., from fabrics. (*e*) A device for automatically cleaning scum or floating matter from the surface of water in a boiler and depositing it in a separator or settling-chamber located on top of the boiler. It consists of a skimmer in the boiler, to which is attached a vertical pipe which discharges into the settling-chamber near its top. From a point at the other side of the settling-chamber a return-pipe leads into the boiler, discharging somewhat below the water-level.

cleaning, *n.* **3.** In *forestry*, a thinning made in a stand which has not reached the small-pole stage. Its main object is to remove trees of undesirable form and species. See ★*thinning*.

cleaning-cloth (klē′ning-klôth), *n.* A cloth used for cleaning; specifically, a cotton fabric of coarse spongy texture, woven by the aid of two needle-bars.

cleaning-doctor (klē′ning-dok″tọr), *n.* Same as *color-doctor*.

cleaning-drum (klē′ning-drum), *n.* Same as ★*wash-drum*. *Sci. Amer. Sup.*, Feb. 27, 1904, p. 23534.

cleaning-foot (klē′ning-fut), *n.* In certain of the *Crustacea*, the appendage on the basal joint of the exopodite, which serves to dislodge foreign bodies from the branchial chamber.

cleaning-pit (klē′ning-pit), *n.* A pit over which locomotives are run for the purpose of cleaning the ash-pans and fires. Similar pits are used for cleaning and repairing the motors of electric cars.

clean-out (klēn′out), *n.* In *plumbing*, a metal cylinder with a removable cap calked to a waste- or drain-pipe to facilitate its being cleaned out when stopped: as, a brass *clean-out*.

cleansing (klen′zing), *n.* [ME. *clensing*, < AS. *clǣnsung*, < *clǣnsian*, cleanse: see *cleanse*.] **1.** The act of making clean; cleaning; purification.—**2.** That which is removed in cleaning; dirt or refuse removed; specifically, the placenta or afterbirth: usually applied to animals.

clean-skins (klēn′skinz), *n. pl.* See *skin*.

clean-up, *n.*— **Clean-up barrel**, in *gold-milling*, a revolving iron drum containing iron balls and mercury for grinding and amalgamating rich products requiring such treatment and coming from the periodic cleaning up of the stamp-mill.— **Clean-up pan**, in *gold-milling*, a cast-iron grinding and amalgamating apparatus for treating products from clean-up operations.

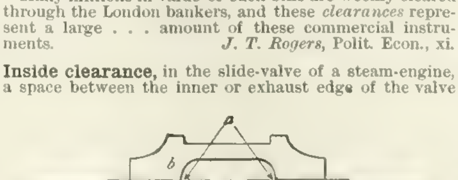
clear. **I.** *a.*— **Clear day**, a day marked by the absence of rain and clouds; as used technically by the United States Weather Bureau, a day in which the average obscuration, between sunrise and sunset, is $\frac{3}{10}$ or less.— **Clear length**, in *forestry*, that portion of the stem which is free from branches. In forest measurements the meaning of the term varies with the species measured and the purpose of the measurements: for example, in some cases it is used to designate that portion of the stem which is free from dead branches or from growing ones of a given size.— **Clear sky.** See ★*clear day*.— **Clear trunk.** Same as ★*clear length*.— **Half clear**, partly depolished: said of glass.

II. *n.* **4.** In *bot.*, an open space.

clearance, *n.* **5.** A piece of land which has been cleared for cultivation or for building; a clearing.—**6.** In *railroading*: (*a*) A difference between the track-gage and the gage of the exterior surface of the wheel-flanges, designed to allow a certain amount of play between the flanges and the rails. (*b*) At a crossing or frog, the clear space left between cross-rails and the frog and guard-rail for the free passage of the flanges of the wheels. (*c*) The clear space between the sides and top of a tunnel or bridge and the outside dimensions of the largest car passing through it.—**7.** In *steam-engines*, the volume or entire space below the valve-face which is filled with steam at the beginning of a stroke, including the space between piston and cylinder-head and the volume of the steam-ducts to the valve-seat.—**8.** The settlement or payment of a debt; the passing of checks and drafts through the clearing-house for their settlement.

Many millions in value of such bills are weekly cleared through the London bankers, and these *clearances* represent a large . . . amount of these commercial instruments. *J. T. Rogers*, Polit. Econ., xi.

Inside clearance, in the slide-valve of a steam-engine, a space between the inner or exhaust edge of the valve



Inside Clearance.
a, clearance; *b*, slide valve; *c*, *c*, steam-ports; *d*, exhaust port.

and the inner edge of the port opening when the valve stands in its central position. Both ends of the cylinder will then be in communication with the exhaust-outlet, each by the amount of this clearance. It is given in high-speed engines to secure free escape of exhaust-steam, but is incompatible with economical working with a high degree of expansion or early cut-off.

clearance-car (klēr′ans-kär), *n.* A flat-car on which is erected a light frame of the same cross-section as the cars to be used on a new road; it is employed to find out if there is ample clearance through bridges, etc. See ★*clearance*, 6 (*c*).

clearance-point (klēr′ans-point), *n.* In *railroading*, the point at a siding where the siding-track is sufficiently far from the line-track to allow a train upon the one to clear or pass a car standing on the other. See *switch*.

clearance-steam (klēr′ans-stēm), *n.* The steam which fills the clearance-space of a steam cylinder, between the head of the piston and the under surface of the distributing-valve.

clearer, *n.* **3.** On a wool- or cotton-carding machine, a small roller or cylinder for working the stock. *Nasmith*, Cotton Spinning, p. 101.— **Self-stripping clearer**, a device which removes the loose fibers from the top draft-rollers of cotton-spinning and -combing machines, and which automatically clears itself of such fibers.

clearer-brush (klēr′ėr-brush), *n.* A bristle brush, on a cotton-cop winding machine, for clearing the yarn from loose fibers, leaves, etc. *R. Marsden*, Cotton Weaving, p. 257.

clearing-doctor (klēr′ing-dok″tọr), *n.* Same as *color-doctor*.

clearing-hole (klēr′ing-hōl), *n.* A hole made to its full nominal diameter, so that a bolt or shaft of the same diameter can pass through it, but will fit closely: used in opposition to *tap-sized hole* or *tapping-hole*.

clearing-house, *n.*— **Clearing-house certificate**, a certificate of deposit issued by a clearing-house. Such certificates are negotiable only between banks which are members of the clearing-house association. Under special circumstances similar certificates have been issued by the clearing-house on the deposit of securities instead of specie.

clear-skins (klēr′skinz), *n. pl.* Same as *clean-skins* (which see, under *skin*).

clearstory, *n.*— **Clearstory window**, a window of a clearstory; that is, a window in the wall above the nave-arcade and the aisle-roof. In large Gothic churches the principal light is through the clearstory windows.

Cleavage electricity. See ★*electricity*.— **Cleavage lines of the skin**, lines along which the skin more easily tears, owing to the arrangement of bundles of fibrous tissue in the corium.— **Cleavage nucleus**, in *embryol.*, the nucleus which results from the union of the male and female pronuclei, before the division of the egg into two blastomeres.— **Strain-slip cleavage**, a cleavage in rocks, usually associated with fine crumpling and produced when a shearing-strain overcomes the cohesion. *Geikie*, Text-book of Geol., p. 681.

Fertilization in an annelid (armed Gephyrean, [illegible]) [Griffin].
a, approach of the egg-nucleus and sperm-nucleus, the latter accompanied by the sperm-amphiaster; *b*, union of the nuclei to form cleavage-nucleus; *c*, prophase of cleavage-spindle; *d*, metaphase of the same, centrosome divided; *e*, nuclear reconstitution and formation of the daughter-amphiasters for the second cleavage; *f*, two-cell stage. Magnified. (From Wilson's "The Cell.")

cleavage-product (klē′vāj-prod″ukt), *n.* A compound formed by the decomposition of a more complex substance. The action is usually, but not always, hydrolytic and may be caused by water, acids or alkalies, enzymes, micro-organisms, etc. Thus, when albumin is treated with baryta water it yields, as cleavage-products, ammonia, carbon dioxid, oxalic acid, pyrrol, leucin, tyrosin, aspartic acid, etc.

cleavage-spindle (klē'vāj-spin″dl), *n.* In *embryol.* and *cytol.*, the karyokinetic spindle of a dividing cleavage-cell, or blastomere, during the early development of the ovum.

cleave[2], *v. t.* **4.** In *agri.*, to replow (old ridges) in such a manner as to divide each in the middle. See ★*cleaving.* Also *split.* [Great Britain.]

cleave[2] (klēv), *n.* In *mining*, a subdivision of a bed, usually of iron ore; a bench. [Scotch.]

cleave[3] (klēv), *n.* [Ir. *cliabh* (pron. klē'av), OIr. *cliab*, Gael. *clabh*, a basket; akin to Ir. Gael. *clath*, a hurdle.] A basket or basketful: as a *cleave* of potatoes, or of turf. [Irish.]

Now Sir Condy . . . sent out for a couple of *cleaves* full of the sods of his farm.
Miss Edgeworth, Castle Rackrent, p. 49.

cleavers, *n.*, **1.** (*b*) Any plant of the genus *Galium*, such as bedstraw, goose-grass, etc., the numerous species being distinguished by appropriate qualifying names. Of native American species, *G. circaezans* is called *cross-cleavers* from the cross-like arrangement of the four leaves of the whorls. The dyer's cleavers is *G. tinctorium*, also called *wild madder.*

cleaverwort (klē'vèr-wèrt), *n.* Same as ★*cleavers.*

cleaving (klē'ving), *n.* In *agri.*, a method of plowing over old ridges or 'lands,' in which each ridge is divided in the middle, the furrow-slices being turned in opposite directions. Either two narrow ridges are thus formed of one old one, or each half, with half of the next, forms a new ridge with its crown in place of the former water-furrow. In the latter case, the method is called *crown and furrow plowing.* Also *splitting.* [Great Britain.]

cleekie, *n.* See ★*cleekie.*

cleeksman, *n.* See ★*cleiksman.*

cleft[1], *n.* **Hyomandibular cleft,** in *embryol.* and *anat.*, the branchial cleft between the mandibular and hyoid arches in embryo vertebrates and in adult fishes. **Posthyoidean cleft,** in *embryol.* and *anat.*, the branchial cleft between the hyoid and first branchial arches in embryo vertebrates and in adult fishes.

cleft[2], *p. a.*—**Cleft hand,** a congenital malformation of the hand in which the division between the fingers is prolonged into the metacarpus.

cleik, *n.*, **1.** (*b*) In *mining*, a hook. In former times the baskets of coal were attached to the hoisting-rope by a cleik, a term which was extended to mean the whole organization for raising the coal: thus, 'stegging the cleik' meant stopping the output of coal.—**Driving-cleik.** See ★*driving-cleik.*—**Putting-cleik.** See ★*putting-cleik.* [Scotch.]

cleik-coal (klēk'kōl), *n.* Coal as it comes from the pit. [Scotch.]

cleikie, cleekie (klē'ki), *n.* Same as ★*cleiksman.*

cleiksman, cleeksman (klēks'man), *n.*; pl. *cleiksmen, cleeksmen* (-men). In former times, the person who unhooked the baskets of coal at the pit-head. Also *cleikie.* [Scotch.]

Cleithrum, *n.* See ★*clithrum.*

clematine, *n.* **2.** In *color-chem.*, a basic coal-tar color of the azonium chlorid type. It dyes tannin-mordanted cotton a reddish violet.

clematitin (klem-a-ti'tin), *n.* [*Clematitis* + *-in*[2].] A little-known compound found in the snakeroot of Virginia and Texas, *Aristolochia Clematitis.* It is supposed to be identical with the alkaloid aristolochine or serpentarine found in other plants of this family.

cleme[2] (klēm), *n.* [Gr. κλῆμα, a twig, < κλάειν, break. Cf. *clon*, from the same source.] In the nomenclature of the spicular elements of sponges, a hexactine rod bearing alternate barbs on the opposite sides.

clementine[2] (klem'en-tin), *n.* [Appar. < *Clément*, a French surname (?), + *-ine*[2].] Same as *methylene-*★*violet.*

clench-cutter (klench'kut″èr), *n.* A blacksmith's instrument for cutting the clenches on the nails of a horse's shoe previous to removing it from his foot. It is a small wedge-shaped piece of steel with a metal handle. Also *clinch-cutter.*

Clench-cutter.

clench-machine (klench'ma-shēn″), *n.* In *shoe-manuf.*, a machine for nailing shoes with a bent wire or clench; a sole-fastening machine. The machine takes the wire from a reel, corrugates it or forms it into a fastening, and bends back or clenches the ends in the sole.

clenliness, clenly, clenz, *n.* Simplified spellings of *cleanliness*, etc.

Cleopatra's needle. See *obelisk*, 1.

Clepsydrops (klep-sī'drops), *n.* [Gr. κλεψύδρα, water-clock, + ὤψ, face.] A genus of extinct rhynchocephalian reptiles, typical of the family *Clepsydropidæ*, having a long and narrow skull, upper canine and anterior incisors much larger than the other teeth, intercentra in the dorsal and caudal vertebræ, and double-headed anterior ribs. They occur in the Permian rocks of North America.

cleptic, kleptic (klep'tik), *a.* [Gr. κλεπτικός, < κλέπτης, a thief, < κλέπτειν, steal. Compare *klepht.*] Given to stealing or thieving.

cleptobiosis (klep″tō-bī-ō'sis), *n.* [Irreg. < Gr. κλέπτειν, steal, + βίωσις, a way of life.] A form of symbiosis observed between two colonies of ants of different species, one of which inhabits the walls between the galleries and subsists on the progeny or stores of the other species. *W. M. Wheeler*, 1901.

cleptobiotic (klep″tō-bī-ot'ik), *a.* Of or pertaining to cleptobiosis.

cleptocracy, kleptocracy (klep-tok'ra-si), *n.* [Gr. κλέπτης, a thief + -κρατία, < κρατεῖν, rule. Compare *aristocracy*, etc.] Thieves regarded as a ruling class; thieves collectively.

cleptophobia, kleptophobia (klep-tō-fō'bi-a), *n.* [Gr. κλέπτης, a thief (< κλέπτειν, steal), + -φοβία, < φοβεῖν, fear.] An abnormal dread of becoming a thief.

cleptoscope (klep'tō-skōp), *n.* [Irreg. < Gr. κλέπτειν, steal, + σκοπεῖν, view.] An apparatus, fitted with prisms, which enables persons in a submerged submarine boat to ascertain what is going on above the surface of the water.

An Italian engineer, M. Triulzi, has devised a special instrument, the *cleptoscope*, whereby it is possible for the crew of a submarine boat to ascertain what is progressing on the surface while submerged. It comprises a tube fitted with crystal prisms in a special manner.
Sci. Amer., Nov. 23, 1901, p. 329.

clergy, *n.* **1.** Sometimes applied to the ecclesiastics, ministers, and priests of non-Christian religious systems. **Regular clergy,** the body of clergy living in religious communities under a common rule, as distinguished from the clergy who have parochial charge of the laity immediately under diocesan jurisdiction.—**Secular clergy,** the body of clergy in charge of parishes, as distinguished from the clergy living in religious communities.

clergy-house (klèr'ji-hous″), *n.* The residence of the clergymen or clergyman in charge of a church.

Clerical error, in *law*, a mistake in the draft or copy of a statute, record, or other instrument, inadvertently made, and so apparent upon its face that the intent is not affected.

clericalist (kler'i-kal-ist), *n.* One who belongs to a clerical party or who favors clericalism.

His [Alford's] early training was in the evangelical school; he was to some extent carried away by the *clericalist* movement of the years 1835–42.
Dict. Nat. Biog., I. 283.

clericalize (kler'i-kal-īz), *v. t.*; pret. and pp. *clericalized*, ppr. *clericalizing.* To render clerical; exalt the influence of the clergy.

clericature (kler'i-kā-tūr), *n.* [NL. *clericatura*, < *clericare*, make a cleric, < LL. *clericus*, a cleric.] Clerical position or authority.

Holy orders were sometimes assumed on account of the superior opportunities which *clericature* gave of improper intercourse with women.
H. C. Lea, Sacerdotal Celibacy, v.

clerigo (kler'i-gō), *n.* [Sp.: see *cleric.*] **1.** In the Philippine Islands, a cleric who has taken orders and is dedicated to the service of the church, but who is not a member of a monastic order.—**2.** In Porto Rico, a fly-catcher, *Tyrannus taylori.*

Clerk of works, one who superintends the erection of a building or buildings, and who is particularly charged to see that the specifications are followed as regards the quality of the materials, the thoroughness of the workmanship, etc.; an architect's building-inspector. [Eng.]—**Credit clerk,** a clerk who has charge of the credit department of a business.—**Lay clerk.** (*a*) A singing-man in a cathedral or collegiate church. (*b*) A parish clerk. See *clerk*, 3.

clerkage (klèrk'āj), *n.* **1.** Clerk's work; clerical work.—**2.** An amount expended for clerical work.—**3.** A number of clerks; clerks collectively.

clerkery (klèrk'e-ri), *n.* **1.** A counting-house.—**2.** Clerks collectively.—**3.** The calling or office of clerk.

clestine (kles'tin), *n.* [Gr. κλειστός, κλεισταῖος, that can be shut, + *-ine*[1].] In *bot.*, a large parenchymatous cell in which raphides are often deposited.

Clethraceæ (kleth-rā'sē-ē), *n. pl.* [NL. (Klotzsch, 1851), < *Clethra* + *-aceæ.*] A family of dicotyledonous sympetalous plants of the order *Ericales*, the white alder family, formerly included in the *Ericaceæ*, or heath family, and containing only the genus *Clethra.* See *Clethra.*

clethraceous (kleth-rā'shius), *a.* Belonging to the plant-family *Clethraceæ.*

Cleveland ironstone, ore, shale. See ★*ironstone*, etc.

clevis, *n.* **Downhill clevis,** a brake on a logging-sled, consisting of a clevis which encircles the runner, to the bottom of which a heavy square piece of iron is welded.

cliack (klī'ak), *n.* [Also *clyack*; possibly from Gael. *cliathach*, battle.] In Scotland and the north of England, prior to the general introduction of reaping-machines, the last sheaf or armful of grain cut on a farm in harvest-time.

cliché, *n.* **2.** A stereotyped formula; a lifeless copy. [Rare.]

After the course of a hundred years the varieties of expression are apt to become exhausted, the forms grow hard, all the obvious motives tend to express themselves no longer as thoughts but as *clichés.*
Encyc. Brit., XXVIII. 261.

click[1], *v. i.* **2.** To overreach, as a horse, and strike the front of the hind foot against the shoe of the fore foot, making a clicking sound. **Clicking butterfly.** See ★*butterfly.*

click-catch (klik'kach), *n.* A device on the carriage of a spinning-mule which communicates to the spindle the motion for winding on the yarn. *Nasmith*, Cotton Spinning, p. 295.

clickership (klik'er-ship), *n.* The functions of an under-foreman who controls the work of typesetters intrusted with the composition of a book.

click-spring (klik'spring), *n.* A spring which forces the dog or click of a ratchet-and-dog combination to fall into the space between teeth after the dog is lifted. The spring causes the dog to click. *Nasmith*, Cotton Spinning, p. 295.

Clidophorus (kli-dof'ō-rus), *n.* [NL., < Gr. κλείς (κλειδ-), a key, + -φορος, < φέρειν, bear.] A genus of extinct *Pelecypoda* of the family *Ledidæ*, of primitive taxodont type, with teeth in a continuous series on both sides of the beak, and a clavicle, in both valves, extending from the umbones. It occurs in Silurian and Devonian rocks. Also *Nuculites.*

clier (kli'èr), *n.* [Also *clyer, clyre*; connected with D. *klier*, MD. *cliere*, E. Fries. *klīre, klīr*, a gland, a glandular swelling.] A glandular swelling or scrofulous tumor of the skin which occurs in various parts of the body of cattle, especially affecting those parts which have lymph-glands situated in them.

cliff[1], *n.* **2.** The strata of rock above or between the strata of coal.—**3.** [Appar. orig. *cliff chalk.*] Hard chalk.

Cliff . . . **4.** Stone, commonly chalk, put to hinder certain portions of the Trent banks from being washed away by the tide. *Eng. Dial. Dict.*

Cliff glacier. See ★*glacier.*—**French cliff,** a hard kind of chalk, from the lower part of the valley of the Seine in France, used in England as a source of lime for making bleaching-powder.

cliff-dweller (klif'dwel-èr), *n.* A member of one of the aboriginal tribes in the southwestern United States who built their dwellings in natural recesses in cliffs.—**Cliff-dwellers' pottery.** See ★*pottery.*

cliff-dwelling (klif'dwel″ing), *n.* A dwelling of stone on a shelf or recess of a cliff, accessible only by steep paths, steps, or ladders.

A cliff-dwelling.

Cliff-dwellings are found in many canons of the southwestern United States. The cave-dwellings of some Indians of northern Mexico are similar in type to the prehistoric cliff-dwellings. The culture of the cliff-dwellers was similar in general type to that of the more recent Pueblos.

cliffed (klift), *a.* [*cliff* + *-ed*[2].] Possessed of cliffs.

cliff-elm (klif'elm), *n.* Same as ★*cork-elm.*

cliff-house (klif'hous), *n.* Same as ★*cliff-dwelling.*

Cliffordian (kli-fôrd'i-an), *a.* Of or pertaining to W. K. Clifford (1845–79), an English mathematician and philosopher.

Clifford's box, geometry, space. See ★*box*[2], etc.

cliffsman (klifs'man), *n.* One who is accustomed to climb cliffs.

Climacograptus (klim a-ko-grap'tus), *n.* [NL., < Gr. κλίμαξ, a ladder, + γράπτος, written, < γράφειν, write.] A genus of Silurian graptolites which have a row of theca or cells on each side of the stipe, nearly vertical to the central axis.

Climacteric disease, any disease which occurs at a climacteric period, as puberty or the menopause and is related to the physical changes of that time.

climactic (klī-mak'tik), *a.* [Irreg. for **climacic*, < Gr. κλίμαξ (κλιμακ-), climax.] Of, pertaining to, or of the nature of a climax; ascending or leading to a climax.

Give the history of development a *climactic* form. *Whitney*, Life and Growth of Lang., p. 212.

climactical (klī-mak'ti-kal), *a.* Same as ★*climactic.*

The *climactical* point [in the development of wireless telegraphy] was not reached in this country until Marconi arrived here and reported the yacht races in the fall of the same year. *Amer. Inventor*, Dec. 15, 1903, p. 273.

climactichnite (klī-mak-tik'nīt), *n.* [NL. *climactichnites*, erroneously formed from Gr. κλίμαξ, ladder, + ἴχνος, track (see *ichnite*).] An impression believed to have been made by a mollusk crawling over the primordial beach. It occurs on sandstone beds of Cambrian age.

climate, *n.* **Antarctic climate,** the climate of the antarctic regions. It appears to be distinguished by heavier and longer-continued winds, and by rather less severe cold, than that of the arctic region.—**Arctic climate,** the climate of the arctic regions; figuratively, any very cold weather continuing for a long season.—**Climate-and-crop service,** the organization or division of the United States Weather Bureau which pays especial attention to the relation of the climate to crops. It publishes monthly climate-and-crop reports for 45 divisions, called State weather services, covering all portions of the United States; also weekly reports summarizing the rainfall, temperature, and vegetation during the growing-season, based on the returns from about twenty thousand reporters. During the winter season it publishes monthly reports of the condition of the snow and ice. It does not publish statistics of the crops proper, but only of the climatic conditions and their influences irrespective of other considerations.—**Geological climate,** the climate of any region during any geological period or epoch, including the slow changes with altitude, continentality, etc.

Glacial climate, the climate due to the presence of glaciers; the climate of the whole glacial period, including that of the successive glacial and interglacial times.—**Interglacial climate,** the climate prevailing during the intervals between the successive glaciations of any region.—**Landward climate,** the climate on the landward slope of a mountain or ridge. Its principal characteristics are derived from the land-breezes which ascend or the sea-breezes which descend the mountain's slope.—**Optical climate.** See *photochemical* ★*climate.*—**Photochemical climate,** the climate as defined by the chemical activity of the direct solar rays, or of the blue sky and direct rays combined, as distinguished from the *thermal climate*, which is defined by the heating power of the sunshine, or from the *optical climate*, which is defined by the general optical condition of the atmosphere as regards transparency, haze, color, dryness, hardness, softness, and atmospheric perspective.—**Seaward climate,** a local climate whose principal characteristics are derived from ocean winds; the climate of the seaward slope of a mountain or ridge.—**Solar climate,** the climate due to the effect of the sun's rays upon an ideal earth without an atmosphere. The solar climate as modified by atmospheric absorption and by the clouds, the winds, the irregularities of the earth's surface, and the general distribution of continents and oceans becomes the actual telluric climate. See *insolation.* **Telluric climate.** See *solar* ★*climate.* **Thermal climate.** See *photochemical* ★*climate.*

Climatic disease, formation. See ★*disease,* ★*formation.*—**Climatic theory,** a theory that attempts to explain the secular changes of climate recognized in the study of geology. The great ice age, or glacial epoch, offered a succession of glacial and interglacial periods during which an ice-sheet covered northern Europe and North America and the snow-line in the Alps was much nearer sea-level than at present. During Tertiary time the mean temperatures that apparently prevailed in Greenland and Spitzbergen were much higher than those that now prevail there. In the Rocky Mountain region the drying up of large lakes to their present small representatives seems to show that during the Quaternary epoch there was greater rainfall and less evaporation than at present, and also a period of glaciation. These secular variations of climate have led to the development of climatological theories that have had a profound influence on the study of geology. Among these theories are that of Dubois, in which special stress is laid upon possible changes in the character and amount of the radiation from the sun; of Adhemar, which assumes the accumulation of ice at the poles to have been sufficient to displace the center of gravity of the earth and the boundaries of the ocean; of Schmick, which assumes a disturbance of the tides produced by the sun and moon, and hence a different distribution of water; of Croll, which assumes a change in the seasons produced by a change in the eccentricity of the earth's orbit; of Ball, which supposes a change in the ratio of heat received by the northern and southern hemispheres consequent on the change in eccentricity; of De Marchi, which rests upon a change in the coefficient of transparency of the atmosphere for solar rays and for terrestrial radiations; of Arrhenius, which is based upon possible changes in the amount of carbon dioxid in the atmosphere and its effect on the atmospheric absorption of the solar heat; of Schiaparelli and Davis, which demands changes in the position of the earth's axis or rotation due to extensive geological processes; of Zenker and of Lyell, which is based on a radically different distribution of land and water on the earth's surface due to the rising and falling of continents or ocean beds. **Climatic zone.** See ★*zone.* **Hinrichs's climatic index.** See ★*index.*

Climatius (klī-mā'ti-us), *n.* [NL., appar. < Gr. κλίμαξ (κλιμακ-), a slope: see *climate.*] An extinct genus of acanthodean fishes, described by Agassiz from the Old Red Sandstone of Great Britain, with strongly heterocercal tail and broad, strong fin-spines and three or four pairs of free spines between the paired fins.

Climatology of soils, the investigation and study of the relations of soils to climate and organic life, especially to agricultural crops and prosperity. **Geographical climatology,** the study of the distribution of climates over the surface of the earth and of the peculiarities of climate that depend upon the situation of the station relative to the ocean or continent, or upon its altitude above sea-level.

Topographical climatology, the study of the relation between topographic forms and the climatological conditions under which they were evolved; the relation between the climates of the past and the existing orography of the globe.

climatotherapeutics (klī ma-tō-ther-a-pū'tiks), *n.* [Gr. κλίμα (κλιματ-), a region, zone, + θεραπευτικός, of medical treatment: see *therapeutic.*] Same as ★*climatotherapy.*

climatotherapy (klī ma-tō-ther'a-pi), *n.* [Gr. κλίμα (κλιματ-), a region, zone, + θεραπεία, medical treatment.] The treatment of disease by means of a favorable climate, chosen with regard to the atmospheric pressure, purity of air, relative temperature, moisture, etc.

Various questions relative to *climato-therapy* will also be discussed. *Monthly Weather Rev.*, March, 1903, p. 138.

climb, *v. i.* **To climb down,** to descend from a height by the use of both hands and feet; figuratively, to retreat from some point, position, statement, decision, or claim that has been found untenable. [Colloq., U. S.]

climb-down (klīm'doun), *n.* Descent; the abandonment of a high position taken on some point or question, when it has been found untenable or unacceptable. [Colloq.]

climber[1], *n.*—**Watchspring climber,** a liana with thin, spirally coiled, naked tendrils, which become thicker and harder upon stimulus of contact. It is tropical only. See *tendril-climber*, under *climber*[1], 2.

climbing-fish, *n.* 2. A gobioid fish of the north of New South Wales and of Queensland, *Periophthalmus australis.* Also called *hopping-fish* and *skipper.*

clinamen (kli-nā'men), *n.*; pl. *clinamina* (kli-nam'i-nä). [L. *clināmen*, < **clinare*, bend: see *cline, incline.*] 1. Inclination or tendency to turn aside; bias.—2. An event without any cause: in reference to the Epicurean theory of the causeless swervings of the atoms.

clinatory† (klin'a-tō-ri), *n.* [NL. **clinatorium*, < L. **clinare*, incline: see *clinant, cline.*] An instrument for ascertaining the position of a line or plane with reference to its azimuth and altitude; a declinator. *N. E. D.*

clinch-cutter, *n.* See ★*clench-cutter.*

clinckaert (klink'ärt), *n.* [MD.] A gold coin of Holland of the 14th and 15th centuries. It corresponded to the French chaise.

cling, *n.* 3. A dysentery or bloody flux of sheep; a frequently fatal inflammation of the large intestine of sheep, accompanied with fever and fluid discharges from the bowels.—4. In *hort.*, a peach, nectarine, or apricot in which the flesh adheres strongly to the stone; a clingstone.

clinger (kling'ėr), *n.* One who clings: applied sometimes to persons of a stationary social type or class, who depend on others for support and leadership. *Patten*, Develop. of Eng. Thought, p. 24.

clingfish (kling'fish), *n.* Any species of fish belonging to the suborder *Xenopterygii*, small fishes living chiefly in shallow pools among the rocks, and having a ventral sucking-disk with which they are enabled to cling to any object.

clinic, *n.* 4. Same as *dispensary*, 2.

clinician, *n.* 2. A practical physician whose methods are based on experience rather than on theory; also, a teacher of medicine whose method of instruction is clinical rather than didactic.

clinicopathological (klin"i-kō-path-ō-loj'i-kal), *a.* Relating both to the symptoms of disease and to the lesions produced by it.

Thus . . . we have . . . the *clinicopathological* examinations by Vialet, Déjérine, and Henschen, of cases of disease in man.

Philos. Trans. Roy. Soc. (London), ser. B, 1898, p. 2.

clinium (klin'i-um), *n.*; pl. *clinia* (-ä). [NL., dim., < Gr. κλίνη, a bed.] 1. Same as *clinanthium.*—2. A sporophore of some fungi.

Clink[2] (klingk), *n.* [Prob. orig. a jocular term, meaning a place where one hears the 'clink' of bolts, bars, or chains: see *clink*[1], *n.* Names of prisons are often jocular; cf. *jug, quod, cage*, and *gaol* ('little cage').] 1. The name of a prison or lockup in Southwark, London, often mentioned in the sixteenth century and later. Hence—2. [*l. c.*] Any prison.

clinker, *n.* 9. In *cricket*, a ball bowled exceedingly well. [Slang.] **Sterile clinker,** a name given in sewage disposal works to the porous bed which is made of cinder freed from soluble elements. Such porous or absorptive layers not only withdraw color from solution, but also take in some of the nitrogenous compounds. *Nature*, Dec. 10, 1903, p. 159.

clino-anemometer (klī nō-an-e-mom'e-tėr), *n.* The inclined-blade anemometer of Deckevrens, established in 1889 in the Eiffel Tower in Paris, and in 1898 at the observatory of the Isle of Jersey. It is designed to measure the vertical movement of the wind, as well as the horizontal whence the angular inclination of the wind to the horizon may be computed.

clinocephalic (klī ⁄ nō-se-fal'ik), *a.* [Irreg. < Gr. κλίνειν, incline, + κεφαλή, head.] In *anthrop.*, said of skulls characterized by a saddle-like depression behind the coronal suture brought about by premature synostosis of the parietal bones with the sphenoid or temporal bones.

clinocephalism (klī'nō-sef'a-lizm), *n.* Same as ★*clinocephaly.*

clinocephalous (klī-nō-sef'a-lus), *a.* Same as ★*clinocephalic.*

clinocephalus (klī-nō-sef'a-lus), *n.*; pl. *clinocephali* (-lī). [NL.] A person with a clinocephalic skull.

clinocephaly (klī nō-sef'a-li), *n.* [Irreg. < Gr. κλίνειν, bend, + κεφαλή, head, + -*y*[3].] In *craniol.*, a pathological deformation of the cranium resulting from a premature synostosis of the parietal bones with the alisphenoids and with the temporal bones, and characterized by a depression of the anterior portion of the parietal bones, behind the coronal suture.

clinodactyly (klī nō-dak'ti-li), *n.* [Irreg. < Gr. κλίνειν, bend, + δάκτυλος, finger, + -*y*[3].] A deformity of the hand marked by permanent deflection of the fingers.

clinograph (klī'no-graf), *n.* An apparatus for determining the deviation of bore-holes from the vertical. *Motzfeldt's clinograph* contains a magnetic needle and a plummet. The apparatus is filled with melted gelatin and lowered to any desired point in the bore-hole. The gelatin cools and holds both plummet and needle fast. By this means a complete survey of the hole can be made. *Nolton's clinograph* uses weak hydrofluoric acid, partly filling a glass tube, for the same purpose. The acid, after about half an hour, etches the inside of the tube and thus marks the inclination. Also called *clinostat.*

It has been abundantly proved that bore-holes frequently deviate very considerably from the straight path they were intended or supposed to take, and in some cases it becomes very important to determine the amount and direction of the deviation. *Encyc. Brit.*, XXX. 768.

clinohedral (klī-nō-hē'dral), *a.* [Irreg. < Gr. κλίνειν, incline, + ἕδρα, base.] Having oblique bases or faces: applied to a class of crystals, belonging to the monoclinic system, which have a single plane of symmetry but no axis of symmetry. Clinohedrite belongs to this class. See ★*symmetry.* Also called the *domatic* and *gonioid* class.

clinohedrite (klī-nō-hē'drīt), *n.* [*clinohedr(al)* + -*ite*[2].] A basic silicate of zinc and calcium, analogous to calamin in composition, but occurring in colorless monoclinic crystals of strongly oblique habit: found at Franklin Furnace, New Jersey.

clinometer, *n.* 3. In *ophthal.*, same as ★*clinoscope.*—4. An instrument used to determine the heel or pitch of a vessel. When placed athwartships it shows the former; when placed fore-and-aft, the latter.—**Clinometer heel,** the heel of a vessel as indicated by a clinometer. See ★*clinometer*, 4.

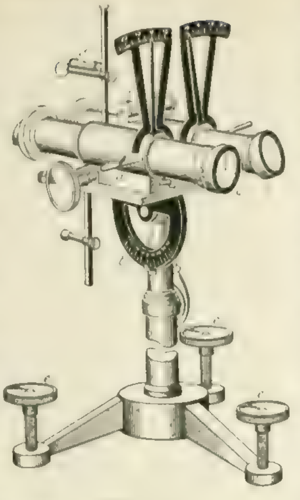
Clinopistha (klī-nō-pis'thä), *n.* [NL., < Gr. κλίνειν, incline, + ὀπισθεν, at the back, behind.] A genus of primitive or degenerative prionodesmaceous *Pelecypoda* from the Carboniferous rocks.

Clinopodium (klī-nō-pō'di-um), *n.* [NL. (Linnæus, 1753, adopted from Tournefort, 1700), < Gr. κλίνη, bed, + πους (ποδ-), foot. The branches of the type species, *C. vulgare*, bearing separated orbicular clusters of flowers, were likened to the legs of a bed.] A genus of dicotyledonous plants of the family *Menthaceæ.* See *Calamintha.*

clinorhomboid (klī-nō-rom'boid), *a.* Same as *trclinic.*

clinorhomboidal (klī nō-rom-boi'dal), *a.* Same as ★*clinorhomboid.*

clinoscope (klī´no-skop), *n.* [Irreg. < Gr. κλίνειν, incline, + σκοπεῖν, view.] An appliance for estimating the inclination of the vertical meridians of the cornea.



Clinoscope.

a, lever for rotating the anterior half of the tube on its longitudinal axis; the pointer and scale above marking the degree of rotation; *b*, pointer and scale marking the degree of dip of the platform supporting the tubes; *c*, *c*, [illegible] so attached that they can be maintained in the vertical plane with any dip of the tubes; *d*, *d*, spirit-levels; *e*, *e*, *e*, leveling screws for stand.

clinostat, *n.* 2. See ★*clinograph.*

clinozoisite (klī-nọ-zō´i-sit), *n.* [Gr. κλίνειν, incline, + E. *zoisite.*] A monoclinic member of the zoisite-epidote group, near zoisite in composition, but differing in crystallization.

clinure (klin´-ur), *n.* [L. **clin*(*are*), incline, + -*ure.*] Inclination, specifically of a vector, relative to some set of coördinates.

Many of the new words he [James Thomson] coined, 'radian,' 'numeric,' 'torque,' 'interface,' '*clinure*,' 'posure,' &c., are great helps both in thinking and teaching.
Proc. Brit. Ass'n Advancement of Sci., 1902, p. 511.

Clio, *n.* 3. In *astron.*, asteroid 84, discovered by Luther in 1865.

Clionopsidæ (klī-ọ-nop´si-dē), *n. pl.* [NL., < *Clionopsis* + -*idæ.*] A family of gymnosomatous pteropods. The body is barrel-shaped; suckers and buccal appendages are lacking; the proboscis is very long; the posterior gill is tetraradiate; and the skin is not pigmented. *Clionopsis* is the only genus.

Clionopsis (klī-ọ-nop´sis), *n.* [NL.] The typical genus of the family *Clionopsidæ*. *Troschel*, 1854.

clip[1], *n.* 7. In *angling*, a salmon-gaff.—8. Same as ★*cartridge-clip.*

To fill the latter [the Kropatschek rifle] rapidly the cartridges are carried packed in bundles of from three to six, in sheet metal or cardboard receptacles. These receptacles are of two kinds, "*clips*" or "chargers." The *clip*, employed in the Mannlicher system, is used with a magazine with parallel walls, being held down in the magazine against the pressure of the magazine platform spring by means of a spring catch.
Encyc. Brit., XXXII. 651.

clip[3] (klip), *n.* Rate of rapid motion, as of horses or yachts: as, a three-mile *clip;* a fifteen-knot *clip.* [Colloq.]

clip-drum (klip´drum), *n.* A drum, used frequently on printing-presses, which has clips to catch the edge of a sheet of paper and carry it around to a certain point where it is taken off the drum by another device.

clip-fish (klip´fish), *n.* See *clippfish.*

clip-forceps (klip´fôr″seps), *n.* A small forceps having blades with broad ends, closed by a spring-catch, used to occlude the end of a divided artery during a surgical operation. *Encyc. Brit.*, XXXIII. 76.

clip-gear (klip´gēr), *n.* In *mach.*, a catch-gear; a spring-catch or -hook and its operating-rod.

clip-kingbolt (klip-king´bōlt), *n.* A form of kingbolt in which the body is attached to thin iron straps, with bolt-ends for nuts, to secure it to the axle-bed. The clip-end encircles the axle and bed, and thus renders a hole through the axle unnecessary.

clip-nut (klip´nut), *n.* Same as ★*clasp-nut.*

clipped (klipt), *p. a.* [Also *clipt;* < *clip*[2] + -*ed*[2].] Cut off by clipping; cut short: having the ends or edges cut off.—**Clipped speech**, a defect of speech noted in certain cases of general paralysis, in which the final syllable or terminal consonant of a word is not pronounced.

clipping-comb (klip´ing-kōm), *n.* A coarse comb of horn, celluloid, or German silver, used for holding up the hair of a horse while it is being clipped.

clipping-machine, *n.* 2. A device for shearing rivets or plate-edges in ship-building: usually driven by air, and then known as a *pneumatic clipping-machine.*

clip-rod (klip´rod), *n.* A rod having one or more projections to catch some part of a mechanism. Such rods are used on some forms of Corliss valve-gear to open the admission-valve.

clique (klēk), *v. i.* [*clique*, *n.*] To form cliques or exclusive sets; associate together in cliques, usually with unworthy or selfish motives.

cliquery (klē´ker-i), *n.* [*clique* + -*ery.*] Disposition to separate into cliques; the methods or actions of a clique; selfish exclusiveness.

The design which . . . we commented upon when *cliquery* in all its lurking places was subsidized to thrust this great work of art . . . into the metropolitan cathedral.
Sat. Rev., July 16, 1859, p. 73.

cliquey (klēk´i), *a.* [*clique* + -*y*[1].] Disposed to form small exclusive sets or cliques; characteristic of cliques and cliquery.

clisiophyllid (klis-i-ọ-fil´id), *a.* and *n.* **I.** *a.* Of or pertaining to the fossil coral genus *Clisiophyllum.*

II. *n.* A member of the genus *Clisiophyllum.*

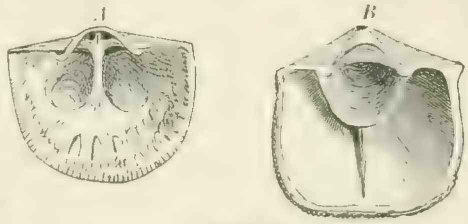
Clisiophyllum (klis-i-ọ-fil´um), *n.* [NL., < Gr. κλίσις, a bending, + φύλλον, a leaf.] A genus of cyathophylloid tetracorals occurring in the Paleozoic rocks.

Clisiospira (klis″i-ọ-spī´rä), *n.* [NL., < Gr. κλίσις, a bending, + σπεῖρα, a spire.] A genus of platypodous gastropods of the family *Xenophoridæ*, occurring in the Silurian rocks.

clistantherous (klīs-tan´thėr-us), *a.* [Gr. κλειστός, that can be closed, + NL. *anthera*, anther, + -*ous.*] Hemiclistogamous with the stamens included: said of a class of flowers.

clistothecium (klis-tọ-thē´sium), *n.*; pl. *clistothecia* (-siä). Same as *clistocarp.*

Clitambonites (klit″am-bō-nī´tēz), *n.* [NL., < Gr. κλιτύς, a slope, + ἄμβων, a ridge, boss.]



[illegible]
interior of ventral valve, showing spondylium, septum, and deltidium. (After Pahlen.) [illegible]

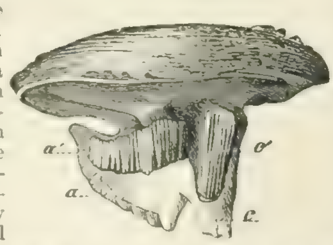
A genus of Paleozoic brachiopods with subpyramidal valves having their apices at the summits of the broad cardinal areas. The ventral valve bears a perforate deltidium and an internal spondylium supported by a median septum; the dorsal valve has a chilidium. It occurs in Silurian rocks.

clitelliferous (klit-e-lif´ẹ-rus), *a.* [NL. *clitellum* + L. -*ferre*, bear.] Bearing or provided with a clitellum: as, a *clitelliferous* worm.

clithridium (klī-thrid´i-um), *n.*; pl. *clithridia* (-ä). [NL., < Gr. κλειθρίδιον, dim. of κλειθρία, a keyhole, < κλεῖθρον, a bar, bolt.] In *bacteriol.*, any bacterium having the outline of a figure eight or a keyhole.

clithrophobia (klith-rọ-fō´bi-ä), *n.* [NL., also *cleithrophobia*, < Gr. κλεῖθρον, a bar for closing a door, pl. κλεῖθρα, bars, a lattice: see ★*clithrum.*] A morbid dread of being in a small room or other confined space.

clithrum (klīth´rum), *n.*; pl. *clithra* (-rä). [NL., also *cleithrum*, < Gr. κλεῖθρον, a bar or bolt for a door: see *clathrate.*] 1. In certain *Pelecypoda*, a modification of the hinge-teeth to form one or more erect processes permitting only the vertical motion of the smaller valve, as in the extinct *Rudistæ*. In the genus *Hippurites* this structure is extravagantly developed.—2. In *anat.*, one of a pair of bones found in the shoulder-girdle of the stegocephalous amphibians and of some theromorphous reptiles. Each clithrum articulates with the clavicle, extends from it dorsally, and may have its posterior border connected with a scapula. Its exact homologies are a little uncertain.



[illegible]

clition (klit´i-ọn), *n.* [NL., < Gr. *κλιτίον, assumed dim. of κλίτος, equiv. to κλιτύς, a slope, < κλίνειν, slope, incline: see *cline*, *clime.*] In *craniom.*, the median point of the highest part of the clivus on the inner surface of the sphenoid bone.

clitochore (klit´ọ-kōr), *n.* [Gr. κλιτύς, a slope, + χωρεῖν, spread abroad.] In *phytogeog.*, a plant whose seeds are distributed by means of gravity, either by falling in steep places or by detachment of soil, etc. *F. E. Clements.*

Clitocybe (kli-tos´i-bē), *n.* [NL. (Endlicher, 1836), < Gr. κλιτός, sloping, + κύβη, head. The name alludes to the convex pileus in its young state.] A genus of white-spored agarics having no annulus or volva and the gills mostly decurrent. *C. laccata* is a common and widely distributed species.

clitter (klit´ėr), *v. i.* [Imitative variation of *clatter*. Cf. *clitter*, *chatter.*] To emit a short, shrill, strident call or note, as a grasshopper; make a slight rattle.

The shrill cicala *clittering* from below.
Lord Houghton, Never Return! l. 142.

clitter (klit´ėr), *n.* 1. A slight rattling noise. —2. Same as ★*clatter*, *n.* Compare *clutter*[2], *n.* [Prov. Eng.]

clival (klī´vạl), *a.* [*clivus* + -*al*[1].] Relating to the clivus in any sense. *Buck*, Med. Handbook, II. 160.

clivus, *n.* 2. The superior surface of the vermis of the cerebellum.

clk. A contraction of *clerk.*

cloak, *n.* 3. In *mollusks*, same as *mantle* or *pallium.*

cloak-fern (klōk´fėrn), *n.* See *fern.*

cloche[2] (klōsh), *n.* [F., a bell or bell-jar: see *clock*[2], *n.*] A bell-jar or bell-glass under which plants are grown. The term is scarcely used in American writings, but is frequent in English horticultural works.

clock[2], *n.*—**Black Forest clock.** See ★*cuckoo-clock.*—**Clock correction**, the quantity which must be added (algebraically) to the time indicated by the clock in order to obtain the true time. It is to be subtracted *numerically* if the clock is fast, added if it is slow.—**Clock error**, the same, numerically, as *clock correction*, but usually, by clock-makers, reckoned with the opposite sign, that is, + if the clock is fast, — if it is slow.—**Diapason clock**, a clock which has a tuning-fork as a regulator. **Eight-day clock**, a clock which goes for eight days with a single winding.—**German clock**, a clock made in Germany. Those made in the sixteenth and seventeenth centuries were often of elaborate construction, some containing automatic figures of persons or animals. One of the most famous of these is the clock in the cathedral at Strasburg.

Shee takes her selfe asunder still when shee goes to bed . . . and about the next day noone is put together againe, like a great *Germane Clocke.*
B. Jonson, Silent Woman, iv. 2.

clock[2], *v. t.* 2. To time, as contestants in a race. [Colloq.]

clock-bird (klok´bėrd), *n.* A large Australian kingfisher, *Dacelo gigas:* so named on account of its calling at sunrise and sunset. The bird is more commonly known as the *laughing jackass.*

clock-calm (klok´käm), *n.* A flat calm, no breath of air stirring; an unruffled surface of water. *Smyth.*

clock-contact (klok´kon″takt), *n.* A contact of the pendulum or other part of a clock with a suitable arrangement for making or breaking a galvanic circuit.

Clock-face experiment, an experiment made to determine whether a person can make a drawing of an ordinary clock-face with roman numerals. It is intended as a test of the power or the habits of observation on the part of the average person. It is said that the majority of persons fail, notwithstanding the assumed familiarity of so simple an object.

clock-golf (klok´golf), *n.* See ★*golf.*

clock-hammer (klok´ham″ėr), *n.* The lever, and its knob, by which the bell of a clock is struck.

clock-meter (klok´mē″tėr), *n.* In *elect.*, an ampere-meter, volt-meter, or wattmeter actuated by clockwork.

clod[1], *n.* 8. A butchers' term for a cut of beef from the fore quarter opposite the cross-rib.

The proportion of bone in meat as ordinarily purchased will vary from almost nothing in "shoulder-*clod*" and "round" to as much as 40 or 50 per cent. in the shank.
Encyc. Brit., XXVII. 446.

clod-coal (klod´kōl), *n.* Strong homogeneous coal. [Scotch.]

clogger (klog´ėr), *n.* One whose business is the making of clogs or wooden shoes, or the wooden soles for such shoes.

cloisonless (kloi´sọn-les), *a.* [*cloison* + -*less.*] Without cloisons or wire cells: as, a *cloisonless* enamel.

Then arose the so-called "*cloisonless* enamels" (musen-jippô). They are not always without cloisons. The design is generally framed at the outset with a ribbon of

tion metal, precisely after the manner of ordinary cloisonné ware. But as the work proceeds the cloisons are hidden unless their presence is necessary to give emphasis to the design and the final result is a picture in vitrified enamels. *Encyc. Brit.*, XXIX. 730.

Cloistered vault. See ★*vault*[1].

cloistered-heart (klois-tėrd-hart′), *n.* The closed gentian, *Gentiana Andrewsii*: the essential organs of the flower are, as it were, cloistered within the closed corolla.

clon (klon), *n.* [Also *clone*; < NL. **clōn*, < Gr. κλών, a twig or slip used for propagation; akin to κλάδος, a twig, slip, branch, < κλᾶν, break.] A group of cultivated plants the different individuals of which are simply transplanted parts of the same seedling individual, the propagation being altogether by the use of vegetative parts, such as buds, grafts, cuttings, suckers, tubers, bulbs, etc. The various sorts of apples, potatoes, chrysanthemums, etc., known as varieties are, in a more restricted sense, clons.

The *clons* of apples, pears, strawberries, etc., do not propagate true to seed, while this is one of the most important characters of races of wheat and corn. *H. J. Webber*, in Science, Oct. 16, 1903, p. 503.

clonal (klō′nal), *a.* [*clon* + *-al*[1].] Relating or pertaining to, or having the characters of, a clon.

The differentiating *clonal* characters of chrysanthemums are mainly in the form and color of the flowers. *H. J. Webber*, in Science, Oct. 16, 1903, p. 502.

clone[2] (klōn), *n.* [Gr. κλών, a twig, slip; related to κλάδος, a branch: see ★*clon*.] **1.** Same as ★*clon*.—**2.** In the nomenclature of the spicular elements of sponges, one of the branches of a spicule: generally restricted to tetraxial forms.

Clonic contraction. See ★*contraction*.

clonism (klon′izm), *n.* [*clon*(*ic*) + *-ism*.] Clonic spasm.

clonome (klō′nōm), *n.* [*clone*[2] + *-ome*.] In the nomenclature of the spicular elements of sponges, the three similar arms of a ★trider (which see).

cloque (klōk), *n.* [F., < Picard *cloque*, a bell, etc.: see *clock*[2].] A name in France of a disease of the leaves of the peach.

Another fungous disease commonly known as *cloque*, probably due to some species of Taphrina or Exoascus, was receiving attention. The trouble is mentioned as affecting peach trees. It causes the leaves to curl in a manner similar to that which is only too frequently seen in America. *E. G. Lodeman*, The Spraying of Plants, p. 47.

close, *v. t.*—**Closed basin.** See ★*basin*.

close[2], *a.* **17.** In *cribbage*, noting cards which are near together, so that sequences are possible, such as the 5 and 7.—**18.** Formed or pronounced with a partial closing of the lips: as, a *close* vowel.

close-grained (klōs′grānd), *a.* Having the constituent grains, fibers, or elements closely compacted together; of closely compacted or dense structure or texture.

close-mouthed (klōs′moutht), *a.* Sparing of speech; reticent: as, a *close-mouthed* person.

close-place (klōs′plās), *n.* In *mining*, a narrow drift without separate airway for ventilation. [Scotch.]

close-reefed (klōs′rēft), *p. a.* Having the last reef taken in: noting the condition of a vessel when there are no more reefs left to be taken in the sails.

closer-on (klō′zėr-on″), *n.* In *shoemaking*, one who stitches the different parts of the upper together.

close-wing (klōs′wing), *n.* A popular name for any moth of the family *Crambidæ*.

closing-hammer (klō′zing-ham″ėr), *n.* A hammer used by boiler-makers for bringing together the plates at the seams of boilers before riveting.

closing-up (klō′zing-up″), *n.* **1.** The placing of the top-box or cope on a foundry mold in preparation for casting. The cope must be clamped or weighted, however, before the mold is poured.—**2.** The heading or burring-over of a rivet, either by hand or by a machine. The length of rivet required for closing-up in hand-riveting is one and one-fourth diameters for snap and conical heads, one diameter for countersunk rivets, and from one-eighth to one-quarter inch more than these for machine-driven rivets.

closing-work (klō′zing-wėrk), *n.* Any device, such as a door, valve, etc., which closes off or obstructs a passage or an opening.

closter (klos′tėr), *n.* [Gr. κλωστήρ, a spindle.] A spindle-shaped cell, of frequent occurrence in wood. Also *clostrum*.

Clostridium (klos-trid′i-um), *n.* [NL., dim. < Gr. κλῶστρον, a clue of thread; cf. κλωστήρ, a spindle.] **1.** A supposed genus of bacteria now usually classed under other genera by different authors.—**2.** [*l. c.*; pl. *clostridia* (-ä).] A term applied to certain bacteria to describe their spindle-like shape.

Thus some bacilli resemble diplococci, others have a drumstick form, while others have a central, *clostridium* enlargement. *Jour. Exper. Med.*, V. 212.

clostrum (klos′trum), *n.*; pl. *clostra*. Same as ★*closter*.

clot,[1] *n.* **Ante-mortem clot,** a clot formed in the heart or aorta just before death. **Laminated clot,** a clot formed in layers by successive deposits of fibrin. **Plastic clot,** a mass of cells given off from the intima of an artery at the point of ligature, the organization of which causes the permanent obliteration of the vessel. **Post-mortem clot,** a clot formed in the aorta or heart just after death.

cloth, *n.* **7.** *Naut.*, a breadth of canvas; one of the breadths of canvas in a square or fore-and-aft sail: a general term in relation to the sails of a ship.—**All cloth made,** full sail set. **Cloth in the wind,** so close to the wind that the sails shake or lift.—**Cloth money.** See ★*money*. **Cloth orange.** See ★*orange*[1].—**Cloth red, B, 3B, G, 3G, O, and R.** See ★*red*[1]. **Cloth-sampling scale.** See ★*scale*[3]. **Faced cloth,** cloth, particularly woolen cloth, that is finished with a lustrous face, as broadcloth.—**Henrietta cloth,** a plain-back fabric with a lustrous finish and twilled face, used for women's dresses. It has a silk warp and a wool weft, or it may be all wool.—**Lady's cloth,** a fine, wide, and closely woven wool flannel, slightly napped and face-finished, for women's wear.—**Little cloth,** limited sail.—**Oriental cloth,** a smooth, face-finished variety of woolen cloth.—**Three cloths in the wind,** a mildly intoxicated condition. Also *three sheets in the wind*. **To carry much cloth,** said of a ship when her yards are long and her sails correspondingly broad.—**Wülfing cloth,** a face-finished broadcloth, valued especially for its fast color and permanent finish, used for army and navy uniforms, liveries, and carriage linings: named after Johann Wulfing, Lennep, Germany.

cloth-beam (klôth′bēm), *n.* **1.** A weighing-beam for ascertaining the weight of a yard of cloth by weighing a whole piece. A given number of yards of cloth are weighed, and when the beam balances, the weight on the beam indicates, by one set of marks, the weight in ounces and tenths of a single yard.—**2.** That roll of a loom upon which the cloth is wound as it is woven.

cloth-brown (klôth′broun), *n.* Either of two mordant-acid coal-tar colors (R and G) of the diazo type, prepared by combining diazotized benzidine with salicylic acid and a naphthol derivative. They dye wool brown in an acid bath. The shade produced is much faster when after-chromed.

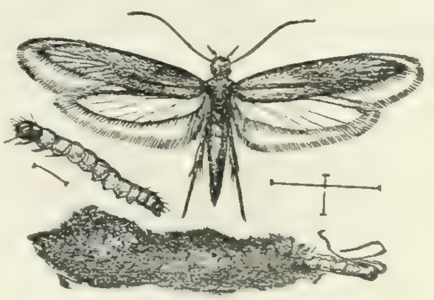
cloth-dresser (klôth′dres″ėr), *n.* One who is employed in finishing cloth for the market, as napping, shearing, brushing, pressing, etc.

cloth-dressing (klôth′dres″ing), *n.* See *dressing*, 2 (*d*).

clothe, *v. t.* **4.** *Naut.*, to cover with canvas; rig.—**To clothe the bowsprit,** to set up its shrouds and bobstays.—**To clothe the lower masts,** to give a great drop to the courses of the lower masts, that is, to bring them well down toward the deck.—**To clothe a ship with canvas,** to carry all sail.

clothes-louse (klōᴛʜz′lous), *n.* A louse, *Pediculus vestimenti*. Also called *body-louse*.

clothes-moth, *n.*—**Naked clothes-moth,** a tineid moth, *Tineola biselliella*, occurring in Europe and the United States, whose larva, feeding on woolen goods and fur, makes neither a case nor a gallery, although spinning a certain amount of silk.—**Tube-building clothes-moth,** a tineid moth, *Tricophaga tapetzella*, occurring in Europe and the United States, whose larva makes a gallery composed of silk and fragments of the cloth on which it feeds.



Naked Clothes-moth [illegible]
[illegible]
(Riley, U. S. D. A.)

clothing[1], *n.* **5.** In *saddlery*, blankets of any kind used on horses.

cloth-knife (klôth′nīf), *n.* A circular knife or disk-knife used in cutting cloth, paper, cork, leather, etc.

cloth-looker (klôth′lůk″ėr), *n.* One who examines or inspects cloth as it comes from the loom.

cloth-looking (klôth′lůk″ing), *n.* The examination or inspection of cloth as it comes from the loom, for the purpose of keeping it up to the standard quality.

cloth-paste (klôth′pāst), *n.* Paste, usually made of flour, employed to cement cloth to the surface of something else, as to the board covers in bookbinding.

cloth-press, *n.* **2.** A press for baling cloth.

cloth-presser (klôth′pres″ėr), *n.* One who operates a cloth-press.

clottage (klot′āj), *n.* [*clot* + *-age*.] The formation of a clot or clots.

clotting-beetle (klot′ing-bē″tl), *n.* A wooden mallet or hammer used in breaking up clods that remain unbroken after plowing and harrowing. [Prov. Eng.]

clotule (klot′ūl), *n.* [Irreg. < *clot* + *-ule*.] A little clot. *Geikie*, Text-book of Geol., p. 878.

cloture (klō′tūr), *v. t.*; pret. and pp. *clotured*, ppr. *cloturing*. To apply the cloture to: as, to *cloture* a bill in Parliament. Also spelled *clôture*.

clotweed (klot′wēd), *n.* Same as *clot-bur*, 2.

clou (klö), *n.* [F., a nail, peg: see *clove*[4].] That which arrests and holds the attention or the interest; the strong point; the chief attraction; the peg on which success depends.

Surrounding these exhibits of machinery in motion are the displays of finished goods, each containing some "*clou*," such as a $5,000 blanket in the blanket section and a combined exhibit made by the costumers in a pavilion known as the Pavilion of Costumes and Fashions, in which are found the latest and best creations in women's dress and millinery. *Amer. Inventor*, Aug. 1, 1904, p. 357.

cloud[1], *n.* **1.** The classification of clouds adopted by the International Meteorological Committee, July 1, 1896, requires all clouds to be classified under the headings here defined: (1) *Cirrus* (abbreviated Ci.), isolated feathery clouds of fine, fibrous texture, generally of a white color, frequently arranged in bands which spread like the meridians on a celestial globe over a part of the sky and converge in perspective toward one or two opposite points of the horizon. In the formation of such bands cirro-stratus and cirro-cumulus often take part. (2) *Cirro-stratus* (Ci. S.), a fine whitish veil, sometimes quite diffuse, giving a whitish appearance to the sky, and called by many *cirrus-haze*; sometimes of more or less distinct structure, exhibiting tangled fibers. The veil often produces halos around the sun and moon. (3) *Cirro-cumulus* (Ci. Cu.), fleecy clouds; small white balls and wisps, without shadows or with very fine shadows, usually arranged in groups and often in rows. (4) *Alto-cumulus* (A. Cu.), dense, fleecy clouds; larger whitish or grayish balls with shaded portions, grouped in flocks or rows, frequently so close together that their edges meet. The various balls are generally larger and more compact (passing into strato-cumulus) toward the center of the group, but more delicate and wispy (passing into cirro-cumulus) on its edges. They are very frequently arranged in lines in one or two directions. (5) *Alto-stratus* (A. S.), a thick veil of a gray or bluish color, exhibiting in the vicinity of the sun and moon a brighter portion, which, without causing halos, may produce coronæ. This form shows gradual transitions to cirro-stratus, but may have only half the altitude. (6) *Strato-cumulus* (S. Cu.), large balls or rolls of dark cloud which frequently cover the sky, especially in winter, and give it at times an undulatory appearance. The layer of strato-cumulus is usually not very thick, and blue sky often appears in the breaks through it. Between this form and the alto-cumulus all possible gradations are found. It is distinguished from nimbus by the ball-like or rolled form, and also by the fact that it does not tend to bring rain. (7) *Nimbus* (N.), rain-clouds; dense masses of dark, formless clouds with ragged edges, from which generally continuous rain or snow is falling. Through the breaks in these clouds there is almost always seen a sheet of higher cirro-stratus or alto-stratus. If the mass of nimbus is torn up into small patches, or if low fragments of cloud are floating much below a great nimbus, they may be called *fracto-nimbus* (*scud* of the sailors). (8) *Cumulus* (Cu.), woolpack clouds; thick clouds whose summits are domes with protuberances, but whose bases are flat. These clouds are formed especially in the diurnal ascensional movement of the lower air. When the cumulus is opposite the sun, the surfaces usually seen by the observer are more brilliant than the edges of the protuberances. When the illumination comes from the side, this cloud shows a strong actual shadow. When on the sunny side of the sky, the cumulus appears dark, with bright edges. The true cumulus shows a sharp border above and below. When cumuli are formed in or torn by strong winds, the detached parts (*fracto-cumulus*) present continual changes. (9) *Cumulo-nimbus* (Cu. N.), thunder-clouds; shower-clouds; heavy masses of cloud rising like mountains, towers, or anvils, generally surrounded at the top by a veil or screen of fibrous texture (*false cirrus*) and below by nimbus-like masses of cloud. From their bases generally fall local showers of rain or snow, and sometimes hail or sleet. Thunder and lightning invariably attend the cumulo-nimbus. The upper edges are either of compact cumulus-like outline, and form massive summits surrounded by delicate false cirrus, or the edges themselves are drawn out into cirrus-like filaments. This last form is most common in spring showers. The front of an approaching thunderstorm cloud of wide extent sometimes appears like a great black arch stretching across a portion of the sky which is uniformly lighter in color. (10) *Stratus* (S.), lifted fog in a horizontal stratum. When this stratum is torn by the wind or by mountain summits into irregular fragments, they may be called *fracto-stratus*.—**Altitude of a cloud,** the linear height of a cloud above the land or the sea-level. The average altitude above sea-level has been de-

termined for numerous portions of the globe. It varies with the temperature and moisture of the air, and therefore with latitude and continentality. Among the methods of determining the altitude are the following: (*a*) *Bernoulli's method* (1744) which consists in determining the time and the depression of the sun below the horizon, when the sun's rays first or last touch a given cloud whose angular altitude and azimuth are also observed simultaneously. A convenient method of calculation is given by Zenker in his Meteorological Calendar for 1887. (*b*) *Feussner's method*, which consists in observing the location on the map of the shadow of a cloud and at the same time observing the altitude of the sun. The formulæ needed for calculation are given in Abbe's "Meteorological Apparatus and Methods" (1887). (*c*) The *kinematic method* (employed in connection with Abbe's marine nephoscope), in which observations give two zenithal apparent movements of the cloud for two corresponding known movements of the observer on a boat or wagon: eight quantities, that is, directions and rates of motion, are thus known which are introduced into the analytical trigonometrical equation, and the true altitude and motion of the cloud are found by elimination. (*d*) *Lambert's method*, which consists in observing the velocity of the shadow of the cloud on the ground and also the apparent angular velocity of the cloud at the zenith, whence the altitude or distance is calculated by trigonometrical formulæ. (*e*) *Trigonometric methods*, which involve the use of the cloud-theodolite, photogrammeter, or cloud-camera. (*f*) *Espy's dew-point method* of determining the altitude of the base of a cloud, which assumes that the altitude of the base is equal to the depression of the dew-point expressed in centigrade degrees multiplied by 100 meters or expressed in degrees Fahrenheit multiplied by 186 feet.—**Cotton-ball clouds.** See ★*cotton-ball*.—**Iridescent cloud,** a cloud that shows a patch of rainbow color suggesting the iridescence of mother-of-pearl; also, a pearly white cloud without iridescent colors. **Mammiform cloud,** a threatening cloud from the under side of which there hang protuberances resembling mammæ, teats, or bags: a formation that is generally due to the rapid settling and evaporation of the heavier cloud-particles, but possibly sometimes to the formation of cloud in a slowly revolving vortex, as when a waterspout or tornado-funnel begins at the lower surface of a cloud.

Nacreous cloud, a delicate white cloud, very high, shining late at night; a noctiluminous cloud: sometimes improperly called *iridescent* and *phosphorescent*. **Noctilucent cloud, night-shining cloud,** a cloud that shines after sunset, apparently very high up and illuminated by distant twilight.

cloud-belt (kloud'belt), *n.* **1.** A zone around the earth covered by clouds; the zone in which the cloudiness is a maximum; specifically, the equatorial zone.—**2.** The belt or ring of clouds itself; a cloud-ring; a belt of clouds crossing a planet, as Jupiter, Saturn, etc.

cloud-berg (kloud'bėrg), *n.* A mountainous mass of cloud which looks like an iceberg on the distant horizon.

cloud-blower (kloud'blō'ėr), *n.* A tubular pipe of the North American Indians: so called when used in religious ceremonials, on account of the symbolic significance of the puffs of smoke.

cloud-camera (kloud'kam″e-rä), *n.* An apparatus for observing the image of a cloud, formed by a lens in a dark chamber, in order to determine its altitude, motion, size, or internal changes. In the cloud-camera of Vettin (1860) the camera is mounted on a horizontal axis adjustable to any apparent angular altitude. The elaboration of this instrument constitutes the photogrammeter perfected for use in the cloud-observation work of the International Meteorological Committee in 1896-97, and for topographical surveys. See ★*photogrammeter* and *nephoscope*.

cloud-chart (kloud'chärt), *n.* One of a series of daily weather-maps showing the quantities, kinds, and motions of the clouds over the area of country covered by the ordinary weather-map.

clouded (klou'ded), *p. a.* **1.** Covered with clouds; obscured by clouds: as, a *clouded* sky. —**2.** Marked by dark, vague, irregular spots:

Clouded Tiger-cat (*Felis nebulosa*).

as, a *clouded* cane; a *clouded* leopard or tiger-cat.—**Clouded locust.** See ★*locust*[1].

cloud-firing (kloud'fīr″ing), *n.* The attempt to procure rain in seasons of drought, or to ward off destructive hail-storms, by the firing of cannon.

cloud-gate (kloud'gāt), *n.* A passageway between hills, mountains, or promontories through which clouds pass in and out with the day and night winds.

cloudiness, *n.*—**Scale of cloudiness.** Meteorological observers have different methods of recording the apparent cloudiness of the sky. Some consider the whole sky from zenith to horizon, others only that portion which is more than 30 degrees above the horizon. When the sky is wholly covered it is said to have a cloudiness of 10. If the observer estimates that one-tenth of this area is occupied by clear spaces, although it may to him appear wholly covered (because he sees the sides of the clouds), he will estimate the cloudiness as 9/10. In general, the cloudiness is that percentage of the whole circular area which would be covered by the clouds if they could be projected vertically downward; therefore, no account is to be taken of the thickness or height of the cloud. One estimates as closely as possible the percentage of area that would be covered by shadows if the sun were in the zenith and the observer could take a comprehensive view of the surrounding circle.

clouding, *n.* **2.** The dulling of varnish, as by dampness or the fumes of sulphur and ammonia.

cloud-projector (kloud'prō-jek″tor), *n.* An apparatus devised by G. G. Stokes (1883) by which from two cloud photographs, taken from different points of view, can be deduced mechanically the altitudes, distances, and dimensions of all parts of the cloud.

cloudscape (kloud'skāp), *n.* A scene composed of clouds; a painting of such a scene.

cloud-shutter (kloud'shut″ėr), *n.* In *photog.*, a shutter provided with adjustable disks by means of which the foreground may be exposed sufficiently while the sky may be taken instantaneously. Images of clouds are thus secured.

cloud-world (kloud'wėrld), *n.* The realm of clouds, or, figuratively, of vague fancies; cloud-land.

Cloudy day, a day in which clouds prevail; as used technically by the United States Weather Bureau, a day in which the average obscuration between sunrise and sunset is 8/10 or more. **Partly cloudy,** as used technically by the United States Weather Bureau, marked by a state of cloudiness ranging from 3 to 7 on the cloud-scale of 10. See *scale of* ★*cloudiness*.

cloudy-wing (klou'di-wing), *n.* An American hesperiid butterfly, *Thorybes pylades*, which has a wide distribution. It is brown in color, with small white spots on the fore wings. Its larvæ feed on clover. Also called *northern cloudy-wing*. **Southern cloudy-wing,** an American hesperiid butterfly, *Thorybes bathyllus*, which ranges from West Virginia to Florida and westward to Kansas and New Mexico. Its larvæ feed on wild beans and other leguminous herbs.

clove[3], *n.* **2.** A cleft; an opening: as, the *clove* in the roving-carriage of a cotton-jenny.

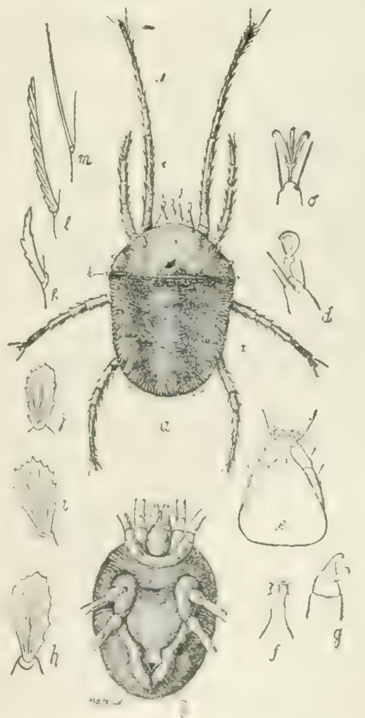
clovene (klō'vēn), *n.* [*clove*[1] + *-ene*.] A sesquiterpene, $C_{15}H_{24}$, obtained by heating caryophyllene hydrate with phosphorus pentoxid. It boils at 261–263° C.

clover, *n.*, **1.** For some of the most useful or otherwise noteworthy true clovers of the western United States, see *annual red* ★*clover*, *bear-*★*clover*, *Beckwith's* ★*clover*, *bull-*★*clover*, and *sour* ★*clover*. These include the most important of several species used raw as food by the California Indians. **Alexandrian clover.** See *Trifolium* and ★*berseem*. **Alsatian clover,** the alsike clover, *Trifolium hybridum*. **Alsike clover.** See ★*alsike*. **Annual red clover,** *Trifolium involucratum*, widely distributed through the Rocky Mountain region, and much the most valuable of the annual species. Also called *purple clover*. **Bear-clover,** *Trifolium virescens*, a Californian species of some forage value and a favorite among the Indians for eating raw. All parts of the plant are sweet (hence also known as *sweet clover*), and the flowers and seed-pods as well as the herbage are eaten. It is considered to be the most common cause of bloat; hence it is sometimes called *bloat-clover*. *Bear-clover* is also a local Californian name of *Chamæbatia foliolosa*. See ★*tar-weed*, 2. **Beckwith's clover,** *Trifolium Beckwithii*, a Rocky Mountain species of low elevations, ranging to South Dakota, valuable for pasture and hay: from its resemblance to *T. pratense*, sometimes called *wild red clover*.—**Bersin clover.** See *Trifolium*.—**Bloat-clover.** Same as *bear-*★*clover*. **Bokhara clover.** See *clover*, 2. —**Brazilian clover.** Same as *alfalfa*. **Broad clover,** the red clover, *Trifolium pratense*. [Eng.]—**Brown clover.** See *Trifolium*.—**Bull-clover,** a true clover, *Trifolium Wormskioldii*, one of the most valuable of the native species of northern California, in damp places growing 2 or 3 feet high. It is much relished by cattle and also by the Indians, who eat all the above-ground parts raw. **Calvary clover.** See *clover*, 2. **Chilean clover,** alfalfa: so called because it was brought to California from Chile.—**Clover broom-rape.** See ★*broom-rape*.—**Clover cutworm.** See ★*cutworm*.—**Clover flower-midge** or **clover seed-midge.** See ★*flower-midge*.—**Clover seed-worm, clover stem-borer.** See ★*seed-worm*, ★*stem-borer*. **Cow-clover.** Same as *mammoth* ★*clover*. **Egyptian clover.** Same as ★*berseem*. **Florida clover.** See *Richardsonia*. **Four-leafed clover.** (*a*) A frequent sport of the common red clover having four leaflets to the leaf. (*b*) In Texas, *Marsilea macropoda*, a plant of some forage value in shady bottoms. See *Marsilea*. **Golden clover,** the yellow clover or hop-clover, *Trifolium agrarium*. **Long-stalked clover,** *Trifolium longipes*, found in the eastern Rocky Mountain region at altitudes of 6,000 to 9,000 feet, where it is valuable for forage. It is a slender plant a foot or more high, with narrow leaflets. A pale-flowered variety is sometimes called *wild white clover*. **Mammoth** or **mammoth red clover,** a robust red clover referred by recent American authors to *Trifolium medium*, the zigzag clover. It resembles common red clover, with which it is often confused, but it may be distinguished, particularly by the long stalks of the heads. It is doubtless identical with the cow-grass of England, the qualities of which it shows in some measure. Sometimes called *sapling clover* (in the western United States) and *cow-clover*. See *cow-grass*. **Mayad clover.** See *Trifolium*. **Menindie clover,** *Trigonella suavissima*, an Australian fodder-plant.—**Mexican clover.** See *Richardsonia*. **Mountain red clover,** *Trifolium megacephalum*, a robust perennial species of the Rocky Mountain region, especially the western slope, valued for forage. It has large and showy heads, leaves with 5 or 7 leaflets, and stout deep-growing roots.—**Musk-clover.** See *musky plant*, under ★*plant*. **Nevada clover,** *Trifolium tridentatum*, a native species of Utah and Nevada, eaten greedily by cattle.—**Purple clover.** (*a*) See *clover*, 1. (*b*) Same as *annual red* ★*clover*. **Rengeso clover,** *Astragalus Sinicus*, a clover-like plant largely grown in Japan for green manure and for forage. It is often sown in rice-fields after harvest and plowed under the next spring.—**Russian red clover,** *Trifolium pratense pallidum*, a variety of the red clover adapted to arid conditions. **Salt clover.** See *sour* ★*clover* (*b*) (2). —**Sapling clover.** Same as *mammoth* ★*clover*.—**Snail clover.** See *snail-clover*.—**Soola clover,** *Hedysarum coronarium*, a leguminous fodder-plant cultivated in Italy and the Balearic Islands.—**Sour clover.** (*a*) The wood-sorrel, *Oxalis Acetosella*. [Prov. Eng.] (*b*) In California: (1) *Trifolium fucatum*, a true clover, probably with some allied species or varieties. These are succulent plants with light-colored foliage. (2) *T. obtusiflorum*, a species having an acid taste and clammy with an acid exudation. The Indians regard it as one of the best for eating, the exudation being generally washed off. Also called *salt clover* and, as growing near springs, *spring-clover*.—**Spanish clover.** See *Richardsonia*.—**Spotted clover,** the spotted medic, *Medicago Arabica*. **Spring-clover.** Same as *sour* ★*clover* (*b*) (2).—**Suckling clover,** *Trifolium filiforme* of Europe, good in mixed pastures for sheep. **Sulphur clover,** *Trifolium ochroleucum* of Europe, growing on dry calcareous soils and relished by cattle. **Swamp-clover,** *Lotus uliginosus*, a species of bird's-foot clover native in northern Europe, and cultivated in Minnesota and Wisconsin on sour, mucky soils. It is a slender branching plant with rather large yellow flowers and long, slender pods.—**Swedish clover.** Same as ★*alsike*. **Sweet clover.** (*a*) See *clover*, 2. (*b*) Same as *bear-*★*clover*.—**Wild red clover.** Same as *Beckwith's* ★*clover*.—**Wild white clover.** Same as *long-stalked* ★*clover*.—**Zigzag clover.** See *Trifolium*, *mammoth* ★*clover*, and *marl-grass*.

clover-dodder (klō'vėr-dod″ėr), *n.* See ★*dodder*[1].

clover-looping (klō'vėr-lö″ping), *a.* Looping clover or warping it by partial eating.—**Clover-looping owlet.** See *owlet* (a moth).

clover-mite (klō'vėr-mīt), *n.* An American mite, *Bryobia pratensis*, very common on clover



Clover-mite (*Bryobia pratensis*).

a, dorsal view; *b*, ventral view; . . . ; *c*, mouth-parts; . . . body . . . ; . . . spines. (Insect Life, U. S. D. A.) Magnified.

in the western United States, and frequently swarming in great numbers on tree-trunks, fences, and the sides of houses.

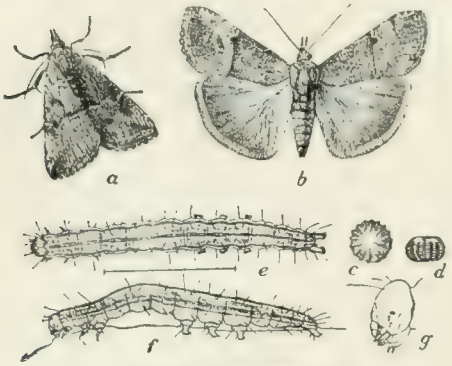
clover-rust (klō'vėr-rust), *n.* A parasitic fungus, *Uromyces Trifolii*, which attacks the leaves of various species of clover.

clover-sickness (klō′vẽr-sik nes), *n.* The state of being clover-sick, that is, incapable of producing a crop of clover: said of soils, usually with reference to the common red clover. In England the trouble has been charged to threadworms (nematoids), to fungi, to insufficient nutrition, to acidity, and to enzyms inimical to the organisms symbiotic with the clover, but agreement has not been reached. Many cases can be corrected by an application of lime. The term has also been applied to the condition of the plant.

Clover-sickness rarely occurs on chalk soils.
J. Wrightson, Fallow and Fodder Crops, p. 220.

clover-tree (klō′vẽr-trē), *n.* A Tasmanian tree, *Goodenia latifolia*. Also called *native laburnum*.

clover-worm (klō′vẽr-wẽrm), *n.* A green



Clover worm (*Plathypena scabra*).

a, moth with wings folded; *b*, same, wings expanded; *c* and *d*, egg; *e* and *f*, penultimate stage of larva; *g*, head of larva; all enlarged; *c*, *d*, *g*, greatly enlarged. (Chittenden, U. S. D. A.)

caterpillar, the larva of *Plathypena scabra*, an American noctuid moth.

clove-strip (klōv′strip), *n.* The floating or creeping primrose-willow, *Jussiæa diffusa*, common in the eastern United States, and also found in tropical America and Asia. See *Jussiæa* and *primrose-willow*.

clownism (klou′nizm), *n.* [*clown* + *-ism*.] Clownish conduct; specifically, a stage of hystero-epilepsy in which the patient assumes the most bizarre and seemingly impossible attitudes.

Clown's lungwort. See *lungwort*.—**Clown's mustard**, the bitter candytuft, *Iberis amara*.—**Clown's-nard.** See *plowman's spikenard*, under *spikenard*.—**Clown's spikenard.** Same as ★*clown's-nard*.

cloy[3] (kloi), *n.* [Origin uncertain; perhaps lit. something that cloys or is sticky, ⟨ *cloy*[1], *v.* Otherwise for *claay* or *cly*, dial. form of *clay*?] An artificial mixture of plastic character, in this respect resembling clay.

cloze, *v.* A simplified spelling of *close*.

C. L. P. A. An abbreviation of *Common Law Procedure Act*.

C. L. S. C. An abbreviation of *Chautauqua Literary and Scientific Circle*.

club[1], *n.* **8.** The expanded end of the tentacular arms in decacerous cephalopods.—**Sensory club**, in hydromedusans, a ★cordylus (which see, with cut).

club[1], *v. t.*—**To club a fleet**, to manœuver a fleet, so as to get to windward of a certain position.

Clubbed fingers, enlargement of the tips of the fingers, with incurvation of the nails, occurring in diseases in which hematosis is interfered with.

clubbing[1], *n.* **4.** In *gardening*, the process or progress of becoming clubrooted; also, the clubrooted condition.

clubbing[2] (klub′ing), *n.* The act of forming a club; joint action or subscription for joint or individual benefit.

clubbock (klub′ok), *n.* [Appar. ⟨ *club*[1] + *-ock*.] A sea-fish, the spotted blenny, *Gadus gunnellus*. Also *gunnel*.

club-fungus (klub′fung″gus), *n.* Any one of the fungi belonging to the family *Clavariaceæ*.

Not all of the *club-fungi* are unbranched; but some of them are divided like the antlers of a deer, and yet others in which the branching is more copious grow in pearl-gray, yellow, white or pinkish tufts, several inches high, and covering spaces as large as a dinner-plate.
C. MacMillan, Minn. Plant Life, viii.

club-hand (klub′hand), *n.* A deformity of the hand similar in nature and causation to club-foot.

club-head (klub′hed), *n.* A club-shaped or club-like head.

club-moss, *n.*—**Bog club-moss,** *Lycopodium inundatum*, a small low-ground species, not uncommon in Europe and in North America, extending in the latter from Newfoundland and Alaska south to Washington, Illinois, and New Jersey. Also called *crowfoot* and *marsh club-moss*.—**Fir club-moss,** *Lycopodium Selago*, a boreal species of Europe and North America, in the latter extending to the mountains of North Carolina. See other vernacular names under *Lycopodium*.—**Foxtail club-moss,** *Lycopodium alopecuroides*, a showy species occurring in moist situations along the coast from New York to Florida and Mississippi.—**Interrupted club-moss,** *Lycopodium annotinum*, a trailing species having stiff acicular leaves, circumpolar in its distribution, in North America occurring as far south as Pennsylvania, Michigan, and Washington.—**Marsh club-moss.** Same as *bog* ★*club-moss*.—**Rock club-moss,** *Lycopodium porophilum*, a rather rare species of the central and southern United States, allied to *L. lucidulum*, and usually found on sandstone rocks.—**Shining club-moss,** *Lycopodium lucidulum*, a beautiful dark green erect species of low woods in eastern Canada and extending from the central United States eastward. Sometimes known as *swamp* and *trailing evergreen*.—**Stiff club-moss.** Same as *interrupted* ★*club-moss*.—**Tree club-moss,** the ground-pine, *Lycopodium obscurum* (*L. dendroideum*). See *Lycopodium*.

club-shell (klub′shel), *n.* A marine univalve mollusk of the family *Cerithiidæ*.

club-tooth (klub′töth), *n.* A gear-tooth which is larger at the outer end, or tip, than at the inner end, or root.

clucker (kluk′ẽr), *n.* An oyster that, owing to its having been chilled or otherwise injured, sounds hollow when its shell is struck. [Local, U. S.] *Stand. Dict.*

clue, *n.*—**Foot clue** (*naut.*), the clue at the foot-end of a hammock.

clue, *v. t.*—**To clue down** (*naut.*), to let go the halyards and sheet of a gaff-topsail while the tack is kept fast, and to man the clue-line so as to bring the head, leech, and luff of the sail down to the clue; to man clue-lines so as to force a yard down on the mast-cap.

clue-cringle (klō′kring″gl), *n.* Same as *clue-thimble* (which see, under *thimble*).

clue-line, *n.*—**Gaff-topsail clue-line,** the rope that runs around the foot, leech, and luff of a gaff-sail, by means of which the topsail is bunched in to the mast on a fore-and-aft vessel, being clued up or clued down, according as the tack is slacked up or held fast.

clue-rope (klō′rōp), *n.* The roping on a sail at the clues. A clue-line is sometimes incorrectly referred to as a clue-rope.

cluf, *n.* A simplified spelling of *clough*.

clump[1], *n.* **6.** An aggregation of bacteria resulting from the action of agglutinins. See *serum* ★*diagnosis*.

clump[1] (klump), *v.* [*clump*[1], *n.*] **I.** *intrans.* To form a clump or cluster; cluster; aggregate: said of the agglutination of certain bacteria in response to the action of definite substances. See *serum* ★*diagnosis*.

The Seal Harbor bacillus refused absolutely to *clump* in any dilution above 1-10. *Med. Record*, Feb., 1903, p. 358.

II. *trans.* To form (bacteria) into a clump or cluster; agglutinate.

clumping, *n.* **2.** The forming of a clump or cluster of bacteria; agglutination of bacteria.

The actual results agree with the prediction, the table showing a somatic agglutination of 100 for both cultures, and no flagellar *clumping*.
Jour. Med. Research, Oct., 1904, p. 321.

Cluny enamel. See ★*enamel*.

clupein (klū′pē-in), *n.* [Also *clupeine*; ⟨ L. *clupea*, herring, + *-in*[2].] A protamin obtained from the testicles of the herring. Also called *salmin*.

Clusiaceæ (klū-si-ā′sē-ē), *n. pl.* [NL. (Lindley, 1836), ⟨ *Clusia* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Hypericales*, the balsam-tree family, including the greater part of the *Guttiferæ* of some authors, but not including the *Hypericaceæ* nor the *Quinaceæ*.

cluster cotton, cluster variable. See ★*cotton*[1], ★*variable*.

cluster-berry (klus′tẽr-ber-i), *n.* The mountain-cranberry, *Vaccinium Vitis-Idæa*.

clustered (klus′tẽrd), *p. a.* Formed into a cluster; arranged or collected in clusters; in *bot.*, applied specially to flowers and fruits regardless of the type of inflorescence.

cluster-fly (klus′tẽr-flī), *n.* A muscid fly, *Pollenia rudis*, which enters houses in the autumn and clusters, in a sluggish way, on windows and walls.

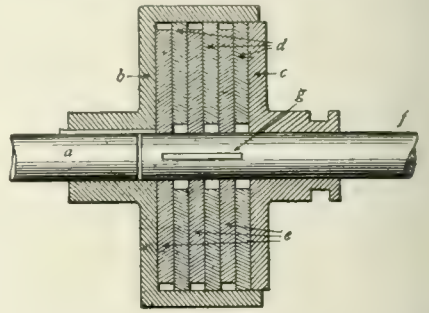
cluster-pore (klus′tẽr-pōr), *n.* One of several small pores or orifices clustered together which form part of the system of mucous canals opening on the surface in *Chimæra*.

There is also an absence of primitive porês, and the *cluster-pores* are very few in number.
Proc. Zool. Soc. London, 1895, p. 880.

clutch[1], *n.*, **2.** (*a*) The simplest form is a pair of opposing disks, one with projections which can slide into depressions on the other. When thus interlocked they act as one. The two surfaces may also engage each other by friction, the pressure between them keeping the one from slipping on the other, as a friction-clutch. Clutches are much used where parts of a machine are to be run independently; where it is desired to stop and start different parts in succession; where varying demand of resistance through the day makes it desirable to run units of different capacities at different times, without stopping some continuous motion; and where different floors of a factory stop and start at different times. Clutches of gradual action are preferred, by reason of the avoidance of shock, when machinery at rest is to be started from parts already moving. When reversing is to be done from a source of power which always turns in one direction, a clutch will be required. This condition is present in most of the motor-cars operated by internal combustion engines. See *bayonet-clutch*, ★*coal-clutch*, ★*expanding-clutch* (with cut), ★*jaw-clutch*, ★*ratchet-clutch* (with cut), *Weston* ★*clutch*.

6. *Naut.*: (*a*) A forked stanchion. (*b*) The throat of a patent anchor.—**7.** Oyster spawn.

Catch-and-ratchet clutch, a form of engaging and disengaging mechanism in which two parts or elements are made, by a ratchet action, to engage and act as driver and driven. *Nasmith*, Cotton Spinning, p. 319.—**Coil-clutch.** See ★*coal-clutch*.—**Individual-clutch transmission.** See ★*transmission*.—**Magnetic clutch,** a device for causing a pulley to revolve with the shaft upon which it is mounted, and for releasing the pulley when not in use, by means of electromagnets.—**Weston clutch,** a form of multiple friction-clutch, devised by Thomas Weston, in which alternate disks form the contact- and driving-surfaces. Those of one set are compelled to turn with the driving-shaft, the alternate ones in turning must turn the exterior cylindrical shell which incloses them, and this shell is keyed to the other shaft. When the disks are compressed by pressure parallel to the shafts, they bear on each other's faces, and gradually compel the driven element to come to the speed of the driver. When all are at common speed there is no slipping.



Weston Clutch.

a, driving-shaft; *b*, hollow cylinder keyed to *a*; *c*, pressure-disk sliding lengthwise on *f*; *d*, friction-disks capable of slight motion parallel to shaft, but compelled by ribs on *b* to turn with it; *e*, friction-disks capable of slight motion parallel to shaft, but compelled by a feather, *g*, to turn with the driven or follower-shaft, *f*; *g*, feather. When *c* presses *d* and *e* together, *a* driving *b* and *d* will compel *e* to drive *f* by friction between the contact surfaces.

clutch-block (kluch′blok), *n.* The bolt or block which, in a positive clutch, locks one part of the clutch to the other.

clutch-box (kluch′boks), *n.* **1.** A cover or box surrounding a clutch to keep dirt, etc., out of the clutch and protect the hands of the operator from the danger of being caught. —**2.** An essential part of the Heilmann cotton-comber for detaching and delivering the combed sliver.

clutch-coupling (kluch′kup-ling), *n.* Same as *clutch*[1], 2.

clutch-plate (kluch′plāt), *n.* A plate for operating a clutch; a plate which carries a clutch, or to which a clutch is fastened; a plate which carries pins, or is slotted to receive pins, so that when it is moved it will operate a clutch.

clutch-sleeve (kluch′slēv), *n.* A sleeve or boss attached to a clutch. It is usually slotted, or a groove is turned in it so that it is free to turn with the clutch and can also be connected to a stationary operating-lever.

clutch-spool (kluch′spōl), *n.* That part of a friction-clutch which engages with the clutch-block. Usually, a part which enters a recess in the clutch-block.

clutch-wheel (kluch′hwēl), *n.* Same as ★*clutch-box*, 2. *Taggart*, Cotton Spinning, II. 46.

clutter[2], *v.* **II.** *intrans.* To jumble words together in speaking, clipping syllables and dropping consonants.

Clydesdale (klīdz′dāl), *n.* A breed of heavy draft-horses originally raised about the Clyde, Scotland.

Clydonautilus (klī-dō-nâ′ti-lus), *n.* [NL. for **Clydononautilus*, ⟨ Gr. κλύδων, a wave, + ναυτίλος, nautilus.] A genus of fossil nautiloid cephalopods with coiled involute shells and lobed septal sutures like those of the goniatites. It is from the Triassic rocks.

Clydonites (klī-dō-nī′tēz), *n.* [NL., ⟨ Gr. κλύδων, a wave, + *-ites*.] A genus of fossil ammonoid cephalopods or ammonites from the Triassic rocks, including primitive forms with simple septal sutures.

clyer, clyre, *n.* See ★*clier*.

clymene (klī-mēn′), *n.* [Appar. ⟨ L. *Clymene*, name of a nymph: see *Clymenia*.] The trade-name of an odoriferous material of unpub-

lished composition. It is used, among other purposes, for psychophysiological tests of the power of smell.

clymenioid (kli-mē′ni-oid), *a.* and *n.* **I.** *a.* Resembling or having the characters of *Clymenia.*

II. *n.* One of the *Clymeniidæ.*

Clypeastrina (klip″ē-as-trī′nä), *n. pl.* [NL., prop. *Clypeasterina*, ⟨ *Clypeaster* (a genus), + *-ina*[2].] A suborder of irregular *Echinoidea*, of the order *Gnathostomata.* They have powerful jaws which move only horizontally and are without braces and compasses; the teeth are placed in pyramids which articulate by a socket fitting on to vertical processes; and the ambulacra are petaloid.

Clypeus anterior, in *entom.*, the anterior portion of the clypeus when this is divided by a transverse suture.

Clypeus posterior, in *entom.*, the posterior portion of the clypeus when it is divided by a transverse suture.

clysma (kliz′mä), *n.*; pl. *clysmata* (-mä-tä). [NL., ⟨ Gr. κλύσμα, a drench, a clyster, ⟨ κλύειν, wash, drench.] Same as *clyster.*

clyssus, clissus (klis′us), *n.* [NL. *clyssus*, prob. for *clissus*, and that perhaps for **clisis*, ⟨ Gr. κλεῖσις, κλῆσις, a closing up (hence reunion, recomposition), ⟨ κλείειν, close: see *clisto-.*] A chemical term of the iatrochemical period, used with more or less vagueness to signify the material essence of a substance or a mixture of substances.

clyster (klis′tėr), *v. t.* [*clyster, n.*] To administer a rectal injection: same as *clysterize.*

C. M. An abbreviation (*b*) of *Certified Master;* (*c*) of *Church Missionary;* (*d*) of *common meter;* (*e*) of *corresponding member.*

C. M. D. An abbreviation of *common meter double.*

C. M. G. An abbreviation of *Companion of St. Michael and St. George.* See *order.*

cml. A contraction of *commercial.*

C. M. S. An abbreviation of *Church Missionary Society.*

c. m. s. An abbreviation of the Latin *cras mane sumendus*, in medical prescriptions, 'to be taken to-morrow morning.'

Cneoraceæ (nē-ō-rā′sē-ē), *n. pl.* [NL. (Engler, 1890), ⟨ *Cneorum* + *-aceæ.*] A family of dicotyledonous, choripetalous plants of the order *Geraniales*, the widow-wail family, formerly included in the family *Simaroubaceæ*, but now placed by Engler between the *Zygophyllaceæ* and the *Rutaceæ.* It consists of the genus ★*Cneorum* only (which see) and *widow-wail*, 1.

Cneorum (nē-ō′rum), *n.* [NL. (Linnæus, 1753, first used by him in 1737), ⟨ Gr. κνέωρον, the name of some flower used for garlands; according to some a nettle, but taken by botanists to be *Daphne Cneorum* or *Daphne Gnidium.* This plant was called by the early botanists *Thymelæa* ('thyme-olive') and thus connects with *Chamælea* ('ground-olive'), Tournefort's name for the genus *Cneorum.*] A genus of dicotyledonous evergreen shrub-like plants, the type and only genus of the family *Cneoraceæ.* It is characterized by the small axillary cymose or solitary yellow flowers, and the entire linear-oblong or spatulate, coriaceous leaves. Twelve species are known, all natives of the Mediterranean region and the Canary Islands. *Cneorum tricoccum* and *C. pulverulentum* are sometimes cultivated. See *widow-wail*, 1.

Cneorum tricoccum.

a, branch with flowers and fruit; *b*, flower; *c*, disk with stamens and gynæcium attached; *d*, fruit; *a*, two thirds natural size; *b*, *c*, and *d*, enlarged. (From Engler and Prantl's "Pflanzenfamilien.")

Cnidian (nī′di-ąn), *a.* [Gr. Κνίδιος, ⟨ Κνίδος, L. *Cnidus.*] Of or pertaining to ancient Cnidus in Asia Minor. **Cnidian school,** a very early school of medicine in Greece, existing before that of Hippocrates.

cnidocyst (nī′dō-sist), *n.* [Gr. κνίδη, a nettle, + κύστις, bag (cyst).] A nematocyst.

cnidogenous (nī-doj′e-nus), *a.* [Gr. κνίδη, nettle, + -γενής, -producing.] Producing or containing nematocysts: as, the *cnidogenous* sacs of certain mollusks.

The hepatic cæca in the dorsal papillæ of Eolidoidea actually communicate with the *cnidogenous* sacs at their extremity. *Encyc. Brit.*, XXX. 797.

cnidophore (nī′dō-fōr), *n.* [Gr. κνίδη, a nettle, + -φορος, ⟨ φέρειν, bear.] A part or organ that bears cnidoblasts.

Cnidophores are distinctly visible round the edge of the mantle. *Proc. Zool. Soc. London*, 1903, I. 252.

cnidophorous (ni-dof′o-rus), *a.* Bearing cnidoblasts.

cnidosac (nī′dō-sak), *n.* [Gr. κνίδη, a nettle, + σάκκος, sack: see *sac, sack*[1].] The enlarged middle parts of a tentillum in certain *Siphonophora*, bearing numerous nematocysts. See the extract.

The tentacle [in *Diphyes*] is tubular and is beset with a series of lateral tentilla, also tubular. Each tentillum is composed of three parts—(1) a thin pedicle or proximal part, (2) a dilated middle part, the *cnidosac*, and (3) a slender terminal filament. The swelling of the *cnidosac* is due to a rich development of nematocysts of various kinds, forming the battery.

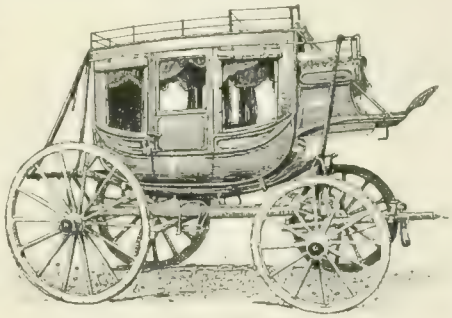
Sedgwick, Text-book of Zool., I. 146.

cnidosphere (nī′dō-sfēr), *n.* [Gr. κνίδη, nettle, + σφαῖρα, sphere.] In *Siphonophora*, as certain *Disconectæ*, one of the spherical knobs composed of cnidoblasts borne on the tentacles.

C. O. An abbreviation (*a*) of *Commanding Officer;* (*b*) of *Colonial Office.*

coacervate, *a.* **2.** In *bot.*, densely crowded together; clustered.

coach, *n.*, **4.** (*c*) In base-ball, one of the players belonging to the side at the bat who takes his position near either first or third base and advises the base-runner when to run.—**6.** A tame bullock or horse used as a decoy in capturing wild cattle or horses. [Australia.]—**Calash coach.** See ★*calash.* **Concord coach,** a heavy coach-body hung upon leather thorough-braces and having a detached driver's seat in front and a covered baggage-rack at the rear. It originated in Concord, New Hampshire. **Drawing-room coach,** a coach without upper door-pillars. The quarters are paneled one half their depth and the low door has a drop-light. The large openings thus permitted on the sides can be closed by sliding the quarter-lights and raising the door-lights.



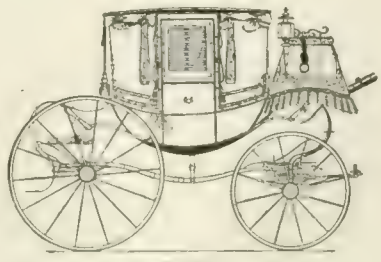
Concord Coach.

coach, *v. t.* **4.** To capture (wild cattle or horses) with the help of a tame bullock or horse as a decoy: see ★*coach, n.*, 6. [Australia.]

coach-band (kōch′band), *n.* A metallic thimble used upon the outer end of the hub of a wheel of a vehicle, both as an ornament and as a protection to the wood.

coach-bridle (kōch′brī″dl), *n.* A heavy bridle with large winkers, broad front-band, drop face-piece, nose- and chin-pieces, and generally check-straps.

coachee, *n.* **2.** A style of coach highly popular in the southern United States before 1860.



Coachee.

The body had but four pillars, those at the doors, the top resting upon these and upon scrolled supports at the ends. It had a hammer-cloth seat, and a foot board at the rear. The quarters were inclosed with curtains instead of panels or glasses. **Coachee rockaway.** See ★*rockaway.*

coach-harness (koch′har nes), *n.* A heavy harness for a team of horses used with a heavy coach.

coach-hinge (koch′hinj), *n.* A heavy hinge with long narrow flaps which shut flat on the insides, used on carriage-doors.

coach-lace (kōch′lās), *n.* A hard woven ribbon with an ornamental face and a plain back: used as a trimming material for carriages.

coach-lock (kōch′lok), *n.* A thin box with a flat securing-surface at right angles with the side. The bolt is retained in the box and is operated by a square bar on a coach-handle.

coachmaker's vise. See ★*vise*[2].

coachman, *n.* **3.** In *angling*, an artificial fly, named for a Herefordshire stage-coach driver who was famous as a fly-fisher. It is composed of a copper-colored peacock harl body, white swan or other white feather wings, and red cock-hackle.—**4.** Same as ★*coach-whip bird.*

coach-pad (kōch′pad), *n.* In a harness, a frame of iron covered with leather and provided with two pads or cushions on the under side. The frame is fitted with holes for attaching the hooks and terrets. The soft pad has no iron frame, heavy leather being used instead. A self-adjusting pad is one that has hinged sections attached to the lower arms of the frame which allow the cushions to adjust themselves to the back of any horse.

coach-varnish (kōch′vär″nish), *n.* Any hard varnish used on coaches.

coach-whip, *n.* **4.** The ocotilla, *Fouquieria splendens*, so called from the long, leafless, lash-like branches. See *Fouquieria* and ★*ocotilla.*—**Coach-whip bird,** an Australian name for birds of the genus *Psophodes:* given on account of the resemblance of their notes to the crack of a whip. Also called *coachman*, for the same reason.

coad. An abbreviation of *coadjutor.*

coadministrator (kō-ad-min′is-trā-tor), *n.* One who is joint administrator with one or more other persons.

coadministratrix (kō-ad-min-is-trā′trikz), *n.* A female coadministrator.

coagulin (kō-ag′ū-lin), *n.* [Also *coaguline;* ⟨ *coagul(ate)* + *-in*[2].] An adaptation-product which causes coagulation. Immunization with milk will thus call forth the production of a coagulin which coagulates milk. These bodies are very similar to, and are possibly identical with, the precipitins.

coagulometer (kō-ag-ū-lom′e-tėr), *n.* [Irreg. ⟨ L. *coagulare*, coagulate, + Gr. μέτρον, measure.] An apparatus in the form of a graduated tube, used to determine (*a*) the rapidity of coagulation of any given specimen of blood, or (*b*) the coagulating power of any substance when added to a definite quantity of blood.

coal, *n.*, **2.** In *anthracite* and *semi-anthracite coal* the volatile matter constitutes from 3 to 10 per cent. of the whole; in *graphitic anthracite*, from 1 to 3 per cent.; in *bituminous coal*, from 25 to 30 per cent.; and in *semi-bituminous*, from 5 to 20 per cent. Coals which are used for the production of coke are bituminous, and are called *coking-coals* (see *coke*[1]); *furnace-coals* are those suitable for use in a blast-furnace. Other varieties of bituminous coal are *steam-coal, blacksmith's coal*, and *gas-coal*, which have well-defined characteristics fitting them for special uses. *Cannel-coal* is a dense, fine-grained coal, apparently deposited as a sediment containing much ash but rich in volatile matter. *Block-coal* breaks into cubical masses, and *splint-coal* into long pieces. *Peacock-coal* is iridescent coal. Anthracite coal is usually graded into six sizes, pea, chestnut, stove, egg, broken, and steamboat, the last being the largest. *Buckwheat-coal* and *rice-coal* are smaller than pea, and *cherry* larger. There are also many well-recognized varieties of anthracite coal, as free-burning, slow-burning, red ash and white ash for domestic use, steam-coal, furnace-coal, etc.—**Altogether coal,** coal as it is mined, unassorted; the run-of-the-mine coal.—**Black coal,** coal slightly burned by igneous rock. [Scotch.] *Barrowman*, Glossary.—**Bony coal,** a coal containing so much shaly matter as to leave an excessive residue after burning. *U. S. Geol. Surv.*, 1902, p. 279.—**Broken coal,** coal of the next to the largest commercial size; larger than egg-coal, but smaller than steamboat-coal. It will pass through a 4-inch hole but not through a 2½-inch hole.—**Burnt coal,** *n.* Same as *black* ★*coal.*—**Coal battery.** See ★*battery.*—**Coal flora,** the flora of coal-bearing deposits: applicable to those of any age, but used chiefly for those of Paleozoic age; especially the flora of the coal-measures. See *coal-measures* and *coal-plant.*—**Coal porcelain.** See ★*porcelain.*—**Craw,** or **crow, coal,** a thin seam of inferior coal. Also *craws.* [Scotch.]—**Non-coking coal.** (*a*) Coal which will not undergo a distillation of its volatile elements, leaving a residue in porous state, mainly consisting of fixed carbon and the incombustible elements or ash. (*b*) Coal which will not fuse together and cohere in masses when burned. It is desirable that coal should do this for forge fires in certain kinds of work.—**Run-of-the-mine coal,** coal as it comes from the mine in unsized and unsorted lumps: said especially of bituminous coal, which is too soft and friable to pass through a breaker and screens without reducing much of it to unsalable dust.

Large coal passed through the crusher almost invariably yields coke of above the average quality of that produced from "run-of-mine" or unscreened coal.
Sci. Amer. Sup., April 1, 1905, p. 24459.

Steam coal, coal that may be used in heating steam-boilers; in England, a bituminous, non-coking variety of coal with a medium percentage of volatile matter and burning with a flame of medium length.

coal-bag (kōl'bag), *n.* 1. A bag for holding coal.—2. Same as *coal-sack*, 2.

coal-ball (kōl'bâl), *n.* A nodular concretion, usually of pyrite or calcite, in association with a coal-seam. *Rep. Brit. Ass'n Advancement of Sci.*, 1902, p. 811.

coal-bearer (kōl'bär ėr), *n.* See ★*bearer*, 14.

coal-box, *n.* A buggy with high side-panels, cut down forward of the seat as low as possible and originally without a top.

coal-breaking jack. See *jack*[1], 11 (*i*) (1).

Coalbrook Dale porcelain. See ★*porcelain*.

coal-cellar (kōl'sel″ėr), *n.* A cellar used for storing coal, as for domestic use.

coal-crusher (kōl'krush ėr), *n.* A machine for crushing the lumps in coal to reduce them either to small pieces or to a powder; a coal-breaker.

coal-cutter (kōl'kut ėr), *n.* A machine for holing or undercutting coal.

coal-deposit (kōl'dē-poz″it), *n.* A coal-bed or coal-seam.

coal-drift (kōl'drift), *n.* An entry or haulage-road of a coal-mine which starts at the outcrop and follows the bed. See *gangway*, 3. *N. E. D.*

coal-dust engine. See ★*engine*.

coalescence, *n.* 3. In *psychol.*: (*a*) the combination of a number of sensible data into a single object-perception.

In this *coalescence* in a 'thing,' one of the coalescing sensations is held to be the thing, the other sensations are taken for its more or less accidental properties.
W. James, Text-book of Psychol., p. 339.

(*b*) The unremarked assimilation of a mental content to other mental contents or to conscious dispositions.

Suppose the components of the one combination are *a*, *b*, *c*, and of the other *a*, *b*, *x*; *c* may be so favored from the outset that it simply displaces *x* without any feeling of discrepancy arising, and without any attention to the difference. This process I call overlapping or *coalescence*. *G. F. Stout*, Anal. Psychol., I. 285.

Law of molecular coalescence, the law that crystals in an albuminous or colloidal medium become rounded in form and coalesce in spheroidal masses.

coal-face (kōl'fâs), *n.* 1. The surface of coal exposed by mining.—2. The place where the coal is being mined.—3. The end of a drift or entry or room in a coal-mine.

coal-factor (kōl'fak″tọr), *n.* An intermediate agent between coal-owners and customers; in London formerly an officially recognized agent between the coal-owner or shipper and the coal-seller. *N. E. D.*

Owing to the combination of the *coalfactors*, no more coals can come into the market than are sufficient to meet the demand without lowering the price.
Mayhew, London Labour, III. 245.

coal-fauld (kōl'fâld), *n.* In *mining*, a storing-place for coal. [Scotch.]

coalfish, *n.* 2. A fish, *Anoplopoma fimbria*, of the family *Anoplopomatidæ*, found in the North Pacific.—3. The pollack, *Pollachius virens*.

coal-heugh (kōl'hūch), *n.* A coal-pit or coal-mine. [Scotch.]

coal-hewer (kōl'hū″ėr), *n.* A person who digs coal; a collier.

coal-hill (kōl'hil), *n.* In *coal-mining*, ground occupied as a pit-head or mine-opening for colliery purposes. [Scotch.]

coaling-boom (kō'ling-bōm), *n.* A kind of derrick-boom used for loading coal into a ship from lighters or colliers.

coaling-chute (kō'ling-shōt), *n.* In *ship-building*, a large pipe or trunk through which coal is passed from the coaling-scuttles on the deck or side into the bunkers of a vessel.

coaling-scuttle (kō'ling-skut″l), *n.* In *ship-building*, a scuttle for loading coal into the bunkers.

coaling-station (kō'ling-stā″shọn), *n.* 1. A port at which steam-vessels may call and receive fresh supplies of coal. Coaling-stations with accumulations of coal and appliances for speedy coaling are maintained in various parts of the world by the great naval powers.

2. A station for the storage of coal for the use of the locomotives of a railroad. Two types are in use, namely, *terminal* and *through-service* coaling-stations. Terminal stations are very large coal-pockets with machinery for receiving and storing many tons of coal and for loading several locomotive-tenders at the same time. The through-service stations are smaller pockets, placed at convenient points along the line. The pockets may stand parallel with a track, with chutes at the sides arranged to fill several tenders in line on the track, may have a bridge over the track, or may be built directly over the track. See ★*coal-pocket* (with cut).

coaling-trunk (kō'ling-trungk), *n.* In *ship-building*, a trunk built into the structure of a ship for loading coal into the bunkers.

coal-jungle (kōl'jung″gl), *n.* One of the coastal swamps in which the coal-plants of Carboniferous or other geological period are supposed to have grown.

coal-measures, *n. pl.* In America and Great Britain a special significance attaches to this term in geological classification. In Pennsylvania the coal-measures are those strata which carry the productive coal-beds of Carboniferous age and all deposits intercalated between them, and they are divided into *lower productive*, *lower barren*, and *upper productive measures*. The coal-measures, with the millstone-grit at their base, constitute the upper division of the Carboniferous system. In Great Britain and on the Continent their relations are similar. —**False coal-measures**, strata including a series of coal-seams.—**Greta coal-measures**, in *geol.*, a division of the productive coal-measures in New South Wales. **Newcastle coal-measures**, in *geol.*, a subdivision of the coal-measures in New South Wales lying at the top of the series.

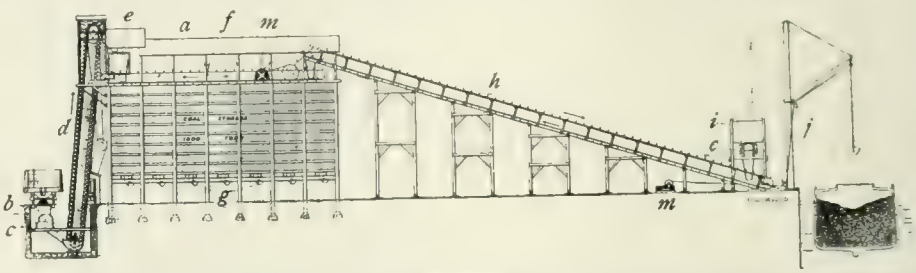
coal-merchant (kōl'mėr″chant), *n.* One engaged in buying and selling coal, as distinguished from a coal-master or a coal-operator who is engaged in producing coal.

coal-mill (kōl'mil), *n.* Same as ★*coke-mill*.

Coal-miners' phthisis. See *anthracosis*.

coal-naphtha (kōl'naf″thą or -nap″thą), *n.* The lighter and more volatile portion of the distillate from coal-tar, consisting chiefly of hydrocarbons of the benzene series, and therefore quite different from the naphtha obtained from petroleum, although in part applied to the same uses, as a solvent, to improve the illuminating character of gas, etc.

coal-pocket (kōl'pok″et), *n.* A structure for the storage of coal. It consists commonly of a group of deep and narrow bunkers, inclosed on the sides and by a roof, and supported on columns, the ground floor being open to allow the entrance of teams to the delivery-chute at the bottom of each bunker. The term includes the whole plant, with elevators, conveyers, weighing-machines, and other appliances for receiving, crushing, sorting, storing, and delivering the coal. The illustration shows a section of a motor-operated retail coal-pocket. At the left the car delivers the coal to the coal-crusher, which in turn delivers it, crushed to the required size, to the elevator, which lifts it to the top floor. There it passes through the weighing-hopper, which measures it, weighs it, records the weight, and delivers it to the horizontal conveyer by which it is transferred to the proper bunker, at the rate of 40 tons an hour. At the right the derrick delivers the coal from the boat to the crusher. Since the conveyer is reversible, the coal can be delivered to any bunker. See ★*conveyer*.



Coal-pocket.

a, pocket; *b*, car-dump; *c*, coal-crusher; *d*, elevator, discharging into weigher; *e*, weighing-machine, delivering to conveyer; *f*, conveyer distributing coal in either direction to bins; *g*, coal-chutes; *h*, inclined conveyer; *i*, receiving-pocket; *j*, bucket-hoist; *m*, motors.

coal-putter (kōl'pụt″ėr), *n.* See *putter*[1], 2.

coal-rashings (kōl'rash″ingz), *n. pl.* In *coal-mining*, soft dark shale, in small pieces, containing much carbonaceous matter. [Eng.]

coal-room (kōl'rōm), *n.* In *coal-mining*, a room excavated in coal, usually 5 to 10 yards wide and 100 yards, more or less, in length, and separated from adjoining rooms by pillars of solid coal. See *room*[1], 11, and *heading*, 10 (*b*).

coal-salt (kōl'sâlt), *n.* Fine-grained common salt obtained from brine by surface-evaporation: so called because generally discolored by soot from the flame passing over the evaporating-pan. *G. Lunge*, Sulphuric Acid, II. 249.

coal-seam (kōl'sēm), *n.* A layer or bed of coal.

coal-slack, *n.* See *slack*[2].

coal-slake (kōl'slāk), *n.* See *coal-slack*, 2.

coal-storage (kōl'stōr″āj), *n.* In *railroading*, the storing of coal for the use of locomotives. It may be stored in an open yard, in heaps, or under a trestle, or in a building. The larger open-air storage-yards are filled with coal, by means of a cable-way, conveyer, or elevator, directly from the boat or car, the coal being distributed by means of a reloader, elevator, or conveyer. In using an elevator a large A-shaped crane is erected in the yard, the elevator traveling up one leg of the A and delivering the coal at the top. The space under the crane is thus filled with coal in a conical heap. Another storage-system employs combined elevators, conveyers, and reloading conveyers for receiving, storing, and delivering coal in large bunkers, from cars and to cars and locomotives, the whole plant being inclosed.

coal-swamp (kōl'swomp), *n.* A coastal lagoon, of the Carboniferous or other geological period, overgrown with the vegetation from which coal-beds have been formed.

Coal-tar bate. See ★*bate*[5].—**Coal-tar colors.** They are classified as follows: (*a*) According to their source (that is, according to the raw materials to which they are related), into *aniline colors*, *naphthalene colors*, *anthracene colors*, and *phenol colors*. This method of classification is but little used at the present time. (*b*) According to their composition, into at least 20 different types of coloring-matters, the following being the classification adopted in A. E. Green's translation of Schultz and Julius's "Systematic Survey of the Organic Coloring Matters." This classification is chiefly used by color-manufacturers and color-chemists: (1) nitro coloring-matters; (2) monoazo coloring-matters; (3) diazo coloring-matters; (4) triazo coloring-matters; (5) tetrakisazo coloring-matters; (6) nitroso or quinoneoxime coloring-matters; (7) stilbene coloring-matters; (8) oxyketone, oxylactone, and oxyquinone colors (excluding anthracene derivatives); (9) diphenylmethane coloring-matters; (10) triphenylmethane coloring-matters; (11) xanthene coloring-matters (pyronines, phthaleins, and rhodamines); (12) acridine coloring-matters; (13) anthracene coloring-matters; (14) indophenols, indamines, and allies; (15) azines and azonium coloring-matters (eurodines, safranines, indulines, and rosindulines); (16) oxazine coloring-matters; (17) thiazine coloring-matters; (18) thiazol or thiobenzenyl coloring-matters; (19) quinoline coloring-matters; (20) sulphid coloring-matters. (*c*) According to their application, into 10 groups: (1) basic colors; (2) phthalic anhydrid colors; (3) acid colors; (4) direct cotton colors; (5) sulphid colors; (6) insoluble azo colors; (7) mordant-acid colors; (8) mordant colors; (9) reducible vat colors; (10) aniline black. This classification is used by textile-colorists.—**Coal-tar creosote.** See ★*creosote*.—**Coal-tar naphtha.** Same as ★*coal-naphtha*. **Coal-tar remedies**, various substances used in medicine which are made synthetically from coal-tar and its derivatives: acetanilide and antipyrin are remedies of this class.

coalternate (kō-al-tėr'nāt), *a.* [*co-*[1] + *alternate*.] Doubly alternate.—**Coalternate fever.** Same as *double fever* (which see, under *fever*[1]).

co-altitude (kō-al'ti-tūd), *n.* The complement of the altitude (90° minus the altitude). Same as *zenith-distance*.

coal-vein (kōl'vān), *n.* A layer of coal; a coal-seam.

coal-vend (kōl'vend), *n.* 1. The general sale of coals.—2. The limited quantity of coal to which each colliery was restricted by a former combination of coal-owners on the Tyne and Wear. *N. E. D.* [Eng.]

coal-wall (kōl'wâl), *n.* In *mining*, same as ★*coal-face*, 3.

coal-washery (kōl'wosh″ę-ri), *n.* An establishment where coal is cleaned from slate and other impurities by mechanical processes which use water and take advantage of the difference in specific gravity of the coal and its impurities.

coaly[3] (ko'li), *n.* [*coal* + dim. *-y*[2]. Cf. *coacher*, *bargee*, etc.] A coal-heaver. [Eng.]

coal-yard (kōl'yärd), *n.* A yard or area in which a supply of coal is kept in bins or heaps to meet the demands of customers.

Coaptation splint, a splint made of several longitudinal strips pasted upon a piece of cloth.

coarcture (kō-ärk'tūr), *n.* In *bot.*, same as *collar*, 2 (*b*) (3). *Grew*.

coarse, *a.* 6. In *pathol.*, rough; hoarse: said of the respiratory note or of râles heard in auscultation of the chest.

coartation (kō-är-tā'shọn), *n.* [More correct form of *coarctation*.] In *logic*, the restriction of a term to denote a narrower range of objects than usual.

coassignee (kō″as-i-nē'), *n.* One of several joint assignees.

coassine (kō-as'in), *a.* [NL. *Coassus*, a genus name of S. Amer. origin.] Of or relating to

the small South American spike-horned deer of the genera *Coassus* and *Pudu*, which form a group of American deer.

coast, *v. i.* **8.** To glide along swiftly through the air with motionless wings, as a bird.

This explanation of soaring flight, viz., gliding in an uprising current, accounts for the birds exhibiting no trace of fatigue even after "*coasting*" long distances.
Sci. Amer. Sup., June 11, 1904, p. 23778.

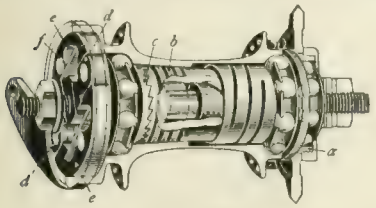
9. To loaf about from station to station. [Slang, Australia.]

coastal, *a.* **Belted coastal plain.** See ★*plain*[1]. **Coastal plain.** See ★*plain*[1].—**Embayed coastal plain.** See ★*plain*[1].

coaster, *n.* **3.** A loafer. See ★*coast, v. i.*, 9. [Slang, Australia.]—**4.** A name applied to cattle bred on or near the coast.

Many times fine specimens have been purchased at long prices, but landed in the hands of the Philistines, with dire results to the offspring—bodies that could not make a shadow, and horns of the Texas *coaster*—all from the lack of decent care.
Rep. Kan. State Board of Agr., 1901-02, p. 154.

coaster-brake (kōs'tẽr-brāk″), *n.* A brake used on bicycles which is applied by rotating the



Coaster-brake.

a, driver attached to sprocket and revolving with it. When driven forward by pedal-effort, the screw threads on *a* draw *c*, the clutch proper, into frictional contact with the conical interior surface of the hub-shell, and the wheel is driven as in common types of hub. When the pedals are stopped, *a* and *b* stop, while the hub-shell keeps on, so that *b* moves out of contact with the hub-shell and into engagement with *c*, the brake-clutch. The wheel now coasts so long as pedals are held stationary. When *b* is turned backward, *c* presses against *d*, the brake-levers, forcing outward *e*, the brake-shoes. *f*, springs which release the shoes *e*, when the pressure on the pedals is removed.

pedals backward, and is automatically thrown off if the pedals are rotated forward. If, when pedaling forward, the feet are stopped and held still, the brake is not applied, and in this position the rider can coast or ride down a grade without moving the feet, while by giving a small rotation backward the brake is applied; hence the name.

coasting, *n.* **4.** In *railroading*, the act of allowing a train or a car to run upon a down grade by its own gravity, without steam or electric power. [U. S.]

coasting-lead (kōs'ting-led), *n.* See *lead*[2], 2.

coasting-vessel (kōs'ting-ves″el), *n.* A vessel which plies only along the coast.

coast-liner (kōst'lī″nẽr), *n.* A surveyor engaged in mapping a coast-line.

It is with the high-water line that the *coast-liner* is concerned, delineating its character according to the Admiralty symbols. *Encyc. Brit.*, XXXIII. 102.

coast-lining (kōst'lī″ning), *n.* The delineation of a coast-line.

Coast-lining. In a detailed survey the coast is sketched in by walking along it, fixing by theodolite or sextant angles, and plotting by tracing-paper or station-pointer. A sufficient number of fixed marks along the shore afford a constant check on the minor coast-line stations, which should be plotted on, or checked by, lines from one to the other wherever possible to do so.
Encyc. Brit., XXXIII. 102.

coat[2], *n.*—**Disguise coat,** the first coat of lead-color put upon the gear of a vehicle, as a cover for the iron and wood, before laying on the colors.—**Eton coat** or **jacket.** (*a*) A boy's short black coat or jacket, reaching to the waist, worn with a wide turned-over stiff linen collar: formerly the distinctive dress of Eton College, England, but now worn by boys of many schools or of suitable age to go to school. (*b*) A somewhat similar jacket worn by women.—**Inverness coat, overcoat,** or **cape,** an overcoat, rather close-fitting, and worn with or without a long heavy cape. The cape may be worn separately, hence the garment is known by all three names.—**Prince Albert coat,** a double-breasted frock-coat, longer than the ordinary morning coat: worn in the daytime on ceremonial occasions.—**Staring coat,** as used by veterinarians and farmers, a dry condition of the skin (especially of horses and cattle), with harsh, rough hair. The individual hairs, being very dry, do not adhere to one another or take their normal position, but stand apart in irregular order.—**Tuxedo coat,** a kind of dress-coat for evening wear, made without skirts: named for a country club at Tuxedo Park, New York: usually shortened to Tuxedo. [U. S.] **Wash coat,** in lath-and-plaster work, the last thin finishing coat of fine plaster: properly, the white coat or finishing coat. [Seldom used.]

coated (kō'ted), *p. a.* **1.** Provided with a coat; wearing a coat.—**2.** Having a covering (of any kind); as, *coated* nuts (coated with sugar); chocolate-*coated* marshmallows; a *coated* tongue.

coating-machine (kō'ting-mạ-shēn″), *n.* **1.** In *candy-making*, a machine for coating and finishing chocolate candies. It consists of a paper-covered traveling-apron, or wire netting, combined with steam-heated tanks holding liquid chocolate and a suitable mechanism for delivering the liquid in a thin stream upon the apron. The nuts, fruits, pastes, etc., to be coated are placed upon the apron, pass through the stream of liquid chocolate, and are completely coated, the surplus falling through the openwork apron into a tank below. An air-blast also assists in removing the surplus chocolate and cooling the finished candies.

2. A pneumatic paint-spreading machine or air-brush; a painting-machine.—**3.** In *photog.*, a machine for coating glass or paper with a sensitive film. *Woodbury*, Encyc. Dict. of Photog., p. 107.

coat-tack (kōt'tak), *n.* A short, broad-headed copper nail for securing a canvas coat around a mast close to the deck.

coattest (kō-ạ-test'), *v. i.* In *law*, to attest together.

coattestation (kō-at-es-tā'shọn), *n.* Joint attestation by several persons at one time and in one place. See *attestation*.

coattestator (kō-at'es-tā-tọr), *n.* One of several attesting witnesses to the same act or instrument.

coattribute (kō-at'ri-būt), *n.* An attribute of the same substance or subject.

coattribution (kō-at-ri-bū'shọn), *n.* The reciprocal relation of coattributes.

co-author (kō-ạ'thọr), *n.* A joint author.

Coaxial triangle. See ★*triangle*.

cob[2], *n.* **1.** (*f*). In *pharm.*, a cylindrical mass of crystals of lactose (sugar of milk) formed upon a stick or cord.—**12.** In *hort.*, a kind of filbert characterized by a short rounded nut borne in short open husks. The longer nuts, in long husks, are known as *true filberts*.—**13.** Any of the larger gulls, but more particularly the black-backed gull, *Larus marinus*. [Local, Eng.]

cob[3], *n.* In the United States the standard for a cob is somewhat larger than in England, a typical cob standing about 15 hands high and weighing from 1,000 to 1,050 pounds. A cob is smoother and more compact than a coacher and has shorter legs.

cob[8], (kob), *n.* [*cob*(*swan*).] Same as *cobswan*.

cobalt, *n.*—**Gray cobalt,** a name for smaltine and cobalt pyrites or linnæite.—**Tin-white cobalt.** Same as *smaltine*.

cobaltammine (kō'bâlt-am″in), *n.* [*cobalt* + *amine*.] Any one of an extensive series of compounds, the salts of which, obtained by the action of ammonia on salts of cobalt, in some cases with access of oxygen, are of much interest to the scientific chemist. They include diammines, triammines, tetrammines, pentammines, and hexammines, partly distinguished by characteristic colors.

cobaltiferous (kō-bâl-tif'ẽ-rus), *a.* [E. *cobalt* + L. *ferre*, bear.] Containing and capable of being used to produce cobalt. *Smithsonian Rep.* (*Nat. Mus.*), 1900, p. 363.

cobano (kō'bä-nō), *n.* [Porto Rican.] A magnificent, widely spreading leguminous tree, *Stahlia monosperma*, native to Porto Rico and found near the sea-coast. It yields a durable wood prized for house-building. Also called *polisandro*.

cobbing-belt (kob'ing-belt), *n.* A heavy flat strip of leather used in cobbing. See *cob*[7].

cobbing-board (kob'ing-bōrd), *n.* A flat piece of wood used in cobbing. See *cob*[7].

cobbing-staff (kob'ing-stâf), *n.* Same as ★*cobbing-stick*.

cobbing-stick (kob'ing-stik), *n.* A heavy piece of wood, resembling a yardstick, used in cobbing. See *cob*[7].

cobble[1], *n.* **7.** In general, any piece of iron or steel which is wasted during rolling or forging: specifically, an imperfectly puddled ball of iron which goes to pieces in the squeezer.

cobble-hedge (kob'l-hej), *n.* A fence of cobble-stones.

After a few steps Greta remembered the trick she had played on Paul, and craned her beautiful neck to see over the stone *cobble-hedge* into the field where she had left him. *Hall Caine*, A Son of Hagar, i. 5.

cobbler[1], *n.* **3.** The last sheep in the pen in sheep-shearing time, usually one that is hardest to shear. [Australia.]—**4.** (*a*) A small fish, *Fundulus heteroclitus*, found abundantly along the eastern coast of the United States. (*b*) The thread-fish, *Alectis ciliaris*, a fish with long filamentous dorsal and anal rays.—**Cobbler's chest.** See ★*chest*[1].—**Cobbler's end,** a waxed end.

cobbler-fish, *n.* **2.** See ★*Alectis*.

cobbra (kob'rä), *n.* [Also *cobra, kobbera*: native Australian.] The head; the top of a thing.

Coblentz stoneware. See ★*stoneware*.

Coblentzian (kob-lent'si-an), *n.* and *a.* [Named from *Coblentz*.] In *geol.*, the name given to the uppermost division of the Lower Devonian in central Europe. In Belgium the formation has a thickness of 700–800 feet, and portions of it are highly fossiliferous.

Cobleskill limestone. See *coralline* ★*limestone*.

cob-money (kob'mun″i), *n.* See *cob*[2], 8.

cobra[1], *n.*—**African cobra,** the asp, *Naja haje*.—**King cobra,** *Naja hannah* or *Ophiophagus elaps*, the largest of poisonous snakes and one of the most deadly. It reaches a length of 12 feet, is of an olive-color, with V-shaped bands and markings of a lighter tint, and is found from India to the Malay Peninsula, and in some of the Malayan islands.

cobraism (kō'brä-izm), *n.* [*cobra* + *-ism*.] Poisoning by cobra venom.

In the main these symptoms resemble those of *cobraism*, but the dyspnœa is more urgent.
Nature, July 14, 1902, p. 260.

cobra-lily (kō'brä-lil″i), *n.* *Candarum campanulatum*, a plant of the family *Araceæ*, widely distributed in tropical Asia and adjacent islands.

cobra-stone (kō'brä-stōn), *n.* Same as *chlorophane*, 1.

coburg, *n.* **2.** A primitive vehicle used in the south of England: an inclosed tilt-cart, with windows in the sides and a door in the rear.

Cobweb skipper, weaver. See ★*skipper*[1], ★*weaver*.

cobwork (kob'wẽrk), *n.* A structure made of logs laid with their alternate layers at right angles and with the ends secured to the layers above and below by dovetailing.

coca[1], *n.* **Mexican coca.** Same as *Mexican* ★*clover*.

cocaïnist (kō'kä-in-ist), *n.* [*cocaïne* + *-ist*.] One who is addicted to the use of cocaïne. *N. E. D.*

cocaïnomania (kō″kä-in-ọ-mā'ni-ä), *n.* [E. *cocaine* + Gr. *μανία*, madness.] Morbid addiction to cocïane; cocaïnism.

cocash (kọ-kash'), *n.* [Amerindian.] The red-stalk or purple-stem aster, *Aster puniceus*, of eastern North America, the root of which is stimulant, diaphoretic, and antispasmodic.

cocash-weed (kọ-kash'wēd), *n.* The golden ragwort, *Senecio aureus*.

cocayl (kō'kä-il), *n.* [*coca* + *-yl*.] An organic group, $(CH_3)NC_5H_7$, which, combined with the radical of oxypropionic acid, constitutes the base ecgonine, which, together with methyl alcohol and benzoic acid, is a saponification-product of the alkaloid cocaïne.

Coccaceæ (kok-kā'sẽ-ē), *n. pl.* [NL., < *coccus* (recognized in botany as a genus only in compounds, as *Micrococcus*, etc.) + *-aceæ*.] A family of *Schizomycetes* including globose forms. Cell-division takes place in 1, 2, or 3 planes. The principal genus is *Micrococcus*. See *coccus*, 1 (*c*).

coccelic (kok-sel'ik), *a.* [*coccus* + *-el* + *-ic*.] Noting a crystalline acid, $C_{20}H_{22}O_7$, found in *Cladonia coccifera*. It melts with decomposition at 178° C.

coccellinic (kok-se-lin'ik), *a.* [*coccel*(*l*)*ic* + *-in* + *-ic*.] Noting a crystalline acid, $C_{10}H_{12}O_4$, formed by the action of hydriodic acid on coccelic acid.

cocceric (kok-ser'ik), *a.* [*coccus* + *-er-* + *-ic*.] Derived from cochineal.—**Cocceric acid,** a crystalline monobasic acid, $C_{31}H_{62}O_3$, found combined with cocceryl alcohol in cochineal. It melts at 93° C.

coccerin (kok'se-rin), *n.* [*coccer-ic* + *-in*[2].] The cocceryl ester of cocceric acid, $C_{30}H_{60}(C_{31}H_{61}O_3)_2$. It is found in cochineal and melts at 106° C.

cocceryl (kok'se-ril), *n.* [*coccer-ic* + *-yl*.] The radical, $C_{30}H_{60}$, of cocceryl alcohol.—**Cocceryl alcohol,** a crystalline diacid alcohol, $C_{30}H_{60}(OH)_2$, found combined with cocceric acid in cochineal. It melts at 101-104° C.

coccidia, *n. pl.* **2.** [*cap.*] The *Coccidiidea*.

coccidial (kok-sid'i-ạl), *a.* [*coccidium* + *-al*[1].] Pertaining to, containing, or caused by *Coccidia*. *Jour. Exper. Med.*, Oct. 25, 1900, p. 166.

coccidid (kok'si-did), *a.* and *n.* **I.** *a.* Of or belonging to the homopterous insects of the family *Coccidæ*, the scale-insects.

II. *n.* A member of the family *Coccidæ*.

coccidin (kok'si-din), *n.* [Also *coccidine*; < *coccid* + *-in*[2].] The substance composing the plastinoid granules characteristic of *Coccidia*. *Labbé*.

coccidine (kok'si-din), *n.* Same as ★*coccidin*.

coccidioid (kok-sid'i-oid), *a.* [*coccidi*(*um*) + *-oid*.] Relating or pertaining to a coccidium.

Coccidioides (kok-sid″i-ō-i′dēz), *n.* [NL.] A problematical organism occurring as a parasite in man, and found as yet only in America. It first invades the skin, and may spread to the lymphatics and cause a chronic or acute malady which in the latter case is fatal in a short time. The disease resembles miliary tuberculosis in some respects, since immense numbers of small nodules are found in the infected viscera, each nodule containing one or two parasites, either free or lodged in a giant cell. By some the organism is considered to be a sporozoan. *Rixford and Gilchrist*, 1896.

Coccidiomorpha (kok-sid″i-ō-môr′fä), *n. pl.* [NL., < *Coccidium* + Gr. μορφή, form.] An order of *Sporozoa* consisting of the *Coccidia* and the *Hæmosporidia*. *Doflein.*

coccidiosis (kok-sid-i-ō′sis), *n.* [NL., < *coccidium* + *-osis.*] A disease caused by the presence of a parasitic coccidium. An affection of this nature in rabbits resembles cancer.

coccidium, *n.* **3.** [*l.c.*] One of the *coccidiidea.*

coccidology (kok-si-dol′ō-ji), *n.* [NL. *Coccidæ* + Gr. -λογία, < λέγειν, speak.] The scientific study of the *Coccidæ*, or scale-insects.

In the present state of *coccidology* any writer may well be excused for not accepting all the recently proposed innovations. *Science*, March 25, 1904, p. 501.

coccigenic (kok-si-jen′ik), *a.* [NL. *coccus* + *-genus*, -produced, + *-ic.*] Of coccus origin; caused by the presence of a micrococcus.

coccin (kok′sin), *n.* [Also *coccine*; < *coccus* + *-in*[2].] A term applied to two aniline dyes, both of a red color, one of which, also termed *safrosin*, *eosin scarlet*, *nopalin*, and *eosin BN*, is dinitrobromfluorescin, and the other, known as *coccin 2B* and as *crocein 3BX*, is the sodium salt of sulpho-α-azonaphthalin-sulpho-β-naphthol.

Coccinin B, an acid coal-tar color of the monoazo type, derived from amido-para-cresol, which dyes wool and silk red in an acid bath.

coccinite (kok′si-nīt), *n.* [*coccus* + *-in* + *-ite*[2].] A mineral found in Mexico in from red to yellow or green crystals and masses. It has been regarded as an iodide of mercury, but its true nature is doubtful.

coccobacillus (kok″ō-ba-sil′us), *n.*; pl. *coccobacilli* (-ī). [NL., < *coccus* + *bacillus.*] A very short bacillus resembling a coccus, as the *coccobacillus* of swine-plague. *Vaughan and Novy*, Cellular Toxins, p. 180.

coccochromatic (kok″ō-krō-mat′ik), *a.* In *diatoms*, having the color distributed in granular patches. Compare ★*placochromatic.*

coccogone (kok′ō-gōn), *n.* [NL. *coccogonium*, < Gr. κόκκος, a berry (spore), + γονή, generation, offspring.] A cell containing spores found in some of the blue-green algæ and resembling a sporangium.

Coccogoneæ (kok-ō-gō′nē-ē), *n. pl.* [NL., as *coccogone* + *-eæ.*] An order of the blue-green algæ which consist of but a single cell, although that is occasionally united in colonies embedded in a gelatinous matrix. They reproduce by means of spores formed within a coccogone.

coccogonium (kok-ō-gō′ni-um), *n.* [NL.] Same as ★*coccogone.*

coccoid[1] (kok′oid), *a.* and *n.* [*coccus* + *-oid.*] **I.** *a.* Berry-like; globular: applied to microorganisms.

II. *n.* An aggregation of spores of the blue-green alga *Nostoc.*

coccoid[2] (kok′oid), *a.* and *n.* [Gr. κόκκος, a berry, + εἶδος, form.] **I.** *a.* Resembling a coccus or micrococcus.

II. *n.* A spherical or ovoid bacterium.

coccolith, *n.* Harting has found that minute calcareous disks are separated out of a solution of limesul phate or lime chlorid by the action of ammonia generated by the decomposition of organic matter, and therefore it has been inferred that the coccoliths may be separated from the sea-water whenever organic decomposition is in progress in the presence of lime sulphate.

coccostean (ko-kos′tē-an), *a.* Related to the genus *Coccosteus* or the family *Coccosteidæ.*

coccosteid (ko-kos′tē-id), *n.* One of the *Coccosteidæ.*

cocculiferous (kok-ū-lif′e-rus), *a.* [NL. *cocculus* + L. *ferre*, bear.] Bearing coccules or cocci; cocciferous. See *coccus*, 1 (*a*).

cocculin (kok′ū-lin), *n.* [*Cocculus* + *-in*[2].] A crystalline, bitter neutral compound, $C_{19}H_{26}O_{10}$, found, together with picrotoxin, in *Cocculus Cocculus.*

coccygalgia (kok-si-gal′ji-ä), *n.* [NL., < Gr. κόκκυξ, coccyx, + ἄλγος, pain.] Same as *coccygodynia.*

Coccygeal fistula. See ★*fistula.*

coccygeopubic (kok-sij′ē-ō-pū″bik), *a.* In *anthrop.*, relating to the coccyx and to the pubic bone.—**Coccygeopubic diameter,** the distance from the tip of the coccyx to the lower border of the symphysis.

cochenillin (koch-e-nil′in), *n.* [*cochenille*, a form of *cochineal*, + *-in*[2].] An old name for carminic acid.

cochilsapote (kō″chil-sä-pō′tā), *n.* [Aztec *cochilzapotl*, < *cochi*, sleep, + *tzapotl*, a sweet, succulent fruit containing large seeds.] A Mexican tree, *Casimiroa edulis*, belonging to the *Rutaceæ*. It grows wild, but is also cultivated for the sake of its fruit, which is the size of a large apple and has an agreeable taste. It is said to induce sleep, and is also used as an anthelmintic; the leaves are employed as a remedy for diarrhea. Also called ★*iztactzapotl* or *white sapota.*

Cochilsapote (*Casimiroa edulis*).
a, branch bearing leaves and flowers, about one fifth natural size; *b*, longitudinal section of fruit, about one third natural size.

cochineal, *n.*—**Brilliant cochineal 2R and 4R.** Same as *palatine* ★*scarlet.*—**Cochineal red, scarlet.** See ★*red*[1], ★*scarlet.*—**Cochineal wax,** a solid wax extracted in small quantities from dried cochineal insects. It consists chiefly of an ester, coccerin, containing the radicals of a peculiar alcohol and acid, both of the fatty series.

cochinito (kō-chē-nē′tō), *n.* [Sp., dim. of *cochino*, a pig: see ★*cochino.*] A fish, *Xenurus punctatus*, of the family *Teuthididæ*, found on the Pacific coast of Mexico.

cochino (kō-chē′nō), *n.* [Sp., lit. a pig.] The oldwife, *Balistes vetula.*

cochl. An abbreviation of the Latin *cochleare*, a spoonful.

cochlea, *n.* **3.** In *bot.*, a closely coiled legume.

cochlearin (kok-lē-ä′rin), *n.* [*Cochlearia*[1] + *-in*[2]] A crystalline, camphor-like substance of doubtful identity, obtained from *Cochlearia officinalis* or spoonwort.

cochlearthrosis (kok″lē-är-thrō′sis), *n.* [NL., < *cochlea* + Gr. ἄρθρωσις, articulation.] A hinge-joint in which there is a slight lateral shifting of the surfaces on movement.

cochleiform (kok′lē-i-fôrm), *a.* [L. *cochlea*, snail-shell, + *forma*, form.] Having the form of a snail-shell. *Syd. Soc. Lex.*

cochleitis (kok-lē-ī′tis), *n.* [NL., < *cochlea* + *-itis.*] Inflammation of the cochlea of the ear. *Buck*, Med. Handbook, III. 683.

Cochlidiidæ (kok-li-dī′i-dē), *n.* Same as *Limacodidæ.*

cochlidiospermate (kok-lid′i-ō-spêr″māt), *a.* [L. *cochlea*, a snail-shell, + Gr. dim. -ιδιον + σπέρμα (τ-), seed.] Having convexo-concave seeds, as in some species of *Veronica.*

cochliodont (kok′li-ō-dont), *a.* [NL. *Cochliodus* (*-odont-*).] Having the characters of *Cochliodus* or of the *Cochliodontidæ.*

Cochliopodidæ (kok″li-ō-pod′i-dē), *n. pl.* [*Cochliopus* (*pod-*) + *-idæ.*] Same as *Limacodidæ.*

cochlite (kok′līt), *n.* [Gr. κόχλος, a spiral shell, + *-ite*[2].] A fossil spiral shell or its cast.

Cochloceras (kok-los′e-ras), *n.* [Gr. κόχλος, a spiral shell, + κέρας, a horn.] A genus of degenerative ammonoid cephalopods or ammonites having a ribbed, turreted, spirally coiled shell and very simply lobed septal sutures. It is typical of the family *Cochloceratidæ*, and occurs in Triassic rocks.

(From Zittel's "Paleontology.")

Cochranea (kok-rā′nē-ä), *n.* [NL. (Miers, 1868), named in honor of Thomas *Cochrane* (1775–1860), a British naval commander who served as the first admiral of the navy of Chile.] A genus of plants of the family *Boraginaceæ*. They are branching perennials or shrubs, with small, alternate, entire or undulate leaves, and flowers in terminal cymes or scorpioid spikes. There are four species, natives of southern South America. One of them, *C. anchusæfolia*, has been naturalized in the southern United States, where it is known as *false heliotrope.*

Cochrane gambit. See ★*gambit.*

cochucho (kō-chō′chō), *n.* [S. Amer.?] Same as ★*coco*[2].

cocillaña (kō-thēl-yän′yä), *n.* [Bolivian Sp.] A tree, *Guarea Rusbyi*, of the Bolivian Andes, which yields a valuable medicinal bark having expectorant, tonic, and laxative properties.

cocinera (kō-thē-nā′rä), *n.* [Sp., fem. of *cocinero*, a cook, < *cocina*, kitchen: see *kitchen.*] A fish, *Caranx vinctus*, found on the Pacific coast of Mexico and Central America.

cocinero (kō-thē-nā′rō), *n.* [See ★*cocinera.*] A common name of *Caranx caballus*, a carangoid fish found on the Pacific coast of North America from Mexico to Panama.

cock[1], *n.* **Cock-end stone,** the upper jewel of the balance of a watch. **Half-cock stroke.** See ★*stroke.*

Pull-down cock, a faucet opened by pulling down a rod fastened to the lever or handle of the valve.—**Release cock.** See ★*release-cock.*—**Three-way cock,** a valve having three openings, usually so arranged that any two can be connected or all can be closed.

cock-a-bondy (kok-a-bon′di), *n.* [Also *cock-a-bundy*, *cock a bondha*, etc., < W. *coch a bon ddu*, 'red with black trunk or stem'; *coch*, red (< L. *coccum*, red, scarlet, : see *coccus*); *a*, with; *bon*, trunk or stem (anything swollen); *du*, black.] In *angling*, an artifical fly having a hackle with black center and brown tops.

cockabully (kok′a-bul′i), *n.* [A colonial perversion of the Maori name *kokopu.*] A New Zealand fish, the kokopu, *Galaxias fasciatus*, of the family *Galaxidæ.*

cock-a-bundy, *n.* Same as ★*cock-a-bondy.*

cockalorum (kok-a-lō′rum), *n.* [A humorous word, appar. < *cock*[1] + *-al-orum*, a Latin-seeming ending; but perhaps a variation of *cockarouse*, formerly used in the same sense: often with the epithet *high.*] A person of consequence; a self-important person. [Colloq.]

cockatoo, *n.* **2.** A somewhat contemptuous term applied to a small farmer in Australia. [Colloq.]—**Cockatoo fence,** a fence of the kind used by the cockatoos, or small farmers of Australia. It consists of branches and trees laid horizontally on the ground, one across the other, with bars or slip-rails for gates.

cockatoo-bush (kok-a-tō′bûsh), *n.* The palberry- or blueberry-tree. *Myoporum serratum.* See ★*palberry.* [Australia.]

cock-bird (kok′bêrd), *n.* An African weaver-bird of the genus *Vidua*, having two long tail-feathers which suggest the sickle-feathers of a fowl.

cock-boy (kok′boi), *n.* A boy who controlled the action of the steam inlet-valve in pumping-engines before it was understood how the valve could be operated from a moving part of the engine.

cockersprags (kok′êr-spragz), *n. pl.* Same as *cockermegs.*

cock-eye pilot. See ★*pilot.*

cocking[1] (kok′ing), *n.* Same as *calking*[1], 2.

cocking-dog (kok′ing-dog), *n.* Same as *cocker*[2], 2.

cocking-machine (kok′ing-ma-shēn″), *n.* A machine which gathers hay from the windrows and puts it in cocks.

cocking-spaniel (kok′ing-span″yel), *n.* Same as *cocker*[2], 2.

cockle[1], *n.*—**Corn-cockle,** an erect whitish woolly annual weed, *Agrostemma Githago*, 1 to 3 feet high, with showy red-purple flowers, infesting grain-fields in Europe and in the eastern half of the United States. The numerous rough, black, irregularly rounded seeds are separated from wheat only with great difficulty, though special separators have been devised for the purpose. The seeds are poisonous, and the bread made of flour from wheat containing them produces disease, sometimes fatal, and either acute or chronic, in the latter case (being due to small amounts habitually eaten) sometimes termed *githagism.*—**Cow-cockle,** the cow-herb, *Vaccaria Vaccaria*, a smooth, much-branched annual, 1 to 3 feet high with numerous rather small pale red flowers. It is a European plant widely introduced in North America, and a bad weed in the northwestern States and adjacent Canada, west of the main range of the corn-cockle. Its seed has been experimentally shown to be poisonous. It is spherical in form and about twice the size of mustard-seed. It mingles with wheat and also with barley and oats, but is more easily screened out than the seed of the corn-cockle.—**Spring cockle,** the cow-cockle, sometimes so called in the northwestern United States on account of its association with spring wheat.

cockle[2], *n.* **1.** (*b*) An Australian bivalve mollusk, *Cardium tenuicostatum*; also, a member of the genus *Chione.*—**6.** A small crisp confection of sugar stiffened with flour, variously flavored, and of a pink, light-yellow, or white color. Mottoes were printed on them in red letters.—**7.** A pucker or wrinkle; an unevenness, as in cloth or glass.—**8.** A disease of wheat caused by a nematoid worm, *Telenchus tritici*, which infests the grain and causes it to become deformed. [Eng.]—**Spanish cockle,** a large, inedible West Indian bivalve, *Codakia orbicularis.*

cockle-bread (kok′l-bred″), *n.* A term of obscure origin and meaning, used especially in the phrase *molding of cockle-bread*, the name of a trivial sport.

cockle-bur, *n.* **3.** The burdock, *Arctium Lappa.*

cockly[1] (kok'li), *a.* Full of wrinkles or puckers: as, *cockly* silk.

cockly[2] (kok'li), *a.* Same as *coggly* and *cocklety.*

cock-mass (kok'mas), *n.* Mass at cockcrow.

cockneyize (kok'ni-iz), *v. t.* [*cockney* + *-ize.*] To give a cockney character to: as, to *cockneyize* a translation.

He allows Hazlitt . . . to *Cockneyize* the title of Gifford's poem into the "Barviad.
Blackwood's Mag., XIV. 221.

cockpit, *n.* **5.** A place which is or has been the scene of many contests or battles: as, an ecclesiastical *cockpit;* "Belgium, . . . the *cockpit* of Europe," *Murray*, Handbook of N. Germany, p. 158.

cockroach, *n.* **American cockroach,** a large cockroach, *Periplaneta americana*, indigenous to subtropical America. It has extended its northern range to the latitude of Philadelphia and has established itself in many parts of the world. **Australian cockroach,** a large cockroach, *Periplaneta australasiæ*, indigenous to Australia, but carried by commerce to most parts of the world. It is about as large as the American cockroach (*P. americana*), but may at once be distinguished by the brighter and more definitely limited yellow band on the prothorax and by a yellow dash on the sides of the upper wings.—**European cockroach, Oriental cockroach,** the common *Periplaneta orientalis.* See *cockroach.*

cock-robin (kok'rob"in), *n.* The male European robin, *Erythacus rubecula.* The name is most familiar in a nursery rime.—**Cock-robin shop,** a term descriptive of a petty printing-house. [Slang, Eng.]

Cockscomb elm-gall. See ★*elm-gall.*

cockshy, *n.* **2.** The object at which the shy is made; a mark or target.—**3.** A booth or other establishment, as at a fair, where for a small fee one may secure the privilege of having a certain number of shies at some object, such as a negro's head, and receive a prize (a cigar or the like) if successful.

cock-sparrow (kok'spar"ō), *n.* The male English sparrow, *Passer domesticus.*

cockspur, *n.* **3.** (*c*) The ergot of rye. See *ergot*[1]. [Prov. Eng.] (*d*) In British Honduras, *Acacia spadicigera*, a shrub or small tree armed with curved spines about two inches long, produced in pairs at the base of each branch and each leaf. These thorns are usually hollowed out by ants and serve them as nests.

cockswain's-box (kok'swānz-boks), *n.* In a ship's cutter, the space between the backboard and the transom, in which the cockswain sits while steering.

cocksy (kok'si), *a.* [Also *coxy;* < *cock*[1] + *-sy*, equiv. to *-y*[1].] Same as *cocky.* *T. Hughes.*

cocktail, *n.* **5.** Cocktail beer. [Prov. Eng.]

Bill drank the proffered *cock-tail* not unwillingly.
T. Hughes, Tom Brown's School Days, i. 6.

Cocktail beer, beer when fresh and foaming. [Prov. Eng.]—**Cocktail grit.** See *Esopus* ★*grit.* **Manhattan cocktail,** a whisky cocktail diluted with vermuth.—**Martini cocktail,** a gin cocktail diluted with vermuth.—**Oyster cocktail,** a mixture made by putting 6 small raw oysters in a cocktail-glass or small tumbler and adding a dash of Tabasco-sauce, half a teaspoonful of vinegar, two or three dashes of lemon-juice, tomato catchup, and salt and pepper to taste.

cock-tailed, *a.* **2.** Said of a horse having the tail docked so that it points obliquely upward like the tail of a cock.

cock-tread (kok'tred), *n.* Same as *cicatricula.*

cock-treading (kok'tred-ing), *n.* Same as ★*cock-tread.*

cocky[2] (kok'i), *n.* A shortened form of ★*cockatoo*, 2. [Australia.]

coco[2] (kō'kō), *n.* [Native name.] A name in Argentina of a tree of the rue family, *Fagara Coco* found in the sierras of the country. It has a powerful penetrating odor and yields a wood of a beautiful light-green color. Also called *cockucho.*

coco[3] (kō'kō), *n.* [Origin uncertain.] The nut-grass, *Cyperus rotundus.* See *Cyperus.* Also *coco-sedge.*

coco[4] (kō'kō), *n.* [Also *cocoe, cocco;* appar. native.] In the British West Indies, the taro-plant, *Caladium Colocasia.*

cocoa[2], *n.* **3.** A beverage made from ground cocoa-nibs. See ★*cocoa-nibs*, *cacao*, and *Theobroma.*—**Flake cocoa,** a trade-name for a special form of chocolate, prepared by passing the roasted and husked kernels through rollers, or more commonly by grinding the small fragments of the kernels (still retaining much husk) which have been separated in sifting.

cocoa-beetle (kō'kō-bē"tl), *n.* Same as ★*cacao-beetle.*

cocoa-butter (kō'kō-but"ėr), *n.* Same as *cacao-butter.*

cocoa-cracker (kō'kō-krak"ėr), *n.* A machine for cracking or crushing cocoa. It consists of a pair of horizontal rolls for cracking the shells, and a winnowing-fan for removing the broken shells and dust. It is usually combined with a rotary screen for sorting the broken cocoa and removing undesirable portions.

cocoa-essence (kō'kō-es"ens), *n.* The trade-name for the roasted kernels of chocolate, husked, ground, and deprived of part of their fat by heat and pressure, or else to which starch and sometimes sugar have been added so as to reduce the relative proportion of fat.

cocoa-fat (kō'kō-fat), *n.* Same as *cacao-butter.*

cocoa-mill (kō'kō-mil), *n.* A mill for reducing crushed cocoa to a soft paste by grinding it between millstones. Such mills are sometimes arranged in pairs or in series of three, for fine grinding.

cocoa-nibs (kō'kō-nibz), *n. pl.* The cotyledons of cacao seed. See *cacao.*

cocoanut, *n.* **Cocoanut olein,** the more fusible portion of cocoanut-oil, separated from the less fusible stearin by pressure.—**Cocoanut stearin,** the less fusible or more solid portion of cocoanut-oil, left as a cake on the removal of the fluid olein by pressure.

cocoanut-beetle (kō'kọ-nut-bē"tl), *n.* **1.** An Oriental scarabæid beetle, *Oryctes rhinocerus.*—**2.** An Oriental curculionid beetle, *Rhynchophorus ferrugineus.*—**3.** The ★*palm-beetle* (which see).

cocoa-paste (kō'kō-pāst"), *n.* The paste produced by grinding under heated rollers the kernels of chocolate which have been roasted and deprived of their husks.

cocoa-red (kō'kō-red), *n.* A brownish-red coloring-matter present in chocolate, probably derived from the oxidation of tannin.

cocoa-roaster (kō'kō-rōs"tėr), *n.* In *candy-making*, a hollow revolving oven connected with a furnace, used in roasting cocoa, coffee-beans, nuts, etc. The oven is suspended from a tilting-frame for convenience in discharging the roasted material, and when in operation is made, by means of gearing, to revolve to prevent burning, and is fitted with an appliance for testing the roasting without stopping the process. In another and larger type the process is aided by a hot blast for drying the nuts and removing the broken shells and dust.

cocoa-tavern (kō'kō-tav"ėrn), *n.* A place for the sale of the beverage called cocoa.

coconscious (kō-kon'shus), *a.* In *psychol.*, pertaining to the continuity or felt conjunction of experiences within a single consciousness.

The conjunctive relation that has given most trouble to philosophy is the *co-conscious* transition, so to call it, by which one experience passes into another when both belong to the same self. About the facts there is no question.
W. James, in Jour. Philos., Psychol. and Sci. Methods, [Sept. 29, 1904, p. 536.

cocoon (kọ-kön'), *v.* [*cocoon*[1], *n.*] **I.** *intrans.* To form a cocoon.

II. *trans.* To wrap as in a cocoon.

We snatched a few odds and ends of clothing, *cocooned* ourselves in the proper red blankets, and plunged . . . out into the whistling wind bareheaded.
Mark Twain, Tramp Abroad, xxviii.

cocorron (kō-kō-rōn'), *n.* [Porto Rican.] A variety of *Elæodendrum xylocarpum*, a shrub or small tree of the family *Celastraceæ*, found along the sea-coast in the Danish West Indies and Porto Rico. Called *spoon-tree* in the Danish West Indies.

coco-sedge (kō'kō-sej), *n.* Same as ★*coco.*[3]

cocuiza (kō-kö-ē'thä), *n.* [Venezuelan.] A fiber prepared from the long, thick leaves of several species of *Furcræa*, especially *F. fœtida* and *F. Cubensis.* It is used for making bags, hammocks, harness, cordage, etc. Commercially known as *Mauritius hemp.* See also *pita*, 2.

cocurrent (kō-kur'ẹnt), *a.* That turn at the same lunar hour as oceanic currents, or that connect on a map of the ocean the points where different oceanic currents turn at the same hour: as, *cocurrent* lines. *An. Rep. U. S. Coast Survey*, 1897, p. 335.

cocuyo (kọ-kö'yọ), *n.* [Taino.] **1.** A fire-fly; also, a glow-worm.—**2.** A fish of the family *Balestidæ, Xanthichthys ringens*, found in the West Indies.

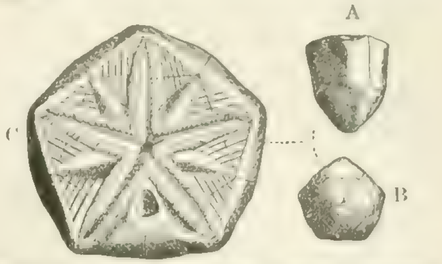
cod[1], *n.* **8.** The bearing of a car-axle; a bush. [Scotch miners' term.]

cod[2], *n.*—**Black cod,** a New Zealand fish, *Notothenia angustata.* **Pacific cod,** a codfish, *Gadus macrocephalus*, found in the North Pacific: abundant about the Alaskan coasts.

cod[2], (kod), *v. i.* [Cod[2], *n.*] To fish for cod.

Cod. An abbreviation of *Codex.*

Codaster (kō-das'tėr), *n.* [NL., short for *Codonaster.*] A genus of regular blastoid *Echinodermata* with obconical calyx, the flat pentagonal upper surface bearing the oral, anal, and ambulacral areas. It occurs in Devonian and Carboniferous rocks. Sometimes written *Codonaster.*



Codaster [illegible] Derbyshire.
A, side view of calyx. B, base. C, ventral aspect; enlarged (after Roemer).
From Zittel's "Palæontology."

cod-bait (kod'bāt), *n.* [Appar. < *cod*[1] + *bait*, the larva being in a cod or case; but some take the other form, *cad-bait*, to be the original.] **1.** The larva of the caddis-fly: same as *cad-bait.*—**2.** The lobworm, *Arenicola.*

cod-bank (kod'bangk), *n.* A fishing-bank frequented by cod or on which cod are caught.

cod-chest (kod'chest), *n.* A live-box in which cod are kept.

coddia (kod'i-ä), *n.* A Ceylonese black ant noted for its severe bite.

coddle[2], *v. t.* **2.** In *tobacco-manuf.*, to injure by fermentation.

code, *n.*—**Civil code.** (*a*) A body of adjective law which defines procedure and practice in civil actions. (*b*) A body of substantive law which defines the rules and principles applicable to civil actions.—**Criminal code,** a code which defines crimes, their degrees, and the nature and extent of the punishment.—**International code,** the code of signals adopted by all maritime nations for communicating with vessels at sea, stations alongshore, etc. The present code came into use on January 1, 1902, and consists of 26 flags—one for each letter of the English alphabet—and a code-pennant. Urgent and important signals are of two flags; general signals of three flags; and geographical signals, alphabetical spelling-tables, and vessels' numbers are of four flags. The international code-book is divided into three parts. The first contains urgent and important signals, and all the tables of money, weights, barometric heights, etc., together with a geographical list and a table of phrases formed with the auxiliary verbs. The second is an index, consisting of a general vocabulary and a geographical index, arranged in alphabetical order. The third gives lists of the United States storm-warning, life-saving, and time-signal stations, and of Lloyd's signal-stations of the world. It also contains semaphore and distant signal-codes, United States army and navy codes, and Morse wigwag codes.—**Mosaic code.** Same as *Mosaic law.*—**Priests' code,** the ceremonial sections of Exodus and Numbers, regarded by modern critics as representing a narrative written during the Babylonian exile by a school of priests who sought to give in a historical setting their conception of the origin of the ceremonial institutions of the Hebrews. It is characterized by statistical details, long genealogical tables, careful chronology, and formality of style. About 400 B. C., the so-called prophetic narratives were incorporated with it to form the present Hexateuch. Also called *Elohistic document P.*—**Stricklandian code,** rules of zoölogical nomenclature prepared by a committee appointed by the Britith Association at the Manchester meeting, 1842. H. E. Strickland, the ornithologist, a member of this committee, is credited with having drawn up these rules, usually known as the Stricklandian code. The work was of great importance as being the first earnest effort to systematize the formation and use of zoological names.—**Telegraphic code,** a system of words of uniform length, each of which represents some word, phrase, or sentence, used in sending telegraphic or cable messages, in order to secure brevity, economy in expenditure, and secrecy, the message so sent having no intelligible meaning except to those who possess the key, that is, another copy of the code.

code (kōd), *v. t.* To prepare (a message or despatch) for transmission by translating it into the cipher or arbitrarily chosen words of the code previously agreed upon.

codeclination (kō-dek-li-nā'shọn), *n.* [*co*(*mplement*) + *declination.*] The complement of the declination (90° minus the declination). Same as *polar distance.*

codefendant (kō-dẹ-fen'dạnt), *n.* A joint defendant (in some action or suit).

codeia (kō-dē'yä), *n.* [NL.] Same as *codeine.*

cod-end (kod'end), *n.* Same as *cod*[1], 7.

codeposit (kō-dẹ-poz'it), *n.* In *elect.*, a deposit upon the electrode of an electrolytic cell consisting of metal or substance other than that obtained from the main electrolytic action and deposited simultaneously with the latter.

codeposition (kō-dep-ọ-zish'ọn), *n.* In *elect.*, the simultaneous deposition, upon the electrode of an electrolytic cell, of two or more substances.

codetermination (kō-dẹ-tėr-mi-nā'shọn), *n.* **1.** A determination that determines the same matter.—**2.** The reciprocal relation of determining the same matter.

codetta, *n.* 2. Same as ★*copula*, 9.

codex, *n.* 2. Among the famous American codices are the *Codex Cortesianus*, a pre-Columbian Maya codex preserved at Madrid, the *Codex Dresdensis*, a pre-Columbian Maya codex preserved at Dresden, and the *Codex Vaticanus*, a pre-Columbian codex preserved in the Vatican Library, Rome.

codirectional (kō-di-rek'shon-al), *a.* Having the same direction.

A ray of plane polarized light is transmitted through a substance set in a magnetic field *codirectional* with the ray. *Ency. Brit.*, XXX. 248.

cod-man (kod'man), *n.* A vessel employed in the cod-fishery. *N. E. D.*

cod-oil (kod'oil), *n.* Oil obtained from the bodies of codfish, often mixed with the product from other fish: used in dressing leather.

Codonaster (kō-dō-nas'tèr), *n.* [NL., < Gr. κώδων, a bell, + ἀστήρ, a star.] See ★*Codaster*.

Codonidæ (kō-don'i-dē), *n. pl.* [NL., < *Codonium* + *-idæ*.] A family of *Anthomedusæ*, having the mouth-opening simple, the gonads not divided radially, 4 narrow radial canals, and unbranched tentacles. It includes *Codonium*, *Dinema*, *Hybocodon*, *Globiceps*, and other genera.

Codonium (kō-dō'ni-um), *n.* [NL., < κωδώνιον, dim. of κώδων, a bell.] The typical genus of the family *Codonidæ*. *Haeckel*, 1879.

codonostome (kō-dō'nō-stōm), *n.* Same as *codonostoma*.

codot (kō'dot), *n.* [*co*-[1] + *dot*[1].] In *projective geom.*, one of the points other than the dots in which the connectors of a polystigm intersect.—**Codot tristigm,** in *projective geom.*, the tristigm determined by the 3 codots of a tetrastigm.

cod-piece, *n.* 2. In carriage-trimming, a half-circle at the lower front corner of a carriage-top cast solid with the side-quarter or sewed on: used to cover slat-irons and prop-post.

cod-pitchings (kod'pich″ings), *n. pl.* Cod-liver oil of the lowest grade, made from partly decomposed livers.

cod-slip (kod'slip), *n.* A pillow-case.

coed (kō-ed'), *n.* A female student in a coeducational college. [Slang.]

coeducation (kō-ed″ū-kā'shon), *n.* [*co*-[1] + *education*.] Joint education; specifically, the education of young men and young women in the same institution and the same classes.

coeducational (kō-ed-ū-kā'shon-al), *a.* 1. Relating or pertaining to coeducation: as, *coeducational* problems.—2. That admits both sexes to the same educational privileges: as, a *coeducational* college.

There is also inculcated in the minds of our boys and girls the thought that wrong is wrong, no matter who shelters or defends it; . . . that immorality is immorality, whether seen in man or woman. Nowhere else than in a *coeducational* school can these principles be so firmly rooted. *F. S. Fosdick*, in Jour. of Proc. of Nat. Educational Ass'n, 1903, p. 453.

coeffect (kō-e-fekt'), *n.* A complementary effect.

Though it has been claimed that at times these growths induce headache, it is probable that they are then but *co-effects* of some other cause.
Buck, Med. Handbook, II. 390.

coefficient, *n.*—**Adiabatic coefficient of compressibility,** the coefficient of compressibility of a fluid measured under conditions such that heat neither enters nor leaves the fluid during the operation.—**Admiralty coefficients,** in *naval arch.*, empirical coefficients used in estimating the horse-power required to drive a ship at a given speed. The *midship-section coefficient* is the ratio of the product of the area of midship section by the cube of the speed to the indicated horse-power; the *displacement coefficient* is the ratio of the product of the two-thirds power of the displacement by the cube of the speed to the indicated horse-power.

Those "coefficients" are frequently based upon rules laid down in Admiralty practice at an early period in steamship construction, and they are consequently known as *Admiralty coefficients*.
White, Manual of Naval Arch., p. 625.

Block coefficient, in *naval arch.*, the ratio of the volume of the under-water body of a vessel to the displacement of a parallelepiped having the same length, breadth, and depth as that part of the vessel. See ★*coefficient of fineness*.—**Coefficient of absorption of gases,** the volume of a gas at 0° C. and 76 centimeters pressure, dissolved by a unit volume of the liquid in which it is absorbed.—**Coefficient of absorption of radiation.** See *absorption of light*.—**Coefficient of acidity.** See ★*acidity*.—**Coefficient of augmentation,** in *naval arch.*, a coefficient depending on the average angle of obliquity of the water-lines of a vessel to the fore-and-aft line: applied to the wetted surface it gave the augmented surface used by Rankine in a formula for determining the resistance to propulsion of the vessel. See *augmented surface*, under *augment*.—**Coefficient of contraction,** in *hydraul.*, the ratio of the area of the jet of liquid issuing from a reservoir, measured at a distance from the orifice of half the diameter of the jet, to the area of the orifice.—**Coefficient of correlation.** See ★*correlation*, 5.—**Coefficient of diffuse reflection.** Same as ★*coefficient of diffusion*.—**Coefficient of diffusion,** in *optics*, the ratio of the light diffusely reflected, in the direction of the normal to a mat surface, to the incident light. Also called the *coefficient of diffuse reflection*.—**Coefficient of direct resistance,** in *naval arch.*, an empirical factor which when multiplied by the area of greatest submerged section normal to the direction of motion and by the square of the speed gives the resistance of a body to motion through the water.—**Coefficient of discharge,** in *hydraul.*, the ratio of the actual rate of discharge of liquid from a reservoir to that which would have occurred in the absence of the recognized impediments to flow, such as frictional resistance, contraction of the liquid vein, etc.—**Coefficient of ellipticity,** the ratio between the major and minor axes of an ellipse.—**Coefficient of emission,** the ratio of emissive power of a body to that of the ideal black body of the same temperature. This ratio is designated by most writers as *emissive power*, and sometimes as *emissivity*. *Tait*. [Rare.] **Coefficient of fatigue.** See ★*fatigue*.—**Coefficient of fineness,** in *naval arch.*, a coefficient expressing the ratio of the area of a curved line, such as the immersed midship section or a waterline of a vessel, to the area of its circumscribed rectangle, or the ratio of the under-water volume to the volume of its circumscribing rectangular parallelepiped (in that case called *block coefficient*), or to the volume of the cylinder circumscribed about the midship section (called *cylindrical* or *prismatic coefficient*).

The technical term for such percentages is "*coefficient of fineness*," expressing, as it does, the extent to which the immersed part of a ship is reduced from the parallelepipedon, or "fined." *White*, Manual of Naval Arch., p. 3.

Coefficient of friction. (*b*) In *naval arch.*, an empirical factor, dependent upon the immersed length, which when multiplied by the area and by the velocity of the water past the surface, raised to about the 1.83 power, gives the frictional resistance of a submerged surface to motion through the water. Also called *coefficient of frictional resistance*.—**Coefficient of inhibition,** in *bacteriol.*, that concentration of a disinfectant which if added to a given medium will prevent the development and multiplication of bacteria without killing them.—**Coefficients of performance.** Same as *admiralty* ★*coefficients*. **Coefficient of purity,** in the sugar industry, the ratio (usually expressed as percentage) of sucrose or pure cane-sugar to the total solids in solution in the juice of cane or beet.—**Coefficients of reality,** two conative factors held to be the material of the intellectual concept of reality, the one (an experience of resistance) relating to reality in the past and furnishing the reason for attributing it to an object; the other referring to reality in the future and furnishing a *raison d'être*, or utility, to the concept (a resolve to shape one's conduct to an expectation). The term was introduced by Dr. H. W. Stuart, who regards the coefficients as emotions, the former of the contractive type, the latter of the expansive. But it is not essential to the main position that reality should be based on emotion.—**Coefficient of regression.** See ★*correlation*, 5.—**Coefficient of resistance,** in *hydraul.*, the numerical factor representing the loss of head due to frictional resistance to flow in the case of the efflux of a liquid from a reservoir.—**Coefficient of rigidity,** a numerical constant used to denote the simple rigidity of a substance.—**Coefficient of rotation.** Same as *rotatory* ★*coefficient*.—**Coefficient of run-off,** the ratio between precipitation and run-off.

Hydrotechnologists have laid much stress on this proportion [between river-water and the rainfall of a region], the so-called "*coefficient of run-off*," and it is generally thought that this might be a constant factor for a distinct river. *Geog. Jour.* (R. G. S.), X. 620.

Coefficient of self-induction, the numerical value of the self-inductance in a circuit expressed in henrys or other units.—**Coefficient of slip,** the ratio of the internal friction of a gas or vapor to its external friction.

Between the pressures of .6 and 20 millimeters of mercury the value of the *coefficient of slip* was found to be inversely proportional to the density of the gas and very nearly equal to the free path of the molecules.
Reynolds, Physical Rev., XVIII. 423.

Coefficient of solubility. See ★*solubility*.—**Coefficient of thermometric conductivity,** the conductivity of a substance divided by the quantity of heat necessary to raise a unit volume of it 1° C. Same as *thermal* ★*diffusivity*.—**Coefficient of transmission,** the proportion of radiant energy transmitted by a layer of any absorbing medium one centimeter in thickness.

Each wave-length has its own *coefficient of transmission* through each transparent substance.
A. Daniell, Text-book of Physics, p. 499.

Coefficient of ubiquity, the exponent of a logarithmic factor which expresses the dependence of a plant upon temperature: the larger the exponential coefficient the less is the plant dependent on local temperature and the more widely it may spread over the globe.—**Coefficient of variability.** (*a*) A number computed in accordance with the laws of chance, and expressing the fact that there is an even chance that the observed value of a given phenomenon will lie within a given range. Thus the coefficient of variability of the annual rainfall at Marietta, Ohio, is 4.1 inches; or, in other words, there is an even chance that the rainfall of any year will be 4.1 inches more or less than its average value. Also called the *probable error of the event*. (*b*) Same as ★*coefficient of variation*.—**Coefficient of variation,** a coefficient obtained by dividing the diversity among the individuals of a species, race, or population, considered as statistical deviation from the mode, by the index of variability and multiplying it by 100. See ★*index of variability* and ★*mode* 1, 12. *H. E. Crampton*, Biometrika, March July, 1904, ii. 117.—**Coefficient of velocity,** in *hydraul.*, the ratio of the actual velocity of efflux of liquid from a reservoir to the velocity which would have been attained in the absence of resistance to flow due to friction or to other causes of retardation.—**Coefficient of ventilation,** a formula which expresses the number of times the air contained in a given space is renewed per unit of time: it is the fraction $\frac{R}{H}$, in which R represents the number of times the air is renewed in the given time represented by H. *Buck*, Med. Handbook, VI. 162.—**Coefficient of viscosity,** the ratio of the stress upon a moving fluid to its velocity gradient.—**Coefficient of wind-pressure,** the pressure of the wind against a stationary object, or the resistance of the air to a moving object, depending upon the velocity of the motion, the density of the air, and the size and shape of the object. If the wind carries rain, this mass is added to that of the air and increases the pressure.—**Cylindrical coefficient.** Same as ★*coefficient of fineness*.—**Displacement coefficient.** See *admiralty* ★*coefficient*.—**Dissociation coefficient.** See *dissociation* ★*constant*.—**Hyetal coefficient.** See *pluviometric* ★*coefficient*.—**Hysteresis coefficient,** in *elect.*, a numerical constant denoting the degree of hysteresis observed in a given specimen of iron or other magnetic material when it is subjected to successive magnetization and demagnetization.—**Ionization coefficient,** a number which expresses the degree of ionization or electrolytic dissociation of a dissolved electrolyte.—**Isothermal coefficient of compressibility,** the coefficient of compressibility of a fluid, measured under conditions involving no change of temperature.—**Lethal coefficient** in *bacteriol.* (*a*) *Inferior lethal coefficient*, that medium concentration of a disinfectant which will kill sporeless bacteria in water at a temperature of 20–25° C. in the shortest time. (*b*) *Superior lethal coefficient*, that medium concentration of a disinfectant which will kill bacteria spores in water at a temperature of 20–25° C. in the shortest time.—**Lilienthal coefficients,** coefficients prepared by Lilienthal, showing the relation between the horizontal and vertical components of the force exerted by a current of moving air on an inclined vane or wing.—**Midship-section coefficient.** See *admiralty* ★*coefficient*.—**Output coefficient,** a ratio proposed as the ultimate basis for the design of induction motors. As proposed, it is the ratio of the watt output to the product of speed in revolutions per minute, gross length in centimeters, and the square of the diameter at the air-gaps in centimeters. It varies from 0.0009 for a 10-horse-power motor to 0.0018 for a 1,000-horse-power motor.—**Pluviometric** or **hyetal coefficient,** in *meteor.*, the ratio of the precipitation for any month to what would have fallen if the rainfall had been uniformly distributed throughout the year.—**Prismatic coefficient.** See ★*coefficient of fineness*.—**Propulsive coefficient,** in *naval arch.*, the ratio of the effective ★horse-power (which see) to the indicated horse-power of the propelling engines of a steamer. The coefficient is usually expressed as a percentage.—**Rotatory coefficient,** a physical constant denoting the power of optically active substances to turn the plane of polarization of light; the angle through which the plane of polarization is rotated by a layer of unit thickness.—**Temperature coefficient.** (*a*) A numerical factor which expresses the change in temperature per degree centigrade of any physical constant. Since nearly all the properties of matter are affected by change of temperature, there are numerous temperature coefficients, such as the temperature coefficient of rigidity, viscosity, thermal conductivity, thermal capacity, refraction, specific inductive capacity, and electrical resistance. (*b*) The coefficient of change in electrical resistance of a substance with variation of temperature. The temperature coefficient (k) is given by the equation: $kt = 1 - \frac{r_t}{r}$, in which r is the resistance of the substance at the temperature t_0, and r_t its resistance at 0°.

cœlacanthous (sē-la-kan'thus), *a.* Same as *cœlacanthine*.

Cœlelminthes (sē-lel-min'thēz), *n. pl.* [NL.] Same as *Cœlelmintha*.

cœlenteric (sē-len-ter'ik), *a.* [*cœlenter-on* + *-ic*.] In *zoöl.*, of or relating to the cœlenteron or digestive cavity of a cœlenterate.

cœlenteron (sē-len'te-ron), *n.*; pl. *cœlentera* (-rä). [NL., < Gr. κοῖλος, hollow, + ἔντερον, interior, entrail.] The digestive cavity of a cœlenterate; an enterocœle. *A. E. Shipley*, Zoöl. of Invertebrates, p. 78.

coelho (kō-el'yō), *n.* [Pg., = Sp. *conejo*, < L. *cuniculus*, a rabbit: see *cony*.] Same as ★*rabbit-fish*, 4.

cœlian (sē'li-an), *a.* [Gr. κοιλία, a hollow, < κοῖλος, hollow.] Of the hollow type; concave: noting that type of vertebra in which both faces of the centrum are concave; biconcave; amphicœlian. *Wieland*, 1899.

Cœlicolist (sē-lik'ō-list), *n.* [L. *cœlicola*, heaven-worshiper, < *cœlum* (erroneously *cœlum*), sky, heaven, + *colere*, worship, + *-ist*.] A worshiper of the sky: one of a sect of the fourth and fifth centuries.

A Magian never can become a Greek, or a Greek a *Cœlicolist*. *J. H. Newman*, Callista, p. 170. *N. E. D.*

cœliodynia (sē″li-ō-din'i-ä), *n.* [NL., < Gr. κοιλία, belly, + ὀδύνη, ache.] Belly-ache; colic.

cœlioscope (sē'li-ō-skōp), *n.* [Gr. κοιλία, belly, + σκοπεῖν, view.] An instrument for the examination of the abdomen or other cavity of the body.

cœliospasm (sē'li-ō-spazm), *n.* [Gr. κοιλία, belly, + σπασμός, spasm: see *spasm*.] Cramp of the abdominal muscles or of the intestines.

cœliotomy (sē-li-ot'ō-mi), *n.* [Gr. κοιλία, belly, + -τομια, < ταμεῖν, cut.] Same as *laparotomy*.

A scar in the linea alba indicated the site of the former *cœliotomies*. *Lancet*, July 18, 1903, p. 149.

cœloblast (sē'lō-blast), *n.* [Gr. κοῖλος, hollow, + βλαστός, germ.] In *insect embryol.*, according to the nomenclature of Graber, the endoderm in a narrow sense, or a part of the endoblast as distinguished from the myoblast. *Cambridge Nat. Hist.*, V. 149.

cœloblastic (sē-lō-blas´tik), *a.* [Gr. κοῖλος, hollow, + βλαστός, germ, + -ic.] Characterized by possessing a number of nuclei within a single cell-wall: applied to algæ belonging to the *Siphonales*.

cœloblastula (sē-lō-blas´tū-lä), *n.*; pl. *cœloblastulæ* (-lē). [NL., < Gr. κοῖλος, hollow, + NL. *blastula*.] A hollow blastula, as contrasted with one in which the segmentation cavity is filled up by the blastomeres, or a *sterroblastula*.

cœlocyrtean (sē-lō-sėr´tē-an), *a.* [Gr. κοῖλος, hollow, concave, κυρτός, curved, convex, + -e-an.] Concavo-convex: noting that type of vertebra in which the anterior face is concave and the posterior face convex.

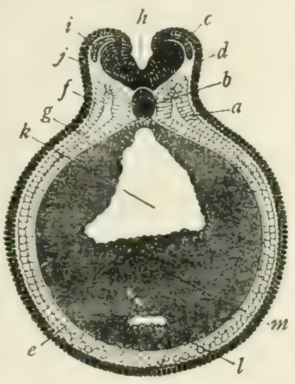
cœlogastrula (sē-lō-gas´trū-lä), *n.*; pl. *cœlogastrulæ* (-lē). [NL., < Gr. κοῖλος, hollow, + NL. *gastrula*.] A gastrula with an open archenteron, as contrasted with a sterrogastrula, in which the archenteron is filled by the endoderm-cells.

Cœlogorgia (sē-lō-gôr´ji-ä), *n.* [NL.] The typical and only genus of the family *Cœlogorgidæ*. *Milne-Edwards*, 1867.

Cœlogorgidæ (sē-lō-gôr´ji-dē), *n. pl.* [NL., < *Coelogorgia* + *-idæ*.] A family of alcyonarian *Anthozoa*, of the order *Stelechotokea*. The colony is arborescent, attached by stolon-like processes. The stem is formed by an axial zooid with thickened cœnenchymatous walls, the branches by axial zooids of the second order, and the branchlets by axial zooids of the third order borne either on two sides or in spirals on the main stem. The spicules are straight or curved and bear lateral processes. *Cœlogorgia* is the typical genus.

Cœlogyne (sē-loj´i-nē), *n.* [NL. (Lindley, 1825), < Gr. κοῖλος, hollow, + γυνή, female (pistil).] A genus of ornamental plants of the family *Orchidaceæ*. It includes about 50 species, all of which are pseudobulbous. They are found growing on trees and rocks in tropical Asia. *C. pandurata*, *C. Dayana*, *C. Massangeana*, *C. odoratissima*, and others, are grown in the United States. *C. cristata*, with its several varieties, is the most popular species. It has large white yellow-fringed flowers.

cœlomesoblast (sē-lō-mes´ō-blast), *n.* [Gr. κοῖλος, hollow, + μέσος, middle, + βλαστός, germ.] In *embryol.*, the true mesoblast surrounding the true body-cavity or cœlom of the embryo, as distinguished from other kinds of mesoblast, such as the mesenchyme and ectomesoblast.



Transverse Section through a Frog Embryo

showing the neural folds shortly before they meet each other to complete the neural tube. *a*, cœlom or body-cavity; *b*, notochord; *c*, outer or epidermic layer of epiblast; *d*, inner or nervous layer of epiblast; *e*, cœlomesoblast; *f*, outer or somatopleuric layer of mesoblast; *g*, inner or splanchnopleuric layer of mesoblast; *h*, neural groove; *i*, dorsal root of a spinal nerve; *j*, spinal chord; *k*, mesentery; *l*, liver diverticulum; *m*, yolk. (From Marshall's "Vertebrate Embryology.")

Cœlomic fluid, a colorless nutritive fluid, containing amœboid corpuscles, found in the perivisceral cavity of certain annulate worms.—**Cœlomic pouch**, in *embryol.*, a pocket derived by evagination from the walls of the cœlom.

Cœlomocœla (sē-lō-mō-sē´lä), *n. pl.* [NL., < Gr. κοίλωμα, a hollow (see *cœloma*), + κοῖλος, hollow.] In Lankester's classification, a grade of *Enterozoa* in which the cœloma is present as an independent second cavity, as opposed to the *Enterocœla* (which see), in which the sole cavity is the enteron. In this grade are included all groups of *Enterozoa* except the *Hydromedusæ*, *Scyphomedusæ*, *Anthozoa*, and *Ctenophora*. Same as *Cœlomata*, 1.

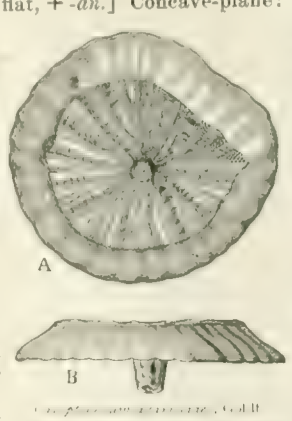
cœlomodæum (sē-lō-mo-dē´um), *n.*: pl. *cœlomodæa* (-ä). [NL., < Gr. κοίλωμα, a hollow, + (?) δαίειν, divide.] The ectodermal portion of a cœlomic duct.

cœlomopore (sē-lō´mō-pōr), *n.* [Gr. κοίλωμα, a hollow, + πόρος, a pore.] A pore or opening through which the cavity of a protocœlom communicates with the exterior.

cœlomostome (sē-lō´mō-stōm), *n.* [Gr. κοίλωμα, a hollow, + στόμα, mouth.] The funnel-like mouth of a cœlomoduct.

Cœloplana (sē-lō-plā´nä), *n.* [NL., < Gr. κοῖλος, hollow, + L. *planus*, plane.] A flat disk-shaped organism which has been regarded as transitional from the planarians through *Ctenoplana* to the ctenophores, *Cœloplana* being regarded as closest to the planarians, and *Ctenoplana* closest to the ctenophores. Nothing is known of the development of either form.

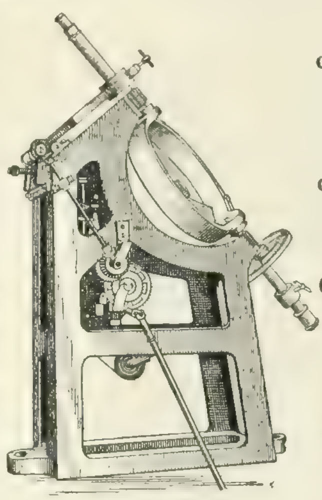
cœloplatyan (sē-lo-plat´i-an), *a.* [Gr. κοῖλος, hollow, + πλατύς, flat, + -an.] Concave-plane: noting that type of vertebra in which the anterior face is concave and the posterior face flat.



Cœloptychium agaricoides. Upper Cretaceous, Vordorf, near Braunschweig. *A*, top view; *B*, profile. One-half natural size. (From Zittel's "Palæontology.")

Cœloptychium (sē-lop-tik´i-um), *n.* [Gr. κοῖλος, hollow, + πτύξ (πτυχ-), a leaf.] A genus of hexactinellid sponges having a regular mushroom-shaped frond with stalk and radial convolutions, the ostia being on the under side of the umbel. It is the only representative of a family, *Cœloptychidæ*, and occurs in the rocks of the Upper Cretaceous.

cœlostat (sē´lō-stat), *n.* [Erroneously for *cælostat or *celostat, < L. *cælum* (formerly often erroneously *cœlum*), sky, + Gr. στατός: see *heliostat*.] A form of siderostat or heliostat which shows the image of the sky reflected in a plane mirror as stationary. It consists of a plane mirror attached to an axis which is directed toward the celestial pole and made to revolve uniformly by clockwork once in 48 hours. Any celestial object seen by reflection in this mirror will appear to be at rest, so that its image thrown upon a photographic plate will be stationary and without any rotation in its own plane. In this last fact lies the superiority of the cœlostat over the older heliostat and siderostat, which have mirrors revolving in 24 hours. They, on the other hand, have the advantage that the reflected ray may be thrown in any desired direction, while with the cœlostat the available range is limited by conditions determined by the declination of the object.



Lippmann Cœlostat.

cœlothel (sē´lō-thel), *n.* [Gr. κοῖλος, hollow, + θηλή, nipple.] In *embryol.*, the mesoblastic epithelium lining the true body-cavity or cœlom of the vertebrate embryo.

coemptional (kō-emp´shon-al), *a.* Relating or pertaining to coemption.

coendure (kō-en-dūr´), *v. i.* To endure together, or as long (as): as, "*co-enduring* with time." *Pusey.*

cœnenchymal gemmation. See **gemmation*.

cœnobe (sē´nōb), *n.* In *bot.*, same as *cœnobium*, 3.

cœnobiarch (sē-nō´bi-ärk), *n.* [LGr. κοινοβιάρχης, < κοινόβιον, convent (see *cœnobium*), + ἄρχειν, rule.] The director or head of a convent or monastery. *N. E. D.*

cœnobioid (sē-nō´bi-oid), *a.* [*cœnobium* + *-oid*.] Resembling a cœnobium.

cœnocentrum (sē-no-sen´trum), *n.*; pl. *cœnocentra* (-trä). [Gr. κοινός, common, + κέντρον, center.] In *bot.*, a specialized mass of cytoplasm around which the eggs of certain fungi (*Saprolegniaceæ*) develop.

cœnocladia (sē-nō-klā´di-ä), *n.* [NL., < Gr. κοινός, common, + κλάδος, branch.] In *bot.*, the growing together of branches; natural grafting.

cœnocyte (sē´nō-sīt), *n.* [Gr. κοινός, common, + κύτος, a hollow (a cell).] Same as *syncytium*.

cœnodiœcism (sē-nō-di-ē´sizm), *n.* [Gr. κοινός, common, + *diœcism*.] The production of male, female, and hermaphrodite flowers on different plants of the same species; triœcism.

cœnœcic (sē-nē´sik), *a.* Same as *cœnœcial*.

cœnogenesis (sē-nō-jen´e-sis), *n.* [Gr. κοινός, common, + γένεσις, genesis.] Common genesis, generation, or origin.

cœnogenetic (sē″nō-jē-net´ik), *a.* Of or pertaining to cœnogenesis. **Cœnogenetic regeneration.** See **regeneration*.

Cœnogoniaceæ (sē″nō-gō-ni-ā´sē-ē), *n. pl.* [NL., < *Cœnogonium* + *-aceæ*.] A family of gymnocarpous lichens named from the genus *Cœnogonium*.

Cœnogonium (sē-nō-gō´ni-um), *n.* [NL. (Ehrenberg, 1820), < Gr. κοινός, common, + γωνία, angle.] A genus of lichens, typical of the family *Cœnogoniaceæ*, having the thallus byssoid or fungus-like forming a flat, circular, or kidney-shaped body. The spores are hyaline, elongate, or spindle-shaped, and one- or two-celled. The species are mostly tropical and occur on the branches or trunks of trees.

Cœnograptus (sē-nō-grap´tus), *n.* [Gr. κοινός, common, + γραπτός, written.] A genus of Lower Silurian graptolites characterized by having two branches originating from the triangular sicula, curving sigmoidally and giving off simple branches from the convex side.

cœnomonœcism (sē″nō-mō-nē´sizm), *n.* [Gr. κοινός, common, + E. *monœcism*.] The coexistence of male, female, and hermaphrodite flowers on the same individual plant.

cœnopsyche (sē-nop-sī´kē), *n.* [Gr. κοινός, common, + ψυχή, mind.] The consciousness of a community compared to a collection of intercommunicating cells each endowed with consciousness. *Haeckel.*

cœnosome (sē´nō-sōm), *n.* [Gr. κοινός, common, + σῶμα, body.] In *Siphonophora*, the stem or trunk of the colony; the elongated manubrium of the original larval medusoid, which produces by budding all the parts of the colony.

cœnosteon (sē-nos´tē-on), *n.*; pl. *cœnostea* (-ä). [Gr. κοινός, common, + ὀστέον, bone.] In *ichth.*, an anterior lower bone of the shoulder-girdle, bordering the gill-opening behind; the clavicle.

Cœnothecalia (sē″nō-thē-kā´li-ä), *n. pl.* [NL., < Gr. κοινός, common, + θήκη, case, + *-alia*.] An order of alcyonarian *Anthozoa*. They have a calcareous skeleton composed of lamellæ of calcite forming a dense corallum resembling that of the imperforate *Madreporaria* and developed from a specialized layer of ectoderm-cells. The colony consists of zooids and solenia. There is but a single living genus, *Heliopora*; but the group was more largely represented in Paleozoic times.

coercionist (kō-ėr´shon-ist), *n.* A supporter of coercive measures or acts; specifically, in recent British history, an advocate of the Coercion Acts in Ireland.

coestate (kō-es-tāt´), *n.* [*co-*[1] + *estate*.] The estate held by either a tenant in common or a joint tenant.

coevality (kō-ē-val´i-ti), *n.* [*coeval* + *-ity*.] The quality of being coeval or of the same age or period of time.

coexcitation (kō-ek-sī-tā´shon), *n.* [*co-*[1] + *excitation*.] In *physiol.*, simultaneous or collateral excitation. *Amer. Jour. Psychol.*, XII. 264.

coexistence, *n.* 2. In *logic*, that reciprocal relation which subsists between any two objects in that they exist in the same universe, generally regardless of time. In philosophy this ought to be the exclusive meaning, since *contemporaneity* perfectly expresses the temporal meaning, and the ambiguity leads to the gravest contradictions that pass without notice.

Coeymans limestone. See **limestone*.

cof, *v.* and *n.* A simplified spelling of cough.

coffearin (ko-fē´a-rin), *n.* [*coffee* + *-ar*[2] + *-in*[2].] A weak diacid base, $C_{14}H_{16}O_4N_2$, obtained from coffee. It crystallizes in needles, which melt with decomposition at 180° C.

coffee, *n.* **Caracol coffee.** Same as **caracolillo*, 1. —**Coffee black.** See **black*.—**Date coffee**, roasted date-stones prepared for making a beverage.—**Mexican coffee**, the Negro or Mogdad coffee, *Cassia occidentalis*, a common weed in the southern United States. It is cultivated in Florida, as in Mexico, etc., as a substitute for coffee and in this capacity sometimes passes under the name of *Espinoza bean*.—**Sudan coffee.** Same as *Negro* or *Mogdad coffee* (which see, under *coffee*).—**Wild coffee.** (*b*) The bearberry or cascara sagrada, *Rhamnus Purshiana*; also called *wild coffee-bush*, *western coffee*, and *coffee-berry*.

Coffee-bean weevil. See **weevil*.

coffee-berry, *n.* 2. A Tasmanian name for a native plant, *Coprosma hirtella*, which is related to the true coffee-plant. Its fruits are sweet and edible, but are not agreeable.

coffee-bird (kof′ẹ̄-bėrd), *n.* A name given in the British West Indies to one of the finches, *Loxigilla violacea*, that nests in coffee-bushes.

coffee-bush (kof′ẹ̄-bůsh), *n.* In New Zealand, a settlers' name for the karamu, *Coprosma lucida*. A drink is made of its berries. See *orange-leaf*.

coffee-cake (kof′ẹ-kāk), *n.* Bread sponge enriched, thinned, iced, and baked in a thin layer; a kind of a bun: often twisted and shaped in rings.

coffee-disease (kof′ẹ̄-di-zēz″), *n.* See ★*disease.* **American coffee-disease.** See ★*disease*.

coffee-fern (kof′ẹ̄-fėrn), *n.* See ★*fern.*

coffeeism (kof′ẹ̄-izm), *n.* [*coffee* + *-ism.*] The coffee-drinking habit or its effects on the health. *G. S. Hall*, Adolescence, II. 14.

coffee-leaf (kof′ẹ̄-lēf″), *n.* The leaf of the coffee-plant. **Coffee-leaf miner**, the larva of a tineid moth, *Cemiostoma coffeella*, which mines the leaves of the coffee-tree.

coffee-plant (kof′ẹ̄-plant), *n.* 1. A plant of the genus *Coffea*, which yields the coffee of commerce.—2. In New Zealand, same as ★*coffee-bush.*—3. In Tasmania, same as ★*coffee-berry*.

coffee-rat (kof′ẹ̄-rat), *n.* A small rat, *Golunda eliiotti*, found in southern India and Ceylon, where it does much damage to coffee plantations, by eating buds and blossoms. It is about 10 inches in total length and olive-brown above, tawny below.

coffee-walk (kof′ẹ̄-wâk), *n.* The space between two rows of trees in a coffee plantation.

coffeic (kof′ẹ̄-ik), *a.* Same as *caffeic.*

coffer-dam, *n.* 3. In a war-ship, one of a series of compartments, in the vicinity of the water-line above the protective deck, built in the interior against the ship's side or around hatches, forming a double wall, which can be packed to prevent water from entering the vessel after the side has been pierced by shot. In the United States navy the packing is made of the pith of corn-stalks. See *def.* 2.

coffered (kof′ėrd), *p. a.* In *arch.*, built with coffers: said of a wooden ceiling or vault, the coffers in the former being the panels between the beams, and those of the latter being recesses built in the masonry.

coffering, *n.* 2. In *arch.*, decorations by means of coffers or sunken panels.—3. A special method of making a watertight brick-work lining for a mine shaft, each course being laid in rings, without headers, and the bricks of alternate rings being floated in grout, breaking joints horizontally with the other rings.

coffin-bird (kof′in-bėrd), *n.* The *hoopoe*, *Upupa epops*, so named because in China it sometimes nests in holes in coffins, or in the carved work with which they are decorated. This is possible in China, where coffins are placed under mounds above-ground.

coffin-joint (kof′in-joint), *n.* The second interphalangeal joint within the hoof of the horse.

coffin-lid crystals. See ★*crystal.*

coffin-pin (kof′in-pin), *n.* An ornamental iron used in hearses to hold the coffin in place.

coffin-plate (kof′in-plāt), *n.* The metallic plate or shield on a coffin-lid inscribed with the name, age, etc., of the deceased.

coffin-ship (kof′in-ship), *n.* A ship likely to founder, and thus become the coffin of the crew: a term in common colloquial and newspaper use in the United Kingdom, during the agitation in Parliament begun by Samuel Plimsoll for legislation on the subject.

C. of G. H. An abbreviation of *Cape of Good Hope*.

cofraternal (kō-frạ̄-tėr′nạl), *a.* and *n.* [*co-*[1] + *fraternal.*] **I.** *a.* Concerning or pertaining to a cofraternity.

II. *n.* A member of a cofraternity. *Francis Galton*, Natural Inheritance, p. 94.

cofraternity (kō-frạ̄-tėr′nị-ti), *n.* All the sons and transmuted daughters, considered collectively, of like statistical mid-parents.

> As all the Adult Sons and Transmuted Daughters of the *same* Mid-Parents form what is called a Fraternity, so all the Adult Sons and Transmuted Daughters of a *group* of Mid-Parents who have the same Stature (reckoned to the nearest inch) will be termed a *Co-Fraternity.*
> *Francis Galton*, Natural Inheritance, p. 94.

cog[2], *n.* —**To slip a cog**, to make a single unsuspected mistake in one's work or calculations.

cog[2], *v. t.* 4. In *metal.*, to roll, especially to roll ingots into blooms.

cog. An abbreviation of *cognate.*

cogener (kō′jẹ̄-nėr), *n.* Same as *congener.*

> Among the *Centrarchidæ*, the large-mouthed black bass is second only to its *congener*, the small mouthed species, as a game-fish.
> *Jordan and Evermann*, Amer. Food and Game Fishes, [p. 357.

cogged (kogd), *p. a.* Provided with cogs: as, a *cogged* wheel. **Cogged-wheel breathing** or **rhythm.** Same as *cogged breath-sound* (which see, under *breath-sound*).

cogging[3] (kog′ing), *n.* 1. The fitting in and working of the wooden teeth or cogs of mortise-wheels.—2. The process of rolling steel blooms from ingots.

cogging-engine (kog′ing-en″jin), *n.* Any engine used for driving an ingot-mill or cogging-mill.

cogging-mill (kog′ing-mil), *n.* A rolling-mill in which steel blooms are rolled from ingots; an ingot-mill.

coggle[4] (kog′l), *n.* [Appar. based on *cog*[1].] In *ceram.*, a decorating wheel of wood or iron, usually grooved, designed to be run around the edges of pie-plates, to form the notches or indentations.

cogitation, *n.* 3. In pre-Kantian philosophy, especially in Descartes, Spinoza, and the Wolfians, consciousness, especially thoughts. Usually rendered 'thought' or 'thinking'; but any mode of consciousness was meant, especially that of immediate perception of objects, whether internal or external. In modern philosophy the term is not used at all. It would be convenient to give it the meaning of consciousness of an object—that grade of consciousness which makes the distinction of subject and object, or ego and non-ego, but does not think of generals or of signs as such.

cognac, *n.*—**Oil of cognac**, the trade-name for diluted fusel-oil.

cognitional (kog-nish′ọn-al), *a.* [*cognition* + *-al*[1].] Of or pertaining to cognition: as, *cognitional* judgments.

> So many of our judgments are recognitional instead of being *cognitional*, that judgments usually appear to be instantaneous. *J. W. Powell*, Truth and Error, p. 281.

cognition-time (kog-nish′ọn-tīm), *n.* In *psychophys.*: (*a*) The total time of the cognitive reaction. (*b*) This time minus the time of the simple reaction. The cognitive reaction is a form of the reaction experiment in which the reactor is told, for example, that he will see a color or hear a tone, and that he is to react only when he has cognized the color as red, blue, etc., or the tone as the tone of a certain pitch, of a certain instrument, etc.

cognitive, *a.* **II.** *n.* In *gram.*, a particular form of a root word, expressing recognition or knowledge.

> Abenaki awanoch, the *cognitive* of Penobscot awenoch, means Frenchman, the first whites with whom the early Abenakis were brought in contact.
> *Amer. Anthropologist*, Jan.–March, 1902, p. 31.

cognitor (kog′ni-tọr), *n.* In *Rom. law*, the attorney or advocate of a party to a private suit; one who took up the defense of a person present in court.

cogon (kō′gōn), *n.* [Philippine Sp. *cogon*, < Tagalog and Bisaya *cogon*, Bicol *cogon-cogon.*] A name in the Philippine Islands of *Imperata arundinacea*, a grass which takes possession of abandoned clearings and covers vast tracts of savanna land. It furnishes excellent material for thatching, but is fit for pasture only when young and tender. See ★*alang-alang.*

cogonal (kō-gō-näl′), *n.*; pl. *cogonales* (-nä′lāz). [Philippine Sp., < *cogon* + *-al*, implying plantation.] A cane-field; land overgrown with cogon.

coguarantor (kō-gar′ạn-tôr), *n.* [*co-*[1] + *guarantor.*] A joint guarantor.

cogway (kog′wā), *n.* A railroad-track with a cog-rail, used on grades too steep for smooth wheels.

cohen (kō′hen), *n.*; pl. *cohanim* (kō-hä′nēm). [Heb. *kōhēn.*] Among the Jews, a priest. Jews bearing this name or one of its numerous variants (such as *Cohn, Cohen, Cahn, Coen, Coon, Kahn, Cowen, Cowan*, etc.) are assumed to be descendants from the high priest Aaron. In the synagogue service the congregation is divided into three classes, as follows: (1) *Cohanim*, or priests, descendants of Aaron; (2) *Leviim*, or Levites, descendants of the patriarch Levi; (3) *Israelim*, or Israelites. The last are, of course, the most numerous. Many of the first category (the *Cohanim*) have secular names, to which, when signed in Hebrew, they affix the letters C. Z., an abbreviation of *cohen zedek*, 'righteous priest.'

cohenite (kō′hen-īt), *n.* [Named after Professor E. *Cohen* of Greifswald, Germany.] A compound of carbon with iron, nickel, and cobalt, $(Fe,Ni,Co)_3C$, identified in some meteoric irons.

coherence, *n.* 3. In *math.* See ★*adherence*, 6.

coherer (kọ-hēr′ėr), *n.* In *elect.*, a tube filled with a conducting substance in powdered or granular form, as metal filings, which, when struck by an electric wave, as that sent out from a wireless telegraph station, decreases in electrical resistance, probably by the particles making a better contact with each other, and so is used to discover very minute electric waves, as in wireless telegraphy. After the passing of the electric wave the resistance of the coherer usually remains low, but it rises again when the tube is tapped.

coheritage (kō-her′i-tạ̄j), *n.* The estate of one of several heirs to the same estate.

Cohiba (kọ-hī′bạ̈), *n.* [NL. (Rafinesque, 1836), said by its author to be of Haitian origin.] A genus of dicotyledonous plants belonging to the family *Hydrophyllaceæ*. See *Wigandia.*

coho (kō′hō), *n.* [California Indian?] A salmon, *Oncorhynchus kisutch*, found from San Francisco northward and on the Asiatic coasts southward to Japan.

> In the opinions of the canners . . . the *coho* should rank next after the king salmon in food value.
> *Bulletin U. S. Fish Com.*, XVIII. 6.

cohune (ko-hö′ne), *n.* [Native name in Honduras.] A pinnately leaved palm, *Attalea Cohune*, native of Central America. The fruit yields oil and is used in the same manner as the ivory-nut for turning small articles. See *Attalea* and *corozo*, 1.

coiffeur (kwo-fėr′), *n.* [F.] A hair-dresser.

coign, *n.* 2. In *geol.*, an original angular elevation of land around which as a corner-stone continental growth has taken place.

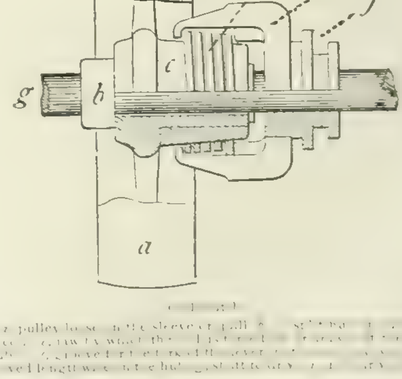
> South of the Scandinavian *coign*.
> *Geog. Jour.* (R. G. S.), XIII. 245.

coil[1], *v. t.* —**Coiled basketry.** See ★*basketry.*

coil[1], *n.* 4. A cylindrical hoop or tube formed by coiling a wrought-iron bar and then welding to form a solid piece: formerly used in building up Armstrong guns.—**Leiter's coil**, a coil of metal or rubber tubing through which a stream of hot or cold water may be made to pass: employed as a means of making thermal applications to the surface of the body.—**Reactive coil.** See ★*reactive.*—**Series coil**, in *elect.*, a coil placed in series with the other parts of the main circuit of any electrical machine or device, as a dynamo, motor, or arc-lamp, and traversed by the entire current flowing in that circuit.—**Shunt coil**, in *elect.*, a coil placed in parallel with a portion of the main circuit of any electrical machine or device, as an arc-lamp, dynamo, or motor, and traversed by a portion of the current flowing in the main circuit. The relative amount of current received by a shunt-coil is determined by the inverse ratio of its resistance to the resistance of the conductor with which it is in shunt.—**Tesla coil**, a form of induction-coil without an iron core and designed for the production of the form of high-frequency discharge known as the *Tesla* ★*discharge* (which see).

coil-boiler (koil′boi-lėr), *n.* A boiler made of one or more coiled tubes.

coil-clutch (koil′kluch), *n.* A form of friction-clutch in which a coil of steel rod or a wire



[illegible]

rope is fastened to one element, and a cone upon the other is pressed into the inside of the coil. The multiple turns of the rod or coil make it seize upon the surface of the cone and hold with great power

coil-end (koil′end), *n.* Same as ★*coil-stand.*

coiler (koi′lėr), *n.* An apparatus, connected with a cotton-carding machine, for receiving the sliver and disposing of it in the form of coils, so that it may not become entangled.

coiler-can (koi'lêr-kan), *n.* The can of the coiler apparatus that receives the sliver from a cotton-carding machine. *Nasmith*, Cotton Spinning, p. 127.

coiler-head (koi'lêr-hed), *n.* The top part of the coiler apparatus of a cotton-carding machine, through which the sliver passes into the can. *Nasmith*, Cotton Spinning, p. 174.

coiler-motion (koi'lêr-mō shŏn), *n.* A mechanism, attached to a carding-machine, for receiving the sliver and laying it into coils.

coiler-plate (koi'lêr-plāt), *n.* The upper revolving part of the coiler, which receives the sliver from the cotton-carding machine and delivers it into the can. *Nasmith*, Cotton Spinning, p. 126.

coiler-roller (koi'lêr-rō″lêr), *n.* One of a pair of calender-rollers between which the sliver passes into the coiler-can from the cotton-carding or -combing machine. *Thornley*, Cotton-combing Machines, p. 235.

coil-flux (koil'fluks), *n.* In *elect.*, that part of the magnetic flux of a coil which is due to its own magnetism, and not to the presence of a magnetizable core or of anything capable of increasing the permeability of the magnetic circuit.

coil-gland (koil'gland), *n.* Same as *sweat-gland*. *Buck*, Med. Handbook, I. 79.

coiling-machine (koi'ling-ma-shēn″), *n.* In *wood-working*, a machine for bending and forming barrel-hoops by coiling the steamed straight hoops over a drum and holding them in the right form until they are stiff and rigid.

coil-stand (koil'stand), *n.* An upright casting or support for a coil of steam-pipes. Sometimes called a *coil-end*.

coin[1], *n.* **Alliance coins**, in *Gr. numis.*, coins struck by two or more Greek cities in agreement for mercantile convenience, or for political reasons.—**Bætyl coin.** See ★*bætyl*.—**Family coins**, Roman silver denarii, struck under consuls.—**Postal and coin scales.** See ★*scale*[2].—**Subsidiary coin**, small coin used for change the legal-tender value of which is limited by statute. See *legal-tender currency*, under *tender*[2].

Coinage ratio, the ratio which expresses the equivalence in value between gold and silver under the (then existing) mint law. Thus, in the United States, under the law of 1837, it is 15.988 to 1: that is, one pound of gold can be coined into as many dollars as 15.988 pounds of silver. The coinage ratio is intended (except for subsidiary coins), where bimetallism is desired, to be identical with the average commercial ratio; if this is not the case the metal which is undervalued disappears from circulation as money. Thus under the law of 1792 the coinage ratio was fixed at 15 to 1, but this undervalued gold and it disappeared from circulation; in 1834 the ratio was changed to 16.002 to 1, and in 1837 to 15.988 to 1, but this undervalued silver and it practically disappeared from circulation (except in the form of subsidiary and abraded coins) until 1873, when it was demonetized. Since that date the fall in the value of silver has brought the commercial ratio down to about 32 to 1.

coin-catcher (koin'kach″êr), *n.* A probang with a special device at the end, designed to hook under a coin or other similar object lodged in the esophagus, and so draw it out.

co-inherence (kō-in-hēr'ens), *n.* The state or quality of inhering together.

co-initial (kō-i-nish'al), *a.* [*co-*[1] + *initial*.] Originating together.

co-insurance (kō-in-shōr'ans), *n.* See *insurance*.

Coir powder, the powder which separates in the manufacture of prepared cocoanut-fiber (for matting, etc.) from the husk of the cocoanut.

coke[1], *n.* **Graphitized coke**, coke which has been converted into artificial graphite by the high temperature of an electric furnace in the presence of silicon in small quantity.—**Native coke**, an impure variety of carbon formed in nature by the destructive distillation of bituminous coal by contact with igneous rock. Called also *carbonite*.

coke-bed (kōk'bed), *n.* 1. A layer of coke which is put into a cupola before charging any of the iron. The amount of coke in this layer is proportionate to the amount of iron to be melted.—2. A porous stratum of coke and clinker in pieces of various sizes, laid to a depth of several inches below a mold for casting a piece of work having large surfaces and which is bedded in. Provision is thus made for carrying off the gas generated in the mold, there being vent-pipes to allow the gas to escape from the porous stratum.

coke-breeze (kōk'brēz), *n.* Coke from gas-works in pieces small enough to pass through a one-inch ring. In handling coke a proportion of breeze is formed by the breaking of the larger pieces. This breeze is screened from the remainder of the coke as it is a detriment to the use of the coke in fires of furnaces.

coke-dust (kōk'dust), *n.* Powdered coke: used for blacking foundry molds.

coke-furnace (kōk'fêr″nās), *n.* A furnace or heating-apparatus adapted to use coke as a fuel. Coke burns with a short flame and no smoke, and gives an intense local heat.

coke-gas (kōk'gas), *n.* The hot gas from a coke fire.

coke-kiln (kōk'kil), *n.* A kiln which is heated by the burning of coke.

coke-mill (kōk'mil), *n.* A mill for grinding coal or coke into a powder for use in blacking foundry molds. It is usually a closed revolving cylinder inside of which are heavy balls or rollers which crush the material. Also called *blacking-mill* and *coal-mill*.

coke-oven, *n.*—**Aitken's coke-oven**, a modification of the ordinary beehive coke-oven, intended to effect the recovery of tar and ammonia in making coke from bituminous coal.—**Appolt coke-oven**, one of the modern forms of oven for the manufacture of coke from bituminous coal, in which air is excluded from the interior of the coking-chamber.—**Breckon and Dixon's coke-oven**, an improved coke-oven with flues for conveying the gases during combustion beneath the floor of the oven. This improvement, introduced about 1860, is embodied in a few of the modern coke-ovens.—**Coke-oven tar.** See ★*tar*[1].—**Jameson coke-oven**, a modification of the common beehive oven, which provides for saving the tar and ammonia liquor by drawing off the vapors formed in the coking through pipes connected with a system of channels, covered with perforated tiles, in the bottom of the oven.—**Otto-Coppée coke-oven**, an oven or kiln for coking coal, with provision for the recovery of tar and ammoniacal liquor.—**Simon-Carvés coke-oven**, an oven or kiln for the manufacture of coke, specially contrived to save the volatile products given off, as well as the tar and the ammoniacal liquor. The fuel used consists almost entirely of the uncondensed combustible gases given off from the coal carbonized, and these gases are passed through separate flues surrounding the closed space for this coal, to which space no air is admitted.

coke-plate (kōk'plāt), *n.* 1. Tin-plate, the sheet-iron base for which is made of iron refined with coke as a fuel, as distinguished from charcoal-plate.—2. Iron plate made from puddled iron, which is inferior to charcoal-plate.

coke-scrubber (kōk'skrub″êr), *n.* An apparatus filled with coke moistened with oil, used to purify street gas, which is forced through it. *W. L. Dibdin*, Public Lighting, p. 132.

coking-plate (kō'king-plāt), *n.* The dead-plate; a plate at the door of a furnace which uses bituminous coal, on which the fresh coal is placed and allowed to coke before being spread on the fire.

coking-stoker (kō'king-stō″kêr), *n.* A mechanical stoker or device for firing a furnace, which permits the fuel to coke before feeding it to the grate, thus burning the fuel with little or no smoke.

coky (kō'ki), *a.* [*coke* + *-y*[1].] Like coke; porous in structure from partial fusion and escape of volatile matter: said of the residue from charring certain kinds of bituminous coal. *Sadtler*, Handbook of Indust. Chem., p. 359.

col, *n.* 2. A name given by Abercromby in 1887 to the region on a weather-map between two anticyclones, where the isobars show a connecting neck or narrow region of lower pressure analogous to the col that affords a passage from one mountain peak to its neighbor: not to be confounded with a trough or an area of low pressure.

cola[2] (kō'lä), *n.* [Also *kola*; W. Afr., given also in other forms, as *kolla*, *korra*, *gorra*, *goora*.] 1. A tree of the family *Sterculiaceæ*, *Bichea acuminata* (*Cola acuminata* of Schott and Endlicher), which yields the cola-nut. See *cola-nut*.—2. [NL.] Any tree of the genus *Bichea*, which includes about 40 species of tropical African sterculiaceous trees having entire or lobed leaves and axillary clusters of unisexual or polygamous flowers.

colaborer, colabourer (kō-lā'bor-êr), *n.* A fellow-laborer; a colleague.

colacobiosis (kol″a-kō-bī-ō'sis), *n.* [NL., < Gr. κόλαξ (κολακ-), flatterer, + βίωσις, living.] A form of social symbiosis, or symbiosis between two colonies of ants of different species, one of which is parasitic on the other species; permanent social parasitism. *Wheeler*, 1901.

colacobiotic (kol″a-kō-bī-ot'ik), *a.* Of or pertaining to colacobiosis.

colalgia (kō-lal'ji-ä), *n.* [NL., < Gr. κόλον, colon, + ἄλγος, pain.] Pain in the colon.

colander, *n.* 2. A perforated hemispherical vessel used in casting shot. *Ure*.

colanine (kō'la-nin), *n.* [Also *kolanine*; < *cola*[2] + *-ine*[2].] A substance obtained from the cola-nut. It is probably a mixture of caffein tannate and a little theobromine tannate, and is used as a sedative in cases of seasickness.

cola-red (kō'la-red), *n.* The red coloring-matter of cola-nut, formed by the oxidation of cola-tannic acid.

colchic (kol'chik), *a.* [*colchic(um)*.] Derived from colchicum.—**Colchic acid**, an amorphous acid, $C_{16}H_{15}O_5N_7$, obtained from colchiceine by heating it with concentrated hydrochloric acid, which removes two methyl groups.

colchiceine (kol-chis'ē-in), *n.* [*colchic(um)* + *-e-* + *-ine*[2].] A colorless, crystalline, slightly bitter alkaloid, $C_{21}H_{23}NO_6 + \frac{1}{2}H_2O$, contained in meadow-saffron (*Colchicum autumnale*).

colchyte, cholchyte (kol'kīt), *n.* [Prop. *cholchyte*; = F. *colchyte*, < Gr. χολχύτης, a word found in pl. in papyri, with a fem. χολχυτίδες, pl., and explained as Egyptian, but prob. an error for *χοαχύτης*, < Gr. χοή, a pouring out, a drink-offering, libation, + χύτης, a pourer, < χύειν, pour. See Van Herwerden, Lex. graecum supplet. et dial., 1902, p. 903.] A funeral director in ancient Egypt: one who provided liturgical services. *Wilkinson*.

colcol (kol'kol), *n.* [California Indian.] The shells of *Olivella*, which are strung and used as money by certain California Indians.

cold. I. *a.*—**Cold plague.** (*a*) A form of pernicious malarial fever in which death occurs during the cold stage. (*b*) Epidemic cerebrospinal meningitis in horses.—**Cold pole.** See ★*pole*[2].—**Cold rays.** See ★*ray*[1].—**Cold-rigor point**, the degree of cold (0° C.) at which a cell loses its irritability.—**Cold-stage**, the chill in malarial fever.—**Cold test.** (*a*) The determination of the temperature at which a gradually cooled sample of oil, especially lubricating oil, solidifies either wholly or partly. (*b*) The testing of the ductility of iron and steel bars and plates by bending, while cold, to a certain angle, 90°, both with and across the grain, to determine whether this can be done without fracture.—**Cold wall.** See ★*wall*[1].

II. *n.*—**Pole of cold.** See ★*pole*[2].—**Strangers' cold**, a catarrh which attacks the inhabitants of certain remote islands whenever they are visited by ships.

cold-blast (kōld'blâst), *n.* and *a.* I. *n.* 1. A blast of air that has not been heated.—2. A blast that has been cooled by artificial means.

II. *a.* Using an unheated blast or one that has been cooled.

colder (kōl'dêr), *n.* [Also *calder*, *caulder*, *cholder*, *chaulder*; origin unknown.] 1. The husk or refuse of threshed wheat.—2. Rubbish from old buildings. [Prov. Eng. in both uses.]

cold-expressed (kōld'eks-prest″), *a.* Same as *cold-drawn*.

cold-frame (kōld'frām), *n.* A small glass-covered structure, and the bed of earth which it covers, used for starting plants in the spring, or to receive plants transplanted from hotbeds or greenhouses, or to carry semi-hardy plants over winter. It differs from a hotbed in that there is no heat in the soil except that which accumulates from the sun's rays.

cold-riveting (kōld'riv″et-ing), *n.* The process of heading-over rivets without first heating them. This is done only with rivets not over three eighths of an inch in diameter.

cold-rolled (kōld'rōld), *a.* Rolled while cold, instead of at a red heat; specifically, noting a metal which has become brittle from excessive rolling or hammering.

cold-rolling (kōld'rōl″ing), *n.* The process of rolling iron and steel plates or rods while they are cold. A smooth, finished surface is attained, resistant to abrasion, and needing no subsequent machining.

cold-saw (kōld'sâ), *n.* A saw for cutting cold metals; especially, a power sawing-machine used in cutting iron beams, rods, rails, etc. Such machines employ heavy circular saws driven at high speeds, the metals to be cut being clamped to a table and fed to the saw. In some machines the saw is fed to the metal. Steel disks driven at very high speeds are also used in place of saws, and are called *friction-disks*. In some smaller machines band-saws are used. There is also a metal-sawing machine which employs a reciprocating saw resembling a hack-saw. The large machines are also called *cold-saw cutting-off machines*. See *milling* ★*saw*.

cold-sawing (kōld'sâ″ing), *n.* The process of sawing cold metal with a circular saw or cold-saw.

cold-shortness (kōld'shôrt″nes), *n.* Brittleness when cold: a condition of wrought iron, steel, or other metal, in which the metal, on account of its brittleness, cannot be worked when cold without fracture or cracking at the edges. Compare *red-shortness*.

cold-shoulder (kōld'shōl″dêr), *v. t.* To 'give the cold shoulder' to; treat with studied coldness, indifference, or neglect.

cold-soldering (kōld'sod″êr-ing), *n.* A process of amalgamating metallic substances by the aid of mercury. A hard amalgam, made of 5 or 6 parts of pure silver, 3 or 4 parts of tin, and from 3 to 5 per cent. of bismuth, is melted and cast into ingots, which are then reduced to fine filings. The filings are mixed, as required, with enough mercury to form a stiff paste which hardens in about an hour.

cold-spot (kōld'spot), *n.* In *physiol.*, a spot upon the skin which is sensitive to cold, but

insensitive to pressure, pain, or warmth: also termed a *cold-point*.

The warm-spots are more difficult of identification than the *cold-spots*. *E. B. Titchener*, Exper. Psychol., I. ii. 82.

cold-ulcer (kōld'ul sẽr), *n.* An ulcer on a finger or toe, resembling a chilblain, but due to interference with the local blood-circulation.

colein (kō'lē-in), *n.* [*Cole(us)* + *-in*[2].] A purple-red resinous compound, $C_{10}H_{10}O_5$, obtained from the leaves of *Coleus Blumei*.

coleopod (ko'lē-ọ-pod), *n.* [NL. *coleopodium*, < Gr. κολεό, sheath, + πους (ποδ-), foot.] In certain myriapods, one of the accessory structures which form a sheath for the phallopods or essential parts of the external reproductive apparatus.

coleopodium (kō-lē-ọ-po'di-um), *n.*; pl. *coleopodia* (-ä). [NL.: see ★*coleopod*.] The peculiar protoplasmic process extruded by certain diatoms and believed by some to be the means of locomotion in these plants.

coleopterin (kol-ē-op'tẹ-rin), *n.* [*coleopter* + *-in*[2].] A red pigment found in the wing-covers of beetles.

coleopterology (kol-ē-op-tẹ-rol'ọ-ji), *n.* [*Coleoptera* + Gr. *-λογία*: see *-ology*.] The science of *Coleoptera*: a branch of entomology.

Coleosporium (kō'lē-ọ-spō'ri-um), *n.* [NL. (Léveillé, 1847), < Gr. κολεός, a sheath, + σπορά, seed (spore).] A genus of uredineous fungi having the æcidia usually produced on the leaves of conifers, and the uredospores and teleutospores on other hosts. The teleutospores form soft, reddish, waxy sori and germinate while attached to the host. *C. Senecionis* produces its teleutospores on species of *Senecio*, and its æcidia on *Pinus sylvestris*.

Coleroa (kol-ē-rō'ä), *n.* [NL. (Rabenhorst, 1851).] A genus of parasitic pyrenomycetous fungi having membranous or thin, leathery perithecia furnished with radiating bristles. The spores are ovoid, two-celled, hyaline, and greenish or brownish yellow. *C. Chætomium* attacks the leaves of species of *Rubus* in Europe.

colic, *n.* **Copper-colic,** a colic, analogous to lead-colic, arising from chronic copper-poisoning.—**Crapulent colic,** a colic resulting from overeating. **Menstrual colic,** pain in the abdomen due to obstruction to the free flow of the menstrual blood.—**Pancreatic colic,** pain in the abdomen due to obstruction in the excretory duct of the pancreas.—**Saburral colic,** pain attending intestinal indigestion.—**Uterine colic,** a colicky pain supposed to be due to slight muscular contractions of the non-gravid uterus.

colica, *n.* **2.** Colic.—**Colica metallica, colica sicca.** Same as *lead-colic*.

colic-weed (kol'ik-wēd), *n.* The squirrel-corn, *Bikukulla Canadensis*; also, less frequently, the dutchman's-breeches, *B. Cucullaria*, and species of *Capnoides*.

colicwort (kol'ik-wẽrt), *n.* **1.** The colic-root, *Aletris farinosa*.—**2.** The parsley-piert, *Alchemilla arvensis*.

colitis, *n.*—**Amœbic colitis.** See ★*amœbic*.

coll. An abbreviation (*a*) of *college*; (*b*) of *collegiate*.

collæmia (ko-lē'mi-ä), *n.* [NL., < Gr. κόλλα, glue, + αἷμα, blood.] The presence of uric acid in colloidal form in the blood.

collage (ko-läzh'), *n.* [F., < *coller*, glue, clarify with gelatin, < *colle*, < Gr. κόλλα, glue.] The process of clearing wine by means of isinglass or gelatin.

colla parte (kōl'lä pär'te). [It., 'with the part.'] In *music*, a direction for the accompaniment to follow the tempo of a soloist or leading singer or player. In vocal music also expressed by *colla voce*.

collaps, *v.* and *n.* A simplified spelling of *collapse*.

collar, *n.*, **2.** (*g*) (4). A deposit of shell matter about the siphonal funnels in some of the cephalopod mollusks. (*h*) In *plumbing*, a cone or ring on a pipe to check the flow of melted solder.—**Collar- and cuff-shaper,** a combined turning- and shaping-machine, made in several forms, all essentially bending-rolls adapted to starched fabrics; a collar-turner and -shaper.—**Compensating collar,** an annular ring or collar placed on the spindle of a drilling-machine, between the feed-screw and the grooved spindle, to form proper bearing-surfaces, and by the adjustment of which the wear of the collars and spindles can be taken up.—**False collar,** in a harness, a broad piece of soft leather cut to fit the horse's neck. It is worn under a round collar to equalize the pressure upon the neck.

collar, *v. t.* **5.** In *cricket*, to become complete master of (the bowling): said of the batsman. [Slang.]—**6.** To lay hold of; 'nab'; take possession of; in *foot-ball*, to tackle. [Slang.]

A gentleman has a glass of punch before him . . ., when another gentleman comes and *collars* that glass of punch, without a "with your leave." *Dickens*, Nich. Nickleby, xv.

collar-bearing (kol'är-bãr'ing), *n.* A bearing for taking the end thrust on a shaft, made by forming or fastening a collar on the shaft and using one face of the collar as the bearing-surface.

collar-bound (kol'är-bound), *a.* In *mach.*, cramped between collars; so caught by collars as to make rotation difficult or impossible. Engine-shafts are sometimes collar-bound by the heating of bearings that run between collars.

collaret, *n.* **3.** In *zoöl.*: (*a*) In certain goniatite cephalopods of Devonian age, one of a series of swellings in the shell which apparently represent successive positions of the stoma or shell-aperture. (*b*) The circle of tentacles in sea-anemones.

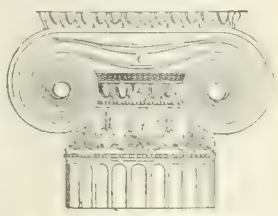
collar-gage (kol'är-gāj), *n.* A hollow cylinder for testing the size of a cylindrical piece.

collar-gall (kol'är-gâl), *n.* An indolent raw sore appearing on the shoulders of horses as a result of the irritation caused by an improperly fitting collar.

collargol (ko-lär'gol), *n.* [Gr. κόλλα, glue, + ἀργ(υρος), silver, + *-ol*.] A trade-name for a non-irritant combination of silver with proteid material (colloidal silver), intended for surgical use. *Nature*, March 26, 1903, p. 503.

collar-heart (kol'är-härt), *n.* *Naut.*, a heart-block which has one large hole in the center and a groove around the circumference, and is open at the end opposite the lanyard.

collarino, *n.* **2.** The cylindrical part of any decorative capital. Thus the more elaborate Ionic style, as in the Erechtheum at Athens, has a broad band decorated with anthemions below the coussinet and between the volutes, and this is sometimes called *collarino*.



A, collarino; *B*, quarter-round or echinus; *C*, coussinet.

collar-nut (kol'är-nut), *n.* A nut having a cylindrical collar at one end. The collar is designed to provide a suitable bearing-surface and also to prevent a bur which has been formed on the corners of the nut from cutting into the end of the piece which bears against the nut.

collar-pad (kol'är-pad), *n.* A piece of sole-leather or metal shaped to fit a horse's neck under the top end of the collar.

collar-palm (kol'är-päm), *n.* A tool used by horse-collar makers for shaping the collar. It is of iron bent in the shape of a double elbow.

collar-pore (kol'är-pōr), *n.* A ciliated tube, or pore, connecting the cavity of the collar of *Balanoglossus* with the first gill-slit. *Parker and Haswell*, Zoölogy, II. 2.

Collateral power, in *law*, a power in which the donee has no estate in the land subject to the power.

collaterate (kọ-lat'e-rāt), *v. t.*; pret. and pp. *collaterated*, ppr. *collaterating*. [*collater(al)* + *-ate*[2].] To use or pledge as collateral security. [Recent.]

collation, *n.* **12.** (*a*) In *bibliog.*, detailed comparison of a book with a perfect copy, usually by specifying, by signature-marks or other indications, the number of leaves (blank as well as printed) and detachable plates or maps, present or absent, in the copy examined, as compared with a perfect copy. The process is usual in the case of all valuable books, especially old ones, it being a highly probable assumption that any book in hand is imperfect. (*b*) In *bookbinding*, the examination of the folded sections (signatures) of a book for the purpose of discovering omissions or misplacements of sections.

collationary (kọ-lā'shọn-ä-ri), *a.* and *n.* **I.** *a.* Of or pertaining to collation (in some sense).—**Collationary Fathers,** apparently, a religious society, so called; but perhaps a feigned name under which Erasmus veiled an allusion to the proselyting orders or priests of the Roman church.

They were placed in a house of *Collationary Fathers*. Except from this account of Erasmus, I never heard of these people, nor can learn any more about them. Erasmus says that they were a community who had nests all over Christendom, and made their living by netting proselytes for the regular orders. Their business was to catch in some way superior lads, threaten them, frighten them, beat them, crush their spirits, tame them, as the process was called, and break them in for the cloister.

Froude, Erasmus, p. 7.

II. *n.* A collationary father. See above.

The Franciscans and Dominicans admitted that without the *Collationaries'* help their orders would die out.

Froude, Erasmus, p. 7.

colla voce (kōl'lä vō'che). [It., 'with the voice.'] In *music*, a direction for a singer to follow the tempo of the leading singer. See ★*colla parte*.

collect, *v. t.* **4.** In *horsemanship*, to gain control (of a horse) and bring it into a position where it has proper command of its powers.

By a judicious use of the curb rein, you collect a tired horse. . . . You draw his hind-legs under him, throw him upon his haunches, and render him less liable to fall even on his weary or weak fore-legs.

Art of Training Horses, viii. *N. E. D.*

Collecting-hairs. See ★*hair*[1].

collection, *n.* **8.** In *logic*, many independent or discrete objects regarded as a single object composed of these objects. In this sense 'many' is to be taken as including the case of a single object regarded as being composed of itself alone. The modern logicomathematical science of multitude (often called the *theory of cardinal numbers*) relates to the magnitudes of collections.

9. A plural object: an individual object whose existence consists in the existence of whatever individuals may have been mentally connected and regarded as parts of it. Different logicians and mathematicians have different objects in mind in speaking of a 'collection,' without always recognizing that they are at cross-purposes. Most logicians are in the habit of thinking of objects as they would be if they were real, so that each is assumed to be in itself definitely distinguished from every other. With them, the identity of a collection lies in the identity of its individual members; so that whatever metamorphoses the different individuals might undergo, as long as their identities were conserved, that of the collection would remain. But if an individual member is destroyed or a new one created, a different collection is produced, though the definition of the *class* (which is a collection recognized as consisting of whatever existent objects possess a certain common character) may be unchanged. Most writers on pure mathematics, on the other hand, are in the habit of studying objects that are purely hypothetical, without any consideration of whether any such objects exist. These objects, being mere creatures of thought, possess only such individuality as is determinately predicated of them. They are what the logicians term 'indesignate individuals,' a name which fails to recognize the extrinsic, superimposed character of their individuality. A mathematician, for example, will think of a collection consisting of a dot, of a dot expressly supposed to be other than the former, and of a dot expressly supposed to be neither of the others. These dots, being mere creatures of thought, are entirely alike as long as they are not thought as unlike. But being expressly supposed to be each other than either of two, so they necessarily are in their hypothetical being. Thus the mathematician's collection, being a mere creature of thought, changes its identity as soon as it is altered at all, unless it be expressly supposed to remain the same collection. The logician's collection is also created by thought, but it is thought to exist in the real existence of its individual members. Thus the logician's collection has a derived existence distinct from its essence, which latter lies in the intention of the act of thought which severs the universe into two portions, the one to form the inside and the other the outside of the collection. Accordingly, a logician's collection may contain but a single member with which the collection is identical in existence, although its essence refers also to everything excluded. So, too, if to the question, 'What is in this box?' the answer be, 'Nothing,' this word, as a reply to that question, signifies the essence of a collection, namely of the one sole logical collection which has no existence.

Collective bargaining, in *polit. econ.*, the determination of wages and conditions of employment by agreements between an employer or a group of employers on the one hand, and a body of employees, acting in concert, on the other. In its simplest form it may be merely the determination of wages, etc., by agreement between a single employer and an informal union of his employees. More often it is extended to practically all the shops of one industry in a city or district, and sometimes in an entire country, as in the cotton-spinning industry in England and the glass-blowing industry in the United States.—**Collective suggestion, telesis.** See ★*suggestion*, ★*telesis*.

collectivistic (kọ-lek-ti-vis'tik), *a.* Pertaining or related to or accordant with collectivism.

In order to promote the realization of the ideal *collectivistic* state, Marxists are ready . . . to become the servants and supporters of capital.

Athenæum, July 7, 1894, p. 24.

collector, *n.* **8.** [*pl.*] Same as *collecting-*★*hairs*. —**9.** In the manufacture of artificial silk, a device for collecting and coalescing several collodion filaments from the spinning-apparatus, and then winding them upon bobbins.

college, *n.*—**Agricultural college.** See ★*agricultural*.—**College settlement.** See ★*settlement*. **College widow,** a woman residing in a college town who is assumed to have received the attentions of students of several successive classes, but remains unmarried. [Slang.]—**Land-grant college,** one of those colleges of the United States, which, under the Land Grant Act of 1862, and the supplementary law of 1890, received grants of land and money for the education of young farmers.

Collemaceæ (kol-ē-mā'sẽ-ē), *n. pl.* [NL., < *Collema* + *-aceæ*.] The now preferred form for the name of the lichen family *Collemei* (which see).

collembolan (ko-lem'bō-lạn), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the *Collembola*.

II. *n.* One of the *Collembola*.

collenchyma, *n.*—**Bast-collenchyma.** See ★*bast*[1].

Colleri (kol'ẹ-ri), *n.*; pl. *Colleries* (-riz). One of a race occupying the country south of Trichinopoli, formerly so predatory that the word came to be the equivalent of 'thief' in that region.

Colletotrichum (kol-ē-tot′ri-kum), *n.* [NL. (Corda, 1837), so called from the glutinous character of the hairs; < Gr. κολλητός, glued, + θριξ (τριχ-), hair.] A genus of melanconiaceous fungi having the fructifications (sporodochia) dark-colored and breaking through the surface of the host. Dark-colored setæ are produced among the sporophores. The spores are simple and hyaline or light-colored in mass. A number of the species produce serious diseases of cultivated plants. *C. Gossypii* attacks the cotton-plant. See ★*anthracnose of cotton.*

colliculate (ko-lik′ū-lāt), *a.* [NL. *colliculatus*, < L. *colliculus*, a little hill: see *colliculus.*] Having small eminences.

collidone (kol′i-dōn), *n.* [*collid(in)* + *-one.*] A basic substance related to collidine.

collier[1], *n.* **Collier's stomach,** motor weakness of the stomach due to anemia.

Collier plant-louse. See ★*plant-louse.*

colligation, *n.* **3.** In *psychol.*, a form of mental connection or association in which the constituent elements, after combination, are as distinct as (or even more distinct than) they were or would be in isolation.

Simultaneous color contrast may serve as a typical instance of *colligation.*
O. Kulpe (trans.), Outlines of Psychol., p. 21.

colligative (kō-lig′ā-tiv), *a.* Pertaining to or effecting colligation.—**Colligative properties,** in *phys. chem.*, properties which depend only on numbers of molecules: contrasted with *additive* and with *constitutive properties.*

But of the purposes served by the *colligative properties*, that of giving molecular measurements without recourse to the evidence afforded by chemical change is well known to be of the very widest application.
Rep. Brit. Ass'n Advancement of Sci., 1902, p. 14.

collimate, *v. t.* **2.** To render the line passing through the optical center of the object-glass of a telescope and the middle wire of its reticule strictly perpendicular (or sometimes parallel) to the axis on which the telescope turns: usually by the aid of a collimator, or of star-observations in reversed positions of the instrument.

Collimation axis. Same as *line of collimation.*

collimator, *n.*—**Floating collimator,** a small telescope attached to an iron float which swims in mercury. The collimator may be horizontal or vertical: in the latter case the float is a ring, the mercury cistern annular, and the collimating telescope points downward through the center of the ring.

collinal (kol′i-nal), *a.* [*colline* + *-al*[1].] Relating or pertaining to a colline.

Verrill refers to cases of apparent exothecal budding on the *collinal* ridges of Meandra.
Annals and Mag. Nat. Hist., Nov., 1902, p. 391.

colline, *n.* **2.** In *zoöl.*, one of the ridges of a meandriform coral.

collinear. I. *a.*—**Collinear relationship,** a geometrical relationship between two portions of space such that each point, line, and plane in the one has one and but one corresponding point, line, or plane in the other. The object-space of a lens and the image-space corresponding to it are thus collinearly related; every point in the latter being the image and only image of some point in the former.

II. *n.* A trade-name of a variety of ★anastigmat (which see).

collinearity (ko-lin-ē-ar′i-ti), *n.* [*collinear* + *-ity.*] The quality or fact of being collinear, that is, costraight.

collinearly (ko-lin′ē-är-li), *adv.* In a collinear or costraight manner.

collingual, *a.* **II.** *n.* A person who speaks the same language as another.

In brief, the tribal relations of the Seri seem always to have been antipathetic, especially toward the aboriginal tribes of alien blood, in somewhat less measure toward Caucasians, and in least—yet still considerable—degree toward their own *collinguals* and (presumptive) consanguineals. *17th An. Rep. Bur. Amer. Ethnol.*, ii. 135.

Collinson's flower. The horse-balm, *Collinsonia Canadensis.*

colliquescence (kol-i-kwes′ens), *n.* [NL. ✱*colliquescentia*, < L. *colliquescere*, become fluid, < *com-*, together, + *liquescere*, become fluid: see *liquescent.*] Same as *liquescence.*

Collision and damage, the technical name of a suit in admiralty brought to recover damages by reason of a collision between vessels upon navigable waters.

collocation, *n.*—**Collocations of matter,** those features of the physical universe which a complete dynamic explanation would leave unexplained, referring them to initial conditions, namely: the positions and velocities of all particles at any one instant, assumed as an origin of time-measurement.

collocational (kol-ō-kā′shon-al), *a.* [*collocation* + *-al.*] Of or pertaining to collocation.

In the *collocational* stage of syntax, the chief means resorted to for this end was repetition.
J. Earle, Philol. Eng. Tongue, ¶ 567.

collocative (kol′ō-kā-tiv), *a.* [*collocate* + *-ive.*] Based on collocation or order of arrangement; of the nature of collocation.

There are three kinds of instrumentality which are the most active in the production of this effect [a continuous and consistent signification in the parts of a sentence]. The first of these is collocation, or the relative position of words. . . . This . . . we call . . . flat or *collocative* syntax. *J. Earle*, Philol. Eng. Tongue, ¶ ¶ 552, 553.

collodiochlorid (kō-lō di-ō-klō′rid), *a.* In *photog.*, noting a printing process in which the sensitive surface on glass or paper consists of collodion impregnated with silver chlorid.

collodiogelatin (kō-lo di-o-jel′ā-tin), *a.* In *photog.*, noting a process in which a plate coated with washed collodion emulsion is immersed in a solution of gelatin, casein, or a similar substance, to perfect the film; or a plate coated with washed collodion emulsion is washed with hot water and covered with a thin film of rapid gelatin emulsion.

collodion, *n.* **Albuminized collodion,** collodion which has been treated with a clear aqueous solution of egg-albumin, and then separated from the white precipitate.—**Blistering collodion,** the collodium cantharidatum of the U. S. Pharmacopœia. **Cantharidal collodion,** a preparation of collodion containing the chlorodormic extract of 60 parts cantharides in 100 parts of the finished liquid. **Caustic collodion,** a solution of corrosive sublimate in collodion. **Collodion emulsion.** See ★*emulsion.*—**Collodion sac method,** a method of increasing the virulence of bacteria by growing them in sacs composed of collodion (analogous to parchment dialyzers), introduced into the peritoneal cavity of an animal. *Med. Record*, April 4, 1903, p. 522. **Collodion transfer,** in *photog.*, a finished picture produced in a collodion film on glass which by suitable preparation and handling may be removed from the glass and transferred to paper.—**Enamel collodion,** an insensitized collodion used as a varnish for films or prints. **Flexible collodion,** collodion with the addition of castor oil and Canada turpentine. After the evaporation of the ether the collodion film remains soft and pliable owing to the addition. **Methylic collodion,** in *photog.*, collodion made by the use of methylic instead of ethylic alcohol. **Styptic collodion.** See *styptic.*

Collodionized paper, paper coated with a film of collodion. Photographs so covered may then be painted with oil colors.

collographic (kol-ō-graf′ik), *a.* Of or pertaining to the collograph or to collography.—**Collographic process.** Same as ★*collography.*

collography (ko-log′ra-fi), *n.* **1.** The manifolding of a writing or document by means of the collograph.—**2.** The art or practice of making prints from photographically prepared printing-surfaces of gelatin. There are two processes, known as *heliotype* and ★*collotype* (which see), analogous in principle but different in details.

Colloidal metals, metals in a peculiar condition of extreme subdivision, in which they remain for an indefinite time suspended or dissolved in water, and often present colors quite different from those exhibited by the same metals in massive form. Silver, gold, mercury, and platinum have been especially studied in this condition.

colloidize (kol′oi-dīz), *v. t.*; pret. and pp. *colloidized*, ppr. *colloidizing.* [*colloid* + *-ize.*] To produce colloidal or jelly-like structure, as in the incorporation of guncotton with nitroglycerin and vaseline or camphor in the manufacture of smokeless powder.

collop, *n.* **3.** A rounded fold of flesh, as on some very fat animals.

colloped (kol′opt), *a.* Having rounded folds of flesh, as a very fat animal. *N. E. D.*

collophore (kol′ō-fōr), *n.* [Gr. κόλλα, glue, + -φορος, < φέρειν, bear.] In *entom.*, the ventral tube of the *Collembola.*

These turned out to be specimens of *Podura aquatica*, commonly called "Spring-tails," a low type of insect life, in which the mouth parts have degenerated, [and] a *collophore*, or sucker, has developed on the ventral side of the abdomen. *Knowledge*, Nov., 1903, p. 259.

colloq. An abbreviation of *colloquial.*

colloquialism, *n.* **2.** Colloquial style, quality, or usage: as, "a transcript of the *colloquialism* of the day," *Coleridge.*

colloturine (kol-ō-tū′rin), *n.* [Gr. κόλλα, glue, + L. *tus* (*tur-*), incense (?), + *-ine*[2].] A crystalline alkaloid found in small amount in the bark of *Symplocos racemosa.*

collotype (kol′ō-tīp), *n.* [Gr. κόλλα, glue, + τύπος, type.] **1.** A photomechanical process by which prints in greasy ink are obtained from a gelatin film used as a printing-surface. When bichromated gelatin is exposed behind a reversed negative and is washed, a greasy ink will adhere only to those places which have been affected by light. This property was discovered by Fox Talbot in 1853. It is usual to employ a thick glass plate (though metals and parchment paper also serve) for supporting the gelatin, and to cover this glass with a silicate, or an albumin solution, which is dried, as a substratum for the gelatin. More prints can then be run off. The surface of the developed gelatin is kept moistened with a mixture of glycerin and water. The ink is applied with a leather roller for the shadows, and a gelatin roller for the halftones. The paper on which the proofs are pulled may be glazed or unglazed, and a protecting varnish may be put over the print.

Collotype would have done more justice to the 'Alphabet of Death' and the Old Testament wood-cuts than the line process which has been employed.
Athenæum, Dec. 19, 1903, p. 832.

2. A print from a photographically prepared film of gelatin upon a glass or metal plate.

collotypic (kol-ō-tip′ik), *a.* Of or pertaining to collotype productions or processes.

colloxylin, colloxyline (ko-lok′si-lin), *n.* [Gr. κόλλα, glue, + E. *oxygen*) + *-l-* + *-in*[2].] Same as *pyroxylin.*

colluctation, *n.* **2.** An agitation or disturbance of the particles of a substance. [Rare.]

Natural Baths, or Hot-Springs, do not owe their Heat to any *Colluctation* or Effervescence of the Minerals in them. *J. Woodward*, Nat. Hist. of the Earth, iii. 161.

colluvial (ko-lū′vi-al), *a.* [*colluvies* + *-al*[1].] Belonging to or composed of colluvies; consisting of alluvium in part and also containing angular fragments of the original rocks: contrasted with *alluvial* and *diluvial.*

Collybia (ko-lib′i-ā), *n.* [NL. (Endlicher, 1836), so named from the flat circular pileus; < Gr. κόλλυβος, a coin.] A large genus of white-spored agarics, having a fibrillose stem without volva or annulus and the gills mostly adnate. *C. radicata* is a very common and widely distributed species occurring in woodlands, and producing a long, root-like extension of the stem.

Collyrites (kol-i-rī′tēz), *n.* [NL., < Gr. κολλυρίς, a loaf of bread, + *-ites*, E. *-ite*[2].] A genus of spatangoid *Echinoidea*, or sea-urchins, having the apical system disconnected, the bivium and trivium widely separated, and periproct posterior: typical of the family *Collyritidæ* and very abundant in the Jurassic and Cretaceous rocks.

collywest (kol′i-west), *adv.* [Also *colleywest*, *kolliwest.*] Same as *collyweston.* [Prov. Eng.]

collyweston (kol-i-wes′ton), *n.* [Appar. from the name of a person.] **1.** In the phrase 'It's all along of Colly Weston,' said when anything goes wrong.—**2.** Nonsense.—**3.** Opposition. [Prov. Eng. in all uses.]

collyweston (kol-i-wes′ton), *adv.* [Also *colleyweston*, *collywesson*, *collywest*, *galleywest*, etc.; from the noun.] In an opposite direction; often as an adjective, contrary, contradictory. [Prov. Eng.]

Colo. The official abbreviation of *Colorado.*

coloboma, *n.*—**Bridge coloboma,** a defect in the iris by which it is divided into two by a thin band of normal iris tissue.—**Coloboma palpebræ,** a fissure dividing the eyelid vertically.

colocentesis (kol″ō-sen-tē′sis), *n.* [NL., < Gr. κόλον, colon, + κέντησις, puncture.] In *surg.*, puncture of the colon to give egress to retained gases.

colocolic (kol-ō-kol′ik), *a.* [Gr. κόλον, colon, + κόλον, colon, + *-ic.*] Pertaining to two non-contiguous portions of the colon.

When a colectomy is impossible because of the site of the lesion, as, for instance, in the splenic flexure, an anastomosis is indicated, either *colo-colic* or ileo-sigmoid.
Therapeutic Gazette, Feb. 15, 1903, p. 102.

colocolostomy (kol″ō-kol-os′tō-mi), *n.* [Gr. κόλον, colon, + κόλον, colon, + στόμα, mouth.] In *surg.*, establishment of a permanent communication between two non-contiguous portions of the colon.

colocynth, *n.*—**Compound extract of colocynth,** a brown cathartic powder made by melting purified aloes 16 parts, adding alcohol 10 parts, soap 14 parts, extract of colocynth 16 parts, and resin of scammony 14 parts; heating to 120° C. until homogeneous; cooling; adding cardamom 6 parts; and reducing to a fine powder: the extractum colocynthidis compositum of the U. S. Pharmacopœia.

colo-enteritis (kol′ō-en-te-rī′tis), *n.* [Gr. κόλον, colon, + NL. *enteritis.*] Inflammation of both the large and the small intestine.

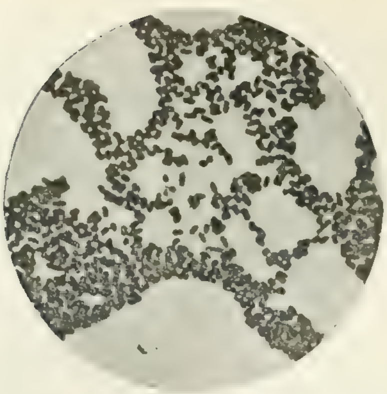
cologarithm (kō-log′a-rithm), *n.* The logarithm of the reciprocal of a number so taken that the mantissa is positive. The characteristic may be positive or negative.

Cologne brown. See ★*brown.*—**Cologne spirit,** a trade-name for common or ethyl alcohol freed with special care from fusel-oil or other disagreeably smelling impurities, and used in the manufacture of eau de Cologne and other perfumes: also frequently selected for pharmaceutical use.—**Cologne yellow.** See ★*yellow.*

colombiano (kō-lōm-bē-ä′nō), *n.* [Sp., < *Colombia* (see def.): see *Colombian.*] A silver coin of Colombia, of the value of 8 reales.

colon[3] (kō-lōn′), *n.* [Named after *Columbus*, Sp. *Colón*, the discoverer of America.] The silver peso or dollar of Costa Rica, of the value of 46½ cents or 100 centavos.

Colon bacillus. Same as ★*Bacillus coli communis.* See cut on following page.



Colon Bacillus (*B[illegible]* [illegible]) from agar culture.
Magnified [illegible] times.
(From Buck's "Reference Handbook of the Medical Sciences.")

colonel, *n.* 2. In *angling*, the name of an artificial salmon-fly. **Colonel commandant,** the chief of a brigade of artillery, engineers, or marines in the British service.

Colonel Bogie. In *golf*, an imaginary player to whom is assigned, by the committee in charge, a score against which the players have to play.

This "*Bogie*" score usually represents par play over the green, and it is made known before the competition begins, so that each competitor knows what he has to do at every hole. Each player counts his score at every hole, and if he holes out at that particular hole in fewer strokes, or in the same number, or in more than the appointed number, he wins, halves, or loses the hole to "*Bogie*," as the case may be. At the end of the game the number of holes won from "*Bogie*" are placed against those lost to "*Bogie*," and the player who is the greatest number of holes up or the fewest down wins the competition.
W. Park, Game of Golf, p. 13.

colonial. I. *a.*—**Colonial goose,** a boned leg of mutton stuffed with sage and onions. [Australia.]
II. *n.* 2. *pl.* Colonial products, securities, etc.

colonialism, *n.* 3. The colonial principle or system: as, British *colonialism* works well. *Dicey.*

colonialist (ko̤-lō′ni-al-ist), *n.* One who favors colonialism or the colonial principle.

colonic (kō-lon′ik), *a.* [Irreg. < *colon* + *-ic* The normal adj. is *colic.*] Relating to the colon. *Buck*, Med. Handbook, I. 14.

colony, *n.*, 4. (*c*) A circumscribed aggregation of bacteria of the same species in artificial culture.
5. In *sociol.*, a group of individuals of like natures or having a common interest, living by themselves as a self-sufficient social organization.

Many schemes have been suggested, such as that carried out by the Salvation Army, for giving such men work in a labour *colony*; but as yet no scheme offers a solution.
Encyc. Brit., XXXII. 675.

Charter colony. See ★*charter.*—**Doctrine of colonies,** in *paleon.*, a proposition set forth and defended by the Bohemian paleontologist Barrande to account for the appearance of representatives of a fauna in rocks antedating the normal horizon of that fauna. He supposed this earlier partial appearance of a fauna to be due to the incursion of its species from an outside basin or neighboring province through the temporary breaking-down of geographical barriers, and the hypothesis involved the conception that the same faunas which were contemporaneous in adjoining provinces may be successive in the provinces independently. The invading congeries, finding itself in an environment unpropitious for its perpetuity, was soon extinguished, and the normal fauna resumed its occupancy until driven out and replaced by its permanent successor. These ideas have been combated by other geologists, and the phenomena involved in the Bohemian basin have been for the most part accredited to displacements by faulting; but it is now conceded that the fundamental conceptions involved in the theory are true for any normal succession of faunas, the culminant development of any fauna being preceded or heralded by the appearance of detached bodies of that fauna in the rocks before the earlier dominant fauna has departed. Such premature appearances have been termed *prenuncial faunas.*

colopexy (kol-ō̤-pek′si), *n.* [Gr. κόλον, colon, + πῆξις, a fixing.] In *surg.*, an operation for the attachment of a too movable portion of the colon to the abdominal wall.

colophan (kol′ọ̄-fan), *n.* [*colophon*(*y*) + *-an.*] An amorphous resin obtained from elemi.

Colophene camphor. See ★*camphor.*

colophilene (kol′ō-fi-lēn), *n.* [*coloph*(*ene*) + *-il* + *-ene.*] A hydrocarbon of uncertain identity, formed by treating colophene hydrochlorid with barium hydroxid.

colophonin (kol′ō-fọ̄-nin), *n.* [*colophon*(*y*) + *-in*[2].] A crystalline compound (colophonin hydrate), $C_{10}H_{22}O_3 + H_2O$, formed when that portion of the oil obtained by distilling colophony which boils at 103–104° C. is allowed to stand for some days with water. The free colophonin is also crystalline.

colophonone (kol′ọ̄-fō-nōn), *n.* [*colophon*(*y*) + *-one.*] An oily mixture obtained by the dry distillation of colophony.

coloproctia (kol-ọ̄-prok′ti-ạ̈), *n.* [Gr. κόλον, colon, + πρωκτός, anus.] Same as ★*colostomy.*

coloptosis (kol-op-tō′sis), *n.* [Gr. κόλον, colon, + πτῶσις, falling, lapse.] Prolapse of the colon.

colopuncture (kol′ọ̄-pungk-ṭụ̈r), *n.* [Gr. κόλον, colon, + L. *punctura*, puncture.] Same as ★*colocentesis.*

color, *n.* 18. *pl.* In *faro*, a system of play by which the cards bet upon are selected according to the color of the first winner or first loser.—19. *pl.* The commission of ensign in the British military service; usually *a pair of colours.*—20. In *calico-printing*, any mordant or pigment that is printed on cloth, made into a paste by means of some thickening substance, as starch, gum, etc.—**Acid color,** one of an important class of artificial dyestuffs; so named because they are applied in an acid bath. They are used in dyeing and printing animal fibers, but are of little or no value in the coloring of vegetable fibers.—**Acridine color,** a color related to acridine.—**Albumen colors,** in *textile printing*, colors which are held upon the fiber mechanically by means of coagulated albumen. They are, without exception, pigments.—**Alizarin colors,** a group of artificial dyestuffs which are related to alizarin in their composition and therefore belong to the larger group of anthracene colors. They are mordant colors, polygenetic in character, and noted for their fastness. The term is sometimes erroneously applied to mordant dyestuffs not related to alizarin.—**Animal color,** a color of animal origin. Such colors are derived chiefly from insects, and include such dyestuffs as cochineal, kermes, and lac-dye.—**Anthracene color,** one of an important group of coal-tar coloring matters directly related to anthracene. This group includes alizarin and other important mordant colors.—**Anticryptic colors.** See ★*anticryptic.* **Apatetic colors.** See ★*apatetic.*—**Aposematic colors.** See ★*aposematic.*—**Azin color,** a color related to one of the azins.—**Azo color,** any artificial dyestuff which is an azo compound, that is, which contains one or more azo groups. The azo colors are very extensive, and are divided into a number of subclasses. See *coal-tar colors.*—**Basic color,** one of an important class of artificial dyestuffs, for the most part substituted ammonias and consequently basic in character. They dye cotton upon an acid mordant, commonly tannic acid, and dye wool directly. They are largely used in calico-printing and in the coloring of ginghams. As a class they are very fast to washing, but not fast to light. Also called *tannin colors.* For specific basic colors see ★*blue*, ★*green*, ★*red*, etc.—**Benzidine colors,** a name by which the direct cotton colors are sometimes designated, since benzidine is the starting-point in the preparation of many of them. **Christiansen's colors,** colors produced by submerging pieces of a clear colorless substance, such as glass in a colorless liquid of the same refracting power. Owing to the different dispersion of the solid and liquid the indices of refraction of the two are strictly identical for only a single wave-length. For other wave-lengths there is reflection of light at the faces between solid and liquid, and since the intensity of reflection depends on the difference of the indices, color-effects sometimes of great beauty result.—**Color index,** a term used in hematology to designate the relative amount of hemoglobin contained in a red blood-corpuscle. The index is obtained by dividing the hemoglobin percentage by the red-corpuscle percentage. **Colors of thin plates,** the colors produced by the interference of light reflected from the first with that reflected from the second surface of thin layers or films of any transparent substance.—**Color standard,** a classified assortment of pigments the color constants of which are known. Comparison with these makes it possible to designate approximately the character of other colors without determining their constants.—**Dead color.** (*a*) See *dead-coloring.* (*b*) Color which has no reflections.—**Diamine colors.** See ★*diamine.*—**Diazo color,** one of a class of coal-tar coloring matters containing two azo groups, but no more. They are for the most part direct cotton colors.—**Direct cotton colors,** an important group of coal-tar colors which possess the common property of dyeing unmordanted cotton in a neutral or slightly alkaline salt or soap bath. They also dye unmordanted wool in a neutral bath, but in most cases there are faster and cheaper acid colors which give similar results. Most of the direct cotton colors are of the diazo type and are derived from tetrazo compounds; a few are of the triazo type, and a still smaller number of the tetrakisazo type. Several coal-tar colors of the thiazol type also come under this head. Various names are assigned to them by different manufacturers, such as *benzidine colors*, *benzo-colors*, *Kongo colors*, *diamine colors*, *direct colors*, *diazo-colors*, and *tetrazo-colors.* **Express color,** in *pleading*, matter inserted in a pleading in confession and avoidance, admitting an apparent right in the adverse party, but a right so insufficient in law as to require further pleading by the adverse party.—**Fechner's colors,** in *psychophysics*, the colors of the artificial spectrum-top.—**Flight of colors,** in *psychophysics*, the series of colors seen in the after-image of intensive white light, for example, after glancing at the sun.—**Hering's theory of color vision,** or **visual sensation,** in *physiol.* and *psychol.*, the theory propounded by E. Hering, in opposition to the Young-Helmholtz theory, that there are six fundamental visual sensations, arranged in three pairs of complementaries (red-green, blue-yellow, black-white) and corresponding to antagonistic processes in three 'visual substances.' The black-white substance is affected by any form of light stimulus; the other two substances respond only to their specific stimuli.—**Implied color,** in *pleading*, that color which arises from the nature of the defense, as when the facts alleged by the adverse party are admitted, but their sufficiency in law is denied by matters set forth in the pleading. See *express* ★*color.*—**Ingrain colors,** insoluble colors which are actually formed upon and within the grain or body of the fiber during the coloring process. With one or two exceptions their application is confined to the vegetable fibers. The ingrain colors are chiefly insoluble azo compounds, as paranitraniline red, alpha-naphthylamine red, and developed primulin; but the term also includes mineral colors, as chrome-yellow, iron buff, and Prussian blue. The general process of application is to prepare the cloth with one compound and then pass it through a solution of a second substance which will react with the first and form an insoluble colored compound upon the fiber. See *paranitraniline* ★*red* and *iron buff.* **Janus colors,** a group of coal-tar colors which simultaneously possess the characteristics of the acid and basic colors and also the peculiar property of dyeing unmordanted cotton in an acid bath. In composition they are characterized by containing sulphonic acid groups and both amido and azo groups. They are applied to wool as acid colors and to cotton as basic colors: or cotton may be dyed directly by them in an acid bath.—**Kongo colors,** a name by which the direct cotton colors are sometimes designated; so called from Kongo red, discovered in 1884, which was the first direct cotton color.—**Mode color,** a term used by textile colorists to denote compound color or shade of a subdued character. Light drabs and slate-colors are excellent examples of mode shades.—**Monoazo color,** one of a class of coal-tar coloring matters which contain one, and but one, azo group. They are for the most part acid colors.—**Monogenetic colors,** dyestuffs capable of producing only one color, or, at the most, tints or shades of one color. See also *polygenetic* ★*colors.*—**Mordant acid colors,** an important class of artificial dyestuffs which dye wool from an acid bath in the same manner as the acid colors, but possess the valuable property of forming chromium color-lakes when after-treated with some chromium mordanting principle, as potassium bichromate or chromium fluoride. The colors produced by this after-chroming are extremely fast to the common color-destroying agencies, and in many cases are as fast as the alizarin colors. They are for the most part carboxyphenol or salicylic acid derivatives.—**Newton's scale of colors,** a list of the colors of Newton's rings, counting from the center outward, as recorded by Sir Isaac Newton. The order of colors on Newton's scale is as follows: black, blue, white, yellow, red, violet, blue, green, yellow, red; purple, blue, green, yellow, red; green, red; greenish blue, red; greenish blue, pale red; greenish blue, reddish white.—**Nitroso color,** one of a class of coal-tar coloring matters which contain one or more nitroso groups. They are either mordant or mordant acid colors.—**Opposite color,** in *psychophysics*, an antagonistic or complementary color.—**Original color,** in *psychophysics*, a physiologically primary color.—**Oxazin color,** one of a class of coal-tar coloring matters containing an oxazin group.—**Oxidation colors,** in *calico-printing*, colors which are developed on the surface of the cloth from materials printed on, and afterward undergoing oxidation. The most important color so produced is insoluble aniline black.—**Oxyketone colors,** a class of dyestuffs, of which the most important is alizarin, originally derived from madder, but now manufactured artificially from the anthracene of coal-tar. It yields a number of derivatives also used in dyeing.—**Phthalic anhydrid color,** one of a group of coal-tar coloring matters related to phthalic anhydrid. This group includes the eosins.—**Polygenetic colors,** dyestuffs capable of producing different colors with different mordants. Thus alizarin, a polygenetic color, produces red with aluminium mordants, wine colors with chromium mordants, violet black with iron mordants, and orange with tin mordants.—**Principal color,** in *psychophysics*, one of the psychologically fundamental colors; red, green, blue, yellow, black, or white.—**Raised color,** in *calico-printing*, a color that is developed by a mordant or some other agency.—**Steam color,** in *calico-printing*, a mordanted color that is developed and fixed upon the fabric by steaming. Besides cotton and linen, silk and woolen goods are occasionally treated in this way.—**Stilbene color,** one of a group of coal-tar coloring-matters related to stilbene. They are for the most part direct cotton colors.—**Sulphid color.** Same as *sulphur* ★*color.*—**Sulphonated azo color,** one of a subdivision of the acid colors, which includes most of the acid reds, yellows, oranges, browns, and blacks.—**Sulphonated basic color,** one of a subdivision of the acid colors, made by treating certain of the basic dyestuffs with concentrated sulphuric acid.—**Sulphone colors,** a group of direct cotton coal-tar colors, derived from benzidine-sulphon-disulphonic acid. They are better suited for dyeing wool than for dyeing cotton.—**Sulphur color,** one of an important group of coal-tar coloring matters prepared by fusing various aromatic diamines and other organic compounds with sodium sulphid, sulphur, or thiosulphates. They are soluble in sodium sulphid solution, and in such a solution cotton may be dyed directly. They produce, for the most part, dull shades and include many fast blacks, browns, and blues. Also known as *sulphid colors.*—**Tannin color.** Same as *basic* ★*color.*—**Tetrakisazo color,** one of a class of coal-tar coloring matters containing four azo groups. They are direct cotton colors.—**Thiazin color,** one of a class of coal-tar coloring matters containing the thiazin group. They include the methylene and thionine blues.—**Triazo color,** one of a class of coal-tar coloring matters which contain three azo groups but no more. They are for the most part direct cotton colors.—**Triphenylmethane color,** one of a class of coal-tar coloring matters which are directly related to triphenylmethane. They include most of the basic colors and the sulphonated basic colors.—**With the colors,** serving in the active or standing army in contradistinction to serving in the reserve.—**Xanthene color,** one of a class of coal-tar coloring matters which are related in structure to xanthene. These colors include the phthalic anhydrid colors and pyronines.

Colorado grass. Same as *concho-grass.*—**Colorado group.** See ★*group*[1].

Colorado River trout. See ★*trout*[1].

color-blindness, *n.* Since it is estimated that one man in twenty-five is color-blind, the importance of recognizing this defect in railroad or maritime employees, whose occupation requires the ability to distinguish quickly between signals of different colors, is evident. Many

European governments and a few of the United States now have laws regulating the examination of applicants for such positions. The large railroad companies on their own account test the vision of new men and require all employees to submit to reexamination at stated intervals. Numerous tests have been devised for this purpose, but practically only two are used in official examinations. One of these is nearly always founded on the wool test of Holmgren. In this a hundred or more skeins of wool, all different in color or shade, are placed in a pile, and the applicant is required to select first all the skeins corresponding in color to a light green skein. The test is then repeated with a rose-pink skein, and in some cases with a bright red one. The color-blind person hesitates in making his selections and matches the colors incorrectly. The other test consists in the use of a lantern so arranged as to show the light through one or more disks of glass, the color, size, and brightness of which can be varied so as to simulate lantern signals under different conditions of distance, fog, smoke, etc. The wool test is sometimes modified by having the skeins suspended side by side from a stick, so that the selections may be made more quickly. Instead of skeins of wool, colored blocks, small glass tubes filled with colored powders, or slips of paper of different colors, are sometimes used, or colored letters are printed on a colored background in such a way that some of them cannot be distinguished from the background by color-blind persons. In official examinations the acuteness of vision for form and the hearing are usually tested, as well as the function of color-perception. It should be added that the wool and lantern tests are by no means adequate tests of color-blindness at large. Many cases of red-green blindness are missed by the wool test; and the lantern test merely shows whether or not the employee can distinguish the particular colors used under the particular conditions of observation, not whether or not he is partially color-blind. To detect the less obvious cases of partial color-blindness, recourse must be had to some instrument of precision, such as Hering's color-blindness tester, in which the color-tone and brightness of complementary color-pairs can be accurately and measurably adjusted.

color-box, *n.* **3.** In *calico-printing*, a long trough, attached to a cylinder printing-machine, for holding a color to be applied to an engraved roller.

color-chord (kul'or-kôrd), *n.* A fanciful term sometimes used to describe color combinations which are decidedly agreeable, like the russet and green of a forest, or the violet and yellowish green of the wistaria.

color-curve (kul'or-kèrv), *n.* A curve which shows the differences in the focal length of the object-glass of a telescope for rays of different color (wave-length).

color-defective (kul'or-dē-fek″tiv), *n.* One who is partially or completely color-blind. *Stud. Yale Psychol. Lab.*, VIII. 17.

color-disk (kul'or-disk), *n.* A disk for use in the color-wheel. See *Maxwell color-disks* (under *disk*); and ★*color-mixer*, and *Masson's* ★*disk* (with cuts).

colored sounds. See ★*sound*[5].

color-hearing (kul'or-hēr″ing), *n.* A condition in which a certain sound calls up the memory of a certain color, and vice versa. See ★*chromæsthesia*. *Buck*, Med. Handbook, III. 603.

colorimeter, *n.*—**Hehner's colorimeter,** an apparatus for volumetric analysis by the color-method. Two graduated glass cylinders, with stop-cocks at the sides and with flat bottoms, are used—one to hold the solution having a standard color, the sample to be tested being placed in the other. The comparison of color is made by looking axially through the cylinders. Liquid is withdrawn from the one having the deeper tint until both are alike. The strengths of the solutions are inversely as the readings of the graduated scales. Thus if 100 cubic centimeters of the unknown solution give the same tint as 20 cubic centimeters of the standard, the unknown solution is one fifth as strong as the standard.—**Leed's colorimeter,** an apparatus for comparing the relative depth of color of liquids. The light is reflected from above by a mirror, and is transmitted lengthwise through the tubes, and the colors are compared in the mirror below the stage.—**Stead's colorimeter** or **chromometer,** an apparatus for the comparison of colored solutions, used in estimating the proportion of carbon in steel.

colorimetrical (kul-o-ri-met'ri-kal), *a.* Same as *colorimetric*.

colorimetrically (kul″o-ri-met'ri-kal-i), *adv.* Having reference to a colorimetric comparison; by means of the colorimeter.

colorimetry, *n.* **2.** The quantitative measurement, as in chemical analysis, of a colored substance by comparing the depth of color of its solution with that of a solution of known strength of the same or a similarly colored substance.

colorin (kō-lō-rēn'), *n.* [Sp. *colorin*, intense color, < *color*, color.] A name in Mexico of several plants having bright-colored seeds which are sometimes used by the natives for beads, especially of *Erythrina coralloides*, a small thorny tree, with trifoliate leaves, belonging to the *Fabaceæ*.—**Colorin chiquito,** the Mexican rosary-pea, *Dolicholus phaseoloides*, a twining plant with small, hard, red-and-black seeds very closely resembling the common crabs'-eyes of the West Indies (*Abrus Abrus*). The plant, however, is easily distinguished by its trifoliate leaves, the leaves of *Abrus* being pinnate with many pairs of leaflets. See also ★*chilicote*.

coloring, *n.* **Aggressive coloring.** See ★*aggressive*.—**Cryptic coloring,** animal coloring which serves to conceal its possessor, so as to hide it from its enemies or prevent its prey from discovering it. It may be for defense or for attack, general or special.—**Epigamic coloring,** sexual coloring which by its display serves to attract or stimulate the other sex during the courtship of animals.—**Episematic coloring,** animal coloring which serves as a recognition-mark for other individuals of the species.—**Procryptic** or **protective coloring,** organic coloring which serves to conceal its possessor from enemies.—**Pseudallosematic, pseudaposematic, pseudepisematic, pseudosematic coloring.** See ★*pseudallosematic*, ★*pseudaposematic*, ★*pseudosematic character*.—**Sematic coloring,** organic coloring which serves to alarm enemies or to bring together individuals of the species for their welfare.—**Synaposematic coloring,** warning or aposematic coloring like that of allied species.

coloring-wheel (kul'or-ing-hwēl), *n.* In *leather-manuf.*, a wheel or drum into which skins are put with the coloring liquid and revolved until sufficiently colored. *Flemming*, Practical Tanning, p. 179.

coloristic, colouristic (kul-or-is'tik), *a.* Of or pertaining to color or coloring.

Instead of imitating the old masters, let us paint the *colouristic* charms that were unknown to them.
Encyc. Brit., XXXII. 449.

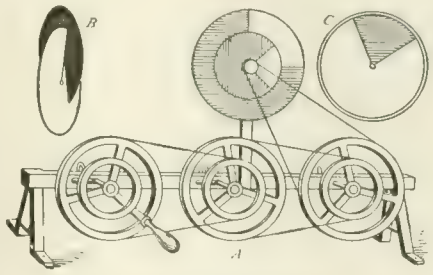
colorítype (kō-lor'i-tīp), *n.* [L. *color*, color, + Gr. τύπος, type.] The art of making photo-engraved plates or printing-surfaces that can be used for the production of prints in many colors from three plates only, respectively planned for the primary colors yellow, blue, and red. See ★*colortype*.

colorless, *a.* **2.** In *bot.*: (*a*) Having no other color than green. (*b*) Pale or hyaline. *Jackson*, Glossary.

color-line, *n.* **3.** In *psychophys.*: (*a*) The outline of the plane figure (circle, square, triangle) which gives a diagrammatic representation of color sensations and their interrelation. (*b*) Any straight line joining two points on or within the solid figure (sphere, double cone, double pyramid) which gives a diagrammatic representation of the totality of visual sensations.

colorman, *n.* **2.** In *leather manuf.*, the man who mixes the dyes. Most factories have a special workman who attends to this.

color-mixer (kul'or-mik″sèr), *n.* In *psychophys.*, an instrument for the mixture of colors. The usual form of the instrument is the color-top or color-wheel. This consists essentially of a vertical or horizontal axle, capable of rotation at high speed, upon which may be



Color-mixer.
A, color-mixer; *B* and *C*, disks.

clamped disks of black, white, or colored cardboard. If the disks are slit along one radius, several may be fitted together, and mounted on the axle at the same time; the separate impressions on the retina then succeed each other so swiftly that only the result of mixture is seen. The color-wheel, electrically or mechanically driven, is one of the staple instruments of the psychological laboratory.—**Marbe's color-mixer,** a form of the color-wheel in which the relation of the sectors of the mounted disks may be changed at will during rotation.—**Reflection color-mixer,** a color-mixer in which a pane of clear glass is set, at a certain inclination, between two horizontal strips of colored paper. The observer, looking down through the glass, sees the reflection of one strip projected upon the image of the other.

color-pan (kul'or-pan), *n.* In *calico-printing*, a vessel, usually of copper, employed for dissolving and stirring thickeners and colors.

color-plate (kul'or-plāt), *n.* A printing-plate for one color only made for a print which is to be fully developed, in a perfect copy, by the printing of other colors from separately prepared plates.

color-screen (kul'or-skrēn), *n.* A plate of colored glass or other transparent medium, interposed in the path of a beam of light to absorb certain rays while allowing the rest to pass; specifically, a screen which cuts out all but the middle portion of the spectrum, so that when it is interposed before an isochromatic plate it becomes possible to obtain satisfactory photographs of celestial objects with refractors which are not photographically corrected.

color-slab (kul'or-slab), *n.* A slab or plate of white porcelain upon which little patches of the various colors used in porcelain-painting have been burned in to serve as a guide to the artist, showing the result each material will give in firing.

color-tone (kul'or-tōn), *n.* **1.** Gradation and harmony of color.

'The most important part of *color-tone* atmosphere, Millet was fond of saying, 'can be perfectly rendered in black and white.'
J. Cartwright, in Burlington Mag., V. 52.

2. In *psychol.*, the color quality of a colored impression; chroma or hue, as opposed to brightness and saturation.

color-top (kul'or-top), *n.* A top the surface of which is systematically tinted in such a way that when it revolves it exhibits the phenomena of color-mixture by persistence of vision. See ★*color-mixer*.

color-tub (kul'or-tub), *n.* In printing calico by hand with blocks, a box for holding the color employed by the printer.

color-tube (kul'or-töb), *n.* See ★*tube*.

colortype (kul'or-tīp), *n.* A pictorial print produced on the ordinary typographic printing-press by the three-color process from three photo-engraved plates that respectively convey the primary colors yellow, blue, and red. When the outline or form is indistinct, a fourth plate of black is sometimes added. Secondary and tertiary shades of color are made by the dissection and combination of the overlapping primary colors in the processes of printing.

color-weakness (kul'or-wēk-nes), *n.* Inability to distinguish colors at low degrees of saturation: for example, the inability to see the redness of a washed-out pink or the blueness of a navy blue.

color-wheel (kul'or-hwēl), *n.* A wheel designed to demonstrate the phenomena of color-mixture. See ★*color-mixer*.

colory, coloury (kul'or-i), *a.* and *n.* [*color* + -*y*[1].] **I.** *a.* **1.** Abounding in color: as, good *colory* cows. [Colloq.]—**2.** Of a color that indicates excellence of quality: as, *colory* hops, or coffee, or tobacco.

II. *n.* A packer's grade of light leaf-tobacco, from which tobacco for pipes and cigarettes is manufactured. This grade of tobacco is produced chiefly in Maryland and Ohio and is largely exported.

Coloss. An abbreviation of *Colossians*.

colossalize (kō-los'al-īz), *v. t.* [*colossal* + -*ize*.] To render colossal; impart colossal proportions.

A third-rate author, owing his fame to his effigy *colossalized* through the lens of John Wilson.
Emerson, Letters and Social Aims, p. 188.

colostomy (ko-los'tō-mi), *n.* [Gr. κόλον, colon, + στόμα, mouth.] In *surg.*, the establishment of a permanent opening (artificial anus) into some portion of the colon. *Med. Record*, July 11, 1903, p. 71.

colpalgia (kolp-al'ji-ä), *n.* [NL., < Gr. κόλπος, bosom, womb (vagina), + ἄλγος, pain.] In *med.*, pain in the vagina.

colpocystocele (kol-pō-sis'tō-sēl), *n.* [Gr. κόλπος, womb (vagina), + κύστις, bladder, + κήλη, tumor.] In *surg.*, prolapse of the bladder which pushes before it the wall of the vagina.

colpocystotomy (kol″pō-sis-tot'ō-mi), *n.* [Gr. κόλπος, womb (vagina), + κύστις, bladder, + -τομία, < ταμεῖν, cut.] In *surg.*, incision into the bladder through the vagina.

colpodesmorraphia (kol-pō-des-mō-raf'i-ä), *n.* [NL., < Gr. κόλπος, womb (vagina), + δεσμός, a band, + ῥαφή, a sewing.] In *surg.*, an operation for reducing the capacity of the vagina by removing a section of the mucous membrane and uniting the edges of the defects. The object of the operation is to furnish support to a prolapsed womb.

colpohysterectomy (kol-pō-his-te-rek'tō-mi), *n.* [Gr. κόλπος, womb (vagina), + *hysterectomy*.] In *surg.*, removal of the uterus by an operation through the vagina.

colpomyomectomy (kol-pō-mī-o-mek'tō-mi), *n.* [Gr. κόλπος, womb (vagina), + μῦς, muscle, + ἐκτομή, excision.] In *surg.*, removal of a myoma of the uterus through an incision in the vaginal wall.

colporrhexis (kol-pō-rek'sis), *n.* [NL., < Gr. κόλπος, womb (vagina), + ῥῆξις, breaking, < ῥήγνυναι, break.] In *surg.*, a laceration of the vaginal wall.

colpos (kol′pos), *n.*; pl. *colpoi* (-poi). [Gr. κόλπος, the bosom, the lap, a deep hollow, bay, gulf, etc.: see *gulf.*] In Greek costume, a fold in a garment, as the chiton, above the girdle. It was sometimes used as a pocket.

colpostenosis (kol″pō-stē-nō′sis), *n.* [NL., < Gr. κόλπος, womb (vagina), + στένωσις, narrowing.] In *surg.*, stricture of the vagina.

colpotomy (kol-pot′ō-mi), *n.* [Gr. κόλπος, womb (vagina), + -τομία, < ταμεῖν, cut.] In *surg.*, incision into the vaginal wall.

colpoxerosis (kol′pok-sē-rō′sis), *n.* [NL., < Gr. κόλπος, womb (vagina), + ξήρωσις, a drying up, < ξηρόω, dry up, < ξηρός, dry.] In *med.*, extreme dryness of the vaginal mucous membrane.

colt, *v. t.* 2. To beat with a rope's end. See *colt, n.*, 4. *Marryat.*

colter, *n.* 2. In medieval armor, a two-handed Flemish weapon with one edge straight and the other curved: so called from its resemblance to the colter of a plow.

colt-ill (kōlt′il), *n.* An infectious catarrhal fever affecting horses. Young animals principally are attacked. One attack confers subsequent immunity. See *strangles.*

coltskin (kōlt′skin), *n.* The skin of a colt; as a trade term, leather made from skins of colts or of horses. *Flemming,* Practical Tanning, p. 397.

colt's-tail, *n.* 2. The small mare's-tail or cat's-tail (cirrus cloud): a portent of rain.

colugo (kō-lō′gō), *n.* [E. Indian.] The common name for the flying-lemur, *Galeopithecus volans.* Called also *kaguan* and *kubong.*

colulus (kol′ū-lus), *n.*; pl. *coluli* (-lī). [NL., dim. of L. *colus,* distaff.] A small comb-like sclerite at the base of and between the front spinnerets in many spiders. *Annals and Mag. Nat. Hist.,* Jan., 1904, p. 65.

Columbellaria (kol-um-be-lā′ri-ä), *n.* [NL.] A genus of platypodous gastropods with spiral ribs, long and narrow aperture, thickened and spirally ribbed outer lip. It occurs in the Upper Jurassic rocks.

Columbia black, blue, brown, etc. See ★*black,* ★*blue,* ★*brown,* etc.

Columbia formation. See ★*formation.*

Columbia River sucker, trout. See ★*sucker,* ★*trout.*

columbiad, *n.* 2. [*cap.*] An epic of Columbia, that is, America: used as the title of several poems, as one by J. L. Moore (1798), one, better known, by Joel Barlow (1808), and one in French (*La Colombiade*) by Madame de Boccage (1756).

Columbian[1], *a.*—**Columbian type,** a former name of a type-body now known as 16-point (.2213 of an inch).

Columbian[2] (kō-lum′bi-an), *a.* [*Columbus* + *-ian.*] Of or pertaining to Columbus; in *ethnol.*, pertaining to the period of American history beginning with the discovery of the continent by Columbus: called more definitely *post-Columbian.*

columbiform (kō-lum′bi-fôrm), *a.* [L. *columbus,* a dove or pigeon, + *form,* form.] Having the characters or appearance of a pigeon.

columbin[2] (kō-lum′bin), *n.* [*columbo* + *-in*[2].] A colorless, crystalline, bitter principle, $C_{21}H_{22}O_7$, contained in African columbo-root, *Jateorhiza palmata.*

columbine[2], *n.*—**Red** or **wild columbine,** *Aquilegia Canadensis,* a favorite American wild-flower, sometimes cultivated, with bright red showy nodding flowers: common on rocks from Nova Scotia to North Carolina and westward to the great plains. The large red columbine is *A. coccinea,* a larger and less common species with a similar but somewhat more restricted range.—**Tufted columbine,** a name applied to both *Thalictrum glaucum,* native in Spain, and *T. aquilegifolium.* The former is also called *Spanish-tuft,* and the latter *feathered columbine.* See *Thalictrum.*

columbium, *n.* 2. In *chem.*, a supposed new element announced in 1879 by J. L. Smith as present in the mineral samarskite: its existence has not been confirmed. Distinct from the previously known element columbium or niobium.

columbo, *n.*—**Extract of columbo.** See ★*extract.*

columbotitanate (kō-lum-bō-ti′tan-āt), *n.* [*columb(ic)* + *titan(ic)*[2] + *-ate*[2].] In *chem.* and *mineral.*, a compound in which the basic element or elements are united to the radicals of both columbic (niobic) and titanic acids, as in the mineral euxenite.

Columellar lobe, in the nomenclature of the septal sutures of the cephalopods, the median lobe on the dorsal surface of the whorl, which is usually the inner or concave surface. Also called *antisiphonal lobe, dorsal lobe,* and *interior lobe.*—**Columellar muscle,** in gastropods, a muscle that is attached to the columella and serves to draw the body into the shell.

column, *n.* 11. A short upright line which separates written or printed words or symbols. Its most common uses are to indicate, in copied or reprinted passages, especially title-pages, the ending of a line in the original copy, and in metrical works, liturgies, chants, etc., the close of a foot, rhythm, or measure.

12. The mast or vertical member of a hoisting apparatus, such as a crane, usually so constructed that no bracing or guys shall be required at the top to resist the bending stresses due to the load.—**Close column,** a battalion in column of companies or platoons with less than full distance between the subdivisions. Also called *battalion in mass.*—**Column at full distance,** a battalion in column of companies or platoons with such distance between subdivisions that the column can wheel into line. **Column of files,** two files (or one file) of men faced to right or left.—**Column of fours,** a column composed of four files or of ranks of four.—**Diminished column,** one whose shaft is tapered. See *entasis* and ★*diminish, v. t.*, 2.—**Erosion column,** a tower-like form resulting from rain-wash and weathering of incoherent strata or loosely bound sediments with more resistant capping. *Amer. Jour. Sci.,* April, 1904, p. 265.—**Lotus column.** See *lotus* ★*capital.*—**Parallel columns,** two or more columns of printed matter placed side by side to show agreement or disagreement in words or expression.

columnal. II. *n.* A segment or joint of the stem of the *Crinoidea.*

columnar, *a.* 3. In *geol.*, divided into columns, by tension-joints, as is frequent in flows of basalt. The Giant's Causeway, in Ireland, is a famous instance. *Geikie,* Textbook of Geol., p. 136.—4. Arranged, written, or printed in columns, as in Chinese, Japanese, Korean, etc., writing.—**Columnar architecture, cell.** See ★*architecture,* ★*cell.*—**Columnar structure.** (*b*) In *petrog.*, a structure resulting from a system of cracks or joints whereby a rock is divided into prisms or columns, often six-sided: produced in igneous rocks by shrinkage upon cooling, in sedimentary rocks by loss of volume due to contact-metamorphism.

Columnaria (kol-um-nā′ri-ä), *n.* [NL., < LL. *columnaris,* columnar.] A genus of extinct *Tetracoralla* growing in compound stocks, composed of polygonal corallites, which bear horizontal tabulæ and two cycles of septa. It occurs in Silurian and Devonian rocks.

Columnia intermedia, an area of gray matter in the spinal chord, between the anterior and posterior horns.

columniated (ko-lum′ni-ā-ted), *a.* Same as *columnated.*

column-pipe (kol′um-pīp), *n.* 1. The pipe which conveys the drainage water in a mine shaft from the bottom pump to the surface.—2. The pipe and fixtures connecting a steam-boiler to the water-column which carries the water-gage and try-cocks.

colunar (kō-lū′när), *a.* [*co-*[1] + *lune* + *-ar*[3].] Pertaining to the same lune. If A and A′ be opposite points of a sphere, then the spherical triangles ABC, A′BC are colunar. Together they make up a lune.

colure, *n.* 2. In *vegetable pathol.*, a disease of the grape, characterized by the falling of the flowers and the imperfect development of the fruit. It has been attributed chiefly to unfavorable climatic conditions.

com. An abbreviation (*a*) of *commission;* (*b*) of *commoner;* (*c*) [*cap.*] of *commonwealth.*

coma[1], *n.*—**Diabetic coma,** the coma which often marks the final stage of diabetes mellitus.—**Uremic coma,** coma occurring in the later stages of uremia.

comale (ko-mä′le), *n.* [Sp., < Nah. *comalli.*] A flat disk or stone for baking corn-bread.

Comanche series. See ★*series.*

comatulin (kō-mat′ū-lin), *n.* [*Comatula* + *-in*[2].] A red pigment found in certain invertebrates (crinoids).

comb[1], *n.*, 2. (*m*) A series of points fastened to a stick, used in pricking the skin in tattooing. (*n*) *pl.* In *zoöl.*, paired ventral pectinated appendages of the abdomen of scorpions. They are of systematic importance. (*o*) A wooden form employed by riggers for weaving mats, etc. (*p*) In *agri.*, an implement with teeth and a long handle, used to strip the seed from grass or other low-growing plants; a seed-gatherer. (*q*) In *zoöl.*, one of the rows of immense cilia, fused at their proximal ends, which form the swimming-plates and serve as the locomotor organs of *Ctenophora.*

10. See ★*comb-flower.*—**Antlered comb,** in *poultry,* a comb formed of two divergent branches, or 'horns,' such as is found in some Polish fowls and in the La Flèche.—**Drone comb,** honeycomb in which drone-brood or drone-honey may be found.—**Segmented comb,** in *cotton-manuf.*, the needle-segment on the cylinder-comb of a combing-machine. See ★*comb-segment.*

comb[1], *v. t.* 4. To subject to a process or action similar to that of combing, as in dredging: as, to *comb* oyster-beds.

comb-bar (kōm′bär), *n.* In bobbin-net and lace-manufacture, an iron bar divided into a number of grooves, or combs, for guiding the thread-bobbins in forming the lace meshes. Also called a *conducting-bar.*

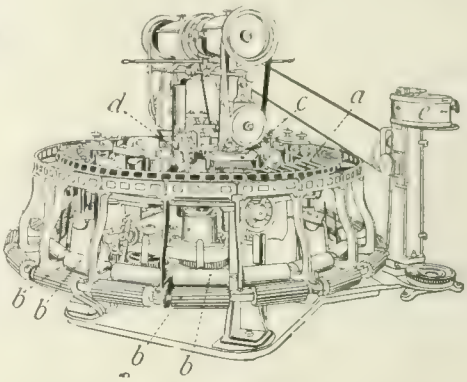
comb-basket (kōm′bas″ket), *n.* In *bee-keeping,* a receptacle for the combs in a honey-extractor.

comb-bucket (kōm′buk″et), *n.* In *bee-keeping,* a wooden bucket with a tight-fitting lid, used in transporting frames filled with honeycomb from the hives to the building where the combs are uncapped and the honey extracted.

comb-cylinder (kōm′sil″in-dèr), *n.* A revolving cylinder which performs the chief part of the combing process on a cotton-combing machine.

combed, *a.* 2. In *geol.*: (*a*) a term applied to prismatic crystals, especially of quartz, which grow toward each other from opposite walls of a fissure and interlock: used chiefly in describing mineral veins. Also *comb-in-comb.* (*b*) Surmounted by a sharp edge or comb.

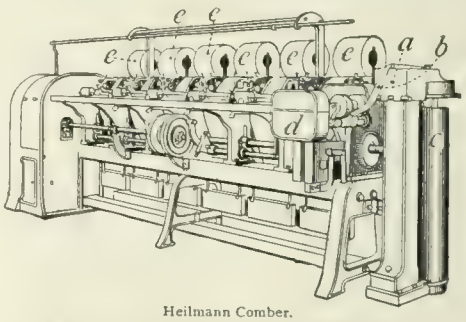
comber[1], *n.* 3. A machine for combing cotton, wool, and other textile fibers.—**Alsatian**



Noble Wool-comber.

a, conductors or boxes; *b*, *b*, *b*, *b*, creel-rolls; *c*, dabbing-brush; *d*, stroker or divider; *e*, coiler.

comber, a recent improvement of the Heilmann principle of cotton-comber, whereby the fluted segment is abolished and the nip and feed apparatus has a movement toward the detaching rolls, which permits an increased production to be passed through these rolls at each revolution of the cylinder.—**Bourcart's comber,** a cotton-combing machine having two sets of combs, which, with the necessary appliances, enable the machine to run at an increased speed for an increased production.—**Heilmann comber,** a machine used chiefly



Heilmann Comber.

a, coiler; *b*, sliver; *c*, sliver-can; *d*, draw-box; *e*, lap.

for combing cotton, to be used in the finer qualities of yarn, by means of nipping and combing devices that lay the fibers, of uniform length, parallel to each other for a continuous and even sliver. It was invented by Josué Heilmann of Mülhausen, Alsace, to whom an English patent was granted in 1846. It is substantially the same to-day as when first invented, the improvements being confined to mechanical details.

comber-board (kō′mèr-bōrd), *n.* A perforated board, on a Jacquard loom, for keeping the harness-cords separate and in position.

comber-lap (kō′mèr-lap), *n.* A ribbon or web of cotton prepared for the operation of combing on a combing-machine.

comb-fish (kōm′fish), *n.* A name given in British Guiana to the saw-fish, *Pristis pectinatus,* one of the thick-tailed rays, having the rostrum produced and armed with spines at the edges.

comb-flower (kōm′flou″èr), *n.* The purple cone-flower or black-sampson, *Brauneria purpurea,* so called from the stiff and sharp comb-like chaff of the receptacle. The name is extended to other species of the genus. The dry heads with persistent chaff are called *combs.*

combinantive (kom′bi-nan-tiv), *a.* [*combinant* + *-ive.*] Belonging to or like a combinant. *Sylvester,* 1853.

combinate, *a.* 2. Combined.

A work . . . thoughtfully planned out, so as to be wrought . . . by *combinate* minds, could never possess, if accomplished singly, the . . . character and intentions of its original designers.
Mrs. Browning, Letters to R. H. Horne, II. 110.

combination, *n.* **6.** At ball-pool, a designed shot by which a cue-ball makes one or more object-balls drive another into a pocket; at ordinary billiards one that similarly effects a carom or pocket.— **7.** In lace-manufacture, a complex arrangement of threads.— **8.** Same as *combination-room.*— **9.** Same as ★*combination garment.* —**10.** Specifically, in *organ-playing*, whatever stops are drawn for use in a particular piece or passage, or the tonal effect thus produced. The process or art of choosing the stops to be used is *registration*, but each particular choice is a *combination.*— **Back combination,** in *photog.*, that portion of a doublet lens which is situated nearest the focusing-screen.— **Combination and double-action die.** See ★*die*[3].— **Combination bearing.** See ★*bearing.* **Combination bevel.** See ★*bevel.*— **Combination button** or **piston,** in *organ-building*, a push-knob belonging to some one section of the instrument, and usually placed just below its keyboard, by pushing which a stop or combination of stops for that keyboard can be called into action. If there is a series of such pistons, pushing one releases any previously in operation, and all can be released by a special piston called the *release.* The mechanism is either pneumatic or electric. Sometimes it actually moves the stop-knobs, in which case the combination not only replaces that previously obtained by the latter, but may subsequently be modified by drawing or retiring them; but sometimes the piston action does not affect the stop-knobs, in which case, if the piston is released, the combination through the knobs is reinstated. In some organs the combination secured by a particular piston is fixed, but in others it is adjustable in various ways according to taste. Compare *combination pedal* and *composition pedal.*— **Combination by volume,** in *chem.*, combination considered in respect to the definite volumes or bulks of substances in the gaseous state which are found to unite, and the definite volumes of the resulting compound substances when also gaseous, such volumes being compared under the same conditions of temperature and pressure. The volumes of solids and liquids which combine have also been studied, but do not exhibit relations of the same definiteness and simplicity.— **Combination by weight,** in *chem.*, combination considered with reference to the definite weights, or more properly masses (quantities of matter), of the substances which are found to combine with each other. See *law of equivalents*, under *equivalent, n.*— **Combination car, chock, die.** See ★*car*[1], *chock*[1], ★*die*[3].— **Combination garment,** a close-fitting undergarment consisting of undershirt and drawers woven in one piece. Also called a *union suit.*— **Combination laws,** certain British laws, both statute and common, directed against combinations of masters as well as of workmen: repealed in 1824.— **Combination light, scales, spring, tannage.** See ★*light*[1], etc.— **Theory of combinations,** the part of algebra which treats of the different arrangements of a number of objects or symbols into groups of a given nature.

Combinational distribution. See ★*distribution.*

combinatoric (kom-bī-na-tor′ik), *n.* [*combinator-y* + *-ic.*] The theory of the formation, enumeration, and properties of the combinations, permutations, partitions, and variations of a finite number of elements according to different given conditions.

comb-in-comb (kōm″in-kōm′), *a.* Same as ★*combed*, 2.

combine, *v. i.*— **Combining weights,** in *chem.*, the relative quantities of different substances which are found to combine with each other: as, 35.18 parts of chlorin and 22.88 parts of sodium, or quantities in this proportion, are required to produce common salt.

combing-needle (kō′ming-nē″dl), *n.* One of a series of graduated needles which form the comb of a cotton-combing machine. They are attached to a cylinder known as the combing-cylinder.

combining-tube (kom-bī′ning-tūb), *n.* The tapering tube or channel in the injector for feeding boilers, within which the feed-water meets the energizing steam-jet and combines with the latter. In the injector this combining-tube is convergent in section; in the ejector it is a divergent orifice.

comb-rib (kōm′rib), *n.* The meridional swimming-organ of a ctenophore, from which it derives its name.

comb-roller (kōm′rō″lèr), *n.* A roller having projecting teeth of radial or curved wire, to act upon fibers (as of cotton) and cause them to lie straight and parallel for the next process: used in spinning-machinery.

comb-segment (kōm′seg″ment), *n.* A section of the combing-cylinder of a cotton-combing machine. There are usually two segments, the needle and the fluted: the object of the former is to comb the fibers, and that of the latter to enable a tuft of cotton to be detached after it has been combed, and to aid in attaching it to the previously combed sliver.

comb-spring (kōm′spring), *n.* A series, or one of a series, of parallel springs attached to and projecting from a supporting base like comb teeth.

comb-stock (kōm′stok), *n.* The barrel or cylinder to which are attached the combing-needles of a cotton-combing machine. *Nasmith*, Cotton Spinning, p. 152.

comburent (kom-bū′rent), *a.* and *n.* [L. *comburens*, ppr. of *comburere*, burn up: see *combust.*] **I.** *a.* Supporting combustion.

II. *n.* Anything that supports combustion.

combust, *v. t.* **2.** To burn up or consume with fire. *Caxton.*

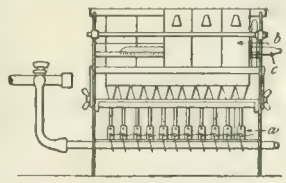
"Good Lord, you don't suppose that I would go spontaneously *combusting* any person?"
Dickens, Bleak House, xxxiii.

combust, *a.*— **Combust way,** in *astrol.*, the space in the second half of Libra, and through the whole of Scorpio.

combustion, *n.*— **Heat of combustion.** See ★*heat.* —**Isothermal combustion,** combustion which takes place at a constant temperature, or without change of temperature.— **Spontaneous combustion.** Besides the rapid oxidation, beginning at common temperature and leading to heating and ignition, of such materials as greasy rags, the pyrites of coal, etc., spontaneous combustion is in some cases exhibited by substances, such as zinc-ethyl and cacodyl, for which the temperature of ignition lies at or below the common temperature of the air, and which therefore take fire at once on coming in contact with atmospheric oxygen.— **Supporter of combustion,** in *chem.*, the substance, usually gaseous, and in the most common cases oxygen gas, which is relatively electronegative in the union with production of heat and light (combustion or burning) of two substances, the other, relatively electropositive, being spoken of as the *combustible* or *fuel.*— **Surface combustion process.** See ★*process.*

combustion-chamber (kom-bus′chon-chām″bèr), *n.* A space, of relatively large cross-section, behind the furnace which must be traversed by the hot gases from a boiler-grate, and in which they will be thoroughly mixed with oxygen and have an opportunity to burn completely. It is usually a chamber into which the gases pass directly from the fire-box.

combustion-furnace (kom-bus′chon-fêr″nās), *n.* The heating apparatus used in chemical laboratories in carrying out the usual process for the ultimate analysis of an organic substance by subjecting it to complete combustion and collecting the products. As originally devised by Liebig, it consisted of a trough of sheet-iron in which charcoal was burned; at the present day it usually consists of one or more rows of gas-jets with separate stop-cocks, serving to heat the tube of hard glass, or of platinum, in which the combustion is effected.— **Bunsen's combustion-furnace,** a form of heating-apparatus especially designed for the ultimate analysis of organic substances. From 10 to 20 Bunsen burners in line, each provided with a stop-cock and with an air-regulating slide, serve as the source of heat. The combustion-tube or other apparatus to be heated is supported in an iron trough lined with asbestos, while fire-clay tiles inclose it and form a chimney, confining the heat to the space about the tube. A high temperature is thus obtained.



Bunsen's Combustion-furnace.
a, Bunsen burners; *b*, tiles; *c*, combustion-tube.

combustion-tube (kom-bus′chon-tūb), *n.* A tube of hard (Bohemian) glass, infusible except at high temperatures, in which substances are subjected to heat, as in ultimate analysis.

comby (kō′mi), *a.* [*comb*[1] + *-y*[1].] **1.** Like a comb; specifically, in *geol.*, applied to banded mineral veins some or all of whose layers consist of thickly set, parallel prismatic crystals in section resembling a comb. *Geikie*, Textbook of Geol., p. 814.— **2.** Like a honeycomb; honeycombed; having many cavities.

comdt. An abbreviation of *commandant.*

comedist (kom′e-dist), *n.* [*comed-y* + *-ist.*] A writer of comedies. *Athenæum.*

comedy, *n.* **5.** A narrative poem: applied to the *Divina Commedia* ('Divine Comedy') of Dante. See *Dante* and *Divina Commedia* in the Cyclopedia of Names.— **Light comedy,** a humorous and refined play with a more or less complex plot and a happy ending, representing events, situations, and scenes in ordinary life.— **Low comedy,** a broadly humorous or 'droll' comedy with no particular plot and tending to farce.

come-hither (kum-hiтн′èr), *n.* [Also dial. *commither, comither, commether, comether, comother*, etc.] **1.** A persuasive call to a child or an animal. Compare ★*comether.*— **2.** A call to a horse to come toward one: usually to the left side, where the carter walks when driving without reins. [Prov. Eng. and Scotch.]

comendite (ko-men′dīt), *n.* [*Comende* on the island of San Pietro, S. W. coast of Sardinia, + *-ite*[2].] In *petrog.*, a name given by Bertolio (1895) to a variety of rhyolite with ægirite, arfvedsonite, or riebeckite.

comenic (ko-men′ik), *a.* [A metathesis of *meconic.*] Derived from meconic acid. **Comenic acid,** a bibasic acid, $C_6H_4O_5$, obtained by boiling meconic acid with water or with hydrochloric acid.

come prima (ko′me prē′mä). [It.: *come*, as, < L. *quo modo*, in what manner; *prima*, at first, before, < L. *prima*, abl. fem. of *primus*, first: see *prime.*] In *music*, as at first: a direction for repetition.

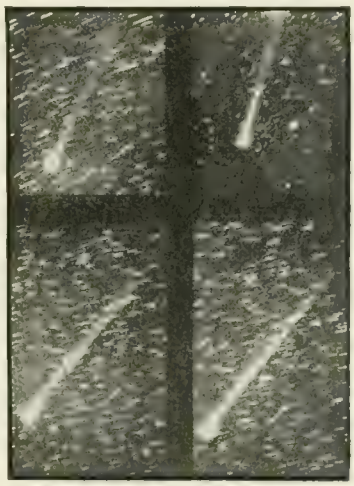
comer, *n.* **2.** In *stock-raising*, an animal that is 'coming on' or promises well.

He has made good growth since he came before the public as a feature of the Nave dispersion, and still shows that remarkable looseness and elasticity of hide that indicates a "*comer*" when he is put next to the feed-box. *Rep. Kan. State Board Agr.*, 1901-1902, p. 202.

comes, *n.* **5.** In *astron.*, a small companion star in any double, triple, or multiple 'system.'

come sopra (kō′me sō′prä), *n.* [It.: *come*, as; *sopra*, < L. *supra*, above.] In *music*, as above: a direction for repetition.

comet, *n.* **1.** Comets are doubtless visitors, and not members of the solar system in any such sense as are the planets. Until recently it was believed that they come from interstellar space; but from the facts that hyperbolic orbits are extremely rare, and that there is no distinct arrangement of their orbits relative to the direction of the sun's motion in space, it now appears nearly certain that they originate in clouds of matter which partake of that motion, remote, outlying remnants of the huge nebula within which the solar system is supposed to have been developed. The distance from which they descend and to which they return is, however, generally so great that their orbits, though really elliptical, cannot be distinguished from parabolas in the part near the sun. The orbits of short period (Jupiter's comet-family for instance) are in all probability due to the capture of comets passing near one of the larger planets under such conditions that their speed is retarded, while the few hyperbolic orbits are explained by planetary encounters under the less frequent conditions which produce acceleration. The dimensions of comets are enormous: none less than 10,000 miles in diameter are recorded, and some have considerably exceeded the size of the sun itself. Their mass, on the other hand, is relatively insignificant, as is demonstrated by the fact that in certain cases, when they have passed so close to a planet as to suffer violent perturbation and even disruption, the planet itself and its satellites have shown not the slightest effect from the encounter. The mean density of comets must therefore be extremely low,—comparable with that of the best artificial vacuum. But it does not follow that they may not contain dense particles of stone, or even iron, widely diffused in rarefied gas: indeed this is probable from the ascertained connection between comets and meteors, and from certain spectroscopic phenomena. While reflecting sunlight to some extent, the comet is also self-luminous with a light in some way excited by its approach to the sun, though not by simple heating. The spectrum is always mainly gaseous, and is usually marked by four bright bands identical with those shown by the blue cone of a Bunsen burner flame: there are, however, occasional exceptions, and when a comet has passed very near the sun, as in 1882, the bright lines of various metals have appeared in the spectrum. The gaseous spectrum must not be regarded as showing that the gas is the principal constituent of the comet's mass, but only that it is the one which is most conspicuously luminous, nor must it be taken as necessarily indicating a flame-like temperature: it is much more probable that the temperature is low, and that the gas shines by luminescence rather than by heat. While the tail of a comet is due mainly to solar repulsion, there is also distinct evidence of forces acting from within the comet itself, excited by the nearness of the sun. The tail often consists of a narrow stream or streams emanating from the comet's head, and this type is perhaps more frequent than the horn-shaped cone which envelops the head and widens out behind it, shown in the figure under *comet.* As to the energy which acts against gravitation and drives off the materials of the train, it is likely that several forces coöperate, namely, the recently dem-


Borrelly's Comet of 1903.
From photographs made at the Yerkes Observatory. The two lower figures show the remarkable changes in the comet's tail which took place during about four hours on the night of July 24.

onstrated repulsive power of light-waves upon minute particles, the action of electrified corpuscles and 'ions' liberated from intensely heated surfaces, and the influence of radioactive substances presumably abounding in the sun—all these and others still are conceivable and not improbable. Photography promises much in the study of these bodies, and has already brought out many interesting facts. The light of comets is strongly actinic, and the photograph reveals much which the telescope utterly fails to show.

5. In *photog.*, a comet-shaped defect appearing on gelatin dry plates. *Woodbury*, Encyc. Dict. of Photog., p. 132.—**Biela's comet.** A short-period comet discovered by Biela in 1826, the second of its class. Its period is 6.6 years. In 1846 it separated into two, and has not been seen since its reappearance in 1852. The Andromedid or Bielid meteors, appearing in occasional meteoric showers about the 27th to the 23d of November, travel in its orbit, and are supposed to be the products of its disintegration.

Cometary nebula. See ★*nebula*.

comet-family (kom'et-fam i-li), *n.* A number of periodic comets which have orbits that nearly intersect the orbit of one of the larger planets and are supposed to have been captured on some past occasion of near approach, their orbits having then been transformed from parabolas to ellipses. Jupiter's comet-family comprises nearly thirty members with periods ranging from three to eight years. Saturn is credited with two, Uranus with two, and Neptune with six.

comet-group (kom'et-gröp), *n.* A number of comets which, though certainly distinct, have orbits almost identical, and are presumed to have had a common origin. Four or five such comet-groups are recognized, the most remarkable of which is composed of the great comets of 1668, 1843, 1882, and 1887, all of which passed extremely near the sun.

comether (kọ-meŦH'ėr), *n.* [Also *comedher*, *commither*; a dial. pronunciation of *come hither*, used in coaxing children, cows, horses, etc.: see ★*come-hither*.] 1. Used in the phrase 'to put one's (or the) comether on (a person),' that is, to subject him to coaxing or wheedling; to win him over by flattery or persuasion, beguile him. [Prov. Eng. and Irish.]

How does ut come about, sorr, that whin a man has put the *comether* on wan woman he 's sure bound to put ut on another? . . . An ye thought ye 'd put the *comether* on her. *R. Kipling*, Courting of Dinah Shadd, ii.

2. Friendly intercourse. [Irish.]—3. Matter; affair. [Irish.] *Eng. Dial. Dict.*

cometoid (kom'e-toid), *a.* and *n.* **I.** *a.* Resembling a comet.

II. *n.* A name proposed in 1805 (but never adopted) for the asteroids, on account of their eccentric orbits.

comet-seeker, *n.* 2. An astronomer who makes a specialty of seeking comets.

comforter, *n.*—**Job's comforter.** (*a*) One who (like Job's three friends), while professing to comfort and console a friend in affliction, really makes matters worse by argumentative fault-finding, or the like. (*b*) A boil: in allusion to those with which Job is supposed to have been afflicted. [Colloq. in both uses.]

Com.-in-Chf. An abbreviation of *Commander-in-chief*.

comitative (kom'i-tā-tiv), *a.* [NL. **comitativus*, ⟨ L. *comitatus*, accompaniment: see *comitatus*.] 1. That serves to express accompaniment, association, or connection; associative.

A small number of adverbial prefixes are found only in combination with other elements. Thus: . . . (*b*) The *comitative* prefix *sa*, used instead of the preposition *sám*, and exchangeably with *saha*, before nouns and adjectives. *Whitney*, Sanskrit Grammar, p. 364.

2. In *gram.*, noting the case expressing companionship (with). Also as a noun. *Amer. Anthropologist*, Jan.–March, 1903, p. 26.

comiteco (kō-mi-tā'kō), *n.* [Mex. Sp.] A stimulating liquor distilled from a species of agave. [Mexico.] *Sci. Amer. Sup.*, Dec. 12, 1903, p. 23365.

comitium (kọ-mish'i-um), *n.* [L.: see *comitia*.] In *Rom. hist.*, the meeting-place of the comitia (which see).

comitiva (kō-mi-tē'vä), *n.* [It., a party, for **comitativa*, ⟨ L. *comitatus*, a company: see *comitatus*.] An organized band of brigands or of lawless people. [Southern Italy.]

comi-tragedy (kom-i-traj'e-di), *n.* [*comi(c)* + *tragedy*. Cf. *tragicomedy*.] A tragedy with a comic element in it.

I know no better method . . . than . . . quoting . . . a passage in which he transfers the whole *comi-tragedy* from Italy of old to England in 1861. *Kingsley*, Roman and Teuton, Lecture ii.

Comley sandstone. See ★*sandstone*.

comm. An abbreviation (*a*) of *Commander*; (*b*) of *commentary*; (*c*) of *commerce*; (*d*) of *commonwealth*.

Comma degeneration, progressive degeneration of the nervous substance comprising the comma tract.—**Comma tract,** a tract of white nerve-fibers found within the posterior external column of the spinal cord.—**Gray comma,** an American nymphalid butterfly, *Polygonia progne*, found in the northeastern United States and Canada. Its larvæ feed on the elm, currant, and gooseberry.—**Green comma,** an American nymphalid butterfly, *Polygonia faunus*, common in the northern United States and Canada. Its larvæ feed on the alder, willow, black birch, currant, and gooseberry.

command, *n.*—9. In *whist* and *bridge*, the best card of a suit, usually of one which the adversaries are trying to establish.

commandeer (kom-an-dēr'), *v. t.* [D. *commandeeren*, ⟨ F. *commander*, whence E. *command*, *v.*] 1. To order (the enrolled militia) into active military service: originally with reference to the late Dutch republics of South Africa, which were charged with forcing aliens also into the military service.

The naive claims put forward by the Boers to some special Providence—a process which a friendly German critic described as "*commandeering* the Almighty." *A. Conan Doyle*, Great Boer War, xiii.

2. To seize private property for military or other public use.—3. To seize public or private property for private use, under color of military necessity or right; steal from a helpless victim. [Humorous.]

However, we were able by using the *commandeered* property of the Boer frau, to produce a newspaper of pretentious size and considerable importance. *J. Ralph*, in War's Brighter Side, p. 52.

commandeer (kom-an-dēr'), *n.* The act of commandeering.

"So here's my bloomin' health," says he; "I'm on the *commandeer*."
And without another word he commandeered it.
War's Brighter Side, p. 157.

commando, *n.* 2. The enrolled militia of an electoral district in the late Dutch republics of South Africa.—3. A unit of the Boer army commanded by an officer whose title was *Commandant*.

A messenger was also sent to warn the Fauresmith *commando* of 400 to 500 men, which was approaching the town, that they had better disperse. *J. Ralph*, in War's Brighter Side, p. 90.

To go on commando, to take the field or join an armed force in the field.

We sailed *upon commando*
To vierneuk our Brother Boer—
A landlord and a Protestant,
What could the bhoys want more?
R. Kipling, The Friend, in War's Brighter Side, p. 136.

commelinaceous (ko-mel-i-nā'shius), *a.* Of, pertaining to, or having the characters of the *Commelinaceæ*.

commensally (ko-men'sạl-i), *adv.* In the manner of a commensal.

commerce, *n.*—**Bureau of Foreign Commerce.** See ★*bureau*.—**Interstate commerce law.** See ★*law*1.

commerce-destroyer (kom'ėrs-des-troi''ėr), *n.* A type of cruiser designed with special reference to the destruction of an enemy's commerce. It has high speed and coal endurance, with comparatively weak offensive and defensive powers.

commerce-destroying (kom'ėrs-des-troi''ing), *n.* The systematic pursuit and capture of merchant vessels of the enemy, by armed cruisers especially devoted to this purpose. It is the modern equivalent of privateering, which has been abolished among civilized nations.

The advantage of geographical nearness to the enemy, or to the object of attack, is nowhere more apparent than in that form of warfare which has lately received the name of *commerce-destroying*, which the French call guerre de course. This operation of war being directed against peaceful merchant vessels which are usually defenceless, calls for ships of small military force. *Mahan*, The Influence of Sea Power upon History, p. 30.

Commercial agency. See *mercantile* ★*agency*.—**Commercial botany.** See ★*botany*.—**Commercial geography.** See ★ *geography*.—**Commercial pitch.** Same as *auction-pitch* (which see, under *pitch*1).

commercialism, *n.* 3. A commercial custom or expression.

The excruciating *commercialism* 'Maria wrote Mrs. Inchbald' for 'wrote to Mrs. Inchbald' defaces almost every page. *Athenæum*, Mar. 3, 1883, p. 273. *N. E. D.*

4. The supremacy of commercial over moral considerations; regard for commercial or financial advantage only: as, *commercialism* in politics.

commercialist (kọ-mėr'shạl-ist), *n.* A commercial person; an adherent of commercialism.

Heaven forbid that the clamour philosophizing *commercialists* should prevail! *Southey*, Espriella's Letters, xxxviii.

commerciality (kọ-mėr-shi-al'i-ti), *n.* Commercial quality or spirit: as, "the *commerciality* of modern artists," *Pall Mall Gazette*, Oct. 4, 1889.

commercialization (kọ-mėr''shạl-i-zā'shọn), *n.* [*commercialize* + *-ation*.] Conversion to commercial character or uses: as, the *commercialization* of the military railways of India or Russia.

commercialize (kọ-mėr'shạl-īz), *v. t.*; pret. and pp. *commercialized*, ppr. *commercializing*. [*commercial* + *-ize*.] To render commercial in character, methods, or spirit; make a matter of trade.

Agriculture . . . has been . . . *commercialized*, and really a branch of trade. *J. Bryce*, Amer. Commonwealth.

commerge (kọ-mėrj'), *v.*; pret. and pp. *commerged*, ppr. *commerging*. [L. *com-*, together, + *mergere*, drown, bury: see *merge*.] **I.** *trans.* To merge together; mingle.

II. *intrans.* To come together; coincide. *Carlyle*.

commergence (kọ-mėr'jẹns), *n.* The condition of mingling, particularly mingling of blood.

commers, *n.* See ★*kommers*.

commissary, *n.* 5. [F. *commissaire de police*.] A superior officer of police in France. *Macaulay*.—6. A general store for supplying workmen in any large industry.

commissary-general, *n.* 2. A chief commissary.

commission, *n.* 9. In naval use, a period of active service of a war-ship, from the time she is put into commission until she is again out of commission. In the British navy this period is from 2 to 5 years. In the United States navy there is no fixed length of commission.

The commanding officer of one of these ships has stated "that they may go through a *commission* and never heel or roll more than one or two degrees." *White*, Manual of Naval Arch., p. 245.

Commission of stamps, in *Eng. law*, the commissioners of inland revenue who had the care and management of the stamp-duties.—**International Polar Commission** a commission representing ten of the most important nations, appointed for the purpose of carrying out the proposition of Lieutenant Weyprecht, that there be at least one year of simultaneous meteorological, magnetic, and other physical work executed by all nations of the globe within the arctic circle. The period August 1st, 1882–Sept. 1st, 1884, was agreed upon for this work, and about twenty stations were occupied in the arctic region, and ten in the antarctic. All of the observations made have been published by the respective governments.—**Out of commission,** (*naval*), not in active service, as a war-ship laid up in ordinary, or in reserve without officers and crew: by extension, said of anything not in condition for use or not in working order.—**United States Commission of Fish and Fisheries.** See ★*Bureau of Fisheries*.

commission, *v. t.* 3. To order, as a war-ship, into active service, or to place in commission with formal ceremony.

commissioner, *n.* 5. A betting-broker at a race-track. [Slang.]—**Commissioner of array.** See ★array.—**Shipping commissioner,** an officer appointed by the circuit courts of the United States for a port of entry, whose duty it is to facilitate and superintend the hiring and discharge of seamen; to secure the presence on board at the proper time of the men employed, and to facilitate apprenticeship to sea-service, etc. The officer in the United Kingdom charged with these duties is called the *shipping-master*.

commissionership, *n.* 2. The district under a commissioner.

If the Government is wise they will add to his *commissionership* the whole of the Kalahari desert. *Pall Mall Gazette*, November 19, 1884.

Commissura aberrans, a band of commissural fibers crossing the epithelial roof of the third ventricle midway between the dorsal (hippocampal) and superior (habenular) commissures; present in *Lacertilia* and *Sphenodon*. The commissura aberrans indicates in the mesial plane the caudal limit of the attachment of the cerebral hemisphere to the rest of the neural tube. *G. E. Smith*.—**Commissura ansata,** fibers of nervous substance which pass across the optic chiasm between the tuber cinereum and the lamina terminalis cinerea.—**Commissura cruciata,** the decussating fibers of the optic chiasm.—**Commissura dorsalis,** a band of fibers, in or near the lamina terminalis, which extends into each hemicerebrum and ultimately enters the hippocampus. Some have homologized this structure in the lower vertebrates with the rudiment of the fornix or callosum, or both.—**Commissura fornicis,** a term sometimes used to designate the fornix of the brain in mammals. The name has been provisionally applied by Wilder to a transverse band just ventrad of the crista fornicis. In the lower vertebrates it is identical with the *commissura aberrans* of Smith.—**Commissura habenularum,** a band of fibers passing transversely in the roof of the third ventricle near the anterior peduncles of the epiphysis. The peduncle is known as the habena or habenula. The commissure takes its name from its position adjacent to the habenulæ. Also called *superior commissure* and *supra commissure*.—**Commissura ventralis,** a band of fibers, in the lamina terminalis, which extend into the corpora striata. In many forms some of the fibers pass in a posterior direction, and the two divisions of this commissure are termed, respectively, the *olfactory* and *temporal* portions. It is synonymous with *anterior commissure* and *precommissure*, the latter terms being more commonly used in connection with the higher vertebrates. Also applied to the anterior commissure of the spinal cord.

commissure, *n.*—**Arcuate commissure.** Same as *Gudden's* ★*commissure*.—**Gudden's commissure,** a bundle of nerve-fibers, at the posterior part of the optic

chiasm, running along the mesial side of the optic tracts to join the internal geniculate bodies of the two sides. Also known as the *inferior* or *arcuate commissure*. **Hippocampal commissure**, a term sometimes used to indicate the fusion of the hippocampi on the median line to form the fornix. In the lower vertebrates it is synonymous with ★*commissura fornicis* and ★*commissura aberrans*. Some have homologized it with the ★*commissura dorsalis*. **Inferior commissure.** Same as *Gudden's* ★*commissure*. **Postchiasmatic commissure,** a band of fibers immediately posterior to Gudden's commissure. It is closely applied to the optic chiasm and appears to give fibers to it: described by Edinger in reptiles and by Boyce and Warrington in birds.—**Superior commissure.** Same as ★*commissura habenularum*. **Supra-infundibular commissure,** a bundle of fibers situated near the caudal attachment of the infundibulum to the brain. It appears to arise in the lateral walls of the third ventricle.

commit[2] (kom′it), *n.* [Said to be a mistaken form for the F. *comète*, comet. The game was invented during the appearance of Halley's comet, and the idea of the game is that of a string of cards forming a tail to the one first played.] A game of cards. The eight of diamonds is thrown out of a full pack. Cards are dealt out one at a time as far as they will go, any remaining being left on the table for stops. The eldest hand leads, and every card in sequence and suit with it must come in order, the play being much the same as in newmarket (which see), the first to get rid of all his cards winning the pool.

commodatum (kom-ō-dā′tum), *n.* [ML.: see *commodate*.] In *law*, a kind of bailment in which property is loaned to another to be returned without compensation for its use.

commodo (kom′ō-dō), *a.* [It., easy, moderate: see *commodious*.] In *music*, easy or moderate, as in *a tempo commodo*, in moderate time.

Common counts. See ★*count*[1]. **Common feeling,** in *psychol.*, the general feeling of bodily comfort or discomfort, which is conditioned mainly upon the mass of organic sensations that constitute the background of consciousness. See *cœnesthesis*.

The *common feeling* is always the immediate expression of our sensible comfort and discomfort, and is therefore, of all our composite feelings, most closely related to the simple sense-feelings.
W. Wundt (trans.), Outlines of Psychol., p. 161.

Common traverse. See ★*traverse*.

commonage, *n.* **3.** The commonalty.

The whole baronetage, peerage, *commonage* of England.
Thackeray.

common-law marriage. See ★*marriage*.

communal, *a.* **3.** Of or pertaining to the commune of Paris (which see, under *commune*[2]). —**Communal forest.** Same as *town* ★*forest*.—**Theory of communal intensity.** See ★*intensity*.

communality (kom-ū-nal′i-ti), *n.* [ML. **communalitas*, < *communalis*, common: see *communal* and commonalty.] The condition of belonging to a community.

Finally the material sacrifice commonly leaves dependents (widows, children, and perhaps agelings) to be supported by the informal public bounty of tribal life, or perhaps to be distributed among scattered families in such manner as to strengthen sentiments of *communality* and to keep alive the sense of community in interests.
Smithsonian Rep., 1901, p. 76.

communalization (kom″ū-nal-ī-zā′shon), *n.* [*communalize* + *-ation*.] The act of communalizing or of rendering communal; specifically, the abolition of private ownership in certain kinds of property in which the public is interested, such as land, water, light, etc., and the vesting of it in the commune or local community for the common good; the conversion of private ownership and management into communal ownership and management.

communalize (kom′ū-nal-īz), *v. t.*; pret. and pp. *communalized*, ppr. *communalizing*. **1.** To render communal; to convert into municipal property, as water-works, street railroads, etc. —**2.** To convert to a belief in communal ownership and initiative.

communalizer (kom′ū-nal-ī-zer), *n.* One who advocates or favors the communalization of land and some other kinds of property in which the general public is interested.

communicant, *a.* **2.** In *anat.*, same as *communicating*; noting one of several nerves or arteries. *Buck*, Med. Handbook, II. 251.

communication-room (ko-mū-ni-kā′shon-röm), *n.* In a war-ship, a compartment with sound-proof walls below the protective deck, containing a steering-wheel, the switchboards for telephones and speaking-tubes, and engine and steering telegraphs, which forms a central station for the interior signaling apparatus and other means of communication throughout the ship.

Communion in both kinds, the reception of the sacrament of the eucharist under the forms of both bread and wine.

communionist (ko-mū′nyon-ist), *n.* Same as *communicant*.

communistery (kom-ū-nis′te-ri), *n.* A communist habitation. *N. E. D.*

communitive (ko-mū′ni-tiv), *a.* [Irreg. < *communit-y* + *-ive*.] Of or belonging to a community. *N. E. D.*

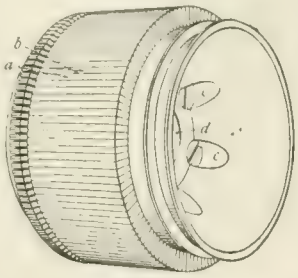
communitorium (ko-mū-ni-tō′ri-um), *n.*; pl. *communitoria* (-ä). [*communit-y* + *-orium*.] The home of a (socialistic) community; a settlement on communistic principles. *N. E. D.*

communization (ko-mū-ni-zā′shon), *n.* [*communize* + *-ation*.] The making of anything the public property of the community.

communize (kom′ū-nīz), *v. t.* [L. *communis*, common, + *-ize*.] To make common; make (something) the property of the community. *N. E. D.*

commutate (kom′ū-tāt), *v. t.*; pret. and pp. *commutated*, ppr. *commutating*. [L. *commutatus*, pp. of *commutare*, change: see *commute*.] To change; commute; specifically, to change the direction of, as an electric or magnetic circuit, or part of a circuit.

commutator, *n.* **3.** In *elect.*, that part of a continuous-current dynamo-electric machine which, by revolving in contact with the brushes, turns or directs the electrical actions in the armature coils of the machine so as to make the current and the voltage in the external circuit continuous. It usually consists of a large number of copper bars, connected with the armature coils of the machine, and separated from each other by mica insulation.



Commutator.
a, commutator bars; *b*, mica insulation; *c*, clamping-screws; *d*, shaft hole.

4. In *photog.*, a device for automatically effecting the exposure of a number of photographic plates at various predetermined instants during a total eclipse of the sun. *D. P. Todd*, in Rep. Brit. Ass'n Advancement of Sci., 1901, p. 541.

commutual, *a.* **2.** Contiguous; adjoining; noting, in *anat.*, two surfaces in apposition or nearly so.

Comocladia (kō-mō-klā′di-ä), *n.* [NL. (Patrick Browne, 1756), < Gr. κόμη, hair, foliage, + κλάδος, shoot, branch.] A genus of plants of the family *Anacardiaceæ*. They are shrubs or trees, with odd-pinnate leaves, clustered toward the ends of the branches, the leaflets usually mucronatedentate. The flowers are minute and are disposed in axillary panicles nearly as long as the leaves. There are about ten species, natives of the West Indies and Central America. The fruits of *C. integrifolia* and *C. dentata* furnish a black dye. The abundant glutinous juice of *C. ilicifolia* and other species which turns black on exposure to the air, is poisonous to the touch.

Comocladia ilicifolia, a branch bearing leaves and spikes of minute flowers (reduced). (From Engler and Prantl's "Pflanzenfamilien.")

comoid (kō′moid), *a.* [Gr. κόμη, hair, + εἶδος, form.] Hair-like; resembling hair: in *meteor.*, noting the hair-like structure of some kind of cirrus clouds (mare's-tail cirrus).

comortgagee (cō-môr-gā-jē′), *n.* One of several parties to whom the same mortgage is made.

comospore (kō′mō-spôr), *n.* (Gr. κόμη, hair, + σπορά, seed.] In *phytogeog.*, a plant whose seed or fruit is provided with hairs or bristles as a help to dissemination. *F. E. Clements.*

compact[1], *a.* **6.** In *petrog.*, dense without pores: also applied to extremely fine-grained textures in which the individual crystals or grains cannot be seen by the unaided eye: equivalent to *aphanitic*, *cryptocrystalline*, and ★*cryptoclastic*.

companion[1], *v. t.*—**II.** *intrans.* To associate or keep company: used with *with*: as, to *companion* with vagabonds.

companionage (kom-pan′yon-āj), *n.* The whole body of Knights' Companions, or a list of them: as, "The Peerage, Knightage, Baronetage, and *Companionage* of the British Empire." (Title of a book.)

companion-cropping (kom-pan′yon-krop″ing), *n.* The practice of growing companion crops (which see, under ★*crop*).

companion-hatch (kom-pan′yon-hach), *n.* *Naut.*, a hatch fitted with companion-ladders for access to living quarters.

companion-ladder, *n.* **2.** A sloping ladder with flat treads or steps, for passage from one deck to another.

company, *n.*—**Bearer company,** a company of soldiers whose duty is to remove the wounded from the battlefield.—**Catalan Grand Company,** a body of adventurers which Peter of Aragon brought into Sicily in 1282 against Charles of Anjou. In 1302 they entered the service of the Byzantine Emperor Andronicus against the Turks. When their chief Roger di Flor was assassinated in 1306, they abandoned the emperor and settled in the duchy of Athens, where they remained until the end of the fourteenth century.—**City company,** one of the corporations that historically represent the medieval trade and craft gilds of London.—**Company's rupee.** See ★*rupee*.—**One-man company,** a pretended association of several persons for the purpose of carrying on an enterprise which in reality is owned and controlled by a single person. *Encyc. Brit.*, XXVII. 177.—**Trust-company.** See ★*trust-company*.

company-boat (kum′pa-ni-bōt), *n.* A guest-boat; a beamy gig having side-seats in the after half and an awning over the cockpit. It is used on English rivers.

comparascope (kom-par′a-skōp), *n.* [Irreg. < L. *comparare*, compare, + Gr. σκοπεῖν, view.] In *microscopy*, a device attached to an ordinary microscope for the simultaneous comparison of two slides.

comparator, *n.*, **1.** The standards to be compared are usually metal bars with transverse lines ruled upon them, and it is the distance between these lines which is to be determined. In some cases the entire length of the bar constitutes the standard of length. The distances to be compared are usually very nearly equal in length, and the measurement to be made is of the small difference between them and not of the whole length of the standard. The comparator in the form commonly employed consists of a rigid bed or plate upon which the standard bar is placed in a horizontal position. Provision is made for the raising and lowering and lateral shifting of each end of the bar mechanically, and also for its longitudinal movement, so that it can be brought into perfect alinement under two microscopes mounted above it with axes vertical. The microscopes, which have micrometer eyepieces, are focused upon the rulings at the ends of the standard bar, with the cross-hairs in the eyepieces accurately set upon the lines. These adjustments made, the bar is removed without disturbing the microscopes, and the one to be compared with it is put in its place. When the ruling at one end is brought precisely under the cross-hairs, that at the other end will be somewhat out of coincidence on account of the inequality in the length of the bars. This small difference is measured by noting the revolutions of the micrometer-screw of the eyepiece necessary to bring the cross-hairs over the line. To provide for cases in which the inequality is such as to bring the line entirely out of the field, this microscope is sometimes so mounted that it can be moved longitudinally in the direction of the length of the bar and its motion measured by means of a micrometer-screw. For the comparison of standards in which the length to be determined is the entire length of the bar instead of the distance between transverse lines ruled upon its surface, various other devices of precision are used. In some comparators one end of the bar is placed against a rigid stop or plug, and a delicate micrometer-screw, mounted to run parallel to the axis of the bar, is turned until it comes into contact with the free end. The position of contact is sometimes indicated electrically. The optical lever or tipping mirror of Saxton is likewise employed for determining the position of the free end of the bar, the angular movement of the mirror being determined by means of a reading telescope and scale. The most refined and sensitive method for the comparison of lengths is doubtless that employed in the *interference comparator*, a modification of the interferometer due to Michelson, and by him employed for the study of the meter and the determination of that standard in terms of the wave-length of light. See ★*interferometer*.

2. A vessel in which liquid is kept rapidly stirred and at a uniform constant temperature so that thermometers immersed in it must all be maintained at the same temperature. Simultaneous readings of the secondary thermometers and the standard are made, and the corrections to the former are thus determined for a wide range of temperatures. —**Transfer comparator,** an instrument for comparing the distances between or over the ends of contact points on a gage to the distances defined on a standard bar.

comparison, *n.*—**Associative comparison,** in Wundt's psychology, a connection of two sensations, in which the quality of each is determined by its relation to that of the other: exemplified in the phenomena of visual contrast.—**Comparison of hands,** in *law*, the admission in evidence of writings otherwise irrelevant, solely for the purpose of determining by comparison whether a certain writing was written by a certain person.—**Comparison spectrum.** See ★*spectrum*.—**Method of paired comparisons,** in *experimental psychol.*, a form of the method of impression, employed in the study of the affective

processes. A number of stimuli—for example, colors—are prepared, and are presented to the observer two at a time, the pairs being so constituted that every color is given once along with every other. The observer declares which member of the pair before him is the more pleasant or the more unpleasant. The judgments are recorded. When the whole series has been worked through, the experimenter plots an 'affective curve': the abscissæ are the color stimuli, in serial order, and the ordinates represent the number of times that the particular colors have been preferred to their rivals. *E. B. Titchener*, Exper. Psychol., I. ii. 161.

comparison-star (kom-par'i-son-stär), *n.* A star of known position used as a reference-point from which to determine the position of some planet, comet, or other object near it.

compartment, *n.* **4.** A division or chamber in any part of a plant or of an animal.—**5.** In *forestry*, the unit of area treated in a working plan. The size and the shape of compartments are determined mainly by topographic features.—**Compartment line,** in *forestry*, the boundary of a ★compartment (which see). It may be marked by a road, a ride, or a natural feature, such as a stream or the crest of a ridge. In Europe, when other demarcation is wanting, clean cuttings upon narrow strips are made to mark the boundaries of a compartment. These are known as *rides*. A ride which separates two cutting series, and thus runs parallel to the prevailing wind direction, is called a *major ride*, while those rides which complete the demarcation of the compartments are known as *minor rides*.—**Compartment system.** See ★*stand method*.—**Wing-compartment,** one of a series of water-tight compartments of a war-ship, formed between the outboard longitudinal bulkhead and the ship's side below the protective or lower deck.

compartmental (kom-pärt-men'tal), *a.* [*compartment* + *-al*[1].] Pertaining to or consisting of compartments; divided into compartments.

The cells may or may not be *compartmental*, the latter type predominating. The conditions favor the series connection of the electrodes.
Electrochem. Industry, July, 1903, p. 378.

compass, *n.* **11.** [*cap.*] In *astron.*, a small southern constellation.—**Compass caliper.** See ★*caliper*.—**Compass corrections** (*naut.*), the quantities (points or degrees) which must be applied to courses or bearings in order to obtain correct magnetic readings.—**Compass course,** the course steered by compass, independent of leeway, variation, deviation, currents, send of the sea, etc.—**Compensated compass,** a compass which has been corrected for deviation by the employment of magnets.—**Declination compass,** a compass arranged to measure the variation of the magnetic needle from the astronomical meridian.—**Demagnetized compass,** a compass the needle of which has lost its magnetism. Electric disturbances have been known to produce this effect.—**Dry-card compass.** Same as *dry* ★*compass*.—**Dry compass,** a compass which is inclosed in an air-instead of a liquid-chamber: also known as a *dry-card-compass*.—**Elevated compass,** any compass that is elevated beyond the influence of the ship's iron, which, being more or less magnetized, is liable seriously to affect the pointing of the magnetic needle. Under this head are included *masthead*, *pole*, and *tripod compasses*.—**Hanging compass,** a tell-tale compass; an inverted compass; one that is suspended face downward from a deck beam.—**Liquid compass,** a compass the card of which is inclosed and completely submerged in a chamber filled generally with 35 parts of alcohol and 65 parts of distilled water, the freezing-point of the mixture being—10° F. Compasses used in arctic work have their bowls filled with pure alcohol. The disadvantage of undiluted alcohol is that it eats the paint on the card. The Germans have successfully used refined oil for their liquid compasses.—**Masthead compass,** a compass placed aloft at the lower masthead in order to elevate it above the influence of the iron in the ship's hull, deck-fittings, machinery, etc.—**Oil-compass,** a liquid compass the card of which floats in oil instead of in alcohol.—**Pole-compass,** a compass elevated above the deck on the end of a pole, access to it being had by means of a short ladder. It is supposed to be sufficiently high above the deck to be removed from the sphere of influence of the ship's iron.—**Solar compass,** an apparatus, invented by Burt in 1836, attached to a surveyor's theodolite, and enabling the observer to determine the true meridian by a simple setting of the sights upon the sun. In the later forms a small telescope is used instead of sights, and the apparatus is called a ★*solar attachment*, of which there are various forms.—**Spirit compass.** Same as *liquid* ★*compass*.—**Tripod-compass,** a compass so named from the three-legged stand on which it is elevated: a form of pole-compass.—**Weber's compass,** a form of esthesiometer.

compass, *v.* **I.** *trans.*—**7.** To grasp mentally; comprehend.

"Forebodings of ill . . . that cannot be *compassed*."
Longfellow.

8. To adjust or orient by means of a compass.
II. *intrans.* To level a compass.

compass-bearing (kum'pas-bâr''ing), *n.* The direction of an object as indicated by a magnetic compass.

compass-error (kum'pas-er''or), *n.* Same as *deviation of the compass* (which see, under *deviation*).

compass-joint (kum'pas-joint), *n.* A joint having parallel and concentric disks permitting relative motion or opening in one plane, as in a drawing-compass.

compass-plant, *n.* **3.** In California, *Wyethia angustifolia* and other species, coarse composites with sunflower-like heads, whose large erect leaves are said to stand with their edges north and south. *M. E. Parsons*, Wild Flowers of California.—**4.** The prairie bird's-foot trefoil, *Lotus Americanus*, of the western United States, the numerous distichous branches of which are polarized on the stem after the manner of the leaves of other compass-plants.

Compass-plant (*Lotus Americanus*).
One fourth natural size.

We have then in this plant another example of a true *compass plant*, but involving an entirely different principle from that of *Silphium laciniatum* L., *Lactuca Scariola* L., etc., in which it is the leaves and not the branches that are affected.
Plant World, May, 1898, p. 118.

compass-rose (kum'pas-rōz), *n.* The ornamental diagram of a compass found printed on some charts.

compass-weed (kum'pas-wēd), *n.* A name of the prickly lettuce, *Lactuca Scariola*, and probably of any of the compass-plants. It is also applied to one of the button-weeds, *Diodia teres*, in allusion, perhaps, to its radiate habit.

compelled (kom-peld'), *p. a.* In *pathol.*, involuntary; compulsory: noting movements and attitudes in certain diseases of the central nervous system.

compellent (kom-pel'ent), *a.* [L. *compellens* (*-ent-*), ppr. of *compellere*, compel: see *compel*.] Compelling; compulsive.

And when we bear
Our virtue outward most impulsively,
Most full of invocation, and to be
Most instantly *compellant*, certes, there,
We live most life!
Mrs. Browning, Sonnet, Love, I. 6.

compendency (kom-pen'den-si), *n.* [NL. **compendentia*, < **compendens*, hanging together: see *compendent*.] In *math.*, connectivity.

This doctrine of the *compendency* of surfaces is a creation of Riemann's.
W. B. Smith, Modern Geometry, p. 145.

compendent (kom-pen'dent), *a.* [NL. **compendens* (*-ent-*), ppr. of **compendēre*, hang together, < *com-*, together, + *pendēre*, hang.] Connected; closed.

The straight is thus a closed line *compendent* through its point at infinity.
Merriman and Woodward, Higher Mathematics, p. 73.

compensated (kom'pen-sā-ted), *p. a.* Adjusted so as to neutralize or balance differences or deviations; as a compensated balance or pendulum.—**Compensated alternater.** See ★*alternater*. **Compensated constant-pressure gas-thermometer.** See ★*gas-thermometer*.—**Compensated motor.** See ★*motor*.

compensating (kom'pen-sā-ting), *p. a.* Adjusting so as to neutralize or balance differences; producing compensation; characterized by compensation; compensatory.

A *compensating* mixture of sweet and salt gives rise to an insipid, flat, alkaline taste.
E. B. Titchener, Exper. Psychol., I. ii. 110.

Compensating exciter. See ★*exciter*.—**Compensating compound wedge.** See ★*wedge*.

compensating-gear (kom'pen-sā-ting-gēr''), *n.* A device for connecting the two parts of a shaft in such a manner that one part can run at varying speeds relatively to the other part; specifically applied to the driving-device which connects the two parts of the driving-axle of a motor-car. This compensating-gear allows one wheel to travel further than the other in turning corners. Called also *differential gear* and *compensation-gear*.

compensation, *n.* **6.** In *pathol.*, an increase in functional power of some organ or part of an organ to make up for a defect in another organ or in another part of the same organ.—**7.** In *psychophysics*, the neutralization of a sensation by a stimulus process of a complementary or antagonistic kind.

The principle of smell *compensation* is familiar to us in everyday life.
E. B. Titchener, Exper. Psychol., I. ii. 131.

8. In *vegetable teratol.*, the occurrence of opposite abnormal conditions in different parts of the same plant, as an atrophied condition of one part associated with a hypertrophied condition of another. *Masters.*—**Compensation of functions,** in *neurol.*, the law or principle that inhibition of the activity of one region of the cerebral cortex is always connected with increased activity in the regions with which it is interrelated. *W. Wundt* (trans.), Outlines of Psychol., p. 274.—**Compensation supply,** or **compensation water,** water held in reservoirs to be delivered in a river in compensation for water which is claimed by riparian owners.

The water supplied to the stream from such a reservoir is known as "*compensation* water," and is generally a first charge upon the works. *Encyc. Brit.* XXXIII. 771.

compensation-sac (kom-pen-sā'shon-sak), *n.* In certain polyzoans, a structure lying inside the body cavity, and communicating with the external water; regarded as the apparatus by which the protrusion and retraction of the polypide is effected. *Jullien.*

compensator, *n.* (*c*) In *elect.*, an autotransformer, frequently employed to compensate for variations of voltage. See ★*autotransformer*. (*d*) In *photog.*, an apparatus designed to render the illumination of a field uniform. It consists of a plano-convex lens of smoky glass, and a plano-concave lens, of equal curvature, of plain crystal glass so united as to make a thin glass with parallel sides. (*e*) In *optics*, a device for producing a known and measurable retardation of a beam of light. One of the simplest forms of compensator is that used by Jamin in making measurements with his refractometer. (See ★*interferometer*.) In this refractometer there are two parallel beams of light the difference of phase of which is to be determined. If these beams are made to pass through two similar glass plates, they will suffer equal retardation when the plates are parallel; but if one of the plates is turned through an angle, thus varying the distance through the glass traversed by the ray, the retardation will be increased. Jamin's compensator, fig. 1, consists of two such plates of glass mounted upon a common axis and making a small constant angle with one another. By rotation of these plates upon the axis, the relative retardation of the rays passing through them can be varied at will; and if the two rays, before traversing the compensator, differed in phase, this difference of phase can be reduced to zero by turning the compensator to the proper angle. From the size of this angle the original difference of phase can be computed. Senarmont's compensator consists of a quarter-wave plate, that is, a plate of crystal of such thickness that it introduces a difference of phase $\frac{\pi}{2}$ between the two components of a beam of light propagated through it. It has many uses in the study of polarized light, such as the determination of the principal axes of the vibration form of an elliptically polarized ray. Babinet's compensator consists of two wedges of quartz placed together as shown in fig. 2. In one of the wedges the optic axis is parallel to the face of the prism and perpendicular to its axis. The optic axis, *o*, of the other prism is parallel to its face and also to the axis of the prism. A beam of plane-polarized light reaching the compensator in a direction perpendicular to the surface *ab* will be resolved into two components. The component which is more retarded in passing through the upper wedge will be relatively less retarded in the lower wedge, and *vice versa*; and the difference of phase between the two components after passage through the compensator varies with the distance of its path from the central line. Soleil's compensator, which is used in Soleil's saccharimeter, consists of two wedges of quartz, cut perpendicular to the axis, which turn the plane of polarization of light in the same direction. The wedges are so mounted that they can be made to slide past each other along their common face and thus constitute a plate the thickness of which may be varied at will. The object and use of the compensator is to introduce any desired amount of left-handed rotation of the beam of light so as precisely to compensate for and thus measure the right-handed rotation of the sugar solution through which the light has previously passed. Kerr's compensator, which was used by him in his observations on the reflection of plane-polarized light from a magnetic pole, consists of a strip of glass which, when stretched, becomes doubly refracting. When interposed in the path of a ray of light elliptically polarized by reflection from the magnet, it could be stretched until the difference of phase of that ray was compensated or reduced to zero, and in this way the character of the polarized light produced by such reflection could be determined.

Fig. 1.
Jamin's Compensator.

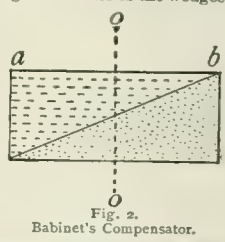


Fig. 2.
Babinet's Compensator.

Compensatory hypertrophy. See ★*hypertrophy*.

compete, *v. i.*—**2.** In *polit. econ.*, to engage in rivalry in the sale or purchase of a commodity or service; also, figuratively, of a commodity or service, to be open to choice as against some other commodity or service. Thus iron is said to compete with stone in the construction of buildings; water routes compete with railways in the handling of traffic.

competence, competency, *n.* **5.** In *phys. geog.*, the ability of a stream to transport the amount of land waste that is brought into it.

competent, *a.* **5.** In *phys. geog.*, of a stream, capable of transporting fragments of a given size.—**6.** In *geol.*, having sufficient firmness and strength to transmit pressure to other strata or to lift an overlying burden, as a rock or stratum.

competition, *n.* **4.** In *polit. econ.*, rivalry in the purchase or sale of a commodity or service: as, the *competition* of wage-earners lowers

wages: British merchants have to meet German *competition*. — **Competition price.** See ★*competitive price*. — **Competition rent,** rent determined by active competition on the part of landlords and tenants, as opposed to customary rent and monopoly rent. — **Potential competition,** a condition of things which would amount to actual competition were a particular change, such as a rise in price, to take place.

Competitive price, the price determined by active competition on the part of both buyers and sellers, as opposed to monopoly price and customary price.

compilatory (kọm-pī'la-tọ-ri), *a.* Of or belonging to a compilator or compiler; connected with, or incident to, compilation: as, *compilatory* judgment; *compilatory* labors.

compile, *v. t.* **6.** To score, earn, 'pile up' (usually of a large number of runs). [Cricket slang.]

compital (kom'pi-tal), *a.* [L. *compitalis*, < *compitum*, *competum*, a place where several ways meet, the cross-ways, < *competere*, come together, meet: see *compete*.] **1.** In *Rom. antiq.*, belonging to the cross-ways. The *lares compitales* were domestic deities whose shrines stood on the street-corners.

2. In *bot.*: (*a*) Intersecting and crossing at various angles: said of the veins of leaves. (*b*) Situated at the point of junction of two veins; said of the sori of ferns.

complaisance, *n.* — **Operation of complaisance,** in *surg.*, an operation which is not urgently demanded to save life, and which therefore may be delayed until all the conditions are most favorable.

complanation, *n.* **2.** A flattening or flattening out: as, a crater of *complanation*. *Dana.*

complement, *n.* **8.** In *physiol. chem.*, same as ★*alexin*. See the extract.

Two principles are concerned in lysis. These principles are different in origin. One — that which is stable — is the product of immunization, and, on account of certain combining properties possessed by it, they call it the 'intermediary body.' The other is normally present in the body juices, but is easily destroyed by heat and tends to disappear spontaneously when the fluids are removed from the body. This latter principle, on account of the complemental nature of its action, they [Ehrlich and Morgenroth] propose to call the *complement*. . . . This body is called 'alexin' by Bordet, and probably agrees in part with the body of the same name described by Buchner. Metchnikoff calls it 'cytase.' *Jour. Exper. Med.*, VI. 282.

Complement of the humidity. See ★*humidity*. — **Deviation of the complement.** In the simultaneous presence of receptors, complements, and an excess of amboceptors the complements may be largely taken up by the amboceptors and prevented from acting upon the receptors. — **Phonetic complement.** See the extract.

The Assyrian scribes usually attached one or more phonetic characters to the ideographs they employed, in order to indicate their pronunciation in a given passage, but these *phonetic complements*, as they are termed, were frequently omitted in the case of well-known proper names, such as those of the native kings and deities.
A. H. Sayce, Anc. Monuments, p. 19.

complementarism (kom-plē-men'ta-rizm), *n.* The state or property of being complementary or antagonistic. *E. B. Titchener*, Exper. Psychol., I. ii. 15.

Complementary air. See ★*air*[1]. — **Complementary male,** in certain cirripeds and myzostomidan worms, a dwarf male that lives as a parasite upon the ordinary hermaphrodite individuals which appear to be unable to fertilize themselves. — **Complementary rocks,** a name suggested by Brogger (1894) for igneous rocks, found associated together in one locality, whose compositions are such that when they are combined they represent the magma from which they are supposed to have originated by processes of differentiation. Thus pyroxenite and anorthosite are complementary rocks whose combination is equivalent to gabbro.

complementative (kom-plē-men'ta-tiv), *a.* [*complement*, v., + *-ative*.] In *philol.*, serving to complement a notion or its expression: applied to certain verb forms in some agglutinative languages.

The highly agglutinating character of this language [the *Kuki-Lushai* of North Kachar Hills and parts of Nagaland] is evident from the numerous conjugations given by Mr. Soppit, for some of which he has no names, but which may be called Acceleratives, Retardatives, *Complementatives*, and so on. *Keane*, Man Past and Present, p. 185.

complementoid (kom-plē-men'toid), *n.* [*complement* + *-oid*.] In *physiol. chem.*, a complement (see ★*complement*, 8) which has lost its zymotoxic group, but retains the haptophoric group for the amboceptor.

complementophile (kom-plē-men'tọ-fīl), *a.* [*complement* + Gr. φίλειν, love.] In *physiol. chem.*, having affinity for the complement (see ★*complement*, 8); noting that group of an amboceptor which unites with the complement.

If the two components are present in corresponding quantities the amboceptor will unite with the bacterium by its haptophore group, the complement will then fit into the *complementophile* group of the amboceptor and the bacterium will be destroyed.
Lancet, April 4, 1903, p. 943.

complementophilic (kom-plē-men-tọ-fil'ik), *a.* Same as ★*complementophile*.

Complete hernia, etc. See ★*hernia*, etc. — **Complete perspectives,** in *geom.*, two figures such that to every point of one corresponds a point of the other, to every straight of the one a straight of the other, to every join of the one the join of the corresponding points of the other, and to every cross of the one the cross of the corresponding straights of the other. — **Complete reaction,** in *psychophysics*, the sensorial form of the simple reaction, in which the reactor's attention is directed upon the stimulus, and not upon the movement of response. *E. B. Titchener*, Exper. Psychol., I. i. 123.

completion, *n.* — **Equivalent by completion.** See ★*equivalent*.

complex, *n.* **Cell complex,** a mass of closely united or intertwined cells, as in the case of certain fungi. — **Cosingular complexes,** such complexes as have the same singular surface. — **Fundamental complex.** Same as ★*basement complex*. — **Line-complex,** the assemblage of straight lines which satisfy one given condition, that is, of lines whose coördinates satisfy one equation of given form. Since a line has four coördinates, the lines of a line-complex are triply infinite, or ∞^3, in number. — **Pallial complex,** the mass of organs, including the gills, osphradia, nephric and genital ducts, which lie near one another in the mantle-chamber of gastropod mollusks and may be considered as an anatomical unit. — **Quadratic complex,** a complex in which the equation of the line-complex is of the second degree in the coördinates. The quadratic complex involves 19 constants. — **Tetrahedral complex,** the quadratic complex composed of the lines which meet the faces of a given tetrahedron in four points whose double ratio or cross ratio is constant. A tetrahedral complex is determined by its fundamental tetrahedron and by one of its lines or by the cross ratio of the complex. Since the fundamental tetrahedron may be chosen in ∞^{12} ways, there are ∞^{13} tetrahedral complexes.

complex (kom'pleks), *v. t.* [*complex*, *a.*] To combine intricately; involve; mix up.

Murdered thus
Mutatione vestium, in disguise,
Whereby mere murder got *complexed* with wile.
Browning, Ring and Book, viii. 1319.

complexion, *n.* **5.** In *psychol.*, a term proposed for a certain type of mental connection or association. See the extract.

The melody, e. g., is a *complexion*. It contains both the consolidating contents, the various notes played or sung, the members of the *complexion*; and the consolidated contents, i. e., the new factor that emerges when the notes are taken together, the unifying factor in the *complexion*, the 'taken-togetherness' itself, the unity of the new fund that cancels the old debts.
I. M. Bentley, in Amer. Jour. Psychol., XIII. 280.

complication, *n.* **6.** In *psychol.*, the simultaneous association of perceptions or ideas of different senses.

These connections of ideas of disparate senses which are referred to the same objects, and so belong closely together, we may term with Herbart *complications*.
W. Wundt (trans.), Human and Animal Psychol., p. 285.

Let us call the reproducing presentation *A*, and that with which it has been associated *B*; the reproduced presentation may be denoted by *b* . . . When *b* is an integral part of *A* and incapable of independent existence, the process is called *complication*, because the result is merely a change in the constitution of *A*, and for the most part an increase in its complexity.
G. F. Stout, Manual of Psychol., p. 90.

Complication pendulum, in *exper. psychol.*, an instrument for presenting a series of visual stimuli any term of which may be accompanied by some disparate stimulus (sound, pressure, electric shock). The primary visual series is given with the movement of a clock-hand over the divisions of a dial; the complicating stimulus is thrown in, at the required moment, by a gear attached to the pendulum of the clock-work. The instrument was devised by Wundt for the study of attention: although the selected visual impression and its complicating sound, etc., are objectively coincident, they are not necessarily 'apperceived' as coincident; there may be a 'temporal displacement' of the two simultaneous impressions, according to the direction of attention. Recently the complication pendulum has been replaced by the *complication clock*: the difference between the two instruments is that the hand of the clock moves uniformly round its dial, whereas the pointer of the older apparatus repeats the acceleration of the pendulum movements.

complt. An abbreviation of *complainant*.

Component society. See ★*society*.

comport[2] (kom'pōrt), *n.* A perverted form in trade catalogues, etc., of *compote*, 2.

composimeter (kọm-pō-sim'e-tẽr), *n.* [Irreg. < *composi(tion)* + Gr. μέτρον, measure.] A device used in connection with gas-engines for indicating the calorific value of the gas employed in the engine.

composit, *a.* A simplified spelling of *composite*.

composite bow, dike, forest, etc. See ★*bow*[2], *etc.*

compositeness (kọm-poz'it-, kom'pō-zit-nes), *n.* Composite structure or make-up; composite character or quality.

From an early date the *compositeness* of this work [Book of Enoch] was recognized. *Encyc. Brit.*, XXV. 490.

composition, *n.* **12.** In *chem.*, the kind and relative amounts of the components of a compound; commonly, the kind and relative weights of the elements, or the kind and number of the atoms, which make up the compound. The gravimetric composition states the relative weights of the components; the volumetric composition their relative volumes; the centesimal or percentage composition their percentages; and the atomic composition or the molecular composition, the kind and number of the atoms which make up their molecules. For example, the gravimetric composition of water is 1 part by weight of hydrogen and 7.94 parts by weight of oxygen; the centesimal composition is 11.19 per cent. of hydrogen and 88.81 per cent. of oxygen; the volumetric composition is 1 volume of oxygen and 2.0027 volumes of hydrogen; the atomic or molecular composition is 1 atom of oxygen and 2 atoms of hydrogen. The composition belonging to the critical temperature is a critical composition and a solution of such composition a critical solution. — **Critical composition of solution.** See ★*solution*. **Demotic, social composition.** See ★*demotic*, ★*social*.

Compositors' cramp, an occupation neurosis, analogous to writers' cramp, which affects the muscles of the forearm and hand in type-setters.

compost[1], *n.* **3.** A compost is any mixture of a not easily decomposable substance containing plant-food, with more putrescible substances or with chemicals to secure decomposition and render available the fertilizing constituents of the whole. The typical compost is a combination of peat with dung, fish, or the like, moisture being supplied if wanting. The nitrogen of the latter substances is absorbed and conserved while the organization of the woody matter is broken down and its content of plant-food released. Straw, dead leaves, and any kind of litter may be used in the place of peat. Another class of composts are made by the combination with peat of alkaline substances, particularly lime, with or without salt, also wood ashes, peat ashes, or gas-lime. Composts are also made of bones with lime and wood ashes. — **Compost heap,** a compact pile of the materials of a compost, at first in layers. The material is usually turned over with a fork several times to assist decomposition. A trench or pit is employed in the reduction of bones.

compost[1], *v. t.* **3.** To form or convert into compost. See ★*compost*[1], *n.*, 3.

compost[2]†, *n.* [OF. *compost*, an erroneous form of *compot*, < LL. *computus* < L. *computare*, compute: see *compute*, *v.* and *n.*] A computation or calendar of astronomical and ecclesiastical data. *N. E. D.*

composting (kom'pōst-ing), *n.* [*compost v.* + *-ing*[1].] The operation of making a compost or of making into a compost with the proper substance.

Thorough *composting* with lime is a remedy for these conditions [that is, the injurious action of muck].
Yearbook U. S. Dept. Agr., 1901, p. 170.

compound[1], *v. t.* **9.** To make (a steam-engine) operate on the compound principle, whereby the steam expands first in a small cylinder and does work in propelling the piston, and thence exhausts into a larger low-pressure cylinder, where it expands still further until released at the exhaust when the traverse is completed.

The era of *compounding*, as applied to locomotives, was inaugurated by Mr. A. Mallet in 1876 in France, followed by Mr. A. von Borries in Germany, Mr. T. W. Worsdell and Mr. F. W. Webb in England, and Mr. S. M. Vauclain in America, all about the year 1889.
Encyc. Brit., XXXII. 152.

compound[1]. **I.** *a.* — **Compound arch, balance-rudder.** See ★*arch*[1], ★*balance-rudder*. — **Compound crystal,** a twin crystal. See *twin*[1] II. 3. — **Compound dike.** Same as *composite* ★*dike*. — **Compound evolution, flexure,** etc. See ★*evolution*, ★*flexure*, etc.

II. *n.* — **Copulated compound**† in *chem.*, a compound formed by the union of two other compounds and exhibiting to some extent the chemical character of the one modified by that of the other. Originally the term, which is now out of use, was applied to compounds of organic with inorganic substances. Also called *conjugated compound*. — **Cyclic compounds.** See ★*cyclic*. — **Lard compound,** trade name for an imitation of hog's lard, made from the stearin left in the production of oleo-margarin, refined cotton-seed oil, and, usually, some actual lard. Also known as *compound lard*. — **Psychical compound.** See ★*psychical*.

comprehensive, *a.* **4.** In *logic*, intensive; relating to logical comprehension.

It is an axiom in logic that the more extensive any general term is, it is the less *comprehensive*. *Reid.*

5. In *biol.*, of a general or synthetic type of structure. See *synthetic*, 3. — **Comprehensive type,** in *paleon.*, any ancient organism possessed of characters which in geologically later periods have become distributed among different and more highly specialized groups. The comprehensive type always precedes the specialized type in time, and the sum of its characters, once broken up, is never recombined at a later date. Also called *generalized type*.

compress, *n.* **4.** An establishment in which cotton-bales are compressed for transportation. [U. S.]

Compressed-air motor. Same as *air-motor* (which see, under *motor*).

compressibility, *n.* — **Adiabatic coefficient of compressibility.** See ★*coefficient*. — **Isothermal coefficient of compressibility.** See ★*coefficient*.

compressing-bottle (kọm-pres'ing-bot'l), *n.* A stout glass vessel for the digestion of substances under pressure.

compression, *n.* — **Center of compression.** See ★*center*[1]. — **Compression atrophy, beam,** etc. See ★*atrophy*, etc. — **Compression by stages,** a process of compression in which a gas is introduced successively

into a series of cylinders which decrease in size as the pressure increases. A compressor or pump with four such cylinders, for example, is called a four-stage compressor. **Compression myelitis.** See ★*myelitis.* — **Compression of the brain,** intracranial pressure caused by an effusion of blood, a tumor, depressed fracture of the skull, etc. The usual symptom is coma, but there may be convulsions. — **Compression of the poles,** of the earth or other planet, its oblateness, that is, the ratio of the difference between its equatorial and polar diameters to the equatorial diameter. **Isothermal compression,** compression of a fluid, or other body, under conditions involving no change of temperature.

compressional (kọm-presh'ọn-al), *a.* [*compression* + *-al*[1].] Of or pertaining to compression, that is, to the strain due to a stress, such as hydrostatic pressure, which tends to produce diminution of volume without shearing. See *elasticity.* — **Compressional energy,** energy stored in an elastic medium as the result of work done in compressing it. — **Compressional strain,** a strain in an elastic body resulting from and corresponding to compressional stress. — **Compressional strength,** that property of an elastic body by which it resists compression. Compressional strength is denoted by the bulk modulus in cases in which the stresses tend to reduction of volume, and by the stretch modulus when the stress is longitudinal. — **Compressional stress,** stress which tends to reduce the length, breadth, thickness, or volume of a body. — **Compressional wave.** See ★*wave*1.

compression-chamber (kọm-presh'ọn-chām″-bẹr), *n.* A space or compartment the volume of which can be reduced, usually by the pushing in of a piston or plunger, for the purpose of compressing the contents; a compressing-cylinder.

compression-coupling (kọm-presh'ọn-kup″-ling), *n.* A form of shaft-coupling for uniting lengths of driving-shaft end to end, in which the two ends each have a split cone keyed on. These two cones are drawn in and compressed by bolts against two complementary female cone surfaces inside a cylindrical casing which receives both of the split cones. The coupling shows no bolts, and can be used to carry a driving-belt.

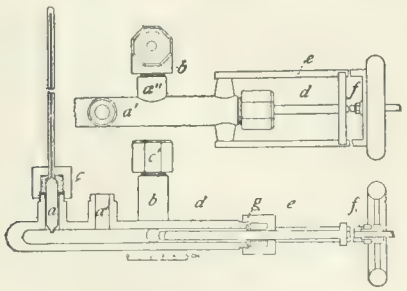
compression-curve (kọm-presh'ọn-kẹrv), *n.* That curve or part of an indicator-diagram from an engine which shows the pressures in the cylinder on that part of the return stroke which takes place after the exhaust-port has closed.

compression-cylinder (kọm-presh'ọn-sil″-inder), *n.* **1.** Same as ★*air-compressor, n.* — **2.** A form of cylinder in which air is retained under pressure to act as a pneumatic spring under shock or impact, as in the recoil of gun-carriages.

compression-engine (kọm-presh'ọn-en″jin), *n.* A gas-engine in which the mixed charge is subjected to compression before being ignited. The advantage of employing compression is that the pressure resulting from the explosion of the charge is very much higher than at atmospheric pressure. For this reason the economy and efficiency of the engine are increased.

compression-faucet (kọm-presh'ọn-fâ″set), *n.* A faucet in which the valve is closed by pressure only.

compression-machine (kọm-presh'ọn-ma-shẽn″), *n.* **1.** An air-compressor; a machine for compressing any substance. — **2.** A testing-



Compression-machine.
(From Travers's "Study of Gases.")

machine for finding the compressive strength of materials. — **3.** A machine for determining the physical constants of gases, as vapor pressure, critical temperature, etc. It consists of a wrought-iron barrel to hold mercury, into which compression-tubes for gases, and manometers are inserted at *a*, *a′*, and *a″*. The caps as at *a*, and *a′*, the latter attached to the off-set *b*, serve to keep the manometers in place. Pressure is exerted on the gases when by turning the screw *f*, held by the guide-bars *e*, and the cap *g*, the plunger *d* is forced against the mercury in the barrel.

compression-member (kọm-presh'ọn-mem″-bẹr), *n.* Any part of a structure, as a bridge or a building, in which the stresses due to the loads produce compression.

compression-pump (kọm-presh'ọn-pump), *n.* A pump for the compression of air or other gas, either as a source of power, for convenience of storage, or for producing liquefaction as in the manufacture of liquid air.

compression-valve (kọm-presh'ọn-valv), *n.* A valve whose opening or release will relieve excessive compression behind it: used in internal combustion motors to relieve an inconvenient compression when such motors are to be started by hand. Often called *relief-valve.*

compressorium, *n.* **2.** Same as *compressor.* (*a*).

compromission (kom'prọ-mish'ọn), *n.* [LL. See *compromise.*] Compromise: used now only in the following phrase. **Election by compromission,** election to an office by a committee to whom power to elect has been delegated.

comptograph (komp'tọ-gräf), *n.* [Badly formed from L. *comp(u)tare,* count, + Gr. γράφειν, write.] A key-actuated machine which prints or lists successive numerical items on paper, adds the items, and, at the will of the operator, records their sum.

comptometer (komp-tom'ẹ-tẹr), *n.* [Badly formed from L. *comp(u)tare,* count, + Gr. μέτρον, measure.] A key-actuated machine for performing addition, subtraction, multiplication, and division. It has nine keys and one lever for each column of figures; the keys actuate the levers, and the levers figure-wheels which indicate results. *Engin. Mag.,* July, 1904, p. 612.

Compulsive insanity. See ★*insanity.*

Compulsory idea, an imperative concept, or obsession, which completely dominates the will.

compunctious, *a.* **2.** Troubled with a feeling of compunction.

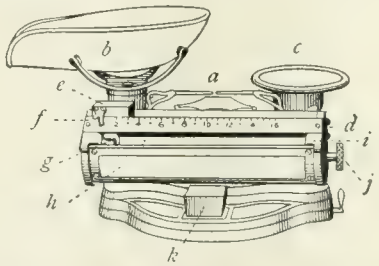
Spears had been deeply *compunctious* for the part he had taken. *Mrs. Oliphant. N. E. D.*

computant (kom'pū-tạnt), *n.* [L. *computans* (*-ant-*), ppr. of *computare,* compute.] A computer; an arithmetician. *Carlyle,* German Romance.

computative (kọm-pūt'ā-tiv), *a.* [NL. **computativus,* ⟨ L. *computare,* compute.] Given to computation; calculating. *Ruskin.*

computing-machine (kọm-pū'ting-ma-shẽn″), *n.* A machine which performs the simpler operations of arithmetic by mechanical means.

computing-scale (kọm-pū'ting-skāl″), *n.* A combined weighing and price-calculating ma-



Computing-scale.

a, weighing-beam indicator — beam not shown; *b*, tray holding goods to be weighed; *c*, platform for weights; *d*, weight-scale; *e*, sliding-weight; *f*, pointer indicating weight on scale; *g*, pointer indicating price at that weight; *h*, casing inclosing computing mechanism; *i*, price scale; *j*, operating-handle controlling computator; *k*, extra weight.

chine. It consists essentially of a beam, spring, or platform weighing-scale, and a mechanical computing-machine affixed to the weighing-scale. The computing mechanism may be of any form and be joined to any type of weighing-machine, the essential feature being that the method of indicating the weight shall be so applied that it also indicates the selling price of the article weighed. In the illustration a simple form of beam-scale is shown, the sliding-weight, resting on the graduated scale, appearing at the left. Beneath the scale-beam is shown the cylindrical casing inclosing the price-calculating mechanism. This consists essentially of a revolving cylinder, marked in figures representing cents, arranged in parallel horizontal lines and operated by the nurled screw at the right. On turning the screw the cylinder is revolved until the line of figures calculated for any particular price is brought into view in front. On weighing any article in the scale the weight is moved until the beam balances, when a pointer on the lower side of the weight indicates the computed price in cents on the computing-cylinder.

compy. An abbreviation of *company.*

comr. An abbreviation of *commissioner.*

Comrade palmer-worm. See ★*palmer-worm.*

com.-sergt. An abbreviation of *commissary-sergeant.*

Comstock lode. See ★*lode.*

Com. Ver. An abbreviation of *Common Version* (of the Bible).

con[6] (kon), *a.* Short for 'confidence': as a *con* man; a *con* game. See *confidence man, confidence game* (under *confidence*).

Con. An abbreviation (*a*) of *Consul;* (*b*) [*l. c.*] of *conclusion.*

conacaste (kō-nä-käs'tā), *n.* [Guatemalan.] The eardrop-tree, *Enterolobium cyclocarpum,* or its fruits. The latter are sometimes used for tanning, like divi-divi.

con agilità (kon ä-jẹ-lẹ-tä′). [It.] In *music,* with agility or nimbleness: used especially of the vocal execution of rapid runs or figures.

con anima (kon ä′ni-mä). [It.] In *music,* with animation.

Conant dollar. See ★*dollar.*

conarite, *n.* See ★*connarite.*

conation, *n.* **3.** In *sociol.,* social effort, especially that put forth by a community to transform its environment. *L. F. Ward,* Pure Sociol., p. 247.

concameration, *n.* **4.** In *anat.,* an arrangement in the form of connecting cavities or hollow cells. — **5.** The vault or sphere of the heavens; one of the celestial 'spheres' of older astronomy. *N. E. D.*

concassation (kon-ka-sā'shọn), *n.* [NL. **concassatio(n-),* for, **conquassatio(n-),* ⟨ **conquassare,* ⟨ L. *con-,* together, + *quassare,* crush: see *quash*[2].] The reduction of roots or woods to small fragments, that their active principles may be more easily extracted by solvents.

concatenation, *n.* **3.** The association of a number of nerve-cells in a series to form a nerve or nerve-tract. — **4.** In *elect.,* same as *cascade* ★*connection,* (*b*).

concave, *n.* **4.** The vault or arch of heaven: as, "the blue *concave.*" — **5.** A playing card so trimmed that it can be separated from others according to the purpose for which the pack was prepared.

conceiv, *v. t.* and *i.* A simplified spelling of *conceive.*

concelebrate, *v.* **II.** *intrans.* In the *Rom. Cath. Ch.,* to repeat, as a newly ordained priest, the words of the mass along with the ordaining bishop, who celebrates.

concelebration (kon-sel-ẹ-brā'shọn), *n.* The act, of a newly ordained priest, of repeating the words of the mass along with the ordaining bishop, who celebrates.

concento (kon-chen'tō), *n.* [It., ⟨ L. *concentus,* harmony: see *concentus.*] Harmony; in *music,* indicating the simultaneous sounding of the tones of a chord: opposed to *arpeggio.*

concentration, *n.* (*c*) Concentration may be: (1) The reduction of volume by the process of concentrating, as by the evaporation of water from a solution, or the removal of gangue from an ore. (2) The strength of a solution as increased by concentrating it and as depending on the amount of some dissolved substance contained in a given volume of the solution. (3) The strength of a solution as depending on the amount of some substance dissolved in a given amount of the solution, simply, and without reference to any process of concentrating it: it may be measured in percentage, or by specific gravity of the solution. (4) The number of gram-atoms or gram-equivalents or gram-molecules of the dissolved substance, as the case may be, which are contained in unit volume of the solution. The unit volume is commonly the liter, but sometimes the cubic centimeter. A solution containing one gram-molecule, etc., in the liter is called a *normal solution;* and one containing one tenth of a gram-molecule, etc., in the liter is called a *decinormal solution,* often written 0.1 normal, or $\frac{n}{10}$ solution. (5) The number of gram-atoms, gram-equivalents, etc., contained in the unit volume, although not in solution, as in case of gases or vapors. (*g*) In Herbart's pedagogic system, same as ★*absorption,* 2. — **Concentration camp, deposit.** See ★*camp*2, ★*deposit.* — **Ionic concentration,** in *phys. chem.,* the number of gram-atoms or gram-equivalents of an ion which are contained in the unit volume of a solution. — **Molecular concentration,** in *phys. chem.,* the ratio of the number of molecules of a dissolved substance which are contained in a given volume to the number of molecules of the solvent contained in the same volume.

concentrator, *n.* **4.** An apparatus wherein solutions or other products of manufacture are concentrated. — **Belt-concentrators,** a class of concentrating-machines in which the work is done on the surface of an inclined endless belt, usually of rubber, over which the pulp flows. The heavier minerals are retarded by friction, while the lighter ones move more rapidly. The separation is aided by mechanical jarring or shaking of the frame which carries the belt. Also called *belt-table.* — **Centrifugal concentrator,** a machine for separating minerals by centrifugal force. In one form the ore particles are thrown from a rapidly revolving disk outward into a series of concentric troughs, the denser grains being thrown farther than the lighter grains of gangue.

concept, *n.* — **Classific concept,** the governing idea of a system of classification or of any part of such a system.

conceptacle, *n.* — **Neutral, sterile,** or **vegetative conceptacle.** Same as *cryptostoma.*

concept-feeling (kon'sept-fẹ″ling), *n.* In *psychol.,* a characteristic feeling which accompanies the consciousness of vicarious or symbolic value attaching to the concept-idea. Also called *conceptual feeling.*

concept-idea (kon'sept-i-dẹ″ä), *n.* In *psychol.,* an idea which is recognized as having only a

vicarious or symbolic value; an idea which serves as the vehicle of the logical concept. Also called *conceptual idea*.

They serve to invest the *concept-idea* with the consciousness of its vicarious significance, and with the resultant concept-feeling.
W. Wundt (trans.), Human and Animal Psychol., p. 310.

conceptionist, 2. A member of the Roman Catholic religious order of the Sisters of the Conception of Our Lady, founded in Portugal by Beatrix de Sylva in 1484.

Conceptual time. See ★*time*[1].

conceptually (kon̤-sep'tū-al-i), *adv.* As a mental conception.

A substance is neither actually nor *conceptually* the sum of its radicals. *Nature*, Sept. 18, 1902, p. 501.

concert, *n.* **The European concert,** the great powers of Europe when acting together diplomatically. See *the powers*, under *power*[1].

concertante, *a.*, (*b*) An old term used to designate orchestral parts or instruments that were employed throughout a piece: opposed to *ripieno* parts, which were used only at intervals for fuller effect.

concert-hall (kon'sèrt-hâl), *n.* A hall in which concerts, chiefly, are given.

concertinist (kon-sèr-tē'nist), *n.* [*concertina* + *-ist.*] One who plays upon a concertina.

concertino, I., *n.* 2. In a ★concerto grosso (which see), the group of solo instruments taken collectively.

concertist (kon'sèr-tist), *n.*. [*concert* + *-ist.*] A performer in a concert. [Colloq.]

concertistic (kon-sèr-tis'tik), *a.* In *music*, pertaining to or after the manner of a concert: usually in distinction from *ecclesiastical* or *operatic*. [Rare.]

concertize (kon'sèr-tīz), *v. i.*; pret. and pp. *concertized*, ppr. *concertizing*. [*concert* + *-ize.*] To give or perform in a concert. [Colloq.]

concerto, *n.* **Concerto grosso** 'great concerto,' a concerto in which a group of solo instruments occupies the principal place.

concession, *n.* 4. In China, Korea, and other countries where extraterritoriality prevails, a tract of land at or near a sea- or river-port, set apart for the use of the citizens and subjects of the treaty-nations when that port is opened by treaty to foreign residence and trade: as, the French and British *concessions* at Shanghai; the British *concession* at Han-kau; the Foreign *Concession* at Tientsin, etc. Here foreigners may lease land and erect such dwellings and other buildings as are required in their business, and in most instances the right of municipal self-government has been acquired by agreement with the sovereign power.

concessionaire (kon̤-sesh-on̤-âr'), *n.* [F.] A concessioner or concessionary.

The rules to which exhibitors, *concessionaires*, and state and foreign governments must conform in the erection and maintenance of structures on the St. Louis Exposition grounds have received the final approval of all authorities concerned.
Elect. World and Engin., Jan. 24, 1903, p. 148.

conch, *n.* 8. In the cephalopod mollusks, the postembryonic shell: contrasted with *protoconch* or *embryonal shell*, and with *shell*, a term which loosely covers the entire external skeleton.—9. (*a*) The whelk, *Fulgur carica*; (*b*) the helmet-shell, *Cassis*.—10. In *Rom. antiq.*, the name for various small vessels used for oil, salt, etc.

conch[2] (kongk), *n.* Same as ★*conk*[2].

conch., conchol. Abbreviations of *conchology*.

concha, *n.* 4. Same as ★*conch*, 10.

The admirable figure of Marforius, casting water into a most ample *concha*. *Evelyn. N. E. D.*

5. The thin, translucent shell of a bivalve mollusk, sometimes used for window-panes in the East Indies.

conchal (kong'kal), *a.* [*concha* + *-al.*] Relating to or resembling a concha.

Conchidium (kon-kid'i-um), *n.* [NL., < Gr. κόγχη, a shell, + *-idium*, dim.] A genus of extinct brachiopods of the family *Pentameridæ*, having in the ventral valve a spondylium supported by a median septum and two vertical septa in the dorsal valve. The shells are strongly ribbed on the exterior. The genus is widely distributed in Silurian and Devonian rocks.

conchifragous (kon-kif'ra̤-gus), *a.* [Gr. κόγχη, a shell, + L. *-fragus*, < *frangere*, break.] Shell-breaking: said of the jaws of animals adapted for feeding on shellfish.

Cranium.—Agreeing in most characters with the existing Cheloniæ, but specialized for a *conchifragous* habit; short, very broad, with external nares directed as much upward as forward.
Amer. Jour. of Sci., Sept., 1904, p. 192.

conchite, *n.* 2. A form of calcium carbonate, forming a considerable part of the calcareous secretions of molluscan shells and supposed to have specific characters. It is probably only a form of aragonite.

conchitis (kong-kī'tis), *n.* [NL., < *concha* + *-itis.*] Inflammation of the external ear.

conchoid, *n.*—**Spherical conchoid,** a curve like a conchoid, but on a sphere.

conchoidal, *a.* 2. In *math.*, pertaining or relating to the conchoid: as, Holm's *conchoidal* screw.

conchoidally (kong-koi'dal-i), *adv.* In a conchoidal curve.

The sandstone of this formation has the peculiarity of fracturing *conchoidally*. *Pop. Sci. Mo.*, LIV. 64.

conchologize (kong-kol'ō-jīz), *v. i.*; pret. and pp. *conchologized*, ppr. *conchologizing*. [*conchology* + *-ize.*] To collect or study shells. *Kingsley.*

conchorhynchus (kong-kō-ring'kus), *n.* [NL., < Gr. κόγχη, a shell, + ῥύγχος, a snout.] One of the names which were applied to the horny jaws of the fossil cephalopod *Temnocheilus bidorsatus*, of the Triassic rocks, before it was known to what shell they appertained.

conchotome (kong'kō-tōm), *n.* [Gr. κόγχη, shell, + *-τομος*, < ταμεῖν, cut.] An instrument for dividing one of the turbinals in the nose.

conchula (kong'kū-lä̤), *n.*; pl. *conchulæ* (-lē). [NL., dim. of L. *concha*, a shell.] The thickened, lobed extremity of the siphonoglyph in *Siphonactinidæ*.

conchyliferous (kong-ki-lif'e̤-rus), *a.* [Gr. κογχύλη, a shell, + L. *ferre*, bear.] Same as *conchiferous*.

concis. An abbreviation of the Latin *concisus*, cut.

conclusiuncule (kon̤-klō'zi-ung-kūl), *n.* [L. *conclusiuncula*, dim. of *conclusio*(*n-*), conclusion.] A trifling conclusion: one of the stock sophisms of traditional logic.

concomitant, *a.* 2. In *bot.*, running side by side, as bundles which are not separated by other bundles.

concordance, *n.* 4. In *music*, concord or consonance in the technical sense of these words: opposed to *dissonance* or *discord*.

Concord axle, buggy, coach, hame. See ★*axle*, etc.

concrescence, *n.* 5. In *embryol.*, the formation of the body of the vertebrate embryo by the growing together of the lips of the blastopore.

concrescent (kon̤-kres'e̤nt), *a.* [L. *concrescens* (*-ent-*), ppr. of *concrescere*, grow together: see *concresce.*] Growing together; coherent.

A single male flower consists of an axis enclosed at the base by an inconspicuous perianth formed of two *concrescent* leaves and terminating in two, or as many as eight, shortly stalked or sessile anthers.
Encyc. Brit., XXIX. 191.

concrete, I. *a.* 5. In *bot.*, growing together.

II. *n.*—**Adobe concrete.** See ★*adobe.*—**Armored concrete.** Same as *reinforced* ★*concrete.*—**Reinforced concrete,** any form of concrete construction in which the concrete is reinforced by the use of steel or iron bars, rails, rods, wires, netting, etc., bedded in it, to give it additional strength and solidity. In the most important form, called *steel concrete*, the concrete is reinforced by corrugated bars of steel or expanded metal. It is used in erecting bridges, culverts, sewers, fire-proof floors and roofs, footings, and walks or foundations. The steel is disposed in the mass of the concrete to resist the various strains to which the structure may be subjected. Thin floors, walls, and roofs are reinforced by sheets of expanded metal; foundations, bridges, arches, sewers, etc., are strengthened by bars of steel having right-angled corrugations.

concrete, *v. t.* 3. To treat or lay with concrete: as, to *concrete* the foundations of a building; to *concrete* a cellar floor, or a sidewalk.

concrete-mixer (kon'krēt-mik"sèr), *n.* A machine for mixing cement, sand, crushed or broken stone, and water in varying proportions for making concrete. The most common type is a rotary cylinder operated by a small portable engine or motor, and arranged with suitable inlets for the water and other materials, and for stirring and mixing them, etc.

concretion, *n.* 5. In old *chem.*, reduction of a liquid to a solid, commonly by partial evaporation.

Concretionary granite. See ★*granite.*

concretize (kon̤-krē'tīz), *v. i.*; pret. and pp. *concretized*, ppr. *concretizing*. [*concrete* + *-ize.*] To make specific; give definiteness to.

The method of resolving bodies into particles I call analysis, and the proof of analysis is synthesis. I use the term analysis with a specific meaning, to distinguish it from abstraction. The proof of abstraction is *concretizing*. *J. W. Powell*, in Amer. Anthropol., July–Sept., 1901, [p. 409.

concur, *v. i.* 6. (*a*) In *law*, to assert, with other claimants, a claim against the estate of an insolvent. (*b*) In *Eng. law*, to unite in two or more persons the title to a single estate.

concur (kon̤-kèr'), *n.* [*concur*, *v.*] In *mod. geom.*, the straight determined by two coplanar flat pencils.

concurrence, *n.* 5. In *math.*, the meeting of lines, surfaces, etc.—6. In *mod. geom.*, the meeting-point or cointersection-point of three or more lines.—7. In French law, equality of rights of several parties in the same subject-matter or thing.

concurrency, *n.* 2. In *logic*, a relation in which no individual object stands to any other than itself, such as 'being at once black and also —.'

concusconine (kon̤-kus'kō-nin), *n.* [*con-* + *cusconine.*] A crystalline alkaloid, $C_{23}H_{26}O_4N_2+H_2O$ found in the bark of *Remijia purdieana*. The hydrate melts at 144° C., the anhydrous alkaloid at 208° C.

concussion-bellows (kon̤-kush'on̤-bel"ōz), *n.* Same as *winker*, 6.

concussion-table (kon̤-kush'on̤-tā"bl), *n.* A table for sizing and sorting rock or ore by means of a sidewise jarring motion which, in combination with the effect of gravity, brings particles of the same size or of the same specific gravity into separate groups and results in a mechanical separation.

Condemnation money. See ★*money.*

condensance (kon̤-den'sans), *n.* [*condense* + *-ance.*] In *elect.*, a negative reactance or capacity reactance. See ★*reactance.*

condensate, *a.* **II.** *n.* The substance formed by condensation.

Culture liquids tainted by the filter, the absorbing liquid, and the *condensate*. *Buck*, Med. Handbook, I. 157.

condensation, *n.* 3. In *organic chem.*, the union of two carbon atoms which may be in the same or in different molecules. Thus acetylene, C_2H_2, condenses to benzene, C_6H_6. In recent years the term has been applied to reactions involving the union of a carbon atom to an atom of some other polyvalent element, usually accompanied by the removal of the elements of water. Thus acetaldehyde, C_2H_4O, and hydroxylamine, NH_2OH, condense to form acetaldoxime, C_2H_4NOH, and water, H_2O.—**Aldol condensation, temperature of condensation, condensation theory.** See ★*aldol*, ★*temperature*, ★*theory.*

condensational (kon-den-sā'shon̤-al), *a.* [*condensation* + *-al*[1].] Of or pertaining to condensation; having the power to condense or reduce the volume of a substance.

And why may one attribute to ionised air different *condensational* properties, according as positive or as negative ions are in question, without having first established that the corresponding air nuclei do not differ in size sufficiently to account for the *condensational* difference observed. *Nature*, Dec. 3, 1903, p. 104.

Condensational energy, wave. See ★*energy*, ★*wave*[1].

Condensed numbers. See ★*number.*—**Extra condensed type,** any face or style of printing-type that is unusually narrow for its height.

This line is in Extra Condensed on 8-point body.

condenser, *n.* (*f*) A device for removing from a current of gas such elements as will be caused to fall out from the gas by reducing its temperature. Tar and ammonia are separable in this way.—**Abbé condenser,** a form of achromatic condenser (which see, under *achromatic*).—**Ammonia condenser.** See ★*ammonia.*—**Condenser yarns,** a trade-name applied to cotton yarns spun from roving made on a carding-machine with a condenser apparatus.—**Counter-current condenser,** a jet-condenser in which the direction of the current of air taken away from the condensed water is contrary to the direction of the current of injection-water; consequently the air passes through the injection-water and is thoroughly cooled.—**Reflux condenser,** a condenser so adjusted as to return condensed vapors to the vessel from which they came. *Amer. Chem. Jour.*, Jan., 1903, p. 39.

condensery (kon̤-den'sèr-i), *n.* [*condense* + *-ery.*] An establishment where condensed milk is prepared.

condensing-engine (kon̤-den'sing-en"jin), *n.* See ★*engine.*

condiction (kon̤-dik'shon̤), *n.* [L. *condictio*(*n-*), < *condicere*, agree, promise, proclaim, reclaim, etc.: see *condition.*] In *Rom. law*, an action of a personal nature, founded upon an obligation to perform a certain and defined service or to give or do a certain thing.

condictitious (kon-dik-tish'us), *a.* [LL. *condicticius*, < *condictus*, pp. of *condicere*, reclaim: see ★*condiction.*] Of or pertaining to condiction.

condidit (kon'di-dit), *n.* [From the principal word in the plea, L. *condidit*, 'he made' (the will), perf. ind. third pers. sing. of *condere*, put together, make, compose, etc.; see *condiment.*] In *eccles. law*, a plea to a libel alleging that the decedent made the will in suit, and that he was of sound mind at the time.

condition, *v. t.* **7.** In the tobacco trade, to spray with a 2-per-cent. solution of glycerin. This operation is performed only on chewing, plug, and cigarette tobaccos.

conditioner (kọn-dish'ọn-ėr), *n.* [*condition* + *-er*[1].] In *milling*, a machine for drying damp or musty grain and bringing it into proper condition for use. It consists of a tall tower, the upper part of which is formed of a series of circular blinds and the lower part (one third) of woven-wire netting. Inside the tower, and extending throughout its length, is a pipe or cylinder of perforated sheet-metal. The damp grain is fed into the top of the tower, and falls to the bottom in a cylindrical sheet between the outside blinds and netting and the central perforated metal pipe. In falling, the grain is first exposed to a heavy blast of hot air which passes through the perforations in the central pipe, escaping through the grain and the blinds to the open air. Falling still lower, it meets a blast of cold air, which, passing through the falling grain, escapes through the wire netting. The heating, drying, and cooling leave the grain clean, dry, and in good condition.

condol (kon-dōl'), *n.* [Philippine Sp., < Tag. *condol*.] A name in the Philippine Islands and Guam of the ash-pumpkin or wax-gourd, *Benincasa hispida*, the fruit of which is used as a vegetable and is preserved as a sweetmeat. See *benincasa*.

Condolence council, a tribal council of the Iroquois held after the death of a sachem. During the council the successor of the deceased sachem was installed.

> He was engaged on the Grand River reservation in Canada, where he successfully made special effort to obtain the chants and speeches used in the *condolence council* of the league. *Smithsonian Rep.*, 1890, p. 49.

condonance (kọn-dō'nạns), *n.* [*condone* + *-ance*.] Condonation. *Athenæum*.

Condroz psammites. See ★*psammite*.

Condrusian (kon-drö'si-ạn), *a.* and *n.* [L. *Condrusi*, n. pl., name of a people in Belgic Gaul, in the district now called *Condroz*.] **I.** *a.* In *geol.*, a term applied to the uppermost division of the Devonian rocks in Belgium and northern France, being otherwise known as the *Psammites of Condroz* and constituting the upper of two subdivisions which together make the Famennian stage.

II. *n.* The Condrusian division.

conduct, *v. t.*—**Conducting cells, sheath.** See ★*cell*, ★*sheath*.

conduct[1], *n.* **10**†. The arrangement and composition of a picture. *Walpole*.

conductance (kọn-duk'tạns), *n.* [*conduct* + *-ance*.] In *elect.*: (*a*) the conducting power of a given mass of specified material of specified shape and connections. *Standard Elect. Dict.* (*b*) in alternating-current circuits, the energy component of admittance, defined as the ratio of the energy current divided by the electromotive force. See ★*admittance*, 6.—**Specific conductance,** in *elect.*, conductivity; the conductance of a portion (of any given material) one centimeter long and one square centimeter in cross-section.

conducting-bar (kọn-duk'ting-bär), *n.* Same as ★*comb-bar*.

conduction, *n.* **4.** In *physiol.*, the transfer of nervous influence along a nerve-fiber or of the contractile force from point to point in muscle-tissue.

> Just as in a nerve fiber, when excited by a localized stimulus, the excited state spreads from the excited point to the adjacent unexcited ones, so in muscle the "contraction," when excited at a point, spreads to the adjacent uncontracted parts. Both in muscle and in nerve this spread is termed "*conduction*." *Encyc. Brit.*, XXXI. 738.

Avalanche conduction. See ★*avalanche*.—**Fourier's law of conduction.** See ★*law*[1].—**Wernicke's aphasia of conduction.** Same as *word-deafness*.

Conductive tissue, in *bot.*, same as *conducting tissue* (which see, under *tissue*).

conductivity, *n.* **2.** In *physiol.*, the power of a nerve to conduct an impulse.

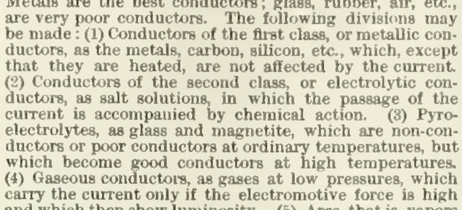
> When a nerve is divided it will lose its motor *conductivity* only after the lapse of some time. *Lancet*, April 18, 1903, p. 1089.

Conductivity of the atmosphere. (*a*) The calorimetric conductivity of the atmosphere expressed in absolute units of heat, or the number of calories conducted through a unit distance and a unit mass of air in a unit of time under the influence of a unit gradient of temperature. This small quantity becomes very important in meteorology, where it is converted into thermometric conductivity. (*b*) The thermometric conductivity of the atmosphere; the change in temperature of the atmosphere due to its calorimetric conductivity. It is equal to the latter divided by the specific heat of a unit volume, or by the product of the specific heat of a unit mass multiplied by the density of the gas. It is therefore a large quantity in the upper regions of the atmosphere.—**Coefficient of thermometric conductivity.** See ★*coefficient*. **Conductivity water,** in *phys. chem.*, water specially purified for use in measuring the electrical conductivity of solutions. Ordinary water is commonly regarded as a fairly good conductor of electricity; even distilled water is far from being a non-conductor; but most of its conducting power depends on the presence of dissolved substances, such as ammonia and carbon dioxid. Water freed as far as possible from these is used in experiments on the conductivity of solutions.—**External conductivity.** See ★*emissivity*. **Magnetic conductivity,** the magnetic induction of a circuit divided by the magnetizing force; magnetic permeability or specific permeance; the reciprocal of reluctivity. **Molecular conductivity,** in *phys. chem.*, the specific electric conductivity of a solution divided by the concentration; the conductivity which would be exhibited by a solution of the specified concentration, and of such volume as to contain one gram-molecule of the dissolved substance when entirely inclosed between large electrodes one centimeter apart.—**Specific conductivity.** Same as *specific* ★*conductance*.—**Surface conductivity,** radiating power expressed in terms of the heat emitted per second by a square centimeter of surface when the radiating body has a temperature one degree centigrade above its surroundings. Also called *emissivity*. —**Thermal conductivity,** a physical constant used to express quantitatively the rate of transfer of heat through a medium by conduction. The conductivity, *k*, is the quantity of heat which would pass, in a unit of time, between the opposite faces of a layer of the substance of unit area and unit thickness when the difference of temperature between the faces is one degree. See *conduction* and *conductivity*.—**Thermometric conductivity.** Same as *thermal* ★*diffusivity*.

conductor, *n.* **9.** Specifically, in *elect.*, a substance through which electric currents can flow. Metals are the best conductors; glass, rubber, air, etc., are very poor conductors. The following divisions may be made: (1) Conductors of the first class, or metallic conductors, as the metals, carbon, silicon, etc., which, except that they are heated, are not affected by the current. (2) Conductors of the second class, or electrolytic conductors, as salt solutions, in which the passage of the current is accompanied by chemical action. (3) Pyro-electrolytes, as glass and magnetite, which are non-conductors or poor conductors at ordinary temperatures, but which become good conductors at high temperatures. (4) Gaseous conductors, as gases at low pressures, which carry the current only if the electromotive force is high and which then show luminosity. (5) Arcs, that is, vapors of first-class conductors, which become conducting by the passage of the current.—**Conjugate conductors,** in *elect.*, two conductors which form parts of a divided circuit and are so placed that an electromotive force in the one produces no current in the other.—**Cord conductor,** in *elect.*, a conductor consisting of many fine strands twisted or braided together and covered with flexible insulating material. Cord conductors are used in making switchboard connections and for many other purposes where a flexible conductor is desirable.—**Core conductor,** a form of apparatus used in experiments in electrotonus, in which there is a metal wire, or core, through which the current is conducted.—**Neutral conductor,** in a three-wire or Edison system of low-tension electric distribution, the middle conductor, which has against each of the two outside conductors half the voltage existing between the outside conductors. In a direct-current three-wire distribution the two outside conductors are the *positive* and the *negative* conductors respectively.

conductor-rail (kọn-duk'tọr-rāl), *n.* In *electrotechnics*, a metallic rail by means of which the electric current is conveyed to motors of an electric railway.

conduit[1], *n.*—**6.** Same as ★*copula*, 9.—**Electric conduit,** a permanent tubular space or system of spaces or ducts designed to receive insulated electric conductors.



Sub-trolley Conduit.

a, traffic-rail; *b*, cover-plate; *c*, slot-rail; *d*, holder; *e*, insulator; *f*, yoke; *g*, working conductor; *h*, conduits for cables.

Sub-trolley conduit, a sub-surface inclosed space with openings at the top, intended to support and protect the working conductors of a sub-trolley electric railway.

conduplication, *n.* **2.** Specifically, in *bot.*, a form of estivation in which the sides of an organ are applied to each other by their faces.

condurangin (kon-dū-rang'gin), *n.* [*condurango*, var. of *cundurango*, + *-in*[2].] A name given to two glucosides, $C_{20}H_{32}O_6$ and $C_{18}H_{28}O_7$, found in the bark of the South American plant cundurango, *Marsdenia Cundurango*. They are powerful nerve-poisons.

condylarth (kon'di-lärth), *n.* A member of the group of extinct mammals termed the *Condylarthra*.

condylarthran (kon-di-lär'thrạn), *a.* and *n.* **I.** *a.* Of or pertaining to the *Condylarthra*.

II. *n.* A member of the *Condylarthra*.

condylarthrosis (kon"di-lär-thrō'sis), *n.* [Gr. κόνδυλος, knuckle, + ἄρθρωσις, articulation.] In *anat.*, a form of hinge-joint, usually with some lateral movement, in which a condyle of one bone fits into a suitable depression in the opposite bone.

condyle, *n.*—**Mandibular condyle,** in *ornith.*, the facet on the distal end of the quadrate for the articulation of the jaw or mandible. **Pterygoid condyle,** in *ornith.*, the projecting rounded facet on the anterior edge of the quadrate for the articulation of the pterygoid.

condylion (kon-dil'i-ọn), *n.*; pl. *condylia* (-ạ̈). [NL., < Gr. κονδύλιον, dim. of κονδύλη, socket: see *condyle*.] In *craniom.*, a corner of the condyle of the lower jaw. The lateral and the medial condylia are distinguished.

Condyloid joint. Same as ★*condylarthrosis*.

condylomatoid (kon-di-lom'ạ-toid), *a.* [*condyloma*(*t*-) + *-oid*.] Resembling a condyloma. *Buck*, Med. Handbook, I. 51.

condylome (kon'di-lōm), *n.* Same as *condyloma*.

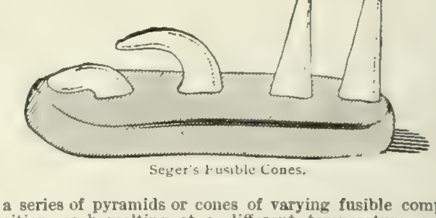
condylotomy (kon-di-lot'ọ-mi), *n.* [Gr. κόνδυλος, knuckle, + -τομία, < ταμεῖν, cut.] In *surg.*, removal of the whole or of a part of the condyle of a bone.

cone, *n.* **2.** (*h*) The conical top of a helmet or of a hat.

> He smote him on the helmet's *cone*, where streamed
> The horse-hair plume. *Bryant*, tr. of Iliad, I. iv. 579.

(*i*) The crystalline lens of the compound or faceted eye (*ommateum*) of an insect.

Alluvial cone, in *phys. geog.*, a fan-shaped deposit of detritus formed by a stream at the mouth of a ravine; an alluvial fan.—**Antipodal cone,** in *cytol.*, the cone-shaped bundle of fibers opposite the spindle-fibers in the karyokinetic figure of the dividing-cell.—**Apical cone, asymptote cone.** See ★*apical*, ★*asymptote*.—**Cone of eruption,** a volcanic cone formed by the accumulation of erupted material, such as dust and ashes.—**Cone of growth,** in *bot.*, the growing point at the apex of a stem, which is conical in shape.—**Cone of light.** Same as ★*light-spot*.—**Cone of planes,** the planes of correlated straights of two copunctal non-coplanar flat pencils, projective but not perspective.—**Cone of shade** or **shadow,** in *astron.*, the conical shadow projected into space by a planet.—**Parasitic cone,** a secondary cone formed at a temporary vent; an offshoot from the main volcanic vent. —**Pyrometric cones.** Same as *Seger's* ★*cones*.—**Reverse cones.** (*a*) Cones which when used in pairs have their similar bases together, so that their elements run in opposite directions or make an angle with each other: used in bearings of lathe head-stocks, and in roller-bearings as used in motor-cars. (*b*) A pair of equal cones with parallel axes, but with the small base of one in line with the large base of the other, at such a distance that an endless belt on their surfaces or an idle transmitting-wheel between them can transmit power from one to the other. In either form the device may be used to transmit a varying velocity ratio by adjusting belt or wheel so that a large circumference of driver is opposite a small circumference of driver, or the reverse.—**Seger's cones,**

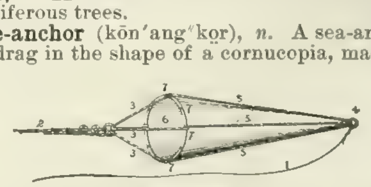


Seger's Fusible Cones.

a series of pyramids or cones of varying fusible composition, each melting at a different temperature, used to determine the several degrees of heat in porcelain-kilns: first devised by Lauth and Vogt at Sèvres, and perfected by Seger at the Royal Berlin Porcelain Works. There are 60 in the series. The first indicates a temperature of 590° C. and the last one of 1,890° C. Many of the cones contain alumina and silica in the proportion $Al_2O_3 + 10SiO_2$. Those melting at high temperatures contain only Al_2O_3 and SiO_2 in varying proportion, while those indicating lower temperatures contain K_2O, CaO, Fe_2O_3, $Na_2O + PbO$, with SiO_2 and B_2O_3. They are inserted at windowed draft-holes in the kiln, and the degree of heat is determined by their point of fusion.—**Tactile cone,** in some trematoids, one of the conical elevations bearing groups of non-motile sensory cilia.—**Torrential cone,** a fan-shaped-deposit of detritus built on the land by rivers.—**Vertex of a cone,** the apex.—**Visual cone,** in *optics*, the cone of rays whose vortex is at the retina and whose surface is determined by the pupil of the eye or, when looking at a small object, by the boundaries of the object.

cone, *v.* **II.** *intrans.* To bear cones: said of coniferous trees.

cone-anchor (kōn'ang"kọr), *n.* A sea-anchor or drag in the shape of a cornucopia, made of



Cone-anchor.

1, tripping-line; 2, towing-line; [illegible]; 4, tripping-line ring; 5, roping of drag; [illegible]; 7, iron ring.

an iron ring and of canvas: employed by vessels in heavy weather to keep them headed to the sea and wind, and to prevent them from drifting rapidly to leeward.

> M. Heureux dropped his *cone-anchor* and waited until a tug-boat, sent out especially from Dunkerque, threw a rope to the car, by which the balloon was tugged easily and reached Dunkerque fully inflated. *Nature*, Sept. 4, 1902, p. 447.

cone-bearing (kōn'bãr"ing), *a.* Coniferous; belonging to the *Pinaceæ* or any of the families of the order *Pinales*.

cone-belt (kōn′belt), *n.* A descriptive name for a form of furnace-tube which is made up of a series of frustums of cones riveted together.

cone-cell (kōn′sel), *n.* In *histol.*, one of the cells which secrete the crystalline cone in the ommatidium of the compound eyes of crustaceans and insects.

cone-clutch, *n.*—**Internal cone-clutch,** a friction-clutch in which the contact-surface is an internal cone. Usually the contact is made by pushing a disk with a conical rim into the internal cone.

cone-drive (kōn′driv), *n.* A device consisting of two cones of equal slant on parallel shafts, with their bases in opposite directions, and a leather loop pressed between them at one point. The leather loop can be shifted along, and as the distance between the cones is constant, one cone can drive the other with different velocity-ratios.

cone-drum (kōn′drum), *n.* An elongated cone-shaped pulley or wheel. *Taggart*, Cotton Spinning, I. 18.

cone-duster (kōn′dus″tėr), *n.* A machine consisting of a conical cylinder armed with teeth and revolving in a cylindrical casing armed with teeth on the inside; a devil. The stock fed into the machine is caught between the fixed and the revolving teeth, and is torn apart or opened and the dust shaken out.

conejo (kō-nā′hō), *n.* [Sp. *conejo*, a rabbit, < L. *cuniculus*, a rabbit: see *cony*.] 1. A fish, *Alepisaurus altivelis*, of the family *Alepisauridæ*: found in rather deep water in the West Indies.—2. Same as ★*rabbit-fish*, 4.

cone-key (kōn′kē), *n.* A frustum of a cone in which is a cylindrical hole, used for keeping a wheel in place on its shaft when the hole in the wheel is larger than the shaft. The wheel is bored conically, and the cone-key, after being turned to fit it, is cut into three pieces, so that it may be forced tightly into the wheel and keep it concentric with the shaft. Such a key can be used to fasten a wheel which has to pass over a section of the shaft larger than that where it is fastened.

Conemaugh series. See ★*series*.

cone-nose, *n.*—**Blood-sucking cone-nose.** Same as *gigantic* ★*bedbug*.

cone-pick (kōn′pik), *n.* A form of overpick-motion for throwing the shuttle of a loom, applied to some fast-running looms for weaving light and medium cotton fabrics: named from a cone-shaped antifriction roller which is a part of it. *Fox*, Mechanism of Weaving, p. 314.

cones (kōnz), *n.* [Origin unknown; perhaps orig. alluding to 'cones' of paper used in scattering the flour over the loaves and troughs.] A fine white flour used by bakers to 'dust' their loaves and troughs.

cone-screw (kōn′skrō), *n.* A threaded cone or frustum of a cone: used in cases where the screwed joint is liable to be subjected to very heavy pressures and it is desirable that the end of the screw shall not bottom or jam in its hole. It is used on the ends of punches for heavy hydraulic cupping-presses.

con espressione (kon es-pres-i-ō′ne). [It.] In *music*, with expression or feeling.

cone-spring (kōn′spring), *n.* A spiral wire spring wound, not in one plane, but as a helix on a cone. By this method of winding, the turns of wire fit one inside another when the spring is compressed, thus allowing it to close to practically the thickness of the wire.

Cone-spring.

cone-stand (kōn′stand), *n.* A stand or pedestal, of a conical shape, forming the lower fixed part of a mount for light guns.

conf. An abbreviation of *conference*.

confection, *v. t.* 2. To make up (elaborate articles of female attire). [French, occasionally used in English.]

confederalist (kon-fed′ėr-al-ist), *n.* [*confeder-(ation)* + *-al*[1] + *-ist* (after *federal*).] One who believes in confederation, with preservation of the autonomy of each component group, as a form of social or political organization.

confederationist (kon-fed-e-rā′shon-ist), *n.* One who favors or supports confederation or a confederation.

confelicity (kon-fē-lis′i-ti), *n.* [*con-* + *felicity*.] Participation in the joy of others; sympathy.

The *confelicity* . . . is . . . as rare as comparison is commonplace, and is far fainter and less educible or contagious. *G. S. Hall*, Adolescence, II. 581.

conference, *n.*—**Synodical Conference,** the largest of the Lutheran general bodies in the United States, organized in 1872 by the delegates from the Missouri, Ohio, Wisconsin, Minnesota, Illinois, and Norwegian synods. The conference proclaims Lutheranism of the most positive character, and an unreserved acceptance of the Augsburg Confession. The members are called *Missourians*, from the name of the largest synod.

conferted (kon-fėr′ted), *a.* [L. *confertus*, pp. of *confercire*, cram together, < *com-*, together + *farcire*, cram: see *farce*, *v.*] In *bot.*, crowded closely together.

Confervales (kon-fėr-vā′lēz), *n. pl.* [*Conferva* + *-ales*.] An order of the grass-green algæ, or *Chlorophyceæ*, containing some 10 or 12 families and widely distributed.

confession, *n.* **Augsburg Confession.** See *confession*, 3.

confessionalian (kon-fesh-o-nā′lian), *n.* One who favors formal confessions or articles of faith. *N. E. D.*

confessionism (kon-fesh′on-izm), *n.* [*confession* + *-ism*.] A morbid tendency to pour out one's psychological states, mental struggles, hopes, fears, longings, likes, dislikes, etc., in diaries, autobiographies, and the like.

Women are more easily hypnotized, more prone to jealousy, ill temper, and *confessionism*. *G. S. Hall*, Adolescence, I. 490.

confessive (kon-fes′iv), *a.* Giving knowledge of something not obvious; indicative.

An exclamation too *confessive* of the ardour of the address. *New Monthly Mag.*, II. 351.

confessorial (kon-fe-sō′ri-al), *a.* [LL. *confessorius* (< *confessor*: see *confessor*) + *-al*[1].] Pertaining to the office of a confessor.

The Priest's Tale is a sermon, prolix indeed, but, except in . . . holding up the *confessorial* office of the Priesthood, . . . moral in its scope. *Milman*, Latin Christianity, VI. xiv. 7.

confidante, *n.* 2. The name given by the English designer Hepplewhite to a species of sofa, similar to an ordinary stuffed couch, with additional seats at the ends, all made in one.

configuration, *n.*, 5. (*b*) A system of a finite number of points with their duals.

The diagram illustrating this theorem is worthy of notice as representing a class of remarkable *configurations* characterized by a certain regularity of form. It consists of ten points and ten straight lines; three of the ten points lie upon each of the straight lines, and three of the ten lines pass through each of the points. *T. F. Holgate*, Geom. of Position by Reye, p. 5.

6. In *organic chem.*, the arrangement of the atoms within the molecule, especially that arrangement in space which occasions optical activity.—**Algebraic configuration.** See ★*algebraic*.—**Maclaurin's configuration,** in *projective geom.*, the figure for the dual theorems:

A tetrastim with dots in a conic range has each pair of codots costraight with a pair of fan points of the tetragram of tangents at the dots.	A tetragram with sides in a conic pencil has each pair of diagonals copunctal with a pair of connectors of the tetrastim of contacts on the sides.

confined, *p. a.* 3. Restricted to the service of one employer, as a laborer hired by him for the year; as, "a numerous body of *confined* labourers," *Daily News* (London), July 20, 1888.

confinedly (kon-fī′ned-li), *adv.* In a confined, limited, or restricted manner, sense, or degree.

The beauties of Nature, as they have been *confinedly* called. *Lamb*, Life and Letters, I. 214. *N. E. D.*

confirmand (kon-fėr-mand′), *n.* [L. *confirmandus*, that is to be confirmed, gerundive of *confirmare*, confirm.] A candidate for confirmation. *N. E. D.*

confirmant (kon-fėr′mant), *n.* One who confers the sacrament of confirmation.

confiscatable (kon-fis′kā-ta-bl), *a.* [*confiscate* + *-able*.] Liable to be confiscated: as, undeclared goods are *confiscatable*.

conflagrate, *v.* **II.** *intrans.* To burst into flame; take fire, either literally or figuratively. *Carlyle*.

conflagrative (kon-flā′gra-tiv), *a.* Incendiary: as, the *conflagrative* Russians. *Carlyle*.

conflagrator (kon-flā′gra-tor), *n.* [NL. **conflagrator*, < L. *conflagrare*: see *conflagrate*.] One who sets on fire; an incendiary. *N. E. D.*

conflate, *a.* 2. In *diplomatics*, marked by conflation; inadvertently formed by combining two different readings into one: as, a *conflate* text or passage. *Westcott and Hort*.

confluence, *n.* 4. In *psychol.*, the mutual assimilation of mental processes set up by adjacent stimuli: opposed to *contrast*. *E. B. Titchener*, Exper. Psychol., I. ii. 323.

Confluent fruit, measles. See ★*fruit*, ★*measles*.

conflux, *n.* 3. The point or place where lines meet.

confocal, *a.* **II.** *n.* A figure having the same focus as another.

A theorem which of course includes the corresponding proposition for *confocals* in plano. *Rep. Brit. Assn. Advancement of Sci.*, 1902, p. 506.

Conform ferment. See ★*ferment*.

conformable, *a.* 6. Specifically, that accepts and conforms to the usages of the Anglican Church.

Yet this man that stopped his ears like the adder to the charms of the Bishop, was after persuaded by a lay-man, and grew *conformable*. *Sir J. Harrington*.

conformal (kon-fôr′mal), *a.* [*conform*, *a.*, + *-al*[1].] 1. Of the same form.—2. In *math.*, conserving angles or establishing infinitesimal similarity.

If ds is the element of arc on the plane, $d\sigma$ that corresponding to it on the sphere, we have

$$d\sigma = \frac{ds}{x^2 + y^2 + 1},$$

a formula of great importance hereafter, inasmuch as it indicates the *conformal* character of the representation. *F. Hardcastle*, Riemann's Theory of Algebraic Functions, [p. 15.

Conformal representation. See ★*representation*.

conformer, *n.* 2. An apparatus for obtaining a graphic tracing of the form of the body.

conformist, *n.* 2. In *entom.*, a British collector's name for a noctuid moth, *Xylina conformis*.

conformity, *n.* 4. In *geol.*, parallelism of dip and strike between two strata or groups of strata. It may be produced by faulting, differing in this respect from conformability.

conformly (kon-fôrm′li), *adv.* In a conform way; so as to conserve angles.

con forza (kon fôrt′sä). [It.] In *music*, with force or power.

confrunt, *v.* A simplified spelling of *confront*.

confusion, *n.*—**Confusion of goods,** in *law*, an admixture of the property of two or more persons so that the individual property of each cannot thereafter be determined.

Confusional insanity. See ★*insanity*.

Cong. An abbreviation (*a*) of *Congregation*, *Congregational*, or *Congregationalist*; (*b*) of *Congress* or *Congressional*.

congelation, *n.* 3. The deposition of a mineral substance, as from an aqueous solution, either in crystals or otherwise: used particularly in regard to the formation of stalactites.

congener, *n.* 2. In *anat.*, a muscle which acts with another in producing the same movement.

conger[1], *n.*, 1. Most of the species undergo a metamorphosis, the young being loosely organized and transparent, band-shaped, and with very small head. The body grows smaller with increased age, owing to the compacting of the tissues, until the age when the growth in the usual direction begins.

In 1864 the American naturalist, Gill, published the conclusion that L[eptocephalus] morrisii was the young or larva of the *conger*, and Leptocephali generally the young stages of species of Murænidæ. In 1886 this conclusion was confirmed from direct observation by Yves Delage, who kept alive in a tank at Roscoff a specimen of L. Morrisii, and saw it gradually transformed into a young *conger*. *Encyc. Brit.*, XXVII. 685.

conger-eel, *n.* 4. In Australia, *Leptocephalus labiatus*, *Leptocephalus conger* L., and *Gonorhynchus Gronow*.

Congeria (kon-jē′ri-ä), *n.* [NL., from *Conger*, a surname.] A genus of extinct *Pelecypoda* having large mytiliform shells with double myophores: abundant in the Pliocene Tertiary.—**Congeria stage,** in *geol.*, the lowest stage of the Pliocene Tertiary in the Vienna basin: so named from the abundance of the molluscan genus *Congeria*.

congestin (kon-jes′tin), *n.* [*congest* + *-in*[2].] A poison found in the tentacles of *Actiniæ*.

congestion, *n.*—**Active congestion,** arterial congestion due to greater afflux of blood to the part: distinguished from *passive* or *venous congestion*, which arises from obstruction to the escape of blood from the part.

Conglobate gland. See ★*gland*.

conglomerate, *n.*—**Allegrippus conglomerate,** in *geol.*, a mass of gray sandstones and conglomerates occurring in central Pennsylvania. It attains a thickness of 1,600 feet, and is regarded by the geologists of that State as equivalent to the lower part of the Chemung stage of New York, that is, as appertaining to the Upper Devonian.—**Bloomsbury conglomerate,** in *geol.*, a division of Middle Devonian age underlying the Dadoxylon sandstone in New Brunswick.—**Crush conglomerate,** in *geol.*, an aggregate of rounded fragments of rock, produced by the crush along a fault-line.—**Dwyka conglomerate,** in *geol.*, a formation in South Africa of great thickness and extent, composed of pebbles and boulders, the latter often weighing a ton or more. It contains no fossils, but is regarded by most writers as a sheet of glacial deposits, the age of which has not been definitely ascertained, though it doubtless belongs to the closing stages of Paleozoic time.—**Mispec conglomerate,** in *geol.*, a division of the Middle Devonian series in New Brunswick.—**Olean conglomerate,** in *geol.*, a subdivision, in New York, of the Upper Carboniferous or Pennsylvanian series, the highest and latest of the Paleozoic rocks in that State. It is a quartz-pebble conglomerate overlain by a small amount of shale, and has been found to contain plant remains of the age of the Pottsville sandstone of Pennsylvania.—**Oneida conglomerate,** in *geol.*, a division of the Paleozoic series in New York, lying

at the base of the Upper Silurian, above the Lorraine beds and below the Medina sandstone. It consists largely of white-quartz conglomerate and sand, and carries no fossils, but attains considerable thickness, especially in eastern New York, where it constitutes the greater part of the Shawangunk Mountains and is termed the Shawangunk grit. **Panama conglomerate,** in *geol.*, a conglomerate lentil in the midst of the Cattaraugus red-shale formation of the Paleocarbonic series in Cattaraugus and Chautauqua counties, New York, and McKean and Warren counties, Pennsylvania. It has also received the names of *Salamanca, Mount Hermon, Pope Hollow,* and *Tuna conglomerate.* - **Prieska conglomerate,** in *geol.*, a conglomerate of Upper Carboniferous or Permian age in the Orange River Colony, South Africa, regarded by some writers as of glacial origin. - **Skunnemunk conglomerate,** in *geol.*, a local conglomerate of great thickness capping the Skunnemunk and Bellvale mountains, in southeastern New York, and overlying the Middle Devonian Bellvale flags.—**Wolf Creek conglomerate,** in *geol.*, a local conglomerate in Allegany and Cattaraugus counties, New York, lying on the Cattaraugus shales and containing the earliest evidences of the Carboniferous fauna in this section.

conglutinated (kon̤-glō′ti-nā-ted), *p. a.* Same as *conglutinate, a.*

Congo blue, brown, etc. See *Kongo* ★*blue,* ★*brown,* etc.

Congolese (kong-gō lēz′), *a.* [*Congo* + *-l-* + *ese* (prob. after *Angolese,* from *Angola*).] Of or pertaining to the Kongo region, especially to the Kongo Free State. Also *Kongolese.*

congonha (kon̤-gōn′ yä), *n.* [Brazilian.] A shrub of southern Brazil, *Villaresia Congonha,* belonging to the family *Icacinaceæ.* From its leaves is prepared a beverage like mate, and on the Paraguay river it is called *mate.*

congo-root (kong′gō-röt), *n.* Same as *Samson's snakeroot,* under *snakeroot.*

congratulant, *a.* **II.** *n.* One who congratulates: a congratulator. *Carlyle.*

Cong. Rec. An abbreviation of *Congressional Record.*

congreganist (kong′grē-gan̤-ist), *n.* [F. *congréganiste,* irreg. ⟨ *congregan(t),* congregant, + *-ist.*] In the *Rom. Cath. Ch.,* one who belongs to one of those religious associations which go under the common name of *congregations.* See *congregation,* 6.

congregant (kong′ grē-gan̤t), *n.* [L. *congregans* (*-ant*), ppr. of *congregare,* congregant.] A member of a congregation or assembly.

congregation, *n.* **10.** The coming together of the elements of a population by immigration, as opposed to the growth of a population by a birth-rate in excess of a death-rate. It is an aggregation of individuals or of families that have not been living together from their birth, and that therefore come together as partial or entire strangers. *Giddings,* Prin. of Sociol., p. 91. See *genetic* ★*aggregation.*

congregationalize (kong-grē-gā′shon̤-al̤-īz), *v. t.*; pret. and pp. *congregationalized,* ppr. *congregationalizing.* [*congregational* + *-ize.*] To render congregational in regard to polity: as, to *congregationalize* a Presbyterian church.

congregationist (kong-grē-gā′shon̤-ist), *n.* [*congregation* + *-ist.*] A member of a (Roman Catholic) congregation; a congreganist.

congregativeness (kong′grē-gā-tiv-nes), *n.* Tendency to congregate or form assemblies, communities, etc., as for protection, social enjoyment, profit, etc.

congregator (kong′grē-gā-tor), *n.* [LL. *congregator,* ⟨ *congregare,* assemble; see *congregate.*] An assembler; one who collects, calls, or brings together.

He was the *congregator* of those great spirits who presided over the resurrection of learning.
J. A. Symonds, Study of Dante, vii. 4.

congressionalist (kon̤-gresh′on̤-al̤-ist), *n.* [*congressional* + *-ist.*] A member of a congressional party; one who favors or supports congressional action or congressional measures.

congressist (kong′gres-ist), *n.* [*congress* + *-ist.*] A member of a congress (as of scientists, educators, or the like).

Contribute . . . to the enlargement of the geological experience and knowledge of the *congressists.*
Nature, Sept. 24, 1903, p. 515.

congruence, *n.* **5.** In *geom.*, identity in shape and size. Its symbol is ≡.

In the traditional geometry the foundation of all proof by Euclid's method consists in establishing the *congruence* of magnitudes.
G. B. Halsted, in Popular Astronomy, VIII. May, 1900, [p. 277.

6. In *line geom.*, a set of ∞^2 lines, such that any two given conditions determine a definite finite number of lines of the set.

To any set of ∞^2 lines the name *congruence* is attached.
C. M. Jessop, A Treatise on the Line Complex, p. vii.

congruent, *a.* **5.** In *geom.*, identical in shape and size.

But since no part of a curve can be *congruent* to any piece of a straight, so, for example, no part of a circle can be equivalent to any sect.
G. B. Halsted, in Pop. Astron., May, 1900, p. 277.

congruism (kong′grō-izm), *n.* [F. *congruisme,* ⟨ NL. **congruismus,* ⟨ L. *congruus,* suitable, congruous: see *congruous.*] In *theol.*, the theory which makes the efficacy of grace depend upon its congruity with the conditions or circumstances under which it is granted.

congruist (kong′grō-ist), *n.* [F. *congruiste,* ⟨ NL. **congruista,* ⟨ L. *congruus,* congruous: see *congruous.*] In *theol.*, one who holds the theory of congruism.

congruistic (kong-grō-is′tik), *a.* Pertaining to congruism or congruists.

Congruous grace. See ★*grace.*

Coniacian (kō-ni-ā′shian), *a.* and *n.* [NL. **Coniacianus* for **Coniacanus,* ⟨ ML. *Coniacum,* Cognac.] **I.** *a.* In *geol.*, pertaining to a division or substage of the Cretaceous formation in France and Belgium, consisting mainly of white chalk and constituting the lowest member of the Senonian: essentially equivalent to the Dover Chalk in the English succession. It lies below the Santonian and above the Angoumian.

II. *n.* The Coniacian division.

Conic pencil, range. See ★*pencil*[1], ★*range.*

conic, *n.*—**Conjugate conics,** in *geom.*, two concentric conics when the polars, with respect to them, of any point are parallel, and equidistant from the common center.—**General conic,** in *geom.*, the locus of the general equation of the second degree between two variables, $Ax^2 + 2Hxy + By^2 + 2Gx + 2Fy + C = 0$. **Particular conic,** in *geom.*, the locus arising from giving special values to the constants in the general equation of the second degree between two variables.

coniceine (kō-nis′ē-in), *n.* [*con(ine)* + *-ic* + *-e-* + *-ine*[2].] An alkaloid, $C_8H_{15}N$, which exists in three forms—*α*- and *β*-coniceine, obtained by heating conhydrine with hydrochloric acid (the first is a liquid which boils at 158° C., the second melts at 41° C.), and *γ*-coniceine, found in crude conine. The last boils at 173° C. and is 18 times more poisonous than conine, which it resembles.

conicine (kon′ī-sin), *n.* [*con(ine)* + *-ic* + *-ine*[2].] Same as *conine.*

conico-elongate (kon″i-kō-ē-lông′gāt), *a.* Extended in cone-like form.

conicograph (kon′i-kō-graf), *n.* [Gr. κωνικός, conic, + γράφειν, write.] A conic-describing instrument. *Sylvester.*

conicohemispherical (kon″i-kō-hem-i-sfer′i-kal̤), *a.* Blending in shape the cone and hemisphere.

conicopoly (kon-i-kop′ō-li), *n.* [Tamil *kanakka,* an account or writing, + *pillai,* a person (used also as a title of respect).] In the presidency of Madras, a native writer or clerk. *Yule and Burnell.* [Anglo-Indian.]

conicosubulate (kon″i-kō-sub′ū-lāt), *a.* Slenderly conic; tapering toward a point.

conid[2] (kō-nid′), *n.* [*conidium.*] A shortened and Anglicized form of *conidium.*

conidian (kō-nid′i-an̤), *a.* Same as *conidial.* [Rare.]

conidiospore (kō-nid′i-ō-spōr), *n.* [*conidium* + Gr. σπορά, seed (spore).] Same as *conidium.*

coniferyl (kō-nif′ē-ril), *n.* [*conifer* + *-yl.*] The radical $C_9H_9O_2$.—**Coniferyl alcohol,** the 3-methyl ether of 3, 4-phendiolpropenylol, $CH_3OC_6H_3(OH)C_3H_4OH$. It crystallizes in prisms which melt at 74° C. It is formed, together with glucose, by the action of emulsin on coniferin.

conimene (kō′ni-mēn), *n.* A sesquiterpene, $C_{15}H_{24}$, obtained from icica resin. It boils at 264° C.

coniopterygid (kō″ni-op-ter′i-jid), *a.* and *n.* **I.** *a.* Of or belonging to the family *Coniopterygidæ.*

II. *n.* A member of the family *Coniopterygidæ.*

Coniosporium (kon-i-ō-spō′ri-um), *n.* [NL. (Link, 1809), ⟨ Gr. κόνις, powder, + σπορά, seed (spore).] A genus of hyphomycetous fungi which have the hyphæ and sporophores very short and produce a powdery layer of dark simple spores on the surface of the host. About 75 species have been described, mostly saprophytic. *C. Arundinis* is a common species on *Arundo.*

Coniothyrium (kon-i-ō-thir′i-um), *n.* [NL. (Corda, 1840), ⟨ Gr. κόνις, powder, + θυρεός, shield (perithecium).] A genus of sphæronsidaceous fungi which have the pycnidia mostly scattered and embedded in the surface of the host. The spores are small, ellipsoid, and dark-colored. Over 150 species have been described, some of which are parasitic. *C. Diplodiella* is the cause of the white-rot of the grape. See *grape-rot.*

coniscope, koniscope (kon′i-skōp), *n.* [Gr. κονις, dust, + σκοπεῖν, view.] An apparatus for making visible and estimating the quantity of dust in the atmosphere, as distinguished from the dust-counter which is supposed to give an absolute measurement of the number of dust-particles. Specifically, Aitken's koniscope, consisting of a tube inclosing moist paper. When the inclosed air is nearly saturated and is allowed to expand slightly it forms a light mist, and the light transmitted through the tube is dimmed and colored in proportion to the number of dust-particles that serve as nuclei for condensation.

conj. An abbreviation (*c*) of *conjugation.*

conjective (kon̤-jek′tiv), *a.* [*conject* + *-ive.*] In *projective geom.*, said of two projective primal figures of the same kind of elements when both are on the same bearer.

conjecturably (kon̤-jek′tū-ra̤-bli), *adv.* In a conjectural manner; by way of conjecture.

conjectural, *a.* **2.** Given to conjecturing or to depending on mere conjecture: as, a *conjectural* critic.

conjoined, *p. a.* **2.** Bimanual: noting a method of examination or manipulation of an organ with the two hands.—**Conjoined manipulation,** use of the two hands, one externally, the other internally, in obstetrical operations.

Conjoint bundle, in *bot.*, a vascular bundle composed of wood and bast.

conjugable (kon′jō-ga̤-bl), *a.* [NL. **conjugabilis,* ⟨ L. *conjugare,* conjugate.] Capable of being conjugated.

conjugata (kon-jō-gā′tä), *n.* [NL.: see *conjugate.*] The anteroposterior diameter of the human pelvis from the promontory of the sacrum to the symphysis pubis. Also called *conjugate diameter.*—**Conjugata vera** (true conjugata), the diameter of the pelvis measured from the upper and posterior portion of the symphysis pubis to the second sacral segment.

conjugate, I. *a.* **6.** In *gearing,* said of tooth-profiles when they are of such a form that one will drive the other with a constant velocity-ratio, that is, when the ratio of the angular velocity of the driver to that of the driven is constant. The necessary condition for a constant velocity-ratio is that a normal to the two curves at the point of contact shall cut the straight line joining the centers of the gears at the point where it is intersected by the two pitch-circles.

7. United by a transverse furrow, as the paired ambulacral pores of the echinoids.—**Conjugate conics, foramen, spiral, sulphates.** See ★*conic,* etc.—**Harmonically conjugate points.** Same as *harmonic conjugates.*

II. *n.*—**Isogonal conjugates,** two points so related to a triangle that the two rays through them from any vertex are isogonals with reference to that angle. The isogonal conjugate to the centroid of a triangle is called the *Lemoine point* of the triangle.—**Isotomic conjugate.** (*a*) Of a point A with respect to the sect BC, a point A′ such that the sect AA′ has the same mid-point as BC. (*b*) Of a point O with respect to the triangle ABC, a point O′ such that on it are copunctal AX′, BY′, CZ′ when X′, Y′, Z′ are the isotomic conjugates, with respect to the sides, of X, Y, Z the points where transversals from A, B, C through O meet the sides.

conjugate, *v. t.*—**Conjugated double unions.** See ★*union.*

conjunction, *n.*—**Causal conjunction.** See ★*causal.*

conjunctival fold, reflex. See ★*fold*[1], ★*reflex.*

conjunctive threads, tissue. See ★*thread,* ★*tissue.*

conjunctivitis, *n.*—**Egyptian conjunctivitis.** Same as *trachoma.*—**Spring** or **vernal conjunctivitis,** a form of inflammation of the conjunctiva which prevails especially in the spring.

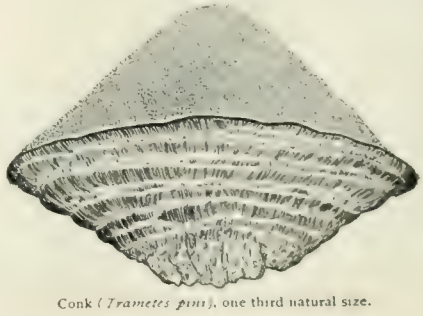
conjure, *v. t.* **4.** To exorcise or 'lay'; quiet; allay.

The mutinous spirit of the army had been *conjured* by the intrigues of a woman, when the name of the Roman Princeps had failed to coerce it.
C. Merivale, Rom. Empire, V. xlii.

conjustment (kon̤-just′ment), *n.* [*con-* + *(ad)justment.*] Adjustment.

The *conjustment* of man and environment.
W. J. McGee, Smithsonian Rep., 1901, p. 73.

conk[2] (kongk), *n.* [Also *conch, konk;* prob. a figurative use of *conch,* a shell, etc. Com-



Conk (*Trametes pini*), one third natural size.

pare the slang use of *cocoanut, knob*, etc., as 'head.'] 1. The head. [Prov. Eng slang.]—2. The nose. [Prov. Eng. slang.]—3. In *bot.*, a tough, leathery, or woody fungus, especially *Trametes pini*, whose fruiting bodies are bracket-like in form and occur upon the trunks of trees, producing a decay of the timber. [Colloq.]

The *conk* or bracket seen on affected trees is the fruiting organ. On its under side are innumerable minute spores or seeds. These float through the air and lodge upon other trees. *Conk* spores never enter through the bark, but usually through the scars of broken branches. Once the spore is established, root-like fibers grow inward, destroying the structure of the wood. When sufficient nourishment has been extracted a small *conk* is produced, which grows by annual layers on its under side, and in turn liberates millions of spores.
Bureau of Forestry, Bulletin 33, p. 15.

conker (kongk'ėr), *n.* [*conk*[2] + *-er*[1].] 1. A snail-shell.—2. A snail-shell or a horse-chestnut used in a boys' game, in which the object is to break the snail-shell or horse-chestnut by striking it with another.—3. *pl.* The game itself. [Prov. Eng. in all uses.] *Eng. Dial. Dict.*

conky (kongk'i), *a.* [*conk*[2] + *-y*[1].] Attacked by fungi called conks: as, a *conky* hemlock. See ★*conk*[2], 3. [Colloq.]

Conn. An abbreviation of *Connecticut.*

Connaraceæ (kon-ạ-rā'sē-ē), *n. pl.* [NL. (Robert Brown, 1818), ⟨ *Connarus* + *-aceæ.*] A family of dicotyledonous archichlamydeous plants of the order *Rosales*, typified by the genus ★*Connarus* (which see), and characterized by 5-merous, chiefly hermaphrodite flowers with separate carpels. There are 19 genera and about 160 species, mostly tropical woody climbers or lianas, with odd-pinnate leaves and flowers in racemes.

connaraceous (kon-ạ-rā'shius), *a.* Of or belonging to the family *Connaraceæ.*

connarite (kon'ạ-rīt), *n.* [Also *konnarite* and (incorrectly) *conarite* or *konarite*, ⟨ Gr. κόνναρος, an evergreen tree, + *-ite*[2].] A hydrated nickel silicate occurring in bright green crystalline grains.

Connarus (kon'ạ̈-rus), *n.* [NL. (Linnæus, 1753, first proposed by him in 1747), ⟨ Gr. κόνναρος, the name of some unidentified evergreen tree.] A genus of dicotyledonous evergreen trees or shrubs, type of the family *Connaraceæ.* They are characterized by their odd-pinnate coriaceous leaves with entire leaflets, and small white flowers in axillary and terminal pannicles. The flowers have five densely pubescent ovaries, one of which develops into an oblique stipitate capsule, the other four being usually abortive. About 70 species are recognized, natives of tropical and subtrophical regions of America, Africa, and Asia, being particularly abundant in the Malay archipelago. See *pigeonwood* (*d*) and *zebra-wood*, 1.

connation, *n.* 3. In *bot.*, the act of growing together, or the state of being grown together, as in connate leaves or petioles. See *connate leaf* (cut), under *connate.*

connect, *v.* I. *trans.*—**Connected surface.** See ★*surface.*

II. *intrans.* 2. To make connection in time and place (with another train or boat): as, the boat *connects* with the train at Fall River.

connectible, connectable (kọ-nek'ti-bl, -tạ-bl), *a.* Capable of being connected.

Connecticut River sandstone. See ★*sandstone.*

Connecticut trough. See ★*trough.*

connecting-zone (kọ-nek'ting-zōn), *n.* In *bot.*, the zone or girdle connecting the valves of a diatom. See *hoop*[1], 4.

connection, *n.* 8. Whatever connects or is used to connect; a connecting part or thing: as, hot-water *connections.*—**Cascade connection,** in *elect.*: (*a*) Connection in series, that is, so that the same current passes through different apparatus, as Leyden jars. (*b*) Inductive series connection of induction motors or transformers, that is, such connection that the primary of the first apparatus connects to the supply-circuit, the secondary of the first to the primary of the second apparatus, the secondary of the second apparatus to the receiving-circuit or to the primary of a third apparatus, etc. Usually called *concatenation* or *tandem connection.*—**Huntingdon Connection,** the sect of Methodists organized in England by the Countess of Huntingdon (1760). The Connection still exists, with about 30 chapels. See *Huntingdonian.*—**Multi-circuit connection,** in *series arc-lighting*, a method of connecting in series alternately an arc-circuit consuming voltage and a section of the arc-light generator or constant-current transformer generating this voltage. By this means a very large number of arc-lamps can be operated from one machine or transformer without excessive voltages in any arc-circuit.—**New Connection.** (*a*) A body of Baptists in England which seceded in 1770 from the General or 'Arminian' Baptists, condemning the Unitarian tendencies in the latter and holding to the original Arminian doctrines. (*b*) A body of Methodists in England which seceded from the Wesleyan Methodist Connection (1797), advocating the distribution of power of government between the ministers and the laity.—**Ring connection, star connection,** in *elect.* See ★*polyphase.*—**Tandem connection.** Same as *cascade* ★*connection.*

connectionalism (kọ-nek'shọn-ạl-izm), *n.* [*connectional* + *-ism.*] The theory and practice of the system of the Methodist connection, that is, the complete organization and unification of the different societies by means of the class-meeting, the itinerant ministry, the conference, etc.

connection-peg (kọ-nek'shọn-peg), *n.* In *elect.*, a metallic peg or plug, usually conical, employed in making temporary electrical connections. For this purpose the peg is inserted in the conical hole of a contact-block or connection-strip or between two blocks or strips, serving in the latter case to bridge the gap between the blocks or strips.

connection-plug (kọ-nek'shọn-plug), *n.* In *elect.*, same as ★*connection-peg.*

connection-strip (kọ-nek'shọn-strip), *n.* In *elect.*, a metallic strip joining points on a switchboard between which permanent electrical connection is desired, or serving a similar purpose in the case of any other electrical apparatus.

connective, *a.*—**Connective arrangement,** that special feature of the psychophysical organism, whatever it may be, by virtue of which attention and volition after they cease, as far as the subject can be aware, leave behind a continuance of their effects, perhaps more efficient than they. Thus, in reading music one first notices the clef, and then, without further apparent attention to it, proceeds to read the music without difficulty, although the signification of every note depends upon the clef, the thought of which has does not consciously persist through the reading. *G. F. Stout*, Anal. Psychol., I. 124.—**Connective-tissue tumor.** See ★*tumor.*

connectivity (kon-ek-tiv'i-ti), *n.* [*connective* + *-ity.*] In *math.*, the order of connection. In Riemann's theory the connectivity of a surface is p, the number of loop-cuts which can be drawn on the surface without resolving it into distinct pieces. For the sphere, p = 0, since it is divided into 2 disconnected regions by any closed curve drawn on its surface. For the ordinary anchor-ring, p = 1; a cut can be made along one and only one closed curve—though this may have a very arbitrary form—without resolving the surface into distinct portions.

connector, *n.* (*d*) In *geom.*, one of the ranges determined by *n* coplanar points ('dots') in a polystigm.

In the case of a tetrastigm, it is often convenient to use the word opposite. Thus, in the tetrastigm ABCD the *connector* CD is said to be opposite to the *connector* AB; and AB, CD are called a pair of opposite *connectors.* It is evident that the six *connectors* of a tetrastigm consist of three pairs of opposite *connectors.*
R. Lachlan, Mod. Pure Geom., p. 83.

connexionalism, *n.* See ★*connectionalism.*

conning-tower, *n.*—**Conning-tower shield,** an armor-plate at the rear of the entrance at the back of a conning-tower to protect the opening from the enemy's projectiles.—**Conning-tower tube,** an armored tube, extending from the floor of the conning-tower to the protective deck, in the interior of which are placed the transmission-shafts of steering-gear, speaking-tubes, signal-wires, etc., leading from the conning-tower below.

conniption (kọ-nip'shọn), *n.* [A made word of Latin appearance, as it were a blend of *con(vulsion)* and *(er)uption.*] An attack of hysteria; a fit of rage or vexation. [Slang, U. S.]

connive, *v. i.* 6. In *biol.*, to be connivent.

connivence, *n.* 2. In *nat. hist.*, the convergence of parts toward a common point. Same as *connivency*, 2.

The *connivence* of the anthers in a cone.
Lindley, Nat. Syst. Bot., p. 225. *N. E. D.*

connoisseurship, *n.* 2. Skill as a connoisseur; proficiency as an art critic.

Conoquenessing sandstone. See ★*sandstone.*

connotively (ko-nō'tiv-li), *adv.* In a connotive manner.

Among some primitive peoples, individual names are applied *connotively* in such manner as to indicate order or rank, which is synonymous with position in the camping group. *Smithsonian Rep.*, 1892, p. xxiv.

connubium (kọ-nū'bi-um), *n.* [NL. use of L. *connubium*, marriage.] In *bot.*, the stage at which the protoplasm of filamentous algæ coalesces in conjugation.

conocarpium (kō-nọ-kär'pi-um), *n.*; pl. *conocarpia* (-ä). [NL.] Same as *conocarp.*

Conoceras (kō-nos'ẹ-ras), *n.* [NL., ⟨ Gr. κῶνος, a cone, + κέρας, a horn.] A genus of nautiloid cephalopods or orthoceratites, having a straight shell with closely crowded septa in which the funnels are split on one side, the hiatus being closed by a flattened fold extending from one funnel to the next. It is of Lower Silurian age.

Conocoryphe (kō-nọ-kor'i-fē), *n.* [Gr. κῶνος, a cone, + κορυφή, vertex.] A genus of trilobites of Cambrian age, with rather small head, free cheeks carrying the genal spines, thorax with 14 segments, and small pygidium. The genus is also called *Conocephalites.*

Conoidal pump. See ★*pump*[1].

conoodle, *v.* See ★*canoodle.*

conopid (kō'nọ-pid), *a.* and *n.* I. *a.* Of or belonging to the dipterous family *Conopidæ.*

II. *n.* A member of the family *Conopidæ.*

conopodium (kō-nọ-pō'di-um), *n.*; pl. *conopodia* (-ä). In *bot.*, a conical receptacle.

Conorbis (kō-nor'bis), *n.* [L. *conus*, a cone, + *orbis*, a circle.] A genus of gastropods belonging to the family *Conidæ*, which have a high spire and curved, deeply notched outer lip. It occurs in the Eocene and Oligocene Tertiary.

Conoryctidæ (kō-nọ-rik'ti-dē), *n. pl.* [NL., ⟨ *Conoryctes*, the type genus, + *-idæ.*] A family of extinct primitive edentate mammals belonging to the subborder *Ganodonta.* The species are from the Wasatch (Eocene) of the western United States. *Wortman*, 1896.

conotheca (kō-nọ-thē'kạ̈), *n.*; pl. *conothecæ* (-sē). [NL., ⟨ Gr. κῶνος, a cone, + θήκη, a box.] In the extinct dibranchiate cephalopods termed belemnites, the thin lining of the phragmacone, which is produced forward on the dorsal side into the proöstracum.

conothecal (kō-nọ-thē'kạl), *a.* Pertaining to or resembling a conotheca.—**Conothecal striæ,** the striations on the membranous investment of the conotheca of the belemnites.

con ottava (kon ot-tä'va). [It.] In *music*, with the octave, usually the octave above: a direction added to a melody that is to be played in octaves. Abbreviated *con 8va, con 8vi*, or simply *8va, 8vi.*

conplane (kon'plān), *a.* [*con-* + *plane*[1].] Coplanar; situated in a common plane.

conquer-John (kong'kėr-jon), *n.* The smaller or dwarf Solomon's-seal, *Polygonatum biflorum.* See *Solomon's-seal*, 1.

conquien (kon-ki-ān', in Texas usually kōn-kan'), *n.* [Sp. *con quien*, 'with whom?'] A Mexican game of cards for two players. The court cards are all thrown out. Each of the players receives ten cards, two or three at a time. The top of the stock is turned face up, and each in turn says whether or not it shall remain with him. To use it, he must combine it with two or more others in the same suit to make a sequence, or with two or three others of the same denomination. For every card taken from the stock the user must discard one from his hand. All combinations are left face up on the table, and the first to get down eleven cards wins. If neither gets down eleven, it is a tableau or tie.

conquinine (kon'kwi-nin), *n.* [*con-* + *quinine.*] Same as *quinidine.*

Cons. An abbreviation (*a*) of *Constable*; (*b*) of *Constitution*; (*c*) [*l. c.*] of *consonant*; (*d*) of *consul.*

consanguineal, *a.*—**Consanguineal organization,** a social organization based on consanguineous groups.

II. *n.* A person consanguineous with another one.

consanguined (kon-sang'gwind), *a.* Related by birth to another.

consanguineous, *a.* 4. In *petrog.*, derived from a common parent magma: said of igneous rocks.

consanguinity, *n.* 2. In *petrog.*, the genetic relationship existing between those igneous rocks of one locality which have been derived from a common parent magma by processes of differentiation.

conscience-stricken (kon'shẹns-strik'n), *a.* Same as *conscience-smitten.*

conscientialism (kon-ṣi-en'shạl-izm), *n.* [L. *conscientia*, consciousness (see *conscience*), + *-al*[1] + *-ism.*] The doctrine that an external world is a hypothesis founded on our experience and that this hypothesis ought to be rejected as unnecessary. This is entirely different from the opinion of pragmaticism, which is that nothing exists but objects of consciousness, but that this means possible consciousness, since consciousness in its wider sense is only possibility, and that the external world is entirely contained in that consciousness.

consciousness, *n.*—**Action consciousness,** in *psychol.*, the consciousness immediately preceding, accompanying, and immediately following the performance of an action; specifically, consciousness during the reaction-experiment. *E. B. Titchener*, Exper. Psychol., I. i. 118.—**Association consciousness, associative consciousness,** in *psychol.*, the contents and disposition of consciousness during the process of association of ideas; specifically, consciousness during the associative reaction. *E. B. Titchener*, Exper. Psychol., I. i. 201.—**Consciousness of kind,** the awareness or consciousness on the part of any individual that another individual is in any respect, physical or mental, like himself.

The *consciousness of kind*, then, is that pleasurable state of mind which includes organic sympathy, the perception of resemblance, conscious or reflective sympathy, affection, and the desire for recognition.
Giddings, Inductive Sociol., p. 90.

Cosmic consciousness, a mystical consciousness of the life and order of the universe.—**Disaggregation of consciousness,** the separation of consciousness into more or less disconnected consciousnesses, of which the most striking instances are those of multiple personality. Hypnosis, which has been defined as an inhibition of inhibition, is thought by some writers to be due to a loss of the normal harmony between the action of higher and lower nerve-centers. These writers regard all suggestibility as dependent upon a separation of the controlling and the reflex consciousnesses. In a state of drowsiness the ideas do not hang together; and this is an incipient disaggregation of consciousness. But it is evident that we cannot be directly aware of a disaggregation of awareness, since we "refer our ideas to ourselves," that is to say, have a certain union or harmony of such awareness as there is for us, "ourselves" consisting in this union. Consciousness is essentially a being of wholes. **Double consciousness, dual consciousness,** in *psychol.*, double or alternating personality; the apparent coexistence or alternation of two selves or persons in one and the same individual. It sometimes happens, with hypnotic subjects, that memory is continuous from hypnosis to hypnosis, as it is from normal state to normal state; so that there seem to be two distinct minds or selves (the normal self and the hypnotic self) within the single individual. Here, however, the facts readily admit of explanation in terms of the known laws of memory. If we wish to revive a past experience, we must reproduce, so far as may be, the total conscious contents that constituted that experience. Now there is a marked difference between the consciousness of profound hypnosis and the waking consciousness. Hence there is no reason why one should remember from hypnosis to waking, or conversely; while there is no reason, psychologically, why memory should not persist from like state to like state, whether the state be normal or abnormal. Much more difficult of explanation are those pathological cases in which the whole mental life of the individual appears to be ruptured, so that two dissociated mental existences present themselves, either in alternating sections, or side by side at the same time. It should, however, be noted that analogies to this condition are afforded by the normal life, and that it is possible to work out a fairly continuous series of instances connecting the abnormal with the normal. Even, then, if we cannot account in detail, and in the particular case, for the sudden transition from a primary to a secondary consciousness, we can at least point to general characters of the human mind from which these extreme symptoms derive.

The psychologists of France, during the past few years, have been diligently at work studying the phenomena of *double consciousness* and double personality in hysterical individuals.

A. Binet (trans.), Double Consciousness, p. 14.

Field of consciousness, in *psychol.*, consciousness considered on the analogy of visual perception. As in the field of vision there is an area of clear perception and a surrounding region of obscure perception, so in the field of consciousness we have the focal area of attention and the marginal or peripheral region of inattention.—**Principle of the economy of consciousness,** the principle that, in understanding anything, we do not actually recall in consciousness more than is necessary for the purpose.—**Reaction consciousness,** in *psychophys.*, consciousness immediately preceding, during, and immediately following a reaction-experiment.

The *reaction consciousness* is the laboratory form of the action consciousness of everyday life.

E. B. Titchener, Exper. Psychol., I. i. 118.

con. sect. An abbreviation of *conic section* or of *conic sections*.

consensually (kon-sen′sū-al-i), *adv.* By consensus or consent.

Consensus gentium, the general persuasion of mankind. This was urged by the Stoics as a confirmation of the opinion that there are immortal gods. The argument was adopted by the scholastic doctors and has been employed by theists ever since.

Consent rule, in *law*, in an action of ejectment, an entry on the record by the defendant confessing the lease, entry, and ouster, and insisting upon title alone.—**Universal consent,** the unanimous assent of all contemporary sane men, or, at least, of all men who are at present qualified to express an opinion which ought to weigh in the mind of a reader. Propositions which are admitted by universal consent ought to be reckoned as absolutely certain, according to the philosophy of common sense, but not in any very exact sense. Thus, it is a matter of universal consent that human thought can cause motions of matter; but when it comes to an exactly defined philosophical statement of this point, there is no universal consent, nor would it have any value if there were.

consentian (kon-sen′shian), *a.* [L. *consentes*, a word of unknown origin (Etruscan ?) and meaning, in the phrase *dii consentes.*] Of or belonging to the *dii consentes*, or twelve superior deities of the Etrusco-Roman religion. *N. E. D.*

consentience, *n.* **2.** Agreement of opinion; the quality of being consentient (in sense 1): as, "the *consentience* of contemporary historical witnesses," *Nineteenth Century*, Oct., 1879, p. 679.

consentient, *a.* **II.** *n.* One of two or more agreeing and mutually consenting minds. *Ross*, Moot Points in Sociol., VIII. 762.

consequence, *n.* **7†.** In *astron.*, motion from an earlier to a later sign of the zodiac, or from west to east; direct motion.

consequent, *a.* **4.** In *phys. geog.*, resulting directly from original conditions; having a course determined by the form or slope of an initial land-surface: as, a *consequent* divide, *consequent* drainage, a *consequent* river, a *consequent* valley, etc. Contrasted with ★*insequent*, 2, ★*obsequent*, 2, ★*antecedent*, 2.

conserv, *v. t.* and *n.* A simplified spelling of *conserve*.

conservation, *n.* **3.** In England, a court or board of commissioners having jurisdiction over a port (as London, Liverpool, etc.) or of a river (as the Thames, the Mersey, etc.), and charged with the regulation as well as the conservation of its navigation, fisheries, etc.—**Conservation of areas.** See ★*area*.—**Conservation of density in phase.** See the extract.

In an ensemble of mechanical systems identical in nature and subject to forces determined by identical laws, but distributed in phase in any continuous manner, the *density-in-phase* is constant for the varying phases of a moving system; provided that the forces of a system are functions of its coördinates, either alone or with the time.

J. W. Gibbs, Statistical Mech., p. 9.

Conservation of extension in phase. See the extract.

When the phases bounding an extension in phase vary in the course of time according to the dynamical laws of a system subject to forces which are functions of the coördinates either alone or with the time, the value of the extension-in-phase thus bounded remains constant. In this form the principle may be called the principle of *conservation of extension-in-phase*.

J. W. Gibbs, Statistical Mech., p. 10.

Law of conservation of mass, the law that the mass of any system is unchanged by any process which takes place within that system.—**Law of conservation of matter,** the general fact that in the innumerable changes of properties undergone by matter, involving the production and the disappearance of particular substances, there is neither creation nor destruction of matter in the abstract, or, in other words, that the total quantity of matter in existence, as far as observable by us, is unchangeable. Thus, when a piece of wood burns it ceases to exist as wood, and at the same time a part of the oxygen of the surrounding air ceases to exist as oxygen gas, but instead of these there come into existence and mingle with the remaining air carbon-dioxid gas and vapor of water, and the sum of the quantities of these newly formed substances exactly equals the sum of the quantities of those which have disappeared.

conservatist (kon-sēr′va-tist), *a.* and *n.* Conservative, or a conservative.

conservative organs. See ★*organ*[1].

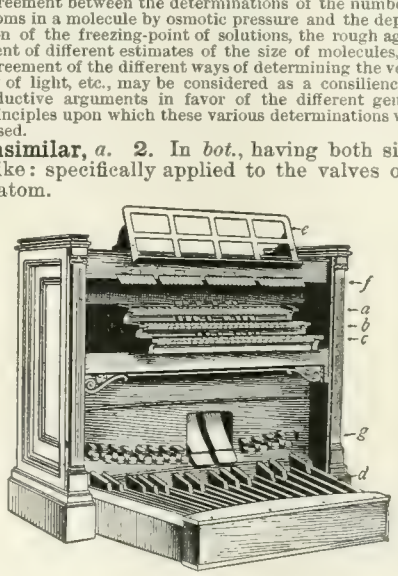
consider, *v. i.* **3.** To look carefully or attentively. *Lev.*, xiii. 13.

consideration, *n.*—**Illegal consideration,** a consideration which will not support a contract by reason of the fact that the thing done or promised is contrary to public policy.—**Impossible consideration,** a consideration which from its nature cannot be performed. Such a consideration is void in law.—**Meritorious consideration,** a consideration based upon natural love and affection. A contract depending upon such consideration will be sustained in a court of equity where the relations of the parties are such as father and son, brother and sister, husband and wife, etc.; otherwise not.—**Moral consideration,** a consideration based upon moral duty, but which carries with it no legal obligation.—**Past consideration,** something done prior to the making of a contract. The contract cannot be enforced upon a past consideration alone.

consigne, *n.* **2.** A form of punishment consisting in confinement to prescribed limits.

Consilience of inductions, the agreement in final result of scientific investigations along widely different lines of research: a term introduced by Whewell. Instances of this phenomenon are extremely rare. But the agreement between the determinations of the number of atoms in a molecule by osmotic pressure and the depression of the freezing-point of solutions, the rough agreement of different estimates of the size of molecules, the agreement of the different ways of determining the velocity of light, etc., may be considered as a consilience of inductive arguments in favor of the different general principles upon which these various determinations were based.

consimilar, *a.* **2.** In *bot.*, having both sides alike: specifically applied to the valves of a diatom.



Console.

a, swell-organ keyboard or manual, with six combination pistons above, affecting the swell-organ stops; *b*, great-organ keyboard or manual, with eight combination pistons; *c*, choir-organ keyboard or manual, with six combination pistons; *d*, pedal organ keyboard, which is both curved and radiating; *e*, music-rack; *f*, tilting tablets, controlling both stops and couplers (taking the place of the draw-knobs formerly used), grouped according to the keyboards to which they belong, those of the pedal organ being on the left, those of the choir-organ next, etc.; *g*, combination pedals, with two swell pedals in the center, the one belonging to the swell-organ, the other to the choir-organ.

consistency, *n.*—**Rule of consistency,** a designation sometimes applied to Kant's moral law, "Act only on such a principle as thou canst will should be universally adopted."

consistent equations. See ★*equation*.

consociationism (kon-sō-shi-ā′shon-izm), *n.* The theory and practice of consociatism.

consolation, *n.*—**Dutch consolation,** the thought that things might be worse, or might have been worse.

console[2], *n.* **4.** In *organ-building*, the desk in which the keyboards and stop-action are contained and before which the player sits. Where the action is pneumatic or electric, the console may be quite detached from the rest of the instrument and even capable of movement from one position to another, the action being transmitted through tubes or wires. In this case it is said to be movable. See cut in preceding column.—**Detached console.** See ★*console*[2], 4. **Movable console.** See ★*console*[2], 4.

Consolidated annuities. See *annuity* and *consols*.—**Consolidated content.** See *Funded* ★*content*.

consolidating-apparatus (kon-sol′i-dā-ting-ap-a-rā″tus), *n.* In the crinoids of the family *Cupressocrinidæ*, a peculiar annular structure situated on the upper interior margin of the calyx between the arm-bases.

consolidation, *n.* **7.** In *geol.*, the mechanical process by which separated parts of a rock are brought closer together through pressure. The pressure may be due to superincumbent weight or lateral thrust, or it may accompany mineral growth and metasomatism. Fine sediments, such as silts or muds, are most affected by this process. The included water, which largely acts as a separating film in them, is squeezed out, bringing the mineral particles into contact. This, together with mechanical readjustments of the particles themselves, results in great increase of cohesion. *Van Hise*, U. S. Geol. Sur., Monograph 47, p. 595.

8. In *finance*, the combining of two or more sources of revenue into a common fund, or of varied forms of public indebtedness into a stock bearing interest at a uniform rate. *N. E. D.*

consolute (kon-sō-lūt′), *a.* [*con-* + *solute.*] In *phys. chem.*, commonly soluble: when two solvents which do not mix are in contact and have each in solution a given third substance, the latter is sometimes said to be *consolute*, that is, to be a solute common to the two solvents.

He showed that in the case of two non-miscible liquids and a *consolute* liquid, the equilibria can be represented by the mass law equation, and that there are only two sets of equilibria over the whole range of concentration, and these are represented by two different equations.

Jour. Phys. Chem., April, 1904, p. 248.

conspiracy, *n.* **3.** An ancient writ which was issued against parties alleged to be guilty of a conspiracy to indict a party for treason or a felony.

conspirital (kon-spir′i-tal), *a.* [In form, < L. *com-*, together, + *spirit(us)*, spirit, + *-al*. The sense implies a formation from *conspire* or *conspir(acy)* + *-ital.*] Constituted conspiracy.

Unscrupulous adventurers . . . create relations of personal allegiance by means of bribery, patronage and preferment. Intrigue and conspiracy are the social bonds. The social type is the *conspirital*.

Giddings, in Am. Jour. Sociol., X. 169.

const. An abbreviation (*a*) of *constitution*; (*b*) of *constable*.

constable, *n.* **3.** The commander of a constabulary or company of men-at-arms.

In the matter of administrative organization the men-at-arms were distributed into constabularies, being commanded by officers called *constables*.

J. W. Fortescue, Hist. Brit. Army, I. i. 2.

constancy, *n.* **4.** A constant job: as, "a *constancy* and good wages promised for a good workman," *The Scotsman* (advt.).

constant. I. *a.*—**Constant current.** See ★*current*[1].—**Constant-deviation spectroscope.** See ★*spectroscope*.—**Law of constant heat sums, law of constant proportion.** See ★*law*[1].

II. *n.*—**Affinity constants.** See ★*affinity*.—**Capillary constant,** a numerical constant denoting the attraction between two surfaces to which the phenomenon of capillarity is due.—**Constant of aberration.** (*b*) The semimajor axis of the aberrational ellipse which every star apparently describes in a year on account of the aberration of light. It is very nearly 20.5″.—**Constant of capillarity.** See *capillary* ★*constant*.—**Constant of light-equation,** the number of seconds by which the distance of a body, expressed in astronomical units, must be multiplied to give the corresponding equation of light. (See *equation*.) It is 498, the time in which light travels from the sun to the earth.—**Constant of nutation,** the semimajor axis of the nutational ellipse described in 19 years by the axis of the earth under the nutational disturbance produced by the moon. Its value is 9.21″.—**Constant of precession,** the average amount by which the equinox moves annually westward along the ecliptic. Its value is at present 50.25″.—**Cyclic constant,** the constant by which a many-valued function changes on describing a cycle.—**Dielectric constant,** in *elect.*, the specific inductive capacity of an insulating medium, measured as the ratio of the capacity of a condenser with this medium as insulator, and the capacity of the same condenser with air-insulation.—**Diffusion constant,** a numerical constant or coefficient denoting the

rate of liquid or gaseous diffusion. **Dissociation constant,** in *phys. chem.*, a number from which can be computed the degree of dissociation at any desired dilution of any electrolyte which obeys a certain law. The degree of dissociation varies greatly with the varying volume in which a gram-molecule of the electrolyte is dissolved, but from the variable dissociation of an electrolyte we can compute in many cases a quantity which does not vary with the dilution. For an electrolyte which dissociates into two ions, in many cases, if we put m for the degree of dissociation at any volume represented by v, which stands for the number of liters which contain one gram-molecule of the solute, we find $\frac{m^2}{(1-m)v}$ = a constant; and the numerical value of this quantity is the dissociation constant for the given substance.—**Electrical constant,** a numerical quantity, such as the specific inductive capacity, employed to designate or describe some electrical property of a body. **Kerr's constant,** the quantity K in the expression $\epsilon = K I_n$, where ϵ is the rotation of the plane of polarization of a ray of polarized light reflected from the surface of a magnet and I_n is the normal component of magnetization. Kerr's constant is used in the optical method of measuring the strength of the magnetic field. **Kundt's constant,** the constant quantity ψ in the equation $\epsilon = \psi I d$, which expresses the power of ferromagnetic substances (taken in thin layers) to turn the plane of polarization of transmitted light. The angle of rotation is ϵ; I is the strength of the magnetic field; and d is the thickness of the layer.—**Level constant.** See ★*level*1. **Newtonian constant.** Same as *gravitation constant* (which see, under *constant*). **Optical constant,** a numerical quantity, such as the index of refraction, employed to designate or describe some optical property of a substance.—**Precession constant,** the quantity $\frac{C-A}{A}$, where C is the moment of inertia of the revolving body about its polar axis and A is its moment of inertia about an equatorial diameter. The seven numerical quantities used to compute the precession of the equinox are also called *precession constants.*—**Radiation constant,** the heat, in calories, lost by radiation from a unit surface in a unit of time when the radiating body has a temperature one degree centigrade above its surroundings; the emissivity.—**Solar constant.** See *solar.*—**Spheroidal constant,** one of the numerical quantities, such as the ratio of the axes, used in astronomy to define quantitatively the form of the earth.—**Temperature constant,** in *phenology*, the thermal constant.—**Thermal constant,** the phenological constant; the total quantity of heat or day degrees required by a plant in order to attain any phase of plant life. This is not, strictly speaking, a constant, and the various attempts to define and compute it are known by the names of the respective authors, as follows: *Adanson's constant* (1750), the sum of all the positive mean daily temperatures on the centigrade scale, counting from the beginning of the year. *Boussingault's constant* (1837), the same as Adanson's except that it counts from the beginning of vegetation. *Marie Davy's constant* (1880), the sum of all the mean daily actinometric degrees in full sunshine, counting from the date of vegetation. *Gasparin's constant* (1847), the sum of all effective temperatures (the excesses of mean daily temperatures in full sunshine above 5° C.), counted on the centigrade scale and from the date in the springtime when such effective temperature is first attained. *H. Hoffman's constant* (1857), the sum of all daily maximum temperatures above freezing, (the positive maxima) on Réaumur's scale, counting from January 1 to the attainment of any given phase of development. *Linsser's thermal constant* (1867), the sum of all mean daily temperatures above 0° C. in the shade, counting from the date when the annual minimum occurs up to any phase of vegetation. *Linsser's local annual thermal constant* (1867), the sum of all the mean daily temperatures above 0° C. in the shade for the whole year at any locality. *Linsser's physiologic thermal constant* (1867), the sum of all the positive daily mean temperatures from germination to the attainment of any phase of vegetation, divided by his local annual thermal constant. *Linsser's local climatic constant* (1869), the sum of all the local rainfalls from germination up to the attainment of any phase divided by the local annual thermal phenological constant. *Hervé Mangon's constant* (1875), the sum of all the positive excesses of mean daily shade-temperatures above 5° C. (T.°—5° C.), counted on the centigrade scale and from the date of vegetation. *Quetelet's constant* (1845), the sum of the squares of the positive daily temperatures, centigrade scale, counting from the date of the awakening of vegetation, when the mean daily temperature is 6° C. *Réaumur's constant* (1735), the sum of all the mean daily temperatures on the Réaumur scale, counting from the date of vegetation.—**Verdet's constant,** the quantity ω in the expression $\epsilon = \omega$ H d, where ϵ is the rotation of the plane of polarized light in passing through a layer, of thickness d, of a substance so placed in a magnetic field of intensity H that the light travels in the direction of the lines of force. Verdet's constant (ω) is the rotation per unit variation of magnetic potential. It depends upon the wave-length of the light, the nature of the substance, and the temperature of the latter.

constantan (kon′stan-tan), *n.* [From *Constant*, a personal name.] An alloy consisting of 60 per cent. copper and 40 per cent. nickel. Its electrical resistance, which is more than 50 times that of copper, varies inappreciably with change of temperature; its thermo-electromotive force in combination with copper is very large. It may be heated to 300° C. without oxidation. It is freely ductile.

Constantinian (kon-stan-tin′i-an), *a.* Of or pertaining to Constantine the Great, a Roman emperor, or his reign (306–337 A. D.).

constantino (kon-stan-tē′nō), *n.* [Amer. Sp.] A fish, *Centropomus robalito*, of the family *Centropomidæ*: found from Mexico to Panama.

Constellaria (kon-stel-ā′ri-ä), *n.* A genus of trepostomatous bryozoans growing attached to foreign bodies and having thin-walled cells with abundant mesopores and the surface of the zoaria covered with star-shaped maculæ. It is of Silurian age.

constituent. **I.** *a.*—**Constituent society,** a society which is a constituent part of a larger social order, for example, a business corporation, a church, a political party, or a club. In the constituent society individuals work or find pleasure together, though they may not dwell in the same neighborhood or even in the same state. In the ★component society (which see) individuals dwell together and may or may not work together. *Giddings*, Elem. of Sociol., p. 7.

constitution, *n.*—**Constitution Church,** the church which was established in France by the decree of the Constituent Assembly, July 12, 1790. This decree provided that all bishops should be elected by local conventions of the clergy, without recourse to the holy see, and that the entire clergy should take an oath to maintain the civil constitution provided by the assembly.—**Provincial constitutions,** the decrees of provincial synods held under divers archbishops of Canterbury. *Bouvier*, Law Dict.—**Social constitution.** See ★*social.*

Constitutional Law. (*a*) A valid law; one which is not unconstitutional. (*b*) That branch of the law which defines and interprets the scope and meaning of a constitution.

constitutionally, *adv.* **4.** As regards constitution or composition: as, the substances differ both toxicologically and *constitutionally.*

constitutive, *a.* **3.** In *phys. chem.*, a term introduced by Ostwald to denote those properties of a compound which depend on the constitution of the molecule, or on the mode of union and arrangement of the atoms in the molecule. For instance, of two molecules having the same number of the same atoms, one turns the plane of polarized light to the right and the other to the left; this difference is obviously due to something in the structure of the molecule—it is a *constitutive* property, as distinguished from an *additive* or a *colligative* property.—**Constitutive government.** See ★*government.*

constrain, *v. t.* **6.** In *mech.*: (*a*) To prevent the occurrence of (motion), except in a particular direction: as, the relative motions of the parts of any machine are always *constrained.* (*b*) To prevent the operation of the motion of (a material point or body), except in a particular and definite manner: as, to *constrain* a part of a mechanism.—**Constrained system,** a system of points subject to constraints, that is, forces regarded as infinite which compel a certain relation between their motions.

construct, *a.* **II.** *n.* **1.** Something constructed or created.—**2.** In *compar. psychol.*, the mental picture answering to a real or a possible object of sense: regarded as the mental result of the action of external stimuli.

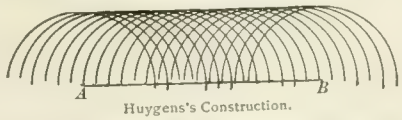
In all these cases, the object is constructed at the bidding of certain sensations, which suggest to my mind the associated qualities. The object is a *construct.*
C. L. Morgan, Animal Life and Intelligence, p. 312.

3. In *math.*, a configuration or surface.

The notion of monogenic *construct* is wider than that of a monogenic function. *Ency. Brit.*, XXVIII. 541.

constructible (kon-struk′ti-bl), *a.* Capable of being constructed.

construction, *n.*—**Bureau of Construction and Repair.** See ★*bureau.*—**Hennebique construction,** a system of construction in concrete reinforced by steel or iron introduced in various ways. It was first brought to perfection by M. François Hennebique, a French builder. See *reinforced* ★*concrete.*—**Huygens's construction,** a geometrical method, first employed by Huygens, for representing the front of a light-wave. It consists of a set of equal semicircles the centers of which are equidistant points along a line, AB, which represents the front of the wave at a given instant, t. The envelop of the semicircles is the wave-front at a later time, t, such that their radius measures the progress of the wave during the intervening interval.—**Mill construction,** in *arch.*, construction by means of solid timbers and thick planks with no inclosed hollow spaces. Thus the floors are of very thick planks resting directly on girders. Such a building resists fire, and is often said to be of *slow-burning construction.*—**Terrace of construction.** Same as *alluvial* ★*terrace.*



Huygens's Construction.

constructional, *a.* **2.** Controlled by the original and still prevailing surface attitude and structure of the land: said of watercourses. See ★*consequent* and ★*attitude.*—**3.** Formed by or resulting from consequent drainage: said of land-forms: as, a *constructional* divide or valley.—**Constructional slope.** See ★*slope.*

construction-train (kon-struk′shon-trān), *n.* A train of cars adapted to the conveyance and application to use of the materials for the construction or repair of railroads.

Constructive theft. See ★*theft.*

construe, *v.* **II.** *intrans.* To yield to or admit of grammatical analysis or interpretation: as, a sentence that will not *construe.*

consubstantialist, *n.* **2.** Same as ★*consubstantiationist.*

consubstantiationist (kon″sub-stan-shi-ā′-shon-ist), *n.* One who holds the doctrine of consubstantiation.

consul, *n.* **5.** Formerly, in southern France and Catalonia, a municipal magistrate. *N. E. D.*—**6.** Formerly, within the foreign colony or settlement of a town, the representative chief of the merchants and their intermediary with the local government. *N. E. D.*—**7.** A local representative of a cyclists' touring club.

consul (kon′sul), *v. t.* [*consul*, *n.*] To submit (an invoice) for certification to the consul of a country to which goods are consigned.

Consular bureau. See ★*bureau.*—**Consular court,** a court of justice presided over by a consul. Such courts are established only in countries where extraterritoriality (which see) has been conceded by treaty to other foreign nations, as by China, and formerly also Japan. The jurisdiction of these courts is limited to suits arising between the consuls' own countrymen, and to hearing and deciding suits brought against any of them by subjects of the country in which the court is established.

Consultation game, in *chess*, a game in which two or more persons play on one side and the moves are made after joint deliberation.

consumption, *n.* **5.** In *Rom. law*, loss of a right of action after commencement of the suit.—**Acute, galloping, hasty, or rapid consumption,** pulmonary tuberculosis running a rapidly fatal course.—**Hatters' consumption,** a catarrhal condition of the bronchial tubes and pulmonary alveoli, due to the inhalation of particles of felt, silk, or other materials used in the manufacture of hats.—**Luxus consumption,** the ingestion of an excessive amount of albuminoid food, far beyond the needs of the organism.—**Potters' consumption,** same as *potters'* ★*asthma.*

consumption-weed (kon-sump′shon-wēd), *n.* The round-leaved wintergreen, *Pyrola rotundifolia*: so called from its supposed medicinal virtues.

consumptive, *a.* **5.** Indicating the presence of consumption: as, a *consumptive* cough.

contact[1], *n.* **4.** In *geol.*, the surface of juncture, specifically of an igneous intrusion and its containing-walls, along which mineralogical and structural changes, and especially ore-deposits, are often developed; also applied to the surface of juncture of any two contrasted rocks.—**5.** In *anthropol.*, the meeting of tribes or peoples of different culture, particularly that of a primitive tribe with the trade and influence of a superior people.—**6.** In *psychol.*: (*a*) A light pressure upon the skin; a low degree of intensity of the adequate stimulus of the pressure-spots. (*b*) A weak sensation of pressure. Some psychologists regard the sensation of contact as qualitatively different from the sensation of pressure. In all probability, however, the two are simply degrees of one and the same sensible quality.

Still other points on the skin, very wealthily interspersed amongst the others, give us, if excited in isolation, sensations of *contact* or of pressure.
Royce, Outlines of Psychol., p. 133.

Contact sensation: Ger. Berührungsempfindung; F. sensation de contact; Ital. sensazione di contatto. A sensation made up probably (Dessoir) of touch sensation and pressure sensation.
Baldwin, Dict. Philosophy and Psychology.

Angle of contact. (*b*) See ★*angle*3.—**Center of contact,** the point of intersection of two tangents at two points of contact of two conics or other plane curves.—**Circumaxial contact.** See ★*circumaxial.*—**Contact action.** An important application of this principle to industrial purposes is the manufacture of sulphuric acid by the combination of sulphur dioxid with additional oxygen, on passing these gases over heated platinum in a finely divided state, the platinum remaining unchanged, while the resulting sulphur trioxid is conducted into water: spoken of as the *contact process* for the manufacture of sulphuric acid.—**Contact difference of potential, electricity, electromotive force, metamorphism, mineral.** See ★*potential*, ★*electricity*, ★*electromotive*, ★*metamorphism*, ★*mineral.*—**Contact paper,** in *photog.*, sensitized paper used for contact-printing.—**Contact phenomena,** effects produced upon older rocks by the introduction of an igneous mass, as a dike or an intruded sheet. The presence of the more highly heated body, with its attendant mineralizers and the circulation of waters induced, leads to many changes in the minerals and rock-structures near the contact.—**Contact print,** in *photog.*, a print made by the exposure to light of a sensitive surface placed behind and in contact with a negative or other object to be copied. See *contact-printing*, below.—**Contact-printing,** in *photog.*, a process in which sensitized paper or glass is printed in contact with the negative; also, printing upon bromide paper behind, and in contact with a negative, exposed a few feet away from an artificial source of light.—**Contact process,** in *phys. chem.*, a process which is accelerated to a useful rate by contact of the acting substance with another substance which is left unchanged at the end of the process; a catalytic process. See *catalysis* and ★*contact action.*—**Contact reaction,** in *phys. chem.*, a reaction which is much accelerated by contact of the acting substance with another substance that is left unchanged at the end of the reaction; a catalytic reaction.—**Contact substance,** in *phys. chem.*, a substance which accelerates a contact reaction.—**Contact transformation,** in *math.*, a transformation which changes

an element by such substitutions as transform into itself the linear differential equation $dx + pdy = qdy = 0$. Two manifoldnesses having a contact, that is, having a surface-element in common are changed by the transformation into two others which also have a contact; hence the name given by Lie to the transformation. **Contact vein.** Same as *contact-deposit*. **Internal contact,** the apparent contact of the edge of the disk of the moon at the time of an annular eclipse, or of the planets Venus or Mercury at the time of transit with the inner edge of the sun, opposed to *external contact*, when the moon or planet appears to touch the sun's disk from the outside.—**Optical contact,** in *photog.*, the contact of any two substances brought into close union with each other and presenting two instead of four surfaces, as a silver-backed mirror. **Sensation of double contact.** (*a*) The sensory experience which arises when a movable object, as a stick or a pencil, is thrust or pressed by the hand against a second object, or passed over its surface; the experience of projected touch, in which the sensations appear to have their origin, not in hand or arm, but at the tip of the stick or pencil. (*b*) The sensations aroused by pressure of one part of the skin upon another. (*c*) The twofold sensation (pressure followed by pain) which arises when the skin, for example, of the wrist is tapped with the point of a needle whose shaft is held loosely between the finger and thumb of the other hand. **Sliding contact,** the continuous action of motion by means of surfaces which drive with a necessary slipping of one surface on the other, as distinguished from rolling contact, where no slip occurs. Sliding contact occurs when the driving is by cams, the teeth of wheels, screws, wedges, and pin-joints.—**Wipe contact.** (*a*) Interrupted contact; the touching of one part of a machine by another in the course of the travel of either part; the wiping of one part of a machine or engine by another. (*b*) A method of making an electric arc pass between terminals by interrupting an electric circuit, the contact points passing over each other with a sliding or wiping contact. The arc terminals are kept free of oxid or deposit, because the surfaces are cleansed by the sliding action.

contact[2] (kon-takt′), *n.* [L. *contactus:* see *contact*[1], *n.*] One who has been exposed to an infectious disease by contact or near association with a person suffering from it. *Med. Record*, Feb. 28, 1903, p. 346.

contact-bed (kon′takt-bed), *n.* **1.** A layer of porous material through which sewage is intermittently filtered in order that contact with bacterial organisms and atmospheric oxygen, over the great surface presented by the pores of the mass, may bring about chemical destruction of the noxious organic matter present.—**2.** In *geol.*, a bed lying next to (in contact with) a formation of a different character.

contact-block (kon′takt-blok), *n.* In *elect.*, a metallic block forming part of an instrument, as a rheostat, and serving, in conjunction with a peg, plug, screw, or brush, to convey current to any portion of the electric circuit with which it may be connected.

contact-irritation (kon′takt-ir-i-tā″shon), *n.* The irritation produced in the cells of a plant by the contact of an insect or fungus, which frequently stimulates growth and produces slight abnormalities.

Some epiphytes, however, are able to fix their hyphæ to the epidermis by sending minute peg-like projections into the cuticle—Trichosphæria, Herpotrichia—while others send haustoria right through the outer epidermal walls—e. g. Erysiphe—and thus supplement mere *contact-irritation* and shading by actual absorption from the external cells. *H. M. Ward*, Disease in Plants, p. 135.

contact-pin (kon′takt-pin), *n.* In *elect.*, a metallic pin by means of which contact for the conduction of current is secured between the parts of any electrical apparatus.

contact-ring (kon′takt-ring), *n.* In *elect.*, a metallic ring on the shaft of a dynamo or motor, or of any electrical apparatus, for the transmission of current, by sliding contact, between the fixed and moving parts.

contact-screw (kon′takt-skrö), *n.* In *elect.*, a screw by means of which metallic contact for the conduction of current is secured between the parts of any electrical apparatus.

contact-stud (kon′takt-stud), *n.* In *elect.*, a stud or peg by means of which metallic contact for the conduction of current is secured between the parts of any electrical apparatus.

contact-vein (kon′takt-vān), *n.* A vein following the plane of contact between different rock-formations.

contagion, *n.* **5.** A contagious disease.—**Psychical contagion,** the propagation of nervous disorders through imitation, as when chorea attacks many children in a school. The dancing manias of the middle ages are typical examples of psychical contagion.

contagiosity (kon-tā-ji-os′i-ti), *n.* [*contagious* (L. *-iosus*) + *-ity.*] Contagiousness.

Contagium vivum [L., living contagium], a living germ of infectious disease, either a bacterium or a protozoan parasite.

contain, *v. t.* **9.** To hold (a body of troops) in position, usually by deploying the containing force in its front and threatening an attack.

Regiments or even brigades lying flat on the ground, . . . their presence in front of the enemy will have the advantage of *containing* him; but in the open, across which an enemy has to advance, a containing force of a proportion of one man to five of the enemy is quite sufficient. *H. A. Gwynne*, in War's Brighter Side, p. 174.

contano (kon′tä-no), *v.* [It., 'they count' (time), pres. ind. 3d pers. pl. of *contare*, count[1], *v.*] In writing music for an orchestra, a direction that a particular instrument is to be silent for a time. Abbreviated *cont.*

content[3], *n.* **6.** The amount or quantity yielded.

The director of the Arizona Experiment Station reported that the sugar *content* in pounds per acre from five characteristic soils of that Territory ranged from 1,491 to 3,561 pounds. *Yearbook U. S. Dept. Agr.*, 1901, p. 41.

Funded content, in *psychol.*, a mental content of the second order, supposed to be produced by the bringing together of other contents into a unitary whole; a form quality, or form of combination.

Funded or consolidated *contents* are, then, such contents as are produced by bringing together, in a very intimate way, various part-contents.
I. M. Bentley, in Amer. Jour. Psychol., XIII. 279.

conterminousness (kon-tēr′mi-nus-nes), *n.* The condition of being conterminous.

contestation, *n.* **5.** Same as *contention*, 5.

contiguity, *n.*—**Synthesis of contiguity.** See ★*synthesis.*

continent, *n.*—**Indo-African continent,** a term referring to the former more or less extensive union of Asia and Africa by a supposed land connection in the vicinity of the southern end of the Red Sea. This is indicated by soundings, but especially by the character of the fossil fauna of the Sivalik Hills, India.—**Dark Continent,** Africa.

Continental divide. See ★*divide.*—**Continental glacier, high, islands,** etc. See ★*glacier*, ★*high*, ★*island*[1], etc.

continentalism (kon-ti-nen′tal-izm), *n.* [*continental* + *-ism.*] A view, opinion, custom, action, expression, or way of doing things that is peculiar to or characteristic of the continental part of Europe.

continentality (kon″ti-nen-tal′i-ti), *n.* [*continental* + *-ity.*] **1.** The character of being continental.—**2.** In *meteor.*, the extent to which the climate of any spot agrees with the typical continental climate. As defined by Zenker this is measured by the annual range of temperature divided by the sine of the latitude; but he uses the arc itself.

continentalize (kon-ti-nen′tal-īz), *v. t.*; pret. and pp. *continentalized*, ppr. *continentalizing.* [*continental* + *-ize.*] To make continental; infect with the ideas and ways of the continent of Europe.

contingency, *n.* **4.** In *biometry*, a method of studying statistically biological data that do not admit of numerical expression.

I think . . . I have surmounted the difficulty of scale orders by applying the new method of *contingency*, which completely dispenses with any scale order.
Pearson, in Biometrika, March and July, 1904, p. 150.

Contingent damages, debt. See ★*damage*, ★*debt.*

continuant, *n.* **2.** A consonant such as *f*, *v*, *s*, *z*, etc., the sound of which may be indefinitely prolonged, as distinguished from a 'stop,' such as *p*, *b*, etc., which involves a complete closure of the mouth.

continuating (kon-tin′ū-ā-ting), *p. a.* Serving to continue.—**Continuating glasses.** See ★*glass.*

Continuation school, a school in which instruction is given, usually in the evening, in continuation or extension of that given in the ordinary day-schools; an evening-school for popular instruction by lesson or lecture. [Eng.] *Nature*, Sept. 17, 1903, p. 492.

continuative, *n.* **3.** In *philol.*, a form that indicates continuation.

The *continuative* [in the Chinook verb] is a purely intransitive tense, because in transitive verbs the object limits the action in such manner as to preclude the possibility of its occurrence.
Amer. Anthropologist, April–June, 1900, p. 213.

Continued fraction of the second order. See ★*fraction.*—**Continued rest.** See ★*rest*[1].

continuist (kon-tin′ū-ist), *n.* [L. *continuus*, continuous, + *-ist.*] One who holds that a certain thing is continuous; as, specifically, that a declaration or prophecy in the Revelation of St. John refers in part to the past and continues to refer for the rest to the future.

continuity, *n.* **4.** In *biol.*, the existence of successive generations of living beings without any gap or interruption of material composition. See ★*germinal continuity.* **Amputation in continuity.** See ★*amputation.*—**Doctrine of continuity,** the doctrine that all real variations are continuous and without sudden jumps. The doctrine was particularly advocated by Leibnitz, and more and more fully as his reflections advanced. There are many varieties of the doctrine. Thus, it may be held absolutely or only as a regulative principle, or even only as a sound working hypothesis. It may be held as strictly applying to every character (so that, for example, its advocate will contend that things are more or less real but not absolutely real, etc.) or it may be held under definite or indefinite restriction. The continuity predicated may also be understood in several senses.—**Germinal continuity.** See ★*germinal.*—**Protoplasmic continuity,** in *cytol.*, the connection, by means of very delicate strands of protoplasm, between the living substance of adjacent cells. In plants these strands pass through minute pores in the cell-walls.—**Synthesis of continuity,** direct union of the ends of a fractured bone or the lips of a wound.

continuo (kon-tin′u-ō), *n.* [It. *basso continuo*, 'continued bass.'] Same as *figured bass*, which see, under *bass*[3].

Continuous action. See ★*action.*—**Continuous current.** See ★*current*[1], 6.—**Continuous flow calorimeter.** See ★*calorimeter.*

continuum, *n.* **2.** In *math.*, the whole system of positive and negative integral, fractional, and irrational numbers.

contort (kon-tôrt′), *a.* [L. *contortus*, pp.: see *contort*, *v.*] Twisted; contorted.

contortion, *n.* **3.** In *vegetable teratol.*, an irregular twisting or bending of the stems or branches of plants, due to various causes, usually accidental. *Masters.*—**4.** In *geol.*, the disordered attitude of irregularly folded stratified rocks. *Geikie*, Text-book of Geol.

contour, *n.*—**Complex contour,** in *math.*, a contour consisting of several curves.—**Simple contour,** in *math.*, a non-intersecting closed curve which is a contour.

contour, *v.* **II.** *intrans.* To follow a level line on an irregular slope; imitate the path of a contour-line.

The cliffs and beaches that *contour* around the slopes of the mountains of Utah, where the waves of Lake Bonneville once beat, in many ways resemble the elevated shore lines of western Scotland.
W. M. Davis, Elem. Phys. Geog., p. 319.

contra (kon′trä), *n.* [*contra*, *adv.*] The contrary or opposite side or thing; in *bookkeeping*, the opposite side or column of an account; especially the right-hand or credit side (in which appear the items against the person whose books are kept).

contra-. (*c*) In *organ-building*, in the names of stops, indicating a stop whose tones are an octave below the pitch of the keys used: as, *contragamba*, etc.

contrabourdon (kon′tra-bör″don), *n.* In *organ-building*, a stop giving tones an octave lower than the usual bourdon.

contracoup (kon′tra-köp″), *n.* Same as ★*counter-coupé.*

contract, *n.* **6.** A contracted word; a contraction.—**Certain contract,** in *law*, a contract in which the thing to be done presumably rests upon the will of the party, or, when, in the ordinary course of events, it must happen in the manner agreed upon.—**Contract job,** a piece of work executed according to conditions (respecting quality of workmanship, time of delivery, price, etc.) determined by contract in advance of execution: contrasted with a piece of work executed in anticipation of sale, or production for the open market.—**Contract of beneficence,** in *Louisiana law*, a contract in which a benefit is secured to only one of the contracting parties, as a gratuitous loan.—**Contract prices,** prices determined, by contract, in advance of the production of goods: contrasted with *market prices.* The term is sometimes used to designate competitive prices, as distinguished from customary prices.—**Contract surgeon.** See ★*surgeon.*—**Contract system,** the system of obtaining public supplies, or the performance of public services, through the intervention of a contractor, instead of through direct public management or through direct purchase in the open market.—**Dependent contract,** a contract containing one or more dependent covenants. See *dependent covenant*, under *covenant.*—**Gratuitous contract,** a contract in which the object is to benefit the party with whom it is made without any consideration to the other party. Such a contract is not binding unless under seal.—**Hazardous contract,** in *Louisiana law*, a contract in which the performance of that which is the object, or one of the objects, of the contract depends upon an uncertain event.—**Independent contract,** a contract in which the things to be performed by the various parties have no relation to each other as equivalents or as mutual considerations.—**Naked contract.** Same as *nude pact*, which see, under *nude.*—**Nude contract.** Same as *nude pact*, which see, under *nude.*—**Obligation of contract,** the duty imposed by law upon a party to a contract.—**Onerous contract,** a contract in which the consideration is inadequate to that which is given or promised.—**Separable** or **severable contract,** a contract in which several considerations and corresponding obligations are so expressed as to render the contract susceptible of divisibility in such a way that each or one consideration may be enforced upon the performance of its corresponding obligation.

contracted, *p. a.* **5.** In *gram.* and *phonetics*, shortened by combination or by omission of letters or sounds. See *contract*, *v. t.*, 3, and *contraction*, 3.

contractile cells. See ★*cell.*

contraction, *n.*—**Anodal closure contraction,** muscular contraction occurring at the anode when the circuit is closed.—**Cathodal closure contraction,** muscular contraction occurring at the cathode at the moment of closure of the circuit.—**Cathodal duration contraction,** muscular contraction occurring at the cathode and continuing during the entire time of the passage of the current.—**Clonic contraction,** an intermittent muscular contraction alternating with intervals of relaxation.—**Coefficient of contraction.** See ★*coefficient.*—**Contraction volume.** See ★*volume.*—**Isometric contraction,** the change in tension in a muscle whose extremities are fixed, upon the application of a stimulus:

opposed to *isotonic* ★*contraction*. **Isotonic contraction,** the shortening of a muscle upon the application of a stimulus, with approximation of its extremities: opposed to *isometric* ★*contraction*. **Pflüger's law of contraction,** the law that the stimulation of a nerve by an electric current is stronger at the occurrence of catelectrotonus than at the disappearance of anelectrotonus. It has been ascertained that a nerve is stimulated by an electric current at the moment that the current is made and at the moment that it is broken. As the current is closed, the stimulation occurs at the negative pole; as it is opened, it takes place at the positive pole. **Tetanic or tonic contraction.** Same as *tetanic spasm*, which see, under *tetanic*. **Volkmann's contraction,** paralytic flexion of the fingers, presumably caused by tight bandaging in cases of injury to the arm.

contraction-ring (kon-trak'shon-ring), *n.* See the following phrase.—**Contraction-ring of Bandl,** a circular constriction of the pregnant uterus, caused by unequal contraction of the muscular segments, sometimes occurring in threatened rupture of that organ.

contractment (kon-trakt'ment), *n.* Contraction; abridgment.

A very masterly production; . . . with judicious *contractments*, might be rendered an interesting Drama on the stage. *Athenæum*, March 23, 1895, p. 379.

contracurrent (kon-trä-kur'ent), *a.* Noting optical systems in which conjugate focal lengths are of opposite signs, so that if a point moves from right to left its image will move from left to right, and if a point moves in the direction in which the light travels its image will move along the conjugate ray in the direction in which the light travels.

contradeciduate (kon″trä-dē-sid'ū-āt), *a.* Noting that condition in which the fetal placenta does not leave the uterus after birth, but is broken up and absorbed. This occurs in the mole and the bandicoot, the latter being noteworthy as a marsupial having a small placenta. *Parker and Haswell*, Textbook of Zool., II. 562.

contradiscriminate (kon″trä-dis-krim'i-nāt), *v. t.*; pret. and pp. *contradiscriminated*, ppr. *contradiscriminating*. To discriminate contrastively.

Act, operation, energy, are *contradiscriminated* from power, faculty, capacity, disposition and habit. *Sir W. Hamilton*, Metaphysics, Lecture X.

contragamba (kon-trä-gam'bä), *n.* In *organ-building*, a stop giving tones an octave lower than the usual gamba.

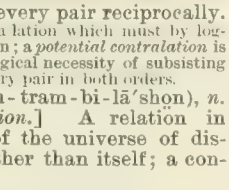
contraharmonically (kon″trä-här-mon'i-kal-i), *adv.* In a contraharmonical way.

contralation (kon-tra-lā'shon), *n.* [*contra-* + *lation*.] A lation which does not subsist between the members of every pair reciprocally. An *essential contralation* is a lation which must by logical necessity be a contralation; a *potential contralation* is a lation which is under no logical necessity of subsisting between the members of every pair in both orders.

contrambilation (kon-tram-bi-lā'shon), *n.* [*contra-* + *ambi-* + *lation*.] A relation in which no individual of the universe of discourse stands to any other than itself; a concurrency.

contranominal (kon-trä-nom'i-nal), *a.* [L. *contra*, against, + *nomen*, name: see *nominal*.] In *math.*, containing contrasted terms. If x is y, then non-y is non-x, and two such statements are called each the *contranominal*, or *contranominal form*, of the other.

contraparallelogram (kon″trä-par-a-lel'ō-gram), *n.* A plane quadrilateral having its alternate sides equal but not parallel, two of them being crossed; the figure formed by the non-parallel sides and the diagonals of an isosceles trapezoid.



Contraparallelogram.

contraperlation (kon″trä-pér-lā'shon), *n.* [*contra-* + *per-* + *lation*.] A relation in which some individual of the universe of its relate does not stand to any individual of the universe of its correlate.

contrapone (kon-tra-pōn'), *v. t.*; pret. and pp. *contraponed*, ppr. *contraponing*. To convert by contraposition (which see). *Bowen*, Logic, vi.

contraposaune (kon″tra-pō-zou'ne), *n.* In *organ-building*, a stop giving tones an octave lower than the usual posaune or trombone.

contrapositive (kon-trä-poz'i-tiv), *a.* and *n.* **I.** *a.* Of, pertaining to, or produced by contraposition: as, *contrapositive* propositions; *contrapositive* conversion.

II. *n.* In *logic*, a contrapositive proposition.

contrapposto (kōn-trap-pōs'tō), *n.* [It., pp. of *contrapporre*, < L. *contraponere*, set opposite: see *contrapose*.] In pictorial or sculptural composition, the crossing of limbs and contrasting of masses which is especially pronounced in the works of Michelangelo.

In the figure of the soldan he gives a superb instance of almost Michel-angelesque *contrapposto*. *B. Berenson*, in Burlington Mag., III. 20.

contrareperlation (kon″trä-rē″pér-lā'shon), *n.* [*contra-* + *re-* + *per-* + *lation*.] A relation whose converse is a contraperlation.

contrast, *n.* **5.** In *psychol. optics*, the reciprocal induction of colors and brightnesses in the present field of regard. Contrast is essentially a matter of the present moment; under steady fixation the phenomena of contrast give place to those of adaptation. The chief laws of contrast are as follows: (*a*) Contrast always takes the direction of greatest qualitative difference—red-green, blue-yellow, black-white, etc. (*b*) The effect of contrast varies directly with the degree of saturation of the inducing color. (*c*) The nearer together the contrasting surfaces, the greater is the contrast-effect. (*d*) Color-contrast is maximal when brightness-contrast is absent. (*e*) The contrast-effect is enhanced by the elimination of boundary lines or contours.

6. In *psychol.*, generally, any supposed intensification or throwing into relief by juxtaposition with an opposite.

The third law, that of *contrast*, applies to the ethnic mind the curious fact in mental life that a prolonged devotion to one idea leads to a reaction in which the opposite of that idea becomes dominant. *Brinton*, Basis of Social Relations, p. 43.

Law of psychical contrasts, in Wundt's *psychol.*, one of the three general psychological laws of relation. The subjective components of our immediate experience are arranged in groups made up of opposite qualities, and these opposites obey in their succession the general law of intensification through *contrast*. *W. Wundt* (trans.), Outlines of Psychol., p. 324.

Marginal contrast, the contrast-effect produced at the apposed edges of two contiguous contrasting surfaces. See ★*contrast*, 5.

contrast-color (kon'trast-kul″or), *n.* A color due to contrast and not to the character of the objective stimulus. *E. B. Titchener*, Exper. Psychol., I. i. 19.

contrast-disk (kon'trast-disk), *n.* A party-colored disk, which when mounted on the color-mixer shows the phenomena of brightness and color-contrast. *E. B. Titchener*, Exper. Psychol., I. i. 17.

contrast-feeling (kon'trast-fē″ling), *n.* In Wundt's *psychol.*, a composite feeling, made up of partial feelings of opposite character, and deriving its own characteristics from this combination: for example, the feeling that accompanies tickling.

contra-stimulant, *n.* **2.** A remedy which possesses the property of depressing the vital forces: the opposite of *stimulant*.

contra-stimulation (kon″trä-stim-ū-lā'shon), *n.* The use of contra-stimulants. See ★*contra-stimulus*.

contra-stimulism (kon″trä-stim'ū-lizm), *n.* [*contra-stimulus* + *-ism*.] Medical practice based upon the doctrine of contra-stimulus.

contra-stimulist (kon″trä-stim'ū-list), *n.* [*contra-stimulus* + *-ist*.] An adherent of the medical theory of contra-stimulus.

contra-stimulus (kon″trä-stim'ū-lus), *n.*; pl. *contra-stimuli* (-lī). [L. *contra*, against, + *stimulus*, stimulus.] A force which tends to diminish vital action. **Doctrine of contra-stimulus,** the doctrine of Rasori, that all vital processes depend upon stimulus, or exciting force, and contra-stimulus, or depressing force. When these two forces are in equilibrium the condition is that of health; when one or the other is in excess disease is present and is to be combated by either a stimulant or a contra-stimulant.

contrastment (kon-trast'ment), *n.* The act of contrasting: contrasting.

contrast-plane (kon'trast-plān), *n.* In a photometer-screen, the plane between the comparison-prisms.

contrast-stain (kon'trast-stān), *n.* Same as ★*counter-stain*.

contratabulant (kon-trä-tab'ū-lant), *n.* [A modern term, irreg. < *contratabul(ar)* + *-ant*.] In *civil law*, a possessor or claimant of goods of a decedent contrary to his will or testament.

contratabular (kon-trä-tab'ū-lär), *a.* [A modern term, < L. *contra*, against, + *tabula*, a writing, a will: see *tabular*.] In *civil law*, contrary to or not in accordance with the terms of a will or testament.

contratempo (kon-trä-tem'pō), *n.* [It. *contrattempo* = F. *contretemps*: see *contretemps*.] In *music*, same as *syncopation*.

contravindicate (kon-trä-vin'di-kāt), *v. i.*; pret. and pp. *contravindicated*, ppr. *contravindicating*. [LL. *contravindicare*, < L. *contra*, against, + *vindicare*, claim: see *vindicate*.] In *Roman law*, to make an affirmative defense; counter-claim.

contravindication (kon″trä-vin-di-kā'shon), *n.* In *Roman law*, an affirmative defense; a counter-claim.

contrectation, *n.* **2.** In *civil law*, such handling and removing of goods as will amount to theft if they are not restored to their original place.

cont. rem. An abbreviation of the Latin *continuetur remedium*, 'let the remedy be continued.'

contretemps, *n.* **2.** In *music*, same as *syncopation*.

contrivancy (kon-trī'van-si), *n.* [*contrive* + *-ancy*.] The contriving faculty, or its exercise.

Jack, then, grew up a rather serious boy, full of strange knowledge, with a passionate love for everything that spoke of *contrivancy* and the mastery of Nature. *Besant and Rice*, This Son of Vulcan, ii. 1.

contrive[1], *v. t.* **3.** To make out; discover; imagine: as, what had become of him I could not *contrive*. [Colloq.]

control, *n.* **4.** Whatever serves to control or check; particularly, a standard of comparison by which, as in scientific investigation or experiment, inferences or results already obtained are checked.

Further study in physiological chemistry, experimental pathology, and allied studies must be undertaken to isolate the exact toxic agents, care always being exercised in maintaining normal *controls* and excluding the products of the disease from those causing it. *Med. Record*, Feb. 14, 1903, p. 258.

5. A person or persons who control a business, or act as a check on others concerned.

A resident rival and *control* upon the Doge. *Milman*.

6. In *spiritualism*, the supposed spirit who is alleged to control or direct the action and utterances of a medium.

Everything known to the normal Mrs. T. must be considered equally known to the ostensible "*control*" speaking with Mrs. T.'s mouth. *Sir Oliver Lodge*, in Proc. Soc. Psychical Research, XVII. 65.

7. In racing with motor-cars or motor-cycles, the authorized persons along the route who observe and record the times of arrival and departure of the cars, maintain the time and rate schedule if there is any, and enforce the regulations of the contest.

II. *a.* Of the nature of or used as a control.

Since it is impossible to tell, without removing bits of muscular tissue by a surgical operation, whether any mouse is infected spontaneously, even a severe infection being compatible for many months with a sleek appearance and the usual vivacity, *control* observations were made upon mice during the whole period of the investigation. *Jour. Exper. Med.*, Nov. 29, 1901, p. 9.

Control mice, which were not previously injected with this new Aronson serum, all died when injected with the same fatal dose of streptococcus bouillon. *Med. Record*, March 7, 1903, p. 374.

Control test. See ★*test*[1].

controller, *n.* Specifically—**2.** An officer who has certain duties to perform in examining the accounts and managing the financial affairs of a public or private corporation, or of a city, state, or government. Two controllers are employed by the government of the United States—the *controller of the Treasury* and the *controller of the currency*, the latter administers the laws relating to the national banks. There is also an assistant controller of the Treasury. Some States and cities also have officers styled controllers, with similar duties. [In this sense often spelled *comptroller*, a false form (see the etymology).]

Should we have ministers of the church to be *comptrollers* of the myntes? *Latimer*, Ploughers (Arb.).

My excellent friend Sir Byam Martin, *Comptroller* of the Navy. *Sir J. Ross*, N. W. Pass., II. 8.

4. In *mech.*, a part of an apparatus or an adjunct which controls the motion or operation of the main part. Specifically, in *elect. engin.*, a compact arrangement of switches, contacts, electromagnets, and rheostats, manipulated by one or more handles or hand-wheels, by means of which one or more electric motors, connected by electric wires to the controller, are started or stopped, or their speed is controlled: as, an electric street-car *controller*; an electric turret-turning *controller*.

5. In *ship-building*, a heavy iron block secured to the deck near a hawse-pipe, with a movable section so arranged that the chain cable passing over it is held or allowed to run out as the movable section is lowered or raised.—**Master controller,** in the multiple-unit system of electric-railway operation, a main controller, which operates the controllers in the individual units or cars from one point.

controlling-bit (kon-trō'ling-bit), *n.* A bit consisting of a long piece of rawhide with loops at the ends for rein-rings. The mouthpiece is formed into a loop, the two ends running parallel and held together by small metal rings: the double portion of the loop is put into the horse's mouth, the single portion passing under the jaw.

controlling-valve (kon-trō′ling-valv), *n.* Any valve for regulating pressure or speed, as with steam, air, or water, in motors or other machinery.

controversialism (kon-trō-vêr′shal-izm), *n.* A controversial spirit, tendency, or habit.

conular (kon′ū-lär), *a.* [*conul(us)* + *-ar*[1].] Cone-shaped; having a tendency to assume the shape of a cone; in *zoöl.*, said of the cusps or ridges of teeth. [Rare.]

The specimen, which belongs to *M. latidens* or a closely related species, exhibits an interesting stage in the passage of the molar teeth of the Proboscidea from the *conular* type of the mastodons to that of the elephants, where the enamel is arranged in numerous transverse lamiæ. *Science*, April 8, 1904, p. 556.

conule (kon′ūl), *n.* [NL. *conulus.*] In sponges, same as ★*conulus.*

conulus (kon′ū-lus), *n.*; pl. *conuli* (-lī). [NL., dim. of L. *conus*, cone: see *cone.*] In sponges, a tent-like elevation of the surface, produced by the vertical projection of the principal fibers of the skeletal system.

co-numerous (kō-nū′me-rus), *a.* [*co-*[1] + *numerous.*] Co-extensive, or equal in number.

Organs of senses . . . *co-numerous* with the modes of existence.
D. Masson, Recent Brit. Philos., p. 133. *N. E. D.*

conus, *n.* **3.** A patch of atrophied choroid near the optic papilla in myopia.

conv. An abbreviation (*a*) of *convent:* (*b*) of *convention.*

convalescence, *n.* **2.** In *Roman law*, the establishment of a right or title by the retroactive effect of removing an original defect in its validity.

convallamaretin (kon″val-a-mar′e-tin), *n.* [*convallamar(in)* + Gr. *ῥητίνη*, resin.] A crystalline compound, $C_{20}H_{36}O_8$ (?), formed, together with a sugar, by the hydrolysis of convaliamarin.

convallaretin (kon-va-lar′e-tin), *n.* [*Convalla(ria)* + Gr. *ῥητίνη*, resin.] A crystalline product, $C_{14}H_{26}O_3$, obtained by warming the glucoside convallarin contained in the lily-of-the-valley (*Convallaria majalis*) with dilute mineral acids.

Convallariaceæ (kon-va-lā-ri-ā′sē-ē), *n. pl.* [NL. (Link, 1829), ⟨ *Convallaria* + *-aceæ.*] A family of monocotyledonous plants of the order *Liliales*, the lily-of-the-valley family, included by some botanists in the family *Liliaceæ.* It includes about 23 genera, of which *Convallaria* is the type, and 215 species, scapose or leafy-stemmed herbs of temperate climates, and some showy or even fragrant flowers. See *Convallaria, asparagus, Paris,* and *Trillium.*

convected (kon-vek′ted), *a.* Transferred, as heat, by means of a convection current.

convection, *n.*—**Compound atmospheric convection,** the total transfer of heat from one part of the atmosphere to another by two distinct methods: (*a*) by currents of air or water carrying heat with them by virtue of their specific capacity for heat; (*b*) by liberation of the latent heat of evaporation which remains with the aqueous vapor contained in the air until it is liberated by condensation into cloud. In so far as the liberated heat remains in the cloud, it may be consumed in reëvaporating the cloudy particles or be lost by radiation; in so far as it is brought down to the earth with the rain or snow, it affects the local climate powerfully.—**Electric convection,** a term used for the conduction of electrolytes and of gases; motion accompanies the conduction in these cases. See ★*conductor,* 9.

convectional (kon-vek′shon-al), *a.* [*convection* + *-al*[1].] Pertaining to or of the nature of convection; caused or formed by convection.

The pressure is comparatively uniform below the sun's surface, and widely discontinuous at the surface. Hence, the *convectional* currents and the dependent phenomenon of rotation in latitude are leisurely motions compared with the explosive action at the surface layers.
U. S. Monthly Weather Rev., Feb., 1904, p. 77.

Convectional circulation. See *general* ★*circulation of the atmosphere.*—**Convectional currents,** vertical interchanges due to differences of temperature in any liquid or gas.

Convective resistance, resistance in a moving fluid due to changes in its motion and particularly to the formation of surfaces of discontinuity. In the atmosphere convective friction may be due to the mixing of warm and cold air or to the mixing of eddies produced by obstacles.

convenance (kon″ve-nans′, F. pron. kôṅ-ve-noṅs′), *n.*; pl. *convenances* (-noṅs′). [F.: see *convenience.*] **1.** That which is becoming or proper; conventional propriety.

The duration of a glance
Is the term of *convenance.*
Emerson, The Visit, l. 24.

2. *pl.* The conventionalities of life.

This careless . . . widow is evidently but ill qualified to take charge of unsophisticated Gladys, with her utter ignorance of London *convenances* and proprieties.
Spectator, April 9, 1881, p. 476.

Mariage de convenance [F.], a marriage based on considerations of family interests, such as birth, position, fortune, or the like, rather than on personal predilection.

convenience (kon-vē′niens), *v. t.*; pret. and pp. *convenienced*, ppr. *conveniencing.* To provide with facilities and accommodations which make for ease, comfort, effectiveness in action, movement, or the like; accommodate.

conventicular (kon-ven-tik′ū-lär), *a.* [L. *conventiculum*, assembly, + *-ar*[3].] **1.** Of the nature of a conventicle: as *conventicular* meetings.—**2.** Characteristic of conventicles or of those who attend them.

You can, by an infallible diagnosis, detect the *conventicular* Gothic. *Saturday Rev.*, Aug. 27, 1864, p. 271.

convention, *n.* **8.** In the *fine arts*, a generalization of nature which expresses certain phases of the actual and suppresses others, according to custom or tradition.

A gorgeous *convention* has been substituted for any attempt to render the literal tints of nature.
W. Armstrong, Portfolio, N. S., XIV. 78.

9. In *card-playing*, a play adopted for convenience: as, in bridge, leading a heart when the pone doubles a no-trumper, or scoring spades without playing when the make is not doubled and the score is not 20 or better.

conventional, *a.* **7.** In *card-playing*, noting any method of conveying information which is not based on the principles of the game, such as the trump signal, the American leads, etc. —**Conventional heir,** one who succeeds to an inheritance by reason of a contract (for example, a marriage contract) to that effect.

conventionalism, *n.* **3.** In *anthrop.*, the tendency of human activities to lose their significance in the course of the development of culture, and to become conventional.—**4.** In the *fine arts*, the tendency of realistic representations of animals, plants, and other natural forms to become more conventional; in the course of the development of decorative art, the tendency of realistic motives to change into geometrical forms.

conventionism (kon-ven′shon-izm), *n.* [*convention* + *-ism.*] Mere conventional custom; conventionalism.

The researches conducted in the Bureau have already rendered it clear that decoration, as indeed the greater portion of the fine arts, arises in symbolism and develops through *conventionism;* and the researches of the year suggest a related genesis for industries.
An. Rep. Bur. Amer. Ethnol., 1898–99, p. xiv.

conventionist, *n.* **2.** A member of a convention.

conventionize (kon-ven′shon-īz), *v. t.*; pret. and pp. *conventionized*, ppr. *conventionizing.* [*convention* + *-ize.*] Same as *conventionalize.* *J. W. Powell*, An. Rep. Bur. Amer. Ethnol., 1897–98, p. xx.

converge, *v. i.* **2.** In *biol.*, to exhibit resemblances which are not inherited from a common ancestor.

convergence, *n.* **3.** In *biol.*, the manifestation of a tendency, among allied or diverse groups of organisms, to assume series of modifications by the same methods or along parallel lines, and with somewhat similar results. Thus, through successive rock strata representing periods of time, species originally dissimilar evolve in such a manner that the derived forms of each series resemble each other much more than do the ancestral forms. The term is also applied to a like developmental process in a single organ or group of organs. Convergence is the process of which homomorphy is the result.

If two species, belonging to two distinct though allied genera, had both produced a large number of new and divergent forms, it is conceivable that these might approach each other so closely that they would all have to be classed under the same genus; and thus that the descendants of two distinct genera would converge into one. But it would in most cases be extremely rash to attribute to *convergence* a close and general similarity of structure in the modified descendants of widely distinct forms.
Darwin, Origin of Species, iv.

Absolute convergence, the convergence of a series which would still converge if for every term were substituted the modulus of that term. It is a theorem that absolute convergence is the same as unconditional convergence. Non-absolute convergence is called *semiconvergence.*—**Convergence frequency,** in a spectrum series of lines (see ★*series*), the limiting frequency or wave-number (the reciprocal of the wave-length) toward which the higher members of the series asymptotically converge, crowding more and more closely together as they approach it. It is the value of N_0 in the formula which expresses the law of the series, namely, $N = N_0 - \frac{A}{m^2} - \frac{B}{m^4}$, in which N is the wave-number or frequency of any line in the series, A and B are coefficients determined by observation, and m is an integer—1 for the first line of the series, 2 for the second, and so on. *A. M. Clerke*, Problems in Astrophysics, p. 53.

convergent, *a.* **2.** In *biol.*, illustrative of or due to convergence; similar in structure but different in origin (polyphyletic).

[It] seems probable that the three orders of Ratitæ arose independently from primitive Carinatæ, and that the ratite division is to be looked upon as a *convergent* or polyphyletic group, owing its distinctive characters, not to descent from a common ancestor, but to the independent acquisition of similar characters under the influence of like surroundings. *Parker and Haswell*, Zoology, II. 416.

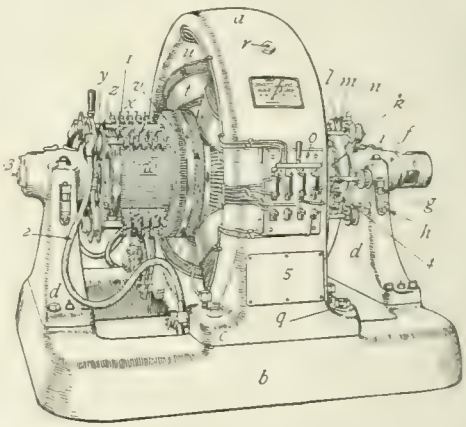
Convergent analogy, ladybird, lens. See ★*analogy,* ★*ladybird,* ★*lens.* **Convergent squint.** Same as *convergent strabismus.*

converging, *p. a.* **2.** Capable of causing convergence: as, a *converging* lens. **Converging associations,** associations which coöperate in tending to revive in consciousness the same idea.

conversion, *n.* **10.** Substitution of or exchange for something else, especially of one kind of property for another; specifically, the change of an issue of public securities, of bonds, debentures, stocks, shares, etc., into another of different character or with an altered (generally reduced) rate of interest. Also attributively: as, *conversion* scheme, *conversion* operation, etc. *N. E. D.*—**11.** In *ship-building*, the selection, laying out, and working of plank and timber so as to have the least possible waste.—**12.** In *forestry*, a change from one system of forest management to another, as from the sprout system to the seed system. —**13.** In *steel manuf.*, the process of changing iron into steel, especially by the cementation process. See *cementation.*—**Constructive conversion,** in *law*, such an act, in reference to the personal property of another, as will be deemed in law to constitute an appropriation of the property although there may be no actual taking.—**Direct conversion,** in *law*, the actual wrongful taking of the personal property of another and appropriation of the same to the taker's use.

convert, *v. t.* **9.** In *ship-building:* (*a*) To work up, as rough plank or timber, into the shape required for use on a vessel. (*b*) To alter so as to change the type to which a vessel belongs: as, to *convert* a steamer into a sailing-ship.—**Converted gun.** See ★*gun*[1].

converter, *n.* **3.** In *elect.*, an apparatus for changing electric power into a different form by mechanical motion. The *synchronous converter* or rotary converter changes alternating (single-phase or polyphase) currents into direct currents; the *inverted converter* changes direct currents into alternating currents; the *frequency-converter* changes alternating currents into alternating currents of different frequency;



Rotary Converter.

a, field-frame; *b*, base; *c*, foot; *d*, pillow-blocks; *e*, speed-limiting device; *f*, bearing; *g*, oil-gage; *h*, pet-cock; *i*, oil-cup cover; *k*, collector-ring; *l*, alternating-current brush-holder yoke; *m*, insulator; *n*, alternating-current brush-holder stud; *o*, field break-up switch; *p*, name-plate; *q*, holding-down bolts; *r*, pole-piece bolt; *s*, field break-up switch-leads; *t*, shunt field-winding; *u*, series field-winding; *v*, armature; *w*, commutator; *x*, direct-current brush; *y*, direct-current brush-holder yoke; *z*, insulation; *1*, direct-current brush-holder stud; *2*, armature-lead; *3*, end-play device; *4*, alternating-current brush; *5*, hand-hole cover.

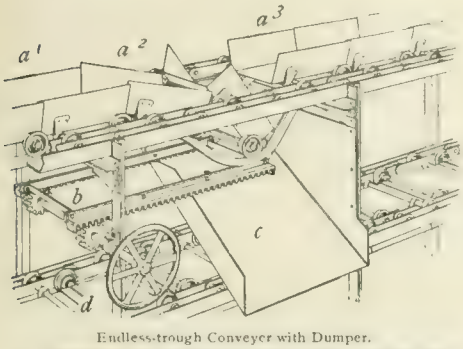
the *phase-converter* changes alternating, usually single-phase, currents into alternating currents of a different number of phases; the *direct-current converter* changes direct into direct currents. The most common type is the synchronous converter, commonly called *converter* or *rotary converter*, which is used for changing the transmitted polyphase alternating current into direct current for use on electric railways, for lighting, etc. **Holley's modification of the Bessemer converter,** an improvement of the Bessemer converter introduced by A. L. Holley, which consisted in a removable bottom which greatly increased the rapidity of working, as many as 100 blows being thus obtained in 24 hours in one converter. Holley's invention also made it possible to renew the lining of the bottom, which wears out in about 20 blows, without changing that of the body of the converter, which lasts for many thousand blows.

Convertible anastigmat, lens. See ★*anastigmat,* ★*lens.* —**Kater's convertible pendulum.** See ★*pendulum.*

converting-pot (kon-vêr′ting-pot), *n.* A chest or trough of fire-brick or fire-stone into which bar-iron is put for cementation.

convex, *a.* **3.** In *geom.*, having no reëntrant angle.—**Convex polyhedron,** one which has no summits on different sides of the plane of a face.

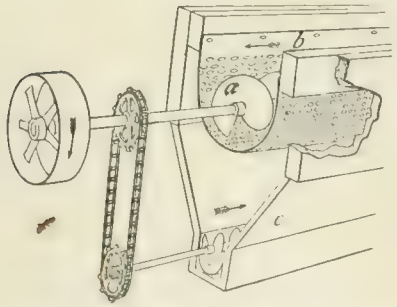
conveyer, *n.* **4.** In *transportation*, a general term applied to a variety of machines used in moving coal, grain, and other materials in bulk over short distances, in a horizontal direction or up and down moderate inclines. Conveyers are named from the material transported (as *box-*, *coal-*, *hide-*, *paper-*, or *log-conveyer*) and also from the method of operation. An *apron-conveyer* consists of endless chains upon which wood or metal slats are placed close together, forming a continuous traveling platform. It is closely allied to the ★*carrier* (which see). A *belt-conveyer* employs a broad endless belt of leather, rubber, or similar fabric, running over stationary rollers placed at equal distances apart. When in operation a stream of light material, such as grain, can be fed to the belt and be transported at high speed in large quantities. If the feed corresponds to the speed of the belt, the material can be handled without loss, since the slight vibration of the belt, when in motion, causes the load to gather at the center where it rests during transit or until the belt changes its direction by turning over a horizontal roller at the point of delivery. Two types of idle rollers are used with belt-conveyers to support the belt. For very light materials a horizontal roller is used; for coal, wet sand, broken stone, and heavy materials the rollers are disposed in sets of three, one small horizontal roller in the middle and two others, each inclined toward the center to give the belt a dishing or trough-like surface for the purpose of concentrating the load in the middle of the belt and thus preventing loss over the sides. Belt-conveyers are in general use in all industrial and engineering plants where large quantities of heavy ores, coal, ashes, etc., must be moved over distances of a thousand feet, more or less, and up moderate inclines. For direct lifts, short belts, each at a slight incline, arranged in series, one feeding into the next, are often used. To pass at a right angle two belts are used, one delivering to the other at a slightly lower level. A *bucket-conveyer* is one having V-shaped buckets fixed and sometimes pivoted to a pair of chains. As a *flight-conveyer*, it can be operated in a horizontal direction by using the buckets as flights to drag the material to be removed along a trough. The same buckets can also be used to pick up and lift the material in a vertical direction. When used in both directions the machine is a *combined conveyer and elevator*. An *endless-trough conveyer* is one in which chains



Endless-trough Conveyer with Dumper.

a, buckets forming continuous trough, traveling on two pairs of flanged wheels on different tracks, *a*1, loaded, *a*2, entering dumper, forward wheels follow loop track, rear wheels on straight track; *a*3, empty troughs; *b*, dumper; *c*, chute; *d*, hand-wheel controlling dumper.

carry a sheet-metal trough open at each end. The buckets fit one into another and form a continuous trough, used to convey spikes, bolts, castings, etc. A *flight-conveyer* consists of a trough, of square or semicircular section, through which scrapers, called *flights*, supported by traveling chains, drag the loose material. (See cut under *monobar* ★*chain*.) In some forms the boxes, barrels, or other packages of goods are pushed along a smooth wooden platform by means of lugs or low flights attached to conveyer-chains. A *rotary conveyer* is a cylindrical conveyer of the screw type mounted on wheels and made to turn upon its axis. It is used to dry and mix the material which is being transported through it. A *screw-conveyer*



Screw-conveyer.

a, screw-conveyer; *b*, perforated trough for screening material in transit; *c*, trough for screw-conveyer transporting screenings from *b*. Arrows show direction of travel.

employs a trough of a cylindrical section, fitted with a helicoidal screw, which is supported by a shafting in the trough. The screw fits the trough so closely that in turning it forces the material along the trough in the direction of the thrust of the screw. The troughs used in screw-conveyers are sometimes made of perforated metal which serves as a screen in cleaning the material from dust, lint, etc.—**Hoist-conveyer,** a cableway or wire-rope tramway in which the load to be conveyed can be hoisted from the ground to the tramway; a lifting wireway; used in sewer and subway construction. Not properly a conveyer, though often so called. **Push-plate conveyer,** a device for transporting loose material, such as coal, crushed stone, or sand, for short distances. It consists of an endless chain, to which plates are fastened at regular intervals, and a wooden or metal trough in which the material slides. The plates stand at right angles to the chain and push the material along as the chain is pulled. See *flight-conveyer*, above.

convicine (kon′vi-sin), *n.* [*con-* + *Vicia* + *-ine*².] A crystalline alkaloid, $C_{10}H_{15}O_8N_3 + H_2O$, found in the seeds of vetch, *Vicia sativa*.

convictional (kon-vik′shon-al), *a.* [*conviction* + *-al*¹.] Relating to conviction, settled belief, or opinion.

convincing (kon-vin′sing), *p. a.* Of a nature to convince or persuade; such as to convince or impress seriously or to win one's sympathy or assent; in *art criticism*, exhibiting completeness and propriety.

Convocation week, the week in which the first day of January falls. This week has been recently set aside by some American societies and universities, on the initiative of the American Association for the Advancement of Science, for the holding of meetings of scientific and other learned societies.

Convoluted tubule. See ★*tubule*.

convolution, *n.*—**Central convolutions,** the convolutions which border on the central sulcus. **Wernicke's convolution,** the first temporosphenoid convolution of the brain.

convolutional (kon-vō-lū′shon-al), *a.* Relating to or like a convolution.

convolutionary (kon-vō-lū′shon-ā-ri), *a.* Of or relating to a convolution or convolutions, particularly to the convolutions of the brain.

Many of these are so excellently preserved that every detail of the *convolutionary* pattern can be recognised, and by transferring it to the surface of the cranial cast an accurate model showing exactly the size, shape, and arrangement of the sulci with perfect accuracy can be obtained. *Nature*, Nov. 5, 1903, p. 8.

convolvulinol (kon-vol′vū-lin-ōl′), *n.* [*convolvulin* + *-ol*.] A crystalline substance said to have been obtained by the hydrolysis of convolvulin. Later observers have failed to find it.

convolvulonolic (kon-vol″vū-lon-ol′ik), *a.* [*convolvulinol* + *-ic*.] Derived from convolvulin.—**Convolvulonolic acid,** an acid, $C_{15}H_{30}O_3$, obtained by the hydrolysis of convolvulinic acid with dilute sulphuric acid. It is monobasic and melts at 51.5°C.

Convolvulus moth, a European and African sphingid moth, *Phlegethontius convolvuli*, whose larva feeds on the foliage of plants of the family *Convolvulaceæ*.

convulsant (kon-vul′sant), *a.* and *n.* [*convulse* + *-ant*.] **I.** *a.* Causing muscular spasms. **II.** *n.* An agent which causes muscular spasms.

convulsibility (kon-vul-si-bil′i-ti), *n.* A tendency to convulsion or the capability of being convulsed. *Buck*, Med. Handbook, III. 275.

convulsion, *n.*—**External convulsion,** spasmodic contraction of the voluntary muscles.—**Internal convulsion.** (*a*) Spasmodic contraction of the involuntary muscles. (*b*) Same as *laryngismus stridulus*.

convulsion-root (kon-vul′shon-röt), *n.* The Indian-pipe, *Monotropa uniflora*. See *Monotropa* (cut). Also called *convulsion-weed*.

cony, *n.* **8.** The West Indian agouti, *Dasyprocta cristata*, so called by the early English colonists from its fancied resemblance to a rabbit.

There are no quadrupeds, natives of Dominica, except the Indian *Coney*, which is nearly the size of a rabbit.
T. Alvord, Hist. of Island of Dominica, p. 45.

9. The name of several West Indian serranoid fishes: (*a*) The guativere, *Cephalopholis fulvus*. (*b*) *Cephalopholis cruentatus*, a brown fish with many spots, called in Spanish *enjambre*.

conylene (kon′i-lēn), *n.* [*con(ine)* + *-yl* + *-ene*.] A hydrocarbon, C_8H_{14}, formed by distilling trimethylconine. It is an oil which boils at 127° C.

conyrine (kon′i-rin), *n.* [*con(ine)* + *-yr* (varied from *-yl*) + *-ine*².] An oily base, $C_5H_4N.C_3H_7$, which boils at 172° C. and is obtained by heating conine with zinc chlorid.

coobah (kö′bä), *n.* [Aboriginal Australian.] In Australia, a small tree, *Acacia salicina*. It yields an excellent tan-bark and its wood is close-grained, heavy, dark brown, and nicely marked. The aboriginals make boomerangs and the colonists furniture from it. Also called *native willow*.

coöbligant (kō-ob′li-gant), *n.* One who binds or has bound himself with another or others in regard to some matter; one who is under some obligation jointly with another or others.

coöbligor (kō-ob′li-gōr), *n.* One of several parties bound by the same obligation.

cook¹, *v. t.* **5.** In *tobacco-manuf.*, to overheat (tobacco) in the process of sweating in bulk, depriving it of the power of heating up again. This happens when the temperature is kept long at 65° F. or raised still higher.

The oxidase and catalase are now killed. Such tobacco is called *cooked*. *U. S. Dept. Agr.*, Rep. No. 65 (1900), p. 46.

cook¹, *n.* **2.** Same as ★*cook-fish*.

cook-camp (kůk′kamp), *n.* The building used as kitchen and dining-room in a logging-camp. [U. S.]

cooker, *n.* **2.** Specifically, a receptacle in which food may be cooked by steam. A common form is that of a sheet-metal vessel resembling the portable oven of a gas-stove, fitted with shelves for the various foods to be steamed. Water is placed in a tank below, and, on placing the cooker on the stove, steam is formed which fills the entire vessel and cooks the food. A portion of the steam escapes into a condenser, and the resulting hot water returns by gravity to the tank. In other forms steam from some outside source is led by pipes through the cooker, causing the water inside to heat and cook the food. Another cooker consists of a double plate, the space between the plates being filled with steam: the *oyster-cooker* used in restaurants is an example of this type. Steam soup-kettles and steam-kettles used in canneries and in cooking food for cattle are steam cookers.

cook-fish (kůk′fish), *n.* A labroid fish, *Labrus bimaculatus*.

cook-house, *n.* **2.** A building or room, whether detached from a house or attached to it, in which cooking is carried on.

cook-shop (kůk′shop), *n.* A shop where food is cooked and sold.

At noon I, with my wife and Mercer, to Philpot Lane, a great *cookshop*, to the wedding of Mr. Longracke, our purveyor. *Pepys*, Diary, Aug. 28, 1666.

cool¹, *v. t.* **5.** In *painting*, to strengthen (colors) on the blue and violet side of the spectrum, or to reduce (reds and yellows).

coolamin (kö′la-min), *n.* [Australian.] A drinking-cup made of a hollow gum-tree knot.

coold, *pp.* A simplified spelling of *cooled*.

cool-drawn (köl′drân), *a.* Same as *cold-drawn* (which see).

cooler, *n.* **2.** (*b*) In *motor-car construction*, the apparatus used to lower the temperature of the circulating water which keeps the cylinder walls of the internal-combustion motor from overheating. It is an air-surface condenser, with air circulating around the exterior surface of tubes containing the water; or the water may be on the outside surface and the air pass through the bores. In the first type, radiating and contact surface are increased by spines or coils projecting from the tube-surface; for the second, the cooler is often made with hexagonal tubes so as to get the greatest number in a given space. Such coolers or radiators are called *honey-comb coolers*. The water can usually be kept at about 180° F., but when the car moves very slowly the water may be forced to the boiling-point. **4.** A heavy square horse-blanket of sufficient size to envelop the horse's body.—**5.** A cooling drink.—**Remsen cooler,** a compound of Old Tom gin, lemon-peel, club soda, and cracked ice.—**Renwick cooler,** same as *Remsen* ★*cooler*, except that ginger-ale takes the place of soda.

coolgardite (köl′gär-dīt), *n.* [*Coolgardie* (see def.) + *-ite*².] A supposed gold telluride from the Coolgardie gold-field in Western Australia: probably only a mixture of known species.

coolibah (kö′li-bä), *n.* [Also *coolibar*: aboriginal Australian name.] In western Queensland, a tree, *Eucalyptus microtheca*, the wood of which is reddish brown, remarkably hard, heavy and elastic, and useful in building. Also called *goborro*, and by the colonists *bastard*, *black*, or *flooded box*.

cooliman (kö′li-man), *n.* [Also *coolaman*, *coolamin*, *coolieman*, *koolaman*: aboriginal Australian.] A small trough of wood or bark used for carrying food or water.

The "gins" and "picaninnies" go carefully over the ground with a pointed stick in one hand and a wooden "*cooliman*" . . . in the other, gathering up any lizard, snake, or grub which has perished in the flames.
Geog. Jour. (R. G. S.), XI. 262.

cooling-bridle (kö′ling-brī″dl), *n.* A bridle consisting of a single strap, with buckles and chapes on the ends by which the bit is attached. It has no brow-band or throat-latch.

cooling-cell (kö′ling-sel), *n.* In *photog.*, a cell with parallel glass sides, which contains water or a solution of alum and is placed in front of a lantern to shield plates used in projection from the action of heat.

cooling-drum (kö′ling-drum), *n.* **1.** An enlarged section of a pipe used to increase the area for the radiation of heat.—**2.** A drum or cylinder containing a refrigerating-coil; a condenser.

cooling-pond (kö′ling-pond), *n.* A pond the water of which, having been used for condens-

ing purposes in a steam-engine either in a jet or a surface-condenser, is exposed to the air and cooled so as to be used again.

cooling-stack (kö′ling-stak), *n.* Same as ★*cooling-tower.*

cooling-stove (kö′ling-stōv), *n.* An apparatus for lowering the temperature of the air of a room in hot weather. A mixture of broken ice and salt is placed in a sheet-metal vessel, and the air of the room passes downward through flues in contact with the freezing-mixture, and so out into the room. *Sci. Amer.*, May 16, 1903, p. 372.

cooling-surface (kö′ling-sėr″fās), *n.* **1.** A surface on which steam is condensed.—**2.** Any surface which is cool enough to abstract heat from the substance on one side of it, as in the coils which circulate brine in cold-storage rooms or in ice-making plants.

cooling-table (kö′ling-tā″bl), *n.* A place where rolled sections of metal are placed as they come from the rolls to allow them to cool and harden before being straightened and finished.

cooling-tower (kö′ling-tou″ėr), *n.* A device for cooling the water used in a steam-condenser or refrigerating-plant. It consists of a series of drip-pans placed one above the other in a water-tight tower, in combination with an air-blast. The hot water from the condenser is pumped into the uppermost pan, and falls from it in a shower to the next pan, and from this to the next, and so on until it reaches the reservoir below. A fan delivers a large volume of air under moderate pressure to the tower near its base, the air rising through the falling water and escaping through blinds at the top of the tower. The water passing through the tower is cooled from 15° to 30°, and can then be again used in the condenser.

coolooly (kö-lö′li), *n.* In Algiers, a person of mixed blood.

cool-tankard, *n.* **2.** The borage, *Borago officinalis*, used in preparing the beverage so named.

coolth (költh), *n.* [*cool* + *-th.*] **1.** Coolness: the opposite of *warmth.* [Now chiefly dialectal.]

My father and Mrs. Thrale seated themselves out of doors . . . for *coolth* and chat.
Mme. d'Arblay, Diary, I. 379.

2. A cold in the head. [Prov. Eng.]

coom[3] (köm), *n.* [Dial. form of *culm*[1].] The wooden frame used in building the arch of a bridge. [Scotch.]

coombe-rock (köm′rok), *n.* [*coombe* = *comb* + *rock*[1].] A term which has been applied in Sussex, England, to unstratified loose Pleistocene materials which have been regarded as due to the action of heavy rains while the ground below the surface was permanently frozen.

coom-ceiled (köm′sēld), *p. a.* Having an arched or sloping ceiling, as an attic or garret. [Scotch.]

coomed (kömd), *a.* Arch-shaped. [Scotch.]

coomy (kö′mi), *a.* [*coom*[1] + *-y*[1].] **1.** Full of coom or dust: as, very *coomy* coal.—**2.** Begrimed with coal-dust and soot: as, *coomy* hands and face. [Scotch in both senses.]

coon, *n.* **4.** A negro. [U. S. slang.]—**To go the whole coon,** to go the whole hog. [Slang.]—**To hunt the same old coon,** to keep on doing the same thing. [Colloq.]

cooncan (kön-kan′), *n.* See ★*conquien.*

coon-cat (kön′kat), *n.* A name in New England of a large, long-haired variety of the domesticated cat, with ringed tail, whose pelage suggests that of a racoon.

coon-dog (kön′dog), *n.* A dog trained to follow and tree racoons.

coonery (kö′nėr-i), *n.* [*Coon* + *-ery.*] The aims and methods of the 'Coons' of the old Whig party in the United States. See *coon*, *n.*, 2.

coon-root (kön′rōt), *n.* The bloodroot, *Sanguinaria Canadensis.*

coon-song (kön′sông), *n.* A popular song, such as is common among the negroes in the southern United States: so called because originally associated with coon-hunting. [Colloq.]

coöperancy (kō-op′ė-ran-si), *n.* [*coöperan(t)* + *-cy.*] Coöperant relation or state.

This conception of a reign of law, amid which and under which we live, affects the emotions in various ways: at times it may cause despondency, but . . . . we shall more and more find occasion for joy and triumph in the *co-operancy* of the energies of humanity with those of their giant kindred, light, and motion, and heat, and electricity, and chemical affinity.
Edward Dowden, Studies in Literature, p. 99.

coöperation, *n.* **3.** In *psychol.*, the process by which a mental group, in the exercise of its apperceptive function, prompts other groups to a similar activity. *G. F. Stout*, Anal. Psychol., II. 128.

Cooper's lemming-mouse. See ★*lemming-mouse.*

coöptative (ko op′ta-tiv), *a.* [*coöptate* + *-ive.*] Chosen by coöptation: as, *coöptative* governors of an institution, as distinct from representative governors.

coöpted (ko-op′ted), *p. a.* Chosen by coöptation.

It may be remarked that of 271 schemes approved by the Board of Education, some two-thirds provide for such *co-opted* members with expert knowledge.
Nature, Feb. 11, 1904, p. 344.

coorash (kö-räsh′), *n.* [Ar. *kurāsh*, scratching, < *karasha*, drive away, hurry, scratch.] A pruritic skin disease accompanied by a pustular eruption: common in parts of Africa.

coördinate. **I.** *a.*—**Coördinate paper.** See ★*paper.*

II. *n.*—**External coördinate,** in *statistical mech.*, a coördinate of a body external to a given system but upon which, in part, the potential energy of the system depends. —**Positional coördinate,** a coördinate which serves to define or locate a point or system.—**Projective coördinates.** From von Staudt's quadrilateral construction (see ★*quadrilateral*) is obtained a purely descriptive, projective, non-metrical definition of cross-ratio; and, given a pair of points, it is possible to obtain, without the use of any ratio or measurement, the harmonic conjugate to any third point of the same straight line. Starting with any 3 points on a straight line, assign to them arbitrarily the numbers 0, 1, ∞; then find the harmonic conjugate to the first with respect to 1, ∞, and assign to it the number 2; then find the harmonic conjugate to the point 1 with respect to 2, ∞, and assign to it the number 3; and so on. By introducing such a numerical system on 2 straight lines, or on 3, the projective coördinates of any point in a plane or in space are obtained.

coorongite (kö′rong-īt), *n.* [*Coorong* (see def.) + *-ite*[2].] A mineral substance resembling india-rubber: found in the Coorong district of South Australia. *Groves and Thorp*, Chem. Technol, II. 129.

coörthotomic (kō-ôr-thō-tom′ik), *a.* [*co-*[1] + *orthotomic.*] In *math.*, crossing at right angles at every intersection: said of a set of curves.

coot, *n.* **1.** The name is variously applied in different localities to rails, gallinules, and ducks. Thus the hyacinthine gallinule, *Porphyrio hyacinthus*, is known as the *purple coot*; the scoter *Œdemia perspicillata*, as the *surf-coot*; and another scoter, *O. Americana*, as the *whistling coot.*

cop[1], *n.* **11.** In *golf*, the face of a bunker.

Cop. An abbreviation (*a*) of *Copernican*; (*b*) of *Coptic*; (*c*) [*l. c.*] of *copper.*

copa de oro (kō′pä dā ō′rō). [Sp., 'cup of gold.'] The California poppy, *Eschscholzia Californica*: so named by the Spanish Californians for its brilliant yellow flowers.

copaibic (kō-pā′bik), *a.* Same as *copaivic.*

copal, *n.*—**Mexican copal,** a resin derived from several species of *Terebinthus*: as *copal amargo* from *T. bipinnata* (*Bursera bipinnata* of Engler); *copal blanco* and *copal de penca* from *T. Jorullensis* (*B. Jorullensis* of Engler); and *copal de santo* from *T. Mexicana* (*B. Mexicana* of Engler) and from *T. Jorullensis.* The resin of *T. Jorullensis* is also called *goma de limon* and *Mexican elemi*). See *Bursera* and *copal.*

copalcocote (kō-päl-kō-kō′tā), *n.* [Mex. *copalcocote*, < Aztec *copalxocotl*, < *copalli*, gum or resin, + *xocotl*, fruit.] *Cyrtocarpa procera*, a small Mexican tree belonging to the sumac family, with odd-pinnate leaves having entire leaflets. It bears a yellow, acid, plum-like fruit, called *ciruela* by the Spaniards, with a resinous mesocarp and a stony endocarp, which is used medicinally.

copaliferous (kō-pa-lif′e-rus), *a.* [E. *copal* + L. *-fer*, < *ferre*, bear.] Producing copal: as, *copaliferous* sand.

copalillo (kō-pä-lēl′yō), *n.* [Sp. *copalillo*, dim. of *copal*, which see.] *Exothea Copalillo*, a Mexican tree belonging to the *Sapindaceæ*, having upright branches, abruptly pinnate leaves with usually two pairs of entire leaflets, and berry-like fruit.

copalite (kō′pal-īt), *n.* [*copal* + *-ite*[2].] Same as *copalin.*

Copalm balm. Same as copalm balsam (which see, under *balsam*).

copang (kō′pang), *n.* [Also *cupang*, *coupang*, *kupang*, < Malay *kūpang*, a copper coin, = Jav. *kobang* = Jap. *koban*: see *coban.*] A Malayan copper coin.

copatentee (kō-pat-en-tē′), *n.* [*co-*[1] + *patentee.*] One who holds a patent jointly with another or others.

cop-dyeing (kop′dī″ing), *n.* The process of dyeing yarn upon the cop, in order to save the expense of reeling it into skeins and rewinding it upon bobbins. Many machines have been devised for this purpose but none has been entirely satisfactory.

cope[1], *v. t.* **3.** To muzzle, as a ferret, by sewing or tying up its mouth.—**To cope off,** to lift or draw that part of a pattern which is embedded in the top box or cope of a foundry-flask. The cope is lifted off and turned over for this purpose.

cope-head (kōp′hed), *n.* In *wood-working*, an attachment to a tenoning-machine for forming a coping on the tenon. See *tenoning-machine.*

copellidine (kō-pel′i-din), *n.* Hexahydrocollidine, or 2-methyl-5-ethyl piperidine, $C_8H_{11}N$. $CH_3.C_2H_5$, a basic oil which boils at 162° C. and has a disagreeable ammoniacal odor.

coper[1] (kō′pėr), *n.* [Also *cooper*; < D. and Flem. *kooper*, buyer, trader, < *koopen*, buy, trade: see *cope*[2], *v.*] A kind of floating grog-shop, stocked with indifferent liquors, tobacco, etc., which accompanies or plies its trade among the North Sea fishing-fleets.

cope-ring (kōp′ring), *n.* A metal ring with trunnions, used to carry the sand and loam which form the cope of a loam-mold.

coperiodic (kō-pē-ri-od′ik), *a.* [*co-*[1] + *periodic.*] Synchronous as to period; undergoing periodic fluctuations or changes in equal intervals of time.

Copernicanism (kō-pėr′ni-kan-izm), *n.* The astronomical theory of Copernicus; that is, the doctrine that the earth and all the planets (except the moon and telescopic satellites discovered since the enunciation of the doctrine) revolve round the sun. Originally no definite meaning could be attached to this statement unless one regarded vacuous space as a real substance, an opinion which is now out of vogue; but the dynamics of rotation supplies a meaning which is true and which does not (at least, explicitly) suppose space to be a thing.

coperta (kō-per′tä), *n.* [It. *coperta*, a cover: see *covert.*] In *ceram.*, the final film of glaze put on the later Italian majolica-painting which acted like a varnish and increased the brilliance of the colors. This practice was not followed in France. *M. L. Solon*, French Faïence, Glossary.

cop-frame (kop′frām), *n.* A machine for winding yarn on a cop.

cophasal (kō-fā′zal), *a.* [*co-*[1] + *phasal.*] Being in or having the same phase.

copigue (kō-pē′gwā), *n.* [Also *copihue*; a native name in Chile.] *Lapageria rosea*, a half-woody climber, belonging to the lily family, with beautiful rose-colored or crimson flowers and sweet edible berries the size of a hen's egg. [Chile.]

coping-brick (kō′ping-brik), *n.* A brick cast to a shape fitting it to form part of a coping, as with a single or a double slope on its upper surface.

copinol (kō-pē-nōl′), *n.* [Central Amer.] Same as ★*guapinol.*

copivi (kō-pē′vē), *n.* Same as *copaiba.*

coplaintiff (kō-plān′tif), *n.* [*co-*[1] + *plaintiff.*] One of several parties plaintiff in the same action.

coplanarity (kō-plā-nar′i-ti), *n.* [*coplanar* + *-ity.*] The quality of being coplanar or of lying in the same plane.

The divergence from *coplanarity* as a rule has small importance. *Biometrika*, Aug., 1902, p. 413.

copopod (kō′pō-pod), *a.* and *n.* Same as *copepod.*

copper[1]. **I.** *n.* **8.** The plate of copper which contains or is intended to contain on its surface the engraved or etched design prepared for printing.—**Aceto-arsenite of copper.** Same as *Paris green.* **American copper,** *Heodes hypophlæas*, a butterfly of the family *Lycænidæ*, common in the Atlantic United States where in the larval state it feeds on sorrel.—**Ammonionitrate of copper,** a substance, $4NH_3.Cu(NO_3)_2$, which has been proposed for use as an explosive agent, to be granulated and fired by a detonator. —**Bronze copper,** an American butterfly, *Chrysophanus thoe*, of the family *Lycænidæ*, the male of which has wings of a coppery brown spotted with black, the female's wings being orange-red with black spots. It is of wide distribution, and the larva feeds on curled dock, knotweed, and prickly ash.—**Copper arsenite,** a substance occurring in various green powders (as Paris green, emerald-green, Schweinfurt green, etc.) used as pigments and as insecticides.—**Copper barilla.** Same as ★*barilla*, 2.—**Copper bath colic.** See ★*bath*[1], ★*colic.* **Copper glass.** Same as *Alexandria blue* (which see, under *blue*).—**Copper mixture of Gironde,** the original name for Bordeaux mixture used in spraying plants as a fungicide.—**Copper-pitch ore,** a not uncommon silicious ore of copper occurring in massive form with a dark-brown or black color and usually a dull, pitchy luster. It often contains besides copper other metallic oxids, as of iron, zinc, manganese, etc., and has been regarded as an impure chrysocolla; this, however, is not generally true, and in some cases it seems to be a definite compound. See ★*melanochalcite.* **Copper rock,** ore containing native copper. [Lake Superior.]—**Copper silicide.** Same as ★*silicon-copper.*—**Copper sucrate,** a fungicide solution used in spraying fruit-trees and other plants: made with 4 pounds of crystallized sulphate of copper, 5 pounds of lime, 2 pounds of molasses, and 45 gallons of water.—**Manhès copper process,** the process of refining copper matte in a Bessemer converter

with twyers in the side of the vessel and above the level of the molten metal. The advantage of the Manhes converter lies in the fact that it protects the pure copper at the bottom from the blast and that it prevents the setting metal from closing the twyers. It is now replaced by newer designs. **Moss copper**, metallic copper in fine filaments resembling moss which sometimes exudes from copper matte during the contraction of the latter in one of the stages of copper-smelting by the Swansea process.

Phosphide of copper, silicium copper. See ★*phosphide*, ★*silicon copper*. **Potassium cyanide copper process.** See ★*cyanide process*. **Stamp copper**, native copper which has been separated from the copper rock by stamping and washing, as distinguished from mass copper and barrel-work. [Lake Superior.]—**Underpoled copper**, copper from which the suboxid has not been sufficiently removed by poling.

II. *a.*—**American copper hindwing.** See ★*hindwing*. **Copper age, luster.** See ★*age*, ★*luster*2.

copper[1], *v. t.* **3.** To coat with copper: as, to *copper* type: also, to color by means of a salt of copper: as, to *copper* pickles, etc., in order to make them a bright-green color.

The colouring of preserved peas by the use of a little copper sulphate is on a different basis, as the copper is considered liable to produce injury to health, and many vendors of *coppered* peas have been fined during recent years; yet the public object to purchase preserved peas of the natural brown colour. *Encyc. Brit.*, XXV. 92.

copper[2] (kop′ėr), *n.* A policeman. See *cop*4. [Slang.]

copper-bill (kop′ėr-bil), *n.* A centrarchoid fish, *Lepomis pallidus*, found in the eastern United States.

copper-blende (kop′ėr-blend), *n.* Same as *tennantite*.

copper-bloom (kop′ėr-blöm), *n.* Same as *chalcotrichite*.

copper-cut (kop′ėr-kut), *n.* and *a.* **I.** *n.* A plate engraved on copper. *Carlyle*, French Rev., III. iii.

II. *a.* Pertaining to a copper-cut.

copperhead, *n.* **4.** A private token, equal to one cent, struck in the United States during the Civil War.—**5.** In *ornith.*, the yellow-headed blackbird, *Xanthocephalus xanthocephalus*, of the western United States: so called from the reddish-yellow color of its head.

coppering-hammer (kop′ėr-ing-ham″ėr), *n.* See ★*hammer*1.

copper-manganese (kop″ėr-mang-ga-nēs′), *n.* Same as *crednerite*.

copper-Maori (kop″ėr-mä′ō-ri). [A colonial rendering of Maori *kapura*, the common fire used for cooking (or from *kopa*, the hole scooped out for a native oven?), + *Maori*, Maori ('native').] In New Zealand, a native oven.

copper-nose, *n.* **2.** A disease, *acne rosacea*, of the nose, caused sometimes by excessive use of alcohol.—**3.** A person having this disease; a drunkard.

copperplate (kop′ėr-plāt), *v. t.*: pret. and pp. *copperplated*, ppr. *copperplating*. To engrave or etch on a plate of copper for the production of a printing surface.

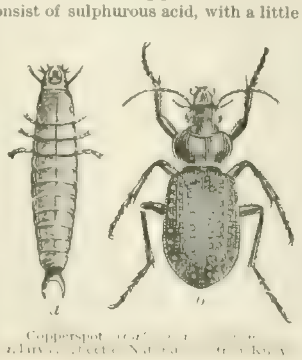
copper-schist (kop′ėr-shist), *n.* A schistose or slaty bituminous and very persistent bed, which carries copper-ores containing some silver, in the Mansfeld district, Saxony. The geological horizon is the Permian. The industry is a very old one, the mines are extensive, and the metallurgical problems, on account of the aluminous nature and relatively low-grade of the ore, are of special interest and importance. The rock is rather a shale or slate than a schist.

copperskin (kop′ėr-skin), *n.* A member of the American race; a redskin.

copper-slate (kop′ėr-slāt), *n.* A clay-slate in the Mansfeld district, Saxony, which carries copper ore.

copper-smoke (kop′ėr-smōk), *n.* The gases which escape from the hearth of a reverberatory furnace in which copper ores are roasted. They consist of sulphurous acid, with a little of the vapor of sulphuric acid, and hydrofluoric acid gas, and are very harmful to the surrounding country.

copperspot (kop′ėr-spot), *n.* An American carabid beetle, *Calosoma calidum*, having the black elytra dotted with copper-colored spots. [Local, Canada.]



Copperspot [illegible]

coppertail (kop′ėr-tāl), *n.* A person of low social standing. [Bush cant, Australia.]

copperwork, *n.* **2.** In *candy-making*, the copper kettles, pans, caldrons, and other vessels collectively in which syrups, pastes, conserves, etc., are boiled or otherwise treated in cooking candy.

Coppery leaves, leaves which show yellowish spots, gradually becoming a reddish-brown or copper color, due to injury caused by the so-called red spider, species of *Tetranychus*.

coppet (kop′et), *n.* [*cop*1 + *-et*.] A small knoll; a hummock; a hammock. [Florida and Bermuda.]

The '*coppets*' or 'hammocks,' as they are called in Florida, are areas devoid of either pines or palmettos and often occupy isolated areas entirely surrounded by pine forests as in southern Florida. *Science*, July 22, 1904, p. 115.

Coppice forest. Same as *sprout* ★*forest*.—**Coppice system.** Same as ★*sprout system*. **Standard coppice system.** Same as *reserve* ★*sprout method*.

coppice-shoot (kop′is-shöt), *n.* Same as *sprout*, 1, (*b*).

coppice-wood (kop′is-wůd), *n.* A wood with underbrush. *Bacon*.

copping-beam (kop′ing-bēm), *n.* A beam which forms part of the machine by which thread is formed into cops.

coppy[2] (kop′i), *n.* [*cop*1 + *-y*1.] A crested fowl, such as the Houdan or Polish. [Local, Eng.]

copracrasia (kop-ra-krā′si-ä), *n.* [Gr. κόπρος, excrement, + ἀκρασία, powerlessness.] Loss of power to retain the feces.

copragogue (kop′ra-gog), *a.* and *n.* [Gr. κόπρος, excrement, + ἀγωγός, leading.] **I.** *a.* Cathartic.

II. *n.* A cathartic remedy.

cop-reel (kop′rēl), *n.* A machine for winding yarn into hanks from mule-cops.

coprin (kop′rin), *n.* [*Coprinus*.] A fungus of the genus *Coprinus*.

coprodæum (kop-rō-dē′um), *n.*; pl. *coprodæa* (-ä). [Gr. κόπρος, dung, + (irreg.) δαίειν, divide.] In *anat.*, the anterior division of the cloaca which receives the rectum in such animals as birds: correlative with *proctodæum* and ★*urodæum*.

coprolalia (kop″rō-lā′li-ä), *n.* [NL., < Gr. κόπρος, dung, + λαλεῖν, speak.] A morbid tendency to indecent speech.

coprolite, *n.* **2.** Any rounded concretionary mass or pebble containing largely calcium phosphate and representing the more or less altered debris of fossil bones, teeth, etc., used as a source of phosphoric acid in the manufacture of fertilizers. *Thorpe*, Dict. Applied Chem., I. 609.—**Radiolarian coprolites**, round or cylindrical bodies, often attaining the size of a goose-egg, found in the Lias of Germany. They contain great numbers of radiolarians. "They probably originated from fish or cephalopods which had fed upon *Crustacea*, *Pteropoda*, and similar pelagic organisms whose stomachs were already full of radiolarian skeletons." *Haeckel* (quoted in Nicholson and Lydekker, Manual of Paleont., p. 148).

coprologist (ko-prol′ō-jist), *n.* A writer or painter whose work is characterized by filth or indecency. *Fortnightly Rev.*

coprology (ko-prol′ō-ji), *n.* [Gr. κόπρος, dung, + λέγειν, gather.] **1.** The collection or a collection of filth or dung; figuratively, filth in literature or art.

How far poetry may be permitted to go in the line of sensual pleasure or sexual emotion may be debatable between the disciples of Ariosto and the disciples of Milton; but all English readers, I trust, will agree with me that *coprology* should be left to Frenchmen. *A. C. Swinburne*, Ben Jonson, ii. 94.

coprophagy (ko-prof′a-ji), *n.* [Gr. κόπρος, excrement, + φαγεῖν, eat.] The habit, found among insects, of customarily feeding upon excrement. It also occurs as a pathological condition in man.

coproprietorship (kō-prō-prī′e-tor-ship), *n.* Joint proprietorship or ownership.

Coprosma (kō-pros′mä), *n.* [NL. (Forster, 1776), < Gr. κόπρος, dung, + ὀσμή, smell. The allusion is to the odor of the herbage in some species.] A genus of plants of the family *Rubiaceæ*. They are shrubs or small trees with opposite or whorled, entire leaves, and white or greenish mostly inconspicuous flowers, either axillary or terminal and borne singly or in small cymes or heads, the fruit consisting of a 2- or 4-celled berry. There are about forty species, extending from New Zealand and Australia to Java, the Hawaiian Islands, and Juan Fernandez. *C. Baueri* is sometimes cultivated in greenhouses for its small, coral-red, ornamental fruits. *C. fœtidissima* is the *sterile wood*, and *C. lucida* the *karamu* or *coffee-bush*, of New Zealand. See *sterile wood*, under *sterile*, and ★*coffee-bush*.

coprosterol, *n.* See ★*koprosterol*.

cops[1], *n.* A former (and recent simplified) spelling of *copse*.

cops[2] (kops), *n.* [Also *copse*, < ME. *cops*, < AS. *cops*, var. of *cosp* (= OS. *cosp*), a shackle.] **1†.** A shackle for the hands or feet. [Anglo-Saxon use.]—**2.** A hasp. [Prov. Eng.]—**3.** A bow-shaped piece of metal, bent into the form of a capital U, used as a holdfast at the end of a pole or beam (of a plow or wagon, etc.); a clevis. [Prov. Eng.]

copse[2], *n.* Same as ★*cops*2.

Copt. An abbreviation of *Coptic*.

copula, *n.* **5.** In *bot.*, same as *zygospore*.—**6.** In *zoöl.*, the cell resulting from the union of a microgamete and a macrogamete among the *Sporozoa*.—**7.** In *chem.*, one compound substance united with and modifying the character of another. See *copulated* ★*compound*. *E. von Meyer*, Hist. Chem., p. 283.—**8.** A commissure; the corpus callosum.—**9.** In *music*, a brief connecting passage, especially between the subject and answer of a fugue. Also called *codetta* or *conduit*.—**10.** Same as ★*amboceptor*.—**11.** In *ichth.*, same as *actinost*.

copulated (kop′ụ-lā-ted), *p. a.* United by a copula; joined.—**Copulated compound.** See ★*compound*.

copulation, *n.* **3.** In *chem.* See *copulated* ★*compound*. *E. von Meyer*, Hist. Chem., p. 325.

copunctal (ko-pungk′tal), *a.* [L. *co-*, together, + *punctum*, point, + *-al*1.] In *geom.*, being on the same point; concurrent.

Planes all on the same point, or straights all with the same cross, are called *copunctal*. *Merriman and Woodward*, Higher Mathematics, p. 71.

cop-winder (kop′wīn′dėr), *n.* A machine for winding yarn from the skein upon a bobbin or pirn for weaving.

copy, *n.* **Close copy**, formerly a copy of legal instruments which might be written continuously without breaking off in order to leave only a given number of words on each sheet. In an office copy, each sheet was to contain only a prescribed number of words.

copygram (kop′i-gram), *n.* Same as ★*copygraph*.

copygraph (kop′i-gråf), *n.* [*copy* + Gr. γράφειν, write.] **1.** Same as *hectograph*.—**2.** A print produced by copygraph.—**3.** A printing-type of peculiar face, made to imitate the characters of a type-writing machine.

copy-head (kop′i-hed), *n.* A line of writing set at the head of each page of a child's copy-book, as a model of penmanship to be copied or imitated.

coquille, *n.* **2.** A shell, or a dish in the form of a shell, in which preparations of fish, etc., are served.—**3.** *pl.* Spectacles of concavo-convex glass, usually tinted or smoked, used as a protection to the eyes.—**4.** A mistake in printing, in which one letter is substituted for another.

Cor adiposum. Same as *fatty* ★*heart*.—**Cor arteriosum** [L., arterial heart], the left side of the heart, which contains arterial blood. **Cor bovinum** [L., ox heart], a greatly hypertrophied heart.—**Cor dextrum** [L., right heart]. Same as ★*cor venosum*. **Cor sinistrum** [L., left heart]. Same as ★*cor arteriosum*. **Cor taurinum.** Same as ★*cor bovinum*. **Cor venosum** [L., venous heart], the right half of the heart, which contains venous blood.

Cor. An abbreviation (*b*) of *coroner*; [l. c.] (*c*) of *correlative*, (*d*) of *correspondence*, *correspondent*, and *corresponding*.

coracite (kor′a-sīt), *n.* [Gr. κόραξ, crow, + *-ite*2.] A partially altered uraninite, or pitchblende, from the north shore of Lake Superior.

coracler (kor′a-klėr), *n.* [*coracle* + *-er*1.] A fisherman who uses a coracle. *N. E. D.*

Coracohumeral groove, in *ornith.*, the well-defined impression on the anterior side of the proximal end of the humerus.

coracoid, *n.* (*e*) In *ichth.*, a large bone of the shoulder-girdle; the clavicle; not homologous with the coracoid of Agassiz or of Parker, or the coracoideum of Vogt and Yung. *Starks*, Synonymy of the Fish Skeleton, p. 521.

coracoideum (kor″a-kō-id′ẹ-um), *n.*; pl. *coracoidea* (-ä). In *ichth.*, the supraclavicle; a bone of the shoulder-girdle of fishes between the clavicle and the post-temporal: not homologous with the coracoid of Parker, Agassiz, or Owen. *Starks*, Synonymy of the Fish Skeleton, p. 520.

coracoradialis (kor″a-ko-rā-di-ā′lis), *n.* [NL., < *coraco*(*ides*), the coracoid, + *radius*, radius.] The short head of the biceps muscle.

coraco-ulnaris (kor″a-kō-ul-nā′ris), *n.* [NL., < *coraco*(*ides*), the coracoid, + *ulna*, ulna.] Fibers of the biceps muscle attached to the fascia of the forearm.

coradgee, *n.* See ★*koradji*.

coral, *n.* **Black coral**, any coral having a black horn-like axis, as the antipatharians; also applied to the black axis of certain gorgonians. **Coral bead-tree, bean**

calculus, fern, hairstreak, rock. See ★*band-tree*, etc. **Deep-sea coral zone.** See ★*zone*. **Honeycomb coral,** a coral of the genus *Favosites*, so named from the regular hexagonal cells and transverse floors or tabulæ. **Mexican coral bean.** See ★*bean*1. **Rose coral,** any species of *Isophyllia*, the polyps of this genus being large and bright colored. **White coral,** a branched coral of the Mediterranean, *Amphihelia oculata*. **Yellow coral,** the yellow form of the hydrocoralline, *Distichopora nitida*.

coral-and-pearl (kor′al-and-pêrl′), *n.* The wild red baneberry, *Actæa rubra*, so called from its pearly-red berries.

coral-bead (kor′al-bēd), *n.* A climbing vine, with red drupes, of the genus *Epibaterium*, of the moonseed family. See ★*Epibaterium*.

coral-creeper (kor′al-krē″pèr), *n.* A trailing leguminous vine of Australia, *Hardenbergia coccinea* (*Glycine coccinea* of Curtis), bearing scarlet flowers. Also called *bleeding-heart*.

coral-gall (kor′al-gâl), *n.* One of the excrescences, of varied shape and size, produced on different kinds of coral by the action of barnacles, crabs and epizoic animals of other species.

These *coral-galls* may be found on the Milleporas and Madreporas of a certain portion of a reef and be absent from all the other genera of neighbouring corals. The crab-galls that are found so commonly and in such abundance upon Pocilloporas and Seriatoporas in certain parts of the Pacific and elsewhere are found only in cases of extreme rarity in other corals.
Nature, Sept. 10, 1903, p. 457.

coral-grove (kor′al-grōv), *n.* A group of arborescent corals growing together.

coralillo (kō-rä-lēl′yō), *n.* [Cuban Sp., dim. of *coral*, coral.] *Antigonon leptopus*, an ornamental climbing-vine of the family *Polygonaceæ*, which bears clusters of showy pink flowers.

coralist (kor′al-ist), *n.* [*Coral* + *-ist*.] A worker or dealer in coral.

Corallana (kor-a-lā′nä), *n.* [NL., < *corallum*, coral: see *coral*. The first species was found among corals.] The typical and only genus of the family *Corallanidæ*. *Dana*, 1852.

Corallanidæ (kor-a-lan′i-dē), *n. pl.* [NL., < *Corallana* + *-idæ*.] A family of cymothoid isopod crustaceans typified by the genus *Corallana*.

corallar (kō-ral′är), *a.* [*coral* + *-ar*.] Pertaing to a corallum or coral.

corallet (kor′a-let), *n.* [*corall-um* + *-et*1.] The skeleton of one of the individuals in a compound corallum. *Dana*.

corallian (kō-ral′i-an), *a.* and *n.* [L. *coralli-um*, coral, + *-an*.] 1. Having the character of coral, or containing coral.—2. Specifically, in *geol.*, noting a division of the Jurassic system lying above the Oxfordian and below the Kimmeridgian and in England including the coral rag, coralline oölite, and calcareous grit. In the English succession it constitutes the upper division of the Middle oolites and is characterized by its great abundance of corals in massive banks. In France and the Alps the parallel division is the Sequanian.

II. *n.* In *geol.*, the corallian division.

corallic (kō-ral′ik), *a.* [L. *corall-um*, coral, + *-ic*.] Having the character of or resembling coral.

Corallidæ (kō-ral′i-dē), *n. pl.* [NL., < *coralli-um* + *-idæ*.] A family of alcyonarian *Anthozoa*, of the order *Pseudaxonia*, in which the axis is a dense calcareous mass formed by the fusion of spicules. It includes the genera *Corallium* and *Pleurocorallium*. See *Coralliidæ*.

corallidomous (kor-a-lid′ō-mus), *a.* [L. *corallum*, coral, + *domus*, Gr. δόμος, house.] Living on coral reefs, as certain mollusks, crustaceans, and other organisms.

corallinaceous (kor″a-li-nā′shius), *a.* Belonging to the family (of algæ) *Corallinaceæ*.

coralline. I. *a.*—**Coralline crag, limestone.** See ★*crag*1, 2, ★*limestone*.

II. *n.* 4. Commercial rosolic acid.

coral-milk (kor′al-milk), *n.* The circulating fluid in the channels of compound corals.

The nutritive fluids, after elaboration by the polyps, are conveyed into the larger deep-seated parallel tubes: the nutrient fluid contained in these tubes resembles milk so much that it is known by the name of *coral-milk*.
T. Rymer-Jones, Animal Kingdom, p. 128.

coral-pea (kor′al-pē), *n.* Same as ★*coral-creeper*.

coral-polyp (kor′al-pol″ip), *n.* An individual zoöphyte of a coral polypidom.

coral-red (kor′al-red), *n.* and *a.* I. *n.* The red color peculiar to the variety of coral known as *Corallum rubrum*.

II. *a.* Having this color; covered with a glaze of this hue: as, a *coral-red* vase.

coralroot, *n.* **Crested coralroot,** an orchidaceous plant, *Hexalectris aphylla*, of the southern United States, similar to *Corallorhiza*, but distinguished by crested ridges on the lip of the flower.

Coral-spot disease. See ★*disease*.

coral-thrombus (kor′al-throm″bus), *n.* A red thrombus formed in a short time from slowly moving blood, the coagulating fibrin having entangled the red corpuscles before they had time to sink.

In the larger vessels considerable fibrin and a homogeneous material resembling *coral-thrombi* are seen.
Jour. Exper. Med., Oct. 25, 1900, p. 157.

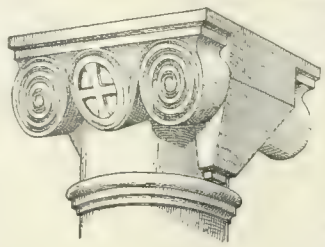
coral-tree, *n.*—2. A small tree of northern India, North China, Korea, and Japan, *Hovenia dulcis*, belonging to the buckthorn family. It bears a small fruit consisting of a three-seeded capsule resting on an enlarged, fleshy, arched peduncle, resembling a piece of red coral. This peduncle is edible and contains a sweet juice with a pear-like flavor. Also called *Japanese raisin-tree*. **Bat's-wing coral-tree,** an Australian tree, *Erythrina Vespertilio*, 30 to 40 feet high, having exceedingly light and spongy wood which is used by the aborigines for making shields. Called also *cork-tree*.

corbeau (kōr-bō′), *n.* [F., raven: see *corbel*2.] A very dark green color.

corbeille, *n.* 2. A fancy flower- or fruit-basket.

The full *corbeille* of blushing bloom.
Charlotte Brontë, Shirley, xxxii.

corbel1, *v. t.*—**Corbeled capital,** in *columnar arch.*, a capital which has one or more distinctly marked corbels, consoles, or brackets projecting from its mass. In Syrian architecture of the fourth to the sixth centuries this form was used to diminish the length of the unsupported epistyle between two capitals. In most cases there were two of such projections, so that the capital was oblong in plan. In a few cases there were three, so that an epistyle at a right angle with the main epistyle was carried.



Corbeled Capital.

H. C. Butler, Architecture and Other Arts, p. 177.

corbelated, corbellated (kôr′be-lā-ted), *p. a.* Furnished or decorated with corbels; corbeled.

corbel-block (kôr′bel-blok), *n.* 1. A corbel when made of a single piece of stone, terra-cotta, or the like.—2. A stone in a compound corbel made up of several courses, one block of the three or four composing the corbel.

corbel-tabling (kôr′bel-tā′bling), *n.* 1. A corbel-table (which see, with cut).—2. Building by means of rows of corbels or corbel-tables. In Romanesque architecture the corbel-tabling of the cornices is a distinctive feature.

corbie-gable (kôr′bi-gā″bl), *n.* Same as *stepped gable*.

corbillard (kôr-bē-yär′), *n.* [F., a young raven, a hearse, a coach.] A French state coach formerly in use. It had a top supported by six pillars, three on a side. The quarters were inclosed by curtains and the doorways were closed by leather screens, behind which were seats for the pages.

corbina (kôr-bē′nä), *n.* [Sp. *corbina*, *corvina* (NL. *Corvina*), name of several fishes so called from their black color or black fins; prop. fem. of *corvino*, < L. *corvinus*, of the raven or crow: see *corvine* and *corbin*, and compare *Corvina*.] A much-esteemed food-fish, *Corvina deliciosa*, of the western coast of South America, sometimes attaining a length of over 6 feet. The corbina is frequently shipped inland.

corbin-bone (kôr′bin-bōn), *n.* The crow's bone; the hindmost segment of the breast-bone of a deer, technically known as the xiphoid.

corbineta (kôr-bē-nā′tä), *n.* [Sp., dim. of *corbina*, a crow: see ★*corbina*.] A sciænoid fish, *Bairdiella icistia*, found on the west coast of Mexico.

corbule (kôr′būl), *n.* [NL. *Corbula*.] A bivalve of the family *Corbulidæ*.

corcopali (kôr-kop′a-lē), *n.* The edible, acid fruit of *Garcinia Indica*, a slender tree of the gamboge family, native to India. The fruit is purple, and of the size and shape of a small orange. It is somewhat astringent and has long been employed in India for the preparation of a cooling beverage, useful in cases of fever.

cord1, *n.* 9. An imperfection on the surface of glass. See ★*cordy*.—**Amniotic cord.** See ★*amniotic*. **Axial cord.** See ★*axial*. **Bedford cord,** a heavy rib-weave running lengthwise of the fabric, seen chiefly in women's dress-goods.—**Cord area.** See ★*area*. **Cord foot,** one lineal foot of a pile of cord-wood cut in 4-foot lengths and piled 4 feet high; equal to 16 cubic feet. **Ferrein's cords,** the true vocal cords.—**Gangliated cord,** the sympathetic nerve. **Gubernacular cord,** in *embryol.*, a fibrous cord connecting the embryonic mammalian testis with the skin of the scrotum and disappearing after the descent of the testis. **Stigmatal cord,** in *entom.*, one of the temporarily functionless solid tracheal branches running from the main longitudinal trachea to aborted thoracic stigmata in the nymphs and larvæ of certain insects of the neuropteroid series, as *Ephemeridæ*, *Perlidæ*, *Odonata*, and *Trichoptera*. In the adults they become functional. *A. S. Packard*, Text-book of Entom., p. 400. **Willis's cords,** fine fibrous cords which cross the sinuses of the dura mater, also called *trabeculæ of Willis* and *chordæ Willisii*.

cord1, *v.* II. *intrans.* To become hard and cord-like: noting a condition occasionally encountered in the blood-vessels.

From obstruction of the jugular there are often *cording* of the vein, swelling and œdema of the tissues and glands about the vein, and cellulitis of the neck.
Buck, Med. Handbook, III. 658.

cordage, *n.* 2. The quantity of wood, in cords, on a given area of land.

Cordaitaceæ (kôr″da-i-tā′sē-ē), *n. pl.* [NL. (Engler, 1887), < *Cordaites* + *-aceæ*.] A family of gymnospermous fossil plants of the order *Cordaitales*, typified by the genus *Cordaites*. It is characterized by unisexual flowers, the staminate stalked with 3–4 cylindrical stamens consisting of a simple pollen-sac; the fertile borne on short, filiform peduncles in the axils of bracts, many of which, crowded together on an axis, form spikes. Several genera are recognized, and generic names have been applied to various parts found detached from the stems. They were trees or woody plants with broad, longitudinally nerved leaves, ranging from the Devonian through the Carboniferous. See *Cordaites*.

cordaitaceous (kôr″da-i-tā′shius), *a.* Belonging or related to the family *Cordaitaceæ*.

cordaitalean (kôr″da-i-tā′lē-an), *a.* [*Cordaitales* + *-an*.] Belonging or related to the fossil plant-order *Cordaitales*.

Cordaitales (kôr″da-i-tā′lēz), *n. pl.* [NL. (Engler, 1892), < *Cordaites* + *-ales*.] An order of fossil gymnospermous plants, usually made to include the families *Cordaitaceæ* and *Dolerophyllaceæ*: doubts, however, exist with regard to the latter. They range from the Devonian to the Permian, and are regarded by many as the ancestors of the *Ginkgoales*.

cordaitean (kôr-da-i-tē′an), *a.* [*Cordaites* + *-an*.] Belonging or related to the fossil plant-genus *Cordaites*, or to the family *Cordaitaceæ*.

cordein (kôr′dē-in), *n.* [*cord(ol)* + *-e-* + *-in*2.] The trade-name of methyltribromsalol or methyl cordol. Its use in medicine is similar to that of cordol.

cordicole (kôr′di-kōl), *n.* [NL. *cordicola*, < L. *cor* (*cord-*), heart, + *-cola*, < *colere*, till, worship: see *cult*.] A worshiper of the heart: a name applied to members of Roman Catholic societies who worship the 'sacred heart' (of Jesus).

cording1, *n.* 3. In *sewing-machine work*, the stitching, with special machines, of cords on cloaks, corsets, uniforms, and other garments.

cordite (kôr′dīt), *n.* [*cord*1 + *-ite*2.] A smokeless powder, introduced in 1889, and adopted in the British military and naval service for small arms and guns of all calibers. Abandoned in 1902. It is brown in color, and is composed of 58 parts of nitroglycerin, 37 parts of guncotton, and 5 parts of mineral jelly (vaseline). The name is derived from the fact that it is made in the forms of cords or cylinders by pressing the composition through holes of varying size. The cylinders for heavy guns are made tubular. Cordite imparts a high velocity to the projectile without undue pressure, is very stable under extreme climatic conditions, and its ballistic properties are not seriously affected by moisture. The objection to it is that the high degree of heat developed upon combustion causes rapid erosion of the bore of the gun.

cordol (kôr′dol), *n.* [*cord*1(?) + *-ol*.] The trade-name of tribromphenyl salicylate, $HOC_6H_4COOH_6H_2Br_3$, prepared by the action of bromine on salol. It crystallizes in colorless needles, and is used in medicine as a gastric sedative and intestinal antiseptic.

cordoned (kôr′dond), *p. a.* Decorated with an encircling band in relief: as, a *cordoned* vase of old Satsuma.

cord-peg (kôrd′peg), *n.* In *elect.*, the metallic peg or plug attached to the end of a flexible conducting-cord for making switchboard connections. Such pegs are employed in telephone service and in other cases where circuits for small currents are needed.

corduroy, *v. t.* 2. In splitting a hide, to make uneven lines or spots on the flesh side of it. *Davis*, Manuf. of Leather, p. 203.

cordy (kôr′di), *a.* [*cord*1 + *-y*1.] Stringy; in *glass-manuf.*, noting a defective condition resulting from impurities. See also *wreath*, 4.

cordylite (kôr′di-lit), *n.* [Gr. κορύλη, club, + *-ite*2, in allusion to the shape of the crystals.]

A cerium fluocarbonate related to parisite but peculiar in containing barium: found in southern Greenland.

cordylurid (kör-di-lu'rid), *a.* and *n.* **I.** *a.* Of or belonging to the dipterous family *Cordyluridæ.*

II. *n.* A member of the family *Cordyluridæ.*

cordylus (kôr'di-lus), *n.*; pl. *cordyli* (-lī). [NL., < Gr. κορδύλη, a club.] In the medusoid of *Hydromedusæ*, an exumbral structure, possibly a modified tentacle, placed between tentacles and consisting of a core of vacuolated endoderm cells covered by flattened ectoderm. *W. K. Brooks.*

Sensory Club (Cordylus) of [illegible] sp., showing the hooks and cluster of [illegible] below them. Nearly one-half natural size. (From "Cambridge Natural History.")

core-bar (kōr'bär), *n.* A bar of iron upon which a round core is struck up. The bar is placed on the bearings of core-trestles and loam is laid on it and struck to shape by revolving it against the edge of a board cut to the required outline. Core-bars vary in diameter with the sizes of the cores required, ranging from a half inch to twelve inches or more, and when of large diameter, such as are used in gun-construction, are called *core-barrels.*

core-barrel, *n.* 2. In *mining* and *rock-drilling*, a form of boring-bit carrier for use in making annular holes in rock with the diamond drill. The barrel consists of a wrought-iron tube of the diameter of the hole outside, with spiral grooves along its length to allow escape of water and refuse. The core passes up inside the barrel. See ★*core-borer.*

core-bench (kōr'bench), *n.* A bench where small foundry cores are made.

core-board (kōr'bōrd), *n.* Same as *loam-board.*

core-borer (kōr'bōr"ėr), *n.* In *mining*, a type of machine for deep boring having an annular cutting-bit. To this type belong the diamond drill and the calyx drill.

Core-box machine, a molding-machine fitted with cutters adapted to form in wood patterns for core-boxes.— **Core-box plane,** a plane for making the hollow cylinders within which the cores are to be molded.

core-carriage (kōr'kar'āj), *n.* A low iron car on which cores and molds which are to be baked are run into the core-oven.

Core conductor. See ★*conductor.*

corediastasis, corediastole. Erroneous forms for ★*corodiastasis* and ★*corodiastole.*

core-drill (kōr'dril), *n.* Same as ★*core-borer.*

core-drilling (kōr'dril"ing), *n.* Drilling with an annular bit, usually of diamonds set in a holder, so that a core is left in the axis of the tube. From the core the strata which have been pierced can be determined.

Core-drilling is indispensable in a great variety of engineering and mining enterprises, affording, as it does, a means for drilling out a sample core or column of rock, which enables one to tell at a glance the exact nature of the substrata. *Sci. Amer.*, July 18, 1903, p. 44.

core-extractor (kōr'eks-trak"tọr), *n.* In *mining*, a conical-toothed clutch in the lower end of the core-barrel by which the core is detached and raised.

coreid (kō'rē-id), *a.* and *n.* **I.** *a.* Of or belonging to the heteropterous family *Coreidæ.*

II. *n.* A member of the family *Coreidæ.*

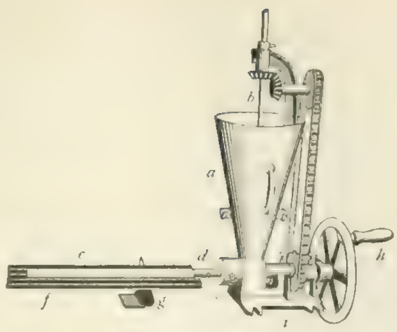
coreine (kō'rē-in), *n.* A mordant coal-tar color of the oxazin type, derived from the amide of dihydroxybenzoic acid. It dyes chromium-mordanted wool blue.—**Coreine AB** and **AR,** mordant coal-tar colors of the oxazin type, made by heating coreine RR with aniline and then sulphonating the product. It dyes chromium-mordanted wool blue.—**Coreine 2R,** a mordant coal-tar color of the oxazin type, derived from gallocyanine. It dyes chromium-mordanted wool a bright blue. Same as *celestine* ★*blue.*

core-iron (kōr'ī"ėrn), *n.* A small wrought-iron rod from $\frac{1}{8}$ to $\frac{1}{2}$ of an inch in diameter, used in forming a center for a foundry core. This is necessary in slender cores in order to make them sufficiently strong to withstand the pressure of the iron.

co-relation, *n.* 2. Specifically, in *vegetable teratol.*, the association of one malformation with others in the same plant: illustrated in *peloria*, etc. *Masters.*

core-loss (kôr'lôs), *n.* The loss of power in the iron core of electric machinery, consisting of the hysteresis loss and the eddy-current loss in the iron.

core-machine (kōr'ma-shēn"), *n.* In *foundry work*, a hand-power machine for pressing prepared molding-sand into cylindrical forms for use as cores. The sand is placed in the hopper end and by the revolution of a vertical plug is forced out of



Core-machine.

a, hopper [illegible] sand, flour, and oil through the forming-die; c, forming-die; d, core-tube; e, plastic core delivered upon corrugated tray, f; g, adjustment to keep tray level and to shift it until filled; h, operating-handle; i, base, resting on work-bench. Capacity 200 feet of core an hour.

the bottom of the hopper, through a die that forms it into long cylinders, deposited on a tray, and cut into lengths ready for the core-oven.

core-maker (kōr'mā"kėr), *n.* One who or that which makes cores; specifically, a workman employed in a foundry whose business it is to mold and bake sand or loam cores.

coreometer, *n.* See ★*corometer.*

core-oven (kōr'uv"n), *n.* In *foundry work*, an oven for drying and baking small cores. It may be a simple sheet-metal box placed over a small furnace or a large brick oven heated by coal or gas. The cores are placed upon triangular shelves which are pivoted at one corner. The oven is fitted with two doors placed at right angles, so that whether the shelf is in the oven or swung outside the oven is always closed by one of the doors.

core-packing (kōr'pak"ing), *n.* Packing placed around a core to increase its strength and durability. The material for both core and covering depends on the service required of the packing.

core-peg (kōr'peg), *n.* A peg or support for a core which is made of a number of parts. The various parts are set on the peg and are then fastened together.

core-plate (kōr'plāt), *n.* A thin annular cast-iron plate used in making a framework or skeleton for large cores. Several of these plates are fastened to a central bar, the space between them is filled with twisted hay, and the whole is covered with loam.

core-ring (kōr'ring), *n.* A ring of cast-iron which supports a core and, when the casting is poured, melts and becomes a part of the casting.

core-rod (kōr'rod), *n.* Same as ★*core-iron.*

co-respondency (kō-re-spon'den-si), *n.* The fact of being co-respondent, as in a suit for divorce.

core-stove (kōr'stōv), *n.* A stove for heating a core-oven in a foundry.

core-trestle (kōr'tres"l), *n.* A strong trestle, usually of metal, having V-bearings on its top in which a core-bar is laid. To the end of this core-bar is fastened a crank by which it can be turned to shape the core as in a rough sort of lathe.

core-tube (kōr'tūb), *n.* 1. Same as *core-barrel.* —2. The inner tube of a built-up gun.

core-vent (kōr'vent), *n.* In *founding*, a small hole or passage made in a core for the escape of gas. The best way to make it is to lay a string in the core when the latter is being made, and to burn it out after the core is baked. Sometimes small wires are placed in the core and withdrawn after it is baked.

core-wall (kōr'wâl), *n.* A wall of solid masonry in the interior of a dam, dike, or causeway which is constructed chiefly of sand or earth. *H. M. Wilson*, Irrigation Engineering, p. 350.

corf, *n.* 3. A small mine-car of wood or iron.

corf-cage (kôrf'kāj), *n.* The cage or elevator in which corfs are hoisted to the surface. [Eng.]

corial (kō-ri-äl'), *n.* [Sp. *corial*, appar. perverted from Arawak *kuljara.*] In Guiana, a dugout canoe pointed at both ends.

coriandrol (kō-ri-an'drōl), *n.* [L. *coriandrum*, coriander, + *-ol.*] A colorless fragrant liquid compound, $C_{10}H_{18}O$, contained in oil of coriander.

Coriariaceæ (kō"ri-ā-ri-ā'sē-ē), *n. pl.* [NL. (Dumortier, 1829), < *Coriaria* + *-aceæ.*] A family of dicotyledonous choripetalous plants of the order *Sapindales*, containing the genus *Coriaria* only, and characterized by 5-merous diplostemonous flowers. They are woody plants with opposite or whorled entire leaves without stipules, and axillary or clustered flowers. The genus *Coriaria* is remarkable for its wide distribution in both hemispheres of the old world, and is also found fossil in the Tertiary of Europe. See *Coriaria.*

coridine (kor'i-din), *n.* A monacid base, $C_{10}H_{15}N$, found in coal-tar. It boils at 211° C.

coriin (kō'ri-in), *n.* [*cori(um)* + *-in*2.] An albuminoid substance which cements together the fibers of the corium.

corimelænid (kor-i-me-lē'nid), *n.* A member of the heteropterous family *Corimelænidæ.* Also used adjectively.

corindin (kō-rin'din), *n.* [Formation not clear.] A ptomaine, $C_{10}H_{15}N$.

coring-out (kōr-ing-out'), *n.* The process of making hollow castings by the use of cores, as distinguished from forming the interior by a block of greensand.

coring-up (kōr-ing-up'), *n.* The process of putting the cores in place in a foundry-mold before closing it up by putting on the cope.

corinth (kor'inth), *n.* 2. A name applied to several coal-tar colors which dye currant-red and other reddish shades.—**Glycin corinth,** a direct cotton coal-tar color of the diazo type, derived from benzidine. It dyes unmordanted cotton currant-red in an acid bath. **Kongo corinth B** and **G,** direct cotton colors of the disazo type, the former derived from tolidine, the latter from benzidine. They dye unmordanted cotton brownish violet in a soap bath.

Corinthian, *a.* 4. Elegantly ornate; florid: applied to literary style.

I have already spoken of the Attic and the Asiatic styles; besides these, there is the *Corinthian* style. . . . It has not the warm glow, blithe movement, and soft pliancy of life, as the Attic style has; it has not the over-heavy richness and encumbered gait of the Asiatic style; it has glitter without warmth, rapidity without ease, effectiveness without charm. Its characteristic is, that it has no soul. *M. Arnold*, Essays in Criticism, p. 87.

Corinthian atrium. See ★*atrium.*

Corinthianesque (kọ-rin"thi-an-esk'), *a.* [*Corinthian* + *-esque.*] Resembling the Corinthian style: as, *Corinthianesque* pillars.

Corinthianism (kọ-rin'thi-ạn-izm), *n.* [*Corinthian* + *-ism.*] Corinthian conduct or theory; that is, the unrestrained pursuit of worldly pleasure.

Corinthianize, *v. i.* 2. In *arch.*, to design or to be designed somewhat in the spirit of the Corinthian order. Thus the Byzantine capitals of the fifth century and later, founded upon sharp, thistle-like leafage resembling the acanthus, are assumed to be deliberate imitations of Corinthian capitals, and may be said to be *Corinthianized.*

coriomyrtin (kō"ri-ọ-mėr'tin), *n.* Same as *coriamyrtin.*

coriosulphurine (kō"ri-ọ-sul'fụ-rin), *n.* [L. *corium*, skin, + *sulphur*, sulphur, + *-ine*2.] A yellow pigment found in the skin of certain birds.

corisid (kor'i-sid), *n.* A member of the heteropterous family *Corisidæ.* Also used adjectively.

corium, *n.* 3. A tunic of leather with overlying flaps. It appears in the Bayeux tapestry, and was used as late as the time of Henry III. *Myrick*, Antient Armor, I. 2.—**Corium phlogisticum,** an unusually thick crust formed on blood drawn during the height of an inflammation. See *buffy coat.*

Corixidæ (kō-rik'si-dē), *n. pl.* Same as *Corisidæ* (which is the preferred spelling).

cork1, **I.** *n.* 5. *pl.* (*a*) A game played with corks colored differently on the sides and so trimmed that they may fall either way, the players betting on whether the majority thrown will fall red or black. Sometimes called *props.* (*b*) In France and Belgium, a game, a mixture of quoits and bowls. (*c*) A variety of skittle-pool.—**Burnt cork,** charred cork used to blacken the face, as in making up for a 'negro minstrel,' or to emphasize the eyebrows, etc.

II. *a.*—**Cork belt,** a cork life-preserver made to be fastened around the waist.—**Cork leg,** an artificial leg made of cork: now usually applied to one made of wood or other material.

cork1, *v. t.* 4. In *currying*, to grain. [Rare.] *Modern Amer. Tanning*, p. 83.

cork-board, *n.* 2. In *currying*, a board, with a cork surface, used by a workman to board or grain a skin or hide. *Modern Amer. Tanning*, p. 83.

cork-borer (kôrk'bōr"ėr), *n.* Any one of the following insects, which bore into the corks of wine-bottles: *Rhizophagus bipustulatus*, a nitidulid beetle; *Tinea cloacella*; *Endrosis lactella*; and *Asopia farinalis.* One of the sow-bugs, *Oniscus murarius*, also has this habit, but probably only follows insect damage.

cork-elm (kôrk'elm), *n.* A majestic forest-tree, *Ulmus racemosa*, of the more northeastern parts of North America, but ranging from Quebec to Nebraska and south to northern New Jersey and Missouri. It reaches a height of 100 feet, the trunk, which sometimes attains a diameter of 3 feet, often being free of branches for 60 feet. The

habit is wholly unlike that of the white elm, the top being relatively small for so large a tree. The bark of old trees is deeply divided by fissures into broad, corky ridges. The wood has most of the valuable qualities of the elm, and is largely employed in the manufacture of agricultural implements, wagon hubs, and railway-ties, and for the foundations of buildings. It is planted sometimes for shade and ornament, but lacks the umbrageous qualities as well as the grace and beauty of the American elm.

Harris's Cormorant (*Nannopterum harrisi*).

corking (kôr'king), *n.* The undesirable effect produced in wines by fungi in the cork.

In order to destroy the fungi the spores or mycelium of which exist in cork and give rise to volatile substances, which in their turn give rise to what is known as *corking* in wines or other fluids, the corks employed should be sterilized in vacuo. *Lancet*, June 8, 1904, p. 1758.

corking (kôr'king), *a.* [Cf. *corker.*] Fine; 'bully.' [Slang.]

corkir (kôr'kêr), *n.* [Also *korkir*, *korker*, < Gael. *corcur*, crimson, = Ir. *corcur*, scarlet, OIr. *corcur*, purple, = W. *porphor*, < L. *purpura*, purple: see *purple*. See also *cork*[4].] A kind of lichen which furnishes a crimson dye.

cork-paint (kôrk'pānt), *n.* In *ship-building*, a paint applied to iron surfaces to prevent condensation of moisture from the atmosphere, or sweating. A sticky varnish is first applied to the surface, and finely granulated cork is thrown against it. The adhering cork is afterward painted over with ordinary paint.

cork-pool (kôrk'pöl), *n.* See ★*pool*[2].

cork-rope (kôrk'rōp), *n.* The rope to which the corks of a fish-net are attached.

corkscrew, *n.* **2.** A geared logging-locomotive. [Slang.]—**Devil's corkscrews,** spiral bodies, described under the generic name ★*Daimonelix* (which see, with cuts), of large size, often having a vertical height of from 5 to 10 feet, and sometimes coiled about a solid cylindrical axis. They occur in a vertical position in the Miocene rocks of Nebraska, and were originally regarded as casts of the borings of rodents. The latest investigations show that the bodies are constituted of a probably vegetable cellular tissue composed of loose oblong tubules variously intertwined.

corkscrew-plant (kôrk'skrö-plant), *n.* See *Spiranthes.*

cork-tree, *n.* **2.** In Australia: (*a*) *Hakea lorea*, a tree of the family *Proteaceæ*, giving strong, durable timber: so called in allusion to its rugged bark. (*b*) Same as *bat's-wing* ★*coral-tree.*—**New Zealand cork-tree,** a tiliaceous tree, *Entelea arborescens*, having extraordinarily light wood.

cork-wax (kôrk'waks), *n.* Same as *cerin*, 2.

cork-wing (kôrk'wing), *n.* *Crenilabrus melops*, a labroid fish found on the coasts of Europe.

corkwood, *n.* **2.** In Australia, any one of several trees having very light or soft and easily worked wood, or the wood itself. The three most important are *Duboisia myoporoides*, a solanaceous tree having white or yellowish firm, soft wood, and bark resembling that of the cork-oak: also called *corkwood-elm*; *Endiandra Sieberi*, a lauraceous tree with light-brown soft wood suitable for cabinet-work; and *Schizomeria ovata*, of the family *Cunoniaceæ*, which has wood exceedingly light in weight.

3. See ★*whau.*

corkwood-elm (kôrk'wud-elm″), *n.* See ★*corkwood*, 2. See also *Duboisia* and *duboisine.*

Corky dike, a local name in the *Acadian* provinces of a variety of soil which contains many vegetable fragments and tubers. *J. W. Dawson*, Acadian Geol., III. 25.—**Corky warts,** pathological formations of cork in the form of wart-like excrescences on roots and tubers. They frequently occur in connection with scab of potato-tubers and beets, and are mostly due to the action of bacteria and fungi.

cormidium (kôr-mid'i-um), *n.*; pl. *cormidia* (-ä). [NL., < Gr. κορμός, a trunk (see *cormus*), + dim. -ίδιον.] A group, in a cormus, of the morphological units or persons of which it is composed. In the siphonophores the cormidia are often arranged at regular intervals upon the stem, separated by internodes.

The *cormidium* consists of a gonophore and a sterile person with bract, siphon, and capturing filament.
Lang (trans.), *Comp. Anat.*, p. 112.

cormogenous (kôr-moj'e-nus), *a.* In *bot.*, having a corm.

cormoid (kôr'moid), *a.* Resembling or having the character of a corm. *Syd. Soc. Lex.*

cormophylogeny (kôr″mō-fī-loj'e-ni), *n.* [Gr. κορμός, a trunk, + φυλόν, a tribe, + -γενεια, < γεν-, produce (see *phylogeny*).] Same as *cormophyly.*

cormorant, *n.*—**Harris's cormorant,** *Nannopterum harrisi*, a large flightless cormorant confined to the vicinity of Narborough Island, of the Galapagos group, discovered by Charles Miller Harris in 1897, and named for him. See cut in first column.

cormus, *n.* **3.** In *biol.*, a morphological individual or morphon of the fourth order, composed of two or more persons organically connected into a compound organism. A siphonophoran is a cormus in this sense, since its constituent members are persons; but a tree is not. Sometimes *corm.* See *person*, 8.

corn[1], *n.*—**Corn-and-cob meal,** the product of grinding the whole ear of Indian corn. The combination of grain and cob has been found advantageous for stock-feeding. **Corn-belt** (of the United States), the States where Indian corn is most extensively grown. These are seven in number: Illinois, Iowa, Kansas, Nebraska, Missouri, Indiana, and Ohio.—**Corn bran,** the external coating of the kernel of maize, separated by grinding and bolting. In a compressed state, with the addition of water, and of salt as a preservative, it is sold as food for cattle. **Corn chop,** coarsely ground or cracked Indian corn used for feeding stock.—**Corn ear-worm,** the larva of a cosmopolitan noctuid moth, *Heliothis armiger*, which feeds on ears of maize. Also known as the *boll-worm* and *tomato fruit-worm.*—**Corn ergot.** See ★*ergot*1.—**Corn flour.** (*a*) Corn meal. (*b*) Same as *corn-starch*, 2.

The only form of corn as human food at all known abroad is corn starch, which is sold principally in the British Isles under the name of *corn flour.*
U. S. Dept. Agr., Use of Maize in Europe, 1891, p. 5.

(*c*) A term applied to flour made from rice or other grain. [Eng.] (*d*) A recent product which consists of the finely ground grain of Indian corn exclusive of the chit or germ. It is finer than corn meal, and being nearly free from oil is of better keeping quality; but it has lost the corn flavor and lacks gluten, and hence must be used in mixture with strong wheat flour.—**Corn meal,** the grain of Indian corn ground to varying degrees of fineness: used for making mush and the different kinds of corn bread, and also for feeding animals. See ★*corn flour* and *samp.*—**Corn oil,** an oil derived from the germ of the grain of maize as a by-product in the manufacture of glucose. It is used to some extent in soap-making and as a substitute for linseed-oil in painting, and, having a fine flavor, it is often mixed with olive-oil, as also sometimes with cod-liver oil. It is also vulcanized and mixed with rubber.—**Corn plant-louse,** an American aphidid, *Aphis maidis*, living on Indian corn.—**Corn root-louse,** an American aphidid, *Aphis maidi-radicis*, which lives for at least a part of its existence on the roots of Indian corn.—**Corn-root web-worm,** the larva of an American crambid moth, *Crambus zeellus*, which feeds on the roots of maize and forms a webbed cocoon near the base of the stalk.—**Corn root-worm,** the larva of either of two American chrysomelid beetles, *Diabrotica longicornis* and *D. duodecim punctata.* See *Southern* ★*corn-root worm*, with cut. **Corn-seed maggot,** the larva of an American anthomyid fly, *Pegomya fusciceps*, which damages seed-corn in the ground.—**Corn-stalk maggot,** the larva of an American fly, *Chætopsis ænea*, which lives in a cavity formed within the stems of maize, wheat, oats, and sugar-cane.—**Corn trash,** the husks or shucks of Indian corn. [Southern U. S.]—**Corn-wireworm,** the larva of an American elaterid beetle, *Melanotus cribulosus*, which injures growing maize.—**Cuzco corn,** a Chilean Indian corn of many varieties. It belongs to the soft type, and has the kernels larger than in any other sort, sometimes an inch long.—**Danubian corn,** an Indian corn grown in commercial quantity in southeastern Europe, preferred for chicken feed on account of its small grains. It is thought to belong to the 'golden pop-corn' race.—**Dent corn.** See ★*maize.*—**Flint corn.** See ★*maize.*—**Fodder corn,** maize intended for green or dry forage; specifically, any variety of maize specially adapted for use as forage, that is, producing abundant foliage and, if intended for green-feeding, having a long season. Though the corn-plant grows richer in content with maturity, it is fed green with advantage for certain purposes, particularly for soiling. Fodder corn is often sown broadcast or in drills, more thickly than corn intended for grain.—**Green corn,** in *cookery*, a cylindrical mass of yellowish egg-capsules of certain whelks, *Buccinum.*—**Horse-tooth corn,** a group of varieties of dent corn which have long, flat kernels.—**Hulled corn.** See *hull*1, *v. t.*—**Indian corn.** See *maize* and *Zea.* **Jerusalem corn.** See ★*Kafir-corn.*—**Kafir corn.** See ★*Kafir-corn.*—**Large corn-stalk borer.** Same as *sugar-cane borer.*—**Mummy-corn,** Indian corn found with mummies in Peru and Chile.—**Pharaoh's corn.** Same as *mummy-wheat.* **Snapped corn,** corn ears picked, usually somewhat before they are ripe, and, with some of the inner husks adhering, fed to stock.—**Southern-corn leaf-beetle** an American chrysomelid beetle, *Myochrous denticollis.* **Southern-corn root-worm,** the larva of an American chrysomelid beetle, *Diabrotica duodecimpunctata*, also known as the *12-spotted cucumber-beetle* or *12-spotted Diabrotica.*

Southern-Corn Root-worm. (*Diabrotica 12-punctata*).

a, beetle; *b*, egg; *c*, larva; *d*, anal segment of larva; *e*, work of larva at base of cornstalk. All much enlarged except *e*, which is reduced. (After Riley, U. S. D. A.)

Sugar corn. (*a*) A variety of sweet corn. See ★*maize.* (*b*) A brand of corn-feed made up mostly of the hulls and germs of maize-kernels.—**Tassel corn,** a sport, produced by various types of maize, in which kernels are borne on the tassel. **White Egyptian corn.** Same as ★*chicken-corn.*—**Yankee corn,** flint corn: so called in the West because grown chiefly in New England.

corn[1], *v. i.* **2.** To form corns or seeds in the ear or pod; kern: said of cereals or pulse. *N. E. D.*

corn[2], *n.*—**Soft corn,** a corn formed between the toes and constantly macerated by the perspiration of the foot.

Corn. An abbreviation of *Cornish* and of *Cornwall.*

cornacuspongian (kôr-nak-ū-spon'ji-an), *a.* and *n.* **I.** *a.* Having the characteristics of the *Cornacuspongiæ.*

II. *n.* An individual of the order *Cornacuspongiæ.*

corn-aphis (kôrn'ā″fis), *n.* An American aphidid, *Aphis maidis*, found commonly on Indian corn.

corn-binder (kôrn'bīn″dêr), *n.* In *agri.*, a harvesting-machine for cutting, gathering, and binding together the stalks of Indian

Corn-binder.

a, guides for bringing the stalks to the knife (not shown); *b*, binding mechanism; *c*, bundle of stalks ready to be discharged.

corn. It is a horse-power machine operated by one man. One type has two long guide-bars designed to collect all the stalks of one row of corn and guide them to a short reciprocating knife placed at the throat between the bars. The machine is driven along the row, and gathers, cuts, and bends down the stalks into a compact bundle, which is bound and discharged behind the machine or held until a number of bundles accumulate, when all may be discharged at once for convenience in shocking. See *mower* and ★*corn-shocker.*

corn-boggard (kôrn'bog ärd), *n.* A scarecrow set up in a corn-field.

As he sat in his shirt-sleeves and stocking-feet, . . . he was more than usually grotesque, 'As slamp an wobbly as an owd *corn-boggart*,' so his neighbors described him.
Mrs. Humphry Ward, David Grieve, i. 4.

corn-brake (kôrn'brāk), *n.* A plantation of maize. [U. S.]

corn-broom (kôrn'bröm), *n.* A broom made from the branching panicles of broom-corn.

corn-crowfoot (kôrn'krō″fůt), *n.* See ★*crowfoot.*

corn-doctor (kôrn'dok-tọr), *n.* A chiropodist. [Colloq.]

cornea, *n.* **Conical cornea,** a conical anterior bulging of the cornea. Also called *keratoconus* and *staphyloma corneæ.* See *staphyloma.* **Cornea globosa.** Same as *buphthalmos.* **Hernia of the cornea.** Same as *ceratocele.* **Sugar-loaf cornea.** Same as *buphthalmos.*

Corneal astigmatism. See ★*astigmatism.*

cornein (kôr'nẹ̄-in), *n.* [L. *corneus*, horny, + *-in*[2].] 1. A nitrogenous compound which forms the chief organic portion of the corals *Antipathes* and *Gorgonia.* It is related to spongin, fibroin, and sericin.—2. An igneous rock of a compact, tough, and horn-like texture. Dana refers to this name as an equivalent of *aphanite.* It was applied by De la Beche to a variety of trap-rock found in Pembrokeshire. Also *corneine.*

cornel, *n.* **Silky cornel,** *Cornus Amomum*, an American shrub from 3 to 10 feet high, with ovate, silky pubescent leaves and purplish twigs, found along streams from New Brunswick to Florida and westward to the Dakotas and Texas. Also called *swamp-dogwood* and *kinnikinick.*

corneoblepharon (kôr″nẹ̄-ọ̄-blef'ạ-ron), *n.* [NL. *cornea*, cornea, + Gr. βλέφαρον, eyelid. The form does not exactly express the notion defined.] Adhesion between the cornea and the eyelid.

corneo-iritis (kôr″nẹ̄-ọ̄-ī-rī'tis), *n.* [NL., < *cornea* + *iritis.*] Inflammation of the cornea and the iris. *Lancet*, May 30, 1903, p. 1516.

corneole (kôr'nẹ̄-ōl), *n.* [NL. *corneola*, dim. of *cornea*, cornea.] The anterior transparent part of each of the segments of the compound eye of insects. *Syd. Soc. Lex.*

corner, *n.* **10.** Specifically, a projecting angle in the side of an instrument of the viol family. In instruments of the true violin group there are two corners on each side, between which is the concave indentation called the *waist.* See ★*block*[1], 19.—**11.** In *math.*, a vertex or summit of a polyhedron.—**12.** In *field hockey*, a free hit against the defending side, made within three feet of the nearest corner flag.—**Amen corner.** See ★*amen.*—**Corner binds,** in *forestry*, four stout chains, used on logging-sleds, to bind the two outside logs of the lower tier to the bunks and thus give a firm bottom to the load. [Newfoundland].—**Corner quadrat.** See ★*quadrat.*
Dead corner, a manufacturer's name for any corner or angle in the lead chambers used in making sulphuric acid, in which the gases stagnate or fail to be mixed as they should be by motion. **Round the corner,** in *poker*, a straight which is made by counting the ace as a connecting card between the top and the bottom of a suit, such as Q K A 2 3. When played it outranks the lowest possible straight.

corner, *v. t.* **3.** In making turpentine, to cut out a triangular shallow chip above each of the two corners of the box, to prepare the tree for chipping and to direct the flow of resin into the box. [Southern U. S.]—**4.** To form a corner in (a stock or commodity). See *to corner the market.*

corner-block (kôr'nėr-blok″), *n.* In *violin-making*, see ★*block*[1], 19.

corner-punch (kôr'nėr-punch″), *n.* An angular punch used for cleaning out corners.

corner-valve (kôr'nėr-valv″), *n.* A little-used form of small valve in which the spindle and valve are on one side, at right angles to the plane of the two outlets. The angle-valve, in which the spindle is in the plane of the two outlets and in line with one of them, is more common.

cornet[1], *n.* **8.** In *bot.*, a hollow, horn-like growth or projection; a hood.

corneta (kôr-nā'tạ̈), *n.* [Sp.] Same as ★*cornet-fish.*

cornet-fish (kôr'net-fish″), *n.* A trumpet-fish, *Fistularia depressa*, widely distributed through the Pacific.

cornette-pot (kôr-net'pot), *n.* A pot in which the cornette of gold undergoes one of the steps of the assaying process.

corneum (kôr'nẹ̄-um), *n.* [NL., neut. of L. *corneus*, horny: see *cornea.*] The horny layer of the skin.

corn-feed (kôrn'fēd), *n.* One of a class of commercial feeds for stock, composed chiefly of the waste from the manufacture of glucose and starch.

corn-flag, *n.* **2.** The yellow flag or flower-de-luce, *Iris pseudacorus*, now naturalized in the eastern United States and common in cultivation.

Corn-flower decoration. See ★*decoration.*

corn-fly, *n.*—**Ribbon-footed corn-fly.** Same as *corn-fly.*

corn-fodder (kôrn'fod″ėr), *n.* The maize-plant as used for feeding stock; specifically, the whole maize-plant, including the ears, field-cured and used for feeding cattle. It is usually put up in shocks and is known on the farm as 'shock corn.' Contrasted with *silage* and ★*stover*[1]. Compare *fodder* and *fodder* ★*corn.*

corn-grinder (kôrn'grīn″dėr), *n.* A muller for grinding corn on the metate.

corn-harvester (kôrn'här″ves-tėr), *n.* A machine used in harvesting maize. See ★*corn-shocker.*

cornice (kôr'nis), *v. t.* To furnish or finish with a cornice.

cornice-brake (kôr'nis-brāk), *n.* See ★*brake*[3], 14.

cornice-machine (kôr'nis-mạ-shēn″), *n.* A machine for working copper or galvanized iron to form the moldings and decorations of sheet-metal cornices for the exterior of buildings.

corniculiferous (kôr-nik″ū-lif'ẹ-rus), *a.* In *bot.*, bearing little horns or projections; corniculate.

cornification, *n.* **2.** The growing of horns.

> The habit of *cornification* is more likely to have been formed nearer home than in the interior of Africa.
> *Southey*, Doctor, cxxviii.

Corning[2] (kôr'ning), *n.* [Named for Erastus *Corning* of Albany, New York, the owner of the first vehicle of this kind.] A top-buggy with deep sides and the part forward of the seat cut down square.

Cornish, *a.* **Cornish pump,** any pump worked by a Cornish engine-cylinder. As the Cornish engine had no connecting-rod and crank-device, the length of its stroke was not constant; but no acceleration of the water-column was caused by the harmonic motion of the piston as the crank revolved.—**Cornish rolls,** crushing or pulverizing rolls used chiefly for ores or easily broken materials.

corn-jobber (kôrn'job″ėr), *n.* A jobber who deals in corn; a grain-dealer.

corn-mildew (kôrn'mil″dū), *n.* The rust of wheat caused by the fungus *Puccinia graminis.* [Eng.]

corno (kôr'nō), *n.* [It., < L. *cornu*, horn: see *corn*[2], *horn.*] In *music*, a horn. When used absolutely, it now usually designates the French or orchestral horn (see *horn*); but the *corno inglese*, or English horn, is a tenor oboe (see *oboe*), and the *corno di bassetto*, or basset horn, is a tenor clarinet. See ★*corno di caccia.*

corno di bassetto. **2.** In *organ-building*, a soft-toned reed-stop.

corno di caccia (kôr'nọ̄ dẹ̄ käch'ä). [It., 'hunting-horn.'] A horn originally used in hunting and gradually developed into the modern French or orchestral horn. See *horn*, 4 (*c*).

corno-flute (kôr'nọ̄ flöt). In *organ-building*, a soft stop of the flute class.

cornometer (kôr-nom'e-tėr), *n.* [E. *corn*[1] + Gr. μέτρον, measure.] See ★*grain-tester.*

cornopean, *n.* **2.** In *organ-building*, a reed-stop of a bold, powerful tone.

corn-pike (kôrn'pīk), *n.* A circular rick of corn (small grain), pointed at the top; a stack of grain. [Prov. Eng.]

corn-pit (kôrn'pit), *n.* That part of a produce exchange where the business in Indian corn is carried on. [U. S.]

corn-pith (kôrn'pith), *n.* The pith of the stalk of maize, used in the manufacture of cellulose and for a packing between the inner and outer shells of war-ships. It swells greatly when wet and is thus suited to close apertures automatically.

corn-rail (kôrn'rāl), *n.* A name for the corn-crake, *Crex pratensis.*

corn-riddle (kôrn'rid″dl), *n.* A corn-sieve.

corn-salve (kôrn'säv), *n.* An ointment or salve, generally containing salicylic acid and cannabis indica, applied to corns for their removal.

corn-sheller, *n.* Corn-shellers range in capacity from 30 bushels an hour in hand-machines to 250 bushels an hour in power-machines. Some power-machines clean the shelled corn by a blast from a fan and elevate it to a wagon-box or grain-car, and deliver the cobs to an elevator which stacks them at a distance from the machine. Others deliver the clean corn to sacks. Power-machines are also provided with long conveyers for collecting the unshelled corn and conveying it to the sheller. All, both stationary and portable, can be operated by belting or gearing from a horse-power machine placed in the field near by, or by a belt from a portable motor. **Shuck corn-sheller,** a machine for removing the husks from the cob, shelling and cleaning the corn, delivering it to a sacking-machine, and stacking the husks and cobs.

corn-shocker (kôrn'shok″ėr), *n.* In *agri.*, a horse-power machine for cutting standing Indian corn, gathering and binding the stalks into shocks, and depositing the shocks in an upright position upon the ground; a corn-harvester. It consists of a strong platform, mounted on wheels and fitted with machinery for cutting, gathering, bunching, and binding the stalks into an upright shock that stands upon the platform. Attached to the platform is a crane which, when the shock is bound and tied, can be used to lift it, swing it to one side, set it upon the ground, release the lifting apparatus, and return it to its position ready to lift the next shock. The machine is drawn by two horses and operated by one man, the forward movement of the machine, as in other harvesters, serving to move all the machinery except the crane, which is operated by hand. If desired, the shock when gathered can be transported on the machine to another place to leave the field clear for plowing.

corn-shuck (kôrn'shuk), *n.* One of the coarse leaves which inclose an ear of Indian corn.

corn-sieve (kôrn'siv), *n.* A sieve for cleaning corn or grain.

corn-silk (kôrn'silk), *n.* The styles of Indian corn: same as *silk*, 4. Corn-silk is officially recognized under the pharmacopœial name *zea* as a mild stimulant diuretic.

corn-spurry (kôrn'spur″i), *n.* See *spurry*[2].

corn-stalk (kôrn'stâk), *n.* **1.** The stem or culm of Indian corn, without the ears, leaves, or tassel, or with all of these except the ears. Compare ★*stover*[1]. The corn-stalk consists of an outer-shell surrounding the pith. After removal of the latter the shell is now sometimes ground into a meal equal to good hay for feeding stock.
2. A tall, slender person: applied as a nickname to those whites who have been born and bred in the Australian colonies, and especially in New South Wales.

> The Australian ladies may compete for personal beauty and elegance with any European, although satirized as *corn stalks* from the slenderness of their form.
> *G. Bennett*, Wanderings in N. S. Wales, I. 341.

Corn-stalk disease, a peculiar fatal malady of cattle in the western United States, the cause of which is little understood. It frequently follows the eating of dried standing corn-stalks, hence the name.

> The *cornstalk disease*, which extends northward into a few localities in the northern stock ranges, especially in South Dakota, is a strange, little-understood malady of cattle, due to the eating of dry cornstalks in the field after harvest. As corn of itself is not poisonous, the real cause of the malady has been variously attributed to bacteria, to parasitic fungi, and to saltpeter, which may, under different conditions, be present on the corn, or simply to malnutrition or impaction of the alimentary canal. *Yearbook U. S. Dept. Agr.*, 1900, p. 307.

Corn-stalk fiddle, a musical toy made from a nearly ripe stalk of corn by slitting from the outer portion of the stalk, just above a joint, two narrow strips (without detaching the ends), raising them, and inserting under them thin slivers of wood. The slivers form bridges which support and stretch the fibers and make it possible to use them in the manner of a violin. [U. S.]

cornstalk-weed (kôrn'stâk-wēd), *n.* The shining pondweed, *Potamogeton lucens*, the long peduncles of which, surmounted by dense spikes, rising out of the water, somewhat resemble stalks of Indian corn.

corn-tassel (kôrn'tas″l), *n.* The tassel or staminate inflorescence at the top of a stalk of Indian corn.

cornu, *n.*—**Cornua of the spinal cord,** collections of gray matter seen on transverse section of the spinal cord, passing, two anteriorly and two posteriorly, from the central commissure. See cut under *spinal cord.*—**Cornu cutaneum,** a horny outgrowth from the skin.—**Cornu majus.** Same as *ceratohyal;* one of the hyoid bones of fishes.—**Cornu occipitale,** the posterior horn of each lateral ventricle of the brain.—**Ethmoidal cornu,** the middle turbinated body.—**Middle cornu.** (*a*) Same as *ethmoidal* ★*cornu.* (*b*) The descending horn of each lateral ventricle of the brain.

cornuate (kôr'nụ̄-āt), *a.* [L. *cornuatus*, poetic variant of *cornutus*, horned.] Same as *cornute*, ★3.

cornucopia, *n.* **4.** An extension of the choroid plexus into each lateral recess of the fourth ventricle of the brain.

cornucopiate (kor-nụ̄-kō'pẹ̄-āt), *a.* [*cornucopia* + *-ate*[2].] Having the shape of a cornucopia, as certain shells.

cornule (kôr'nūl), *n.* [LL. *cornulum*, dim. of L. *cornu*, horn.] A horny grinding-plate, with the function of a tooth.

Cornu's spiral. See ★*spiral.*

Cornute leaf. See ★*leaf.*

cornutin (kôr-nū'tin), *n.* [L. *cornutus*, horned, + *-in*[2].] A poisonous alkaloid, of unknown composition and somewhat doubtful identity, found in ergot.

> The recent announcement by Kobert (C. C. 1885, 66) of three new compounds in ergot, ergotic and sphacelic acids and *cornutine*, is questioned by Tanret (J. Ph. 1885, 11,309). *Thorpe*, Dict. Applied Chem., II. 13.

Cornwall heave. See ★*heave.*

Cornwallis (kôrn-wol'is), *n.* The anniversary of the capture of General Cornwallis at Yorktown (Oct. 19, 1781), long observed as a holiday with parades, sham battles, etc.

> I hait the Site of a feller with a muskit as I du pizn.
> But there is fun to a *cornwallis* I ain't agoin' to deny it.
> *Lowell*, Biglow Papers, 1st ser., ii.

coroa (kō-rō'ä), *n.* [Pg., a crown: see *crown.*] A gold coin of Portugal, equal to 5,000 reis, and equivalent to about $5.40.

corodiastasis (kor″ọ̄-dī-as'tạ-sis), *n*; pl. *corodiastases* (-sēz). [NL. (at first erroneously *core-*),

< Gr. κόρη, pupil of the eye, + διάστασις, separation.] Dilatation of the pupil. Also *corodiastole*.

corodiastole (kor″ ọ̄-dī-as′tọ-lē), *n.* [NL. (at first erroneously *core-*). < Gr. κόρη, pupil of the eye, + διαστολή, separation, dilatation.] Same as ★*corodiastasis*.

corol., coroll. Abbreviations of *corollary*.

corollar (kọ̄-rol′är) *a.* [NL. *corollaris*, < *corolla*, corolla.] Same as *corollate*.

corollarial (kor-ọ-lā′ri-al), *a.* [LL. *corollarium*, corollary, + *-al*[1].] Of the character of a corollary.

corollary, *n.* **II.** *a.* Same as ★*corollar* and *corollate*.

corollitic (kor-ọ̄-lit′ik), *a.* [Also erroneously *carolitic, carolytic*; < F. *corollitique*, said to be formed (erroneously) from L. *corolla*, a wreath, garland: see *corolla*.] Having a sculptured garland wound around its shaft, generally in a spiral. [Rare.]

corollula (kọ̄-rol′ụ̄-lä), *n.*; pl. *corollulæ* (-lē). [NL., dim. of *corolla*: see *corolla*.] A small or minute corolla, especially the corolla of a floret in composite plants.

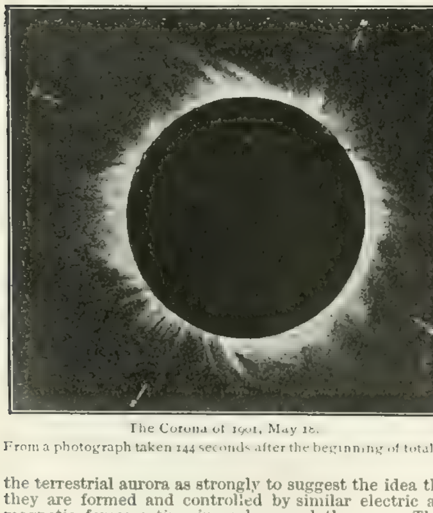
corollule (kor′o-lūl), *n.* Same as ★*corollula*.

corometer (kọ̄-rom′ẹ-tėr), *n.* [First erroneously *coreometer*; < Gr. κόρη, the pupil of the eye, + μέτρον, measure.] An instrument for measuring the width of the pupil.

corona, *n.* **5.** (*h*) In *zoöl.*, the upper, branched portion of a crinoid, as distinguished from the *stem* or *columna*. (*i*) See the extract.

> In Melo and some other genera the spines project upwards and are generally unclosed on the apertural side. This produces the spiral *corona*, so striking a feature in some shells. *Amer. Nat.*, Dec., 1902, p. 932.

6. (*d*) A cucullus or hood. (*e*) The ring of primary wood in the medullary sheath.—**7.** The solar corona is very complex. There is, first, a faintly luminous haze, not very high near the poles of the sun, while it extends at times to a distance of five or six million miles from the solar equator and the sun-spot zones, gradually fading to invisibility. Its spectrum is mainly continuous, sometimes, however, showing faintly a few of the most conspicuous Fraunhofer lines, which indicates that, while probably composed of incandescent particles, it also reflects sunlight. Next there is a gaseous envelop, less extensive and interpenetrating the haze, and composed of a substance, as yet unidentified but provisionally called *coronium*, of extreme tenuity and shown to be gaseous by its spectrum of bright lines. Of these lines the most conspicuous by far is in the green, and this was for a long time erroneously supposed to coincide with a line known as Kirchhoff's 1474 (λ, 5317), which is prominent in the chromosphere spectrum; recently, however, it has been shown to be slightly more refrangible (λ, 5304). A number of other coronium lines are revealed by photography in the violet and ultra-violet. Thirdly, there are the sharply defined streamers which mainly emanate from rings surrounding the poles and near the equator, but also less abundantly from the whole sun-spot region. They curve from both sides toward the spot-zones, and in their arrangement so closely resemble that of the streamers of



The Corona of 1901, May 18.
From a photograph taken 144 seconds after the beginning of totality

the terrestrial aurora as strongly to suggest the idea that they are formed and controlled by similar electric and magnetic forces acting in and around the sun. Their composition is doubtful, because it has not yet been found possible to isolate their spectrum. There is a distinct sympathy between all these elements of the corona and the sun-spots. At the time of a sun-spot minimum the wing-like extensions are longest, the coronium spectrum faintest, and the polar streamers especially conspicuous: while at a sun-spot maximum the corona is brighter but smaller, and is markedly quadrangular in form, the greatest extensions lying above the middle of the spot-zones. The photographs of any particular eclipse also show many other interrelations between spots and prominences and the overlying portions of the corona. It is hardly necessary to add that the features of the corona continually change, though not with such rapidity as in the case of the chromosphere and prominences. In addition to the true corona, the observer sees overlying the rest the aerial illumination from the air between him and the eclipsed sun. This air, deeply immersed in the lunar shadow, receives no light from the photosphere, but only from the corona and the much more brilliant prominences, so that the bright lines of hydrogen, helium, and calcium are recognizable in its spectrum. This for a time led to the wrong conclusion that the chromospheric gases contributed to the coronal atmosphere, an inference refuted by the fact that at times these chromospheric lines extend into, and even clear across, the dark disk of the moon. This aërial illumination is obviously no part of the true solar corona.

11. Same as ★*aurora*, 5.—**12.** A phenomenon seen when an artificial cloud is viewed by transmitted light; an artificial halo.

> It is only when few nuclei are present, and the drops formed on expansion thus comparatively large, that normal *coronas*, as Barus calls them, are seen surrounding a luminous source viewed through the cloud. It is only to such *coronas* that the ordinary theory of the *corona* applies, the gorgeous colour phenomena observed when the drops are very small, numerous and uniform in size are much more difficult to interpret. *Nature*, Oct. 8, 1903, p. 549.

Diffraction corona. See ★*diffraction*.

coronade (kor-ọ̄-nād′), *n.* [Fencers' F. *coronade*, < L. *corona*, crown, + *-ade*[1].] In *fencing*, a flourish of the saber round the head the instant before delivering a blow, to gain vigor in stroke and also trouble the opponent.

coronadite (kor-ọ̄-nä′dīt), *n.* [*Coronado* (1500?–1543?), the name of an early explorer of the region now including Arizona, + *-ite*[2].] A mineral of somewhat uncertain composition, but consisting essentially of lead manganite ($PbMn_3O_7$). It occurs in black massive forms with fibrous structure in the Clifton-Morenci copper district in Arizona.

coronado (kō-rō-nä′dō) *n.* [Sp., < L. *coronatus*, crowned: see *coronate*, *a.*] Same as ★*amber-jack*.

coronal, *a.* **4.** In *bot.*, pertaining to a corona in any of the botanical senses of that word. —**Coronal poles, sulcus.** See ★*pole*[2], ★*sulcus*.

coronaled, coronalled (kor′ọ̄-nald), *a.* [*coronal* + *-ed*.] Adorned or decorated with a coronal or garland: as, *coronalled* panels. *Thackeray.*

Coronary artery of the stomach, an artery which comes from the celiac axis and passes along the lesser curvature of the stomach.—**Coronary sulcus.** See ★*sulcus*.

coronet[1], *n.* **7.** In *bot.*, same as *corona*, especially in a diminutive sense; also formerly applied to a whorl of small flowers, as in some labiate plants, and to small heads of umbelliferous and composite plants.—**8.** The bur at the base of an antler.

coronet-boot (kor′ọ̄-net-böt″), *n.* A horse-boot designed to protect the coronet from injury when the horse is trotting.

coronillin (kor-ọ̄-nil′in), *n.* [*Coronilla* + *-in*[2].] A yellowish powder, $C_7H_{12}O_5$, of glucosidal nature, contained in the seeds of various species of *Coronilla*, particularly *C. scorpioides*. It acts promptly on the heart like digitalis.

coronillo (kō-rō-nēl′yō), *n.* [Sp., dim. of *corona*, a crown.] A large leguminous tree, *Gleditschia amorphoides*, of northern Argentina, whose trunk from the ground up to the height of a man is thickly beset with strong, much-branched thorns from 5 to 8 inches long. Its handsome veined wood is used in building and for furniture and cabinet-work. Its bark contains saponin and is used like soap, under the name of *quillay*.

coronion (ko-rō ni-on), *n.* [NL., < Gr. κορώνιος, with crumpled horns, < κορώνη, a curved point or tip: see *corona*.] In *craniom.*, the point of the coronoid process of the lower jaw. *Von Török.*

coronium (ko-rō′ni-um), *n.* [NL., < L. *corona*: see *corona*.] A gaseous element, unidentified as yet and thus far detected only in the solar corona. It is supposed to be lighter and more diffusible than hydrogen. Some years ago it was reported as present in volcanic gases at Pozzuoli, but probably by mistake; the observation has never been verified.

coronogram (kọ̄-rō′nọ̄-gram), *n.* [NL. *corona*, corona, + Gr. γράμμα, anything written.] A photograph of the solar corona.

coronograph (kọ̄-rō′nọ̄-gráf), *n.* [NL. *corona*, corona, + Gr. γράφειν, write.] An instrument, first suggested and tried by Huggins for photographing the sun's corona during an eclipse, or in full sunlight, if possible. The attempts to photograph the corona in full sunlight were unsuccessful, and the name is now applied to cameras designed for photographing the corona in total eclipses, the instrument being designed to secure the greatest brilliance of the image, with less regard to definition of fine details.

> They included two cœlostats and two *coronagraphs*, one of the latter being of 4 inches aperture and 19 feet 4 inches focal length, the other of 6 inches aperture and 7 feet 10½ inches focal length. *Nature*, Dec. 17, 1903, p. 160.

coronographic (kọ̄-rō-nọ̄-graf′ik), *a.* Pertaining to or produced by a coronograph.

coronoid. I. *a.*—**Coronoid index.** See ★*index*.

II. *n.* One of the component bones of the jaw in birds and reptiles, lying on the inner face of the dentary and back of the splenial.

> In *Eudynamys*, *Cuculus*, and *Guira* the rami are pierced by a long lateral vacuity, which is partly closed by a long and slender *coronoid*. In *Coua* the *coronoid* terminates midway across this vacuity; whilst in *Taccocua* and *Centropus* this vacuity is quite open, the *coronoid* forming its ventral border. *Proc. Zool. Soc. London*, 1903, p. 267.

coronoidal (kor-ọ̄-noi′dal), *a.* Resembling the solar corona in appearance; imitating the corona.—**Coronoidal tube,** a vacuum-tube with a large bulb, around which, under the influence of a powerful magnetic field, strong electric discharges cause the emission of luminous streamers which strikingly resemble the streamers of the solar corona in appearance and arrangement.

Coronopus (kọ̄-ron′ọ̄-pus), *n.* [NL. (Haller, 1768, adopted from Ruellius, 1536), < Gr. κορωνόπους, crowfoot, *Plantago Coronopus*, < κορώνη, crow, + πούς, foot.] A genus of dicotyledonous plants of the family *Brassicaceæ*. See *Senebiera*.

coronule, *n.* (*b*) The little calyx-like body which crowns the nucule in the genus *Chara*. (*c*) The crown of spines which sometimes occurs at the apex of the frustule in diatoms.

coroplastic (kor-ọ̄-plas′tik), *a.* [*coroplast-y* + *-ic*.] **1.** Relating to coroplasty.—**2.** In *Gr. antiq.*, relating to the manufacture of figurines. See *coroplast*.

coroplasty (kor′ọ̄-plas-ti), *n.* [Gr. κόρη, pupil of the eye, + πλαστος, < πλάσσειν, form.] Operative treatment for the restoration of the iris.

corotomy (kọ̄-rot′ọ̄-mi), *n.* [Gr. κόρη, pupil of the eye, + -τομία, < ταμεῖν, cut.] The proper form of *coretomy*.

corp (kôrp), *n.* [Assumed sing. of *corpse, corps*.] An old and still dialectal form of *corpse*.

> Blessed is the *corp* that the rain rains on. *Scotch Proverb.*

corp. An abbreviation of *corporal*[2].

corporal[2], *n.* **2.** *Semotilus corporalis*, a cyprinoid fish found in fresh waters east of the Alleghanies.—**Corporal of the field,** a superior officer of the army in the sixteenth and seventeenth centuries, who acted as an assistant or as a kind of aide-de-camp to the sergeant-major. *N. E. D.*—**Little Corporal.** (*a*) A translation of the F. *le petit Caporal*, a popular nickname of Napoleon I. (*b*) [*l. c.*] Three-ball billiards with the addition of a wooden pin which spots wherever it falls on the playing-surface of the table and counts if knocked down by the cue-ball after this has hit another ball.

corporalship (kôr′pọ̄-ral-ship), *n.* **1.** The rank or position of a corporal: as, to work one's way up from a *corporalship* to a generalship.—**2**†. A squad of soldiers under the charge of a corporal.

> Every company was divided into three *corporalships*, of which each was the peculiar care of one of the three corporals, and of one of the three officers. *J. W. Fortescue*, Hist. Brit. Army, I. 153.

corporation, *n.*—**Bureau of Corporations.** See ★*bureau*.—**Religious corporation law.** See ★*religious*.

corporealness (kôr-pō′rẹ̄-al-nes), *n.* Corporeal state or quality. *Ruskin.*

corps[2], *n.* **5.** One of the several bodies of officers charged with special administrative duties in the army or navy. In the United States navy the corps are as follows: *medical corps*, in charge of the sanitary and medical service; *pay corps*, in charge of supplies and stores, commissary, accounts, disbursements of money; *corps of chaplains*; *corps of naval constructors*, in charge of building and repairs of vessels; *corps of professors of mathematics*, in charge of work at the Naval Observatory and instruction at the Naval Academy; and *corps of civil engineers*, in charge of construction of dry-docks, buildings, and civil-engineering work generally at navy-yards.—**Army service corps,** the corps responsible for the transportation and supply of the British army. It is under the control of the quartermaster-general.—**Corps d'élite** [F.], a body of picked men.—**General staff corps,** in the United States army, a body of officers charged with the organization, distribution, equipment, and training of the military forces. It proposes legislative action, revises estimates for appropriations, exercises supervision over inspections and military education, prepares plans for national defense and mobilization, collects military information, and records the military operations of the armies of the United States. The senior officer is the chief of staff. European armies have corps performing approximately the same duties.—**Staff corps,** one of the corps of the staff of the United States army, as the corps of engineers.

corps-à-corps (kōr-ä-kōr′). [F., 'body to body.'] In *fencing*, the advance of one fencer on another to close quarters, thus destroying the elegance of the passage and causing wild

hitting. It is discouraged on the fencing-floor: in fencing for points the master of bouts warns or disqualifies a fencer who persists in it.

corpse (kôrps), *v. t.* **1.** To make a corpse of; murder. [Low slang.] — **2.** To 'put out' or confuse (an actor) in speaking his lines or to spoil (his 'business') by some blunder or mistake. [Theatrical slang.]

corpus, *n.* (*d*) Principal, as opposed to interest or income: as, these payments should be made out of *corpus*, and not out of income. (*e*) In *alg.*, a manifold, such that its elements are representable by symbols which can be combined according to the laws of ordinary algebra, every algebraic expression obtained by combining a finite number of symbols by means of a finite chain of rational operations (, , , ,) being capable of interpretation as representing a definite element of the manifold, with the single reservation that division by zero is inadmissible.—**Corpora arenacea,** the sand-like grains found in a psammoma and sometimes isolated in the dura mater.—**Corpora fibrosa,** small fibrous nodules sometimes present in the ovaries: probably modified corpora lutea.—**Corpora flava,** bodies found in the central nervous system and elsewhere, resembling somewhat corpora amylacea, but not yielding the amyloid reaction with the aniline dyes. They are waxy or sandy in consistence and are supposed to arise from the direct transformation of nerve-cells.—**Corpora Malpighiana.** Same as *Malpighian bodies.* **Corpora Morgagnii.** Same as *hydatids of Morgagni* (which see, under *hydatid*). **Corpora Santoriniana.** Same as *cornicula laryngis* (which see, under *corniculum*).—**Corpora versicolorata,** corpora amylacea: so called because they take a variegated tint when treated with iodine solutions. —**Corpora Wolffiana.** Same as *Wolffian bodies.* **Corpus interpedunculare,** a small oval mass of gray substance immediately anterior to the pons Varolii. It lies between the *crura cerebri*, or peduncles of the brain; hence its name. Also called *ganglion interpedunculare.* **Corpus mammillare,** a small body forming a portion of the floor of the third ventricle. It lies just caudal to the infundibulum of the hypophysis and in front of the pons. In most vertebrates there is but one corpus mammillare, but in man there are two, connected together across the median line. The white matter of these bodies is formed by the anterior pillars of the fornix; hence they have also been named *bulbs of the fornix.* Also called *corpus albicans, corpus candicans,* and *bulbus fornicis.*—**Corpus mandibulæ,** in *ichth.*, the dentary; the bone in the lower jaw of teleost fishes which carries the teeth.—**Corpus mucosum.** Same as *rete mucosum.* **Corpus nigrum,** a pigmented prominence or body at the edge of the iris. It is well developed in the horse and other *Equidæ.*—**Corpus pampiniforme.** Same as *pampiniform plexus* (which see, under *pampiniform*). **Corpus subthalamicum,** a stratum of gray matter in the ventral portion of the thalamus, containing numerous nerve-cells and a plexus of fine medullated fibers. It is lens-shaped in section and has an inclosing envelop of white substance. This body or stratum is distinct only in primates. Also called *nucleus of Luys, nucleus amygdaliformis.*—**Galoisian corpus,** in *math.*, a corpus each of whose conjugate corpora is identical with it.

corpuscle, *n.* **5.** In *elect.*, a body smaller than an atom, assumed to explain the phenomena of electric discharges in gases, and of radioactivity. **Cancroid corpuscles.** Same as ★*cancer-nests.*—**Chlorophyl corpuscle.** See ★*chlorophyl.*—**Krause's corpuscle** or **end-bulb,** the expanded bulbous extremity of a terminal nerve-twig, present in the conjunctiva and elsewhere.—**Miescher's corpuscle,** an elongated spindle-shaped, parasitic protozoan (*Sarcocystis miescheri*) sometimes found embedded in the muscle-fibers of mammals. Also called *Rainey's corpuscle.*—**Phantom** or **shadow corpuscle,** a decolorized red blood-corpuscle.—**Rainey's corpuscle.** Same as *Miescher's* ★*corpuscle.*—**Ruffini corpuscles,** nerve-endings in the skin which have an arborescent form and are inclosed in connective tissue instead of epithelium. There is no capsule present, as in the Pacinian corpuscle.—**Third corpuscle,** a hematoblast.—**Traube's corpuscles,** decolorized red blood-corpuscles.—**Washed corpuscles,** in experiments dealing with hemolytic problems, the isolated red blood-corpuscles of an animal, which have been washed free from contaminating material with 0.8 per cent. saline solution, and separated by centrifugation.

Corpuscular temperature, in *phys. chem.*, a term used by J. J. Thomson to denote the energy of supposed corpuscular motions going on within the atom. *Nature,* May 26, 1904, p. 74.

corpusculiferous (kôr-pus-kū-lif′ėr-us), *a.* [L. *corpusculum,* corpuscle, + *ferre,* bear.] Bearing corpuscles. *Lindley.*

corrade, *v. t.* **2.** In *geol.*, to abrade and remove (rock), as by running streams charged with grit.

This portion of the tract was *corraded* into a labyrinth of canyons, among which the Grand Canyon of the Colorado is most notable. *Smithsonian Rep.,* 1892, p. 21.

corral, *n.* **4.** In Florida and the West Indies, a pen near the shore where sponges are macerated in the course of cleaning them for market. Sometimes colloquially contracted to *crawl.* See *kraal.*

corrasion (ko-rā′zhon), *n.* [NL. ★*corrasio(n-),* ⟨ L. *corradere:* see *corrade.*] In *geol.*, the scraping away of a rock by the action on it of rock fragments moved by wind or water. *Dana,* Manual of Geol., p. 168.

correality[1] (kō-rē-al′i-ti), *n.* [*cor-* + *reality.*] Correlative or equal reality. *Sir W. Hamilton.*

correality[2] (kō-rē-al′i-ti), *n.* [*correal* + *-ity.*] In *Rom. law,* the condition of being correal. See *correal obligations* (under *correal*).

correction, *n.*—**Compass corrections.** See ★*compass.*—**Gravity correction.** See ★*gravity.*—**Optical correction,** a modification of form intended to counteract apparent discordances or deviations, such as an appearance of sagging or of sloping in an architectural member. A long girder or lintel that is perfectly horizontal will commonly look as if it curved downward in the middle, and to obviate this an upward curve may be actually given to its lower face.—**Poggendorff's correction,** a correction applicable to an ordinary mercurial thermometer, owing to the fact that the bore of the tube increases its volume as the temperature rises, so that a degree of the scale represents a greater volume and consequently a greater change in temperature in proportion as the temperature rises.—**Temperature correction.** See ★*temperature.*—**Twilight correction,** the correction applied to photographic registers of the duration of sunshine, in order to allow for the great loss of photographic power by the sun's rays when they pass near the horizon. —**Vacuum correction.** See ★*vacuum.*

correctionalist (kō-rek′shon-al-ist), *n.* One who is in favor of correctional methods in the management of delinquents. Also used adjectively.

Those smitten with the institution craze or with extreme *correctionalist* views will never solve the problem of criminal youths. *G. S. Hall,* Adolescence, I. 407.

correctionally (kō-rek′shon-al-i), *adv.* By way of correction or reform; as a corrective merely; with reform in view: as, "there are offences only punishable '*correctionally,*' not criminally," *Gladstone.*

correction-house (kō-rek′shon-hous), *n.* A house of correction (which see, under *correction*).

correction-proof (kō-rek′shon-prōf), *a.* Proof against correction; incorrigible: as, a stubborn, *correction-proof* youth. *Fuller.*

correctorial (kor-ek-tō′ri-al), *a.* [*correctory* + *-al*[1].] Of or pertaining to a corrector. *N.E.D.*

Correlate strata, equivalent strata; those of the same geological horizon. *Dana,* Manual of Geol., p. 398.

correlation, *n.* **5.** In *statistics,* the relation of two or more variable quantities. One variable quantity never determines another completely. For instance, in a certain biological type size never completely determines weight, although large individuals are, on the whole, heavy. The values of one variable, which are correlated with a certain value of another variable, are called an *array.* When the variability is normal, the average deviation of the array is equal to the deviation of the correlated measure multiplied by a constant which is called the *coefficient of regression.* A comparison of the coefficients of regression of the first variable considered as a series of arrays of the second, and of the second considered as a series of arrays of the first, leads to their reduction to a common *coefficient of correlation* which equals the average of the products of all the correlated pairs of deviations, divided by the product of their standard or mean square variabilities. The variabilities of the arrays are equal to the variability of each complete series multiplied by $\sqrt{1-r^2}$ where r is the coefficient of correlation.

correlative, *n.*—**The doctrine of correlatives,** the doctrine that correlative terms are necessarily thought together, since a correlative implies the relation, the relation the other correlates, and the correlates suggest the correlatives. The phrase was introduced by H. Spencer.

correlativism (kō-rel′a-tiv-izm), *n.* A doctrine in which the correlative or universally relative nature of ideas and terms forms the basis.

The relativism of Mill, and the universal relativism or *correlativism* of Laas. *Encyc. Brit.,* XXX. 665.

corresp. An abbreviation of *correspondence, corresponding,* and *correspondent.*

corresponding, *p. a.* **1.** (*c*) In *phytogeog.*: (1) Derived from and in part taking the place of an older and broader type, broken up in the process of evolution; vicarious or representative in an evolutionary sense. Said of an endemic plant type. *Drude,* 1890. (2) Œcologically equivalent to another genus or species, therefore alternating with it in similar areas of a habitat. *F. E. Clements.*—**Corresponding points.** (*b*) In *physiol.*, points upon the two retinæ whose impressions unite, in the great majority of cases, to give a single, spatially undifferentiated perception.

corridor, *n.* **4.** In *car-building,* a narrow passage between the side of a sleeping-, dining-, stateroom- or other car and a partition which incloses the staterooms, lavatory, kitchen, or other apartment.—**Corridor train,** a train composed of vestibuled cars in which a corridor or passageway extends the whole length of each car. [Eng.]—**Corridor carriage,** a railway-car through which there is a corridor or passageway. [Eng.]

corrie-basin (kor′i-bā″sn), *n.* A nearly level-floored depression on a mountain- or hillside, supposed to have been formed by glacial erosion. *J. Geikie,* The Great Ice Age, p. 254.

corrie-glacier (kor′i-glā″shiėr), *n.* A glacier occupying a cirque or corrie.

Finally, there was the phase of *corrie-glaciers,* when the glacial detritus was borne for no great distance from the local centres of dispersion. *Nature,* April 7, 1904, p. 549.

corrie-lake (kor′i-lāk), *n.* A lake occupying the floor of a corrie or cirque. *J. Geikie,* The Great Ice Age, p. 236.

Corr. Mem. An abbreviation of *Corresponding Member.*

Corroded crystals. See ★*crystal.*

corrodentian (kor-ō-den′shian), *a.* and *n.* **I.** *a.* Of or belonging to the insect order *Corrodentia.*

II. *n.* A member of the *Corrodentia.*

corrodiary (ko-rō′di-ā-ri), *n.* [ML. *corrodiarius,* ⟨ *corrodium:* see *corody.*] Formerly, one who received an allowance for maintenance; a pensioner.

corrodier (ko-rō′di-ėr), *n.* Same as ★*corrodiary.* *Kingsley.*

corrosion, *n.* **2.** In *geol.*, the solution and removal of rocks, usually in water; the eating away by fusion and absorption of a solid mass of rock or of a mineral which is inclosed in a molten magma.

Erosion, *corrosion,* and hydrostatic pressure have, by widening the natural fissures of the ground, formed a real sponge of stone. *Geog. Jour.* (R. G. S.), X. 502.

Corrosion preparation, an anatomic preparation, as of the injected vessels of a part, made by treating the tissues with a corrosive substance which leaves only the solidified injection material.

corrosion-zone (kō-rō′zhon-zōn), *n.* A zone surrounding certain minerals which, having crystallized out of a molten magma or lava, have afterward been partially reabsorbed by fusion and have thus yielded a surrounding rim of intermediate composition between themselves and the unaffected lava. *Geikie,* Textbook of Geol., p. 141.

Corrosive glands. See ★*gland.*

corrugating-machine (kor′ō-gā-ting-ma-shēn″), *n.* A power crimping-machine having large, long crimping-rolls for corrugating large pieces of sheet-metal. See ★*crimping-machine,* 2.

corrugative (kor′ō-gā-tiv), *a.* Same as *corrugate,* 2. *Treas. Bot.*

corrugator, *n.*—**Corrugator labii inferioris** (wrinkler of the lower lip), fibers from the depressor anguli oris muscle, contraction of which throws the lower lip into folds.

corrupt, *a.* **5.** Legally tainted, as by an act of attainder of treason or felony: said of the blood of one legally attainted. See *corruption,* 8.

corsair, *n.* **4.** Any pirate-bug of the family *Reduviidæ.*—**Two-spotted corsair,** an American reduviid bug *Rasahus biguttatus,* inhabiting the southern and southwestern United States. It is predatory in its habits and sometimes bites human beings, inflicting a painful wound.

Corsican moss. See *moss*[1].

cort. An abbreviation of *cortex.*

cortex, *n.*, **1.** (*c*) The peridium of fungi.—**3.** (*c*) In *Infusoria,* the clear, firm outer layer of protoplasm, bearing the cilia or suckers and showing in its simplest structure no further evidence of differentiation, though in some of the more specialized forms 3 distinct layers may be seen. Same as *ectosarc* and *ectoplasm.*—**Dermal cortex,** in sponges, a specialized outer layer of mesoderm lying immediately below the superficial ectoderm and usually containing the inner ends of projecting spicules and spaces and canals lined by ectoderm.

Corti, cells of. See ★*cell.*

Cortical cataract. See ★*cataract.*—**Cortical integument.** Same as ★*cortical layer* (*b*). **Cortical layer.** (*b*) The integument which invests the bast system of a stem.

corticifugal (kôr-ti-sif′ū-gal), *a.* [L. *cortex* (*cortic-*), bark, + *fugere,* flee, + *-al*[1].] Originating in and running from the cortex, or outer layer of the cerebrum or cerebellum, into adjacent regions, such as the pulvinar and quadrigeminal bodies or the various fiber-tracts.

There was no clear evidence of *corticifugal* fibres passing from the angular gyrus to the basal ganglia; but that this gyrus is connected with the pulvinar by corticipetal fibres will be shown in the next section. *Philos. Trans. Roy. Soc.* (London), ser. B, 1898, p. 10.

corticifugally (kôr-ti-sif′ū-gal-i), *adv.* In a corticifugal manner.

corticipetal (kôr-ti-sip′e-tal), *a.* [L. *cortex* (*cortic-*), bark, + *petere,* seek, + *-al.*] Originating outside of and running into the cerebral or cerebellar cortex. *Philos. Trans. Roy. Soc.* (London), ser. B, 1898, p. 11.

corticipetally (kôr-ti-sip′e-tal-i), *adv.* In a corticipetal manner.

corticopeduncular (kôr″ti-kō-pē-dung′kū-lär), *a.* [L. *cortex,* bark, + NL. *pedunculus,* peduncle.] Relating to the cortex and both peduncles of the brain.

cortlandtite (kôrt′lan-dīt), *n.* [*Cortlandt* township, New York, + *-ite*[2].] In *petrog.*, a name given by G. H. Williams (1886) to a coarse-grained rock composed of large crystals of hornblende with abundant inclusions of olivin and pyroxene which mottle the cleavage surfaces of the hornblendes and give the rock a poikilitic fabric: a variety of hornblende picrite.

corubin (kō-rō'bin), *n.* [*co*(*rundum*) + *ruby*, + *-in*²] The trade-name of artificial corundum or crystallized alumina, obtained in the aluminothermic processes of Goldschmidt: used as an abrasive. *Electrochem. Industry*, Oct., 1904, p. 405.

coruco (ko-rō'ko), *n.* [Mex. Sp.] The popular name in Mexico and New Mexico of the so-called *Mexican chicken-bug*, a cimicid, *Acanthia inodora*, which attacks poultry in those regions.

corvid (kôr'vid), *a.* and *n.* **I.** *a.* Pertaining to or resembling the *Corvidæ*.

II. *n.* A crow of the family *Corvidæ*.

corvina, *n.* (*b*) Also applied to a large number of other fishes belonging to the family *Sciænidæ*.

corybantian (kor-i-ban'ti-an), *a.* Of or pertaining to the corybants or their worship.

corybantiate (kor-i-ban'ti-āt), *v. i.*; pret. and pp. *corybantiated*, ppr. *corybantiating*. [*corybant* + *-i* + *-ate*²] To 'carry on' like a frenzied corybant; act like a lunatic.

corybantine (kor-i-ban'tin), *a.* [*corybant* + *-ine*¹] Of, pertaining to, or resembling the corybants or their rites; corybantian. *N. E. D.*

corybulbine (kor-i-bul'bin), *n.* [*Cory*(*dalis*) (see def.) + L. *bulbus*, bulb, + *-ine*².] A light-yellow crystalline monacid alkaloid, $C_{21}H_{25}O_4N$, found in the roots of *Corydalis cava* (otherwise *Bulbocapnus*, also *Capnodes*, *cavus*).

corycavine (kor-i-kav'in), *n.* [*Cory*(*dalis cava*) (see def.) + *-ine*².] A crystalline alkaloid, $C_{23}H_{23}O_6N$, found in the roots of *Capnoides cavum* (*Corydalis cava*).

corydalic (kor-i-dal'ik), *a.* [*Corydal-is* + *-ic.*] Derived from corydaline.—**Corydalic acid,** a name given, through misapprehension, to the acid ammonium salt of metahemipinic acid, $C_{10}H_{10}O_6.C_{10}H_9O_6NH_4.3H_2O$, obtained by the oxidation of corydaline.

Corydalis, *n.* **2.** [*l. c.*] The golden corydalis is *Capnoides aureum* of the northeastern United States and Canada, with golden-yellow flowers. The pink corydalis is *C. sempervirens* of the same region, but ranging to Alaska and North Carolina: the flowers are pink with yellow tips. The pale corydalis is *C. flavulum*, with pale yellow flowers, an early wild flower of the eastern half of the United States. These and other species are delicate and attractive plants.

Pink Corydalis (*Capnoides sempervirens*).

a, plant and inflorescence, one fourth natural size; *b*, a capsule, one half natural size.

Corydalus, *n.*—**Horned corydalus,** *Corydalus cornutus*. See *Corydalus*. *Comstock*, Manual of Insects, p. 176.

corylaceous (kor-i-lā'shius), *a.* [NL. *corylaceus*, < L. *corylus*, hazel: see *hazel*.] Of or pertaining to the hazel; belonging or related to the *Corylaceæ*.

corylin (kor'i-lin), *n.* [L. *corylus*, hazel, + *-in*².] A globulin obtained from various nuts.

corylophid (ko-ril'ō-fid), *a.* and *n.* **I.** *a.* Of or belonging to the coleopterous family *Corylophidæ*.

II. *n.* A beetle of the family *Corylophidæ*.

corymb, *n.* **2.** A hemispherical group of zoöphytes. *Dana*, Zooph., p. 173. *N. E. D.*

corymbate (ko-rim'bāt), *a.* In *bot.*, same as *corymbiate*.

Coryneum (ko-rin'ē-um), *n.* [NL. (Nees, 1816), from the shape of the sporodochia; < Gr. κορύνη, a club.] A genus of melanconiaceous fungi having black disk-shaped or pulvinate sporodochia breaking through the bark of the host. The spores are fusiform, dark-colored and several septate. *C. Beyerinckii* is said to be the cause of a gum flux of the cherry and closely related plants. It is also regarded as the conidial condition of *Ascospora Beyerinckii*. See ★*Ascospora*.

corynite (kor'i-nit), *n.* [Gr. κορύνη, club, + *-ite*².] The name refers to the form of the crystalline groups.] A mineral similar to gersdorffite, but with the arsenic in part replaced by antimony.

corynocarpine (ko-rin-ō-kär'pin), *n.* [*Corynocarpus* + *-ine*².] A crystalline alkaloid found in the fruit of the karaka tree, *Corynocarpus lævigata*. It melts at 140° C.

Coryphantha (kor-i-fan'thä), *n.* [NL. (Lemaire, 1868, adopted from a subgenus name of Engelmann, 1857), < Gr. κορυφή, summit, + ἄνθη, blossom. The name alludes to the occurrence of the flowers, in typical species, on the very summit of the plant.] A genus of plants of the family *Cactaceæ*, often called *Mamillaria* (which see).

coryphodon, *n.* **2.** [*l. c.*] A mammal of the genus *Coryphodon*. **Coryphodon beds,** in *geol.*, the lower division of the Lower Eocene in the Rocky Mountain and Plateau region: equivalent to the Wahsatch group. It contains remains of the coryphodon.

coryphylly (ko-rif'i-li), *n.* [For **coryphophylly*, < Gr. κορυφή, summit, + φύλλον, leaf, + *-y*³.] The abnormal production of a leaf (sometimes colored) at the summit of the axis of a plant.

corytuberine (kor-i-tū'bèr-in), *n.* [*Cory*(*dalis*) (see def.) + L. *tuber*, tuber, + *-ine*².] An alkaloid, $C_{19}H_{25}O_4N$, found in the roots of *Capnoides cavum* (*Corydalis cava*). It crystallizes in needles which decompose at 200° C.

cos² (kos), *n.* [Also *coss*, *cosse* (lettuce), < L. *Cōs*, < Gr. Κῶς, an island in the Ægean Sea, now Stanchio.] A kind of lettuce, suited for being grown out of doors in summer, usually forming long heads or rosettes.

C. O. S. An abbreviation of *Charity Organization Society*.

cosaque (ko-säk'), *n.* [F.] A Cossack dance, or the music for it.

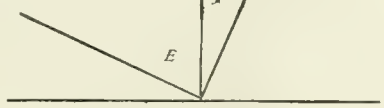
coscoroba (kos-kō-rō'bä), *n.* [NL. *coscoroba*, appar. connected with the Tupi *casaroba*, also *saroba*, a diving bird.] A large swan-like duck, *Coscoroba coscoroba*, of South America, which has a white body and a long, slender, black neck.

cosensal (kō-sen'sal), *a.* [*co*-¹ + *sense* + *-al*¹.] Having the same sense. Two mutually equiangular polygons are cosensal when rays pivoted within them and containing the vertices of equal angles, rotate in the same sense to pass through the vertices of the consecutive equal angles. Congruent spherical triangles are cosensal, which is not the case with symmetrical spherical triangles.

cosher¹, *v.* **II.** *intrans.* To chat in a familiar, friendly way; gossip. *Macaulay.*

Cosina beds. See ★*bed*¹.

Cosine circle. See ★*circle*.—**Cosine law.** See *Lambert's law of* ★*cosines*.—**Hyperbolic cosine** of x, $\frac{1}{2}(e^x + e^{-x}) = \cos x\sqrt{-1} = 1 + \frac{x^2}{2!} + \frac{x^4}{4!} \ldots$ It is usually written cosh x and read "cosh x", or "h-cosine x."—**Lambert's law of cosines,** the law that the intensity of the light



Lambert's Law of Cosines.

diffusely reflected from a mat surface is proportional to the cosine of the angle between the direction of the diffused rays under consideration and the normal to the surface. Experiments by Wright (Philos. Mag., XLIX. 199) show that if *I* is the angle of incidence of the light the intensity of the diffusely reflected light is strictly proportional to the cosine of the angle *E*, but that if the incidence be varied, the light reflected at a constant angle *E* is not proportional to the cosine of the angle *I*.

cosingular (kō-sing'gū-lär), *a.* [*co*-¹ + *singular*.] Having the same singular surface: said of complexes in line geometry.

By these principles the existence of *cosingular* quadratic complexes can easily be established.
Encyc. Brit., XXVIII. 662.

Cosingular complexes. See ★*complex*, *n.*

cosmetid (kos'me-tid), *a.* and *n.* **I.** *a.* Having the characteristics of or belonging to the family *Cosmetidæ*.

II. *n.* An arachnidan of the family *Cosmetidæ*.

cosmic, *a.*—**Cosmic consciousness.** See ★*consciousness*.—**Cosmic fog,** a nebulosity enveloping certain star-groups, notably the Pleiades.

Helium stars are often palpably connected with nebulæ. The entire Orion region, where they brilliantly congregate, is pervaded with *cosmic fog*; *cosmic fog* enwraps the Pleiades; and individual instances of the same association abound, and are likely to multiply as exploration proceeds. *A. M. Clerke*, Problems in Astrophysics, p. 189.—**Cosmic hydrogen, theism,** etc. See ★*hydrogen*, ★*theism*, etc.

II. *n.* A name proposed by H. L. Fairchild, in accordance with the new planetesimal hypothesis, for the primitive massive rocks.

With the passing of the old hypothesis it will be desirable to change the terminology of the rocks as far as this now implies an original molten or "igneous" state of the earth. Some new name will be desirable for the sediments which were formed chiefly or wholly from the planetesimals (the cosmic matter) in the early seas of the growing globe. Let us call such deposits cosmoplastics and the primitive massive rocks the *cosmics*.
H. L. Fairchild, Amer. Geol., Feb., 1904, p. 101.

cosmism, *n.* **2.** The philosophy of Spencer and Fiske, which asserts the existence of a real unknowable outside of the mind, the absolute relativity of all thought to ourselves, and that there is no knowledge except what is ultimately empirical science. It is specially opposed to the systems of Berkeley, Hume, Kant, Hamilton, and Comte.—**3.** The doctrine that the material universe works automatically; affirmative atheism.—**4.** The ethical doctrine which makes the welfare of mankind the highest good.

cosmist (koz'mist), *n.* [Gr. κόσμος, the universe, + *-ist*.] **1.** A believer in cosmism, or the cosmic philosophy of Fiske, which is substantially the first principles of Spencer.—**2.** A believer in the affirmative atheism of Holyoake, according to which we know that nature is automatic.

Cosmoceras (koz-mos'ē-ras), *n.* [NL., < Gr. κόσμος, ornament, + κέρας, a horn.] A genus of ammonoid cephalopods or ammonites with involute shells and highly costated and tuberculated whorls. It occurs in the Jurassic rocks.

cosmochlore (koz'mō-klōr) *n.* [Also *kosmochlore*; < Gr. κόσμος, ornament, + χλωρός, green.] A chromium silicate occurring in emerald-green monoclinic needles in the meteoric iron of Toluca, Mexico.

cosmoclastic (koz-mō-klas'tik), *a* and *n.* [Gr. κόσμος, universe, + κλαστός, < κλᾶν, break.] **I.** *a.* Consisting of fragmental material of extraterrestrial origin.—**Cosmoclastic rocks,** rocks composed of fragmental material of extraterrestrial origin.

II. *n.* A cosmoclastic rock. See the extract, under ★*cosmic*.

cosmog. An abbreviation of *cosmography*.

cosmogenetic (koz-mō-jē-net'ik), *a.* [Gr. κόσμος, universe + γένεσις, origin: see *genetic*.] Of or pertaining to the origin and development of the universe.

cosmogeny (koz-moj'e-ni), *n.* [Gr. κόσμος, the universe, + *-γενεια*, < *-γενής*, -produced.] **1.** Cosmogony; the history of the origin and development of the universe.

This *cosmogeny*, or theory of the development of the universe. *Haeckel* (trans.), Hist. Creation, I. 321.

2. The history of the origin and development of the inorganic universe, as distinguished from that of living beings.

Primary Aggregation. *Cosmogeny*—Genesis of Matter—Chemical Relations.
L. F. Ward, Dynamic Sociol, I. 220.

cosmognosis (koz-mog'nō-sis), *n.* [Gr. κόσμος, the world, + γνῶσις, knowledge.] The imaginary 'general knowledge' or instinct to which the migrations of birds have been attributed. *Syd. Soc. Lex.*

cosmogonize (koz-mog'ō-nīz), *v. i.*; pret. and pp. *cosmogonized*, ppr. *cosmogonizing*. [*cosmogony* + *-ize*.] To explain the origin of the world: theorize in regard to the world's origin. *J. W. Draper*, Intell. Devel. of Europe, I. iv.

cosmogony chart. See ★*chart*.

cosmographer, *n.* **2.** A geographer.

Aratus the astronomer, Ptolemy the *cosmographer*, add lustre to the golden age of Alexandrian culture.
J. A. Symonds, Greek Poets, 1st ser., p. 32.

cosmologic (koz-mō-loj'ik), *a.* Same as *cosmological*.

cosmological, *a.*—**Cosmological proof,** that proof of theism which rests on the principle of efficient causation. According to Caldecott there are nine forms of this argument, as follows: (1) from the world as a mass of effects, an argument used (says Caldecott) by Aristotle, Aquinas, Locke, Clarke, Martineau, and Illingworth; (2) from the changes in the world, used by Aristotle and Martineau; (3) from the dependency of everything in the world, used by J. Caird, Martineau, and Stirling; (4) the contingencies of the world, used by Aquinas, Leibnitz, Clarke; (5) from the finitude of things in the world, used by Clarke; (6) from the temporal character of things in the world; (7) from the relativities of the world, used by Green and Illingworth; (8) from the phenomenal character of the world; (9) from the potential character of the world, used by Aristotle.

cosmonomic (koz-mō-nom'ik), *a.* [Gr. κόσμος, the world, + νόμος, law.] Pertaining to the laws of nature, in the sense of general truths as to instantaneous results of contemporaneous conditions.—**Cosmonomic monism,** a form of monism which acknowledges cosmonomic influences alone.

cosmophilite (koz-mof'i-lit), *n.* [Gr. κόσμος, the world, + φιλεῖν, love, + *-ite*².] A lover of the world.

Actress ball, where there was to be a great deal of Parisian beauty, which a *cosmophilite* ought to see.
Thackeray, in Scribner's Mag., June, 1887, p. 681.

cosmopoietic (koz-mo̧-poi-et'ik), *a.* [Gr. κόσμος, the universe, + ποιητικός, ⟨ ποιεῖν, make (see *poetic*).] Contributing to form the universe and to render it orderly. *Huxley.*

cosmopolis (koz-mop'o̧-lis), *n.* [Gr. κόσμος, the world, + πόλις, city.] A city composed of people gathered from all parts of the world. *Stand. Dict.*

cosmopolitanize (koz-mo̧-pol'i-tan-īz), *v. t.*; pret. and pp. *cosmopolitanized*, ppr. *cosmopolitanizing*. [*cosmopolitan* + *-ize*.] To render cosmopolitan in character or feeling.

The telegraph has *cosmopolitanized* us in spite of ourselves; the whole world has but one set of nerves and we all have the headache together. *Lowell*, Letters, II. 368.

cosmopolite, *n.* **3.** A nymphalid butterfly, *Vanessa cardui*, common to Europe, Asia, North America, and Australia. Its larva feeds on thistle, mallow, and everlasting. Also known as the *thistle-butterfly*. See cut under *painted-lady*.

cosmorganic (koz-môr-gan'ik), *a.* [Gr. κόσμος, the world, + ὄργανον, organ. + *-ic*.] Pertaining to the supposed character of the universe as a living organism whose atoms are severally endowed with sensibility: a hypothesis put forward by G. T. Fechner.

But his [Fechner's] substitute was his own hypothesis of panpsychism, from which he deduced a "*cosmorganic*" evolution from a "*cosmoplasm*" or original condition of the world as a living organism into the morganic, by the principle of tendency to stability.
Encyc. Brit., XXX. 662.

Cosmos fiber. See ★*fiber*[1].

cosmotheist (koz'mo̧-thē-ist), *n.* [*cosmotheism* + *-ist*.] A believer in cosmotheism.

cosmotheistic (koz″mo̧-thē-is'tik), *a.* Of or pertaining to cosmotheism or the cosmotheists.

cosmozoan (koz-mo̧-zō'an), *n.* [Gr. κόσμος, the universe, + ζῷον, a living being, + *-an*.] An imaginary organism transported to the earth from some unknown region of the cosmos. [Rare.]

It [life] was transported to the earth from another world, or from the cosmic environment, under the form of cosmic germs, or *cosmozoans*, more or less comparable to the living cells with which we are acquainted.
Smithsonian Rep., 1902, p. 401.

cosmozoic (koz-mo̧-zō'ik), *a.* [*cosmozo-an* + *-ic*.] Concerning or pertaining to the introduction of life upon earth from without.—**Cosmozoic hypothesis,** the doctrine or opinion that the first living organisms upon earth were brought here from some unknown region of the universe by a meteorite.

Kelvin suggested that germ life may have been a meteoric passenger from otherwhere. Allowing such arrival gave no answer to the question as to the origin of the life found on the meteorite. Helmholtz, in advocacy of this "*cosmozoic hypothesis*," said, "Organic life either came into existence at a certain period, or it is eternal."
Science, April 28, 1905, p. 643.

cosmozoism (koz'mo̧-zō-izm), *n.* [*cosmozo-an* + *-ism*.] The doctrine that the universe as a whole has an animal consciousness: a term which has been in good use since Cudworth.

cospecies (kō-spē'shēz), *n.* [*co-*[1] + *species*.] One of two or more closely related and very similar species.

Warm-blooded animals which live in these [arctic] regions have the same temperature as their *cospecies* in warm climates. *Smithsonian Rep.*, 1890, p. 420.

Cossack post. See ★*post*[2].

Cossackian (ko-sak'i-an), *a.* [*Cossack* + *-ian*.] Same as ★*Cossackic*.

Cossackic (ko-sak'ik), *a.* [*Cossack* + *-ic*.] Of or pertaining to the Cossacks. *N. E. D.*

cossaite (kos'a̧-it), *n.* [Named after Professor Luigi *Cossa* of Pavia.] A compact variety of the soda-mica called paragonite.

cossette (ko-set'), *n.* [F. *cossette*, ⟨ *cosse*, a pod, husk.] A section or slice of a root, as made in a process of manufacture; specifically, a section of chicory so cut before drying and roasting, or of sugar-beet root in the making of beet-sugar.

The raw beet is simply cut into long slender grooved slices. In the factory these slices are known as *cossettes*.
U. S. Dept. Agr., Rep. No. 74, 1902, p. 39.

cossid[1] (kos'id), *a.* and *n.* **I.** *a.* Pertaining to or resembling the lepidopterous family *Cossidæ*.
II. *n.* A moth of the family *Cossidæ*.

cossid[2] (kos'id), *n.* [Also *cassid*, *kasid*, ⟨ Hind. Ar. *qāṣid*, a messenger.] A running messenger; a courier. *Yule and Burnell.* [Anglo-Indian.]

cost[2], *n.*—**Bill of costs.** See ★*bill*[3].—**Cost, freight, and insurance,** a term, used in commercial transactions, meaning the actual cost of the goods ordered, plus the commission, the premium of insurance, and the freight or transportation charges: abbreviated to *C. F. and I.*, or *c. f. and i.*—**Joint cost,** the cost of producing two or more commodities or of two services which normally result from a single productive operation: as, the *joint cost* of beef and leather, or of naphtha and kerosene.

costa, *n.*, **2.** (*e*) In *Ctenophora*, one of the eight meridional rows of swimming-plates. (*f*) In *Hydrozoa*, one of the protective branches which form the walls of an open basketwork inclosing the gonangia, as in the corbula of *Aglaophenia*. (*g*) The ridge of the sucker of a tapeworm. **Costæ sternales,** *in ichth.*, the branchiostegal rays, a series of bony rays attached to the hyoid arch and assisting to close the gill cavity below.

costal, I. *a.*—**Costal gemmation.** Same as *cœnenchymal* ★*gemmation*. **Costal processes.** (*c*) In *ichth.*, the ribs.

II. *n.* **1.** In the articulate crinoids, the lateral plates of the calyx, often fused together. **2.** One of the bony plates borne upon and fusing with the external face of the ribs to form the greater portion of the carapace in turtles. These plates are lacking in the lyre-turtle, *Spharaiis*, and certain related extinct forms. See cut under *carapace*. Also called *pleurale*.

cost-card (kôst'kärd), *n.* In the card-system of industrial cost-keeping, a card on which is inscribed the cost of manufacturing any article.

Costen lights, signals. See ★*light*[1].

costerdom (kos'tẽr-dum), *n.* [*coster* + *-dom*.] Costers (that is, costermongers) collectively or viewed as constituting a distinctive community. *Athenæum*, Dec. 28, 1895, p. 897.

costiv, *a.* A simplified spelling of *costive*.

costocervicalis (kos″tō-sẽr-vi-kā'lis), *n.* [NL., ⟨ L. *costa*, rib, + *cervix* (*cervic-*), neck: see *cervical*.] A muscular slip which occasionally passes between the cervical fascia or carotid sheath and the sternothyroid muscle.

costochondral (kos-tō-kon'dral), *a.* [L. *costa*, rib, + Gr. χόνδρος, cartilage.] Same as ★*chondrocostal*.

costofascialis (kos″tō-fash-i-ā'lis), *n.* [L. *costa*, rib, + *fascia*, a band: see *fascia*.] Same as ★*costocervicalis*.

costo-inferior (kos″tō-in-fē'ri-o̧r), *a.* Relating to the lower ribs.

costopleural (kos-tō-plö'ral), *a.* Relating to both ribs and pleura.

costopulmonary (kos-tō-pul'mo̧-nā-ri), *a.* Relating to both the ribs and the lungs.

costosuperior (kos″to-sū-pē'ri-o̧r), *a.* Relating to the upper ribs.

costotrachelian (kos″tō-trā-kē'li-an), *a.* [L. *costa*, rib, + Gr. τράχηλος, neck, + *-i-an*.] Relating to both the ribs and the neck.—**Costotrachelian muscles.** Same as *scalene muscles* (which see, under *scalenus*).

costraight (kō-strāt'), *a.* [*co-*[1] + *straight*[1].] Situated on the same straight line.

In the Euclidean geometry every three points are either on a straight line or a circle. In non-Euclidean geometry there are triplets of points which are neither *costraight* nor concyclic.
Amer. Inventor, April 15, 1904, p. 180.

costula (kos'tū-la̧), *n.*; pl. *costulæ* (-lē). [NL., dim. of L. *costa*, a rib: see *costa*.] A small costa, as on a shell.

costulation (kos-tū-lā'shon), *n.* [*costula* + *-ation*.] The system of costæ upon a shell.

Diplommatina skeati. . . . Only a single specimen of the shell, the most salient features of which are the inflated whorls, deeply cut suture, and fine, regular *costulations*. *Proc. Zool. Soc. London*, 1905, p. 198.

costume-piece (kos-tūm'pēs), *n.* In *theat.*, a play in which the actors are costumed in the style appropriate to the period represented, if earlier than the modern or present period.

costumery (kos-tū'mȩ-ri), *n.* [*costume* + *-ery*.] Costume in general; clothing; apparel.

Typical articles of *costumery*, weapons, utensils, etc., were collected and some information was gained concerning the ethnic characteristics of the tribe.
Smithsonian Rep., 1895, p. 43.

costumier (kos-tü-myā'), *n.* [F.] A costumer; a dealer in costumes, or one who rents out costumes for theatricals, mask-balls, or the like.

cosymmedian (kō-si-mē'di-an), *a.* [*co-*[1] + *symmedian*.] Having the same symmedian lines: said of triangles. *J. J. Milne.*

cota[2] (kō'ta̧), *n.* [Also *cotta*; Philippine Sp. *cota*, *cotta*, ⟨ Sulu *kōta*, a wall, a fort, = Tagalog *cota*, a wall, = Pampanga *cuta* = Ilocan *cota* = Bisaya *cota* = Malay *kōta*, a fort, stronghold, ⟨ Skt. *kōṭa*, *kōṭṭa*, a fort, stronghold, ⟨ *ko-*, a prefix, who, what, implying strange, indifferent, somewhat (nom. sing. *kas* = L. *quis* = E. *who*), + *aṭṭa*, a room on a housetop, a tower.] In the southern islands of the Philippine archipelago, a fort.

cotangential (kō-tan-jen'shal), *a.* [*co-*[1] + *tangential*.] Having the same tangent.

cotarnic (kō-tär'nik), *a.* [*cotarn-ine* + *-ic*.] Derived from cotarnine.—**Cotarnic acid,** a crystalline acid obtained by the oxidation of cotarnine or cotarnone. It melts at 175° C. with formation of the anhydrid.

cotarnone (kō-tär'nōn), *n.* [*cotarn-ine* + *-one*.] A compound, $C_{11}H_{10}O_4$, obtained indirectly from cotarnine. It crystallizes in leaflets which melt at 78° C.

coteau (kō-tō'), *n.* [F., a hill, hillside, ridge, dim. of *côte*, hill, hillside: see *coast*[1], *n.*] In *phys. geog.*, an upland; a broad, flat-topped ridge of moderate elevation. [Northwestern U. S.]

cotenure (kō-ten'ūr), *n.* [*co-*[1] + *tenure*.] Joint tenure.

coterel (kot'e-rel), *n.* [Also *cotterell*, *cotteril*; ME. *coterel*, ⟨ OF. *coterel* (ML. *coterellus*), dim. of *cotier*, cotter: see *cotter*[1].] Same as *cotter*[1]; a cottager under the cottier system of land-tenure. The name is found sometimes applied, by blunder, to the cotter's tenement.

coterminal (kō-tẽr'mi-nal), *a.* [*co-*[1] + *terminal*.] Same as *conterminal* and *conterminous*.

cothurnian (kō-thẽr'ni-an), *a.* [*cothurn* + *-ian*.] Proper to or characteristic of tragedy.

Cotidal chart, a chart of the ocean showing cotidal lines,

Cotidal Chart of the North Atlantic Ocean.

or lines which connect the places at which the tidal waves arrive simultaneously.

cotillage (kō-til'a̧j), *n.* [*co-*[1] + *tillage*.] Joint or coöperative tillage.

cotinine (kō'ti-nin), *n.* [A metathesis of *nicotine*.] A crystalline alkaloid, $C_{10}H_{12}ON_2$, obtained indirectly from nicotine. It melts at 50° C.

cotogenin (kō-toj'e-nin), *n.* [*coto(in)* + *-gen* *-in*[2].] The trimethyl ether of pentahydroxybenzophenone, $(CH_3O)C_6H_2COC_6H_3(OH)_2$. It is formed by fusion of methylprotocotoin with caustic potash, and crystallizes in plates which melt at 27° C.

cotta[2] (kot'a̧), *n.* Same as ★*cota*[2].

cottabist (kot'a̧-bist), *n.* [*cottab-us* + *-ist*.] One who took part in the ancient Greek game cottabus. *J. S. Blackie*, Wise Men of Greece, p. 138.

cottage, *n.* **5.** In Australia, a dwelling without up-stairs rooms; a house in which all the rooms are on the ground floor: as, a weather-board *cottage* with twelve rooms.—**Cottage bonnet,** a small, close-fitting bonnet, fashionable in the early Victorian era.—**Cottage loaf,** a loaf of bread on the top of which a smaller loaf is stuck.—**Cottage range.** See ★*range*.

cotta-grass (kot'a̧-gras), *n.* A Mexican and South American grass, *Cottea pappophoroides*, found also in cañons from western Texas to Arizona.

cotter[2], *n.* Cotters were used in place of the nut and thread on a bolt before the cutting of threads was easy and cheap, and are still useful where the thread would be liable to injury. A wedge-shaped or tapered flat pin (cotter) is driven into a slot cut near the end of the bolt or stud, drawing up the bolt. A similar device is used to secure nuts on bolts from being shaken off. A hole is drilled through the bolt, at right angles to its axis, beyond the nut, and through this hole a taper pin is driven. The cotter in this case is often split at its smaller end, and if the two parts are spread it cannot of itself work out. In small work the cotter is made of half-round wire, bent double on itself, with an eye at the bend, so that when it is in place and the ends are spread, it cannot slip out either way. The hole can therefore be straight or cylindrical and not tapering, and the cotter has no wedging action in this form. Cotters are much used in motor-car construction.

cotter[2] (kot'ẽr), *v. t.* [*cotter*[2], *n.*] To fasten by means of a cotter.

cotter-bolt (kot′ėr-bōlt), *n.* A bolt which, instead of a screw and nut at one end, has a slot cut through it near that end, for the insertion of a cotter, to keep it in its place. *Trautwine*, Engin. Pocket-book.

cotterel, *n.* 5. A washer or flat disk of metal to go under a bolt-head or nut and increase the bearing area of the fastening. [Eng.]—6. A disk of leather placed over the head of a mop to keep the strands together and prevent water from running up the handle.

cotterel-lug (kot′ėr-el-lug), *n.* An ear or lug through which a cotter is passed, to secure the piece to which the lug is attached.

cotter-pin (kot′ėr-pin), *n.* A pin used instead of a nut to keep a cotter in its place, as in fixing the pedals of a bicycle to the cranks.

cotter-way (kot′ėr-wā), *n.* A keyway; an oblong slot cut through two pieces which are to be joined by a cotter or key. The sides of the slot are parallel, but one or both ends are usually tapered so that the tapered key will bear at both bottom and top.

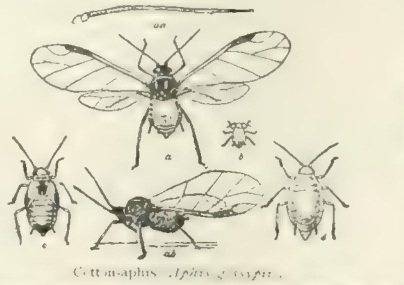
Cottier rent, the rent paid by a cottier, or small tenant at will. See *cottier tenure*, under *cottier*1.—**Cottier tenancy,** the tenancy of a cottier, or small tenant at will. Originally the term designated the tenancy of an agricultural laborer who held a cottage and a parcel of land as partial payment for services upon the fields of his landlord. **Cottier tenant,** a tenant at will holding a few acres of ground which he cultivates with his own labor.

cottolene (kot′ō-lēn), *n.* [*cott*(*on*)(*seed*) + L. *ol*(*eum*), oil, + *-ene*.] A substance made from beef suet and cotton-seed oil.

cotton1. **I.** *n.*—**Artificial cotton,** any vegetable fiber (as the cellulose of the fir-tree freed from bark and knobs) reduced by chemical means to a cellulose condition resembling cotton.—**Asiatic cotton,** the same as *India* ★*cotton*, but the American upland plant has been introduced into Russian Turkestan, Persia, and India.—**Bender cotton,** long-staple upland cotton grown in the bends of the Mississippi river. See ★*cotton-plant*.—**Black-seed cotton,** the sea-island cotton, so named on account of its black or dark-brown seeds. The lint is removed with one ginning. Some upland varieties, doubtless containing sea-island stock, are included. Compare *green-seed* ★*cotton*.—**Blow of cotton,** the cotton crop as it appears in the field after the opening of the bolls.—**Cape cotton,** the silky fibers attached to the seeds of a shrub of the milkweed family, *Gomphocarpus fruticosus*, native to Cape Colony.—**Cluster cotton.** See *short-limb* ★*cotton*.—**Cotton army-worm.** See ★*army-worm*.—**Cotton boll-worm.** See *boll-worm*. **Cotton crops,** a trade-term for three general pickings of the cotton crop. The division is more or less imaginary: the *bottom crop* is the first pickings; the *middle crop* the second pickings, and the most abundant; the *top crop* the last pickings; but this is often cut off by an early frost or wholly destroyed.—**Cotton cutworm.** Same as *granulated* ★*cutworm*.—**Cotton flax.** See ★*flax*.—**Cotton manufacture,** a completed commercial article made from cotton known and recognized in trade by a distinctive name other than the name of the raw material.—**Cotton-root bark.** See ★*bark*2.—**Cotton snout-moth,** an American tortricid moth, *Platynota rostrana*, whose larva attacks first the forms and squares of the cotton-plant, and afterward the foliage. **Cotton stalk-borer.** See ★*stalk-borer*.—**Diamond cotton.** See ★*diamond*.—**Egyptian cotton,** a variety of *Gossypium Barbadense* produced from the sea-island cotton by cultivation in Egypt. It differs little from the latter except in its somewhat shorter staple. The product is especially valuable in the manufacture of mercerized goods. It is imported into the United States in large amounts and is under experimental cultivation in the Gulf States.—**Green-seed cotton,** the upland cotton, whose green seeds retain a fuzz after ginning which necessitates reginning. This name and that of *black-seed cotton*, though referring to color, have chiefly in view the corresponding adherence or detachableness of the lint. The name *green-seed* seems formerly to have designated a special variety of upland cotton.—**India cotton,** the fiber of *Gossypium herbaceum*, native in southern Asia and grown in India and other Asiatic countries, or the plant itself. *G. herbaceum* has the stems less woody than *G. hirsutum*, the leaves rounder-lobed, the bolls more nearly spherical, and the fiber generally coarser and shorter and from glossy white to golden brown.—**Kafir cotton,** the cottony fiber surrounding the seeds of a climbing plant, *Ipomœa digitata*, found in the warm regions of both hemispheres. Also called *Natal cotton*.—**Kendal cotton,** a coarse, rough woolen cloth, manufactured from the fourteenth to the seventeenth century in Lancashire, Westmoreland, and Wales: named from Kendal in Westmoreland, the original place of its manufacture. Also known as *Manchester* and *Welsh cotton*. **Lint cotton,** cotton fiber after the removal of the seeds.—**Long Georgia cotton,** the sea-island variety of cotton grown in Georgia.—**Long-limb cotton,** a class of upland-cotton varieties with long limbs, large bolls, and long staple: unprolific, and maturing late.—**Maco cotton,** Egyptian cotton: so named from a certain Swiss who was a cotton-planter in Egypt. At one time all Egyptian cotton was known as *Maco cotton*, but now the name is more familiar among the cotton-spinners of middle Europe than elsewhere. Sometimes spelled *Mako*.—**Nankin cotton,** properly the cloth made from the naturally brownish-yellow fiber of a particular variety of cotton; but the term is very commonly applied to ordinary cotton cloth which has been dyed a similar color.—**Natal cotton.** (*a*) The cottony tomentum from the young stems and the seeds of a shrubby perennial climber of the morning-glory family, *Ipomœa albivenia*, native of Transvaal and Natal. Also called *wild cotton*. (*b*) Same as *Kafir* ★*cotton*.—**New Zealand cotton,** the fiber of the young branches of the ribbonwood, *Plagianthus betulinus*. See *Plagianthus*.—**Seed-cotton,** cotton lint which still contains the seed, that is, has been picked but is not yet ginned.—**Short-limb cotton,** a class of upland-cotton varieties with short limbs, medium to small bolls, and short staple: prolific, and maturing early. From the aggregation of the bolls, also called *cluster cotton*. **Wild cotton.** (*a*) In the southern Atlantic States, the rose-mallow, *Hibiscus Moscheutos*, a plant resembling cotton. (*b*) See ★*cotton-weed*, 3. (*c*) Same as *Natal* ★*cotton* (*a*).

II. *a.* **Cotton plush,** a fabric identical with cotton velvet, except that it has a longer pile.

cotton-aphis (kot′n-ā″fis), *n.* A plant-louse, *Aphis gossypii*, occurring commonly on the cotton-plant in the southern United States, especially in the early summer.



Cotton-aphis (*Aphis gossypii*).

a, winged female; *aa*, enlarged antenna of same; *ab*, dark female, side view; *b*, young nymph, or larva; *c*, last stage of nymph; *d*, wingless female; all greatly enlarged. (Chittenden, U. S. D. A.)

cotton-bale (kot′n-bāl), *n.* A bale of cotton; a commercial package consisting of cotton lint more or less tightly compressed, covered with bagging, and bound with ties. The bale differs in size, form, and covering in different countries. The standard American bale is of a square section, the faces 54 by 27 inches, and is intended to contain 500 pounds, but there is actually great variation in dimensions and density. Smaller and denser cylindrical bales, less subject to waste and loss by fire or rain, have come somewhat into use, and improvements of similar purpose have been attempted in the square bale.

cotton-ball (kot′n-bâl), *n.* A ball or small compact mass of cotton.—**Cotton-ball clouds,** small cumuli. When very small and white they are cirro-cumuli; when larger, with a darker shade on one side, they may be alto-cumuli or even cumulo-cirri.

cotton-belt (kot′n-belt), *n.* That section of the United States in which cotton is grown to best advantage. It covers 24° of longitude and 10° of latitude, including southern Virginia, Tennessee, Arkansas, Texas (except the western part), and all the States south and east of this line, the whole amounting to 600,000 square miles. Of this, however, only a small fraction is actually planted in cotton—up to 1896 about one twentieth. Cotton has been grown at many points outside of this area.

Cotton-boll cutworm, weevil. See ★*cutworm*, ★*weevil*.

cotton-brown (kot′n-broun), *n.* One of several direct cotton coal-tar colors of varying composition, all of which dye unmordanted cotton brown in a salt bath.—**Clayton cotton-brown,** a direct cotton coal-tar color. It dyes unmordanted cotton brown in a salt bath.

cotton-bush (kot′n-bůsh), *n.* See *Kochia*.

cotton-caterpillar (kot′n-kat″ėr-pil-är), *n.* The larva of an American noctuid moth, *Alabama argillacea* (formerly *Aletia xylina*), which abounds in the cotton-fields of the southern United States and feeds on the foliage of the cotton-plant to an injurious extent. Same as *cotton-worm* (which see, with cut).

cottoneer† (kot-n-ēr′), *n.* [*cotton* + *-eer*.] A cotton-spinner or -manufacturer.

cotton-fern (kot′n-fėrn), *n.* See ★*fern*1.

cotton-gin, *n.*—**Single-breasted cotton-gin,** a cotton saw-gin with one grid or grate, through which the saws project.

cotton-grass, *n.* **2.** A panic-grass, *Panicum insulare*, bearing cottony or silky hairs on its spikelets. It is a tropical species appearing in the southern United States, and, where abundant, is excellent for pasture. The name is also applied locally to the feather-sedge, *Andropogon saccharoides*. The *Arizona cotton-grass* is *Panicum lachnanthum*, called also *wiry panic* and *silky panic-grass*.

Cotton-leaf worm. Same as ★*cotton-caterpillar*.

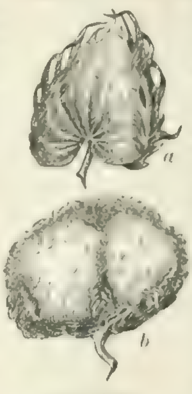
cotton-loom (kot′n-löm), *n.* A loom made specially for weaving plain cotton fabrics.

cotton-manufacturer (kot′n-man-ụ-fak″tụ̄r-ėr), *n.* One who operates a cotton-weaving establishment; in a broad sense, a person who carries on all the processes of cotton-manufacture from the ginned raw material to the completed product.

cotton-mouse (kot′n-mous), *n.* A rather large, coarse-haired, long-tailed field-mouse, *Sigmodon hispidus*, found in the cotton-fields of the southern United States. Also *cotton-rat*.

cotton-oil (kot′n-oil), *n.* Same as *cotton-seed oil* (which see, under *cotton-seed*).

cotton-plant, *n.* All parts of the cotton-plant are valuable, even the stubble, which forms a good coarse forage. The bark of the stems contains a fiber which it has been proposed to extract and put to several uses for which it is adapted, and the root-bark is medicinal. The main values lie in the staple or lint borne upon the seeds within the 3 to 5 cells of the pod or boll, which opens at maturity into as many divisions or locks, and in the seed itself (see ★*cotton-seed*). The cottons grown in the United States are believed to belong exclusively to the two species *Gossypium hirsutum* (the short-staple or upland cotton, a native of tropical America often identified with *G. herbaceum*) and *G. Barbadense* (the long-staple or sea-island cotton, including the Egyptian ★cotton, which see). The long-staple upland cottons appear to be derived by selection from hybrids of these two species. The sea-island cotton-plant differs from the upland in its larger growth (it is from 3 to 8 feet high against 3 or 4 feet), longer and more flexible branches, more deeply lobed leaves, bright-yellow flowers, and sharp-pointed smaller bolls having but 3 cells instead of 4 or 5. In the upland cotton the staple ranges from $\frac{3}{4}$ to $1\frac{1}{8}$ inches in length; in the sea-island, from $1\frac{3}{8}$ to 2 inches; in the long-staple upland, between the two. The short-staple or upland is the ordinary cotton of the southern United States. Long-staple upland is grown sparingly in all the cotton States, in larger quantity in the delta region of the Mississippi, that is, on the broad alluvial flats along the river, chiefly between Memphis and Natchez (see *bender* ★*cotton*). Sea-island cotton is grown only in Georgia, Florida, and South Carolina, and the product forms less than one per cent. of the whole. The greater cost of its production precludes its use except for the highest grades of fabrics.



Cotton Bolls.

a, unripe boll; *b*, mature and opened boll. One-half natural size.

cotton-red (kot″n-red′), *n.* A direct cotton coal-tar color of the diazo type derived from toluidine and similar to benzo-purpurin 4B. It dyes unmordanted cotton a bright red from an alkaline salt bath.

cotton-rib (kot′n-rib), *n.* A kind of corduroy.

cotton-rock (kot′n-rok), *n.* A local name in the State of Missouri for a soft, fine-grained silicious magnesian limestone of the Lower Silurian series of Swallow.

No. 3. 15 feet of soft, earthy, fine-grained, yellowish-white or drab silico-magnesian limestone, with a conchoidal earthy fracture, in beds from half an inch to one foot thick, interstratified with thin layers of bluish, silico-argillaceous Magnesian Limestone. It is called "Cotton-rock." *G. C. Swallow*, Geol. Surv. of Mo., 1855, p. 121.

cotton-seed, *n.* Cotton-seeds as picked are densely covered with the lint which is removed by ginning (see *cotton-gin*). The seed after ginning is either quite smooth, or, as is practically all commercial seed, still covered with down (see *black-seed* ★*cotton*, *green-seed* ★*cotton*, and *linter*1). The seed proper of cotton is composed of the hull (the outer shell) consisting of the seed-coats and the meat, or kernel, consisting of a coiled embryo without albumen, sprinkled with resinous glands, and containing in its cells, with other substances, oil to the extent of 20 per cent. or more of the seed. The weight of the seed is slightly over twice that of the adherent lint; the hull and the meat form about equal parts. Cotton-seed was not utilized, except for planting, until the latter part of the eighteenth century, when its value for oil and cake began to be recognized in England. It had no commercial value in the United States prior to 1834, and, though it had come into extensive use for fertilization and into limited use for feeding purposes, large amounts were still thrown away in the richer cotton States down to the time of the civil war. With the introduction of the oil-mill, chiefly after 1867, the cotton-seed industry vastly expanded, until in 1900 the total value of manufactured cotton-seed prod-

Cotton-seeds, with lint still adhering.

ucts exceeded $42,000,000, a sum much increased in later years. **Cotton-seed bran.** (*a*) The dark, solid portion of the hull of the cotton-seed from which the short fiber has been removed. (*b*) A mixture of ground hulls and waste kernels, chiefly of immature or frosted seed. It is used as food for cattle. **Cotton-seed cake.** See *cotton-cake*. In France three kinds have been recognized: the linty, containing much waste fiber and used only for manure; the crude, containing large quantities of fragments of hulls and used as food for cattle, and the refined, from which these fragments have been removed. In the United States two kinds were formerly known, the undecorticated and the decorticated, that is, cake from seed with or without the hulls; but the former has now disappeared. Cotton-seed cake comes from the press as hard as wood and is exported in blocks, but for American use it is mostly converted into meal.—**Cotton-seed feed,** a ground mixture of cotton-seed hulls and cotton-seed meal used as food for stock. **Cotton-seed meal,** dry cotton-seed cake broken up in a cracker or breaker and ground in a mill. It is very rich in protein, and is also one of the cheapest sources of nitrogen for fertilizing.—**Cotton-seed oil.** In the manufacture of cotton-seed oil as conducted in the United States, the ginned seed is reginned in a linter; the delinted seed is decorticated or hulled; the meats are crushed by a roller-machine or crusher; the resulting flakes are made into cakes by a former; and the cakes are wrapped in camel's-hair cloth and subjected to hydraulic pressure. After settling and clearing, the crude oil is refined by heating and agitation with caustic soda. After the oil is drawn off, freed of the excess of alkali, dried, and filtered, it is known as *summer yellow oil* either *prime*, *choice*, or *off*. (The same gradations are also applied to the crude oil.) High grades of summer yellow oil are used in the manufacture of artificial butter, and when so used are called *butter oils*. *Summer white oil* is obtained from summer yellow by bleaching with fullers' earth and filtering, and is used chiefly in the manufacture of lard compound (see ★*lard*). *Winter yellow* and *winter white* oils are obtained by the separation from the foregoing, respectively, of the solid glycerides, the latter forming commercial *cotton-oil stearin*, which is also used in the manufacture of lard compound. The winter oils remain limpid at 32° F.; the summer oils begin to crystallize at from 35° to 50° F. The winter oils are marketed directly as salad and cooking oils; they also enter, in varying measure, into butter substitutes. Miner's oil is a winter oil used in the place of lard-oil for lighting mines. Except in the manufacture of soap, cotton-seed oil is little used in the arts, being too slow-drying for paints and too gummy for lubricating. It is chiefly consumed as food, most largely in lard compound, next in substitutes for butter, and lastly as a food-oil, like olive-oil (and often deceptively sold under that name). In 1867 there were but 4 cotton-seed oil mills in the United States; in 1902 there were 618; in 1903 the American production of cotton-seed oil exceeded 131,000,000 gallons.—**Cotton-seed oil soap stock,** the precipitate resulting from the combination of caustic soda with the free acid of crude cotton-seed oil in the refining process. This is a true soap, but needs to be cleansed from various admixtures. **Cotton-seed stearin,** a residue obtained upon subjecting cotton-seed oil to pressure at a low temperature: used as an adulterant and in imitations of lard and butter.

cotton-spinner (kot'n-spin″ėr), *n.* **1.** One who spins cotton; a manufacturer of cotton thread.—**2.** An echinoderm, *Holothuria forskali:* so named from the adhesive white threads (Cuvierian organs) which are shot out when the animal is irritated.

cotton-teal (kot'n-tēl), *n.* A small East Indian duck, *Nettapus coromandelicus.*

cotton-thief (kot'n-thēf), *n.* A name given in Ceylon and southern India to the paradise fly-catcher, *Terpsiphone*, the adult male of which is white and black.

cotton-top (kot'n-top), *n.* The *Arizona cotton-grass.* See ★*cotton-grass*, 2.

cotton-waste, *n.*—**Hard cotton-waste,** cotton thread or yarn waste.—**Soft cotton-waste,** any untwisted or partially twisted cotton-waste, as slubbing, roving, etc.

cotton-wax (kot'n-waks), *n.* A wax-like body occurring as a thin coating on the surface of cotton fiber. It is insoluble in and lighter than water, and has a comparatively high melting-point.

cotton-weave (kot'n-wēv), *n.* The simplest of the fundamental weaves: a plain weave consisting of 2 warp- and 2 weft-threads crossing each other at right angles.

cottonweed, *n.* **2.** Same as *sea-cudweed.*—**3.** The common milkweed, *Asclepias Syriaca:* the name, like that of *silkweed*, refers to the copious white fiber attached to its seeds. Also called *wild cotton.*

cottonwood, *n.* **2.** In Australia, a tree of the aster family, *Bedfordia salicina:* so called from the cottony under-surface of the leaves, or its hard, brownish, mottled wood. Called *dogwood* and *honeywood* in Tasmania.—**Balm** or **balsam cottonwood.** Same as *black* ★*cottonwood*: a name in frequent use on the Pacific coast; but to be carefully distinguished from the balsam or balm of Gilead.—**Black cottonwood,** *Populus trichocarpa*, a large tree of the Pacific coast, ranging from California to Alaska, sometimes attaining a height of 200 feet, having light wood much used for staves and various other articles.—**Common cottonwood,** *Populus deltoides*, a large tree of eastern North America, ranging from Canada to Florida and westward across the great plains, sometimes attaining a height of 100 feet. It often constitutes the only timber in the valleys of western rivers. The leaves are large, normally deltoid in outline, with coarse rounded teeth and sinuses. The wood is inferior as lumber; it warps in drying and is slow in seasoning. The tree is ornamental, of rapid growth, and is extensively planted for shade and to retain moisture on the treeless plains of the western United States. Also called *necklace-poplar* (which see, under *poplar*).—**Fremont cottonwood,** *Populus Fremontii*, a tree of the southwestern United States and

Fremont Cottonwood (*Populus Fremontii*).

a, male ament; *b*, a female ament; *c*, branch with leaf and two fruiting aments. (From Sargent's "Manual of the Trees of North America.")

Lower California, often planted for shade and also for fuel, in the latter case usually being pollarded to accelerate growth. **Lance-leaf cottonwood,** *Populus acuminata*, a small tree of the foot-hills of the Rocky Mountains, ranging from Assiniboia to Colorado, with broadly lanceolate, taper-pointed leaves. It is sometimes planted as a shade-tree in the towns of that region. **Narrow-leaf** or **narrow-leaved cottonwood,** *Populus angustifolia*, a middle-sized tree with narrow lanceolate leaves resembling those of a willow, found throughout the Rocky Mountain region from Assiniboia to Arizona, and exhibiting considerable variation. It is the common cottonwood west of the great plains.—**White cottonwood.** Same as *Fremont* ★*cottonwood*. **Willow** or **willow-leaved cottonwood.** Same as *narrow-leaf* ★*cottonwood*.—**Yellow cottonwood,** the common cottonwood.

Cotton-worm egg-parasite, a minute hymenopterous insect of the family *Chalcididæ*, *Trichogramma pretiosa*,

Cotton-worm Egg-parasite (*Trichogramma pretiosa*).

a, adult female, greatly enlarged; *b*, ovipositor; *c*, female antenna; *d*, male antenna, still more enlarged. (Riley, U. S. D. A.)

which lays its eggs in the eggs of the cotton-caterpillar moth.

Cottony scale, cottony cushion-scale. See ★*scale*[1].

cotton-yellow (kot'n-yel″ō), *n.* A name of several direct cotton coal-tar colors which dye unmordanted cotton yellow in a salt bath.

cotwal (kot'wâl), *n.* [Also *kotwal*, *cutwall*, *cutwaul*, etc., < Hind. Pers. *kotwāl*, prob. < Turki *kotāwal*, *kotāwāl*, *kotāul*, a commandant of a fort or garrison.] An officer or superintendent of police; a native town magistrate. [Anglo-Indian.]

cotylar (kot'i-lar), *a.* [NL. **cotylaris*, < *cotyle*, < Gr. κοτύλη, a cup.] Cup-shaped, as the cavity in the mandible of some saurians.

Cotylea (kot-i-lē'ä), *n. pl.* [NL., < Gr. κοτύλη, a cup, socket.] A group of *Platyhelminthes*, of the order *Polyclada*. The central or subcentral ventral sucker is always placed behind the genital pores; the mouth is in the middle of the body or in front of it; the genital openings are usually in the anterior half of the body, with tentacles, if present, developed from the margin. It is opposed to the ★*Acotylea* (which see), and includes the families *Anonymidæ*, *Pseudocerotidæ*, *Eucyleptidæ*, *Prosthiostomidæ*, *Enantiidæ*, and *Diplopharyngeatidæ*.

cotyliform, *a.* **2.** In *bot.*, dish-shaped, with the border erect, as the leaves of *Victoria Amazonica.*

cotylophore (ko-til'ō-fōr), *n.* [Gr. κοτύλη, cup, + -φορος, < φέρειν, bear.] In *Polystomidæ*, the caudal sucker-bearing disk.

cotylopubic (kot″i-lō-pū'bik), *a.* [Gr. κοτύλη, socket (acetabulum), + L. *pubis:* see *pubic.*] Relating to both the acetabulum and the os pubis.

cotylosacral (kot″i-lō-sā'kral), *a.* [Gr. κοτύλη, socket (acetabulum), + L. *sacrum*, sacrum.] Relating to both the acetabulum and the sacrum.

cotylosaur (ko-til'ō-sâr), *n.* Any member of the order *Cotylosauria.*

Cotylosauria (kot″i-lō-sâ'ri-ä), *n. pl.* [NL., < Gr. κοτύλη, cup, + σαῦρος, lizard.] An order of Permian anomodont reptiles, closely related to the *Stegocephalia.* They have the head protected by a bony roof, the teeth on the margin of the jaws arranged in a more or less uniform series, and the vertebræ pierced for the permanent notochord. The order is synonymous with *Pariasauria*, and includes such genera as *Pariasaurus*, *Otocoelus*, and *Dicynodon*.

cotylosaurian (kot″i-lō-sâ'ri-an), *a.* and *n.* **I.** *a.* Of or pertaining to the order *Cotylosauria.* **II.** *n.* A member of the reptilian order *Cotylosauria.*

cotype (kō'tīp), *n.* [*co*-[1] + *type.*] In *zoöl.*, one of two or more specimens which together furnish the characters on which a new species is based. Such material may comprise the skin and skull of a mammal, or, as often happens in the case of fossils, portions of several individuals.

A number of valuable types and *cotypes* of fishes have also been transmitted by the commission.
Smithsonian Rep., 1898, p. 33.

couac (kwäk), *n.* [F., an imitative word, = E. *quack*[1].] The harsh and startling sound produced when a clarinet is unskilfully blown or its reed is out of order.

coubie (kō'bi), *n.* [F. *coubie*, appar. < Ar. **qūbī*, < *qūba*, a dry scab.] A cyprinoid fish, *Labeo coubie*, found in the Nile.

couch[1], *v. i.* **7.** To lie in a heap or pile to decay and pass into compost, as leaves and litter.

couch-grass, *n.*—**False couch-grass,** a western North American couch-grass, *Agropyron pseudorepens*, ranging from Nebraska to British Columbia and south to Texas and Arizona.

couchu (kō'chō), *n.* [Native name?] A common name of *Chætostomus fischeri*, a fish of the family *Loricariidæ* found in the river Chágres near Panama.

coudée (kō-dā'), *n.* [F., < *coude*, < L. *cubitus*, elbow: see *cubit.*] A cubit; the length from the elbow to the end of the hand.

cougar, *n.* Several species and subspecies of cougar have been recognized by naturalists, the Florida animal being known as *Felis coryi* and that from the northwest coast region as *F. oregonensis.* The southern form retains the name *F. concolor:* the type locality for this species is Brazil.

cough, *n.*—**Churchyard cough,** a cough that indicates an early death. *Mrs. Gaskell.*

cough-drop (kôf'drop), *n.* See *drop*, 2.

cough-root (kôf'röt), *n.* The nodding wake-robin, *Trillium cernuum*, of eastern North America.

cough-weed (kôf'wēd), *n.* The golden ragwort, *Senecio aureus.* See *ragwort.*

couia (kō-ē'ä), *n.* [Prob. a native name.] A fish, *Chasmistes cujus*, one of the suckers, found in Pyramid Lake, Nevada.

coulage (kō-läzh'), *n.* [F., < *couler*, flow, run, leak: see *coulisse*, *cullis*[2].] In *ceram.*, same as *casting*, 2.

couleur, *n.* **3.** In *rouge-et-noir*, the square (marked 'couleur') in which the banker pays all bets when the first card dealt for red or black is the same color as the winning color. *Amer. Hoyle*, p. 252.—**Couleurs de demi-grand feu** [F., 'colors of a medium fire'], in *ceram.*, colors which are fixed at the lower temperature of the least exposed parts of the porcelain-kiln: applied particularly to colors of Oriental and French hard-paste porcelain.—**Couleurs de grand feu** [F., 'colors of an intense fire'], in *ceram.*, colors which will bear the intense heat of a sharp fire without volatilizing, as certain of the blues and browns used in underglaze decoration: applied particularly to colors of Oriental and French hard-paste porcelains. See ★*grand feu.*—**Couleurs de moufle** [F., 'colors of muffle'], in *ceram.*, enamel colors which are put on over the glaze and fired in the muffle or decorating-kiln, but which will not bear the heat of the porcelain-kiln. See *muffle*[1], 6.—**Couleurs de petit feu** [F., 'colors of a low fire], in *ceram.*, the colors of the muffle-kiln. See ★*couleurs de moufle.*

coulis (kō-lē'), *n.* [F.: see *cullis*[1].] A rich brown gravy.

couloir, *n.* **2.** A dredging-machine which employs iron elevator-buckets on an endless chain and excavates by making a gully where the buckets pass.

Coulomb's law. See ★*law.*

coulometer (kō-lom'e-tėr), *n.* Same as *coulomb-meter.*

couma (kō'mä), *n.* [F. (whence NL.) *couma*, representing a native name.] In Guiana and northern Brazil, a tree of the dogbane family, *Couma utilis*, or its fruit. By wounding the bark of the tree an abundant flow of sweet white milk is obtained, which is used as food and medicine by the Indians. The fruits are edible, and have a very sweet taste. Also called *Rio Negro cow-tree.*

coumalic (kō-mā'lik), *a.* [Appar. < *cou*(*marin*) + *malic.*] Noting an acid, the anhydrid of formylglutaconic acid, prepared by heating

malic acid with concentrated sulphuric acid. It crystallizes in prisms which melt, with decomposition, at 205–210° C.

coumalin (kö'ma-lin), *n.* [*coumal-ic* + *-in*[2].] An anhydrid, $\mathrm{CH}\lessgtr\begin{smallmatrix}\mathrm{CH:CH}\\ \mathrm{C-CO}\end{smallmatrix}>\mathrm{O}$, formed from coumalic acid by the loss of carbon dioxid.

coumarone (kō'ma-rōn), *n.* [*coumar-in* + *-one.*] A compound, $\mathrm{C_6H_4}<\begin{smallmatrix}\mathrm{CH}\\ \mathrm{O}\end{smallmatrix}>\mathrm{CH}$, formedby heating coumarilic acid with lime or coumarin dibromide with alcoholic potash. It is an oil which boils at 172° C.

Coumarouna (kö-mä-rö'nä), *n.* [NL. (Aublet, 1775), ‹ *coumarou* (*kumaru*), the Carib name of the tonka-bean.] A genus of dicotyledonous trees of the family *Fabaceæ*. See *Dipteryx* and *tonka-bean*.

council, *n.* **Borough council,** the body of councilors elected by the voters of a borough to administer its affairs. In each of the 28 metropolitan boroughs of London, consisting of a mayor, aldermen, and councilors, the number of aldermen is one sixth that of the councilors. **County council,** in England and Wales, a popularly elected body charged, since the passing of the Local Government Act of 1888, with the administration of the affairs of one of the new administrative counties established by the same act. Its members are elected for three years, choose their own chairman (annually) and a certain number of aldermen who serve for six years, one half retiring every three years.
General council. (*a*) See *council*, 7. (*b*) A Lutheran body organized in the United States in 1866 by the Pennsylvania synod and others which were not in sympathy with the attitude of the general synod toward the Augsburg Confession. The council proclaimed strict adherence to the Lutheran faith.—**Parish council,** in England, a representative body, elected in the parish, which supplements the local government work of the county council. Parish councils were established in 1894.

council-fire (koun'sil-fīr), *n.* Among several tribes of eastern North America, the fire around which the members of the tribe assemble when holding a council.

count[1], *n.*, **6.** (*a*) A term used in the textile industry to indicate the size or fineness of yarn, designated by naming the number of hanks in a pound, in the plural form: as, 20's. Also called *number* or *grist*. (*b*) *pl.* Fineness of the pitch of the wire teeth in card-clothing, computed on the number of teeth found in a width of 4 inches. — **7.** *pl.* Things sold by count, as by the dozen, the hundred, etc., and not by weight or measure; specifically, oysters, terrapin, etc.—**Common counts,** in *law*, general allegations in a complaint or declaration which are not founded upon the precise circumstances of the case, but are intended to enable the plaintiff to take advantage of any ground of liability that may be disclosed upon the trial of the action.—**Differential count,** the enumeration of the different kinds of leucocytes of the blood according to percentages.

count-bishop (kount' bish″ up), *n.* One who is at the same time a bishop and a count.

count-cardinal (kount'kär″di-nal), *n.* One who is at the same time a cardinal and a count.

countenance, *n.*—**To change countenance,** to show involuntarily by a change of facial expression a sudden change of feeling or emotion, as on hearing unwelcome news or the like.

counter[1], *n.*, **2.** In its more elaborate form a counter consists of a series of disks placed parallel to one another on a shaft and having figures from 0 to 9 on their edges. The disks exhibit the figures through a line of holes on a covering-plate. The first one in series is moved through the angle between two of its figures by a rod from a machine whose strokes are to be counted. Each stroke moves the unit figure up one number. The tenth motion causes a dog or pin on the units disk to engage a pin or projection on the second or tens disk, and this second disk similarly moves the third or hundreds disk when the ninety-ninth stroke of the first disk is completed; and so on as far as is desired.
6. The representative of the engineer-in-chief of a canal or similar public work, having special charge of the recording of quantities of excavation, embankment, or masonry.

counter[3], *n.* **8.** The depressed part of the face of a coin, medal, or printing-type that gives relief and contrast to the raised part of the design.—**Counter-dividing machine,** in *shoe-manuf.*, a machine for cutting stock for boot-counters.

counter-agency (koun″tėr-ā'jen-si), *n.* An opposing agency. *De Quincey.*

counter-alliance (koun″tėr-a-lī'ans), *n.* An alliance entered into to oppose, offset, or counterbalance another alliance.

counter-antidote (koun″tėr-an'ti-dōt), *n.* A substance that inhibits the action of an antidote; an antiantitoxin.

counter-arch, *n.* **2.** An inverted arch connecting the imposts of another arch to give them equal bearing.

counter-attack (koun″tėr-a-tak'), *n.* Defense by aggressive measures; the attempt to ward off an opponent's attack by engaging him at another point: used especially in chess.

counterbalance, *n.* **2.** In elevators, a weight suspended on a rope which is attached to the car and passes over a pulley at the top of the elevator-shaft. The weight is usually heavier than the car, so as to allow for the average load.

counter-bass (koun'tėr-bās), *n.* See *bass counter*, under *bass*[3].

counterbore (koun'tėr-bōr), *v. t.*; pret. and pp. *counterbored*, ppr. *counterboring.* To bore out (a hole) to a larger diameter for a given depth.

counterbore (koun'tėr-bōr), *n.* **1.** A tool-holder or tool-bar for a drilling-machine. It is passed through a hole in the work and brings the cutting tool against the farther or opposite (counter) end of the work.
2. A tool for boring out a portion of a hole to a larger diameter. Such a tool is usually made with a tip on the end to fit the drilled hole, so that the enlarged section will be concentric with and parallel to the drilled hole.
3. An enlarged section of a drilled hole, made for the purpose of receiving the cylindrical head of a screw or some similar object.

counterbracing (koun'tėr-brā″sing), *n.* Diagonal bracing placed in a truss or latticed girder to transmit stress, either tensile or compressive, from one point to another; a counterbrace to prevent deformation of the panel when the stress is reversed in the principal members.

counter-ceiling (koun'tėr-sē″ling), *n.* In *construction*, a false or second ceiling made by filling in between the floor-boards and the lath-and-plastered ceiling with mineral wool or other sound-deadening material, or with concrete, hollow brick, or other fireproofing.

countercharge, *v. t.* **2.** In *decoration*, to arrange (a design) so that elements may be repeated by simple reversion; to reverse (a design).

> By *countercharging* two or more designs were obtained by the same drawing.
> *Hungerford*, Furniture in South Kensington Museum, [p. cxxxii.

countercheck, *n.* **2.** In *pianoforte-making*, a projection from the hammer-butt that engages with the check. See cut under *pianoforte*. Also called *bumper*.

counter-chute (koun'tėr-shöt), *n.* A chute down which coal is dumped from an upper to a lower level or gangway. *Coal and Metal Miners' Pocketbook.*

counter-claim (koun'tėr-klām), *v. i.* In *law*, to set up an affirmative defense; make a counter-claim (which see).

counter-claimant (koun'tėr-klā″mant), *n.* One who sets up a counter-claim or begins a cross-action.

counter-coupé (koun″tėr-kö-pā'), *n.* In *fencing*, a thrust made by means of a counter which, instead of clinging to the opposing blade, develops into a coupé over the point. See ★*coupé*, 4.

counter-cry (koun'tėr-krī), *n.* An opposing cry.

> Thy face is far from this our war,
> Our call and *counter-cry*.
> *R. Kipling*, The True Romance.

counter-demand (koun″tėr-dē-månd'), *n.* A demand made by way of reply to another.

counter-demonstration (koun″tėr-dem-on-strā'shon), *n.* A demonstration intended to be an answer to some other supposedly hostile movement or action.

counter-diapason (koun″tėr-dī-a-pā'zon), *n.* In *organ-building*, a double diapason, or 16-foot diapason.

counter-disengage (koun″tėr-dis-en-gāj'), *v. i.* In *fencing*, to disengage and make ready to thrust over the hand as the adversary changes the engagement.

counter-disengage (koun″tėr-dis-en-gāj'), *n.* In *fencing*, same as ★*counter-disengagement.*

counter-disengagement (koun″tėr-dis-en-gāj'-ment), *n.* In *fencing*, a disengagement which follows or anticipates a disengagement of one's opponent; also, a riposte made by means of a disengagement which follows that of the opponent and avoids his foil. *N. E. D.*

counter-enamel (koun″tėr-e-nam'el), *v. t.* To enamel both front and back. See the noun.

counter-exposition (koun″tėr-eks-pō-zish'on), *n.* In *fugue-writing*, a treatment in which the answer precedes the subject.

counter-extend (koun″tėr-eks-tend'), *v. t.* To apply counter-extension to. *Buck*, Med. Handbook, III. 525.

counter-fire (koun'tėr-fīr), *n.* Same as ★*back-fire.*

counter-fugue (koun'tėr-fūg″), *n.* A fugue in which the imitation of the subject is in contrary motion or by inversion. See *fugue* and *imitation*, 3.

counter-gambit (koun-tėr-gam'bit), *n.* In *chess*, a gambit played by the second player. See *gambit*.—**Lewis's counter-gambit,** an obsolete variation of the King's Bishop's opening.—**Lopez-Gianutio counter-gambit,** black's 3 . . . P—KB 4 in the King's Bishop's gambit.

counter-glow (koun'tėr-glō″), *n.* **1.** The light from the eastern sky after the sun has set: an apparent reflection of the sunset twilight glow, but really the independent illumination of the eastern atmospheric dust and haze by sunbeams that pass far above the observer through the upper atmosphere when the sun is below the horizon. The lower limit of the counter-glow is the twilight-arch.—**2.** A patch of extremely faint luminosity in the heavens always opposite to the sun. It is supposed to be connected with the zodiacal light.

counter-imitate (koun'tėr-im″i-tāt), *v. t.*; pret. and pp. *counter-imitated*, ppr. *counter-imitating.* To do or say the opposite of what one sees done or hears said.

> In *counter-imitating* one another, that is to say, in doing or saying the exact opposite of what they observe being done or said, they are becoming more and more assimilated, just as much assimilated as if they did or said precisely what was being done or said around them.
> *Tarde* (trans.), Laws of Imitation, p. xvii.

counter-imitation (koun'tėr-im-i-tā″shon), *n.* The opposite of imitation; the act of doing or saying the opposite of what one sees done or hears said.

> Let us say, then, from this wider point of view, that a society is a group of people who display many resemblances produced either by imitation or by *counter-imitation.* *Tarde* (trans.), Laws of Imitation, p. xvii.

counter-lath (koun'tėr-låth), *n.* **1.** A lath, used as a kind of furring, as where the lathing and plastering must be carried over broad surfaces of timber or other material and must be kept away from it by the thickness of the counter-lath to allow the damp plaster to make a key between the laths.—**2.** A lath used as a gage to fix the amount of separation between boards, laths, palings, or the like which are to be nailed fast with openings between them.

counter-lath (koun'tėr-låth), *v. t.* In *plastering*, to furnish (a ceiling or wall) with counter-laths. See ★*counter-lath, n.*

counter-lathing (koun'tėr-låth″ing), *n.* In *plastering*, lathing applied to counter-laths. See ★*counter-lath, n.* *W. Millar*, Plastering, p. 86.

counter-lever (koun'tėr-lev″ėr), *n.* That part of a bar or system, serving as a lever, which lies between the fulcrum and the weight.

counter-loper (koun'tėr-lō″pėr), *n.* A counter-jumper (which see).

counterman (koun'tėr-man), *n.* A salesman in a shop or store; the man behind the counter, as distinguished from the floor-walker, etc.

countermine, *n.* **1.** (*b*) A mine or torpedo placed and exploded in a harbor entrance by an attacking navy to destroy the mines or torpedoes which guard the entrance.

counter-mold (koun'tėr-mōld), *n.* A profile or the like cut in and fitted close to a molding or group of moldings so that it may be copied accurately.

counter-penalty (koun'tėr-pen″al-ti), *n.* A penalty proposed as a substitute for another: as, in *Gr. antiq.* (translating Gr. ἀντιτίμησις), the penalty which a person convicted of crime was permitted to suggest for himself as an alternative to that proposed by the accuser.

counterpoint[2], *n.*—**Unequal counterpoint,** in *music*, any form of counterpoint that is not note against note. See *counterpoint*[2].

counterpointist (koun'tėr-poin-tist), *n.* Same as *contrapuntist.*

counterpoise, *n.*—**Counterpoise globe,** a glass globe equal in size to one containing a gas whose weight is to be accurately determined. It is placed on the other side of the balance and eliminates errors due to the change in the buoyancy of the air: first used by Regnault in 1845. *M. W. Travers*, Exper. Study of Gases, p. 125.

counter-pump (koun'tėr-pump), *n.* A pump under a counter or bar, for drawing liquids from barrels or other vessels too bulky to be kept close at hand.

counterpuncture (koun'tėr-pungk-tūr), *n.* In *surg.*, a second puncture made at another point, usually at some dependent part.

Counter-Reformation (koun″tèr-ref-or-mā′shon), *n.* The movement of reform within the Roman Catholic Church which followed, and partly counteracted the effects of, the Protestant Reformation in the sixteenth century. See *reformation*, 3.

counter-roll (koun′tèr-rōl), *v. i.* To roll in the opposite direction: as, to roll and *counter-roll.*

> And spiritual thunders, born of soul
> Not cloud, did leap from mystic pole
> And o'er him roll and *counter-roll.*
>
> *Mrs. Browning*, Vision of Poets, st. 65.

counter-screw (koun′tèr-skrö), *n.* Either of two screws (both right-handed and turning together in the same direction or one right-handed and the other left-handed and turning opposite ways) by which an object which they adjust or restrain may be moved in one direction or the other by the motion of one.

counter-shaft, *n.*—**Differential counter-shaft,** a supplementary shaft in a motor-vehicle, parallel to the driving-axle and connected by drive-chains to the latter or the driving-wheels. It is divided by the compensating-gears, and therefore removes the latter from the rear axle which has to carry the load. This gives to it its differential character when the car is rounding curves. *Sci. Amer.*, Feb. 7, 1903, p. 91.

counter-shafting (koun′tèr-shäf″ting), *n.* One or more counter-shafts; the system of secondary transmission to tools from the main driving-shaft of a factory or works.

counter-skiver (koun′tèr-skī″vèr), *n.* A special machine for skiving counters and taps, and making rounds and welts. See *skiving-machine.*

counter-stain (koun′tèr-stān), *n.* In *histol.*, a dye employed to stain of another color the elements not colored by the dye first used. The effect is to make the different elements more conspicuous by contrast.

counter-stain (koun′tèr-stān), *v. t.* To treat with a counter-stain.

> Rehm (25) *counterstaining* with a solution of carmine 1 part, liq. ammon. caustic 1 part, in water 100 parts for five minutes, then decolorizing five minutes in alcohol 100 parts, potassium nitrate 1 part, stained the centre of the nucleolus red, while leaving a peripheral rim of blue.
>
> *F. R. Bailey*, in Jour. Exper. Med., Oct. 1, 1901, p. 559.

counter-stitcher (koun′tèr-stich″èr), *n.* A shoe-sewing machine for stitching counters.

counter-stroke, *n.* 2. A force which produces a lesion in a part other than that where the injury is inflicted. See *counter-fissure. Buck*, Med. Handbook, IV. 558.

counter-tide (koun′tèr-tīd), *n.* A tide that opposes one already existing; the flood- or ebb-tide that is about to succeed to the one already existing; the incoming flood-tide overlying the outgoing ebb-tide as shown by the surface-ripple or bore.

counter-time, *n.* 3. In *fencing*, a pass or thrust made at a wrong or inopportune moment for the opponent, thus breaking the rhythm of his intended combination.

counter-treble (koun′tèr-treb″l), *n.* In *music*, a high treble or soprano voice, or the part sung by such a voice.

count-fish (kount′fish), *n.* A large snapper found in Australian and New Zealand waters, sometimes used as a standard of size by the fishermen in selling fish in the market.

counting-cell (koun′ting-sel), *n.* An apparatus designed for counting the number of blood-corpuscles, bacteria, etc., in a given volume of fluid.

counting-machine (koun′ting-ma-shēn″), *n.* A machine devised to perform the operation of counting; a ★tallying-machine (which see).

counting-scales (koun′ting-skālz), *n. pl.* A weighing-scales of the portable platform type, arranged for counting small hardware articles such as nuts, bolts, etc., by weight. It has two pans, a small one being suspended from the end of the balance-beam. One sample placed in this pan will balance one hundred placed on the platform. To count out a hundred nuts it is only necessary to place one nut in the pan and to place on the platform a quantity of the same nuts just sufficient to balance it. Small articles weighing less than a quarter of a pound can be counted by placing one in the small pan and more in the larger pan: when the two pans balance there are twenty in the larger pan.

count-muster (kount′mus″tèr), *n.* A muster or round-up, as of cattle, for the purpose of counting those that have been mustered. [Australia.]

country, *n.* 10. The parts of a cricket-field covered by the out-fielders; the long- or deep-field. [Colloq.]—**To appeal to the country,** in British parliamentary procedure, to appeal to the voters of the country by dissolving Parliament and ordering a new general election, when some government measure, considered of vital importance by the ministry, has been defeated in the House of Commons.

country-box (kun′tri-boks), *n.* A small country-house, generally for temporary residence as when shooting, fishing, or the like.

country-cut (kun′tri-kut), *a.* That has been cut roughly: used in regard to timber which has been roughly sawed in the district where it was felled.

country-damaged (kun′tri-dam″ājd), *a.* Damaged in the country, or at the interior or initial point of shipment (by being exposed to rain, mud, careless handling, etc.): a term applied to cotton in the bale when so damaged. *Taggart*, Cotton Spinning, I. 43.

country-house (kun′tri-hous), *n.* A house or mansion in the country, as distinguished from a town-house; a country-seat.

country-note (kun′tri-nōt), *n.* A bank-note issued by a local bank in England, as distinguished from those issued by the Bank of England. *N. E. D.*

county[1]. I. *n.* **Administrative county,** one of the 62 divisions (exclusive of county boroughs) into which the 52 geographical and historical counties or shires of England and Wales are divided under the Local Government Act of 1888 for the administration of the county affairs which had prior to that date been administered in quarter-sessions by the justices of the peace, their powers being transferred to a new popularly elected administrative body styled the *county* ★*council* (which see). London is an administrative county in itself, with its own county council for county affairs, but for purely local or municipal purposes it is divided into 28 boroughs, each with its own municipal council. See also ★*county borough.*—**Body of a county,** the entire territory embraced within the limits of a county.—**Home counties,** the group of English counties of which London is the center. These are Middlesex, Hertford, Essex, Kent, Surrey, and (sometimes) Sussex: as, farming in the *Home Counties.*

II. *a.* **County borough,** in England and Wales, a borough with a population of 50,000 or more, that since the passing of the Local Government Act of 1888 has had county administrative powers added to its own municipal powers and is thus a county in itself, administratively (but not politically or judicially) independent of the county in which it is situated. The county boroughs now number 67, but do not include the 28 boroughs of the administrative county of London.—**County council** See ★*council.*

county-court (koun′ti-kōrt), *v. t.* To sue (one) in the county court, especially for debt. *Surtees.*

county-house (koun′ti-hous), *n.* The county poorhouse. [Eng.]

coup[4], *n.* 4. A stroke; a brilliant play; in banking games the decision of all the bets by one event.—**Bath coup,** in *whist*, the act of holding up the ace and jack when the adversary leads a king, so as to secure tenace in the suit: so called because first brought into use by the old whist-players at Bath, England.—**Coup de repos** [F.], in *chess*, a silent or quiet move after a series of checks.—**Coup dur** [F., 'hard stroke'], a French billiard term for what in England and America is technically the 'kiss-shot.' Until recently it comprehended only that class of strokes in which the cue-ball was made to rebound from an object-ball either on or very close to a cushion. It now includes, but with insufficient reason, shots in which there is no double contact, or 'kiss,' between any two balls whatever.—**Coup fourré** [F., 'interchanged blow'], in *fencing*, a double blow delivered by two fencers, neither one waiting to parry: usually regarded with disfavor, as it spoils the grace and interest of the game.—**Coup juste** [F., 'exact stroke'], in *chess*, a move made at the right or opportune time.—**Grand coup** [F., 'great stroke'], in *whist* or *bridge*, the trumping of a trick which is already won by the partner, or throwing a small trump when he has already trumped with a higher.—**To run a coup,** in *billiards*, to pocket the cue-ball or send it off the table without hitting any other ball: a technicality of English billiards.

coupé, *n.* 4. In *fencing*, a sudden shifting of the guard by lifting the foil over the point of the opponent's blade and thrusting at the same moment on the unprotected side. A coupé is in the nature of a surprise to a careless opponent. See *cut over point*, under *cut.*

coupélet (kö-pā-let′), *n.* [*coupé* + *-let.*] A carriage with a coupé under-body and a calash top over the rear seat, and without high pillars on the doors or front.

couple, *n.* 2. (*e*) In *astron.*, a double star.—**Flexural couple,** a couple of forces acting upon a body in such a manner as to produce or tend to produce bending.—**Mechanical couple.** See def. 2 (*b*).—**Righting couple,** in *naval arch.*, the mechanical couple formed by the force of gravity acting downward through the center of gravity and the force of buoyancy acting upward through the center of buoyancy, which tends to restore a vessel to the upright or position of equilibrium after it has been inclined from that position.—**Torsion couple,** in *mech.*, a couple of forces acting so as to twist a body; a couple tending to produce torsion.—**Unit moment of a couple,** the moment of a couple such that the product obtained by multiplying one of the forces by the arm of the couple is equal to unity: thus the couple in which each force is one dyne and the arm is one centimeter has unit moment.

coupled, *p. a.* 2. As applied to quadrupeds, and particularly to horses, noting the distance between the shoulders and the hip-joint: as, well *coupled*, short *coupled.*—**Coupled rhythm, wheels.** See ★*rhythm*, ★*wheel*1.

coupler, *n.* (*d*) In *zool.*, a plate which joins one of the swimming-appendages of a crustacean to its fellow on the opposite side of the body.

> [The] first four thoracic appendages bear biramous swimming feet . . . those of the right and left sides being connected by transverse plates or *couplers.*
>
> *Parker and Haswell*, Zoology, I. 530.

Automatic coupler. See *coupling*, 4. (*b*), (*c*).

couplet, *n.* 3. In *Gothic arch.*, a double window; one having two lights only and these of the same size and style.

coupling, *n.*, 4. (*c*) Same as *pipe-coupling.*—**Conevise coupling,** a shaft-coupling consisting of a sleeve bored conically from each end, two bushings turned to fit the conical boring of the sleeve and bored to fit the shaft, and three bolts passing through the bushings by which they can be tightened in the sleeve and on the shaft, the bushings being slotted through on one side to permit of them being compressed sufficiently to bind the shaft.—**Electro-magnetic coupling,** a device for coupling the parts of a mechanism, in which magnetic attraction, electrically produced and controlled, is used instead of friction or of some other of the mechanical means commonly employed.—**Face-plate coupling,** a flanged coupling; a pipe- or shaft-coupling which resembles in form the face-plate of a lathe, in that flat areas at right angles to the axis of the pipe or shaft form the joint.—**Flange-coupling,** a device for uniting two lengths of driving-shaft. On the end of each is fastened by keys a flange on a hub; the two flanges face each other, and are bolted to each other by bolts.

coupling-grab (kup′ling-grab), *n.* Same as ★*grapple*, 7.

coupling-rod (kup′ling-rod), *n.* Same as *parallel rod* (which see, under *rod*[1]).

coupling-screw (kup′ling-skrö), *n.* An eye-bolt with a strap attached to the nut, so that by screwing the bolt into the nut a chain or rope or rod fastened to the eye and to the strap may be tightened; also, a socket with female screws at each end, for connecting-rods or tension-members.

coupling-tool (kup′ling-töl), *n.* Tongs used in uniting objects such as lengths of pipe. [Eng.]

coupon, *n.* 2. A small piece of metal made as a part of another piece to serve as a sample for testing-purposes.—**Ex coupon,** in *finance*, without the right to the coupon for current interest: said of a bond sold under this condition.

courbaril, *n.* 2. The tree which yields courbaril resin or anime. See *Hymenæa.*

courbash, *n.* See *koorbash.*

courbature (kör-bä-tür′), *n.* [F., aching, lassitude, lumbago, < *courbatu*, overpowered by lassitude, < OF. *courbatu*, lit. 'beaten with short arm' (that is, with quick and many blows), < *court*, short, + *batu*, *battu*, beat: see *battue*, *batter*[1].] An aching in the muscles. *Buck*, Med. Handbook, VII. 608.

courge (körzh), *n.* [F., lit. 'a gourd': see *gourd.*] In *sea-fishing*, a gourd-shaped basket for holding live bait immersed in the water.

courida (kö-rē-dä′), *n.* [Native name in Guiana.] In British Guiana, a verbenaceous shrub or small tree, *Avicennia nitida.* It is found within the tropics on both sides of the Atlantic. It grows with the mangrove on muddy flats along the sea-shore, and, like it, is raised on stilt-like-roots. Called *black mangrove* and *blackwood* in the West Indies.

> The land at the mouths of these æstuaries is on the increase, forming a fringe of low ground which is soon covered with mangroves and *courida* bushes.
>
> *R. H. Schomburgk*, Descrip. British Guiana, p. 7.

course[1], *n.*—21. In *mining*: (*a*) An influx of water from one direction. (*b*) The direction of a lode or vein. (*c*) A passage-way. (*d*) The direction of a mine working.—**Course made good,** *naut.*, the true bearing of a vessel from the point left; the compass course corrected for leeway, send of the sea, variation, deviation, etc.—**Compass course.** See ★*compass.*—**Course of kind,**† the course of nature: the ordinary procedure of nature especially as regards reproduction.

> Not an egg had been laid; and it appeared upon inquiry, that the whole *course of kind* was suspended.
>
> *Southey*, Doctor, lxxvi.

Void of course, in *astrol.*, said of the heavenly bodies when they form no fresh aspect before leaving the sign in which they are posited.

Coursed ashler. See ★*ashler.*

court, *n.* 12. Among Foresters and some other friendly societies, a local branch or lodge.—**Bail court,** in *Eng. law*, the practice-court; a court auxiliary to the Court of King's Bench, where motions connected with the pleading and practice, rather than with the merits, of a controversy were heard and determined.—**Central Criminal Court,** the most important English court of criminal jurisdiction. All the higher crimes committed in London and its surrounding country are triable in this court, as are also the serious offenses that were formerly within the jurisdiction of the admiralty court.—**Circuit court of appeals.** See ★*appeal.*

Court of claims. (*a*) A court in which claims against the State may be heard and determined. As the sovereign power cannot be sued by a subject, this court is usually established by the State, and all claims against the government must be brought therein. Such courts exist in Washington and generally in the capitals of each of the

States.—**Court of error.** See *error.*—**Court of Private Land Claims.** See *private land claims,* under ★*claim*[1].—**Court of referees.** See the extract.

In the passage of private bills through the House of Commons, the practice was adopted in 1864 of the appointment of referees on such bills, consisting of the chairman of ways and means and not less than three other persons to be appointed by the speaker. The referees were formed into one or more courts, three at least being required to constitute each court, a member in every case being chairman, but receiving no salary. The referees inquired into the proposed works, etc., and reported to the house. The committees of the house on any bill might also refer any question to the referees for their decision. It was also ordered in 1864 that the referees should decide on all petitions as to the right of the petitioner to be heard, i. e. his locus standi. A *court of referees* was specially constituted for the adjudication of this right, called locus standi. A series of reports of the court of referees on private bills in parliament, called Locus Standi reports, has been published since 1867. *Bouvier,* Law Dict.

Court of regard. See *regard.* **Court of request.** Same as *court of conscience,* under *conscience.* **Court of Wards and Liveries,** in *Eng. law,* a former court of record in England, having jurisdiction over questions relating to profits accruing to the crown by reason of tenures, the granting to heirs of the delivery of their inheritance out of the hands of their guardians, the granting of licenses to the king's widows to marry and imposing fines for marrying without license, and the superintendence of persons *non compos mentis* in the king's custody. It was abolished in the reign of Charles II.—**Court Scotch.** See ★*Scotch.*—**Double Court,** in *tennis,* a court for two pairs of players.—**High Court of Justice,** in England, a division of the Supreme Court having original and some appellate jurisdiction. The lord chief justice is its president.—**Levy court,** the name given in some of the United States to the board of officers which administers the affairs of a county, the same as *board of county commissioners, county supervisors, board of freeholders,* etc.—**Passage court,** an ancient court of record in Liverpool, once called the "mayor's court of *pays sage,*" but now usually called the "court of the passage of the borough of Liverpool." *Bouvier.*—**Single court,** in *tennis,* a court for two players only.—**Summary court,** in the *United States army,* a court consisting of a single officer, for the trial of minor offenses committed by enlisted men.—**To cover court,** in *tennis* and similar games, to so move about over the court as to render it impossible for the opponents to score by placing the ball out of reach.

court-circular (kōrt′sėr′kū-lär), *n.* An official circular or bulletin containing a record of the doings of the court or royal family of Great Britain, supplied to the newspapers every day for publication in their columns.

courtesy, *n.*—**Courtesy of the port.** (*a*) A courtesy extended, in some cases, to a passenger arriving from a foreign port, consisting in the examination of the passenger's baggage by a special inspector immediately upon its delivery from the ship. (*b*) *Naval,* the interchange of official visits and salutes when a war-ship enters a foreign port.

court-room (kōrt′röm), *n.* The room or chamber in which a court is regularly held and justice is dispensed.

courtzilite (kōrt′zi-līt), *n.* [**Courtzil,* a proper name (?) + *-ite*[2].] A kind of asphaltum allied to uintahite and gilsonite.

coussinet, *n.* **2.** In an Ionic capital, a roll or baluster-shaped member which is carried horizontally from one volute to another. There are two in each capital. See cut at ★*collarino.*

Couvin shales. See ★*shale*[2].

Coventry, Earl of. See ★*snip-snap-snorem.*

covenant, *n.*—**Book of the Covenant.** See ★*book.*—**Covenant of non-claim,** in *law,* in a deed of real property, substantially the same as a warranty covenant: used especially in the New England States and in deeds of extinguishment of ground-rents in Pennsylvania. It provides that neither the grantor nor his heirs shall claim any title in the property conveyed.—**Covenant of salt,** an inviolable covenant: from an old custom of the Hebrews of sealing an agreement by a common meal, at which salt was eaten, the preservative quality of the salt signifying the security of the agreement. 2 Chron., xiii. 5.—**Covenant to convey,** in *law,* a covenant by which one party agrees to convey to another the estate described in the covenant, under certain circumstances.—**Greater Book of the Covenant, Little Book of the Covenant.** See ★*book.*—**Personal covenant,** in *law,* one which binds the covenantor only; a covenant which does not run with the land.—**Real covenant,** in *law,* one which binds not only the covenantor but also the property which is the subject-matter of the covenant; a covenant which runs with land.—**Transitive covenant,** in *law,* one which binds both the covenantor and his representatives.—**Writ of covenant,** a legal process which issues in favor of a party who claims damages for breach of covenant.

cover[1], *v.* **I.** *trans.* **15.** In *hockey, basket-ball,* and other sports, to stand by the side of or in front of (an opponent), so as to render it impossible for him to make a play.—**17.** In *cricket,* to field; to catch or stop (the ball) and return it.—**To cover court.** See ★*court.*

II. *intrans.* **4.** In *card-playing,* to play a higher card on a card led or played, when the higher card is not the best of the suit: as, queen on jack, when the ace and king have not yet been played.

cover,[1] *n.* **8.** In *cricket,* cover-point; a fielder who stands behind point, and more in the direction of the bowler; also, his position in the field.—**9.** In *calico-printing,* a fine pattern engraved on a roller to be printed over a pattern in resist.—**10.** In making a butt-joint in riveted work with plates, the lap-piece which covers the joint and is riveted to the butting edges. The double butt-joint has an outer and an inner cover-plate.—**Crown cover,** in *forestry,* the canopy formed by the crowns of all the trees in a forest, or, in an irregular forest, by the crowns of all trees in a specified crown class.—**Dead cover,** in English billiards, a position which corresponds to 'tie up' in the French or American game, the balls being so aligned that the striker can effect a count only at the risk of losing position. *W. Broadfoot,* Billiards, p. 339.—**Double cover,** in *cricket,* extra-cover, or extra-cover point; the fielder who plays between cover-point and mid-off, but farther from the batsman's wicket than either of them; also, his position in the field.—**Forest cover,** in *forestry,* all trees and other plants in a forest.

cover[3] (kuv′ėr), *n.* [W. *cyfair.*] The ordinary measure of land in South Wales, two thirds of an imperial acre. *N. E. D.*

covering-piece (cuv′ėr-ing-pēs), *n.* In the *Echinodermata,* especially the *Crinoidea,* one of the plates arranged along both sides of the ambulacral grooves which cover the ambulacra.

covering-plate (kuv′ėr-ing-plāt″), *n.* In *Crinoidea,* one of the calcareous plates, situated along the margins of the food-grooves in the arms, which, by opening and closing, as occasion demands, serve to protect the soft parts. Also called *ambulacral.*

cover-slip, *n.* **2.** In *cricket:* (*a*) A fielder formerly placed to back up or cover the short-slip. (*b*) His position in the field.

covert, *n.*—**Covert play.** See *close* ★*play.*—**Ear coverts,** in *ornith.,* the feathers covering the external opening of the ear.

co-vibration (kō″vī-brā′shon), *n.* [*co-*[1] + *vibration.*] A concomitant or sympathetic vibration. *C. R. Squire,* in Amer. Jour. Psychol., XII. 588.

Covillea (kō-vil′e-ä), *n.* [NL. (Vail, 1895), named after Frederick V. *Coville,* an American botanist.] A genus of dicotyledonous plants belonging to the family *Zygophyllaceæ.* See *Larrea* and *creosote-bush.*

co-volume (kō-vol′ūm), *n.* [*co-*[1] + *volume.*] In *phys. chem.,* that part of the total volume of a body which is not occupied by the molecules, and which is the volume available for the oscillatory and translatory motions of the atoms and molecules.

cow[1], *n.*—**The cow with the iron tail,** the pump, as an alleged resort of the milkmen to enhance the quantity of their milk. [Colloq.]

The *cow with the iron tail* is still milked in London. *All the Year Round.*

cowalker (kō-wâk′ėr), *n.* In *folk-lore,* a double; an apparitional counterpart, which may show itself in places remote from that occupied by the individual in person.

A is on his way to X, or is dreaming that he is on his way, and is seen at X by P, or by P, Q, and R, as may happen. These cases are common, and were explained, in Celtic philosophy, by the theory of the "*Co-Walker,*" a kind of "astral body." *Encyc. Brit.,* XXXII. 52.

cowan (kou′an), *n.* [Also *cowen, kowan;* origin unknown.] **1.** One whose occupation is the building of dry stone walls: used especially of one who has not been regularly trained in the mason's trade. [Scotch.] Hence—**2.** One who is not a Free-Mason.

Cowbane (*Oxypolis rigidior*).
a, upper part of plant and inflorescence, one eighth natural size; *b,* fruit and cross-section of same, three fourths natural size.

coward-tree (kou′ärd-trē), *n.* A tree under which all men who manifest fear in battle are killed: used by some Zulu tribes. *G. S. Hall,* Adolescence, II. 720.

cowbane, *n.* **2.** An American umbelliferous swamp-plant, *Oxypolis rigidior,* ranging from New York to Florida and westward to Minnesota and Louisiana, supposed to be poisonous to cattle. Also called *hemlock-dropwort:* and *water-dropwort.* See cut in middle column.

cow-basil (kou′baz-il), *n.* Same as *cow-herb.*

cow-bind (kou′bīnd), *n.* The common or red-berried bryony, *Bryonia dioica.* See *bryony.*

cow-clover (kou′klō″vėr), *n.* See ★*clover.*

cow-cockle (kou′kok″l), *n.* See ★*cockle*[1].

cow-creamer (kou′krē″mėr), *n.* A cream-jug made in the shape of a cow. The cream is poured in through a hole in the back, the open mouth of the cow serving for a spout, while the curled tail answers for a handle. Such jugs were extensively made in England and in the United States from the middle of the eighteenth to the middle of the nineteenth century, both in cream-colored and brown glazed ware.

cowen, *n.* Same as ★*cohen.*

cow-fish, *n.,* (*b*) (3) A name applied in New England to the grampus, *Grampus griseus.* (*e*) A name applied in Demerara to the manatee.

cow-keeper, *n.* **2.** A person, in a city or town, who keeps stall-fed cows and retails the milk.

The most significant feature in connexion with the milk supply of the metropolis at the beginning of the 20th century is the gradual extinction of the town "*cow-keeper.*" *Ency. Brit.,* XXVII. 363.

cowl[3] (koul), *n.* See ★*kowl.*

cow-lady, *n.* **2.** In *angling:* (*a*) A natural fly used by anglers. (*b*) An artificial imitation of the same, in which the body is of peacock's feather and the wings of red hackle of a cock.

cow-lick, *n.* **2.** *pl.* The snowdrop-tree, *Mohrodendron dipterum.*

cow-pea, *n.* The cow-pea is a bean rather than a pea, having large leaves with three leaflets and seeds frequently oblong or kidney-shaped. It is commonly classed as *Vigna Sinensis,* but probably includes more than one natural species, the red-seeded and black-seeded varieties forming one natural group; the round-seeded 'lady-peas' a second; the large black-eyed and purple-eyed a third; and the mottled and speckled 'whippoorwills,' together with plain yellow, pinkish, and light brown a fourth. The cow-pea is an annual, its numerous varieties passing through all grades of bush, trailing, and running habit, the less rampant being better adapted to short seasons. It requires much heat and will bear no frost; hence it is most at home in the South, but varieties have been

Cow-pea (*Vigna Sinensis*).
a, plant, about one fourth natural size; *b,* black-eye variety of bean of *Vigna Sinensis,* about natural size.

secured which will mature in 60 days, and its culture is extending northward. In the southern United States it has long been of great value, and with the introduction of mixed farming is increasingly appreciated. It is available for forage and soiling and for hay, in the latter use, when well cured, ranking with red clover; and it is one of the foremost nitrogen-gatherers. For silage it is inferior to corn or sorghum. The shelled seeds, chiefly of the 'black-eye pea,' are used for human food, either fresh or dried.—**Cow-pea weevil.** See ★*weevil.*

cow-penning (kou′pen″ing), *n.* The practice of penning cattle in orange-groves over night, the position of the pens being changed every few days. *Yearbook U. S. Dept. Agr.,* 1894, p. 201.

cowperitis (kou- or kō-pe-rī′tis), *n.* [NL., < *Cowper(ian glands)* + *-itis.*] Inflammation of the Cowperian glands.

cow-puncher (kou′pun″chėr), *n.* A cattle-driver on the great plains of the United States. Sometimes used for *cow-boy.* [Slang.]

cow-run (kou'run), *n.* A common for pasturing cows.

cowry, *n.* **3.** A unit of surface used in Hindustan, equal to a square yard.—**Head of cowries,** a count of 2,000 cowries, equal to about sixpence, in the British African Colonies.

cowslip, *n.* **Cape cowslip,** any plant of the genus *Lachenalia.* See *leopard-lily.*

cow-tick (kou'tik), *n.* An ixodid, *Boöphilus bovis.* Also called ★*cattle-tick* (which see, with cut).

cow-tree, *n.* **2.** In British Guiana, the hya-hya or milk-tree, *Tabernæmontana utilis.* See *milk-tree,* 2, and *Tabernæmontana.*—**3.** The karaka of New Zealand, *Corynocarpus lævigata,* so called by the colonists from the fondness of cows for its leaves. See ★*karaka.*—**Cow-tree wax,** a wax-like substance obtained by boiling the milky juice of the South American cow-tree, *Perantnera utilis;* used locally for making candles. **Rio Negro cow-tree.** See ★*couma.*

Coxa vara, a deformity marked by a bending of the neck of the thigh-bone, causing adduction of the limb.

Coxal gland. See ★*gland*—**Coxal organ,** in *Peripatus,* an eversible, furrow-like structure, with tumid lips and lined with smooth non-tuberculate epithelium, situated on the ventral sides of certain of the legs.—**Coxal sacs,** certain eversible sacs which function as blood-gills and occur near the coxæ in certain diplopods and other *Myriopoda,* and in the *Symphala* and *Synaptera.* A. S. Packard, Text-book of Entom., p. 14.

coxarthrocace (kok-sär-throk'ą-sē), *n.* [NL., < L. *coxa,* hip, + Gr. ἀρθρον, joint, + κάκη, ill condition (*arthrocace.*)] Hip-joint disease.

coxarthropathy (kok-sär-throp'ą-thi), *n.* [NL., < L. *coxa,* hip, + Gr. ἀρθρον, joint, + -παθεια, < πάθος, disease.] Hip-joint disease.

coxecphysis (kox-ek'fi-sis), *n.* [NL., < L. *coxa,* thigh, + Gr. ἐκφυσις, outgrowth.] In crustaceans, a branch borne by the first joint or coxa of any appendage; an epignathite or epipodite.

coxitis, *n.*—**Senile coxitis,** rheumatoid arthritis located in the hip-joint.

coxodynia (kok-sō-din'i-ą), *n.* [NL., < L. *coxa,* hip, + ὀδύνη, pain.] Same as *coxalgia.*

coxognathite (koks-og'na-thīt), *n.* [L. *coxa,* thigh, + Gr. γνάθος, jaw, + -*ite*[2].] The basal joint or coxa of a foot-jaw.

coxotuberculosis (kok″sō-tū-bèr″kū-lō'sis), *n.* [NL., < L. *coxa,* hip, + NL. *tuberculosis.*] Tuberculous disease of the hip-joint.

coxy, *a.* See ★*cocksy.*

coyote, *n.* No less than eleven species of coyotes have been recognized by Merriam, the name *Canis latrans* being restricted to the eastern form whose type-locality is Iowa. The species from Lower California is *C. peninsulæ;* the Californian form is *C. ochropus;* and that from Indian Territory is *C. frustror.*

coyoting (kō-yō'ting), *n.* Mining alone in a desultory way or in irregular openings and burrows like those made by the coyote. [Colloq., western U. S.]

Cozio counter-attack. See ★*attack.*

cp. A contraction of *compare.*

C. P. An abbreviation (*b*) of *candle-power;* (*c*) of *Chief Patriarch;* (*d*) of *Clerk of the Peace;* (*e*) of *Code of Procedure;* (*f*) of *Congregatio Passionis,* Congregation of the Passion.

cpd. An abbreviation of *compound.*

C. P. D., C. P. D. M. In *astron.,* abbreviations of *Cape* (of Good Hope) *Photographic Durchmusterung.* See ★*durchmusterung.*

C. P. M. An abbreviation of *common particular meter.*

Cr. **3.** An abbreviation of *crown.*

C. R. An abbreviation (*c*) of the Latin *Civis Romanus,* Roman citizen.

crab[1], *n.,* **7.** (*g*) The ironwork affixed to the end of a carriage-pole to which are attached the straps or chains which secure the horses to the pole. It consists of a socket and two branching arms with loop-ends, with or without a long whiffletree-hook.

8. In Australia, the marine crustacean, *Scylla serrata;* also, *Telphusa transversa,* a crustacean found in fresh water.—**9.** *pl.* Same as *crab-jaws.*—**Black crab,** *Gecarcinus ruricola,* a land-crab living in the Antilles: its name is due to the markings on its carapace.—**Chevalier crab,** a swift-running sand-crab, of the genus *Ocypoda.* Also called *horseman-crab.*—**Crab nebula.** See ★*nebula.*—**Creole crab,** a large hairy West Indian crab with prickly claws.—**Demon-faced crab,** the Japanese *Dorippe dorsipes.*—**Fighting crab.** Same as *fiddler-crab* (which see, under *crab*[1], 1).—**Great warty crab.** Same as *lazy* ★*crab.*—**Heraldic crab,** *Hucnia heraldica,* a crab whose markings suggest a heraldic shield.—**Jonah crab,** a large crab, *Cancer borealis,* found along the North Atlantic coast of the United States.—**Lazy crab,** in the East and West Indies, *Parthenope horrida.* Also called *great warty crab.*—**Oldman's-face crab,** a local name for a crab, *Atelecyclus septendentatus,* found along the southern coast of England.—**Sargasso crab,** a small crab, *Planes minutus,* that lives among sargasso weeds and is protectively colored.—**Swift crab.** (*a*) Any species of the beach-crab *Ocypoda.* (*b*) A cliff-crab, especially *Grapsus pictus.*—**To turn out crabs.** See ★*turn.* **Velvet crab.** Same as ★*lady-crab,* 2, (*b*). **Warty crab.** Same as *lazy* ★*crab.* **White crab,** a beach-crab; a sprite.

crab[2], *n.* **2.** The American crab-apple, *Malus coronaria,* also called sweet crab and fragrant crab, is a small

Crab-apple (*Malus coronaria*).

a, flowering branch; *b,* fruit-bearing branch. (From Sargent's "Manual of the Trees of North America.")

tree from 25 to 30 feet high, with a trunk rarely a foot in diameter, abundant in the Appalachian region and in the region of the Great Lakes and in the Mississippi valley, extending eastward to New York, Pennsylvania, and the District of Columbia. It has somewhat ovate, sharply serrate leaves and large, handsome, white or rose-colored flowers in umbels on slender pedicels. Several in each umbel mature, the fruits hanging on long stems. The apples are nearly spherical with a depression at base and summit, an inch or more in diameter, green, but attaining a yellowish hue when fully ripe, sometimes turning nearly red. The sarcocarp is compact, heavy, and juicy, sharply acid, but with a pleasant aroma. They are little eaten in a raw state, but are highly valued for preserves and make excellent sauce. The Iowa crab-apple, *M. Ioensis,* which is confined to the Mississippi basin, but ranges from Minnesota to Texas, is similar to the last and is often confounded with it, but has narrower leaves and somewhat larger fruit. The Soulard crab-apple, *M. Soulardi,* of the same region is regarded by some as a hybrid between *M. Ioensis* and the common apple. The fruit is larger than that of the others (sometimes 2 inches across) and useful for the same purposes as the quince. The narrow-leaf crab-apple, *M. angustifolia,* of the Atlantic and Gulf States has much smaller fruit and is of little value. The Oregon crab-apple, *M. rivularis,* of the Pacific coast from California to Alaska, has a pleasant subacid fruit not much larger than that of the hawthorn.

crab[3], *v. t.* **3.** To 'pull to pieces'; criticize or find fault with; hence, to hinder, spoil or defeat by adverse criticism of trivial details. [Colloq.]

The conditions of the race laid down definitely that every part of a competing vehicle [automobile] must be built in the country by it represented, and the use of foreign tires of course *crabbed* the deal.

New York Independent, Dec. 12, 1901.

crabbing-trough (krab'ing-trôf), *n.* A trough used in cleansing woven fabrics preparatory to dyeing.

crab-capstan (krab'kap-stan), *n.* A portable wooden upright pillar or shaft having a large socket or hole in the upper part into which is inserted a long strong wooden beam or lever: used for lifting weights, etc., commonly in shipyards.

crab-eater, *n.* **3.** A West Indian name of several small herons, including the green heron, *Ardea virescens* and the blue heron, *Ardea cærulea.*

crab-eyestone (krab-ī'stōn), *n.* A gastrolith of a crab; also, any eyestone.

crab-fish (krab'fish), *n.* A crab.

The fox catches *crab fish* with his tail, which Olaus Magnus saith he himself was an eye-witness of.

Derham, in Johnson's Dictionary, 8th ed., 1799.

crab-grass, *n.* **1.** Any species of *Syntherisma. S. linearis,* distinguished as *smooth crab-grass,* is abundant in the southern United States, but is little valued.—**Sprouting crab-grass,** *Panicum proliferum,* a succulent grass quite different from *Syntherisma,* sending out branches from all the upper nodes. It is liked by cattle but is hardly worthy of cultivation.

crab-hawk (krab'hâk), *n.* One of several species of birds of prey of the genus *Urubitinga,* related to the harpy-eagle but much smaller. The commonest species is *U. anthracina,* of Central and South America and the West Indies.

crab-hole (krab'hōl), *n.* A hole made by a land-crab or craw-fish; also, the hollow afterwards formed from one of these burrows by rain or by caving-in. [Australia.]

crabling (krab'ling), *n.* [*crab*[1] + -*ling*[1].] A small crab.

crabronid (krā'brō-nid), *a.* and *n.* **I.** *a.* Of or belonging to the hymenopterous family *Crabronidæ.*

II. *n.* A member of the hymenopterous family *Crabronidæ.*

crab-shell (krab'shel), *n.* A crab's carapace.

crab-step (krab'step), *n.* A sidelong step like that of a crab, made by a horse.

crab-tree, *n.* **2.** See ★*bitter-bark,* 1.

crab-vinegar (krab'vin-ē-gär), *n.* Vinegar made from the cider of crab-apples.

Cracca (krak'ą), *n.* [NL. (*Linnæus,* 1753, adopted from his 'Flora Zeylanica,' 1747), < L. *cracca,* an unidentified leguminous plant.] A genus of dicotyledonous plants belonging to the family *Fabaceæ.* See *Tephrosia.*

crack, *v.* **I.** *intrans.* **4.** (*b*) In *golf,* said of a player 'who goes to pieces.' In a close match a player *cracks* when he fails to maintain his average play of the preceding holes and allows his opponent thereafter easily to beat him. [Colloq.]

9. To shoot with small arms; fire: as, to *crack* at birds.—**10.** To become harsh or unmanageable; more specifically, to break involuntarily into an upper register: said of a voice.

II. trans. **10.** In *cricket,* to hit (a ball) hard with the bat: usually said of balls hit in front of the wicket. [Colloq.]—**11.** In *music,* to render (a voice) harsh or unmanageable.—**To crack on sail,** to carry a press of sail; crowd on sail.

crack, *n.* **17.** In a length of cloth, a short space without weft.—**18.** A burglary; a housebreaking; also, a cracksman; a burglar. [Thieves' slang.]

crackajack (krak'ą-jak), *a.* and *n.* [Also *crackerjack;* vaguely formed from *cracker*[1] + *jack*[1].] **I.** *a.* Extraordinarily or exceptionally fine; 'bang-up.' [Slang.]

II. *n.* Something, as a horse, a bicycle, or the like, that is extraordinarily fine; a 'bang-up' thing. [Slang.]

We have had a few sales, but business has been quiet. We got in a load of *crackajacks* during the week and among others Warlock, Nuttingham Gift and J. Max Davis, which we call the 'Marquis of Michigan,' were in the lot. We also had seven or eight pairs, the equal of anything ever brought to our stables.

Spirit of the Times, CXXXVI. 435.

crackbrain (krak'brān), *n.* One who is cracked or impaired intellectually; a crazy fellow. *Carlyle.*

cracked, *p. a.*—**Cracked-pot sound.** Same as ★*bruit de pot fêlé.*

cracker, *n.*—**Cracker-cutting machine,** in a bakery, a machine for stamping and cutting a sheet of sponge or water dough into crackers ready for baking. In general plan it resembles a panning-machine (which see).

cracker-berry (krak'èr-ber″i), *n.* The dwarf cornel or bunch-berry, *Cornus Canadensis.*

crackerjack (krak'èr-jak), *a.* and *n.* See *crackajack.*

cracking, *n.* **3.** A process by which a compound made up of elements of varying volatility may be analyzed and the components separated by successively raising the temperature of the mixture, so that they are distilled off successively in the order of their volatility: used specifically of petroleum compounds, which in the refining process are separated by increasing the temperature of distillation.

cracking-machine (krak'ing-ma-shēn″), *n.* A machine for producing fine lines like cracks on the surface of a millstone.

crack-jaw (krak'jâ), *a.* Jaw-breaking; hard to pronounce: as, a Russian *crack-jaw* name.

It is a story told of a Polish nobleman, a count somebody: I never can remember their *crack-jaw* names.

Disraeli, Vivian Grey, v. 13.

crackle, *n.* **3.** In *pathol.,* same as *crepitant râle* (which see, under *râle*).—**Fish-roe crackle,** a finely crackled glaze on Chinese porcelain.

crackler (krak'lèr), *n.* A soft-shell crab when the new shell begins to harden and gives a crackling noise when pressed.

crack-preventer (krak'prē-ven″tèr), *n.* A contrivance attached to a loom to prevent open spaces in the cloth in places where the weft fails, from any cause, to be laid in the web.

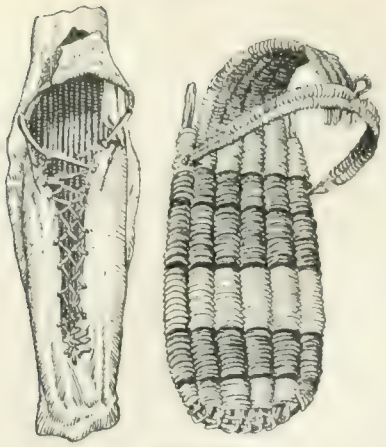
cracky[2] (krak'i), *interj.* An exclamation of surprise or astonishment. [Slang.]

cradle, *n.* **4.** (*o*) In a gun-carriage, a bronze or bronze-lined frame in which the gun slides when recoiling. *Jour. U. S. Artillery,* Nov.-Dec., 1903, p. 296. (*o*) A framework of timbers in which ocean-going rafts of logs are built. (*p*) A rocking part of the building-motion, on a cotton-roving machine, which regulates the wind of the roving on the bobbin.

cradle, *v. t.* **5.** To reinforce on the back with crossed strips in order to prevent warping: as, to *cradle* a picture.—**6.** To support on or in a cradle: as, to *cradle* a ship while it is being raised to a higher level.—**7.** To cut (a cask) in two longitudinally. *Knight,* Dict. Mech.

cradle-board (krā'dl-bōrd), *n.* A board to which an infant is more or less firmly strapped: the cradle of most North American tribes.

cradle-frame (krā'dl-frām), *n.* A framework of willow or similar material, used like a cradle-



Cradle-frames.

board by some of the Indians of western and southwestern North America.

cradle-gage (krā′dl-gāj), *n.* An instrument for gaging the angle or setting of the top comb of a Heilmann cotton-combing machine.

cradle-knoll (krā′dl-nōl), *n.* In the construction of logging-roads, a small knoll which requires grading.

cradle-roof (krā′dl-röf), *n.* A roof having (as seen from within) the general shape of a cradle-vault, wagon-vault, or tunnel-vault: always a construction of light materials, not of masonry. It is usually built with wooden ribs bent or cut to the curve and boarded up.

cradle-song (krā′dl-sông), *n.* A song sung to a babe in the cradle; a lullaby.

craft[1], *n.*—**Arts and crafts.** See ★*art*[2], *n.*

craft-warden (kräft′wär″den), *n.* The warden of a craft-gild.

About the same time, the '*craft wardens*' of the various fellowships . . . were levying excessive fees on the admission of apprentices. *Froude*, Hist. Eng., I. i.

crag[1], *n.* **2.** In geological classification this term has been applied to divisions of the Pliocene Tertiary in England, which are, in a general sense, banks or crags of marine shells. The *Coralline crag*, a division of the Older Pliocene, also called the *Bryozoan*, *White*, or *Suffolk crag*, is essentially made up of fragments of molluscan shells and bryozoans or corallines. The *Red crag*, a brown or ferruginous shelly band, is of the Newer Pliocene, and has been divided from the base up into the Walton, Oakley, Newbourn, and Butley crags. The Norwich, Chillesford, and Weybourn crags follow in order above the Red crag, and terminate the marine series.

crag-bed (krag′bed), *n.* A coarse-grained fragmental deposit formed just before the glacial period. See *crag*[1], 2.

crag-bone (krag′bōn), *n.* The neck-bone; the cervical vertebræ considered as one bone.

crag-fast (krag′fäst), *a.* Fast between two crags, as a sheep on a craggy hillside. [Eng.]

craggan (krag′an), *n.* [Var. of *crogan*, ⟨ Gael. Ir. *crogan*, O. Ir. *crocan*, W. *crochan*, a pot: see *crock*[1].] A vessel of rude pottery found in the Hebrides.

cram, *n.* **4.** A densely packed gathering or crowd; a crush; a 'jam.' [Colloq.]

It was a prodigious *cram* and we turned away no end of people. *Dickens.*

crambid (kram′bid), *n.* and *a.* **I.** *n.* A member of the family *Crambidæ*.

II. *a.* Of or belonging to the lepidopterous family *Crambidæ*.

cram-book (kram′bůk), *n.* A book specially prepared for 'cramming' a subject for an examination.

Cramp game, any game at billiards in which one player, by limiting his opportunities for counting (for example, always playing on the red ball first, or playing four pockets against six), gives his opponent odds.

cramp[2], *n.*—**Compositors', glass-blowers', musicians' cramp.** See *occupation* ★*cramp*.—**Occupation** or **professional cramp**, an involuntary and irregular contraction occurring in muscles which have been strained by overuse in certain occupations whenever an attempt is made to resume the occupation in question. This cramp or spasm has received various names descriptive of the sufferer's occupation. See *writers' cramp*, under *writer*. —**Pianists', sewers', shoemakers', typewriters' cramp.** See *occupation* ★*cramp*.

cramper (kram′pèr), *n.* A length of yarn which sailors sometimes tie around their legs to prevent cramp.

cramp-frame (kramp′frām), *n.* A clamp-frame; the frame of a C-clamp; the frame of a cramp-drill.

cramp-hole (kramp′hōl), *n.* A hole to receive a locking-pin; a hole for a clamping-bolt.

crampit, *n.*, **2.** (*c*) An iron spike or bar driven or built into a wall to serve as a support for other parts or to bind the wall itself. [Eng.]

cramp-word (kramp′wèrd), *n.* A word that is hard to understand or pronounce. *N. E. D.*

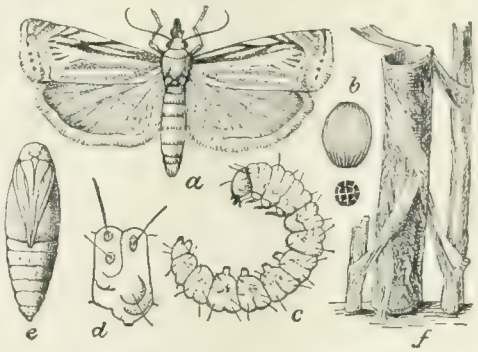
Cranberry blast. See ★*blast*. **Cranberry fire-worm.** Same as *blackhead* ★*cranberry-worm*. **Cranberry gall-fly, katydid, etc.** See ★*gall-fly*, ★*katydid*, etc. **Cranberry tip-worm.** See *tip-worm*. **Swedish cranberry**, the mountain-cranberry (so called when imported into the United States). **Upland** or **wild cranberry**, the bearberry, *Arctostaphylos Uva-ursi*.

cranberry-aphis (kran′ber-i-ā″fis), *n.* An undetermined plant-louse which affects the leaves and young stems of the cranberry in the eastern United States.

cranberry-bog (kran′ber-i-bog), *n.* A bog in which cranberries grow or are cultivated.

cranberry-gall (kran′ber-i-gâl), *n.* A pustular swelling sometimes found on cranberry-leaves, caused by the fungus *Synchytrium Vaccinii*. See ★*gall-fungus*.

cranberry-girdler (kran′ber-i-gèr″dlèr), *n.* The larva of a crambid moth, *Crambus hortuellus*. It lives in silken galleries, feeding upon the runners of the vine and girdling the stem. Also called *girdle-worm*.



Cranberry-girdler (*Crambus hortuellus*).

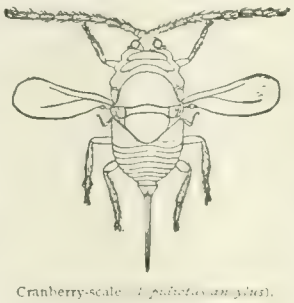
a, moth; *b*, egg; *c*, larva; *d*, segment of larva; *e*, pupa; *f*, nest of larva. All enlarged. (Scudder, U. S. D. A.)

cranberry-looper (kran′ber-i-lö″pèr), *n.* The larva of an American geometrid moth, *Xanthotype crocataria*.

cranberry-marsh (kran′ber-i-märsh), *n.* A marshy spot, periodically flooded, in which cranberries are cultivated for the market.

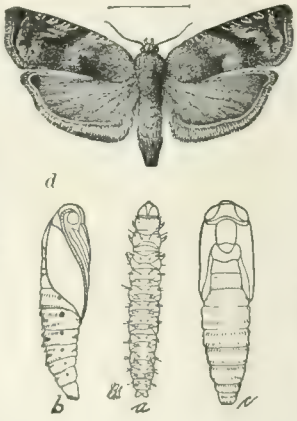
cranberry-moth (kran′ber-i-môth″), *n.*—**Glistening cranberry-moth**, an American tortricid moth, *Eudemis oxycoccana*, the adult of a small caterpillar which feeds on cranberry.

cranberry-scale (kran′ber-i-skāl), *n.* A scale-insect, *Aspidiotus ancylus*. Also known as *Putnam's scale*.



Cranberry-scale (*Aspidiotus ancylus*). (Comstock, U. S. D. A.) Enlarged.

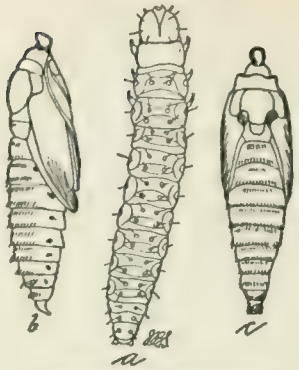
cranberry-tree, *n.* **2.** In North America, *Viburnum pauciflorum*, a shrub ranging from Pennsylvania to Alaska, and somewhat resembling *V. Opulus* in its 3-lobed leaves and reddish globose drupes: distinguished as *few-flowered cranberry-tree*.



Blackhead Cranberry-worm (*Eudemis vacciniana*).

a, larva; *b* and *c*, pupa, all enlarged (after Smith); *d*, moth (after Riley).

Cranberry-worm (kran′ber-i-wèrm), *n.*—**Blackhead cranberry-worm** the larva of an American tortricid moth, *Eudemis vacciniana*. It feeds on the buds, flowers, and young fruit of the cranberry, as well as on the foliage. Also *crane-worm* and *fire-worm*.—**Red-striped cranberry-worm**, an occasional fall variety of the yellow-headed cranberry-worm, in which the body becomes striped with red.—**Yellow-headed cranberry-worm**, the larva of an American tortricid moth, *Alceris minuta*. It feeds on cranberry-leaves, often spinning several small twigs together.



Yellow-headed Cranberry-worm (*Acerris minuta*).

a, larva; *b* and *c*, pupa. All enlarged.

crane[2], *n.*—**Automotor-crane**, a form of crane which is supported on a car whose wheels are adapted to run on common roads.—**Cantaliver crane**, a crane supported at the middle upon a lofty frame and having a long cantaliver boom on which travels the hoisting-trolley. The frame may revolve upon a stationary platform, or may travel upon a track or runway. Shipyard and blast-furnace cantaliver cranes are often 100 feet high with a boom 350 feet long.—**Chain-block crane**, a crane having a chain-block for its hoisting apparatus, in place of the usual geared drum.—**Electric crane**, a swing or traveling crane, on which electric motors are used to furnish the power required for any or all of the motions. Traveling cranes are almost always equipped with motors, because for this purpose electric transmission is far more convenient than any other. On such cranes there is usually a motor for each motion—hoisting, cross-travel, and end-travel. When auxiliary hoists are fitted they usually have their own motors, since this simplifies the design and operation.—**Floating crane**, a bridge- or other type of crane mounted upon a float or pontoon.—**Gauntree crane**, a bridge-crane in which the bridge is carried by structural-iron supports resting on car-trucks, one truck supporting the out-board end of the bridge and traveling upon a single rail, and the other supporting the other end of the bridge and the motive power for the crane and traveling upon a broad-gage track. These cranes are made in many forms for use in railroad-yards, shipyards, blast-furnace yards, and on ore- and coal-docks, and are often of very great size.—**Molders' crane.** Same as *molding-crane*.—**Railway-crane.** (*a*) A crane designed for work on railways, especially in wrecking. (*b*) A crane mounted upon a car and fitted to run or traverse on a railway laid upon the ground, and either self-propelling or driven by a locomotive.—**Warehouse-crane**, a light form of hoisting apparatus used in warehouses for lifting articles and for interior transportation, having a capacity range from 1,000 to 6,000 pounds, and operated either by hand or by pneumatic or electric power.—**Yard-crane**, a gauntree-crane.

Cantaliver Crane.
Balanced revolving type.

a, foundation supporting circular track on which crane traverses in a circle; *b*, platform supporting power-house and central structure; *c*, cantaliver arms; *d*, trolley supporting hoist and traversing arms, hoisting chains not shown; *e*, house for boiler engine, hoisting drums and swinging gear. Total length of arms 356 ft. 6 in.

crane-barge (krān′bärj), *n.* See ★*barge*[1].

crane-bridge (krān′brij), *n.* The girder or bridge of a traveling crane, on which the hoist can travel transversely. The bridge is usually made of a pair of girders, each carrying a track for the hoist, though in very light cranes a single girder is sometimes used.

Crane-fly orchis. See *Tipularia*.—**False crane-fly**, any member of the dipterous family *Ryphidæ*. They are generally small flies with rounded and spotted wings. Their larvæ are found in decaying wood and fruit, in cow-dung, and in dirty-water.

crane-house (krān′hous), *n.* **1.** A building or shed covering a crane.—**2.** A shed built at the base of a large crane to protect the machinery and operator from the weather.

crane-neck (krān′nek), *n.* The long thin section of a coach which connects the driver's seat with the body.

crane's-bill, *n.*—**Spotted** or **wild crane's-bill**, *Geranium maculatum*, a favorite American wildflower found in woods from Newfoundland to Manitoba and south to Alabama and Kansas. It is a leafy herb a foot or more high, with large showy rose-purple flowers.

crane-willow (krān′wil″ō), *n.* The button-bush, *Cephalanthus occidentalis*.

crangonid (krang-gon'id), *n.* and *a.* **I.** *n.* A shrimp-like crustacean belonging to the family *Crangonidæ*.

II. *a.* Of or pertaining to the *Crangonidæ*.

crangonoid (krang'gon-oid), *a.* Shrimp-like, as a crustacean.

Cranial cartilage, flexure. See ★*cartilage*, ★*flexure*.

Cranial index. See ★*index*.

craniate (kra'ni-at), *a.* [NL. ★*craniatus*, < L. *cranium*, < Gr. κρανίον, skull.] Having a skull or cranium, as do all vertebrates above the lampreys.

It [Amphioxus] exhibits what appears to be a primordial condition of vertebrate organization, a condition which is, in fact, partly recapitulated in the course of the embryonic stages of *craniate* vertebrates. *Encyc. Brit.*, XXV. 385.

cranidium (kra-nid'i-um), *n.*; pl. *cranidia* (-ä). [NL., < Gr. κρανίον, skull, + dim. -ιδιον.] In the cephalon of the trilobites, the central piece included within the facial sutures, consisting of the glabella and fixed cheeks.

craniectomy (krā-ni-ek'tō-mi), *n.* [Gr. κρανίον, skull, + ἐκτομή, excision.] Excision of a thin strip of the skull in a young child to relieve pressure on the brain.

craniodidymus (kra'ni-ō-did'i-mus), *n.*; pl. *craniodidymi* (-mī). [NL., < Gr. κρανίον, skull, + δίδυμοι, twin.] A monster with two heads.

Craniofacial fissure, in *anat.*, a vertical fissure, or vacuity, in line with the frontonasal articulation, separating the mesethmoid more or less completely into two parts. *Proc. Zool. Soc. London*, 1903, I. 269.

craniognosy (krā-ni-og'nō-si), *n.* [Gr. κρανίον, skull, + γνῶσις, knowledge.] Same as *craniology*.

craniographer (krā-ni-og'ra-fèr), *n.* One who describes and makes drawings of skulls; one versed in craniography.

craniohematoncus (kra'ni-ō-hem-a-tong'kus), *n.* [NL., < Gr. κρανίον, skull, + αἷμα(τ-), blood, + ὄγκος, mass.] Same as *cephalæmatoma*.

craniol. An abbreviation of *craniology*.

craniologically (krā'ni-ō-loj'i-kal-i), *adv.* With regard to the cranium, or to the zoölogical characters of the cranium.

craniom. An abbreviation of *craniometry*.

craniomalacia (krā'ni-ō-ma-lā'si-ä), *n.* [NL., < Gr. κρανίον, skull, + μαλακία, softness.] Same as *craniotabes*.

craniometrically (krā'ni-ō-met'ri-kal-i), *adv.* According to the rules and methods of craniometry; by means of the craniometer.

craniometrist (krā-ni-om'ę-trist), *n.* A person who measures skulls.

craniopathy (krā-ni-op'a-thi), *n.* [Gr. κρανίον, skull, + -πάθεια, < πάθος, disease.] Any disease of the skull.

craniorachischisis (kra'ni-ō-ra-kis'ki-sis), *n.* [NL., < Gr. κρανίον, skull, + ῥάχις, backbone, + σχίσις, cleaving, fissure.] Fissure of the skull and vertebral column.

cranioschisis (krā-ni-os'ki-sis), *n.* [NL., < Gr. κρανίον, skull, + σχίσις, cleaving, fissure.] Fissure of the skull.

craniosclerosis (krā-ni-ō-sklē-rō'sis), *n.* [NL., < Gr. κρανίον, skull, + σκλήρωσις, hardening.] Thickening of the skull.

craniostosis (krā-ni-os'tō-sis), *n.* [NL., prop. ★*craniosteosis*, < Gr. κρανίον, skull, + ὀστέον, bone, + -*osis*.] Premature closure of the cranial sutures.

craniote (krā'ni-ōt), *a.* and *n.* [NL. ★*craniotus*, < Gr. ★κρανιωτός, < κρανίον, skull.] **I.** *a.* Having a skull.

II. *n.* A member of the *Craniota*, or vertebrates which have a well-defined skull.

craniotome (krā'ni-ō-tom), *n.* [Gr. κρανίον, skull, + -τομος, < -τέμνειν, cut.] A surgical instrument for cutting bone, used in operations on the skull.

craniotomy, *n.*—**Linear craniotomy,** incision through the cranium of a child to relieve tension.

craniotopography (krā'ni-ō-tō-pog'ra-fi), *n.* [Gr. κρανίον, skull, + E. *topography*.] The mapping out of the surface of the skull in order to determine the relation of the various parts to the brain beneath.

craniotractor (krā'ni-ō-trak'tor), *n.* [NL., < κρανίον, skull, + L. *tractor*, tractor.] A form of cranioclast.

cranitis (krā-nī'tis), *n.* [NL., < Gr. κρανίον, skull, + -*itis*.] Inflammation of the cranial bones.

crank[2], *n.*—**Overhanging crank,** a crank whose shaft-bearing is on one side of the crank-pin only. The crank is on the end of the shaft. When the bearing is on the right of the crank, as the observer looks along the mechanism which drives the crank in a horizontal engine, the crank is right-handed.—**Three-throw crank,** a shaft which has three cranks forged upon it, or which is built up of separate pieces, with an angle between any two, and is used in three-cylinder engines or pumps. The usual arrangement of a three-throw crank in an engine or pump is to place the cranks 120 degrees apart to secure as uniform a turning movement as possible.

crank[2], *v. t.* **4.** To turn with a crank; turn (an engine) with a hand crank. This is usually done to draw in and compress the charge in a gas engine so that it will be of the desired composition under pressure and ready to be ignited.

crank-arm (krangk ärm), *n.* That part of a crank which joins the center of the shaft to be turned by it to the handle or pin to which the power or resistance is applied.

crank-cheek (krangk'chek), *n.* A cheek-piece; a crank-arm; the crank to which the crank-pin is fastened.

crank-circle (krangk'sèr kl), *n.* The circle described by a crank-pin; specifically, the circle in a valve-diagram or the elevation of a steam-engine which represents the path of the crank.

Cranked axle or shaft. See ★*shaft*.

crank-effort (krangk'ef"ort), *n.* The tangential force acting on the crank-pin of an engine. This force depends upon the angle between the crank and the connecting-rod, the pressure acting on the piston, and the effect of the inertia of the reciprocating parts of the engine.

cranking (krangk'ing), *n.* **1.** In cutting tools, the hollowing out of the tool immediately behind the cutting edge. This is done in order that the tool may have a tendency to spring back and out, rather than dig into work, when making a heavy cut.

2. The operation of turning a crank, specifically in order to start an internal-combustion motor, as in a motor-car.

crank-motion (krangk'mō"shon), *n.* The motion of a body when driving or when driven by a crank. Such motion is called *harmonic*, as the reciprocating part traverses the diameter of the circle in the same time in which the crank-pin is moving uniformly over the semi-circumference of the same circle.

crank-pit (krangk'pit), *n.* A recess, below the floor-line around an engine, in which the main crank and the lower end of its connecting-rod revolve.

crank-web (krangk'web), *n.* That part of a crank which connects the crank-pin hub to the shaft-hub. In short cranks this may be as large in cross-section as either hub, while in long cranks it is usually cut away to make it as light as possible.

crank-wrist (krangk'rist), *n.* In *mach.*, the short length of the double crank between the arms of the U. It forms the crank-pin surface to which the connecting-rod is attached.

crap[3] (krap), *n.* [Perhaps ult. connected with *crop*, *v.*] **1.** A throw with dice; especially, a losing cast in the game of craps, when the total of pips on the two dice is 2, 3, or 12. See *craps*[2]. *Stand. Dict.*—**Crap-shooting.** Same as *craps*[2] and ★*craps*[2].

crape-dresser (krāp'dres"er), *n.* One who finishes crape for the market.

crape-fern (krāp'fèrn), *n.* See ★*fern*[1].

crape-markings (krap'mär-kingz), *n. pl.* In *photog.*, peculiar markings which appear in the film of collodion in the wet-plate process, due to the presence of water in the alcohol or ether. *Woodbury*, Encyc. Dict. Photog., p. 146.

crape-myrtle (krāp'mèr-tl), *n.* A shrub, *Lagerstræmia Indica*. Also called *Indian lilac*. See *lilac* and *Lagerstræmia*.

crape-ring (krāp'ring), *n.* The semi-transparent, dusky ring of Saturn between the bright ring and the planet. *Sci. Amer.*, Aug. 1, 1903, p. 79.

Craponne lace. See ★*lace*.

crappox (krap'poks), *n.* [Appar. < *crap*(*audin*[1]) + *pox*.] In yaws, ulceration with indurated edges on the soles of the feet.

craps[2] (kraps), *n. pl.* A game of chance played with dice; the modern and simplified method of playing hazard. The players bet as much as they choose, and the caster covets the amount he is willing to risk. He then throws two dice from his hand. If the first throw is 7 or 11, it is a nick or natural, and the caster wins everything. If 2, 3, or 12 is thrown, it is a crap, and the caster loses everything. Any other number thrown is the caster's point, and he must continue throwing until he brings the same number again and wins, or throws 7 and loses.—**To shoot craps,** to play at craps: said because the dice are thrown or shot from the hand, instead of being rolled from a dice-box.

crapula, *n.* **2.** A resin or confection of some drug producing intoxication, as hashish.

Crapulent colic. See ★*colic*.

craspedodrome (kras-ped'ō-drōm), *a.* [Gr. κράσπεδον, margin, + -δρομος, < δραμεῖν, run.] Running into the margin: said of the nerves of leaves. See *nervation* (*a*) (1), Fig. 2.

Lateral primaries when forked usually above their base, often present as basal sub-primaries; secondaries camptodrome in the entire-margined forms and *craspedodrome* in those which have dentate margins, both characters combined in some species. *Bot. Gazette*, Dec., 1903, p. 423.

craspedodromous (kras-pe-dod'rō-mus), *a.* Same as ★*craspedodrome*.

craspedon (kras'pe-don), *n.*; pl. *craspeda* (-dä). Same as *craspedum*.

Craspedostoma (kras-pe-dos'to-mä), *n.* [Gr. κράσπεδον, margin, + στόμα, mouth.] A genus of rhipidoglossal gastropods of the family *Delphinulidæ*, having globose whorls, short spire, cancellated body-whorl, and an alar process at the end of the columella. It is of Silurian age.

craspedotal (kras-pe-do'tal), *a.* [*Craspedota* + -*al*[1].] Of or pertaining to the *Craspedota*; having a velum.

crass[2] (kras), *n.* [*Crassicornis*, the specific name.] A species of sea-anemone, *Bunodes crassicornus*.

Crassatella (kras-a-tel'ä), *n.* [NL., < L. *crassatus*, thickened, + dim. -*ella*.] The typical genus of the family *Crassatellidæ*. *Lamarck*, 1801.

Crassatellidæ (kras-ą-tel'i-dē), *n. pl.* [NL., < *Crassatella* + -*idæ*.] A family of bivalve mollusks. The shell is equivalve, thick, and nearly triangular; the mantle with anal orifice or open; hinge-ligament in an internal fossette, and hinge with 2 cardinal teeth. The laterals are produced. The principal genus is *Crassatella*.

Crassilinguia (kras-i-ling'gwi-ä), *n. pl.* [NL., neut. pl. of *crassilinguus*, < L. *crassus*, thick, + *lingua*, tongue.] A section or superfamily of *Lacertilia*, containing lizards with short, thick, nonprotrusile tongues, including such forms as the geckos and iguanas. Correlated with *Vermilinguia* and *Fissilinguia*.

Crassocephalum (kras-ō-sef'a-lum), *n.* [NL. (Moench, 1794), < L. *crassus*, thick, + Gr. κεφαλή, head. The allusion is to the swollen fruit-heads of *C. cernuum*.] A genus of plants of the family *Asteraceæ*, related to *Senecio*. There are about 24 species, of the Old World tropics, one of which is sometimes grown in warm glass-houses for its rich purple velvety foliage. This is *C. aurantiacum* (*Gynura aurantiaca* of de Candolle), the velvet-plant, from Java. It is a stout plant, hairy in all its parts, with large ovate jagged-edged soft leaves. The flower-heads are yellow or orange, in terminal clusters.

cratægin (krat'ē-jin), *n.* [*Cratægus* + -*in*[2].] A crystalline, bitter compound from the fresh bark of the twigs of the hawthorn, *Cratægus Oxyacantha*.

cratch[2], *n.* **3†.** In *astron.*, the star-cluster known as Præsepe (the Manger) in the constellation Cancer.

crate, *n.* **3.** In *glass-manuf.*, a lot of twelve tables or disks of crown-glass. See *table*, 1 (*d*).

crate (krāt), *v. t.* To put or pack in a crate for transportation: as, to *crate* fruit, furniture, etc.

crater, *n.*—**Bell crater,** in Greek vases, a crater which has the form of a modern bell. This type is usually followed in the marble Roman vases. See *crater* 1, with cut. —**Crater basin:** (*a*) A depressed area in which volcanic craters occur. (*b*) A caldera. —**Crater of an arc.** Same as *crater*, 6.—**Explosion crater,** a large cavity or caldera in a volcanic cone, caused by a violent eruption.

crater-chain (krā'tèr-chān), *n.* A series of volcanic craters, nearly in a line.

Sixteen were lava-cones. . . .; but the *crater-chains* numbered not less than eighty-three. *Geog. Jour.* (R. G. S.), XIII. 503.

crater-lake (krā'tèr-lāk), *n.* A lake occupying the crater or caldera of a volcano; specifically, a large and deep lake occupying a typical caldera in Oregon. *Geikie*, Text-book of Geol., p. 324.

crater-wall (krā'tèr-wäl), *n.* The inclosing rock wall of a crater; as sometimes used, the steep in-face of this bounding wall. The ordinary crater of the basalt-volcano is pit-like, with the walls often nearly vertical, and the floor may be a great nearly level plane of solid lava. *Dana*, Characteristics of Volcanoes, p. 150.

Craticularia (kra-tik-ū-lā'ri-ä), *n.* [NL., < L. *craticulus*, dim. of *cratis*, wickerwork, grating, hurdle: see *crate*, *grate*[2], and *griddle*.] A genus of fossil hexactinellid sponges of the family *Craticularidæ*, occurring in the Mesozoic and Lower Tertiary rocks.

cravo (krä'vo), *n.* [Pg., lit. a nail, < L. *clavus*, a nail: see *clavus*, *clove*[4].] A fish, the same as ★*mariposa*.

crawcraw (krä'krä), *n.* [W. Afr. ★*krakra*.] A pruriginous skin-disease, probably parasitic, which affects chiefly the inner side of the thighs. It occurs on the west coast of Africa.

crawfish, *n.* **3.** One who backs out from a position or undertaking, especially in politics. [U. S. slang.] —**Blind crawfish,** *Cambarus pellucidus*,

which lives in the Mammoth Cave.—**Spiny crawfish**, the largest fresh-water crawfish of Australia, *Astacopsis serratus*.

crawl[1], *v. i.* **To crawl off** (*naut.*), to work a vessel slowly away from a lee shore.

crawl-a-bottom, *n.* **2.** A small percoid fish, *Hadropterus nigrofasciatus*, found in fresh water from South Carolina to Louisiana. [Local, U. S.]

crawler, *n.* **3.** A person or thing that moves slowly; particularly, a cab that moves along a street very slowly on the outlook for a fare. [Colloq.]

crawley (krâ'li), *n.* Same as *crawley-root*. **False crawley**, the Albany beech-drops or pine-drops, *Pterospora andromedea*. See *Pterospora*.

crayon-board (krā'on-bōrd), *n.* A cardboard for crayon or pastel, usually with a tooth or roughened surface. See ★*tooth*, 11.

crazia (krät'sē-ä), *n.*; pl. *crazie* (-ā). [It., < G. *kreuzer, kreutzer*: see *kreutzer*.] A subsidiary coin of Tuscany, the twelfth part of a lira, equal to 1.67 United States cents.

crazy-chain (krā'zi-chān), *n.* In *forestry*, the short chain used to hold up that tongue of a sprinkler-sled which is not in use.

crazy-grass (krā'zi-gras), *n.* See ★*canary-grass*.

cream[1], *n.*—**Alumina cream.** See ★*alumina*.—**Bavarian cream**, a dessert composed of gelatin and whipped cream added to a custard flavored variously and served cold.—**Cream caustic.** See ★*caustic*.—**Cream of lime**, (*b*) slaked lime mixed with water to a cream-like consistence.—**Devonshire cream.** Same as *clotted cream*. See *clot*[1].—**Evaporated cream**, in *dairying*, a trade-name for condensed cream, which resembles condensed milk.—**Neapolitan cream**, an ice-cream in which two kinds of cream and an ice are frozen in one block.

cream[1], *v. t.* **4.** To work and beat until it becomes smooth and light, forming a creamy mass. Butter is often so treated before it is mixed with other ingredients.—**5.** In *cookery* generally, to prepare in a cream sauce (chicken, oysters, etc.): frequently for use as filling for molds of puff-paste or of bread.

creamer, *n.* **3.** A refrigerator or cooling-cabinet in which fresh milk, placed in deep cylindrical cans, is kept cool by means of ice or cold water while the cream rises naturally. **Helmet creamer**, a cream-jug shaped like an inverted helmet, of Chinese porcelain, commonly, but improperly, ascribed to Lowestoft, England.

creameryman (krē'me-ri-man), *n.* A man who owns or operates a creamery. *Yearbook U. S. Dept. Agr.*, 1897, p. 17.

cream-gage (krēm'gāj), *n.* A graduated glass vessel, resembling a test-tube, used to measure the percentage of cream in milk.

creaming (krē'ming), *n.* **1.** The formation of cream; the rising of any liquid in cream or foam.—**2.** An artificial or mechanical process for separating cream from milk.

cream-sacs (krēm'saks), *n.* A species of owl's-clover, *Orthocarpus lithospermoides*: so named from the cream-colored corolla developed into three sacs. [California.]

cream-separator (krēm'sep″a-rā-tor), *n.* See *separator*.—**Gravity cream-separator**, a vessel designed to hold fresh milk while the milk is separating from the cream by gravity. It is a closed vessel, fitted with a strainer, draw-cocks, and glass indicators to show the position of the contents and the proportions of the separating milk and cream during the process.

creaser, *n.* **4.** A tool having a thin triangular head, used to crease leather.

creat[2] (krē'at), *n.* [Also *creyat*; < Canarese *kreata*.] An annual acanthaceous herb, *Erianthera paniculata* (*Justicia paniculata* of Burman), native to India and Ceylon, where it is sometimes cultivated in gardens. In Mauritius and the West Indies it has escaped from cultivation, becoming a weed. It is used medicinally as a bitter tonic like quassia.

creatinic, kreatinic (krē-a-tin'ik), *a.* Relating to creatin. *C. E. Simon*, Physiol. Chem., p. 84.

creation, *n.*—**The doctrine of continuous creation.** (*a*) The doctrine that the creative energy of the Deity alone keeps the universe in existence: an opinion adopted by St. Augustine and from him passing to some of the scholastics and to Descartes and his followers, including Spinoza and Leibnitz, and widely held by more modern theologians. (*b*) The opinion or hypothesis that the variety of creation is perpetually increasing in consequence of the fact that the regularity of nature is not absolute or does not extend to all events.

creationalism (krē-ā'shon-al-izm), *n.* Same as *creationism*. *Science*, July 5, 1901, p. 15.

creationalistic (krē-ā″shon-a-lis'tik), *a.* Pertaining to or of the nature of creationism.

creationary (krē-ā'shon-ā-ri), *a.* [*creation* + *-ary*[1].] Pertaining to creationism. *Athenæum*, Oct. 27, 1894.

creation-myth (krē-ā'shon-mith), *n.* A myth explaining the creation of the world: sometimes used in opposition to *transformation-myth*, a myth which explains the present form of the world by a series of transformations from a previous stage.

creativity (krē-a-tiv'i-ti), *n.* [*creative* + *-ity*.] Creativeness.

creatophagous (krē-a-tof'a-gus), *a.* [Gr. κρέας (κρεατ-), flesh, + φαγεῖν, eat.] Same as *creophagous*.

creatospore (krē-at'ō-spōr), *n.* [Gr. κρέας (κρεατ-), flesh (used for the 'meat' of a nut), + σπορά, seed.] In *phytogeog.*, a plant which bears nut fruits and is thus adapted to distribution by rodents. *F. E. Clements.*

creatoxicon, kreatoxicon (krē-a-tok'si-kon), *n.* [Gr. κρέα(ς) (κρεατ-), flesh, + τοξικόν, poison.] A poisonous substance, the cause of meat-poisoning. *Vaughan and Novy*, Cellular Toxins, p. 188.

creatoxin, kreatoxin (krē-a-tok'sin), *n.* [*creatox(icon)* + *-in*[2].] A substance concerned in meat-poisoning. *Vaughan and Novy*, Cellular Toxins, p. 188.

creatoxism, kreatoxism (krē-a-tok'sizm), *n.* [Gr. κρέα(ς) (κρεατ-), flesh, + τοξ(ικόν), poison, + *-ism*.] Poisoning by tainted meat.

creaturism (krē'tūr-izm), *n.* [*creature* + *-ism*.] The ascription to God of creature qualities and attributes.

creaturist (krē'tūr-ist), *n.* [*creature* + *-ist*.] One who ascribes creature qualities to God.

crêche, *n.* **3.** A representation of the Holy Family, with the babe in the manger, and the ox and ass, modeled in full relief and colored: usually exhibited at Christmas-time in the parish church.

credently (krē'dent-li), *adv.* Believingly. *Carlyle.*

credit, *n.* **Contra credit.** See ★*contra*.—**Credit bureau.** See *mercantile* ★*agency*.—**Credit entry**, in *bookkeeping*, an entry on the credit side of an account.—**Credit gild**, an organization of farmers in Japan for the promotion of their common interests, and through which its members may obtain loans on favorable terms. *Sci. Amer. Sup.*, Aug. 27, 1904, p. 23,959.—**Credit item**, in *bookkeeping*, an item to be entered on the credit side of an account.—**Credit system**, the system of buying and selling on credit.—**Paper credit**, credit given on the security of a written obligation purporting to represent property, such as I O U's, book-debts, bills of exchange, etc.

creditive (kred'i-tiv), *a.* [*credit* + *-ive*.] Of the nature of or connected with belief: as, *creditive* assent.

The faith is a wholly transactional matter toward God himself, and no mere *creditive* assent or conviction.
Bushnell, Sermons on Living Subjects, Sermon iii.

creditor, *n.*—**Chirographary creditor**, the holder of evidence of debt acknowledged by the handwriting of the debtor.

Cree (krē), *n.* and *a.* **I.** *n.* A member of a branch of the Algonkian (or Algonkin) Indians. See *Cree* and *Algonquian* in Century Cyclopedia of Names.

II. *a.* Of or pertaining to the Crees.

creed-bound (krēd'bound), *a.* Having a servile respect for creeds; slavishly obedient to a creed. *N. E. D.*

creed-monger (krēd'mung″gèr), n. Literally, one who deals in creeds; one who is devoted to the formulation of creeds.

creeker (krē'kèr), *n.* A local name for the spotted sandpiper, *Actitis macularia*: given from its habit of frequenting the borders of small streams.

creek-sedge (krēk'sej), *n.* A salt-marsh grass, *Spartina glabra*, abounding particularly along the edge of creeks and estuaries on the Atlantic coast. Also called *thatchy grass*. See *Spartina*.

creek-stuff (krēk'stuf), *n.* See *Spartina*.

creek-thatch (krēk'thach), *n.* See *Spartina*.

creeler (krē'lèr), *n.* One who attends to the creel of a spinning-machine.

creep, *v. i.* **8.** In *chem.*, to rise above the surface of the liquid upon the walls of the containing-vessel, like salt crystals in an evaporating-dish.

creep, *n.* **4.** Same as *creeper*, 6 (*b*). *G. E. Armstrong*, Torpedos and Torpedo-vessels, p. 134.—**5.** In *geol.*, the extremely slow downward movement of disintegrated rock on hillsides. Ground-water, frost, and changes of temperature are the chief factors in such movement.

When the movement is too slow to be sensible it is called *creep*. *Chamberlin and Salisbury*, Geol., I. 218.

Crust-creep, in *geol.*, the slow movement of a large portion of the earth's crust under compressive strain along a reversed or thrust fault.

Gigantic *crust-creep* of overthrust masses.
Geog. Jour. (R. G. S.), XVI. 461.

Tangential creep, in *geol.*, lateral movement of formations; displacement in a horizontal direction by expansion or contraction.

He attributes the *tangential creep* to the transference of material by denudation from one place to another, promoting subsidence, heating of the lower layers, and lateral expansion, with consequent crumpling of the strata. *Knowledge*, Feb., 1904, p. 9.

creeper, *n.*, **6.** (*j*) *pl.* Small andirons or fire-dogs placed between large ones.

10. The sandworm, *Nereis virens*. [Eng.]—**Bow-string creeper.** Same as *jetee*.—**Chain-creeper**, a woody-stemmed, leguminous vine, *Bauhinia splendens*, of northern South America. The stems are extremely flexible and tough, so that they can be used like cords, being more durable than iron nails or chains, which in the damp atmosphere soon rust and give way. Strips of the bark are made into a coarse kind of cordage. Also called *bejuco de cadena*. **Rajmahal creeper.** Same as *jetee*.

creeper-chain (krē'pèr-chān), *n.* An endless chain provided with projecting hooks or fingers: used in moving mine-cars horizontally or on inclines. *G. W. Hughes*, Coal Mining, p. 465.

creeping, *n.* **2.** Stalking or still-hunting, as for moose or deer. *Earl of Dunraven*, in Sport with Gun and Rod, p. 20.—**3.** Motion of the rails of a railroad in the direction of traffic, due to a number of causes. The usual preventive measure is to notch the foot of the rail, and put through this notch the spike which holds the rail to the tie or sleeper.

4. The slip of a belt or rope which is driving one pulley from another: due to working or elasticity in the belt or rope.—**5.** In *elect.*, the slow drifting or moving of an instrument or meter at no load, due to inaccurate adjustment or to a slow change of the suspension.—**6.** In *geol.*, same as ★*creep*, 5.

creeping-bur (krē'ping-bèr), *n.* The ground-pine or club-moss, *Lycopodium clavatum*. Also called *creeping-jenny*.

creeping-fern (krē'ping-fèrn), *n.* See *climbing-fern*.

creeping-jenny, *n.* **2.** Same as ★*creeping-bur*.

creese (krēs), *v. t.* [Also *crease*, *kris*, < *creese*, *n.*] To kill by stabbing with a creese (which see).

cremaster, *n.* **4.** In marsupials a muscle which compresses the mammary gland and forces the milk down the gullet of the young while in the pouch.

cremastral (krē-mas'tral), *a.* [*cremaster* + *-al*[1].] Pertaining to the cremaster of insects. *Natural Science*, Jan. 1878, p. 16.

crême (krām), *n.* [F.: see *cream*[1], *n.*] **1.** A cream: a term used especially in the names of certain cordials, as *crême de menthe*. See *cream*[1], 6.—**2.** In *cookery*, meat, fish or vegetables baked in white sauce and covered with bread-crumbs.—**Crême brulée**, caramel or browned sugar with cream.—**Crême de cacao** [F.], a liqueur of the oily consistency known as *crême*, flavored with cacao or chocolate.

cremnophobia (krem-nō-fō'bi-ä), *n.* [NL., < Gr. κρημνός, a steep bank, a cliff, + -φοβία, < φοβεῖν, fear.] Morbid fear of being near the edge of a cliff or precipice.

cremometer (krē-mom'e-tèr), *n.* [E. *cream* (with assumed stem *crem-*) + Gr. μέτρον, measure.] In *dairying*, a graduated test-tube used in estimating the proportion of cream in milk. Fresh milk warmed to 100° F. is placed in the tube, filling it to the zero mark, and left to stand in it, in a cool place, for twenty-four hours, by which time the percentage of cream will be plainly indicated by the scale.

Cremona transformation. See ★*transformation*.

Cremorne bolt. See ★*bolt*[1].

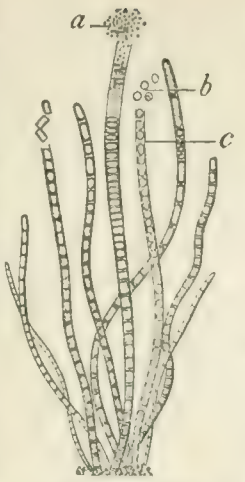
crena, *n.* **3.** In *bot.*, a tooth or notch of a crenate leaf. **Crena ani**, the fissure between the nates.

Crenipecten (kren-i-pek'ten), *n.* [NL., < L. *crena*, a notch, + NL. *Pecten*, a genus of pelecypods, < L. *pecten*, a comb: see *pecten*.] A Carboniferous genus of pectenoid *Pelecypoda* with taxodont hinge.

crenitic (krē-nit'ik), *a.* [Gr. κρηνῖτις, adj., < κρήνη, a spring.] In *geol.*, of or pertaining to springs.—**Crenitic hypothesis**, a hypothesis formulated by T. S. Hunt to explain the origin of the crystalline schists. It assumed that the earth, in cooling from a molten condition, had solidified but was still hot: heated waters rising from the depths and charged with mineral matter deposited at the surface successive layers which contained an abundance of zeolites; subsequently the zeolites became feldspars, occasioning thus the banded nature of the schists.

Crenothrix (kren'ō-thriks), *n.* [NL. (Cohn, 1870), < Gr. κρήνη, a spring, + θρίξ, a hair.

These bacteria have a hair-like form and occur in springs.] A genus of filamentous non-motile bacteria having cylindrical or flat cells inclosed in a sheath. Reproduction takes place by means of two kinds of spores produced from the vegetative cells within the filaments. The single species, *C. polyspora*, occurs in stagnant or running water containing organic matter and iron salts.



Crenothrix polyspora.
Highly magnified. (After Zopf.)
a, arthrospores; *b*, single segments; *c*, empty sheath containing the separate spores. (From Frankland's "Micro-Organisms in Water.")

crenule (kren′ūl), *n.* [NL. *crenula*, dim. of L. *crena*, a notch: see *crena*.] In *bot.*, a diminutive crena.

creoform (krē′ō-fôrm), *n.* [*creo(sote)* + *form(aldehyde)*.] A non-toxic tasteless and odorless condensation-product of creosote and formaldehyde. It is a strong antiseptic. Also called *geoform* and *cresoform*.

creole, *n.* **3.** In *ichth.*, the genizara, *Clepticus parræ*, found in the West Indies.

creole-fish (krē′ōl-fish), *n.* A beautiful fish, *Paranthias furcifer*, of tropical American waters.

creolinated (krē′ō-lin-ā″ted), *a.* [*creolin* + *-ate*[1] + *-ed*[2].] Mixed or impregnated with creolin: as, *creolinated* soap.

creolin (krē′ō-lin), *n.* [*creo(sote)* + *-l-* + *-in*[2].] The trade-name of two different commercial products: (*a*) *Pearson's creolin*, a mixture of coal-tar hydrocarbons (and probably phenols) with resin soap; (*b*) *Artmann's creolin*, a mixture of coal-tar hydrocarbons with cresol-sulphonic acid. They are used as antiseptic washes.

creolism (krē′ō-lizm), *n.* [*creole* + *-ism*.] The condition and characteristics, physical and mental, of creoles. *Athenæum*, Oct. 7, 1893.

creolization (krē″ō-lī-zā′shon), *n.* [*creolize* + *-ation*.] The development of characteristics of a creole race.

The subject race had . . . been physically refined by those extraordinary influences of climate and environment which produce the phenomena of *creolization*.
Harper's Mag., Feb., 1890, p. 416.

creolize (krē′ō-līz), *v. i.*; pret. and pp. *creolized*, ppr. *creolizing*. [*creole* + *-ize*.] To play the creole; imitate or fall in with the manners, customs, habits, etc., of the creoles, especially as regards an easy manner of living.

The ladies . . . generally *creolize* the whole day in a delectable state of apathy.
J. McLeod, Voyage of Alceste, p. 190.

creophagism (krē-of′a-jizm), *n.* [Also *kreo-*; < *creophag-ous* + *-ism*.] The practice of using flesh as food. Also *kreophagism*.

Kreophagism leads to alcoholism, and still more to immorality. *Saturday Rev.*, Nov. 5, 1881, p. 570.

creophagist (krē-of′a-jist), *n.* [Also *kreo-*; < *creophag-ous* + *-ism*.] A flesh-eater; one who uses flesh as food.

creosal (krē′ō-sal), *n.* [*creos(ote)* + *-al*[3].] The trade-name of a tannic-acid ester of creosote. It is a dark-brown astringent powder, and is used medicinally in cases of pulmonary tuberculosis and in certain intestinal troubles.

creosine (krē′ō-sin), *n.* [*creos(ote)* + *-ine*[2].] A yellow transparent non-irritating fluid composed of creosote, iodine, calcium hypophosphite, and balsam of Peru: used internally in phthisis, bronchitis, etc.

creosoform (krē-ō′sō-fôrm), *n.* [*creoso(te)* + *form(aldehyde)*.] Same as ★*creoform*.

creosote, *n.*—**Coal-tar creosote,** impure phenol or carbolic acid: quite distinct from the genuine creosote of wood-tar. **Creosote oil.** See ★*oil*.

creosotol (krē′ō-sō-tol), *n.* [*creosote* + *-ol*.] A thick brownish inodorous oil analogous to guaiacol carbonate, but made directly from beech-wood creosote.

creotoxism (krē-ō-tok′sizm), *n.* Same as ★*creatoxism*.

crêpe, *n.* **Crêpe de chine** [F., 'China crape'], a very thin, lustrous dress-silk.

crêpe (krāp), *v. t.*; pret. and pp. *crêped*, ppr. *crêping*. [F. *crêper*, < L. *crispare*, curl: see *crêpe, n.*, *crape*, and *crisp, v.*] To curl; crimp; buckle; put up in curl-papers; frizz: as, to *crêpe* the hair.

crêpé (kre-pā′), *p. a.* [F.] Frizzed.

crepidome (krep′i-dōm), *n.* [NL. *crepidoma*, < Gr. κρηπίδωμα, a foundation: see *crepidoma*.] In the nomenclature of the spicular elements of sponges, an inceptive condition or stage in the growth of the irregular tetraxial spicules in which the tetraxial or caltrop type is manifested.

crepis, *n.* **2.** In sponge-spicules, the central axis of a desma. *Lankester*, Treatise on Zool., II. 134.

crepitation, *n.* **6.** The peculiar crackling sensation felt on palpation of emphysematous tissues.

cresalol (kres′a-lōl), *n.* [*cres(ol)* + *-al*[3] + *-ol*.] A group of ortho-, meta-, and para-salicylic esters of cresols. They form bulky white crystals, and are used as antiseptic dusting-powders.

crescence-line (kres′ens-līn), *n.* In the pelecypod mollusks, the line of most rapid growth of the shell. It usually extends on each valve from the umbo obliquely backward to the post-lateral margin.

crescent, *n.* **4.** (*d*) In *anat.*, one of the cornua of gray matter in the spinal cord. (*e*) In *pathol.*, a sexual form of the plasmodium malariæ.

9. (*a*) The curved, sausage-shaped gametocyte of *Laverania*, the parasite of pernicious ★malaria (which see, with cut). (*b*) In certain extinct cardioid pelecypods, a lunate flattening of the shell-surface just behind the beaks. It specially characterizes the Devonian genus *Honeoyea*. (*c*) In the extinct trimerellid brachiopods, a curved and narrow muscular scar on each valve just within the cardinal margin. **10.** In plate-armor, one of the small pieces of steel used to protect joints. See *gusset* (a).

Malarial crescent. Same as ★*crescent*, 4 (*e*). **Myopic crescent,** a crescentic yellowish patch about the papilla of the optic nerve, due to atrophy or detachment of the choroid.

crescentic, *a.* **2.** In *geol.*, noting certain crescentiform marks or 'gouges' attributed to the action of glacial ice. They are thought to be due to localized pressure, as in the process of gouging, and are therefore sometimes called *crescentic gouges*. *G. K. Gilbert*, in Science, Dec. 23, 1904, p. 894.

cresegol (kres′ē-gōl), *n.* A brownish-red stable organic compound of mercury, said to precipitate toxins but not albumins: used as a substitute for mercuric chlorid as a bactericide.

cresilite (kres′i-līt), *n.* [F. *crésilite*; as *cres(ol)* + *-il-* + *-ite*[2].] An explosive consisting of trinitrocresol mixed with melinite: used in France.

Cresol red. See ★*red*[1].

cresolene (kres′ō-lēn), *n.* [*cresol* + *-ene*.] A trade-name for anisol, or methyl-phenyl ether, $C_6H_5OCH_3$, used as a disinfectant.

cresorcin (kres-ôr′sin), *n.* [*cres(ol)* + *orcin*.] Methyl phendiol-2,4, $C_6H_3(OH)_2CH_3$, or dihydroxytoluene. It is a crystalline dibasic phenol, which melts at 104° C.

cresorcinol (krē-sôr′si-nōl), *n.* Same as ★*isorcinol*.

cresotate (kres′ō-tāt), *n.* [*cres(ol)* + *-ote* + *-ate*[1].] Same as ★*cresylate*.

cresotinic (kres-ō-tin′ik), *a.* [*cres(ol)* + *-ote* + *-in*[2] + *-ic*.] Derived from cresol.—**Cresotinic acid,** the name given to three isomeric acids formed by the action of carbon dioxid on the sodium salts of the cresols: α-cresotinic acid is 4-hydroxy-m-toluic acid, $C_6H_3(OH)(CH_3)CO_2H$(4:1:3); β-cresotinic acid is 2-hydroxy-m-toluic acid, $C_6H_3(OH)(CH_3)CO_2H$(2:1:3); γ-cresotinic acid is 3-hydroxy-p-toluic acid, $C_6H_3(OH)(CH_3)CO_2H$(3:1:4). The acids melt at 151°, 164°, and 177° C. respectively.

Cresphontes butterfly. See ★*butterfly*.

cress, *n.*—**French cress,** the winter cress, *Campe Barbarea*.—**Leek-cress,** the hedge-garlic or garlic mustard, *Alliaria Alliaria*.—**Meadow-cress.** (*a*) See *meadow-cress*. (*b*) The common garden-cress, *Lepidium sativum*.—**Mouse-ear cress.** See *thale-cress*. **Para cress,** a pungent cruciferous plant, *Spilanthes oleracea*, originally from the West Indies, replacing water-cress in hot countries. See *Spilanthes*.—**Rocket cress.** Same as *French* ★*cress*. **Yellow cress.** See *yellow cress*, under *yellow*.

cressed (krest), *a.* [*cress* + *-ed*[2].] Bordered with water-cresses.

Cressed brook and ever-eddying river, lifted even in flood scarcely over its stepping-stones,—but through all sweet summer keeping tremulous music with harp-strings of dark water. *Ruskin*, Modern Painters, V. vii. 4.

cresset-lamp (kres′et-lamp), *n.* Same as *cresset*.

cresswort (kres′wêrt), *n.* Any plant of the mustard family *Brassicaceæ*, to which the cress also belongs. *Lindley*. [Rare.]

crest, *n.* **2.** (*j*) The design, generally that of an animal, which constitutes the heraldic bearings of a social group among primitive tribes. The crest belongs often to an exogamic group and is related to the totem. (*k*) The summit of a river-flood wave. **Crest and trough,** the alternately occurring regions situated half a wave-length apart in any wave-system where the displacements of the vibrating medium reach a maximum but are opposite in direction.—**Crest of the urethra.** Same as *crista urethræ*. **Cross crest,** a fold of enamel running transversely across the face of a tooth.—**Ethmoid crest.** Same as *crista galli*.—**Exterior crest.** See drawing, under *parapet*. **Neural crest,** in the vertebrate embryo, the ridge-like dorsal portion of the neural tube where it is cut off from the general integumentary ectoderm and gives rise to the spinal ganglia. See cut, under ★*cœlomesoblast*.—**Nuchal crest,** a crest of hair or feathers on the nape of the neck, as in a few birds and some mammals.—**Orbital crest,** the lower edge of the orbital surface of the sphenoid bone.—**Procnemial crest,** in *ornith.*, the large crest for the attachment of muscles on the superior end and anterior face of the tibia. **Sphenomaxillary crest,** a bony ridge forming the margin of the sphenomaxillary fissure. **Supramastoid crest,** a bony ridge on the temporal bone just above the meatus auditorius.—**Temporal crest,** in *anat.*, the line which extends from the outer angles of the frontal bone upward over the frontal and parietals. Also called *linea semicircularis*.

crest-board (krest′bōrd), *n.* **1.** An ornamental board which forms the cresting or crossing of a roof.—**2.** A similar board set along the sloping edge of a gable and rising like a parapet above the roof: an erroneous use.

creston (kres-tōn′), *n.* [Sp., crest of a helmet.] In *mining geol.*, the outcrop of a vein: used along the Mexican boundary.

cresyl (kres′il), *n.* [*cres(ol)* + *-yl*.] A substance derived from cresol.—**Cresyl blue.** See ★*blue, n.*—**Cresyl fast violet.** See ★*violet*[1].

cresylate (krē′si-lāt), *n.* [*cresyl* + *-ate*[1].] A salt of cresylic acid: as, *cresylate* of sodium.

cresyol (kres′i-ōl), *n.* Same as ★*cresyl*.

creta (krē′tą), *n.* [L.: see *cretaceous, crayon*.] Chalk.—**Creta præparata** (prepared chalk), chalk freed from impurities and finely pulverized.

cretaceous, *a.* **3.** In *bot.*: (*a*) Chalky, or having chalk-glands, as in some species of *Saxifraga*. (*b*) Of a chalky color; dead-white.

cretification (krē-ti-fi-kā′shon), *n.* [*cretify* (*-fic-*) + *-ation*.] **1.** Same as *cretefaction*.—**2.** Same as *calcification*, 2.

cretinize (krē′ti-nīz), *v. t.*; pret. and pp. *cretinized*, ppr. *cretinizing*. [*cretin* + *-ize*.] To reduce to the condition of a cretin. See *cretinism*.

The wretched look of the dwarfed, diseased and *cretinized* inhabitants. *Freeman*.

cretinoid (krē′ti-noid), *a.* [*cretin* + *-oid*.] Resembling, in symptoms, a cretin.—**Cretinoid disease.** Same as *myxœdema*.

cretinous (krē′tin-us), *a.* [*cretin* + *-ous*.] Relating to cretinism or to a cretin.

Cretinous idiots, who are born without thyroid glands. *Encyc. Brit.*, XXXI. 540.

cretion (krē′shon), *n.* [L. *cretio(n-)*, < *cernere* (pp. *cretus*), decide: see ★*cern*[2] and cf. *discrete*, etc.] In *Rom. law*, the act of cerning and the time allowed for it. See ★*cern*[2].

cretol (krē′tōl), *n.* [L. *creta*, chalk, + *-ol*.] A preparation suggested for the destruction of various obnoxious organisms, such as the larvæ and pupæ of mosquitoes.

Creto-Mycenæan (krē″tō-mī-sē-nē′an), *a.* Pertaining to both Crete and Mycenæ: applied to the Cretan phase of the Mycenæan or early prehistoric Hellenic civilization. Many excavations have recently been undertaken in Crete by English and Italian archæologists.

cretous (krē′tus), *a.* Same as *cretose*. [Rare.]

crevally (kre-val′i), *n.* Same as *cavally*.

crevasse, *n.*—**Crevasse cycle,** the sequence of changes which a series of crevasses passes through in the movement of a glacier. *Science*, May 20, 1904, p. 786.

crevasse (kre-vas′), *v. t.*; pret. and pp. *crevassed*, ppr. *crevassing*. To rend, as the surface of a glacier, with fissures and cracks.

This high isolated drumlin and lower accumulations . . . are evidence of the wrenching and *crevassing* at the turning spot. *Dana*, Manual of Geol., p. 971.

crewellery (krō′el-ėr-i), *n.* [*crewel* + *-ery*.] Crewel-work. *N. E. D.*

crew-space (krō′spās), *n.* *Naut.*, space in a vessel specifically assigned and reserved as quarters for the crew. Each space must have not less than 72 cubic feet, with 12 square feet of floor for each person lodged therein, and no cargo or stores may be carried in such spaces.

crib[1], *n.* **11.** The frames may rest one on the other, forming a solid lining, or *solid cribbing*, or they may be spaced at convenient intervals, making what is called an *open cribbing*. In the latter case a lining or backing of planks or of poles is used. At intervals *bearing cribs*, frames with ends projecting into the solid rock, are used to support the weight of the shaft-lining. *Wedging cribs* are heavy frames used as the foundation for a water-tight shaft-lining (tubbing), the space behind the wedging crib being wedged water-tight. *Garland curbs* are provided with horizontal gutters to intercept the water flowing down inside the shaft-lining. Also called *curb*.—**To balk the crib.** See ★*balk*.

crib[1], *v. t.* **5.** To make up (logs, boards, or staves) into small rafts or cribs to be united later into a large raft. [United States and Canada.]

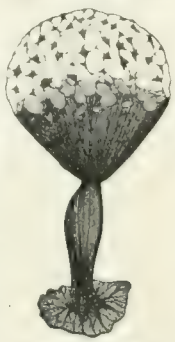
cribbage, *n.* **Five-card cribbage,** a variety of cribbage in which each player receives only five cards, two of which are laid out for the crib, the play stopping as soon as a 'go' or 31 is reached.

cribber, *n.* **2.** A device which is buckled around a horse's throat to prevent cribbing. The under side, which bears against the horse's throat, is provided with sharp points which are held back by springs to prevent them from pricking unless the horse attempts to crib.

cribbing-muzzle (krib'ing-muz"l), *n.* An open wire muzzle which is held in place over a horse's mouth by a halter, to prevent cribbing.

cribral (krib'ral), *a.* [*cribrum* + *-al*[1].] Relating to a cribrum or any sieve-like structure. *Science,* June 7, 1901, p. 888.

Cribraria (kri-brā'ri-ä), *n.* [NL. (Schrader, 1791), < L. *cribrum,* a sieve.] A genus of slime-molds, type of the family *Cribrariaceæ,* having separate stipitate sporangia. The lower portion of the peridium is cup-shaped and the upper consists of a network of thick-celled strands, which suggest the name. The spores are variously colored.



Cribraria piriformis. (From Engler and Prantl's "Pflanzenfamilien.")

Cribrariaceæ (krī-brā-ri-ā'sē-ē), *n. pl.* [NL., < *Cribraria* + *-aceæ.*] A family of slime-molds named from the genus *Cribraria.* The peridia are mostly stipitate and have radiate or stellate thickenings. The thinner intermediate portions disappear at maturity, leaving a more or less spherical network. See ★*Cribraria.*

Cribriform area. See ★*area.* — **Cribriform organ,** in *Stelleroidea,* one of the densely packed groups of small spinelets or lamellæ found on some or all of the marginal plates, especially in *Porcellanasteridæ.* The function of the organ is unknown, but it may act as a percolator.

cribrilinidan (krib-ri-lin'i-dan), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the bryozoan family *Cribrilinidæ.*

II. *n.* A member of the *Cribrilinidæ.*

cricamphityle (kri-kam'fi-tīl), *n.* [Gr. κρίκος, a ring, + ἀμφί, on both ends, + τύλη, a lump.] In the nomenclature of the spicular elements of sponges, a monaxial spicule or rhabd with concentric swellings and blunt ends.

criccaltrop (kri-kal'trop), *n.* [Irreg. < Gr. κρίκος, a ring, + E. *caltrop.*] In the nomenclature of the spicular elements of sponges, a caltrop in which the arms bear series of concentric rings.

crick[3] (krik), *v. t.* [*crick*[3], *n.*] To wrench or sprain: as, to *crick* one's neck.

cricket[1], *n.* **Agitating cricket,** an American gryllid, *Hapithus agitator,* which occasionally damages young cotton-plants in the southern United States.— **Banded cricket,** an American gryllid, *Nemobius fasciatus,* which occasionally injures the cotton-plant.— **Black cricket,** any member of the family *Gryllidæ* which is black in color, like *Gryllus assimilis.*— **Mormon cricket,** a wingless American locust-id, *Anabrus simplex.* [Local, U. S.]— **Western cricket.** Same as *mormon* ★*cricket.*

cricket[2], *n.*— **Double-wicket cricket,** the ordinary form of modern cricket, which requires two wickets, and a batsman at each: in contradistinction to *single-wicket cricket,* in which only one batsman bats at a time.

cricket-match (krik'et-mach), *n.* A contest at cricket between two sides of eleven players each, lasting usually from half a day to three days. That side wins which, two innings having been played by both sides, shall have scored the greatest aggregate of runs. See *cricket.*

cricket-teal (krik'et-tēl), *n.* **1.** See *teal*[1].— **2.** A local name of the European blue-winged teal, *Anas crecca.*

cricohyoid (krī-kō-hī'oid), *a.* [*crico(id)* + *hyoid.*] Relating to the hyoid bone and the cricoid cartilage.

cricorhabd (krī'kō-rabd), *n.* [Gr. κρίκος, a ring, + ῥάβδος, a rod: see *rhabd.*] In the nomenclature of the spicular elements of sponges, a monaxial spicule or straight rhabd with concentric swellings.

cricostyle (krī'kō-stīl), *n.* [Gr. κρίκος, a ring, + στῦλος, a pillar, taken in sense of L. *stilus,* a pointed instrument.] A cricorhabd with sharp ends. See ★*cricorhabd.*

cricotomy (krī-kot'ō-mi), *n.* [*crico(id)* + Gr. *-τομία,* < τεμεῖν, cut.] Division of the cricoid cartilage in laryngotomy.

cricotracheal (krī-kō-trā'kē-al), *a.* [*crico(id)* + *tracheal.*] Relating to both the cricoid cartilage and the rings of the trachea.

cricotriæne (krī-kō-trī'ēn), *n.* [Gr. κρίκος, a ring, + τρίαινα, a trident.] In the nomenclature of the spicular elements of sponges, a triæne in which the four arms bear series of concentric wrinkles. See *triæne* and ★*criccaltrop.*

criminal, *a.*— **Central Criminal Court.** See ★*court.* Criminal code. See ★*code.*

criminaloid (krim'i-nal-oid), *a.* and *n.* [*criminal* + *-oid.*] **I.** *a.* Similar to a criminal.

II. *n.* A person who in physique is similar to the criminal type, that is, the type which is believed to predispose to criminal acts.

The scientifically trained and practically experienced examiner . . . can, moreover, by the same means [a physical examination] exclude the criminals, *criminaloids,* and the degenerates.

Buck, Med. Handbook, VI. 181.

criminogenesis (krim"i-nō-jen'e-sis), *n.* [L. *crimen* (*crimin-*), crime, + γένεσις, origin.] The origin of crime. *Baldwin,* Dict. of Philos. and Psychol., I. 245.

criminography (krim-i-nog'ra-fi), *n.* [L. *crimen* (*crimin-*), crime, + -γραφία, < γράφειν, write.] The scientific description of crime, of its distribution, origin, and of the characteristics of criminals. *Baldwin,* Dict. of Philos. and Psychol., I. 245.

criminological (krim"i-nō-loj'i-kal), *a.* Of or pertaining to criminology.

criminology (krim-i-nol'ō-ji), *n.* The science of crime.

crimping-brake (krim'ping-brāk), *n.* In *shoe-manuf.,* a machine for crimping the vamps of shoes; a crimper. Also called *banging-iron.*

crimping-form (krim'ping-fôrm), *n.* A form on which vamps for boots may be crimped.

crimping-machine, *n.* **2.** In *sheet-metal work,* a hand- or power-machine for crimping the edges of box-covers, cans, and other tinware; a machine closely allied to the beading-machine, employing rolls to form a crimp or corrugation in sheet-metal.— **3.** A contrivance for crimping the tops of lamp-chimneys and other glassware. —**Double-head crimping-machine,** a power-machine for crimping both ends of a can at the same time.— **Upright crimping-machine,** one having horizontal crimping-rolls. It is adapted to crimping the edges of square as well as of round cans, the crimping-rolls following automatically the shape of the can, however irregular.

crimping-screw (krim'ping-skrō), *n.* A small, hand screw-press for crimping vamps.

crinanthropist (krī-nan'thrō-pist), *n.* [*crinanthrop-y* + *-ist.*] One who is in the habit of criticizing men. *N. E. D.*

crinanthropy (krī-nan'thrō-pi), *n.* [Irreg. < Gr. κρίνειν, judge, + ἄνθρωπος, man.] Criticism of men. *N. E. D.*

crine[2] (krīn), *v. i.*; pret. and pp. *crined,* ppr. *crining.* [Appar. < Gael. *críon,* wither, < *crion,* withered, little, = Ir. *crion,* earlier *crin,* = W. *crin* = Bret. *krin,* dry.] To shrink or shrivel up from dryness or heat, as in cooking. [Scotch.]

cringle, *n.*— **Bull's-eye cringle,** a cringle having a grooved ring of iron, called a *thimble,* around which the rope or wire is spliced.

crinid (krī'nid), *n.* [Gr. κρίνον, lily, + *-id*[2].] A crinoid.

criniferous (kri-nif'ē-rus), *a.* [L. *crinis,* hair, + *ferre,* bear.] Bearing hair. [Rare.]

crinin, krinin (krin'in), *n.* [Irreg. < Gr. κρίνειν, separate, + *-in*[2].] A substance which will stimulate the secretion of certain glands, such as the pancreas, for example, secretin.

crinivorous (kri-niv'ō-rus), *a.* [L. *crinis,* hair, + *vorare,* devour.] Devouring hair. [Rare.]

crinogenic, krinogenic (kri-nō-jen'ik), *a.* Of or pertaining to crinin.

crinoline, *n.* **4.** A contrivance worn by divers in deep water to enable them to breathe more freely. It is placed round the body and tied in front of the stomach.

crinoline-mount krin'ō-lin-mount), *n.* Same as ★*cage-mount.*

crinula (krin'ū-lä), *n.* [NL., dim. of L. *crinis,* hair: see *crine*[1].] In *bot.,* same as *elater*[2], 2.

crin végétal (kraṅ vā-zhā-täl'). [F. *crin végétal,* 'vegetal hair': see *crine*[1] and *vegetal.*] The commercial name of the fiber obtained from the leaves of the dwarf fan-palm of southern Europe and northern Africa, *Chamærops humilis.* It is usually twisted, curled, and dyed to resemble curled horsehair, and is extensively used as a substitute for the latter in upholstery. See *hemp-palm,* and *vegetable horsehair,* under *vegetable.* *Hannan,* Textile Fibres of Com., p. 160.

crioboly (krī-ob'ō-li), *n.* [Also *kriboly;* < Gr. *κριοβολία, < κριοβόλος, ram-slaying, < κριός, ram, + βάλλειν, throw, cast.] A rite of the Phrygian worship performed by bathing in the blood of sacrificial rams. The practice was introduced into Rome during the early Empire.

Criophoros (krī-of'ō-ros), *n.* [Gr. κριοφόρος, < κριός, a ram, + -φορος, < φέρειν, bear.] In *Gr. myth.,* the ram-bearer, an epithet of Hermes, the ram being the animal especially sacrificed in his honor. There was a famous statue of Hermes Criophoros by Calamis at Tanagra in Bœotia.

cripple, *n.* **4.** A kind of temporary staging used by window-cleaners.— **5.** In *railroading,* a freight-car or other car which has been injured or damaged in its running gear or is for any other reason unfit for use. A car condemned by a car-inspector as a cripple must be cut out of its train and sent to the cripple-track. See ★*drill-yard.*

cripple-rafter (krip'l-râf"tèr), *n.* Same as ★*cripple-timber.*

cripple-stopper (krip'l-stop"èr), *n.* A small gun used by sportsmen to kill wounded birds.

cripple-timber (krip'l-tim'bèr), *n.* In *roof-construction,* a timber made shorter, as required by the slope of the roof, so as to frame into a hip-rafter or valley-rafter. Often same as *jack-rafter.*

cripple-track (krip'l-trak), *n.* In *railroading,* a special track in a drill-yard for the storage or repair of cripples, or injured cars. Such tracks are provided with ample space on each side to enable the repairers to work about the cars. If the injury is serious, cripples are unloaded and sent from the cripple-tracks to the repair-shops.

cripple-window (krip'l-win"dō), *n.* A window built in or upon the slope of a roof, as a dormer-window of any form; also, an opening filled with a sash in the slope of the roof itself.

crisis, *n.* **3.** A paroxysm of acute localized pain or of functional disturbance of some organ accompanying tabes dorsalis or other degenerative affection of the spinal cord.— **Dietl's crises,** attacks of severe gastric distress in cases of wandering kidney.— **Gastric crisis,** a sudden attack of violent pain radiating from the region of the stomach, accompanied by nausea and vomiting, occurring sometimes in locomotor ataxia.— **Laryngeal crisis,** a convulsive cough, with hoarseness and severe pain in the larynx, occurring in the course of tabes dorsalis.

crispifloral (kris'pi-flō-ral), *a.* [L. *crispus,* curled, + *flos* (*flor-*), flower, + *-al*[1] (see *floral*).] Having crispate or curled flowers. *Jackson,* Glossary.

crispifoliate (kris-pi-fō'li-āt), *a.* [L. *crispus,* curled, + *folium,* leaf, + *-ate*[1] (see *foliate*).] Having crispate or curled leaves. *Jackson,* Glossary.

crista, *n.,* (*b*) In *anat.,* a ridge or crest for the attachment of a muscle. (*c*) A narrow fold of enamel directed inward and backward from a point near the meeting of the protoloph and ectoloph in such a tooth as that of a rhinoceros. See cut under ★*tooth.* (*d*) A cord-like longitudinal ridge on the dorsal surface of the egg-capsule of cockroaches. *A. S. Packard,* Text-book of Entom., p. 519.— **Crista ethmoidei,** in *ichth.,* the ethmoid: a median bone in front of the frontals and above the vomer. See cut under *Esox.* *Starks,* Synonymy of the Fish Skeleton, p. 509.— **Crista femoris.** Same as *linea aspera.*— **Crista helicis,** 'ridge of the helix,' the projection of the external ear just above the meatus, which divides the concha into two parts, the upper (cymba) and the lower (cavitas conchæ).— **Crista inferior,** in *ornith.,* the ridge along the proximal portion of the lower border of the humerus.— **Crista superior,** in *ornith.,* the marked ridge on the upper border for the attachment of the great pectoralis major.— **Crista tympanica,** 'tympanic ridge,' a roughened line on the annulus tympanicus which serves for the attachment of the drum membrane.— **Crista ulnæ,** 'ridge of the ulna'; the external border of the ulna.

critenchyma (kri-tengk'i-mä), *n.* [NL., < Gr. κριτός, separated, + ἐγχυμα, infusion: see ★*enchyma.*] In *bot.,* the tissue of the sheaths of fibrovascular bundles. *Jackson,* Glossary.

criteriology (krī-tē-ri-ol'ō-ji), *n.* [Gr. κριτήριον, criterion, + *-λογία,* < λέγειν, speak.] The doctrine of criteria or standards of judgment. See *criterion.*

Criterion of equilibrium, of kinetic stability. See ★*equilibrium, kinetic* ★*stability.*

Critical days, days on which the crisis of an acute disease may occur.— **Critical integer, mineral.** See ★*integer,* ★*mineral.*— **Critical period.** Same as *climacteric.*— **Critical point.** (*c*) In *math.,* a point where the slope of the graph of a function is zero or infinitely great.— **Critical pressure, solution, speed.** See ★*pressure,* etc.— **Critical state,** in *phys.,* the condition of unstable equilibrium between the vapor phase and the liquid phase, in which a substance exists when at its critical pressure and critical temperature.— **Critical temperature, tube, value,** etc. See ★*temperature,* etc.

criticism, *n.*— **Morellian criticism.** It was noticed by Giovanni Morelli (1816–91), the critic of Italian painting, that the old painters dropped unconsciously into mannerisms in the representation of details, both im-

portant and unimportant; each master, for instance, having a peculiar way of constructing a hand or an ear. Morelli used these peculiarities with good results to supplement the higher criticism of style, color, and composition in ascribing paintings to their proper authors. The method has been widely adopted in the criticism of art.

croaker, *n.*, **4.** (*e*) The little roncador. (*f*) Any fish of the sciænoid genus *Micropogon*, especially *M. undulatus*. **Black croaker,** the red roncador. **Post croaker.** Same as *spot*, 7 (*a*). **Silver croaker,** a sciænoid fish, *Bairdiella chrysura*, found on the Atlantic coast of the United States. **White croaker,** the queenfish.

Croatan group. See ★*group*[1].

crobylus, *n.* See *krobylos*.

crocard (krō-kärd′), *n.* [Also *crockard* (a modern spelling, but the word is not in modern use); ME. *crocard*, AF. *crokard*, prob. < ME. *crok*, a crock, a potsherd: see *crock*[1].] A base coin current in England in the time of Edward I.

croc-chien (krō-shyaṅ′), *n.* [Colonial F., for *croc de chien*, 'dog's fang' (from the hooked spines on the stems and leaves): F. *croc*, fang or tusk; *chien*, dog.] A common name in the West Indies of climbing palms of the genus *Desmoncus*. Their stems and the petioles and midribs of the leaves are beset with hooked spines, making them very troublesome to one walking in a forest. See *Desmoncus*.

As the Spanish soldiers ran from the English, one of them was caught in the innumerable hooks of the *Croc-chien*. *Kingsley*, At Last, iii.

crocein (krō′sē-in), *n.* [*croce(ous)* + *-in*[2].] A name given to several acid coal-tar colors on account of the bright red they produce.—**Brilliant crocein M, 3B,** and **9B,** acid coal-tar colors of the disazo-sulphonic-acid type. They dye wool a bright bluish red from an acid bath, and are also used in coloring paper and, to a limited extent, in dyeing cotton.—**Crocein B** and **3B,** two acid coal-tar colors of the disazo type. The former is derived from amidoazo-benzine and the latter from azo-toluene. They dye wool red in an acid bath.—**Crocein 2B** or **3BX,** an acid coal-tar color of the monoazo type, derived from naphthionic acid. It dyes wool red in an acid bath. Also called *scarlet* 000.—**Crocein orange, scarlet.** See ★*orange*[1], ★*scarlet*.

crocetin, *n.* (*b*) An amorphous red product, $C_{34}H_{46}O_{11}$, obtained by heating crocin, the coloring matter of saffron (*Crocus sativus*), with dilute mineral acids.

crochet, *n.* **4.** A fold of enamel directed forward from the anterior edge of the median cross-crest (metaloph) in such a tooth as the molar of a rhinoceros. See cut under ★*tooth*.

crocine (krō′sin), *a.* [L. *crocinus*, < Gr. κρόκινος, < κρόκος, saffron: see *crocus*.] Of or pertaining to the crocus.

crock[2], *n.* **2.** In *cricket*, a worthless player. [Slang.]

crocketed, *a.* **2.** Having crockets, or terminal snags: said of stags' horns.

crocketing (krok′e-ting), *n.* **1.** In *arch.*, the system of crockets, as along the gable, or one angle, of a spire.—**2.** Decoration by means of rows of crockets: as, a steeple adorned by rich *crocketing*.

crockman (krok′mạn), *n.* A man who deals in crockery.

crock-stick (krok′stik), *n.* A stick used for stirring a pot; a pot-stick; a spurtle.

crocodile-arrow (krok′ọ-dīl-ar″ō), *n.* A large arrow bearing the design of a crocodile on its foreshaft: used by the natives of Torres Strait, and remarkable on account of the conventional modifications of the crocodile design. *Haddon*, Evolution in Art, p. 20.

crocodile-shears (krok′ọ-dīl-shērz), *n. sing.* and *pl.* Same as ★*alligator-shears*.

crocose (krō′kōs), *n.* [*croc-us* + *-ose*.] Sugar obtained by the hydrolysis of crocetin: now known to be glucose. Also called *saffron-sugar*.

Crocosmia (krō-koz′mi-ä), *n.* [NL. (Planchon, 1851–52), < Gr. κρόκος, saffron, crocus, + ὀσμή, smell. The dried flowers when moistened have the odor of saffron.] A genus of plants of the family *Iridaceæ*, which includes only one species, *C. aurea*, a showy bulbous autumn-blooming plant. This genus is distinguished from the closely allied genus *Tritonia* by having the stamens separated at equal distances instead of grouped at one side, the tube not swollen at the top, and the fruit 3-seeded instead of many-seeded. Its cultivation is that of *Gladiolus*. The plant is native to Africa.

crocus, *n.* **5.** In old *chem.*, a yellowish or reddish impure oxid of some of the metals: as, *crocus antimonii* or *crocus metallorum*, an impure oxid of antimony obtained by deflagration of natural sulphid of antimony with saltpeter; *crocus Martis*, oxid of iron left on heating sulphate of iron to redness in the air; *crocus Veneris*, red oxid of copper obtained by heating copper in the air.—**Autumn, fog, meadow,** or **Mi-chaelmas crocus,** the meadow-saffron, *Colchicum autumnale*. **Prairie** or **wild crocus,** the American pasque-flower, *Pulsatilla hirsutissima*. See *pasque-flower*.

crocused (krō′kust), *p. a.* Covered or decked with crocuses. *Ruskin*.

crocus-powder (krō′kus-pou″dèr), *n.* An old name for red oxid of iron in fine powder, used as a polishing material. See *crocus*, 4.

crodonium (krō-dō′ni-um), *n.* [NL.] A supposed new chemical element announced by Trommsdorff in 1820 as present in an incrustation produced by sulphuric acid: afterward shown to be a mixture of common substances.

croft-bleaching (krôft′blē″ching), *n.* Bleaching and exposure to the sun on grass, and frequent sprinkling; insolation. See *croft*, *v. t.*

crofter, *n.* Originally a customary tenant with well-defined rights to his holding, in the early nineteenth century the crofter came to be regarded merely as a tenant at will. Wholesale evictions of crofters led, in 1883, to the appointment of a parliamentary commission of investigation, the result of which was the enactment, in 1885, of the Crofters Act, which guaranteed permanence of tenure, compensation for improvements, and fair rents, determined by a permanent commission.

Since the passing of the *Crofters* Act of 1885, and the amending statutes of succeeding years, which added to the Commissioners' powers of fixing fair rents and cancelling arrears, the power of enlarging crofts and common grazings, political agitation among the Highland *crofters* has practically died out. *Encyc. Brit.*, XXXII. 464.

crogan (krō′gạn), *n.* See ★*craggan*.

crokinole (krō′ki-nōl), *n.* [Also *croquinole*, *crocknale*; < F. *croquignole*, a filip; probably connected with *croquignole*, *craquignolle*, a cracknel, which originated in the root of *crack*[1], *v.*] A game played on a round or octagonal board, in which round wooden disks are filliped from the edge toward the middle. See *squail*.

Cro-Magnon race. See ★*race*[3].

cromfordite (krom′fôr-dīt), *n.* [*Cromford*, a locality in Derbyshire, + *-ite*[2].] Same as *phosgenite*.

cromhorn (krom′hôrn), *n.* Same as *cromorna*.

crommelin (krom′e-lin), *n.* [Appar. from a surname *Crommelin*.] A light roasted starch, similar to roasted potato starch, used in calico-printing as a thickener for thin colors.

Crompton loom. See ★*loom*[1].

Cromwellism (krom′wel-izm), *n.* Policy and methods characteristic of Oliver Cromwell. See *Cromwellian*.

Cronartium (krō-när′shium), *n.* [NL. (Fries, 1815).] A genus of parasitic fungi of the order *Uredinales*. The æcidia grow on conifers and have been called *Peridermium*. The uredospores and teleutospores occur on leaves of *Ribes*, *Asclepias*, *Quercus*, etc. The teleutospores are one-celled and arranged in slender cylindrical brown masses. *C. Asclepiadeum* has æcidia on the trunk or branches of *Pinus sylvestris* and teleutospores on *Cynanchum Vincetoxicum*, in Europe.

cronk (krongk), *a.* [Var. of *crank*[3].] **1.** Sick or feigned to be sick; in poor condition; in 'bad trim,' as a race-horse.—**2.** Unsound; cranky; shaky; unstable; 'crooked': as, *cronk* financial institutions.—**3.** Obtained by theft or fraud; stolen: as, *cronk* goods. [Australian slang in all senses.]

crook, *n.*, **4.** (*j*) A British foundry name for a compass of wood used in the forming up of the molds for casting bells.

10†. A name given to both the parenthesis ( ) and the square bracket [ ].

crookbill (krùk′bil), *n.* The New Zealand plover, *Anarhynchus frontalis*, in which the bill is bent sidewise.

crooked-foot (krùk′ed-fùt), *n.* A pathological condition of a horse's hoof in which one wall is concave from the coronet to the plantar surface, while the opposite wall is convex. The hoof may be said to be twisted to form an arc of a circle.

Crookes's layer, space, vacuum. See ★*layer*, ★*space*, ★*vacuum*.

croom (kröm), *n.* A dialectal form of *crome*[2].

crop, *n.* **15.** In cattle, a portion of the back, on either side of the median line, immediately back of the shoulder. See cut under ★*point*[1].—**16.** The working unit in the making of turpentine, consisting of a forest tract of from 200 to 250 acres, containing approximately 10,500 faces.—**17.** In certain cephalopods and other mollusks, a more or less dilated portion of the esophagus, sometimes forming a lobular cæcum.—**Ameliorating crop,** a crop beneficial to the soil, and grown wholly or partly for that reason.—**Black crop,** a crop of beans or peas, as opposed to one of cereals: according to some, it includes vetches when grown for seed. [Great Britain.]—**Brown crop,** a crop other than one of grain, as legumes, turnips, etc.

Most of the modern systems of rotation in connection with high farming depend . . . upon the alternation of straw crops and leaf crops, or, as the old terms were, "white crops" and "brown crops."
Storer, Agriculture, II. 220.

Catch crop, a minor crop occupying the soil between the times of two principal crops; specifically, in Great Britain, a fallow crop of vetches, clover, rye, or the like, following the grain of one year and preceding the root crop of the next. See *cropped* ★*fallow* and *stolen crop*.—**Cleaning crop,** a crop which serves in any manner to rid the ground of weeds.

It [rye] becomes in a sense a "*cleaning*" *crop* when another crop immediately follows the depasturing.
T. Shaw, Forage Crops, p. 173.

Companion crop, a crop which is grown with another crop, the two occupying the land simultaneously.—**Cotton crops.** See ★*cotton*[1].—**County crop,** the crop or hair-cut of prisoners in the county jail. [Slang.]—**Cover crop,** a leguminous crop planted to protect the soil from washing and weeds during the period when it is not occupied by the main crop, at the same time serving to enrich it.—**Crop report,** specifically, an official exhibit of the condition of domestic crops, published monthly by the United States Department of Agriculture. These reports are based upon the advices of voluntary correspondents.—**Crop writer,** a skilled agriculturist who collects agricultural reports as to the prospects of good crops or poor crops.

Educated and practically trained meteorologists, *crop writers*, printers, and messengers are on duty, fully equipped with the most improved instruments and mechanical appliances for performing their various functions. *Yearbook U. S. Dept. Agr.*, 1897, p. 64.

Forage crop, in the broadest sense, any crop grown principally for forage, that is, as feed for stock, or any crop so far as grown for this purpose. Cereals, including Indian corn, become forage crops when intended for stock-feeding, and even the sugar-beet when the use of the pulp for stock-feeding is in view. More often the term is used in some limited sense, as (*a*) In British agriculture, a crop grown as green food for stock, exclusive of root crops and temporary or permanent pasture. (*J. Muir*, Agriculture, p. 243.) (*b*) In the United States, usually a crop of which the herbage is eaten either green or dry, not exclusive of pasturage; the meaning is not well defined with reference to roots, which (until recently the sugar-beet) have been little grown in the United States. (See the extract.) T. Shaw ("Forage Crops," p. 1) restricts the term to pasture crops other than grasses.

In a more limited and technical sense a *forage crop* is an annual crop in which the whole plant is used for food. *T. F. Hunt*, Cereals in America, p. 7.

Leguminous crop, a crop of any useful legume or pulse-plant, more especially of one grown in the field for cutting or for plowing under. Under such crops are included all the cultivated true beans, peas, and clovers, the vetches or tares and lupines, the cow-pea, chick-pea, horse-bean, soy-bean, sword-bean, sanfoin, sulla, sweet clover, beggar-weed, etc., all belonging to the family *Fabaceæ*.—**Money crop,** a crop which is sold, as cotton, in distinction from one consumed on the farm.—**Nitrogen-fixing crop,** a crop of some plant whose roots serve as hosts for the microbes which have the power of fixing the free nitrogen of the air as organic matter. The plants available for this purpose are legumes, such as clovers, the cow-pea, etc. The nitrogen accumulated in the roots is prepared for plant use through nitrification. See *nitrification*, ★*nitrogen-fixing*, and *nodule-bacteria* under *Bacterium*.—**Nurse crop,** an annual crop which serves, primarily or incidentally, to protect the young growth of some longer-lived crop, as rye or wheat sown with clover to secure the benefit of its shade. The term has been applied also to the banana grown with coffee to shade it.—**Protective crop.** Same as *nurse* ★*crop*.—**Renovating crop,** a crop grown for its effect in improving the soil; often, however, serving also as forage. Soiling crops (see below) may also be renovating crops.—**Root crop.** See *root-crop* and *cropped* ★*fallow*. In Great Britain root crops consist of turnips (white and yellow), Swedes, mangel-wurzel, carrots, and parsnips, with which are sometimes counted cabbage, kale, rape, and the potato.—**Scourging crop,** a crop which impoverishes the soil. [Great Britain.]

The flax is what is termed by farmers a *scourging crop*.
Low, Pract. Ag., p. 284.

Smothering crop, a dense and vigorous crop grown to suppress weeds. **Soiling crop,** a crop suited to the purpose of soiling, that is, of being fed green to cattle in the stall or yard. Indian corn, small grains, and grasses can be thus used; but leguminous crops (clover, the cow-pea, alfalfa, etc.) are advantageous in that they require little expensive manuring and leave the soil richer and in better physical condition than before (see *nitrogen-fixing* ★*crops*), at the same time affording a rich nitrogenous food.—**Stolen crop,** a catch-crop: so called because it is taken between regular crops, as if by stealth.—**Succession crop,** a crop which is grown directly after another in a short rotation, particularly horticultural crops, as a succession in one season of lettuce, beans, and turnips. The practice of raising succession crops is called *succession-cropping*. **Top crop,** in *cotton-growing*, a crop which, in the more southern States, may sometimes be gathered from the upper, late-maturing bolls.—**Trap-crop,** a crop attractive to noxious insects, planted to draw them away from some other crop. On the trap-crop the insects are killed by poison, or in some cases the crop laden with eggs is fed to cattle.

crop, *v. t.* **4.** To shear; cut the nap from, as woolen cloth.—**5.** To cut down needlessly the outer margins of a book. When this cutting shaves the type the book so treated is said to be *bled*.

crop-belt (krop′belt), *n.* Same as *crop*-★*zone*.

crop-ends (krop′endz), *n.* The rough, unfinished ends of rails, billets, or blooms, in the rolling-mill process, which are cut off in bringing the finished pieces to standard length and to remove the defective portions which are con-

centrated into such wastage. The crop-ends are melted over again and charged, as scrap, into the furnaces.

Large billets can be rolled at one operation into small rods of great length, so that the proportion of metal wasted in the form of *crop-ends* is greatly reduced.
Encyc. Brit., XXIX. 588.

crop-head (krop'hed), *n.* The top or head of an ingot. This is always less sound than the bottom or foot, since the formation of the "pipe" in cooling occurs in the head, and any impurities rise there by liquation. More metal should therefore be cut off from the head than from the bottom end. See ★ *crop-ends.*

The next process is to cut the long bloom up into smaller blooms, in which electrically-driven bloom shears are brought into play. The rough ends — "*crop heads*" are cut off and are placed by an electric crane in a car for shipment to any part of the works.
Sci. Amer. Sup., Feb. 21, 1903, p. 22687.

crop-leather (krop'leтн″ėr), *n.* Sole-leather made from a hide from which the belly has been trimmed off.

crop-over (krop'ō″vėr), *n.* The end of the sugar-cane harvest on a plantation; hence, a celebration or harvest-home often held on the last day of the cane-cutting. [West Indies.]

cropper[4] (krop'ėr), *n.* [See the def.] A small bed-and-platen printing-press invented by George P. Gordon (1858) of New York, but named from the machinist (H. S. Cropper) who introduced it into Great Britain.

cropper-worker (krop'ėr-wėr″kėr), *n.* One who operates a cropper or cropping-machine used in facing cloth by cropping or shearing the nap.

cropping, *n.*, **3.** (*b*) *pl.* Exposures of bed-rock through the surface-mantle; outcrops.—**Combined cropping,** in *forestry*, the combination of forest and field crops on the same area.

cropping-out (krop'ing-out″), *n.* A rock exposure; an outcrop.

cropping-shears (krop'ing-shērz), *n. sing.* and *pl.* Same as ★*alligator-shears.*

crop-service (krop'sėr″vis), *n.* See *climate- and crop-service*, under ★*climate.*

crop-tin (krop'tin), *n.* Same as *crop-ore.*

croquant (krō-kānt'), *n.* [F. *croquant*, crackling, crisp, ppr. of *croquer*, crackle.] A crisp sweet cake or pastry; something brittle made of nuts, as peanut brittle, etc.

crosnes (krōn), *n.* Same as ★*chorogi.*

cross[1], *n.* **15.** In *geom.*, the point determined by two straight lines: the intersection of two straight lines.—**Axial cross.** See ★*axial.*—**Celtic cross,** a form of sepulchral monument found in England, Scotland, Ireland, and the islands. The name *Celtic* is largely conventional, the works themselves often dating from a later period, sometimes as late as the thirteenth century. They are decorated with interlaced patterns commonly called *Celtic.*—**Cervical cross.** See ★*cervical.*—**Cross dollar.** See ★*dollar.*—**Cross of the Holy Ghost,** the decoration of the Order of the Holy Ghost (which see, under *ghost*).—**Egyptian cross.** See ★*Egyptian.*—**Irish cross,** a form of Celtic cross having a circle at the intersection of the arms with the shaft. See *Celtic* ★*cross* and cut of monumental cross, under *cross*[1], *n.*—**Stations of the cross,** a series of fourteen representations of the passion of Christ, either painted or in relief, around the interior of a Roman Catholic church, before which the faithful pray and meditate; also, the formulary of prayers used for this purpose.—**To give the double cross to,** in racing or any game or sport in which betting is concerned, to conspire with one man to betray another and then to betray the first: as when A, a runner who can easily outrun his opponent B, arranges (for a consideration) with C to let B win, and then, having informed his own backers of this contract with C, arranges with them (for a consideration) to win the race himself, thus giving the double cross to C, who, unaware of A's treachery, bets on B and loses both his bets and the consideration he had paid. See *cross*, 14. [Gamblers' slang.]—**To shake the cross,** to abandon crooked or swindling ways; become 'good.' [Slang.]

cross[1], *a.* **9.** Dishonest; not honestly come by; not on the square: as, a *cross* horse. [Slang.] —**10.** In *logic*, having an extensive part in common, without including or being included. Cross terms are such terms as *living* and *corruptible*, if there are things that are both living and corruptible, others living but incorruptible, others not living but corruptible, whether there is or is not anything neither living nor corruptible.—**Cross keys, ratio.** See ★*key*[1], ★*ratio.*

cross[1], *v. i.* **6.** In *euchre*, when the trump is turned down, to make it the opposite color.

cross-arm (krôs-ärm), *n.* A cross-piece; an arm or bracket which crosses a pole or post: used on poles to carry wires and keep them separated.

cross-assortative (krôs'a-sôr″ta-tiv), *a.* Reciprocally assortative; serving to assort or separate into kinds which are reciprocals. —**Cross-assortative mating,** assortative mating considered reciprocally; the mating or pairing of a male parent with the characteristic *x* and a female parent with the characteristic *y*, as compared with that of a male parent with the characteristic *y* and a female parent with the characteristic *x*.

cross-beard (krôs'bērd), *n.* In *organ-building*, see ★*beard*, 6 (*b*).

cross-beat (krôs'bēt), *n.* In beating time for music, the motion of the hand sidewise or across in marking one of the pulses of a measure between the initial and the final pulse; also, such an intermediate pulse itself.

cross-bedded (krôs'bed″ed), *a.* Having cross- or false bedding. See *false bedding*, under *false.*

cross-belt, *n.* **2.** In *mach.*, a crossed belt; a belt which is crossed or twisted so that the driven pulley will run in a direction opposite to that of the driver.

cross-binding (krôs'bīn″ding), *n.* In *mach.*, binding across corners; the act of sticking in guides, due to a tendency to twist instead of to travel in a line parallel to the guides.

cross-border (krôs'bôr″dėr), *a.* Forming a border across, as across a fabric woven on a Jacquard loom, such as that in a handkerchief, a table-cover, a towel, etc. *T. W. Fox*, Mechanism of Weaving, p. 165.—**Cross-border Jacquard loom.** See ★*loom*[1].

cross-bred, *a.* **II.** *n.* In *biol.*, the offspring produced by the crossing of parents which exhibit antagonistic or mutually exclusive characters, such as blackness and whiteness, tallness and shortness, which do not blend. The generative cells of a cross-bred are held to be of two sorts—those that confer upon descendants the characteristics of one parent and those that confer the characteristics of the other.

Hence it is seen that the 75 per cent. dominants are not really of similar constitution, but consist of twenty-five which are pure dominants and fifty which are really *cross-breds*, though, like the *cross-breds* raised by crossing the two original varieties, they only exhibit the dominant character.
Bateson, Mendel's Prin. of Heredity, p. 10.

cross-catalogue (krôs'kat″a-log), *v. t.*; pret. and pp. *cross-catalogued*, ppr. *cross-cataloguing.* To enter in a catalogue under two or more headings, as under both author and subject.

cross-chains (krôs'chānz), *n. pl.* Chains connecting the front and rear sleds of a logging-sled.

cross-claim (krôs'klām), *n.* An opposing claim; a claim in reply or opposition to another; a counter-claim.

cross-coloring (krôs'kul″or-ing), *n.* In *geol.*, color-markings developed independently of the stratification by infiltrated matter. *Science*, May 31, 1901, p. 869.

cross-crib (krôs'krib), *n.* A headquarters for crooks and blacklegs. *Stand. Dict.* [Thieves' slang.]

Cross-curves of stability, in *naval arch.*, a congeries of curves showing righting arms or righting moments of transverse stability of a vessel. Each cross-curve represents for a constant inclination the righting arm with reference to a fixed pole, as an ordinate, corresponding to the varying displacements as abscissæ. On such a diagram a vertical line with any given displacement as abscissa gives, by its intersection with each curve, the righting arm at the corresponding inclination, from which the curve of statical stability for the given displacement for all inclinations can readily be plotted.

crosscut, *v. t.* **2.** To cross-plow, as in fallowing.

A rough condition of soil . . . such as is obtained by winter ploughing and spring *cross-cutting*.
J. Wrightson, Fallow and Fodder Crops, p. 15.

cross-cut, *n.* **3.** In *math.*, a line, regarded as a section actually made in the surface, which begins at one point of a boundary, goes into the interior of the surface, and, without anywhere intersecting either another boundary-line or itself, ends at a point of the boundary. A cross-cut may connect two points on the same boundary-line, or two on different boundary-lines; or it may end where it began; or it may end in a point of its previous course. Also *cross-line.*

cross-division (krôs'di-vizh″on), *n.* In *logic*, a multiple mode of division by which the concept or class divided is divided in several ways, each subclass in each of these ways intersecting every subclass in each of the other ways. Thus, if men are divided according to their complexions, according to their ages, and according to their social status, this will be a cross-division. Mendeléjeff's division of the chemical elements into groups and series is a cross-division.

crossdye (krôs'dī), *v. t.*; pret. and pp. *crossdyed*, ppr. *crossdyeing.* To carry out the process of ★crossdyeing (which see).

crossdye (krôs'dī), *n.* A color suitable for use in crossdyeing.—**Crossdye black.** See ★*black.*

crossdyeing (krôs'dī-ing), *n.* [Verbal noun of *crossdye.*] The process of dyeing cotton-and-wool union-cloth in which the cotton warp has been dyed some color before weaving. During the crossdyeing the woolen or worsted filling may be colored to match the cotton warp, or it may be dyed a different color. In the latter case the result is called a *shot-effect.* See the extract.

Cross-dyeing is always preferred for medium and better class goods, since it is then possible to dye both the cotton and the wool with a greater choice of colouring matter and process, and the most suitable for each fiber may be employed.
J. J. Hummel, Dyeing of Textile Fabrics, p. 466.

Crossed inheritance, paralysis. See ★*inheritance, paralysis.*

cross-education (krôs'ed-ū-kā″shon), *n.* In *psychol.*, the transference of the effects of practice from the one side of the body to the other, unpractised side. *W. W. Davis*, Yale Psychol. Stud., 1898, p. 6.

cross-fault (krôs'fâlt), *n.* In *geol.*, a fault striking across the axis of a mountain-range or the general strike of the displaced strata.

Both longitudinal and *cross-faults* are said to have been developed more especially in the Eastern Alps.
Geog. Jour. (R.G.S.), XVI. 461.

cross-feed (krôs'fēd), *n.* In *mach.*, a device for feeding the tool or material crosswise in relation to the principal motion of either, or in relation to the long axis of the machine.

cross-fertilization, *n.* **2.** In general, the sexual union of two germ-cells from two parent organisms, as contrasted with self-fertilization in plants and in some hermaphrodite animals.

cross-fiber (krôs'fī″bėr), *n.* One of the varieties of chrysotile asbestos or fibrous serpentine.

This mineral occurs as a filling of veinlets, in which the fiber sometimes lies more or less parallel to the walls (especially where movement has affected it), and is then called *slip-fiber*; but more commonly the structure is almost at a right angle to the vein-walls, and is then called *cross-fiber.*
Amer. Geol., March, 1905, p. 194.

cross-figure (krôs'fig″ūr), *n.* A superficial figure which crosses itself, as a figure 8.

cross-fingering (krôs'fing″gėr-ing), *n.* In playing certain wood wind-instruments, like the flute, the use of the fingers out of the regular or serial order, so as to make extreme tones possible.

cross-flow (krôs'flō), *v. i.* To flow transversly.

cross-flute (krôs'flōt), *n.* A transverse flute. See ★*flute*[1], 1.

cross-fold (krôs'fōld), *n.* A fold which crosses another older fold obliquely or at right angles.

These had been deformed by oblique *cross-folds.*
Nature, Feb. 12, 1903, p. 359.

cross-fur (krôs'fėr), *v. t.* To fur or cover with laths diagonally.

cross-hatch (krôs'hach), *n.* In *engraving*, a series of lines intersecting at right angles or diagonally.

cross-hatch (krôs'hach), *v. t.* In *engraving*, to shade with lines crossing one another. See *cross-hatching.*

cross-haul (krôs'hâl), *n.* In *logging*, the cleared space in which a team moves in cross-hauling.

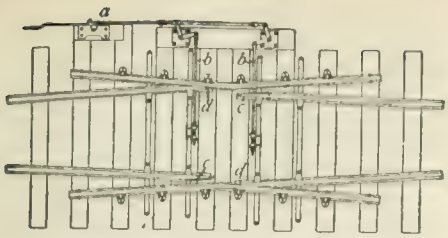
cross-haul (krôs'hâl), *v. t.* In *logging*, to load (cars or sleds) with logs by horse-power and crotch or loading-chain.

cross-head, *n.* **3.** In *printing*, same as ★*cross-heading.*

cross-heading (krôs'hed″ing), *n.* **1.** In *mining*: (*a*) A passage driven for ventilation from the airway to the gangway, or from one breast through the pillar to the adjoining working. (*b*) A roadway driven in the solid, or maintained through old workings, to intersect other haulage-roads diagonally or at right angles. (*c*) A roadway driven at less inclination than directly to the rise of the seam. *Coal and Metal Miners' Pocketbook.*—**2.** In *printing*, a subheading; a title set in the body of the printed matter at the beginning of a subdivision of the treatment.

cross-heredity (krôs'hē-red″i-ti), *n.* The resemblance of descendants to parents or ancestors considered reciprocally, or through the comparison of the descendants of male ancestors who are *x* and female ancestors who are *y* with those of male ancestors who are *y* and female ancestors who are *x*. *Biometrika*, April, 1903, p. 344.

crossing, *n.*—**Movable-point crossing,** in *railroading*, a track-crossing formed of a pair of split switches placed with the points facing each other where the tracks cross at a small angle. The two switches move together in opposite directions, and any movement opens one track and closes the other. Another form is called a *movable-frog crossing.*—**Reciprocal crossing,** the crossing of the male of one race or species with the female of a second, and of the male of the second with the female of the first. It often happens that a cross is fertile and its reciprocal sterile. The eggs of *Echinus microtuberculatus* are readily fertilized with the sperm of *Strongylocentrotus*



Movable frog Crossing.

a, switch-stand and lever, *b*, *b*, switch rods, *c*, *c*, frog in open position, *d*, *d*, close position.

lividus, but the eggs of *S. lividus* cannot be fertilized with the sperm of *E. microtuberculatus*.

crossing-plate (krôs'ing-plāt), *n.* An iron or steel plate forming a crossing of two lines of track.

crossite (krôs'īt), *n.* [Named after Whitman *Cross* of the United States Geological Survey.] A mineral of the amphibole group, in composition between glaucophane and riebeckite. It is marked by its bright blue color and is frequently observed in the crystalline schists of the Coast Range in California.

cross-lamination (krôs'lam-i-nā"shon), *n.* Minor bedding somewhat oblique to the major stratification-lines in sedimentary rocks; cross-bedding or false bedding.

cross-leaf (krôs'lēf), *n.* The cross-leaved, cauliflorous calabash-tree, *Crescentia alata*, a small tree with horizontal branches and round, gourd-like, hard-shelled fruit the size of a large orange. The leaves usually grow in fascicles of three, of which the middle leaf is trifoliate, composed of a long winged petiole and three leaflets, which together have the shape of a cross. The fruit and leaves are used medicinally in Mexico. The species is of Mexican origin, but was early introduced into Guam and the Philippines. Also called *jicara*.

cross-leaved (krôs'lēvd), *a.* In *bot.*, having four-leaved whorls in the form of a cross.

Crossley reflector. See ★*reflector*.

cross-line (krôs'līn), *n.* Same as ★*cross-cut*, 3.

cross-matched (krôs'machd), *a.* Said of a team of four or more horses in which the horses on either side resemble one another in color, but differ from those of the opposite side.

cross-memory (krôs'mem"ō-ri), *n.* In *psychol.*, cross-education, regarded as a transference of habit or organic memory.

It was noticed by Weber and Fechner that the memory for arm movements is transferred from one side to the other, and that this *cross-memory* is symmetrical and not identical. *Scripture*, New Psychol., p. 190.

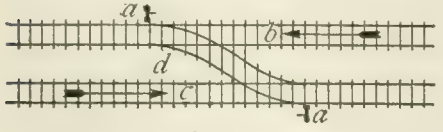
cross-motion (krôs'mō"shon), *n.* Motion of a star at right angles to the line of sight expressed in linear units (miles per second). It can be calculated from the proper motion (seconds of arc per year) when the parallax of the star is known. Sometimes called *thwartwise motion*.

I have classified the stars in this way not only as a whole, but also with reference to their *cross-motion*—motion at right angles to that of the sun.
S. Newcomb, in Pop. Sci. Mo., March, 1901, p. 457.

Crossopodia (kros-ō-pō'di-ä), *n. pl.* [NL., < Gr. κροσσαί, battlements, + ποῦς (ποδ-), a foot.] A name which has been applied to certain serpentine or vermiform markings on Silurian rocks, commonly regarded as the trails of crustaceans, worms, or mollusks.

crossopterine (kros-op'te-rin), *n.* [*Crossopter(ix)* + *-ine*².] An amorphous alkaloid found in the bark of *Crossopterix Kotschyana* Fenzl. of Abyssinia.

crossover, *n.* **2.** In *railroading*, a crossing or connecting line of rails and two switches joining two lines of rails. It is used to enable a



Crossover.

a, switch and switch-stand, *b*, up-line, *c*, down-line; *d*, crossover.

train to cross from one line to another. See *switch*, 2, and ★*ladder*, 3.—**3.** In *elect.*, a place where two wires pass each other without touching. Should they touch a cross would be formed. See *cross*¹, 13.—**4.** Same as *sontag*.—**5.** The crossing of the swiftest current in a river from one side of the channel to the other. Crossovers generally occur between two bends in the course of a stream.

Just below the Pass of Lillo there is a *cross-over* in the [river] current, making a neutral point and forming a shoal. *Encyc. Brit.*, XXVII. 533.

cross-parental (krôs'pā-ren"tal), *a.* Of or pertaining to parentage considered reciprocally, or through the comparison of fathers who are *x* and mothers who are *y* with fathers who are *y* and mothers who are *x*.

I determined *C* from the twelve series and found for its mean value ·5585. This is within two per cent. of the value of *C* found for the *cross-parental* relationships, and I think the agreement is as close as we could hope for.
Biometrika, Nov., 1903, p. 392.

cross-plow (krôs'plou), *v. t.* To plow at right angles with a former plowing.

cross-raise (krôs'rāz), *v. t.*; pret. and pp. *cross-raised*, ppr. *cross-raising*. To raise (the nap of cloth) across its width.

cross-reel (krôs'rēl), *v. t.* To wind (yarn) on a reel with a reciprocating motion. *Nasmith*, Cotton Spinning, p. 362.

cross-reference (krôs'ref"ėr-ens), *v. t.*; pret. and pp. *cross-referenced*, ppr. *cross-referencing*. To relegate or refer by a cross-reference; provide with cross-references.

cross-rib (krôs'rib), *n.* In a side of beef, one of the sternal ribs which run crosswise to the body.—**Cross-rib steak.** See ★*steak*.

cross-road, *n.* **4.** Same as ★*cross-heading*, 1 (*a*) and (*b*).

cross-section, *n.* **2.** The area of a section, of a bar, tube, rod, or other body, taken at right angles to its axis. *C. Hering*, Conversion Tables, p. 101.—**Cross-section paper.** See ★*paper*. **Cross-section units,** units of area, such as the circular mil and the circular millimeter, used for the convenient expression of the areas of cross-section of bars, rods, and wires. Such units are so defined as to avoid the use in computation of the factor π; the circular millimeter, for example, is the area of a circle whose diameter is one millimeter. Also called *circular units*.

cross-sectional (krôs'sek"shon-al), *a.* Of or pertaining to a cross-section or that section of a body (specifically of a bar, rod, or wire) which is normal to the major axis of the body. *H. Du Bois*, The Magnetic Circuit, p. 60.—**Curve of cross-sectional areas.** See ★*curves of ship calculations*.

cross-septation (krôs'sep-tā"shon), *n.* The division of a hypha or other cell by means of a transverse septum.

cross-sleeper (krôs'slē"pèr), *n.* In *railroading*, a long tie, or one longer than those used in an ordinary track, employed to support more than two rails, as at a switch.

cross-slide (krôs'slīd), *n.* That part of a machine on which either the work or the tool-carriage travels across the principal direction of motion.

cross-spring (krôs'spring), *n.* In *carriage-making*, a half-elliptic spring which extends across the body, the ends being secured by toggle-joints to the ends of the side-springs.

cross-stitch (krôs'stich), *v. t.* To sew or embroider with a cross-stitch; sew or fasten with cross-stitches.

cross-straps (krôs'straps), *n. pl.* Ornamental straps which cross one another at the end of the body of a carriage, the upper ends being secured to the body and the lower to the pump-handles.

cross-stratification (krôs'strat-i-fi-kā"shon), *n.* Cross-bedding or false bedding. See *false*.

cross-stratified (krôs'strat"i-fīd), *a.* False-bedded. See *false bedding*, under *false*.

cross-stump (krôs'stump), *n.* In *cricket*, a stump 2 feet long, formerly laid like a bail across the two wickets. *Hutchinson*, Cricket, p. 31. [Obsolete.]

cross-talk (krôs'tâk), *n.* Talk from another telephone circuit that interferes with or intrudes into one's own communication.

crosstoes (krôs'tōz), *n.* The bird's-foot trefoil, *Lotus corniculatus*: so called from the digitate clusters of pods which twist after opening.

cross-town (krôs'toun), *a.* That runs across the town: as, a *cross-town* line of street-cars; a *cross-town* car.

cross-turret (krôs'tur"et), *n.* A turret in a turret-lathe the axis of which is horizontal and lies across the bed, instead of being vertical, as in most turret-lathes.

cross-vault (krôs'vâlt), *n.* A groined vault, usually one in which the two cylindrical surfaces which meet one another are of the same width and height, so that the plan would form a cross of the usual type.

Cross-warp weave. See ★*weave*¹.

cross-weed (krôs'wēd), *n.* A plant of the genus *Diplotaxis* of the mustard family, especially *D. muralis* and *D. tenuifolia*, the cruciferous character of whose flowers is more than usually marked. See *tenuifolia*, 1, and *wall-rocket*, under *rocket*, 2. Both species are adventive in the United States. Also known as *sand-rocket*.

cross-wind (krôs'wind), *n.* In *archery*, a wind blowing across the range.

cross-wind (krôs'wīnd), *v.* **I.** *trans.* To wind (yarn) on a reel in such a manner that the windings cross at an acute angle with the axis. *Nasmith*, Cotton Spinning, p. 360.

II. *intrans.* To twist; depart from a plane: said of a plank or platform which twists out of its plane.

cross-wood (krôs'wud), *n.* A West Indian shrub of the family *Theophrastaceæ*, *Jaquinia aculeata*: so called from the fact that its branches are produced in whorls of four, thus forming a cross.

crotaconic (krō-ta-kon'ik), *a.* [*crot(on)* + *aconic* (?).] Noting a crystalline, easily soluble acid, $CH_3CH:C(CO_2H)_2$ (?), obtained by the saponification of cyancrotonic acid: as, *crotaconic* acid (which melts at 119° C.).

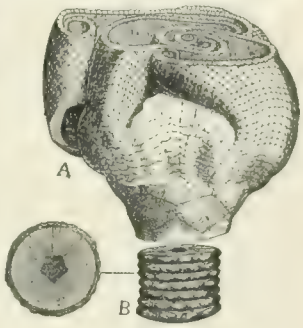
crotalic (krō-tal'ik), *a.* [*Crotalus* + *-ic*.] Of or pertaining to the genus *Crotalus*, or to a poison derived from snakes of that genus.

crotalin (krō'ta-lin), *n.* [*Crotalus* + *-in*².] An albuminous poison found in venom derived from snakes of the genus *Crotalus*.

crotalism (krō'ta-lizm), *n.* [NL. *Crotal(aria)* + *-ism*.] A disease of horses, known chiefly in the valley of the Missouri river, due to eating the rattlebox, *Crotalaria sagittalis*. Also called *bottom disease*, because it occurs on bottom-land.

The diseases resulting from plant poisoning known as locoism and *crotalism*, which prevail in some parts of the West and Northwest, are caused, respectively, by the continued eating in the field of some one of the several locoweeds (Astragalus and Aragallus species) and by the eating of the rattleweed or rattlebox (Crotalaria sagittalis) either in the field or in hay.
Yearbook U. S. Dept. Agr., 1900, p. 308.

Crotalocrinus (krō-ta-lok'ri-nus), *n.* [NL., < Gr. κρόταλον, a rattle, + κρίνον, a lily (see *crinoid*).] A genus of singular camerate crinoids in which the branches of the first arms rapidly dichotomize, but remain united so that each arm forms a broad infolded net. It occurs in the Silurian rocks.



Crotalocrinus pulcher, Hisinger. Silurian; Gottland.

A, crown with folded arms; *B*, portion of stem. (From Zittel's "Palæontology.")

crotaloid (krō'ta-loid), *a.* [*Crotalus* + *-oid*.] Of or pertaining to a rattlesnake; having the characters of a rattlesnake.

crotaphion (krō-taf'i-on), *n.* [NL., < Gr. κροτάφιον, neut. of κροτάφιος, of the temples, < κρόταφος, temple.] In *craniom.*, the posterior terminal point of the suture between the parietal and sphenoid bones.

crotaphite, *a.*—**Crotaphite fossa** or **depression,** the groove on the posterior portion and superior face of a bird's skull in which the temporal muscles lie. The size of this is an indication of the power of the mandible, and it is large in fish-eating birds.

crotaphitic (krō-ta-fit'ik), *a.* [*crotaphite* + *-ic*.] In *anat.*, same as *crotaphite*. Also *crotaphytic*.

The morphogenic action of *crotaphytic* muscles on the skull and brain of the Carnivora and Primates, by M. R. Anthony. *Nature*, Dec. 3, 1903, p. 120.

crotaphyte, *n.* An erroneous spelling of *crotaphite*.

crotch (kroch), *v. t.* In *logging*, to cut notches on opposite sides of (a log) near the end, into which dogs are fastened.

crotch-chain (kroch'chān), *n.* A tackle for loading logs on sleds, cars, or skidways by cross-hauling.

crotchet, *n.* **11.** In *zoöl.*, one of the slightly curved and notched bristles or chætæ common among *Oligochæta*, and serving probably as locomotor organs.—**12.** Same as *crocket*.

crotching (kroch'ing), *n.* In *billiards*, a play analogous to the anchor (see ★*anchored*) in balk-line billiards, with the exception that, as the two object-balls lie transversely in a corner of the table, less accuracy of touch and far less skill are required to keep them there. The same situation can occur in the jaw of a pocket-table, but is more difficult to maintain, unless balls are larger and pockets smaller than the standard. Crotching beyond three successive shots was barred as early as 1862, and jawing in 1866, but both in America and in England expert professionals have since sometimes resorted to one or the other for their high runs.

crotch-tongue (kroch'tung), *n.* Two pieces of wood, in the form of a V, joining the front and rear sleds of a logging-sled.

crotin (kro' tin), *n.* [*Croton* + *-in*².] A highly poisonous toxalbumin contained in the seed of *Croton Tiglium*.

Crotonic aldehyde. See ★*aldehyde*.

crotonoleic (krō″ton-ō-lē'ik), *a.* [*Croton* + L. *oleum*, oil.] Noting a pale-yellow compound existing, partly as free acid and partly as glyceride, in croton-oil. It is a drastic purgative.

crounotherapy (krō-nō-ther'a-pi), *n.* [Reg. ★*crunotherapy*, < Gr. κρουνός, a spring, + θεραπεία, medical treatment.] Treatment of disease by a course of drinking or bathing, aided by a special dietary and exercises, at a mineral-spring resort. *Lancet*, July 11, 1903, p. 104.

croup¹, *n.* **Catarrhal croup.** Same as *false croup*. - **Diphtheritic croup,** diphtheria of the larynx. - **Fibrinous croup,** true croup.—**Intestinal croup,** croupous inflammation of the mucous membrane of the intestine.—**Pharyngeal croup,** inflammation of the mucous membrane of the pharynx attended with a fibrinous exudation.—**Pseudomembranous croup,** true croup.—**Uterine croup,** croupous inflammation of the lining membrane of the uterus.

croup¹ (kröp), *v. i.* [Also *croop*, *crupe*, prob. imitative, like *roup*, etc. See *croup*¹, *n.*] To cry out; cry hoarsely; specifically, to cough hoarsely, as in croup. [Provincial (Sc.) or colloq.]

crouper-bush (krö'per-bůsh), *n.* The button-bush. *Cephalanthus occidentalis*.

croup-kettle (kröp'ket″l), *n.* A kettle under which a low flame is kept lighted so that there may be a continuous escape of vapor: used in giving vapor inhalations in cases of laryngitis, or to keep the atmosphere of the room humid.

croustade (krös-täd'), *n.* [F., < It. *crostata*: see *crustate*, *custard*.] A cup-like form of bread toasted, fried in hot fat, or dipped in melted butter and browned in the oven; also, a hollow mold of rice sprinkled with bread-crumbs and fried in deep fat, or of puff-paste filled with creamed meat, fish, etc.

crout (krout), *n.* Same as *sauer-kraut*.

croûte au pot (kröt ō pō'). [F., 'crust in the pot': see *crust*.] A clear soup to which small pieces of toast, or of stale bread, have been added just before serving.

croûton (krö-toṅ'), *n.* [F., < *croûte*, crust.] A small piece of bread dipped in melted butter and toasted in the oven, or fried in hot butter or fat: used in soups and to garnish various types of stewed dishes.

crow², *n.* **2.** (*b*) In the West Indies, particularly in Jamaica, the black vulture, *Catharista atrata*.—**Blue-wattled crow,** in New Zealand, a name given to *Glaucopsis wilsoni*, a bird of the crow family.

crow-bird (krō'bêrd), *n.* The purple grackle, *Quiscalus quiscula*: so called in some parts of the United States.

crowd¹, *v. t.* **To crowd off,** to work (a ship) off from the land.

crowd¹, *n.*—**Crowd of sail,** a press of canvas; all possible sail set.

crowd-poison (kroud'poi″zn), *n.* Volatile excrementitious matters contained in the respired air, which by concentration become dangerous to health in crowded places. *G. H. Napheys*, Prevention and Cure of Disease, I. 197.

crowd-poisoning (kroud' poi″zn-ing), *n.* A morbid state induced by the inhalation of waste products given off by the breath and skin of a number of persons confined in an unventilated space; ochlesis.

The symptoms arising from indigestion, from *crowd-poisoning*, from sewer-gas-poisoning, from ptomaine-poisoning (auto-infection), etc., are often ascribed to "malaria." *Pop. Sci. Mo.*, Feb., 1901, p. 371.

crow-duck (krō'duk), *n.* See *Fulica*.

crowd-weed (kroud'wēd), *n.* **1.** The field-cress, *Lepidium campestre*.—**2.** The charlock or wild mustard, *Brassica arvensis*.

crow-eater (krō'ē″têr), *n.* One who will do anything rather than work. [Colloq., Australia.]

crowfoot, *n.* **2.** The name is applied to many plants with pedately or palmately divided leaves, chiefly of the genus *Ranunculus*, but also of other genera, especially the club-mosses, *Lycopodium inundatum*, *L. obscurum*, and *L. complanatum*. See *bear* ★*club-moss*, ★*Christmas green*, and *Lycopodium*.—**American crowfoot,** the spotted crane's-bill, *Geranium maculatum*. **Celery-leaved crowfoot,** *Ranunculus sceleratus*. Also called *water-celery* (which see).—**Corn crowfoot,** *Ranunculus arvensis*, common in the Old World and sparingly found in the United States. See *hungerweed* and *starve-acre*. **Cursed crowfoot.** Same as *celery-leaved* ★*crowfoot*, translating the specific name.—**Ditch-crowfoot, marsh-crowfoot.** Same as *celery-leaved* ★*crowfoot*. **Musk-crowfoot,** *Adoxa Moschatellina*, better known as *hollow-root*. Also called *musk-root* and *moschatel*. See *Adoxa*. - **Tuberous crowfoot.** Same as *musk*-★*crowfoot*. - **Water-crowfoot.** See *water-crowfoot*.—**Wood-crowfoot.** (*a*) The goldilocks, *Ranunculus auricomus*. See *goldilocks* and *Ranunculus*. (*b*) The wind-flower, *Anemone nemorosa*.

crowfoot-grass (krō'fůt-gras), *n.* **1.** A plant, *Dactyloctenium Ægyptiacum*, distinguished as *little crowfoot*, a low creeping grass of warm climates, common in the southern United States. It is a weed of cultivated grounds, but sometimes cut for hay. The name, as with other crowfoot-grasses, refers to the digitate inflorescence.—**2.** The similar but larger *Eleusine Indica*, also called *goose-grass*, *yard-grass*, *wire-grass*, etc. See *wire-grass*, 2.—**Bearded crowfoot-grass, feather crowfoot-grass,** a grass of the genus *Chloris*. See ★*finger-grass*, 3.—**Texas crowfoot-grass,** *Diplachne dubia*, a promising hay-grass somewhat of the crowfoot habit.

crow-hop (krō'hop), *n.* The action of a horse in endeavoring to throw a rider by arching the body, holding the legs stiff, and bucking vigorously. [Local, U. S.]

All bronchos are different individually, but the ways they try to throw their riders may be classed under three heads. The first is known as the *crow-hop*. The rider gets on a wild horse and immediately the steed bunches itself up like a goat, holds itself stiff in limb and body, and bucks promiscuously. It jars the rider, but the horse that only does this is considered easy and tame. *Wide World Mag.*, April, 1903, p. 548.

crow-line (krō'lin), *n.* The straight line of a crow's flight. See *crow-flight*.

crown. **I.** *n.* **7.** (*f*) In *mech.*: (2) The amount of curvature of a surface or line. In pulleys for flat belts the face is made of larger diameter in the middle to check a tendency of the belt to work off to one side or the other by greater stretching on the edges. (*g*) In *arch.*: (2) An ornamental top of a tower used in late English Gothic. It resembles four or more flying buttresses meeting at their highest point. (*k*) In *zool.*: (1) The protuberance on the head of a whale, particularly of a right whale, surrounding the blow-holes. [Rare.] (2) Same as *crown-antler*. [Rare.] (3) Same as *coronet*¹, 6 (in reference to the bones of a horse's foot). (4) In the terminology of the *Crinoidea*, the calyx without the stem. (*l*) In *ship-building*, the arching athwartship or camber of a deck or deck-beam; also, the top or central part of such an arched deck.

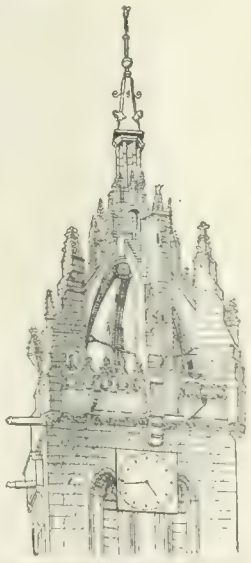
These spaces include the internal volume of the ship, below the deck forming the *crown* of the engine and boiler-rooms. *White*, Manual of Naval Arch., p. 61.

(*m*) The horizontal cap-piece or collar of a set of mine timbers. Also called *crown-tree*. [Scotch.] (*n*) That part of the bridle of a harness which extends over the horse's head and to which the cheeks are attached. (*o*) In *agri.*, the middle line of a ridge of land, formed by two furrow-slices laid back to back. [Great Britain.] (*p*) In *bell-founding*, the top of a bell, of which the cannons are parts and to which the tongue is attached within. Also called *pallet*. (*q*) Same as ★*howell*.

12. (*b*) The summit of a root, as of a beet or turnip, the leaf-bases forming a circle. (*c*) The leaves and living branches of a tree. In forest measurements the use of the term varies with the kind of tree and the purpose of the measurements. For example, *crown* may be used to designate either the whole leaf-and-branch system or that portion of it above a dead or a growing branch of a given size. In the description of trees the crown is said to be long or short, broad or narrow, compact or ragged, conical or flat.

16. An abbreviation of *crown-glass*.

Experiments of the eminent Jena glass-makers with phosphate *crowns* and borate flints are optically highly successful. *Encyc. Brit.*, XXV. 41.



Crown Imperial, Church of St. Giles, Edinburgh.

Brabant crown, a Belgian silver coin struck under Austrian domination, weighing 436 grains, .872 fine. **Crown forest.** See *national* ★*forest*. **Crown imperial,** in late English Gothic architecture, a decorative finish of a tower produced by carrying up four curved ribs upon which a small spire is set. The term was invented in the nineteenth century to describe a thing once thought very attractive. The Church of St. Giles at Edinburgh is the best known example, though there are several others, among them the Church of St. Dunstan's in the East, in the City of London. **Gothic crown,** an English silver coin of Queen Victoria, struck as a pattern in 1846, 1847, and 1853.—**Iron crown of Lombardy,** a thin ring of iron, said to have been forged from a nail of the true cross, overlaid with gold and precious stones. It is supposed to have been made for Agilulf, king of the Longobards, in 591, and was worn by Charlemagne and all the medieval emperors who were also kings of Lombardy. Napoleon I. placed it upon his head. It is now in the cathedral of Monza, in Italy.—**Order of the crown.** (*a*) *Order of the Iron Crown of Italy*. See *iron*.—**Order of the Oak Crown,** an order for civil and military merit, conferred by Luxemburg and founded in 1841. **Order of Rue Crown,** a military order of Saxony, founded in 1807.—**Petition crown,** a rare coin of Charles II., struck in 1663 with a petition of the mint-master to the king.—**Triple crown.** (*a*) and (*b*). See *triple*. (*c*) See ★*triple*.

II. *a.*—**Crown government,** government by the crown, as in a crown colony. **Crown grant,** a grant from the crown.—**Crown prosecutor.** See ★*prosecutor*. —**Crown side.** Same as *Crown Office* (which see, under *crown*).—**Crown witness,** in *Eng. law*, a witness for the prosecution in a criminal action.—**Master of the Crown Office,** the prosecuting officer in the criminal department of the Court of King's Bench, who prosecutes upon the relation of some private person or informer, the crown being the nominal prosecutor.

crown, *v. t.* **10.** To give a crown or bulge to: as, to *crown* the surface of a ship's deck.—**11.** To cut off (the crown), as of a sugar-beet.

crownal (krou'nal), *a.* and *n.* **I.** *a.* Pertaining to or resembling a crown.

II. *n.* A coronet, chaplet, or garland; a coronal.

crown-beam (kroun'bēm), *n.* A cross-beam.

crown-borer (kroun' bōr-êr), *n.*—**Blackberry crown-borer,** the larva of an American sesiid moth, *Bembecia marginata*, common in the northern United States, which burrows into canes of the blackberry at the surface of the ground.

Blackberry Crown-borer (*Bembecia marginata*). *a*, male; *b*, female.

crown-gall (kroun'gal), *n.* A disease which attacks the roots of certain plants, especially the almond, blackberry, peach, and raspberry. It is characterized by the formation of hard, rough, irregular-shaped, gall-like bodies on the roots and sometimes on the stems of the plant. The cause is somewhat doubtful. Toumey attributed it to a myxomycete which he named *Dendrophagus globosus*.

crown-gear (kroun'gēr), *n.* A crown-wheel; a gear having teeth cut in the edge of an annular ring, or as if in the end of a hollow cylinder.

crown-grafting, *n.* **2.** A kind of grafting in which the scion is inserted at the crown of the plant (where it emerges from the ground).

crowning, *n.* **6.** In *agri.*, the cutting off of the crown, as of sugar-beets. See ★*crown*, 12 (*b*).

crown-moth (kroun'môth), *n.* A moth whose larva attacks the crowns of plants.—**Strawberry crown-moth,** an American sesiid moth, *Sesia rutilans*, whose larva bores in the crown of strawberry, raspberry, and blackberry plants on the Pacific coast.

crown-of-the-field (kroun″ uv-the-fēld'), *n.* The corn-cockle, *Agrostemma Githago*.

crown-piece, *n.* **3.** The crown-sheet or top plate of the fire-box of an internally fired boiler.

crown-plate (kroun'plāt), *n.* **1.** The top plate of the fire-box of an internally fired boiler.—**2.** In *carp.*, the horizontal member which finishes a frame at the top. In a wall, as of a framed house, the crown-plate may receive the timbers of the attic floor, or the rafters of the roof, or both. It is the top chord of a frame, as the *sill* is the bottom chord.

crown-princess (kroun'prin-ses), *n.* The wife of a crown-prince: as, the *crown-princess* of Prussia. [Commonly as two words.]

crown-roast (kroun'rōst), *n.* The ribs of lamb as a fancy roast with the upper part of the bones trimmed and the whole turned on itself and so fastened that the center is hollow.

crown-tree (kroun'trē), *n.* **1.** The horizontal timber of a timber framework, which rests on

top of the uprights and on which rest the rafters or, in some cases, the joists.—**2.** Same as ★*crown*, 7 (*m*).

crown-tuber (kroun'tū″bẻr), *n.* A tuber the upper part of which is stem or crown, the lower part being root, as beet, carrot, radish. *L. H. Bailey.*

crown-work, *n.* **2.** In *dentistry*, the attachment of an artificial crown of gold or porcelain to the root of a tooth.

crow-pheasant (kro'fez″ạnt), *n.* A large East Indian ground-cuckoo, *Centropus rufipennis.*

crow-poison (krō'poi″zn), *n.* **1.** Same as *fly-poison*, 2.—**2.** A related plant, *Tracyanthus angustifolius*, found in low grounds from North Carolina to Florida.

crow-purse (krō'pẻrs), *n.* A popular name of the egg-case of the skate, a black or dark-brown oblong case having a long process at each corner and a texture like that of leather.

crow's-foot, *n.* **5.** *pl.* The angular lines or arrow-points (made thus: < >) which are placed at the extremities of dimension-lines on a drawing to indicate between what points or planes the dimension is given.

crow's-nest, *n.* **2.** See ★*Cycadeoidea.*

crowstone, *n.* **3.** A name once commonly applied in Worcestershire, England, to fossil oyster-shells of the genus *Gryphæa* from the Jurassic rocks.

crow-twill (krō'twil), *n.* A four-harness twill-weave, regular or irregular. See ★*cassimere-twill.*

croydon (kroi'dọn), *n.* [From *Croydon* in Surrey.] A kind of two-wheeled carriage of the gig class, introduced about 1850, originally of wickerwork but afterward made of wood. *N. E. D.*

crozer (krō'zẻr), *n.* [*croze* + *-er*[1].] In *barrel-making*, a machine for cutting the croze in barrel-staves or in the assembled package of staves forming a barrel; a crozing-machine.

crozier, *n.* **4.** In *bot.*, the circinate young frond of a fern. Also *crozier-head*, *crozier-bud*. *Sir C. Lyell*, Elem. of Geol., p. 230. [Rare.]—**5.** The flat, spirally coiled shell of the cephalopodous mollusk *Spirula.*

crozier-bud (krō'zhẻr-bud), *n.* Same as ★*crozier*, 4.

crozier-head (krō'zhẻr-hed), *n.* Same as ★*crozier*. 4.

crozing-machine (krō'zing-mạ-shēn″), *n.* See ★*crozer.*

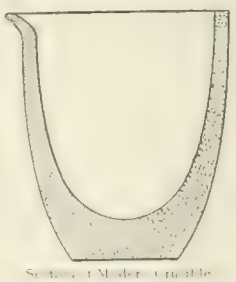
C. R. P. An abbreviation of *Calendar of the Patent Rolls.*

cruciade (krō-si-ād'), *n.* [F. *cruciade*, < It. *crociata*, ML. *cruciata*: see *crusade*[1].] **1.** A crusade.—**2.** A papal bull enjoining and authorizing a crusade, or granting indulgences to those who undertake a crusade.

Crucial bandage. Same as *T-bandage.*

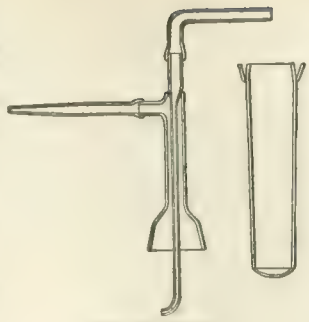
crucian[2] (krō'shian), *a.* [L. *Crux* (*Cruci-*), a constellation, 'the Cross,' + *-an.*] Noting those stars which have a spectrum of the type of that of β Crucis, of which the most extraordinary character is the presence of many oxygen lines. Hydrogen, both series of helium lines, nitrogen, and carbon are predominant. Protomagnesium, protocalcium, both series of silicon lines, and a line due to an unknown body, λ=4649.2, are present. The protometallic lines are relatively thick, the hydrogen lines relatively thin.

crucible, *n.*, **1.** The crucibles used in steel-making will carry 200 pounds, and are made of plumbago and fire-clay. The crucible process for making steel is specially adapted for high-grade products with a high percentage of carbon, and for uses in which desirable properties are conferred by alloying the iron with other metallic elements such as chromium, tungsten, manganese, titanium, and the like.—**Caldwell's crucible,** a porcelain crucible with a movable perforated plate inserted to form the bottom. **Gooch's crucible,** a platinum or porcelain crucible with a fixed or movable perforated bottom. A layer of fine asbestos spread over the bottom inside the crucible serves to collect any precipitate in a liquid filtered through it, usually by suction. The precipitate so collected is dried or ignited, and weighed with the crucible.—**Reduction crucible,** in *chem.*, a porcelain crucible with a perforated cover and inlet-tube of the same material, by means of which a metallic oxid may be heated in a stream of hydrogen gas.



Section of Meidert Crucible.

—**Tubulated crucible,** a platinum crucible with a tubulated cover, used in iron-ore analysis.



Tubulated Crucible.

crucible-earth (krō'si-bl-ẻrth), *n.* Clay suitable for making fire-crucibles.

crucible-furnace (krō'si-bl-fẻr″nās), *n.* See ★*furnace.*

Crucibulum (krō-sib'ụ-lum), *n.* [NL. (L. R. and Ch. Tulasne, 1844), < ML. *crucibulum*, a pot: see *crucible.*] A small genus of gasteromycetous fungi of the family *Nidulariaceæ.*

Crucibulum vulgare.

A, group of fruiting bodies in the successive stages of development; *B*, longitudinal section through a nearly mature but still closed fruiting body. (From Engler and Prantl's "Pflanzenfamilien.")

The peridium is yellowish and cup-shaped, and has the top at first covered with a membrane which ruptures at maturity and exposes the seed-like sporangioles which are attached to the peridium by thread-like processes called funiculi. *C. vulgare* is a common and widely distributed species, occurring on decaying wood, old rope, and matting.

crucificial (krō-si-fish'ạl), *a.* [Improp. formed from *crucifix*, with termination conformed to *sacrificial*, etc.] Of or pertaining to a crucifix.

He [the archbishop] stopped and blessed the people, making *crucificial* signs on the stairs.
Thackeray, Letters, Feb., 1849, p. 42.

Crucifixion attitude. See ★*attitude.*

cruciformly (krō'si-fȯrm-li), *adv.* In the form of a cross.

crude, *a.*—**Crude oil,** natural mineral oil, "neither steamed nor treated, free from water, sediment, or any other adulteration, of the gravity of 43° to 48° B." *New York Oil Exchange*, Rule iv., quoted in *Dialect Notes*, II. vi.

cruentation (krō-en-tā'shọn), *n.* [L. *cruentatio(n-)*, < *cruentare*, stain with blood, < *cruentus*, bloody.] Passive oozing of blood-tinged fluid from the cut surface of raw flesh. *Syd. Soc. Lex.*

cruise[1], *v i.* **2.** To survey and estimate the amount and value of standing timber.

cruiser, *n.* **2.** In *forestry*, one who cruises or surveys and estimates the amount and value of standing timber.—**Armored cruiser,** a type of war-ship intermediate between a battle-ship and a protected cruiser. The distinction between an armored and a protected cruiser is that the water-line of the latter has no external armor-protection, though both have protective decks. The distinction between an armored cruiser and a battle-ship is that the former has higher speed, lighter guns, and thinner armor, though the two types tend to merge. See ★*battle-ship.*—**Auxiliary cruiser,** a merchant steamer converted into a cruiser by arming it with guns and putting it into commission as a war-vessel. **Belted cruiser,** a type of war-ship intermediate between a battle-ship and a cruiser, having comparatively high speed and protected by a partial armor belt of moderate thickness. The Spanish ships in the battle of Santiago (1898) were of this type. The belted cruiser may be considered the forerunner of the armored ★cruiser (which see).—**Protected cruiser,** a cruiser having a protective deck, but no vertical side armor except local protection for the guns.—**Scout cruiser,** a recent type of cruiser in which battery and protection have been sacrificed to a large extent in order to secure extreme speed combined with good sea-going qualities. These vessels are from 2,000 to 4,000 tons displacement and from 24 to 26 knots speed, and in some cases have steam-turbine propelling machinery.—**Torpedo cruiser** a small cruiser having a powerful torpedo armament. **Unprotected cruiser,** a cruiser which has no armor or protective deck. These vessels are usually of small size and are practically obsolete.

crum, *n.* and *v.* A simplified spelling of *crumb*[1].

crummy, *a.* **3.** Plump; buxom: as, a *crummy* lass. [Eng. slang.]

Crumpsall yellow. See ★*yellow.*

crupper, *n.* **3.** *Naut.*, the train-tackle bolt in a gun-carriage. **Crupper bolt.** Same as ★*crupper*, 3. **Crupper chain** (*naut.*), an old-fashioned device for securing the heel of the jib-boom to the bowsprit; it consists of a length of small chain passing around the two spars.—**Crupper loop,** a metal loop attached to a saddle-tree or pad frame for securing the crupper. **Crupper notch** (*naut.*), the scone in the head of the jib-boom for receiving the crupper chain.

crural, *a.* **5.** Of or pertaining to the crura. See ★*crus.* **Crural neuralgia.** See ★*neuralgia.*

cruralium (krō-ra'li-um), *n.*; pl. *cruralia* (-ä). [NL., < L. *cruralis*: see *crural.*] In the *Brachiopoda*, the calcareous supports for the coiled internal arms when formed, by the union of the crura (see ★*crus*), into a single apparatus: contrasted with ★*spiralium*, which is applied to the coiled supports.

crurin (krō'rin), *n.* [L. *crus* (*crur-*), leg, + *-in*[2].] A powder, quinoline-bismuth-sulphocyanate, used as a dressing for various forms of ulcers.

cruriped (krō'ri-ped), *n.* [L. *crus* (*crur-*), leg, + *pes* (*ped-*), foot.] One of the ambulatory appendages following the chelipeds or great claws on the cephalothorax, especially of crabs and lobsters. *J. E. Ives.*

crus, *n.* **2.** *pl.* The calcareous brachial supports in the *Brachiopoda*, as in *Pentamerus* and *Rhynchonella*, where they are a pair of short discrete, slightly curved lamellæ. Also called *crural plates.*—**Auricular crura,** in certain pelecypod mollusks, a hinge-structure consisting of two ridges which diverge within and below the beaks. This structure, in specialized forms, develops into concentric teeth and sockets which cannot be separated without breaking, as in *Spondylus.*

crush, *n.* **3.** In Australia, a funnel-shaped, fenced lane or passageway for cattle.—**4.** In *coal-mining*: (*a*) A general settlement of the strata above a coal-mine, due to failure of the pillars: generally accompanied by numerous local falls of roof-rocks in the workings. (*b*) A species of fault in coal.—**5.** The amount of cotton-seed crushed for oil during a given season: as, a large *crush.*

crush-breccia (krush'brech″i-ä), *n.* A breccia produced by the shattering of rocks along a fault. See ★*fault-breccia.*

crush-conglomerate (krush'kọn-glom″ẹ-rāt), *n.* See ★*conglomerate.*

crusher, *n.* **3.** Specifically, a crushing-machine. The most common type has two converging jaws operated by powerful mechanism, between which the mineral is crushed by pressure. To this type belong the Blake and Dodge crushers. (See *Blake* ★*crusher.*) Another more recent type has a gyrating swinging cone in a hopper-shaped receptacle, as in the Gates and McCully breakers. Crushers are used to prepare stone for road-ballast, for concrete, and for other engineering purposes, and in mining to prepare the ore for finer crushing by rolls, stamps, etc.

4. A mill for grinding sugar-beets, potatoes, and other roots to reduce them to a pulp for use in the manufacture of sugar or starch.—**5.** In *elect.*, a device for reducing the apparent fall of potential in the ground return-circuit of an electric system. The function of a crusher in such a circuit is similar to that of a booster in a system with insulated return-circuit. Both terms are of slang origin, but have acquired recognition on account of the great practical importance of the devices thus designated.—**Blake crusher,** a machine for crushing ore or other hard material in coarse lumps. It is provided with two jaws, one stationary and one swinging. The machine moves at the rate of about 250 revolutions a minute, the swinging jaw advancing about half an inch toward the stationary jaw at each revolution. The size of the fragments is limited by the distance between the jaws at the bottom, which can be regulated at will. The capacity of a machine whose dimensions at the mouth are 20 inches by 10 inches is about 300 tons of ordinary rock per day of 24 hours. See *stone-breaker*, with cut.

Crushing strain, the strain which causes a piece of material to fail, or tend to fail, by compression. Most brittle materials, such as cement, stone, and cast-iron, fail by shearing at an angle, while the more ductile materials, such as wrought-iron and soft brass, fail by bulging.—**Crushing strength,** the strength of a substance measured in terms of the load necessary to crush a test-piece of it one cubic centimeter (or one cubic inch) in size.

crushing-rolls (krush'ing-rōlz), *n. pl.* A machine consisting of two heavy rolls between which ore, coal, or other mineral is drawn and crushed. Sometimes the rolls are toothed or ribbed, but for ore their surface is generally smooth.

crush-line (krush'lin), *n.* In *geol.*, a line along which rocks, under great compression, yield, usually with the production of schistosity.

Such, too, has been the compression that in some cases lykes of 50 or 60 yards in breadth are reduced where one of these thrusts or *crush-lines* crosses them obliquely to a thickness of no more than four feet.
Geikie, Text-book of Geol., p. 888

crush-movement (krush'möv″ment), *n.* In *geol.*, compression, thrust, or lateral movement tending to develop shattered zones.

The greater part, if not actually of Bala age, seem to have been intruded before the post-Bala *crush-movements.* *Nature*, June 16, 1904, p. 166.

crush-plane (krush'plān), *n.* In *geol.*, a plane defining zones of shattering which result from lateral thrust.

The previous investigators of Fassa Valley failed to recognise the presence of the innumerable *crush-planes* with extremely low hade, and the branch-connection of many of them with leading cross-faults, and consequently overlooked the correlation of the igneous invasions with pre-existent deformational structures.
Annals and Mag. Nat. Hist., Jan., 1904, p. 79.

crush-zone (krush'zōn), *n.* In *geol.*, a zone of faulting and brecciation in rocks.

Throughout the Tertiary crust-movements in the Alps, this passage-zone had been the great *crush-zone* of the district. *Nature*, Feb. 12, 1903, p. 359.

crust, *n.*—**Flotation crust,** the thin solid crust of the earth that has been thought to rest upon a liquid mass beneath. Earlier theorists were accustomed to explain changes of level and many other adjustments by this floating of the crust. *Dana*, Manual of Geol., p. 378. —**In crust,** in *currying*, said of a skin which has been tanned and colored but not glazed or entirely finished. *Flemming*, Practical Tanning, p. 312.—**Weathered crust,** a film or zone on the outside of a stone which shows marked alteration or decay. Such a crust is not always more fragile than the unchanged interior, and may form a hard shell or successive shells.

They show no *weathered crusts*, and the matrix of finer-grained materials is similarly unaltered.
J. Geikie, The Great Ice Age, p. 23.

crustaceal (krus-tā'shiạl), *a.* Same as *crustacean.*

crustaceoid (krus-tā'sē-oid), *a.* [*crustaceous* + *-oid.*] Resembling a crustacean. *Dana.*

crust-creep (krust'krēp), *n.* See ★*creep.*

crust-fold (krust'fōld), *n.* In *geol.*, a fold in the earth's crust.

'The great Rocky Mountain-Andes fold, . . . the longest and most continuous *crust-fold* of the present day.'
Geog Jour. (R. G. S.), XV. 48.

crust-fracture (krust'frak″tūr), *n.* An extended fracture in the earth's crust.

It may probably be regarded as true of any wide region upheaved by a folding-movement and afterwards submerged, that old crust-forms and *crust-fractures*, especially such as allow occasional intrusion and outlet of volcanic material, are determining factors in the distribution of the subsequent deposits.
Geog. Jour. (R. G. S.), XVI. 460.

crustification (krus″ti-fi-kā'shọn), *n.* The forming of a crust or coating or band, by chemical precipitation, in a cavity from mineral-bearing waters.

As a general rule, however, *crustification* is a characteristic feature of cavity-filling.
F. Posepny, Trans. Amer. Inst. Min. Engin., 1893, p. 207.

crust-movement (krust'möv″ment), *n.* An extensive movement of the earth's crust.

There are two primary and permanent kinds of *crust-movements*, namely, (*a*) those which give rise to those greatest inequalities of the Earth's surface—oceanic basins and continental surfaces; and (*b*) those which by interior contraction determine mountains of folded structure.
Geog. Jour. (R. G. S.), IX. 669.

crust-strain (krust'strān), *n.* A strain in the earth's crust. *Geog. Jour.* (R. G. S.), XVI. 457.

crust-stress (krust'stres), *n.* Local strains and pressure within the rocks of the earth's crust.

During the geological periods when the fault-vent continued intermittently active, the form of the sill-complex was capable of being re-moulded periodically in harmony with the localised *crust-stresses.*
Nature, Sept. 3, 1903, p. 413.

crust-torsion (krust'tôr″shọn), *n.* A twisting stress in the earth's crust.

Crust-torsion has already been recognized as a mode of crust-deformation associated with the superposition of different movements upon one another, either simultaneously or successively. . . . In 1898, I demonstrated, by the field geology of Enneberg, that phenomena of *crust-torsion* were induced by any combination of crust-pressures, not only by cross-movements crossing rectangularly, but also by cross-movements at any oblique angle.
M. M. O. Gordon, in Geog. Jour. (R. G. S.), XVI. 457.

crutch[1], *n.* **3.** (*h*) The angle at the meeting of the flukes forming the tail of a whale; the fluke-notch. (*i*) In *leather-manuf.*, a contrivance which fits under the arm like a crutch: used in hand-staking.—**Crutch paralysis.** See ★*paralysis.*

crutch[1], *v. t.* **3.** In *leather-manuf.*, to work with a crutch. *Flemming*, Practical Tanning, p. 81.

crutcher (kruch'ėr), *n.* In *soap-making*, a vessel in which the ingredients of soap are mixed and thoroughly stirred together: so called from the wooden paddle sometimes used to mix soap. See *crutch*, 3 (*e*).

crutch-hole (kruch'hōl), *n.* *Naut.*, a hole designed to receive the stanchion on which a boom or other spar rests, to prevent it from slipping; also, a hole on the quarter-rail of a boat for the use of a steering-oar.

cruzada (krö-thä'dä), *n.* [Sp.: see *crusado*[2].] A gold coin of Castile of the time of Pedro I. (1350–68): it weighed 92⅔ grains.

cry, *n.*—**Epileptic cry,** a loud cry which sometimes precedes the respiratory spasm in an epileptic attack.—**Hydrocephalic cry,** a sudden shriek or loud scream uttered by a child suffering from meningitis.—**Night cry,** a sudden shrill scream uttered by a child in its sleep: often a sign of beginning joint-disease.

cryæsthesia (krī-es-thē'si ä), *n.* [NL., < Gr. κρύος, cold, + αἴσθησις, perception.] Sensitiveness to cold.

cryalgesia (krī-al-jē'si-ä), *n.* [NL., < Gr. κρύος, cold, + ἄλγησις, sense of pain.] Pain caused by cold.

cry-baby (krī'bā″bi), *n.* One who, like a baby, is prone to tears. [A derisive term among children.]

crymophyte (krī'mọ-fīt), *n.* [Gr. κρυμός, icy cold, + φυτόν, plant.] In *phytogeog.*, a plant adapted to life under low temperatures.

crymotherapeutics (krī″mọ-ther-ạ-pū'tiks), *n.* [Gr. κρυμός, icy cold, + θεραπευτικός, of medical treatment.] The employment of cold in the treatment of disease.

crymotherapy (krī-mọ-ther'ạ-pi), *n.* [Gr. κρυμός, icy cold, + θεραπεία, medical treatment.] Same as ★*crymotherapeutics.*

Cryogen blue. See ★*blue.*

cryogenic (krī-ọ-jen'ik), *a.* [Gr. κρύος, cold, + -γενής, -producing.] Producing cold; especially, noting an apparatus or a laboratory for experimenting at the extreme low temperatures which may be produced by the evaporation of liquefied ethylene, air, oxygen, or hydrogen.

The physical laboratory of the University of Leipzig, the *cryogenic* laboratory, and the Astronomical observatory of Leiden. *Rep. Carnegie Inst.*, 1903, p. 186.

cryohydrate (krī-ọ-hī'drāt), *n.* [Gr. κρύος, cold, + ὕδωρ (ὑδρ-), water, + *-ate*[1].] A definite mixture of ice and any crystallized salt obtained by freezing a saturated aqueous solution of the salt.

Cryohydrates were supposed by Guthrie, to whom the name is due, to be chemical compounds, but they are now regarded as mixtures the constancy of proportion of which is due to the uniform conditions of temperature, etc., under which they are produced. . . . A *cryohydrate* is the lowest freezing-mixture of two substances.
H. C. Jones, Physical Chem., p. 222.

cryohydric (krī-ọ-hī'drik), *a* [*cryohydr-ate* + *-ic.*] Producing, produced by, or connected with a cryohydrate.

If the solution saturated with two iodides be cooled to the freezing-point, ice will separate. Five phases are then present, ice, the two iodides, solution and vapor, and the system becomes non-variant. Such a system can exist only at its *cryohydric* temperature, and the composition of the solution is fixed.
Amer. Chem. Jour., March, 1903, p. 205.

Cryohydric temperature, the temperature at which a cryohydrate is produced.

cryolithionite (krī-ọ-lith'i-ọ-nīt), *n.* [Gr. κρύος, cold, + NL. *lithium* + *-n-* + *-ite*[2].] A fluoride of aluminium, sodium, and lithium ($Li_3Na_3Al_2F_{12}$) occurring in colorless dodecahedrons at the cryolite locality in Greenland.

cryometer (krī-om'e-tėr), *n.* [Gr. κρύος, cold, + μέτρον, measure.] A thermometer for the measurement of low temperatures (usually below the freezing-point of mercury) and therefore containing alcohol or a similar liquid of low freezing-point.

cryophoric (krī-ọ-for'ik), *a.* [*cryophor-us* + *-ic.*] Of or pertaining to the cryophorus, or to any instrument or method for freezing a liquid by its own evaporation.

cryoplankton (krī-ọ-plangk'ton), *n.* [NL., < Gr. κρύος, cold, ice, + NL. *plankton.*] The 'plankton,' particularly the algic flora, which is found in the snow and ice of polar and alpine regions.

cryoscopic (krī-ọ-skop'ik), *a.* [*cryoscop-y* + *-ic.*] Of or pertaining to the phenomena of freezing, specifically to those methods of determining molecular weights, degrees of dissociation, and other properties of substances which depend upon measurements of the freezing-point.

Raoult indicated the possibility of employing the lowering of the vapor-pressure of a solution in determining the molecular weight of a dissolved substance. In his opinion, however, the experimental difficulties were such as to give preference to the *cryoscopic* and ebullioscopic methods. *Amer. Chem. Jour.*, April, 1903, p. 342.

cryoscopy (krī-os'kọ-pi), *n.* [Gr. κρύος, cold, + -σκοπία, < σκόπεῖν, view.] That department of physical chemistry which treats of the freezing or solidification of liquids and solutions; specifically, the determination of molecular weights of dissolved substances by the lowering of the freezing-point of their solutions in suitable solvents.

Taking into account all the difficulties and disturbing factors in experiments of this kind, the authors conclude that their results tend to increase confidence in the methods of exact *cryoscopy.* *Nature*, Jan. 15, 1903, p. 263.

cryostase (krī'ọ-stās), *n.* [Gr. κρύος, cold, + στάσις, standing.] A mixture of equal parts of phenol, saponin, and camphor, with a little turpentine. It is liquid when cold, but solidifies on warming.

Cryphæus (kri-fē'us), *n.* [NL., < Gr. κρυφαῖος, concealed, < κρύπτειν, conceal.] A genus of Devonian trilobites, of the family *Phacopidæ*, having broad and long genal spines and a fringe of flat spines on the pygidium.

crypsis, *n.* **2.** A term used in the discussions of the seventeenth century to designate Christ's possession of divine omnipotence and divine omniscience, with conscious restraint in the use of them.

crypt, *n.*—**Morgagni's crypts,** minute depressions in the bulbous portion of the urethra; also, pits in the rectal mucous membrane.

Cryptaulax (krip-tâ'laks), *n.* [Gr. κρυπτός, concealed, + αὔλαξ, a furrow, groove.] A genus of platypodous mollusks, of the family *Cerithiidæ.* They have turreted shells with spiral ribs on the whorls and a scarcely perceptible canal in the aperture. The genus occurs in Triassic and Jurassic rocks.

cryptic, *a.* **2.** In *biol.*, serving to conceal or fitted for concealing an organism.

The most perfect *Cryptic* powers are possessed by those animals in which the individuals can change their colours into any tint which would be appropriate to a normal environment. *Encyc. Brit.*, XXVII. 147.

cryptitis (krip-tī'tis), *n.* [NL., < *crypta*, crypt, + *-itis.*] Same as *folliculitis.*

Crypto-Calvinism (krip-tọ-kal'vin-izm), *n.* **1.** Concealed Calvinism: an opprobrious term used, during the controversy concerning the doctrine of the Lord's Supper (1552–74), to designate the teaching of Melanchthon, who favored the Calvinistic view of the spiritual presence of Christ, as opposed to the Lutheran view.—**2.** Applied, in 1881, to the doctrine of unconditional election (semi-Calvinistic) held by Missouri Lutherans.

Crypto-Catholic (krip-tọ-kath'ọ-lik), *a.* and *n.* **I.** *a.* Of or pertaining to Crypto-Catholicism.
II. *n.* One initiated into a supposed system of hidden or esoteric (Roman) Catholicism.

Crypto-Catholicism (krip″tọ-ka-thol'i-sizm), *n.* A supposed system of hidden or esoteric (Roman) Catholicism known only to the initiated.

Cryptocephala (krip-tọ-sef'ạ-lä), *n. pl.* [NL., < Gr. κρυπτός, hidden, + κεφαλή, head.] A group of *Annelida*, of the order *Polychæta.* They have the præstomium more or less hidden by the peristomium, which grows forward; the tentacles reduced, but the palps greatly developed and subdivided, forming the crown of gills; the body distinguishable into the thorax and abdomen, characterized by the form and arrangement of the setæ and by certain internal differences. The group includes the *Sabellidæ*, *Erioyraphidæ*, *Amphicorinidæ*, *Serpulidæ*, and *Hermellidæ.* Contrasted with *Phanerocephala.*

cryptocerate (krip-tos'e-rāt), *a.* and *n.* **I.** *a.* Pertaining to or resembling the *Cryptocerata.*
II. *n.* A member of the *Cryptocerata.*

cryptochelate (krip-tọ-kē'lāt), *a.* [Gr. κρυπτός, hidden, + χηλή, claw (see *chela*), + *-ate*[1].] Having the chelæ hidden or so minute as to escape notice without close observation, as certain crustaceans.

cryptochroism (krip-tok'rọ-izm), *n.* [Gr. κρυπτός, hidden, + χροα, color, + *-ism.*] A difference in properties of X-rays and other obscure rays, due to difference in wave-length and analogous to the color-difference in light-rays.

cryptoclastic (krip-tọ-klas'tik), *a.* [Gr. κρυπτός, hidden, + κλαστός, broken.] In *petrog.*, composed of fragments too small to be seen by the unaided eye.

cryptoclite (krip'tọ-klīt), *n.* [Gr. κρυπτός, hidden, + *κλιτός, verbal adj. of κλίνειν, incline.] In *gram.*, a noun whose originally normal inflections have been disguised by phonetic changes, as by hidden umlaut, quasi-gemination of semi-vowels, contraction, etc., so that the resulting forms are irregular. An example is, in Anglo-Saxon, nominative *man*, dative *men*, plural *men*, whence English *man*, plural *men.* *March*, Anglo-Saxon Gram., p. 52.

cryptococcus (krip-tọ̄-kok′us), *n.* [NL., ‹ Gr. *κρυπτός*, hidden, + *κόκκος*, berry (coccus).] Same as *Saccharomyces*. **Cryptococcus xanthogenicus**, a microbe believed by Freire of Brazil to be the cause of yellow fever.

Cryptocrinus (krip-tok′ri-nus), *n.* [NL., ‹ Gr. *κρυπτός*, hidden, + *κρίνον*, a lily (see *crinoid*).] A genus of Silurian cystideans in which the calyx is composed of three rings of perforate plates, the mouth is central, the arms are eccentric, and the stem is short.

cryptocyst (krip′tọ̄-sist), *n.* [Gr. *κρυπτός*, hidden, + *κύστις*, bladder, bag.] In certain polyzoans, a portion of the body cavity separated from the remainder by a calcareous lamina. [Not used.]

In the Microporidae and Steganoporellidae, and perhaps in many of the Lepralioid Cheilostomata, the body-cavity is partially subdivided by a calcareous lamina ("*cryptocyst*," Jullien) which grows from the proximal side. *Encyc. Brit.*, XXXI. 829.

Cryptocystes (krip-tọ̄-sis′tēz), *n. pl.* [NL., pl. of *cryptocystis*, ‹ Gr. *κρυπτός*, hidden, + *κύστις*, bladder.] A group of *Myxosporidia* having minute pear-shaped spores, with one polar capsule and more than two spores formed in each pansporoblast. They are cell-parasites. Also *Microsporidia*.

Cryptodira (krip-tọ̄-dī′rä), *n. pl.* [Gr. *κρυπτός*, hidden, + *δειρή*, neck.] A division or suborder of *Chelonia* containing those species in which the neck can be bent in a vertical plane and is usually capable of being withdrawn within the body: contrasted with *Pleurodira*.

cryptodiran (krip-tọ̄-dī′ran), *a.* and *n.* **I.** *a.* Relating to or characteristic of the *Cryptodira*.

II. *n.* A member of the *Cryptodira*.

cryptodire (krip′tọ̄-dīr), *n.* One of the *Cryptodira*.

crypto-double (krip′tọ̄-dub″l), *n.* A double star of which the components are too close to be resolved by the telescope, but the duplicity of which is indicated by the fact that its spectrum is composed of two spectra of different classes overlying each other. Alpha Equulei is a typical case. This star and several others have been shown to be spectroscopic binaries.

Indeed, several of Miss Maury's *crypto-doubles*, *o* Leonis, *o* Andromedæ, and *α* Equulei among the number, have been spectroscopically resolved by Professor Campbell into unlike pairs. *A. M. Clerke*, Problems in Astrophysics, p. 266.

Cryptodrilidæ (krip-tọ̄-dril′i-dē), *n. pl.* [NL., ‹ *Cryptodrilus* (see def.) + *-idæ*.] A family of terricolous *Annelida*, of the order *Oligochæta*. They have 8 setæ on each segment, clitellum occupying some or all of segments 12 to 23, usually complete anteriorly, spermathecæ 1 to 5 pairs placed anteriorly, male pores on segments 17 or 18, nephridia paired or diffuse. Members of this family occur in nearly all parts of the world, but are mainly tropical and especially Australian. It includes *Microscolex*, *Pontodrilus*, *Cryptodrilus*, *Microdrilus*, and other genera.

Cryptogamic botany. See ★*botany*.

cryptogenetic (krip″tọ̄-jẹ̄-net′ik), *a.* [Gr. *κρυπτός*, hidden, + *γένεσις*, origin: see *genetic*.] Having no evident cause; of unknown origin; specifically, noting a disease of unknown origin. *Buck*, Med. Handbook, IV. 585.

cryptogenic (krip-tọ̄-jen′ik), *a.* [Gr. *κρυπτός*, hidden, + *-γενής*, -producing.] Same as ★*cryptogenetic*.

cryptogenous (krip-toj′ẹ-nus), *a.* Same as ★*cryptogenetic*.

cryptogramic (krip-tọ̄-gram′ik), *a.* Pertaining to or of the nature of a cryptogram.

Cryptogramma (krip-tọ̄-gram′ä), *n.* [NL. (Robert Brown, 1823), ‹ Gr. *κρυπτός*, hidden, + *γραμμή*, a line.] A small genus of boreal polypodiaceous ferns, the rock-brakes, distinguished from *Pellæa* mainly by their dimorphic fronds. Two species, *C. Stelleri* and *C. acrostichoides*, occur in the northern United States and Canada. The latter and a closely allied European species, *C. crispa*, are known as *parsley-fern*.

cryptogrammatic (krip″tọ̄-gra-mat′ik), *a.* Of, pertaining to, or of the nature of a cryptogram.

cryptogrammatical (krip″tọ̄-gra-mat′i-kạl), *a.* Same as ★*cryptogrammatic*.

cryptogrammatist (krip-tọ̄-gram′ạ-tist), *n.* One who is skilled in cryptograms and their decipherment.

cryptographic, *a.* **3.** In *petrog.*, noting a fabric formed by the graphic intergrowth of two minerals, but so minute as not to be seen by the unaided eye.

cryptographist (krip-tog′rạ-fist), *n.* One who is skilled in cryptography.

cryptoheresy (krip-tọ̄-her′e-si), *n.* Concealed heresy; hidden heresy.

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cryptoheretic (krip-tọ̄-her′e-tik), *n.* A secret heretic; one who secretly holds heretical views.

Crypto-Jesuit (krip-tọ̄-jez′ū-it), *n.* A secret Jesuit; one who has, or is supposed to have, secret affiliation with the Society of Jesus.

Crypto-Jesuitism (krip-tọ̄-jez′ụ̄-it-izm), *n.* Disguised Jesuitism.

Cryptol, *n.* See ★*kryptol*.

cryptolin (krip′tọ̄-lin), *n.* [*cryptol* + *-in*[2].] An organic liquid sometimes found in cavities of topaz, chrysoberyl, or quartz. It hardens to a resinous body when exposed to the air.

Cryptomeria (krip-tọ̄-mē′ri′ä), *n.* [NL. (Don, 1839), ‹ Gr. *κρυπτός*, hidden, + *μέρος*, a part. The plant is so named because the seeds are well covered by the scales.] A genus of coniferous plants of the family *Pinaceæ* and tribe *Taxoideæ*, technically distinguished from *Taxodium* by the manifest toothed inner scales of the cones. There is only one species, *C. Japonica*, the Japan cedar, or sugi, a native of Japan and northern China. See *sugi* and *Japan* ★*cedar*.

Cryptomeria Japonica.

a, a branch with both male (left) and female (right) flowers; *b*, male spike; *c* and *d*, stamen showing anthers; *e*, cone scale seen from the back; *f*, a scale seen from the side; *g*, a seed. (Drawn from Engler and Prantl's "Pflanzenfamilien.")

cryptomerous (krip-tom′ẹ-rus), *a.* [Gr. *κρυπτός*, hidden, + *μέρος*, a part.] In *petrog.*, exceedingly fine-grained; dense; aphanitic; applied to the texture of rocks.

cryptomnesia (krip-tom-nē′si-ạ̈), *n.* [NL., ‹ Gr. *κρυπτός*, hidden, + *μνῆσις*, memory.] In *psychol.*, subconscious memory; memory exercised by the subliminal self.

Cryptomonadina, *n.* **3.** A family of *Protozoa*, of the order *Flagellata*, having either a colored or a colorless body, usually compressed laterally, without true cuticle, with two long anterior flagella, and the anterior end obliquely truncated. It includes *Chilomonas*, *Cyathomonas*, *Cryptomonas*, and *Oxyrrhis*.

cryptonema (krip-tọ̄-nē′mä), *n.*; pl. *cryptonemata* (-mạ-tä). [NL., ‹ Gr. *κρυπτός*, hidden, + *νῆμα*, thread.] In *bot.*, one of the hairs or threads formed in a cryptostoma. See *cryptostoma*.

Cryptoniscidæ (krip-tọ̄-nis′i-dē), *n. pl.* [NL., ‹ *Cryptoniscus* + *-idæ*.] A family of isopod crustaceans parasitic on cirripeds, typified by the genus *Cryptoniscus*.

Cryptoniscus (krip-tọ̄-nis′kus), *n.* [NL., ‹ Gr. *κρυπτός*, hidden, + *ὀνίσκος*, a wood-louse: see *Oniscus*.] The typical genus of the family *Cryptoniscidæ*. *C. planarioides* is a parasite on *Peltogaster purpureus*, which in turn is parasitic on a pagurid crustacean. *F. Müller*, 1864.

cryptonymous (krip-ton′i-mus), *a.* [As *cryptonym* + *-ous*.] Having the real name concealed; pseudonymous: as, a *cryptonymous* author.

Cryptoparamera (krip″tọ̄-pạ-ram′e-rạ̈), *n*, *pl.* [NL., ‹ Gr. *κρυπτός*, hidden, + NL. *Paramera*.] One of two grades (the other being *Paramera*) of zoantharian *Anthozoa*, in which the primary bilateral symmetry is obscured by the radial development of the second and succeeding series of mesenteries. It includes the order *Actiniidea*.

cryptoperthite (krip-tọ̄-pėr′thīt), *n.* [Gr. *κρυπτός*, hidden, + E. *perthite*.] A name given to certain feldspars whose composition and optical characters make it probable that they have the structure of perthite, although the supposed interlamination of albite and orthoclase is too fine to be discernible even with the microscope.

cryptophagid (krip-tof′ạ-jid), *n.* and *a.* **I.** *n.* A member of the *Cryptophagidæ*.

II. *a.* Pertaining to or resembling the coleopterous family *Cryptophagidæ*.

cryptophanic (krip-tọ̄-fan′ik), *a.* [Gr. *κρυπτός*, hidden, + *-φανής*, ‹ *φαίνεσθαι*, appear.] Appearing only obscurely; scarcely appearing: noting an amorphous acid, $C_{10}H_{18}O_{10}N_2$, which in small amounts is said to occur in human urine.

cryptophthalmia (krip-tof-thal′mi-ạ̈), *n.* [NL., ‹ Gr. *κρυπτός*, hidden, + *ὀφθαλμός*, eye.] Congenital closure of the eye through union of the eyelids, the eyeball itself being usually also imperfectly formed.

cryptophyte (krip′tọ̄-fīt), *n.* [Gr. *κρυπτός*, hidden, + *φυτόν*, plant.] Same as *cryptogam*. [Rare.]

Cryptoplacidæ (krip-tọ̄-plas′i-dē), *n. pl.* [NL., ‹ *Cryptoplax*, a genus (‹ Gr. *κρυπτός*, hidden, + *πλάξ* (*πλακ-*), anything flat), + *-idæ*.] A family of polyplacophorous *Mollusca* or chitons with small valves.

cryptoscope (krip′tọ̄-skōp), *n.* [Gr. *κρυπτός*, hidden, + *σκοπεῖν*, view.] A fluorescent screen, with a hood, for the observation of bodies under the action of X-rays; a ★fluoroscope (which see, with cut).

cryptoscopic (krip-tọ̄-skop′ik), *a.* Of or pertaining to the use of the fluorescent screen or cryptoscope.

cryptoscopy (krip-tos′kọ̄-pi), *n.* [Gr. *κρυπτός*, hidden, + *-σκοπία*, ‹ *σκοπεῖν*, view.] The art or process of examining, by means of a fluorescent screen, bodies which are subjected to the X-rays.

cryptostemmid (krip-tọ̄-stem′id), *n.* and *a.* **I.** *n.* A member of the *Cryptostemmidæ*.

II. *a.* Of or belonging to the family *Cryptostemmidæ*.

Cryptostomata (krip-tọ̄-stō′mạ-tạ̈), *n. pl.* [Gr. *κρυπτός*, hidden, + *στόμα*(*τ-*), mouth.] A suborder of the *Bryozoa*, characterized by having the apertures of the zoœcia concealed, lying at the bottom of a tubular vestibule which may be divided by diaphragms and is surrounded by vesicular or solid tissue. Marsupia and avicularia are absent. The group is essentially of Paleozoic age.

cryptostomatous (krip-tọ̄-stom′ạ-tus), *a.* [Gr. *κρυπτός*, hidden, + *στόμα*(*τ-*), mouth.] Having the mouth-opening concealed.

cryptozoic (krip-tọ̄-zō′ik), *a.* [Gr. *κρυπτός*, hidden, + *ζωή*, life.] **1.** Leading a concealed life: in *zoöl.*, applied to those animals which habitually seek concealment and pass the greater part of their lives beneath logs, stones, etc.

Among terrestrial animals those which habitually live on the open ground must be distinguished from . . . *cryptozoic* forms which live under stones, logs of wood, etc., such as Land Planarians, Peripatus, Centipedes, and Woodlice. *Parker and Haswell*, Zoölogy, II. 601.

2. Having the organic evidences concealed: in *petrog.*, applied to limestones whose organic origin cannot be recognized by the unaided eye, as lithographic limestone. *Renevier*, 1882.

Cryptozonia (krip-tọ̄-zō′ni-ạ̈), *n. pl.* [NL., ‹ Gr. *κρυπτός*, hidden, + *ζώνη*, girdle.] An order of extinct starfishes with the marginal plates inconspicuous, the entire surface papillate, and the ambulacral plates crowded and narrow.

cryptozygous, *a.* **2.** In *craniom.*, having a stephanozygomatic index of more than 100.

crys. An abbreviation (*a*) of *crystal*; (*b*) of *crystallography*.

crystal, *n.* **6.** An English trade-name for a fine quality of white sugar.—**Asthma crystals.** Same as *Charcot's crystals*.—**Boettcher's crystals**, crystals found in the prostatic secretion, possibly the same as *Charcot's crystals*.—**Charcot-Leyden crystals.** Same as *Charcot's crystals* (under *crystal*).—**Coffin-lid crystals**, crystals of triple phosphate found sometimes in the urine.—**Corroded crystals**, in *petrog.*, crystals that have been partly resorbed or dissolved by the molten magma before its final solidification.—**Demerara crystals**, a commercial name of a kind of sugar, originally and chiefly brought from Demerara, obtained by direct boiling down of cane-juice, preferably in vacuum-pans, and careful washing of it in centrifugals.—**Dumb-bell crystals**, crystals of calcium oxalate sometimes found in the urine.—**Equatorial crystal.** See ★*equatorial*.—**Hedgehog crystals**, globular crystals of sodium urate having numerous sharp acicular projections.—**Hopper crystal**, a crystal having the form of a hollow inverted pyramid, or one having cavernous faces of this shape. Such crystals are usually the result of rapid and imperfect crystallization, as with rock-salt formed from an evaporating brine.—**Lead-**

chamber crystals, colorless crystals which form in the leaden chambers in which sulphuric acid is made upon a great scale, and which can also be prepared by laboratory methods. They consist of nitrosyl sulphuric acid or nitrosulphonic acid ($SO_2.HO.NO_2$). If it comes in contact with water the substance is decomposed, producing sulphuric acid and nitrogen trioxid or the products of its dissociation, the dioxid and tetroxid of nitrogen.—**Leucocytic crystals**, the Charcot-Leyden crystals: so named on account of their common association with eosinophilic leucocytes.—**Liquid crystal**, a crystallized substance in which some of the properties belonging to the solid crystals are lost, not when the substance is fused, but at some higher temperature. For instance, *p*-azoxyanisoil fuses at 114° C. The liquid shows strong double refraction, so that its molecules possess a regular arrangement like that in a solid crystal; but it is mobile and rises in a capillary tube, so that it is indubitably a liquid. At 134.1° C. it suddenly becomes in all respects like an ordinary liquid.—**Platner's crystals**, crystals of the salts of the bile acids.—**Protein crystals.** See ★*protein*.—**Skeleton crystal**, a crystal whose edges are developed while the interior is more or less hollow. In such cases the edges are often formed of a multitude of minute crystals (for example, cubes) in parallel position. The form is common with certain of the native metals, as gold, silver, and copper.—**Teichmann's crystals**, a crystalline product which is obtained from blood-coloring matter by evaporation with salt and glacial acetic acid. An important medicolegal test is based upon the formation of these crystals. Chemically they are hemin crystals of the composition $C_{34}H_{33}N_4O_4FeCl$.—**Virchow's crystals**, crystals of hematoidin.—**Whetstone crystals**, crystals of xanthin sometimes found in urine.

crystal-gazing (kris'tal-gā″zing), *n.* A steady staring into the depths of a clear object, now usually a glass ball, with the view of arousing visual perceptions. Crystal-gazing is of world-wide occurrence in folk-magic, the object of the practice being to determine what is taking place at a distance or to obtain information regarding the future. A well-known variant is the use of the ink-pool, and the experiment will also succeed, in many cases, with clear water. The visions which the gazer imagines he sees in the crystal are by the ignorant believed to be of supernatural origin, and figure in fortune-telling and other impostures. Among those who seek a scientific explanation it is customary to refer the 'visions' to subliminal or subconscious processes; but they are more probably, at least in most instances, ordinary illusions, constructed by association on the basis of the stimulus which is supplied by the pleasing form, the apparent depth, and the glitter and cross-lights of the crystal.

> Post-hypnotic suggestion, *crystal-gazing*, automatic writing and trance-speech, the willing-game, etc., are now, thanks to him [Myers], instruments of research.
> *W. James*, in Proc. Soc. Psychical Research, May, 1901, p. 17.

Crystallic attraction. See ★*attraction*.

crystalliform (kris-tal'i-fôrm), *a.* [L. *crystallum*, crystal, + *forma*, form.] Of crystalline form: as, a *crystalliform* body.

Crystalline glaze, etc. See ★*glaze*, etc.

Crystalline liquid. Same as *liquid* ★*crystal*.

crystallinic (kris-ta-lin'ik), *a.* [*crystalline* + *-ic.*] Of a crystalline character: in *petrog.*, a term used to designate metamorphism in which there is simply a change in crystallization, as the change of limestone to marble. *Dana*, 1895.

crystallinity, *n.* **2.** In *petrog.*, the degree of crystallization in a rock, as compared with the state of glassiness, whether completely or partly crystallized.

crystallitic (kris-ta-lit'ik), *a.* [*crystallite* + *-ic.*] In *petrog.*, of or belonging to crystallite: used to describe the texture of glassy rocks filled with crystallites.

crystallization, *n.*—**Fractional crystallization**, a process by which substances closely resembling each other in chemical character may sometimes be separated, from the fact that one shows a tendency to crystallize out from a solution before the other or others. Thus salts supposed to contain a single metal, didymium, by very often repeated crystallizations (in each of which the crystals first separated were kept apart from those separating later) were shown to be intimate mixtures of salts of two different metals, neodymium and praseodymium.

crystallized (kris'ta-līzd), *p. a.* Having assumed the form of crystals: as, *crystallized* saltpeter or *crystallized* alum.

crystallizer, *n.* **2.** In *petrog.*, an agent, such as gas, in molten rock-magmas, which by increasing the mobility of the liquid promotes the development of crystals without entering into their composition. Sometimes called a *mineralizing agent*.

crystalloceramic (kris'ta-lō-se-ram″ik), *a.* Of or pertaining to the incrustation of glass on clay.

crystallochore (kris'ta-lō-kōr), *n.* [Gr. κρύσταλλος, clear ice, + χωρεῖν, spread abroad.] In *phytogeog.*, a plant distributed by means of glaciers. *F. E. Clements.*

crystallogenesis (kris″ta-lō-jen'e-sis), *n.* Same as *crystallogeny*.

crystallogenetic (kris″ta-lō-jē-net'ik), *a.* Same as *crystallogenic*.

crystallogranular (kris″ta-lō-gran'ū-lär), *a.* Having the condition of a granular powder consisting of minute crystals, as sal ammoniac granulated by rapid and disturbed crystallization.

crystalloiditis (kris″ta-loi-dī'tis), *n.* [NL., < *crystalloides*, crystalloid, + *-itis.*] Same as *phacitis*.

crystallometric (kris″ta-lō-met'rik), *a.* Of or pertaining to crystallometry.—**Crystallometric angles**, the angles (either 30°, 45°, 60°, or 90°) between any pair of the several planes of symmetry in a crystal.

crystal-seer (kris'tal-sēr), *n.* A crystal-gazer; specifically, one who pretends by this means to see events at a distance, to reveal secrets, etc.

crystal-symmetry (kris″tal-sim'e-tri), *n.* See ★*symmetry*.

crystal-vision (kris'tal-vizh″on), *n.* The illusory visual perception aroused by crystal-gazing. See ★*crystal-gazing*.

crystic (kris'tik), *a.* [Also *krystic*; < Gr. κρύστ-(αλλος), ice (see *crystal*), + *-ic.*] Of or relating to ice; especially noting that branch of geology which is concerned with the study of glaciers, etc.

Cs. An abbreviation (*b*) of *cases*.

C. S. An abbreviation (*e*) of *Civil Service*; (*f*) of *clerk of session*; (*g*) of *commissary of subsistence*; (*h*) of *current strength*.

C. S. I. An abbreviation of *Companion of the Order of the Star of India*.

C. S. O. An abbreviation of *Chief Signal Officer*.

C. SS. R. An abbreviation of *Congregatio Sanctissimi Redemptoris* (Congregation of the Most Holy Redeemer). See *Redemptorist*.

C. S. T. An abbreviation of *Central Standard Time* (see *time*).

ct. An abbreviation (*d*) of *centum*; (*e*) of *contrast*.

C. T. An abbreviation of *Certificated Teacher*.

C. T. A. U. An abbreviation of *Catholic Total Abstinence Union*.

cteinophyte (tī'nō-fīt), *n.* [Irreg. < Gr. κτείνειν, kill, + φυτόν, plant.] A parasitic fungus which exerts a chemical (and destructive) action only upon its host. *Wakker.*

Ctenacanthus (ten-a-kan'thus), *n.*; pl. *ctenacanthi* (-thi). [NL., < Gr. κτείς (κτεν-), a comb, + ἄκανθα, a spine.] A name given by Agassiz to spines of fossil selachians not otherwise known, but of frequent occurrence in Carboniferous rocks.

ctenate (ten'āt), *a.* [Gr. κτείς (κτεν-), a comb, + *-ate*[1].] Comb-like; pectinate; bearing many fine teeth, as the chætæ of some worms.

ctene (tēn), *n.* [Gr. κτείς (κτεν-), a comb.] One of the swimming-plates in *Ctenophora*.

ctenid (ten'id), *a.* Same as *ctenoid*: applied to fish scales which are rough or toothed on their posterior edges.

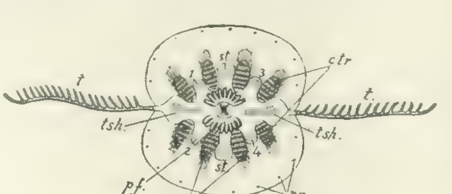
cteniform (ten'i-fôrm), *a.* [NL., < *Ctenus*, a genus of spiders, + L. *forma*, form.] Noting the spiders, of several different groups, that have the eye-formula of the genus *Ctenus*. *Proc. Zool. Soc. London*, 1898, p. 13.

Ctenodonta (ten-ō-don'ta), *n.* [NL., < Gr. κτείς (κτεν-), a comb, + ὀδούς (ὀδοντ-), a tooth.] A genus of taxodont *Pelecypoda* having the hinge-teeth in a continuous arched series, an external ligament, and a simple mantle-line. It is of Silurian age.

Ctenolates (ten-ō-lā'tēz), *n.* [NL., < Gr. κτείς (κτεν-), a comb, + (?)-*lates* for *-latus* < L. *latus*, broad?] A genus of serranoid fishes found in the rivers of southeastern Australia.

ctenolium (ten-ō'li-um), *n.*; pl. *ctenolia* (-ä). [NL., < Gr. κτείς (κτεν-), a comb, + term. *-olium*.] A comb-like arrangement on the margins of the byssal sinus in some of the *Pelecypoda* (pectens) in which the threads of the byssus rest.

Ctenoplana (ten-ō-plā'nä), *n.* [NL., < Gr. κτείς (κτεν-), a comb, + L. *planus*, plane.] A ctenophoran of much flattened shape, with eight very short ribs, and the characteristic combs which can be withdrawn into or evaginated from pouch-like cavities in the body-wall. It has a pair of solid, muscular, pinnate tentacles retractile into sheaths. It swims by means of its combs, or crawls on the bottom on its ventral surface, or attaches itself, ventral side uppermost, to the surface film of water.



Ctenoplana Kowalevskii, Korotneff (after Willey).
t, t, tentacles; *tsh*, tentacle sheaths; *ctr*, sub-transverse costæ; *css*, sub-sagittal costæ; *st*, "stomach" [illegible]; 1, 2, 3, 4, the four principal lobes of the infundibulum; *pf*, sensory tentacles representing the polar fields; *pg*, pigment spots. (From Lankester's [illegible].)

ctenostome (ten'ō-stōm), *a.* and *n.* **I.** *a.* Relating to or characteristic of the *Ctenostomata*.

II. *n.* One of the *Ctenostomata*.

ctetology (te-tol'ō-ji), *n.* [Gr. κτητός, acquired, + -λογία, < λέγειν, say.] The science of acquired characters: a term proposed by Cope.

ctl. A contraction of *cental*.

cu. An abbreviation (*a*) of *cubic*; (*b*) of *cumulus*.

cuabilla (kwä-bēl'yä), *n.* [Cuban Sp., dim. of *cuaba*, an aboriginal name of the tree.] The torch-wood of Florida and the West Indies, *Amyris elemifera* and *A. maritima*. See *torch-wood*.

cuajilote (kwä-hē-lō'tā), *n.* [Mex. Sp., also *quaxilote*, < Nahuatl *quauhxilotl*, < *quauhitl*, tree, + *xilotl*, an ear of green maize.] A tree of Mexico and Central America, *Parmentiera edulis*, with greenish-yellow flowers followed by fruit resembling cucumbers or pods of the okra (*Abelmoschus esculentus*). This is crisp and pleasant to the taste. It is eaten either raw or cooked, or is prepared in the form of pickles.

cuajiote (kwä-hē-ō'tā), *n.* [Mex. Sp., < Nahuatl *quauhxiotl*, < *quauhitl*, tree, + *xiotl*, skin-eruption.] 1. The Mexican stinkwood, *Pseudosmodingium perniciosum*, a foul-smelling, poisonous shrub or small tree of the sumac family, exuding a fetid gum which is used as an antidote for scorpions' stings. Also called *cuajiote blanco*, to distinguish it from the two following.—**2.** A name applied to several species of *Terebinthus* growing in Mexico, especially to *T. fagaroides* (*Bursera fagaroides* of Engler), called *cuajiote verde*, and to *T. lancifolia* (*Bursera lancifolia* of Engler), called *cuajiote chino*, both of which yield a gum-resin called ★*gum-archipin*, used as an antidote for scorpions' stings, and having emetic and purgative properties. These gums are also used for mending broken porcelain and glass.

cuantecomate (kwän-tā-kō-mä'tā), *n.* [Mex. Sp., < Aztec *quatecomatl*, head-calabash, < *quaitl*, head, + *tecomatl*, calabash.] A Mexican name for the ★*cross-leaf*.

cuarta (kwär'tä), *n.* [Said to be Amer. Sp.; if original, it is apparently connected with *cuarta*, a fourth part, and must be the source of *quirt*, which has been doubtfully referred to Sp. *cuerda*, a cord.] A long rawhide whip. [Southwestern U. S.]

cuartel (kwär-tel'), *n.* [Sp., < *cuarto*, fourth.] A quarter; ward of a city; soldiers' quarters.

cuartillo (kwär-tēl'yō), *n.* [Sp., < *cuarto*, fourth.] A silver coin of the Spanish American States, equivalent to one fourth of a real.

cub. An abbreviation of *cubic*.

Cuba bast, black. See ★*bast*[1], ★*black*, *n.*

Cuban blind-fish. See ★*blind-fish*.

cube, *v. t.* **2.** To measure the cubic capacity of a hollow object, like that of a skull.

> Among the 73 male and 42 female crania that were *cubed* (with shot, according to Turner's method), 'the maximum capacity in the male skulls was 1,855 c.c., the minimum was 1,230 c.c., and the mean was 1,478 c.c.
> *Science*, Oct. 30, 1903, p. 568.

cube, *n.*—**Four-faced cube**, a tetrahexahedron.

Cubeb camphor. See ★*camphor*.

cubebene (kū'beb-ēn), *n.* [*cubeb* + *-ene.*] A sesquiterpene, $C_{15}H_{24}$, obtained by the dehydration of cubeb camphor. It boils at 250–260° C. The name was formerly applied, also, to cadinene, the principal constituent of cubeb oil.

cubera (kö-bā'rä), *n.* [Sp., < *cuba*, < L. *cupa*, a tub: see *cup*.] A fish, *Lutianus cyanopterus*, of the family *Lutianidæ*, known from the West Indies to Brazil.

cubic. **I.** *a.* **Cubic space curve**, a non-plane or twisted cubic curve, or curve of double curvature, which may be regarded as the partial intersection of two ruled quadric surfaces which have a common element or generator.

II.—**Discriminating cubic**, the equation

$$\begin{vmatrix} a-\lambda, & h, & g \\ h, & b-\lambda, & f \\ g, & f, & c-\lambda \end{vmatrix} = 0.$$

> The discrimination of the conicoid can be made through the *discriminating cubic*.
> *W. H. Echols*, Calculus, p. 361.

Polar cubic, of a point O, its first polar with respect to a quartic.—**Ruled cubic**, a cubic ruled surface

For a *cubed cubic* the double line *d* may be either (i) a double directrix, or (ii) a generator and a single directrix, understanding by a *directrix* of a ruled surface a line which meets every generator.
C. M. Jessop, Treatise on the Line Complex, p. 76.

cubicephalic (ku-bi-se-fal'ik), *a.* [L. *cubus*, cube, + Gr. κεφαλή, head, + *-ic.*] In *craniom.*, having a brachycephalic form with flattened occiput. *Aitken Meigs.*

cubicossic (kū-bi-kos'ik), *a.* [L. *cubus*, cube, + NL. *cossicus*, cossic: see *cossic.*] Of or pertaining to cubic equations.

cubilose (kū'bi-lōs), *n.* [L. *cubile*, a couch, + *-ose.*] The mucilaginous material which forms the essential basis of edible birds'-nests.

cubital. **I.** *a.*—**Cubital fossa.** Same as *coronoid fossa* (which see, under *coronoid*).

II. *n.* **3.** Same as *hypocoracoid*, the lower of the two bones attached to the clavicle and supporting the actinosts in fishes.

cubitale (kū-bi-tā'lē), *n.*; pl. *cubitalia* (-li-ą). [NL.: see *cubital.*] Same as *cuneiform bone* (which see, under *cuneiform*, *a*).

cubitalis (kū-bi-tā'lis), *n.* [NL.] One of the ulnar muscles of the forearm.—**Cubitalis anterior** or **internus.** Same as *flexor carpi ulnaris.* **Cubitalis gracilis.** Same as *palmaris longus.* **Cubitalis posterior** or **externus.** Same as *extensor carpi ulnaris.* **Cubitalis Riolani.** Same as *anconeus.*

cubit-arm (kū'bit-ärm), *n.* In *her.*, an arm couped at the elbow.

cubito-radial (kū"bi-tō-rā'di-ąl), *a.* [L. *cubitus*, elbow, + *radius*, spoke (radius).] Relating to both the radius and the ulna.

cubitus, *n.* **2.** In *ornith.*, the forearm; more particularly the ulna, or outer bone of the forearm.—**Radius and cubitus,** the actinosts, the bones at the base of the pectoral fin-rays of fishes: not homologous with the radius of Owen, nor with the radial or the cubital of Cuvier.

cuboid. **I.** *a.*—**Cuboid cell.** See ★*cell.*

II. *n.* **2.** A parallelopiped whose six faces are rectangles.—**3.** In *anthrop.*, a cranium, short, high, and wide, of somewhat angular form. *G. Sergi*, The Varieties of the Human Species, p. 39.

Cuboides beds. See ★*bed*[1].

cub-shark (kub'shärk), *n.* A shark, *Carcharhinus lamia*, found in tropical parts of the Atlantic, and abundant in the Caribbean Sea and the Mediterranean.

cucharo (kō-chä'rō), *n.* [Venezuelan.] Same as ★*paraguatan.*

cuckoo, *n.*—**Bee cuckoo,** the honey-guide, *Indicator major.*—**Cuckoo owl.** Same as ★*hoolook.*

cuckoo-clock (kuk'ö-klok), *n.* A clock in which a mechanical cuckoo announces the hours: originally made in the Black Forest or in Switzerland and known as *Black Forest clock.*

cuckoo-fish, *n.* **3.** A gurnard, *Trigla cuculus*, found in European seas.

cuckoo-flower, *n.*—**White** or **wild cuckoo-flower,** the white campion, *Lychnis alba.*

cuckoo-wrasse (kuk'ö-ras), *n.* A common name of *Labrus variegatus*, a fish of the family *Labridæ.*

Cucujo, *n.* See ★*cucuyo.*

Cucullella (kū-kū-lel'ą), *n.* [NL., dim. of L. *cucullus*, a hood: see *cowl*[1].] A genus of Paleozoic taxodont *Pelecypoda* of the family *Ctenodontidæ*, having teeth in a continuous arched series and elongate shells bearing a buttress behind the anterior adductor.

cucullus, *n.* **3.** In *bot.*, an organ folded in the form of a hood or cowl, as the upper sepal of *Aconitum.*

Cucumaria (kū-kū-mā'ri-ą), *n.* [NL., < L. *cucumis* (*cucumer-*), cucumber, + *-aria.*] The typical genus of the family *Cucumariidæ.* *Blainville.*

Cucumariidæ (kū-kū-ma-rī'i-dē), *n. pl.* [NL., < *Cucumaria* + *-idæ.*] A family of *Holothuroidea*, of the order *Actinopoda.* The podia are generally tube-feet only, and there are no papillæ; the mouth and anus are terminal or dorsal; the tentacles number from 8 to 30 and are branched; the madreporite is internal; the calcareous ring consists of 5 radial and 5 interradial pieces; retractor muscles are present, and the longitudinal muscles are generally simple; the respiratory tree is well developed; Cuvierian organs are rarely present; and the spicules are chiefly rods and knobbed perforated plates. It includes *Cucumaria*, *Psolus*, *Thyone*, *Rhopalodina* and other genera.

cucumber, *n.*—**Bacteriosis of the cucumber.** See ★*bacteriosis.*—**Bur cucumber,** the star cucumber, *Sicyos angulatus.* Also called *one-seeded bur cucumber.* See *cucumber.* **Cucumber caterpillar borer.** See ★*borer.*—**Cucumber mildew.** See ★*mildew.*—**Jamaica cucumber,** the burr or West Indian gherkin, *Cucumis Anguria.* See *burr* ★*gherkin.*—**Leaping cucumber.** Same as *squirting cucumber* (which see, under *cucumber*).—**Neat cucumber-moth,** an American pyralid moth, *Diaphania nitidalis*, the parent of the so-called "pickle-worm." See *pickle-worm.*—**Salad cucumber,** a variety of *Cucumis Melo*, much grown in Egypt, ripening earlier than the common cucumber: the fruit long, horn-shaped, succulent, and of a delicate flavor.—**Wild cucumber.** (*a*) See *squirting cucumber* under *cucumber.* (*b*) In California, the big-root or man root *Marah oreganus fabacea*, and doubtless other species. *Parsons and Bush*, Wild Flowers of California.

cucumber-beetle (kū'kum-bėr-bē"tl), *n.* **1.** Any one of several species of chrysomelid beetles of the genus *Diabrotica*, as *D. vittata*, the striped cucumber beetle, *D. longicornis*, *D. soror*, and *D. duodecimpunctata*, the 12-spotted cucumber beetle, also known as the *southern* ★*corn root-worm* (which see, with cut), which feed on the leaves of cucumber and other cucurbitaceous plants.—**2.** A minute halticid beetle, *Haltica cucumeris*, also known as the *cucumber flea-beetle.*

cucumber-fish (kū'kum-bėr-fish), *n.* A fish, *Prototroctes oxyrynchus*, of the family *Haplochitonidæ*, found in Australia and New Zealand and known more commonly as the *grayling.* Also called *cucumber-mullet.*

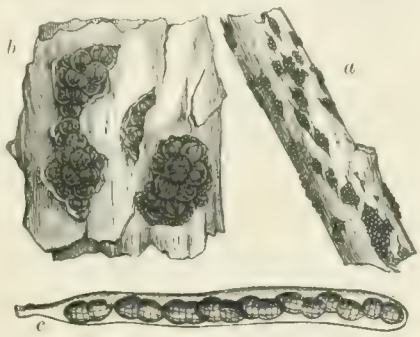
cucumber-green (kū'kum-bėr-grēn), *n.* A shade of green like that of the cucumber; specifically, such a shade of green seen in the glaze of some Oriental porcelains and in the enamel of the Grueby pottery.

cucumber-mullet (kū'kum-bėr-mul"et), *n.* Same as ★*cucumber-fish.*

cucumber-shin (kū'kum-bėr-shin), *n.* Anterior curvature of the tibia, common in the negro as a result of rickets in childhood.

His shins had the true *cucumber* curve.
W. Irving, Salmagundi, 79. *N. E. D.*

Cucurbitaria (kū-kėr-bi-tā'ri-ą), *n.* [NL. (S. F. Gray, 1821), from a resemblance of the perithecia to gourds, < L. *cucurbita*, a gourd, + *-aria.*] A large genus of pyrenomycetous fungi, type of the family *Cucurbitariaceæ*, having the black, carbonaceous perithecia in close clusters on a thin stroma. The spores are ellipsoid and are divided by both longitudinal and transverse septa. *C. Berberidis* is a common species occurring on branches of the barberry and other plants in Europe and America.



Cucurbitaria berberidis.
a, habit of the fungus growing on dry stems of the barberry; *b*, several fruiting bodies, enlarged; *c*, a spore case with spores, enlarged. (From Engler and Prantl's "Pflanzenfamilien.")

Cucurbitariaceæ (kū-kėr"bi-tā-ri-ā'sē-ē), *n. pl.* [NL., < *Cucurbitaria* + *-aceæ.*] A family of pyrenomycetous fungi of the order *Sphæriales*, named from the genus *Cucurbitaria.* The perithecia are mostly spherical and carbonaceous and are usually arranged in dense masses on a more or less well-developed stroma.

cucurbitine (kū-kėr'bi-tin), *a.* and *n.* **I.** *a.* Of or pertaining to a cucurbitinus.

II. *n.* Same as *cucurbitinus.*

cucuyo (kö-kö'yō), *n.* [Also *cucuïo*, *cucujo*, erroneously *cucullo* and in F. spelling *cucuye*; < Sp. *cucuyo*, < Taino (Haitian) *cucuyo*, *cocuyo*, otherwise reported as *cucuix* and *locuyo.*] **1.** The West Indian firefly, *Pyrophorus noctilucus* and another species, an elaterid beetle which gleams with phosphorescent light from spots on the body. See *Pyrophorus*, with cut.—**2.** A fish (*Balistes carolinensis*), the leather-jacket; also another balistoid fish, *Xanthichthys ringens*, of the West Indies and waters southward.

cuddy[1], *n.* **4.** A counterweight, a loaded truck used to balance the car on an incline. [Scotch miner's term.]

cuddy[2], *n.* **1.** *Naut.*: (*b*) A platform in the stern of a fishing-boat, on which a drift-net is carried when not in use.

cuddy-brae (kud'i-brā), *n.* An inclined roadway with a rope and a counterweight or cuddie which is raised by a descending loaded car, and is heavy enough to raise the empty car. [Scotch miner's term.]

cudgerie (kuj'ėr-i), *n.* [Australian aboriginal name.] **1.** Same as *rasp pod* and *crow's* ★*ash.*—**2.** A Queensland tree, *Hernandia bicalcis*, of the family *Hernandiaceæ*: it yields an oily nut and a light, soft, dark-gray wood. Also called *grease nut.*

cudweed, *n.* **Winged cudweed.** See *clammy* ★*everlasting.*

cue-call (kū'kâl), *n.* The signal or call furnished by the 'cue' to speak or act one's part. See *cue*[1], *n.* **3.**

In the life-drama's stern *cue-call*,
A friend's a part well prized by all.
D. G. Rossetti, Soothsay, st. 4.

cueist (kū'ist), *n.* A billiard-player, especially one who uses his cue skilfully. See *cue*[1] *v. i.*

cuerda, *n.* **3.** In Porto Rico, a unit of land measure, equal to about two fifths of an acre.

cuesta (kwes'tą), *n.* [Sp.: see *coast*, *n.*] An unsymmetrical ridge having a strong slope or escarpment on one side and a gentle slope on the other. [Southwestern U. S.]

An upland of this kind may be called a *cuesta*, following a name of Spanish origin used in New Mexico for low ridges of steep descent on one side and gentle slope on the other. *W. M. Davis*, Phys. Geog., p. 133.

cuf, *v.* and *n.* A simplified spelling of *cuff.*

cuffy (kuf'i), *n.* [From the personal name *Cuffy*, Guiana, D. *Koffi*, a common name for negroes, applied by custom to any one born on Friday.] A general name for a negro. [Southern U. S.]

cuilleron, *n.* **2.** A name given by French entomologists to the squama of the *Diptera* and to a certain extent adopted by English writers. *A. S. Packard*, Text-book of Entom., p. 124.

Cuirass cancer. See ★*cancer en cuirasse.*

cuiter (kū'ter), *v. t.* [Also *cuter*, *kuter*; a freq. form, of unknown origin.] To tend or nurse with tenderness and solicitous care; minister to with untiring kindness or affection; cocker up; coddle. [Scotch.]

I've seen the day ye buttered my brose,
And *cuitered* me late and early, O;
But downa-do's come o'er me now,
And och, I find it sairly, O!
Burns, Deuks Dang o'er my Daddy, st. 11.

culantrillo (kö-län-trēl'yō), *n.* [Sp. *culantrillo*, dim. of *culantro*, vernacular form of *coriandro*, coriander: see *coriander.*] **1.** In many Spanish countries, the name applied to the maidenhair, *Adiantum Capillus-Veneris*, and ferns resembling it, decoctions or syrups of which are administered to women at childbirth and for menstrual irregularities. In Mexico the term is applied to *A. tenerum* and *A. trichophyllum*, and in the Philippines to *A. lunulatum.* Also called *cilantrillo*, or *culantrillo del pozo.*

2. A name applied to several other plants used medicinally, as *Tetilla hydrocotylæfolia*, a Chilean plant with astringent properties, belonging to the saxifrage family.

culch (*kulch*), *v. t.* [*culch*, *cultch*, *n.*] To apply (cultch) to (an oyster-bed). See *culching.*

culching (kul'ching), *n.* In *oyster-culture*, the coating of an oyster-bed with fresh gravel, stones, etc., to form a surface on which the oyster-spat can find a lodgment.

Nature has often to be assisted in the preparation of these spots by the process known as "*culching*," that is, scattering the floor of the bed with rock, loose coral, and so on, to afford the necessary anchorage for the byssus of the young oyster. *Nature*, March 17, 1904, p. 466.

culd, *pp.* A simplified spelling of *culled.*

culebra (kö-lā'brą), *n.* [Sp. *culebra*, < L. *colubra*, a snake: see *culverin.*] A water-spout or cloud-burst on land. The dark-colored spout, reaching down from the sky, does not descend to the ground of the lowlands and stir up a cloud of dust, but moves toward the mountains and breaks up on a mountain side, sending torrents of water down the gorges.

culen (kö-len'), *n.* [Chilean name: in Uruguay *culé.*] See *Psoralea.*

culiat (kö-lē-ät'), *n.* See ★*kuliat.*

culicide (kū-lis'i-sīd), *n.* and *a.* [L. *culex* (*culic-*), a gnat, mosquito, + *-cida* < *cædere*, kill.] **I.** *n.* An agent which is destructive of mosquitos.

II. *a.* Destructive of mosquitos.

culicid (kū-lis'id), *n.* and *a.* **I.** *n.* A member of the family *Culicidæ.*

II. *a.* Of or belonging to the dipterous family *Culicidæ.*

culicide[1] (kū'li-sīd), *n.* and *a.* Same as ★*culicicide.*

The non-spreading qualities of corn-oil, however, as well as its price, remove it from the list of good *culicides.*
L. O. Howard, Mosquitoes, p. 197.

culicide[2] (kū'li-sīd), *n.* [For ★*culicicide*, < L. *culex* (*culic-*), mosquito, + *-cidium*, a killing, < *cædere*, kill.] The act of killing mosquitos.

Culicina (ku-li-sī'nä), *n. pl.* [NL., < *culex* (*culic*), a mosquito + *-ina.*] A tribe or subfamily of mosquitos, *Culicidæ*, including the typical genus *Culex* and its allies, having the palpi short in the female and long in the male, and the first submarginal cell of the wings as long as or longer than the second posterior cell.

culilawang (kö-lē-lä'wang), *n.* [Malay.] See *culilawan bark* under *bark*[2].

culintangan (kö lin-täng'gan), *n.* [Also *colintangan*; Mindanao.] A musical instrument consisting of a number of closed metal vessels or gongs of varying size which are struck with sticks: used among the Moros.

culler, *n.* **4.** In *glass-manuf.*, same as *gatherer*, 6.

culmigenous (kul-mig'e-nus), *a.* [L. *culmus*, a stalk, + *-genus*, -born.] Produced or growing on straw. *Syd. Soc. Lex.*

culm-measure (kulm'mezh ūr), *n.* One of the Lower Carboniferous formations.

Those Lower Carboniferous rocks that are called the *culm-measures* by some authors.
Geog. Jour. (R. G. S.), XVI. 56.

culor, *n.* and *v.* A simplified spelling of *color*.

culorabl, *a.* A simplified spelling of *colorable*.

culord, *pp.* A simplified spelling of *colored*.

culpose (kul'pōs), *a.* [NL. **culposus*, < L. *culpa*, a fault.] Faulty; negligent; grossly careless.

cult-deity (kult'dē'i-ti), *n.* See ★*cultus-statue*.

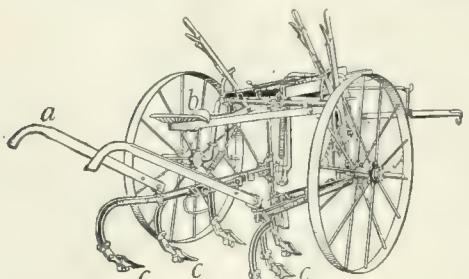
cultellus, *n.* **2.** In medieval arms and armor, a knife which occasionally served as a dagger.

cultivation, *n.*—**Margin of cultivation,** in *polit. econ.*, a situation in which labor and capital yield a product just sufficient to cover normal wages and interest. The term came into use in the conventional exposition of the nature of rent. Some lands are so fertile and so favorably situated with respect to centers of population as to yield a surplus over and above the normal remuneration of the labor and capital employed upon them. Lands of less fertility, or less favorably situated, yield a smaller surplus, and some lands, usually represented as a narrow zone circumscribing the surplus-yielding lands, produce barely enough to pay normal wages and interest. This zone, for obvious reasons, is called the *margin of cultivation*, or more commonly, the *extensive margin of cultivation*. In the cultivation of the better lands the first units of labor and capital may properly be said to yield large returns, the later units increasing the total product, but not in proportion. Obviously a point appears at which an additional unit of labor and capital yields normal wages and interest, but nothing more. This point is spoken of figuratively as the *margin of cultivation*, or, more specifically, the *intensive margin of cultivation*.—**Zone of cultivation.** See ★*zone*.

cultivation-bed (kul-ti-vā'shōn-bed), *n.* The filter-like bed often used with the septic tank which by bacterial action brings about nitrification of the effluent from the tank. Same as *bacteria-bed*.

cultivation-paddock (kul-ti-vā'shon-pad'ok), *n.* The tract of land set off from an Australian cattle-farm for tillage and the raising of such crops as are needed on the station.

cultivator, *n.* (*c*) This name is now applied to a great variety of horticultural and agricultural machines. They



Combined Walking and Riding Cultivator.

a, handles for operator when walking; *b*, seat for rider; *c*, *c*, *c*, cultivator teeth.

are divided into two classes, hand machines and horse machines; and the horse machines are classed as *walking cultivators*, and *riding* or *sulky cultivators*. Hand machines are supported upon one or two wheels placed in front, and have two long plow-handles by which they are pushed along the ground beside or astride of the rows of plants to be cultivated. All are provided with one or more teeth for breaking and stirring the soil and removing weeds, and have interchangeable tools (plows, rakes, hoes, scrapers, harrow-teeth, etc.) to adapt them to a variety of work. 'Walking' horse cultivators are supported upon a pair of wheels and are provided with a pair of plow-handles placed behind, by which they are guided by the operator walking in the rear. 'Riding' cultivators are fitted with a seat above the cultivating-tools, in the rear of the machine and in reach of levers for controlling the tools. The teeth or tools of all horse machines are interchangeable, and are made in the form of small hoes, rakes, scrapers, plows, harrow-points, claws, weeders, and disks. Hand cultivators are often provided with seed-drills, or other planting-appliances, and with fertilizer-distributing appliances. The combination of many tools in one machine has led to the use of many trade names. **Disk cultivator,** a cultivator using disks in place of knives or shears. See above. **Expanding cultivator,** a cultivator in which the frame is adjustable to varying widths of plant-rows. By expanding or contracting the frame, the machine can be made to fit all conditions of culture.

cult-society (kult'so-sī'e-ti), *n.*; pl. *cult-societies* (*-tiz*). A society or social group held together by a religious motive, like the religious secret societies of Africa and of North America.

The *cult-society*, or fraternity, or phratry, or curia (for by all of these names it has been known), has an ecclesiastic or religious motive which distinguishes it from the clan and gens which have a sociologic motive.
An. Rep. Bur. Amer. Ethnol., 1897-98, p. xlvi.

cultural, *a.* **2.** Produced by cultivation: said of types of plants, chiefly varietal. A cultural variety is opposed to a natural or botanical one.

Substances obtainable from large numbers of plants of different types, botanical and *cultural*.
Yearbook U. S. Dept. Agr., 1901, p. 363.

3. In *surv.*, of artificial origin: said of roads, villages, etc., on a topographic map.—**4.** In *bacteriol.*, relating to culture-media or to the character of any micro-organism as indicated by the results obtained from growing it upon various culture-media.

The bacillus . . . always showed the same *cultural* characters, viz., sparseness of growth on blood-serum, limited surface growth in gelatine stab cultures, and a typical radiating colonies in gelatine plates.
Jour. Exper. Med., 1900, p. 259.

Cultural degeneracy, the weakening in constitution of plants under domestication.

A few of my correspondents believe in what I may call *cultural degeneracy*, or the doctrine that the more highly we improve the species, the weaker in constitution must each succeeding generation of varieties become.
L. H. Bailey, Survival of the Unlike, p. 335.

Cultural map, a map which shows cultural details.—**Cultural plant formation.** See ★*formation*.—**Cultural variety,** a variety or form of plant originating under cultivation, as distinguished from one originating under feral conditions. Such varieties are often spoken of as agricultural or horticultural varieties, according as they pertain to agricultural or horticultural plants. See *cultural*, 2, above.

culturally (kul'tūr-al-i), *adv.* In *bacteriol.*, by the use of culture-media: applied to the identification of micro-organisms according to their specific methods of growth.

In the first seven cases they failed to obtain the organisms *culturally* in one. *Med. Record*, LXIII. 237.

culture, *n.* **9.** In a map, all those features represented which are artificial or of human origin, such as meridians, roads, railroads, trails, ferries, bridges, houses, etc.—**Aridian culture.** See ★*aridian*.—**Bouillon culture,** a culture of bacteria growing in bouillon, which generally consists of some combination of beef extract, and peptone.—**Culture anthropology.** See ★*anthropology*. **Culture area.** See ★*area*. **Culture system,** a system of colonial exploitation employed in the Dutch East India colonies, especially in Java, the essential characteristic of which is obligatory service of the native population on government plantations for the profit of the government or its concessionaries. The system was introduced into Java in 1830 and was radically reformed in 1870. It has since practically disappeared. The principal commodities produced under it were coffee, sugar, and indigo. It was originally intended to take the place of the burdensome and unproductive land-tax, and was defended as an institution which would improve the condition of the peasant. In its practical operation, however, it proved to be highly iniquitous, reducing the peasant to the position of a serf.—**Direct culture,** a culture of bacteria produced by direct transfer from their natural source to an artificial medium.—**Drop culture,** a method of cultivating minute organisms, particularly fungus and alga spores, in single drops of water or nutrient solution for the purpose of observing their development under the microscope.—**Ethical culture,** the cultivation of morality and the art of right living, apart from and independently of religious beliefs and philosophical theories. Societies for ethical culture, led by lecturers, exist under this name in the principal American cities.—**Hanging-drop culture,** a minute drop culture adherent to the under surface of a cover glass.—**Intensive culture,** the production of crops under the system of intensive ★farming (which see).

As is well known, there are two great classes of farms: viz. those based upon "*intensive*" *culture*,—"high farming," as the English call it,—and those based upon "extensive" culture. *Storer*, Agriculture, II. 317.

Negative culture, inoculation of a culture medium with suspected material not followed by a growth of bacteria.—**Positive culture,** inoculation of a culture medium with blood, secretions, or suspected matter, which is followed by a growth of bacteria.—**Poured plate culture,** a method of cultivating bacteria upon solid media which enables each organism to give rise to an individual colony. The medium is liquefied and with the bacteria is poured upon a plate of glass or into a shallow dish, where it soon hardens. Also called *Petri dish culture*. See *Petri* ★*dish*. **Puncture culture.** Same as *stab* ★*culture*.—**Roll culture,** a method of culture in which a tube of nutrient gelatin is inoculated with the organism to be cultivated and then rolled on a block of ice, so as to solidify the gelatin on the walls of the tube as rapidly as possible.—**Shake culture,** a culture prepared by inoculating a tube of gelatin with the organisms under investigation, distributing these through the medium by gentle shaking, and allowing the medium to solidify again.—**Slant culture,** bacteria cultivated upon a medium which presents a slanting surface, due to the tilting of the tube before the medium hardens.—**Stab culture,** bacteria growing in some solid medium which has been inoculated by adding the necessary organisms by means of stabbing a platinum needle into its substance. **Stock culture,** a permanent culture of bacteria, kept for a considerable period, from which transfers can be made. **Streak culture,** bacteria growing upon a solid medium which has been inoculated by drawing a platinum needle, to which the proper organisms adhered, across its surface. Also called *stroke culture*.

culture-dish (kul'tūr-dish), *n.* A shallow glass dish with a loose-fitting glass cover, used for bacteriologic cultures.

culture-flask (kul'tūr-flask), *n.* Apparatus of varying shape used in growing bacteria.

Culture-flasks.

a, Chamberland's culture-flask; *b*, *c*, Pasteur's culture-flasks; *d*, Lister's culture-flask; *e*, Miquel's culture-flask; *f*, Freudenreich's culture-flask.

culture-hero (kul'tūr-hē'rō), *n.*; pl. *culture-heroes* (-rōz). In *anthrop.*, the mythical personage who gave to the world its present shape, and who gave to man his arts: a belief characteristic of many tribes and peoples in the lower stages of culture.

culture-province (kul'tūr-prov'ins), *n.* In *anthrop.*, a geographical area in which, under the influence of geographical and social environment, certain metamorphic types of man developed. *Encyc. Brit.*, XXV. 373.

culture-stock (kul'tūr-stok), *n.* A group of tribes or peoples characterized by the possession of one and the same type of culture.

They are much more likely to have been permanent than temporary habitations of the same *culture-stock* of Indians who availed themselves of rock shelters wherever the nature of the cliff permitted excavation in its walls.
17th An. Rep. Bur. Am. Ethnol., ii. 543.

culture-yeast (kul'tūr-yēst), *n.* A cultivated form of yeast, *Saccharomyces*, as distinguished from undesirable forms, (wild yeast) which produce the so-called diseases in beer.

cultur-kampf, *n.* See ★*kultur-kampf*.

cultus[2] (kul'tus), *a.* [Chinook jargon *cultus*, worthless, purposeless, vain, nothing; < Chinook *kaltas*, in vain.] Worthless. [Washington state and British Columbia.]

cultus-statue (kul'tus-stat'ū), *n.* In *classic antiq.*, a temple image or sacred statue, usually quite simple and archaic.

cum, *v.* A recent simplified (and dialectal) spelling of *come*.

cumaphyte (kū'ma-fīt), *n.* [By error or intention, a more direct representative, in the first element, of the original, the normal NL. type being **cymatophytum*, < Gr. κῦμα (κυματ-), a wave, + φυτόν, a plant.] In *phytogeog.*, an aquatic plant adapted to growing in places exposed to the surf.

The general character of *cumaphytes* is necessarily such that impact of the waves does not injure or displace them.
C. MacMillan, Minn. Bot. Stud., Bulletin IX., p. 1001.

cumaphytic (kū-ma-fit'ik), *a.* [*cumaphyte* + *-ic*.] In *bot.*, adapted to the action of the surf: as, the *cumaphytic* form assumed by marine algæ and other plants.

cumaphytism (kū'ma-fīt-izm), *n.* [*cumaphyte* + *-ism*.] The changing of the normal form of certain plants, particularly marine algæ, to abnormal forms for the purpose of better resisting the action of waves and rough water.

cumarone, *n.* Same as ★*coumarone*.

cumber-board, *n.* Same as ★*comber-board*.

cumberlandite (kum'bèr-land-it), *n.* [*Cumberland* (Cumberland Hill, R. I.) + *-ite*[2].] In *petrog.*, a name given by M. E. Wadsworth (1884) to much-altered rocks composed of abundant titaniferous magnetite, lime-soda feldspar, olivin, and secondary minerals.

cumbersum, *a.* A simplified spelling of *cumbersome*.

cumbi[2] (kum'bī), *n.* [Tamil *kumbai*.] A fetid gum-resin exuded as transparent tears on the buds and young shoots of *Gardenia gummifera* and *G. lucida*. See *dikamali* and *Gardenia*.

cumboo-millet (kum′bō-mil-et), *n.* [Tamil *kambu* + E. *millet.*] In the East Indies, the cat-tail millet, *Pennisetum spicatum.*

cumbre (köm′brā), *n.* [Sp., top, summit, < L. *cumulus*, heap: see *cumber*, *cumulus.*] A dividing ridge, or divide.

On the afternoon of the same day the party camped at a point 4600 feet above this, on the first "*cumbre*," or dividing ridge. *Geog. Jour.* (R. G. S.), XII. 615.

cum d. or **div.** An abbreviation of the New Latin *cum dividendo*, 'with the dividend': used in stock-exchange quotations.

cumengite (kum′en-jīt), *n.* [From M. *Cumenge*, a French chemist.] An oxychlorid of lead and copper from Boléo, Lower California, closely related to percylite, but supposed to have distinguishing optical characters. Also *cumengeite.*

cumfit, *n.* A simplified spelling of *comfit.*

cumfortabl, *a.* A simplified spelling of *comfortable.*

cumforter, *n.* A simplified spelling of *comforter.*

Cumidæ (kū′mi-dē), *n. pl.* [NL., < *Cuma* + *-idæ.*] A family of sessile-eyed crustaceans typified by the genus *Cuma.*

cumidic (ku-mid′ik), *a.* [*cum(in)* + *-id* + *-ic.*] Used in *cumidic acid*, a name given to two bibasic acids: *a-cumidic acid*, $C_6H_2(CH_3)_2(CO_2H)_2$ (1:3:4:6), melts above 320° C. and is also called *s-dimethylisophthalic acid;* and *β-cumidic acid*, $C_6H_2(CH_3)_2(CO_2H)_2$ (1:4:2:5), sublimes without melting and is called *s-dimethylterephthalic acid.*

cumidine (ku′mi-din), *n.* [*cumid-ic* + *-ine*[2].] A base, $C_6H_4(NH_2)CH(CH_3)_2$ (1:4), prepared by the reduction of p-nitrocumene. It boils at 225° C. and is also called *p-aminoisopropylbenzene.*—**Cumidine ponceau.** See ★*ponceau*[1], *n.*—**Cumidine red.** See ★*red*[1], *n.*

cuminic (ku-min′ik), *a.* Derived from cumin. **Cuminic acid.** Same as *cumic acid.*

cuminil (ku′mi-nil), *n.* [*cumin* + *-il.*] A 1,2-diketone, $C_3H_7C_6H_4COCO\ C_6H_4C_3H_7$ (1:4:4′:1′), prepared by the oxidation of cuminoïn. It crystallizes in prisms which melt at 84° C.

cuminilic (ku-mi-nil′ik), *a.* [*cuminil* + *-ic.*] Derived from cuminil.—**Cuminilic acid.** A crystalline acid, $[(CH_3)_2CHC_6H_4]_2C(OH)CO_2H$, prepared by fusing cuminil with potassium hydroxid. It melts at 120° C.

cuminoïn (ku-min′ō-in), *n.* [*cumin* (L. *cuminum*) + *-in.*] A white crystalline ketone alcohol, $C_3H_7C_6H_4C(OH)COC_6H_4C_3H_7$, formed when cuminic aldehyde is boiled with alcoholic potassium cyanide. It melts at 101° C.

cumliness, *n.* A simplified spelling of *comeliness.*

cumpanion, *n.* and *a.* A simplified spelling of *companion.*

cumpany, *n.* A simplified spelling of *company.*

cumpass, *n.* and *v. t.* A simplified spelling of *compass.*

cumular (kū′mū-lär), *a.* [NL. *cumularis*, < L. *cumulus*, a heap: see *cumulus.*] Having the form of a heap; heaped; piled up; cumulous. —**Cumular cloud,** a cumulus cloud.

cumulate (kū′mū-lāt), *a.* Heaped or piled up; as, a *cumulate* sentence or subject.

Short sentences are prevalent in our language, as long ones are in the German. In all things we incline to curtness. . . . But we can use the *cumulate* construction when needed. *J. Earle*, Philol. Eng. Tongue, § 655.

Cumulative jurisdiction, in *Scotch law*, same as *concurrent jurisdiction* (which see, under *concurrent*, *a.*).—**Cumulative temperature.** See ★*temperature.*

cumulescent (kū-mū-les′ent), *a.* [*cumulus* + *-escent.*] Assuming the characteristics of the cumulus form of cloud; piling up; growing larger.

cumulitic (kū-mū-lit′ik), *a.* [*cumulus* + *-ite*[2] + *-ic.*] Having an appearance of being gathered into heaps, as an agglomerated mass of micro-particles in a rock. See *cumulite.*

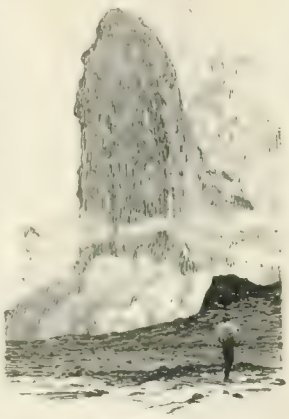
It is filled with minute, reddish, non-polarizing grains, agglomerated into semi-opaque, often spherical, balls, which give the mass a "*cumulitic*" appearance. *Amer. Geol.*, Feb., 1905, p. 98.

cumulo-cirrus (kū″mū-lō-sir′us), *n.*; pl. *cumulo-cirri* (-ī). A high cloud belonging to the cirrus group, but having the cumulus structure; an alto-cumulus. See ★*cloud.*

cumulo-nimbus (kū″mū-lō-nim′bus), *n.*; pl. *cumulo-nimbi* (-ī). Cumulus developing toward the formation of rain, but from which little rain has yet fallen. See ★*cloud.*

Cumulous deposits, accumulations of vegetation in water, where it does not suffer complete decay, as in marshes where peat is formed. *Van Hise*, U. S. Geol. Surv., Monograph 47, p. 471.

cumulo-volcano (kū″mū-lō-vol-kā′nō), *n.* A name suggested by Lacroix, in connection with studies of Mont Pelé, in Martinique, for steep cones or columns built up of masses of viscous or relatively infusible lavas which have been forced out from below the earth's surface and have been heaped up without moving far, if at all, from the vent.



Cumulo-volcano
Formed at Mont Pelé, Martinique, in 1903.

Examination through a telescope convinced Lacroix that this top was composed of "solid" rock, not débris, and led him to advance the idea that Pelé now was to be classed as a *cumulo-volcano*, a theory which his subsequent observations and those of his colleague Giraud, and of Sapper, Heilprin and the author have fully confirmed. *Amer. Jour. Sci.*, Oct., 1903, p. 272.

cumulus, *n.*—**Turreted cumulus,** a large cumulus cloud from whose sides rise special masses suggesting the turrets of a fortress. See ★*cloud.*

Cu. N. An abbreviation of *cumulo-nimbus.*

cunctatious (kungk-tā′shus), *a.* [*cunctati(on)* + *-ous.*] Prone to delay. *Carlyle.*

cunctatory (kungk′tā-tō-ri), *a.* [*cunctat(ion)* + *-ory.*] Disposed to linger or delay. *Carlyle.*

cundy (kun′di), *n.* [Also *cundie*, *condy*, *cundiff*, *cundith*, etc., < OF. *conduit;* see *conduit.*] **1.** A covered drain; a conduit.—**2.** In *long-wall mining*, the unfilled space between pack-walls. —**3.** In steep mine-workings, a chute down which coal or other mineral slides to a passage below.—**4.** A small roadway or air-course. [Scotch and North. Eng. in all uses.]

cuneiformist (kū″nē-i-fôr′mist), *n.* [*cuneiform* + *-ist.*] One who is versed in or has made a special study of cuneiform writing or writings. *N. Y. Tribune*, Oct. 26, 1900.

Cunoniaceæ (kū″nō-ni-ā′sē-ē), *n. pl.* [NL. (Robert Brown, 1814), < *Cunonia* + *-aceæ.*] A family of dicotyledonous, choripetalous plants of the order *Rosales*, typified by the genus *Cunonia*, (which see), and differing chiefly from the *Saxifragaceæ*, in which it was formerly included, by having the seeds in two rows in the carpels. There are 20 genera and about 123 species, 70 of which belong to *Weinmannia*, woody plants with stipuled, opposite, or whorled leaves and small flowers in clusters or compound racemes, chiefly natives of Australasia, but also found in the Pacific and other islands and in South America. See *Platylophus*, 3, *tile-seed*, and *Weinmannia.*

cuntry, *n.* A simplified spelling of *country.*

cup, *n.* **Anathema cup,** a large silver cup at Pembroke College, Cambridge, bearing the hall-mark of 1481; and presented by the bishop of Winchester: so called from the inscription engraved on its base, QUI ALIENAVERIT ANATHEMA SIT, 'cursed be the man who sells (this cup).' —**Antimonial cup.** See ★*antimonial.*—**Cup and gutter system,** the system of turpentine-gathering by the use of earthen cups and metal gutters.—**Dorsal cup,** in crinoids, the part of the theca below the origins of the free arms.—**Dragon-boat cup,** a small porcelain wine-cup made by Chinese potters and decorated with paintings of racing-boats in the dragon festival.—**Elijah's cup,** a cup used in the Passover service and dedicated to the prophet Elijah, whose name is synonymous with redemption. As the Passover service commemorates the Exodus and symbolizes the final emancipation at the Great Day, a special, large cup is filled with wine and placed in the center of the table at the Passover service, ready for the Prophet, who, according to tradition, will suddenly make his appearance on a Passover eve and announce the coming of the Messiah.—**Eve's cup.** See ★*Eve.*—**Grape-trellis cup,** a small wine-cup of Chinese porcelain bearing paintings of grape vines rising from frames.—**Jugal cup,** in *crotch*, the cup-shaped depression, or socket for the articular face of the jugal, found on the external face of the distal end of the quadrate bone.—**Keyser cup,** a tall cup with a cover, made in China for exportation and painted with European designs.

Cup and Gutter System of Turpentine-gathering.

The tall cups with covers called *Keyser cups*, which are illustrated in Sir Henry Thompson's Catalogue, and also by Jacquemart, are painted with a broad panel containing St. Louis of France and his queen on a canopied throne, and narrower alternate panels with kneeling figures and birds. *S. W. Bushell*, Oriental Ceramic Art, p. 612.

Vaphio cups, two gold vases about 0.m.08 high, having each a single handle, found at Vaphio, in Greece. They are decorated with sculpture in relief, representing bulls and herdsmen. They are considered to be the finest examples of Mycenæan or prehistoric Greek work.

Decoration of the Vaphio Cups.

cup, *v.* **II.** *intrans.* **4.** To fit concavely over a contiguous leaf. See ★*cupping*, 4.

cup-and-ring (kup″and-ring′), *n.* A peculiar type of markings on rocks, stone monuments, and buildings, consisting of cups and rings, and of doubtful significance.

Rock inscriptions, Archaic. An account of the *cup-and-ring* marking on the sculptural stones of the old and new worlds. London, 1890. 8vo. *Smithsonian Report.*, 1890, p. 597.

cupang (kö′päng), *n.* See ★*kupang.*

cupay (kö-pī′), *n.* [Also cupey; of S. Amer. origin.] In the West Indies and South America, a parasitic shrub or tree of the gamboge family, *Clusia rosea.* Its wood is reddish and is used only as fuel. See ★*aralie* and *Clusia.*

Cupay (*Clusia rosea*).

cup-break (kup′brāk), *n.* A cup-shaped fracture. Some metals, when broken in a testing-machine, show a cup-break, the particles on the edges stretching more at the moment of rupture than those nearer the center.

cup-cake (kup′kāk), *n.* A plain cake, usually baked in small tins: so named from the fact that the original directions gave the proportions of the ingredients as measured by cupfuls.

cup-chuck (kup′chuk), *n.* Same as *bell-chuck.*

cup-day (kup′dā), *n.* In *racing*, the day on which a race is run for a cup.

cup-drum (kup′drum), *n.* A chain-sheave having recesses to receive the alternate individual links of the chain which passes over it.

cupel, *n.* 2. The hearth of a cupellation furnace in which silver is separated from lead; a test. See *test*[1], 2.

cupel-furnace (kū′pel-fėr″nās), *n.* A form of assay furnace.

cup-escutcheon (kup′es-kuch″on), *n.* A door-plate having a cup-like recess containing the keyhole, knob, and a door-pull or finger-hole: used with sliding doors.

cupesid (kū-pes′id), *a.* and *n.* Of or belonging to the Coleopterous family *Cupesidæ.*

cupey (kö-pā′), *n.* Same as ★*cupay.*

cup-flower (kup′flou″ėr), *n.* A twining annual herbaceous plant, *Scyphanthus elegans*, belonging to the family *Loasaceæ*, but without stinging hairs. It has opposite, twice-pinnatifid leaves, and yellow, cup-shaped, axillary flowers with ten petals, the alternate ones being somewhat spurred at the base and larger than the others, which are three-awned at the tip. It is a native of Chile.

cup-fungus (kup′fung″gus), *n.*; pl. *cup-fungi* (fun″jī). Any ediscomycetous fungus, especially one of those which have the ascomata distinctly cup-shaped. Also *cup-mushroom.*

cup-headed (kup′hed-ed), *a.* Having a cup-shaped head: said of a railroad spike so shaped, particularly in English practice, where the rails are supported in chairs: in the United States, a socket-spike.

cupiá (kö-pi-ä′), *n.* [Tupi *cupiá.*] An undetermined yellow ant found in Brazil, where it is or was eaten, according to Piso and Humboldt, by the Marivatano and Margueritare Indians.

Cupid's-flower (kū′pidz-flou″ėr), *n.* The cypress-vine, *Quamoclit Quamoclit.*

cuplet, *n.* A simplified spelling of *couplet.*

cupling, *n.* A simplified spelling of *coupling.*

cup-marked (kup′märkt), *a.* In *archæol.*, marked with cup-like depressions, as cup-stones.

> The significance of inscribed and *cup-marked* stones, dolmens, and other early monuments.
> *Geog. Jour.* (R. G. S.), XI. 681.

cup-marking (kup′mär″king), *n.* A circular cavity, with or without a surrounding ring, found as a peculiar form of archaic sculptured marking in Scandinavia, Scotland, America, and even in early churches in Prussia. See ★*cup-and-ring.*

cupped, *a.* 2. Lodged in a cup or depression of the ground, as a golf-ball.

cupper, *n.* 3. A device for making cup-leathers, which are used for packing pumps and hydraulic presses. It consists of a die of the size of the outside of the cup to be made and a plug or plunger of the size of the inside of the cup. A disk of leather of the proper size is cut, is wet and stretched over the plug, and is pushed into the die and allowed to dry and set.

cupping, *n.* 4. The taking of a concave form, as tobacco leaves do in drying, when placed face to back. Cupping is prevented by stringing the leaves face to face and back to back.

cupping-pump (kup′ing-pump), *n.* In *surg.*, an air-pump used for drycupping.

cup-plate (kup′plāt), *n.* A small plate of glass or china, three or four inches in diameter, formerly used to hold a teacup from which the tea had been poured into the saucer to cool.

cuppy[2] (kup′i), *a.* 1. Cup-like; concave: as, *cuppy* flowers.—2. Full of small cup-like cavities. See *cup*, *n.*, 6 (*b*). [Golfers' cant.]—**Cuppy lie,** in *golf*, the position of a ball when it lies in a depression or shallow hole in the course. *W. J. Travis*, Practical Golf, p. 46.

cuprammonia (kū-pra-mō′ni-ä), *n.* [NL., < *cupr-um*, copper, + NL. *ammonia.*] A solution of cupric hydroxid in aqueous ammonia; Schweitzer's reagent. A substance resembling horn or celluloid may be obtained by the action of cuprammonia on cellulose which, with its original vegetable structure (as, for instance, cotton fiber), is thus dissolved and then recovered in amorphous condition by evaporation of the solution and the removal of the copper by a dilute acid.

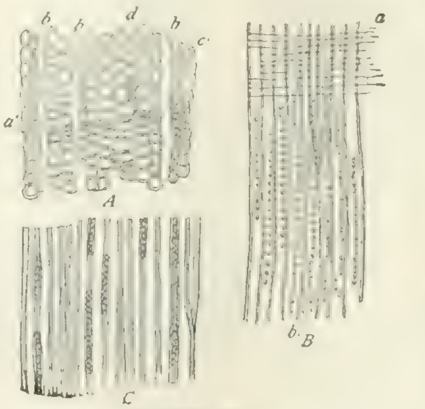
cuprammonium (kū-prä-mō′ni-um), *n.* [NL., < L. *cupr-um*, copper, + *ammonia* + *-um.*] In *chem.*, the compound radical in certain salts obtained by the action of ammonia upon the ordinary salts of copper.

cupreol (kū′prē-ol), *n.* [*cuprea* (see def.) + -ol.] A complex alcohol, $C_{20}H_{34}O + H_2O$, found in cuprea-bark, *Cinchona officinalis.* It crystallizes in needles or leaflets which melt at 140° C.

Cupreous pyrites. See ★*pyrites.*

cupressineous (kū-pre-sin′ē-us), *a.* Belonging or pertaining to the tribe *Cupressineæ* or cypress family; cypress-like.

Cupressinoxylon (kū-pres-i-nok′si-lon), *n.* [NL. (Göppert, 1850), < L. *cupressinus*, of cypress, + Gr. ξύλον, wood.] A genus of fossil



Cupressinoxylon.

A and B, *Cupressinoxylon* [illegible]; *A*, transverse section through annual ring; *a*, cells of fall wood; *b*, *b*, *b*, medullary rays; *c*, very large intercellular space. *B*, radial section; *a*, medullary ray; *b*, tracheid with two rows of bordered pits. *C*, *Cupressinoxylon Columbianum*, tangential section. All magnified about 33 diameters. (From "Bull. 56 of the U. S. Geol. Surv.")

coniferous plants based entirely on the internal structure of the wood which has not been connected with other parts. It agrees in a general way with that of the cypress family, but more closely still with that of *Sequoia* in the tribe *Taxodieæ*. The leading character is the circular punctations of the tracheids shown in radial section, which are always in a single row. The genus is chiefly Upper Mesozoic, being most common in the Lower Cretaceous. Though found in many parts of the world, it is perhaps most abundant in the United States, and constitutes most of the fossil wood found in such great quantities in the Potomac formation of Virginia and Maryland.

cupriaseptol (kū″pri-a-sep′tol), *n.* [*cupri(c)* + *asept(ic)* + *-ol.*] A light-green crystalline compound, $Cu(C_6H_4(OH)SO_3),H_2O$, obtained by neutralizing phenol-sulphuric acid with cupric oxid and purifying; copper sulphocarbolate: used as a hemostatic.

Cupric reduction, the reduction of the state of cuprous oxid of an alkaline solution of cupric tartrate (Fehling's solution), which serves as a test for and the means of quantitatively determining certain kinds of sugar, as glucose.

cuprobismutite (kū-prō-biz′mut-īt), *n.* [L. *cuprum*, copper, + E. *bismut(h)* + *-ite*[2].] A sulphid of bismuth and copper occurring in groups of bluish black prismatic crystals.

cuprodescloizite (kū″prō-dā-cloi′zīt), *n.* [L. *cuprum*, copper, + *descloizite.*] A variety of descloizite containing copper; it occurs in green to brown crusts or reniform masses.

cupro-iodargyrite (kū″prō-ī-ō-där′ji-rīt), *n.* [L. *cuprum*, copper, + *iod(ide)* + Gr. ἄργυρος, silver, + *-ite*[2].] A rare mineral consisting of the iodides of copper and silver; it is found in Chile.

cuproplumbite (kū-prō-plum′bīt), *n.* [L. *cuprum*, copper, + *plumbum*, lead, + *-ite*[2].] A sulphid of copper and lead intermediate in composition between galena and chalcocite: first described from Chile, but also observed elsewhere, for example, in Montana.

cuprotungstite (kū-prō-tung′stīt), *n.* [L. *cuprum*, copper, + *tungst(en)* + *-ite*[2].] A tungstate of copper, or of copper and calcium ($(Cu,Ca)WO_4$), occurring in crystalline granular masses of a green color.

cuprum (kū′prum), *n.* [LL. *cuprum*: see *copper.*] In *chem.*, the metal copper.

cup-shake (kup′shāk), *n.* See *shake*, *n.*, 7.

cup-stone (kup′stōn), *n.* In *archæol.*, a stone with cup-like depressions made in its surface. Such cups are found in Europe and Asia, on natural rocks as well as on prehistoric monuments and on churches. Cup-stones occur also in America. See ★*cup-marking.*

cur. An abbreviation (*a*) of *currency;* (*b*) of *current.*

curage, *n.* A simplified spelling of *courage.*

curageous, *a.* A simplified spelling of *courageous.*

curangin (kū-ran′gin), *n.* [*Curanga* + *-in*[2].] An amorphous, bitter glucoside, $C_{48}H_{77}O_{20}$ (?), found in *Picria amara* (*Curanga amara* of Vahl). It melts at 172° C.

curare, *n.* Same as *curari.*

curassow, *n.*—**Mountain curassow,** *Oreophasis derbianus*, a species confined to the forest in the vicinity of the Volcan de Fuego, Guatemala. Also called *mountain pheasant.*

curator, *n.*—**Curator ad hoc** ('guardian for this'), a guardian appointed for one special purpose only.—**Curator bonis.** (*a*) In *civil law*, an officer appointed to take care of property. (*b*) In *Scotch law*, one appointed as guardian for minors, incompetents, etc.

curatorial (kū-ra-tō′ri-al), *a.* [LL. *curatorius* (< *curator*, curator) + *-ial.*] Of or pertaining to a curator or his office or duties.

> The purely *curatorial* part of the work.
> *Gunther*, Cat. Birds Brit. Mus., XX. v.

curatorium (kū-rā-tō′ri-um), *n.* [NL. *curatorium*, neut. of LL. *curatorius*, adj. < L. *curator*, curator.] A board or college of curators, forming the governing body of a German university or Imperial institution.

> The function of the *curatorium* is the appointment of the officials and the general management of the institution. *H. S. Carhart*, in Smithsonian Rep., 1900, p. 405.

curatory[2], *n.* [NL. *curatorium.*] Same as ★*curatorium.*

curb, *n.*[2], 4. (*i*) Same as *crib*[1], 11.—**Curb market,** business in stocks, bonds, etc., transacted on the curb, that is, on the street, or not within a regularly organized exchange; specifically, the business carried on by large groups of brokers, not members of the exchange, near the New York stock-exchange: as, prices on the *curb market.*

curb-hook (kėrb′hůk), *n.* A snap-hook fitted for the curb-straps of a bridle.

curbing (kėrb′ing), *n.* 1. The act of checking or restraining.—2. Material prepared for curb-stones either roughly worked to dimension, or finished ready to set.

curcas (kėr′kas), *n.* [NL. *curcas* (specific name), Sp. *curcaso;* of S. Amer. origin.] The seed of certain *Euphorbiaceæ*, as *Jatropha Curcas*, found in South America. Its oil has purging properties.

curculionideous (kėr-kū″li-ō-nid′ē-us), *a.* Belonging to the coleopterous family *Curculionidæ*, the weevils.

curculionist (kėr-kū′li-on-ist), *n.* [L. *curculio(n-)*, curculio, + *-ist.*] One versed in the study of curculios.

curcuma, *n.*—**Ohio curcuma,** the goldenseal, *Hydrastis Canadensis.*

curcumein (kėr-kū′mē-in), *n.* Same as ★*curcumin*, 2.

curcumin, *n.* 2. A name given to several yellow acid coal-tar colors, as, fast yellow, brilliant yellow, and citronin. Also *curcumein.*

curd-knife (kėrd′nīf), *n.* A series of knife-blades placed side by side in a metal frame fitted with a handle, used in slicing curd in cheese-making; a curd-cutter.

curd-soap (kėrd-sōp′), *n.* Soap which has been coagulated or granulated by the addition of common salt to the original solution obtained by boiling together fat and an alkaline lye.

cure, *n.* 6. That which is cured (see *cure*, *v.* 4); a product preserved by drying, salting, etc.; a catch of fish so treated.

> The fish caught round the Newfoundland coast are generally of good quality, but the Labrador *cure*, owing to the short season, is often very inferior.
> *Encyc. Brit.*, XXXI. 143.

Chlorid-of-gold cure. See ★*gold-cure.*—**Economic cure,** cure of a disease, not necessarily absolute, but to the extent that the patient regains his wage-earning capacity. *Lancet*, June 18, 1904, p. 1753.—**Open-air cure.** See ★*open-air.*—**Terrain cure,** treatment of disease by means of graduated exercises and measured mountain climbing, combined usually with strict regulation of the diet.

cure-all, *n.* 2. The name of various plants having real or supposed medicinal virtues: in most cases a translation like *heal-all* and *all-heal*, but applied specifically to the water avens, *Geum rivale*, and the garden or lemon balm, *Melissa officinalis.* The evening primrose, *Œnothera biennis*, is called *king's cure-all.*

cure-master (kūr′mas″tėr), *n.* In *fishing*, one who superintends the curing of fish.

curf (kurf), *n.* [Another spelling of *kerf*[2], a cutting, layer, etc.] On the Isle of Portland, a calcareous rock which, considered geologically, is one of the members of the Portlandian division of the Jurassic series. [Local. Eng.]

curialist (kū′ri-al-ist), *n.* [*curial* + *-ist.*] An officer or dignitary of the Roman Curia or papal court; also, one who advocates or supports the papal system.

curibali (kö-rē-bä′lē), *n.* Same as *juribali.*

curiboco (kö′ri-bō″kō), *n.* [Braz.] In Brazil, a person of mixed Indian and negro descent.

curine (kūr′in), *n.* [*cur(ari)* + *-ine*[2].] A crystalline alkaloid, $C_{18}H_{19}O_3N_7$, found in curari. It melts at 212° C. It tastes at first sweet then bitter and acts by paralyzing the nervous system.

curist (ku′rist), *n.* One who cures or who professes to cure disease: usually employed in a somewhat contemptuous sense and in composition as, mind-*curist*, sure-*curist*, etc. (really formed from *mind-cure* + *-ist*, etc.).

curl, *n.*, **4.** (*b*) A disease of potatoes in which the shoots become curled up and deformed. It is attributed to chlorosis. (*c*) A disease of other plants in which the leaves curl up.—**Leaf-curl.** See ★*leaf-curl*.

curl, *v.* **I.** *trans.* **4.** In *cricket*, to cause (the ball) to curve in the air: said of the bowler.
II. *intrans.* **5.** In *cricket*, to curve in the air: said of the ball.

curl-cloth (kėrl′klôth), *n.* A kind of woolen fabric with a curly face.

curld, *pp.* A simplified spelling of ★*curled*.

curled (kėrld), *p. a.* **1.** Having the form of a curl; brought into curls.—**2.** Having a winding grain: said of wood, as *curled* maple. See *maple*.—**3.** In *bot.*: (*a*) much folded or crumpled, as the leaves of *Cichorium Endivia*. (*b*) Affected by curl. See *curl*, *n.*, 4 (*a*), ★(*b*), ★(*c*).

curling[2] (kėr′ling), *n.* **1.** The act of forming into curls; taking the form of curls.—**2.** Same as *curl*, *n.*, 4 (*a*), ★(*b*), ★(*c*).—**3.** A process for giving a curl to the long nap on the face of some woolen fabrics. It is done by passing the fabric beneath a plate fitted with a brush which is given a rotating or otherwise curving motion.
4. The faulty detaching of cotton from the comb in a combing-machine.

curlock (kėr′lok), *n.* A dialectal form of *charlock*.

curly, *a.* **2.** Affected with curl. See *curl*, *n.*, 4 (*a*), ★(*b*), ★(*c*).—**Curly top**, a disease of unknown origin which affects the sugar-beet. The leaves become much curled and the roots hairy, tough, and fibrous.

> Sugar beets in New York, Ohio, and Michigan suffered severely from leaf spot. In Utah, Colorado, Nebraska, and to a slight extent in the Middle States the disease known as "*curly top*" was prevalent and injurious.
> *Yearbook U. S. Dept. Agr.*, 1901, p. 671.

curly-grass (kėr′li-gràs″), *n.* A fern of the genus *Schizæa*: so called from the curly thread-like segments of the sterile fronds. See cut under *Schizæa*.—**Curly-grass family**, the fern family *Schizæaceæ* (which see).

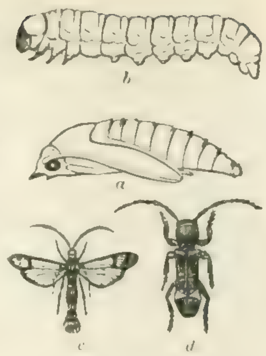
curly-head (kėr′li-hed″), *n.* The erect silky clematis, *Clematis ochroleuca*, an American plant which ranges from Pennsylvania to Georgia. It is an erect herb a foot or more high, covered with silky hairs, having opposite sessile, ovate

Curly head (*Clematis ochroleuca*).
(From Britton and Brown's "Illustrated Flora of the Northern States and Canada.")

leaves and large solitary thick and leathery greenish-white flowers nodding at the summit of the stem; the flowers are converted into heads of fruit one to two inches in diameter, formed of a mass of long, curled, plumose, persistent styles of a yellowish-brown color, suggesting the name.

currant[2], *n.* **Black currant mite.** See ★*mite*1.—**Cane-blight of currant.** See ★*cane-blight*.—**Currant bark-louse.** See ★*bark-louse*. **Currant endropia**, an American geometrid moth, *Procycla armataria*, whose larva feeds on the foliage of the currant in the northeastern United States. **Currant plant-louse, saw-fly, scale.** See ★*plant-louse*, etc.—**Native currant** of Australia. Same as ★*blueberry-tree*. **Wild currant**, any currant in its native state; also, other plants with currant-like fruit, as *Amelanchier Botryapium* (Dismal Swamp region), and *Berberis trifoliolata* (Texas). The fruit of the latter is used for tarts, jellies, etc.

currant-borer, *n.* (*b*) The larva of a cosmopolitan moth, *Sesia tipuliformis*, probably introduced into the United States from Europe. (*c*) An American cerambycid beetle, *Psenocerus supernotatus*. Also called *long-horned currant-borer*.



Currant-borer.
[illegible] twice natural size.

currant-bug (kur′ant-bug), *n.*—**Yellow-lined currant-bug.** Same as *four-lined* ★*leaf-bug*.

currant-fly (kur′ant-flī), *n.* An American trypetid fly, *Epochra canadensis*, which attacks the fruit of white and red currants, its larva feeding within the fruit which prematurely ripens, decays, and falls.

currant-leaf (kur′ant-lēf″), *n.* The bishop's-cap or miterwort, *Mitella diphylla*: so called from some resemblance of the leaves to those of the currant.

currant-moth, *n.*—**Pepper-and-salt currant-moth**, an American geometrid moth, *Lycia cognataria*, with pepper-and-salt markings, whose larva feeds on the foliage of the currant and other plants.

currency, *n.*—**Divisional currency**, currency consisting of the small or fractional pieces.

current[1], *n.*—**After currents**, electric currents in muscular tissue produced after the arrest of a galvanic current. **Alternating current.** See ★*alternating*. **Average current**, in *elect.*, the average intensity of an alternating current; the square root of the mean square of the current value. The *average current* is also sometimes defined as that value which is equal to the value of the equivalent continuous current.—**Axial current.** See ★*axial*. **Cellulifugal current.** See ★*cellulifugal*.—**Cellulipetal current.** See ★*cellulipetal*.—**Constant current**, a direct or alternating current of constant mean intensity.—**Continuous current**, a direct current of constant or uniform intensity.—**Current of injury**, a current set up as the result of an injury to a muscle or nerve. The injured surface becomes electronegative, as compared with the intact substance. Also known as *Hermann's demarcation current*.—**Dielectric current.** Same as *displacement* ★*current*. **Direct current**, an electric current which always flows in the same direction.—**Discharging current**, the current derived from discharging a charged storage battery or condenser.—**Displacement current**, the condition of electric stress in an insulating material or dielectric produced by an alternating electromotive force acting thereon.—**Eddy currents**, in *elect.*, induced currents flowing in closed circuits within the mass of a conductor placed in a fluctuating magnetic field or moving through a field so as to cut lines of force. Also called *Foucault currents*.—**Energy current**, an alternating current or component of current in phase with the electromotive force or voltage.—**Foucault current**, in *elect.*, same as *eddy* ★*current*.—**Franklinic current**, a current produced by an electrostatic machine.—**Guinea current**, a current in the Atlantic ocean which flows eastward along the Guinea coast; the counter-current of the equatorial Atlantic. **Hermann's demarcation current.** Same as ★*current of injury*. **Idle current**, in *elect.*, a term formerly used for a wattless current.—**Leakage current of transformer**, in *elect.*, a term formerly used for the exciting current of transformer, that is, a current passing through the primary circuit at open circuit of the secondary coils.—**Local current**, in *elect.*, a current circulating within any small portion of an electric circuit and not traversing the circuit as a whole. Currents flowing within a voltaic cell, for example, and not entering the external circuits, are local currents.—**Magnetic current**, the magnetic flux. See *magnetic* ★*circuit*. **Molecular current**, in *phys.*, a term sometimes employed to denote that electric current flowing around each molecule of iron which was assumed by Ampère in a theory of magnetism.—**Molecular theory of vital currents**, the theory that nerves and muscles are composed of electromotive molecules serially connected.—**Monsoon current**, a current of the equatorial oceans, particularly of the Indian ocean, caused by the monsoon winds.—**Ore currents**, in *geol.*, subterranean waters which are believed to have brought the ores in solution to form ore-deposits.—**Oscillating current**, in *elect.*, a periodically reversing current in which the successive half-waves are of equal duration but gradually decrease in intensity. See ★*alternating*.—**Planktonic current.** See ★*planktonic*.—**Polyphase current**, a system combining two or more alternating currents differing in phase.—**Poncelet current**, a current of water having a dynamic energy of 100 kilogrammeters per second.—**Power current.** Same as *energy* ★*current*.—**Pulsating current**, a current which varies periodically in intensity, so that it always or generally flows in the same direction; a pulsatory current.—**Reactive current.** Same as *wattless* ★*current*.—**Rotary current**, a term occasionally used for a polyphase, especially a three-phase, current.—**Surface current**, a current of small depth at the surface of a lake or ocean.—**Terrestrial currents**, electrical currents traversing the crust of the earth; earth-currents.—**Tesla current**, a term sometimes used for *oscillating current*. See ★*current*.—**Upper currents**, the motions of the atmosphere as shown by the clouds or by balloons at great elevations. According to Broun's rules, deduced in 1845 from observations at Makerstown, Scotland, the successive layers one above the other move in directions successively deflected more and more to the right of the lower wind. This law was also deduced independently by Clement Ley for southern England (1872), by Abbe for American balloon voyages (1871), and for clouds throughout the United States (1872), and is sometimes known by their names.—**Wattless current**, an alternating current, or component of current displaced in phase from the electromotive force by a quarter period.

current-bedding (kur′ent-bed″ing), *n.* Cross-bedding developed in deposits made by a strong current over a sandy bottom. *Dana.*

current-bottle (kur′ent-bot″l), *n.* A sealed bottle, usually one of a number, containing a dated writing asking for its return when found: cast into the sea by investigators of the direction and velocity of ocean currents. *Geog. Jour.* (R. G. S.), XVI. 374.

current-collector (kur′ent-ko-lek″tor), *n.* In *elect.*, any device, as a sliding brush or a trolley-wheel, for conveying current from a fixed to a moving portion of the circuit of an electric machine, motor, generator, or system; or vice versa.

current-density (kur′ent-den″si-ti), *n.* In *elect.*, the ratio of the current flowing to the cross-sectional area of the conductor, taken at right angles to the lines of flow. It is expressed in c. g. s. units of current per square centimeter, or in amperes per square centimeter, or sometimes in amperes per circular mil.

current-gage (kur′ent-gāj), *n.* An apparatus designed to measure the flow of liquids through channels; a current-meter.

current-mark (kur′ent-märk), *n.* In *geol.*, the undulating surface of sands that are drifted by a current: contrasted with a *ripple-mark* which is formed by small waves. *Geog. Jour.* (R. G. S.), XVIII. 196.

curricular (ku-rik′ū-lär), *a.* [NL. **curricularis*, < L. *curriculum*, a course.] **1.** Of or pertaining to a carriage course or carriage-driving.—**2.** Of or pertaining to a curriculum or course of study. See ★*curricularization*.

curricularization (ku-rik″ū-lär-i-zā′shon), *n.* [*curricular* + *-ize* + *-ation*.] Subjection to a hard-and-fast school or college curriculum.

> Youth who want somewhere room for individuality, if not for distinction, and resist *curricularization* and, as the French call it, the canalization of knowledge.
> *G. S. Hall*, Adolescence, II. 509.

currycomb (kur′i-kōm), *v. t.* To curry, as a horse.

Cursive epilepsy. See ★*epilepsy*.

cursor, *n.*—**Radial cursor**, an addition to the slide-rule, devised by Lanchester.

> Lanchester's *radial cursor*, which makes thermodynamical calculations with γ-wise exponents almost as direct as plain multiplications, and far more convenient than with the log. log. line. *Nature*, July 24, 1902, p. 293.

cursus, *n.* **2.** A course of study.

curtail (kėr′tāl), *n.* In *arch.*, a member shaped like a volute or scroll, especially in stair-building, as in the lower termination of a hand-rail or the projection of the lowest step of a flight. See *curtail-step*.

curtain, *n.* **9.** In *hydraul. engin.*, a woven fabric of brushwood or withes, such as branches of willows, placed in a stream to retard the current and permit the deposition of silt, or to compel scour and remove it.—**10.** A vertical fold of the mantle within the margins of the valves of certain pelecypods (the pectens).—**11.** In *arch.*, a wall which serves as an inclosure rather than as a support. Thus the wall beneath a large window, as in a church, or that between two buttresses which carry the vault and roof without its assistance, is a curtain.—**Asbestos curtain.** See ★*asbestos*.—**Auroral curtain**, an arrangement of nearly vertical beams of auroral light resembling the folds of a curtain, or drapery, and partly obscuring the light of the stars beyond. The foldings are usually in motion horizontally, or changing so as to give the appearance of motion, and show that the sheet of light is apparently a boundary-surface between moving masses of air.

curtain-holder (kėr′tān-hōl″dėr), *n.* A mechanical device for holding a car window-curtain in any desired position.—**Magnetic curtain-holder**, a curtain-holder consisting of bar-magnets fastened to the lower edge of the shade and bearing against soft iron guides in the window-casing. The shade is held in place by magnetic attraction. A slight pull readily releases the magnets, and when again at rest they hold the curtain in place.

curtain-paper (kėr′tān-pā″pėr), *n.* A kind of tinted and ornamented paper of close texture, used to some extent in the United States for roller-blinds or window-shades.

curtain-raiser (kėr′tān-rā″zėr), *n.* A short opening piece acted before the principal play of the evening. [Theatrical slang.]

Curtate expectation of life. See ★*expectation*.

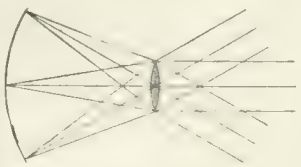
curteous, curtesy, curtezan. Simplified spellings of *courteous*, *courtesy*, *courtezan*.

curupay (kö-rö-pī′), *n.* [Guarani *curupai*.] The name in Paraguay and Argentina of *Stachychrysum Cebil* (*Piptadenia Cebil* of Grisebach), a large tree of the mimosa family.

It yields a strong and easily worked dark-red timber, used for furniture and house construction, and a reddish gum resembling gum arabic. The bark contains from 19 to 7 per cent. of tannin, and is much used locally for tanning hides in the manufacture of sole-leather. Also called *cebil* and *cebil colorado*.

curv, *a.*, *n.*, and *v.* A simplified spelling of *curve*.

curvature, *n.* 4. In *projective geom.*, susceptibility of being cut in two different points by a straight, independently of whether the construct possessing this property has any point at which two straights inclined to one another and lying in this construct might meet. In metric geometry curvature is often used for the measure of curvature or the reciprocal of the radius of curvature.—**Axis of curvature,** the intersection of consecutive normal planes of a skew curve.—**Curvature of field,** in *photog.*, the imaginary concave surface upon which the rays of light are brought to a focus. Corrections for this are made in photographic and other objectives in order that the image may appear sharply defined at all points of the plane of the plate or film. **Curvature of space.** See ★*space*.—**Sachs's curvature,** the difference in the growth of the two sides of a root, causing it to curve. *Wettstein.*—**Specific curvature,** the curvature of a surface expressed in terms of the solid angle subtended by a unit of area.—**Terminal curvature,** in *geol.*, the bending over of outcropping edges of strata. This is a common feature in glaciated regions, but it is not confined to them. The same effect is sometimes the result of creep.



Curvature of Field.

curve, *n.* **Adjoint** or **adjunct curve,** in *math.*, a curve which passes i–1 times through every i-fold point of a primitive curve.—**Affective curve.** See ★*affective*.—**Binomial curve,** in *math.*, a curve whose ordinate may be expressed by some power of a binomial function of the abscissa: thus $y = x^{m}(a - bx^{m})^{p}$ is a binomial curve.—**Curve of Carus,** the axis of the pelvis represented by a curved line.—**Curve of centers of buoyancy.** See ★*curves of ship calculations*.—**Curve of comfort,** in *climatology*, a curve connecting temperatures and moistures that correspond to perfect bodily comfort for a given velocity of the wind. *Abbe*, in Monthly Weather Rev., Aug., 1898.—**Curve of decay,** in radioactivity, a curve showing the diminution of activity of a radioactive substance, as a function of the time.—**Curve of discomfort,** a curve connecting temperatures and moistures that correspond to extreme bodily discomfort for a given velocity of the wind; a hyther. *W. S. Tyler*, in Monthly Weather Rev., May, 1904.—**Curve of displacement.** See ★*curves of ship calculations*.—**Curve of distribution.** Same as *Quételet's* ★*curve*.—**Curve of energy,** in *phys.*, any curve representing change of condition or configuration of a system, in which energy is one of the variables; specifically, in *spectroscopy*, the curve of distribution of energy in the spectrum.—**Curve of extinction,** in *naval arch.*, a curve showing graphically the diminishing angle of inclination in the rolling of a vessel in still water which has been inclined by an extraneous force and then allowed to oscillate freely in the water.—**Curve of fatigue,** in *phys.*, the curve which shows the gradual change in the deformation of a body subjected to continued stress.—**Curve of flexure,** in a curve drawn on an anticlastic surface which may be held fixed without involving the immovability of the surface: the curve will be that formed by the successive elements of the inflexional tangents.—**Curve of flotation,** in *naval arch.*, a curve formed by a normal section of the envelop of the load-water planes of a vessel, in the theory of unresisted rolling.—**Curve of loads.** See ★*curves of ship calculations*.—**Curve of longitudinal shearing-stresses.** See ★*curves of ship calculations*.—**Curve of metacenters** or **transverse metacenter.** See ★*curves of ship calculations*.—**Curve of resistance,** in *naval arch.*, a curve which shows graphically the resistance of a ship or model to towing as obtained by experiments in a model basin. The model is run at various speeds and its resistance to towing is measured for each speed. These resistances are plotted as ordinates with the speeds as abscissæ and the points thus obtained are joined in a curve. The resistance for a given speed is separated into three parts, the wave-making resistance, eddy resistance, and frictional resistance (see ★*resistance*), and by suitable calculations, using the law of comparison, the curve of resistance and curve of effective horse-power for the full-sized ship of similar form to that of the model are obtained.—**Curve of saturation,** in *meteor.*, that curved line on the Hertzian or Neuhoff diagram of adiabatic changes which separates the dry stage from the cloudy stage.—**Curve of search** (*naval*), a curve of pursuit geometrically developed from information as to the speed and time of departure of a vessel or fleet of the enemy from a given place, or from its speed and probable time of arrival. The pursuing or scouting vessel follows this curve as the best method of systematic search for the enemy with the information available.—**Curve of sensitiveness,** a curve which represents the relative sensitiveness of a photographic plate for rays of different wave-length.—**Curve of stability,** a curve which shows the relation between the angle of inclination of a floating vessel, as a ship, and the arm of the righting couple. See also ★*curves of ship calculations*.—**Curve of velocity,** a curve for every point of which the abscissa is the length of time after a certain instant and the ordinate is the velocity acquired at the end of that period of time.—**Curve of weight.** See ★*curves of ship calculations*.—**Curve resistance.** See ★*resistance*.—**Curves of ship calculations.** In determining the qualities of a ship, naval architects make certain calculations based on the form of the vessel as shown by the lines. These calculations are made by certain mathematical rules known as Simpson's rules, trapezoidal rule, etc. (see ★*rule*). The calculations are made for the vessel floating at a certain number of equally spaced water-lines, and the values obtained are laid off in a diagram. The points thus obtained are joined by curves passing through them (see the cut). From the diagram the quantities for any intermediate water-line can be obtained without calculation by reading their values from the intersection of the corresponding curves with the water-line. The following curves are usually calculated for a vessel of any importance: *Curve of displacement*, a curve showing to a suitable scale the displacement of a vessel in fresh or salt water for any given mean draft. *Curve of centers of buoyancy*, a curve showing the position of the center of buoyancy (see *center*) corresponding to the immersion of a vessel to any given water-line. The curve showing the vertical position of the center of buoyancy is generally plotted in combination with the curve of transverse metacenters as follows (see the cut): A diagonal line at 45° inclination is drawn on the diagram. Where this diagonal intersects any given water-line a vertical line is drawn (see dotted line in diagram), and the intersection of this vertical with the curve of metacenters and the curve of centers of buoyancy gives the height of the metacenter and of the center of buoyancy corresponding to the displacement of the vessel floating at that water-line. The longitudinal position of the center of buoyancy is shown by laying its value off on the water-line corresponding to any given displacement forward or abaft a vertical indicating the middle perpendicular (not shown in diagram). *Curve of transverse metacenters* or *curve of metacenters*, a curve showing the height of the metacenter with reference to the water-line corresponding to any given displacement. For the method of laying off curve, see above. *Curve of tons per inch immersion* or *curve of tons per inch*, a curve showing the additional displacement corresponding to one inch deeper immersion of the vessel in the water when it is floating at any given water-line. Thus it is the measure of the weight required to be added to the vessel to sink her one inch deeper when she is floating at any given displacement. Additional curves are usually calculated for warships. Among the more important of these are the *cross-curves of stability*. From the cross-curves can be obtained for any given condition of loading of the vessel a *curve of statical stability* which shows, corresponding to each angle of inclination from the upright, the value of the righting couple and the point to which, if sufficiently inclined, the vessel will upset or turn turtle. The *curve of cross-sectional areas* or *curve of buoyancy* is the curve whose ordinates are areas of cross-sections up to a given water-line corresponding to each point in the length. Read to a suitable scale, these ordinates represent the buoyancy per unit of length. *Curve of weight* is a similar curve showing the actual weight of the vessel and its contents for each unit of the length. The difference between the ordinates of the curve of weights and the curve of buoyancy for any given displacement gives the *curve of loads*, from which, by integration, are successively obtained the *curve of longitudinal shearing-stresses* and the *curve of bending moments* which serve to determine whether the vessel has sufficient longitudinal strength.—**Derived curve,** of the function f (x), the graph of the derivative of the function f(x) of x.—**Diametral curve,** a curve which has, like a diameter, the property of bisecting parallel chords in a curve.—**Dioptric curve.** Same as *Cartesian oval*.—**Frequency curve.** Same as *curve of probability*, but applied more often than the latter term to unsymmetrical curves which cannot be explained in any very limited space.—**French curve,** in *mechanical drawing*, a thin plate of metal or hard rubber, sheet of cardboard, or veneer of wood cut into complicated shapes so that its edge may give a great many different curves of non-geometrical character. It is used for drawing a curve through three or more points previously laid down, and in similar ways.—**Funicular curve.** Same as *catenary curve*.—**Galton's curve.** Same as *Quételet's* ★*curve*.—**Hessian of a curve.** See ★*Hessian*[2].—**Ichthyoid curve,** a curve, having the generalized form of a fish, which is the profile of completed snow-drifts in the neighborhood of obstructions on the prairie; the fundamental curve of snow-drifts.—**Inertia curve,** the curve that would be described by a body moving freely on the surface of the earth, or of any other rotating body, under the influence of gravity and inertia only. At the pole it is a point and at the equator a straight line; at intermediate latitudes it is a circle whose radius depends on the sine of the latitude and on the velocity of motion.—**Integral curve.** If $\phi(x)$ and f(x) are 2 functions so related that $\frac{d}{dx}\phi(x) = f(x)$, then the curve $y = \phi(x)$ is an *integral curve* of the curve y = f(x).—**Integral probability curve.** See the diagram under *Quételet's* ★*curve*. By this curve problems such as the following can be solved: Given the probability, *r*, that an object taken at random will have a certain character, then among any considerable number, *n*, of independent objects, what is the probability that the number having the character in question will be within the given inclusive limits m_1 and m_2, where $m_1 < m_2$?—**Isediomal curve.** See ★*isediomal*.—**Isentropic curve,** a curve, in any thermodynamic diagram, indicating any process or operation during which there is no change of entropy.—**Isogyric curve.** See ★*isogyric*.—**Isothermal curve,** the curve which represents the expansion or compression of a gas or vapor at a constant temperature. The isothermal curve for a perfect gas follows the law of Boyle or Mariotte, which is that the pressure times the volume is a constant.—**Kinematic curve,** a curve which is usually the resultant of two or more harmonic or circular motions mechanically combined.—**Liquidus curve,** a curve which shows the temperatures of complete fusion or of the beginning of solidification of a series of alloys containing every proportion of the two constituents. See ★*solidus curve*.—**Load curve,** in *electrotechnics*, a curve which indicates variations of the load of an electric-power system as a function of any variable, such as the time of day, upon which the size of the load depends.—**Magnetic curves.** (*b*) See ★*magnetic*.—**Mixed curve,** an irregular curve; a curve composed of two or more different curves.—**Motion curve,** a curve showing the successive positions of a piece of mechanism or a point, specifically of the link-block or of that part which moves the slide-valve of a steam-engine, as in a locomotive or marine engine.—**Polytropic curve,** in *thermodynamics*, a curve of constant specific heat for a perfect gas; a curve having the equation pv^{n} = const., where *p* is the pressure of a gas and *v* is its volume.—**Probability curve.** See *Quételet's* ★*curve*.—**Quételet's curve,** a curve which exhibits the arrangement or distribution of a group of statistical events according to the mathematical law of error. It was first employed as a means for recognizing and distinguishing biological types or species by a French mathematician, Lambert Adolphe Jacques Quételet (1796–1874), and it is the basis of the modern science of biometry. Quételet showed that the numbers representing the individual qualities of a race of mankind are grouped round the numbers referring to the 'average man' in a manner corresponding to that in which single results of observation are grouped round the mean result, so that the principles of the theory of probabilities may be applied to statistical researches in anthropology as a means of distinguishing the different human races. He showed that the number of cases in which a certain height, for example, occurs among a large number of individuals of a race may be represented by an ordinate of a curve symmetrically situated with regard to the ordinate representing the mean result or average stature, and that the curves for different races of mankind are different. Also called *Galton's curve*, *curve of distribution*, *probability curve*.—**Reverse curve.** See *reverse* ★*twist*.—**Vapor-pressure curve,** a curve showing the variation of vapor-pressure with temperature.—**Vertex of a curve.** See ★*vertex*.

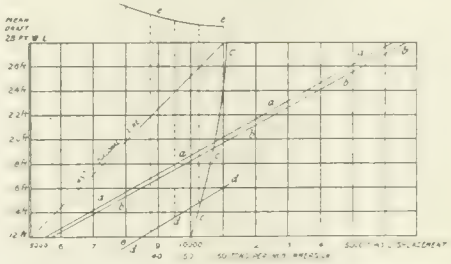
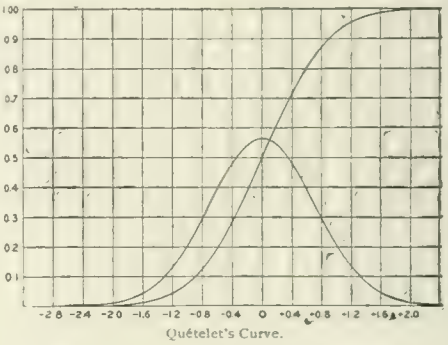


Diagram of Displacement and Other Curves usually Calculated for Ships.

a, *a*, curve of displacement in fresh water; *b*, *b*, curve of displacement in salt water; *c*, *c*, curve of tons per inch immersion; *d*, *d*, curve of vertical position of centers of buoyancy; *e*, *e*, curve of transverse metacenters.



Quételet's Curve.

Probability Curve and Integral Curve of Probabilities.

curve-adder (kėrv′ad″ėr), *n.* An instrument by means of which the sum of two curves of any kind, with any relations of period, amplitude, and phase, can be drawn automatically. *Scripture*, Exper. Phonetics, p. 68.

curve-pen (kėrv′pen), *n.* A ruling-pen having pen-points attached to a rod inclosed in the handle and free to rotate with it. When used in drawing fine curves the points follow the motion of the hand, whatever its direction.

curve-tracer (kėrv′trā′sėr), *n.* A machine for drawing curves; specifically, a device for recording graphically the changes of electromotive force or current which occur in alternating electric circuits or when a condenser is charged or discharged. The term is also applied to instruments for drawing curves of magnetic induction.

curve-tracing (kėrv′trā′sing), *n.* The process of tracing a curve or curves. A curve is said to be *traced* when the general form of its several parts or branches is determined, and the position of those which are unlimited in extent is indicated.

curvilineal (kėr-vi-lin′ē-al), *a.* Same as *curvilinear*.

curvilinear fret. See ★*fret*[3].

curvometer (kėr-vom′e-tėr), *n.* [L. *curvus*, curve, + Gr. *μέτρον*, measure.] An instrument for measuring the length of curved lines, as of a road on a map. A wheel is rolled along the line, each revolution of the point of contact indicating a path equal to the circumference of the wheel. *Encyc. Brit.* XXX. 578.

cuscamidine (kus-kam′i-din), *n.* [*Cusc(o)* (*bark*) + *amide* + *-ine*[2].] A crystalline alka-

loid contained in the bark of certain species of cinchona.

cuscamine (kus'ka-min), *n.* [*Cusc(o)* (*bark*) + *amine.*] Same as ★*cuscamidine.*

Cuscutaceæ (kus-kū-tā'sē-ē), *n. pl.* [NL. (Dumortier, 1829), ⟨ *Cuscuta* + *-aceæ.*] A family of dicotyledonous sympetalous plants of the order *Polemoniales*, the dodder family. It contains the genus *Cuscuta* only, and differs from the *Convolvulaceæ*, in which it is included by many authors, chiefly in its parasitic habit, the leaves being reduced to minute scales. See *Cuscuta* and *dodder*1.

cusecs (ku'seks), *n.* An abbreviation of *cubic feet per second*, occasionally used by irrigation engineers, particularly by British engineers, as an expression of rate of flow of water.

cush2 (kŭsh), *n.* [Origin obscure.] In North Carolina, the crumbs and scrapings of cracker- or meal-barrels, fried with grease.

cushaw (kŭsh-ä'), *n.* [Also *cashaw*, *cashew*, *kershaw*; Algonkian (of Virginia) *escushaw.*] A fruit, mostly oblong or crooked, of *Cucurbita moschata*, sometimes called *squash* and sometimes *pumpkin*. The pumpkins, as the term is understood in North America, belong to the species *Cucurbita Pepo*, and the autumn and winter squashes to *C. moschata*. The name seems to be applied somewhat loosely, and in its local usage may designate pumpkin-like fruits other than those of *Cucurbita moschata*, but the usage of horticultural writings seems to confine it to that species, although it does not follow that all fruits of *C. moschata* are cushaws. The winter crookneck or Canada crookneck type is the fruit most commonly known as cushaw or cashaw. It keeps well into winter. The name is chiefly used in the southern and western United States.

The best variety [of squash] for family use is the *Cashaw*, a long, cylindrical, curved variety, swollen at one extremity, of fine, creamy yellow color, very solid and excellent to use as a winter squash, and quite as valuable as any for the other purposes.
W. N. White, Gardening for the South, p. 214.

cushion, *n.* **2.** (*j*) (2) An expansion at the lower extremity of a grape-vine from which a part of its roots spring.

This had ten roots springing from the *cushion* at the base.
U. S. Dept. Agr., Div. Veg. Pathol., Bulletin 2, 1892, p. 52.

(*l*) Same as *saddle*, 3 (*a*)(6). (*m*) In *pianoforte-making*, a pad or roll of felt placed under the ends of the keys to prevent noise. See cut under *pianoforte*. (*n*) Same as *coronet*1, 6. (*o*) A pool formed by a low dam or obstruction immediately below a higher dam to prevent erosion or destructive effect of the water which falls over the higher dam or hydraulic work.—**Cushion form,** in *phytogeog.*, the vegetation-form which is embodied in a ★cushion-plant (which see, with cut). Also called *hassock form.*—**Leaf-cushion,** in *paleobot.*, the more or less raised and usually rhombic area left on the trunks and stems of various fossil plants, especially *Lepidodendron* and *Sigillaria*. It includes the leaf-scar proper (see *scar*1, 4), the print of the vascular bundle, the ★*parichnos* (which see), the ligule (see *ligule* (*d*)), and other markings.—**Sucking cushions,** circumscribed areas of fatty tissue in an infant's cheeks, the function of which is supposed to be to prevent the cheeks from sinking in while the child is at the breast.

cushion, *v. t.* **4.** In *mach.*, to compress (exhaust-steam or other motive fluid) by closing the exhaust-outlet of a cylinder before the piston completes its traverse. The gradual compression causes increasing pressure against the piston and arrests the motion of the reciprocating parts without shock. See *cushion*, *n.*, 2 (*b*).

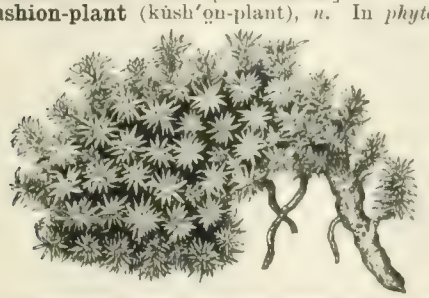
cushion-bit (kŭsh'on-bit), *n.* A metal bit in which the mouthpieces are covered with vulcanized leather. Round pads of soft leather, which bear against the horse's cheeks, are attached to the side of the rings.

cushion-crawling (kŭsh'on-krâ"ling), *n.* In *Eng. billiards*, a mode of nursing along or near a cushion: analogous to American play 'on the rail' before it developed into 'straight (straight-forward and corner-turning) rail.'

cushion-draw (kŭsh'on-drâ), *n.* In *billiards*, the name of two draw-shots, in one of which the cue-ball retrogrades parallel with and along the cushion, and in the other comes peculiarly out at right angles to it, cushion and first object-ball being struck, in both shots, at about the same time.

cushion-flower (kŭsh'on-flou"ėr), *n.* An evergreen shrub, *Hakea laurina*, of the family *Proteaceæ*. See *Hakea*. [Australian.]

cushion-plant (kŭsh'on-plant), *n.* In *phytogeog.*, a plant of a vegetation-form resembling a cushion, consisting of a mass of branches from an axis, which may either persist or disappear, so crowded that leaves and flowers are shown only on the general surface. Except in the case of mosses, it is mainly an alpine or arctic type, but is also developed on islands of the south temperate zone.



A Cushion-plant (*Verbena minima*) of Peru and Bolivia. Natural size. (Drawn from Schimper's "Pflanzengeographie.")

cushion-rest (kŭsh'on-rest), *n.* In *billiards*, the cushion used as a support for the striker's bridge-hand or for the cue itself, the latter especially in giving the odds of one hand against two.

cushion-steam (kŭsh'on-stēm), *n.* The steam which remains in a steam-engine cylinder and the clearance-spaces after the exhaust-valve closes.

cushion-work (kŭsh'on-wėrk), *n.* See *cushion style*, under *cushion.*

In old embroidery the cushion-work or -style (*opus pulvinarium*) was like modern so-called Berlin work. It was done in cross- or tent-stitch with silk or wool, and was used to cover cushions, either to kneel upon or to uphold the mass-book at the altar; hence its name. It was also used for emblazoning heraldic designs.
Rock, S. K. Handbook, Textile, Fabrics, p. 81.

cusk-eel (kusk'ēl), *n.* Any fish of the family *Ophidiidæ*. They are marine forms, eel-shaped, but have nothing in common with the true eels.

cusp, *n.* **5.** (*c*) One of the segments, with pointed tip, of a valve of the heart.—**Ceratoid cusp,** a cusp at which the two branches of the curve, in the neighborhood of the singular point, lie on opposite sides of the common tangent.

cuspate, (kus'pāt), *a.* [*cusp* + *-ate*1. Cf. *cuspidate.*] Resembling a cusp; having the form of a cusp.

cuspid (kus'pid), *n.* and *a.* [L. *cuspis* (*cuspid-*), a point: see *cusp.*] **I.** *n.* A canine tooth.

II. *a.* Same as *cuspidate*, 2.

cuspidal, *a.* **3.** Having cusps; cuspidate: said of teeth. [Rare.]—**Cuspidal tangent.** See ★*tangent.*

cuspidation (kus-pi-dā'shon), *n.* Same as ★*cusping.*

cuspidite (kus'pi-dīt), *n.* [L. *cuspis* (*cuspid-*), point, + *-ite*2.] Same as *cuspidine.*

cuspidule (kus'pi-dūl), *n.* [NL. **cuspidula*, dim. of *cuspis*, a cusp.] A minute cusp. [Rare.]

cusping (kus'ping), *n.* In *arch.*, an arrangement of cusps; a series of cusps; the general system of decoration by cusps, as in Gothic tracery.

cusplet (kusp'let), *n.* [*cusp* + *-let.*] A small cusp.

cuspule (kus'pūl), *n.* [*cusp* + *-ule.*] In *anat.*, a small projection or minute cusp on a tooth.

customary, *n.* **2.** A book which treats of the rules, regulations, usages, and ceremonies to be observed by a religious community, order, or college. Also *custumary.*—**Customary estate,** See ★*estate.*

custom-free (kus'tum-frē), *a.* Free of customs-duty; duty-free; on the free list: as, *custom-free* goods.

cut, *v.* **I.** *trans.* **20.** In *golf*, to draw the club smartly across and underneath (a ball) with a quick upward turn of the wrists. *Practical Golf*, p. 49.—**21.** In *projective geom.*, said of the intersecting by a fixed plane μ (the picture-plane) of a figure, the subject, made up of planes β, γ, δ, etc., and straights b, c, d, etc., thus constructing the meets $\overline{\mu\beta}$, $\overline{\mu\gamma}$, $\overline{\mu\delta}$, and the passes μb, μc, μd. Thus is obtained a new figure composed of straights and points, all on μ, and called a *cut* of the subject. If the subject is an eject of an original, the cut of the subject is an image of the original.

The operations of projecting and *cutting* are the two fundamental ones of the Projective Geometry.
C. Leudesdorf, Cremona, Projective Geom., p. 2.

Cut service, terrace. See ★*service*1, ★*terrace.*—**Cutting-down machine,** in *shoe manuf.*, a foot-power cutting-machine employing a straight-edge knife for cutting panels, trimming shank-pieces, etc.—**Cutting-off tool,** in a lathe, a special tool for cutting off any part of the work to release it from the chuck, or to finish the end of the piece. It is made in many forms. A tool having two parallel cutting-off blades, with a narrow space between them, is used to cut flat rings from a pipe and is called a *ring-cutting tool.* An automatic machine for cutting metal rods into lengths is called a *cutting-off machine*, as is also a cold saw for cutting rods and bars. See *parting-tool.*—**To cut ice,** to make an impression; effect something. [Slang.]—**To cut the pan,** in *soap-making*, to add salt to the original solution obtained by boiling together fat, alkali, and water, in order to precipitate or curdle the soap, leaving glycerin in the watery brine or under-lye.

II. *intrans.* **9.** In *mech.*, to become scored or scratched by friction, as a journal-bearing or piston-rod when imperfectly lubricated or improperly packed.—**To cut in.** (*c*) In *carriage-painting*, to apply color around a letter or stripe.—**To cut out, to cut all out,** in sheep-shearing, to finish the work. [Australia.]

cut, *n.* **22.** In *mining*: (*a*) An advance opening made with a pick or by blasting in drifting or other mine-work to facilitate subsequent blasting. (*b*) An open side. In long-wall work, one working-face in advance of another gives it *cut.* *Barrowman*, Glossary.—**23.** In *forestry*, the season's output of logs.—**24.** In *agri.*, a land or ridge.

After this the furrows between the "lands," or "*cuts*," are cleaned out, so as to allow of surface drainage.
H. J. Webb, Advanced Agriculture, p. 319.

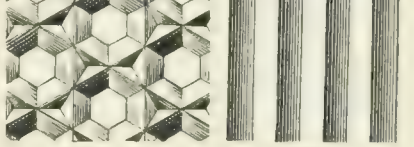
25. A slit or narrow opening across the stage of a theater for use in moving the scenery up or down.—**26.** In *sugar-manuf.*, a pause in the process of boiling syrup, during which the evaporating-pan is partly emptied of the concentrated syrup. A portion is left to set up crystallization in the fresh syrup which is then added and the process resumed.

To obtain this result, reduce the cutting and shorten the time of boiling, refiners now proceed as follows, viz., they concentrate some liquor in the pan to nearly the crystallizing point and add to it a proportion of the dried sugar from the first or earlier *cuts* of a former boiling.
Sci. Amer. Sup., Feb. 28, 1903, p. 22706.

27. In *math.*: (*a*) Any separation of the system of rational numbers into two classes, A_2, A_1, which possesses the characteristic property that every number in A_1 is less than every number in A_2.

Every separation $\bar{R} = A + A'$ which satisfies these conditions is called a *cut*, and will be denoted by (A, A'). We have seen that every rational number α is associated with a definite cut. Conversely, a cut (A, A') in which A has a last element α is perfectly definite, and specifies α without ambiguity. *Encyc. Brit.*, XXXI. 284.

(*b*) In *projective geom.*, the figure obtained by cutting. See ★*cut*, *v. t.*, 21. (*c*) In *function-theory*, the line of division in the *z*-plane, which serves to separate the branches of a function from one another.—**28.** The act of cutting or interfering. See *cut*, *v. i.*, **6.**—**Fish-fin cut,** a standard pattern in decorative glass-cutting, resembling the serrated fins of a fish.—**Forward cut,** in *cricket*, a stroke by which a short-pitched ball is sent to the right side of point. *Hutchinson*, Cricket, p. 67.—**Hobnail cut,** a standard pattern in decorative glass-cutting.



Hobnail cut. Prism cut.

—**Indian cut,** a method of cutting gems in Ceylon and the Orient, in which the size of the table is usually double the size of the culet and there is no special order as to the size of any of the facets, the gems being cut for weight and preservation of color rather than for their beauty. They are almost invariably recut when sent to Europe or the United States.—**Late cut,** in *cricket*, a wrist-stroke by which a length ball, or a ball short of a length, is hit when it has almost passed the batsman, so as to send it in the direction of third man. *Hutchinson*, Cricket, p. 67.—**Olive cut,** a standard pattern in decorative glass-cutting.—**Prism cut,** a standard pattern in decorative glass-cutting.—**Rasp cut.** Same as *rasp*1, 1.—**Speedy cut,** an injury to the inside of the fore leg of a horse just below the knee, inflicted when the animal is trotting or going at a rapid gait.—**Split cut.** (*a*) See *split.* (*b*) A standard pattern in decorative glass-cutting. See ★*split*, *n.* **Square cut,** in *cricket*, a wrist-stroke by which a length ball, or a ball short of a length, is sent in the direction of point. *Hutchinson*, Cricket, p. 67. **Strawberry diamond cut, table diamond cut,** standard patterns in decorative glass-cutting.

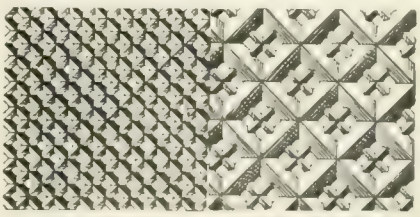


Table diamond cut. Strawberry diamond cut.

cut-and-cover (kut'and-kuv'ėr), *a.* and *n.* **I.** *a.* In *engin.*, a term applied to a method of tunnel construction in which those portions which approach the surface are made by cutting down from above (instead of boring horizon-

tally) and filling in with the excavated earth when the cut has been properly lined and roofed over.

II. *n.* The cut-and-cover method of tunnel construction.

cut-and-fill (kut′and-fil′), *n.* In *geol.*, lateral planation on one side of a meandering stream accompanied by deposition on the other.

This is *cut-and-fill*. The sediment eroded from the curve which is concave toward the stream is shifted down-stream, while that deposited in the curve which is convex toward the stream is brought down from above.
Chamberlin and Salisbury, Geol., I. 183.

cutch[3], *n.*—**Diamine cutch**, a direct cotton coal-tar color of the disazo type, derived from diamido-naphthalene. It dyes unmordanted cotton a violet brown from a salt bath.

cut-chain (kut′chan), *n.* In *mining*, a chain used on inclines, which may be cut at different places to suit various levels.

cut-finger (kut′fing-gẽr), *n.* See *Vinca*.

cutigeral (kū-tij′e-ral), *a.* [L. *cutis*, skin, + *gerere*, carry, + *-al*[1].] Carrying or supporting skin.—**Cutigeral cavity**, the depression or emargination in the inner upper border of a horse's hoof.

cut-in (kut-in′), *n.* Same as *cut-in notes*. See *cut*, *p. a.*

cutization (kū-ti-zā′shon), *n.* [L. *cutis*, skin, + *-ize* + *-ation*.] Transformation into skin.

cutline (kut′līn), *n.* Same as ★*caption*.

cutling[2] (kut′ling), *n.* [*cut* + *-ling*[1].] A cutting; a small part of a plant, as a twig, severed for purposes of propagation.

cut-looker (kut′lůk″ėr), *n.* One who inspects the weaver's cut or piece of cloth as it comes from the loom.

cut-meter (kut′mē″tėr), *n.* An instrument for measuring the cutting-speed of machine-tools.

It is essentially a form of tachometer, having a dial which, when the instrument is pressed against the spindle of a lathe, the cutter of a milling-machine, or the table of a planer, records the speed of the cut made by the tool.

cut-money (kut′mun′i), *n.* See ★*money*.

cut-off, *n.* **7.** An attachment to a magazine firearm which enables the soldier to use it as a single-loader and reserve the cartridges in the magazine.

The new weapon [Springfield rifle] is what is known as the clip-loading magazine gun, being provided with a *cut-off* which enables the firer to use it as a single loader.
Review of Reviews, Nov., 1903, p. 570.

8. In *forestry*, an artificial channel by which the course of a stream is straightened to facilitate log-driving.—**9.** The practice of stopping or cutting off the admission of motor-fluid, such as steam, to the engine-cylinder before the traverse of the piston is completed. It makes the steam imprisoned in the cylinder work by expansive action after cut-off has occurred, so that the steam is of lower pressure and temperature when the exhaust takes place, and the heat in it is more efficiently utilized. The cut-off is said to be *short* when the expansion period is long. The expansion or degree of expansion is the reciprocal of the cut-off; that is, if the cut-off is at $\frac{2}{3}$ of the stroke, the expansion is $\frac{3}{2}$, or the steam has $\frac{3}{2}$ the volume which it occupied when the valve closed. The point of cut-off is the point of the piston traverse at which the valve closed.—**Commercial cut-off**, a point on a steam-engine indicator-diagram which is determined by drawing a line parallel to the base-line through a point which shows the maximum pressure during admission, and intersecting it with the backward prolongation of the expansion-line by a hyperbolic curve; that point of cut-off which gives the greatest power for a dollar expended to produce such power.—**Cut-off governor**, a governor which regulates the speed of the engine by varying the point of cut-off, thus changing the amount of steam or gas admitted to the cylinder by shortening or lengthening the period of admission, but without affecting the pressure during such admission.—**Cut-off muscle.** Same as *compressor urethræ*.—**Cut-off plate.** (*a*) Same as ★*cut-off valve*. (*b*) A partition or plate in a valve-chest having one or more ports controlled, as to opening and closure, by a cut-off valve.—**Cut-off ring**, a metal ring with a number of holes around its periphery, placed in the steam-chest of a turbine and used to regulate the amount of steam admitted to it. The position of the holes in this ring determines the number of nozles in use.—**Cut-off valve**, a steam-valve which slides on the back of the main steam-valve to cut off steam from the latter and hence from the cylinder. This enables the cut-off to be made earlier and more sharply than by means of a single valve, since the exhaust functions of the main valve are not modified by the angular advance or considerable lap required to produce early cut-off of admission. The cut-off valve may be adjustable by hand or by the governor to make the cut-off variable. **Drop cut-off**, a closure of the period of admission of steam to an engine-cylinder by releasing the valve from the mechanism which opened it, so that it closes suddenly by a weight or by a spring. (See *Corliss* ★*valve*.) This was first proposed for vertical spindle-valves by Sickles. A dash-pot is required to prevent inconvenient shock.—**Governor cut-off**, a period of admission for the steam to the cylinder, which is made to vary as the demand for steam varies and is effected automatically by the action of the engine governor.—**Trip cut-off.** Same as *drop* ★*cut-off*.

cut-out, *n.* **2.** A clutch; a device for mechanically connecting or disconnecting two pieces.—**Film cut-out**, in *elect.*, a cut-out in which a film or sheet of paper or mica is employed which is punctured if the voltage exceeds the normal value.

cut-over (kut′ō″vėr), *v. t.* In *cricket*, to injure (the batsman) by striking him in vulnerable parts: said of the ball.

cut-shot (kut′shot), *n.* A blast-hole designed to break coal which has been opened on one side by shearing with a pick or otherwise. [Scotch.]

cuttacoo (kut′a-kö), *n.* [Jamaica.] In Jamaica, a small bag made of basketry, carried attached to a belt or shoulder-band and used for carrying tobacco and trinkets.

cuttage (kut′aj), *n.* [*cut* + *-age*.] The practice or process of multiplying plants by means of cuttings or severed parts.

cuttanee (kut′a-nē), *n.* [Hind. Pers. **kattani*. < Hind. *katān*, fine linen (Fallon), *kattān*, waste selvage of silk (Yule, 1903), < Pers. Ar. *kattān*, linen.] A stuff of silk, or of silk and cotton, at one time imported into Europe from the East Indies.

cutter[1], *n.* **3.** (*c*) A vessel of the government revenue marine which is known as the revenue-cutter service.—**Albany cutter**, a style of sleigh first built by James Goold in Albany, New York. Its characteristic features are a light bent-wood frame for the body, well-curved panels, and full-sweep outlines. An enlarged size has seat-room for four or six passengers.—**Ensilage cutter.** See ★*ensilage*.—**Formed cutter**, a cutter made of a special form to adapt it to particular kinds of work. It is made in a great variety of forms to which special names are given, as *twist-drill cutter*, *grooving-cutter*, *angular*, *spiral*, *convex*, *volute cutter*, etc. **Lever cutter**, a small machine which has a feed-table on which hay or other material to be cut is placed and pushed against a pivoted knife operated by a hand-lever. Larger machines employ revolving knives operated by means of a hand-crank.

cutter-brig (kut′ėr-brig), *n.* A square-rigged vessel with a fore-and-aft mainsail and a jigger-mast.

cutter-built (kut′ėr-bilt), *a.* Built on the lines of a cutter.

cutter-gig (kut′ėr-gig), *n.* A ship's boat between a cutter and a gig in build and size.

cutter-rigged (kut′ėr-rigd), *a.* Rigged like a cutter. See *cutter*, 3 (*b*).

cutter-spindle (kut′ėr-spin″dl), *n.* A revolving head or spindle to which cutting-blades can be attached.

cutter-yacht (kut′ėr-yot), *n.* A deep-draught comparatively narrow-beamed vessel rigged as a cutter.

Cutthroat finch. See ★*finch*[1].

cutting, *n.* **9.** A process in bookbinding. After gluing, rounding, and backing, the edges are cut in a special machine. Cutting is one of the secondary processes included in the general term *forwarding*. See *forwarding*, *n.*, 2.—**Accretion cutting.** Same as ★*accretion thinning*.—**Clean cutting**, in *forestry* (*a*) The cutting of the entire stand. (*b*) An area upon which the entire stand has been cut.—**Cutting series**, in *forestry*, a block, or a part of a block, containing even-aged stands whose ages differ uniformly within given limits and which are to be cut in turn, the cuttings usually following a given direction. A perfect cutting series seldom exists, except under the clean-cutting method followed by artificial reproduction, or under the sprout method.—**Preparatory cuttings.** See *stand* ★*method*.—**Regeneration cutting.** See *reproduction* ★*cutting*.—**Removal cuttings.** See *stand* ★*method*.—**Reproduction cutting**, in *forestry*, any cutting which is intended to invite or assist reproduction. **Seed cuttings.** See *stand* ★*method*.—**Severance cutting**, in *forestry*, the cutting of all trees upon a narrow strip before natural pruning has far advanced, in order that the trees bordering this strip may, as the result of partial exposure, become wind-firm through the development of strong roots.

cutting-almond (kut″ing-ä′mond), *n.* The American feverfew or prairie-dock, *Parthenium integrifolium*, a stout composite plant with numerous small white-flowered heads in dense terminal corymbs: found from Maryland to Minnesota and south to Georgia and Texas.

cutting-back (kut″ing-bak′), *n.* The heading-in of shoots or plants by cutting the leading shoots off at the ends.

cutting-bed (kut′ing-bed), *n.* A bed or plot of sandy soil for propagating plants. The cuttings of currant, privet, or other shrubs or trees are set in the bed in the spring or fall and allowed to stand for one growing season, when they may be removed from it for sale or permanent planting. In a greenhouse a shallow box of wood or slate placed over the hot-water or steam pipes and filled with sand is used as a propagating-bed for such plants as the geranium, verbena, etc.

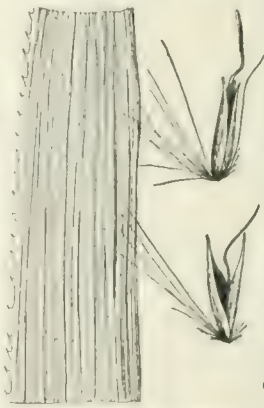
cutting-cylinder (kut′ing-sil″in-dėr), *n.* The cylinder with a knife-attachment which cuts the roll of paper printed on a web-press into sheets of proper length.

cutting-die (kut′ing-dī), *n.* A simple die for cutting out the blanks used in making tinware and other sheet-metal objects.

cutting-engine (kut′ing-en″jin), *n.* A machine for cutting gear-teeth or ratchet-wheels. It has an indexing device to divide a circumference into aliquot or equal parts.

cutting-frame (kut′ing-frām), *n.* A wooden frame, with a trough and a spindle, in which are placed the wheels used in glass-cutting.

cutting-grass (kut′ing-grās), *n.* Same as *cut-grass*. The name is also applied to a number of sedges, especially to species of *Cladium* and *Scleria*. On the Island of Guam there are open areas called 'savannas' covered with the cutting-grass, *Xyphorostis floridula*, also called *nēti* or *sword-grass*. In Australia and Tasmania occurs *Cladium psittacorum* and in the Everglades of Florida, *Cladium effusum*, also called *saw-grass*. In the West Indies and South America grow *Scleria reflexa*, *S. latifolia*, and a number of allied species called *cortadera* and *herbe coutteau*. See *cut-grass*, *knife-grass*, *razor-grass*, *saw-grass*, ★*Cladium*, and *Scleria*.



Cutting-grass (*Xyphorostis sandwicensis*).

Portion of leaf-blade showing cutting-teeth, spikelets. All magnified.

cutting-in (kut″ing-in′), *n.* The process of shortening the growth of plants or of reducing their size by cutting the leading shoots in two. Often called ★*cutting-back* (which see).

cutting-liquor (kut′ing-lik″or), *n.* In *calico-printing*, a chemically prepared liquor for discharging (or cutting), in spots, a color that is printed on the cloth, in order to produce a pattern. *G. Duerr*, Bleaching and Calico-printing, p. 45.

cutting-machine (kut′ing-ma-shēn″), *n.* An apparatus, used by cracker-bakers, for cutting a sheet of sponge or water dough into crackers. Sometimes called *peeling-machine*.

cutting-pot (kut′ing-pot), *n.* A shallow earthenware pot filled with sand and used as a small propagating-bed in a window or greenhouse.

cutting-press, *n.*—**Armature-disk cutting-press**, a press employing a gang of dies which punch the blank circular armature and make all the perforations, key-slots, and notches at once. Other machines cut segments of armature-disks, cutting, perforating, and notching at one stroke. See ★*notching-press*.

cutting-shop (kut′ing-shop), *n.* An establishment in which flint-glass is decorated by the process of cutting or grinding.

cutting-tool (kut′ing-töl), *n.* A tool with a sharp edge intended or adapted for cutting, as distinguished from a boring-, piercing-, planing-, riving-, sawing-, or other tool.

cutting-wire (kut′ing-wīr), *n.* In *ceram.*, a piece of fine brass wire, a foot or more in length, to each end of which a small piece of wood or other object is attached as a handle: used by potters for cutting the plastic vessel from the wheel-head. See *archetto*.

cuttle[4] (kut′l), *n.* [Origin obscure; perhaps orig. a fold made by the use of the back of a knife (see *cuttle*[2]).] A fold or plait of cloth, formed when the piece is done up in layers.

cuttle[4] (kut′l), *v. t.* [See ★*cuttle*[4], *n.*] To fold (cloth) in plaits, with the exception of a length at one end, which is wrapped around the plaited part for convenience in unfolding and showing it.

Cuttle, to fold cloth in the following manner. First, a small portion is doubled, then another upon it (not round it), and so on until it is all doubled up; finally wrap the end, left first or last round all. The reasons for adopting this mode are, that the cloth is supposed to keep best; it is easier to unfold for show purposes; it piles best.
Glossary of the Dialect of Almondbury and Huddersfield, [p. 34. *N. E. D.*

cuttle-shell. Same as *cuttlebone*.

cutty-stoup (kut′i-stoup), *n.* A pewter vessel holding the eighth part of a chopin or quart. *Jamieson*.

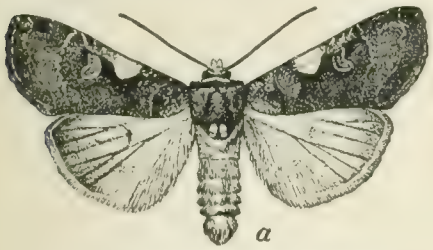
cut-under (kut′un-dėr), *n.* A carriage or other vehicle in which the body is cut out in such a way as to allow the front wheels to pass under it in turning; also, the form thus produced. See *cut-under buggy*, under *buggy*[2].

cut-ups (kut′ups), *n. pl.* Articles of hosiery, such as stockings, undershirts, etc., cut and shaped out of a web knitted by machinery, and then sewed together and finished by other machines.

cut-work (kut′wėrk), *n.* [*cut*, *n.*, 13, + *work*, *n.*] In typographic printing, the presswork of woodcuts or their electrotypes, or of illustrations

of any kind, that requires more skill than that given to ordinary type-work.

cutworm, *n.* **Bean cutworm,** the larva of an American noctuid moth, *Oncocnemia cinereola.* It devours the buds and leaves of beans and peas. **Black cutworm,** the larva of *Agrotis upsilon.* **Bronzed cutworm,** the larva of *Nephelodes violans.* **Climbing cutworm,** any one of several different cutworms which climb trees and plants at night to feed on foliage or fruit; notably and specifically, the larva of *Euxoa scandens.* **Clover cutworm,** the larva of a noctuid moth, *Mamestra trifolii,* which, although partial to clover, feeds also upon other plants, as the cabbage.—**Cotton-boll cutworm,** the larva of an American noctuid moth, *Prodenia ornithogalli,* which feeds on the bolls and squares of cotton in the same way as does the boll-worm. **Dark-sided cutworm,** the larva of an American noctuid moth, *Euxoa messoria.* **Dingy cutworm,** the larva of *Feltia subgothica.*—**Granulated cutworm,** the larva of an American noctuid moth, *Feltia annexa.*—**Greasy cutworm,** the larva of an American noctuid moth, *Agrotis upsilon.* **Pretty cutworm,** the larva of *Mamestra legitima.* **Shagreened cutworm,** the larva of *Feltia malefida.*—**Speckled cutworm,** the larva of *Mamestra subjuncta.*

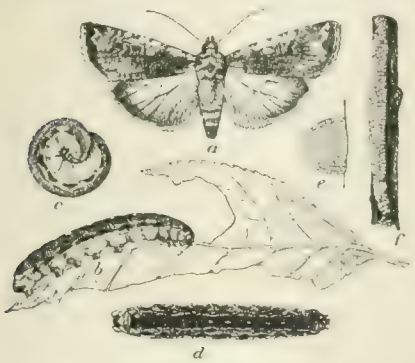


a

b

Spotted Cutworm (A. *c-nigrum*)
a, moth; *b*, larva, somewhat enlarged.

—**Spotted cutworm,** the larva of an American noctuid moth, *Noctua c-nigrum,* which damages grains, grasses, and other crops.—**Striped cutworm,** the larva of an American noctuid moth, *Feltia jaculifera,* a species of eastern distribution.—**Variegated cutworm,** the larva of an American noctuid moth, *Peridroma saucia,* which



Variegated Cutworm (*Peridroma saucia*).
a, moth; *b*, *c*, *d*, larvæ; *e*, eggs; *f*, egg-masses on twig. All reduced except *e*, highly magnified. (After Howard, U. S. D. A.)

damages crops of nearly all kinds, including garden and field crops, also fruit-trees, greenhouse plants, etc.—**Western striped cutworm,** the larva of an American noctuid moth, *Feltia herilis,* a species of western distribution.—**W-marked cutworm,** the larva of an American noctuid moth, *Noctua clandestina.*

cuvenant, *n.* and *v.* A simplified spelling of *covenant.*

cuver, cuverd, cuvering. Simplified spellings of *cover, covered, covering.*

cuverlet, *n.* A simplified spelling of *coverlet.*

cuvetous, *a.* A simplified spelling of *covetous.*

cuvette, *n.* **4.** In *photog.,* a narrow vessel of glass, porcelain, vulcanite, etc., for holding silver nitrate or other solutions: it is placed vertically or at an angle, and into it the photographic plate is dipped. *Wilson,* Cyc. of Photog., p. 107.

cuvey, *n.* A simplified spelling of *covey.*

Cuvier, canal of. Same as *ductus Cuvieri.*

Cuyahoga shale. See ★*shale*[2].

Cuzco corn. See ★*corn*[1].

cuzen, cuzenage. Simplified spellings of *cozen, cozenage.*

cuzin, *n.* A simplified spelling of *cousin.*

C. V. An abbreviation of *Common Version* (of the Bible).

C. V. O. An abbreviation of *Commander of the Royal Victorian Order.*

cwm (köm), *n.* [W. *cwm,* a valley, comb: see *comb*[3], *coomb*[2].] A round valley-head inclosed on all sides but one by steep slopes; a corrie; a cirque. The typical cwms of the Welsh mountains have been shaped by glacial erosion. *Geikie,* Text-book of Geol., p. 541.

C. W. O. An abbreviation of *cash with order.*

cyamelide (sī-am′e-lid), *n.* [*cyamel(lone)* + *-ide*[2].] A polymeric form of cyanic acid, $(CONH)_4$. It forms a white, amorphous, insoluble powder.

cyamellone (sī-am′e-lōn), *n.* [*cya(nic)* + *mellone.*] A tribasic acid, $C_9H_3N_{13}$, known only in solution and in its salts. The potassium salt is obtained by heating mellone with a solution of potassium hydroxid. Also called *mellone hydrid.*

cyameluric (sī-a-me-lu′rik), *a.* [*cyamel(lone)* + *-uric.*] Noting a tribasic acid, $C_6H_3O_3N_7 + 2\frac{1}{2}H_2O$, whose potassium salt is formed when the potassium salt of cyamellone is boiled with a solution of potassium hydroxid.

cyanacetic (sī′an-a-set′ik), *a.* [*cyan(ogen)* + *acetic.*] Derived from chloracetic acid and potassium cyanide.—**Cyanacetic acid,** a crystalline acid, $CH_2(CN)CO_2H$, whose potassium salt is formed by the action of a solution of potassium cyanide on chloracetic acid. It melts at 55° C.

cyananiline (sī-an-an′i-lin), *n.* [*cyan(ogen)* + *aniline.*] A crystalline base, $NH{:}C\text{-}NHC_6H_5$ | $NH{:}C\text{-}NHC_6H_5$ formed by the action of cyanogen on aniline. It melts at 210–220° C.

cyanephidrosis (sī-a-nef-id-rō′sis), *n.* [Gr. κύανος, blue, + ἐφίδρωσις, superficial perspiration.] Blue sweat, a form of chromidrosis.

cyanescent (sī-a-nes′ent), *a.* [*cyan(eous)* + *-escent.*] Tending to a cyaneous or dark bluish color.

cyanethine (sī-an′e-thin), *n.* [*cyan(ide)* + *eth(yl)* + *-ine*[2].] A compound, $C_9H_{15}N_3$, which occurs when ethyl cyanide is treated with potassium.

cyanformic (sī-an-fôr′mik), *a.* [Irreg. < *cyan(ogen)* + *formic.*] Same as ★*cyanoformic.*

cyanhematin (sī-an-hem′a-tin), *n.* [Irreg. < *cyan(ogen)* + *hematin.*] A supposed compound of cyanogen and hematin.

cyanhemoglobin (sī-an-hem-ō-glō′bin), *n.* [Also *cyanhæmoglobin;* irreg. < *cyan(ogen)* + *hemoglobin.*] A compound of hydrocyanic acid with hemoglobin.

cyanhydrate (sī-an-hī′drāt), *n.* [*cyan(ogen)* + *hydr(ogen)* + *-ate*[2].] Same as ★*cyanhydrin.*

cyanhydrin (sī-an-hī′drin), *n.* [*cyan(ogen)* + *hydr(ogen)* + *-in*[2].] A compound, R′C(OH)CN.H or R-C(OH)CN.R′, containing a hydroxyl and a cyanogen group. The cyanhydrins are usually prepared by the addition of hydrocyanic acid to an aldehyde or ketone.

cyanic, *a.* **3.** Same as *cyanotic.*

cyanide, *n.*—**Alkaline cyanide,** a compound of cyanogen and an alkali metal.—**Cyanide of cacodyl.** See ★*cacodyl.* **Cyanide process,** an important process of modern metallurgy, in which a dilute solution of an alkaline cyanide, aided by the action of atmospheric oxygen, serves to dissolve metallic gold existing in a very finely divided condition in rock: the gold is recovered from the solution by precipitation on metallic zinc. The process is especially valuable in the treatment of poor but abundant ores of gold, as in South Africa, and of tailings from other methods of treatment.—**Platinobarium cyanide.** Same as ★*barium platinocyanide,* or *platinum* ★*bariocyanide.* **Potassium cyanide.** Much of the salt sold under this name is in reality a mixture of two thirds potassium cyanide and one third sodium cyanide, this mixture serving quite well for all of its usual applications in the arts. In two respects these alkaline cyanides have recently commanded special attention, first on account of their use on a very large scale for the extraction of gold from rocks containing the precious metal in such small proportion as not to admit of profitable working in any other way, and secondly on account of the demonstrated possibility of utilizing, with the aid of the electric furnace, the nitrogen of the air for the production on the *a* scale of the cyanides themselves. See ★*cyanide process.*

cyanide (sī′a-nid or -nīd), *v. t.;* pret. and pp. *cyanided,* ppr. *cyaniding.* [*cyanide, n.*] To treat an ore with a weak solution of an alkaline cyanide, as in the cyanide process for the extraction of gold. See ★*cyanide process.*

cyanilic (sī-a-nil′ik), *a.* [*cyan(ogen)* + *-il* + *-ic.*] Noting a crystalline acid, $C_3H_3O_3N_3 + 2H_2O$, obtained by boiling mellone with nitric acid. It is isomeric with cyanuric acid but is more easily soluble.

cyanimide (sī-an′i-mid), *n.* [*cyan(ogen)* + *imide.*] A salt of a hypothetical acid, H_2CN_2.—**Calcium cyanimide.** Same as ★*calcium cyanamide.*

cyanine, *n.* **2.** In *chem.,* a beautiful blue dye, chinoline blue, prepared by acting on a mixture of chinoline and lepidine with amyl iodide. Unfortunately it does not resist the action of light, and hence has lost its importance as a dyestuff, but it is used in making orthochromatic plates for photography. **Alizarin cyanine,** a name applied to several mordant dyestuffs derived from anthraquinone, which produce greenish blues. They are chiefly tetra- or penta-hydroxyanthraquinones.—**Brilliant alizarin cyanine G** and **3G,** mordant coal-tar colors, similar to alizarin blue.—**Cyanine B,** an acid coal-tar color prepared by oxidizing patent blue. It dyes wool and silk, in an acid bath, a blue resembling indigo.

cyanitic (sī-a-nit′ik), *a.* [*cyanite* + *-ic.*] Pertaining to or containing cyanite.

cyanmethemoglobin (sī″an-meth″em-ō-glō′bin), *n.* [*cyan(ogen)* + *methemoglobin.*] A compound of methemoglobin with hydrocyanic acid.

cyano (sī′a-nō), *n.* [Detached from *cyanogen.*] The radical CNO contained in cyanic acid.

cyanochroite (sī-a-nok′ro-it), *n.* [Gr. κύανος, blue, + χρόα, color, + *-ite*[2].] A hydrous sulphate of copper and potassium occurring in bright-blue crystalline crusts, found in Vesuvian lavas after the eruption of 1855.

cyanocrystallin (sī-a-no-kris′ta-lin), *n.* [Gr. κύανος, blue, + κρύσταλλος, crystal, + *-in*[2].] A bluish pigment found in the eggs and carapace of the river crab and the lobster.

cyanoform (sī-an′ō-fôrm), *n.* [*cyan(ide)* + *(chloro)form.*] A crystalline compound, $CH(CN)_3$, formed by the action of potassium cyanide on chloroform.

cyanoformic (sī-a-no-fôr′mik), *a.* [*cyano(gen)* + *formic.*] See the following phrase.—**Cyanoformic acid,** a hypothetical acid, $CN.CO_2H$, known only in the form of its esters, which are prepared by the dehydration of esters of oxamic acid.

cyanogenetic (sī″a-nō-jē-net′ik), *a.* [*cyano(gen)* + *-genetic,* < *-genesis:* see *genetic.*] Giving rise to cyanogen. The poisonous properties of certain fodder-plants and food-grains are referable to cyanogenetic glucosides which occur in the young plants but gradually disappear as the seeds ripen.

Besides lotusin and dhurrin, the glucosides we have isolated from young plants of Lotus arabicus and Sorghum vulgare respectively, only one other *cyanogenetic* glucoside is definitely known.
Philos. Trans. Roy. Soc. (London), Ser. a, 1902 p., 409.

cyanomaclurin (sī″a-nō-ma-klō′rin), *n.* [Gr. κύανος, blue, + E. *maclurin.*] A compound, $C_{15}H_{14}O_6$, closely related to the catechins and found in the jack-wood, *Artocarpus integrifolia.*

cyanometric (sī″a-nō-met′rik), *a.* [*cyanometer* + *-ic.*] Pertaining to or measured by the cyanometer.

cyanophilic (sī-a-nō-fil′ik), *a.* [Gr. κύανος, blue, + φίλος, loving, + *-ic.*] Same as ★*cyanophilous.*

cyanophilous (sī″a-nof′i-lus), *a.* [Gr. κύανος, blue, + φίλος, loving, + *-ous.*] In *cytol.,* having the capacity of readily staining in blue or green dyes: said of cells and tissues: opposed to *erythrophilous.*

cyanophycean (sī″a-nō-fī′sē-an), *a.* and *n.* **I.** *a.* Same as ★*cyanophyceous.*

II. *n.* An alga of the *Cyanophyceæ.*

Gloioconis, found by Renault in a coprolite of Permian age, is regarded by him as a *Cyanophycean* allied to *Glœocapsa.* *Encyc. Brit.,* XXXI. 409.

cyanophyceous (sī″a-nō-fī′sē-us), *a.* In *bot.,* of or pertaining to the *Cyanophyceæ,* or blue-green algæ.

cyanopia (sī-a-nō′pi-a), *n.* [NL., <Gr. κύανος, blue, + ὄψ (ὠπ-), eye.] Blue vision; a morbid condition in which objects appear to have a bluish tinge.

cyanoplatinite (sī″a-nō-plat′i-nīt), *n.* [*cyano(gen)* + *platin-um* + *-ite*[2].] Same as ★*platinocyanide.*

cyanoplatinous (sī″a-nō-plat′i-nus), *a.* [*cyano(gen)* + *platin-um* + *-ous.*] Same as ★*platinocyanic.*—**Cyanoplatinous acid.** Same as ★*platinocyanic acid.*

cyanosine (sī-an′ō-sin), *n.* [Gr. κύανος, blue, + *-ose* + *-in*[2].] A coal-tar color of the xanthene type, made by methylating phloxin. It dyes wool a bluish pink or red in an acid bath. It is only slightly soluble in water, but dissolves readily in alcohol.

cyanuramide (sī″a-nū-ram′id), *n.* [*cyanur-ic* + *amide.*] An amide of cyanuric acid; especially melamine, $(CNNH_2)_3$, which is more properly called *cyanurtriamide.*

cyanurenic, *a.* Same as *cyanuric.*

cyanurin (sī-a-nū′rin), *n.* [Gr. κύανος, blue, + οὖρον, urine, + *-in*[2].] Indigo-blue obtained from urine.

cyanurtriamide (sī″a-nūr-trī-am′id), *n.* See ★*cyanuramide.*

cyaphenin (sī-af′e-nin), *n.* [*cya(nate)* + *phen(yl)* + *-in*[2].] A crystalline compound,

$(C_6H_5CN)_3$, formed when potassium cyanate is heated with benzoyl chlorid. It melts at 233° C.

Cyathaspis (sī-a-thas'pis), *n.* [NL., < Gr. κύαθος, a cup, + ἀσπίς, a shield.] A genus of extinct ostracoderm fishes, known from its dorsal shield and rostral plate: found in the Upper Silurian rocks.

Cyatheaceæ (sī-ath-ē-ā'sē-ē), *n. pl.* [NL., < *Cyathea* + *-aceæ*.] One of the seven coördinate families of homosporous leptosporangiate *Filicales*, or true ferns, typified by the genus *Cyathea*. The species, which are mainly arborescent and are commonly known as the tree-ferns, are associated within about 10 genera, under 3 tribes, namely, *Cyatheæ*, *Thyrsopteridæ*, and *Dicksonieæ*. The sporangia, which are either sessile or short-stalked, are provided with a complete annulus extending obliquely over the apex of the capsule, and are aggregated in dense sori borne upon mostly elevated receptacles. There are more than 250 species, mainly tropical, and divided about evenly between the eastern and western hemispheres.

Cyatheæ (sī-ath'ē-ē), *n. pl.* [NL., < *Cyathea* + *-eæ*.] One of the three tribes constituting the family *Cyatheaceæ*. The sori are borne dorsally upon the simple veinlets or at their forking; the indusia are globose, cyathiform, scale-like, or (in *Alsophila*) wanting. The principal genera are *Cyathea*, *Hemitelia* and *Alsophila*, embracing many of the most beautiful tree-ferns.

cyathocrinoid (sī-a-thok'ri-noid), *n.* and *a.* **I.** *n.* A crinoid allied to *Cyathocrinus*.

II. *a.* Pertaining to *Cyathocrinus*.

cyathometer (sī-a-thom'e-tèr), *n.* [Gr. κύαθος, cup, + μέτρον, measure.] An instrument designed to detect any tampering with liquids in bottles, vats, or other receptacles. It indicates how much of the liquid has been withdrawn and if thereafter any has been added. *Sci. Amer. Sup.*, Nov. 22, 1902, p. 22,481.

cyathophyllid (sī-a-thō-fil'id), *n.* and *a.* **I.** *n.* A member of the family *Cyathophyllidæ*.

II. *a.* Pertaining to or having the characters of the fossil coral family *Cyathophyllidæ*.

Cyathophylloidea (sī-a-thō-fil-lō-id'ē-ä), *n. pl.* [NL., < Gr. κύαθος, cup, + φύλλον, leaf, + εἶδος, form.] A Paleozoic section of rugose corals having the peripheral region of the visceral chamber extensively occupied by vesicular dissepimental tissue whose lenticular cells are directed obliquely downward: not generally recognized.

Cybele, *n.* **3.** [NL. (Salisbury, 1809), < L. *Cybele*, < Gr. Κυβέλη, Cybele, a Greek goddess. The summit of the flower before expanding resembles the crown which Cybele is conventionally represented as wearing.] A genus of dicotyledonous plants of the family *Proteaceæ*. See *Stenocarpus*.

cycad, *n.* **2.** A fossil cycadean trunk belonging to either of the genera *Cycadeoidea* or *Bennettites*.

A Famous Fossil *Cycad*. *Amer. Jour. Sci.*, July, 1904, p. 40.

cycadean (sī-kā'dē-an), *a.* [*cycad* + *-ean*.] Same as *cycadaceous;* also specifically and commonly applied to fossil trunks of the family *Bennettitaceæ*.

In no case, however, had the fructification of any Fern-Cycad been definitely recognised, hence it remained an open question whether the *Cycadean* advance which was so marked a feature of the vegetative organs found its counterpart in the reproductive process.
Nature, June 4, 1903, p. 113.

Cycadeoidea (sī-kā-dē-oi'dē-ä), *n.* [NL. (Buckland, 1828), < *Cycas* (*Cycad-*) + *-oidea* (see *-oidea*, *-oideus*, *-oid*).] A large genus of fossil cycadean trunks of the family *Bennettitaceæ*, characterized by an axis consisting of a large medulla or pith, a woody zone usually of three exogenous layers or rings, and a very thick false bark or armor (see ★*armor*) in which the reproductive organs are buried. Those in which seeds have been found have been called ★*Bennettites* (which see). These trunks are abundant in the quarries of the Isle of Portland, where they are popularly called *crow's-nests* from the cavity at the summit caused by the loss of the terminal bud. Great numbers occur in Mesozoic strata in Italy and in the United States.

cycadeous (sik-ā'dē-us), *a.* Same as ★*cycadean*.

cycadite (sik'a-dīt), *n.* [*cycad* + *-ite*[2].] A fossil cycad. [Rare.]

Cycadofilices (sik"a-dō-fil'i-sēz), *n. pl.* [NL. (Potonié, 1897), < *Cycas* (*Cycad-*) + L. *filices*, pl. of *filix*, fern]. A group of extinct plants, all Paleozoic so far as is known, having the systematic rank of a phylum, coördinate with the *Pteridophyta* and the *Spermatophyta* and intermediate between these in having the outward appearance of ferns but bearing true seeds. The name *Pteridospermaphyta* has been proposed as better expressing these relations. The group was originally founded on features of the internal structure of these plants which were incompatible with their classification as ferns. The discovery of seeds was subsequent and the group now includes many genera not primarily included in it.

cycadofilicinean (sik"a-dō-fil-i-sin'i-an), *a.* [*Cycadofilices* + *-ine*[1] + *-e-an*.] Relating or belonging to the *Cycadofilices*. [A bad form.]

It is impossible to do more than to point to a few indications afforded by external and, to a slight extent, by internal structure, of the survival of *Cycadofilicinean* types.
Encyc. Brit., XXXI. 425.

cyclad (sī'klad), *n.* [NL. *Cyclas* (*cyclad-*).] A fresh-water mollusk of the genus *Cyclas*, or of the family *Cycladidæ*.

cyclamen, *n.*—**Wild cyclamen,** in *bot.*, in California, any species of the genus *Dodecatheon*; the shooting-star. *Parsons and Buck*, Wild Flowers of California.

cyclamen[2] (sik'la-men), *n.* Same as ★*cyclamin*, 2.

cyclamin, *n.* **2.** A coal-tar color of the xanthene type. It dyes wool and silk bluish red in a neutral bath. Also spelled *cyclamen* and *cyclamine*.

cyclamiretin (sik la-mi-rē'tin), *n.* [*Cyclami(n)* + Gr. ῥητίνη, resin.] A white amorphous compound, $C_{14}H_{18}O_2$, obtained by the hydrolysis of the glucoside cyclamin.

cyclamose (sik'la-mōs), *n.* [*Cyclam(in)* + *-ose*.] A levorotatory sugar, $C_{12}H_{22}O_{11}$, found in the roots of *Cyclamen Europæum*.

Cyclanthaceæ (sik-lan-thā'sē-ē), *n. pl.* [NL. (Lindley, 1836), < *Cyclanthus* + *-aceæ*.] A family of monocotyledonous plants typified by the genus *Cyclanthus*. They bear some resemblance to both palms and screw-pines, but have the monœcious flowers arranged in dense alternating spirals or whorls around a thick succulent spadix. The family includes 6 genera and 44 species, all natives of tropical America. The largest and most important genus is *Carludovica* (which see).

cyclanthaceous (sik-lan-thā'shius), *a.* [*Cyclanthaceæ* + *-ous*.] Belonging to the plant family *Cyclanthaceæ*.

cyclar (sik'lär), *a.* Same as *cyclic*.

cycle[1], *n.* **10.** In *elect.*, the time of one complete wave, or double reversal, of alternating currents. Frequencies are usually denoted in cycles per second. See ★*alternating*.—**11.** In *chem.*, same as ★*ring*, *n.* 18.—**12.** In *mech.*, a succession of conditions, operations, or phases which follow each other in a determinate order; specifically, in gas or internal-combustion motors, the successive changes experienced by the mixture of fuel and air in the motor cylinder. In the cycle proposed by Beau de Rochas, now better known as the *Otto cycle*, the mixture of fuel and air is drawn into the cylinder by an aspirating stroke of the piston and the mixture is compressed by the return of the piston; then this compressed mixture is ignited by an electric spark, or other means, and the expansion due to the heating of the air by the combustion of the gas causes a rise in pressure and exerts the forward effort on the piston during the second outward stroke; during this increase of volume the pressure is lowered. On the second return stroke, the exhaust-valve is opened and the burned gases are expelled during this fourth traverse. Then the cycle repeats itself. This cycle may be realized in one cylinder; or aspiration and compression may be done in one cylinder, and the working-stroke and following exhaust take place in another; or, in the two-phase cycle, or two-cycle motor, the intake or aspiration phase may take place just at the end of the working-stroke, the exhaust not occupying the time of a piston traverse. This makes one working-stroke for each complete revolution of the crank. The cycles may differ in having the compression and expansion isothermal or adiabatic, the heating at constant volume or at constant pressure, and the cooling phenomena isothermal or adiabatic. The compression may be omitted, although efficiency is increased by retaining it. The cycle of the gas-mixture should not be confounded with the mechanical arrangements for realizing and utilizing it.

Their three-quarter actual horse-power motor, which is of the two *cycle* compression type, having an impulse at each revolution and is reversible.
Hiscox, Horseless Vehicles, p. 163.

It thus takes four strokes or two revolutions of the shaft to complete the Otto *cycle*, the cylinder being used alternately as a pump and a motor, and the engine, when working at full load, thus gives one impulse for every two revolutions. *Encyc. Brit.*, XXVIII. 184.

13. In *math.*: (*a*) In *geom.*, a closed path in a multiply connected region. (*b*) In *function-theory*, the set of homologous corners of a given region (in substitution-groups).—**14.** In *meteor.*, the repetition of some general atmospheric phenomenon at approximately regular intervals. The more prominent cycles are the 35-year period, deduced by Bruckner; the sun-spot period, which varies between seven and thirteen years following the sun-spots; the 26.6 day period, deduced by Professor F. H. Bigelow; the lunar or tidal periods, the existence of which has been asserted by many persons but which are still uncertain; a 7-year period in the rainfall of Illinois, announced by Dr. Cyrus Thomas; the geological periods of indefinite and irregular extent, discussed by many geologists; the sun-spot period in the tropical temperatures combined with a retardation further away from the equator, as deduced by Koeppen; the annual temperature-wave carried slowly from the tropics to the polar regions by the ocean current or surface drift; and the diurnal and annual periods, carried from the surface of the ground downward by the conduction of heat through the ground.—**Anœstrous cycle.** See ★*anœstrous*.—**Asexual cycle.** See *sexual* ★*cycle*.—**Automobile cycle,** a form of motor-driven bicycle; a motor-cycle.—**Calippic cycle.** Same as *Calippic period* (which see, under *Calippic*).—**Canicular cycle.** See ★*canicular*.—**Clausius' cycle,** the succession of operations proposed contemporaneously by Clausius and Rankine for an ideal steam-engine. In this cycle all parts of the engine are assumed to be perfect, without initial condensation, leakage, radiation, or clearance in the cylinder. The feed-water is taken into the boiler at the exhaust temperature and heated until it becomes steam of a certain pressure and temperature. The steam is supplied to the cylinder at constant pressure until cut-off takes place; after which, expansion takes place adiabatically, pressure being reduced to the back-pressure. Then the return-stroke of the piston is performed at the constant terminal pressure until all the steam has been swept from the cylinder and the cycle is complete.—**Closed cycle,** a complete cycle; a series of states of a quantity of gas which starts with a certain volume, pressure, and temperature and in which the gas returns to those same conditions at the end of the cycle.—**Cycle of eclipses.** See *saros*.—**Cycle of erosion,** the time involved in the reduction of a land area to base-level. *Chamberlin and Salisbury*, Geol., I. 78.—**Eimerian cycle.** Same as *schizogenic* ★*cycle*.—**Ericsson cycle,** the succession or series of operations upon a gas or air used in Ericsson's design of hot-air, or so-called 'caloric,' engine. The special feature is the change of quantities of heat in the air or of intrinsic energy at constant pressures, so that the change of volume is the striking dynamic element. The air is passed by displacement over the heating surface, and its temperature and volume are increased; it then does work at constant temperature by increasing the volume it seeks to occupy at that pressure, and is afterwards displaced into the cooling-chamber, to which it imparts temperature, and shrinks in volume at the lower constant temperature; after which it is heated again, repeating the series.—**Four-stroke cycle.** Same as *four-phase cycle* (which see, under *internal-combustion* ★*motor*.—**Genesial cycle,** the period of reproductive life in woman, consisting of conception and gestation, parturition, and lactation.—**Geographical cycle,** in *phys. geog.*, an indefinite period of time in which a land mass is worn down from its initial form to a featureless plain close to sea-level; a cycle of erosion.—**Irreversible cycle,** in *thermodynamics*, a cycle in which one or more of the operations cannot be performed in the reversed sense. An operation which involves the development of heat by friction is of this sort and a cycle containing such an operation is irreversible.—**Joule cycle,** the succession of operations upon a gas used in a hot-air or closed-cycle gas-engine. The air is compressed by a piston in a cylinder, and passes thence through a heating-chamber. From the heater it passes to the motor-cylinder where it does work on the external resistance, exhausting thence into a cooling-chamber. From the latter the intake of the compressor withdraws the air and repeats the series of operations. The pressures in both heater and cooler are not supposed to vary, by having the volumes of these latter large enough. The Joule cycle becomes that of the usual internal-combustion ★motor (which see) when the heater becomes the place where fuel is introduced and by its combustion heats the air, while the cooler serves to keep any heat from going to waste with the free exhaust to the atmosphere. The Joule cycle reversed is used in refrigerating machinery.—**Rankine's cycle.** Same as *Clausius'* ★*cycle*.—**Schizogenic cycle,** that stage in the life-history of certain parasites which is devoted to multiplication by division. See *sporogenic* ★*cycle*.

The glomerular parasite . . . may represent the *schizogenic* or Eimerian cycle of the species and as such may antedate the whole sporogenic cycle of the tubules.
Jour. Exper. Med., VI. 310.

Sexual cycle, in *biol.*, that form or generation of animals and plants in which they spring from an ovum or female gametocyte, as distinguished from the *asexual cycle*, or generation which arises by budding or fission of the parent organism. The sexual and asexual cycles alternate in the so-called 'alternation of generations.'—**Sporogenic cycle,** the resting or spore stage in the life-history of certain animal parasites. See *schizogenic* ★*cycle*.

cycle-horn (sī'kl-hôrn), *n.* An alarm signal for use on bicycles, usually blown by compressing a rubber bulb which forces air through a reed at the smaller end of the horn-tube.

cycle-path (sī'kl-pàth), *n.* A path for bicycles.

The cycle tax consequently has been devoted, first, to the construction of *cycle-paths*, on which wheelmen have equal rights with pedestrians.
Encyc. Brit., XXVII. 328.

cycleway (sī'kl-wā), *n.* An elevated roadway for the special use of bicycles, motor-cycles, etc.: as, the *cycleway* between Pasadena and Los Angeles, California.

Cycliæ (sik'li-ē), *n. pl.* [NL., < Gr. κύκλος, circle.] An order of fossil marsipobranchiate fishes found in the Lower Devonian, interesting on account of its high development.

cyclic, *a.* **4.** In *chem.*, containing a cycle or ring. —**5.** In *bot.*, arranged in whorls: said of the stamens, petals, etc., in a flower; also, having the parts so arranged: said of the flower; cyclical. In composition used in this sense and also with reference to the annual course or cycle of plant-life. See *monocyclic*, 1 and ★3, *bicyclic*1, *pentacyclic*, ★*dicyclic*, and ★*pleiocyclic*.

6. In *geom.*, having its vertices all on the same circle: thus, if a quadrilateral has its vertices concyclic it is *cyclic*.—**Cyclic albuminuria.** See

★*albuminuria*. **Cyclic compounds**, Same as ★*ring compounds* or *closed* ★*chain compounds*. **Cyclic constant**. See ★*constant*. **Cyclic hydrocarbon**, a hydrocarbon containing a closed chain or ring of carbon atoms. **Cyclic permutation**. Same as *cyclical permutation*.

Cyclical form, in *music*, a method or pattern of composition in which a principal theme or passage recurs at intervals without substantial change, used especially of rondos and sometimes of songs in which successive stanzas are treated alike. See ★*strophic*, 2.

cyclically (sik'li-kal-i), *adv.* In a manner such that a cycle or series of cycles occurs; said of certain periodic changes as of temperature or pressure in which the varying conditions are repeated and follow each other in the same order.

cyclicism (sik'li-sizm), *n.* [*cyclic* + *-ism*.] The custom or system of reckoning days or years by cycles.

cyclicotomy (sik-li-kot'ō-mi), *n.* [Gr. κυκλικός, circular, + *-τομια*, ‹ ταμεῖν, cut.] An operation for dividing the ciliary body of the eye. *Syd. Soc. Lex.*

cyclide, *n.* **Darboux's cyclide**, a point surface represented by any equation of the second degree F (a, b, c, d, e) = 0, taken in connection with the relation $b^2 + c^2 + d^2 - ae = 0$. From the point of view of ordinary projective geometry, the *cyclide* is a surface of the fourth order containing the imaginary circle common to all spheres of space as a double curve. **Dupin's cyclide**. Same as *cyclide*.

cyclism (sik'lizm), *n.* [*cycle* + *-ism*.] The use of the bicycle or tricycle as a means of transportation or for health or pleasure.

Military *cyclism* wants no undue praise.
Saturday Rev., Aug. 2, 1890, p. 136.

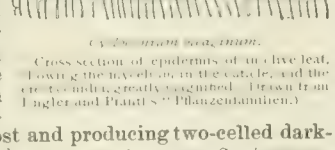
cyclocentric (sī-klō-sen'trik), *a.* [Gr. κύκλος, circle, + κέντρον, center, + *-ic*.] Having the starting-point of the spiral at a little distance from the center, so that the first whorl runs around it, as in the shells of certain mollusks. *Syd. Soc. Lex.*

cyclocephalian (sī″klō-se-fā'liạn), *a.* Same as *cyclocephalic*.

Cycloceras (sī-klos'ẹ-ras), *n.* [Gr. κύκλος, circle, + κέρας, horn.] A genus of Paleozoic nautiloid cephalopods with slightly curved shells bearing annuli and longitudinal ridges.

cycloceratitis (sī″klō-ser-ạ-tī'tis), *n.* [NL., ‹ Gr. κύκλος, circle, + κέρας (κερατ-), horn, + *-itis*.] Inflammation of the cornea and ciliary body.

Cycloconium (sī-klō-kō'ni-um), *n.* [NL. (Castagne, 1845), ‹ Gr. κύκλος, circle, + κόνις, dust (see *conidium*).] A genus of hyphomycetous fungi having dichotomously branched black hyphæ growing in the epidermis of the host and producing two-celled dark-colored conidia. The single species, *C. oleaginum*, is parasitic on leaves of the olive in Europe and California, causing a disease called scab. See ★*scab of olive*.



Cycloconium oleaginum.

Cross section of epidermis of an olive leaf, showing the mycelium in the cuticle, and the circle of conidia, greatly magnified. (Drawn from Engler and Prantl's "Pflanzenfamilien.")

Cyclodonta (sī-klō-don'tạ), *n.* [NL., ‹ Gr. κύκλος, circle, + ὀδοῖς (οδοντ-), tooth.] A division of the pelecypod mollusks characterized by the extreme torsion of their dentition, which curves out from under the beaks and is not set upon a flat hinge-plate.

cyclogenous (sī-kloj'e-nus), *a.* [*cyclogen* + *-ous*.] Of the nature of a cyclogen; exogenous. *Syd. Soc. Lex.* [Not used.]

cyclograph, *n.* **2.** The name given to a machine, invented by A. H. Smith of the British Museum, for photographing Greek vases. The vase to be photographed rotates while traveling along the circumference of a circle having its center at the center of the lens.—**3.** A special form of camera for obtaining panoramic views.—**4.** An apparatus for automatically making a topographical record of the ground traversed during a journey. As now manufactured it is intended for use on a bicycle, and the rider must set the instrument for direction by the aid of a compass, the remainder of the recording being done automatically.

cyclography (sī-klog'rạ-fi), *n.* [Gr. κύκλος, circle, + *-γραφια*, ‹ γράφειν, write.] A method for the treatment of geometrical problems by means of circles: due to Fiedler, 1863. *Science*, May 2, 1902, p. 713.

cyclohexane (sī-klo-hek'sān), *n.* [Gr. κύκλος, circle, + E. *hexane*.] A hydrocarbon, C_6H_{12}, found in Russian and in Californian petroleum, and also prepared synthetically. It boils at 81° C.

cyclohexanol (sī-klō-hek'sạ-nōl), *n.* [*cyclohexane* + *-ol*.] An alcohol, $C_6H_{11}OH$, derived from cyclohexane. It boils at 160.5° C.

cyclohexanone (sī-klō-hek'sạ-nōn), *n.* [*cyclohexane* + *-one*.] A ketone, $C_6H_{10}O$, prepared by oxidizing cyclohexanol. It boils at 154.5° C. Also called *pimelic ketone*.

cycloid, *a.* **3.** In *chem.*, containing a cycle or ring of atoms; used especially of the structure of organic compounds.

Cycloidal pump. See ★*pump*[1].

cycloidally (sī-kloi'dạl-i), *adv.* In a cycloidal manner.

cycloidotrope (sī-kloi'dō-trōp), *n.* [Gr. κύκλος, circle, + εἶδος, form (see *cycloid*), + τρόπος, a turning.] In *photog.*, a kind of lantern-slide for projecting the operation of engine-engraving or turning.

cyclolith (sī'klō-lith), *n.* [Gr. κύκλος, circle, + λίθος, stone.] A prehistoric megalithic stone circle.

But similar blocks are also found disposed in circular form round the barrows, and they are then known as *cycloliths* or stone circles. *Keane*, Ethnology, p. 130.

cyclomatic (sī-klō-mat'ik), *a.* [NL. **cyclomaticus*, ‹ *cycloma*, a circle: see *cycloma*.] Of or pertaining to a cycle or cycles. **Cyclomatic number**, in *phys.*, a number which denotes how many cycles occur in a given process or are comprised in a diagram.

cyclome (sī'klōm), *n.* [NL. *cycloma*, ‹ Gr. κύκλωμα, a circle, wheel, coil, ‹ κυκλοῦν, make into a circle, ‹ κύκλος, circle.] In *bot.*, a ring-shaped cushion of anthers. *McNab.*

cyclometrical (sī-klō-met'ri-kạl), *a.* **1.** Of or pertaining to the cyclometer or to cyclometry.

A degree of exactness for *cyclometrical* operations was now obtained. *Smithsonian Rep.*, 1890, p. 113.

2. Cyclometric; specifically, pertaining to the rectification of the circumference.

Cyclonal gradient. See ★*gradient*.

cyclone, *n.*—**Axis of a cyclone**, in *meteor.*, a line which joins the center of a cyclonic whirl at the earth's surface with corresponding centers in the layers of air above. The line is generally inclined to the earth's surface and is rarely a straight line.—**Centered cyclone**, a theoretic cyclone in which the isobars are circular, the winds are parallel to them, and the whole system is stationary relative to the earth's surface.—**Cyclone nozzle**. See ★*nozzle*.—**Diurnal cyclone**, the cyclonic appearance of winds on a weather-map of the whole illuminated hemisphere, on which the departures from normal temperatures, pressures, and winds show a general inflow toward the heated central region over which the sun is vertical, thereby constituting a true cyclone, though one of feeble energy.—**Eclipse cyclone**, the cyclonic appearance of a weather-map during a total eclipse of the sun, on which the departures from normal temperatures, pressures, and winds show cyclonic and anti-cyclonic tendencies in the atmosphere around the central shadow.—**Ferrel's theory of cyclones**, the application to general cyclonic motions of the laws governing small local cyclones; especially the assumption that the condensation of vapor in ascending convection-currents is the initial cause and the supporting force of the cyclone.—**Polar cyclone**, the theoretic circulation of the atmosphere about the north or south polar regions, forming a cyclone with a cold center, in which the lower air flows outward but the upper air flows inward.—**Primary cyclone**, a large area of low pressure having a well-defined system of isobars and rotation of the wind.—**Satellite cyclone**, a small depression that is supposed to revolve around a larger primary cyclone, although this actually happens very rarely.—**Secondary cyclones**, a small area of low pressure and revolving winds usually formed in advance of the primary cyclone, or between the primary and the highest adjacent pressure, and usually lasting only a few hours.—**Solar cyclone**, a whirling movement like a terrestrial cyclonic storm observed in the solar atmosphere; a sun-spot; a solar protuberance; a solar flame.—**Stationary cyclone**, a cyclone whose center has no appreciable movement of translation; a centered cyclone. A moving cyclone is frequently stationary for some time at some point in its history, and may even move backward, making a loop or reentrant angle in an otherwise steady progression. During this stationary period the isobars become almost perfectly circular and the inclination of the wind to the isobars becomes very slight.—**Tropical cyclone**, a large whirlwind beginning as a small one within ten degrees of the equator and increasing in size as it moves until it becomes known as a hurricane in the Atlantic, a typhoon in the Pacific, and a cyclone in the Indian Ocean.—**Trough of a cyclone**, the line drawn through the center of a cyclone (approximately north and south in northern latitudes) connecting those places on the weather-map where the barometer reading is the lowest at that moment or has the greatest departure from the normal. This line separates the front and rear of the cyclone. In front of it the barometer is falling and in the rear of it rising, in consequence of the forward motion of the cyclone.—**Zone of cyclones**, the region between latitudes 30° and 60°, within which cyclones occur by virtue of the combination of descending polar and ascending equatorial winds into one rotating mass of mixing air; a zone of mixture in which the west wind retains the upper hand.

cyclone-cellar (sī'klon-sel ạr), *n.* An underground room used as a refuge on the approach of a cyclone or tornado in certain western plains and prairies of the United States. Sometimes called *cyclone-pit*.

Cyclonema (sī-klō-nē'mạ), *n.* [NL., ‹ Gr. κύκλος, circle, + νῆμα, thread.] A genus of Paleozoic gastropods commonly assigned to the family *Turbinidæ* and including turbinate shells with inflated whorls marked with spiral striæ, rounded aperture, and conical operculum.

cyclone-season (sī'klon-se-zn), *n.* The months during which hurricanes, typhoons, or cyclones are most frequent. In India the cyclone-season extends from July to November, in China and Japan from April to November, in the West Indies and the Philippines from August to October.

cycloneurous (sī-klō-nū'rus), *a.* [Gr. κύκλος, circle, + νεῦρον, nerve, + *-ous*.] Having the principal parts of the nervous system arranged in a circular manner, as certain jellyfishes.

Cyclonic law, the law of the circulation of the winds within a cyclone; specifically, the rule that, in the northern hemisphere, if one stands with his back to the wind, the center of the cyclone bears from 30 to 80 degrees to the left of front or from 10 to 40 degrees in front of the left hand; it will also be more directly to the left of the movement of the lower clouds. In the southern hemisphere the center will be to the right instead of to the left. Originally the cyclonic law assumed a circular motion around a storm-center, but at present it includes the idea of a spiral movement inward with a gradual ascent, and a corresponding outflow and descent above.

cyclonist (sī'klō-nist), *n.* [*cyclone* + *-ist*.] A cyclonologist; in a restricted sense, one who advocates the circular theory of cyclones; one who makes too much use of explanations based on the theory of cyclones.

cyclonograph (sī-klon'ō-graf), *n.* [*cyclone* + Gr. γράφειν, write.] A form of dromoscope devised by Viscovich in 1882; an apparatus for drawing cyclonic movements; also, a diagram for exhibiting the circulation of winds around a storm-center.

cyclonologist (sī-klō-nol'ō-jist), *n.* [*cyclonology* + *-ist*.] A student of cyclonology; one who is wedded to the circular theory of cyclones. See *cyclonic law*.

cyclonology (sī-klō-nol'ō-ji), *n.* [*cyclone* + Gr. *-λογία*, ‹ λέγειν, speak.] The scientific study of the winds and other phenomena of cyclones.

cyclopedist, cyclopædist (sī-klō-pē'dist), *n.* [*cyclopedia* + *-ist*.] One who contributes to or makes a cyclopedia or encyclopedia.

Cyclopeltis (sī-klō-pel'tis), *n.* [NL. (John Smith, 1846), ‹ Gr. κύκλος, circle, + πελτή, a shield.] A genus of free-veined polypodiaceous ferns, having the crowded simple pinnæ narrow, auriculate, and articulated with the rachis, the sori borne in from 1 to 3 rows on either side of the midvein, and the indusia peltate. There are 2 species, *C. semigordata*, a well known West Indian plant, and *C. Preslianа* of the Philippine Islands.

cyclopentane (sī-klō-pen'tān), *n.* [Gr. κύκλος, circle, + E. *pentane*.] A synthetic cyclic hydrocarbon, C_5H_{10}. It is an oil which boils at 50° C. Also called *pentamethylene* and *R-pentene*.

cyclophoria (sī-klō-fō'ri-ạ), *n.* [NL., ‹ Gr. κύκλος, circle, + *-φορος*, ‹ φέρειν, carry.] Insufficiency of the oblique muscles of the eye, producing a tendency to rotation about an anteroposterior axis. *Med. Record*, Feb. 7, 1903, p. 211.

cyclophoric (sī-klō-for'ik), *a.* Relating to or of the nature of cyclophoria. *Optical Jour.*, Aug. 4, 1904, p. 453.

Cyclopia (sī-klō'pi-ạ), *n.* [NL. (Ventenat, 1808), ‹ Gr. κύκλος, circle, + ὤψ(ὠπ-), eye: see *Cyclops*. The allusion is to the circular depression of the base of the calyx, around the pedicel.] A genus of shrubs of the family *Fabaceæ*. They have small, sessile, trifoliate leaves, and yellow flowers borne singly in their axils. There are about 10 species, all South African. See *bush tea*, under *tea*.

cyclopic[2] (sī-klop'ik), *a.* [*Cyclopia* (see def.) + *-ic*.] Obtained from a plant of the genus *Cyclopia*.—**Cyclopic acid**, a solid yellow acid, $C_7H_8O_4$, found in the leaves of *Cyclopia subternata*.

cyclopically (sī-klop'i-kal-i), *adv.* In the manner of the Cyclopes. See *Cyclops*, 1, and *cyclopic*.

cyclopiform (sī-klop'i-fôrm), *a.* [L. *cyclops* (*cyclop-*), cyclops, + *forma*, form.] Shaped like a cyclops.

cycloplegic (sī-klō-plej'ik), *a.* and *n.* **I.** *a.* Relating to or of the nature of cycloplegia.

II. *n.* **1.** An agent, such as atropine, which causes paralysis of the ciliary muscle. *Optical Jour.*, June, 1903, p. 726.—**2.** A person suffering from cycloplegia.

Cyclops, *n.* **4.** (*b*, *c*.) A monster having one imperfect eye, sometimes showing a fusion of two, near the middle line.

cyclopterin (sī-klop'te-rin), *n.* [*Cyclopterus* + *-in*[2].] A protamin obtained from the testicles of the teleost fish *Cyclopterus lumpus*.

cycloramic, *a.*—**Cycloramic camera**. See ★*camera*.

cyclose (sī′klōz), *n.* [Gr. κύκλος, circle, + *-ose.*] A sugar containing a closed carbon chain in the molecule.

cyclosis, *n.* 2. In *phys.*, the existence of cycles.

The existence of cycles is called *Cyclosis.*
Clerk Maxwell, Electricity and Magnetism, I. 17.

3. In *math.*, the occurrence of closed paths.

Cyclospondyli (sī-klō-spon′di-lī), *n. pl.* [NL., ‹ Gr. κύκλος, circle, + σπόνδυλος, a vertebra.] A suborder of sharks having the calcareous lamellæ of the vertebræ arranged in one or more concentric circles or series around a central ring, instead of radiating from a central ring as in the asterospondylous sharks.

cyclospondylic (sī″klō-spon-dil′ik), *a.* Having the characters of the *Cyclospondyli*; having vertebræ that are partly cartilaginous and partly ossified by the deposit of bone arranged in concentric layers; also, noting such vertebræ.

cyclospondylous (sī-klō-spon′di-lus), *a.* Same as ★*cyclospondylic.*

Cyclosporales (sī″klō-spō-rā′lēz), *n. pl.* [NL., ‹ Gr. κύκλος, circle, + σπορά, seed (spore), + *-ales.*] An order of the *Phæophyceæ*, or brown seaweeds: practically the same as *Fucaceæ.*

cyclostomian (sī-klō-sto′mi-an), *a.* [Gr. κύκλος, circle, + στόμα, mouth, + *-ian.*] Having circular orifices of the zoœcia or cells, as certain polyzoans.

cyclostyle, *n.* 2. A peristyle of circular form.

cyclotomic, *a.* 2. Relating to or of the nature of cyclotomy. **Cyclotomic equation.** See ★*equation.*

cyclotomy (sī-klot′ō-mi), *n.* [Gr. κύκλος, circle, + -τομια, ‹ ταμεῖν, cut.] 1. In *surg.*, operation for division of the ciliary muscle, practised to relieve tension in glaucoma.— 2. In *math.*, the theory of the partition of the circle.

Cyclotus, *n.* 2. [*l. c.*] Same as *synotus*, 2.

cyclovertebral (sī-klō-vėr′tē-bral), *n.* [Gr. κύκλος, circle, + E. *vertebral.*] The body of a vertebra in fishes; the centrum.

Cydippidea (sī-di-pid′ē-ä), *n. pl.* [NL., ‹ *Cydippe* + *-idea.*] An order of tentaculate *Ctenophora.* They have the body of spherical, cylindrical, or compressed form, with 2 simple or branched tentacles retractile within tentacular sheaths, and the meridional and stomodeal canals not produced into a peripheral-canal system. The order includes the families *Mertensidæ* and *Pleurobrachiidæ.*

Cydones (si-dō′nēz), *n.* [Gr. Κύδωνες.] One of the early races of Crete.

Cygnian (sig′ni-an), *a.* and *n.* [*Cygnus* + *-ian.*] **I.** *a.* Having a spectrum similar to that of Arided (*a* Cygni, often called Deneb).
II. *n.* A star having such a spectrum.

cyl. An abbreviation (*a*) of *cylinder;* (*b*) of *cylindrical.*

Cylinder oil. See ★*oil.*— **Delivery-cylinder,** in a printing-press, the cylinder which seizes the printed sheet when it leaves the printing-cylinder, and delivers it to the fly on the receiving-table.— **Displacement-cylinder,** an auxiliary cylinder used on some internal-combustion engines for forcing the charge into the main or working cylinder.— **Impression-cylinder,** the cylinder of a rotary printing-machine which resists the pressure of the plate-cylinder and gives the impression which produces the print. See *cylinder*, 2 (*c*).— **Inside cylinder,** a cylinder located between the frames of a locomotive instead of outside of them. The inside cylinder compels the use of a cranked axle, and compacts the connecting-rods and guides into the small spaces under the boiler. The valve-gear is then usually forced outside the frames, where it is more liable to injury. See *locomotive.*— **Inverted cylinder,** a vertical-engine cylinder in which the piston-rod passes downward through the bottom-head. In the original vertical engines built by Watt and others, the piston-rod passed through the top-head.— **Inverted-cylinder engine.** See ★*engine.*— **Low-pressure cylinder,** the last cylinder in which the steam is expanded in a compound or multiple-expansion engine, the steam passing first into the high-pressure cylinder and thence through the other cylinders in the order of their size, the low-pressure cylinder being the largest.— **Outside cylinder.** See *overhanging* ★*cylinder* and *locomotive.* **Overhanging cylinder,** a cylinder of a locomotive which overhangs the frames. Usually called *outside cylinder* or *outside connected cylinder.*— **Plate-cylinder,** the cylinder of a rotary printing-machine on which are fastened the curved electrotype or stereotype plates to be printed.— **Porcupine cylinder.** Same as *porcupine* ★*beater.*

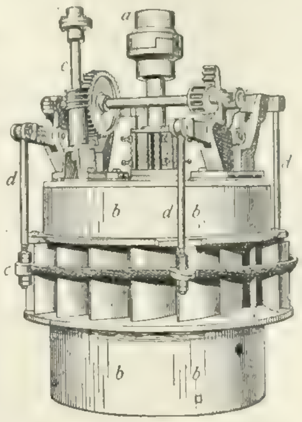
cylinder (sil′in-dėr), *v. t.* To press under a cylinder or between cylinders.

cylinder-band (sil′in-dėr-band), *n.* A type of fluted band, observed in certain metallic spectra, which has the appearance of a hollow half-cylinder illuminated from one side. *Electrochem. Industry*, Dec. 1903.

cylinder-cake (sil′in-dėr-kāk), *n.* Salt-cake (sodium sulphate) made by heating common salt with sulphuric acid in cylindrical cast-iron retorts. *G. Lunge*, Sulphuric Acid, II. 121.

cylinder-gage, *n.* 2. A gage for testing or measuring the size of the opening in the escape-wheel of a cylinder-escapement.— 3. A steam-gage connected with the cylinder of a steam-engine.

cylinder-gate (sil′in-dėr-gāt), *n.* A cylindrical gate or valve used to regulate the amount of water flowing to a turbine. In its usual form it is a series of fingers protruding downward from a cylinder and filling the passages between the guide-vanes of the turbine.



Cylinder-gate.
a, shaft of turbine; *b*, casing of turbine; *c*, ring or cylinder, or flange (the cylinder which shuts off the water from the vanes or buckets) fastened to the inner edge of this ring or flange; *d*, *d*, hangers supporting flange and gate; *e*, rod actuating worm and wheel to raise and lower the gate.

cylinder-pressure (sil′in-dėr-presh″ūr), *n.* The motor effort on a piston-motor, due to the tension of the fluid which drives it. The pressure at the beginning of the stroke is the initial pressure, that at the end of the stroke the final or terminal pressure. The average of all pressures throughout the stroke is the mean pressure, or the mean effective pressure.

cylinder-printing (sil′in-dėr-prin″ting), *n.* The printing of cloth on a machine consisting of one large cylinder and a number of smaller ones. The surfaces of the latter are engraved with the patterns to be printed.

cylinder-relief (sil′in-dėr-rē-lēf″), *n.* A drain for carrying off water which collects in a steam-cylinder; also, an automatic valve which opens when the pressure rises above a certain point; a relief-valve.

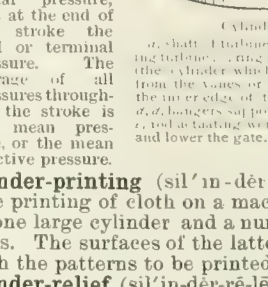
cylindrarthrosis (sil″in-drär-thrō′sis), *n.* [NL., ‹ Gr. κύλινδρος, cylinder, + ἄρθρωσις, articulation.] In *anat.*, a hinge-joint.

Cylindrical spiral. See ★*spiral.*

cylindricality (si-lin-dri-kal′i-ti), *n.* [*cylindrical* + *-ity.*] The quality of being cylindrical; cylindricity.

cylindrite (sil′in-drīt), *n.* [NL. **cylindrites*, ‹ Gr. κύλινδρος, cylinder, + -ιτης, E. *-ite*[2].] A sulphid of lead, antimony, and tin, occurring in massive forms with concentric cylindrical structure: found in Bolivia. Also written *kylindrite.*

cylindrograph (si-lin′drō-gráf), *n.* [Gr. κύλινδρος, cylinder, + γράφειν, write.] In *photog.*, a form of panoramic camera which has an angular range covering nearly half the horizon. *Woodbury*, Encyc. Dict. of Photog., p. 152.



Cylindrograph.
a, objective; *b*, curved film; *c*, camera; *d*, arm for rotating objective.

cylindroid, *n.* 3. In *anthrop.*, a cranium the norma verticalis of which is elongated, flattened at the forehead and occiput, and rounded at the sides. *G. Sergi*, (trans.) Var. of the Human Species, p. 39.— 4. In *pathol.*, a body resembling a tube-cast, consisting usually only of mucus.

cylindroscope (si-lin′drō-skōp), *n.* [Gr. κύλινδρος, cylinder, + σκοπεῖν, view.] In *photog.*, an apparatus for viewing panoramic pictures, the print being curved to a radius which corresponds to the original radius of the panoramic camera or cylindrograph used to secure the negative. *Wall*, Dict. of Photog., p. 172.

Cylindrosporium (si-lin-drō-spō′ri-um), *n.* [NL. (Greville, 1822), ‹ κύλινδρος, cylinder, + σπορά, seed (spore).] A large genus of parasitic melanconiaceous fungi having the pale-colored conidial cushions (sporodochia) embedded in the surface of the host, and producing filiform straight or variously curved conidia. *C. Padi* is a common species causing a disease of the leaves of plum and cherry. See *cherry* ★*leaf-spot.*

cylindruria (sil-in-drū′ri-ä), *n.* [NL., ‹ Gr. κύλινδρος, cylinder, + οὖρον, urine.] In *pathol.*, the condition in which there is a passage of urinary tube-casts in the urine.

Cym. An abbreviation of *Cymric.*

cymba, *n.*— **Cymba conchæ,** in *anat.*, the upper portion of the concha of the ear, above the auditory meatus.

cymbalo (sim′ba-lō), *n.* Same as *cembalo.*

cymbella (sim-bel′ä), *n.*; pl. *cymbellæ* (-ē). [NL., dim. of L. *cymba*, a boat: see *cymba.*] In *bot.*, one of the elliptical zoöspores of some algæ.

cymbocephalic, *a.* 2. Belonging to a subdivision of the oöidocephalic forms, characterized by an exceedingly protuberant occiput. *Aitken Meigs.*

cymbocephalous (sim-bō-sef′a-lus), *a.* Same as *cymbocephalic.*

cymbocephalus (sim-bō-sef′a-lus), *n.*; pl. *cymbocephali* (-lī). [Gr. κύμβη, bowl, + κεφαλή, head.] One who has a cymbocephalic skull.

cyme, *n.*— **Bostrychoid cyme.** Same as *bostryx.*

cymenol (sim′e-nōl), *n.* [*cymene* + *-ol.*] Same as *carvacrol.*

cymidine (sī′mi-din), *n.* [*cym(ene)* + *-id*[1] + *-ine*[2].] Amino-cymene, $CH_3C_6H_3(NH_2)CH(CH_3)_2(1{:}3{:}4)$, an oily monacid base which boils at 230° C. Also called 3-*amino-methyl*-4-*methoethylphen.*

cymogene, *n.* This very volatile product, obtainable at the beginning of the distillation of crude petroleum, boils under ordinary pressure at 0° C. (32° F.), and consists chiefly of normal butane, C_4H_{10}. Also *chymogene.*

cymograph (sī′mō-gráf), *n.* Same as *kymograph.*

cymometer (sī-mom′e-tėr), *n.* [Gr. κῦμα, wave, + μέτρον, measure.] In *elect.*, an instrument for the measurement of the wave-length and frequency of electric oscillations.

cymotrichous (si-mot′ri-kus), *a.* [Gr. κῦμα, wave, + θρίξ (τριχ-), hair.] In *anthrop.*, characterized by having wavy hair.

cymyl (sim′il), *n.* [*cym(ene)* + *-yl.*] The radical, $C_6H_3(CH_3)CH(CH_3)_2(1{:}4)$, of cymene.

cynanchin (si-nang′kin), *n.* [NL. *Cynanchum* (see def.) + *-in*[2].] A compound found in the milky juice of *Cynanchum acutum* Linn. It crystallizes in leaflets which melt at 149° C.

cynanchocerin (si-nang-kō-sē′rin), *n.* [NL. *Cynanchum* (see def.) + Gr. κηρός, wax, + *-in*[2].] A compound obtained from the milky juice of *Cynanchum acutum* Linn. It crystallizes in needles which melt at 146° C.

cynanchol (si-nang′kōl), *n.* [NL. *Cynanchum* (see def.) + *-ol.*] A crystalline substance obtained from the milky juice of *Cynanchum acutum* Linn. It was afterward separated into cynanchocerin and cynanchin.

cynapin (sin′a-pin), *n.* [NL. *cynapium* (see def.) + *-in*[2].] An oil of uncertain composition obtained from fool's-parsley, *Æthusa Cynapium.* It has a strong odor and reddish-yellow color.

Cynareæ (si-nā′rē-ē), *n. pl.* [NL., ‹ *Cynara* + *-eæ.*] A tribe of plants of the family *Asteraceæ*, typified by the genus *Cynara;* the thistle family; same as *Cynaroideæ. Cynareæ* is the proper form of the tribal name.

cynarrhodion, cynarrhodium, *n.* Erroneous forms often used for *cynorrhodon* or *cynorrhodium.*

cyniatria (sin-i-a-trī′ä), *n.* [Gr. κύων (κυν-), dog, + ἰατρεία, medical treatment.] Investigation and treatment of diseases of the dog.

cyniatrics (sin-i-at′riks), *n.* [Gr. κύων, dog, + ἰατρικός, ‹ ἰατρός, physician: see *iatric.*] Same as ★*cyniatria.*

cynipidean (si-ni-pid′ē-an), *a.* Of or belonging to the hymenopterous family *Cynipidæ*, the gall-flies.

cynism (sin′ism), *n.* Same as *cynicism. Thirlwall. N. E. D.*

cynoctonine (si-nok′tō-nin), *n.* [Gr. κυνόκτονον, aconite, (neut. of κυνόκτονος, killing dogs (‹ κύων (κυν-), dog, + -κτονος, ‹ κτείνειν, kill), + *-in*[2].] An amorphous, bitter alkaloid, $C_{36}H_{55}O_{13}N_2$, found in *Aconitium septentrionale.* It is poisonous, producing tonic-clonic spasms.

cynodonichthys (sin′ō-don-ik′this), *n.* [NL., < Gr. κυνόδους (κυνοδοντ-), canine tooth, + ἰχθύς, fish.] A genus of fishes of the family *Characidæ* found in fresh waters of Mexico.

cynodont (sī′no-dont), *n.* [Gr. κυνόδους, a canine tooth, < κύων (κυν-), dog, + ὀδούς (ὀδοντ-), tooth.] A member of the reptilian suborder ★*Cynodontia*.

On the other hand, like the *cynodonts*, they show a rudimentary secondary palate.
Amer. Nat., Feb. 1904, p. 103.

Cynodontia (sī-nō-don′ti-ä), *n. pl.* [NL., neut. pl. of *Cynodus*, < Gr. κυνόδους, a canine tooth: see *cynodont*.] A suborder of anomodont reptiles of medium size, having the squamosal expanded, the quadrate reduced, and double occipital condyles: Owen's family *Cynodontia* (1876), raised to a suborder by Osborn (1903).

cynolatry (sī-nol′ạ-tri), *n.* [Gr. κύων (κυν-), dog, + λατρεία, worship.] Dog-worship.

cynology (sī-nol′ō-ji), *n.* [Gr. κύων (κυν-), dog, + -λογία, < λέγειν, speak.] The natural history of the dog.

Cynomoriaceæ (sī-nō-mō-ri-ā′sē-ē), *n. pl.* [NL. (Lindley, 1836), < *Cynomorium* + *-aceæ*.] A family of dicotyledonous archichlamydeous root-parasitic plants of fungoid habit, containing the genus *Cynomorium* only (which see). Lindley gave this name to the family *Balanophoraceæ* in which he and most other authors included this plant, but Engler, in 1897, removed it from that family and classed it in the order *Myrtales*, as a distinct family. See *rhizogen*.

cynomorphous (sī-nō-môr′fus), *a.* [Gr. κυνόμορφος, dog-shaped, < κύων (κυν-), a dog, + μορφή, form.] Resembling, or characteristic of, the Old World monkeys contained in the family *Cynopithecidæ* or *Cercopithecidæ*.

cynophilist (sī-nof′i-list), *n.* [Gr. κύων (κυν-), dog, + φίλος, loving, + *-ist*.] A lover of dogs. *N. E. D.*

cynophobia (sī-nō-fō′bi-ä), *n.* [Also *kynophobia*; < Gr. κύων (κυν-), dog, + -φοβία, < φοβεῖν, fear.] **1.** Same as *lyssophobia*.—**2.** A morbid fear of dogs.

cynopic (sī-nop′ik), *a.* [Gr. κυνώπης, dog-eyed, < κύων (κυν-), dog, + ὤψ (ὠπ-), eye.] Dog-eyed; shameless. *Badham.* [Nonce-word.] *N. E. D.*

Cynthia, *n.* **4.** [*l. c.*] In *bot.*, the Virginia ★goat's-beard (which see).

cynurenic (sī-nū-ren′ik), *a.* [*cynur(ic)* + *-en* + *-ic*.] Obtained from the urine of dogs.

Cynurenic acid, a colorless compound, $HOC_9H_5NCOOH.H_2O$, contained in the urine of dogs fed with meat-fat. It crystallizes in silver, lustrous needles and when anhydrous melts at 257–258° C. Also called *hydroxyquinolinecarboxylic acid*.

cynuric (sī-nū′rik), *a.* [Gr. κύων (κυν-), dog, + οὖρον, urine.] Noting a crystalline acid, $CO_2H.C_6H_4NHCOCO_2H + H_2O$, which melts, when free from water, at 188–189° C., with decomposition. Also called *oxalylanthranilic acid*.

cynurine (sin′ū-rin), *n.* [*cynur(ic)* + *-ine*[2].] A colorless bitter compound, HOC_9H_6N, prepared by the fusion of cynurenic acid and also by the oxidation of cinchonine and certain related compounds. It crystallizes in lustrous, monoclinic, anhydrous prisms or, with $3H_2O$, in needles melting at 201° C. and 52° C. respectively. Also called *4-hydroxyquinoline*.

cyperoid (sī′pe-roid), *a.* [*Cyper-us* + *-oid*.] Resembling, allied to, or belonging to the plant-genus *Cyperus* or the family *Cyperaceæ*.

Cyphaspis (sī-fas′pis), *n.* [Gr. κυφός, bent, + ἀσπίς, a shield.] A genus of trilobites of the family *Proëtidæ*, having a short ovoid glabellum, broad cephalic margins, a variable number of thoracic segments, and a small pygidium. It occurs in the Silurian and Devonian rocks.

cyphophthalmid (sī-fof-thal′mid), *a.* Having the characters of or belonging to the family *Cyphophthalmidæ*.

Cyphosomatidæ (sī″fō-sō-mat′i-dē), *n. pl.* [NL., < *Cyphosoma(t-)* + *-idæ*.] A family of regular ectobranchiate *Echinoidea*, of the order *Diademoida*. They have the ambulacral plates compounded, with 3 to 7 pore-plates in an arc; the adoral, supraoral, and sometimes also the aboral plates primaries, and the remaining constituents demi-plates. It is typified by the extinct genus *Cyphosoma*, the only living genus being *Glypticodiadema*.

cyphotic (sī-fot′ik), *a.* [*cyphosis* (*-ot-*) + *-ic*.] Humpbacked: usually *kyphotic*.

cypress[1], *n.*—**Alaska cypress, Alaska ground-cypress,** the yellow cedar, *Chamæcyparis Nootkatensis*. See *yellow*.—**Arizona cypress,** *Cupressus Arizonica*, a tree of the mountains of Arizona and northeastern Mexico, sometimes attaining a height of 70 feet, with the trunk very large in proportion to the height. The wood is light and soft. The tree is occasionally cultivated for ornament.—**California mountain cypress.** Same as *MacNab's* ★*cypress*.—**Chilean cypress,** a tall, stately tree, *Libocedrus tetragona*, of the Chilean Andes and Patagonia, with a straight trunk sometimes 120 feet high, and soft, white, light, resinous wood, which is durable under ground and is much used for railway-ties in Chile. This species, together with the Chilean cedar (*Fitzroya Patagonica*), is recommended for planting in swampy mountain-moors of the temperate zones. The name *alerce* is often applied to both of them, as well as to *Libocedrus Chilensis*.—**Dwarf cypress.** Same as *cypress-moss*. See *hairy cypress*.—**Flowering cypress.** See *tamarisk*, 1.—**Gowen cypress,** *Cupressus Goweniana*, a tree of the California coast regions, sometimes 50 feet high and 2 feet in diameter, with light, soft wood: sometimes cultivated for ornament.—**Ground-cypress,** the *lavender-cotton* (which see, under *cotton*[1]).—**Guadalupe cypress.** Same as *Arizona* ★*cypress*.—**MacNab's cypress,** *Cupressus Macnabiana*, a small bushy tree of interior California, occasionally 30 feet high and over a foot in diameter, with light, fine-grained wood. It is occasionally planted for ornament in southwestern Europe.—**Mexican cypress, Mexican bald cypress,** *Taxodium Mexicanum*. See *Taxodium*.—**Monterey cypress.** See *cypress*[1], 1. (*a*). The Monterey cypress is a tree 60 or 70 feet high, with a trunk very large for its height, usually 2–3 feet in diameter, but exceptionally 6 feet. Its slender erect branches form in old trees a broad flat-topped crown. The wood is hard, fine-grained and durable. This tree is remarkable

Monterey Cypress (*Cupressus macrocarpa*).
(From Sargent's "Silva.")

for its very restricted range, being confined to an area about two miles long and 200 yards wide on the California coast south of the Bay of Monterey, extending from Cypress Point to the shores of Carmelo Bay, with a small grove on Point Lobos. It is now nearly extinct in its native habitat, but fortunately it thrives well in cultivation, and has been introduced throughout the Pacific coast region from Lower California to Vancouver Island, also to some extent in the southeastern United States, and extensively in southern and western Europe, in South America, and in Australia and New Zealand.—**Montezuma cypress,** an individual tree of the Mexican cypress of historic note. See *Taxodium*.—**Nootka cypress, Nootka Sound cypress.** Same as *Alaska* ★*cypress*.—**Pond-cypress,** a subspecies of the bald cypress, *Taxodium distichum imbricarium*, regarded by some as a distinct species, growing in or around ponds, swamps, and shallow streams, from the Dismal Swamp to Florida and Alabama. It is distinguished from the typical bald cypress by its smaller size and acicular leaves, and is more frequently cultivated in the northern United States and in Europe than the type form.—**Red-bark cypress.** Same as *Arizona* ★*cypress*.—**Shasta cypress.** Same as *MacNab's* ★*cypress*.—**Southern, Virginia, Virginia swamp, water cypress,** local names of the *bald cypress*.—**Southern cypress,** the white cedar, *Chamæcyparis thyoides*. The bald cypress is also so called.

cypress-grass (sī′pres-gräs), *n.* A general name for plants of the genus *Cyperus*; galangal. See *Cyperus*.

cypress-vine, *n.* **2.** The climbing fumitory, *Adlumia fungosa*.

Cyprian vitriol. See ★*vitriol*.

Cypricardella (sip″ri-kär-del′ä), n. [NL., < *Cypri(na)* + *Card(ium)* (genera of pelecypods) + *-ella*.] A genus of Devonian teleodesmaceous pelecypods having subquadrate concentrically lined valves, each bearing two cardinal teeth. Same as *Microdon*, 3.

Cypricardinia (sip″ri-kär-din′i-ä), *n.* [*Cypri(na)* + *Card(ium)* (genera of pelecypods) + *-in* + *-ia*.] A genus of Devonian teleodesmaceous pelecypods having two small cardinal teeth in each valve and bearing concentric laminæ on the surface with a finer ornament between.

Cypricardites (sip″ri-kär-dī′tēz), *n.* [*Cypri(na)* + *Card(ium)* (genera of pelecypods) + *-ites*, E. *-ite*[2].] A Silurian genus of prionodesmaceous pelecypods of the family *Cyrtodontidæ*, with subequal valves bearing fine cardinal teeth.

Cypridina shales, in South Devon, the Rhineland, and Westphalia, the uppermost division of the marine Devonian, profusely abundant in the ostracode crustacean *Cypridina* or *Entomis*.

cypridinoid (si-prid′i-noid), *n.* and *a.* **I.** *n.* A fish belonging or allied to the family *Cypridinidæ*.

II. *a.* Having the characters of the *Cypridinidæ*.

cypriferous (sip-rif′ẹ-rus), *a.* [*Cypris* + L. *ferre*, bear.] Containing the tests of the ostracode crustacean *Cypris*.

Cypro-Mycenæan (sī″prō-mī-sē-nē′an), *a.* Relating to both Cyprus and Mycenæ: noting relics of the Mycenæan age found in Cyprus. See ★*Mycenæan*.

Cyproniscidæ (sip-rō-nis′i-dē), *n. pl.* [NL., < *Cyproniscus* + *-idæ*.] A family of isopod crustaceans, parasitic on *Ostracopoda*, typified by the genus *Cyproniscus*.

Cyproniscus (sip-rō-nis′kus), *n.* [NL., < *Cypris* + Gr. ὀνίσκος, a wood-louse (see *Oniscus*).] The typical and only genus of the family *Cyproniscidæ*. *Kossmann*, 1884.

Cypro-Phenician (sī″prō-fē-nish′an), *a.* Of or pertaining to the civilization brought to Cyprus by the Phenicians. Colonies were established in Cyprus by Phenicians at an early period, and the earliest Phenician inscriptions have been found there.

Cypselid (sip′se-lid), *n.* [Gr. Κυψελίδαι, pl., < Κυψελος, Cypselus.] A descendant of Cypselus, tyrant of Corinth. The Cypselids dedicated the chest of Cypselus at Olympia.

cypselous (sip′se-lus), *a.* [*cypsela* + *-ous*.] Having the character of a cypsela; bearing cypselæ.

cyrillaceous (sir-i-lā′shius), *a.* Belonging to the plant family *Cyrillaceæ*.

cyroplane (sir′ō-plān), *n.* [Gr. κῦρος, lord (?), + E. *plane*.] A special form of tripod-head for photographic cameras or surveyors' plane-tables, by which the plane of the table can be adjusted to be normal to any line, and free adjustment horizontally or in azimuth be subsequently made without changing the position of the normal: useful in taking panoramas by photography. The usual ball-and-socket mounting is retained, but in addition a conical axis in the ball gives a separate adjustment without disturbing the ball.

cyrtean (sèr′tē-an), *a.* [Gr. κυρτός, convex, + *-e-an*.] Noting that type of vertebra in which both faces of the centrum are convex. *Wieland*, 1899.

Cyrtia (sèr′ti-ä), *n.* [NL. < Gr. κυρτός, curved.] A Paleozoic genus of *Brachiopoda* resembling *Spirifer*, but having a high suberect cardinal area and perforated deltarium.

Cyrtina (sèr-tī′nä), *n.* [NL., Gr. κυρτός, curved, + *-ina*[1].] A Paleozoic genus of brachipods in general aspect like *Spirifer*, but having a median septum in the ventral valve which supports the convergent dental plates or spondylium.

cyrtiniform (sèr-tin′i-fôrm), *a.* Having the form and aspect of *Cyrtina*, an extinct genus of brachiopods.

cyrtocephalus (sèr-tō-sef′ạ-lus), *n.* [NL. < Gr. κυρτός, curved, convex, + κεφαλή, head.] In *anthrop.*, a cranium which has a convexity, extending from the frontal and parietals to the vertex, resembling a protuberance. *G. Sergi* (trans.), Var. of the Human Species, p. 55.

cyrtoceracone (sèr-tō-ser′ạ-kōn), *n.* [Gr. κυρτός, curved, + κέρας, horn, + κῶνος, cone.] In the nautiloid cephalopods, a shell curved, like *Cyrtoceras*, on both venter and dorsum.

Cyrtochoanites (sèr″tō-kō-ạ-nī′tēz), *n. pl.* [NL., < Gr. κυρτός, curved, + χόανος, a funnel, + -ιτης, E. *-ite*[2].] A Paleozoic suborder of the nautiloid cephalopods, including forms with straight or curved shells variously ornamented and with simple sutures, the siphuncle tubular or nummuloidal and the siphonal funnels short and bent outward.

cyrtocœlian (sèr-tō-sē′li-an), *n.* [Gr. κυρτός, curved, + κοῖλος, hollow.] Having that type of vertebra in which the anterior face of the centrum is convex and the posterior concave: convexo-concave. *Wieland*, 1899.

cyrtocone (sèr′tō-kōn), *n.* [Gr. κυρτός, curved, + κῶνος, a cone.] In the nautiloid cephalopods, a curved form of the young shell replacing or succeeding the more primitive orthocone.

Cyrtodonta (sèr-tō-don′tä), *n.* [NL., < Gr. κυρτός, curved, + ὀδούς (ὀδοντ-), a tooth.] A genus of prionodesmaceous *Pelecypoda*, typical of the *Cyrtodontidæ* and having rounded heavy shells, narrow cardinal area, from 2 to 4 curved cardinal teeth, and strong lateral teeth. It is of Silurian age.

cyrtograph (sèr′tō-gräf), *n.* [Gr. κυρτός, curved, convex, + γράφειν, write.] Same as *cyrtometer*.

cyrtoid (sêr'toid), *a.* [Gr. κυρτοειδής, < κυρτός, curved, arched, convex, + εἶδος, form.] Humpbacked. *Syd. Soc. Lex.*

Cyrtoidida (sêr-toi'di-dä), *n. pl.* [NL., < *Cyrtoides* (< Gr. κυρτός, curved, + εἶδος, form) + *-idæ.*] An order of nassellarian *Radiolaria* having a helmet-shaped shell without a sagittal furrow. It includes the families *Tripocalpidæ*, *Anthocyrtidæ*, *Podocampidæ*, and others.

Cyrtolites (sêr-tọ-lī'tēz), *n.* [NL., < Gr. κυρτός, curved, + λίθος, stone.] A genus of Silurian rhipidoglossal gastropod mollusks of the family *Bellerophontidæ*, having widely umbilicate keeled shells without peripheral slit and with strong transverse ribs or lamellæ.

cyrtometer, *n.* **2.** An instrument for measuring the shape or size of the head.

Cyrtomium (sêr-tō'mi-um), *n.* [NL. (Prese, 1836), referring to the curved veins, < Gr. κύρτωμα, curvature, < κυρτοῦν, make curved, < κυρτός, curved.] A small genus of rigid, simply pinnate polypodiaceous ferns allied to *Polystichum*, from which it differs by its freely anastomosing venation. There are about 6 species, all Asiatic, of which *C. falcatum*, *C. caryotideum*, and *C. Fortunei* are commonly cultivated in greenhouses.

Cyrtonotus (sêr″tō-nō'tus), *n.* [Gr. κυρτός, curved, + νῶτος, the back.] A genus of short and thicked-shelled *Pelecypoda*, allied to *Astarte* and characterized by the broad cardinal surface, with one strong tooth on each valve. It is of Devonian age.

cyrtopia (sêr-tō'pi-ä), *n.*; pl. *cyrtopiæ* (-ē). [NL., < Gr. κυρτός, curved, + ὤψ (ὠπ-), eye, face.] A schizopod crustacean in a larval stage, in which the antennæ are transformed and no longer serve for locomotion, and the posterior pairs of thoracic and abdominal feet and the gills appear.

cyrtoplatyan (sêr-tō-plat'i-an), *a.* [Gr. κυρτός, curved, + πλατύς, flat, + *-an.*] Having the anterior face of the vertebral centrum convex and the posterior face flattened; convex-plane. *Wieland*, 1899.

cyrtosis (sêr-tō'sis), *n.* [NL., < Gr. κύρτωσις, curvedness, humpbacked condition, < κυρτοῦν, curve, arch, hump, < κυρτός, curved, arched, convex.] Spinal curvature.

Cyrtospadix (sêr-tō-spā'diks), *n.* [NL. (C. Koch, 1853), < Gr. κυρτός, curved, + *spadix*, in reference to the curved middle part of the spadix in the type species, *C. striatipes*.] A genus of monocotyledonous plants of the family *Araceæ*. See *Caladium*, 2.

cyrtostyle (sêr'tō-stīl), *a.* and *n.* [Gr. κυρτός, curved, + στῦλος, pillar, column (see *style*[2]).] **I.** *a.* Having columns arranged in a generally curvilinear plan: said of a portico, or a part of one, which has a rounded horizontal projection.

II. *n.* A portico having a rounded projection; or, by extension, a building furnished with such a portico.

cyst, *n.* **5.** (*a*) The resistant coating formed by the parent organism previous to sporulation and inclosing the spores, in *Sporozoa*. (*b*) In *Sporozoa*, the common envelop surrounding the two associated gametocytes. (*c*) The resistant covering secreted by many *Infusoria* previous to going into a resting-stage, or before fission, or for the purpose of resisting draught or other unfavorable conditions of environment.—**Dentigerous cyst**, a dermoid cyst in which a tooth has developed.—**Inclusion cyst**, a cyst which results from the inclosure in tissue of one origin of an islet of tissue of different origin.—**Meibomian cyst.** Same as *chalazion.*—**Mother-cyst.** See ★*mother-cyst.*—**Nabothian cysts**, small nodules formed by retention of the mucous secretion in the Nabothian follicles. **Parent-cyst.** Same as ★*mother-cyst.* **Piliferous cyst**, a dermoid cyst which contains hair.—**Serous cyst.** Same as *hygroma.*

cystal (sis'tal), *a.* [*cyst* + *-al*[1].] Pertaining to or derived from a cyst.—**Cystal residuum**, the surplus of protoplasm remaining after the formation of the gametes in the gametocyte of *Sporozoa*, and serving for the nutrition of the sporoblasts during their further development.

cystamine (sis'ta-min), *n.* [Gr. κύστις, bladder, + *amine.*] Same as ★*uritone.*

cystatrophy (sis-tat'rō-fi), *n.* [Gr. κύστις, of the bladder, + ἀτροφία, atrophy.] Atrophy of the bladder.

cystauchenitis (sis″tâ-kē-nī'tis), *n.* [NL., < Gr. κύστις, bladder, + αὐχήν, neck, + *-itis.*] Inflammation at the neck of the bladder.

cystectomy (sis-tek'tō-mi), *n.* [Gr. κύστις, bladder, + ἐκτομή, excision.] Excision of the urinary or gall-bladder, or of a cyst.

cystein (sis'tē-in), *n.* [Gr. κύστις, bladder, + *-e-* + *-in*[2].] An organic sulphur body which is closely related to cystin. On oxidation it yields cysteinic acid, and this, in turn, taurin.

cysteinic (sis-tē-in'ik), *a.* Pertaining to or derived from cystein. **Cysteinic acid**, an oxidation product of cystein, $C_3H_7NSO_5$. By loss of CO_2 cysteinic acid gives rise to taurin.

cystencyte (sis'ten-sit), *n.* [Gr. κύστις, bladder, + *en*, in, + κύτος, a hollow (a cell).] One of the large vesicular cells of which cystenchyma is composed. *W. J. Sollas.*

Cystic canal. Same as *cystic duct* (which see, under *duct*).—**Cystic degeneration.** See ★*degeneration.*

cysticercosis (sis″ti-sêr-kō'sis), *n.* [NL., < *cysticercus* + *-osis.*] An infection with bladder-worms or larval tapeworms (cysticerci) of the genus *Tænia*. *Cysticercosis* of man is caused by *Cysticercus cellulosæ*; of cattle, by *C. bovis* and *C. tenuicollis*, and of hogs, by *C. cellulosæ* and *C. tenuicollis.*

cysticolous (sis-tik'ō-lus), *a.* [Gr. κύστις, bladder (cyst), + L. *colere*, inhabit.] Inhabiting a cyst: specifically applied to certain *Myzostomaria*. *Cambridge Nat. Hist.*, II. 334.

cysticotomy (sis-ti-kot'ō-mi), *n.* [*cystic* + Gr. τομία, < ταμεῖν, cut.] Incision into the cystic duct of the liver.

cystidean, *n.* **II.** *a.* Pertaining to or having the characters of the *Cystidea*.

cystigerous (sis-tij'e-rus), *a.* [Gr. κύστις, bag (cyst), + L. *gerere*, bear.] Bearing or containing cysts; cystic: as, *cystigerous* growths.

cystinemia (sis-ti-nē'mi-ä), *n.* [NL. *cystinæmia*, < *E. cystin* + Gr. αἷμα, blood.] Presence of cystin in the circulating blood. Also *cystinæmia.*

cystinuria (sis-ti-nū'ri-ä), *n.* [NL. *cystinuria*, < E. *cystin* + Gr. οὖρον, urine.] Excretion of cystin in the urine.

cystinuric (sis-ti-nū'rik), *a.* [*cystinuria* + *-ic.*] Relating to or affected with cystinuria.

cystiphragm (sis'ti-fram), *n.* [Gr. κύστις, a bladder, + φράγμα, partition.] One of the curved partitions which divide transversely the zoœcia of the trepostomatous *Bryozoa*: contrasted with the *diaphragms* or flat partitions.

cysto-adenoma (sis″tō-ad-e-nō'mä), *n.*; pl. *cysto-adenomata* (-ma-tä). [Gr. κύστις, bladder, + NL. *adenoma.*] A gland tumor which contains cysts.

cystocarcinoma (sis″tō-kär-si-nō'mä), *n.*; pl. *cystocarcinomata* (ma-tä). [NL., < Gr. κύστις, bladder, + NL. *carcinoma.*] A cancerous growth which contains cysts.

cystocarpium (sis-tō-kar'pi-um), *n.*; pl. *cystocarpia* (-ä). Same as *cystocarp.*

Cystocidaroida (sis″tō-sid-a-rō'i-dä), *n. pl.* [NL., < *Cystocidaris* (< Gr. κύστις, a bladder, + κίδαρις, a Persian head-dress) + εἶδος, shape.] An order of primitive *Palæechinoidea* regarded as transitional to the *Cystoidea* and characterized by an exocyclic test, narrow and straight ambulacra, with 4 vertical rows of plates each with a central pair of pores, broad interambulacra, numerous scale-like echinate plates, periproct posterior, and mouth with well-developed jaws. It is of Silurian age.

Cystodictya (sis-tō-dik'ti-ä), *n.* [NL., < Gr. κύστις, a bladder, + δίκτυον, a net.] A Paleozoic genus of cryptostomatous bryozoans, typical of the family *Cystodictyonidæ*.

Cystodictyonidæ (sis″tō-dik-ti-on'i-dē), *n. pl.* [NL., < *Cystodictyon* + *-idæ.*] A Paleozoic family of cryptostomatous *Bryozoa* in which the zoaria consist of several rows of cells grown together back to back, forming flat, branching fronds; primitive cells with tubular vestibules, and superficial aperture with a lunarium; and interzoœcial spaces with vesicular tissue.

Cystoflagellata (sis″tō-flaj-e-lā'tä), *n. pl.* [NL., < Gr. κύστις, bladder (cyst), + NL. *Flagellata.*] An order of mastigophoran *Protozoa*. It contains individuals of large size with a single nucleus, reticular protoplasm, a stout membrane, and 2 flagella, one of which is modified into a long tentacle, while the other is small, and contained within the gullet. It includes two genera, both marine: *Noctiluca* (which see), and *Leptodiscus*. Same as *Rhizochoflagellata.*

cystogen (sis'tō-jen), *n.* [Gr. κύστις, bladder (cyst), + *-γενης*, -produced.] Same as ★*uritone.*

cystoid, *a.* **II.** *n.* One of the structures produced by the swelling of a functionless pollen-tube within the ovarian cavity of plants.

cystomatous (sis-tom'a-tus), *a.* [*cystoma*(*t-*) + *-ous.*] Relating to, containing, or complicated by a cystoma.

cyston (sis'tōn), *n.* [NL. *cyston*, < Gr. κύστις, bladder.] One of the dactylozoöids of *Siphonophora*, modified for excretory purposes. *Sedgwick*, Text-book of Zoöl., I. 151.

Cystonectæ (sis-tō-nek'tē), *n. pl.* [NL., < Gr. κύστις, bladder (cyst), + νῆκτης, swimmer.] A group of siphonanthous *Siphonophora* having a large apical pneumatophore without nectocalyces or bracts, the pneumatocyst having an apical stigma. The gasterozooids are generally numerous and arranged either on the lower side of the pneumatophore or on a long tubular cœnosarc. It includes the *Physaliidæ* and several other families.

cystonectous (sis-tō-nek'tus), *a.* Having the characters of the *Cystonectæ*.

cystonula (sis-ton'ū-lä), *n.*; pl. *cystonulæ* (-lē). [NL., dim. of *cyston*, cyston.] The youngest larva of the *Physaliidæ*. It has a float and one siphon with a tentacle hanging below it.

cystopexy (sis'tō-pek-si), *n.* [Gr. κύστις, a bladder, + πῆξις, a fixing.] In *surg.*, an operation for the fixation of a prolapsed bladder to the anterior abdominal wall.

cystophore (sis'tō-fōr), *n.* [Gr. κύστις, bladder (cyst), + *-φορος*, < φέρειν, bear.] **1.** The stem or stalk which bears the cysts in the *Myxobacteriaceæ*.

Finally a condition is reached in which the stem or *cystophore*, as it may be conveniently called, is terminated by one or more rounded masses of very similar dimensions. *Thaxter*, in Bot. Gazette, XVII. 391.

2. Same as *ascophore*. *Jackson*, Glossary.

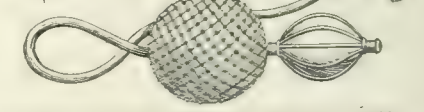
cystophthisis (sis-tof'thi-sis), *n.* [NL., < Gr. κύστις, bladder, + φθίσις, consumption: see *phthisis.*] Tuberculosis of the bladder.

cystoproctostomy (sis″tō-prok-tos'tō-mi), *n.* [Gr. κύστις, bladder, + πρωκτός, anus, + στόμα, mouth.] In *surg.*, an operation for the establishment of a permanent communication between the bladder and the rectum.

cystosarcoma (sis″tō-sär-kō'mä), *n.*; pl. *cystosarcomata* (-ma-tä). [Gr. κύστις, bladder, + σάρκωμα, sarcoma.] A sarcoma which contains cysts.

cystoschisis (sis-tos'ki-sis), *n.* [NL., < Gr. κύστις, bladder, + σχίσις, cleaving.] Congenital fissure of the bladder.

cystoscope (sis'tō-skōp), *n.* [Gr. κύστις, bladder, + σκοπεῖν, view.] A hollow tube illuminated



Cystoscope, with bulb attachment for inflating the bladder.

by an electric light, employed to bring into view the interior of the bladder.

Alterations in the internal vesical orifice as demonstrated by the stone-searcher and *cystoscope*. *Therapeutic Gazette*, Feb. 15, 1903, p. 74.

cystoscopic (sis″tō-skop'ik), *a.* [*cystoscop-y* + *-ic.*] Relating to cystoscopy or the cystoscope; obtained by use of the cystoscope. *Med. Record*, June 13, 1903, p. 952.

cystoscopical (sis-tō-skop'i-kal), *a.* Same as ★*cystoscopic.*

cystoscopy (sis-tos'kō-pi), *n.* [Gr. κύστις, bladder, + *-σκοπια*, < σκοπεῖν, view.] Inspection of the interior of the bladder by means of the cystoscope. *Med. Record*, June 13, 1903, p. 952.

cystosore (sis'tō-sōr), *n.* [Gr. κύστις, bladder (cyst), + σωρός, a heap.] In *bot.*, a group or heap of resting-spores within a cell, as in the fungus *Woronina*.

cystospasm (sis'tō-spazm), *n.* [Gr. κύστις, bladder, + σπασμός, contraction: see *spasm.*] Spasmodic contraction of the walls of the bladder. *V. Krafft-Ebing* (trans.), in Alien. and Neurol., Feb., 1903, p. 29.

cystospore (sis'tō-spōr), *n.* [Gr. κύστις, bladder (cyst), + σπορά, seed (spore).] In *bot.*, same as *carpospore*.

cystostomy (sis-tos'tō-mi), *n.* [Gr. κύστις, bladder, + στόμα, mouth.] In *surg.*, an operation for the establishment of a permanent opening into the bladder.

cystotrachelotomy (sis″tō-trā-kē-lot'ō-mi), *n.* [Gr. κύστις, bladder, + τραχηλός, neck, + *-τομία*, < ταμεῖν, cut.] In *surg.*, incision through the neck of the bladder.

cystozoöid (sis-tọ-zō´oid), *n.* [Gr. κύστις, bladder (cyst), + *zooid.*] The enlarged body-like anterior portion of the proscolex of certain *Cestodea*, as *Dipylidium caninum.* See ★*acanthozooid. Villot.*

cyst-pearl (sist´pėrl), *n.* See ★*pearl.*

cyst-worm (sist´wėrm), *n.* A bladder-worm.

cytase (sī´tās), *n.* [Gr. κύτος, a hollow (a cell), + E. *-ase.*] An enzym which ferments cellulose: found in germinating seeds, certain fungi, and possibly in some animal secretions. See ★*complement, n,* 8.

The views advanced by Bordet and others of the French school regarding the union of the amboceptors with the cells to be destroyed are less precise than those of Ehrlich. Both, however, recognize the importance of an association of the amboceptor as a condition for the effective action of the complement (*cytase*).
Med. Record, Feb. 14, 1903, p. 249.

cytaster (sī-tȧs´tėr), *n.* [Gr. κύτος, a hollow (a cell), + ἀστήρ, star.] In *cytol.*, the star-like radiation seen at either pole of the karyokinetic spindle during the division of a cell.

Cytherea (sith-ẹ-rē´ä), *n.* [NL. (Salisbury, 1812), < L. *Cytherea*, < Gr. Κυθέρεια, a surname of Aphrodite.] A genus of monocotyledonous plants of the family *Orchidaceæ.* See *Calypso*, 1.

Cytherea bulbosa. (L.) House.
One half natural size.

Cytherella (sith-ẹ-rel´ä), *n.* [NL., < *Cythere* + *-ella.*] A genus of ostracode crustaceans or water-fleas, having elongate, smooth, bean-shaped valves, flanged on the hinge. They are commonly regarded as appearing in Silurian time and continuing to the present.

cytiau (kut´i-ou), *n. pl.* [W., pl. of *cwt*, a hut, cot, sty.] In *Eng. archæol.*, a name given to certain prehistoric stone huts in Wales, as those at Tre'r Ceiri. *Sci. Amer. Sup.*, Nov. 14, 1903, p. 23299.

cytoblast, *n.* **3.** In *cytol.*: (*a*) The nucleus of the cell. *Schleiden*, 1838. (*b*) One of the hypothetical units of cell-structure. *Altmann*, 1890. (*c*) A naked cell; a protoblast. *Kolliker.*

cytoblastemal (sī˝tọ-blas-tē´mal), *a.* [*cytoblastema* + *-al*[1].] Of or pertaining to cytoblastema.

cytoblastemic (sī˝tọ-blas-tē´mik), *a.* Same as ★*cytoblastemal.*

cytochemism (sī-tọ-kem´izm), *n.* [Gr. κύτος, a hollow (a cell), + E. *chemism.*] Same as ★*chemotaxis.*

cytochromatic (sī˝tọ-krọ-mat´ik), *a.* In *cytol.*, of or pertaining to cytochromes, or to the appearance of specific, readily stainable substance in the cytoplasm of certain cells.

cytochrome (sī´tọ-krōm), *a.* [NL. *cytochroma*, < Gr. κύτος, a hollow (a cell), + χρῶμα, color.] In *neurol.*, a name given by Nissl to the so-called 'granules,' or nerve-cells with scanty cytoplasm incompletely surrounding a small nucleus which does not exceed in size the nucleus of an ordinary leucocyte or neuroglia cell: opposed to ★*caryochrome* cell which has a larger nucleus.

cytochylema (sī-tō-kī-lē´mạ), *n.* [NL., < Gr. κύτος, a hollow, (a cell), + χυλός, juice, + *-ema.*] Same as ★*cytolymph.*

cytochyma (sī-tọ-kī´mä), *n.* [Gr. κύτος, a hollow (a cell), + χύμα, juice.] The fluid contents of the vacuoles found in cell-protoplasm.

cytoclasis (sī-tok´lạ-sis), *n.* [NL., < Gr. κύτος, a hollow (a cell), + κλάσις, breaking, < κλᾶν, break.] Necrotic destruction of cells.

cytoclastic (sī-tọ-klas´tik), *a.* [Gr. κύτος, a hollow (a cell), + κλαστός, < κλᾶν, break.] Relating to cytoclasis.

cytocyst (sī´tọ-sist), *n.* [Gr. κύτος, a hollow (a cell), + κύστις, a bladder (a cyst).] A schizont inclosed in a membrane, as in the sporozoan blood-parasite *Lankestrella.*

cytoderm (sī´tọ-dėrm), *n.* [Gr. κύτος, a hollow (a cell), + δέρμα, skin.] Same as *cytioderm.*

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cytodiagnosis (sī˝tọ-dī-ag-nō´sis), *n.* [Gr. κύτος, a hollow (a cell), + διάγνωσις, diagnosis.] Diagnosis based upon a study of the cell-contents of the fluids of the body, especially of the cerebrospinal fluid. *Lancet*, May 30, 1903, p. 1535.

cytodieresis (sī˝tọ-dī-er´e-sis), *n.* [Gr. κύτος, a hollow (a cell), + διαίρεσις, a division.] In *cytol.*, cell-division, both direct (amitosis) and indirect (mitosis, karyokinesis).

cytodieretic (sī˝tọ-dī-e-ret´ik), *a.* Of or pertaining to cytodieresis, or cell-division.

cytogenic (sī-tọ-jen´ik), *a.* **1.** Same as *cytogenous.*—**2.** Concerning or pertaining to cytogenesis or the subject-matter of the science of cytology.

cytogeny, *n.* **2.** Cell-lineage; the series of cells which intervenes between an embryonic cell and the tissues or organs or parts of the body which ultimately arise from it.

The relationship of the inner and outer layers in the various forms of gastrulas must be investigated . . . by tracing out the cell lineage or *cytogeny* of the individual blastomeres from the beginning of development.
E. B. Wilson, in Biol. Lectures, 1894, p. 2.

cytoglobin (sī-tọ-glō´bin), *n.* [Gr. κύτος, a hollow (a cell), + E. *glob(ulin)* + *-in*[2].] A cell globulin.

cytohyaloplasm (sī-tọ-hī´ạ-lō-plazm), *n.* [NL. *cytohyaloplasma*, < Gr. κύτος, a hollow (a cell), + ὕαλος, glass, + πλάσμα, anything formed.] In *cytol.*, the reticular or alveolar substance of the cell-cytoplasm as opposed to the more liquid cytochylema or cytolymph.

cytohyaloplasma (sī-tọ-hī˝ạ-lọ-plaz´mä), *n.* [NL.] Same as ★*cytohyaloplasm.*

cytohydrolist (sī-tọ-hī´drọ-list), *n.* [Gr. κύτος, a hollow (a cell), + E. *hydrol(ysis)* + *ist.*] An enzym which attacks and breaks up the cell-wall by hydrolysis.

cytohydrolytic (sī˝tọ-hī-drō-lit´ik), *a.* [Gr. κύτος, a hollow (a cell), + E. *hydrolytic.*] Relating to or of the nature of intracellular hydrolytic ferments.

cytolist (sī´tọ-list), *n.* [*cytol(ysis)* + *-ist.*] An enzym which dissolves the cell-wall.

cytologic (sī-tọ-loj´ik), *a.* Of or pertaining to cytology or cells.

cytological (sī-tọ-loj´i-kạl), *a.* Same as ★*cytologic.*

cytologist (sī-tol´ọ-jist), *n.* One who studies cells or cytology.

cytology (sī-tol´ọ-ji), *n.* [Gr. κύτος, a hollow (a cell), + -λογία, < λέγειν, speak.] The study of the structure and functions of the cells of animals and plants; especially, the study of the cells of the human body, and of the significance of changes in their form and location in disease.

cytolymph (sī´tọ-limf), *n.* [Gr. κύτος, a hollow (a cell), + L. *lympha*, clear water.] In *cytol.*, the more liquid substance contained in the reticulum or alveoli of the cell-cytoplasm. Also called *cytochylema* and *hyaloplasma.*

cytolysin (sī-tol´i-sin), *n.* [*cytolys(is)* + *-in*[2].] Same as ★*cytotoxin.*

cytolysis (sī-tol´i-sis), *n.* [Gr. κύτος, a hollow (a cell), + λύσις, dissolution.] In *pathol.*, the destruction or degeneration of cells.

cytolytic (sī-tọ-lit´ik), *a.* Relating to cytolysis; having cell-destroying properties.

cytomachia (sī-tọ-mak´i-ä), *n.* [Gr. κύτος, a hollow (a cell), + μάχη, fight.] 'Cell-fighting'; a rhetorical name referring to the apparent struggle for mastery between pathogenic micro-organisms and the protective cells of the body. *Buck*, Med. Handbook, III. 534.

cytometer (sī-tom´e-tėr), *n.* [Gr. κύτος, a hollow (a cell), + μέτρον, a measure.] Any device used in counting cells: employed frequently in the special sense of *hemacytometer.*

cytomicrosome (sī-tọ-mī´krọ-sōm), *n.* [Gr. κύτος, a hollow (a cell), + μικρός, small, + σῶμα, body.] In *cytol.*, one of the minute bodies which are supposed to make up the cytoplasm of the animal and plant cell.

cytomitoma (sī-tọ-mī-tō´mä), *n.* Same as ★*cytomitome.*

cytomitome (sī-tom´i-tōm), *n.* [NL. **cytomitoma*, < Gr. κύτος, a hollow (a cell), + μίτος thread.] In *cytol.*, the reticulum which forms the more solid portion of the cytoplasm of the cell; the cytohyaloplasm.

cytomorphosis (sī-tọ-môr´fō˝sis), *n.* [NL., < Gr. κύτος, a hollow (a cell), + μόρφωσις, shaping.] In *biol.*, a general term for all the structural alterations which cells, or successive generations of cells, may undergo from the earliest undifferentiated stage to their final destruction. *Minot*, 1901.

cytophagy (sī-tof´ạ-ji), *n.* [Gr. κύτος, a hollow (a cell), + -φαγία, < φαγεῖν, eat.] Same as *phagocytosis.*

cytophan (sī´tọ-fan), *n.* [Gr. κύτος, a hollow (a cell), + -φανής, < φαίνεσθαι, appear.] The ovoid matrix surrounding the nucleus-like granules, or karyophans, in the strand of the contractile stalk of certain *Infusoria*, as *Zoothamnium.*

cytopharynx (sī-tọ-far´ingks), *n.* [NL., < Gr. κύτος, a hollow (a cell), + φάρυγξ, pharynx.] The gullet or esophagus of a protozoan, as a ciliate.

cytophil (sī´tọ-fil), *a.* [Gr. κύτος, a hollow (a cell), + φίλος, loving.] In *cytol.*, having a disposition to combine with the receptor of a cell: a term applied to one group of amboceptors. *Wasserman* (trans.), Immune Sera, p. 18.

cytophilic (sī-tof´i-lik), *a.* Same as ★*cytophil.*

Cytoplasmic bridge. In *cytol.*, a strand of protoplasm connecting two adjacent blastomeres during the early cleavage of the egg. **Cytoplasmic cycle**, that stage in the life-cycle of a micro-organism during which it is living in the cytoplasm, or cell-body, of some cell of the host organism: distinguished from the *intranuclear cycle* or *stage.*

cytoplast (sī´tọ-plast), *n.* [Gr. κύτος, hollow, (a cell), + πλαστός, formed.] In *biol.*, one of the hypothetical bodies or units of protoplasm in the cell.

cytoplastin (sī-tọ-plas´tin), *n.* [Gr. κύτος, a hollow (a cell), + E. *plastin.*] The plastin of the cytoplasm of a cell.

cytoproct (sī´tọ-prokt), *n.* [Gr. κύτος, a hollow (a cell), + πρωκτός, anus.] In *zoöl.*, the anus of a unicellular organism, such as an infusorian.

cytopsyche (sī-top-sī´kē), *n.* [NL. *cytopsyche*, < Gr. κύτος, a hollow (a cell), + ψυχή, mind.] The consciousness of the protoplasmic contents of a cell, according to the metaphysical system of E. Haeckel. *Haeckel* (trans.), Riddle of the Universe.

cytoreticulum (sī˝tọ-rẹ-tik´ū-lum), *n.*; pl. *Cytoreticula*(-lä). [Gr. κύτος, a hollow (a cell), + L. *reticulum*, a little net: see *reticulum.*] In *cytol.*, the network of more solid substance in the cytoplasm; the spongioplasm as distinguished from the more liquid ground substance, cytochylema or cytolymph. See cut under ★*cell.*

Cytoryctes (sī-tọ-rik´tēz), *n.* [NL., < Gr. κύτος, a hollow (a cell), + ὀρυκτής, a digger, < ὀρύσσειν, dig, excavate.] The supposed protozoan organism of smallpox and vaccina; one of the vaccine-bodies. *Nature*, Aug. 4, 1904, p. 324.

cytosin (sī´tọ-sin), *n.* [Gr. κύτος, a hollow (a cell), + *-ose* + *-in*[2].] A pyrimidin derivative ($C_4H_5ON_3$) of the nucleinic acids, from which it is obtained as a constant decomposition-product together with xanthin bases.

cytosoma (sī-tō-sō´mạ), *n.*; pl. *cytosomata* (-mạ-tä). [NL.] Same as ★*cytosome.*

cytosome (sī´tọ-sōm), *n.* [NL. *cytosoma*, < Gr. κύτος, a hollow (a cell), + σῶμα, a body.] The body of a cell.

Cytospora (sī-tos´pọ-rä), *n.* [NL. (Ehrenberg, 1818), < Gr. κύτος, a hollow (a cell), + σπορά, seed (spore).] A large genus of sphæropsidaceous fungi having allantoid, hyaline spores produced in irregular chambers in an erumpent stroma buried in the surface of the host. About 200 species have been described. They occur on the branches of woody plants, and many are regarded as the pycnidial condition of species of *Valsa.* Also incorrectly spelled *Cytispora.*

cytostasis (sī-tos´tạ-sis), *n.* [NL., < Gr. κύτος, a hollow (a cell), + στάσις, standing.] Arrest of blood-corpuscles in the small vessels.

cytotactic (sī-tọ-tak´tik), *a.* [*cytotaxis* (*-tact-*) + *-ic.*] Of or pertaining to the locomotion of cells in relation to other cells; exhibiting cytotaxis.

cytotaxis (sī-tō-tak´sis), *n.* [Gr. κύτος, a hollow (a cell), + τάξις, arrangement.] The movement of cells, or of cell-masses, in relation to one another. The approach of cells to one another is spoken of as *positive cytotaxis*, their withdrawal from one another as *negative cytotaxis.*

cytotherapy (sī-tọ-ther´ạ-pi), *n.* [Gr. κύτος, a hollow (a cell), + θεραπεία, medical treatment.] Same as ★*organotherapy* or ★*opotherapy.*

cytothesis (sī-toth´e-sis), *n.* [NL., < Gr. κύτος, a hollow (a cell), + θέσις, placing, arranging.] In

physiol., the regenerative or restorative change in a cell or neuron; the opposite of ★*cytolysis*.

cytotoxic (sī-tō-tok'sik), *a.* [Gr. κύτος, a hollow (a cell), + τοξικός, poison (see *toxic*).] Effecting the destruction of cells: applied to the action of special cytotoxins.

cytotoxin (sī-tō-tok'sin), *n.* [*cytotox(ic)* + *-in*[2].] An adaptation-product which has specific toxic properties for the particular kind of cell which was used in immunization. Generally speaking, these bodies result on immunization with cells from a different species, and are specific. Autocytotoxins may, however, also be formed. The action of the cytotoxins depends upon the presence of a specific amboceptor and of a complement (see ★*complement*, 8) which is present in normal serum. Examples are the nephrotoxins, hepatotoxins, leucotoxins, etc. Also termed ★*cytolysin*.

cytotropic (sī-tō-trop'ik), *a.* [Gr. κύτος, a hollow (a cell), + τρόπος, a turning.] Of or pertaining to the growth or bending of cell-masses in relation to one another.

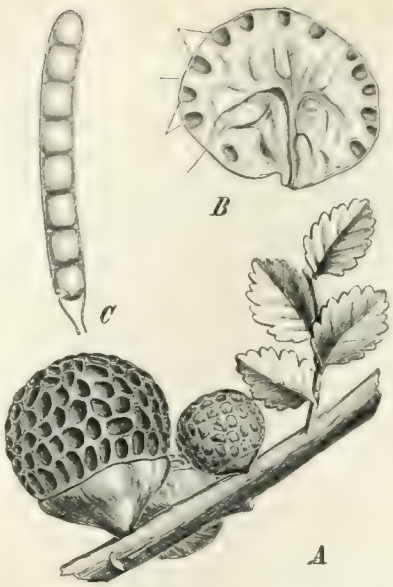
cytotropism (sī-tot'rō-pizm), *n.* [*cytotrop(ic)* + *-ism*.] The growing or bending of cell-masses, or of cells, toward or away from one another. See ★*cytotaxis*.

cytozoan (sī-tō-zō'an), *a.* and *n.* **I.** *a.* Having the characters of the *Cytozoa*.

II. *n.* One of the *Cytozoa*.

cytozoön (sī-tō-zō'on), *n.*; pl. *cytozoa* (-ä). [NL., < Gr. κύτος, a hollow (a cell), + ζῷον, an animal.] A protozoan parasite of the red blood-corpuscles.

Cyttaria (si-tā'ri-ä), *n.* [NL. (Berkeley, 1841), so named from the resemblance of the plants to a wasp's nest; < Gr. κυτταρός, honeycomb, wasp's nest.] A genus of discomycetous fungi having the ascomata sunken in the surface of a subspherical mostly stipitate stroma which is gelatinous when mature. About 6 species are known, mostly from Patagonia and Tierra del Fuego, where they are eaten by the natives. They grow upon living branches of beeches, species of *Nothofagus*. See *beech-fungus* and *mushroom*, 1.



Cyttaria.

A, *C. Darwiniana* in different stages of development; *B*, *C. Hariotii*; *C*, longitudinal section through a stroma (×), showing mature spores with spores. (From Engler and Prantl's "Pflanzenfamilien.")

Cyttariaceæ (si-tā-ri-ā'sē-ē), *n. pl.* [NL., < *Cyttaria* + *-aceæ*.] A family of ascomycetous fungi named from the single genus *Cyttaria*, and having the same general characters. See ★*Cyttaria*.

C. Z. An abbreviation of (Gould's) *Cordova Zones*. See ★*G. C. Z.*

czar, tsar, *n.* **White Czar,** a name by which (or its equivalent) the Czar of Russia is known especially in Asia.

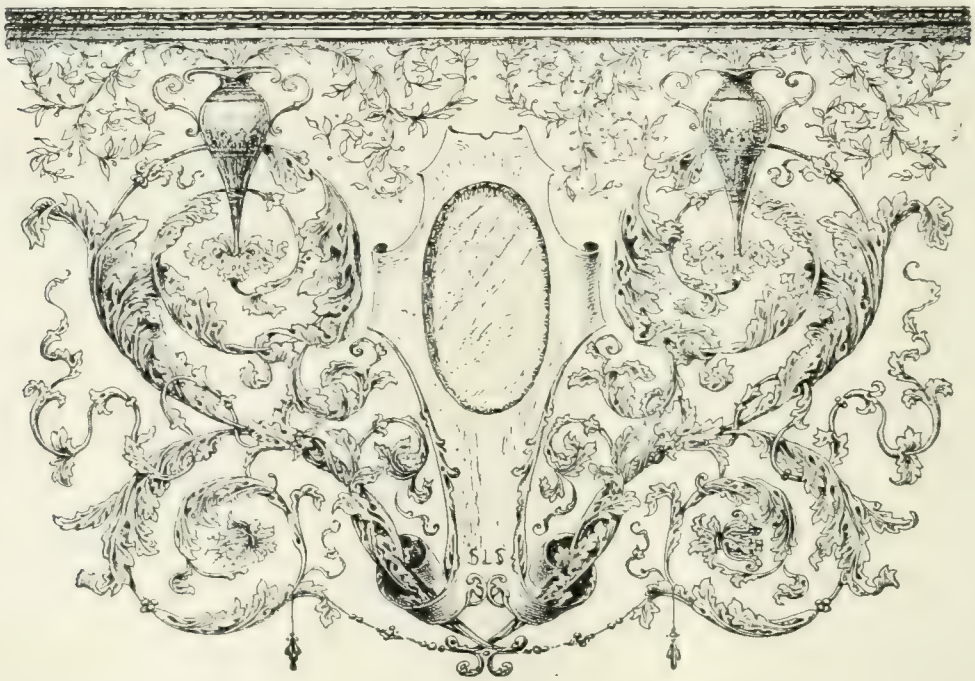
> The *White Tsar's* people call
> Aloud to the skies of lead:
> "We are slaves, not freemen:
> Ourselves, our children, our women
> Dead, we are dead.
> Though we breathe, we are dead men all.
> *R. W. Gilder*, In the Heights,
> The White Tsar's People, i. 3.

czardom, tsardom (zär'dum, tsär'dum), *n.* The dominion, power, or office of a czar.

czarian, tsarian (zär'i-an), *a.* Of or pertaining to a czar.

> The growing influence of the Tsar in the affairs of other nations was conditioned by the same causes as the decline of the *Tsarian* System within the confines of Russia.
> *A. Ular*, Russia from Within, p. 1.

czarism, tsarism (zär'izm), *n.* Absolutism in government, such as that of the Czar of Russia. *A. Ular*, Russia from Within, p. 5.



D 3. (*a*) In *music:* (3) Also, the key-note of the minor key of one flat; in medieval music, the final of the Dorian and Hypodorian modes. (*b*) In *chem.*: (2) d- before certain compounds has reference to their behavior toward polarized light, namely, to their dextrorotation, as distinguished from their inaction (i-) or levorotation (l-). (*c*) In *math.*: (2) D is also used for the number denoting the deficiency of a curve (what its number of double points lacks of the maximum). —4. As an abbreviation: (*f*) In *law* (*D.*), an abbreviation of *Decree*, *Decret*, *Dictum*. (*g*) In *med.* (*d.*), an abbreviation of: (1) *diopter* or *dioptric;* (2) *dexter* (right); (3) *divide* (in prescriptions). (*h*) (*D.*) Of *Democrat*, *Deus* (God), *Dominus* (Lord), *Dutch;* (*d.*) of *daughter*, *delete* (cancel), *density*.—5. Short for *damn* (often printed *d*—).

At last he flung out in his violent way, and said, with a *D.* 'Then do as you like.'
Dickens, Great Expectations, xi.

6. Any mechanical device or appliance which resembles the letter **D**; specifically, in a harness, a loop of metal which has a straight bar joined at each end to a semicircular loop: used as a support for a strap. Also written *dee.* See ★*D-trap* and *D-valve*.—**Radium D.** See ★*radium*. **The D,** the striking-balk in English billiards: so called because of its resemblance to the letter D turned half-way round. Of a smaller area, substantially the same thing in form and function is styled the *semicircle balk* in all three-ball games in America.

Da. The chemical symbol of *darium*.

D. A. A. G. An abbreviation of *Deputy Assistant Adjutant-General*.

dab[1] (dab), *adv.* [Elliptic use of *dab*,[1] *v.*] With a dab; without hesitation; vigorously. *Ruskin.*

dab[2], *n.* **Alaska dab,** *Limanda aspera*, a small flounder found in Alaska. **Mud dab,** *Limanda limanda*, a European flounder. See *dab*2.

dabb (dob), *n.* [Also **dhabb, dhob;* ‹ Ar. *dabb* (*dhabb*).] The palm-lizard, *Uromastix acanthurus*, of the family *Agamidæ*, found in northern Africa.

dabbler, *n.* **Mud dabbler,** the common killifish, *Fundulus heteroclitus*.

da camera (dä kä′me-rä). [It.] 'Of the chamber': in *music*, applied to music (chamber music) so distinguished from music for the church or the opera-house.

dace, *n.* —**Black-headed dace.** Same as *blackhead*, 2. **Black-nosed dace,** a small minnow, *Rhinichthys atronasus*, of the eastern United States.—**Horned dace,** a cyprinoid fish, *Semotilus atromaculatus*, found in the eastern United States.—**Long-nosed dace,** a small minnow, *Rhinichthys cataractæ* of the eastern United States. **Red-bellied dace,** a small minnow, *Chrosmus erythrogaster*, of the Mississippi valley.

Dachstein (däch′stīn), *n.* [G. *Dachstein*, a mountain group in the Austrian Alps, named from the principal peak, *Dachstein*.] In *geol.*, a division of the Triassic formation in the northern and southern Alps, constituting the upper division of that formation and equivalent in whole or in part to the Rhætic beds of Germany.

dacion (dä-thē-ōn′), *n.* [Sp., ‹ L. *datio*(*n*-), a giving: see *dation*.] In *Sp. law*, the actual effective delivery of a thing in the performance of a contractual obligation.

dacitic (dā-sit′ik), *a.* [*dacite* + *-ic*.] In *petrog.*, of or pertaining to dacite; having the mineral composition and the texture characteristic of dacite.

dacryocystosyringotomy (dak″ri-ō-sis″tō-sir-ing-got′ō-mi), *n.* [Gr. δάκρυον, tear, + κύστις, bag (sac), + σῦριγξ, pipe, + -τομια, ‹ ταμεῖν, cut.] In *surg.*, the operation of opening the lacrymal sac and duct.

dacryocystotomy (dak″ri-ō-sis-tot′ō-mi), *n.* [Gr. δάκρυον, tear, + κύστις, bag (sac), + -τομία, ‹ ταμεῖν, cut.] In *surg.*: (*a*) Incision into the lacrymal sac. (*b*) Division of a stricture of the lacrymal duct.

dacryolin (dak′ri-ō-lin), *n.* [Gr. δάκρυον, tear, + *-ol* + *-in*[2].] An albuminous component of tears.

Dacryomyces (dak″ri-om′i-sēs), *n.* [NL. (Nees, 1816), ‹ Gr. δάκρυον, tear, a drop, + μύκης, a fungus.] A genus of fungi of the order *Dacryomycetales*, having gelatinous, sessile, flat or cushion-shaped irregular fructifications. The spores are ovate or cylindrical, simple at first, but becoming septate before germination. About 55 species have been described, occurring mostly on decaying wood. *D. abietinus* is a widely distributed species occurring on rotting conifers.

Dacryomycetales (dak″ri-ō-mī-set′a-lēz), *n. pl.* [NL., ‹ *Dacryomyces* (-*cet*-) + *-ales*.] An order of basidiomycetous fungi named from the genus *Dacryomyces*. The basidia are undivided and the species are mostly small: some are flat and spreading, others more or less stipitate and forming flattened or irregular club-shaped fructifications. Also *Dacryomycetineæ*.

Dacryomycetineæ (dak″ri-ō-mī-se-tin′ē-ē), *n. pl.* [NL.] See ★*Dacryomycetales*.

dacryostenosis (dak″ri-ō-stē-nō′sis), *n.* [NL., ‹ Gr. δάκρυ, tear, + στένωσις, narrowing.] Stricture of the lacrymal duct.

dacryosyrinx (dak″ri-ō-sir′ingks), *n.* [NL., ‹ Gr. δάκρυ, tear, + σῦριγξ, pipe, syringe.] **1.** A syringe for injecting fluids into the lacrymal duct.—**2.** A lacrymal fistula.

dactyl, *n.* **6.** [Gr. δάκτυλοι Ἰδαῖοι, 'fingers of Ida,' in Crete.] In *Gr. antiq.*, a mythological creature supposed to have the secrets of fire and of iron-working. The dactyls were associated with the worship of Rhea and Cybele. The basis is found in some sacred stones (bætyl-stones) found in Crete, and associated with the worship of Cybele.

These bætyl-stones were called in Crete, *Dactyls*.
Jane E. Harrison, in Jour. Hellenic Studies, XIX. 238.

Dactylagnus (dak-ti-lag′nus), *n.* [NL., ‹ Gr. δάκτυλος, finger, + ἄγνος, name of a fish.] A genus of small fishes of the family *Dactyloscopidæ*, inhabiting coral sand in the tropics.

Dactylanthias (dak-til-an′thi-as), *n.* [NL., ‹ Gr. δάκτυλος, finger, + ἀνθίας, name of a fish.] A genus of serranoid fishes found in the sea of Amboyna.

dactylate (dak′ti-lāt), *a.* [Gr. δάκτυλος, a finger, + *-ate*[1].] In *anat.*, having finger-like processes; digitate; fingered. A dactylate joint is one formed by the articulation of various long and rather slender processes.

Dactylifera (dak-ti-lif′e-rä), *n. pl.* [NL., ‹ Gr. δάκτυλος, finger, + L. *ferre*, bear.] An order of *Platyhelmia*, of the class *Temnocephaloidea*. They have the body produced into finger-shaped tentacular processes along the anterior margin, sometimes also along the lateral margins; the mouth situated anteriorly; the pharynx leading into a wide, nearly rectangular intestine which has no diverticula. It includes the families *Temnocephalidæ* and *Actinodactylellidæ*.

Dactylioida (dak″til-i-oi′dä), *n. pl.* [NL., ‹ Gr. δακτύλιος, a finger-ring (‹ δάκτυλος, a finger: see *dactyl*), + εἶδος, form.] A group of the fossil ammonoid cephalopods or ammonites constituting a section of the suborder *Pachycampyli*. It includes umbilicated forms having the venter broader than the dorsum and ornamented with nodes and ridges without continuous median division.

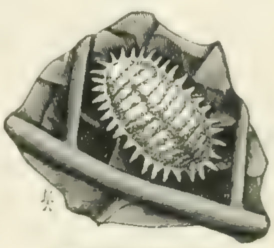
dactylognathite (dak-ti-log′na-thīt), *n.* [Gr. δάκτυλος, finger, + γνάθος, jaw, + *-ite*[2].] In crustaceans, the terminal segment of a complete foot-jaw.

Dactyloidites (dak″ti-lō-i-dī′tēz), *n.* [NL., ‹ Gr. δάκτυλος, finger, + εἶδος, form (see *dactyloid*) + -ιτης, E. *-ite*[2].] A genus of organisms, found in the Cambrian slates, having a stellate form with rays thickened distally. These bodies are regarded by some writers as stellate fucoids, but by others are considered as casts of the internal cavities of *Medusæ* or jellyfishes.

dactylolysis (dak-ti-lol′i-sis), *n.* [NL., ‹ Gr. δάκτυλος, finger, + λύσις, dissolution.] In *pathol.*, loss, by disease, of fingers and toes. See *ainhum*.

dactylomegaly (dak″ti-lō-meg′a-li), *n.* [Gr. δάκτυλος, finger or toe, + μεγαλία, largeness, ‹ μέγας, great, large.] A condition in which the fingers or toes are abnormally large.

Dactylopius (dak-ti-lō′pi-us), *n. pl.* [NL., ‹ Gr. δάκτυλος, finger, + ὤψ, eye, face.] An important genus of scale-insects including all of the so-called mealy bugs so abundant in greenhouses. Recent writers place most of the old species of *Dactylopius* in the genus *Pseudococcus*.



dactylorhiza, *n.* 2. The phenomenon of root-forking.

dactyloscopy (dak-ti-los′kō-pi), *n.* [Gr. δάκτυλος, finger, + -σκοπία, ‹ σκοπεῖν, view.] The identification of individuals by means of examination of the lines on the tips of the fingers: a method employed for the identification of criminals, records of impressions of finger-tips being kept for this purpose.

dactylosternal (dak″ti-lō-stėr′nal), *a.* [Gr. δάκτυλος, finger, + στέρνον, breast-bone, + *-al*[1].] Having the lateral margins of the plastron dactylate, or provided with finger-like processes, which abut on the carapace and are often received in little depressions: said of some turtles. *Amer. Jour. Sci.*, Feb., 1904, p. 129.

dactylozoöid (dak″ti-lō-zō′oid), *n.* [Gr. δάκτυλος, finger, + E. *zoöid*.] One of the members of a colony of *Hydrozoa* whose function is to capture food for the gastrozoöids, or nutritive members of the colony.

dadangsi (dä′däng-sē), *n.* [Chamorro *dadangsi*, sticker, ‹ *dangsi*, adhere.] On the island of Guam, the name applied to burweeds, especially to the dogsfoot-weed, *Urena sinuata*, a half-shrubby plant belonging to the mallow family, with deeply lobed palmate leaves having a nectar-gland on the lower surface of the midrib, and small rose-purple flowers; and to species of *Triumfetta*, belonging to the linden family, with cordate or 3-lobed leaves and cymes of small yellow flowers.

dadap (dä′däp), *n.* [Jav. *dadap*, Malay, *dādap*, also *dĕdap*.] Any one of several species of leguminous trees belonging to the genus *Erythrina;* especially *E. lithosperma* and *E. Hypaphorus*, natives of the East Indies. The dadaps are cultivated in the tropics, especially in Java and Ceylon, for shade in coffee-plantations and for the green manure afforded by their leaves.

dado-head (dā′dō-hed), *n.* See ★*dado-machine*.

dado-machine (dā′dō-ma-shēn″), *n.* In *wood-working*, a modification of a gaining-machine employing a special type of cutter-head, called a *dado-head* or *groover-head*, for forming square, ornamental balustrades, etc.

dædala (ded′a-lä), *n. pl.* [Gr. δαίδαλα, pl. of δαίδαλον, a statue, neut. of δαίδαλος, wrought by art: see *dedal*.] In *Gr. antiq.*: (*a*) Crude archaic wooden figures. (*b*) A Bœotian festival described by Pausanias. The greater dædala occurred every sixtieth year; the lesser dædala every seventh. The characteristic features of both were certain little wooden figures which were distributed by lot among the cities of Bœotia.

Dæodon (dē′ō-don), *n.* [NL., irreg. ‹ Gr. δαίειν, divide, + ὀδούς, tooth.] A genus of extinct ungulate mammals of the family *Titanotheriidæ*.

daer-stock (dā′ėr-stok), *n.* [MIr. *dāer*, OIr. *dōir*, *doer*, base, servile, Ir. *daor*, captive, enslaved, guilty, = Gael. *daor*, enslaved (< *do-*, not, = Gr. δυς-, ill (see *dys-*), + *fear*, man), + E. *stock*.] In *Ir. antiq.*, cattle or other stock granted by a chief to a tenant for his use, ownership still remaining with the chief. Sometimes used attributively: as, *daer-stock* tenancy.

The *Daer-stock* tenant, distinguished by the limited amount of stock which he received from the Chief, remained a freeman and retained his tribal rights in their integrity . . . The *Daer-stock* tenant, throughout accepting a large grant of stock from the Chief, had unquestionably parted with some portion of his freedom, and his duties are invariably referred to as very onerous.

Maine, Early Hist. of Institutions, p. 179.

daffy (daf′i), *a.* [*daff*[1] (still in dialectal use) + *-y*[1].] **1.** Like a silly person; silly; imbecile; 'soft.' [Prov. Eng. and U. S.]—**2.** Dry; insipid. [Prov. Eng.] *Eng. Dial. Dict.*

D. A. G. An abbreviation of *Deputy Adjutant-General.*

dag[2], *n.* **4.** A short tapering or pointed piece of metal like the point of a dagger, used to interlock timbers with each other, or to form the stabbing or piercing teeth on rolls for breaking coal.—**5.** The first antler of a buck, which is slender, almost straight, and without branches, thus resembling a dagger or dag.

dagesh, *n.* See *daghesh.*

dagga (däg′ä), *n.* [South African name, also rendered *dakka*, *dacka*.] In South Africa, *Cannabis Indica*, the Indian hemp, which is used by the natives as a narcotic. It is collected, dried, and smoked by the lower classes of Hottentots, who are rendered stupid and incapable of connected work while under the influence of it. See *hashish*, *deiamba*, and *Cannabis.*

dagger, *n.*—**American dagger,** a noctuid moth, *Apatela americana*, common in the Atlantic United States, where its larvæ feed on the foliage of maple, elm, and other forest and shade trees.—**Ocher dagger,** an American noctuid moth, *Apatela morula*, whose larvæ feed on the leaves of elm and basswood.—**Witch-hazel dagger,** an American noctuid moth, *Apatela hamamelis*, whose larvæ feed on the leaves of the witch-hazel, oak, and other forest trees.

dagger-head (dag′ėr-hed), *n.* A timber placed diagonally in the launching-ways of a ship and securing certain timber shores placed between the bottom of the vessel and the bilgeways.

dagger-moth (dag′ėr-môth), *n.*—**Gray dagger-moth,** an American noctuid moth, *Apatela interrupta*, whose larvæ feed on the foliage of the apple, pear, cherry, and plum.

dagmai (däg′mī), *n.* [Bisaya *dagmai*, *dagmay*.] In the Philippines, a name for *Caladium Colocasia*, also called *gabi*. See *taro*[1] and *Colocasia.*

dago[2] (dā′gō), *n.* [Chamorro *dago*, a yam.] In the island of Guam, the square-stemmed yam, *Dioscorea alata*, and other species of *Dioscorea* resembling it.

Daguerreotype etching, in *photog.*, a process for biting daguerreotypes by immersing the plate in dilute hydrochloric acid opposite a platinum plate, and passing a current from a couple of Grove's cells for a few seconds. Oxychlorid of silver is formed, which, when removed, leaves the plate sufficiently etched to be printed from. Devised by Sir W. R. Grove.

dahlia, *n.*—**Dahlia wartlet,** *Tæla crassicornis*, one of the commonest British sea-anemones.

dahllite (däl′it), *n.* [Named after the brothers Tellef and Johann *Dahll*, Norwegians.] A mineral containing the phosphate and carbonate of calcium and occurring in yellowish-white fibrous crusts. It probably results from the alteration of apatite. Found at Bamle, Norway.

Dahoman (dä-hō′man), *a.* and *n.* Same as ★*Dahomeyan.*

Dahomeyan (dä-hō′mi-an), *a.* and *n.* **I.** *a.* Of or pertaining to Dahomey.

II. *n.* A native of Dahomey.

dahu (dä′hö), *n.* A large forest tree, *Artocarpus Lakoocha*, of India and Ceylon, belonging to the breadfruit family. It has simple leaves, glabrous and shiny above and softly downy beneath. The round, velvety, yellow, acid fruit is edible when ripe; the spadix of the male flowers is pickled, and is used in curry; the seeds are eaten; the roots yield a yellow dye, the bark a fiber suitable for cordage; and from the viscous latex a cement is prepared. In Bengal called *dephal* (which see).

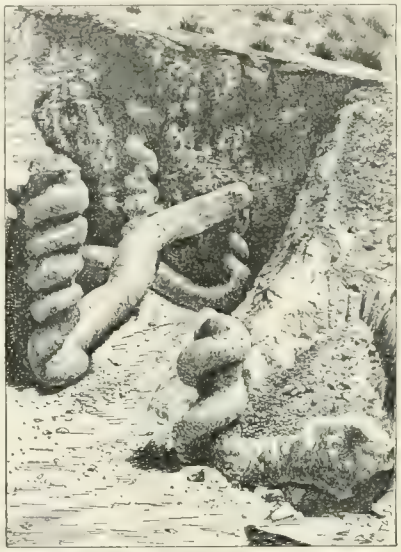
Daikoku (dī-kō′kō), *n.* [More fully *Daikokū-ten:* Sinico-Jap. *dai*, great, + *kokū*, black, + *ten*, deva, god; corresponding to Chin. *t'ai*, great, + *heh* (or *ho*), black, + *t'ien*, heaven, deva.] One of the seven gods of happiness of the Japanese; the god of wealth, whose image is found in every household. He is represented as a short, stout person, wearing a cap with the visor well drawn down; standing or sitting on bags of rice; carrying a mallet, the emblem of labor, in the right hand; and over the left shoulder a large sack (wealth), the mouth of which is grasped firmly with the left hand, thus controlling its expenditure.

daikon (dī′kon), *n.* [Jap. *dai-kon*, < *Chin*, *tai*, great, + *kün*, root.] A large variety of radish, *Raphanus sativus*, one of the most important root-crops cultivated in Japan. It is eaten raw or boiled, and when pickled forms the chief relish of the people.

daimiate (dī′mi-at), *n.* [*daimi(o)* + *-ate*[3].] The position, territory, or jurisdiction of a daimio.

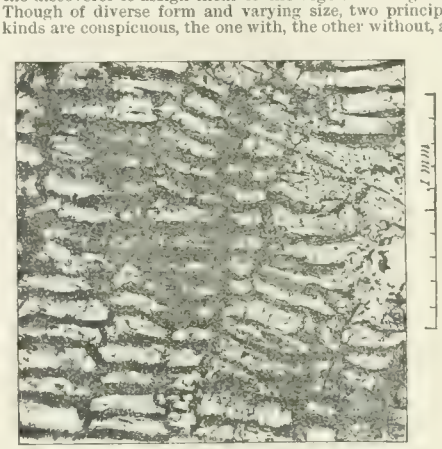
daimioate, *n.* Same as ★*daimiate.*

Daimonelix (dī-mon′ē-liks), *n.* [NL., irreg. < Gr. *δαίμων*, demon, + *ἕλιξ*, spiral: see *helix*.] An erect, spiral, gigantic fossil found in great



Daimonelix in position, Arikaree formation, Sioux County, Nebraska. Average height six to seven feet

numbers in the Arikaree sands (Loup Fork Tertiary) of northwestern Nebraska, chiefly in Sioux county, and also in eastern Wyoming and southern South Dakota. These anomalous fossils, thought by some to represent the burrows of tertiary rodents, consist throughout of intertwining plant fibers of roots of varying size, which, in section, invariably yield perfectly preserved plant-tissue, a fact which led the discoverer to assign them to the vegetable kingdom. Though of diverse form and varying size, two principal kinds are conspicuous, the one with, the other without, an



Photomicrograph of a thin section of *Daimonelix*, showing plant structure

axis. *Daimonelix*, though known for years to the cowboys and ranchmen as the *devil's corkscrew*, was first definitely described by Erwin H. Barbour, State geologist of Nebraska, in 1891. Collections of specimens are now to be found in the large museums of the United States, notably that of the University of Nebraska, the Field Columbian Museum, the Carnegie Museum, and the United States National Museum.

daimonion (dī-mō′ni-on), *n.* [Gr. *δαιμόνιον*, prop. neut. of *δαιμόνιος*, adj., < *δαίμων*, demon.] Same as *demon*, 1: usually with reference to the demon of Socrates.

dainanago (dī-nä-nä′gō), *n.* [Jap. *Tainan*, a port of southern Formosa, + *anago*, eel.] A name of the conger-eel of Formosa, *Leptocephalus crebronus.*

dainty, *a.*—**Dainty sulphur,** an American pierid butterfly, *Nathalis iole*, of very small size and yellow color bordered and banded with black. Its larvæ feed on the marigold. It inhabits the southwestern United States and Mexico.

daira (dī′rä), *n.* [Ar. *dāira*, circle, household, private estate, < *dār*, go about.] The private estates of the Khedive of Egypt.

Dairy scales. See ★*scale*[2].

dairy-farmer (dā′ri-färm″ėr), *n.* A farmer who operates a dairy-farm.

dairy-farming (dā′ri-färm″ing), *n.* That branch of agriculture which is specially devoted to the production of milk and the manufacture of butter, cheese, and other milk products.

dais, *n.*—**Chamber of dais.** See ★*chamber.*

daisy, *n.* **4.** A kind of sea-anemone, *Actinia bellis.* [England.]—**Big daisy,** the oxeye daisy.—**Blue daisy,** (*b*) The chicory.—**Blue spring-daisy,** the robin's-plantain, *Erigeron pulchellus*, from its early flowering and the color of the rays. See *plantain*[1].—**Bull's-eye, butter-daisy** (*b*). Names for the oxeye daisy.—**Childing daisy, dicky-daisy,** the English daisy.—**Dog-daisy.** See ★*dog-daisy.* **English, European, garden daisy.** See *daisy*, 1. **Horse-daisy.** See ★*horse-daisy.*—**Red daisy,** the orange hawkweed. See *hawkweed.*—**Shasta daisy,** a perennial herb which bears very large white-rayed flowers resembling the white field-daisy in general form: originated by Luther Burbank, and apparently of hybrid origin. It is hardy in New York. **White daisy,** the oxeye daisy, more commonly called whiteweed.—**Yellow daisy, yellow oxeye daisy,** the common cone-flower, *Rudbeckia hirta.*

daisy-fleabane (dā″zi-flē′bān), *n.* See *fleabane.*

Dajidæ (daj′i-dē), *n. pl.* [NL., < *Dajus* + *-idæ*.] A family of isopod crustaceans parasitic upon schizopods. *Dajus* is the typical genus.

Dajus (dā′jus), *n.* [NL. (*Kröyer*, 1846, G. spelling for ★*Daius*), < Gr. *δάιος*, destructive.] The typical genus of the family *Dajidæ.*

Dak. An abbreviation of *Dakota.*

daka (dä′kä), *n.* [Also *dacca*, prop. *dhaka:* see def.] An East-Indian muslin of fine and delicate texture, made on the native loom in the district of Dhaka, or Dacca, Bengal.

dak-boat, dawk-boat (dâk′bōt), *n.* [Hind. *dāk*, a post, + Eng. boat.] A mail-boat. [Anglo-Indian.]

dakhuis (däk′hois), *n.* [D., < *dak*, roof, thatch, + *huis*, house.] A house thatched with straw or reeds. [South Africa.]

Dakota formation. See ★*formation.*

Dakotian (da-kō′ti-an), *a.* Same as *Dakotan.* *L. H. Morgan*, Ancient Society, p. 154.

Daksha (däk′shä), *n.* [Skt. *Daksha*, lit. activity, capacity, power, as adj. able, active, dexterous: see *dexter*.] In *Hindu myth.*, a son of Brahma, of whom grotesque legends were told.

dal[2] (däl), *n.* [D., = E. *dale*[1].] A valley. [South Africa.]

dalaga (dä-lä′gä), *n.* [Tagalog *dalaga* = Pampanga *dalaga*, prob. < Skt. *dāraka*, boy, son, in dual two boys, or boy and girl. Cf. Malay *dāra*, maidenhood, *anak dāra*, a young woman, a maid, < Skt. *dārā*, a wife.] In Luzon, Philippine Islands, a young unmarried woman; a girl.

Dalarnian (da-lär′ni-an), *a.* [Sw. *Dalarne*, 'the valleys,' otherwise *Dalecarlia*, a former province of Sweden: see *dale*[1].] In *geol.*, a series of Precambrian rocks in Sweden.

Dalatiidæ (dal-a-tī′i-dē), *n. pl.* [NL., < *Dalatias* + *-idæ*.] A family of sharks typified by the genus *Dalatias*, otherwise known as *Scymnus* or *Scymnorhinus.* The typical species is *D. licha* of the Old World.

daler (dä′lėr), *n.* [Sw.: see *dollar*.] A copper coin, of fictitious value, of Charles XII. of Sweden.

dalesfolk (dālz′fōk), *n. pl.* Dwellers in a dale or valley; dalesmen. *Mary Howitt.*

daleth (dä′leth), *n.* [Heb. *dāleth*, prop. *dālet:* see *delta*, *D.*] The fourth letter (ד) of the Hebrew alphabet, corresponding to the English *D.* Its numerical value is IV.

dali[2] (dä′lę), *n.* [Hind. *dāli*.] See *dally*[1].

Dalibarda (dal-i-bär′dä), *n.* [NL., (Linnæus, 1753), named in honor of Thomas François *Dalibard* (1703–79), a French botanist.] A genus of plants of the family *Rosaceæ*, closely related to *Rubus*, but distinguished by the nearly dry drupelets inclosed at maturity by the connivent calyx lobes. The only species, *D. repens*, a native of northeastern North America, is a low perennial unarmed herb, with slender root-stocks bearing tufts of simple, cordate, crenate leaves, the scape-like peduncles bearing 1 or 2 delicate white flowers. It has much the habit of a strawberry. See ★*dewdrop*, 2.

dallastype (dal′as-tīp), *n.* [*Dallas* (D. C. Dallas, inventor of the method, 1875), + type.] A process used in the early days of photo-engraving: now superseded by more modern methods.

Dalmanites (dal-ma-nī′tēz), *n. pl.* [NL., < *Dalman*, a proper name, + *-ites*, E. *-ite*[2].] A genus of trilobites of the family *Phacopidæ*, in which the test is distinctly divided into three subequal areas both longitudinally and horizontally. The glabellum is large, with prominent frontal lobe and three pairs of lateral lobes, the compound eyes very conspicuous and schizochroal, thorax with eleven grooved segments, pygidium large, with many segments and usually a caudal spine. It is very characteristic of the Silurian and Devonian formations.

dalmatic, *n.* **2.** The imperial mantle, resembling the ecclesiastical dalmatic, worn by kings and emperors at coronation and on other important occasions. The dalmatic worn by Queen Victoria when she was crowned in Westminster Abbey, June 28, 1838, was of cloth of gold.

dalo (dä′lō), *n.* [Fijian *dalo*, < Polynesian *taro.*] In Fiji, *Caladium Colocasia*, the roots and leaves of which are among the principal food-staples of the natives. See *taro.*

Daltonist (dâl′ton-ist), *n.* Same as *Daltonian.*

dam[1], *n.* **5.** A fire-brick wall forming the front of the hearth or crucible of a blast-furnace, through which the tap-hole is formed. —**Bear-trap dam,** a species of movable dam used in the canalization of rivers for purposes of navigation. It consists of two large plates or leaves, each hinged above its lower edge, one pointing down-stream and the other up-stream. The distance apart of the hinged edges is such that when both are horizontal the leaf pointing down-stream overlaps the other leaf. When both are raised, the free edges of the two leaves approach one another and form a flat triangle nearly isosceles. In this position the two leaves form the barrier to dam back the water of the stream. When it is lying flat on the bottom of the river the dam does not obstruct the stream. It is lowered during high water and during those periods when the natural flow or depth of the stream is adequate for purposes of navigation. When it is desired to increase the depth artificially, the dam is raised. This is accomplished by admitting water through submerged culverts and sluices into the space under the two leaves from a pool artificially created at a short distance upstream. The pressure of the water underneath the leaves raises them somewhat, and with them the level of the water above the dam. This still further increases the pressure of the water under the leaves, and under its influence the leaves continue to rise to any desired height within the limits of movement provided. The dam is lowered by closing the gates connecting the space under the dam with the upper pool of the river, and opening corresponding gates which connect the space under the leaves with the river below the dam. The internal pressure being thus diminished to a value less than the external pressure due to the load of water on the outside of the dam, the leaves gradually fall. The leaves move closely between abutments or piers at their ends, under which are the culverts and sluices for raising and lowering the dam. This type of dam was first devised in 1818 by Josiah White, a Philadelphia merchant, to meet the needs of coal navigation on the Lehigh river, in Pennsylvania, and was soon adopted extensively on logging-streams in Pennsylvania and Canada. Since 1880 it has received extensive study and its use has been much extended.—**Canvas dam,** a sheet of canvas or stout cloth, usually attached at the upper edge to a strip of wood, so arranged that it can be placed in an irrigation-ditch for the purpose of forcing the water out of the ditch upon the adjacent fields. See ★*tappoon.* —**Drop-head dam,** a dam with a mechanical device which can be dropped to permit the passage of water.—**Flood dam.** See ★*splash-dam.*—**Gravity dam,** a dam of which the cross-section is of such dimensions that the structure will resist the overturning action of water, that is, will stand against destructive forces because of its weight, and not be dependent upon bracing or arch-action against the sides.—**Hydraulic-fill dam,** a dam constructed of materials washed into place by a process similar to hydraulic mining.—**Rolling dam,** a dam for raising the water in a shallow stream. It has no sluiceways, but a smooth top of timber over which, under a sufficient head of water, logs may slide or roll.—**Self-loading dam.** See ★*raft-dam.*—**To rip a dam,** to remove the plank which closes a splash-dam.

Dama, *n.* This, the generic name for the European fallow-deer, *Dama dama*, or *D. vulgaris*, was for a short time used for the American deer generally placed in the genus *Odocoileus* of Rafinesque, which has precedence over *Cariacus.*

damage, *n.*—**Contingent damages,** those given where the issues upon counts to which no demurrer has been filed are tried, before demurrer to one or more counts in the same declaration has been decided. *Bouvier,* Law Dict. —**General damages,** in *law*, damages which necessarily result from the commission of a wrong or breach of contract, and therefore need not be specially pleaded in the complaint or declaration.—**Intervening damages,** damages which arise after judgment or order: suffered by an appellee by reason of delay caused by an appeal from the judgment or order.

damalic (dą-mal′ik), *a.* [Gr. δαμαλίκ, fem. (δαμαλίς, m.), a young cow, + *-ic.*] Derived from the cow.—**Damalic acid,** an organic substance found in the urine of the cow.

damaluric (dam-ą-lū′rik), *a.* [Gr. δαμαλίκ, a young cow, + οὖρον, urine, + *-ic.*] Derived from the urine of the cow.—**Damaluric acid,** an acid, $C_8H_{10}O_2$, said to occur in cows' urine.

damascenine (dą-mas′en-in), *n.* [NL. *damascena* (see def. + *-ine*[2].] An alkaloid, $C_{10}H_{15}O_3N$, contained in the seed-coats of *Nigella Damascena L.* It melts at 27° C., boils at 168° C., and gives blue fluorescent solutions.

damask, *v. t.* **3.** To deface or destroy by stamping or marking: as, to *damask* seditious books.

Damaskeen texture, in *petrog.*, the interlaced, variegated, appearance of some varieties of obsidian, produced by differences in color of glass or of varieties of microlites.

dambosite (dam′bō-sīt), *n.* Same as *dambonite.*

Damburneya (dam-bèr′nē′ya), *n.* [NL. (Rafinesque, 1838), named for L. A. *Dambourney* (1722–95), a French botanist.] A genus of dicotyledonous trees of the family *Lauraceæ.* See *Nectandra.*

dammar, *n.*—**Philippine dammar,** a resin obtained from *Dammara Philippinensis* (*Agathis loranthifolia* of Blanco, not of Salisbury), a large coniferous tree growing in the mountain districts of Luzon, Camarines, and several other of the Philippine Islands.—**Rock dammar,** the commercial name for the resin obtained in Burma from *Nesiandra odorata.*

dammaran (dam′ą-ran), *n.* [*dammar* + *-an.*] A neutral resin, $C_{40}H_{62}O_6$, one of the constituents of Australian dammar-resin.

dammarol (dam′ą-rol), *n.* [*dammar* + *-ol.*] A volatile oil obtained by the distillation of Australian dammar-resin.

dammarone (dam′ą-rōn), *n.* [*dammar* + *-one.*] A volatile oil obtained by the distillation of Australian dammar-resin with lime.

dammar-pine (dam′är-pīn″), *n.* A tree, *Dammara alba.* See *Dammara.*

dammaryl (dam′ą-ril), *n.* [*dammar* + *-yl.*] A tasteless, odorless powder, $C_{45}H_{72}$, obtained from dammar-resin. It softens at 145° C. and melts at 190° C.

damnation, *n.* **Legacy by damnation.** See ★*legacy.*

damnous (dam′nus), *a.* [L. *damnosus*, < *damnum*, hurt.] In *law*, of or pertaining to damage; causing loss or damage.

damnum fatale (dam′num fā-tā′lē). [NL.] In *civil law*, damages caused by reason of chance, that is, by the happening of an event which could not be foreseen or guarded against by the highest degree of prudence or care.

damp, *n.* **6.** The popular name of a disease which attacks young seedlings and succulent plants, causing them to rot off near the surface of the ground. An excessively moist atmosphere is particularly favorable for its development. *Pythium De Baryanum* is responsible for most of the "damp" in cucumbers, egg-plants, peas and similar plants while a species of *Rhizoctonia* causes this disease in cotton, and *Alternaria tenuis* produces the effect in tobacco. Also called *damping off.*

damp, *v.*—**Damped vibration.** See ★*vibration.*

dampener, *n.* **2.** In *laundry-work*, a machine for dampening collars, cuffs, and other garments previous to ironing. One type employs metal and rubber rolls for spreading a film of water over the collars or other pieces as they pass between the rolls.

dampening-press (damp′n-ing-pres″), *n.* A machine for pressing laundered garments that have already been sprinkled with water or otherwise dampened; a combined sprinkling-machine and press.

damper, *n.* **1.** (*c*) In *elect.*: (1) An attachment which makes a measuring-instrument aperiodic or dead-beat; that is, so that it assumes its final position without oscillation. It usually consists of vanes moving in a closed air-space or in a liquid, or of conductors moving in a magnetic field. (2) The appliance in a synchronous machine or motor used to prevent surging. See ★*amortisseur.*

damper-action (dam′pèr-ak-shon), *n.* In *pianoforte-making*, a collective term for all the parts which compose and control the dampers.

damper-flange (dam′pèr-flanj), *n.* In *pianoforte-making*, the wooden piece, fastened to the action-rail, to which the damper-lever is pivoted. See cut under *pianoforte.*

damper-head (dam′pèr-hed), *n.* In *pianoforte-making*, the padded head or cross-piece of a damper which is designed to check the vibrations of the strings when the key is released. See cut under *pianoforte.*

damper-lever (dam′pèr-lev′èr), *n.* In *pianoforte-making*, the wooden piece that connects the damper-lifter with the damper-head. See cut under *pianoforte.*

damper-lifter (dam′pèr-lif″tèr), *n.* In *pianoforte-making*, the connective piece between the whip and the damper-lever; also called *spoon*, from its shape. See cut under *pianoforte.*

damper-spring (dam′pèr-spring), *n.* In *pianoforte-making*, the spring which presses the damper-head against the string when the key is released. See cut under *pianoforte.*

damper-wire (dam′pèr-wīr), *n.* In *pianoforte-making*, the wire that carries the damper-lever. See cut under *pianoforte.*

damping, *n.* **2.** (*b*) The stopping of the tendency to surge or hunt, in synchronous machines, as alternating-current generators or synchronous motors or converters, by means of closed low-resistance copper turns inserted in the pole-faces of the magnetic field. See ★*amortisseur.*—**3.** Premature decay in plants, especially young seedlings, attributed to excessive moisture. See ★*damp,* 6.

damping-coil (dam′ping-koil), *n.* In *elect.*, a coil of wire used to check the vibrations of the needle or moving parts of a galvanometer or dynamometer by means of the Foucault currents induced in the coil.

damping-machine (dam′ping-mą-shēn″), *n.* **1.** A machine used for dampening or moistening certain classes of wool fabrics, to render the fibers of the nap more flexible and susceptible of the quality of finish desired. Another form of damping-machine is sometimes used for cotton cloth, to improve its feel and appearance.

2. A mechanism used by printers for the quick dampening of paper to make it pliable under impression.

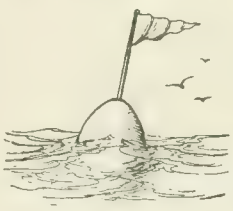
damping-off (dam′ping-ôf″), *n.* The decay of young plants, particularly of seedlings and cuttings, at the surface of the ground. See ★*damp,* *n.*, 6.

damp-proof (damp′prōf), *a.* Proof against damp: as, a *damp-proof* course of masonry.

damsel-bug (dam′zel-bug), *n.* Any heteropterous insect of the family *Nabidæ*, a group of small predatory bugs often included in the family *Reduviidæ.*—**Black damsel-bug,** a heteropterous insect, *Coriscus subcoleoptratus*, of the family *Nabidæ*, common in the northern United States. It is black in color and has yellowish legs, and usually rudimentary wings.—**Blonde damsel-bug,** a heteropterous insect, *Coriscus ferus*, of the family *Nabidæ*, a third of an inch long, and light yellow in color, dotted with brown. It is found in both Europe and North America, hiding in flowers to capture the small insects which frequent them.

damsel-fish (dam′zel-fish), *n.* A name in tropical regions of various species of the family *Pomacentridæ*, especially of those which have brilliant colors.

dan[3] (dan), *n.* [Prob., like *dan*[2], a rustic reduction of *dandy*[1], applied to various mechanical appliances.] *Naut.*, a small buoy having a pole on which is displayed by day a flag and by night a lantern. It is used to indicate both the position of deep-sea fish-lines and a center around which a steam trawler is worked.



Dan.

Dan. An abbreviation of *Danish.*

Danæa (dā-nē′ą), *n.* [NL. (J. E. Smith, 1793), named in honor of Giovanni Pietro Maria *Dana*, professor of botany in Turin.] A genus of marattiaceous ferns which comprises about 20 species of similar appearance, restricted to the humid forests of the West Indies and tropical America. The sterile fronds are from 1 to 3 feet high and mostly once pinnate, the pinnæ opposite and articulate to the rachis, the veins mostly forked and parallel. The fertile fronds are of similar shape, but somewhat reduced, and the numerous sessile sporangia are borne along the free veins and fused into more or less sunken linear synangia which open eventually by apical pores. Most species have the stipes once or several times nodose. One of the best known is *D. alata.*

danaïdin (da-nā′i-din), *n.* [*dana-in* + *-id*, + *-in*[2].] A resinous compound, $C_{22}H_{20}O_6$, obtained by the hydrolysis of danain.

danaïn (dan′ą-in), *n.* [NL. *Danais* (see def.) + *-in*[2].] A glucoside, $C_{14}H_{14}O_5$, contained in the root of *Danais fragrans.*

danaine (dan′ą-in), *a.* and *n.* **I.** *a.* Of or belonging to the subfamily *Danainæ.*

II. *n.* A member of the subfamily *Danainæ.*

danaro (dä-nä′rō), *n.*; pl. *danari* (-ē). [It., < L. *denarius*: see *denarius*, *denier*[2].] An Italian coin, the denier.

dance, *v.* **II.** *trans.* **4.** In the West Indies, especially Trinidad, to clean and polish (cacao) by treading it with the naked feet. The friction caused by the treading removes the mildew from the outside of the beans and at the same time polishes them.

dance, *n.*—**Green-corn dance,** a ceremonial connected with the ripening of Indian corn.—**Pyrrhic dance.** See *pyrrhic*[1], *n.* 1.—**St. Guy's dance, St. John's dance,** chorea.

dance-fly (dans′flī), *n.* Any fly of the dipterous family *Empididæ*, or *Empidæ*: so named from the dance-like mode of flight.

dance-hall (dans′hâl), *n.* A hall, usually in connection with, or as an annex to, a saloon, where dancing is carried on. [Chiefly U. S.]

dance-house (dans′hous), *n.* **1.** A dance-hall. —**2.** A house in which ceremonial dances, or

religious ceremonials connected with dances, are performed.

dancer, *n.* **4.** Same as *dandy-roller.*

dance-society (dăns'so-si-e-ti), *n.* In *anthrop.*, a society which has the duty or the privilege of performing a certain religious ceremonial the chief outer expression of which is a dance.

On superficial examination various tribes appear to be organized according to identical principles, but fuller knowledge generally reveals differences among the similarities. From this it was concluded that such terms as gens, band, age-fraternity and *dance-society* have no stable or exact meaning and hence little descriptive value, detailed information being the great desideratum.
Science, May 31, 1901, p. 864.

dancette, *n.* **3.** In *silver* and *metal work*, decoration relieved by the addition of twisted wire.

dancing-mania (dăn'sing-mā'ni-ä), *n.* A form of saltatory chorea associated with religious ecstasy, occurring in wide-spread epidemics in the middle ages.

dancing-rattle (dăn'sing-rat"l), *n.* A rattle used to accompany dances, particularly dances that form part of religious ceremonials. *Ratzel* (trans.), Hist. of Mankind, II. 274.

dancing-stilts (dăn'sing-stilts), *n.* Stilts used in dances. Such stilts were used by the natives of the Marquesas Islands, and are also common in China.

dandie dinmont (dan'di din'mont), *n.* A small, long-bodied, short-legged, coarse-haired breed of terriers popular in Scotland, named after Andrew (Dandie) Dinmont, a character in Scott's novel "Guy Mannering," who possessed such a dog.

dandruf, dandrif, *n.* Simplified spellings of *dandruff, dandriff.*

dandy[1], *n.* **5.** (*a*) A roller placed on a machine in advance of another, to perform a preliminary operation. (*b*) See *dandy-roller.*—**6.** An open-work basket or vessel, used either to carry fuel, or to confine fuel in a larger grate, or to hold pig-iron in a furnace-hearth for preliminary heating.

dandy-cart (dan'di-kärt), *n.* A kind of spring-cart, used by milkmen, etc. *N. E. D.*

dandyfunk (dan'di-fungk), *n.* *Naut.*, a kind of pudding formerly well known among seafaring men.

Pantiles, on occasion the only article of food, are what the self-satisfied landlubber would call biscuits. They are served with a liberal hand, but the stock is protected by their almost irrefragable character. Out of pantiles a delectable dish is to be made by vigorous pounding in a bag, followed by the admixture of some handy liquid, preferably old pea soup, with the addition of a little fat pork. When this creation is browned in the oven it becomes "dog's body." Should there be molasses to add, the result is "*dandy-funk.*"
C. Protheroe, Life in the Mercantile Marine.

dandy-jack (dan'di-jak), *v. i.* To play the *jackadandy* (which see).

dandy-loom (dan'di-lōm), *n.* Originally a hand-loom with a take-up mechanism for the woven cloth, invented by William Redcliffe, in England, in 1802. It was afterward adapted to operation by power.

dandy-rig (dan'di-rig), *n.* The rig of a kind of yawl or sloop known as a dandy. See *dandy*[4].

dandy-roll (dan'di-rōl), *n.* Same as *dandy-roller.*

Dane, *n.*—**Great Dane,** a breed of powerful, straight-haired dogs, standing from 24 to 30 inches high at the shoulders. The muzzle is rather pointed, the tail thin and wiry. The Danes are usually plain mouse-color, but there are spotted and brindled varieties.

Danebrog, *n.* **2.** The Danish national flag—a white cross on a red ground. Also *Dannebrog.*

Danes' money. See ★*money.*

Danger ball. See *guilty* ★*ball.*

danger-line (dān'jer-lin), *n.* A line, real or imaginary, marking the boundary between apparent safety and danger, as the fire-lines at a conflagration, or the line or level on a river-bank above which the rising waters of a river in flood may overflow, or burst the banks. *Monthly Weather Rev.*, Jan., 1902, p. 3.

dangersome (dān'jer-sum), *a.* [*danger* + *-some.*] Dangerous. [Prov.]

dangle (dang'gl), *n.* One of the points, bobs, rings, or the like, that dangle from an object.

dangle-foot (dang'gl-fŭt), *n.* The dropping of the anterior part of the foot in consequence of paralysis of the flexor muscles in the anterolateral part of the leg.

dangle-money (dang'gl-mun"i), *n.* An early Chinese bronze coinage, so called from its resemblance to and former use as dangles of a musical instrument. Also called *bridge-money.*

Danian (dā'ni-an), *n.* [L. *Dania*, Denmark, < *Dani*, Danes: see *Dane.*] In *geol.*, the uppermost division of the Cretaceous system in France and Belgium, wanting in the English series.

Dankali (dăn-kä'lē), *n.* One of the dialects of Abyssinia, sometimes grouped with Galla, Somali, and other dialects in a 'Cushite' division of Hamitic languages.

Dantean, *a.* **II.** *n.* A student of Dante.

Danthonia (dan-thō'ni-ä), *n.* [NL. (De Candolle, 1805), named in honor of Etienne *Danthoine*, a French botanist.] A genus of grasses. There are about 100 species, belonging to the tropical and temperate regions of both hemispheres. *D. penicillata*, of Australia, widely distributed in that country and known as *wallaby-grass*, is valued for spring pasturage. *D. Californica* is an important element in the natural pasturage of the Pacific coast of the United States. *D. spicata*, known like other species as *wild oat-grass*, is a characteristic plant of worn-out pastures in the northeastern United States.

Danubian corn. See ★*corn*[1].

Dapedius (da-pē'di-us), *n.* [NL., < Gr. *δάπεδον*, ground, pavement.] A genus of ganoid fishes of the family *Dapedidæ*, having flattened ovate bodies with elongate dorsal and anal fins and an almost equally bilobed tail. It occurs in the Trias and Lias of Europe and India.

Daphnaceæ (daf-nā'sē-ē), *n. pl.* [NL. (St. Hilaire, 1805), < *Daphne* + *-aceæ.*] A family of dicotyledonous archichlamydeous (choripetalous or apetalous) plants of the order *Daphnales*, by some included in the order *Myrtales*, the mezereon family, typified by the genus *Daphne* (which see). See also *Thymelæaceæ*, by which name it was long known.

Daphnales (daf-nā'lēz), *n. pl.* [NL. (Lindley, 1833), < *Daphne* + *-ales.*] An order of dicotyledonous archichlamydeous plants, including 6 families, of which the *Daphnaceæ* and *Elæagnaceæ* are the most important. In Lindley's classification, of which it is the daphnal alliance, it included the *Proteaceæ* and *Lauraceæ*, which are now referred to different orders.

Daphnean (daf'nē-an), *a.* Of or pertaining to the nymph Daphne. *T. Hardy.*

Daphnephoria (daf-nē-fō'ri-ä), *n.* [Gr. *δαφνηφορία*, < *δαφνηφορεῖν*, *v.*, < *δαφνηφόρος*, laurel-bearing, < *δάφνη*, laurel, + *-φορος*, < *φέρειν*, bear.] In *Gr. antiq.*, a festival, a kind of May-pole ceremony, observed in Thebes, in ancient Greece. It occurred once in eight years, but was probably at first annual. A boy, richly dressed, and with his long hair let down, headed the procession. He was followed by his nearest relative carrying the decorated pole and a band of singing-girls holding olive-branches.

daphnetic (daf-net'ik), *a.* [*daphnet-in* + *-ic.*] Connected with daphnetin.—**Daphnetic acid,** a hypothetical acid, $(HO)_3C_6H_2CH{:}CHCOOH$, (2:3:4:1), known only in the form of salts and of its anhydrid, daphnetin.

daphniacean (daf-ni-ā'sē-an), *a.* and *n.* **I.** *a.* Resembling or pertaining to the *Daphniacea.* **II.** *n.* One of the *Daphniacea.*

daphnite (daf'nīt), *n.* [Gr. *δάφνη*, laurel, + *-ite*[2].] A rare member of the chlorite group, occurring in green flexible laminæ aggregated in small spherical forms with concentric and radiated structure; it is characterized by the presence of ferrous iron with almost no magnesium.

dapicho (dap'i-chō), *n.* [Braz. *tapicho*, classed doubtfully as a Tupi word; compare Guarani *tapichá*, similar.] A South American name for the caoutchouc from the roots of *Siphonia elastica.* Also called *zaspis.*

Dappled butter. See *diseased* ★*butter.*

D. A. Q. M. G. An abbreviation of *Deputy Assistant Quartermaster-General.*

D. A. R. An abbreviation of *Daughters of the American Revolution*, a society of American women.

darapskite (da-rap'skīt), *n.* [Named after Dr. L. *Darapsky.*] A monoclinic salt consisting of the nitrate and sulphate of sodium: found in Atacama.

Darby and Joan seat. See ★*seat.*

dariole (dä-ri-ōl'), *n.* [F.; origin unknown.] A French cheese-cake.

dark[1], *a.*—**Cathodic dark space** or **Crookes's dark space.** Same as *Crookes's* ★*space.*—**Dark Continent,** a name applied to Africa by H. M. Stanley (1878), probably in allusion to the lack of knowledge with regard to it, as well as to the dusky complexion of its inhabitants.—**Dark lightning, radiation, segment.** See ★*lightning*[1], etc.—**Dark slide,** in *photog.*, the holder for the sensitized plate; plate-holder: single or double back.—**Dark star.** See ★*star*[1].

darkling, *a.* **4.** Sitting in the dark.

As to Eusapia, in Appendix A (not Appendix B, as the notes say), Dr. Maxwell criticizes the Cambridge report on her deceptions. Dr. Hodgson deliberately allowed her to release her hand from his hold, informed the *darkling* company that phenomena were about to occur, and occur they did. *Athenæum*, June 3, 1905, p. 693.

dark-sighted (därk'si'ted), *a.* In *psychol. optics*, adapted to light, and therefore seeing objects as if tinged with black.

If we pass, again, from light to dark, our eye is *dark-sighted.* *E. B. Titchener*, Exper. Psychol., I. i. 23.

Darluca (där-lū'kä), *n.* [NL. (Castagne, 1851), named after Michel *Darluc*, a French naturalist and physician.] A genus of sphæropsidaceous fungi having globose, superficial pycnidia and mostly spindle-shaped hyaline spores provided with polar appendages. Eight species have been described most of which are parasitic on rusts (*Uredinales*). *D. Filum* is a very common cosmopolitan species.

darning-egg (där'ning-eg), *n.* Same as *darning-ball.*

darning-needle, *n.*—**Eve's darning-needle.** Same as *Adam's needle and thread*, the *Yucca filamentosa.*

daroga (dä-rō'gä), *n.* [Also *darogha, daruga, droga*, etc.; < Hind. *dároghah.*] An overseer; inspector; superintendent; governor: a title (originally Mongol) applied in India to various executive officers. *Yule and Burnell.*

darrein, *a.*—**Puis darrein continuance** (Since the last continuance), in *law*, a plea allowed to a defendant, after having already pleaded, by reason of some new matter arising after joinder of issue.

dart[1], *n.* **6.** Plan; scheme. [Australian slang.]

Your only *dart* is to buy a staunch horse with a tip-cart. *Rolf Boldrewood*, Nevermore, iii.

7. Idea; 'style'; fancy: as, "strawberries and cream, eh!—that's my *dart.*" [Australian slang.]

darter, *n.*, **3.** (*a*) (2) Of these small brilliantly colored fishes of the fresh waters of the eastern United States about 50 species are known, the following being the most common: the black-sided darter, *Hadropterus aspero*; the blue darter, *Etheostoma cæruleum*; the blue-breasted darter, *Etheostoma camurum*; the fan-tailed darter, *Etheostoma flabellare*; the green-sided darter, *Dipleson blennioides*; the johnny darter, *Boleosoma nigrum*; the least darter, *Micropterca punctulata*; the manitou darter, *Percina caprodes*, var. *zebra*; the tessellated darter, *Boleosoma olmstedi.*

dart-fish (därt-fish), *n.* A carangoid fish, *Trachynotus russelli*, inhabiting Australian waters.

dartman (därt'man), *n.*; pl. *dartmen* (-men). A warrior or soldier armed with darts or javelins.

dartwood (därt'wŭd), *n.* A small rubiaceous tree of the West Indies, *Chomelia fasciculata*, used for darts and arrows.

darwinite (där'win-īt), *n.* [*Darwin* + *-ite*[2].] A mineral found in Chile. Same as *whitneyite.*

Darwin's point, process, tip. Same as *Darwin's tubercle* (which see, under *tubercle*).

das (das), *n.* [D. *das* = G. *dachs*, a badger.] Same as *dassy.*

dash, *n.*—**Black dash,** an American hesperiid butterfly, *Limochores pontiac*, blackish brown in color with yellow on the basal half of the fore wings: found from Massachusetts to Nebraska.—**Long dash,** an American hesperiid butterfly, *Thymelicus mystic*, occurring in the northeastern United States and feeding in the larval state on grass.

dash[2] (dash), *n.* [Also *dashee*; W. African.] A present or gratuity; a cumshaw. *N. E. D.*

dash-box (dash'boks), *n.* A dash-pot; a cylinder in which a partial vacuum is created by more or less withdrawing a piston. On the return of the piston by its weight or a spring, the air below is compressed and released through controlled openings, causing the valve to seat with less shock or with none.

dashee (dash'ē), *n.* [W. African.] Same as ★*dash*[2], *n.*

dash-foot (dash'fŭt), *n.*; pl. *dash-feet* (fēt). An iron, fitted to receive and retain the dash-frame, attached to the inner side of the front panel or bar of a light carriage-body.

dash-molding (dash'mol"ding), *n.* A light metallic molding placed upon the top edge of a dash to protect the leather from being worn by the driving-reins.

dash-piston (dash'pis"ton), *n.* The piston which slides in a dash-pot. Sometimes, as in the case of a dash-pot on a governor, the piston does not fit closely in the pot, a passage being left for the oil with which the pot is filled. In the case of the dash-pots for closing the admission-valves of a Corliss engine, the piston fits tightly, and a vacuum is formed when it is drawn up, and compression occurs on the descent.

dash-plate (dash'plāt), *n.* A plate sometimes fixed in a marine boiler, over the fire-box, to prevent the crown-sheet from being left bare when the ship heels or rolls heavily. Such a plate holds the water from running to leeward as the ship rolls, and hence the crown-sheet does not get overheated. Also called *division plate.*

dash-rail (dash'rāl), *n.* A rail placed outside of the covered rails of the dash of a carriage.

Dasistoma (dā-sis'tō-mä), *n.* [NL. (Rafinesque), irreg. < Gr. *δασύς*, shaggy, + *στομα*,

mouth: in allusion to the hairy throat of the corolla.] A genus of plants of the family *Scrophulariaceæ*. It is related to *Gerardia*, but differs in its yellow flowers, with the cells of the anthers awned at the base. There are about 8 species, natives of eastern North America, variously known as *false foxglove*, *yellow foxglove*, etc. One of them, *D. Virginicum*, is sometimes called *golden oak*, because of the shape of its leaves.

dastur (da-stör′), *n.* [Also *destour*, *destoor*, *dustoor*; Pers. *dastur*, < Pahlavi *dastobar*, chief councilor, chief priest. Compare *dustoor*, custom.] A chief priest.

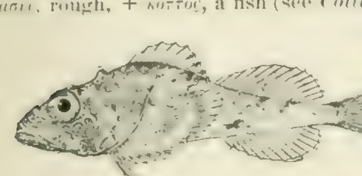
Dasyatidæ (das-i-at′i-dē), *n. pl.* [NL., < *Dasyatis* + *-idæ*.] A family of sting-rays, typified by the common sting-ray of Europe, *Dasyatis pastinaca*. The rays of this family have small teeth and a slender tail usually provided with a strong serrated spine which may inflict a dangerous wound. The name of the family is usually *Trygonidæ*, but the name *Dasyatidæ* is older.

Dasyatinæ (das-i-ā-tī′nē), *n. pl.* [NL., < *Dasyatis* + *-inæ*.] A subfamily of sting-rays typified by the genus *Dasyatis*, characterized within the family by the slender tail.

Dasyatis (das-ī′a-tis), *n.* [NL. (Rafinesque, 1810), later corrected to *Dasybatis* and *Dasybatus*, < Gr. δασύς, thick, + βατίς (also βατος), a ray or skate.] The typical genus of sting-rays, represented by numerous species on both sides of the Atlantic, in the South Seas, and about the East Indies. Usually called *Trygon*.

Dasybatus (da-sib′a-tus), *n.* [NL., < Gr. δασύς, thick, + βάτος, a ray or skate.] An emended form of ★*Dasyatis*.

Dasycottus (das-i-kot′us), *n.* [NL., < Gr. δασύς, rough, + κόττος, a fish (see *Cottus*).] A



Dasycottus setiger.
(From Bulletin 47, U. S. Nat. Museum.)

genus of small soft-bodied sculpins found in the deep waters of the North Pacific.

dasyphyllous, *a.* 2. Having thickly set leaves. —3. Having thick leaves.

dasyproctine (das-i-prok′tin), *a.* Relating to or like the agutis which belong to the genus *Dasyprocta*.

dasypygal (das-i-pī′gal), *a.* [Gr. δασύς, hairy, + πυγή, rump.] Having the posteriors covered with hair: said of the large anthropoid apes as distinguished from the gibbons and Old World monkeys, which have ischial callosities. [Rare.]

Dasyscopelus (das-i-skop′e-lus), *n.* [NL., < Gr. δασύς, rough, + σκόπελος, a peak, promontory.] A genus of lantern-fishes of the family *Myctophidæ*, characterized by the rough, firm scales. *D. spinosus* is a species from the mid-Atlantic.

Dasyscypha (da-sis′i-fä), *n.* [NL. (Nees, 1817), < Gr. δασύς, hairy, + σκύφη, σκύφος, cup.] A genus of discomycetous fungi, so named from the hairy ascomata which are sessile or stipitate. The spores are usually simple and hyaline. About 150 species have been described. They are distributed throughout the world and occur chiefly on decaying trunks and branches. *D. Willkommii* is said to produce a disease of the larch called *blister*. See *larch-★blister*.

datal (dā′tal), *a.* [*date*[1] + *-al*[1].] Chronological; of or pertaining to date: as, the facts are stated in *datal* order. *N. E. D.*

date[1], *n.*—**Of even date**, an expression commonly used in legal instruments to indicate that another instrument referred to was or is to be executed upon the same date.

date[3], *n.* 2. An occasional name in California of the fanleaf palm, *Neowashingtonia filamentosa*. **Chinese date**, the fruit of a cultivated form of the Asiatic jujube, *Zizyphus Jujuba*. It is eaten either fresh or dried and is often candied as a sweetmeat. See *Zizyphus*.—**Date coffee, honey.** See ★*coffee*, ★*honey*. **Trebizond date**, the date-plum of the Mediterranean region, *Diospyros Lotus*. It is considered to afford the best stock for grafting persimmons.—**Wild date**, in California, one of the Spanish bayonets, *Yucca Mohavensis*. The fruit has somewhat the appearance of a date and has also a sweet and succulent flesh, eaten, fresh or dried, by the Indians.

date-fever (dāt′fē″vėr), *n.* Same as *dengue*. *Buck*, Med. Handbook, III. 400.

date-palm, *n.* The date-palm, introduced by the Mission Fathers and by American pioneers, has long existed in California, but in inferior seedling varieties. Good varieties have recently been introduced by the United States Government under auspices promising commercial success over limited areas in Arizona and California. The date-palm, to mature fruit, requires long-continued heat and dry air above, with an abundance of water at the roots, and is thus suited to hot deserts reclaimed by irrigation. It will bear alkali in the soil and will endure more frost than the orange, but less than the peach. It is diœcious and in culture is usually pollinated artificially, one male tree sufficing for a hundred female. The varieties do not breed true by seed and are propagated by the suckers or offshoots put forth from the base of young trees. The tree dies if the terminal bud is destroyed. The plantations in the Sahara form a shelter for many fruit-trees which could not otherwise be grown. The fruits as grown by the Arabs are of three principal types, viz. soft dates (those known to the American market), which are very sugary; similar dates, but with a much lower sugar-content, usually eaten fresh from the tree; and dry dates, which are not at all sticky, are picked up as they fall, and are regarded by the Arabs as much better for food than the soft dates. One of the best of innumerable named varieties is the *deglet noor*. Some good seedling varieties have been developed in the southwestern United States.

dater, *n.* 3. An apparatus for stamping the date on receipts, orders, or other papers. In some complex forms the hour also can be indicated, a clock in the base of the instrument changing the hour as the day advances, without attention from the user.

datil (dä′tēl), *n.* [Sp. *datil*, date (*Phœnix dactylifera*): see *date*[3].] 1. *Yucca baccata*. See *yucca*.—2. In South America, a name of several palms, especially of *Cocos Datil*, the leaves of which yield a fiber which is braided by the natives into hats, baskets, etc.

dating-machine (dā′ting-ma-shēn″), *n.* A machine having type-wheels and mechanism for printing dates on cards, tickets, etc.; a dater.

datiscaceous (dat-is-kā′shius), *a.* Belonging to the plant family *Datiscaceæ*. Also *datisceous*.

datiscetin (da-tis′e-tin), *n.* [*datisc-in* + *-et-* + *-in*[2].] A pale-yellow compound,

$C_6H_4 < {CO \atop O} > C_6(OH)_2(OCH_3)_2$, prepared by the action of sulphuric acid on datiscin. It crystallizes in needles, melting at 237° C.

Datism (dā′tizm), *n.* [Gr. Δατισμός, < Δᾶτις, Datis, the Median commander at Marathon, who spoke broken Greek.] Brokenness or incorrectness of speech natural to a foreigner, or an instance of this; a fault or mistake in speaking a foreign language.

We can understand that a small Athenian boy should commit a *Datism* in Latin.
Saturday Rev., Nov. 14, 1891, p. 554.

datival (dā-tī′val), *a.* Of or belonging to the dative case: as, *datival* terminations.

dato (dä′tō), *n.* [Also *datto*, *dattu*; Philippine Sp. *dato*, *datto*, < Sulu *datoh*, chief, < Malay *dātok*, *dātuk*, a grandfather, the head of a family, hence a title of distinction, a chief, a petty prince.] A feudal lord or chief in Sulu and other Malayan countries. In Sulu the datos formed a council which governed the state. The sultan was merely the executive head of the council.

The Galas district is nominally under the charge of the *Dato*, Bentara, but he lives at Kota Bharu, as do all the chiefs. *Geog. Jour.* (R. G. S.), IX. 36.

datum, *n.* **Ordnance datum.** See ★*ordnance*.

daturic (dā-tū′rik), *a.* [*datura* + *-ic*.] Of or pertaining to datura. Noting a colorless acid, $C_{17}H_{34}O_2$, isomeric with margaric acid, occurring as a glyceride in the seeds of *Datura stramonium*. It crystallizes in slender needles melting at 55° C.

daturinic (dā-tū-rin′ik), *a.* [*datura* + *-in* + *-ic*.] Same as ★*daturic*.

daturism (dā-tū′rizm), *n.* [*datura* + *-ism*.] Poisoning by datura or stramonium (Jamestown or jimson weed), or its active principle, daturine.

daub, *n.* 5. In coloring enameled leather, a thick black substance put on as a first coat to fill the surface in preparation for the final coloring. *Modern Amer. Tanning*, p. 265.

dauber, *n.* 2. A heavy round brush of rice-root, sharpened to a round point, used for cleaning out the corners of a carriage.

daufin, *n.* A simplified spelling of *dauphin*.

daughter-chromosome (dâ′tėr-krō″mō-sōm), *n.* One of the two chromosomes which arise by the equal division of a single chromosome in a mother-cell.

daughter-cyst (dâ′tėr-sist″), *n.* A cyst formed on the interior of the mother-cyst in *Tænia echinococcus*, the cause of hydatids in man and in various domestic animals. From the walls of the daughter-cyst arise numerous tapeworm heads, or scoleces, which are readily detached; and if the organ containing the cyst be swallowed by the dog, the final host of the parasite, some of the scoleces are likely to develop into the adult form of the tapeworm.

daughter-nucleus (dâ′tėr-nū″klē-us), *n.* In *cytol.* and *embryol.*, one of two cell-nuclei derived by division from a single mother-nucleus, as in normal cell-division. See cut under ★*chromatin*.

daughter-segment (dâ′tėr-seg″ment), *n.* In *cytol.* and *embryol.*, either of two metameres, blastomeres, chromosomes, or other organic elements, derived by division from a single mother-element of the same kind.

daumont (dō-mōn′), *n.* [Named from the Duc *d'Aumont*, who introduced this vehicle into France in the time of Napoleon I.] A carriage drawn by four horses, of which the two near ones are ridden by postilions, and having two footmen at the rear: noting a style of driving.

dauphin, *n.* 2. A billon coin struck, under Charles VII. of France, for Dauphiné.

Davallieæ (da-va-lī′e-ē), *n. pl.* [NL., < *Davallia* + *-eæ*.] A tribe of mainly tropical polypodiaceous ferns. Its component genera are distinguished by usually terminal and marginal or submarginal sori, and by extrorse indusia. It includes among others the well-known genera *Davallia* and *Nephrolepis*, several species of which are commonly cultivated, those of the latter genus being known as sword-ferns. See *Davallia* and *sword-★fern*.

David powder. See ★*powder*.

David's harp. See ★*harp*. **David's shield.** See *Zionist* ★*flag*.

Daviel's spoon. See ★*spoon*.

daviesite (dā′viz-īt), *n.* [Named after Thomas *Davies* of the British Museum.] A lead oxychlorid occurring in colorless prismatic crystals: from Atacama.

dawa (dä′wä), *n.* [Fijian name.] In the Fijian Islands, *Pometia pinnata*, a stately forest-tree which belongs to the *Sapindaceæ*. It has pinnate leaves, flowers in terminal panicles, and fruit containing a seed inclosed in a honey-like, glutinous, pulpy white aril which is edible and is esteemed by the natives. The bark is saponaceous, and the timber, though coarse-grained and porous, is suitable for cabinet-work. The tree is also found in New Hebrides, New Caledonia, and New Guinea.

dawk-boat, *n.* See ★*dak-boat*.

dawn, *n.* **False dawn**, a transient light on the horizon about an hour before dawn: a phenomenon well known in the East. **Liquid dawn**, in *ceram.*, a ruby-red color, obtained from copper. Also called *dawn-red*.

dawn-red (dân′red), *n.* Same as *liquid* ★*dawn*.

day[1], *n.* **Affirmance day general.** See ★*affirmance*. —**Apparent solar day**, the interval between two successive meridian transits of the sun. On account of the sun's variable motion in right ascension, these apparent solar days vary slightly in length: December 23–24 is about 53 seconds longer than September 17–18.—**Borrowed days.** See ★*borrowed*. **Change of day**, a change in one's reckoning in circumnavigating the world, in order to make it agree with the calendar. (See *gained* ★*day*, *lost* ★*day*.) This is accomplished when, on crossing the 180th meridian (or a conventional line which has been substituted for it in certain parts of its course), one day is dropped (the lost day) when sailing from east to west, or one day is reckoned twice when sailing from west to east. See *date-line*. **Confederate memorial day**, a legal holiday in several of the southern United States: in Alabama, Florida, Georgia, and Mississippi, April 26; in North and South Carolina, May 10; and in Virginia, May 30.—**Day in, day out**, every day; all the time.—**Day of atonement.** See *Jewish* ★*fasts* and *Jewish* ★*festivals*. —**Days of devotion**, feast days, whose observance is a matter of devotion and not of obligation. **Day terrors**, sudden attacks of fright with a confused mental state, sometimes occurring in children during their waking hours.—**Flag day**, the anniversary of June 14th, 1777, when Congress adopted the Stars and Stripes as the flag of the United States of America: now widely observed as a holiday.—**Gained day**, the day that is gained or reckoned twice when circumnavigating the world from west to east. See *date-line* and *change of* ★*day*.—**Labor day.** See *labor-day*. **Lost day**, the day that is dropped out, at the date-line, in circumnavigating the globe from east to west, in order to make the traveler's reckoning agree with the calendar.—**Lunar day.** (*a*) The period of the moon's axial rotation. (*b*) The time during which the sun shines upon any specified point of the moon's surface: opposed to *lunar night*. (*c*) The interval between two successive transits of the moon across the meridian: sometimes called *tidal day*. **Lustrical day**, in *Rom. antiq.*, the day on which a child was purified by sacrifice and received a name: for boys the ninth after birth, for girls the eighth. **Making-up day.** Same as *contango* or *continuation day*. **Midwinter day**, an old name for *Christmas day*. —**Primrose day**, April 19, the anniversary of the death of Benjamin Disraeli, Earl of Beaconsfield, celebrated by his admirers and followers, members of the *Primrose League* (which see, under *league*[1]).—**St. Barnabas's day.** Same as *Barnaby day* (which see, under *day*[1]).—**St. John's day.** (*a*) June 24, a festival observed in honor of St. John the Baptist: an important day in the history of freemasonry. (*b*) December 27, a festival observed in honor of St. John the evangelist and apostle.—**Seal days**, in *Eng. law*, days upon which motions were heard in the Court of Chancery. They were so named because each motion had to be stamped with the seal of the court, which was not in court on other court days.—**Tidal day**, the interval between two high tides, as distinguished from the length of the lunar day or the solar day. The tidal day results from the interferences of the great lunar and solar tidal waves.—**Treasury day**, pay-day. [Theatrical slang.]—**Year and day.** See ★*year*.

dayan (dä-yän′), *n.*; pl. *dayanim* (dä-yä′nēm). [Heb. *dayān*.] A judge. See ★*beth-din*.

day-blind (dā′blīnd), *a.* Able to see indistinctly or not at all in a bright light. See *hemeralopia*. *Buck*, Med. Handbook, IV. 628.

day-breeze (dā′brēz), *n.* A periodical light wind, occurring in open countries far from any special influences of oceans or mountains.

It is due to the descent of rapidly moving cool air replacing that which ascends when heated by sunshine. The corresponding night breeze is due to the flow of air from adjacent hills or trees, where it has been cooled by nocturnal radiation.

day-coach (dā'kōch), *n.* In *railroading*, an ordinary passenger-car with ordinary double seats, as distinguished from a sleeping-car, drawing-room car, dining-car, or chair-car: not necessarily limited to day use.

day-dawn (dā'dân), *n.* Break of day: the dawn. *Coleridge.*

day-degree (dā'dē-grē"), *n.* In *phenology*, the unit by which an excess or deficit of effective heat is expressed; one degree of temperature per twenty-four hours. Thus the germination of a seed planted in the ground may require ten days at an average temperature of 50° F., or 500 day-degrees; or 80 day-degrees above 42° F. considered as the lower limit of vitality. The day-degree centigrade and the day-degree Fahrenheit are used in the metric and English systems respectively.

day-mosquito (dā'mus-kē"tō), *n.*—**Spotted day-mosquito,** the common name in the British West Indies for the yellow-fever mosquito, *Stegomyia fasciata.*

day-number (dā'num-bėr), *n.* A numerical datum used in calculating the corrections for aberration, precession, and nutation required in reducing the mean place of a star to its apparent place for any day of the year.

Independent *Day-Numbers* for the year 1903, as used at the Royal Observatory, Cape of Good Hope.
Geog. Jour. (R. G. S.), XVIII. 646.

day-stone (dā'stōn), *n.* A surface fragment.

day-student (dā'stū"dent), *n.* A non-resident student who attends college during the day.

day-ticket (dā'tik"et), *n.* A railway or other ticket good for only one day, usually the day of issue.

Dayton limestone. See ★*limestone.*

day-view (dā'vū), *n.* [A translation of G. *tagesansicht.*] The metaphysical system of Gustav Theodor Fechner, of which the principal points are that there is no absolutely unconscious matter, that all finite beings make up one sole infinite being, and that this is the only relation between the finite and the infinite.

dazement (dāz'ment), *n.* [*daze* + *-ment.*] A dazed state or condition.

The 'king relapsed' into his *dazement*, muttering, "It cannot be, it cannot be!"
L. Wallace, The Fair God, vii. 4.

D. B. An abbreviation of *Doomsday Book.*

D-bit (dē'bit), *n.* Same as *pod-bit.*

D. C. An abbreviation (*b*) of *direct current*; (*c*) of *District Court*; (*d*) of *District of Columbia*; (*e*) of *Deputy Consul*; (*f*) of *Divus Cæsar* (the divine Cæsar).

D. Ch. An abbreviation of *Doctor of Chemistry.*

D. C. S. An abbreviation of *Deputy Clerk of Session.*

D. E. An abbreviation of *Dynamical Engineer*, a degree conferred at the completion of a graduate course in mechanical engineering.

deacon, *n.* **4.** A hunter's name for the young of the elk or wapiti, *Cervus canadensis.*

deacon-seat, *n.* The bench in front of the sleeping-bunks in a logging-camp.

Deacon's process. See ★*process.*

deactivation (dē-ak-ti-vā'shon), *n.* [*de-* + *active* + *-ation.*] Loss of radioactivity: said of radium and its emanations, and of other radioactive substances.

Prof. Curie, in Comptes Rendus, gives the results of his experiments of the action taking place when radium is placed in an inclosure maintained at 450 deg. C. or at — 180 deg. C. He finds that the law of *deactivation* is still the same throughout this range of temperature.
Sci. Amer. Sup., Feb. 20, 1904, p. 23523.

dead, *a.* **19.** In *golf*, said of a ball: (*a*) when it falls without rolling; (*b*) when it lies so near a hole that the player is "dead sure" to hole it; (*c*) when it lacks life or resiliency. —**20.** In *elect.*, said of a circuit which is not connected with any source of electric power, either directly, or indirectly, as by induction. —**21.** Said of molten metal when it is thick and sluggish, either from insufficient melting, or from having stood too long in a ladle. Dead metal does not pour well and is not suitable for making thin castings, although it may be successfully used for heavy castings.—**Dead end,** a closed end of a branch water-pipe, passage, etc., through which there is no flow or movement. —**Dead fin.** Same as *adipose fin.* **Dead fingers,** coldness and pallor of the fingers due to defective circulation, a precursor, at times, of Raynaud's disease.—**Dead finish.** See ★*finish.* **Dead full,** said of a contact at billiards when the exact center of the cue-ball hits the exact center of the first object-ball. *W. Broadfoot*, Billiards, p. 327.—**Dead lime.** See ★*lime*[1]. **Dead loss.** See ★*loss.* —**Dead low water,** the lowest stage of ebb-tide.—**Dead space.** (*b, c, d*) See ★*space.* **Dead time, water.** See ★*time*[1], ★*water.* **To be dead,** in *golf*, to be so near the hole that a player is certain to put it in with his next stroke: said of a ball.

dead-bird (ded-bėrd'), *n.* A certainty; a foregone conclusion. [Australian slang.]

dead-bolt (ded'bōlt), *n.* In a lock, a bolt operated directly by the key.

dead-burnt (ded'bėrnt), *a.* Said of lime or plaster of Paris, heated so strongly in the burning as to have become incapable of promptly taking up water: the lime is thus prevented from slaking or the plaster from setting.

Under favorable conditions gypsum actually breaks up at 6... and forms insoluble anhydrite found in nature and identical with *dead-burnt* gypsum.
Nature, Nov. 19, 1903, p. 64.

deadener, *n.* **2.** In *lumbering*, a heavy log or timber, with spikes set in the butt-end, so fastened in a log-slide that the logs passing under it come in contact with the spikes and are retarded.

deadeye, *n.* **2.** In *mech.*, a bearing made in a solid piece, and not split into halves or provided for taking up wear: used mostly in cheap and temporary work.

dead-finish (ded-fin'ish), *n.* Any one of several leguminous trees or shrubs of the genera *Acacia* and *Albizzia*; especially *Albizzia basaltica* and *Acacia Farnesiana*, which by their dense growth form such an obstruction to the traveler that he is brought to a 'dead finish' or halt.

dead-furrow (ded'fur"ō), *n.* In *agri.*, the furrow that remains open in the center of a 'land' or field in plowing. The dead-furrow is the last furrow made; it is really a double furrow, since the plow throws the furrow-slice either way in making the last "round."

dead-head, *n.* **4.** In *lumbering*, a sunken or partly sunken log.

dead-lock, *n.* **3.** A lock with a key-bolt, but with no latch-bolt, operated by a knob.—**4.** A lock in which the key-bolt must be moved by turning the key in each direction: distinguished from a spring lock.

dead-lock (ded'lok), *v. t.* To bring to a dead-lock or standstill: as, "they have *dead-locked* the legislature," *The Nation*, Aug. 4, 1892, p. 81.

dead-lurk (ded'lėrk), *n.* Sneak-thieving; the entering of a dwelling during the absence of the family, for the purpose of robbery. [Slang. Chiefly Eng.]

dead-man (ded'man), *n.* In *lumbering*, a fallen tree on the shore, or a timber to which the hawser of a boom is attached.

dead-man's-thumb (ded'manz-thum"), *n.* The early orchis, *Orchis mascula* of England, so called from the color and shape of the tubers. Also called *dead-man's-hand.* [Prov. Eng.] *N. E. D.*

dead-plate, *n.* **2.** The part of a cotton-scutching machine between the beater-grids and the dust-cages.

dead-roasting (ded'rōs"ting), *n.* Roasting of ores carried to the farthest practicable degree in the expulsion of sulphur. Also called *sweet-roasting.*

dead-stroke, *a.* **II.** *n.* A stroke in power hammers (as in those driven by steam or by belts) in which the hammer-head is not instantly withdrawn after striking and the blow is inelastic in effect and is not received on any cushioning device. This is the most effective blow, and is preferred except for fine finishing or planishing strokes. It is secured by having the mechanism which lifts the hammer after the blow overtake the hammer-head after the blow has been delivered.

dead-water, *n.* **2.** The water which is below the level of the heating-surface in an internally fired steam-boiler, the circulation in this part of the boiler being very slow.

dead-weight, *n.* **4.** In *railroading*, the weight of a car as distinct from its load (called the *live* or *paying weight*) whether it is a freight-car, a passenger-car, or a stock-car.

dead-wheel (ded'hwēl), *n.* A wheel or pulley which surrounds a sleeve or cylinder carrying or supporting a mechanism, but which cannot be used as a driving-pulley.

dead-wood, *n.* **5.** In *card-playing*, the discards from the various players; cards which cannot be used again for any purpose during the hand then being played.—**Dead-wood fence,** a fence built of fallen tree-trunks cut into suitable lengths, laid side by side, and finished above with the smaller branches. [Australia.]

deaf, *a.* **Deaf-and-dumb alphabet.** See *deaf-mute.* —**Deaf nut,** a nut without a kernel; figuratively, anything empty and worthless. *N. E. D.*

deaf-ears (def'ērz), *n. pl.* The ear-lobes of the domesticated fowl.

deafforest (dē-a-for'est), *v. t.* Same as *disafforest.*

deafforestation (dē-a-for-es-tā'shon), *n.* Same as *disafforestation.*

deaf-mutism, *n.* **2.** A usage in speech or writing that is peculiar to deaf-mutes.

deafness, *n.* **Cortical deafness,** deafness due to a lesion in the cortex of the brain. **Labyrinthine deafness.** Same as *nervous deafness.* **Mental deafness, psychical deafness,** a form of mental disorder in which sounds can be heard, but cannot be recognized or interpreted. It is supposed by Munk to be due to the destruction of the cortical centers in which auditory sensations are raised to the rank of perceptions.

The phenomena which make their appearance after destruction of the former [centers], he (Munk) names, in the case of the two higher senses, cortical blindness and cortical deafness; the disturbances which result from the extirpation of the centers of the second order, he terms mental blindness and *mental deafness.*
W. Wundt (trans.), Physiol. Psychol., I. 201.

Mind-deafness. Same as *mental* ★*deafness.*—**Paradoxical deafness,** deafness, due to disease of the middle ear, in which hearing is more acute in a noisy place, as the street or a railway train. Also called *paracusis of Willis.*—**Psychical deafness.** Same as *mental* ★*deafness.* **Throat-deafness,** deafness resulting from a catarrhal process in the throat which leads to closure of the Eustachian tube.

deal[1], *v. t.*—**To deal off,** in *poker*, to continue to deal until a jack-pot is opened.

deal[2], *n.* **Colonial deal.** Same as *native* ★*deal.*—**Native deal,** in Australia, the wood of the she-pine, *Nageia elata*, a large tree of the yew family. It is free from knots, soft, close and fine grained, and easily worked. It is tough and lasting, not readily attacked by termites and ship-worms.

dealate (dē-ā'lāt), *a.* [*de-* + *alate*[2].] Deprived of wings: said of the queens of ants whose wings are shed after the nuptial flight.

dealated (dē-ā'lā-ted), *a.* Same as ★*dealate.*

I have found as many as fourteen *dealated* queens in a single shovelful of its nest-earth.
Biol. Bulletin, Oct., 1904, p. 245.

deal-ends (dēl'endz), *n. pl.* See *deal*[2], *n.*, 1.

dealer, *n.* **3.** In banking games, such as faro, the person who holds the cards which the players bet upon.

deal-yard (dēl'yärd), *n.* A yard where deals are stacked or sold.

deanthropomorphic (dē-an"thrō-pō-môr'fik), *a.* [Irreg. < *deanthropomorph*(*ism*) + *-ic.*] Of the nature of or tending to deanthropomorphism.

death, *n.*—**Local death,** the 'death' or cessation of vital action which is continually occurring among the cells of animals and plants as the result of metabolism.—**Molar death,** gangrene or necrosis in which a mass of tissue is destroyed.—**Molecular death,** ulceration or caries in which the tissues are destroyed gradually, as contrasted with *molar* ★*death.*—**Peril of death,** in *law*, the condition of apprehension of death in which a person must be in order to make a valid gift *causa mortis.*

death-adder, *n.* **2.** The black-snake of Australia, *Pseudechis porphyriacus.* See *black-snake*, 1.

death-angle (deth'ang"gl), *n.* An angle in a military position made memorable by heavy losses: also called *bloody angle.*

death-blast (deth'blàst), *n.* An unusually destructive wind or storm, or a blast of deadly gas. The destruction of St. Pierre, in Martinique, in 1902 was due to a death-blast of hot gases rolling down from the summit of Mont Pelé.

death-cup (deth'kup), *n.* The poisonous mushroom, *Amanita phalloides.* See *deadly* ★*agaric*, and *poison* ★*Amanita.*

death-duty (deth'dū"ti), *n.* In *law*, a tax levied upon the property of a decedent upon its transfer to heirs, legatees, or distributees. The expression is usually used in reference to the English law of 1894, in which year these taxes were largely increased. The corresponding American term is *direct* or *collateral inheritance-tax.*

death-grapple (deth'grap"l), *n.* A close desperate struggle with death or to the death; a desperate, relentless contest.

death-of-man (deth'uv-man"), *n.* The American water-hemlock or spotted cowbane, *Cicuta maculata*: so called from the poisonous properties of its root.

death-penny (deth'pen"i), *n.* The obolus which the ancients placed in the hand or mouth of the dead, as passage-money for Charon.

death-ring (deth'ring), *n.* A ring containing poison which is intended to be transmitted during the act of shaking hands. *W. Jones*, Finger-rings, p. 435. *N. E. D.*

death-wave (deth'wāv), *n.* Any great ocean wave which causes the destruction of vessels at sea or of property and lives on land. Such are the inundations on the Wexford coast; the great ocean-

waves, due to earthquakes, that devastate the eastern coasts of Japan; and the wave that washed over the city of Galveston during the height of the great storm of October, 1900.

death-weed (deth'wēd), *n.* An ambrosiaceous plant, *Iva axillaris*, giving trouble as a weed, particularly in northern Nevada and southern Oregon. It grows profusely in low alkali meadows and pastures, sometimes invading cultivated ground, and is very persistent by reason of its creeping rootstocks.

debarbarization (dē-bär″bạ-rī-zā′shọn), *n.* [*debarbarize* + *-ation.*] The act of debarbarizing or the state of being debarbarized. *N. E. D.*

debarbarize (dē-bär′bạ-rīz), *v. t.*; pret. and pp. *debarbarized*, ppr. *debarbarizing.* [*de-* + *barbarize.*] To free from barbarism: as, first *debarbarize*, then civilize. *De Quincey.*

debarrence (dē-bär′ẹns), *n.* [*debar* + *-ence.*] The address made by a Scotch-Presbyterian minister at the celebration of the Lord's Supper, describing the character of those who should partake, and debarring the unworthy. Also called *debarring.* See *to fence the tables*, under *fence.*

debarring (dē-bär′ing), *n.* Same as ★*debarrence.*

debash, *n.* See *dobbash.*

debilitative (dē-bil′i-tā-tiv), *a.* [*debilitate* + *-ive.*] That has a tendency to debilitate; that causes or tends to cause debilitation.

debloom (dē-blōm′), *v. t.* [*de-* + *bloom*[1].] To remove the bloom of. See ★*deblooming.*

deblooming (dē-blōm′ing), *n.* The removal or concealment of the bluish fluorescence of lubricating-oil from petroleum. Exposure for a long time to sunlight and air is said to be effective, and nitrobenzene or dinitronaphthalene may be added for the same purpose; these additions, however, render the oil corrosive of iron or steel.

debouchure (de-bō-shūr′), *n.* [*debouch* + *-ure.*] A mouth, opening out, or outlet; specifically, the opening out of a stream as it emerges from a confined valley or gorge upon an open valley or broad plain, or the junction between the narrow and the broad portion of a valley: also applied to the zone of change from a mountain track of high gradient to a plains track of much lower gradient and consequent decrease of load.

Deposition at the *debouchure* of the valley follows the same principles as deposition elsewhere.
Chamberlin and Salisbury, Geol., I. 62.

debris-cone (de-brē′kōn), *n.* A mound or cone built up by the accumulation of erupted, fragmental products about the vent of a volcano. *Dana*, Manual of Geol., p. 269.

debrital (dē-brī′tal), *a.* [Irreg. < *debris* (with assumed stem *debri-t-*) + *-al*[1]. Cf. *detrital.*] Of, pertaining to, or consisting of debris. *Geog. Jour.* (R. G. S), IX. 328.

debt, *n.* **Ancestral debt,** in *law*, a debt of an ancestor which survives him and which the law compels the heir to pay.—**Contingent debt,** in *Scots law*, a debt which is to become due upon the happening of a future event, as distinguished from a pure or a future debt.—**Future debt,** in *Scots law*, a debt which is to become due upon some definite future day, as distinguished from a pure or a contingent debt.—**Preferred debt,** a debt provable in bankruptcy, such as taxes, judgments, wages due a servant, workman, or other employee, up to a certain amount and earned during a certain limited period, a *bona fide* preference, etc., that shall be paid before any other debt or debts are paid.—**Pure debt,** in *Scots law*, a debt actually due, as distinguished from a future or a contingent debt.—**Writ of debt,** a writ which issues in favor of a party claiming the recovery of a certain and liquidated sum of money alleged to be actually due him.

debt-raiser (det′rā-zẹr), *n.* One who undertakes to raise or succeeds in raising money to pay off a debt, such as the mortgage on a church, or the like.

début, *n.* **2.** In *chess*, same as *opening*, 9. **Queen's Knight's début.** Same as *Vienna opening.*

dec. An abbreviation (*d*) of *declaration*; (*e*) of *declension*; (*f*) of *declination*; (*g*) of *decorative.*

decacanthous (dek-ạ-kan′thus), *a.* Having ten spines, as the dorsal fin of some fishes.

decacarbon (dek-ạ-kär′bọn), *n.* [Gr. *δέκα*, ten, + E. *carbon.*] A compound, usually of the aliphatic series, containing ten atoms of carbon.

decacere (dek′ạ-sēr), *n.* [NL. *Decacera.*] A ten-armed cephalopod, a member of the *Decacera*; a decapod.

decacyclene (dek-ạ-sik′lēn), *n.* [Gr. *δέκα*, ten, + *κύκλος*, circle, + *-ene.*] A dark-yellow crystalline compound, trinaphthylenebenzene, $(C_{10}H_6)_3C_6$, prepared by the fusion of acenaphthene with sulphur. It melts at 387° C. and contains ten closed chain-systems in its molecule.

decadactylous (dek-ạ-dak′ti-lus), *a.* [Gr. *δεκαδακτυλος*, ten-fingered, < *δέκα*, ten, + *δάκτυλος*, finger.] Having ten finger-like projections or rays.

decadarch (dek′ạ-därk), *n.* [Gr. *δεκαδαρχος*, < *δεκάς*, a company of ten, + *ἀρχός*, ruler.] A commander of ten men; a decurion.

decadarchy (dek′ạ-där-ki), *n.* [Gr. *δεκαδαρχία*, < *δεκαδάρχης*, decadarch.] A body of rulers consisting of ten men.

decadary (dek′ạ-dạ-ri), *a.* [*decad* + *-ary*[2].] Relating or pertaining to a decad of days; specifically pertaining to the periods of ten days into which each month of the French Revolutionary calendar of 1793 was divided.

decadent, *a.* **II.** *n.* One who or that which exhibits decadence or deterioration; specifically, one whose literary or artistic work is supposed to show the marks of national or general decadence: applied especially to a certain group of French writers and artists.

decadescent (dek-ạ-des′ẹnt), *a.* [*decad(ent)* + *-escent.*] Tending to decay; in a decadent state.

decadic (dek′ạ-dik), *a.* [Gr. *δεκαδικός*, < *δεκάς*, the number ten: see *decad.*] Of or pertaining to tens; reckoning by tens; proceeding by or based on tens: as, the *decadic* system of numbers.

decafid (dek′ạ-fid), *a.* [Irreg. < Gr. *δέκα*, ten, + L. *-fidus*, < *findere*, divide.] Same as *decemfid.*

decagrade (dek′ạ-grād), *n.* [Gr. *δέκα*, ten, + L. *gradus*, step, degree.] Ten degrees of an arc or angle measured according to that French system in which the quadrant is divided into one hundred parts; a tenth of a quadrant.

decahydrate (dek-ạ-hī′drāt), *n.* [Gr. *δέκα*, ten, + *ὕδωρ* (*ὑδρ-*), water, + *-ate*[1].] In *chem.*, a compound containing 10 molecules of water, as crystallized sodium sulphate, $Na_2SO_4.10H_2O$.

Between 33° and 17°, however, it was found that in solutions containing but small amounts of sodium chloride and in contact with solid sodium sulphate, the equilibrium conditions were determined by the solid salt being in the form of the *decahydrate*, and the solubility curves for this decahydrate are very much flatter than the corresponding curves for the anhydrous salt.
Science, Jan. 24, 1902, p. 146.

decahydrated (dek-ạ-hī′drā-ted), *a.* In *chem.*, containing 10 molecules of water. *G. Lunge*, Sulphuric Acid, II. 22.

decalcomania.—**Vitrifiable decalcomania,** in *ceram.*, a colored design printed in mineral colors on paper, for transference to the surface of pottery or porcelain.

decalescence (dē-ka-les′ẹns), *n.* [*de-* + *calescence.*] The sudden absorption of heat by iron which is observed when that substance is heated to about 795° C.: opposed to *recalescence.*

decalobate (dek-ạ-lō′bāt), *a.* [Gr. *δέκα*, ten, + *λοβός*, lobe, + *-ate*-[1].] Ten-lobed.

decalog, *n.* A simplified spelling of *decalogue.*

decalvant (dē-kal′vạnt), *a.* and *n.* [L. *de*, away, + *calvans*, ppr. of *calvare*, make bald, < *calvus*, bald: see *callow.*] Same as *depilatory.*

decameral (de-kam′ẹ-ral), *a.* [Gr. *δέκα*, ten, + *μέρος*, a part.] Divided into ten parts: as, the *decameral* radial symmetry in the calice of a coral.

decanting-jar (dē-kan′ting-jär), *n.* In *chem.*, a jar, commonly of porcelain or stoneware, having in the side a series of tubulatures at different levels for drawing off a liquid from above a solid sediment or deposit.

decap (dē-kap′), *v. t.*; pret. and pp. *decapped*, ppr. *decapping.* [*de-* + *cap*[1].] To remove the cap of. See ★*decapper.*

decapartite (dek-ạ-pär′tīt), *a.* Same as ★*decempartite.*

decapitate, *v. t.* **3.** In *math.*, to strike out, as the highest number of the symbol, in the symbolic method of calculating seminvariants.—**4.** Of a word, to cut off the beginning.

decapitator (dē-kap′i-tā-tọr), *n.* [NL. *decapitator.*] **1.** One who decapitates; a headsman. —**2.** In *surg.*, a hook with a sharp inner curve, used to decapitate the fetus in cases of obstructed labor.

decapod, *n.* **3.** In *mech.*, a ten-wheeled locomotive; strictly, a locomotive having eight driving-wheels and a single truck: a type used for hauling heavy freight-trains. [Colloq.]

decapodan (de-kap′ō-dạn), *a.* and *n.* Same as *decapod*, 1 and 2.

decappage (dē-kap′ạj), *n.* The process of removing the outside surface of, or cleaning, a piece of metal preparatory to giving it a particular finish.

decapper (dē-kap′ẹr), *n.* [*decap* + *-er*[1].] A device for removing exploded primers from the primer-seat of a cartridge-case.

decapsulation (dē-kap-sū-lā′shọn), *n.* [*de-* + *capsulation.*] In *surg.*, the depriving of an organ of its investing membrane.—**Decapsulation of the kidney,** or **renal decapsulation,** the operation of stripping off the capsule of the kidney to a greater or less extent in order to relieve tension in cases of Bright's disease.

Decapterus (de-kap′tẹ-rus), *n.* [NL., < Gr. *δέκα*, ten, + *πτερόν*, wing.] A genus of mackerel-like fishes of the family *Carangidæ*, distinguished by the presence of the free finlet behind the dorsal and behind the anal. There are numerous species in all warm seas. *D. punctatus*, the cigar-fish or round robin, is common on the Atlantic coast of the United States. See cut under *cigar-fish.*

decapterygian (de-kap-tẹ-rij′i-ạn), *a.* Same as ★*decapterygious.*

decapterygious (de-kap-tẹ-rij′i-us), *a.* [Gr. *δέκα*, ten, + *πτέρυξ* or *πτερύγιον*, wing, fin.] Having ten fins or finlets.

decarbonizing-furnace (dē-kär′bọ-nī-zing-fẹr-nas), *n.* See ★*furnace.*

decarburation (dē-kär-bū-rā′shọn), *n.* Same as *decarburization.*

decarch, dekarch (dek′ärk), *n.* [Gr. *δεκάρχης*, < *δέκα*, ten, + *ἀρχός*, a ruler.] A leader of ten; specifically, the head of the oligarchy of ten appointed by Lysander, after the battle of Ægospotami, in each of the leading Greek cities.

decarchy, dekarchy (dek′är-ki), *n.* [Gr. *δεκαρχία*, < *δεκάρχης*: see ★*decarch.*] An oligarchy of ten; specifically, one of those established by Lysander in the leading Greek cities after the battle of Ægospotami.

decarnate (dē-kär′nāt), *a.* [LL. *decarnatus*, pp. of *decarnare*, deprive of flesh, < L. *de*, from, + *caro* (*carn-*), flesh.] Stripped of flesh; divested of incarnation.

decaspermal (dek-ạ-spẹr′mạl), *a.* In *bot.*, ten-seeded.

decasyllable (dek-ạ-sil′a-bl), *n.* [Gr. *δέκα*, ten, + *συλλαβή*, syllable.] In *pros.*, a line of ten syllables.

decatholicize (dē-ka-thol′i-sīz), *v. t.* [*de-* + *Catholicize.*] To divest of Catholicism or Catholic character.

decatize (dek′ạ-tīz), *v. t.*; pret. and pp. *decatized*, ppr. *decatizing.* [F. *décatir*, deprive (cloth) of its luster, < *de-* priv. + *catir*, press (cloth), < LL. **coactire* for *coactare*, compel, press together: see *coact.*] To subject, as tightly rolled cloth, to the action of steam in order to increase and fix its press-luster: a process in the finishing of woolen cloth.

decatoic (dek-ạ-tō′ik), *a.* [Gr. *δέκατος*, tenth, + *-ic.*] Containing ten carbon atoms.—**Decatoic acids,** the name given to the isomeric, aliphatic acids, $C_{10}H_{20}O_2$. The chief member is capric acid.

decaudate, *v. t.* **2.** Of a word, to cut off the end.

decavolt (dek′ạ-vōlt), *n.* [Gr. *δέκα*, ten, + E. *volt.*] In *elect.*, an electromotive force equal to ten volts. [Rare.]

decay, *n.*—**Curve of decay.** See ★*curve.*

Deccan traps. See ★*trap*[3].

deceast, *p. a.* A simplified spelling of *deceased.*

deceiv, *v.* A simplified spelling of *deceive.*

deceive, *v. t.* **5.** In *fencing*, to evade, as an attack or parry, thus causing an opponent to lose the contact or feel of one's foil.

decelerate (dē-sel′ẹ-rāt), *v. i.*; pret. and pp. *decelerated*, ppr. *decelerating.* To decrease in velocity: opposed to *accelerate.*

deceleration (dē-sel-ẹ-rā′shọn), *n.* [*de-* + *(ac)celeration.*] The decrease of velocity: opposed to *acceleration.*

December moth. See ★*moth.*

decemjugate (dē-sem′jū-gāt), *a.* [L. *decem*, ten, + *jugum*, yoke, + *-ate*[1].] Having ten pairs of leaflets or other organs.

decempartite (dē-sem′pär-tīt), *a.* [L. *decem*, ten, + *partitus*, parted (see *partite*).] Having ten parts or divisions.

decempedate (dē-sem′pē-dāt), *a.* [L. *decem*, ten, + *pes* (*ped-*), foot, + *-ate*[1].] Ten-footed; decempedal; decapod.

decemplex (dē-sem′pleks), *a.* [L. *decemplex*, < *decem*, ten, + *-plex*, -fold.] Tenfold. *Syd. Soc. Lex.*

decene (dē′sēn), *n.* [L. *dec(em)*, ten, + *-ene.*] A hydrocarbon, $C_{10}H_{20}$, belonging to the ethylene series. It is an oily liquid which boils at 172° C.

decenniad (dē-sen′i-ad), *n.* [*decennium* + *-ad*[1].] A period of ten years; a decennium.

decentered (dē-sen′tẽrd), *a.* [*de-* + *center* + *-ed*[2].] Same as ★*decentrated.*

decentrated (dē-sen′trā-ted), *a.* [**decentrate* (< L. *de-* + **centratus*, < *centrum*, center) + *-ed*[2].] In *optics*, having the optical center not directly in front of the pupil: noting a lens which by this fact has a slightly prismatic action.

decentration (dē-sen-trā′shọn), *n.* [**decentrate* + *-ion.*] Removal from a center: as, *decentration* of a lens, in which the visual line does not pass through the center.

decentric (dē-sen′trik), *a.* [L. *de-* + *centrum*, center, + *-ic.*] That has been decentered, detached, or dissociated from a particular center or central object; considered or viewed apart from and without reference to some central notion or object.

We see love charms dissociated from sex centers and become objects of independent attraction. . . . If touch, smell, voice, eye, . . . are the *decentric* series, we can see how now a change in fashion, now in manners, . . . may each be only a change of fetish groups.
G. S. Hall, Adolescence, II. 115.

decenylene (dē-sen′i-lēn), *n.* [L. *decem*, ten, + *-en* + *-yl* + *-ene.*] A colorless liquid, $C_{10}H_{18}$, prepared from decylene bromide and alcoholic potassium hydroxid. It boils at 150° C. Also *decine.*

decerebrate (dē-ser′ē-brāt), *a.* [L. *de*, from, + *cerebrum*, cerebrum, + *-ate*[1].] Deprived of the cerebrum; associated with or consecutive to removal of the cerebrum.

The *decerebrate* monkey exhibits "cataleptoid" reflexes. Father Kircher's experimentum mirabile with the fowl and the chalk line succeeds best with the *decerebrate* hen.
Encyc. Brit., XXXI. 744.

decerebrate (dē-ser′ē-brāt), *v. t.* Same as *decerebrize.*

decerebration (dē″ser-ē-brā′shọn), *n.* Removal of the brain.

Dechenella (dek-e-nel′ä), *n.* [NL., < G. *Dechen* (H. von Dechen, 1800–89, a German geologist) + dim. *-ella.*] A genus of Devonian trilobites of the family *Proteidæ.*

dechristianization (dē-kris″tian-ī-zā′shọn), *n.* The process of making non-Christian; a breaking down of Christianity.

The Renascence was not, as has been said, a superficial revolution of people's souls; it was, for a narrow group of souls reared in the aristocracy of art and intellect, a profound *dechristianisation* which, underneath the Reformation, was to spread among us in the eighteenth century.
Tarde (trans.), Laws of Imitation, p. 363.

Decian (dē′shi-ạn), *a.* Of or pertaining to the Roman emperor Decius or his reign (249–251): as, the *Decian* persecution of the Christians.

decidua, *n.*—**Ovular decidua.** Same as *decidua reflexa.* **Placental decidua.** Same as *decidua serotina.*

deciduitis (dē-sid-ū-ī′tis), *n.* [NL., < *decidua* + *-itis.*] Inflammation of the decidua.

deciduoma (dē-sid-ū-ō′mä), *n.*; pl. *deciduomata* (-ma-tä). [NL., < *decidua* + *-oma.*] A tumor of the uterus resulting from overgrowth of a portion of the decidua which remains after abortion.—**Deciduoma malignum,** a cancerous tumor resulting from malignant degeneration of a deciduoma.

decifer, *v.* A simplified spelling of *decipher.*

decil, *n.* 2. In *math.*, an object or term occupying a place whose ordinal corresponds to 10 or to a multiple of 10. Also *decile.*

decilux (des′i-luks), *n.* [L. *deci(mus)*, tenth, + *lux*, light.] In *photom.*, one tenth of the illumination from a light-source having an intensity of one hefner and placed at a distance of one meter; one tenth of a lux.

decim. An abbreviation of *decimeter.*

decima, *n.* 3. A tenth part; a tithe or tax of one tenth.

decimal. I. *a.*—**Decimal candle.** See ★*candle.*—**Decimal degree.** (*a*) Of time, 0.1 of an hour. (*b*) Of an angle, one-sixtieth of a right angle. (*c*) Of an arc, one two-hundred-and-fortieth of a circumference.—**Decimal hour,** an hour divided into one-hundredth parts called *decimal minutes*, and into ten-thousandth parts called *decimal seconds.*—**Decimal minute.** (*a*) Of an angle, one six-hundredth of a right angle; 0.1 of a decimal degree. (*b*) Of time, 0.01 of an hour; 0.6 of an ordinary minute. **Decimal second,** one one-hundredth part of a decimal minute. **Decimal watch.** See ★*watch.*

II. *n.* **Infinite decimal.** See *infinite.* **Periodic decimal,** a recurring decimal.

decimillivoltmeter (des-i-mil-i-vōlt′mē″tẽr), *n.* [L. *deci(mus)*, tenth, + *millivolt* + *meter*[3].] In *elect.*, a voltmeter reading to tenths of a millivolt.

decimo, *n.* (*c*) A silver coin of Chile, equivalent to 10 centavos. (*d*) A copper coin of La Plata, the tenth part of a medio.

decine (dē′sin), *n.* [L. *dec(em)*, ten, + *-ine*[2].] Same as ★*decenylene.*

decinormal (des-i-nôr′mạl), *a.* [L. *deci(mus)*, tenth, + *normalis*, normal.] 1. Having one tenth of a normal or usual strength.—2. In *phys. chem.*, said of a solution in which one liter contains one tenth of the gram-molecule or gram-equivalent of the dissolved substance. See ★*concentration* (*c*) and *normal* ★*solution.*

decipher, *n.* 2. A deciphered cipher; a translated version of a cipher.

deck, *v. t.* 5. To rig out: as, to *deck* the card-cylinder of a Jacquard loom.—**To deck up,** to pile (logs) upon a skidway.

deck, *n.* 2. The names given to the various decks in a vessel differ greatly at different times and in different localities. (*a*) The decks of United States war-ships, as officially defined, are as follows: The highest deck extending from stem to stern is called the *main deck.* A partial deck above the main deck at the bow is called the *forecastle-deck*; at the stern, *poop-deck*; amidships, *upper deck.* The name *upper deck* is also applied to a partial deck extending from the waist to either bow or stern, in which case the name *forecastle-deck* or *poop-deck*, as the case may be, is not used, though the terms *forecastle-* and *quarter-deck* may be used in a general way to designate the corresponding portions of such upper deck. When there is no deck above the main deck at the bow or stern, the terms *forecastle-* and *quarter-deck* may be used, in a general way, to indicate the portions of the main deck forward of the foremast or of the superstructure and aft of the mainmast or of the superstructure, respectively. A partial deck above the main deck amidships, the space under which is not inclosed or consists of small compartments, is called the *bridge-deck.* This term should not be applied to a simple connecting gangway between the forward and after bridges or between a bridge and the forecastle-deck or poop-deck. The working bridges are called the *bridge*, the *forward bridge*, the *after bridge*, the *upper bridge*, the *lower bridge*, according to circumstances. A connecting gangway between the forward and after bridges, or between a bridge and the forecastle-deck or poop-deck, is called the *fore-and-aft bridge.* The first deck below the main deck, which is used primarily for berthing purposes, and on which no guns, or light rapid-fire guns only, are carried, is called the *berth-deck.* This is usually the deck at or next above the water-line. A complete deck on which guns are carried between the main deck and the berth-deck is called the *gun-deck.* If there are two such decks, they are called the *gun-deck* and the *lower deck*, respectively. A deck of extra strength and thickness of plating worked for protective purposes is called the *protective deck.* Where such a deck is stepped a complete deck-height, the respective portions are called *middle protective deck* and *forward* (or *after*) *protective deck*, when it is desired to distinguish between them. The deck with sloping or curved sides in smaller vessels, worked similarly to a protective deck, but not of extra strength and thickness above structural requirements, is called the *water-tight deck.* A deck worked for protective purposes below a protective deck is called the *splinter-deck.* This applies to a separate construction only and not to plating worked on the lower side of protective-deck beams. A partial deck below the berth-deck, if situated on or above the protective deck or the water-tight deck, is called the *orlop-deck*; if below the protective deck or the water-tight deck, it is called the *platform.* If there are two platforms at different levels, they are called the *upper platform* and the *lower platform.* Where no protective deck or water-tight deck is fitted, the same nomenclature will be followed, the deck next below the berth-deck being called the orlop-deck. A deck that is stepped less than a deck-height is named as though it were continuous. Deck space, in general, takes the name of the deck above which it is situated. The space above a protective deck or water-tight deck is not, however, named from this deck, but receives its name from the actual use to which it is put. Thus, if the berth-deck coincides with the protective deck, the latter term is used only in referring to the structural features of the deck itself, but the space above it receives its name from the berth-deck. Similarly, an orlop-deck coinciding with a protective deck gives its own name to the deck space. When neither of these decks coincides with the protective deck, the space above the latter is called the *store-rooms*, the *upper coal-bunkers*, etc., as the case may be. (*b*) In the British navy the highest complete deck is called the *upper deck*, and the next deck below the *main deck*, these decks being thus a deck lower than the decks of the same name in the United States navy. The deck below these decks is called the *lower deck*, corresponding generally to the berth-deck in the United States navy, the term *berth-deck* not being used. (*c*) In merchant steamers the following names are generally used: The *upper deck* is the highest complete deck of full structural strength. If there are two decks, they are the *upper* and *lower decks.* If there are three decks, they are called *upper*, *main* or *middle*, and *lower decks.* In vessels carrying passengers as well as cargo, a deck of lighter construction may take the place of the upper deck and is called a *spar-deck.* In vessels where this deck is of still lighter construction, the deck is called an *awning-deck.* A light deck, the space under which is partly or entirely closed at the sides but more or less open at the ends, is called a *shelter-deck.* A *bridge-deck* is one of the same character, extending a comparatively short length amidships. A *shade-deck* is a deck not inclosed at the sides of the vessel, being supported by stanchions extending above an open rail. Such a deck does not usually extend the full length of the vessel. Very large passenger-steamers may have additional decks, as follows: A partial deck below the lower deck is called an *orlop-deck.* Decks above the upper deck receive various names, as *saloon-deck*, *hurricane-deck*, *promenade-deck*, and *boat-deck*, the last being usually the highest deck, of light construction, on which the life-boats are carried. A short low deck at the bows is called an *anchor-deck* or *monkey-forecastle.* A *raised quarter-deck* is a part of the upper deck abaft the bridge-house, at a somewhat higher level than the upper deck forward. A *forecastle* is a deck above the upper deck at the bows. A *poop* is a similar deck at the stern. In a special British design of cargo-steamer, of which many have been built, the side, instead of meeting the main deck rectangularly, is rounded off so as to make a continuous curved surface with the deck. Inboard of this the side is again curved up. The space between the sides at the top is covered by a narrow deck called the *turret-deck*, the horizontal part on the main-deck level being called the *harbor-deck.* In a generally similar type of cargo-steamer, in which, however, the side is not rounded off, the narrow deck covering the central superstructure or trunk is called the *trunk-deck.* In a large Long Island Sound steamer, besides the important structural-steel lower and main decks, there are the following, from below upward: *saloon-*, *gallery-*, *hurricane-*, *break-*, and *dome-*decks. The *tonnage-deck* is that one from which the under-deck gross tonnage is measured. (See *tonnage.*) In vessels having three or more decks to the hull it is the second deck from below; in all others the upper deck of the hull is the tonnage-deck. (Sec. 4150, Revised Statutes.) A *flush deck* is one extending from stem to stern without break in continuity of surface.

7. In *car-building*, the roof of the clearstory of a passenger-car, often called *upper deck*; also, the sloping roof on either side of the clearstory, often called *lower deck.* The word is used in many compounds, such as *deck-hood*, a projecting shelter to keep the rain out of the deck-end ventilator of a street-car; *deck-lamp*, a gas-lamp suspended from the under side of the deck; *deck-sash*, a clearstory window.—**Deck side,** the vertical side, including sash, etc., of the clearstory of a car.—**Deck snatch-block.** Same as *plate* ★*snatch-block.*—**Deck ventilator,** one of the sashes at the deck side of a car, operated by a deck-sash opener.—**Protective deck,** in a war-ship, a deck in the vicinity of the water-line intended primarily to prevent the penetration of the enemy's projectiles into the vital parts of the ship beneath it. For location, see ★*deck*, 2. The deck is sometimes of an arched shape, the edge of it at the side being from 4 to 6 feet below the load water-line and usually rising to from 2 to 3 feet above it in the center. More frequently, however, the central part is flat and there is a sloping part at the side, as indicated in the cut under *frame.* This form of deck is used in most protected and armored cruisers and also frequently in battle-ships of recent design. In many battle-ships, however, the protective deck in the central parts is carried out level to the top of the armor-belt. In the British navy the main-deck plating is sometimes made extra heavy, forming a second protective deck above the first. In the French navy, in the largest ships, there is usually a second protective deck entirely below the water at the level of the bottom of the side armor. Protective decks are usually made in two or three thicknesses of plate, the upper thickness being of nickel-steel. The total thickness of steel on the flat parts varies from 1 to 3 inches, on the slopes from 1 to 6 inches. Also erroneously called *protected deck*

deck-block (dek′blok), *n.* A block having one or more sheaves, and the sides and base cast in one piece and screwed to the deck. See *plate* ★*snatch-block.*

decker, *n.* 3. In *lumbering*, one who rolls logs upon a skidway or log-deck.

deck-erection (dek′ē-rek″shọn), *n.* In *ship-building*, any permanent structure projecting above the general line of the upper deck, as a deck-house, poop, or fore-castle. *White*, Manual of Naval Arch., p. 10.

deck-head, *n.* 2. The card exposed on the top of the pack; specifically, the turned trump in the game of spoil-five.

deck-hood (dek′hùd), *n.* See ★*deck*, 7.

decking-chain (dek′ing-chān), *n.* Same as ★*loading-chain.*

deck-lamp (dek′lâmp), *n.* See ★*deck*, 7.

deckle-edge (dek′l-ej), *n.* Same as *deckle* (*b*).

deck-light (dek′lit), *n.* A heavy piece of glass, of circular or rectangular prismatic form, set into a deck to give light below.

deck-line (dek′lin), *n.* In *ship-building*, the line formed by the intersection of the surface of the deck at the top of the beams with the central longitudinal plane; also, the intersection of the surface with the molded surface of the side of the vessel: called *deck-line at center* and *at side*, respectively.

deck-nail (dek′nāl), *n.* A kind of soft iron spike with a flat head, commonly made in a diamond form: used for decks where any projection of the head above the level surface would be objectionable.

deck-plating (dek′plā″ting), *n.* In *ship-building*, the steel or iron plates forming the covering of a deck, considered collectively.

deck-pot (dek′pot), *n.* A large iron pot or kettle used on whalers to receive scraps from the try-pots.

The oil flows freely between their fingers into the pots, while the refuse, called "twitter," is thrown into another receptacle, called the *deck-pot*, or perhaps into scrap-tubs.
Sci. Amer. Sup., *March* 5, 1904, p. 23551.

deck-sash (dek′sash), *n.* See ★*deck*, 7.

deckt, *pp.* A simplified spelling of *decked.*

decl. An abbreviation (*b*) of *declination.*

declamation, *n.* 2. (*b*) A specially close or successful union of tones with words, as in a song or aria. (*c*) A work in which the text is read or spoken while a musical accompaniment or comment is played. Also called *melodrama*. See *melodrama*, 2.

declaration, *n.* 6. In *card-playing*, an announcement or meld; in *bridge*, specifically, the naming of the trump suit by the dealer. Sometimes called the *make*. **Auburn Declaration,** a defensive statement of doctrine issued by a convention of the Presbyterian synods of Utica, Geneva, Genesee, and the Western Reserve (Auburn, New York, August 17, 1837), in answer to the acts of the General Assembly (May, 1837) exscinding the churches of the above synods for alleged heresies. The declaration was later (1868) indorsed by the General Assembly as having "all the fundamentals of the Calvinistic creed."—**Declaration of Paris,** a declaration signed by the duly authorized delegates of the powers to the Congress of Paris, in 1856, in regard to the rights of belligerents and neutrals in time of war. It includes four points: (1) Privateering is abolished; (2) the neutral flag covers enemy's goods, except when contraband; (3) neutral goods, except when contraband, are not liable to capture under an enemy's flag; (4) blockades to be binding must be effective. The United States refused to accept the first of these, but concurred in the others. **Mecklenburg Declaration.** See *Mecklenburg Declaration of Independence*, in Century Cyclopedia of Names.

declare, *v. i.* 5. In *bridge*, to make or name the trump suit, or to announce the intention to play without a trump.

declass (dē-kläs′), *v. t.* [F. *déclasser*, < *dé-*, L. *de*, from, + *classe*, class: see *class*, *n.*] To remove from one's or its class.

déclassement (dā-kläs-mäṅ′), *n.* [F., < *déclasser*, declass.] The breaking down of class distinctions in society.

The primary school . . . is rapidly leading to a general *déclassement*. *Kidd*, Social Evolution, App. iii.

declination, *n.*—**Circle of declination.** See ★*circle*. **Declination axis, compass.** See ★*axis*[1], ★*compass*. **Declination of a plane,** in *dialing*, the angle made by a vertical plane with the prime vertical or with the meridian plane.

declinatorium (dek″li-nạ-tō′ri-um), *n.*; pl. *declinatoria* (-ä̤). In *phys.*, an instrument for measuring the magnetic declination; a circle of declination.

decline, *v. i.* 10. In *chess*, to refuse to take a piece or pawn offered.

decoagulate (dē-kọ-ag′ụ-lāt), *v. t.*; pret. and pp. *decoagulated*, ppr. *decoagulating*. [*de-* + *coagulate*.] To change from a coagulated condition: applied by Duclaux to the action of a diastatic ferment, found in malt, which converts starch into soluble dextrines.

decoction, *n.*—**Zittmann's decoction,** a decoction of sarsaparilla, containing calomel, cinnabar, and various aromatic substances, employed in the treatment of syphilis.

decoctor (dē-kok′tọr), *n.* [L. *decoctor*, < *decoquere*, squander, waste, lit. boil down, boil away: see *decoct*.] In *Roman law*, an insolvent; a bankrupt; one who squandered public funds.

decode (dē-kōd′), *v. t.*; pret. and pp. *decoded*, ppr. *decoding*. [*de-* + *code*.] To turn or translate (a message or letter from a cipher code) into its original language or form. See *code*, 4.

Decodon (dek′ọ-don), *n.* [NL., < Gr. δέκα, ten, + ὀδούς (ὀδοντ-), tooth.] A genus of ladyfishes or *Labridæ*, found in the waters about Cuba, remarkable for their bright colors. *D. puellaris* is the only species.

decohere (dē-kọ-hēr′), *v. i.*; pret. and pp. *decohered*, ppr. *decohering*. In *elect.*, to increase in resistance, as a coherer in process of restoration to its normal condition of sensitiveness or as an anticoherer when acted upon by electric waves.

decoherence (dē-kọ-hēr′ẹns), *n.* Decohering action. *Science Abstracts*, VI. § B. p. 128.

decoherer (dē-kọ-hēr′ėr), *n.* Same as ★*anticoherer*.

decohesion (dē-kọ-hē′zhọn), *n.* [*de-* + *cohesion*.] The effect of decoherence.

After a short description of the single contact coherer used by him and an explanation of the so-called *decohesion*, he calculated how near the metallic surfaces must be brought together. *Science*, March 21, 1902, p. 466.

decoic (dẹ-kō′ik), *a.* [Gr. δέκα, ten, + *-o-* + *-ic*.] Noting an acid, the same as ★*decatoic* or *capric acid*.

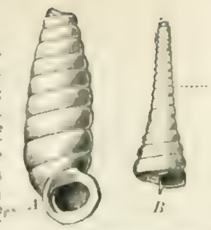
decollate, *v. t.* 2. To remove the apex of, as of a shell.

decollation, *n.* 3. In *conch.*, the removal—by death, growth, or accident—of the upper whorls of a spiral shell after the animal has ceased to occupy them. See cut in middle column.

The coils may be lost by *decollation*, as in Cæcum, in which the spiral part drops off. *Sedgwick*, Text-book of Zool., I. 360.

decollator (dē-ko-lā′tọr), *n.* Same as ★*decapitator*.

décolletage (dā-kol-täzh′), *n.* [F., < *décolleter*, cut low in the neck: see *décolleté*.] In *dressmaking*: (*a*) The state of being cut low in the neck: said of the bodice or waist of a dress. (*b*) The low-cut neck itself of a bodice.



A, decollated adult form, and *B*, perfect young form, of [illegible]; the dotted line shows where the decollation takes place. (From "Cambridge Natural History.")

decompensation (dē-kom-pen-sā′shọn), *n.* [*de-* + *compensation*.] Failing compensation of the heart in valvular disease.

decompression (dē-kọm-presh′ọn), *n.* [*de-* + *compression*.] Relief from pressure; specifically, relief from excessive atmospheric or hydrostatic pressure.

decongestive (dē-kọn-jes′tiv), *a.* and *n.* [*de-* + *congestive*.] **I.** *a.* Tending to reduce congestion.

Treatment by physical agencies, by electricity in particular, restores general and local nutrition, has a *decongestive* local action, depurative in general, and anti-neoplastic in particular. *Med. Record*, Aug. 1, 1903, p. 167.

II. *n.* A remedy designed to reduce congestion.

deconsider (dē-kọn-sid′ėr), *v. t.* [*de-* + *consider*.] To leave out of consideration; treat with scant consideration.

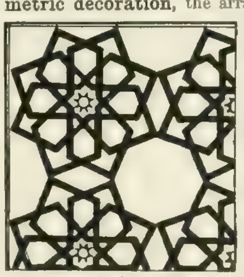
deconsideration (dē-kọn-sid-ẹ-rā′shọn), *n.* The act of deconsidering or the fact of being deconsidered.

deconstruct (dē-kọn-strukt′), *v. t.* [*de-* + *construct*.] To take apart (what has been put together); undo the construction of; undo (what has been done).

deconstruction (dē-kọn-struk′shọn), *n.* [*de-* + *construction*.] The undoing of what has been constructed or done.

decorating-wheel (dek′ọ-rā̤-ting-hwēl″), *n.* A small cylinder or disk of wood, baked clay, or metal which revolves on the end of a handle and usually carries a pattern in relief or in cavetto; a coggle: used for impressing ornamental bands around jars, etc., while they are in a plastic state. Also called *runner*.

decoration, *n.*—**Corn-flower decoration,** a style of ceramic ornamentation in which small blue fringed flowerets, with green leaves, are painted on porcelain or cream-colored ware: at one time extensively used by certain English, French, and American potters.—**Geometric decoration,** the arrangement of mathematical lines and figures in such a way as to produce an interesting pattern. The most perfect and elaborate examples are to be found in the various Arabic styles.—**Hawthorn decoration.** See ★*hawthorn*.—**Lowestoft decoration,** a peculiar style of ceramic embellishment erroneously supposed to have originated at Lowestoft, England, in the latter part of the eighteenth century. It consists of designs painted on porcelain or opaque white ware made at many English factories, and on Chinese porcelain which was carried to Holland, England, and the United States in large quantities by the East India Company. Its main characteristics are sprays of roses in pink and green, borders of lattice-work, and waving dotted lines, usually in brown or purplish red.—**Mural decoration,** the treatment of a wall-surface in an interesting way by the use of mosaic, fresco, oil-painting, or work in relief.—**Rice-grain decoration.** See ★*rice-grain*.



Geometric Decoration.

decorationist (dek-ọ-rā′shọn-ist), *n.* [*decoration* + *-ist*.] An expert or professional decorator. *Carlyle*.

decorporated (dē-kôr′pọ-rā-ted), *a.* [L. *de*, from, + *corpus* (*corpor-*), body, + *-ate*[1] + *-ed*[2].] Deprived of a body: said, for example, of the head after its separation from the body by the guillotine.

decorticated (dẹ-kôr′ti-kā-ted), *p. a.* 1. Same as *decorticate*: applied most frequently to trunks of fossil trees of the coal-measures.—2. Having the periostracum, or the periostracum and the porcelanous layer, worn away, as a shell.

decorticator, *n.* 2. Any machine for removing hulls, bark, or other outer covering of seeds or parts of plants: as, a hemp-*decorticator*, or hemp-brake.

decortization (dẹ-kôr-tī-zā′shọn), *n.* Decortication.

decostate (dē-kos′tāt), *a.* [*de-* + *costate*.] Having no ribs.

decoy, *n.* 4. A pond used to snare and entrap, and also to maintain and breed, waterfowl.—**Decoy letter,** a letter prepared and mailed for the purpose of detecting suspected violators of the postal and revenue laws and postal thieves, or for similar purposes.

decoyman (dẹ-koi′mạn), *n.* A man in charge of a decoy or of several decoys for luring birds, animals, etc.

decr. In *music*, an abbreviation of *decrescendo*.

decreative (dē-krẹ-ā′tiv), *a.* [*de-* + *creative*.] That tends or serves to hinder, reverse, or undo some creative act.

Development is upward, creative, and not *decreative*. *G. S. Hall*, Adolescence, II. 546.

decree, *n.*—**Decree of forthcoming,** in *Scots law*, the decree, made after the arrest of a debtor, by which it was adjudged that the debt be paid or the property of the debtor delivered to the creditor causing the arrest.—**Order of decrees,** the doctrine concerning the order of the divine decrees to create, to permit the fall of man, to provide salvation, and to secure acceptance of salvation to some. There are three forms of the doctrine, supralapsarianism, infralapsarianism, and sublapsarianism.

decrement, *n.*—**Logarithmic decrement,** the Napierian logarithm of the ratio of a preceding to a succeeding amplitude in a damped vibration.

decrepit, *a.* 2. In *geol.*, said of rivers that have reached the last stages of their existence, or of that portion of a drainage-course which has reached base-level and where deposition along the bed exceeds the amount removed by floods. *Dana*, Manual of Geol., p. 182.

decres. In *music*, an abbreviation of *decrescendo*.

decubital, *a.* 2. Relating to decubitus.

Thrombosis may take place in this area due also to the added weight of the *decubital* position. *Med. Record*, July 25, 1903, p. 131.

Decubital gangrene. Same as *bed-sore*.

Decubitus paralysis, pressure-paralysis due to lying for a long time in a faulty position.

deculor, deculorize. Simplified spellings of *decolor*, *decolorize*.

decumana (dek-ụ-mā′nä̤), *n.* [L. (*porta*) *decumana*, adj. fem. of *decumanus*. See *decuman*.] One of the two gates of the typical Roman camp. See *decuman*, *a.*, 1. Opposite the porta decumana was the porta prætoria, the two being connected by the via prætoria, the principal street of the camp.

decuria (dẹ-kū′ri-ä̤), *n.*; pl. *decuriæ* (-ē). [L.: see *decury*.] A company of ten; specifically, in the Jesuit method of instruction, a minor division of a class in which chiefly memory lessons are heard.

decurion, *n.* 3. In *Rom. hist.*, a member of the senate of a colony or of a municipality; a town-councilor.—4. A member of the great council of an Italian city or town.

Decurtate pulse. See ★*pulse*[1].

decussation, *n.*—**Fillet decussation.** See ★*fillet*.—**Fontanal decussation.** Same as ★*fountain decussation*.

decylene (des′i-lēn), *n.* [L. *decem*, ten, + *-yl* + *-ene*.] Same as ★*decene*.

decylic (de-sil′ik), *a.* [L. *decem*, ten, + *-yl* + *-ic*.] Same as *capric*.

ded, *a.* A simplified spelling of *dead*.

dedans (de-däṅ′), *n.* [F. *dedans*, the interior, prop. prep., within, < *de* (< L. *de*), of, + *dans*, within: see *denizen*.] In *court-tennis*, that part of the penthouse at the service end which is netted off for spectators.

dedendum (dẹ-den′dum), *n.*; pl. *dedenda* (-dä̤). [NL. (contrasted with *addendum*), < L. *dedendum*, neut. fut. pass. part. of *dedere*, give up, < *de*, away, + *dare*, give.] That part of the tooth of a cog-wheel or gear which is inside the pitch-circle and is intercepted between the pitch-line and the circle which limits all the roots of the teeth and the spaces between them. The addendum of the teeth of the meshing-wheel enters into this space.

deditician (ded-i-tish′ạn), *n.* [L. *dediticius*, a captive, also as in def., < *deditus*, pp. of *dedere*, surrender, give up.] In *Rom. law*, a former slave who upon manumission was not admitted to full citizenship because of some offense committed during slavery.

dedly, *a.* A simplified spelling of *deadly*.

dedolomitization (dẹ-dō″lọ-mit-i-zā′shọn), *n.* [*de-* + *dolomitization*.] In *petrog.*, the change of a dolomite to some other rock.

dedolomitize (dē-dol′ọ-mit-īz), *v. t.*; pret. and pp. *dedolomitized*, ppr. *dedolomitizing*. [*de-* + *dolomite* + *-ize*.] In *petrog.*, to change (a dolomite) into some other kind of rock, as by the formation of magnesian silicates or of magnesium hydrous oxids.

Deed of arrangement, in *Eng. law,* an instrument transferring the property of a debtor to a trustee for the benefit of his creditors.

deëducational (dē-ed-ū-kā'shon-al), *a.* [*de-* + *educational.*] As regards the hindering or undoing of education or educational work.

deëmanate (de-em'a-nāt), *v. t.*; pret. and pp. *deëmanated,* ppr. *deëmanating.* [*de-* + *emanate.*] To deprive (a radioactive substance) of the power of giving off an emanation, or to reduce, by heating or other process, the rate of the escape of the emanation from such a substance.

deëmanation (dē-em-a-nā'shon), *n.* The process of depriving (a radioactive substance, such as radium) of the power of emitting emanation, or the reduction of the rate of such emission; the state or condition in which emanating power ceases or is reduced.

Thus *de-emanation* does not permanently destroy the power of thorium of giving out an emanation.
E. Rutherford, Radio-activity, p. 216.

deep-field (dēp'fēld), *n.* In *cricket:* (*a*) A fielder placed at or near the boundary somewhere behind the bowler. (*b*) The position of such a fielder.

deepsinker (dēp'sing-kèr), *n.* **1.** A deep tumbler; a tumbler of the largest size as regards depth.—**2.** The drink or beverage served in such a tumbler. [Slang, Australia.]

deep-tank (dēp'tangk), *n.* In *ship-building,* a tank formed by partitions or bulkheads cutting off a part of the hold and specially constructed to hold water ballast. See ★*ballast-tank.* A *midship deep-tank* is in the middle of the length; the *forepeak* and *afterpeak tanks,* or *trimming tanks,* are at the ends of the vessel.

deer, *n.* **Irish deer,** an extinct representative of the *Cervidæ, Cervus* or *Megaceros giganteus,* remarkable for its large size and great spread of palmate antlers, "which diverge at right angles from the plane of the frontals and

Skeleton of the Irish Deer (*Cervus giganteus*) from the Pleistocene of Ireland. (From Nicholson and Lydekker's "Paleontology," after Owen.)

have a distinct brow- and bez-tine and a small posterior tine on the opposite side of the beam to the bez-tine." (*Nicholson and Lydekker,* Manual of Paleont., p. 1134.) Its remains are found in the bogs of northern Europe, particularly of Ireland, and specimens have been found with a spread of more than 11 feet between the tips of the antlers. Also called *Irish Elk.*

deer-balls (dēr'bâlz), *n.* See *hart's-truffles.*

deer-brush (dēr'brush), *n.* One of several shrubs of the genus *Ceanothus* (*C. integerrimus, C. incanus,* and *C. velutinus*) which furnish shelter and browsing for deer.

deer-fern (dēr'fèrn), *n.* See ★*fern*[1].

deer-fly (dēr'flī), *n.* **1.** A European hippoboscid fly, *Lipoptena cervi,* which lives on the European red deer.—**2.** An American hippoboscid fly, *Lipoptena depressa,* which occurs on *Cervus virginianus:* also called *deer-tick.*

deer-food (dēr'fōd), *n.* The water-shield or water-target, *Brasenia Schreberi,* supposed to be eaten by deer.

deer-foot (dēr'fūt), *n.* A V-shaped iron catch on the side of a logging-car in which the binding-chain is fastened.

deer-forest (dēr'for″est), *n.* A tract of land frequented by deer and used as a hunting-preserve.

deer-grass, *n.*—**2.** A bunch grass, *Epicampes rigens,* found in the southwestern United States: it is of some forage value.—**3.** In Wyoming and Montana, the sheep's fescue, *Festuca ovina.*

deer-grasshopper (dēr'gras″hop-èr), *n.* A Malayan locustid insect, of the genus *Mecopoda,* which is enabled by its greatly developed hind legs to take enormous leaps. *Proc. Zool. Soc. London,* 1900, p. 854.

deerhorn (dēr'hôrn), *n.* **1.** The horn of a deer; also, the bone which forms the antlers of a deer.—**2.** A large rough mussel, *Tritogonia* or *Unio verrucosa,* found in the Mississippi river, the shell being used in the manufacture of buttons. Also called *buckhorn.*

deerman (dēr'man), *n.* A member of one of the pastoral reindeer-raising communities of Siberia: opposed to the maritime fisherman of the same tribes.

deer-necked (dēr'nekt), *a.* Having the dorsal or upper margin of the neck concave instead of convex or at least straight; ewe-necked: said of a horse.

deer-park (dēr'pärk), *n.* A park in which deer live or are kept.

Deer parks . . . constitute a feature of considerable importance because of their area in the mountain regions of both the Eastern and Western portions of the United States. *Yearbook U. S. Dept. Agr.,* 1900, p. 585.

deer-stalker, *n.* **2.** A lined cap of cloth or flannel, peaked before and behind with the same material, and sometimes having ear-flaps which are turned up over the crown and tied together at the top by laces. [Eng.]

deer's-tongue, *n.* **2.** The white adder's-tongue, *Erythronium albidum.*—**3.** The rib-grass, *Plantago lanceolata.* In all the deer's-tongues the form of the leaf suggests the name.

deer-tick (dēr'tik), *n.* Same as ★*deer-fly.*

deer-weed (dēr'wēd), *n.* A handsome yellow-flowered Californian leguminous plant, *Lotus glaber.* Also called *wild broom.* See ★*broom*[1].

deer-yard (dēr'yärd), *n.* A winter pasture or browsing-ground of deer.

de-ethicize (dē-eth'i-sīz), *v. t.* To deprive of moral implications or tendencies.

def, *a.* A simplified spelling of *deaf.*

def. An abbreviation (*a*) of *defendant;* (*b*) of *defined;* (*c*) of *definite;* (*d*) of *definition.*

defaultant (dē-fâl'tant), *a.* [*default* + *-ant*[1].] Charged with or guilty of defaulting.

defaulter, *n.* **2.** In the British service, a soldier accused of a military offense.

defector (dē-fek'tor), *n.* One who defects, falls away, deserts, or secedes, as from a religious body, a political party, or the like.

defemination (dē-fem-i-nā'shon), *n.* [L. *de-* + *femina,* woman, + *-ation.*] Deprivation of some of the characteristics of a woman, with or without the assumption of some of those of the male sex.

defeminize (dē-fem'i-nīz), *v. t.*; pret. and pp. *defeminized,* ppr. *defeminizing.* [L. *de-* + *femina,* woman, + *-ize.*] To deprive of feminine qualities and tastes; affect with masculine notions or a liking for mannish modes of life and pursuits or an aversion to domestic life. *Amer. Jour. Psychol.* XI. 546.

defendant. *n.*—**Defendant in error.** See ★*error.*

defender, *n.* **4.** In *Irish hist.,* one of an association of Roman Catholics organized in the north of Ireland in the eighteenth century to oppose the Protestants who had organized as Peep-o'-day Boys or Orangemen.

defenestration (dē-fen-es-trā'shon), *n.* [NL. *defenestratio(n-),* < ✱*defenestrare,* < L. *de,* from, + *fenestra,* window.] The act of throwing out of the window: as, the *defenestration* of Prague in 1618, when Bohemian insurgents broke up a meeting of imperial commissioners and threw two of their number out of the window, an act which preluded the Thirty Years' war.

defense, *n.*—**Berlin** or **Prussian defense,** in *chess,* the rejoinder 2 . . . Kt to KB3 to the King's Bishop's opening. Also called *King's Knight's defense.*—**Damiano defense opening.** See ★*opening.*—**Defense to King's Knight's opening.** See ★*opening.* **Hannekin defense.** Same as *Berlin* or *Prussian* ★*defense.* **Italian defense,** in *chess,* a variation of an antiquated defense to the King's Bishop's opening.—**King's Knight's defense.** Same as *Berlin* ★*defense.* **Lopez defense,** in *chess,* a variation arising in an antiquated form of the King's Bishop's opening. **Paulsen's defense,** in *chess,* 5 Kt—K 5, B—Kt 2, an original defense to the Kieseritzki gambit, invented by the German player Louis Paulsen. **Philidor's defense.** See *opening,* 9.—**Prussian defense.** Same as *Berlin* ★*defense* in the Ruy Lopez opening.—**Queen's Bishop's Pawn's defense,** in *chess,* 1 P—K 4, P—K 4; 2 B—B 4, P—QB 3, a defense to the King's Bishop's opening.—**Statement of defense,** a term sometimes used to denote the plea or answer of a defendant.—**Two Knight's defense.** See *opening,* 9.

Defensive circle, gland, proteid. See ★*circle,* ★*gland,* ★*proteid.*

deferent, *n.* **3.** In *math.,* the locus of the centers of circles of which a bicircular quartic is drawn as the envelop.

deferentitis (def-e-ren-tī'tis), *n.* [NL., < *deferens* (*-ent-*) + *-itis.*] Inflammation of the vas deferens.

Deferred shoots, in *bot.* See ★*shoot.*

defervesce (dē-fèr-ves'), *v. i.*; pret. and pp. *defervesced,* ppr. *defervescing.* [L. *defervescere,* < *de-* + *fervescere,* boil: see *fervescent.*] To cease to boil; cool down; hence, to become more or less neglected or out of favor or regard.

defervescent (dē-fèr-ves'ent), *a.* and *n.* [L. *defervescens* (*-ent-*), ppr. of *defervescere:* see ★*defervesce.*] **I.** *a.* Causing or associated with a reduction of fever.

II. *n.* A remedy employed to produce defervescence.

Defforges's pendulum. See ★*pendulum.*

defilade (def-i-lād'), *n.* [*defile*[2] + *-ade.*] That arrangement of a fortification by means of which its interior is concealed from an adversary on a neighboring height.

definition, *n.*—**Constructive definition,** definition by stating the essential requisites for constructing an object having the defined character. Such definitions have been highly valued in geometry, but they do not always conduce to sound or philosophical development of the subject.—**Diagnostic definition,** a statement which, without attempting to analyze the essence of the object of a general term, undertakes to show that it may be distinguished from everything else.—**Genetic definition,** (*a*) and (*b*). See *genetic.* (*c*) Definition by describing a process for producing the object defined. It is often confounded with the constructive definition, which is a species of genetic definition. Thus if as a definition of Prussian blue it were said to be the substance precipitated on mixing aqueous solutions of partially oxidized green vitriol and yellow prussiate of potassa, this would be a so-called genetic definition; but it would fail altogether to mention one of the essential characters to which the name is due. Less excusable is a method of defining abstract conceptions which has been highly favored by German writers since Kant. It consists in saying that if from some familiar conception certain enumerated ingredients are omitted, what remains is the conception intended. This is no definition, and serves no other purpose than to lead the reader to mistake a vague feeling for an intellectual description and to produce a false illusion of scientific accuracy.—**Normal definition,** a definition of a class of objects as differing only accidentally from a certain norm with a distribution of frequency of given departures from it according to the law of probabilities.—**Pragmatistic definition,** a definition by means of characters that might conceivably influence rational conduct. Such would be the definition of a probable assumption as one which could safely be made the basis of a business enterprise.—**Scholastic definition.** Same as *Aristotelian definition.* See *definition,* 3 (1).—**Typical definition,** a definition of a group as being of a certain hierarchical order (species, genus, family, etc.), and as composed of individuals differing from a certain actual form (assumed as a standard 'type') by as much as individuals of a group of the named hierarchical order might be expected to differ, or to be connected with that type by a series of almost insensible gradations.

Definitive host, sporoblast. See ★*host*[2], ★*sporoblast.*

definitize (dē-fin'i-tīz), *v. t.*; pret. and pp. *definitized,* ppr. *definitizing.* [*definite* + *-ize.*] To make definite.

Hope and fear may be regarded as special forms of expectation. Expectation is indefinite. . . . Hope and fear *definitise* expectation.
W. Wundt (trans.), Human and Animal Psychol., p. 377.

definitor (dē-fin'i-tor), *n.* [L. *definitor,* < *definire,* define.] An officer in certain religious orders whose duty is to decide points of discipline.

deflate (dē-flāt'), *v. t.* [*de-* + *-flate,* as in *inflate.*] To remove the air from: the opposite of *inflate.*

deflation (dē-flā'shon), *n.* **1.** The act of deflating.—**2.** In *geol.,* denudation by the action of the wind bearing solid particles. *Walther.*

deflectionization (dē-flek-shon-i-zā'shon), *n.* The act of deflectionizing; loss of inflections.

In Saxon this infinitive was a flexional one. It could not be otherwise, because there was no flexionless infinitive in the language. This variety then, which we call the Flat Infinitive, is a direct product of *deflectionization.*
Earle, Philol. Eng. Tongue, ¶ 569.

deflectionize (dē-flek'shon-īz), *v. t.*; pret. and pp. *deflectionized,* ppr. *deflectionizing.* [*de-* + *flection* + *-ize.*] To subject to flectional decay; deprive of inflections.

Flectional languages are called Synthetic, and *deflectionized* languages are said to be Analytic.
Earle, Philol. Eng. Tongue, ¶ 445.

deflector, *n.* **3.** In general, something which deflects. Specifically—(*a*) A plate or board which is projected into a current of gas or air to cause it to flow to one side. (*b*) A partition or surface, plane or curved, by which the flames or hot gases in a boiler-setting are compelled to follow definite paths. (*c*) A similar partition to force circulating water to rise or descend in a boiler in definite directions and places. (*d*) A cone or vane in a ventilating-hood. (*e*) A board placed outside of a car-window, at right angles to the motion of the train, to keep smoke and cinders away from the open window.

4. See the extract.

Another conspicuous advantage arising from the use of compasses of this pattern is the readiness with which they admit of correction by the use of the "*deflector*," a simple instrument devised by Lord Kelvin for the measurement of directive force, the successful application of which to compass correction depends on the fact that, when the directive force is equalized on all points, the error of the compass is neutralized.
Encyc. Brit., XXXI. 108.

deflexibility (dē-flek-si-bil′i-ti), *n.* [*deflexible* (*-bil-*) + *-ity.*] Capability of being deflected. *Brougham.*

deflocculation (dē-flok-ū-lā′shon), *n.* [*de-* + *flocculation.*] The reversal of the process of flocculation (which see).

The removal of the finest particles from the surface soil is attributed to *deflocculation* induced by the use of sodium nitrate, and followed by the washing of the finest particles into the subsoil. *Nature*, July 7, 1904, p. 238.

deflorate (dę-flō′rāt), *v. t.*; pret. and pp. *deflorated*, ppr. *deflorating.* [L. *deflorare* (pp. *-atus*): see *deflower.*] To strip of flowers; deflower.

deflorence (dē-flō′rens), *n.* [L. *de-* + *flos* (*flor-*) + *-ence.*] The fading out of the eruption of an exanthematous disease.

defness, *n.* A simplified spelling of *deafness.*

deforest (dē-for′est), *v. t.* [*de-* + *forest.*] Same as *disafforest.*

deform[1], *v. t.*, **1.** (*b*) In *geom.*, to bend without stretching or tearing.

deformation, *n.* **5.** In *bot.*, any malformation or abnormal growth due to the attack of some parasite.—**6.** In *geol.*, the process whereby, under the influence of strains (usually compressive), individual strata, masses of rock, or larger portions of the earth's crust suffer change of form, as when massive rocks become schistose, flat strata are folded, or mountain-ranges are upheaved.

deformational (dē-fôr-mā′shon-al), *a.* Of or pertaining to deformation; tending to produce deformation.

Several *deformational* movements had affected this district. *Nature*, Feb. 12, 1903, p. 359.

deformity, *n.*—**Gun-stock deformity,** displacement of the forearm following fracture of the humerus.—**Silver-fork deformity,** the peculiar curve of the outline of the wrist characteristic of Colles's fracture of the lower end of the radius.

defraudation, *n.* **2.** In *Sp. law*, the offense of fraudulently avoiding payment of a public tax.

defrock (dē-frok′), *v. t.* [F. *défroquer;* as *de-* + *frock.*] Same as *unfrock.*

defrost (dē-frôst′), *v. t.* [*de-* + *frost.*] To remove the effects of frost or freezing from; restore to a sound unfrozen condition or state. [Colloq.]

Each year there is visible improvement in the methods of *defrosting* meats in European markets. Frozen mutton from the antipodes and from Argentina reaches the retail butcher shop in better form and appearance than formerly. *Yearbook, U. S. Dept. Agr.*, 1896, p. 26.

deg. An abbreviation of *degree.*

degelation (dē-je-lā′shon), *n.* [L. *de-* + *gelatio*(*n-*), *freezing.*] Melting; fusion; the change from the solid to the liquid phase or state: liquefaction: opposed to *congelation.* *N. E. D.*

degenerate, *a.* **II.** *n.* One who has retrograded from a normal type or standard, especially in moral nature and character, and exhibits certain morbid physical and mental traits and tendencies.

That which nearly all *degenerates* lack is the sense of morality and of right and wrong.
Nordau, Degeneration, iii. 18.

degeneration, *n.* **5.** A progressive departure of a family from the normal condition: shown in the first generation by a nervous temperament, moral depravity, and excesses; in the second by tendency to apoplexy and severe neuroses frequently with alcoholism; in the third by mental derangement, suicide, and intellectual weakness; and in the fourth by hereditary imbecility, deformities, arrested development, and sterility.—**6.** In *geol.*, disintegration produced by weathering.—**Adipose degeneration.** Same as *fatty degeneration.*—**Anemic degeneration.** Same as *polychromatophilic* ★*degeneration.*—**Angiolithic degeneration,** atheroma with abundant calcareous deposit. **Ascending degeneration.** (*a*) Degenerative change in the spinal cord which progresses upward toward the brain. (*b*) Wallerian degeneration proceeding in a direction from the periphery toward the center. **Bacony degeneration.** Same as *lardaceous disease* (which see, under *lardaceous*).—**Chitinous degeneration.** Same as *amyloid degeneration.* **Comma degeneration.** See ★*comma.*—**Cystic degeneration,** degeneration associated with the formation of cavities or cysts in the part affected.—**Descending degeneration.** Wallerian degeneration advancing from the nerve-centers toward the periphery.—**Earthy degeneration.** Same as *calcareous degeneration.*—**Fibrous degeneration,** overgrowth of the connective-tissue framework of a part, which compresses and causes atrophy of the functionating cells. **Gelatiniform degeneration.** Same as *colloid degeneration.* **Keratoid degeneration,** transformation of the plasma of the cell into keratin. **Method of degeneration,** in *math.*, a method of obtaining results by letting one dimension vanish. **Partial reaction of degeneration,** the presence of reaction of degeneration in a muscle under direct galvanic stimulation, with preservation of normal reaction in the nerve supplying this muscle. See *reaction of degeneration,* under *reaction.*—**Physiological degeneration,** the atrophy of certain cells or tissues or organs that others may attain to perfect development. *Brinton*, Basis of Social Relations, p. 82. **Polychromatophilic degeneration,** a condition of the red corpuscles of the blood, which is characterized by a simultaneous affinity of the cells for more than one dye, namely, for a basic as well as an acid dye. **Quain's degeneration,** fibrous degeneration of the muscle of the heart.—**Senile degeneration,** fibrous degeneration occurring as a result of catabolic changes in the aged.—**Virchow's degeneration.** Same as *lardaceous disease* (which see, under *lardaceous*).

Degenerative juncture. See ★*juncture.*

degerm (dē-jêrm′), *v. t.* [*de-* + *germ.*] To extract or remove the germ from. See *degerminator.*

After *degerming*, the maize is unhusked, wetted, submitted to a temperature sufficient to rupture the starch cells. *Encyc. Brit.*, XXVI. 383.

deglaciation (dē-glā-shi-ā′shon), *n.* [*de-* + *glaciation.*] The withdrawal of ice from a previously glaciated region. *Dana*, Manual of Geol., p. 969.

deglutible (dē-glō′ti-bl), *a.* [NL. **deglutibilis*, < L. *deglutire*, swallow: see *deglutition.*] Capable of being swallowed.

deglycerinize (dē-glis′ę-rin-īz), *v. t.*; pret. and pp. *deglycerinized*, ppr. *deglycerinizing.* [*deglycerin* + *-ize.*] To separate the glycerin from (a fat or oil) before using the fatty acids for the manufacture of soap. *Sadtler*, Handbook of Indust. Chem., p. 71.

degradand (deg′ra-dand), *n.* [ML. *degradandus*, fut. pass. part. of *degradare*, degrade: see *degrade.*] One who is to be degraded or reduced in rank. *R. W. Dixon*, Hist. Church of Eng., iv. 494. *N. E. D.*

degradation, *n.* **10.** In *organic chem.*, the resolution of the molecule of a compound into other substances of smaller molecular weight. It denotes the systematic elimination of one carbon atom after another from a compound, whereby we pass down a homologous series, step by step, from the more to the less complex.

A method of preparation of aldehydes and the systematic *degradation* of acids.
Nature, March 24, 1904, p. 504.

Degradation of energy, in *thermodynam.*, the transformation of energy from higher, or more available, to lower, or less available, forms. The most important case is that of the degradation of kinetic or potential energy into heat. The general doctrine of the degradation of energy is that the processes of nature are in general such as to convert energy from available to unavailable forms, so that the degraded forms, such as heat, constitute a greater and greater proportion of the total energy of the universe.—**Differential degradation,** in *geol.*, the varying degrees of erosion exhibited by a series of stratified rocks of different degrees of hardness and resistance.

degradator (deg-rā-dā′tor), *n.* [NL., < ML. *degradare*, degrade.] One who degrades; one who formally and with authority deprives of rank. *R. W. Dixon*, Hist. Church of Eng., iv. 494. *N. E. D.*

degrade, *v. t.* **8.** In *thermodynam.*, to convert from a form of greater to one of less availability: said of certain transformations of energy.

degraded, *p. a.* **5.** In *geol.*, worn down; leveled by erosion.—**6.** In *thermodynam.*, reduced to a form less available for further transformation: said of energy which as the result of transformations has been converted into heat.

dégraissant (dā-grā-sän′), *n.* [F., prop. ppr. of *degraisser*, remove the grease from, < *dé-* + *graisse*, grease: see *degrease.*] Sand, or the like, mixed with potters' clay, to prevent it from cracking when fired.

dégras (dā-grä′), *n.* [F., for **degrais*, < *dégraisser*, degrease: see *degrease.*] A thick grease obtained as a by-product from wool, and also in the manufacture of some kinds of leather.

Dégras, which has been referred to in connection with the woolen industry as being obtained from wool grease, is also a by-product of great value in the leather industry, and a great demand for this material for currying purposes has led to the manufacture of it as a special industry. *Sci. Amer. Sup.*, Dec. 6, 1902, p. 22518.

dégras-former (dā-grä′fôr″mėr), *n.* A substance of brown color and resinous consistence, a constituent of tanners' dégras and sod-oil, the presence of which enables the fish-oils used in currying leather and in oil-tanning to form an emulsion with water.

degreasing (dē-grē′sing), *n.* The act or process of removing grease from a greasy object; specifically, the removal of fatty matter from raw sheep's wool by the solvent action of petroleum naphtha. *Sadtler*, Handbook of Indust. Chem., p. 310.

degree, *n.*—**Baumé degree,** a degree of the Baumé scale of specific gravity. See ★*scale.* **Decimal degree.** See ★*decimal.* **Degree of an equation.** See *degree*, 7.—**Degree of a surface,** the order of a surface. See *surface.* **Degree of freedom.** [illegible] (*b*) In *phys. chem.*, the number of [illegible] dynamic system which can be changed independently of each other, without destroying the system by suppressing one of its phases. For every [illegible] existing in the two phases, liquid and solid, and depending for equilibrium on the two conditions, temperature and pressure, has one degree of freedom and only one: any desired temperature may be given to it within certain limits, but the pressure is thereby fixed; and any pressure may be established within certain limits, but the temperature is determined in so doing.—**Degree of saturation.** See ★*saturation.* **Degrees of frost.** See ★*frost.*—**Geothermic degree,** the ratio between depth in the earth and increase of temperature [illegible] one degree. After passing below the outer zone of variable seasonal temperature, the usual ratio, as ascertained by data from deep wells and mine-shafts, is from 55 to 60 feet in depth to 1° F. *Dana*, Manual of Geol., p. 257.—**Lambeth degree,** a degree given by the archbishop of Canterbury. Although he can confer all degrees given by the two universities, the graduates have many privileges not shared by the recipients of his degrees. *Bouvier*, Law Dict. **Mercury-in-glass degree,** a degree of the thermometric scale in which equal relative expansions of mercury in glass, as in the ordinary mercury thermometer, are taken to mark equal differences of temperature. The mercury-in-glass degree does not conform strictly to the degree of the gas-thermometer, because the relative expansion of mercury in glass with change of temperature is not strictly uniform.—**Number of degree,** in *hygrom.*, the difference between the temperature of the air and the dew-point.—**Platinum degree,** a degree of the thermometric scale in which equal changes in the electric resistance of a platinum wire are taken to correspond to equal changes of temperature. The platinum degree, like the mercury-in-glass degree of ordinary thermometers, does not agree precisely with the degree of the gas-thermometer because the change of resistance of platinum with temperature is not strictly uniform.—**Square degree,** the area included between two parallels of latitude one degree apart and two meridians of longitude one degree apart, which intersect them. *Geog. Jour.* (*R. G. S.*), XVIII. 92.

dehair (dē-hâr′), *v. t.* [*de-* + *hair.*] To remove the hair or wool from, as hides or skins. *Modern Amer. Tanning*, p. 37.

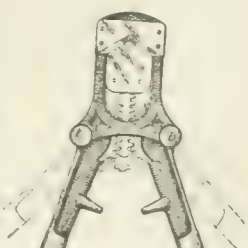
dehalogenize (dē-ha-loj′e-nīz), *v. t.*; pret. and pp. *dehalogenized*, ppr. *dehalogenizing.* [*de-* + *halogen* + *-ize.*] In *chem.*, to deprive of one or more of the halogens chlorin, bromine, iodine, etc. *Jour. Soc. Chem. Industry*, II. 171.

dehematize (dē-hem′a-tīz), *v. t.*; pret. and pp. *dehematized*, ppr. *dehematizing.* [Also *dehæmatize;* < L. *de-*, from, + Gr. *αἷμα*(*τ-*), blood, + *-ize.*] To deprive of blood, either locally, by compression or the use of the Esmarch bandage, or generally, as in the 'salt frog'; render exsanguine. *Med. Record*, March 7, 1903, p. 362.

dehemoglobinize (dē-hem-ō-glō′bi-nīz), *v. t.*; pret. and pp. *dehemoglobinized*, ppr. *dehemoglobinizing.* To remove from the red blood-corpuscles their characteristic coloring matter, the hemoglobin. *Jour. Tropical Med.*, Nov. 2, 1903, p. 337.

dehorn (dē-hôrn′), *v. t.* [*de-* + *horn.*] **1.** To remove the horns from (domestic cattle). Two tools are used in the operation, a saw and a clipper. The saw has a narrow web held in a frame and resembles a butcher's saw; the clipper has a chisel-shaped knife which moves in guides and is operated by a rack and segments controlled by a pivoted handle.
2. To saw off the ends of logs bearing the owner's mark and to put on a new mark. [Kentucky.]

dehorner (dē-hôr′-nėr), *n.* [*dehorn* + *-er*[1].] An instrument for cutting off the horns of cattle.


Dehorner.

Dehumanized virus. See ★*virus.*

dehydracetic (dē-hī-dra-set′ik), *a.* [*de-* + *hydr*(*ogen*) + *acetic.*] Noting an acid, a colorless compound, $CH_3COCH . COCH : C(CH_3)OCO$, prepared by the prolonged boiling of ethyl acetoacetate (acetoacetic ether). It crystallizes in rhombic needles or plates, melts at 108.5–109° C. and boils at 269.9° C.

dehydrocholalic (dē-hī″drō-ko-lal′ik), *a.* [*de-* + *hydro*(*gen*) + *cholalic.*] Noting an organic acid, $C_{24}H_{34}O_5$, obtained on oxidation of cholalic acid.

dehydrogenate (de-hī drō-jen-āt), *v. t.*; pret. and pp. *dehydrogenated*, ppr. *dehydrogenating*. [*de-* + *hydrogen* + *-ate*[2].] Same as *dehydrogenize*.

dehydromorphine (de-hī-drō-môr'fīn), *n.* [*de-* + *hydrogen* + *morphine*.] A colorless compound, $C_{17}H_{18}O_3N_2$, contained in opium and prepared artificially by the oxidation of morphine. It crystallizes with $3H_2O$ and decomposes without melting. Also called *pseudomorphine* and *oxymorphine*.

dehypnotize (dē-hip'nō-tīz), *v. t.*; pret. and pp. *dehypnotized*, ppr. *dehypnotizing*. [*de-* + *hypnotize*.] To awaken from the hypnotic state.

deicidal (dē'i-sī-dal), *a.* [*deicide* + *-al*[1].] Of or pertaining to the slaying of a god. *P. J. Bailey*, Festus. *N. E. D.*

deictic, *a.* 2. Demonstrative.

The augment seems to have been originally a pronominal *deictic* particle. *Encyc. Brit.*, XXXI. 676.

deindividualization (dē-in-di-vid'ū-al-ī-zā'shon), *n.* Destruction of individuality; hence, a social process destructive of individuality and self-dependence, and creative of dependence or pauperism.

There are social causes of *deindividualization* and desocialization. *Giddings*, Inductive Sociol., p. 263.

deindividualize (dē-in-di-vid'ū-al-īz), *v. t.*; pret. and pp. *deindividualized*, ppr. *deindividualizing*. [*de-* + *individualize*.] To destroy individuality.

The degraded are those who are both *deindividualized* and desocialized. They have lost both social instinct and self-respect. *Giddings*, Inductive Sociol., p. 263.

Deiphon (dē'i-fon), *n.* [NL.] An aberrant genus of trilobites, with the two lateral lobes of the entire animal much reduced and modified. The glabellum is globular and the fixed cheeks produced as long curved spines at the base of which are the eyes. The thoracic segments are nine and their pleura are entirely separated from each other; the pygidium is small and bears two pairs of curved spines. It is of Silurian age.

deipotent (dē-ip'ō-tent), *a.* [L. *deus*, god, + *potens*, having power.] Possessing divine power.

But Paul denounced a curse *deipotent*
Against him. *W. C. Wilkinson*, Epic of Paul.

Deister sandstone. See ★*sandstone*.

dejectile (dē-jek'til), *n.* [*deject* + *-ile*.] A missile hurled down upon an enemy.

dejection, *n.* 6. In *geol.*, volcanic debris; a sediment of volcanic origin.

dejector (dē-jek'tor), *n.* A medicinal agent which tends to produce evacuation of the bowels; an aperient.

déjeuner, *n.* 2. A breakfast service, usually consisting of a tray, cups and saucers, tea-pot, sugar-bowl, cream-jug, and slop-basin.

dekarch, dekarchy, *n.* See ★*decarch*, ★*decarchy*.

del[3], *n.* A simplified spelling of *dell*[1].

Del. An abbreviation (*a*) of *Delaware*; (*b*) [*l. c.*] of *delegate*.

delabrated (dē-lā'brā-ted), *p. a.* [**delabrate* (L. *de-* + *labrum*, lip, + *-ate*[1]) + *-ed*[2].] Having the lips or edges removed: applied to volcanic craters of which the walls have been partly destroyed.

delaminate (dē-lam'i-nāt), *v. i.*; pret. and pp. *delaminated*, ppr. *delaminating*. [NL. *delaminare* (pp. *-atus*), < L. *de-* + *lamina*, a thin plate of metal: see *laminate*.] To split into separate layers or plates: used in embryology of the formation of the embryonic layers when one is derived from the other by splitting, and not, as usual, by invagination or cell-migration.

delaminate (dē-lam'i-nāt), *a.* [NL. *delaminatus*, *pp.*] Formed by splitting off from a layer or plate: said of the formation of the endoderm in certain cœlenterate embryos.

deleb (del'eb), *n.* [Ar.; cf. *dolb*, plane-tree.] A variety of the palmyra-palm, *Borassus flabellifer*, distributed from Senegambia through the Sudan and Central Africa to German East Africa and the Zambesi. The seeds are used as food, and from the leaves mats are made. See *palmyra*, 1, and *Borassus*.

delectus (dē-lek'tus), *n.* [L. *delectus*, a selection, < *deligere*, select: see *delectus personæ*.] A graduated selection of passages from Latin or Greek authors, usually with notes and a vocabulary, for translation by school-boys: as, a Latin *delectus*; Valpy's Greek *Delectus*.

delegant (del'ē-gant), *n.* [L. *delegans* (*-ant-*), pp. of *delegare*, assign: see *delegate*, *v.*] In *civil law*, a debtor who, to discharge his debt, assigns to his creditor a debt of a third party due to himself.

delegate, *n.* **Apostolic delegate.** See ★*apostolic*.

delegatee (del-ē-ga-tē'), *n.* [*delegate* + *-ee*[1].] In *civil law*, the assignee of a delegant; one to whom a debtor is assigned in satisfaction of another's debt. See ★*delegant*.

delegator (del'ē-gā-tor), *n.* [LL. *delegator*, < L. *delegare*, delegate.] In *civil law*, same as ★*delegant*.

delestage (de-les-täzh'), *n.* In *French marine law*, the throwing overboard of ballast.

Delézinier's base. See ★*base*[2].

delf[2], *n.* **Brislington delf**, stanniferous faience made at Brislington, near Bristol, England, in the eighteenth century. It is of coarse body and yellowish enamel and is frequently decorated with crudely painted copper-luster designs. **Bristol delf**, stanniferous faience made at Bristol, England, in the eighteenth century, in imitation of Dutch delf, but possessing a body sufficiently hard to resist a steel point.— **Lambeth delf**, tin-enameled pottery produced at Lambeth, London, England, in the seventeenth century, in imitation of the delf ware of Holland. It is of a harder and denser paste than the Dutch product, and the blue color used in the decoration is of a paler tint.— **Liverpool delf**, tin-glazed pottery made at Liverpool, England, during the first half of the eighteenth century, in the manner of Holland delf. The decorations were frequently printed. The body is quite hard and of a pinkish tint.— **Staffordshire delf**, stanniferous enamel produced at several places in Staffordshire, England, in the seventeenth and eighteenth centuries. It was of a coarser body and ruder decoration than other English delf.

Delicate long-sting, an American braconid parasite, *Macrocentrus delicatus*, which destroys the codling-moth. *Saunders*, Insects Injurious to Fruits, p. 132.

delicatessen (del-i-ka-tes'en), *n. pl.* [G., < F. *delicatesse*, < *délicat*, delicate.] Delicacies; delicate or dainty articles of food, implying, in German use, sausages and the like.

delictum (dē-lik'tum), *n.*; pl. *delicta* (-tä). [L.] In *civil* and *Scots law*, see *delict*.

deligate (del'i-gāt), *v. t.*; pret. and pp. *deligated*, ppr. *deligating*. [L. *deligatus*, pp. of *deligare*: see *deligation*.] To tie off; apply a ligature to. *N. E. D.*

delime (dē-līm'), *v. t.*; pret. and pp. *delimed*, ppr. *deliming*. [*de-* + *lime*[1].] To remove lime from, as skins. *Modern Amer. Tanning*, p. 50.

delimit, *v. t.* **Delimiting curve**, a curve which separates two regions of the surface upon which it is drawn.

delimitate (dē-lim'i-tāt), *v. t.*; pret. and pp. *delimitated*, ppr. *delimitating*. To determine and lay down the boundaries of; delimit.

delimitation, *n.* 2. In *bot.*, same as ★*abjunction*.

delimitative (dē-lim'i-tā-tiv), *a.* [*delimitate* + *-ive*.] Having power to delimit: as, a *delimitative* commission has been named.

delineative (dē-lin'ē-ā-tiv), *a.* [*delineate* + *-ive*.] That serves to delineate; of or pertaining to delineation.

When, however, we encounter *delineative* elements or subjects employed in ornamental offices, we may reasonably assume that ideas were associated with them, that they were symbolic.
20th *An. Rep. Bur. Amer. Ethnol.*, 1898–99, p. 65.

delint (dē-lint'), *v. t.* [*de-* + *lint*.] To remove the fiber, or lint, from cotton or similar seeds.

delinter (dē-lin'tèr), *n.* [*delint* + *-er*[1].] A kind of cotton-gin for removing the short fibers, or lint, which remain on the cotton-seed after the first ginning; a linter.

deliquescent, *n.* 5. In *bot.*, becoming liquid at maturity, as certain agarics.

Delirium cordis ('aberration of the heart'), extreme irregularity in the movements of the heart.— **Delirium vesanicum** ('insane aberration'), the delirium of true insanity as distinguished from that associated with other conditions, such as acute fevers.— **Muttering delirium**, a condition, seen in acute fevers, in which the patient is unconscious of his surroundings and is quiet, but constantly mutters to himself.

deliverance, *n.*—**Second deliverance**, in *Eng. law*, a writ by which a plaintiff in replevin, having lost his suit by default or nonsuit, could have the same distress again delivered to him upon giving the same security as before.

delivery, *n.* 11. In a cotton-mill, the quantity of sliver delivered from a machine.— **Express delivery**, immediate and special delivery of mailed letters or parcels.— **Free delivery**, in *postal service*, the delivery of mail-matter, by carriers, within a town or city, or within a limited distance from a substation.— **General delivery**, (*b*) the department in a post-office where letters are kept (by direction of the senders) until called for.— **Rural free delivery**, delivery of mail-matter, by wagon, over long routes in rural districts: it includes the delivery and collection of letters and packages, the sale of stamps, the registry of letters, and the giving of receipts for money-orders.— **Rural free-delivery route**, the official route followed by a rural carrier. It is usually about 25 miles long and reaches about one hundred farms and isolated dwellings, and is supposed to be traversed by the carrier in one continuous trip in one day.— **Special delivery**, in *postal service*, the delivery, by special carrier or messenger, of any letter to which the sender has affixed an extra stamp, called a *special-delivery stamp*.

delivery-box (dē-liv'èr-i-boks), *n.* A box or chamber into which a liquid is thrown by pumps and from which it is delivered to any desired point.

delivery-pipe (dē-liv'èr-i-pīp), *n.* The pipe through which liquids pass away, or are ejected, from a pump; a discharge-pipe.

dellenite (del'en-īt), *n.* [*Dellen*, in Sweden, + *-ite*[2].] In *petrog.*, a name proposed by Brögger (1896) for rocks intermediate in composition between dacite and rhyolite. Dellenite is a porphyritic or non-porphyritic aphanitic rock, characterized by nearly equal amounts of potash feldspar and lime-soda feldspar, with quartz and subordinate amounts of other minerals.

Delolepis (dē-lol'e-pis), *n.* [NL., < Gr. δῆλος, visible, + λεπίς, scale.] A genus of fishes of the family *Cryptacanthodidæ*, or wrymouths, found in Alaskan waters.

delomorphic (del-ō-môr'fik), *a.* [Gr. δῆλος, visible, + μορφή, form, + *-ic*.] Of appreciable size: noting those cells of the stomach-glands which supposedly secrete the hydrochloric acid. Also called *parietal* or *oxyntic cells*. *W. D. Halliburton*, Chemical Physiol. and Pathol., p. 633.

delomorphous (del-ō-môr'fus), *a.* [Gr. δῆλος, visible, + μορφή, form, + *-ous*.] Same as ★*delomorphic*.

Delphin blue. See ★*blue*, *n.*

Delsartian (del-sär'ti-an), *a.* Of or pertaining to François Delsarte (1811–1871), a French musician, or to a method of developing bodily grace and strength founded by him.

delt, *pp.* A simplified spelling of *dealt*.

Delta connection, moth, purpurin. See ★*polyphase*, *deltoid moth*, ★*purpurin*.

deltal (del'tal), *a.* [*delta* + *-al*[1].] Of or pertaining to a delta; of the nature of a delta.

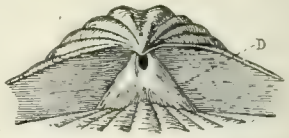
delta-plain (del'tä-plān), *n.* The nearly level lowland portion of a delta, above water. *R. D. Salisbury*, Geol. Surv. of New Jersey, 1892, p. 101.

delta-plateau (del'tä-pla-tō'), *n.* A sand-plain; a delta formed at the front of a regional glacier.

For such topographic forms Professor Davis long since proposed the name of delta-plain or *delta-plateau*, instead of sand-plain, a designation which has also been employed by many others, being both suggestive and descriptive. *Amer. Geol.*, Sept., 1903, p. 163.

delta-ray (del'tä-rā), *n.* See ★*ray*[1].

deltarium (del-tā'ri-um), *n.*; pl. *deltaria* (-ä). [NL., < Gr. δέλτα, the letter Δ, + *-arium*.] In the telotrematous *Brachiopoda*, the deltidial plates, taken as a single feature; the covering of the delthyrium in these organisms: contrasted with *deltidium* and *pseudodeltidium* (which see).



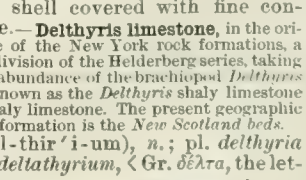
A part of the hinge of the brachiopod *Spirifer*, showing the deltarium, D. (After Hall and Clarke.)

Deltentosteus (del-ten-tos'tē-us), *n.* [NL., < Gr. δέλτα, delta, + ἐντος, within, + ὀστέον, bone.] A genus of small gobies found in the Mediterranean. *D. quadrimaculatus* is the typical species.

delthyrial (del-thir'i-al), *a.* [*delthyrium* + *-al*[1].] Of or pertaining to the delthyrium.

Delthyris (del'thi-ris), *n.* [NL. for **Deltathyris* (referring to the pedicle aperture), < Gr. δέλτα, the letter Δ, + θύρα, a door.] A subgenus of Paleozoic brachiopods, having the general characters of the genus *Spirifer*, but with the surface of the shell covered with fine concentric lamellæ.— **Delthyris limestone**, in the original nomenclature of the New York rock formations, a term applied to a division of the Helderberg series, taking its name from the abundance of the brachiopod *Delthyris* or *Spirifer*; also known as the *Delthyris* shaly limestone and the Catskill shaly limestone. The present geographic designation of the formation is the *New Scotland beds*.

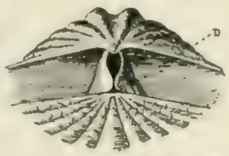
delthyrium (del-thir'i-um), *n.*; pl. *delthyria* (-ä). [NL. for **deltathyrium*, < Gr. δέλτα, the letter Δ, + θύριον, a little door.] In the *Brachiopoda*, the triangular pedicle-opening in the cardinal area of the ventral valve, extending from the beak to the hinge-line. It may remain open



A part of the hinge of the brachiopod *Spirifer*, showing the delthyrium, Δ. (After Hall and Clarke.)

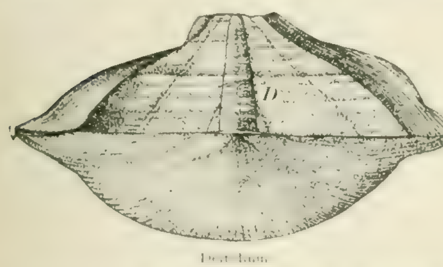
through life or become closed in early life by the growth of the deltidium or, in secondary stages when the deltidium is absent, by the development of the deltidial plates. See ★*deltidium*, ★*deltidial plates*, and ★*delthyrium*.

deltidial (del-tid′i-al), *a.* [*deltidium* + *-al*1.] Of or relating to the deltidium. **Deltidial plates**, in the *Brachiopoda*, the two symmetrical plates which, in advanced forms (*Telotremata*), cover the delthyrial opening or delthyrium. These plates are a secondary structure, appearing late in the phylogeny of the class. They grow from the sides of the delthyrium and sometimes become coalesced along the median line at which they meet, forming a structure similar in appearance and function to the deltidium, but very different therefrom in origin, and known as the *pseudodeltidium*.—**Deltidial tube**, in certain extinct *Brachiopoda*, an incomplete tube or syrinx formed on the inner surface of the deltidium.



A part of the hinge of the brachiopod *Spirifer*, showing the deltidial plates, *D*. (After Hall and Clarke.)

deltidium (del-tid′i-um), *n.*; pl. *deltidia* (-ä). [NL., < Gr. δέλτα, the letter Δ, + dim. *-ίδιον*.]



Deltidium.

A brachiopod (*Derbya* [illegible]), showing the deltidium, D. (After Hall and Clarke.)

In the *Brachiopoda*, the convex or concave single plate which covers the delthyrium or pedicle-passage. In the embryo this appears as a single plate on the dorsal side before the development of the ventral valve, with which it finally becomes fused (see *prodeltidium*), and characterizes certain of the *Protremata*; but in all advanced forms (*Telotremata*) the deltidium is absent, being replaced by the deltidial plates.

Deltistes (del-tis′tēz), *n.* [NL., < Gr. δέλτα, delta, + term. *-ιστης*.] A genus of suckers of the family *Catostomidæ*, found in the lakes of southeastern Oregon, characterized by very strong jaws and triangular teeth in the pharynx. *D. luxatus* is the typical species.

deltoid. I. *a.*—**Deltoid dodecahedron.** See ★*dodecahedron*.—**Deltoid eminence**, that part of the humerus where the deltoid muscle is attached.—**Deltoid plates**, in the blastoid *Echinodermata* or *Blastoidea*, the triangular interradial plates lying at the summit of the calyx.

II. *n.* **2.** In *zoöl.*, a deltoid plate.—**3.** In *math.*, a symmetrical quadrilateral with a diagonal as axis.

Delusion of grandeur, insane belief in one's own importance, wealth, social rank, etc.—**Delusion of negation**, insane belief that some part of the body is lacking.—**Delusion of persecution**, insane belief that one is being pursued, watched, or slandered by secret enemies.

Delusional insanity. See ★*insanity*.

Dem. An abbreviation (*a*) of *Democrat*; (*b*) of *Democratic*.

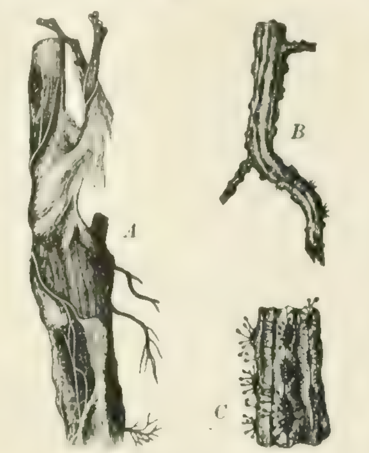
demagnetizer (dē-mag′net-ī-zėr), *n.* One who or that which removes magnetic polarity, or which causes something to cease to exert magnetic attraction; specifically, a device for removing any polarity or tendency to exert magnetic attraction from articles which have touched or have been in the sphere of action of an electromagnet, as in chucks or clutches or lifting-apparatus where the grip has been by magnetic action. Demagnetization is usually effected by frequently reversing the polarity of the demagnetizing mass, while the object to be demagnetized is gradually withdrawn from the influence of that mass; or the object, if small, may be rapidly revolved in the radius of action of a mass of fixed polarity, and then gradually withdrawn while so revolving.

demand, *n.*—**Reciprocal demand**, the external demand for the products of one economic group induced by the demand of that group for the products of non-competing groups. Thus in international trade, through the tendency of imports to balance exports, one nation's demand for the products of other nations induces an equal reciprocal demand on the part of those nations for the products of the first nation. It was contended by Cairnes that this principle determines the relative valuation of products of groups within a nation when there is no free movement of labor and capital from group to group.—**Stale demand** or **claim**, in *law*, a claim or demand that has been allowed to lie dormant so long that, although not barred by the statute of limitations, it is not looked upon with favor by the law.

demareteion (dem″a-rē-tī′on), *n.* See *damareteion*.

Dematiaceæ (dem-a-ti-a′sē-ē), *n. pl.* [NL.] Same as *Dematieæ*; the form now in use.

Dematophora (dem-a-tof′o-rä), *n.* [NL. (Hartig, 1883), < Gr. δεμα(τ-), a band, + *-φορος*, <



Dematophora necatrix.

A, a vine stock affected by the fungus after a prolonged stay in a moist chamber; *B*, a vine root with rows of black sclerotia of the fungus exposed, and bearing bristle-like conidiophores; *C*, portion of *B* after the formation of conidiophores enlarged. (From Lubeuf and Smith's "Diseases of Plants," after R. Hartig.)

φέρειν, bear.] A genus of fungi of doubtful relationship occurring commonly as sterile strands or layers of mycelium parasitic on the roots of plants. It sometimes forms tuberous black sclerotia from which bristle-like conidiophores may arise bearing ovoid hyaline conidia. Viola has also described what he regards as a perithecial condition of the fungus. *D. necatrix* is the best-known form. It attacks the roots of the grape and various fruit- and forest-trees. See ★*aubernage* and ★*root-rot*.

demedication (dē-med-i-kā′shon), *n.* [*de-* + *medication*.] See ★*cataphoretic demedication*.

démêlé (dā-mā-lā′), *n.* [F., < *démêler*, untangle, separate, discuss, < *dé-* + *mêler*, mix: see *mell*, *mêlée*.] Contest; contention; quarrel; squabble: as, an unfortunate *démêlé* with the cook; a *démêlé* with Russia.

demene, *n.* A simplified spelling of *demesne*.

dementholize (dē-men′thōl-īz), *v. t.*; pret. and pp. *dementholized*, ppr. *dementholizing*. [*de-* + *menthol* + *-ize*.] To deprive of menthol.—**Dementholized oil**, oil of peppermint from which the menthol has been removed.

démenti (dā-män-tē′), *n.* [F., < *démentir*, deny, < *dé-* + *mentir*, lie.] The giving of the lie (officially); denial.

Dementia præcox, a form of insanity occurring at puberty.—**Secondary dementia**, a form of chronic dementia which follows repeated acute attacks.

Demerara crystals. See ★*crystal*.

demeritorious (dē-mer-i-tō′ri-us), *a.* [*de-* + *meritorious* (with ref. to *demerit*).] Blameworthy as well as destitute of merit: the opposite of *meritorious*: as, *demeritorious* conduct.

> Let us start from a particular case. I sign what I know to be a malicious libel. I am, then, a malevolent liar. My conduct proves that I am neither benevolent nor truthful. I deserve blame, and my conduct is *de-meritorious*.
> *Leslie Stephen*, Science of Ethics, p. 279.

demersal (dē-mėr′sal), *a.* [Irreg. L. *demersus*, pp. of *demergere*, immerse, + *-al*1.] Having so great a specific gravity as to sink in water: said of fish-eggs.

> The eggs may be pelagic, *i. e.* so light as to float when laid, as in the Cod, Haddock, Turbot, Sole, &c., or *demersal*, *i. e.* so heavy as to sink to the bottom, as in the Herring.
> *Parker and Haswell*, Zoology, II. 225.

demi-bateau (dem″i-ba-tō′), *n.* One of the two small boats which when united form a pontoon-boat. Also called *demi-pontoon*.

demibranch (dem′i-brangk), *n.* [*demi-* + Gr. βράγχιον, gill.] In lamellibranchiates, one of the two gills on either side. *Philos. Trans. Roy. Soc.* (London), 1903, ser. B, p. 151.

demi-brigade (dem′i-bri-gād″), *n.* A small brigade of the Napoleonic era, consisting of three battalions.

demi-column (dem-i-kol′um), *n.* Same as *engaged column*: used especially when about half the shaft is engaged in the wall.

demicontrafagotto (dem-i-kon″tra-fa-got′tō), *n.* [It.] A form of bassoon intermediate in size and pitch between the ordinary bassoon and the double bassoon.

demidolmen (dem-i-dol′men), *n.* A megalithic table-stone resting with one end on one or two upright stones, while the other end rests on the ground.

demi-gross (dem′i-grōs), *n.* An English coin of the time of Edward III., of the value of two pence.

demi-kindred (dem′i-kin″dred), *n.* Persons related by either the paternal or the maternal blood.

demi-landau (dem′i-lan″dâ), *n.* A half-landau; a landaulet.

demilegato (dem″i-lā-gä′tō), *a.* [It.: see *demi-* and *legato*.] In *music*, noting a style of performance in which the tones in a phrase are slightly separated by a silence, but not enough to become fully detached. It is indicated roughly by staccato marks and a sweeping curve. See cut (*a*) under *staccato*.

demilitarize (dē-mil′i-ta-rīz), *v. t.*; pret. and pp. *demilitarized*, ppr. *demilitarizing*. [*de-* + *militar-y* + *-ize*.] To convert from a military to a civil form of government; place under civil jurisdiction. *N. E. D.*

demimondaine (dem-i-mon-dān′), *n.* [F., < *demimonde*, demi-monde.] A member of the demi-monde. *N. and Q.*, May 27, 1905, p. 418.

demineralization (dē-min″e-ral-i-zā′shon), *n.* [*demineralize* + *-ation*.] Loss of mineral constituents: noting a process which occurs in softening of the bones (osteomalacia). *Med. Record*, June 27, 1903, p. 1047.

demi-pique† (dem-i-pēk′), *n.* A saddle with a peak about half as high as that of the military saddle.

> His rider occupied his *demipique*, or war-saddle, with an air that showed it was his familiar seat.
> *Scott*, Legend of Montrose, ii.

demi-plate (dem′i-plāt), *n.* In *Echinoidea*, one of the ambulacral plates which are cut off from the median suture by the union of adjoining plates behind. *Lankester*, Treatise on Zool., III. 288.

demi-pontoon (dem″i-pon-tön′), *n.* Same as ★*demi-bateau*.

demi-season (dem-i-sē′zn), *a.* Intermediate, as in style, etc., between two seasons: as, a *demi-season* costume. *N. E. D.*

demi-semi (dem-i-sem′i), *a.* Half of a half: applied contemptuously to a person (or thing) of no particular account or consequence: as, a *demi-semi* statesman. *N. E. D.*

demisemiquaver, *n.*—**Half demisemiquaver.** Same as *hemidemisemiquaver*.

demit (dē-mit′), *n.* An act of demission or transfer of membership, as from one masonic lodge to another; also, the letter which officially certifies to such a transfer.

demi-tasse (dem-i-täs′), *n.* [F., half-cup.] A small cup, as of coffee served after dinner.

democentric (dem-ō-sen′trik), *a.* Characterized by the idea that the people to which an individual belongs forms the center of the universe.

> The heliocentric system was expanded out of an antecedent geocentric system, itself the offspring of a *democentric* system, which sprang from an earlier ethnocentric system born of the primeval egocentric cosmos of inchoate thinking.
> *W. J. McGee*, Rep. Bur. Amer. Ethnol., 1897–98, p. 831.

democratic, *a.*—**Social Democratic Federation.** See ★*federation*.

demodectic (dem-ō-dek′tik), *a.* [Erroneously formed from *Demodex*.] Of or pertaining to *Demodex*.—**Demodectic acariasis**, a slowly spreading, not highly contagious infection of the hair-follicles with the hair-follicle mite (*Demodex folliculorum*). The best known and most dangerous variety of the disease is that which occurs in dogs. The bovine variety causes considerable injury to the hide, lowering its market value. In man demodectic acariasis is rather common, but rarely of importance. Other varieties occur in horses, goats, and sheep. Also called *follicular mange*.

demodicid (dem-ō-dis′id), *n.* and *a.* **I.** *n.* A member of the family *Demodicidæ*.

II. *a.* Having the characteristics of or belonging to the family *Demodicidæ*.

demogenic (dem-ō-jen′ik), *a.* [Gr. δῆμος, the people, + -γενής, -producing.] Creative of a people organized on a civic basis, as distinguished from a tribe or group of tribes organized on a basis of kinship. *Giddings*, Prin. of Sociol., p. 74. **Demogenic sociology**, that part of social science which is concerned with the social life of peoples which have outgrown the tribal state and have developed a civic organization.

demographically (dem-ō-graf′i-kal-i), *adv.* As regards vital and social conditions; with reference to demographic conditions.

> Buenos-Ayres is a town which is altering *demographically* in two very sensible ways; there is a rapidly increasing population, together with improving sanitary and medi-

cal conditions, indicated by a falling death-rate and a decrease in the percentage of still born children.
Biometrika, Jan., 1904, p. 100.

demoid (de′moid), *a.* [Gr. δημοειδής, < δῆμος, the people (see *demos*), + εἶδος, form.] Characteristic of a region or period, or of a particular geological formation: applied to fossils that are so common as to be typical.

demolitionary (dem-ō-lish′ọn-ā-ri), *a.* [*demolition* + *-ary.*] Tending to demolish or ruin; destructive.

demological (dem-ō-loj′i-kạl), *a.* Of or pertaining to demology or demography. *Philos. Trans. Roy. Soc.* (London), 1895, ser. B, 186. 783.

demology (dē-mol′ō-ji), *n.* [Gr. δῆμος, the people, + -λογία, < λέγειν, speak.] Demography; originally, vital statistics, now expanded in meaning to denote the statistical study of population in extent, density, and composition. *Philos. Trans. Roy. Soc.* (London), 1895, ser. B, 186. 783.

demon, *n.* **5.** In *anthrop.*, a supernatural protector or helper. See *manito* and ★*nyarong.* — **Maxwell's demon,** an imaginary intelligent agent assumed by Maxwell in a discussion of the second law of thermodynamics. The function of the demon was to open and close a gate or valve in a partition separating the two halves of a reservoir of gas in such a manner as to allow only particles of high velocity to pass through in one direction and those of low velocity in the other. The result would be that, without the expenditure of work, the temperature of the gas would be raised on one side and lowered on the other, in contradiction of the second law of thermodynamics.

demonism, *n.* **2.** Specifically, in *anthrop.*, the belief in the existence of an intimate relation between a person and one or more supernatural beings who become his protectors and helpers. This form of belief includes the manito of the Algonkin, the nyarong of the Sea Dayak, and similar beliefs of many other tribes and peoples. Also called *manitoism.* Also *daimonism.*

The advantages of totemism are many, but most of them are social and benefit the special groups or the community at large. The hold that the manitu has on the individual consists in its personal relation: the man feels that he himself is helped, and I suspect this is the main reason why it supplants totemism. I believe Mr. Lang some years ago suggested the term manituism for this cult. If this name be not accepted I venture to propose the revival of the word 'daimon' (δαίμων) to include the manitu, nyarong, and similar spirit helpers, and '*daimonism*' as the name of the cult.
Rep. Brit. Assn. Advancement of Sci., 1902, p. 743.

demonolatrous (dē-mọn-ol′ạ-trus), *a.* Pertaining to or given over to demonolatry; devil-worshiping: as, *demonolatrous* tribes.

demonomaniac (dē″mon-ō-mā′ni-ak), *n.* An insane person believed by others, or by himself, to be possessed by a devil.

For the *demonomaniacs* of a hundred years ago — belated representatives of mediæval mysticism, who typify the ancient form of paranoia — are now substituted the modern paranoiacs.
C. Lombroso (trans.), Man of Genius, p. 173.

demonomy, *n.* **3.** The system of knowledge that pertains to human activities.

I use the term sociology to distinguish one of five coordinate sciences, esthetology, technology, sociology, philology, and sophiology; and I call all of these sciences *demonomy.*
J. W. Powell, Rep. Bur. Amer. Ethnol., 1898–99, p. lx.

demonophobia (dē″mọn-ō-fō′bi-ạ), *n.* [NL., < Gr. δαίμων demon, + -φοβία, fear.] Fear of demons; demonomania.

demonstrant (dē-mon′strạnt), *n.* One who takes part in a public demonstration, as of approval, hostility, or the like.

demonstration, *n.* **6.** In *Rom. law*, the formal statement of the plaintiff's claim in presenting his case to the court: somewhat analogous to the 'declaration' of the common law. — **Abstractional demonstration.** See ★*abstractional.* — **Demonstration by continuous identification,** a demonstration which assumes that phenomena are to be identified by those features which change indefinitely little in indefinitely short intervals of time. — **Demonstration by extreme cases,** a demonstration which proceeds by imagining limiting cases of the application of a principle assumed as general, as, for example, when the properties of a function are demonstrated by considering the cases in which one and the other variable becomes zero and becomes infinite. — **Demonstration by limits.** See *method of limits.* — **Demorganian demonstration,** a demonstration which virtually assumes that a collection to which it relates is finite. — **Dilemmatic demonstration,** a demonstration by enumerating all possible cases and by demonstrating the proposition for each possible case separately. — **Fermatian demonstration,** a mode of demonstration applicable to a collection of objects, say the Ns, provided it has the following character: Let the νs be certain objects among the Ns, and let 'exhaustive step' be the designation of a definite mode of transition from one N to other Ns. Then, if the Ns be such that any N whatever can be reached by a finite number of exhaustive steps starting from some ν, a Fermatian demonstration will be applicable, and will proceed upon this assumption. Thus, if Q be any quality possessed by every ν and also possessed by every N which can be reached by a single exhaustive step from another N that has the quality Q, the statement of this will be a Fermatian demonstration that every N has the quality Q. — **Geminational demonstration,** a demonstration by imagining a moving object suddenly to separate as if it consisted of two or more coincident objects which at a certain moment begin to move along separate paths so as to generate wholly distinct parts of a new place. — **Generalizational demonstration,** a demonstration made by demonstrating a proposition which includes the proposition to be proved as a particular case. — **Projectional demonstration,** a demonstration which passes from imagining points or lines to imagining lines or surfaces through those points generated by the rectilineal motion of the former through a point; or which imagines the section of lines or surfaces by a plane, so as to give points or lines. — **Pullational demonstration,** a demonstration which supposes an object suddenly to begin to occupy a place of higher dimensionality, as when a particle occupying a mathematical point suddenly begins to occupy a continuously expanding spherical surface.

demonstrational (dem-ọn-strā′shọn-ạl), *a.* Of or pertaining to demonstration.

demonurgy (dē′mọn-ėr-ji), *n.* [Gr. δαίμων, demon, + ἔργον, work.] The practice of magic with the help of the devil or of demons.

demonymic (dem-o-nim′ik), *a.* and *n.* [Gr. δῆμος, the people, + ὄνυμα, ὄνομα, name.] **I.** *a.* Bearing a name derived from the deme, or township, to which one (who was an inhabitant of ancient Attica) belonged.

II. *n.* The name itself.

demophil (dem′ō-fil), *n.* [Gr. δῆμος, the people, + φίλος, loving.] A friend of the people. *N. E. D.*

demophilism (dē-mof′i-lizm), *n.* [*demophil* + *-ism.*] Love of the people; regard for the masses.

On the "high mountain" where you [Gladstone] stand there is a demon, not of demagoguism, but of *demophilism*, that is tempting you sorely.
T. W. Reid, Life of Lord Houghton, II. 253.

demorphism (dē-môr′fizm), *n.* [*de-* + *morphism.*] In *petrog.*, the decomposition, disintegration, or weathering of rocks, as contrasted with their metamorphism or transformation into other rocks. *Von Lasaulx.*

demos, *n.* **3.** In *sociol.*, a people which has outgrown the tribal system and is organized on the basis of neighborhood and varied modes of coöperation instead of on the basis of blood-kinship; a social body which, since blood-relationships are no longer important, includes individuals of various lineages or nationalities. *Giddings*, Prin. of Sociol., p. 257.

Demospongiæ, *n. pl.* **2.** A class of *Porifera* consisting of the orders *Carnosa*, *Tetractinellida*, *Halichondrina*, *Hadromerina*, *Dictyoceratina*, *Dendroceratina*, and the *Myxospongida.* It is characterized by the rhagon type of canal system, and is the most widely spread group of sponges of the present day. It includes the most highly organized of the sponges.

demot (dē′mot), *n.* [Gr. δημότης, < δῆμος, the people.] A member of an old Attic deme, or hundred. *Grote.*

demote (dē-mōt′), *v. t.*; pret. and pp. *demoted*, ppr. *demoting.* [*de-* + (*pro*)*mote.*] To reduce to a lower grade or class: opposed to *promote:* as, to *demote* a boy for falling behind in his studies.

demotic, *a.* **2.** Pertaining to a people developed beyond the tribal stage and including individuals of various kindreds or nationalities. *Giddings*, Prin. of Sociol., p. 96. — **3.** Social.

It is convenient to denote the primary activities comprised in the domain of esthetology as pleasures, since they are largely physiologic in character, though, like other activities, chiefly *demotic* (or collective) in their manifestations; and the activities may be classed as ambrosial pleasures, decoration, athletic pleasures or sports, games, and fine arts.
J. W. Powell, Rep. Bur. Amer. Ethnol., 1898–99, p. xii.

Demotic composition, the combination of various elements of age, sex, nationality, and race in a social population or people; a demos. The intermingling of elements unlike in organic constitution, in age, and in sex, and of elements bred of different parent stocks and having therefore unlike qualities and habits, may be called the *demotic composition.*

Because genetic and congregate aggregation must develop together a population always has a *demotic* composition. *Giddings*, Prin. of Sociol., p. 96.

Demotic society, a society which has outgrown the tribal stage and which includes individuals of any lineage or kindred. *Giddings*, Elem. of Sociol., p. 190.

demotics (dē-mot′iks), *n.* The scientific study of the common people; sociology.

demotion (dē-mō′shọn), *n.* (*de-* + (*pro*)*motion.*] Reduction in rank or relative position in any series or class: opposed to *promotion.*

This regimentation [of the members of an Indian family or tribe] is complicated by various factors, such as adoption, and (especially) what may be called promotion and *demotion*, i. e., advancement in "age" (rank) by common consent in recognition of prowess, etc., with correlative reduction in "age" as the penalty for cowardice, etc., so that the actual age relations may be completely lost.
Smithsonian Rep., 1901, p. 75.

demotist (dē-mot′ist), *n.* [*demot(ic)* + *-ist.*] A student of the ancient Egyptian form of writing known as *demotic* (which see).

Though demotic has not yet received serious attention at Berlin, the influence of that great school has made itself felt among *demotists*, especially in Switzerland, Germany, America, and England. *Encyc. Brit.*, XXVII. 726.

demurrant (de-mėr′ạnt), *n.* [*demur* + *-ant*[1].] In *law*, a party to an action who puts in a demurrer.

demurrer-book (dē-mėr′ėr-bůk), *n.* A transcript containing a copy of all the pleadings in an action by which an issue of law, rather than of fact, has been joined.

demy, *n.* **5.** The gold half-lion of 20 grains of Robert II. of Scotland, the lion itself weighing 40, or more usually 38, grains.

denar (de-när′), *n.* [G., < L. *denarius*: see *denarius.*] A money of account of Breslau: one pound equals 288 denars.

denaturalization (dē-nat ṳ-rạl-i-zā′shọn), *n.* [*denaturalize* + *-ation.*] **1.** Deprivation of the status and rights of a citizen or subject; loss of citizenship. — **2.** Same as ★*denaturization.*

denaturalize, *v. t.* **4.** Same as ★*denaturize.*

The manufacture of *denaturalized* alcohol as a substitute for petroleum spirit. *Encyc. Brit.*, XXXI. 13.

denaturant (dē-nā′tṳ-rạnt), *n.* [*denature* + *-ant.*] A substance added to alcohol or other material in order to unfit it for use in a particular way. See ★*denaturization.*

denaturate (dē-nā′tṳ-rāt), *v. t.*; pret. and pp. *denaturated*, ppr. *denaturating.* [NL. **denaturare*: see ★*denature.*] Same as ★*denaturize.* *G. Lunge*, Sulphuric Acid, II. 14.

denaturation (dē-nā-tṳ-rā′shọn), *n.* [F. *dénaturation*; as *denaturate* + *-ion.*] Same as ★*denaturization.*

denature (dē-nā′tūr), *v. t.*; pret. and pp. *denatured*, ppr. *denaturing.* [F. *dénaturer*, < NL. **denaturare*; as *de-* + *nature.*] Same as ★*denaturize.*

denaturization (dē-nā″tūr-i-zā′shọn), *n.* [*denaturize* + *-ation.*] **1.** The act or process of denaturizing (as salt, in Germany, or seed-oils, in Spain); specifically, the addition to alcohol of something which renders it unfit for use as a beverage (thus exempting it, under special legislation, as in England, France, Germany, and the United States, from taxation), so as to permit its economical use as a fuel or in the manufacture of varnishes, chemicals, etc. Wood-spirit, naphtha, and Dippel's animal oil are among the materials most employed for the denaturization of alcohol, but others are used.

2. A term introduced by Neumeister to designate a change effected in the physical or chemical properties of the albumins whereby they lose their individual characteristics and, if coagulated, can no longer be dissolved in their ordinary solvents. Denaturization can be brought about by heat, acids and alkalies, the salts of the heavy metals, etc.

denaturize (dē-nā′tṳ-rīz), *v. t.*; pret. and pp. *denaturized*, ppr. *denaturizing.* [*de-* + *nature* + *-ize.*] To deprive (something) of its peculiar nature; specifically, to treat (alcohol or other material) so as to render it unfit for use in one way while leaving it capable of being used in another. See ★*denaturization.* *Trans. Amer. Inst. Elect. Engin.*, 1898, p. 139.

Denbighshire grits. See ★*grit*[2].

dendo (den′dō), *n.* [Native name in Angola.] An evergreen tree of the ebony family, *Diospyros Dendo*, native to western tropical Africa. It yields a very black hard wood known commercially as *black ebony* or *Niger ebony.*

dendra, *n.* Plural of ★*dendron.*

dendraxon (den-drak′son), *n.* [Gr. δένδρον, tree, + ἄξων, axis.] A neuron, or nerve-cell, the axis-cylinder process of which branches off immediately into dendrites. Also spelled *dendraxone.*

dendrite, *n.* **3.** In *neurol.*, one of the protoplasmic processes of a nerve-cell: opposed to ★*neurite*, the axis-cylinder. See cut at ★*neuron.*

dendritic, *a.* **3.** In *phys. geog.*, branching irregularly, in the form of a tree: as, *dendritic* drainage, streams, valleys.

The student should study also the well-developed *dendritic* drainage in Lebanon valley at the bottom of the map. *I. C. Russell*, Rivers of North America, p. 204.

Dendritic cancer. See ★*cancer.*

dendrobe (den'drōb), *n.* [NL. *dendrobium.*] A dendrobium. *N. E. D.*

Dendrobium, *n.* 3. [*l. c.*] A plant of the genus *Dendrobium.*

Dendrobranchiata (den″drō-brang-ki-a'tä), *n. pl.* [NL.: see ★*dendrobranchiate.*] A division of macrurous decapod crustaceans in which the branchial plumes are divided in an arborescent manner. It includes the *Penæidæ* and the *Sergestidæ.* Contrasted with *Phyllobranchiata* and *Trichobranchiata.* *Spence Bate.*

dendrobranchiate (den-drō-brang'ki-āt), *a.* and *n.* [NL. *dendrobranchiatus,* < Gr. δένδρον, tree, + βράγχια, gills: see *branchiate.*] I. *a.* Having arborescent gills; of, or pertaining to, or resembling, the *Dendrobranchiata.*

II. *n.* One of the *Dendrobranchiata.*

Dendroceratina (den″drō-ser-ạ-tī'nä), *n. pl.* [NL., < Gr. δένδρον, tree, + κέρας (κερατ-), horn, + *-ina*[2].] One of the two orders of ceratose sponges (the other being *Dictyoceratina*) having the spongin fibers dendritic, arising from a basal plate of spongin, and not anastomosing. It includes the family *Aplysillidæ.*

dendroceratine (den-drō-ser'ạ-tin), *a.* Resembling or pertaining to the *Dendroceratina.*

dendrochemical (den-drō-kem'i-kạl), *a.* [Gr. δένδρον + E. *chemical.*] Relating to chemistry as applied to the study of trees for industrial purposes: as, the *dendrochemical* laboratory of the Bureau of Forestry of the United States Department of Agriculture.

dendrodic (den-drō'dik), *a.* [Gr. δενδρώδης, same as δενδροειδής, tree-like (see *dendroid*), + *-ic.*] 1. Same as *dendrodont.*—2. Tree-like: said of ramifying structures seen in the sections of certain organs.

Dendroidea (den-drō-id'ē-ä), *n. pl.* [NL.: see *dendroid.*] A suborder of the graptolites characterized by tree-like mode of growth and differentiation of the zoöids and thecæ in budding, nourishing, and generative individuals. They extend from the Upper Cambrian into the Middle Devonian. Their most widely known genera are *Dictyonema* and *Dendrograptus.*

dendrolatry (den-drol'ạ-tri), *n.* [Gr. δένδρον, tree, + λατρεία, worship.] Tree-worship. *Jour. Amer. Folk-lore,* April–June, 1903, p. 132.

dendrolene (den'drō-lēn), *n.* [Gr. δένδρον, tree, + *-l-* + *-ene.*] A trade-name of a viscid petroleum product used to protect the bark of trees against insects.

dendron (den'drọn), *n.*; pl. *dendra* (-drä). [NL., < Gr. δένδρον, tree.] Same as ★*dendrite,* 3.

dendrophil (den'drō-fil), *a.* and *n.* I. *a.* 1. Tree-loving.—2. Dendrophilous.

II. *n.* A lover of trees.

dendrophilous (den-drof'i-lus), *a.* [Gr. δένδρον, tree, + φιλεῖν, love.] Tree-loving; pertaining to or characterized by an arboreal mode of life.

dendropsychosis (den″drop-si-kō'sis), *n.* [NL., < Gr. δένδρον, tree, + ψύχωσις, animation: see *psychosis.*] A supposed instinctive interest in trees, or impulse to climb trees: regarded as possibly a psychical vestige of prehuman life under arboreal conditions.

The significant fact is that most of both the childish animisms and also of these specialised *dendropsychoses* fall away or end completely at puberty.
G. S. Hall, Adolescence, II. 217.

Dendropupa (den-drō-pū'pä), *n.* [NL., < Gr. δένδρον, tree, + NL. *Pupa,* a genus of mollusks.] A genus of Carboniferous land-shells resembling *Pupa* but having no teeth in the aperture.

Dendrotrophe (den-drot'rō-fē), *n.* [NL. (Miquel, 1855), < Gr. δένδρον, tree, + τροφή, nourishment.] A genus of dicotyledonous plants, of the family *Santalaceæ,* often parasitic on trees. See *Henslowia.*

denegatory (de-neg'ạ-to-ri), *a.* [*denegate* + *-ory.*] Involving or implying a contradiction; contradictory: as, a *denegatory* declaration. *Bentham.*

denga (den'gä), *n.* [Russ. *deniga.*] A Russian copper coin of the value of half a copeck.

denier[2], *n.* 2. A unit of weight in the French system, in use before 1812, equal to 19⅞ troy grains.—3. A unit of weight for silk yarns, equal to about 8½ troy grains.

denier[2] (de-nēr'), *v. t.* To obtain the fineness or size of (a silk thread) in deniers.

denigrate (den'i-grāt), *a.* Blackened; turned black.

denitratation (dē-nī-tra-tā'shọn), *n.* Same as *denitration.*

denitrate, *v. t.* 2. To remove the lower oxids of nitrogen from (nitrous vitriol), in the manufacture of sulphuric acid by the lead-chamber process, so that these oxids may not be lost, but returned to the lead-chambers.—3. To decompose (guncotton, nitroglycerin, or other nitric esters used as explosives), removing the nitric-acid radical and regenerating the cellulose, glycerin, etc., from which these were produced.

denitration, *n.* 2. The process of removing the lower oxids of nitrogen from nitrous vitriol in making sulphuric acid. See ★*denitrate,* 2. 3. The process of removing the nitric-acid radical from guncotton or other nitric esters, regenerating cellulose, etc. See ★*denitrate,* 3.

denitrator (dē-nī'trā-tọr), *n.* An apparatus for denitration.

denitrifier (de-nī'tri-fī ér), *n.* 1. That which destroys or prevents the formation of nitric acid or nitrates, as certain ferments in the decomposition of nitrogenous organic matter.—2. In *bacteriol.,* any micro-organism which is capable of breaking down nitrates into nitrites, and nitrites into ammonia compounds, or of liberating nitrogen from any of these.

denitrify, *v.* II. *trans.* In *bacteriol.,* to break down nitrates into nitrites, and nitrites into ammonia compounds, or to liberate nitrogen from any of these compounds by bacterial action.

denitrize (dē-nī'trīz), *v. t.*; pret. and pp. *denitrized,* ppr. *denitrizing.* [*de-* + *nitr(ogen)* + *-ize.*] Same as *denitrate.*

denizen, *n.* 3. In *bot.,* a plant suspected to be of foreign origin, though behaving as if indigenous. *H. C. Watson.*

denkli (dengk'li), *n.* [Hind. *dhenklī.*] In India, a device for raising water, similar to the Egyptian shadoof (which see).

The simplest and earliest form of water-raising machinery is the pole with a bucket suspended from one end of a crossbeam and a counterpoise at the other. In India this is known as the *denkli* or paccottah; in Egypt it is called the shadûf. *Encyc. Brit.,* XXIX. 592.

Dennett grass. See ★*grass.*

Dennstaedtia (den-stet'i-ä), *n.* [NL. (Bernhardi, 1801), named for August Wilhelm *Dennstaedt* (or *Dennstedt*) of Weimar, author of numerous botanical works.] A genus of polypodiaceous ferns, of the tribe *Davallieæ,* with slender creeping rootstocks and delicate solitary twice or thrice pinnate fronds 2 to 6 feet high. The globose sorus is terminal, the sporangia borne within a special cup-shaped indusium which is more or less adherent on the exterior side to the reflexed segment of the leaf margin. There are about 20 species, mostly tropical and subtropical; but one, *D. punctilobula,* the hay-scented fern, occurs in the United States and Canada. See *Dicksonia.*

denomination, *n.* 4. In any system of reckoning, a class of units of one kind and having a specific name, as tens, hundreds, thousands, etc., in numbers; dollars or cents in values; pounds, hundredweights, tons, etc., in expressing quantity; inches, feet, yards, miles, etc., in measures of length, etc.: as, an issue of paper money of small *denomination.*

denotive (dē-nō'tiv), *a.* [*denote* + *-ive.*] Serving to denote; denotative; specifically, denoting by means of arbitrary terms, or by terms which have no natural association with the idea expressed: opposed to *connotive.*

Among primitive peoples this *denotive* symbolism is not developed, and in lieu thereof an extensive and cumbrous system of connotive or associative symbols is employed. *Smithsonian Rep.,* 1892, p. xxiii.

denounce, *v. t.* 6. In *diplomacy,* to announce the intention of abrogating (a treaty) in accordance with its provisions or arbitrarily.

dens, *n.* 3. In *entom.,* the terminal point of a mandible.

dense, *a.* 6. In *optics,* having a large index of refraction; capable of transmitting light at a less velocity than the velocity of light-waves in vacuo.

densification (den″si-fi-kā'shọn), *n.* The act or process of rendering dense.

The investigation of glass-pot clays, therefore, is restricted to the determination of plasticity, shrinkage, *densification* temperature, fusion point, and chemical composition. *U. S. Geol. Surv.,* 1897–98, p. 428.

densify (den'si-fī), *v. t.*; pret. and pp. *densified,* ppr. *densifying.* [*dense* + *-i-fy.*] To render dense. [Rare.] *U. S. Geol. Surv.,* 1897–98, p. 428.

densimetry (den-sim'e-tri), *n.* The use of the densimeter; specifically, the operation of determining the density of samples of gunpowder.

density, *n.* 4. In *photog.,* opacity of the developed film of a negative. **Density in phase,** in *statistical mech.,* the number of systems in a very great ensemble of independent systems, which at a given moment have phases lying between specified (infinitesimal) limits.

The *density in phase* is constant in time for the varying phases of a moving system, provided that the forces of a system are functions of its coordinates, either alone or with the time. *J. W. Gibbs,* Statistical Mech., p. 9.

Dynamic density (of a population), the number of inhabitants per square mile taken in connection with their power to cooperate, as determined by concentration in cities and their means of communication. **Flux density,** the lines of magnetic force per unit section, or the induction.—**Magnetic density,** the rate of distribution of lines of force in a magnetic field. The unit is the gauss or one line per square centimeter.—**Optical density,** the property by virtue of which transparent substances transmit light at velocities less than that of a light-wave in vacuo. Great optical density is associated with a large index of refraction, and vice versa: thus glass is optically denser than water, and water than air.—**Stem density.** See ★*stem*[1]. **Vapor density,** the density of a gas or vapor, at a specified pressure and temperature, in terms of that of hydrogen, or sometimes of air, taken as a standard.

density-globe (den'si-ti-glōb), *n.* A glass globe having a capacity of from 30 to 2,000 cubic centimeters, used in accurate determinations of the density of gases. The globe is provided with a stop-cock sealed on the neck. *M. W. Travers,* Exper. Study of Gases, p. 121.

dent. An abbreviation (*a*) of *dental;* (*b*) of *dentist;* (*c*) of *dentistry.*

dental. I. *a.*—**Dental arteries,** arteries which supply the pulp-cavities of the teeth. **Dental follicle, furnace,** etc. See ★*follicle,* ★*furnace,* etc. **Dental processes.** Same as *alveolar processes* (which see, under *alveolar*).—**Dental prosthesis,** the supplying of missing teeth or parts of teeth by artificial substitutes.

II. *n.* 3. *Dentex macrophthalmus,* a fish of the family *Lutianidæ,* found in the Mediterranean.

dentale (den-tā'lē), *n.*; pl. *dentalia* (-li-ä). [NL., neuter of L. *dentalis,* dental.] In *ichth.,* the dentary; the tooth-bearing or anterior bone of the lower jaw.

dentalize (den'tạl-iz), *v. t.*; pret. and pp. *dentalized;* ppr. *dentalizing.* [*dental* + *-ize.*] To convert (a sound) into a dental, such as *d* or *t.*

dentary-splenial (den″tạ-ri-splē'ni-ạl), *n.* The fused dentary and splenial bones, or a bone which takes the place of those two in forming the jaw.

Dentate fascia. See ★*fascia.*—**Dentate fissure.** Same as *hippocampal fissure* (which see, under *hippocampal*).—**Dentate gyrus.** See ★*gyrus.*—**Dentate nucleus.** Same as *dentate body* (which see, under *dentate*).

dentes. Plural of *dens.*

Denticete (den-ti-sē'tē), *n. pl.* [L. *dens,* a tooth, + Gr. κῆτος (pl. κῆτη), a whale.] A suborder of *Cetacea* containing the toothed whales. *J. E. Gray,* 1864.

denticle, *n.* 3. In the graptolites (*Hydrozoa*), one of the thecæ. See ★*theca,* 1 (*d*) (6).

denticular (den-tik'ū-lär), *a.* Resembling small teeth; tooth-like; denticulate.

denticulate-serrate (den-tik″ū-lāt-ser'āt), *a.* In *bot.,* between dentate and serrate, with the teeth very small.

denticuliform (den-tik'ū-li-fôrm), *a.* [L. *denticulus,* denticle, + *forma,* form.] Having the form of a small tooth or denticle.

dentification (den-ti-fi-kā'shọn), *n.* [L. *dens* (*dent-*), tooth, + *-ficare,* < *facere,* make.] The formation of tooth-substance or dentin.

Dentigerous cyst. See ★*cyst.*

dentinasal (den-ti-nā'zạl), *a.* and *n.* [L. *dens* (*denti-*), tooth, + *nasus,* nose: see *nasal.*] I. *a.* Dental and nasal: said of certain sounds, as the consonant *n.*

II. *n.* A dentinasal sound.

dentiparous (den-tip'ạ-rus), *a.* [NL. ★*dentiparus,* < L. *dens,* tooth, + *parere,* produce.] Producing teeth.

dentition, *n.* **Cheek dentition,** the molar teeth: used chiefly by British writers.

dentology (den-tol'o-ji), *n.* [L. *dens* (*dent-*), tooth, + Gr. -λογία, < λέγειν, speak.] Same as *odontology.*

dentonasal (den-tō-nā'zạl), *a.* and *n.* An improper form for ★*dentinasal.*

denucleate (dē-nū'klē-āt), *v. t.*; pret. and pp. *denucleated,* ppr. *denucleating.* [NL. ★*denucleare,* < L. *de,* away, + *nucleus,* nucleus.] To deprive a cell of its nucleus. Also *enucleate.*

denudant (de-nū'dạnt), *a.* and *n.* I. *a.* That denudes; denuding.

II. *n.* An agency or process which tends to denude a region. *J. Geikie,* The Great Ice Age, p. 259.

denudation, *n.* 3. In *surg.*, the state of a part which is deprived of its natural covering, as a bone of the periosteum. **Chemical denudation,** in *geol.* the process of removing the material of the land in solution. *I. C. Russell*, Rivers of North America, p. 81.—**Plain of marine denudation, plain of subaerial denudation.** See ★*plain*[1].

denudationist (den-ū-dā′shon-ist), *n.* One who emphasizes the influence of surface agencies in the production of relief forms, to the apparent neglect of deep-seated or subterranean agencies that may contribute to the same end.

How much of a valley is due to original fracture and how much to subsequent erosion remains a matter of opinion. After all, it is largely a question of degree in most matters which are in dispute between the "convulsionists" and the "*denudationists*."
Athenæum, May 13, 1905, p. 595.

denudative (dē-nū′da-tiv), *a.* [*denudate* + *-ive.*] Of or pertaining to denudation; effective in causing denudation. [Rare.] *Smithsonian Rep.*, 1899, p. 279.

denumerable (dē-nū′me-ra-bl), *a.* Same as ★*denumeral.*

denumeral (dē-nū′me-ral), *a.* Enumerable; numerable; countable; capable of being put into one-to-one correspondence with the class of all natural numbers in their usual order.—**Denumeral collection.** Same as *denumerable set.* See ★*set*[1].

denumerantive (dē-nū′me-ran-tiv), *a.* [*denumerant* + *-ive.*] Pertaining to or like a denumerant. *Sylvester.*

denumerate (dē-nū′me-rāt), *v. t.*; pret. and pp. *denumerated*, ppr. *denumerating.* [*de-* + *numerate.*] 1. To count off or enumerate.—2. In *math.*: (*a*) To determine the number of individuals in a given class. (*b*) To determine the denumerant of an equation.

denumeration, *n.* 2. In *math.*: (*a*) Counting off, or enumeration. (*b*) The determination of the number of individuals in a given class. (*c*) In *theory of equations*, the determination of the denumerant.

denumerative (dē-nū′me-ra-tiv), *a.* [*denumerate* + *-ive.*] Of or pertaining to denumeration.

denunciation, *n.* 5. The act of denouncing a treaty.

Denver group. See ★*group*[1].

deoperculate, *a.* 2. Having an operculum that does not spontaneously separate from the sporophore, as certain mosses.

deoxidator (dē-ok′si-dā-tor), *n.* An agent or apparatus for deoxidizing.

deoxidize, *v. t.*—**Deoxidized bronze.** See *Tobin* ★*bronze.*

deoxygenization (dē-ok″si-jen-ī-zā′shon), *n.* [*deoxygenize* + *-ation.*] Same as *deoxygenation.*

deozonization (dē-ō″zon-ī-zā′shon), *n.* [*deozonize* + *-ation.*] In *chem.*, deprivation or removal of ozone: usually applied to its reversion to the condition of ordinary oxygen gas. *Elect. World and Engin.*, Jan. 31, 1903, p. 205.

dep. An abbreviation (*b*) of *department;* (*c*) of *deponent.*

depancreatize (dē-pan′krē-a-tīz), *v. t.*; pret. and pp. *depancreatized*, ppr. *depancreatizing.* [*de-* + *pancreas* (*-at*) + *-ize.*] To deprive of the pancreas by a surgical operation. *Buck*, Med. Handbook, VIII. 39.

depart. An abbreviation of *department.*

department, *n.*—**Staff department,** one of the Bureaus into which the United States Department of War is divided. It includes the following: the Adjutant-General's, Inspector-General's, Judge-Advocate-General's, Quartermaster's, Subsistence, Medical, Pay, Engineer, and Ordnance Departments, and the Signal Bureau.

departmentalism (dē-pärt-men′tal-izm), *n.* [*departmental* + *-ism.*] Departmental methods or usages.

department-store (dē-pärt′ment-stōr), *n.* A large store or shop in which many different lines of retail business are carried on under one general management, such as the sale of fabrics, clothing, shoes, hats, jewelry, toys, household utensils, groceries, books, etc. [U. S.]

Known in America as "*department stores*," situated at points of special convenience for customers using the various traffic lines, and tending to the extinction of thousands of small retail establishments.
Encyc. Brit., XXXI. 219.

Departure in despite of court, in *old Eng. law*, failure of a tenant in a real action to reappear on demand after having once appeared and been present in court. *Rapalje and Lawrence*, Law Dict.

depasturage (dē-pas′tūr-āj), *n.* [*depasture* + *-age.*] Grazing; pasturage.

From Lammas to March the lands are subject to the *depasturage* of stock. *Encyc. Brit.*, XXVII. 169.

depauperation (dē-pâ-pér-ā′shon), *n.* [*depauperate* + *-ion.*] Impoverishment; depauperization. *Lindley.*

depauperize, *v. t.* 2. To impoverish or render poor; depauperate.

deperition (dep-e-rish′on), *n.* [NL. **deperitio*(*n-*), ⟨ L. *deperire*, waste away, ⟨ *de*, away, + *perire*, waste away, perish: see *perish.*] A wasting away. *Bentham.*

depetalize (dē-pet′al-īz), *v. t.*; pret. and pp. *depetalized*, ppr. *depetalizing.* To deprive of petals; remove the petals from. *U. S. Dept. Agr.*, Div. Veg. Pathol., Bulletin 5, p. 40.

dephased (dē-fāzd′), *a.* [*de-* + *phase* + *-ed*[2].] In *elect.*, out of phase.

dephlegmatory (dē-fleg′ma-tō-ri), *a.* Of or pertaining to the removal of phlegm or watery matter from spirits and acids, or to the dephlegmator or condenser by which this is effected.

dephlogisticate, *v. t.* 2. In *med.*, to reduce inflammation in.

Dephosphorization process, a method of eliminating the phosphorus and sulphur from iron while converting it into steel. This is done by using magnesian limestone or dolomite, instead of the silicious ganister employed in the acid process, for lining the converter.

depict, *v. t.* 3. In *math.*, to represent; map.

depiction, *n.* 2. In *math.*, representation; mapping: as, conformal *depiction.*

depictive (dē-pik′tiv), *a.* [*depict* + *-ive.*] Having the quality of depicting or portraying; pictorial: as, the *depictive* character of Chinese writing.

depicture (dē-pik′tūr), *n.* [*depicture*, *v.*] Portrayal; pictured representation; depiction.

depigment (dē-pig′ment), *v. t.* [*de-* + *pigment.*] To deprive of pigment.

depigmentation (dē-pig-men-tā′shon), *n.* [*depigment* + *-ation.*] The loss or removal of pigment; decolorization; more particularly, the loss of pigment by which the white race became differentiated from all others.

Such a climate perhaps directly produced, or, at any rate, favored, variation towards that lymphatism and *depigmentation* that thus came to be characteristic of the race.
Jour. Polit. Econ., Dec., 1900, p. 81.

depigmented (dē-pig′men-ted), *a.* [*depigment* + *-ed*[2].] Deprived of pigment. *Buck*, Med. Handbook, V. 485.

depigmentize (dē-pig′men-tīz), *v. t.*; pret. and pp. *depigmentized*, ppr. *depigmentizing.* [*de-* + *pigment* + *-ize.*] To cause loss of pigmentation in; decolorize. *Lit. Digest*, June 17, 1899, p. 699.

depilitant (dē-pil′i-tant), *n.* [Irreg. assumed from *depilatory*, as if from a L. **depilitare.* The proper form would be **depilant:* see *depilate.*] In *tanning*, material used to swell or distend the fibers of a skin, thus loosening the hair-roots and enabling the tanner to remove the hair. *C. T. Davis*, Manuf. of Leather, p. 161.

deplaster (dē-plâs′tér), *v. t.* [*de-* + *plaster.*] To purify (wines that have been treated with gypsum) by the removal of the plaster. See *plaster*, *v. t.*, 5.

deplenish (dē-plen′ish), *v. t.* [*de-* + *plenish.*] 1. To empty; deplete: as, to *deplenish* one's purse.—2. To dispose of the plenishing of; displenish: as, to *deplenish* one's home.

deploy, *v. i.* 2. To spread out, as the lower end of a valley glacier which extends out on a plain. *Chamberlin and Salisbury*, Geol., I. 241.

depolymerization (dē-pol″i-mer-ī-zā′shon), *n.* In *chem.*, separation of a more complex molecule into two or more simpler ones which are similar to each other, as the separation of one molecule of trioxymethylene into three of simple formic aldehyde.

deposit, *n.*—**Active deposit.** See ★*active.*—**Concentration deposit,** an accumulation of ore formed by the leaching of overlying or adjacent rock, the removal of disseminated matter in solution, and the precipitation of it in an enriched body. *Contrib. to Econ. Geol.*, U. S. Geol. Surv., 1902, p. 241.—**Deposit warrant.** See ★*warrant.*—**Glacial deposit,** the materials, such as terminal and ground moraines, brought together by glacial action.—**Irregular deposit,** in *law*, one in which money is deposited for safe-keeping. The depositary is not bound to return the money actually received, but only an equal sum.—**Phosphatic deposit,** a general term for an accumulation of calcium phosphate, such as is extensively worked for the production of fertilizers. Such a mass frequently consists in large measure of more or less altered remains of animals (bones, teeth, fecal matter, etc.), either of comparatively recent origin, as in phosphatic guano, or altogether fossil, as in the bone-breccia of South Carolina, in coprolites, etc.—**Quasi deposit,** in *law*, a deposit in which the depositary comes lawfully into the possession of another's goods, but with no intention of a deposit being made, as when goods are found and the finder is under an obligation to return them to their owner.

depositee (dē-poz-i-tē′), *n.* [*deposit* + *-ee*[1].] The person with whom a thing is deposited, as for safe-keeping, or as security, etc.

depositing-machine (dē-poz′i-ting-ma-shēn″), *n.* In *candy-making*, a machine for casting creams, gums, or other conserves in starch or other molds, or for depositing liquid candies upon paper. It consists of a steam-heated hopper for keeping the conserves liquid, combined with pumps for delivering the material under pressure to the dropping or depositing machinery, which delivers the right amount of liquid into each mold. The starch molds, placed in trays, pass under the machine on a traveling apron, or a paper band travels under the machine on which the liquid candy is delivered in drops. It is often combined with the starch-buck and the starch-printer to form one machine. In *cake-making*, a similar machine is used for making soft-dough cakes, etc. It consists essentially of a hopper and delivery-rolls for depositing semi-fluid dough in cakes on pans moving upon a conveyer under the machine.

deposition, *n.* 9. In *geol.*, the accumulation of sediments, or the precipitation of minerals (particularly ores) from solution.—**Secondary deposition,** accumulation by chemical alteration, or replacement, or precipitation within the body of an existing rock.

In theoretical geology he first suggested that *secondary deposition* might be the genetic condition of the iron ore bodies. *Science*, March 22, 1901, p. 461.

depositional (dep-ō-zish′on-al), *a.* [*deposition* + *-al*[1].] Of or relating to deposition.

Subordinate or local systems of crust-strains . . . are concentrated along old *depositional* and structural limits.
Geog. Jour. (R. G. S.), XVI. 461.

depot, *n.* 3. *Milit.*: (*d*) A place where military prisoners are confined.

depotentiation (dē-pō-ten-shi-ā′shon), *n.* [L. *de-* + *potentia*, power, + *-ation.*] Deprivation of power or potency.

depot-wagon (de-pō′wag″on), *n.* Formerly a square-box wagon with a detachable top; now a rockaway with a trap-door at the rear end which can be converted into a baggage-rack. [U. S.]

depressant, *n.* 2. A therapeutic agent which is employed to reduce mental or physical strength.

II. *a.* Causing a lowering of the physical or mental forces.

depressibility (dē-pres-i-bil′i-ti), *n.* Capability of being depressed.

depression, *n.*—**Barometric depression.** (*b*) A region of low barometric pressure; a region of relatively low pressure; a region of pressure lower than the normal; a storm-center. (*c*) The difference between the low barometric pressure and the normal pressure for that locality; the departure of the pressure.—**Depression of the dew-point.** See ★*dew-point.*—**Depression range-finder.** See ★*range-finder.*—**V-shaped depression,** in *meteor.*, an area of low pressure whose isobars run to a point like the letter V, generally formed on the equatorial side of the trough of a cyclone, or the trough between two adjacent anticyclones. The wind accompanying the depression is usually a squall or squally.

depressomotor (dē-pres-ō-mō′tor), *a.* and *n.* I. *a.* Causing a retardation of motor activity.

II. *n.* An agent which retards motor activity.

depressor, *n.* 4. In *elect.*, a device, consisting of a generator or other source of electromotive force, placed in the return circuit of an electric system and having the function of keeping the potential in that circuit approximately the same as that of the ground. Also called a *crusher.* A *depressor* or *crusher* is essentially of the same nature as a *booster*, but is applied to the regulation of the return circuit instead of the insulated circuit.—**Depressores capitis,** in the musculature of lepidopterous and other larvæ, the muscles which arise from the jugular plate or from the prosternum and are attached to the lower border of the occipital foramen; they operate in depressing the head.—**Depressores externi,** in the musculature of lepidopterous and other larvæ, the muscles which arise from the jugular plate, or from the prosternum, and are attached to the lower lateral border of the occipital foramen; they operate in depressing the head with a more or less lateral motion.—**Depressor substance,** a substance, formed in the pituitary body, the action of which is to produce a fall in blood-pressure.

deprint (dē-print′), *v. t.* [*de-* + *print.*] To print off (an article) with the same types, but in a separate form from the miscellany of which it forms a part; offprint.

deprint (dē′print), *n.* An article printed in the same types, but separately from the miscellany of which it forms a part; an offprint; a separate print.

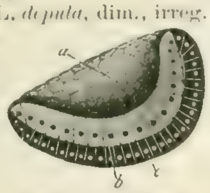
dept. An abbreviation (*b*) of *deputy.*

depth, *n.*—**Depth-perception,** in *psychol.*, the visual perception of the third dimension.—**Molded depth,** in *ship-building*, the interior depth of a vessel from the molded or exterior surface of the framing at the keel to the upper surface of the upper-deck beams. "The depth in one and two-decked vessels is to be taken from the upper part of the keel to the top of the upper deck beam

at the middle of the length, assuming a normal round up of beam of one-quarter of an inch to the foot of breadth. In spar-decked vessels and awning-decked vessels the depth is to be taken from the upper part of the keel to the top of the main deck beam at the middle of the length, with the above normal round up of beam. *Lloyd's Rules.*

depth-gage (depth'gāj), *n.* **1.** An apparatus for measuring the depth of a hole or recess, or the distance from a plain surface to a projecting point.—**2.** An attachment to a drill or other boring-tool so adjusted that when the desired depth has been reached a rod rests on the surface of the work and prevents the cutter from entering farther.

depula (dep'ū-lạ), *n.* [NL. *depula*, dim., irreg. < Gr. δέπας, a goblet, a chalice.] In *embryol.*, that stage in the development of the egg which succeeds the blastula and precedes the formation of the gastrula. *Haeckel.*



Depula of Amphioxus in Optical Section. (Enlarged.)
a, archenteron or gastrocœle; *b*, entoderm, or hypoblast; *c*, ectoderm, or epiblast. (From Marshall's "Vertebrate Embryology.")

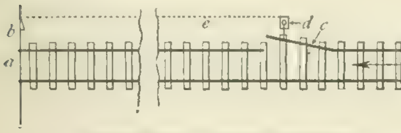
der. An abbreviation (*a*) of *derivation*; (*b*) of *derivative*; (*c*) of *derived*.

deracialize (dē-rā'sial-īz), *v. t.*; pret. and pp. *deracialized*, ppr. *deracializing*. [*de-* + *racial* + *-ize*.] To break down the characteristic habits or qualities of a race or stock; diminish the relative influence of heredity as compared with that of environment. *Patten*, Develop. of Eng. Thought, p. 365.

deracination (dē-ras-i-nā'shọn), *n.* [*deracinate* + *-ion*.] A plucking up by the roots; eradication; extirpation.

deradenitis (de-rad'e-nī'tis), *n.* [NL., < Gr. δέρη, neck, + ἀδήν, gland, + *-itis*.] Inflammation of the cervical lymphatic glands.

derail (dē-rāl'), *n.* [*derail*, *v.*] In *railroading*, a switch which is designed to divert or



Simple Form of Derail at Drawbridge.
a, draw, open position; *b*, lock on draw, open; *c*, derail; *d*, switch-rod, stand, and danger-signal; *e*, interlocking connection between draw lock and derail, so that draw cannot be opened without opening derail and displaying danger-signal. Arrow shows direction of approach to derail.

throw a train or car from the track or to stop its further progress. Derails are placed on sidings to prevent a car from being moved from the siding to the line when the switch is closed; they are also used at drawbridges and at crossings. Any emergency obstruction on a track may serve as a derail. Derails on sidings are placed beyond the clearance-point of a switch.

derailer (dē-rā'lėr), *n.* A derailing switch. See ★*derail*, *n.*

deranencephalia (der-an″en-se-fā'li-ä), *n.* [NL., < Gr. δέρη, neck, + ἀν- priv. + ἐγκέφαλος, brain.] The condition of being a monster with a rudimentary brain lying upon one of the upper cervical vertebræ; also, a monster exhibiting complete or nearly complete absence of the brain and the beginning of the spinal cord.

deranencephalus (der″an-en-sef'ạ-lus), *n.*; pl. *deranencephali* (-lī). [NL.] A monster characterized by deranencephalia.

derangement, *n.*—**Hey's internal derangement,** a form of partial dislocation of the knee attended by severe pain and spasmodic contraction of the muscles.—**Problem of derangements.** See ★*problem*.

derashah (de-rä'shä), *n.* [Heb., < *dārash*, seek, interpret, study.] A sermon or exposition of a scriptural or Talmudic theme in the synagogue on Sabbath or festival mornings. One who delivers the discourse is called *darshan*, that is, a preacher.

derationalize (dē-rash'ọn-ạl-īz), *v. t.*; pret. and pp. *derationalized*, ppr. *derationalizing*. [*de-* + *rationalize*.] To deprive of the power of reason or of reasoning; convert from a rational into an irrational being.

To call upon men to worship gravitation, and sing hallelujahs to the whirlwind, is to call upon them to *derationalize* themselves.
C. Hodge, Systematic Theol., I. 279.

derbio (dėr'bi-ō), *n.* [Sp. *derbion*, also *derbiso*; origin uncertain.] A carangoid fish, *Lichia glauca*, found in the Mediterranean.

derbylite (dėr'bi-līt), *n.* [Named for Dr. O. A. *Derby*, director of the geological survey of Brazil.] A ferrous antimoniate and titanate occurring in slender black prismatic crystals: found near Ouro Preto, Minas Geraes, Brazil.

Dercum's disease. Same as ★*adiposis dolorosa*.

derecho, *n.* **2.** A strong wind or squall blowing straight forward, without any apparent cyclonic rotation. *G. Hinrichs*, in Mo. Rev., Iowa Weather Service, 1885.

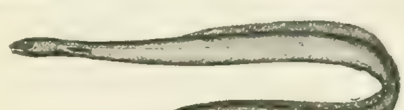
derencephalia (der″en-se-fā'li-ä), *n.* [NL., < Gr. δέρη, neck, + ἐγκέφαλος, brain.] Same as ★*deranencephalia*.

derencephalus (der-en-sef'ạ-lus), *n.*; pl. *derencephali* (-lī). Same as ★*deranencephalus*.

Derepodichthyidæ (der″e-pod-ik-thī'i-dē), *n. pl.* [NL., < *Derepodichthys* + *-idæ*.] A family of small blenny-like fishes found in the deep waters off British Columbia. They are characterized by the absence of scales and spines, the small size of the gill openings, and the attachment of the slender ventrals below the eye.

Derepodichthys (der″e-po-dik'this), *n.* [NL., irreg. < Gr. δέρη, neck, + πούς (ποδ-), foot, + ἰχθύς, fish.] A genus of blenny-like fishes, of which the single known specimen was dredged by the "Albatross" off Queen Charlotte Island, British Columbia; the species is *D. alepidotus*.

Derichthyidæ (der-ik-thī'i-dē), *n. pl.* [NL., < *Derichthys* + *-idæ*.] A family of eels found in the deep waters of the Gulf Stream. They are characterized by the development of the bones of the jaws and by the slender neck to which the snake-like head is attached. The single species is *Derichthys serpentinus*.



Derichthys serpentinus.
(From Bull. 47, U. S. Nat. Museum.)

Derichthys (de-rik'this), *n.* [NL., < Gr. δέρη, neck, + ἰχθύς, fish.] A genus of eels, constituting the family *Derichthyidæ*, found in the depths of the Gulf Stream.

de rigueur (dẹ rē-gėr'). [F., 'of rigor' or strictness.] Strictly required, as by etiquette, usage, rule, etc.; essential; imperative: as, full dress is *de rigueur*.

derivant, *n.* **2.** One who or that which is derived from another.

He sees quite clearly that neither the hide-bound empiricism of the traditional English school, nor the vaulting *a priori* dialectic of Hegel and his English-speaking *derivants*, suffice to philosophical salvation at present.
Pop. Sci. Mo., March, 1901, p. 552.

3. In *med.*, same as *derivative*, *n.*, 1.
II. *a.* **1.** Deriving; derivative.—**2.** In *med.*, same as *derivative*, *a.*, 3.

derivative. I. *a.* **4.** In *geol.*, derived from some other source; not native to the rock in which it is now found.

The shells which they occasionally contain are probably, in most cases, *derivative*—they do not occupy the positions in which the molluscs themselves lived.
J. Geikie, The Great Ice Age, p. 371.

Derivative rocks, in *geol.*, rock strata which have been formed mechanically by the abrasion of preëxisting rocks; generally speaking, the sedimentary rocks.

II. *n.*—**First, second, third, etc., derivative,** in *math.*, the derivative obtained by performing the operation of derivation upon the original function, upon its first, second, etc., derivative respectively.—**Partial derivative.** If x and y are independent in $z = f(x, y)$, the derivative of z with respect to x when x varies and y remains constant is called the *partial derivative of z with respect to x*, and is denoted by the symbol $\frac{\partial z}{\partial x}$.—**Total derivative,** a derivative obtained when all the variables of the function vary.

derive, *v. t.*—**Derived circuit, curve, function, group.** See ★*circuit*, ★*curve*, *function*, ★*group*¹.

dermal, *a.*—**Dermal body,** one of the various structures having a glandular or sensory function, found in the dermis and to some extent in the epidermis of certain gephyreans, as *Sipunculus*.—**Dermal branchiæ, cortex, glands,** etc. See ★*branchiæ*, ★*cortex*, ★*gland*, etc.

dermalaxia (dėr-ma-lak'si-ä), *n.* [NL., for *dermomalaxia or *dermatomalaxia, < Gr. δέρμα, skin, + μάλαξις, softening.] Softening of the skin.

dermale (dėr-mā'lē), *n.*; pl. *dermalia* (-li-ä). [NL., neut. of *dermalis*, dermal: see *dermal*.] In sponges, one of the spicules which support the dermal or bounding membrane of the sponge. *Sedgwick*, Text-book of Zoöl., I. 92.

Dermanyssus (dėr-mạ-nis'us), *n.* [NL. (De Geer, 1778), irreg. < Gr. δέρμα, skin, + νύσσειν, pierce.] A genus of mites. *D. gallinæ* is the chicken- or fowl-tick. It is not a true tick, but a mite belonging to the family *Gamasidæ*, and is one of the most persistent and numerous pests of the henhouse. It also attacks man, horses, cattle, dogs, cats, and rabbits.

dermarticulare (dėr-mär-tik-ū-lā'rē), *n.*; pl. *dermarticularia* (-ri-ä). [NL., < Gr. δέρμα, skin, + NL. *articulare*, a bony element of the lower jaw: see *articular*.] A bony element lying on the posterointernal face of each ramus of the lower jaw of some reptiles. It may fuse with the articulare or remain distinct as in turtles. Also *dermarticular*.

For this dermal element, which in some reptiles is distinct throughout life, I have adopted the term *dermarticulare*. *J. S. Kingsley*, in Amer. Nat., Feb., 1905, p. 61.

dermatitis, *n.*—**Blastomycetic dermatitis.** See ★*blastomycetic*.—**Dermatitis calorica,** inflammation of the skin caused by heat (or by cold).—**Dermatitis congelationis,** frost-bite.—**Dermatitis exfoliativa,** any inflammation of the skin which is attended with an abundant desquamation.—**Dermatitis herpetiformis,** a grave chronic skin-disease with lesions of most varied character, marked by burning sensations and itching. Also called *Duhring's disease*.—**Dermatitis medicamentosa,** an inflammatory redness of the skin due to the action of certain drugs, such as quinine, in susceptible persons.—**Dermatitis venenata,** an inflammation of the skin caused by some poison or irritant, such as poison-ivy.—**Epidemic exfoliative dermatitis,** an epidemic skin-disease marked by an eruption of confluent reddish patches followed by an abundant desquamation.—**Malignant papillary dermatitis,** a parasitic disease of the skin surrounding the nipple, the tendency of which is to become cancerous. Also called *Paget's disease*.—**Röntgen-light** or **Röntgen-ray dermatitis,** a severe inflammation of the skin caused by exposure to the Röntgen rays. Also called *X-ray dermatitis*.—**X-ray dermatitis.** Same as *Röntgen-light* ★*dermatitis*.

Dermatobia (dėr-ma-tō'bi-ä), *n.* [NL., < Gr. δέρμα(τ-), skin, + βίος, life.] An important genus of Œstrid flies, containing one or more species (as *D. noxialis*) which attack human beings in tropical regions. The eggs are laid on the skin, the larva living in the connective tissue under the epidermis.

dermatocellulitis (dėr″mạ-tō-sel-ū-lī'tis), *n.* [NL., < Gr. δέρμα(τ-), skin, + NL. *cellulitis*.] Inflammation of the skin and underlying cellular tissue.

dermatocyst (dėr'mạ-tọ-sist), *n.* [Gr. δέρμα(τ-), skin, + κύστις, bladder (cyst).] A cystic tumor of the skin.

dermatodynia (dėr″mạ-tọ-din'i-ä), *n.* [NL., < δέρμα(τ-), skin, + ὀδύνη, pain.] Same as *dermalgia*.

dermatograph (dėr'mạ-tọ-gráf), *n.* [Gr. δέρμα(τ-), skin, + γράφειν, write.] A device for marking upon the skin.

dermatographia (dėr″mạ-tọ-graf'i-ä), *n.* [NL., < Gr. δέρμα, skin, + γράφειν, write.] An irritable condition of the skin in which a raised line follows the drawing of a hard-pointed instrument across it.

dermatographism (dėr-mạ-tog'rạ-fizm), *n.* Same as ★*dermatographia*.

dermatol (dėr'mạ-tōl), *n.* [Gr. δέρμα(τ-), skin, + *-ol*.] A trade-name for ★bismuthum subgallicum (which see).

Dermatolepis (dėr-mạ-tol'e-pis), *n.* [NL., < Gr. δέρμα(τ-), skin, + λεπίς, scale.] A genus of large bass-like fishes found on both coasts of tropical America, characterized by the smooth embedded scales. The species are *D. inermis* of the West Indies, and *D. punctatus* of the west coast of Mexico.

dermatome (dėr'mạ-tōm), *n.* [Gr. δέρμα, skin, + -τομος, < ταμεῖν, cut.] A knife with a very fine blade, used for removing certain skin-blemishes.

dermatomere (dėr'mạ-tọ-mēr), *n.* [Gr. δέρμα(τ-), skin, + μέρος, part.] In *embryol.*, one of the cleavage-cells or blastomeres which give rise to the integument or skin.

dermatomyositis (dėr″mạ-tọ-mī-ọ-sī'tis), *n.* [NL., < Gr. δέρμα(τ-), skin, + (irreg.) μυός, gen. of μῦς, muscle, + *-itis*. The right form would be **dermatomyitis*.] Inflammation of the skin and underlying muscular tissue.

dermatoneurosis (dėr″mạ-tọ-nū-rō'sis), *n.* [NL., < Gr. δέρμα, skin, + νεῦρον, nerve, + *-osis*.] An affection of the skin due to a morbid state of the nervous system.

dermatopathia (dėr″mạ-tọ-path'i-ä), *n.* [NL., < Gr. δέρμα, skin, + -πάθεια, < πάθος, disease.] Same as *dermatosis*, 2.

dermatopathic (dėr″mạ-tọ-path'ik), *a.* Of or pertaining to disease of the skin.

dermatopathology (dėr″mạ-tọ-pạ-thol'ọ-ji), *n.* [Gr. δέρμα(τ-), skin, + E. *pathology*.] Pathology of the skin.

dermatopathy (dėr-mạ-top'ạ-thi), *n.* [NL. *dermatopathia*.] Same as *dermatosis*, 2.

dermatophone (dėr′mą-tō-fōn), *n.* [Gr. *δέρμα(τ-)*, skin, + *φωνή*, sound.] A modified cylindrical stethoscope devised for dermatophony.

dermatophony (dėr′mą-tof′ō-ni), *n.* [Gr. *δέρμα(τ-)*, skin, + *φωνή*, sound, + *-ια*³.] Auscultation of the sounds of the blood-stream in the vessels of the skin.

dermatoplasm (dėr′mą-tō-plazm), *n.* [Gr. *δέρμα(τ-)*, skin, + *πλάσμα*, anything formed.] The living protoplasm that is said to form an essential part of the cell-membrane in plants.

dermatoplasty (dėr′mą-tō-plas″ti), *n.* [Gr. *δέρμα(τ-)*, skin, + *πλαστός*, ⟨ *πλάσσειν*, form.] Restoration of lost skin by grafting or sliding the integument from another part.

dermatopteran (dėr-mą-top′te-ran), *a.* and *n.* **I.** *a.* Of or belonging to the *Dermatoptera*.

II. *n.* A member of the *Dermatoptera*.

dermatopterous (dėr-mą-top′te-rus), *a.* Belonging to or resembling the *Dermatoptera*.

dermatoptic (dėr-mą-top′tik), *a.* [Gr. *δέρμα(τ-)*, skin, + *ὀπτικός*, of sight: see *optic*.] Relating to or having the faculty of perceiving variations of light by means of the skin alone, in the absence of definite organs of vision: as, *dermatoptic* perception in certain cœlenterates, mollusks, and other invertebrates. Also *dermatoscopic*.

dermatoscopic (dėr″mą-tō-skop′ik), *a.* [Gr. *δέρμα(τ-)*, skin, + *σκοπεῖν*, view, + *-ic*.] Same as ★*dermatoptic*. *Geog. Jour.* (R. G. S.), XII. 452.

dermatosome (dėr′mą-tō-sōm), *n.* [Gr. *δέρμα(τ-)*, skin, + *σῶμα*, body.] In *bot.*, one of the granular bodies which occur in rows, united and surrounded by protoplasm, forming the cell-wall. *Wiesner*.

Dermatostethus (dėr″mą-tō-stē′thus), *n.* [NL., ⟨ Gr. *δέρμα(τ-)*, skin, + *στῆθος*, breast.] A genus of pipe-fishes of the family *Syngnathidæ*, found in the Gulf of California.

dermatosyphilis (dėr″mą-tō-sif′i-lis), *n.* [NL., ⟨ Gr. *δέρμα(τ-)*, skin, + E. *syphilis*.] Syphilitic lesions of the skin.

dermatotherapy (dėr″mą-tō-ther′ą-pi), *n.* [Gr. *δέρμα(τ-)*, skin, + *θεραπεία*, treatment, cure.] Treatment of the skin and its diseases.

dermatotyloma (dėr″mą-tō-ti-lō′mą), *n.*; pl. *dermatotylomata* (-mą-tą). [Gr. *δέρμα(τ-)*, skin, + *τύλωμα*, a callus.] A callus.

dermatotylosis (dėr″mą-tō-ti-lō′sis), *n.* [NL., ⟨ Gr. *δέρμα(τ-)*, skin, + *τύλωσις*, a making or becoming callous.] Same as ★*dermatotyloma*.

Dermatozoa (dėr″mą-tō-zō′ą), *n. pl.* [NL., ⟨ Gr. *δέρμα(τ-)*, skin, + *ζῷον*, animal.] Animals that are parasitic on or in the skin: a general term, of no value in classification.

dermatozoan (dėr″mą-tō-zō′an), *a.* and *n.* **I.** *a.* Relating to or characteristic of the *Dermatozoa*.

II. *n.* One of the *Dermatozoa*, or any animal that is a skin-parasite.

dermatozoönosis (dėr″mą-tō-zō-ō-nō′sis), *n.* [NL., ⟨ Gr. *δέρμα(τ-)*, skin, + *ζῷον*, animal, + *-osis*.] Any disease of the skin produced by animal parasites living on or in the skin, as psoriasis, acariasis, dracunculosis, ground-itch, etc.

dermatrophia (dėr-mą-trō′fi-ą), *n.* [NL., ⟨ Gr. *δέρμα(τ-)*, skin, + *τροφή*, nourishment.] Atrophy of the skin.

dermatrophy (dėr-mat′rō-fi), *n.* Same as ★*dermatrophia*.

dermepenthesis (dėr-me-pen′the-sis), *n.* [NL., ⟨ Gr. *δέρμα*, skin, + *ἐπένθεσις*, insertion: see *epenthesis*.] Skin-grafting.

dermitis (dėr-mī′tis), *n.* [NL., ⟨ Gr. *δέρμα*, skin, + *-itis*.] Same as *dermatitis*.

dermoblast (dėr′mō-blāst), *n.* [Gr. *δέρμα*, skin, + *βλαστός*, germ.] In *embryol.*, that portion of the mesoderm which gives rise to the derma, or true skin.

dermochrome (dėr′mō-krōm), *n.* [Gr. *δέρμα*, skin, + *χρῶμα*, color.] A colored illustration of the skin in health or disease. *Lancet*, May 9, 1903, p. 1308.

dermographism (dėr-mog′rą-fizm), *n.* [Gr. *δέρμα*, skin, + *γράφειν*, write, + *-ism*.] Same as ★*dermatographia*.

dermoid, *a.* **II.** *n.* A dermoid cyst.

dermol (dėr′mōl), *n.* [Gr. *δέρμα*, skin, + *-ol*.] A trade-name for bismuth chrysophanate.

dermophlebitis (dėr″mō-flē-bī′tis), *n.* [NL., ⟨ Gr. *δέρμα*, skin, + *φλέψ* (*φλεβ-*), vein, + *-itis*.] Inflammation of the superficial veins.

dermophyte (dėr′mō-fīt), *n.* Same as *dermatophyte*.

dermoplasty (dėr′mō-plas-ti), *n.* Same as ★*dermatoplasty*.

dermostosis (dėr-mos-tō′sis), *n.* [NL., prop. **derm(at)osteosis*, ⟨ Gr. *δέρμα*, skin, + *ὀστέον*, bone, + *-osis*.] The presence of a bone-like structure in the skin.

dermosynovitis (dėr″mō-sin-ō-vī′tis), *n.* [Gr. *δέρμα*, skin, + NL. *synovia* + *-itis*.] Inflammation preceding and accompanying perforating ulcer (which see, under *perforating*).

dermosyphilis (dėr-mō-sif′i-lis), *n.* Same as ★*dermatosyphilis*.

dermotrich (dėr′mō-trik), *n.* [Gr. *δέρμα*, skin, + *θρίξ* (*τριχ-*), hair.] A mesoblastic dermal fin-ray of fishes. *E. S. Goodrich*, Quart. Jour. Micros. Sci., March, 1904, p. 512.

dermotrichium (dėr-mō-trik′i-um), *n.*; pl. *dermotrichia* (-ą). Same as ★*dermotrich*. *Nature*, May 5, 1904, p. 13.

dernier, *a.* **II.** In *roulette*, a bet that one of the numbers from 25 to 36, inclusive, will win.

derodidymus (der-ō-did′i-mus), *n.*; pl. *derodidymi* (-mī). [Gr. *δέρη*, neck, + *δίδυμος*, twin.] A double-headed monster.

derotremate (der-ō-trē′māt), *a.* Same as *derotreme* and *derotrematous*.

derrick, *n.* **2.** The overhead framework used in drilling the holes for oil-wells, and which remains in place after the boring is completed and the drilling machinery is removed.—**Gin-derrick.** Same as *gin*⁴, 2 (*c*). **Guy-derrick,** a derrick in which the upright post is stayed by three or more guy-ropes which extend to the ground on opposite sides and are there anchored to hold the derrick in position. Where, as in a quarry, several derricks are placed in reach of one another, horizontal guy-ropes may be used to join the tops of all the posts together and furnish a support against side strains, reducing the number of guy-ropes and giving more freedom to the booms of the derricks. Large floating derricks on tow-boats or scows sometimes use two booms on opposite sides of one large post having guy-ropes or staying-shrouds at the sides between the booms. In such derricks the post is fixed and the booms have only a limited swing to the right or left of the point of support.—**Hauling derrick,** a simple crab or windlass on a frame, which can be anchored where desired.—**Stiff-leg derrick,** a derrick in which two stiff rods of wood or iron take the place of guy-ropes. The legs are placed as close together as possible to give free room for the sluing of the boom, the usual position being one quarter of the whole circle in which the boom might turn if it were a guy-derrick. In large derricks the post and boom are supported upon a ★sluing-gear (which see).

derrick-crab (der′ik-krab), *n.* The hoisting-gear and its frame at the foot of any hoisting-apparatus such as a crane or derrick, consisting of a drum on which the hoisting-rope may be wound, and the necessary reducing-gears and pinions.

derrick-elevator (der′ik-el″-ē-vā-tor), *n.* See ★*elevator*.

derricking (der′ik-ing), *a.* Of or pertaining or proper to the jib or boom of a crane or derrick or its inclination with regard to the post.—**Derricking motion** (of a crane), the radial motion of the jib when its inclination with regard to the post is altered in order to place a suspended weight nearer to or farther from the post, as distinguished from the lifting motion itself, or from a sluing or circular motion round the axis of the post.

derrid (der′id), *n.* [NL. *Derris* (*Derrid-*).] A tarry substance obtained from the bark of the root of *Derris* (*Pongamia*) *elliptica*, the active principle of a decoction used in Java for killing fish. One part of this substance in 5,000,000 parts of water is said to act instantly on large fish. *Jour. Soc. Chem. Industry*, X. 268.

derth, *n.* and *v.* A simplified spelling of *dearth*.

deruinate (dē-rō′i-nāt), *a.* [*de-* + *ruinate*.] Ruined; in a state of ruin.

Derwenter (dėr′wen-tėr), *n.* In Australia, a released convict, especially one from Hobart Town, Tasmania, where there was a convict settlement on the banks of the river Derwent: hence the name.

Desarguesian (dā-sär-gē′si-an), *a.* See ★*Arguesian*.

desaxonize (dē-sak′sn-īz), *v. t.*; pret. and pp. *desaxonized*, ppr. *desaxonizing*. [*de-* + *Saxon* + *-ize*.] To divest of distinctively Saxon qualities and tendencies.

> That sometimes almost gives me to believe
> I might have been a poet, gives at least
> A brain *desaxonized*!
>
> *Lowell*, Cathedral.

descamisado (des-kä-mē-sä′dō), *n.* [Sp., lit. 'shirtless,' ⟨ *des-* (⟨ L. *dis-*) priv. + *camisado*, ⟨ *camisa*, shirt.] In *Sp. hist.*, an extreme liberal and revolutionist in the turbulent period after 1820.

Descartes's formula. See ★*formula*.

descend, *v. i.* **7.** In *phys.*, to pass from higher to lower readings or values upon any scale: said specifically of the musical scale and of the thermometric scale.

descendancy, descendency (dē-sen′dan-si, -den-si), *n.* [*descendan(t)*, *-en(t)*, + *-cy*.] Descendants considered collectively. *Buck*, Med. Handbook, V. 36.

descendant, *n.* **3.** In *geol.*, a topographic feature carved from the mass beneath an older topographic form which has been removed.

descendental (dē-sen-den′tal), *a.* [*descendent* + *-al*¹.] Relating to inherited nature and ordinary conditions: humorously distinguished from *transcendental*.

> Square, lover of Plato and Molly Seagrim, with his brain full of transcendental morality, and his heart full of *descendental* appetites. *Whipple*, Essays and Rev., II. 342.

descensional, *a.* [*descension* + *-al*¹.] **2.** Specifically, in *geol.*, noting the disaggregation of the antecedent rock, the separation of unlike particles, and their final aggregation in beds; noting the breaking down of complex silicates, the solution of certain original components, and a gathering of the modified and assorted product into stratified deposits.

> Running hand in hand with this *descensional* process, there has always been a reascensional process by which the coherence, the crystallization, and in some measure the complex composition of the rocks are restored.
>
> *Chamberlin and Salisbury*, Geol., I. 412.

descensionist (dē-sen′shon-ist), *n.* [*descension* + *-ist*.] One who holds some theory involving descending movement or action. See the extract.

> Three theories are maintained as to the course of the [subterranean] waters which deposit ores. Some hold that the waters doing the work are descending; others that they are laterally-moving; others that they are ascending . . . . But if we are *descensionists* . . . we may say that the waters which are doing the work are descending. *Science*, Nov. 15, 1901, p. 756.

description, *n.*—**The world of description.** See *the world of* ★*appreciation*.

descriptive, *a.* **2.** In *geom.*: (*a*) Pertaining to the projective methods of Monge. (*b*) Not containing the idea of quantity or measurement.

> Projective Geometry on the other hand, dealing with projective properties (i.e. such as are not altered by projection), is chiefly concerned with *descriptive* properties of figures.
>
> *C. Leudesdorf*, tr. of Cremona, Projective Geom., p. 50.

desectionalize (dē-sek′shon-al-īz), *v. t.*; pret. and pp. *desectionalized*, ppr. *desectionalizing*. [*de-* + *sectional* + *-ize*.] To free from sectionalism in any sense or in any connection; widen in scope or spirit by the removal of whatever limits or divides; convert into one broad whole.

> This tendency to merging unification and *desectionalizing* is steadily pervading every human interest.
>
> *Elect. World and Engin.*, Jan. 2, 1904, p. 7.

desert¹, *n.* Specifically—(*b*) In *phytogeog.*, one of the three principal types of Schimper's climatic formations, the result of excessive drought or cold. In desert all surviving vegetation is stunted and the difference between woodland and grass-land (the other two grand types) is obliterated.—**Desert act.** Same as *Carey* ★*act*.—**Desert devil.** Same as ★*devil*, 15.—**Desert polish,** a smooth and shining surface imparted to rocks or other hard substances by the wind-blown sand and dust of desert regions. *Geikie*, Text-book of Geol., p. 436.—**Desert sandstone,** in *geol.*, the later Cretaceous formations of Australia.—**Desert varnish,** in *petrog.*, a hardened film of iron oxid or quartz on rocks and stones polished by wind-blown sand, found in deserts. *Gilbert*. See ★*case-hardening*, 2, and ★*desert polish*.

desertion, *n.* **5.** In *bot.* Same as *lipoxeny*.

desert-rod (dez′ėrt-rod), *n.* Any one of several species of herbs belonging to the genus *Eremostachys* of the mint family, natives of western and central Asia.

deserv, *v.* A simplified spelling of *deserve*.

desexualize (dē-sek′sū-al-īz), *v. t.*; pret. and pp. *desexualized*, ppr. *desexualizing*. [*de-* + *sexual* + *-ize*.] To deprive of sex or sexual characters: castrate.

Desiccating Tube.

desiccate, *v. t.*—**Desiccating tube,** a glass apparatus which permits air or gas to pass to and from an inclosed space through sulphuric acid or other desiccating material.

desiderant (dē-sid′e-rant), *n.* and *a.* [L. *desiderans* (*-ant-*), ppr. of *desiderare*, desire: see *desire*.] **I.** *n.* One who desires a thing.

II. *a.* Desiring; of the nature of desire.

> When we ask what we know the soul to be, we can only answer: A sentient desire, or *desiderant* feeling, which, through its own effort after satisfaction, gradually differentiates itself into a world. *Thomas Davidson*, Rousseau, p. 243.

desiderium (dē-si-dē′ri-um), *n.*; pl. *desideria* (-ä). [L.: see *desire*.] A longing or ardent desire as for something once possessed and now missed; pain or regret on account of loss or absence.

All Conservatives . . . regard the memory of Lord Beaconsfield with a *desiderium* which has not been exhibited towards that of any English political leader. *Sat. Rev.*, April 21, 1883, p. 485.

desight (dē-sīt′), *n.* [*de-* + *sight*.] A disfigurement; an eyesore. *N. E. D.*

She had a box, . . . composed of three diamonds, three emeralds, three pearls, and one large rough pebble, which was such a *desight* to the others, that she carried the box to the smith. *Miss Yonge*, Cameos Eng. Hist., ser. 2, vi. 68.

design, *n.* 9. Specifically, in *music*, either the melodic pattern, the harmonic process, or the rhythmic and metric form adopted in composition, by which a particular work or a class of works is made coherent and characteristic. In the evolution of artistic music the principles of design have been but slowly perceived and established. **Arts of design.** See ★*art*2.

Designate individual, in *logic*, an individual object, known to exist (distinctions of time not being regarded) and so denoted as to exclude every other individual, that is, called by its well-known proper name (or a description, which amounts to a proper name in logic, since it is assumed to be applicable to nothing else): opposed to an indesignate or vague individual. Thus, Othello is a *designate* individual existing in the world of Shakspere's tragedy; so is 'earth's satellite' if the phrase is spoken by a person who knows, and to a person who knows, that there is but one; and so is 'quality' in a list of categories.

designingly (dē-zī′- or dē-sī′ning-li), *adv.* Intentionally; with crafty or evil design; for selfish ends.

design-paper (dē-zīn′pā-pėr), *n.* A drawing-paper printed in cross-lines and used in designing patterns for textile fabrics, and particularly in laying out the patterns to be transferred to the cards of a Jacquard loom.

desilicate (dē-sil′i-kāt), *v. t.*; pret. and pp. *desilicated*, ppr. *desilicating*. [*de-* + *silica* + *-ate*2.] In *chem.*, to remove silica from a substance which contains it, as, a rock.

desilication (dē-sil-i-kā′shon), *n.* The act of desilicating or the state of being desilicated.

desinential (des-i-nen′shal), *a.* [NL., **desinentia*, desinence, + *-al*1.] Of or pertaining to a desinence; terminational; terminal; desinent: as, the *desinential* -it for -ed in dialectal English.

desipiency (dē-sip′i-en-si), *n.* Same as *desipience*.

desk-book (desk′bůk), *n.* A book of reference for desk use; a hand-book for ready reference, as in matters of spelling or the like.

desma, *n.* 2. A ligament; formerly, a bandage.

desmactinic (des-mak-tin′ik), *a.* [Gr. δέσμα, band, + ἀκτίς (ἀκτιν-), ray.] Of sea-urchins, having the podia continued upward to the apical plates; opposed to ★*lysactinic* (which see).

Desmarestia (dez-ma-res′ti-ä), *n.* [NL. (Lamouroux, 1813), named for A. G. *Desmarest*, a French naturalist.] A common genus of the *Phæophyceæ*, or brown algæ, occurring along the New England coast and in southern waters.

desmergate (des′mėr-gāt), *n.* [Gr. δεσμός, band, + ἐργάτης, a worker.] A worker ant which is intermediate in structure between the soldier or worker major, and the true worker or worker minor of the same species.

desmic (dez′mik), *a.* Resembling or pertaining to a desma.

desmodynia (des-mō-din′i-ä), *n.* [NL., < Gr. δεσμός, a band, + ὀδύνη, pain.] Pain in the ligaments.

desmogen (des′mō-jen), *n.* [Gr. δεσμός, band, + -γενής, -producing.] In *bot.*, the embryonic tissue of plants. **Primary desmogen.** Same as *procambium*.—**Secondary desmogen,** tissue formed from the cambium and subsequently transformed into permanent vascular strands.

desmogenous (des-moj′e-nus), *a.* [Gr. δεσμός, a band, + -γενής, -produced.] Of ligamentous origin or causation.

desmohemoblast (des-mō-hē′mō-blást), *n.* [Gr. δεσμός, band, + αἷμα, blood, + βλαστός, germ.] Same as *mesenchyme*. Also *desmohæmoblast*.

Des Moines beds. See ★*bed*1.

desmoma (des-mō′mä), *n.*; pl. *desmomata* (-ma-tä). [NL., < Gr. δέσμωμα, a fetter, < δεσμοῦν, bind, fetter, < δεσμός, a band, fetter.] Same as *desma*, 1.

desmon (des′mon), *n.* [NL., < Gr. δεσμός, a band, bond, chain.] Same as ★*amboceptor*.

desmopathy (des-mop′a-thi), *n.* [Gr. δεσμός, a band, + -πάθεια, < πάθος, disease.] Disease of ligamentous structures.

desmorrhexis (des-mo-rek′sis), *n.* [NL., < Gr. δεσμός, a band, + ῥῆξις, a breaking, < ῥηγνύναι, break.] Rupture of a ligament.

desmosis (des-mō′sis), *n.* [NL., < Gr. δεσμός, a band, + *-osis*.] A disease of the connective tissue.

desmosite (des′mo-sīt), *n.* [Irreg. < Gr. δεσμός, a band, + *-ite*2.] In *petrog.*, a banded compact rock developed from shales and slates by contact-metamorphism induced by intrusions of diabase. *Zincken* 1841.

Desmothoraca (des″mo-tho-rā′kä), *n. pl.* [NL., < Gr. δεσμός, a band, + θώραξ (θωρακ-), breastplate.] An order of *Heliozoa* having a stalked or unstalked shell perforated by numerous pores. It includes *Clathrulina* and *Orbulinella*.

desmotropic (des-mō-trop′ik), *a.* [Gr. δεσμός, a bond, + τρόπος, a turning, + *-ic*.] Pertaining to or characterized by desmotropism. *Nature*, June 26, 1902, p. 214.

desmotropism (des-mot′rō-pizm), *n.* [Gr. δεσμός, a bond, + τρόπος, turning, + *-ism*.] In *chem.*, a term proposed by Victor Meyer and Jacobsen, as a substitute for *tautomerism*, to signify an easily experienced shifting of the atoms in a molecule from one order of attachment to another, so that each of two isomeric substances readily changes into the other.

desmotroposantonin (des″mō-trop-ō-san′tō-nin), *n.* [*desmotrop-ic* + *santonin*.] A colorless dextrorotatory alkaloid,

HC:C(CH$_3$)CCH$_2$CH.O.CO
| | | /
HOC:C(CH$_3$)CCH$_2$CH CH(CH$_3$) , isomeric

with santonin, from which it is prepared by the action of concentrated hydrochloric acid. It crystallizes in small needles, melting at 260° C.

desmotroposantonous (des″mō-trop-ō-san′tō-nus), *a.* Derived from desmotroposantonin. —**Desmotroposantonous acid,** a colorless, levorotatory, crystalline compound, $HOC_{10}H_8(CH_3)_2CH(CH_3)COOH$, (3:1:4:6), prepared by the reduction of desmotroposantonin. It is isomeric with santonous acid and melts at 175° C.

desmotropy (des-mot′rō-pi), *n.* Same as ★*desmotropism*.

désobligeant (dā-zō-blē-zhoṅ′), *n.* [F., lit. 'disobliging': compare *sulky*, *n.*] A small chaise with accommodations for only one person: hence the name.

An old *Desobligeant*, in the farthest corner of the court, hit my fancy at first sight; so I instantly got into it. *Sterne*, Sentimental Jour., p. 10.

desocialize (dē-sō′shal-īz), *v. t.*; pret. and pp. *desocialized*, ppr. *desocializing*. [*de-* + *social* + *-ize*.] To break down social instincts, habits, and relations; render non-social. *Giddings*, Inductive Sociol., p. 262.

désœuvré (dā-zė-vrā′), *a.* [F., < *dés-* priv. + *œuvre*, work, < L. *opera*, work.] Unemployed; unoccupied; idle.

Drowsy, dull, *desœuvré*, not having a book in press, and having given up smoking. *Life of Longfellow*, I. 336.

désœuvrement (da-zėv-re-moṅ′), *n.* [F.] A being unemployed; lack of occupation or work.

I have nothing to write you, and therefore, write for the pleasure of it, and from mere *désœuvrement*. *Life of Longfellow*, II. 143.

desonation (dē-sō-nā′shōn), *n.* [*de-* + *sonation*.] The removal of sonant quality: as, "the *desonation* of final vowels," *Scripture*, Exper. Phonetics, p. 203.

desophistication (dē-sō-fis-ti-kā′shon), *n.* The act of freeing or the fact of being freed from sophistication.

De Soto group. See ★*group*1.

desoxyalizarin (des-ok-si-a-liz′a-rin), *n.* Same as ★*anthrarobin*.

desoxycholalic (des-ok″si-ko-lal′ik), *a.* [*des-* for *dis-* + *oxy*(*gen*) + *cholalic*.] Noting an acid, a reduction-product of cholalic acid, $C_{24}H_{40}O_4$.

desoxycholic (des-ok-si-kol′ik), *a.* [*des-* for *dis-* + *oxy*(*gen*) + *cholic*.] Derived from cholic acid by loss of oxygen.—**Desoxycholic acid,** a crystalline acid, $C_{24}H_{40}O_4 + 1\frac{1}{2}H_2O$, formed in the putrefaction of ox-gall. It is bitter and melts at 185–190° C.

desoxydation (des-ok-si-dā′shon), *n.* Same as *deoxidation*.

desoy† (de-soi′), *n.* A shortened form of *sergedusoy*. *A. M. Earle*, Costume of Colonial Times, p. 98.

despatcher, *n.* 2. A die with double numbers, such as two fives on opposite sides, instead of a deuce opposite the five: so called because it throws higher than the average and despatches the game quickly.

despecialization (dē-spesh-al-i-zā′shon), *n.* The act of advancing from a stage of specialization to one of greater generality. *Patten*, Heredity and Social Progress, p. 117.

despecialize (dē-spesh′al-īz), *v. i.*; pret. and pp. *despecialized*, ppr. *despecializing*. [*de-* + *specialize*.] To pass from a specialized to a more generalized condition or stage. *Patten*, Heredity and Social Progress, p. 61.

despiritualize (dē-spir′i-tū-al-īz), *v. t.*; pret. and pp. *despiritualized*, ppr. *despiritualizing*. [*de-* + *spiritualize*.] To deprive of spiritual character, power, or influence; affect with worldliness or materialism: as, to *despiritualize* Christianity.

despumation, *n.* 2. The mechanical removal of scum or foam from a liquid by skimming.

dessert-spoonful (de-zėrt′spön fůl), *n.* As much as a dessert-spoon will contain; about two drams.

destoor, *n.* See ★*dastur*.

destrictinic (dē-strik-tin′ik), *a.* [NL. *destricta* (see def.) + *-in* + *-ic*.] Noting an acid, an indigo-blue crystalline compound, extracted from the lichen *Cladina destricta*.

destroyer, *n.* 2. Specifically, a torpedo-boat destroyer. See *torpedo-boat*.

destructional (dē-struk′shon-al), *a.* [*destruction* + *-al*1.] Pertaining to or formed by destructive agencies or processes; specifically, relating to or resulting from denudation.

The steep cliff is clearly in both cases a *destructional* surface from which material has fallen away. *Amer. Jour. Sci.*, Jan., 1904, p. 38.

destructionalist (dē-struk′shon-al-ist), *n.* [*destructional* + *-ist*.] One whose aim is destruction or who is engaged in the devising or use of engines of destruction.

The torpedo (that ever verdant topic of the universal *destructionalist*). *Sci. Amer.*, lxxix. 322.

Destructive leaf-hopper. See ★*leaf-hopper*.

destructivity (dē-struk-tiv′i-ti), *n.* [*destructive* + *-ity*.] The ability to destroy; destructiveness: as, "seismic *destructivity* can be accurately expressed in mechanical units," *Encyc. Brit.*, XXVII. 609.

destructor-cell (dē-struk′tor-sel), *n.* A unit or retort in a refuse- or garbage-incinerating plant. These furnaces are usually in pairs, straddling a common flue, and are maintained at a high temperature to diminish nuisance from odor.

destructuralize (dē-struk′tū-ral-īz), *v. t.*; pret. and pp. *destructuralized*, ppr. *destructuralizing*. [*de-* + *structural* + *-ize*.] To undo or take apart; disorganize. *N. E. D.*

desubstantiate (dē-sub-stan′shi-āt), *v. t.*; pret. and pp. *desubstantiated*, ppr. *desubstantiating*. [*de-* + *substantiate*.] To deprive of substance. *Mrs. Humphry Ward.* *N. E. D.*

desulphate (dē-sul′fāt), *v. t.*; pret. and pp. *desulphated*, ppr. *desulphating*. [*de-* + *sulphate*.] In *chem.*, to remove a sulphate or the radical of sulphuric acid from (a substance). *Jour. Brit. Inst. of Elect. Engin.*, 1899–1900, p. 474.

desulphation (dē-sul-fā′shon), *n.* The process of desulphating. *Jour. Brit. Inst. of Elect. Engin.*, 1899–1900, p. 466.

desulphurizer (dē-sul′fū-rī-zėr), *n.* In *chem.*, a substance used to combine with and so remove sulphur from something else, as scrap-iron used in the reduction of metallic antimony from its sulphid.

desultor (dē-sul′tôr), *n.*; pl. *desultores* (-tō′rēz). [L.: see *desultory*.] A bareback rider in the Roman circus who rode two or more horses at once, leaping from one to another.

det, *n.* 2. A recent simplified spelling of *debt*.

det. An abbreviation of the Latin *detur*, 'let it be given.'

detaching-roller (dē-tach′ing-rō″lėr), *n.* On a cotton-combing machine, a steel roller with an intermittent motion, for detaching a tuft of cotton after it is combed.

Detachment of the retina. See ★*retina*.

detail, *n.* 5. The service on which one is detailed.—**Detail paper.** See ★*paper*.

detainer2, *n.* (*c*) In *law*, the fact of being detained or held in custody: as, a writ of habeas corpus may issue to inquire into the *detainer* of a prisoner.

detassel (dē-tas'l), *v. t.* [*de-* + *tassel.*] To remove the tassel of growing Indian corn. See ★*detasseling.*

detasseling (dē-tas'l-ing), *n.* The act or practice of removing the tassel (male inflorescence) from growing Indian corn. In breeding for improved stocks weak plants are detasseled to eliminate their pollen, and where cross-fertilization is sought the plants selected to bear the ears are thus treated. Detasseling has been performed experimentally on part of the rows in fields to observe the effect on the yield of grain and forage, with ambiguous results.

detector, *n.* **Electrolytic detector,** a form of receiving apparatus used in wireless telegraphy. It consists of a small electrolytic cell the space between the terminals of which is bridged by a chain of deposited metallic particles. Electric oscillations break down this bridge and momentarily increase the resistance of the circuit. **Electrothermal detector,** in *wireless telegraphy,* same as *thermal* ★*detector.*—**Magnetic detector,** a receiving apparatus used in wireless telegraphy. Its operation depends upon the fact that the sudden changes in the magnetization of the iron core of the receiver, caused by the electric oscillations, are capable of producing sounds in a telephone placed in circuit with a coil about the core. **Mechanical detector,** in *elect.,* a device for the detection of electric waves based upon the tendency of a ring of wire, suspended near a resonator carrying electric oscillations, to turn into the position of minimum action. Such detectors were employed by Hertz in his study of the propagation of electric waves in conductors.—**Thermal detector,** a receiving apparatus, used in wireless telegraphy, the action of which depends upon the heating of a minute wire by the electric oscillations.

detector-bar (dē-tek'tor-bär), *n.* A secondary rail or bar placed beside the rails of a switch and intended to prevent its movement while a train is passing over it. The bar is pivoted to the switch in such a manner that when the switch is to be moved it rises above the level of the top of the switch-rail and then returns to its normal position. In rising it strikes the car-wheels, detects their presence, warns the switchman, and also prevents the movement of the switch until the last wheel of the train has passed. See *switch.*

detent-lock (dē-tent'lok), *n.* A lock, usually a spring-lock, in which the bolt has notches, into which may be slid a detent or catch operated by a knob or pin. One of these notches is so located that when the bolt is drawn back and the detent thrown in, the bolt is held back in the lock and does not project or operate to fasten the door. The other notch is opposite the detent when the bolt is thrust out, and then the bolt cannot be withdrawn by the turning of the key outside, and the door is secure even against pass-keys or the keys belonging to the lock.

detent-rod (dē-tent'rod), *n.* 1. A rod which carries a catch or detent.—2. A rod which controls the motion of a detent.

détenu (dā-tē-nü'), *n.* [F., prop. pp. of *détenir,* detain.] One who is detained in custody; a prisoner: used especially in reference to English and French prisoners of war held by either country during the wars of 1793–1815.

deteriorationist (dē-tē'ri-ō-rā'shon-ist), *n.* One who holds that deterioration is the prevailing tendency or rule of things; a deteriorist.

deteriorator (dē-tē'ri-ō-rā-tor), *n.* One who or that which deteriorates or causes deterioration.

deteriorism (dē-tē'ri-ō-rizm), *n.* [L. *deterior,* worse, + *-ism.*] The doctrine that the general tendency of all things is to grow worse: opposed to *meliorism.*

Meliorism and the opposite theory, which we suppose must be called *deteriorism.* *Goldwin Smith. N. E. D.*

determinant, *n.* 4. In *biol.,* in Weismann's doctrine of germ-plasm, the material bearer of all the hereditary qualities of a cell, regarded as composed of as many biophores, or bearers of single hereditary qualities, as are to be possessed by the cell and its descendants.

I shall designate . . . the particles of the germ-plasm determining them [the cells] as the 'determining parts' or '*determinants.*' *Weismann* (trans.), Germ-plasm, p. 57.

Accessory determinant, according to Weismann, a determinant of the accessory germ-plasm. See ★*germ-plasm.*—**Doctrine of determinants,** in *biol.,* that part of Weismann's doctrine of germ-plasm which regards each cell as represented in the germ-plasm by a determinant. Often used as synonymous with the doctrine of germ-plasm.—**Heterodynamous determinant,** in Weismann's doctrine of germ-plasm, one of the determinants which are the bearers of the hereditary qualities of cells that are different in the two parents.—**Heterologous determinant,** in Weismann's doctrine of germ-plasm, one of the determinants which are the bearers of the hereditary qualities of cells that are not homologous in the parents, so that the cells which they control in the developing organism cannot exhibit the qualities of both parents in combination.—**Homodynamous determinant,** in Weismann's doctrine of germ-plasm, one of the determinants which are the bearers of the hereditary qualities of cells that are alike in the two parents.—**Homologous determinant,** in Weismann's doctrine of germ-plasm, one of the determinants which are the bearers of the hereditary qualities of homologous cells in both parents, so that the cells which they control in the developing organism may exhibit the qualities of both parents in combination.—**Leading term of a determinant,** in *math.,* the product of the elements (constituents) in the principal diagonal. **Supplementary determinant,** according to Weismann, one of the determinants which supply the identity between the constituent cells of a lost part of the body of an organism and the part that is regenerated in its place is due. **Term of a determinant.** From the array choose *n* different elements (constituents) such that there is one and only one element from each row and column, multiply these elements together, the product will be a *term of the determinant.*

determinate, *a.* **Determinate growth,** in *bot.* See ★*growth.* **Determinate number.** See ★*number.* **Determinate variation.** See ★*variation.*

II. *n.* In Weismann's doctrine of determinants, any cell which has distinctive hereditary qualities.

I shall designate the cells or groups of cells which are independently variable from the germ onwards as the 'hereditary parts' or '*determinates.*'

Weismann (trans.), Germ-plasm, p. 57.

determination, *n.* 14. In *bot.* and *zoöl.,* the identification, classification, and naming of specimens of plants or animals.

determine, *v. i.* 4. In Oxford and other universities, to take part in a solemn disputation preparatory to graduation as master of arts. See *determination,* 12.

deterrent, *n.* 2. A substance used in the manufacture of smokeless powder to moderate the violence of the explosion and to diminish sensitiveness to shock. Vaseline, camphor, etc., are so employed.

deterrently (dē-tēr'ent-li), *adv.* In a manner to deter; as a deterrent: as, the possibility of being called to account has acted *deterrently.*

deth, *n.* A simplified spelling of *death.*

dethyroidized (dē-thī'roi-dīzd), *p. a.* [*de-* + *thyroid* + *-ize* + *-ed*[2].] Deprived of the thyroid gland. *Buck,* Med. Handbook, VI. 410.

detin (dē-tin'), *v. t.;* pret. and pp. *detinned,* ppr. *detinning.* [*de-* + *tin.*] To remove the tin from (articles plated with tin).

detinning (dē-tin'ing), *n.* The operation of removing the tin from articles plated with tin, as tinware or tin scrap.

Detinue of goods in frank marriage, in *old Eng. law,* a writ which lay in favor of a wife who had obtained a divorce, to recover the property given with her in marriage.

Detonating fuse, oil, etc. See ★*fuse*[2], ★*oil,* etc.

detortion, *n.* 2. In *biol.,* the symmetry of a straight organism whose ancestors were twisted. [Rare.] *Encyc. Brit.,* XXX. 796.

detritus, *n.* 3. In *pathol.,* caseous or other disorganized material formed by the destruction of living tissue.

Detrusor urinæ, the muscular coat of the bladder, especially the longitudinal fibers.

detter, *n.* A simplified spelling of *debtor.*

deuteragonist (dū-tēr-ag'ō-nist), *n.* [Gr. *δευτεραγωνιστής,* < *δεύτερος,* second, + *ἀγωνιστής,* actor: see *agonist.*] In the *Gr. drama,* an actor who played the second part, after that of the protagonist.

deuteranope (dū'tēr-an-ōp), *n.* [See ★*deuteranopia.*] In *psychophys.,* one who is afflicted by the form of red-green blindness known as *deuteranopia.* *Baldwin,* Dict. of Philos. and Psychol., I. 274, II. 787.

deuteranopia (dū-tēr-an-ō'pi-ä), *n.* [NL., < Gr. *δεύτερος,* second, + NL. *anopia,* blindness.] In *psychophys.,* a form of red-green color-blindness: the so-called green-blindness.

deuterencephalon (dū-tēr-en-sef'a-lon), *n.* Same as ★*deutocerebrum.* *Encyc. Brit.,* XXIX. 499.

deutero-albumose (dū″tę-rō-al'bū-mōs), *n.* One of a group of albumoses, also known as *secondary albumoses,* which are formed during the process of proteolytic digestion. During gastric digestion their formation is preceded by that of the *primary albumoses.* They can all be precipitated by saturation with ammonium sulphate, partly in neutral and partly in acid solution. The digestion of fibrin leads to the formation of at least four deutero-albumoses. See ★*albumose* and *digestion-products,* under ★*digestion.*

deutero-caseose (dū″tę-rō-kā'sē-ōs), *n.* A deutero-albumose derived from casein.

deuterocladus (dū-tę-rok'la-dus), *n.* [NL., < Gr. *δεύτερος,* second, + *κλάδος,* branch.] In sponge-spicules, an actine bearing branches of the second order.

deuterocone (dū'tę-rō-kōn), *n.* [Gr. *δεύτερος,* second, + *κῶνος,* cone.] The inner and anterior cusp of an upper premolar.

deuteroconid (dū-tę-rō-kon'id), *n.* [Gr. *δεύτερος,* second, + *κῶνος,* cone, + *-id*[2].] The inner and anterior cusp of a lower premolar.

deutero-elastose (dū″tę-rō-ē-las'tōs), *n.* A deutero-albumose derived from elastin.

deuterofraction (dū″tę-rō-frak'shon), *n.* One of the groups into which the deutero-albumoses, which result from the albumins on proteolytic digestion, can be separated: spoken of as *deuterofraction A, B, C,* etc.

deuterogamy, *n.* 2. In *bot.,* a form of nuclear fusion in certain cryptogams which is subsequent to the sexual act and superposed upon it. *P. Groom.*

deutero-Isaiah (dū-tę-rō-i-za'yä, or -i-zī'yä), *n.* The name applied by some modern critics to the author of chapters xl.–lxvi. of the book of Isaiah: also, this part of the book, which was probably written at the end of the Babylonian exile.

deutero-Nicene (dū-tę-rō-nī'sēn), *a.* Pertaining to the second Nicene council. See *Nicene.*

deutero-Pauline (dū-tę-rō-pâ'lin), *a.* The designation of certain writings similar in character to the epistles of Paul, but considered to be from another hand. Some critics so name the Epistle to the Hebrews and the Pastoral Epistles.

deuteroplasm (dū'tę-rō-plazm″), *n.* [Gr. *δεύτερος,* second, + *πλάσμα,* anything formed.] Same as *deutoplasm.*

deuteroplasma (dū'tę-rō-plaz'ma), *n.* [NL., < Gr. *δεύτερος,* second, + *πλάσμα,* anything formed.] Same as *paramitom.*

deuteroproteose (dū″tę-rō-prō'tē-ōs), *n.* Same as ★*deutero-albumose.*

deuterosaurian (dū″tę-rō-sâ'ri-an), *a.* and *n.* I. *a.* Pertaining to or having the characters of *Deuterosaurus.*

II. *n.* A member of the genus *Deuterosaurus.*

Deuterosaurus (dū″tę-rō-sâ'rus), *n.* [Gr. *δεύτερος,* second, + *σαῦρος,* a lizard.] A genus of extinct theromorphous reptiles of the family *Deuterosauridæ,* having double-headed ribs, large canine teeth serrated on the edges, no palatal teeth, and large lacrymal bones. It occurs in the Permian formation.

deuteroscopia (dū″tę-rō-skō'pi-ä), *n.* [NL.] Same as *deuteroscopy.*

deuteroscopic (dū'tę-rō-skop'ik), *a.* Of or pertaining to deuteroscopy or second sight: as, the *deuteroscopic* faculty.

deuterostrophy (dū-tę-ros'trō-fi), *n.* [Gr. *δεύτερος,* second, + *στροφή,* turning.] In *phyllotaxy,* a spiral of the third degree.

deuterosystematic (dū″tę-rō-sis-te-mat'ik), *a.* Of or pertaining to a second or secondary system.

deuterotokous (dū-tę-rot'ō-kus), *a.* [Gr. *δεύτερος,* second, + *-τοκος,* < *τεκεῖν,* bring forth.] Of or pertaining to deuterotoky or the parthenogenic generation of both male and female offspring.

deuterotoky (dū-tę-rot'ō-ki), *n.* [Gr. *δεύτερος,* second, + *-τοκια,* < *-τοκος,* < *τεκεῖν,* bring forth.] A form of parthenogenesis in which the virgin female gives birth to offspring of both sexes, as the so-called sexual generations in the *Aphididæ* and *Cynipidæ.* *Cambridge Nat. Hist.,* V. 141.

deuterotoxin (dū″tę-rō-tok'sin), *n.* A derivative of a toxin which has a less marked affinity for the corresponding antitoxin than prototoxin.

deuterozoic (dū-tę-rō-zō'ik), *a.* [Gr. *δεύτερος,* second, + *ζωή,* life, + *-ic.*] In *geol.,* a term proposed to designate the later Paleozoic formations (Devonian, Old Red Sandstone, and Carboniferous system) of Great Britain, in distinction from the earlier ones: not now in use.

deuthyalosome (dūt-hī-al'ō-sōm″), *n.* [Gr. *δευτ(ερος),* second, + *ὑαλος,* glass, + *σῶμα,* body.] In *cytol.,* the nucleus remaining in the egg after the formation of the first polar body. *Van Beneden,* 1883.

deutobrochal (dū-tō-brō'kal), *a.* [Gr. *δεύτ(ερος),* second, + *βρόχος,* a noose, a mesh.] Noting one of the stages in the intra-ovarian development of the oöcyte, the chromatin being coarsely reticular and the nucleus showing one or two nucleoli. *Buck,* Med. Handbook, VI. 450.

deutocerebrum (dū-tō-ser'ē-brum), *n.;* pl. *deutocerebra* (-brä). [Gr. *δεύτ(ερος),* second, + L. *cerebrum,* brain.] That portion of the brain of an insect which comprises the antennal or olfactory lobes; the second lobe of an insect's brain. Also called *deuterencephalon.* *A. S. Packard,* Text-book of Entom., pp. 231, 237.

deutonephron (dū-tō-nef'ron) *n.;* pl. *deutonephra* (-rä). [Gr. *δεύτ(ερος),* second, + *νεφρός,* kidney.] The mesonephron or Wolffian body.

deutoplasm, *n.* 2. Same as ★*deuteroplasma.*

deutoplasmogen (dū-tō-plaz′mō-jen), *n.* [Gr. δεύτερος, second, + πλάσμα, anything formed, + -γενής, -producing.] In *embryol.*, that portion of the egg-cytoplasm which forms or is converted into deutoplasm.

deutosomite (dū-to-so′mīt), *n.* The posterior of the two somites into which the segment in the *Hexapoda* and *Chilopoda* is more or less theoretically supposed to be divided. *Science*, March 27, 1903, p. 485.

devastative (dev′as-tā-tiv), *a.* Destructive; that wastes or ravages: as, *devastative* floods.

devastavit, *n.* **Devastavit by direct abuse** or **direct devastavit,** in *law*, actual embezzlement of the property of an estate by an administrator, executor, or other trustee, or the conversion of the same to his own use; also the wilful release of a claim due the estate, or the surrender of a lease below its value, and generally any culpable act by which the property is actually wasted or lost. **Devastavit by maladministration,** in *law*, payment, by an executor, administrator, or other trustee, of claims against an estate that are not actually due or owing, or payment out of the order in which claims ought to be paid, or payment of legacies prior to debts; and generally any disposition of the funds that may cause a loss to a preferred class, although not benefiting the trustee. **Devastavit by neglect,** *in law*, a negligent act or omission, upon the part of an executor, administrator, or other trustee, which results in loss to the estate: for example, failure to sell goods at a fair price within a reasonable time, neglect to collect a doubtful debt that might with diligence be collected, etc. —**Writ of devastavit,** in *law*, a writ that lies against an executor, administrator, or other trustee to recover damages for a devastavit.

develop, *v. t.* —**To develop one's game,** in *chess*, to proceed in the line of one's intended tactics.—**To develop out,** to subject to a photographic process which requires the use of chemicals, usually in a dark place, for the production of the image: contrasted with to ★*print out*. See ★*print*.

developable, *a.* **3.** If, in the series given for a function by a development formula, the general expression for the error decreases indefinitely as we increase the number of terms, the sum will approach as its limit the value of the function, which is then said to be *developable*.

developing-machine (dē-vel′up-ing-ma-shēn″), *n.* A machine for developing photographic plates or rolls of films.

development, *n.* **3.** (*b*) The generation of a new living being considered inductively as a fact, without reference to the question whether it is to be regarded as evolution or unfolding, or as epigenesis or new formation; the subject-matter of the science of descriptive embryology or embryogeny.—**6.** (*c*) Specifically, in *music*, the second section of a movement in sonata form or the central portion of a fugue, in which the thematic material in the subject or subjects is unfolded and variously treated. Also called the *working-out* or the *development section*.—**7.** In *chess*, the movements by which a player in the early part of the game places his pieces in position for future action.—**Dislocation of development,** the development of embryonic organs out of their proper order or position.—**Induced development,** the generation of a new living being from an egg, considered as epigenesis or new formation and as the result of the reciprocal interaction between it and its environment. Embryologists and writers upon speculative biology commonly hold that the conception of inherent development or evolution or unfolding and the conception of induced development or epigenesis or new formation are contradictory and mutually exclusive; but there are many facts and theoretical considerations which show that the organism is neither inherent in the germ nor induced by the conditions of its existence and development, because it is in the reciprocal interaction between the two. The organism would not be what it is if either the constitution of the germ or the conditions under which its development takes place had been different. From this point of view it is as great an error to locate development, either individual or ancestral, in the conditions of existence as it is to locate it in germ-cells. It exists in neither, because it is in the relation between the two, and the prominence of the one or of the other in the mind of the investigator is dependent upon the purpose that he has in view in making the comparison. The contradiction between the notion of induced development and that of inherent development is not in germ-cells nor in living beings, but in the mental concepts of the biologist, who names, and tries to separate in his mind, what is not separable in fact. See *inherent* ★*development* and ★*innate*, 3.—**Inherent development,** the generation of a new living being through the unfolding or evolution or manifestation to sense of the organization which is held to have been invisible or latent or potential in the germ-cell. See ★*innate*, 3.—**Law of development toward opposites,** in *psychol.*, one of Wundt's three laws of psychical development. Feelings and impulses, at first of low intensity, gradually increase in intensity by contrast with feelings of opposite quality that have for a time been predominant, until finally they gain the ascendancy over the formerly predominant feelings, and are themselves for a longer or shorter time in control. *W. Wundt* (trans.), Outlines of Psychol., p. 327.—**Mosaic theory of development,** the theory that the fertilized egg contains localized representatives of the parts that are to arise from it, so that it may be regarded as a mosaic. *E. B. Wilson*, in Biol. Lectures, 1893.

developmental, *a.*—**Developmental mechanics,** experimental embryology. See ★*embryology*.

developmentalist (dē-vel-up-men′tal-ist), *n.* A believer in the theory of progressive development; an evolutionist. *N. E. D.*

developmentarian (dē-vel-up-men-tā′ri-an), *n.* One who adopts the evolutionary or development theory in philosophy, biology, anthropology, etc.

developoid (dē-vel′up-oid), *n.* [= It. *sviluppoide*; irreg. ⟨ *develop* + *-oid*.] Of a given primitive curve, a curve such that each of its tangents is cut by the primitive at an angle ω which is any function whatsoever of the coördinates of the point of intersection. When this angle is constant, the developoid is called *ordinary*. *Beltrami*.

devenerunt (dev-e-nē′runt), *n.* [L. *devenerunt*, '(they) have come.'] In *old Eng. law*, a writ which lay in favor of the king, to determine what lands and tenements 'have come' to the crown by escheat by reason of the death of a tenant *in capite*.

deviability (dē-vi-ạ-bil′i-ti), *n.* In *phys.*, the property of being capable of deflection from a path, as cathode rays, by the action of a magnet.

deviation, *n.*—**Angle of deviation.** See ★*angle*3.—**Standard deviation.** (*a*) In *biol.*, the index of variability. See *variability*.—(*b*) If the law of error be stated by the equation $z = \frac{1}{\sqrt{\pi c}} e^{\frac{-(x-d)^2}{c^2}}$, more conveniently written $(1 \div \sqrt{\pi c}) \exp - (x-d)^2 c^2$, then $c \div \sqrt{2} = \sigma$ is called by Pearson the *standard deviation*. The square root of the average of the squared departures from the mean in both directions is a measure of variability called the *standard deviation*.

deviative (dē′vi-ạ-tiv), *a.* [*deviate* + *-ive*.] Of, pertaining to, or producing deviation, deflection, or divergence. *Lockyer*.

deviator, *n.* **2.** An appliance for altering the course of a balloon by resistance against water. The appliance is suspended from the balloon by a cord and floats in the water. See the extract.

A strap at each end carries a rope passing to the balloon. When the ropes are of unequal length the *deviator* takes an oblique position and gives a steering effect; when the ropes are equal the blades become parallel to the direction of movement and there is no deviation and but little resistance. This instrument is, in fact, a multiple rudder of the simplest form. Both these *deviators* have been designed to keep at a certain depth below the surface of the water. *Sci. Amer.*, Oct. 26, 1901, p. 266.

devil, *n.*, **9.** (*f*) A machine for unloading grain from the hold of a vessel. *N. E. D.*—(*g*) A small, portable charcoal-furnace used in foundries for drying molds. It is constructed of a light iron latticed frame and is usually suspended in the mold.

11. A junior counsel who assists his superior, usually without financial reward. [Eng.]—**12.** In *math.*, a curve whose equation is $y^4 - x^4 + ay^2 + bx^2 = 0$.—**13.** A 'literary' or professional 'hack'; one who does professional work for another who gets all the credit.—**14.** Gunpowder moistened with water or alcohol so as to destroy the granulation and form a paste: used as a sort of firework by boys, and as a priming or fuse.—**15.** A moving whirlwind carrying up columns of sand, such as are common in India, Persia, and countries having dry seasons: sometimes called *dancing-devil* or *desert devil*, and known in upper India by the local name *bagoola* (*Hind. bagūla*).—**16.** A highly seasoned dish of crabs, chicken, eggs, or the like, cooked together.—**Devil's bedposts.** See ★*bedpost*.—**Devil's coach-horse.** (*b*) *Ocypus olens*, a large European rove-beetle, of the family *Staphylinidæ*, of savage appearance and habits and foul odor. (*c*) The wheel-bug. Also called the *devil's riding-horse*.—**Devil's corkscrews.** See ★*Daimonelix*.—**Devil's darning-needle.** (*c*) A name commonly applied to any common species of dragon-fly. (*d*) The American or Virginia virgin's-bower, *Clematis Virginiana*, so named from its gossamer-like fruit.—**Devil's hop-vine,** the green-brier or cat-brier, *Smilax rotundifolia*.—**Devils on horseback,** a savory dish made of oysters fried or broiled with a small piece of crisply fried bacon astride of each.—**Devil's riding-horse.** Same as ★*devil's coach-horse*.—**Hickory horned devil,** the larva of an American ceratocampid moth, *Citheronia regalis*. See cut under *royal horned caterpillar*.

devil, *v.* **II.** *intrans.* To do professional work (literary or legal) for another who receives all the credit, and sometimes also the remuneration or fee; act as a literary or legal devil.

devil-dancer (dev′l-dan″sèr), *n.* In India, a person who believes himself inspired and who performs dances like the whirling dervishes. See *dervish*.

devil-dancing (dev′l-dan″sing), *n.* The performances of the devil-dancers of India.

devildom (dev′l-dum), *n.* [*devil* + *-dom*.] The realm, domain, or sway of the devil; diabolic power or its exercise. *Tennyson*, The Revenge.

She meant a commination, or, at best,
An exorcism against the *devildom*
Which plainly held me.
Mrs. Browning, Aurora Leigh, ii.

deviler (dev′l-èr), *n.* **1.** One who operates a machine known in England as *devil* and in the United States as *rag picker* or *shoddy-picker*.—**2.** One who attends a hard-waste breaker in a cotton-factory.—**3.** A rag-shaking machine.—**4.** One given to patient and laborious research. [Slang.]

devil-fish, *n.* (*a*) Any large cuttle-fish, as an octopus or an architeuthis. (*c*) *Laccepedia cataphracta*, a fish found in Australian waters.

deviling[2] (dev′l-ing), *n.* Acting as a 'devil' or office hack; literary or legal hack-work: as, a young barrister engaged in *deviling*. [Colloq.]

Devillian (de-vil′i-an), *a.* and *n.* [*Deville*, a town of France.] **I.** *a.* In *geol.*, pertaining to the lowest division of the Cambrian system in the Ardennes mountains of Belgium.

II. *n.* The Devillian division.

devil's-apple (dev′lz-ap″l), *n.* **1.** See *apple*, 3.—**2.** The thorn-apple, *Datura Stramonium*.

devil's-bean (dev′lz-bēn), *n.* [West Indian.] Same as *bottle-cod*.

devil's-bite (dev′lz-bīt), *n.* The American hellebore or Indian poke, *Veratrum viride*.

devil's-bones (dev′lz-bōnz), *n.* The wild yam, *Dioscorea villosa*. See *wild yam* (*a*), under *yam*.

devil's-claw, *n.* **2.** In *bot.*, a small spiny tree, *Acacia Greggii*, of the southwestern United States and northern Mexico. It sometimes reaches 30 feet in height and a foot in diameter, and bears bright creamy-yellow flowers in spikes and long, crooked, pendent pods. The wood is hard, heavy, fine-grained, durable, and strong, and of a rich brown or red color. It is called *uña de gato* by the Mexicans, and shares with *A. Wrightii* the name of *cat's-claw*.

Devil's-claw (*Acacia Greggii*).
From Sargent's "Manual of the Trees of North America."

devil's-claws (dev′lz-klâz), *n.* The corn-crowfoot, *Ranunculus arvensis*: so called from its bur-like fruit.

devil's-fingers (dev′lz-fing″gèrz), *n.* The bird's-foot trefoil, *Lotus corniculatus*. Compare *crow-toe*.

devil's-flax (dev′lz-flaks), *n.* The toad-flax, *Linaria Linaria*.

devil's-flower (dev′lz-flou″èr), *n.* The red campion, *Lychnis dioica*. Also called *adder's-flower*.

devil's-grandmother (dev″lz-grand′muтн-èr), *n.* The woolly elephant's-foot or tobacco-weed, *Elephantopus tomentosus*.

devil's-grass (dev′lz-grâs), *n.* **1.** The joint-grass, *Paspalum distichum*.—**2.** The couch-grass, *Agropyron repens*.—**3.** The gum succory, *Chondrilla juncea*.—**4.** Same as *Bermuda grass*. See under *grass* and *Cynodon*, 1.—**5.** Same as *bur-grass*, 1.

devil's-greens (dev′lz-grēnz), *n.* Same as ★*devil's-grass*, 3.

devil's-grip (dev′lz-grip), *n.* The carpet-weed, *Mollugo verticillata*.

devil's-guts, *n.* **2.** The corn spurrey, *Spergula arvensis*.—**3.** In Australia, the dodder-laurel, *Cassytha filiformis*. See ★*dodder-laurel*.

devil's-hair (dev′lz-hâr), *n.* The American virgin's-bower, *Clematis Virginiana*.

devil's-head-in-a-bush (dev′lz-hed-in-a-bùsh′), *n.* The bladder-ketmia or flower-of-an-hour, *Hibiscus Trionum*.

devil's-herb (dev′lz-èrb), *n.* A trailing or climbing plant, *Plumbago scandens*: so called from the use of its root and leaves as a blistering agent. See *Plumbago*, 2.

devil's-horn (dev′lz-hôrn), *n.* Same as *stinkhorn*.

devil-shrimp (dev′l-shrimp), *n.* A slender crustacean, with long stalked eyes, of the genus *Lucifer*.

devil's-ironweed (dev″lz-ī′èrn-wēd), *n.* The arrow-leaved lettuce, *Lactuca sagittifolia*, of eastern North America; also, less commonly, the wild lettuce, *L. Canadensis*.

devil's-needle (dev′lz-nē″dl), *n.* The salt-marsh mosquito of the Atlantic coast of the United States, *Culex solicitans.* [New Jersey.]

devil's-paintbrush (dev′lz-pānt′brush), *n.* The orange hawkweed or golden mouse-ear, *Hieracium aurantiacum*, from the pencil-like pappus. The name is also applied to the king-devil, *H. praealtum*, which somewhat resembles the first named plant: both have become pests in the United States.

Devil's paintbrush (*Hieracium aurantiacum*). One fourth natural size.

devil's-pitchforks (dev′lz-pich′fôrks), *n.* The common beggar's-ticks or sticktight, *Bidens frondosa.* The bicuspidate fruit resembles the tines of a pitchfork.

devil's-plague (dev′lz-plāg), *n.* The wild carrot, *Daucus Carota*, which is a plague to farmers, especially in America. See *carrot* and *Daucus* (cut).

devil's-rattlebox (dev′lz-rat″l-boks), *n.* The bladder-campion, *Silene vulgaris*, the seeds of which when ripe rattle in the inflated pod.

devil's-root (dev′lz-röt), *n.* The lesser broomrape, *Orobanche minor*, which is injurious to clover upon the roots of which they are parasitic. The name is also applied to the devil's-bit, *Scabiosa Succisa.*

devil's-tether (dev′lz-teтн″ėr), *n.* The black bindweed, *Polygonum Convolvulus.*

devil's-tongue (dev′lz-tung), *n.* 1. The prickly-pear, *Opuntia*, especially *O. Opuntia* and *O. humifusa:* so called from the spiny tongue-shaped branches or joints.—2. See ★*Amorphophallus.*

devil's-trumpet (dev′lz-trum″pet), *n.* The jimson-weed, *Datura Stramonium:* so called from the trumpet-shaped flowers.

devil's-vine (dev′lz-vīn), *n.* The hedge-bindweed, *Convolvulus sepium.*

devil's-walking-stick (dev″lz-wâ′king-stik), *n.* The ailantus tree, *Ailanthus glandulosa.*

devil's-weed (dev′lz-wēd), *n.* Same as ★*devil's-ironweed.*

devirilize (dē-vir′il-īz), *v. t.*; pret. and pp. *devirilized*, ppr. *devirilizing.* [*de-* + *virile* + *-ize.*] To rob or deprive of virility or vigor; emasculate; deprive of vitality or force; weaken.

It would be difficult to find a better illustration of the *devirilizing* effects of transcendental and idealistic habits of thought, than in these pages [a book under review], which are so chastened and refined that all vitality seems to have gone out of them.

Amer. Jour. Psychol., XII. 277.

devize, *v.* Same as *devise.*

devolutive (dev-ō-lū′tiv), *a.* [*devolut(ion)* + *-ive.*] That is of the nature of, or involves, devolution. *N. E. D.*

devolv, *v.* A simplified spelling of *devolve.*

Devon (dev′on), *n.* The name of a shire (Devonshire) in England, applied specifically to a breed of dairy cattle noted for their docility and the quality of their milk. The color is red, varying from dark to pale chestnut, but there must be no mixture of black or white. The skin is yellow, the hair soft, and the general appearance symmetrical.

Devonia (dē-vō′ni-ä), *n.* [NL. *Devonia*, Devon, Devonshire.] In *geol.*, the region of Devonian rocks, without regard to geographical limitation; the Devonian rocks.

Devonian, I. *a.* This term was first applied in geology by Sedgwick and Murchison to a series of rocks in North and South Devon and Cornwall in which fossils had been found which were recognized by Lonsdale as intermediate in character between Silurian and Carboniferous. The lower and upper limits of the formation were not defined in Britain, but were more precisely determined by the same geologists in the Rhineland. So uncertain, however, were the bounds assigned to the base of the formation that more recent study in various countries has added to the lower part of this system considerable beds that had before been assigned to the Silurian system. Strictly applied, the term *Devonian* implies the rocks bearing the marine faunas of that time and is contrasted with the Old Red Sandstone, which is a formation sometimes different lithologically and which represents the lake, lagoon, or delta deposits of the same age.

II. *n.* 1. A native or inhabitant of Devonshire.—2. In *geol.*, the Devonian series.

Devonshire cream. See ★*cream*[1].

devotionalism (dē-vō′shon-al-izm), *n.* [*devotional* + *-ism.*] Devotional character.

devotioner (dē-vō′shon-ėr), *n.* One who belongs to a religious society of a devotional character. *N. E. D. De Vriesian.*

devulcanize (dē-vul′kan-īz), *v. t.*; pret. and pp. *devulcanized*, ppr. *devulcanizing.* [*de-* + *vulcanize.*] To remove sulphur from, as vulcanized india-rubber, and restore to the condition of the original material. There have been numerous attempts to do this, but none of them has been effective, only partial restoration of plasticity having been attained.

dewberry, *n.*, 2. The dewberry has now been improved to such an extent that it has become an important cultivated fruit. The improved forms are derived from native North American species. The most prominent garden kind is the Lucretia, derived from the wild *Rubus roribaccus.* The Bartel, another cultivated form, is derived from *Rubus invisus;* others, in the southern United States, from *Rubus trivialis;* others, in the western States, from *Rubus vitifolius.* The dewberries are trailing, blackberry-like plants. There are hybrids between the common wild dewberry of the northern United States, *Rubus procumbens*, and the high-bush blackberry (*R. nigrobaccus*). In cultivation, the dewberries are usually trained to stakes or trellises.—**California dewberry,** *Rubus vitifolius*, a somewhat trailing species with 3-5-foliate leaves, ovate to oblong coarsely toothed leaflets, and oblong, sweet berries: common in the coast ranges of California from San Diego county to the Fraser river, and also in Idaho.

dew-bit (dū′bit), *n.* A light breakfast taken very early, before the regular breakfast. [Eng. dial.]

dew-bow (dū′bō), *n.* A halo or rainbow seen on a surface covered with drops of dew. An analogous bow has occasionally been seen by reflection from drops of water, resting upon a layer of dust, which have been formed by the gentle fall of particles of fog. Both lunar dew-bows and solar dew-bows have been observed; and both principal and supernumerary dew-bows, analogous to the ordinary double rainbow, have been recorded.

dew-cap (dū′kap), *n.* A prolongation of a telescope-tube beyond the object-glass, intended to prevent deposition of dew, and also to exclude stray light. A small telescope should be provided with a dew-cap, bright without, but dead-black within, and having a length equal to twice its diameter.

dewdrop, *n.* 2. In *bot.*, an American rosaceous plant, *Dalibarda repens*, related to the strawberry, with long-petioled, ovate-orbicular, cordate and crenate leaves, and white flowers on long peduncles. The fruit consists of several dry achenia inclosed in the enlarged calyx. It also bears cleistogamous flowers.

dew-flower (dū′flou″ėr), *n.* Same as *day-flower.*

dew-grass, *n.* 2. The whitetop proper, *Agrostio alba.* Also called *white bent, English bent*, etc. When this grass has a purple or brown color, the redtop proper, it is called *summer dew-grass.*

dewlap, *n.* 5. A brand or ownership-mark on the dewlap of an animal. [Western U. S.]

dew-leaves (dū′lēvs), *n. pl.* Upwardly inclined leaves adapted for the collection of dew.

dew-moth (dū′môth), *n.* An English collectors' name for a European moth, *Setina irrorata:* from its habit of flying in the early morning.

dew-point, *n.*—**Complement of the dew-point,** the number of degrees by which the temperature of the dew-point is below the temperature of the air.—**Depression of the dew-point.** Same as *complement of the* ★*dew-point.*—**Dew-point apparatus,** apparatus for determining the dew-point. That devised by Regnault consisted of a polished silver cup containing ether in the center of which was immersed the bulb of a delicate thermometer. A current of air blown through the ether hastened its evaporation, cooling it down until the outside of the silver cup showed a deposit of dew; the temperature corresponding was the desired dew-point. Modifications of this apparatus have been made by Alluard, Crova, Abbe, and others, in order to secure greater delicacy or freedom from disturbing currents of wind. The deposition of dew depends to a considerable extent upon the nature of the surface and the perfection of its polish. The deposition begins upon the points or spots where a slight roughness exists, but is detected soonest where the surface is polished.—**Trouton's electrical dew-point hygrometer.** See ★*hygrometer.*

dew-pond (dū′pond), *n.* A small and shallow pond, usually artificial, located on ridges or hills where no adequate supply of water is possible from surface-drainage or from springs. The water is collected by condensation from the air dew, which is prevented from rapid evaporation by the means employed. The practice of making dew-ponds is common in Berkshire, England. A wide, shallow hollow is made, dry straw is spread over it, and upon this is laid a layer of finely puddled clay, which is in turn closely strewn with stones. The pond then gradually fills with water.

We have no waters to delight
Our broad and brookless vales—
Only the *dew-pond* on the height
Unfed, that never fails.

R. Kipling, The Five Nations (Sussex).

dew-rake (dū′rāk), *n.* A rake for the surface of grass or stubble. *N. E. D.*

dew-snail (dū′snāl), *n.* A garden or other slug: so named because it is usually found while the dew is on the herbage.

dexiocardia (dek″si-ō-kär′di-ä), *n.* [NL., < Gr. δεξιός, right, + καρδία, heart.] Same as *dextrocardia.*

dexiotrope (dek′si-ō-trōp), *a.* Same as *dexiotropic.*

dexiotropic, *a.* 2. Turning to the right hand or in a clockwise direction: said of the direction of cleavage in the eggs of certain invertebrates.

dexiotropically (dek″si-ō-trop′i-kal-i), *adv.* In a dexiotropic manner.

dexiotropism (dek-si-ot′rō-pizm), *n.* The state of being dexiotropic.

Dexter aspect. See ★*aspect.*

dextraural (deks-trä′ral), *a.* [L. *dexter*, right, + *auris*, ear, + *-al*[1].] Hearing more distinctly with the right ear than with the left.

dextrinase (deks′tri-nās), *n.* [*dextrine* + *-ase.*] In *chem.*, a supposed distinct enzym, forming part of the diastase of malt, believed to convert starch into maltodextrine.

dextrinate (deks′tri-nāt), *n.* [*dextrine* + *-ate*[1].] A compound of dextrine: applied specifically to a compound of iron and dextrine used in medicine.

dextrinize (deks′tri-nīz), *v. t.*; pret. and pp. *dextrinized*, ppr. *dextrinizing.* [*dextrine* + *-ize.*] To convert partially or wholly into dextrine. Various farinaceous foods for infants are thus transformed, usually by simple heating, and the product sometimes gains in digestibility by this treatment.

dextrinized (deks′tri-nīzd), *p. a.* Having the contained starch converted into dextrine: as, *dextrinized* bread.

dextrinous (deks′tri-nus), *a.* [*dextrine* + *-ous.*] Of or pertaining to dextrine.

dextrocamphene (deks″trō-kam-fēn′), *n.* See ★*camphene.*

dextrocardial (deks-trō-kär′di-al), *a.* [L. *dexter*, right, + Gr. καρδία, heart, + *-al*[1].] Having the heart on the right side.

dextrocerebral (deks″trō-ser′ē-bral), *a.* [L. *dexter*, right, + E. *cerebral.*] Having the right cerebral hemisphere functionally more active than the left.

dextrocular (deks-trok′ū-lär), *a.* [L. *dexter*, right, + *oculus*, eye, + *-ar*[3].] Possessing more acute vision in the right eye than in the left. *G. M. Gould*, in Pop. Sci. Mo., Aug., 1904, p. 361.

dextroduction (deks-trō-duk′shon), *n.* [L. *dexter*, right, + *ductio(n-)*, leading.] Movement to the right.

dextroform (deks′trō-fôrm), *n.* [*dextr(ine)* + *form(aldehyde).*] A compound of formaldehyde and dextrine used in surgery as a substitute for iodoform.

dextrogyral (deks-trō-jī′ral), *a.* Of or pertaining to right-handed rotation; having rotatory power in the direction of a right-handed screw: said of crystals or other optically active substances capable of turning the plane of polarization of light toward the right: opposed to ★*levogyral.*

dextromanual (deks″trō-man′ū-al), *a.* [L. *dexter*, right, + *manualis*, of the hand: see *manual.*] Same as *right-handed.*

dextropedal (deks-trop′ē-dal), *a.* [L. *dexter*, right, + *pes* (*ped-*), foot, + *-al.*] Using the right foot and leg by preference in kicking, hopping, etc.

dextrorotation (deks-trō-rō-tā′shon), *n.* In *optics*, rotation (specifically of the plane of polarization of light) in a clockwise direction: opposed to ★*levorotation.*

dextrorotatory, *a.* 2. In *bot.*, turning or twining to the right. See *right-handed*, 3.

dextrosinistral (deks-trō-sin′is-tral), *a.* [L. *dexter*, right, + *sinister*, left + *-al.*] Passing, moving, etc., from right to left.

dextrosuria (deks-trō-sū′ri-ä), *n.* [*dextrose* + Gr. οὖρον, urine.] Excretion of dextrose in the urine.

dextroversion (deks-trō-vėr′shon), *n.* [L. *dexter*, right, + *versio(n-)*, turning.] The act of turning to the right side: said of the uterus.

dezinc (dē-zingk′), *v. t.* [*de-* + *zinc.*] To remove zinc from, as old galvanized iron.

dezincation (dē-zing-kā′shon), *n.* Same as *dezincification.*

dezincify (dē-zingk′i-fy), *v. t.*; pret. and pp. *dezincified*, ppr. *dezincifying*. [*de-* + *zinc* + *-i-fy*.] To eliminate zinc from, as from an alloy or mixture: usually from lead, as in the Parkes process.

D. F. An abbreviation (*b*) of *Dean of the Faculty*.

D. F. M. S. An abbreviation of *Domestic and Foreign Missionary Society*.

dg An abbreviation of *decigram*.

D. H. An abbreviation of *deadhead* or *deadheaded*.

dhan[2] (dän), *n.* [Hind. Hindi *dhān*, rice, = Pali *dhannam*, < Skt. *dhanya*, adj., cereal, n., grain, corn.] In India, a general term for rice in the husk.

dharma (där′mä), *n.* [Skt. *dharma*.] Established order, usage, custom, rule, duty, virtue, right, law, etc. In Buddhism, the law; the canon. Also *dhurma*.

dharna, dhurna (där′nä, dur′nä), *n.* [Hind. *dharna*, put down, set down; *dharna dena* (as in def.).] A coercive measure resorted to in the East Indies by a creditor, complainant, or claimant, who sits at the door of the debtor, without tasting food, until the debt is paid or the demand is complied with: as, to sit *dharna* (or in *dharna*).

dhotee, *n.* 2. A striped cotton fabric woven in suitable lengths for winding about the loins. It is manufactured extensively in Great Britain for the East Indian trade; is woven in all widths from 22 to 50 inches, and in lengths of 40 yards.

dhurrin, *n.* See ★*durrin*.

D. Hy. An abbreviation of *Doctor of Hygiene*, a degree conferred by Durham College, England.

diabase, *n.* **Ash-bed diabase,** a local term used on Keweenaw Point, Lake Superior, for an igneous rock resembling a conglomerate, but regarded by Wadsworth as a scoriaceous, amygdaloidal sheet into which much sand was washed during its early history.

diabetes, *n.* **Bronzed diabetes,** a form of diabetes in which there is a discoloration of the skin, due to a deposit of blood-pigment, and usually also cirrhosis of the liver. **Cerebral diabetes,** excretion of cerebrose in the urine. **Diabetes alternans,** diabetes which alternates with gouty attacks.—**Pancreatic diabetes,** diabetes due to disease of the pancreas.—**Phlorizin diabetes,** excretion of sugar in the urine following the ingestion of phlorizin.—**Phosphatic diabetes,** a morbid condition in which there is a profuse excretion of urine containing phosphates, but not always sugar.—**Puncture diabetes,** excretion of sugar in the urine, experimentally produced in animals by puncture of the medulla oblongata.

Diabetic cataract, center, etc. See ★*cataract*, ★*center*[1], etc.

diabetogenic (dī″a-bē-tō-jen′ik), *a.* [*diabetes* + *-genic*, -producing.] Producing diabetes.

diablo (dē-ä′blō), *n.* [Cuban use of Sp. *diablo*, devil.] The Cuban name of the bat-fish, *Ogcocephalus vespertilio*. See cut under *bat-fish*.

diablotin (dē-ä-blō-tañ′), *n.* [F., dim. of *diable*, devil.] 1. An imp; a little devil. *Scott.* —2. (*a*) In the French West Indies, one of the petrels, *Œstrelata hæsitata*. (*b*) In Trinidad, the guacharo, *Steatornis caripensis*.

diabolatry (dī-a-bol′a-tri), *n.* [For **diabololatry*, < Gr. διάβολος, the devil, + λατρεία, worship.] Worship of the devil.

His infinite and illimitable charity of imagination could transfigure even the most monstrous historic representative of Christian or Catholic *diabolatry* into the likeness of a terribly benevolent and a tragically magnificent monomaniac. *Encyc. Brit.*, XXIX. 350.

diabolo (di-ä′bō-lō), *n.* [It. *diabolo*, *diavolo*, < L. *diabolus*, devil.] The game of the devil on two sticks. See *devil*.

diabolology (dī-ab-ō-lol′ō-ji), *n.* [Gr. διάβολος, the devil, + -λογια, < λέγειν, speak.] The sum of statements and beliefs concerning devils or the devil.

diabolonian (dī-ab-ō-lō′ni-an), *n.* [*Diabolus* (see def.) + *-on-* + *-ian*.] In Bunyan's 'Holy War,' one of the warriors of Diabolus (the Devil) in his attack on Mansoul (man's soul).

diabrosis (dī-a-brō′sis), *n.* [NL., < Gr. διάβρωσις, < διαβιβρώσκειν, eat through, < διά, through, + βιβρώσκειν, eat.] Erosion; ulceration; corrosion.

Diabrotica, *n.*—**Corn-root Diabrotica.** Same as ★*corn-root worm*.

diacalorimeter (dī-a-kal-ō-rim′e-tėr), *n.* [Gr. διά, through, + E. *calorimeter*.] A device for measuring the insulating power of liquids for heat.

diacanthous (dī-a-kan′thus), *a.* [Gr. δι-, two-, + ἄκανθα, thorn, spine.] Having two spines under each leaf. *Syd. Soc. Lex.*

diacathodic (dī-a-ka-thod′ik), *a.* [*dia-* + *cathode* + *-ic*.] Of or pertaining to rays obtained by the interposition of a perforated metallic screen or gauze, negatively electrified, in the path of cathode rays.

diacetic (dī-a-set′ik), *a.* [*di-*[2] + *acetic*.] Acetoacetic. **Diacetic acid,** an acid ($CH_3COCH_2CO_2H$) sometimes found in the urine under abnormal conditions, notably in diabetes. It is derived by oxidation from oxybutyric acid and by loss of carbon dioxide gives rise to acetone. Also called *acetoacetic acid*.

diacetonuria (dī-as″e-tō-nū′ri-ä), *n.* [NL., < *diacet(ic)* + *-on* + Gr. οὖρον, urine.] The excretion of diacetic acid in the urine. It may occur in the course of infectious fevers or of diabetes, in the latter case often preceding the appearance of coma. Also *diaceturia*.

diaceturia (dī″as-ē-tū′ri-ä), *n.* [NL., < *diacet(ic)* + Gr. οὖρον, urine.] Same as ★*diacetonuria*.

diacetyl (dī-as′e-til), *n.* [*di-*[2] + *acetyl*.] A yellow compound, $CH_3COCOCH_3$, the simplest member of the class of aliphatic 1, 2-diketones, prepared from isonitroso methyl-ethyl ketone. It boils at 88° C., has a pungent, sweet odor, and its vapor has the color of chlorin.

diaclase (dī′a-klās), *n.* [Gr. διάκλασις, a breaking in two (used in fig. sense of 'feebleness'), < διακλᾶν, break in two, < διά, apart, + κλᾶν, break.] In *geol.*, a joint: a name suggested by Daubrée. Compare ★*paraclase* and ★*lithoclase*.

Daubree showed that the valley system of northern France follows a line of rectangular fractures, which he called *diaclases*.
J. W. Gregory, in Smithsonian Rep., 1898, p. 374.

diaclasite (dī-ak′la-sīt), *n.* [Gr. διάκλασις, a breaking apart, + *-ite*[2].] A partially altered enstatite.

diaclast (dī′a-klast), *n.* [Gr. *διάκλαστος, < διακλᾶν, break in two, < διά, apart, + κλᾶν, break.] An instrument used in perforation of the fetal skull in craniectomy.

diaclastic (dī-a-klas′tik), *a.* [As *diaclast* + *-ic*.] Pertaining to or produced by diaclases.

The direction of the Greenland fiords is determined by a similar series of intersecting *diaclastic* fractures.
Geog. Jour. (R. G. S.), XIII. 236.

diaclinal (dī-a-klī′nal), *a.* [Gr. διά, through, + κλίνειν, bend.] In *geol.*, transverse to the axis of a fold. **Diaclinal valley,** a valley which cuts across an anticline or syncline.

diacodion (dī-a-kō′di-on), *n.* Same as *diacodium*.

diacœlosis (dī″a-sē-lō′sis), *n.* [NL., < Gr. διά, through, + κοίλωσις, a hollow, lit. a hollowing, < κοιλοῦν, make hollow.] The division of the cœloma or body-cavity into sinuses and channels, as in leeches.

The cœlome is much restricted by a growth of connective tissue, which splits it up into sinuses and channels, a process termed *diacœlosis*.
Rolleston and Jackson, Forms of Animal Life, p. 579.

diaconics (dī-a-kon′iks), *n.* [Gr. διακονικός, of deacons, < διάκονος, deacon.] That branch of practical theology which treats of the science of the 'inner mission,' that is, the mission to the community already Christianized, as distinguished from the 'outer mission,' which reaches out to the unconverted world. It is the study of pastoral duty to the sick, the unfortunate, and the fallen.

diacranterian, *a.* 2. Having a tooth in the hinder portion of the jaw longer than the other teeth. This type of dentition is found in some snakes, the common hog-nosed viper, *Heterodon*, being a good example: opposed to *isodont*.

II. *n.* A snake having a tooth in the hinder part of the jaw longer than the other teeth.

diacrinous (dī-ak′ri-nus), *a.* [Irreg. < Gr. διακρίνειν, separate, + *-ous*.] A term applied to gland-cells which permit their secretion or excretion to pass out directly as from a filter: opposed to ★*ptyocrinous*. The kidneys are good examples of diacrinous glands.

diacrisis (dī-ak′ri-sis), *n.* [NL., < Gr. διάκρισις, separation, < διακρίνειν, separate: see *diacritic*.] 1. A disease characterized by a morbid state of the secretions.—2. A critical discharge or excretion, as sweating in pneumonia.

diacritical, *a.*—**Diacritical current,** in *elect.*, a magnetic current which will produce in an iron coil diacritical magnetization, or a magnetization equal to one half saturation.

diacromyodous (dī″a-krō-mī-ō′dus), *a.* [Gr. δι-, two,- + ἄκρον, extremity, + μυώδης, mussel-like, < μῦς (μυ-), muscle.] In *ornith.*, having the syringeal muscles attached to both the upper and the lower ends of the bronchial half-rings.

diactin (dī-ak′tin), *n.* [Gr. δί-, double, + ἀκτίς (ἀκτιν-), a ray.] In the nomenclature of the spicular elements of sponges, a straight or curved spicule with two arms.

diactinism (dī-ak′tin-izm), *n.* [*diactin-ic* + *-ism*.] The property, possessed by certain substances, of transmitting chemically active rays.

Diadectidæ (dī-a-dek′ti-dē), *n. pl.* [NL., < *Diadectes* + *-idæ*.] A family of anomodont *Reptilia*, founded on genera from the Permian formation and including *Diadectes*, *Empedias*, and some others. The teeth are transversely elongated and [illegible] this peculiar type of tooth as indicative of herbivorous diet.

diadem, *n.* 6. In *embryol.*, a term applied to certain eggs in the blastula stage.

Diadematoidea (dī-a-dēm″a-tō-id′ē-ä), *n.* [NL., < Gr. διάδημα(τ-), diadem, + εἶδος, form.] An order of *Eucchinoidea* or sea-urchins, having an actinal central peristome and an abactinal periproct situated within the dorsocentral system, internal and external branchiæ, jaws and teeth and a continuous perignathic girdle, and ambulacral plates continued beyond the peristome or as separate buccal plates.

Diademina (dī″a-de-mī′nä), *n. pl.* [NL. for **Diadematina*, < Gr. διάδημα, diadem, + *-ina*[2].] A group or suborder of regular ectobranchiate *Echinoidea*, of the order *Diademoida*, having the ambulacral plates of varying degrees of complexity. It includes the *Orthopsidæ*, *Diadematidæ*, *Pedinidæ*, and other families.

Diademoida (dī-a-de-moi′dä), *n. pl.* [NL. for *Diadematoida*, < Gr. διάδημα, diadem, + *-oida*.] An order of regular ectobranchiate *Echinoidea*. They have the mouth and anus both central and opposite, the latter opening in the center of the apical system; the external branchiæ passing out through the buccal clefts; a dental apparatus present; no interambulacral plates on the peristomial membrane; and the ambulacral plates generally compound. It includes the *Arbaciidæ*, *Diadematidæ*, *Strongylocentrotidæ*, and other families.

diaderm (dī′a-dėrm), *n.* [Appar. < Gr. διά, through, + δέρμα, skin.] In *embryol.*, a collective term for both ectoderm and entoderm.

diadochokinesia (dī-ad″ō-kō-ki-nē′si-ä), *n.* [NL., < Gr. διαδοχή, succession, + κίνησις, motion.] The power of executing, in alternation, antagonistic movements, as those of flexion and extension of a limb.

diadromous (dī-ad′rō-mus), *a.* [Gr. διάδρομος, running through, < διά, through, + -δρομος, < δραμεῖν, run.] In *bot.*, having all the nearly equal nerves proceeding in a fan-like manner from the summit of the petiole to the margin of the leaf, as in the maidenhair-tree.

diadumenos (dī-a-dū′men-os), *n.* [Gr. διαδούμενος, middle, ppr. of διαδεῖν, bind around: see *diadem*.] In Gr. *antiq.*, a fillet-binder: a name applied to a class of antique marble and bronze statues representing an athlete binding a fillet about his head. They are supposed to be based upon a famous bronze original by the sculptor Polycletus.

diæne (dī′ēn), *n.* [Gr. δι-, two, + -αινα, the termination of τρίαινα, a trident]. In the nomenclature of the spicular elements of sponges, a triæne in which one of the cladisks has been atrophied.

diafanous, *a.* A simplified spelling of *diaphanous*.

diaforetic, *a.* and *n.* A simplified spelling of *diaphoretic*.

diafragm, *n.* A simplified spelling of *diaphragm*.

diagenesis (dī-a-jen′e-sis), *n.* [NL., < Gr. διά, through, + γένεσις, birth.] In *geol.*, the action of heated waters upon clastic sediments at the time of their deposition, assumed to explain the origin of crystalline schists: proposed by Gümbel (1888); employed by Walther to embrace those physical and chemical modifications which take place in a sediment from the time of its deposition to the time when it is modified by orogenic or volcanic forces, when it undergoes metamorphism.

diagenetic (dī″a-jē-net′ik), *a.* Caused by or characteristic of diagenesis.

diagenic (dī-a-jen′ik), *a.* [*diagen(esis)* + *-ic*.] Pertaining to or resulting from the processes of diagenism.

To sum up, metamorphism may be considered as presenting itself under these phases, 1. Static metamorphism or diagenism, the product being *diagenic* rocks.
A. W. Grabau, in Amer. Geol., April, 1904, p. 236.

diagenism (dī-aj′e-nizm), *n.* [*diagen(esis)* + *-ism*.] A term used by Johannes Walther to include all the physical and chemical changes

which a rock mass undergoes after deposition, aside from those caused by pressure during orogenic disturbances or by igneous activity. *Amer. Geol.*, April, 1904, p. 236.

diagnosable (dī-ag-nō′sa-bl), *a.* [*diagnose* + *-able.*] Capable of being diagnosed.

diagnosis, *n.* **Clinical diagnosis,** diagnosis made from the symptoms alone. **Diagnosis by exclusion,** diagnosis based upon a comparison of all the affections which have various symptoms in common, and the rejection of one after another as certain essential signs are found to be lacking, until only one disease, which answers all the tests, remains. **Pathological diagnosis,** diagnosis made by an examination of the morbid changes present. **Physical diagnosis,** diagnosis based upon information obtained by auscultation, percussion, and palpation. **Serum diagnosis,** diagnosis by means of serums. Among the various antibodies (see ★*immunity*) which have been discovered, the agglutinins and precipitins are of special interest: the first, because their formation facilitates not only the diagnosis of certain bacterial infections, but also the recognition of the corresponding organisms; the second, on account of their special biological and medicolegal significance, the modern blood-test being based upon their formation. (*a*) As regards the *agglutinins*, Gruber and his pupil Durham first showed that cholera bacilli and typhoid bacilli when suspended in an inert fluid lose their motility and collect in little clumps (see ★*agglutination*, 4) upon the addition of homologous blood-serum, that is, of blood-serum derived from an individual infected with the corresponding organism.

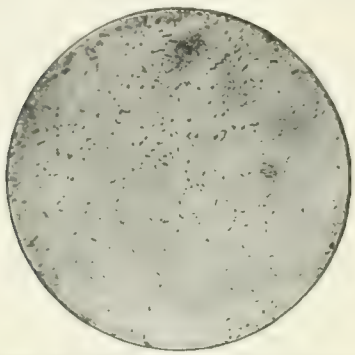


Figure showing typical Typhoid Bacilli, before the Action of the corresponding Agglutinin. (From Cabot's "Guide to the Clinical Examination of the Blood.")

Further research then led to the recognition of the fact that within certain limitations the action of the agglutinins is specific, that is, that the blood-serum from a typhoid patient, for example, does not agglutinate the common colon bacillus, the cholera bacillus, streptococci, staphylococci, etc., and *vice versa*. But it was also

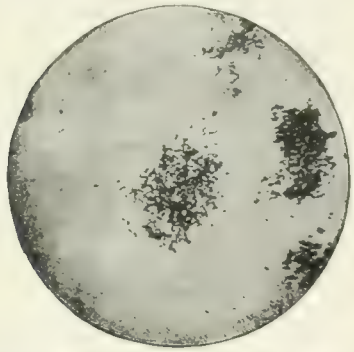


Figure showing typical Agglutination. (From Cabot's "Guide to the Clinical Examination of the Blood.")

shown that the blood-serum from a given case may cause a positive reaction with closely related organisms, as in the case of cholera serum, which will agglutinate *vibrio Ivanoff*, *vibrio Berolinensis*, and *vibrio Seine-Versailles*. Then it was demonstrated that normal blood-serum may have a more or less well-marked agglutinative effect on certain organisms, so that it would appear that the value of this method for the purpose of recognizing bacteria must of necessity be limited. While this is true, in a certain sense, it has been ascertained that marked quantitative differences exist in the behavior of immune blood-serums to micro-organisms in general, and that it is possible to obtain a positive and exclusive reaction between a given organism and its corresponding serum if the latter is strongly diluted. Normal human blood-serum, for example, will not agglutinate the typhoid bacillus in dilutions exceeding 1:10, while with typhoid serum a positive reaction can still be obtained with dilutions of 1:50, 1:200, and more. The clinical significance of the principle of bacterial agglutination was first pointed out by Widal, who showed that the reaction can be obtained with typhoid blood-serum quite early in the course of the disease, namely, at a time when the other clinical symptoms often leave the diagnosis in doubt. For this reason Widal's name has been coupled with the reaction. It should, however, be termed the *Gruber-Widal reaction*, or, still better, the *Gruber-Grünbaum-Widal reaction*, for Grünbaum had fully realized the clinical import of Gruber's discovery before Widal, but did not publish his results, owing to the scarcity of his material, until after Widal's first paper had appeared. At the present time the method is fully recognized as one of the most important in the diagnosis of typhoid fever especially, and is extensively utilized in clinical work. In other diseases, such as dysentery, Malta fever, bubonic plague, cholera, pneumococcus infections, etc., the method is at times also applicable for diagnostic purposes, but the clinical value of the reaction is here diminished to a certain extent, owing to the comparatively late date of its appearance. For the recognition of the corresponding organisms, however, it is invaluable. The clinical examination may be conducted as follows: A large drop of blood is received on a glass slide and allowed to dry. In this form the material is conveniently brought to the laboratory. Here the blood is soaked off with sterile bouillon, or distilled with water, using 15–25 drops for the one drop of blood. This gives a dilution of 1:15:25, as the case may be. One drop of this fluid is placed on a cover-glass and mixed with a drop of a bouillon culture of the typhoid organism not more than 24 hours old. In this manner a final dilution of 1:30:50 is secured. The cover-glass is mounted on a cupped slide and set aside for 30 minutes. If at the expiration of this time the bacilli have lost their motility and have gathered in clumps, as shown in the accompanying illustration, the reaction is positive. Numerous modifications of this method have been described, which are all alike in principle. A new departure, however, has been made of late in the use of dead cultures, which are agglutinated in the same manner. This is an important discovery, since it makes the test more readily applicable for the general practitioner, doing away with the necessity of keeping an actively motile culture on hand. The reaction is obtained in fully 96 per cent. of all cases of typhoid fever at some stage in the course of the disease. (*b*) As regards the *precipitins*, these bodies are formed as the result of immunization of animals with albuminous substances derived from individuals of a different species. When the resultant antiserums are then brought together with solutions of the albumins used in immunization, precipitates result. This phenomenon has been notably investigated by Tchistowitsch, Bordet and Wolf, Wassermann, and Uhlenhuth, and the underlying principle utilized in forensic blood-diagnosis. To this end the material in question (stains on clothes, wood, weapons, etc.) is first examined for the presence of blood by the usual methods (hemin test, spectroscopic behavior, etc.). If the presence of blood has thus been demonstrated, the question whether it is of human origin or not is next investigated by mixing a filtered solution of the material under examination with a small amount of blood-serum obtained from a 'humanized' rabbit, that is, a rabbit in which precipitin formation has been previously provoked by repeated injections of human blood-serum (hydrocele fluid). The mixture is kept in an incubator, at the temperature of the body, for a number of hours and is then examined. If a precipitate results, the blood-stains are presumbly human. The differentiation of animals of closely related species is, however, not possible in this manner, and the blood of a humanized rabbit will thus not only precipitate the serum of the human being, but likewise that of the anthropoid apes. In this manner the close relationship existing between different species can be demonstrated, a fact which renders the precipitins of signal interest also to the biologist. See also ★*agglutination test.*

diagnosticum (dī-ag-nos′ti-kum), *n.*; pl. *diagnostica* (-kä). [NL.] A means of diagnosis. —**Ficker's diagnosticum,** a dead culture of the typhoid bacillus which, in suspected cases of typhoid fever, can be used in the agglutination test, in the place of the living organisms. See ★*agglutination test.*

Diagonal line, the line through the middle points of the three diagonals of a complete quadrilateral; specifically, in *naval arch.*, a curved line formed by the intersection of a diagonal plane with the surface of a vessel. The diagonal plane intersects the central longitudinal plane in a horizontal line and is thence inclined downward and outward. A *rabatted diagonal* is a diagonal shown in its true form, by turning the diagonal plane up to the horizontal about its intersection with the central longitudinal plane as a hinge. See *rabattement.* Diagonal lines are much used in obtaining smooth, fair forms for a vessel's lines, and the harpings usually follow the diagonals. See cut under *harping*, 2 (*b*). Also *diagonal.*—**Diagonal symmetry.** See ★*symmetry.*—**Diagonal trigram.** See ★*trigram.*

diagram, *n.*—**Argand diagram,** a plane figure representing imaginary quantities of the form $x + yi$, by points having for orthogonal coördinates x and y. In such a diagram it is necessary to consider the parts of the plane at infinity to be one point.—**Entropy diagram,** the diagram of a thermodynamic cycle involving changes of entropy.—**Euler's diagram,** a graphic representation of logical relations first given by the mathematician Leonard Euler, in his "Letters to a German Princess." Circles, or ovals, are used to represent each by its contained surface the aggregate of possible individuals to which a certain predicate applies.—**Hertz's diagram,** a graphic presentation of the temperature, pressure, and moisture of a unit mass of moist air when undergoing adiabatic changes of volume.—**Metacentric diagram.** See ★*metacentric.*—**Neuhoff's diagram,** a diagram, analogous to that of Hertz, used for the purpose of determining more accurately the condition of the moisture in air ascending to a given altitude or pressure.—**Puiseux diagram,** a diagram of unit points, like the intersections of the horizontal and vertical lines of squared paper, introduced by the French geometer Puiseux, for the treatment of functions.—**Strain-diagram,** a figure or diagram drawn (as a rule automatically) by the mechanism of a testing-machine, in which the abscissæ are the pounds of stress applied to the test-piece and the ordinates are the strains or the amount of deformation, in pounds or tons, of the specimen under that load. The paper on which the diagram is drawn is moved in abscissa by the weighing apparatus, while the specimen in changing its form under stress describes the ordinate by means of a multiplying mechanism attached to it for the purpose.—**Variation-diagram,** an indicator-diagram which records the diagrams for enough successive strokes of the engine to determine whether the governor is acting properly, or whether it is unable properly to control the steam admission.—**Volume-entropy diagram,** a thermodynamic diagram expressing the relation between the volume of a substance, such as a gas or vapor, and its entropy.—**Volume-pressure diagram,** a thermodynamic diagram expressing the relations between the volume and pressure of a gas or vapor.

diagram-factor (dī′a-gram-fak″tor), *n.* The ratio of the actual mean effective pressure, measured from an indicator-diagram, to the mean effective pressure of a diagram in which the various operations of admission, expansion, release, and compression are carried on under assumed ideal conditions. *Trans. Amer. Soc. Mech. Engin.*, XXIV. 751.

diagramic (dī′a-gram-ik), *a.* Same as *diagrammatic.*

Diagramma (dī′a-gram-ä), *n.* [NL.: see *diagram.*] The name of a genus of grunt-fishes, of the family *Hæmulidæ*, found in the East Indies.

diahydric (dī-a-hī′drik), *a.* [Gr. διά, through, + ὕδωρ (ὑδρ-), water.] Passing through or conveyed by water: as, a *diahydric* sound.

diakathodic, *a.* See ★*diacathodic.*

diakinesis (dī″a-ki-nē′sis), *n.* [NL., < Gr. διά, through, + κίνησις, movement.] In *cytol.*, the segmented spireme stage in the primary oöcyte or spermatocyte. This stage follows synapsis and is characterized by the persistence of the chromosomes for some time in the form of double rods.

dial[1], *n.*—**Lunar dial.** Same as *night* or *nocturnal dial.*

dial[2] (dī′al), *n.* [Origin not ascertained.] The commercial name for the best grade of kauri-gum.

dial. An abbreviation (*a*) of *dialect;* (*b*) of *dialectal, dialectic,* or *dialectical.*

dialdane (dī-al′dān), *n.* [*di-*[2] + *ald(ehyde)* + *-ane.*] A colorless crystalline compound, $OCHCH_2CH(OH)CH{:}CHCH_2CH(OH)CHO$, prepared by the action of hydrochloric acid on a mixture of aldehyde and water. It melts at 130° C. and may be distilled under reduced pressure.

dialdanic (dī-al-dan′ik), *a.* [*dialdane* + *-ic.*] Derived from dialdane.—**Dialdanic acid,** a colorless compound, $C_8H_{14}O_4$, prepared by the action of potassium permanganate on dialdane. It forms monoclinic crystals, melting at 80° C. and boiling at 193° C. under 20 millimeters pressure.

dial-feed (dī′al-fēd), *n.* In *sheet-metal work,* a feed-motion adapted to multiple-die presses which perform one or more operations upon a single blank or shell. It consists essentially of a circular plate, called the *dial*, which revolves horizontally under the upper dies of the press. Two types are in use. In one the dial is a flat plate on which the shells are placed by hand. As it revolves the shells are carried under the single upper die, each being brought to the right position by stationary guides above the dial. The dial can also be used to carry the shells to a second feed-motion which carries each in turn under a gang of dies that perform a series of operations upon each shell. See ★*multiple-press* (with cut). In the other type the dial carries a number of female dies placed in a ring upon the plate. The blanks or shells are fed to these as they pass the front and are carried by the rotation of the dial under one or more upper dies in turn. The press may have three upper dies and perform an equal number of similar operations, or it may have two or three different dies and perform a series of consecutive operations upon each blank in turn. Presses having a dial feed-motion are called *dial-presses.*

diallagic (dī-al′a-jik), *a.* [*diallage* + *-ic.*] Of, or of the nature of, the mineral diallage.

dialog, *n.* and *v.* A simplified spelling of *dialogue.*

Dialommus (dī-a-lom′us), *n.* [NL., < ML. *dialis*, dial, + Gr. ὄμμα, eye.] A genus of blennies from the Galápagos Islands, characterized by having the eyes divided each by a horizontal partition. *D. fuscus* is the only known species.

dial-press (dī′al-press), *n.* A press having a dial-feed motion. See ★*dial-feed.*—**Horizontal dial-press,** a dial-press employing a vertical dial fitted with a number of female dies, placed in a horizontal position, the single opposing die moving in horizontal guides. The shells are fed to the revolving dies by hand.

dial-recorder (dī′al-rē-kôr″dèr), *n.* A clock combined with a dial recording mechanism for registering the time of arrival and departure of employees.

dialurate (dī-a-lū′rāt), *n.* [*dialur-ic* + *-ate*[1].] A salt of dialuric acid.

dialuric (dī-a-lū′rik), *a.* [*dial(ysis)* + *uric.*] Noting an acid, a colorless compound, $CO\langle^{NHCO}_{NHCO}\rangle CHOH$, prepared by the reduction of alloxan. It crystallizes in short, tetragonal prisms. Also called *tartronyl-urea.*

dial-writer (dī′al-rī″tèr), *n.* A form of writing- or printing-machine of the type-writer class, in which the letters are arranged on a dial like the figures on a clock-face and a pointer or arm is moved to the desired letter, or the

whole dial is turned on its center to bring the desired letter to the point where the impression is to be made.

dialycarpel (dī″a-li-kär′pel), *n.* [Irreg. < Gr. *διαλύειν*, part asunder, + NL. *carpellum*, carpel.] A fruit with separate carpels. *Syd. Soc. Lex.*

dialycarpic (dī″a-li-kär′pik), *a.* Same as *dialycarpous*.

dialydesmy (dī″a-li-des′mi), *n.* [Irreg. < Gr. *διαλύειν*, part asunder, + *δεσμός*, band, + *-y*³.] In *bot.*, the breaking up of the axial cylinder into separate bundles each with its own sheath.

dialyneurous (dī″a-li-nū′rus), *a.* [Irreg. < Gr. *διαλύειν*, part asunder, + *νεῦρον*, nerve, + *-ous*.] Characterized by dialyneury: as, the *dialyneurous* nervous system of certain gasteropods. *Proc. Zool. Soc. London*, 1901, II. 466.

dialyneury (dī″a-li-nū′ri), *n.* [*dialyneur-ous* + *-y*³.] The condition of the nervous system among rhipidoglossal *Mollusca*, characterized by the anastomosis of each pleural ganglion with the opposite half of the visceral commissure by means of the pallial nerve.

dialysator (dī′al-i-zā-tor), *n.* [*dialyse* + *-ator*.] In *phys. chem.*, a dialyzer. [Rare.]

dialysis, *n.* 7. In *bot.*, the separation of parts normally united, especially the parts of a whorl.—8. In *petrog.*, transformation of rocks by weathering and processes of disintegration: in contrast to processes of metamorphism.

dialystaminous (dī-al-i-stam′i-nus), *a.* [Irreg. < Gr. *διαλύειν*, part asunder, + NL. *stamen*, stamen.] In *bot.*, having the stamens separate. *N. E. D.*

dialystely (dī″a-li-stē′li), *n.* [Irreg. < Gr. *διαλύειν*, part asunder, + *στήλη*, a pillar.] In *bot.*, the condition in which the axial cylinder consists of several plerome strands or steles which remain for the most part separate throughout their course.

dialytic, *a.* 4. In *biol.*, noting an evolutionary stage or condition in which the divergent characters of inbred varieties do not combine or average in the hybrids but follow one or the other of the parental lines, as discovered by Mendel. Compare ★*catalytic*, 2, ★*hemilytic*, and ★*prostholytic*. *O. F. Cook.*

dialytically (dī-a-lit′i-kal-i), *adv.* By dialysis; specifically, in *math.*, by dialytic elimination (which see, under *dialytic*).

dialyzation (dī-al-ī-zā′shon), *n.* Same as *dialysis*.

diam. An abbreviation of *diameter*.

diamagnetic, *a.* 2. Of lower permeability than air. See *magnetic* ★*circuit*.

diamantine, *a.* II. *n.* A trade-name for boron in the crystallized state and in fine powder, used as an extremely hard abrasive and polishing material.

diamba (dē-am′bä), *n.* [Native name.] Same as *diamba*.

diameter, *n.* 3. The diameter (see def. 2) of the object observed, taken as a convenient measure of linear magnification used in microscopy and in telescopic work.

> A magnification of 15 *diameters* or more is easy.
> *D. P. Todd*, Stars and Telescopes, p. 320.

Coccygeopubic diameter. See ★*coccygeopubic*.—**Conjugate diameter of the pelvis**, a diameter of the brim of the pelvis measured from the promontory of the sacrum to the symphysis pubis.—**Diameter limit**, the diameter, usually breast-high, which defines the size to which trees are to be measured or used for any given purpose. Also *cutting limit*.—**Intertuberal diameter**, in *anthrop.*, the inner diameter of the pelvis measured between the sciatic notches.

diameter-tape (dī-am′e-tėr-tāp), *n.* A tape for ascertaining the diameter of trees, so graduated that the diameter corresponding to the girth of a tree is read directly from the tape.

Diametral curve. See ★*curve*.—**Diametral plane.** (*b*) See ★*plane*.

diamide (dī-am′id), *n.* [*di*-² + *amide*.] 1. Same as *hydrazine*.—2. The name of a class of organic compounds containing two univalent amido groups, -CONH; they are derived from dibasic acids.

Diamine azo-blue, black, etc. See ★*azo-blue*, ★*black*, etc.—**Diamine colors**, the direct cotton coal-tar colors: named because many of them are diamines. For specific diamine colors see ★*blue*, ★*red*, ★*green*, etc.

diaminogen (dī-a-min′ō-jen), *n.* [*diamine* + *-gen*.] A direct cotton coal-tar color of the disazo type, prepared by combining diazotized acetyl-naphthylamine-diamine with *α*-naphthylamine, diazotizing the product and combining again with *β*-naphthol-sulphonic acid, and finally saponifying with sodium hydroxid. It dyes unmordanted cotton a dark blue in a salt bath. By subsequently diazotizing and combining with *β*-naphthol, indigo-blue shades are obtained; when combined with metadiamines, fast blacks are produced.

diaminuria (dī-am-i-nū′ri-ä), *n.* [*diamine* + Gr. *οὖρον*, urine.] The elimination of diamines in the urine. This is notably observed in association with cystinuria, where putrescine and cadaverine have been repeatedly met with.

diamond. I. *n.* 2. The diamond has been artificially reproduced by Moissan, though as yet only in extremely small crystals, by dissolving amorphous carbon in molten iron at the very high temperature of an electric furnace and suddenly cooling the metal by dropping it into water or mercury, which causes crystallization to take place under the pressure due to the contraction of the exterior of the mass upon the interior portion. By dissolving away the iron with an acid the minute diamond crystals are isolated. The recent discovery of minute diamonds in the meteoric iron of Cañon Diablo, Arizona, gives a peculiar interest to these experiments of Moissan. The diamond-mines in South Africa, which were comparatively unproductive during the Boer War, with its close rapidly returned to normal activity. This region has been enormously productive, the mines near Kimberley having yielded, according to one estimate, rough diamonds to a value of approximately $250,000,000, during the period from 1889 to June 30, 1903. It has also produced some very large diamonds: the Jubilee diamond, found at Jagersfontein, in 1893, weighed 972 carats, and the Cullinan diamond, found at the Premier mine January 25, 1905, weighed 3,025 carats, or one and one third pounds. The latter stone measured 4×2½×2 inches, and was bounded in part by natural octahedral faces and in part by cleavage planes. The original stone before fracture had probably nearly double the weight given.—**Brazilian diamond**, a name given to small spherical or rounded crystals of diamonds, in contradistinction to the Indian type—the octahedral form.—**Cape May diamonds, Lake George diamonds**, clear, well-formed quartz crystals fancifully supposed to resemble diamonds.—**Indian diamond**, the octahedral form of diamond.—**Irish diamond**, a name originally applied to rock-crystal cut in diamond form, but more recently applied to a paste imitation of a diamond when sold by Irish dealers. **Rose diamond.** See *rose-cut*. **Writing diamonds**, minute pointed cleavages of diamonds, secured in steel or copper holders, used for making minute marks, letters, or inscriptions on glass or similar substances.

II. *a.* **Diamond brown, cement, flavin**, etc. See ★*brown*, etc. **Diamond cotton.** (*b*) A cotton diaper into which a small diamond figure is woven.—**Diamond draw-plates, photograph.** See ★*draw-plate*, ★*photograph*.

diamond-black (dī′a-mond-blak″), *n.* 1. The trade-name of a very fine lampblack, almost absolutely pure carbon, made in Ohio by the smothered combustion of natural gas: used in the preparation of printers' ink.—2. A mordant acid coal-tar color of the disazo type, derived from salicylic acid. It dyes wool in an acid bath a black which becomes exceedingly fast when after-treated with potassium bichromate. It may also be applied upon chromium-mordanted wool.

diamond-field (dī′a-mond-fēld), *n.* An area which yields diamonds from its superficial deposits: as, the *diamond-fields* of South Africa.

diamond-fig (dī′a-mond-fig″), *n.* Same as ★*diamond-plant*.

diamond-fish (dī′a-mond-fish″), *n.* Any of the garpikes (*Lepidosteidæ*): so named on account of its diamond-shaped scales.

diamond-flounder (dī′a-mond-floun″dėr), *n.* A large flounder, *Hysopsetta guttulata*, found on the Pacific coast of the United States.

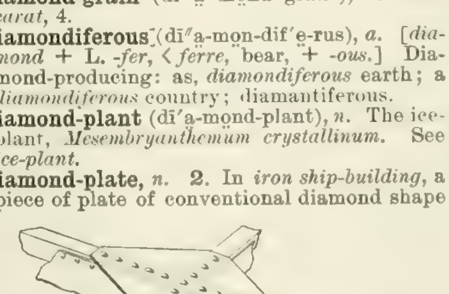
diamond-frame (dī′a-mond-frām), *n.* In a bicycle, the truss made of hollow steel tubing, brazed at the joints, by which the weight of the rider is transferred to the axles of the wheels. Its shape is approximately that of the lozenge on a playing-card called the *diamond*. See *bicycle*.

diamond-grain (dī′a-mond-grān″), *n.* See *carat*, 4.

diamondiferous (dī″a-mon-dif′e-rus), *a.* [*diamond* + L. *-fer*, < *ferre*, bear, + *-ous*.] Diamond-producing: as, *diamondiferous* earth; a *diamondiferous* country; diamantiferous.

diamond-plant (dī′a-mond-plant), *n.* The ice-plant, *Mesembryanthemum crystallinum*. See *ice-plant*.

diamond-plate, *n.* 2. In *iron ship-building*, a piece of plate of conventional diamond shape



Diamond-plate.

uniting and strengthening parts which cross each other at the same level.

diamond-point, *n.* 2. In *railroading*, a crossing where two tracks cross obliquely instead of at a right angle. [Eng.]—**Diamond-point tool.** (*a*) A pointed tool which takes a chisel shape, used by pattern-makers for forming internal mitres. (*b*) A tool which has a V-shaped point, used for turning and grooving metal.

diamond-sparrow (dī′a-mond-spar″ō), *n.* One of the honey-suckers, *Dicæidæ*, *Pardalotus affinis*, which is spangled with red, yellow, white, and black. Also called *diamond-bird*. [Australia.]

diamond-spot (dī′a-mond-spot), *n.* A British collectors' name for a European pyralid moth, *Botys trigonalis*.

diamond-truer (dī′a-mond-trö″ėr), *n.* A hand-tool consisting of a short rod of steel with a wooden handle, and having a black diamond inserted in the point of the bar: used in dressing and truing emery-wheels.

diamond-willow (dī′a-mond-wil″ō), *n.* See *willow*¹.

diamorphosis, *n.* 2. In *physiol.*, growth into normal shape.

diamylene (dī-am′i-lēn), *n.* [*di*-² + *amyl* + *-ene*.] A colorless compound, $(CH_3)_2C{:}C(CH_3)C(CH_3)_2CH_2CH_3$, prepared by the action of sulphuric acid on trimethylethylene. It boils at 154–156° C.

Diana fritillary. See ★*fritillary*.—**Tree of Diana.** See ★*tree*.

diancister (dī-an-sis′tėr), *n.* [NL. *diancistron*, < Gr. *δι-*, double, + *ἄγκιστρον*, a fish-hook.] In the nomenclature of the spicular elements of sponges, a monaxial C- or S-shaped rhabd with the ends sharply bent and with a central excision.

diandrous, *a.* 2. In *ornith.*, having two male mates.

dianil (dī-an′il), *n.* [*di*-² + *anil*.]—**Dianil black, blue.** See ★*black*, ★*blue*.

dianine (dī-an′in), *n.* [*dian(il)* + *-ine*².] The trade-name of a photographic developer consisting of diaminoresorcinol.

dianisidine (dī-a-nis′i-din), *n.* [*di*-² + *anisidine*.] An organic compound formed by the condensation of two molecules of anisidine with the elimination of two atoms of hydrogen.—**Dianisidine blue.** See ★*blue*.

dianium (dī-ā′ni-um), *n.* [NL., < L. *Diana*, Diana.] A name proposed by Von Kobell for a supposed new element obtained from the mineral columbite as found in Bavaria. It has been shown to be the same as niobium.

Dianol red. See ★*red*¹.

dianthine (dī-an′thin), *n.* [Appar. < NL. *Dianthus*, pink, + *-ine*².] A direct cotton coal-tar color of the disazo type, derived from diamidoazoxy-toluene, which dyes unmordanted cotton red in an alkaline salt bath. Also called *rosophenine*, *rock scarlet*, *St. Denis red*, and *Trona red*. **Dianthine B** and **G**, two coal-tar colors of the xanthene type, similar in properties and composition to erythrosin.

diap. An abbreviation of *diapason*.

diapalma (dī-a-pal′mä), *n.* [Gr. *διά*, through (cf. *diachylon*, *diacodium*, etc.), + L. *palma*, palm.] A drying and cleansing plaster formerly composed of palm-oil, litharge, and sulphate of zinc, but now generally made of white wax, diachylon plaster, and sulphate of zinc.

diapason, *n.*—**Bell diapason**, in *organ-building*, an open diapason stop of which the pipes are flared or belled at the top, which produces a slight increase in the reedy quality of the tone.—**Diapason clock.** See ★*clock*².

diapause (dī′a-pâz), *n.* [Gr. *διά*, through, + *παῦσις*, stopping: see *pause*.] In *embryol.*, the stage of quiescence which separates two blastokinetic movements in the insect embryo. *Wheeler*, 1893.

diapensiaceous (dī″a-pen-si-ā′shius), *a.* Belonging to the plant family *Diapensiaceæ*.

diaphanie (dē-ä-fa-nē′), *n.* [F., < *diaphane*, diaphanous.] A process for the imitation of painted or stained glass. *N. E. D.*

diaphanoscope, *n.* 2. An illuminating apparatus employed in diaphanoscopy.

diaphanoscopy (dī″a-fa-nos′kō-pi), *n.* [*diaphanoscope* + *-y*³.] Examination of a cavity, such as the antrum of Highmore, or of a hollow organ, such as the stomach, by means of trans-illumination, an electric light being placed behind or within the part.

diapherin (dī-af′e-rin), *n.* [Gr. *διαφέρειν*, differ, + *-in*².] An amber-colored compound of asepterol, $HOC_6H_4SO_2NHC_9H_6O$, (1:2), used in surgery as a powerful antiseptic. It forms hexagonal crystals which melt at 85° C.

diaphery (di-af'ē-ri), *n.* The calycine synthesis of two flowers. *Morren.*

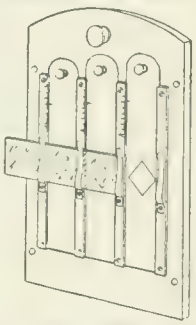
diaphoric (di-ą-for'ik), *a.* [Gr. διαφορά, difference, + *-ic.*] Of or pertaining to differences. — **Diaphoric function.** See ★*function.*

diaphotoscope (dī-ą-fō'tō-skōp), *n.* [Gr. διά, through, + φῶς (φωτ-), light, + σκοπεῖν, view.] Same as ★*diaphanoscope.*

diaphragm, *n.*, **2.** (*c*) A thin ring or plate, pierced with a hole which is usually, but not always, circular. A series of these is attached to the inside of the tube of a telescope or other optical instrument for the purpose of preventing reflections of light from the inner walls of the tube. (*d*) A sheet or disk of flexible material, confined at the edges, but free to yield to pressure on one side or the other: used in regulating-devices where pressure is one element, and to operate valves by a pressure from a distance. (*e*) In tunnel-work, a partition separating the working-face from the first chamber.— **6.** In *statistical mech.*, a portion of space, separating two ensembles of systems of molecules, such that there is no interchange of particles between the two.

This independence of the systems determined physically by forces which prevent particles from passing from one system to the other, or coming within range of each other's action, is represented mathematically by infinite values of the energy for particles in a space dividing the systems. Such a space may be called a *diaphragm.*
J. W. Gibbs, Statistical Mech., p. 196.

7. In *pathol.*, a membranous structure which partly or completely closes the lumen of a tube or cavity: as, inherited *diaphragm* of the larynx. *Med. Record,* Jan. 17, 1903, p. 111.— **Aubert diaphragm,** in *psychophys.*, an instrument for controlling and varying the amount of light admitted to a dark room. It consists essentially of two strips of blackened metal which slide upon each other in grooves; the inner end of each strip is cut out in the form of a right-angled triangle, so that the opening of the diaphragm is always a square. — **Diaphragm process,** a process for the electrolytic production of caustic soda and chlorin from a solution of common salt, in which the products, separated at the two opposite electrodes, are prevented from mixing by the interposition of a porous diaphragm. *Electrochem. Industry,* Sept., 1903, p. 453. — **Pericardial diaphragm.** Same as *pericardial septum* (which see, under *pericardial*). — **Secondary diaphragm,** the transverse mesocolon.



Three Aubert diaphragms, mounted side by side in a wooden frame, for insertion in the wall of a dark room. The grooves carry scales, and the upper metal strips carry corresponding marks, so that the size of the square openings can be read off. The grooves also carry clips for holding strips of ground or colored glass. A glass strip is shown in position over the two smaller openings.

diaphragm (dī'ą-fram), *v. i.* To interpose in the path of a beam of light, or in the field of an optical instrument, a screen containing an aperture; specifically, in *photog.*, to reduce the aperture of an objective by the use of a diaphragm.

Generally speaking it would be an advantage to *diaphragm* the objective during the day.
Smithsonian Rep., 1890, p. 137.

Diaphragmatic hernia, tic. See ★*hernia,* ★*tic.*

diaphragmatically (dī″ą-frag-mat'i-kąl-i), *adv.* By means of the diaphragm: as, to breathe *diaphragmatically.*

diaphragm-furnace (dī'ą-fram-fêr″nās), *n.* A furnace for roasting or oxidizing ores. It has successive levels or shelves on which the ore is placed, the ore becoming gradually hotter as it drops from level to level toward the fire at the bottom.

diaphragm-valve (dī'ą-fram-valv″), *n.* **1.** A valve whose opening and closing are controlled by the motion of a diaphragm.— **2.** A valve to which a plate or diaphragm is attached which will move when the pressure of a liquid in contact with one side of it reaches a certain point.

diaphtherin (dī-af'thę-rin), *n.* [Appar. < Gr. διαφθείρειν, destroy (?) + *-in*[2].] Same as ★*oxyquinaseptol.*

diaphthol (dī-af'thōl), *n.* [*diapth* (*erin*) + *-ol.*] The same as ★*quinaseptol.*

Diaphus (dī'ą-fus), *n.* [NL., erroneously for **Diaphōs,* < Gr. διά, across, + φῶς (φωτ-), light.] A genus of lantern-fishes of the family *Myctophidæ,* characterized by having luminous spots each divided by a cross-line (as in the Greek letter theta, θ). *D. theta* is found on the coast of California.

diaphyllous (dī-af'i-lus), *a.* Same as *dialyphyllous.*

diaphysitis (dī-a-fi-sī'tis), *n.* [NL., < *diaphysis* + *-itis.*] Inflammation of the shaft of a long bone.

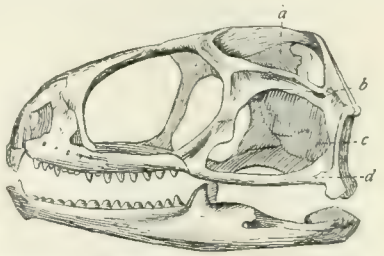
Diaporthe (dī-ą-pôr'the), *n.* [NL. (Nitschke, 1870), irreg. < Gr. διαπορθεῖν, destroy, < διά, through, + πορθεῖν, destroy.] A genus of pyrenomycetous fungi having the membranaceous perithecia buried in a more or less distinct stroma which may be either valsoid or effuse, and consists of the slightly blackened substance of the host. The spores are uniseptate and hyaline and sometimes appendiculate. Over 400 species have been described, occurring on a great variety of plants throughout the temperate regions. *D. parasitica* causes chestnut-blight or canker, a destructive disease in the eastern United States. See *oak* ★*canker.*

diapositive (dī-ą-poz'i-tiv), *n.* [*dia-* + *positive.*] In *photog.*, a transparent positive picture (such as a lantern-slide), made from a negative.

If one of these views be printed as a *diapositive,* and superposed on the other negative, a composite picture will be produced. *Sci. Amer.,* June 25, 1904, p. 494.

diapsid (dī-ap'sid), *a.* [Gr. δι-, two-, + ἀψίς (ἀψιδ-), arch: see *apse.*] Having two temporal arches like the members of the reptilian subclass *Diapsida.*

Diapsida (dī-ap'si-dą̈), *n. pl.* [NL., < Gr. δι-, two-, + ἀψίς, arch.] A subclass of *Reptilia* which contains those forms with (primarily) two temporal arches, a relatively small squamosal, large quadrate, and coracoid and procoracoid early coalescing, or the procoracoid degenerate: contrasted with ★*Synapsida. Osborn,* 1903.



Skull of Hatteria (*Sphenodon punctatum*), a typical diapsidan reptile.

a, supratemporal fossa, *b*, superior temporal arch or arcade; *c*, infra- or laterotemporal fossa, *d*, inferior temporal arch or arcade. The specimen figured is young, the teeth of an old hatteria being fused in one mass.

diapsidan (di-ap'si-dąn), *a.* Relating to or having the characters of the reptilian subclass *Diapsida:* as, *diapsidan* types of shoulder-girdle.

Diaptosauria (dī-ap-tō-sâ'ri-ą̈), *n. pl.* [NL., in allusion to the double temporal arch, < Gr. δι-, two-, + ἀψίς, arch (< ἅπτειν, fasten), + σαῦρος, lizard.] A superorder of primitive reptiles established by Osborn to include those having a skull with two temporal arches and vertebræ typically amphicœlous. Hypocentra may be present throughout the vertebral column or lacking in the dorsal region; abdominal ribs or plastron always present. There are several orders included in the group. The hatteria, *Sphenodon,* is a typical and the only living member of the group.

diarch (dī'ärk), *a.* [Gr. δι-, two-, + ἀρχή, beginning.] In *bot.*, having two protoxylem groups, as the steles of roots.

The *diarch* roots of a Sphenophyllum have been described by Renault, who has also investigated the leaves. *Encyc. Brit.,* XXXI. 412.

diaremia, diaræmia (dī-ą-rē'mi-ą̈), *n.* [NL. *diaræmia* and *diarrhæmia* (?), appar. irreg. formed from διαρρεῖν, flow through: see *diarrhea.*] A watery condition of the blood, with an excessive transudation of serum through the walls of the blood-vessels, frequently seen in sheep which are severely infested with parasites.

diarrhea, *n.*— **Camp diarrhea,** a bowel disturbance, often dysenteric in character, which affects bodies of troops in camp.— **Cochin China diarrhea,** a form of chronic diarrhea which occurs endemically in Cochin China. *Jour. Exper. Med.,* VI. 87.— **Diarrhea alba.** Same as *white diarrhea.*— **Summer diarrhea,** a diarrhea occurring in hot weather, believed to be caused by ptomaines in food which is undergoing the first stages of decomposition.— **Vicarious diarrhea,** watery intestinal discharges occurring as a result of nature's efforts to remove excrementitious matter which is accumulating in consequence of impaired action of the kidneys or the skin.

diaschistic (dī-ą-skis'tik), *a.* [Gr. *διάσχιστος, < διασχίζειν, separate.] In *petrog.*, a term used by Brögger (1894) to designate rocks derived by differentiation from a common magma prior to their eruption.

diaspid (dī-as'pid), *n.* [Gr. δι-, two-, + ἀσπίς (ἀσπιδ-), shield.] In the nomenclature of the specular elements of sponges, a monaxial short rhabd with expanded flattened ends.

diasporometer (dī″ą-spō-rom'e-tėr), *n.* [Gr. διασπορά, dispersion, + μέτρον, measure.] A device for producing and measuring the dispersion of light.

diastase, *n.* **Taka diastase,** a diastase, derived from the fungus *Aspergillus oryzæ,* discovered by the Japanese chemist Takamine. It does not give the reaction for peroxydases, but shows to a high degree the power of decomposing hydrogen dioxid. It is a medicinal preparation.

diastasic (dī-as-tā'sik), *a.* [*diastase* + *-ic.* Cf. *diastatic.*] Of or pertaining to diastase. *U. S. Dept. Agr., Rep.* 68, p. 16.

diastasimetry (dī″ą-stā-sim'e-tri), *n.* [Gr. διάστασις, difference (see *diastase*), + *-μετρία,* < μέτρον, a measure.] The determination of the diastatic power of a substance, that is, of its capability of converting starch into dextrose.

diastema, *n.* **3.** In *cytol.*, the pale region in the cytoplasm or area of sparser protoplasmic fibrillæ which foreshadows the division-plane in karyokinesis, or indirect cell-division.

diastematic (dī-as-tē-mat'ik), *a.* [Gr. διάστημα(τ-), interval, + *-ic.*] Pertaining to or of the nature of a diastema.

diastematomyelia (dī-ą-stē″mą-tō-mī-ē'li-ą̈), *n.* [NL., < Gr. διάστημα(τ-), interval, + μυελός, marrow.] A congenital condition in which the spinal cord is in two separate lateral halves.

diastoloscope (dī-ą-stol'ō-skōp), *n.* Gr. διαστολή, separation, distinction, + σκοπεῖν, view.] An eyepiece for the microscope which, in place of lenses, has two cones on a common axis.

Diastoma (dī-as'tō-mą̈), *n.* [NL., < Gr. διά, through (?), + στόμα, mouth.] A genus of platypodous gastropods of the family *Pyramidellidæ.* They have turreted shells with flat whorls transversely ridged and spirally lined, and the aperture separate from the body whorl. The species occur in Cretaceous and Tertiary rocks.

diastral (dī-as'tral), *a.* [NL. **diastrum,* diaster, + *-al*[1].] Relating or pertaining to a diaster: as, the *diastral* stage in the division of a single cell-nucleus into two.

diastrome (dī-as'trōm), *n.* [Gr. διά, through, + στρῶμα, layer.] In *geol.*, the splitting of sedimentary rocks along their bedding-planes.

diastrophic (dī-as-trof'ik), *a.* [Gr. διαστροφή, distortion, + *-ic.*] Pertaining to upheavals or displacements in the earth's crust; of the nature of diastrophism.

It is desirable that a boring be made, as deep as possible, in a plutonic rock. A mass should be selected which is of great age and which has not for many geologic periods been subjected to *diastrophic* changes.
Rep. Carnegie Inst., 1902, p. 285.

Diastrophic geology, that branch of geology which treats of upheavals and dislocations in the earth's crust.

diastrophism (dī-as'trō-fizm), *n.* [Gr. διαστροφή, distortion, + *-ism.*] In *geol.*, a general term suggested by J. W. Powell for all the varieties of deformation of the earth's crust. As elaborated by G. K. Gilbert, it is of two varieties: orogeny, or the upheaval of mountains, and epeirogeny, or the production of continents. *U. S. Geol. Surv.,* Monograph 1, pp. 3, 340.

diathermanosity (dī″ą-thêr-mą-nos'i-ti), *n.* Same as *diathermance.*

The *diathermanosity* of water and certain solutions.
Nature, LXVII. 425.

diathesis, *n.*— **Uric-acid diathesis,** a theoretical condition in which uric acid is formed in abnormal amount within the body and tends to be deposited in the tissues.

diatomaceous, *a.* **2.** Containing or made up of diatoms: as, *diatomaceous* earth. See *infusorial earth,* under *infusorial.*

diatome (dī'ą-tōm), *n.* Same as *diatom.*

diatomean (dī'ą-tō'mē-ąn), *n.* Same as *diatom.*

diatom-earth (dī'ą-tom-êrth″), *n.* A sedimentary deposit composed of the abandoned frustules of diatoms; infusorial earth. *Geikie,* Text-book of Geol., p. 179.

diatom-ooze (dī'ą-tom-öz″), *n.* An extremely fine deep-sea deposit consisting of the abandoned frustules of diatoms. *Geikie,* Text-book of Geol., p. 179.

Diatonic interval. See *interval,* 5.

diatropic (dī-ą-trop'ik), *a.* [Gr. διά, across, + *-τροπος,* < τρέπειν, turn, + *-ic.*] In *bot.*, transverse to the direction of the stimulus or operating force: said of organs so placing themselves.

Diatrypaceæ (dī-ą-tri-pā'sē-ē), *n. pl.* [NL., < *Diatrype* + *-aceæ.*] A family of pyrenomycetous fungi, named from the genus *Diatrype.*

Diatrype (dī-a-trī′pē), *n.* [NL. (Fries, 1849), irreg. ⟨ Gr. *διατρπαν*, bore through, ⟨ *δια*, through, + *τρπαν*, bore.] A genus of pyrenomycetous fungi having the perithecia sunken in a dark-colored flattened effuse stroma which is at first covered by the outer bark of the host. The ostiola perforate the surface of the stroma at maturity, a fact to which the name refers. The spores are simple, allantoid, and hyaline or yellowish. About 70 species have been described; they occur chiefly on the branches of various trees. *D. Stigma* is a common species on the oak.

diaulic (dī-â′lik), *a.* [Gr. *διαύλος*, a double pipe or course, ⟨ *δι-*, two-, + *αὐλός*, a pipe.] 1. Of or pertaining to the diaulos, or double course in ancient Greek racing.—2. In *zoöl.*, divided into two ducts, as the hermaphrodite duct from the ovotestis of gastropodous mollusks. *Sedgwick*, Text-book of Zoöl., I. 378.

diaxial (dī-ak′si-al), *a.* [Gr. *δι-*, two-, + L. *axis*, axis, + *-al*[1].] Same as *biaxial*.

diaxon (dī-ak′son), *n.* [NL., ⟨ Gr. *δι-*, two-, + *ἄξων*, axis.] A neuron, or nerve-cell, having two axis-cylinder processes.

diazeuxis, *n.* 2. A disjunctive proposition: so called, it would appear, by the immediate successors of Aristotle in his school.

diazin, diazine (dī-az′in), *n.* [*di-*[2] + *azine*.] The name of a class of cyclic organic compounds containing two nitrogen atoms in the ring. See ★*azin*.—**Diazin black, blue,** etc. See ★*black*, ★*blue*, etc.

Diazo black, blue, etc. See ★*black*, ★*blue*, etc.

diazoacetic (dī-az′o-a-set′ik), *a.* [*diazo-* + *acetic*.] Noting an ether, a lemon-yellow oil, $\|{>}CHCOOC_2H_5$ (N), prepared by the action of nitrous acid on ethyl aminoacetate. It crystallizes at low temperatures, melts at −22° C., boils at 81° C. under 61 millimeters pressure, has a characteristic penetrating unpleasant smell, and explodes in contact with concentrated sulphuric acid or after prolonged boiling. It is more correctly termed *ethyl diazoacetate*, and is used in organic syntheses.

diazoamino (dī-az′ō-am′in-ō), *n.* [Detached use of *diazamino-*, ⟨ *diazo-* + *amine*.] The name of a class of organic compounds containing the group RN : NNHR′. These substances are often incorrectly termed *diazoamido* derivatives; they are readily converted into aminoazo compounds, many of which are dyes.

diazobenzene (dī-az′ō-ben′zēn), *n.* [*diazo-* + *benzene*.] A univalent organic radical, $C_6H_5N : N-$ or $C_6H_5\underset{\underset{N}{|}}{N}-$. Derivatives of both forms are known, those of the latter being termed *benzenediazonium* compounds.—**Diazobenzene imide,** a pale-yellow oily compound, $C_6H_5N < \underset{\underset{N}{\|}}{}$, prepared by the action of hydrazin on benzene diazonium sulphate. It has an aromatic ammoniacal odor, and boils at 73.5° C. under 22–24 millimeters pressure. The vapor causes a flow of tears. Also called *triazobenzene* and *phenylenetetrazin*.

diazoic (dī-a-zō′ik), *a.* [*diazo-* + *-ic*.] Noting a class of organic aromatic acids containing the radical $RNHNO_2$ or the tautomeric form RN : NO . OH.

diazonium (dī-a-zō′ni-um), *n.* [*diazo-* + *-n-* + *-ium*.] A basic organic radical, $RN\underset{\underset{N}{|}}{}$. Some of the diazonium compounds are regarded as tautomeric forms of diazo compounds.

diazotate (dī-az′ō-tāt), *n.* [*di-*[2] + *azote* (see *diazo-*) + *-ate*[1].] A salt of an acid, RN : NOH. It may be regarded as a tautomeric form of a diazonium hydroxid $RN\underset{\underset{N}{|}}{}OH$, and must not be confused with salts of diazoic acid.

diazotization (dī-az′ō-tī-zā′shon), *n.* [*diazotize* + *-ation*.] The operation of treating an amido compound with sodium nitrite and hydrochloric acid for the production of a diazo compound.

diazotize (dī-az′ō-tīz), *v. t.*; pret. and pp. *diazotized*, ppr. *diazotizing*. [*di-*[2] + *azote* + *-ize*.] In *chem.*, to treat an aromatic amido compound with nitrous acid so as to introduce the diazo-group of two united atoms of nitrogen which together behave as a dyad radical. By this reaction various brilliant dyestuffs are obtained. *Sadtler*, Handbook of Indust. Chem., p. 488.

diazotype (dī-az′ō-tīp), *n.* In *photog.*, a method of photographic dyeing and printing, in which derivatives of the aromatic hydrocarbons serve for the production of a positive image capable of development in color. Paper, calico, silk, or wood is impregnated with a solution of one of a group of dyestuffs of which primulin, the sodium sulphonate of a complex amido base, is typical, and washed in cold water, and the dyestuff is diazotized by the action of a cold solution of sodium nitrite sharply acidified by hydrochloric, sulphuric, or other acid. After washing in cold water, the tissue is exposed behind a photographic positive, a drawing, or some natural object. The image is then developed by the use of a weak solution of a suitable phenol or amine, as an alkaline solution of β-naphthol for red, of phenol for yellow, or of cikonogen for blue. The picture is then washed. Also known as the *primulin process*.

diazurin, diazurine (dī-az′ū-rin), *n.* [*di(azo-)* + *azure* + *-in*[2].] A direct coal-tar color of the disazo type, derived from dianisidine. It dyes unmordanted cotton a dull violet in a salt bath, but for the best results subsequent diazotizing and development with β-naphthol are necessary. Upon development it gives a navy blue.

dibasicity (dī-ba-sis′i-ti), *n.* [*dibasic* + *-ity*.] In *chem.*, the character of being dibasic: the character of an acid as containing two atoms of hydrogen replaceable by a more basic or electropositive element or radical.

dibatag (dib′a-tag), *n.* [E. African.] A peculiar antelope, *Ammodorcas clarkei*, found in Somaliland. It resembles the gazelles, but has a long, slender neck, somewhat like that of the gerenuk. The females are hornless, the horns of the males are recurved and ringed at the base.

The most striking feature of the report of the Field Columbian Museum for 1902–3 is formed by two plates representing groups—the one of the *dibatag*, or Clarkes gazelle, and the other of the spotted hyæna—mounted in the museum. *Nature*, Sept. 8, 1904, p. 468.

dibble[1], *n.* 2. A planting implement which carries the seed in the handle and drops it from the point by means of a slide, when inserted in the earth. [Great Britain.]—3. A pair of wheels drawn by a horse, and furnished with cogs which make holes for seed: used in cotton-planting. [Southern U. S.]

dibbling[2] (dib′ling), *n.* The act of planting with a dibble. See *dibble*[1], *v. t.*

Dibbling is not a method suited for sowing large areas, but is useful in filling up blanks.
R. H. Wallace, Agriculture, p. 181.

dibenzoyl (dī-ben′zō-il), *n.* [*di-*[2] + *benzoyl*.] 1. Same as *benzil*.—2. A combining form used in organic chemistry to indicate the presence of two benzoyl radicals (C_6H_5CO-) in the molecule of a compound.

dibenzyl (dī-ben′zil), *n.* [*di-*[2] + *benzyl*.] A colorless compound, $C_6H_5CH_2CH_2C_6H_5$, prepared by the action of sodium on benzyl chlorid. It forms monoclinic crystals melting at 51.5–52.5° C., and boils at 284° C. Also called *symmetrical diphenylethane*.

diblastic (dī-blas′tik), *a.* [Gr. *δι-*, two-, + *βλαστός*, germ.] Composed of two germ-layers; having the character of or being in the condition of a diblastula. See *diblastula*.

Dibothridiata (dī-bō-thrid-i-ā′tā), *n. pl.* [NL., ⟨ Gr. *δι-*, two-, + NL. *bothridium* + *-ata*[2].] A group of *Cestoidea*. The scolex is provided with only two suckers, or bothria, these being situated respectively on the dorsal and the ventral aspect, and the uterus communicates with the exterior. It includes the order *Pseudophyllidea*. The majority of the members of this group are parasitic in fresh-water fishes, though certain ones are found in birds and in man.

Dibothriocephalus (dī-both ri-ō-sef′a-lus), *n.* [Gr. *δι-*, two-, + *βοθριον*, dim. of *βόθρος*, a pit, + *κεφαλή*, head.] The older name of the genus *Bothriocephalus* (which see).

dibotryoid (dī-bot′ri-oid), *a.* [*di-*[2] + *botryoid*.] Compoundly botryoid; having the secondary branches botryoid, as in a compound umbel, a panicle, etc.

dibranchious (dī-brangk′i-us), *a.* [Gr. *δι-*, two-, + *βράγχια*, gills, + *-ous*.] Having two branchiæ.

Dibranchus (dī-brang′kus), *n.* [NL., ⟨ *δι-*, two-, + *βράγχος*, for *βράγχιον*, gill.] A genus of deep-sea frogfishes of the family *Ogcocephalidæ*. *D. atlanticus* abounds in the abysses of the Gulf Stream.

dibrom-, dibromo-. [*di-*[2] + *brom(ine)*.] A combining form used in organic chemistry to indicate the presence of two bromine atoms in the molecule of the compound.

dibromide (dī-brō′mid), *n.* [*di-*[2] + *brom(ine)* + *-ide*[2].] In *chem.*, a compound containing two atoms of bromine united to a dyad element or radical: as, ethylene *dibromide*.

dibutyl (dī-bū′til), *n.* [*di-* + *butyl*.] Same as ★*octane*.

dicacodyl (dī-kak′ō-dil), *n.* [*di-*[2] + *cacodyl*.] A colorless highly poisonous compound, $(CH_3)_2AsAs(CH_3)_2$, prepared by the action of zinc on cacodyl chlorid. It melts at −6° C., boils at 170° C., has an offensive smell, and inflames spontaneously in the presence of air or chlorin. Also called *tetramethyldiarsenid*.

dicalcic (dī-kal′sik), *a.* [*di-*[2] + *calc(ium)* + *-ic*.] In *chem.*, containing, as a salt, two atoms of calcium. Dicalcic phosphate ($Ca_2H_2(PO_4)_2$) forms the chief part of the so-called 'reverted phosphate' in fertilizers which by keeping have lost the soluble character of the original monocalcic phosphate or superphosphate of lime ($CaH_4(PO_4)_2$).

dicarbonic (dī-kar-bon′ik), *a.* [*di-*[2] + *carbonic*.] Containing two carbonic-acid radicals, —O.CO.OH, in the molecule. Sometimes incorrectly used for *dicarboxylic*.

dicarboxylic (dī-kär″bok-sil′ik), *a.* [*di-*[2] + *carboxyl* + *-ic*.] Containing two carboxyl groups, —CO.OH, in the molecule, as an organic compound.

dicastic (dī-kast′ik), *a.* [*dicast* + *-ic*.] Of, pertaining to, or characteristic of a dicast or the dicasts: as, the *dicastic* assembly: the *dicastic* badge.

dicefalous, *a.* A simplified spelling of *dicephalous*.

Dicellocephalus (dī-sel-o-sef′a-lus), *n.* [Also *Dikellocephalus*. NL., ⟨ Gr. *δικέλλα*, a two-pronged hoe, a mattock, + *κεφαλή*, head.] A widely distributed genus of Cambrian trilobites having a large crescentic cephalon with conate, transversely grooved glabellum, 9 thoracic segments, and a fan-like pygidium bearing spiniform extensions at the sides.

dicephalus (dī-sef′a-lus), *n.*; pl. *dicephali* (-lī). [NL., ⟨ Gr. *δικέφαλος*, two-headed, ⟨ *δι-*, two, + *κεφαλή*, head.] A double-headed monster.

Diceratidæ (dis-e-rat′i-de), *n. pl.* [NL., ⟨ *Diceras* (*-cerat-*) + *-idæ*.] A family of extinct teleodesmaceous pelecypods of which *Diceras* is the typical genus.

dice-top (dis′top), *n.* A top with numbers on its sides, one of which will be uppermost when the top comes to rest after being spun; a teetotum.

dicetyl (dī-set′il), *n.* Same as ★*dotriacontane*.

dichamphitriæne (dī-kam′fi-trī′en), *n.* [Gr. *δίχα*, in two, + *ἀμφί*, on both sides, + *τριαινα*, trident.] In the nomenclature of the spicular elements of sponges, an amphitriæne in which the cladisks are bifurcated.

Dichapetalaceæ (dik a-pet-a-lā′sē-ē), *n. pl.* [NL. (Engler, 1896), ⟨ *Dichapetalum* + *-aceæ*.] A family of dicotyledonous choripetalous or sometimes sympetalous plants of the order *Geraniales*, typified by the genus *Dichapetalum*, and characterized by regular 5-merous flowers borne from a scaly involucre or cup-shaped disk. There are 3 genera and about 89 species, natives of tropical Africa and America and Madagascar. They are trees, shrubs, or woody vines with alternate entire coriaceous leaves and small flowers in compound cymes in the axils or apparently on the petioles of the leaves. See ★*Dichapetalum*.

Dichapetalum (dik-a-pet′a-lum), *n.* [NL. (Thouars, 1806), in allusion to the two lobes of the petals, ⟨ Gr. *δίχα*, in two, + *πέταλον*, leaf (petal).] A genus of plants, type of the family *Dichapetalaceæ*. There are about 70 species, chiefly natives of Africa and Madagascar. One of these is known as *rat-poison*.

dichlorbenzene (dī-klôr-ben′zēn), *n.* [*di-*[2] + *chlor(ine)* + *benzene*.] One of three compounds with the formula $C_6H_4Cl_2$, distinguished by the prefixes *ortho-*, *meta-*, *para-*. All are colorless; the first two are liquids, and the last is a crystalline solid melting at 53° C. and boiling at 172° C. The others boil at 179° C. and 172° C. respectively.

dichoblastic (dī-kō-blas′tik), *a.* [Gr. *δίχα*, in two, + *βλαστός*, germ, + *-ic*.] In *bot.*, sympodially dichotomous. *Celakovsky*.

dichocaltrop (dī-ko-kal′trop), *n.* [Gr. *δίχα* (*δίχα*), in two, + E. *caltrop*.] In the nomenclature of the spicular elements of sponges, a caltrop with bifurcate arms. See ★*caltrop*, 4.

dichogamism (dī-kog′a-mizm), *n.* [Gr. *δίχα*, in two, + *γάμος*, marriage.] Complete hermaphroditism, or the presence of the accessory reproductive organs as well as of the gonads of both sexes. *G. H. Lewes*.

dichogamy, *n.* 2. In *zoöl.*, the maturation in hermaphroditic animals of the ova and sperm at different times so as to preclude self-fertilization.

dichogeny (dī-koj′e-ni), *n.* [Gr. *δίχα*, in two, + *-γενής*, -producing.] The normal development of cells and tissues in an organism in

different ways, in accordance with normal changes in the conditions to which they are exposed.

Dichograptus (dī-kọ-grap'tus), *n.* [NL., < Gr. δίχα, in two, + γραπτός, written, engraved (see *graptolite*).] A genus of Silurian graptolites in which the hydrosome consists of 8 simple monoprionidian arms originating from the funicle, the latter enveloped in a circular disk.

dichophyllotriæne (dī-kō-fil-ọ-trī'ēn), *n.* [Gr. δίχα, in two, + φύλλον, leaf, + τρίαινα, trident.] In the nomenclature of the spicular elements of sponges, a phyllotriæne in which the flattened cladisks are forked.

dichopterous (dī-kop'tėr-us), *a.* [Gr. δίχα, in two, + πτερόν, wing.] In *entom.*, having cut or emarginate wings. *Syd. Soc. Lex.*

dichoptic (dī-kop'tik), *a.* [Gr. δίχα, in two, + E. *optic.*] Having the eyes distinctly separated, not joined together above, as with many insects. Opposed to ★*holoptic*. *Cambridge Nat. Hist.*, VI. 440.

Dichorisandra (dī″kō-ri-san'drä), *n.* [NL. (Mikan, 1820), irreg. < Gr. δι-, two, + χωρίζειν, separate, + ἀνήρ (ἀνδρ-), a male (anther).] A genus of plants of the family *Commelinaceæ*. There are about 30 species, natives of tropical America, some of which are grown in choice glass-houses for their striking habit and foliage. The flowers, usually not very showy individually, are blue, and grow in large panicle-like clusters. The best-known species in cultivation is *D. thyrsiflora* from Brazil. It has large lanceolate green leaves. Another horticultural favorite is *D. mosaica*; it has variegated foliage.

dichost (dī'kost), *n.* [Gr. δίχα, in two, + ὀστέον, bone.] In *ichth.*, a bone anterior to the bones above the myodome; the basisphenoid. It is very improbable that the bone named basisphenoid in fishes is the homologue of the basisphenoid of the higher vertebrates. *T. Gill.*

dichotic (dī-kot'ik), *a.* [Gr. δίχα, in two, + οὖς (ὠτ-), ear, + *-ic.*] Involving the use of both ears for the simultaneous hearing of tones of different pitch: opposed to *diotic*: as, *dichotic* audition; a *dichotic* experiment.

dichotomistic (dī-kot-ọ-mis'tik), *a.* Of or pertaining to dichotomy or dichotomists: as, the *dichotomistic* principle of classification.

dichotomized (dī-kot'ọ-mīzd), *p. a.* Divided in half: said of the moon or of one of the inferior planets at the moment when exactly half of the disk is illuminated.

dichotomy, *n.*—**Bostrychoid dichotomy.** Same as *helicoid dichotomy* (which see, under *helicoid*).—**Law of dichotomy,** Mendel's law of ancestral inheritance. See ★*inheritance*. *Davenport*, in Science, Jan. 15, 1905.

dichotriænic (dī″kō-trī-ē'nik), *a.* Resembling a dichotriæne, or characterized by a possession of dichotriænes.

dichotrider (dī-kō-trī'dėr), *n.* [Gr. δίχα, in two, + τριδειρος, three-necked (see ★*trider*).] In the nomenclature of the spicular elements of sponges, a trider having three arms dichotomous. See ★*trider*.

dichotypy (dī'kọ-tī-pi), *n.* [Gr. δίχα, in two, + τύπος, type, + *-y*3.] The occurrence of two different forms of the same organ on the same plant or stock.

dichoxytriæne (dī-kok-si-trī'ēn), *n.* [Gr. δίχα, in two, + ὀξύς, sharp, + τρίαινα, trident.] In the nomenclature of the spicular elements of sponges, a dichotriæne in which the divided branches are acute.

dichroiscope (dī-krō'i-skōp), *n.* Same as *dichroscope*.

dichroitic (dī-krọ-it'ik), *a.* Same as *dichroic*, 1.

dichromat, dichromate (dī-krō'mat), *n.* [Gr. δι-, two-, + χρῶμα(τ-), color.] One who possesses only two of the three normal primary color-sensations; a red-blind or green-blind person. The term presupposes the correctness of the Young-Helmholtz theory of color-vision.

dichromated (dī-krō'mā-ted), *a.* In *photog.*, acted on with a bichromate.

dichromic, *a.* **2.** In *optics*, having the property of dichroism; dichroic.—**Dichromic acid.** Same as ★*pyrochromic acid* or ★*anhydrochromic acid* ($H_2Cr_2O_7$).

dichromism (dī'krō-mism), *n.* [Gr. δίχρωμος, two-colored, < δι-, two-, + χρῶμα, color, + *-ism.*] Color-blindness as regards one of the three so-called primary colors of the Young-Helmholtz theory.

dichronous, *a.* **2.** In *bot.*, having two periods of growth in one year. *Syd. Soc. Lex.*

dichroöscope (dī-krō'ọ-skōp), *n.* [Gr. δι-, two, + χροα, color, + σκοπεῖν, view.] An instrument for the blending of colors, devised by Heinrich Dove. Beams of colored light are produced by transmission through stained glass and the proportion of their admixture is regulated by a polarizing arrangement.

dick-a-Tuesday (dik-ạ-tūz'dạ̄), *n.* The ignis fatuus; will-o'-the-wisp; jack-o'-lantern.

dickcissel (dik-sis'el), *n.* [Said to be imitative.] The black-throated bunting, *Spiza americana*, a small member of the sparrow family. It is abundant in many parts of the eastern United States, ranging west to Nebraska and south to Arizona. The male has a black patch on the throat and some yellow markings, but the general color above is grayish brown. See *Spiza*, with cut.

Dickensesque (dik-enz-esk'), *a.* Resembling or peculiar to the style of Charles Dickens, the novelist.

Dickensian (di-ken'zi-ạn), *a.* Of or pertaining to Charles Dickens, the novelist (1812–70), or to his writings or style: as, *Dickensian* characters.

Dickensiana (dik″enz-i-ā'nạ̈), *n. pl.* [*Dickens* + *-i-* + *-ana.*] Collections of sayings, anecdotes, relics, manuscripts, books, editions, works, etc., relating to or connected in any way with Charles Dickens, the novelist.

An important Dickens Exhibition will be held at the Memorial Hall, Farringdon Street, on March 25th, 26th, and 27th, under the auspices of the Dickens Fellowship. This is the first exhibition of *Dickensiana* ever held in London. *Athenæum*, Feb. 21, 1903, p. 243.

dickpfennig (dik'pfen″ig), *n.* [G., 'thick penny.'] A billon coin of Strassburg in Alsace in the seventeenth and eighteenth centuries, equal to 6 batzen.

Dicksonieæ (dik-sō-nī'ẹ-ē), *n. pl.* [NL., < *Dicksonia* + *-eæ.*] One of the three tribes comprising the family of ferns *Cyatheaceæ*. It is distinguished from the other two by having the indusium extrorse and formed at least in part by the more or less modified opposed leaf-segment, and further by having the ring of the sporangium provided with a stomium of thinner cells. It includes among others the important genera *Cibotium* and *Dicksonia*. See ★*Cyatheaceæ*.

dickthaler (dik'tä lėr), *n.* [G., 'thick-dollar.'] A small and thick Austrian silver coin of the year 1484, bearing a portrait of the Archduke Sigismund.

dicky1, *n.*—**Dicky Sam,** a nickname for a native of Liverpool, England.

dicky3 (dik'i), *a.* [Attrib. use of *Dicky*, dim.] Poor in quality or condition; 'sorry'; 'queer': as, a *dicky* lot; a *dicky* concern. [Slang.]

dicky-daisy (dik'i-dā″zi), *n.* See ★*daisy*.

Diclonius (dī-klō'ni-us), *n.* [NL., < Gr. δι-, two-, + (it is said) κλόνις, the sacrum.] A genus of dinosaurian reptiles described by Cope as having elongated skulls with extended and very broad snout, very large nostrils, and subrectangular orbits. The teeth are closely arranged in an alveolar groove opening inward, the successional teeth forming several tectiform series. It occurs in the Cretaceous rocks and is generally regarded as synonymous with *Hadrosaurus* and *Trachodon*.

dicœlious (dī-sē'li-us), *a.* Same as *dicœlous*.

dicondylic (dī-kon-dil'ik), *a.* [Gr. δι-, two-, + κόνδυλος, a knob, condyle.] Same as *dicondylian*. [Rare.]

diconic (dī-kon'ik), *a.* Noting an acid, a colorless compound, $C_9H_{10}O_6$, prepared by the action of concentrated hydrochloric acid on citric acid at 200° C. It forms small crystals, probably of the monoclinic system, and melts at 199–200° C.

dicot (dī'kot), *n.* A colloquial reduction, among botanists, of *dicotyledon*.

dicotyl (dī-kot'il), *n.* [Gr. δι-, two-, + κοτύλη, socket (see *cotyledon*).] Same as *dicotyledon*.

The main development of the early *Dicotyls* and other plants constituting the best horizon markers took place in the late Jurassic. *Amer. Jour. Sci.*, Dec., 1903, p. 416.

dicotyledonary (dī-kot-i-lē'dọn-ạ̄-ri), *a.* [*dicotyledon* + *-ary*1.] Pertaining or relating to dicotyledons. *N. E. D.*

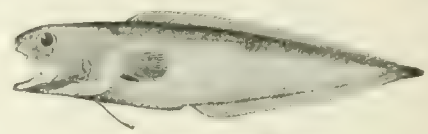
Dicranaceæ (dī-krạ̄-nā'sẹ-ē), *n. pl.* [NL., < *Dicranum* + *-aceæ.*] A large family of acrocarpous mosses of the order *Bryales*. It is typified by the genus *Dicranum* (which see), and characterized by erect stems, awl-shaped or bristle-shaped leaves, a simple peristome of 16 teeth, and 1-celled spores. There are 48 genera, chiefly of the temperate zones (only 2 occurring in the tropics), growing in low, moist ground and forming sod or turf.

dicranobranchiate (dī-krā-nō-brang'ki-āt), *a.* and *n.* **I.** *a.* Relating to or characteristic of the *Dicranobranchia*, or possessing plumose dorsal gills.

II. *n.* One of the *Dicranobranchia*.

Dicranopteris (dī-krạ̄-nop'tẹ-ris), *n.* [NL. (Bernhardi, 1806), < *Dicranum* + Gr. πτερίς, a fern.] A genus of gleicheniaceous ferns. They are scandent trailing or semi-erect and of mostly indeterminate growth, the pinnatifid pinnæ opposite and wholly lateral, borne in pairs far apart upon the wiry, more or less naked, di- or trichotomously branched rachides. The genus is one of the most abundant of tropical ferns, often forming impassable thickets in open or half-cleared ground. The species are imperfectly known. See *Gleichenia*.

Dicromita (dī-krom'i-tạ̈), *n.* [NL., < Gr. δίκροος, forked, + μίτος, thread.] A genus of deep-sea fishes of the family *Brotulidæ*.



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From Bull. 4[illegible] U. S. Nat. Museum.

Dict. An abbreviation of *dictionary*.

Dictæan (dik-tē'ạn), *a.* [L. *Dictæus*, < Gr. Δικταῖος, < Δίκτη, L. *Dicte*, a mountain in Crete. Cf. *dictamnus* and *dittany*.] Of or pertaining to Mt. Dicte (or Dikte) in eastern Crete, where Zeus is said to have been reared.

dictational (dik-tā'shọn-ạl), *a.* [*dictation* + *-al*1.] Of or relating to dictation: as, *dictational* experiences.

The popular mind . . . has retreated from its uncomfortable *dictational* attitude and thrown the whole matter over to the States of the South. *G. W. Cable*, in The Century, Jan., 1885, p. 409.

dictative (dik-tā'tiv), *a.* [*dictate* + *-ive.*] Of the nature of dictation; characteristic of one who is in the habit of speaking with authority.

He uttered . . . such other *dictative* mandates as were necessary. *J. F. Cooper*, Pioneers, xxiii.

dictatorialism (dik-tạ̄-tō'ri-ạl-izm), *n.* [*dictatorial* + *-ism.*] The methods or manner of a dictator or dictatorial person.

Dictionary catalogue. See ★*catalogue*.

Dictyoceratina (dik″ti-ō-se-rat'i-nạ̈), *n. pl.* [NL., < Gr. δίκτυον, a net, + κέρας (κερατ-), horn, + *-ina*2.] One of the two orders of ceratose sponges (the other being *Dendroceratina*) having the spongin skeleton in the form of a network of anastomosing fibers. It includes the families *Spongidæ*, *Spongeliidæ*, and *Aplysinidæ*.

dictyodrome (dik'ti-ọ-drōm), *a.* [Gr. δίκτυον, a net, + -δρομος, < δραμεῖν, run.] Netted-veined, the nerves soon disappearing in the parenchyma of the leaf. See *nervation*, (*a*) (5).

dictyodromous (dik-ti-od'rọ-mus), *a.* Same as ★*dictyodrome*.

dictyoid (dik'ti-oid), *a.* [Gr. δικτυοειδής, net-like, < δίκτυον, net, + εἶδος, form.] Having the form of a net; reticulate; specifically, having both longitudinal and transverse septa: applied to the spores of certain fungi. Same as *muriform*1 and ★*fenestrate*. See ★*Fenestella*.

dictyonale (dik-ti-ọ-nā'lē), *n.*; pl. *dictyonalia* (-liạ̈). [NL., neut. of **dictyonalis*, adj., irreg. < Gr. δίκτυον, a net.] In sponges, one of the parenchymal spicules which become fused to form the continuous skeletal framework of the *Dictyonina*.

Dictyonema, *n.* This hydrozoan genus is commonly regarded as closely allied to the *Graptoloïdea*, but the fronds are funnel- or fan-shaped and the branches connected by transverse bars or dissepiments, the thecæ or cells being usually quite obscure. It is wholly fossil and ranges from the uppermost beds of the Cambrian into the Devonian.

dictyopteran (dik-ti-op'tẹ-ran), *a.* and *n.* **I.** *a.* Of or belonging to the *Dictyoptera*.

II. *n.* A member of the *Dictyoptera*.

Dictyopteris, *n.* **2.** A genus of the *Phæophyceæ*, or brown algæ, separated from the other members of the family *Dictyotaceæ* by the presence of a midrib.

Dictyosiphon (dik-ti-ō-sī'fon), *n.* [NL. (Greville, 1830), from the tubular, reticulately branching thallus; < Gr. δίκτυον, a net, + σίφων, a tube.] A genus of the *Phæophyceæ*, or brown algæ, occurring in both the North Atlantic and southern oceans. Seven species and varieties are found on the New England coast. Reproduction, as far as known, is only by unilocular sporangia.

Dictyospongia (dik-ti-ọ-spon'ji-ạ̈), *n.* [NL., < Gr. δίκτυον, net, + σπογγιά, sponge.] A genus of extinct hexactinellid silicious sponges, typical of the family *Dictyospongidæ* and characterized by its obconical form and the smooth exterior of its reticulum. It is of Devonian age.

Dictyospongidæ (dik″ti-ō-spon'ji-dē), *n. pl.* [NL., < *Dictyospongia* + *-idæ.*] A family of silicious hexactinellid sponges, comprising genera of obconical form and growing as simple individuals, in which the reticulum is principally composed of vertical and horizontal strands and the exterior is variously orna-

mented with nodes, tufts, and fringes. The family is closely allied to the living *Euplectella*, but is regarded as wholly of Paleozoic age.

Dictyosporæ (dik-ti-os'pō-rē), *n. pl.* [NL., < Gr. δίκτυον, net, + σπορά, seed (spore).] A name applied by Saccardo to artificial divisions of various families and orders of fungi, especially those of the *Pyrenomycetes* and *Fungi Imperfecti*, to include the genera which have spores both transversely and longitudinally septate.

Dictyotales (dik-ti-ō-tā'lēz), *n. pl.* [*Dictyota* + *-ales.*] An order of the *Phæophyceæ* or brown algæ, containing the single family *Dictyotaceæ* (which see).

dictyotic (dik-ti-ot'ik), *a.* [Gr. δικτυωτός, made in net fashion, < δίκτυον, net.] Pertaining to or characteristic of a network.—**Dictyotic moment,** in certain *Radiolaria*, the period during which the skeleton is formed. Also called *lorication moment*. *Haeckel.*

dicyanide (dī-sī'a-nid), *n.* [*di-*[2] + *cyanide.*] The name of a class of compounds containing two cyanogen radicals, –CN, in the molecule.

dicycle (dī'si-kl), *n.* [Gr. δίκυκλος, two-wheeled, < δι-, two-, + κύκλος, circle.] A form of two-wheeled vehicle constructed on the plan of the bicycle, but with the two wheels parallel instead of in line.

dicyclic (dī-sik'lik), *a.* [Gr. δίκυκλος, two-wheeled: see ★*dicycle.*] 1. In two cycles: said of the calyx-base of the *Crinoidea* when there are two rings of plates between the topmost joint of the column and the first cycle of plates situated in the projection of the ambulacra or arms: contrasted with *monocyclic.*—2. Noting organic compounds the atoms of which form two closed chains, each having one or more atoms in common. Also *bicyclic.*—3. In *bot.*: (*a*) Forming or disposed in two whorls, as a perianth or other series of organs. *Jackson*, Glossary. (*b*) Biennial: said of hapaxanthous herbs which require two seasons to mature. *Pound and Clements.*

dicyclist (dī'si-klist), *n.* [*dicycle* + *-ist.*] One who rides a dicycle. See ★*dicycle.* *N. E. D.*

dicyemid (dis-i-em'id), *n.* One of the *Dicyemidae.*

dicymose (dī-sī'mōs), *a.* Doubly cymose.

Didache (did'a-kē), *n.* [Gr. διδαχή, teaching, < διδάσκειν, teach.] The Teaching of the Twelve Apostles, an apocryphal writing discovered in a manuscript of the year 1056 at Constantinople in 1873. The date of its composition was about the end of the first century A. D. It consists of two parts, the first of general ethical teaching, the second relating to church polity and liturgy.

> The metropolitan Ph. Bryennios, who discovered and edited the *Didache.* *Encyc. Brit.*, XXXI. 384.

Didachist (did'a-kist), *n.* The unknown author or editor of the Didache. Also called *Didachographer.*

Didachographer (did-a-kog'ra-fėr), *n.* [Gr. διδαχή, teaching, + -γραφος, < γράφειν, write.] Same as ★*Didachist.*

didascalics (did-as-kal'iks), *n.* Matters to be taught: subjects of teaching.

> Did not the Athenians, the wisest of nations, . . . give to melopœia, choregraphy, and the sundry forms of *didascalics*, the precedence of all other matters, civil and military? *Peacock*, Crotchet Castle, vi.

didascaly (dī-das'ka-li), *n.*; pl. *didascalies* (-liz). [Gr. διδασκαλία, earlier περὶ διδασκαλιῶν, '(treatise) concerning (dramatic) productions,' the word meaning teaching, and hence the rehearsing or production of a play, < διδάσκειν, teach.] 1. A catalogue of the ancient Greek dramas: such catalogues were prepared by Aristotle, Callimachus, Aristophanes of Byzantium, etc., but are now lost. They contained the names of the dramas and their writers, with dates and other details.—2. A bill or poster, hung in an ancient theater, containing a short notice of the play and performers.

diddle-dee (did-l-dē'), *n.* In the Falkland Islands, a shrub of the antarctic regions, *Empetrum rubrum.* It is used for fuel. See *Empetrum.*

didelphine (dī-del'fin), *a.* Resembling or having the characters of the *Didelphia*; didelphian.

Didelphis, *n.* Same as *Didelphys* and the preferred (though erroneous) form, under the rule of priority.

didelphous (dī-del'fus), *a.* Resembling or having the characters of the *Didelphia* or *Marsupialia.*

didigonal (dī-dig'ō-nal), *a.* [Gr. δι-, two-, + E. *digonal.*] In *mineral.*, noting a type of symmetry characterized by a dyad axis (that is, one of two-fold symmetry) in which two planes of symmetry intersect. See ★*symmetry.*

di-diurnal (dī-dī-ėr'nal), *a.* [*di-*[2] + *diurnal.*] Twice a day: as a *di-diurnal* visit. *N. E. D.*

didle (dī'dl), *n.* [Also *didal, didall, dydle, dydel.*] 1. A triangular spade used for ditching.

> A sickle to cut with, a *didall* and crome
> for draining of ditches, that noies thee at home.
> *Tusser*, Good Husbandrie, p. 38.

2. A scoop or dredge on the end of a long pole, used for clearing watercourses or channels. [Prov. Eng. in both uses.]

didodecahedron (dī-dō"dek-a-hē'dron), *n.* [*di-*[2] + *dodecahedron.*] A diploid.

didonia (dī-dō'ni-ä), *n.* [NL., < L. *Dido* (*Didon-*), Dido. The allusion is to her trick with the hide: see *dido.*] Of the isoperimetric curves on a given surface, that one which contains the maximum area.

didromic (dī-drō'mik), *a.* [*didrom-y* + *-ic.*] Doubly twisted, as the awns of some grasses.

didromy (did'rō-mi), *n.* [Gr. δι-, two-, + -δρομος < δραμεῖν, run, + *-y*[3].] In *bot.*, double torsion.

diductor (dī-duk'tor), *n.* [NL., < L. *diducere*, draw apart, < *di-*, apart, + *ducere*, draw.] In the articulate orders of the *Brachiopoda*, one of a pair of muscles which by contraction open the valves. These muscles originate in a broad base on the anterior part of the muscular area of the ventral valve and are inserted on the cardinal process of the dorsal valve. There is also a pair of small accessory diductors inserted on the cardinal process and originating on the posterior part of the ventral muscular area.

Didymæa (did-i-mē'ä), *n. pl.* [NL., < Gr. Διδύμαια, neut. pl. of Διδυμαῖος, a name of Zeus, < Δίδυμα, Didyma, near Miletus.] In *Gr. antiq.*, a festival in honor of Zeus and Apollo held at Didyma, near Miletus, in Asia Minor: known only by late coins and inscriptions.

Didymæum (did-i-mē'um), *n.* [NL., < Gr. Διδυμαῖον, prop. neut. of Διδυμαῖος: see ★*Didymæa.*] A temple or shrine sacred to Zeus and Apollo at Didyma, near Miletus. There was a sacred way leading to it which was built for an earlier temple on the site, and which was bordered by a series of archaic seated figures now in the British Museum. The later building, of which remains still exist, probably dates from about 334 B. C. It was dipteral, with the cella open to the sky.

didymalgia (did-i-mal'ji-ä), *n.* [NL., < Gr. δίδυμοι, the testicles, + ἄλγος, pain.] Pain in the testicle.

Didymaspis (did-i-mas'pis), *n.* [NL., < Gr. δίδυμος, double, + ἀσπίς, a shield.] A genus of fossil fishes from the Old Red Sandstone, having a cephalic shield in two pieces and no cornua at the sides.

didymate, didymated (did'i-māt, -mā-ted), *a.* Same as *didymous.* [Rare.]

didymia (dī-dim'i-ä), *n.* [NL., < *didymium.*] In *chem.*, didymium oxid.

Didymitidæ (did-i-mit'i-dē), *n. pl.* [NL., < *Didymites* + *-idæ.*] A family of Triassic ammonites with globose conchs having broad bifid sutural saddles.

didymitis (did-i-mī'tis), *n.* [NL., < Gr. δίδυμοι, testicles, + *-itis.*] Same as *orchitis.*

didymoclone (dī-dim'ō-klōn), *n.* [Gr. δίδυμος, twin, + κλών, a twig.] In the nomenclature of the spicular elements of sponges, a short straight spicule with thickened ends bearing forked branches.

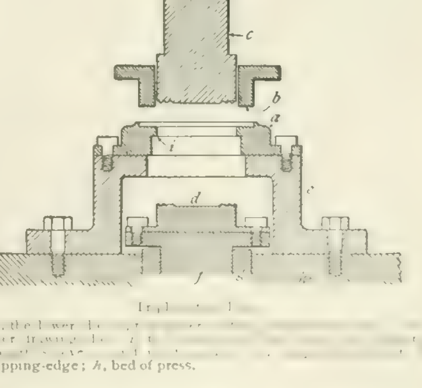
didymoid (did'i-moid), *a.* [Gr. δίδυμος, twin, + εἶδος, form.] Having two (twin) cells: applied to the spores of certain fungi.

> Others [spores] by a cross partition become twin or 2-celled (*didymoid*); others by further parallel cross-partitions become a row of cells (phragmoid).
> *Underwood*, Moulds, Mildews and Mushrooms, iii.

Didymozoön (did"i-mō-zō'on), *n.* [NL., < Gr. δίδυμος, twin, + ζῷον, animal.] The typical genus of the family *Didymozoönidæ.* *Taschenberg*, 1879.

Didymozoönidæ (did"i-mō-zō-on'i-dē), *n. pl.* [NL., < *Didymozoön* + *-idæ.*] A family of trematoid *Platyhelminthes*, of the order *Malacocotylea* (or *Digenea*). They have an anterior sucker only, mouth within the sucker, and the genital pore terminal, in front of the oral sucker. The worms are hermaphroditic and live in pairs in cysts. They are found on the integument or in the mouth and branchial cavity of marine fishes. The family includes the genera *Didymozoön* and *Nematobothrium.*

die[3], *n.* 9. A hard-metal former or working-face for shaping, cutting, or impressing: usually used in pairs. See defs. 5 and 6. Specifically—(*a*) One of a pair of formers, each with an intaglio design, between which is introduced the blank of a coin or medal, and by which, under pressure, a relief is stamped on both sides of the blank. (*b*) One of a pair of formers on one of which is an intaglio and on the other the complementary cameo. When a sheet of metal is placed between them, the common design is pressed when the dies come together. (*c*) One of a pair of formers in each of which one half the desired design is incised as an intaglio. The stock to be shaped is introduced between them, and when the dies are brought together, the shape and design are impressed upon the stock. This process of die-forging of stock is in very wide use for the parts of guns, sewing-machines, wrenches, bicycles, and manufactured articles generally. The pressure is secured by the drop-press and the fall of a tup or hammer carrying the upper die on its face. (*d*) One of a pair of formers for stamping spoons, tinware, or brass from the sheet, cutting the blank from the stock, and molding it in one or more operations. Such dies are often quite complex, and involve drawing the metal and stripping it from the female die after forming. (*e*) A surface or anvil to support the stock against the blow and shearing action of a punch, and to allow the punch to pass into a hole or recess in it after the shear is completed. Such dies must have the hole slightly larger than the punch. (*f*) A special shape of cutting-edge and the complementary recess for cutting soles, uppers, or cards of irregular shape. (*g*) A hardened steel roller, engraved with a design in intaglio, used to raise the pattern on the blank by rolling it under pressure. (*h*) The acting face of a power-hammer, even if smooth. Die-forging for articles to be made in large quantities has practically replaced hand-forging in the United States. **Blanking and perforating dies.** Same as *double* ★*dies.* **Combination and double-action die,** a die that cuts and bends a blank and continues the work by bending it or drawing it into still another form. See *double-action* ★*dies.*—**Combination die,** a die used first to cut the blank and then to turn or bend its edges into some simple form. It is used in making box-covers, bottoms of cans, toys, lamp-burners, pans, and other shallow ware or the parts of other objects. It is sometimes used with a punch to cut a hole in the blank, as in making fruit-can covers with a fruit-can combination die. **Cutting and drawing dies.** Same as *double-action* ★*dies.* **Die-sinking machine,** a milling-machine adapted to the work of milling or cutting out the dies used in drop-hammers.—**Disk-cutting die,** a die used in an armature-disk ★cutting-press (which see). **Double-action dies,** dies of which the upper one is in two parts, one outside of and moving independently of the other. The outer cuts the blank and pushes it downward into the lower die. Then, by a dwell or pause in its movement, it clamps the blank by the rim, holding it firmly between the upper and the lower die. The smaller inside die is timed to touch the blank just as it is clamped, and, pushing downward, draws or stretches the blank into the center of the lower die. The blank, having been drawn into its permanent form, is left behind by the rising of the upper die and is stripped off the dies by striking the stripping edge of the lower die, dropping through it out of the press. In some dies the finished ware is discharged upward by the rising through the lower die of a push-out plate, that ejects it from the press. Double-action dies are sometimes called *cutting and drawing dies.*—**Double dies,** dies which cut two blanks, one small and one large, side by side, or a small hole and a blank next to it. By feeding the sheet-metal to a press fitted with double dies it is thus possible first to cut a small blank or hole and then to cut a blank around it. The first stroke of the press causes the dies to make two distinct cuts. The second stroke completes the preceding operations and performs the first half of the next, and thus every stroke finishes one completed washer, key, bicycle-chain link, door- or key-plate, or other hardware object having a hole or perforation at its center. Sometimes called *blanking and perforating dies.*—**Drawing dies,** dies used in drawing blanks already cut on other machines.—**Perforating dies,** dies or punches for stamping holes in sheet-metal in making strainers, screens, lamp-burners, colanders, and sheets of perforated metal. See ★*perforating-press.* **Triple-action dies,** dies having the upper die in two parts moving independently and, in addition, a third die moving upward through the fixed lower die.



[illegible] stripping-edge; *h*, bed of press.

die[3], *v. t.*—**Dieing-out machine,** in *shoe-manuf.*, a power-machine for stamping out, by means of dies, leather to form the soles or other parts of boots and shoes. It is essentially a stamping-press with a cutting or shaping die and a wooden block on which the leather stock is placed to be cut.

die-back (dī'bak), *n.* A disease of the orange-tree and other citrous fruits, limited to Florida.

The exact cause is unknown, but it is probably due to malnutrition or the excessive use of nitrogenous fertilizers.

Dieb. alt. An abbreviation of the Latin *diebus alternis*, every other day.

die-block (dī'blok), *n.* A heavy block of cast-iron which supports the die in a press or punch. The heavier such a block is made, the better it takes up the shock when the punch strikes the work.

Dieb. tert. An abbreviation of the Latin *diebus tertiis*, every third day.

die-chuck (dī'chuk), *n.* A chuck for holding work that is to be turned or bored in a lathe. It consists of a disk having two or more radial slots, in which steel jaws slide, the sliding motion being imparted by screws which can either be worked independently or together, so that the work can be chucked centrally or eccentrically.

diectasis (dī-ek'tā-sis), *n.* [NL., ‹ Gr. *διέκτασις*, a stretching, ‹ *διεκτείνειν*, stretch, ‹ *διά*, through, + *ἐκτείνειν*, stretch: see *ectasis*.] In *pros.*, lengthening by the insertion of a syllable. See *ectasis*.

From the scientific point of view there is, of course, not a word to be said in favour of such grammatical monsters as *ὁρόω* and *ὁρόωντες*. But it is perfectly easy to see how they arose from a misunderstanding of the 'Epic *diectasis*.'
Athenæum, Dec. 29, 1894, p. 884.

die-forging (dī'fōr"jing), *n.* The process of forging metal parts in dies; drop-forging. It is done by means of a die, made usually in two pieces, which is fastened in a hammer or press. In one part of the die a piece of hot metal is placed, which is squeezed into the shape of the die when the latter is closed. Forgings which are to be duplicated many times are usually made by this process. See ★*die*[3].

die-hole (dī'hōl), *n.* The hole in a punching or drawing die. In punching, the die-hole must be large enough to admit the punch and leave a little clearance; in drawing, it must admit the punch and the material which is being worked.

dieidism (dī-īd'izm), *n.* [Gr. *δι-*, two-, + *εἶδος*, form, + *-ism*.] The assumption of two different forms during successive stages in the life-history of an organism. *Sir J. Lubbock*, 1874.

Dielasma (dī-ē-las'mä), *n.* [Gr. *δι-*, double, + *ἔλασμα*, a metal plate.] A genus of Paleozoic terebratuloid *Brachiopoda* having a short brachial loop and a long free hinge-plate which carries the muscles of the dorsal valve.

Dielectric constant, hysteresis, strength. See ★*constant*, ★*hysteresis*, *disruptive* ★*strength*.

dielectrically (dī-ē-lek'tri-kal-i), *adv.* By dielectric action: as, *dielectrically* polarized bodies.

die-nut (dī'nut), *n.* A square nut of hardened steel, in which grooves are cut as in a die, which is used for cleaning the threads of bolts or studs which have been damaged.

die-plate (dī'plāt), *n.* In *steam-* or *gas-fitting*, a screw-plate; a screw-cutting die.

dieresilia (dī"er-ē-sil'i-ä), *n.* [Irreg. ‹ Gr. *διαίρειν*, to separate, divide, + L. *sili*(*qua*), pod.] Same as *carcerule* (*b*). *Mirbel.*

dieresilian (dī-er-ē-sil'i-an), *a.* [*dieresilia* + *-an*.] Of or pertaining to a diereselia.

dieresis, *n.* 5. In crustaceans, the division in the outer branch of the last pleopods.

Dies Iræ (dī'ēz ī'rē). Day of Wrath: the opening words, and hence the name, of a celebrated Latin hymn of the middle ages. It was probably written by Thomas of Celano in the thirteenth century. The Roman Catholic Church still uses it in the funeral service.

Diestian group. See ★*group*[1].

diet[1], *n.*—**Tufnell diet**, a diet containing very little liquid or succulent food.

diethene (dī-eth'ēn), *a.* [*di-*[2] + *eth*(*yl*) + *-ene*.] Containing two ethylene groups: as, *diethene* diamine, $NH < {CH_2CH_2 \atop CH_2CH_2} > NH$.

diethenic (dī-e-then'ik), *a.* Same as ★*diethene*. **Diethenic alcohol.** Same as *diethene* ★*glycol*, $CH_2OH.CH_2.O.CH_2CH_2OH$.

dietheroscope (dī-ē-ther'ō-skōp), *n.* [Gr. *δι-*, two-, + *αἰθήρ*, ether, + *σκοπεῖν*, view.] An apparatus adapted to the accurate measurement of the refractions that occur in mirage. It consists of a telescope within which mirrors, or total reflecting prisms, or additional lenses, are so arranged as to cause two images of any object to appear in the field of view. When used without the telescope the dietheroscope can be arranged as a dipleidoscope or sun-dial; the two images of the sun overlap each other and coincide when the sun centers on the meridian.

diethyl (dī-eth'il), *n.* [*di-*[2] + *ethyl*.] 1. Same as ★*butane*.—2. A combining form used to indicate the presence of two ethyl radicals in the molecule of an organic compound.

diethylamine (dī-eth-il-am'in), *n.* [*di-*[2] + *ethyl* + *amine*.] A colorless inflammable liquid, $(C_2H_5)_2NH$, prepared by the action of ammonia on ethyl iodide and formed during the putrefaction of fish. It melts at −40° C., boils at 55.5° C., and forms salts with acids similar to those of ammonia.

dietzeite (dēt'sē-īt), *n.* [Named for A. *Dietze*, who first described it.] A mineral consisting of the iodate and chromate of calcium, occurring in yellow prismatic crystals and fibrous masses: found in the soda-nitrate deposits of Atacama.

diff. An abbreviation of *difference*, *different*, or *differs*.

difference, *n.*—**Contact difference of potential.** See ★*potential*.—**Difference hypothesis**, in *psychophys.*, the hypothesis that equal stimulus ratios correspond to equal sensation differences. As an interpretation of the facts of Weber's law, the difference hypothesis is opposed to the ratio hypothesis, which makes equal stimulus ratios correspond to equal sensation ratios.—**Difference limen**, differential limen; in *psychophys.*, the just noticeable stimulus difference; the increment of stimulus which, if all errors of observation were ruled out, would be sufficient to make the resulting sensation just different, with maximal attention, from the original sensation; or the increment of stimulus which, under ordinary conditions of observation after elimination of constant errors, enables the two sensations to be distinguished in 50 per cent. of a large number of comparisons.

With an area of contact of 1 mm. diameter, the *difference limen* on the index finger of the right hand was $\frac{1}{15}$ to $\frac{1}{20}$. *O. Kuelpe* (trans.), Outlines of Psychol., p. 160.

Difference of potential. (*b*) In a social population, more or less capacity for progress, "manifested chiefly in the crossing of cultures."—**Frequency difference**, in *phys.*, the numerical quantity obtained by subtracting one frequency of vibration, such as that belonging to a given wave-length in a line spectrum, from another.—**Method of just noticeable differences, method of least differences, method of minimal differences**, in *psychophys.*, one of the four classical methods of sensation measurement. In its later and more perfect forms the method is usually known as the *method of minimal changes* or as the *method of limits*. The essential feature of the procedure is that one stimulus is kept constant, while another, taken at first as sensibly like or sensibly different from the standard, is varied by minimal steps until a judgment of difference or of lapse of difference is attained. *O. Kuelpe* (trans.), Outlines of Psychol., p. 57.—**Phase difference**, in *elect.*, the difference in time or in angle, when representing a cycle by 360 degrees, between two electric waves, as an alternating current and electromotive force.—**Resting difference**, an electromotive current which is found to exist on comparing the cross-section of a nerve with its longitudinal section. Also called *nerve current* and *demarcation current*. **Second differences**, in *math.*, the differences between successive terms of a series of first differences. In the same way the differences between the second differences give *third differences*, and so on.

Thus we may say that unity which appears in the first column is the *first difference* of the numbers in the second column; the *second difference* of those in the third column; the *third difference* of those in the fourth, and so on.
Jevons, Prin. of Science, I. ii. 9.

To split the difference, to come to agreement by compromise, the difference between the two parties being divided equally; give and take equally in coming to an agreement.

difference-tone (dif'e-rens-tōn), *n.* A third tone set up by the sounding of two simple tones, whose pitch-number is the difference between the pitch-numbers of the two primary tones, or between some multiples of these pitch-numbers; one of the two forms of combinational tone.—**First difference-tone**, in *acoustics*, a combinational tone produced by the simultaneous sounding of two musical tones which differ in pitch. It has a frequency, *f*, expressed by the formula: $f = u - l$, where *u* is the frequency of the higher and *l* of the lower of the two tones.—**Second difference-tone**, in *acoustics*, a difference-tone having a frequency $f = 2l - u$, where *l* and *u* are the frequencies of the lower and upper tones producing the combination.

differentiability (dif-e-ren"shi-a-bil'i-ti), *n.* The property of being differentiable.

differentiable, *a.* 2. In *math.*, having a determinate finite or determinate infinite derivative.

differential. I. *a.* 4. In *mech.*: (*a*) So constructed that the resulting motion is the algebraic sum of two unequal motions in opposite directions. The resistance moves through a path which is the difference of two velocities impressed by the applied force. Hence a slow motion of the resistance is the consequence of the moving force acting through a considerable space, and a small moving force overcomes great resistance. Used in hoisting-pulleys, double screws, and similar devices.
(*b*) Having differing velocities, as automobile driving-shafts when rounding corners and curves, and rollers for grinding grain.—5. Selective; having different effects upon different kinds of material: as, *differential* weathering.

The facts collected pointed to the conclusion that this type of valley was due to *differential* preglacial decay.
Geog. Jour. (R. G. S.), XV. 605.

Differential brake, count, counter-shaft, etc. See ★*brake*[1], ★*count*[1], ★*counter-shaft*, etc. **Differential winding.** (*b*) A winding consisting of two sections, which are excited by two different currents, as a shunt and a series current, in such a manner that their magnetic effects are in directions opposite to each other.—**Exact differential equation.** See ★*equation*.

II. *n.*—**Differential of a function**, the increment of a function so changed or 'doctored' that its ratio to the increment of the independent variable equals the limit of the ratio of the unchanged increments. **Exact differential.** If $\delta M/\delta x = \delta N/\delta y$, then $Mdy + Ndx$ is an *exact differential*. **Second differential.** Since the differential of a function is, from its definition, usually a new function of the independent variable, its differential may be taken, and is called the *second differential*. The second differential of *y* is written d^2y. In the same way we get the *third differential*, d^3y; etc.

differentiant, *n.* II. *a.* Of or pertaining to a discontinuous variation, sport, mutation, or inherited change in the type of a race or species.

Of course Mr. Bateson may say that there is really differentiation there; it is he, however, who identifies "*differentiant*" diversity and "discontinuous variation."
Biometrika, April, 1903, p. 332.

Differentiant variation. See ★*variation*.

differentiate, *v. t.* 5. In *hist.* and *cytol.*, to reveal or resolve structures in (a cell, tissue, or organ) by treating with some stain or reagent.

differentiation, *n.* 5. In *geol.*, the general process by which a parent mass of molten rock of intermediate composition, standing in a reservoir for long periods of time, breaks up or differentiates into several fractional derivatives both more acidic and more basic. While the process is obscure and inadequately understood, it accounts for the contrasted lavas which often come from the same eruptive center at different times. *Geikie*, Text-book of Geol., p. 710.—**Induced differentiation**, in *biol.*, the opinion that the process of cell-multiplication and divergent specialization which takes place during the development of the organism, and to which its characteristics of form and structure are due, is the effect of the conditions under which the development takes place: as contrasted with the opinion that it is innate or inherent in the constitution, organization, or architecture of the egg. See *inherent* ★*development* and ★*innate*, 3.—**Inherent differentiation**, in *biol.*, the process of cell-multiplication and divergent specialization which takes place during the development of the organism, and to which its characteristics of form and structure are due, regarded as the effect of the constitution, organization, or architecture of the egg. See *induced* ★*differentiation*, *induced* ★*development*, *inherent* ★*development*.—**Law of differentiation**, the law, formulated by Herbert Spencer, that society in its evolution, like the cosmos and the living organism, passes from the homogeneous to the heterogeneous.—**Logarithmic differentiation**, the method of passing to logarithms before differentiating.—**Magmatic differentiation**, the differentiation of molten masses of rock, which are technically called magmas. See ★*differentiation*, 5.—**Precocious differentiation**, the presence, in an egg or embryo, of latent or imperceptible organization before it exhibits visible organization.

diffidation (dif-i-dā'shon), *n.* [ML. *diffidatio*(*n-*), ‹ *diffidare*, renounce, defy: see *defy*.] Formal relinquishment or renunciation of faith, allegiance, or amity: solemn defiance of an enemy; declaration of hostilities: as, to send a letter of *diffidation*.

The primeval legislation of the Teutons permitted to the vassal . . . the right of *diffidation*—he might undo his faith.
Sir F. Palgrave, Hist. of Normandy and Eng., II. i.

Diffraction band. See *diffraction*.—**Diffraction corona, glory, halo**, meteorological phenomena caused by diffraction of light, as distinguished from similar phenomena which may be caused by reflection, refraction, or dispersion. The diffraction circles that occur in coronas, glories, and halos have small diameters and are much closer together than those due to reflection and dispersion; moreover, in the former the red circles are within the blue, while in the latter they are outside of the blue.

Diffuse reflection. See ★*reflection*.

diffuser, *n.* 2. In *elect.*, a reflector placed above an arc-lamp for the purpose of more uniformly distributing its light.—**Concentric diffuser**, a diffuser containing a number of concentric rings or waves, shaped so as to distribute the light uniformly over the lower hemisphere, and enameled with a color tinged slightly yellow, so as to compensate for the bluish light of the arc.

Diffuser.
a, outer globe; *b*, concentric diffuser; *c*, case; *d*, cut-out switch; *e*, suspension-hook.

diffuser-chamber (di-fū'zėr-chām'bėr), *n.* A box or chamber in which a spray of water, oil, or other liquid is spread out into very fine particles.

diffusibility, *n.* 2. Capability of spreading widely: as, the *diffusibility* of scarlet fever.

diffusion, *n.*—**Anodal diffusion**, dialysis effected by means of galvanism.—**Coefficient of diffusion.** See ★*coefficient*. **Diffusion constant.** See ★*constant*.—**Diffusion process**, an important method of extracting sugar in aqueous solution from beet-roots cut into slices; sometimes applied also to sugar-cane.—**Fractional diffusion.** Same as *atmolysis*. **Law of diffusion.** (*a*) In *phys.*, the law, formulated by Fick, that in a mixture

of salt and water, so distributed that the layers of equal density are horizontal, the number of grams of salt which will pass in unit time through unit area of a horizontal plane is $R\frac{dn}{dx}$; where n is the number of grams of salt per cubic centimeter in the layer in which the plane is located, x is the height (above a fixed plane) of the layer, and R is a constant called the *diffusivity*. (*b*) In *psychol.*, the law, formulated by A. Bain, that "according as an impression is accompanied with feeling, the aroused currents diffuse themselves freely over the brain, leading to a general agitation of the moving organs, as well as affecting the viscera." *Emotions and Will*, p. 1. **Thermal diffusion.** See *diffusion of heat*, under *diffusion*.

diffusionist (di-fū'zhon-ist), *n.* One who believes or adheres to some theory of diffusion, as the *diffusion of taxes* (which see, under *diffusion*).

diffusivity, *n.* 2. Specifically, in *phys.*, a physical constant expressing the rate of diffusion of a dissolved substance in the solvent. The diffusivity (R) is defined by the equation: $a = R\frac{dn}{dx}$, in which a is the number of grams of the dissolved substance which will pass in unit time through unit area of a horizontal plane, n the number of grams of the substance per cubic centimeter of the layer in which the plane lies, and x is the height of the layer above a fixed plane. Horizontal layers in the solution are everywhere of equal density.—**Thermal diffusivity,** the quantity $\frac{k}{cp}$, in which k is the conductivity for heat of the substance, c its specific heat, and p the density. Also called *thermometric conductivity*.

dig-dig (dig'dig), *n.* Same as ★*dik-dik*.

digeny (dij'e-ni), *n.* Digenous reproduction. *Syd. Soc. Lex.*

digestant (di-jes'tant), *a.* and *n.* [*digest* + *-ant*[1].] **I.** *a.* Aiding or improving digestion.

II. *n.* An agent used to promote digestion.

digesting-flask (di-jes'ting-flăsk), *n.* In *chem.* and *bacteriol.*, a flask used to contain liquids which are to be maintained at a desired temperature for a longer or shorter time.

Digestion products. (*a*) *The products of albuminous digestion.* The first step in the process of proteolytic digestion depends upon the reaction of the digestive medium. If this is acid, acid albumin results; if it is alkaline, alkaline albuminate results. Coincidently the denaturization of the albuminous molecule is effected, whereby the individual physical characteristics of the different members of the group are destroyed. This is followed by the formation of albumoses, of which two classes are recognized, namely, primary and secondary forms. Conjointly the albumoses may be viewed as cleavage-products of the original albumins, and some of their characteristics no doubt are referable to the smaller size of the molecule. As a class they are much more soluble than the albumins, and some members of the group are not altogether indiffusible. Three primary products are recognized, namely, a *heteroalbumose*, a *proto-albumose*, and a *albuco-albumose*. The first mentioned is an antibody (in the sense of Kühne), the second a hemibody; the third is an exclusive carrier of the carbohydrate group. The secondary products, or *deuteroalbumoses*, result from the primary forms on further digestion, and are divided into three groups, according to their behavior toward ammonium sulphate. These are termed the *dialyzate fractions* A, B, and C. Of these A and B are composed of at least two albumoses each. One member of the A fraction is known as *thio-albumose*, from the large amount of sulphur which it contains. As regards the subsequent fate of the albumoses, it was formerly thought that peptic digestion led to an end-product, a peptone, in which the hemi- and anti-groups of the albuminous molecule were still united (Kühne's amphopeptone), while on tryptic digestion this complex was broken down, with the formation of hemipeptone and antipeptone. The hemipeptone was characterized by the supposed readiness with which it was further decomposed by trypsin into leucin, tyrosin, and other crystalline products; but as a matter of fact the substance itself has thus far had only a hypothetical existence. Kühne's antipeptone, on the other hand, could be isolated apparently as a chemical unity. It can be obtained from a mixture of digestive products, after removal of the soluble albumins and albuminates and after salting out the albumoses with ammonium sulphate in neutral, acid, and ammoniacal solution, by precipitation with absolute alcohol. The investigation of this antipeptone within recent years has shown that the substance is not a unity, however, but a mixture of different products, some of which still give the biuret reaction (peptones), while others are further removed in structure from the original albumins and no longer show the characteristic color-change of the 'peptones' (the peptoids). The various components of the antipeptone fraction have not all been isolated as yet, but it appears from Kutscher's researches in the case of fibrin antipeptone that this contains considerable amounts of arginin, lysin, and histidin. The antipeptone of Kühne, in the original meaning of the term, has thus no existence, and further researches have shown that an essential difference, as far as the end-products are concerned, does not exist between peptic and tryptic digestion, and that in either case proteolysis leads to the production of crystalline bodies, which partly belong to the mono-amido acids and partly to the diamido acids, while still others exist which are as yet but little known. Of the manner in which the cleavage of the albumoses to the end-products of proteolytic digestion occurs, and of the intermediary bodies which are formed during the process, our knowledge is still imperfect. But it appears from the researches of E. Fischer and his pupils that the cleavage may take its course over products in which amido-acid radicals are united with one another in gradually diminishing numbers. Such bodies are designated *dipeptides*, *tripeptides*, and *polypeptides*, according to the number of amido-groups which are present in combination. Bodies of this order have been synthetically produced, and have also been demonstrated among the products of peptic and tryptic digestion, such as Siegfried's kyrin, obtained from glutin, which apparently consists of one molecule of arginin, one of lysin, one of glutaminic acid, and two of glycocoll. While formerly only two proteolytic ferments were known to be concerned in the digestion of albumins, Cohnheim has recently shown that a third ferment of this order is found in the mucous membrane of the intestinal tract. This is known as *erepsin*. In its general behavior and the rapidity of its cleavage-action this ferment resembles trypsin, but it differs from this in its inability to attack the native albumins, while acid albumins and albumoses are readily broken down to end-products which no longer give the biuret reaction. All these data suggest that the older concept of the restitution of the albumins from relatively complex bodies in the intestinal mucous membrane must be abandoned and that the reconstruction of the molecule takes place from much simpler bodies. Where this occurs is as yet a matter of speculation, but there are reasons to believe that it may take place beyond the intestinal barrier, and possibly in the tissues of the body at large. (*b*) *The products of carbohydrate digestion.* Carbohydrate digestion is effected by the inverting ferments of the saliva, the pancreatic juice, and the enteric juice. The effect is quite analogous to what occurs in the case of the albumins, that is, there is a cleavage of the more complex bodies to relatively simple substances. The number of these end products, owing to the smaller size of the molecule of the original material, is, however, much smaller, and all belong to one group, the monosaccharides, of which dextrose (glucose) and levulose are familiar examples. These are derived from corresponding disaccharides, which can be compared to the dipeptides, and in which two monosaccharide molecules still exist in combination. The most notable representatives of this order are maltose, which on further digestion yields two molecules of dextrose; lactose, which breaks up into dextrose and galactose; and canesugar, which similarly gives rise to dextrose and levulose. The disaccharides, in turn, result from the complex polysaccharides, with the intermediary formation of bodies which are comparable to the albumoses. Starch, which is the most important foodstuff belonging to this order, is thus first transformed into erythrodextrine, this into achroodextrine, and this in turn into the disaccharides maltose and isomaltose. Absorption of polysaccharides and disaccharides as such does not take place in the gastro-intestinal canal. (*c*) *The products of fat-digestion.* The digestion of fats is effected by the lipase or steapsin of the pancreatic juice and the enteric juice. This is quite analogous to the digestion of albumins and carbohydrates, and also leads to the liberation of the essential radicals of the original food-material. The end-products are glycerin and the fatty acids which enter into the construction of the fat-molecule, which latter, accordingly, vary with the nature of the fat ingested, the most important being palmitic acid, stearic acid, and oleic acid. In this form the fats are absorbed and then reconstructed from the component radicals.—**Primary digestion,** conversion of the food into chyle.—**Secondary digestion,** assimilation of food after its digestion in the stomach and intestine.

Digestive pocket, digestive sac, in *bot.*, an investment of the secondary rootlets which pass through the primary root to the exterior. **Digestive fever.** See ★*fever*[1].

digger, *n.* 4. One who digs for gold; a gold-miner. [Australia.]

diggerdom (dig'ėr-dum), *n.* Gold-diggers collectively. [Australia.]

digging, *n.*—**Bar diggings,** gold-washing claims on a bar or shallow bank in a river.

digital. **I.** *a.* **Digital variation.** See ★*variation*.

II. *n.* 4. One of those primaries, or quill-feathers, most commonly four in number, which are attached to the phalanges of the second and third digits of a bird's wing.

digitaleïn (dig-i-tā'lē-in), *n.* [*digitalis* + *-ein*[2].] A colorless glucoside, $C_{22}H_{38}O_9$, contained in the leaves of *Digitalis purpurea* and *D. lutea*. It forms rounded microscopic granules and is narcotic in its physiological action.

digitalinic (dij'i-tạ-lin'ik), *a.* [*digitalin* + *-ic.*] Derived from digitalin.—**Digitalinic acid,** a colorless crystalline compound, said to be formed by boiling digitalin with sodium hydroxid.

digitally (dij'i-tạl-i), *adv.* With, or by means of, the fingers; with respect to the fingers.

digitate-pinnate (dij'i-tāt-pin″āt), *a.* Digitate with pinnate leaflets, as the sensitive plant.

digitation, *n.* 3. Finger-action; use of the fingers; fingering; manipulation with the fingers.

digitato-pinnate (dij″i-tā-tō-pin'āt), *a.* Same as *digitately pinnate* (which see, under *digitately*).

digitigrady (dij'i-ti-grā-di), *n.* [As *digitigrade* + *-y*[3].] The state or condition of being digitigrade or of walking on the toes, as do cats and dogs; digitigradism: contrasted with ★*plantigrady*.

digitin (dij'i-tin), *n.* [*digit(alis)* + *-in*[2].] An inert crystalline constituent of the leaves of the foxglove, *Digitalis purpurea*.

digitinervate (dij″i-ti-nėr'vāt), *a.* [L. *digitus*, finger, + *nervum*, nerve, + *-ate*[1].] Same as *digitinerved*.

digitinervous (dij″i-ti-nėr'vus), *a.* Same as *digitinerved*.

digitipartite (dij″i-ti-pär'tīt), *a.* [L. *digitus*, finger, + *partitus*, parted.] In *bot.*, digitately parted. See *digitate*, 1, and *parted*, 3.

digitipinnate (dij″i-ti-pin'āt), *a.* [L. *digitus*, finger, + *pinnatus*, pinnate.] Same as *digitately pinnate* (which see, under *digitately*).

digitogenin (dij-i-toj'e-nin), *n.* [*digit(alis)* + *-gen* + *-in*[2].] A colorless compound, $C_{15}H_{24}O_3$, formed by the action of dilute hydrochloric acid on commercial digitalin. It crystallizes in needles which soften at about 250° C.

digitonin (dij-i-tō'nin), *n.* [*digit(alis)* + *-one* + *-in*[2].] A colorless levorotatory glucoside, $C_{27}H_{46}O_{14}5H_2O$, found in commercial digitalin. It crystallizes in slender needles which soften and turn yellow at 235° C.

digitophyllin (dij″i-tō-fil'in), *n.* [*digit(alis)* + Gr. φύλλον, leaf, + *-in*[2].] A crystalline glucoside, $C_{22}H_{32}O_{10}$, a powerful heart-poison contained in foxglove, *Digitalis purpurea*.

digitoplantar (dij-i-to-plan'tär), *a.* [L. *digitus*, finger, toe, + *planta*, sole.] Relating to the sole of the foot and to the toes.

digitoxigenin (dij-i-tok'si-je-nin), *n.* [*digitox(in)* + *-gen* + *-in*[2].] A colorless crystalline compound, $C_{23}H_{32}O_4$, formed by the action of alcoholic hydrochloric acid on digitoxin. It melts at 230° C.

digitoxose (dij-i-tok'sōs), *n.* [*digitox(in)* + *-ose.*] A colorless dextrorotatory sugar, $C_6H_{12}O_6$, formed, together with digitoxigenin, by the action of alcoholic hydrochloric acid on digitoxin. It crystallizes in prisms or plates and melts at 102° C.

diglossia (dī-glos'i-ạ), *n.* [NL., < Gr. δίγλωσσος, two-tongued, < δι-, two-, + γλῶσσα, tongue.] A condition of having a double tongue.

diglottism (dī-glot'izm), *n.* [*diglot* + *-ism.*] The use of two languages among a people, or of words derived from two languages.

> Words run much in couples, the one being English and the other French. . . . In the following . . . from [Chaucer's] Prologue, there are two of these *diglottisms* in a single line:—
>
> 'Trouthe and honour, fredom and curteisye.'
>
> . . . 'Trouthe' is 'honour,' and 'fredom' is 'curteisye.'
>
> *J. Earle*, Philol. Eng. Tongue, ¶ 78.

diglottist (dī-glot'ist), *n.* One who speaks two languages.

diglyoxaline (dī-glī-ok'sạ-lin), *n.* Same as ★*glycosine*.

diglyphic (dī-glif'ik), *a.* [Gr. δι-, two-, + γλυφή, a carving, + *-ic.*] Having two siphonoglyphs, as certain polyps: contrasted with ★*monoglyphic*.

dignathus (dig'na-thus), *n.*; pl. *dignathi* (-thī). [NL., < Gr. δι-, two-, + γνάθος, jaw.] In *teratol.*, a monster having a double lower jaw.

dignitarial (dig-ni-tā'ri-ạl), *a.* [*dignitary* + *-al*[1].] Of, belonging or peculiar to, a dignitary: as, the perversity of the *dignitarial* mind.

digonal (dig'ō-nal), *a.* [Gr. δί-, two-, + γωνία, angle, + *-al*[1].] Noting an axis of binary or twofold symmetry; specifically, one of the six axes of an isometric crystal normal to the dodecahedral faces. See ★*symmetry*.

Digonopora, *n. pl.* 2. A section of hermaphrodite mollusks in which there are separate orifices for the male and female organs: opposed to *Monogonopora*. It contains the *Limnæidæ*, *Vaginulidæ*, *Onchididæ*, and many opisthobranchs, including all the *Pteropoda*.

digraphic, *a.* 2. Written in two distinct alphabets or characters, such as longhand and shorthand: as, a *digraphic* copy-book.

> This was a bilingual (or *digraphic*, as both inscriptions are in the same language), published by De Vogüé.
>
> *Scribner's Monthly*, June, 1880, p. 205.

digrediency (dī-grē'di-ẹn-si), *n.* In *math.*, the relation of digredient sets of variables.

digredient (dī-grē'di-ẹnt), *a.* [L. *digrediens*, ppr. of *digredi*, digress: see *digress*.] In *math.*, said of two sets of variables if on replacing the variables of the first set by linear functions of themselves, those of the second set become also replaced by *different* linear functions of themselves.

digressionary (di-gresh'ọn-ā-ri), *a.* [*digression* + *-ary.*] Of the nature of a digression; digressive.

digynious (dī-jin'i-us), *a.* In *bot.*, belonging to the *Digynia*, in the Linnæan classification. See *Digynia*.

dihalogen (dī-hal'ō-jen), *a.* [*di-*[2] + *halogen.*] In *chem.*, containing two atoms of a halogen element, replacing two atoms of hydrogen, as in dichlorbenzene, $C_6H_4Cl_2$, or chlorbrombenzene, $C_6H_4Cl\,Br$.

dihedral, *a.* **II.** *n.* In *geom.*, a pair of consecutive faces of an angloid.

dihexagonal, *a.* 2. In *crystal.*, noting a type of symmetry characterized by a hexad axis

(that is, one of six-fold symmetry) in which six planes of symmetry intersect. See ★*symmetry*.

dihydrate (dī-hī′drāt), *n.* [Gr. *δι-*, two-, + *ὕδωρ*, water, + *-ate*[1].] In *chem.*, a compound containing two molecules of water, commonly of water of crystallization.

dihydrated (dī-hī′drā-ted), *a.* In *chem.*, containing two molecules of water, commonly of water of crystallization. Thus, alabaster is *dihydrated* calcium sulphate, $CaSO.2H_2O$. *G. Lunge*, Sulphuric Acid, II. 21.

dihydric (dī-hī′drik), *a.* [Gr. *δι-*, two-, + *ὕδωρ* (*ὑδρ-*), water, + *-ic.*] In *chem.*, containing two atoms of basic or easily replaceable hydrogen: as, sulphuric acid is a *dihydric* acid (H_2SO_4).

dihydriodide (dī-hī′dri-ō-did or -dīd), *n.* [*di-*[2] + *hydr(ogen)* + *iod(ine)* + *-ide*[1].] In *chem.*, a compound formed by union with the elements of two molecules of hydriodic acid.

dihydrobromide (dī-hī-drō-brō′mid or-mīd), *n.* [*di-*[2] + *hydro(gen)* + *brom(ine)* + *-ide*[2].] In *chem.*, a compound formed by union with the elements of two molecules of hydrobromic acid.

dihydrochlorid (dī-hī-drō-klō′rid), *n.* [*di-* + *hydro(gen)* + *chlor(ine)* + *-id*[1].] In *chem.*, a compound formed by union with the elements of two molecules of hydrochloric acid.

dihydrolutidin (dī-hī-drō-lū′ti-din), *n.* A ptomaïne ($C_7H_{11}N$) found in cod-liver oil.

dihydroxy-acid (dī-hī-drok′si-as′id), *n.* In *chem.*, an acid containing two combining units of the radical hydroxyl (HO), as tartaric acid. *T. E. Thorpe*, Dict. Applied Chem., I. 666.

dihydroxyl (dī-hī-drok′sil), *a.* [*di-*[2] + *hydroxyl.*] In *chem.*, containing two combining units of the radical hydroxyl (HO): as, tartaric acid is a *dihydroxyl* acid.

dihydroxytartaric (dī-hī-drok″si-tär-tar′ik), *a.* [*di-*[2] + *hydr(ogen)* + *oxy(gen)* + *tartaric.*] Noting an acid, a colorless crystalline compound, $HOOCC(OH)_2C(OH)_2COOH$, formed by the oxidation of dihydroxymalic acid. It melts at 98° C. Also *dioxytartaric*.

diiodide (dī-ī′o-did), *n.* [*di-*[2] + *iodide.*] In *chem.*, a compound containing two atoms of iodine.

diiodocarbazol (dī-ī″ō-dō-kär′ba-zol), *n.* [*di-*[2] + *iod(ine)* + *carbazol.*] A yellow odorless crystalline compound, $C_{12}H_6I_2.NH$, obtained by adding iodine to boiling carbazol. It is antiseptic, insoluble in water, but easily soluble in ether, chloroform, and hot alcohol.

diiodoform (dī-ī′ō-dō-fôrm), *n.* [*di-*[2] + *iodoform.*] A bright-yellow crystalline compound, $C_2H_2I_2$, obtained by the action of iodine on acetylene diiodide. It is an antiseptic.

diiodosalol (dī-ī″ō-dō-sal′ol), *n.* [*di-*[2] + *iod(ine)* + *salol.*] An odorless, tasteless crystalline compound, $C_6H_2I_2(OH)CO_2C_6H_5$, obtained by condensation of diiodosalicylic acid with phenol. It is an antiseptic. Also called *phenyl ester of diiodosalicylic acid*.

diionic (dī-ī-on′ik), *a.* [*di-*[2] + *ion* + *-ic.*] In *phys. chem.*, producing two ions by electrolytic dissociation. *Physical Rev.*, Dec., 1904, p. 370.

diisatogen (dī-is′a-tō-jen), *n.* [*di-*[2] + *isat(in)* + *-gen.*] A red compound, $C_{16}H_8O_4N_2$, prepared by the action of sulphuric acid on dinitro-diphenyl-diacetylene. It crystallizes in needles, and is readily converted into indigo by reducing agents.

Diisoteria (dī″i-sō-tē′ri-ä), *n. pl.* [Gr. *Διοσωτήρια*, neut. pl., ⟨ *Ζεύς* (g. *Διός*), Zeus, + *σωτήρ*, savior.] In *Gr. antiq.*, an Attic festival held at about the fourteenth day of the month Scirophorion (June) in honor of Zeus Soter and Athena Soteira.

Dika almonds, butter. See ★*almond*, ★*butter*[1].

dik-dik (dik′dik), *n.* [Also *dig-dig;* African.] A small African antelope, *Madaqua phillipsi*.

> No game here at this season, except the little *dik dik;* all is silent and desolate. *Geog. Jour.* (R. G. S.), XI. 28.

dike, *n.*—**Blue dike,** a bluish-gray clay soil. [New Brunswick and Nova Scotia.] See the extract.

> Near the edge of the upland, it [the soil] passes into a gray or bluish-gray clay called '*blue dike.*'
> *Dawson*, Acadian Geol., iii. 25.

Composite dike, in *petrog.*, a dike formed by intrusions of two different rocks at different times into one fissure. —**Corky dike.** See ★*corky*.—**Intersecting dikes,** in *geol.*, dikes which cross each other, the later one being always continuous as compared with the older one which is cut by it. See *dike*, 5.—**Multiple dike,** in *geol.*, several parallel dikes which essentially form one whole yet are separated by intervening masses of other rock. See *dike*, 5.—**Sand-dike,** a name given by the miners in the Scottish coal-fields to a former stream-course filled with sand.—**Sandstone dike,** sandstone filling a fissure and resembling an intrusive dike. The fissure is generally believed to have been formed during an earthquake and to have been filled with an uprising emulsion of sand and mud which has afterward hardened.

diketone (dī-ke′tōn), *n.* [*di-*[2] + *ketone.*] One of a class of organic compounds the molecules of which contain two carbonyl radicals, neither of which is linked to hydrogen or hydroxyl. The diketones are subdivided, according to the degree of proximity of the carbonyl groups, into 1, 2 or α-diketones, having the complex RCOCOR; 1, 3 or β-diketones, $RCOCH_2COR$; 1, 4 or γ-diketones, $RCOCH_2CH_2COR$; etc.

dil. An abbreviation of the Latin *dilutus*, dilute.

dilactic (dī-lak′tik), *a.* [*di-*[2] + *lactic.*] **1.** Of or pertaining to dilactic acid.—**2.** Noting a compound which contains two univalent lactyl radicals, $CH_3CHOHCO$, in the molecule.—**Dilactic acid,** a hypothetical acid, $HOCOCH(CH_3)OCOCH(OH)CH_3$, known only in the form of its esters and other derivatives, which are obtained from ethyl chlorpropionate and ethyl sodium lactate.

dilapidation, *n.* **3.** In *eccles. law*, the amount charged against an incumbent for damages incurred during his incumbency.—**4.** In *geol.*, the process by which exposed ledges become diminished or destroyed through the falling away of fragments of rock; also, the material broken off.

dilatant, *n.* **3.** In *phys.*, the liquid or gas, within a dilatometer, the expansion of which is to be measured.

dilatation, *n.* **5.** In *elasticity*, change of volume under stress.

dilatational (dil-ā-tā′shon-al), *a.* Of or pertaining to dilatation.

dilatometer (dil-ā-tom′e-tèr), *n.* [Irreg. ⟨ L. *dilatare*, expand (see *dilate*), + Gr. *μέτρον*, a measure.] An instrument for the determination of the changes of volume of a substance or for the measurement of its linear expansion. The form used for the determination of the relative expansion of liquids is essentially a thermometer with a greatly enlarged bulb. The bulb, including a portion of the neck, is filled with the liquid the expansion of which is to be measured, and the position of the end of the liquid column in the neck is noted at different temperatures. Fig. 1 shows such a dilatometer used in the

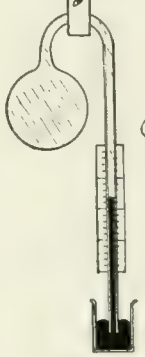


Fig. 1.

Fig. 2.

determination of the coefficient of expansion of liquids containing gases in solution. The neck is bent vertically downward and the open end is submerged in a vessel of mercury. Upon cooling the liquid within the bulb the mercury column rises in the neck, and its position is noted upon a scale attached to the neck for that purpose. For the measurement of the expansion of gases an instrument similar to the air-thermometer is employed. The dilatometer in this case consists of a glass bulb (fig. 2) the neck of which is connected with a mercury manometer. The gas may thus be maintained at constant pressure and its change of volume observed, or the pressures may be varied in such a way as to keep the gas at constant volume. For the measurement of the cubic expansion of solids a modification of the dilatometer for liquids has been employed by Dulong and Petit, Regnault, Kopp, and others. In such determinations the solid is inclosed in a glass bulb or tube (fig. 3) the opening of which is then drawn out to form a capillary neck. The space within the bulb not occupied by the solid is completely filled with mercury. When the dilatometer is heated a certain amount of mercury is driven out by the combined expansion of the solid and of the liquid. This is weighed, and from its volume the expansion of the material is computed. The linear expansion of solids is measured in some cases by the direct observation, through microscopes, of parallel lines drawn upon the surface of the test-piece. This method, known as that of Roy and Ramsden, can be employed only when expansion to be measured is that of a long bar, and even for such purposes it has been superseded by more delicate methods. In one form of dilatometer for more refined measurements of the linear coefficient of expansion the bar is fixed at one end, while to the other end, which is free to move with the change of length of the bar, is attached a device for tipping a small mirror. By observing the movement of the image of a scale seen in this mirror, very minute changes in the length of the bar may be detected. The most refined form of dilatometer for the measurement of the linear expansion of solids, and that which is usually employed for this purpose (especially in cases where the size of the test-piece is small, as in crystals), depends upon the interference of light. This extremely sensitive method, in which expansion is measured in the terms of wave-length of light, was first employed by Jamin, whose device, further perfected and developed by Michelson, has become one of the most important of optical instruments, the ★*interferometer* (which see). A special form of interferometer adapted for the rapid and accurate measurement of the linear expansion of solids is the *Abbe dilatometer*, the principle of which is indicated in fig. 4. In this instrument a glass plate, *gg*, is mounted above the specimen, S. Both surfaces are plane, but not parallel, so that a thin wedge of air lies between them. A ray of monochromatic light from above is in part reflected from the lower face of *gg*, and in part from the surface of the specimen. These two reflected rays interfere, and a system of straight parallel interference-bands is formed. Expansion of S diminishes the thickness of the layer of air and consequently the difference of path of the interfering light. From the resulting movement of the fringes the expansion is computed in terms of the wave-length of the light employed. Neither the observing telescope nor the devices for illumination are shown in the diagram. Various other forms of interferometer are employed as dilatometers.

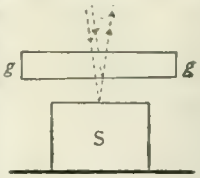


Fig. 4. Abbe Dilatometer.
g, g, glass plate.
S, specimen.

dilatometric (dil-ā-tō-met′rik), *a.* Of or pertaining to the measurement of expansion; relating to or determined by means of the dilatometer. *Nature*, July 2, 1903, p. 216.

dilatory, *a.* **II.** *n.* In *law*, a plea or other proceeding in a suit which is intended to delay the suit without reference to its merits.

Dilemmatic demonstration. See ★*demonstration*.

Dilephila, *n.*—**Dark-veined Dilephila,** a cosmopolitan sphingid moth, *Dilephila gallii*, found in Europe, Asia, and North America. Its larvæ feed on grape and purslane.

dilettante (dil-e-tän′te), *v. i.*; pret. and pp. *dilettanted*, ppr. *dilettanting.* [*dilettante*, *n.*] To play the dilettante.

dilettantist (dil-e-tän′tist), *a.* [*dilettante* + *-ist.*] Affected with or characterized by dilettantism: as, *dilettantist* philanthropy.

dilettantize (dil-e-tän′tīz), *v. i.*; pret. and pp. *dilettantized*, ppr. *dilettantizing.* [*dilettante* + *-ize.*] Same as ★*dilettante*.

Diligence against the heritage, in *Scots law*, an execution in favor of a creditor against the real property of his debtor.—**Diligence against the person,** in *Scots law*, an execution by which a creditor proceeds against the person of his debtor.—**Diligence against witnesses,** in *Scots law*, a process by which the attendance of witnesses is compelled.—**Diligence incident,** in *Scots law*, a process to cite witnesses and examine havers, similar to the English subpœna for witnesses and order for taking testimony and for interrogatories.—**Diligence to examine havers.** Same as ★*diligence incident*.—**Second diligence,** in *Scots law*, a second execution or process issued when the first has been disregarded or disobeyed, similar to the English attachment for contempt.—**Summary diligence,** in *Scots law*, an execution or process issued in a summary manner.

dilituric (dī-lī-tū′rik), *a.* Noting an acid, a compound. $CO(N_2H_2)C_3H(NO_2)O_2.3H_2O$, formed by the action of fuming nitric acid on barbituric acid. It crystallizes in quadratic plates or prisms which dissolve in water or dilute alkali with an intensely yellow color. Many of the salts explode when heated. Also *nitrobarbituric*.

dilli, *n.* See ★*dilly*[4].

dill-water (dil′wâ″tèr), *n.* An aromatic carminative water prepared from the volatile oil of dill or by distilling dill fruit with water.

dilly[4] (dil′i), *n.* [Also *dilli;* said to be native Australian.] A bag woven of grasses or of fur twisted into cord; a small bag of any material. [Australia.]

dilly-bag (dil′i-bag), *n.* Same as ★*dilly*[4].

diloph (dī′lof), *a.* [Gr. *δίλοφος*, of two crests, ⟨ *δι-*, two-, + *λόφος*, a crest.] Having two arms dichotomous, as in the spicules of sponges. A diloph tetraclone is a four-armed spicule with two of the arms thus bifurcated.

dilophous (dil′ō-fus), *a.* [Gr. *δίλοφος*, of two crests, + *-ous.*] In sponge-spicules, having two of the rays forked or branched.

dilution, *n.* **3.** In *homeopathy*, the diffusion of a given quantity of a drug in ten or one hundred times the same quantity of water. A given quantity of this solution is again diffused in ten or one hundred times the quantity of water. Each of these processes is called a *dilution*, and the resulting preparation is said to be of the tenth, fifteenth, etc., decimal or centesimal dilution according to the number of times the operation was repeated and as the quantity of water in each operation was ten or one hundred

times that of the dissolved drug.—**Heat of dilution,** the heat developed by adding to a solution, containing a gram-molecule of the dissolved substance, an amount of the solvent sufficient to double the volume.—**Ostwald's dilution law,** in *phys. chem.*, the law that if v is the number of liters of a solution which contains a gram-molecule of the dissolved electrolyte, and m that fraction of the gram-molecule of the electrolyte which is electrolytically dissociated into ions, the equation $\frac{m^2}{(1-v)v} =$ constant is true for certain classes of electrolytes. Good electrolytes do not obey the law, the reason for this being unknown. For good electrolytes empirical relations have been suggested; one is *Rudolphi's dilution law or formula*, $\frac{m^2}{(1-v)\sqrt{v}} =$ constant; another is *Van t'Hoff's dilution law*, $\frac{m^3}{(1-v)\sqrt{v}} =$ constant.

Diluvian epoch, a subdivision of geologic time following the culmination of the glacial epoch and embracing the retreat and melting of the great ice-sheet with the attendant floods.

diluvium, *n.* **Alpine diluvium,** the loose material from an alpine glacier rearranged by water.

dim. An abbreviation (*b*) of *diminutive;* (*c*) of the Latin *dimidius*, one half.

dimagnesic (dī-mag-nē′sik), *a.* [*di-*[2] + *magnes(ium)* + *-ic.*] In *chem.*, containing two atoms of magnesium.

dimanganous (dī-mang′gạ-nus), *a.* [*di-*[2] + *mangan(ese)* + *-ous.*] In *chem.*, containing two atoms of manganese.

Dime museum. See ★*museum.*

Dimension lines, shingle, stone. See ★*line*[2], ★*shingle*[1], ★*stone.*—**Equation of dimensions.** See ★*equation.*—**Four dimensions,** length, breadth, thickness, and a fourth analogous in character. For exhibiting the relations between any three magnitudes, x, y, z, it is convenient to regard them as the coördinates of a point in space; similarly any four magnitudes may be regarded as the coördinates of a point in space of four dimensions. Lagrange said mechanics may be conceived as a geometry of four dimensions, in which time serves as fourth coördinate.—**Fourth dimension,** a dimension of like character added to length, breadth, and thickness; in *math.*, an (assumed) unknown direction extending in two senses, 'ana-' and 'eiso-', from every particle of a cube, and such that the slightest infinitesimal motion of the cube in this direction would take it completely out of itself. In four-dimensional space a right hand can become a left hand by simple movement.

Prophetic and well-timed were the parting words to the speaker of the illustrious Tchebicheff: "Take to Kinematics, it will repay you; it is more fecund than geometry; it adds a *fourth dimension* to space." So also said Lagrange.
Sylvester, Discoveries Mech. Conver. of Motion, p. 17.

If it became necessary to assume the existence of five atoms at equal distances from one another in a molecule, there would be evidence of a *fourth dimension.*
C. H. Hinton, in Harper's Mag., July, 1904, p. 232.

Rough dimensions, dimensions which are not exact, but which are larger than the finished measurement will be.

Dimensional equation, formula. See ★*equation,* ★*formula.*

dimere (dī′mēr), *n.* [Gr. *διμερής*, of two parts, ‹ *δι-*, two-, + *μέρος*, a part.] In the skeletons of the reticulate hexactinellid sponges, a mesh of the second order, made by the intersection of the secondary spicular bands of a primary quadrule.

dimeric (dī-mer′ik), *a.* [*dimer(ous)* + *-ic.*] **1.** Bilateral, or having a right and a left side, as in most animals: contrasted with ★*polymeric.*

Comparison of bilateral or *dimeric* animals with rotate or polymeric animals.
L. H. Bailey, Smithsonian Rep., 1897, p. 455.

2. In *bot.*, same as *dimerous.*

Dimerosporium (dī″mer-ọ-spō′ri-um), *n.* [NL., ‹ Gr. *διμερής*, of two parts, + *σπορά*, seed (spore).] A genus of epiphytic fungi of the family *Perisporiaceæ*, having membranous or subcarbonaceous perithecia seated upon a subiculum of brown mycelium. The spores are hyaline or brown, and have two cells, as the name indicates. About 60 species have been described, occurring mostly on living leaves in tropical or subtropical regions. *D. mangiferum* causes the black blight of the mango. See *black* ★*blight* (*a*).

dimery (dim′ẹ-ri), *n.* [NL. **dimeria*, ‹ Gr. *διμερής*, of two parts.] In *bot.*, the condition of being dimerous.

In the pentamery and *dimery* of Dicotyledones there is usually a posterior sepal with a pair of lateral prophylls.
Encyc. Brit., XXV. 433.

dimetaphosphate (dī″met-ạ-fos′fāt), *n.* [*di-*[2] + *metaphosphate.*] In *chem.*, a salt which contains the radical P_2O_6, resulting from the coalescence of two combining units of the radical PO_3 of a metaphosphate: as, potassium *dimetaphosphate*, $K_2P_2O_6$.

dimethyl (dī-meth′il), *n.* [*di-*[2] + *methyl.*] **1.** Same as ★*ethane.*—**2.** A combining form used in organic chemistry to indicate the presence of two methyl-groups in the molecule of a compound.

dimethylacetal (dī-meth-il-as′e-tal), *n.* A colorless ethereal liquid compound, $CH_3.CH(OCH_3)_2$, obtained by the oxidation of a mixture of ethyl and methyl alcohol. It is anesthetic.

dimethylamine (dī-meth-il-am′in), *n.* A colorless gas, $(CH_3)_2NH$, present in herring-brine, and formed by the putrefaction of fish, gelatin, and proteid material in general. It is prepared by the action of sodium hydroxid on nitrosodimethylaniline, boils at 7.2–7.3° C., and resembles ammonia in its odor and in the constitution of its salts.

Dimethylaniline orange. See ★*orange*[1].

dimethylarsine (dī-meth-il-är′sin), *n.* A colorless mobile liquid, $(CH_3)_2AsH$, prepared by the action of zinc and hydrochloric acid on cacodyl chlorid. It boils at 36° C., has the odor and poisonous properties characteristic of cacodyl derivatives, and burns spontaneously in air. Also called *cacodyl hydrid.*

dimethylpyrazin (dī-meth′il-pī-raz′in), *n.* See ★*glycoline.*

dimethylpyrone (dī-meth-il-pī′rōn), *n.* [*di-*[2] + *methyl* + *pyrone.*] A colorless compound, $CO\langle^{CH:C(CH_3)}_{CH:C(CH_3)}\rangle O$, prepared by the action of hydriodic acid on dehydracetic acid. It forms crystals which melt at 132° C. and boil at 248–249° C. Also called *a a′-dimethyl-γ-pyrone.*

dimethylxanthin (dī-meth-il-zan′thin), *n.* [*di-*[2] + *methyl* + *xanthin.*] Same as *theobromine:* found in tea.

Dimetian (di-mē′shian), *a.* In *geol.*, noting crystalline rocks in Pembrokeshire which have been regarded by some English geologists as of Precambrian age, but by others, and especially by Geikie, as eruptives intruded into Cambrian strata.

dimetient (di-mē′shi-ent), *a.* [L. *dimetiens* (*-ent-*), ppr. of *dimetiri*, measure: see *dimension.*] In *math.*, characterizing the dimensionality. *De Morgan.* [Rare.]

dimetria (dī-mē′tri-ạ), *n.* [NL., ‹ Gr. *δι-*, two-, + *μήτρα*, womb: see *matrix.*] Congenital abnormality consisting in the presence of a double uterus.

diminish, *v. i.* **2.** To taper, as a column.—**Law of diminishing returns.** See ★*law*[1].

Diminished column, stile. See ★*column,* ★*stile*[1].

diminishing-rod (di-min′ish-ing-rod), *n.* A device on a cotton-roving machine for giving the bobbin of roving its conical ends. *Nasmith,* Cotton Spinning, p. 207.

diminution, *n.*—**Figure of diminution,** in *musical notation*, a numeral, usually with a curve inclosing the notes affected, signifying that the latter are to be performed as a group with less than their normal time-value. Such groups are the *duole, triplet, quartole, quintole, sextole*, etc., the signs for which are 2, 3, 4, 5, 6, etc., respectively.

dimity, *n.* **2.** A thin cotton fabric, either white or colored, resembling muslin, distinguished by raised threads or cords which run lengthwise of the cloth.—**Dimity ruffling,** dimity cloth plaited longitudinally in weaving.

dimmer (dim′ėr), *n.* In *elect.*, an adjustable reactive coil used for reducing the amount of light of incandescent lamps.

dimolecular (dī-mọ-lek′ū-lär), *a.* [*di-*[2] + *molecular.*] Same as ★*bimolecular.*

Since that time Piloty has practically completed the proof of the dependence of the green or blue color upon the monomolecular condition and of the white or colorless form upon the *dimolecular* condition.
Amer. Chem. Jour., Aug., 1903, p. 111.

dimorphism, *n.* **6.** In *petrog.*, modifications produced within the magma of an igneous rock by mineralizing or crystallizing agents before its solidification. *Delesse*, 1858.

dimorphobiotic (dī-môr″fọ-bī-ot′ik), *a.* [Gr. *δι-*, two-, + *μορφή*, form, + *βιωσις* (*βιωτ-*), way of life, + *-ic.*] Exhibiting alternation of generations and having a parasitic and a non-parasitic stage in the course of the complete life-history. *Jour. Exper. Med.*, VI. 79.

Dimorphoceratidæ (dī-môr″fọ-se-rat′i-dē), *n. pl.* [NL., ‹ *Dimorphoceras* (*-cerat-*) + *-idæ.*] A family of Carboniferous ammonoid cephalopods or goniatites with discoidal shells and digitate lobes.

dimple, *n.*—**Capillary dimple,** a slight depression in a liquid surface; specifically, that made by bringing the ivory or glass zero-point of a barometer or manometer into contact with the mercury in the tube or cistern. The point has its proper position when the capillary dimple is barely visible.

Dimyaria, *n. pl.* **2.** A group or branch of *Nemertini* in which the dermal musculature consists of an external coat of circular muscles and an internal coat of longitudinal muscles. It includes the anoplous forms belonging to the orders *Protonemertini, Mesonemertini,* and *Metanemertini.* Contrasted with ★*Trimyaria.*

dimyaric (dim-i-ā′rik), *a.* [*Dimyaria* + *-ic.*] Having the character of the *Dimyaria*, that is, having two muscle-layers: as, *dimyaric* nemertines.

Dimylidæ (dī-mil′i-dē), *n. pl.* [NL., ‹ *Dimylus*, the type genus, + *-idæ.*] A family of small insectivorous mammals comprising extinct species from the Tertiary of Europe. *Schlosser*, 1887.

din[2] (den), *n.*: pl. *dinim* (dē′nēm). [Heb.] **1.** (*a*) A judgment. (*b*) A law suit; a plea or cause. (*c*) A law or precept. There are four rabbinical codes containing all the dinim (precepts), ecclesiastical and secular, by which every dayan, or judge, is guided.
2. See ★*pahad.*

Dinantian (di-nan′shian), *n.* [*Dinant*, a city and district in Belgium, + *-ian.*] In *geol.*, the lower division of the Carboniferous system in Europe. Equivalent to the Culm or Calcaire carbonifère.

dinaphthyl (dī-naf′thil), *n.* [*di-*[2] + *naphth(alene)* + *-yl.*] One of three isomeric compounds, $(C_{10}H_7)_2$: they are colorless, and are prepared by passing naphthalene and stannic-chlorid vapor through a red-hot tube. They are distinguished as α,α-, α,β-, and β,β-dinaphthyl or binaphthyl. The first crystallizes in rhombohedral plates melting at 154° C. and boiling at 360° C.; the second crystallizes in hexagonal plates melting at 79–80° C.; the third forms fluorescent plates melting at 187° C.

dinar, *n.* **2.** A money of account in Persia, equal to one ten thousandth of the tuman.—**3.** A current silver coin of Servia, equal to 100 paras or about 20 United States cents.

Dinarian (di-nā′ri-ạn), *n.* [*Dinara*, a mountain in Dalmatia, + *-ian.*] In *geol.*, a division of the Triassic rocks in the Mediterranean province, as recognized by Austrian geologists. It lies above the Scythian series, which is the lowest member of this formation, and below the Tirolian.

Dinaric (di-nar′ik), *a.* [*Dinara*, a mountain in Dalmatia, + *-ic.*] Noting a region of the Alps.—**Dinaric race,** a European type, found along the coast of the northern Adriatic sea, characterized by being tall, very short-headed, with long dark wavy hair, delicate, straight, or aquiline nose, and slightly tawny skin.
Deniker, Races of Man, p. 333.

Dinaritidæ (din-ạ-rit′i-dē), *n. pl.* [NL., ‹ *Dinarites* (‹ *Dinara:* see ★*Dinarian*) + *-idæ.*] A genus of Triassic ammonoid cephalopods, allied to *Ceratites*, but having fewer and simpler lobes. See *Ceratites*, 1.

dinder (din′dėr), *n.* [A dial form of **dinner*, AS. *dinor* (OF. *denier*), ‹ L. *denarius:* see *denier*[2], *dinar, denarius.*] A local name in some parts of England, particularly in Shropshire, for one of the small coins, called *denarii* by the Romans, frequently found on the sites of old Roman settlements. [Prov. Eng.]

Dinematichthys (dī-nem-ạ-tik′this), *n.* [NL., ‹ Gr. *δι-*, two-, + *νῆμα* (*τ-*), thread, + *ἰχθύς*, fish.] A genus of small fishes of the family *Brotulidæ*, inhabiting the coral reefs.

dinergate (dī-nėr′gāt), *n.* [Gr. *δεινός*, terrible (large) + *ἐργάτης*, a worker.] A general term for a worker major, or 'soldier,' among species of ants with polymorphic workers.

dinerillo (dē-nä-rēl′yō), *n.* [Sp., dim. of *dinero*, penny.] A small copper coin of Philip III. and Philip IV. of Spain, and of Louis XIII. and Louis XIV. of France, struck for Valencia in the seventeenth century.

dinero, *n.* **2.** A Spanish coin, the denier.

dingar (ding′gär), *n.* [E. Ind.] The giant East Indian honey-bee, *Apis dorsata.* *Cambridge Nat. Hist.*, VI. 70.

ding-dong (ding′dông), *v.* **I.** *intrans.* To sound with the regularity of the ding-dong of a bell.

II. *trans.* To assail or pester with a continual succession of complaints, requests, taunts, gibes, or the like. See *ding*[2], *v. t.*

dinge (dinj), *v. t.* [Also *dindge* (obs.): a var. of *ding, v.* Cf. *sing* and *singe.*] To dent, or make a depression or hollow on the surface of, as by a knock or blow; dint; bash: as, a *dinged* silk hat. [Prov. Eng.]

dinge (dinj′), *n.* [Also *dindge* (obs.), ‹ *dinge, v.*] A dent or depression made by a blow; a bruise or bash: as, a *dinge* on a copper kettle; a hat full of *dinges.* [Prov. Eng.]

dingle[1], *n.*, **2.** (*b*) The roofed-over space between the kitchen and the sleeping-quarters in a logging-camp, commonly used as a store-room.

Dingle beds. See ★*bed*[1].

dingle-bird (ding′gl-bėrd), *n.* Same as *bell-bird*, 2.

dinic (din'ik), *a.* and *n.* **I.** *a.* Same as *dinical.* **II.** *n.* A medicinal remedy for giddiness.

Dinichthys (dī-nik'this), *n.* [Gr. *δεινός*, terrible, + *ἰχθύς*, a fish.] A genus of gigantic arthrodirous Devonian fishes, regarded as pertaining to the family *Coccosteida*, in which the head-shield is composed of one large median occipital plate, and three pairs of lateral and two pairs of anterior plates, the trunk also being plated. The median plates are movable, without teeth, but both the maxillæ and the mandibles are sharpened to a cutting edge, which may be serrulate. The species are characteristic of the Devonian black shales in Ohio and New York, and European species are also known. Head-shields have been found in Ohio which measure nearly 4 feet in length.

Diniferida (din-i-fer'i-dä), *n. pl.* [NL., < Gr. *δίνη*, a whirl, + L. *ferre*, bear, + *-ida*.] An order of *Dinoflagellidia* having two transverse furrows. It includes the families *Peridinidæ* and *Dinophysidæ*.

dining-car (dī'ning-kär), *n.* A railway-car fitted up as a dining-room or restaurant, and supplied with a kitchen, pantry, refrigerator, etc.

dining-coach (dī'ning-kōch), *n.* Same as ★*dining-car.*

dining-hall (dī'ning-hâl), *n.* A large dining-room, as in a hotel or college.

dining-table (dī'ning-tā″bl), *n.* The table in a dining-room, dining-hall, or saloon on shipboard, round which people gather to dine; a dinner-table.

dinitrobenzene (dī-nī″trō-ben'zēn), *n.* [*di-*[2] + *nitro(gen)* + *benzene.*] A compound, $C_6H_4(NO_2)_2$, derived from benzene by the substitution of two nitro-groups for two hydrogen atoms. *Orthodinitrobenzene* is formed in small quantity when a mixture of sulphuric and nitric acids acts on benzene. Its crystals melt at 117.9° C. *Metadinitrobenzene* is the chief product obtained from the action of a mixture of sulphuric and nitric acids on benzene. Its yellow crystals melt at 91° C. At the same time a little *paradinitrobenzene* is formed. Its crystals melt at 171–172° C.

dinkel (ding'kel), *n.* [G.] The one-grained wheat, *Triticum monococcum.* See *wheat.* Also called *einkorn.*

dinky (ding'ki), *a.* and *n.* [Also *dinkey;* a prov. word of imitative nature, in effect a var. of *dicky*, as applied to small things.] **I.** *a.* **1.** Small and neat; trim; tidy; nice. [Prov.]—**2.** Small but pretentious; small and insignificant. [Prov.]

II. *n.*; pl. *dinkies* (-kiz). **1.** Something small or insignificant. [Colloq.]—**2.** An apparatus of smaller size than the usual standard, as a pony- or donkey-engine for doing work which requires small horse-power.—**3.** A pair of wheels on an axle used to carry the weight of a beam or pole in erecting structures or wire lines. The axle is usually curved upward in the middle, with a lever affixed, so that the weight can first be raised off the ground, in a sling, and then wheeled to the desired point.

dinner-pad (din'ėr-pad), *n.* A pad placed over the region of the stomach during the application of a plaster-of-Paris or other jacket. After the jacket has hardened the pad is removed, thus allowing room for distention of the stomach when it receives food.

dinner-pail (din'ėr-pāl), *n.* A tin pail, with a cover, in which working-men carry, or are supposed to carry, their 'dinner' or midday meal to their work. "A full dinner-pail" for the working-man figures in party rhetoric. [U. S.]

dinner-pair (din'ėr-pār), *n.* In parliamentary usage, a pair formed by two members of opposite parties during the dinner-hour, the vote of the one balancing the vote of the other in case of a division while both are absent, that is, from 7 to 10 P. M. [Eng.]

dinner-party (din'ėr-pär″ti), *n.* A party of guests invited to dinner and for social intercourse or entertainment.

dinner-ring (din'ėr-ring), *n.* Same as ★*banquet-ring.*

dinner-set (din'ėr-set), *n.* A set of dishes of the same pattern for use on the dinner-table: as, a *dinner-set* of Limoges ware.

Dinobolus (dī-nob'ō-lus), *n.* [Gr. *δεινός*, terrible, + *ὀβολός*, an obol.] A genus of atrematous *Brachiopoda*, of the family *Trimerellidæ*, having thick-shelled subcircular valves with interior muscular platforms slightly excavated for the viscera. They are of Silurian age.

dinoceratous (dī-nō-ser'ą-tus), *a.* Belonging or related to the *Dinocerata*, a group of fossil perissodactyl mammals.

dinomania (din″ō-mā'ni-ą), *n.* [NL., < Gr. *δίνος*, whirling, + *μανία*, madness.] Same as ★*dancing-mania.*

Dinoperca (dī-nō-pėr'ką), *n.* [NL., < Gr. *δεινός*, terrible (large), + *πέρκη*, perch.] A genus of serranoid fishes found on the coasts of Baluchistan and Sind. Only one species, *D. petersii*, is known.

Dinophilea (dī-nof-i-lē'ą), *n. pl.* [NL., < *Dinophilus* + *-ea.*] A class of *Trochelminthes*, represented by a minute worm-like organism, *Dinophilus*, inhabiting salt or brackish water. The body is composed of from 4 to 8 segments, and bears a head of prostomium and a short ventral tail. The surface of the body bears cilia distributed uniformly or in rings. The genus *Dinophilus* is sometimes regarded as belonging to the *Archiannelida*.

Dinophis (din'ō-fis), *n.* [Gr. *δεινός*, terrible, + *ὄφις*, a serpent.] A fossil marine serpent, from the North American Eocene, which attained a length of 30 feet: probably synonymous with *Palæophis.*

dinopid (din'ō-pid), *n.* and *a.* **I.** *n.* A member of the family *Dinopidæ.*

II. *a.* Having the characteristics of or belonging to the family *Dinopidæ.*

dinornithid (dī-nôr'ni-thid), *n.* One of the *Dinornithidæ.*

dinornithine (dī-nôr'ni-thin), *a.* [NL. *dinornis* (*-ornith-*) + *-ine*[2].] Pertaining to or having the characters of the extinct genus *Dinornis* and its allies.

dinornithoid (dī-nôr'ni-thoid), *a.* Allied to or resembling *Dinornis* or the *Dinornithidæ.*

dinos (dī'nos), *n.*; pl. *deinoi* (*-noi*). [Gr. *δίνος*, *δεῖνος*, a name of various round vessels.] In *Gr. antiq.*, a large bowl without a foot.

dinosaur, *n.*—**Chambered dinosaur,** the extinct reptile *Camarosaurus*, so named from the cavities in its vertebræ.—**Duck-billed dinosaur,** the dinosaurian reptile *Trachodon* or *Hadrosaurus*, characterized by the broad, beak-like snout on the skull.

Duck-billed Dinosaur (*Hadrosaurus mirabilis*).
After a restoration by Knight.

dinotherioid (din-ō-thē'ri-oid), *a.* and *n.* **I.** *a.* Related to or having the characters of the extinct ungulate *Dinotherium.*

II. *n.* An ungulate mammal related to *Dinotherium.*

Dinotherium sand. See ★*sand*[1].

diobely (dī-ob'ę-li), *n.* [Gr. *διωβελία*, < *δι-*, two-, + *ὀβολός*, obol.] In *Gr. antiq.*, an allowance of two obols a day to each citizen present during the Athenian festivals, to pay for seats in the theater.

diodangium (dī-o-dan'ji-um), *n.*; pl. *diodangia* (-ą). [NL., < Gr. *διοδος*, a passage, + *ἀγγεῖον*, a vessel.] A sporangium in the *Archegoniatæ.* *Van Tieghem.*

diode[1] (dī'ōd), *a.* [Gr. *δι-*, two-, + *ὁδός*, way.] Of two ways; in *elect. teleg.*, same as *duplex.*

diode[2] (dī'ōd), *n.* [Gr. *διοδος*, a way through, a passage, < *διά*, through, + *ὁδός*, way.] In *bot.*, the rudimentary or transition body in vascular plants which develops into the prothallium. *Van Tieghem.*

diodogone (dī-od'ō-gōn), *n.* [Gr. *διοδος*, a passage, + *γόνος*, generation.] In *bot.*, a sporangium in the *Spermatophyta* which generates diodes; the embryo-sac and pollen-sac. *Van Tieghem.*

diodophyte (dī-od'ō-fīt), *n.* [Gr. *διοδος*, a passage, + *φυτόν*, plant.] A plant which produces diodes; any vascular plant. *Van Tieghem.*

diœciodimorphic (dī-ē-shiō-di-môr'fik), *a.* In *bot.*, same as *heterogonous*, which see.

diœciodimorphous (dī-ē-shiō-di-môr'fus), *a.* Same as ★*diœciodimorphic.*

diœciopolygamous (dī-ē″shiō-pō-lig'ą-mus), *a.* In *bot.*, diœciously polygamous, that is, having some individuals unisexual and others hermaphrodite.

diœstrous (dī-ēs'trus), *a.* [Gr. *δι-*, two-, + *οἶστρος*, stimulus.] **1.** Relating to the first of two successive periods of sexual desire.—**2.** Relating to the brief interval between two successive periods of sexual desire. **Diœstrous cycle,** the first of two successive periods of sexual desire, plus a brief interval of rest (*diœstrum*).

diœstrum (dī-ēs'trum), *n.*; pl. *diœstra.* [NL.: see ★*diœstrous.*] A brief interval (from 6 to 14 days) between two periods of sexual desire in animals.

Diogenodonta (dī-oj″e-nō-don'tą), *n. pl.* [NL., < Gr. *διογενής*, sprung from Zeus, + *ὀδούς*, (*ὀδοντ-*), a tooth.] A group of advanced and modern pelecypod mollusks in which the hinge has lateral and cardinal teeth on a true hinge-plate, the former not exceeding two and the latter three in number.

dionine (dī'ō-nin), *n.* A trade-name of ethyl morphine hydrochlorid. It is employed as an ocular anesthetic in place of cocaine.

Dionysian, *a.* **4.** Of or pertaining to (*a*) Dionysius the Areopagite, mentioned in Acts xvii. 34, who is said to have been made bishop of Athens in the year 50 by the Apostle Paul; or (*b*) a pseudo-Dionysius who, about 360–450 A. D., wrote several ecclesiastical works attributed by some to the Areopagite.

Dionysic (dī-ō-nis'ik), *a.* Same as *Dionysiac.*

Diopsidæ (dī-op'si-dē), *n. pl.* [NL., < *Diopsis* + *-idæ.*] A family of acalyptrate *Diptera* of which *Diopsis* is the type. They are small black flies, rather stout, with stout front thighs and the head much widened. They are found in shady wooded places.

dioptometry (dī-op-tom'ę-tri), *n.* [Gr. *διά*, through, + *ὀπτ(ικός)*, of seeing, + *-μετρία*, < *μέτρον*, measure.] Measurement of the power of accommodation and of the refraction of the eye.

dioptric. **I.** *a.*—**Dioptric curve.** Same as *Cartesian oval.*—**Dioptric globe.** See ★*holophane.*—**Dioptric micrometer.** See ★*micrometer.*

II. *n.*—**Prism dioptric,** a unit of the deflecting power of prisms; a deflecting power equivalent to that of a prism which displaces the transmitted ray through an angle subtended by one centimeter at a distance of one meter: used chiefly by oculists.

dioscorine (dī-os'kō-rin), *n.* [*Dioscorea* + *-ine*[2].] A greenish-yellow, crystalline, very poisonous bitter alkaloid, $C_{13}H_{19}O_2N$, contained in Java gadung, *Dioscorea hirsuta.* It melts at 43.5° C., and acts on the central nervous system like picrotoxin, but is less energetic.

diose (dī'ōs), *n.* [*di-*[2] + *-ose.*] Same as ★*biose.*

The first volume deals with the monosaccharides, the chief subheads being: *dioses*, trioses, tetroses and methyl derivatives. *Jour. Phys. Chem.*, Oct., 1904, p. 509.

diosmin (dī-os'min), *n.* [Gr. *δι-*, two-, + *ὀσμή*, odor, + *-in*[2].] Same as ★*barosmin.*

diosphenol (dī-ō-sfē'nōl), *n.* [*dios(min)* + *phenol.*] A crystalline phenol-like body, $C_{10}H_{18}O_2$, found in buchu-oil from *Parapetalifera betulina* (*Barosma betulina* of Bartling and Wendland). It melts at 82° C. Also called *Barosma camphor*, and *Buchu camphor.*

Diospyraceæ (dī-os-pi-rā'sē-ē), *n. pl.* [NL. (Drude, 1879), < *Diospyros* + *-aceæ.*] A family of dicotyledonous sympetalous plants of the order *Diospyrales*, the ebony family: long known by the name *Ebenaceæ* (which see). It is typified by the genus *Diospyros*, and includes 7 genera and about 318 species, by far the larger number of which belong to *Diospyros*. See *Diospyros*, *Maba*, and *Royena*.

Diospyrales (dī-os-pi-rā'lēz), *n. pl.* [NL., < *Diospyros* + *-ales.*] An order of dicotyledonous sympetalous plants embracing the families *Sapotaceæ*, *Diospyraceæ*, *Styracaceæ*, and *Symplocaceæ.* They are trees or shrubs with simple leaves and often valuable wood.

diota (dī-ō'tą), *n.*; pl. *diotæ* (-tē). [L. *diota*, < Gr. *δίωτος*, two-eared, < *δι-*, two-, + *οὖς* (*ὠτ-*), ear.] A Greek vase with two ears or handles, similar to the amphora.

diotic (dī-ot'ik), *a.* [Gr. *δίωτος*, two-eared, < *δι-*, two-, + *οὖς* (*ὠτ-*), ear, + *-ic.*] Involving the use of both ears in the perception of a single tone or clang: opposed to ★*dichotic.*

Diotocardia (dī″ō-tō-kär'di-ą), *n. pl.* [NL., < Gr. *δίωτος*, two-eared, + *καρδία*, heart.] A division of the gastropod *Mollusca* based on the presence of two auricles in the heart: contrasted with ★*Monotocardia.*

dioxine (dī-ok'sin), *n.* [*di-*² + *ox*(*ygen*) + *-ine*².] Same as ★*gambine B.*

dioxogen (dī-ok'so-jen), *n.* A trade-name for a 3-per-cent. solution of hydrogen peroxid in water.

dioxybenzol (dī-ok-si-ben'zōl), *n.* [*di-*² + *oxygen*) + *benzol*.] A diatomic phenol which results from benzene on the substitution of two hydroxyl groups for two hydrogen atoms, for example, pyrocatechin, resorcin, and hydroquinone.

dioxytartaric (dī-ok"si-tär-tar'ik), *a.* [*di-*² + *oxygen*) + *tartaric*.] Same as ★*dihydroxytartaric*.—**Dioxytartaric acid.** Same as ★*dihydroxytartaric acid*.

dip, *v.* **I.** *trans.* **8.** To submerge (an animal, as sheep, except the head) in a warm decoction of sulphur, tobacco, or the like, for the destruction of injurious parasites and germs of skin-diseases.

II. *intrans.* **4.** In the manufacture of turpentine, to gather resin from boxes or cups. [U. S.]

dip, *n.*, 5. (*c*) In *ceram.*, a preparation of colored slip for decorating pottery. See ★*dip-ware*. **7.** A small dumpling made of batter dropped into boiling water a spoonful at a time and boiled for about five minutes. Usually in the plural. [Australia.]—**8.** Vertical distance below a given level.—**9.** A depression or sink on the surface of the earth.—**10.** Crude turpentine. [U. S.]—**11.** Among stock-breeders, 'tinge' or 'touch,' that is, a slight strain, of another breed or variety.—**12.** The depth to which anything is submerged, as a floating vessel, the floats or buckets of a paddle-wheel, etc.—**Unconformability of dip,** in *geol.*, the lack of correspondence in the dip of strata produced when a later series of sediments is deposited upon the upturned edges of an older and tilted series.

dipa (dē-pä'), *n.* [Tagalog *dipá* = Bisaya *dopá*.] In the Philippine Islands, a measure of length; a fathom.

dipartite (dī-pär'tīt), *a.* [L. *di-*, apart, + *partitus*, parted.] Divided into various parts: as, *dipartite* writings. *Ruskin.*

dipartition (dī-pär-tish'on), *n.* [*dipartite* + *-ion*.] Sundering; division: as, the *dipartition* of the sheep from the goats on the judgment-day.

dipentene (dī-pen'tēn), *n.* [*di-*² + Gr. πέντε, five, + *-ene*.] A terpene, $C_{10}H_{16}$, found in a great variety of volatile oils: it boils at 181° C. and is optically inactive. According to its origin, it has been called by a great variety of names.

dipeptide (dī-pep'tid), *n.* [*di-*² + *pept*(*ic*) + *-ide*¹.] A condensation-product of the anhydrids of two amido-acids which are derived from the albuminous molecule. See ★*digestion products*.

dip-fault (dip'fâlt), *n.* A fault in inclined strata which runs in the direction of their dip and across their strike.

Small *dip-faults* were seen in the sea-cliff. Greater *dip-faults* of considerable but unknown throw cut off the entire series along the axis of the "tickle" and again at a point about 370 meters to the southeast of the headland at the sea-chasm. *Amer. Geol.*, Aug., 1903, p. 68.

dip-glaze (dip'glāz), *n.* In *ceram.*, a liquid glaze preparation into which the biscuit ware is dipped. Compare ★*vapor-glaze*.

diphase (dī'fāz), *a.* [Gr. δι-, two-, + φάσις, phase.] In *elect.*, same as ★*quarterphase*.

diphasic (dī-fā'zik), *a.* [Gr. δι-, two-, + φάσις, phase, + *-ic*.] Having two phases. *Buck*, Med. Handbook, III. 105.

diphenol (dī-fē'nol), *n.* [*di-*² + *phenol*.] One of several isomeric compounds. The most important is the diorthoderivative $HOC_6H_4C_6H_4OH$(2:2), prepared by heating fluorin with potassium hydroxid at 400° C. It forms crystals melting at 98° C.

diphenyl (dī-fē'nil), *n.* [*di-*² + *phenyl*.] A colorless compound, $C_6H_5C_6H_5$, found in coal-tar, and prepared by passing benzene vapor through a red-hot tube. It is volatile with steam, crystallizes in large lustrous monoclinic plates, melts at 70.5° C., and boils at 254° C. Also called *biphenyl*. **Diphenyl blue, brown,** etc. See ★*blue*, ★*brown*, etc.

Diphenylamine-orange. See *orange*¹.

diphenylethanolone (dī-fē"nil-eth-an'ọ-lōn), *n.* Same as ★*benzoin*, 3.

diphenylimide (dī-fē-nil-ī'mid), *n.* [*diphenyl* + *imide*.] A colorless crystalline substance, $(C_6H_5)_2$–NH, formed when diphenylamine vapors are conducted through a tube heated to redness. It also occurs in crude anthracene.

diphenylketone (dī-fē-nil-kē'tōn), *n.* [*di-*² + *phenyl* + *ketone*.] Same as ★*benzophenone*.

diphosphate (dī-fos'fāt), *n.* [*di-*² + *phosph*(*orus*) + *-ate*¹.] In *chem.*, a compound containing two combining units of the radical of phosphoric acid. The name has been incorrectly applied to a phosphate containing two atoms of combining units of a metal united to this radical, as *diphosphate* of soda instead of *hydro*. phosphate.

Diphragmida (dī-frag'mi-dạ̈), *n. pl.* [NL., < Gr. δι-, double, + φραγμα, a partition.] In Hyatt's classification of the *Cephalopoda*, a group of primitive Lower Silurian nautiloids in which the siphuncle is divided by transverse tabulæ alternating with the septa of the shell.

Diphragmoceras (dī-frag-mos'ẹ-rạs), *n.* [Gr. δι-, double, + φραγμα, a partition, + κέρας, a horn.] The typical and only genus of the cephalopod group *Diphragmida*.

diphrophoros (dī-frof'ọ-ros), *n.*; pl. *diphrophoroi* (-roi). [Gr. διφροφόρος, < δίφρος, a seat, stool, + -φορος, < φέρειν, bear.] In *Gr. antiq.*, a stool-carrier: especially applied to two figures in the center of the frieze on the eastern side of the Parthenon at Athens, 31 and 32 Michaelis.

diphtheria, *n.* Diphtheria is caused by a specific bacillus, called *Bacillus diphtheriæ*, or the Klebs-Loeffler bacillus, which usually can readily be detected in the exudate by microscopical methods. The search for this organism has become a routine measure in doubtful cases of inflammation of the upper air-passages, and often a positive diagnosis of such conditions can be made only in this way. The disease begins with swelling and redness of the throat, fever, and loss of strength. The false membrane appears early and may be confined to the tonsils or may spread to the mucous membrane of the nose, pharynx, or larynx. When the larynx is involved, the breathing becomes difficult, and suffocation may ensue. Formerly the only means of saving life in this complication was tracheotomy, but this has been almost entirely superseded by intubation. The disease may be followed by paralysis, by weakness of the heart, or by disease of the kidneys. Treatment, both curative and preventive, consists in the subcutaneous injection of diphtheria antitoxin—one of the earliest instances, and still the most effective instance, of serum therapy. See cut under *Klebs-Loeffler* ★*bacillus*. **Diphtheria bacillus.** See ★*bacillus*, with cut.

diphtherial (dif- or dip-thē'ri-al), *a.* [*diphtheria* + *-al*¹.] Same as *diphtheritic*. *Med. Record*, Feb. 28, 1903, p. 350.

diphtheric (dif- or dip-ther'ik), *a.* [*diphtheria* + *-ic*.] Same as *diphtheritic*.

Diphtheritic croup, paralysis. See ★*croup*¹, ★*paralysis*.

diphtheroidal (dif- or dip-thẹ-roi'dạl), *a.* Same as *diphtheroid*.

diphtherotoxin (dif-thē"rọ-tok'sin), *n.* Toxin elaborated by the bacillus of diphtheria.

diphthong (dif'- or dip'thông), *v. t.* To sound as a diphthong; diphthongize.

Isolative *diphthonging* or 'vowel-clearing' mainly affects long vowels, evidently because of the difficulty of prolonging the same position without change.
H. Sweet, Eng. Sounds, § 63.

diphthongia (dif-thong'gi-ạ̈), *n.* [NL., < Gr. δίφθογγος, having two sounds: see *diphthong*.] A condition in which, owing to partial paralysis of the larynx, two sounds of different pitch are produced simultaneously.

diphthongous (dif'thông-gus), *a.* Same as *diphthongal*.

Diphya limestone. See ★*limestone*.

diphygenic (dif-i-jen'ik), *a.* [Gr. διφυής, of double form, + -γενης, -producing.] In *embryol.*, producing two different embryos: said of the *Dicyemidæ*: opposed to ★*monogenic*.

diphyletic (dī-fī-let'ik), *a.* [Gr. δι-, two-, + φῦλον, tribe.] In *zoöl.*, having two sets of ancestors; derived from two distinct groups of animals.

The *diphyletic* origin of the birds as represented by the Ratitæ and Carinatæ is regarded as an untenable assumption by Fürbringer, who argues for the racial unity of the whole group. *Amer. Nat.*, Jan., 1903, p. 74.

Diphyletic arrangement, a system of classification in which the divisions are arranged in accordance with the view that a given group of animals has been derived from two sources.

diphyletically (dī-fī-let'i-kạl-i), *adv.* In a diphyletic manner.

Diphyllidea, *n. pl.* **2.** An order of tetrabothridiate *Cestodea*. They have a scolex with a long head-stalk armed with several longitudinal rows of hooklets, the head consisting of a retractile armed rostellum and 4 (apparently only 2) phyllidia, with projecting, slightly mobile margins. The order contains but one family, the *Echinobothriidæ*, and one genus, *Echinobothrium*, parasitic in selachians.

diphyodontism (dif-i-ọ-don'tizm), *n.* [*diphyodont* + *-ism*.] The state or condition of being diphyodont or having two sets of teeth, as is the case with the majority of mammals.

Diphyphyllum (dif-i-fil'um), *n.* [NL., irreg. < Gr. διφυής, double, + φύλλον, a leaf.] A genus of Paleozoic tetracorals of the family *Cyathophyllidæ*. They grew in compound stocks, the individual corallites having no columella and not being connected with each other except by the epithecal wall.

dip-joint (dip'joint), *n.* A joint in inclined strata which runs in the direction of the dip. *Geikie*, Text-book of Geol., p. 660.

dipl. An abbreviation (*a*) of *diplomat*; (*b*) of *diplomatist*.

diplacanthid (dip-lạ-kan'thid), *n.* One of the *Diplacanthidæ*.

diplacusis (dip-lạ-kū'sis), *n.* [NL., < Gr. διπλόος, double, + ἄκουσις, hearing, < ἀκούειν, hear.] In *psychol. acoustics*, double hearing: applied usually to the hearing of the same tone in a different pitch by the two ears (*diplacusis binauralis*), but also to the arousing of two tonal sensations in the same ear by a single stimulus.

The abnormality (*diplacusis*) may be restricted to a single ear, may be transitory or chronic, and may be confined to definite parts of the tonal scale or coextensive with it. *O. Kulpe* (trans.), Outlines of Psychol., p. 299.

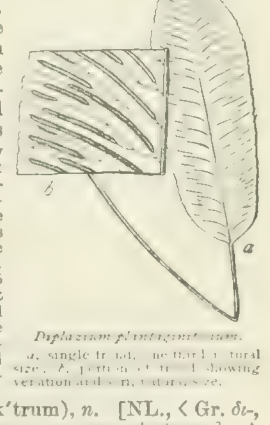
Dipladenia (dip-lạ-dē'ni-ạ̈), *n.* [NL. (Alphonse de Candolle, 1844), < Gr. διπλόος, double, + ἀδήν, gland. The name alludes to the pair of nectar-glands which alternate with the two ovaries.] **1.** A genus of plants of the family *Apocynaceæ*. They are shrubs, chiefly twining, all South American, and mostly from Brazil. Several of the 20 species are in cultivation in glass houses, where they are prized for their showy, mostly rose-colored or purple funnel-form flowers. *Dipladenia atropurpurea*, *D. Boliviensis*, *D. urophylla*, and *D. splendens* are the prominent species. Other species are in cultivation, and all the kinds are prized for their very brilliant floral display, and for their attractive habit.

diplanar (dī-plā'nạ̈r), *a.* [Gr. δι-, two-, + L. *planus*, plane, + *-ar*.] Pertaining to or of two planes.

diplarthry (dip-lär'thri), *n.* [Gr. διπλόος, double, + ἄρθρον, joint.] Having the bones of the tarsus and carpus arranged in a more or less alternating manner: contrasted with *taxeopody*.

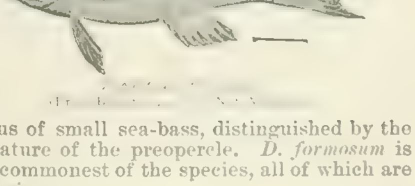
diplasmatic (dī-plaz-mat'ik), *a.* [Gr. δι-, two-, + πλάσμα, anything formed.] In *cytol.*, containing substances besides protoplasm, such as pigment, fat, etc.: said of the cell-cytoplasm.

Diplazium (dī-plā'zi-um), *n.* [NL. (Swartz, 1801), < Gr. διπλάζειν, to double or be doubled, in allusion to the double sori.] A genus of free-veined polypodiaceous ferns. They are nearly allied to *Asplenium*, but are distinguished in external characters by having all or part of the linear sori borne in pairs upon the same vein, the indusia being extrorse. There are more than 75 species, natives of moist tropical and subtropical regions. The type of the genus is *D. plantaginifolium*, a simple-leaved tropical American species.

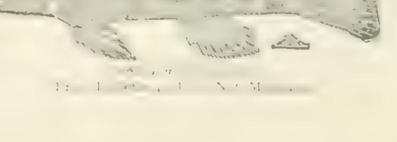


Diplazium plantaginifolium.
a, single frond, one third natural size; *b*, portion of frond showing venation and sori, natural size.

Diplectrum (dī-plek'trum), *n.* [NL., < Gr. δι-, two-, + πλῆκτρον, a spur: see *plectrum*.] A genus of small sea-bass, distinguished by the armature of the preopercle. *D. formosum* is the commonest of the species, all of which are American.



Diplesion (dī-plē'si-on), *n.* [NL., < Gr. διπλήσιος, twofold, double.] A genus of small fishes



of the Mississippi valley, living in clear brooks. *D. blennioides,* the green-sided darter, is the common species.

dipleurogenesis (dī-plū-rọ̄-jen′ẹ̄-sis), *n.* [Gr. *δι-*, two-, + *πλευρά*, side, + *γένεσις*, genesis.] **1.** Historical progress or evolution through the acquisition and elaboration of bilateral symmetry. [Rare.]—**2.** The two-sided, bilateral, or dimeric type of form assumed by the higher members of the animal creation: distinguished from *centrogenesis.* *L. H. Bailey.*

dipleurula (dī-plū′rụ-lạ̈), *n.*; pl. *dipleurulæ* (-lē). [NL., ‹ Gr. *δι-*, two-, + *πλευρά*, side, + L. dim. *-ula.*] A hypothetical ciliate, swimming, bilateral ancestor of the echinoderms, which is supposed to be recapitulated in the swimming larvæ of modern echinoderms. See ★*pelmatozoic theory.*

diplobacillus (dip″lọ̄-ba-sil′us), *n.*; pl. *diplobacilli* (-ī). [NL., ‹ Gr. *διπλόος*, double, + NL. *bacillus.*] Any bacillus in which the cells occur in pairs.

> The occurrence of acid-resisting diplococci or *diplobacilli* and of drumstick forms has been already referred to. *D. M. Cowie,* in Jour. Exper. Med., Oct. 25, 1900, p. 213.

Diploblastica (dip-lọ̄-blas′ti-kạ̈), *n. pl.* [NL., ‹ Gr. *διπλόος*, double, + *βλαστός*, germ.] In *zoöl.*, those animals which develop from only two germ-layers (ectoderm and entoderm), such as the *Cœlenterata:* distinguished from the *Triploblastica.*

diplocaulescent (dip″lọ̄-kâ-les′ẹnt), *a.* [Gr. *διπλόος*, double, + E. *caulescent.*] In *bot.*, having stems or axes of the second order.

diplocephalous (dip-lọ̄-sef′ạ-lus), *a.* In *teratol.*, double-headed: a term applied to monstrous embryos.

diplocephalus (dip-lọ̄-sef′ạ-lus), *n.*; pl. *diplocephali* (-lī). [NL., ‹ Gr. *διπλόος*, double, + *κεφαλή*, head.] A two-headed monster.

diplocephaly (dip-lọ̄-sef′ạ-li), *n.* [NL. **diplocephalia*, ‹ *diplocephalus.*] Monstrosity in which two heads are attached to the same body.

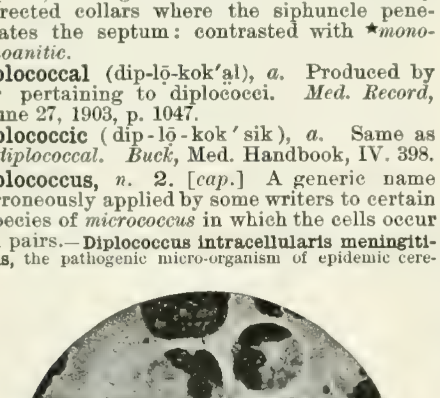
diplochlamydeous (dip″lọ̄-kla-mid′ẹ̄-us), *a.* [Gr. *διπλόος*, double, + *χλαμύς* (*χλαμυδ-*), mantle.] In *bot.*, having two floral envelops, calyx and corolla, or a double perianth, as many monocotyledons.

diplochoanitic (dip″lọ̄-kō-ạ-nit′ịk), *a.* [Gr. *διπλόος*, double, + *χόανος*, a funnel, + *-it-ic.*] In the siphuncles of the ammonoid *Cephalopoda,* having both funnels and forwardly directed collars where the siphuncle penetrates the septum: contrasted with ★*monochoanitic.*

diplococcal (dip-lọ̄-kok′ạl), *a.* Produced by or pertaining to diplococci. *Med. Record,* June 27, 1903, p. 1047.

diplococcic (dip-lọ̄-kok′sik), *a.* Same as ★*diplococcal.* *Buck,* Med. Handbook, IV. 398.

diplococcus, *n.* **2.** [*cap.*] A generic name erroneously applied by some writers to certain species of *micrococcus* in which the cells occur in pairs.—**Diplococcus intracellularis meningitidis,** the pathogenic micro-organism of epidemic cere-



[illegible]
The large bodies are disintegrating pus-cells. Magnified [illegible] times.
(From Buck's "Reference Handbook of the Medical Sciences.")

brospinal meningitis. Also called *Weichselbaum's micrococcus* and *meningococcus.* **Diplococcus pneumoniæ,** the pathogenic micro-organism of acute croupous pneumonia. Also called *micrococcus lanceolatus, pneumococcus,* and *Fraenkel's pneumococcus.* See cut in middle column.

diploconical (dip-lō-kon′i-kạl), *a.* [Gr. *διπλόος*, double, + *κωνικός*, conic, + *-al*¹.] Doubly conical; in the form of a double cone.

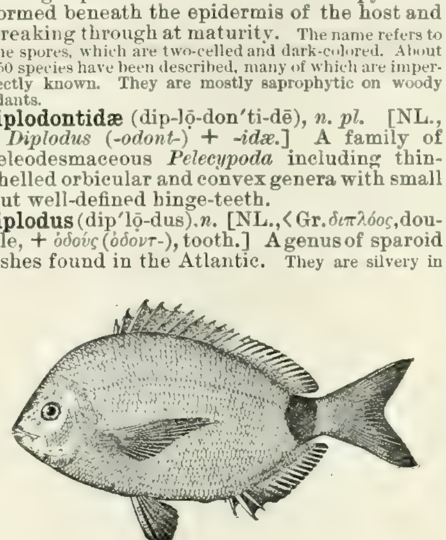
Diplococcus pneumoniæ in blood.
The large bodies are red blood corpuscles. Magnified 1,000 times.
(From Buck's "Reference Handbook of the Medical Sciences.")

diplocoria (dip-lọ̄-kō′ri-ạ̈), *n.* [NL., ‹ Gr. *διπλόος*, double, + *κόρη*, pupil of the eye.] The presence of two more or less complete pupils in one eye.

Diplodia (dī-plō′di-ạ̈), *n.* [NL. (Fries, 1834), ‹ Gr. *διπλόος*, double, + *εἶδος*, form. Cf. *diploid.*] A genus of sphæropsidaceous fungi having separate black carbonaceous pycnidia formed beneath the epidermis of the host and breaking through at maturity. The name refers to the spores, which are two-celled and dark-colored. About 450 species have been described, many of which are imperfectly known. They are mostly saprophytic on woody plants.

Diplodontidæ (dip-lọ̄-don′ti-dē), *n. pl.* [NL., ‹ *Diplodus* (*-odont-*) + *-idæ.*] A family of teleodesmaceous *Pelecypoda* including thin-shelled orbicular and convex genera with small but well-defined hinge-teeth.

Diplodus (dip′lọ̄-dus), *n.* [NL., ‹ Gr. *διπλόος*, double, + *ὀδούς* (*ὀδοντ-*), tooth.] A genus of sparoid fishes found in the Atlantic. They are silvery in



Diplodus holbrookii.
(From Bulletin 47, U. S. Nat. Museum.)

color, with black spots on the tail. Several species occur in the Mediterranean. *D. holbrookii* occurs on the Atlantic coast of the United States: known in Spanish and Portuguese as *Sargo.*

diplogenesis, *n.* **2.** In *biol.*, the process by which a change in the environment which produces a change in an organism produces a similar change in the germ-cells that are contained in its body, so that descendants in later generations are born with an inherited adaptation for meeting and responding to this specific change in the environment. *Cope.*

> [To] suppose that a modification of either the male or the female parent affects potential variation in the spermatozoön or the ovum, is merely to re-state, in other words, that a change of environment which affects the parent likewise affects the generative products; and such a statement is nothing more or less than Cope's theory of *Diplogenesis.* *Natural Science,* Nov., 1896, p. 288.

diplogenetic (dip″lọ̄-jẹ̄-net′ik), *a.* **1.** Relating to diplogenesis.—**2.** Same as *diplogenic.*

Diploglossa (dip-lọ̄-glos′ạ̈), *n. pl.* [Gr. *διπλόος*, double, + *γλῶσσα*, tongue. The tongue is not forked, but the anterior portion can be withdrawn into the posterior, like the parts of a telescope.] A superfamily of *Lacertilia,* containing the glass-snakes, *Anguidæ,* and related forms: correlated with *Pachyglossa* and *Leptoglossa.* *Cope,* 1864.

diploglossate (dip-lō-glos′āt), *a.* Having the anterior portion of the tongue retractile within the posterior part, like a two-jointed telescope.

diplographic (dip-lọ̄-graf′ik), *a.* [*diplograph-y* + *-ic.*] Of or pertaining to 'double-writing,' or to the diplograph, the machine by which it is produced.

diplographical (dip-lọ̄-graf′i-kạl), *a.* Same as ★*diplographic.*

diplography (di-plog′rạ-fi), *n.* [Gr. *διπλόος*, double, + *-γραφία*, ‹ *γράφειν*, write.] The art of writing double, or the use of the diplograph, the machine by which this is accomplished. See *diplograph.*

diplohedral (dip-lọ̄-hē′drạl), *a.* [*diplohedr-on* + *-al*¹.] Of or pertaining to a diplohedron, or diploid.

diplohedron (dip-lọ̄-hē′drọn), *n.* [NL., ‹ Gr. *διπλόος*, double, + *ἕδρα*, seat, base.] A diploid.

diploidal (dip′loi-dạl), *a.* [*diploid* + *-al*¹.] **1.** Of or pertaining to a diploid.—**2.** Noting a class of symmetry, belonging to the isometric system, of which the diploid is the characteristic form. See ★*symmetry.*

Diploma in public health, a certificate or diploma given to one who has passed an examination in public health. London University grants certificates in this department. Abbreviated *D. P. H.*

diplomate (dip′lō-māt), *n.* [*diplomate, v.*] One who holds a diploma.

Diplomatic bureau. See ★*bureau.*

diplomyelia (dip″lọ̄-mī-ē′li-ạ̈), *n.* [NL., ‹ Gr. *διπλόος*, double, + *μυελός*, marrow (medulla).] A condition in which the spinal cord is double, or is made to appear so by a deep fissure which separates it into two distinct halves.

diplonephridium (dip″lō-nẹ̄-frid′i-um), *n.*; pl. *diplonephridia* (-ä). [NL., ‹ Gr. *διπλόος*, double, + NL. *nephridium.*] A nephridium in the formation of which both ectoderm and mesoderm have taken part, the peritoneal funnel becoming connected with an ingrowth of the ectoderm, as in *Polychæta* generally.

diploneural (dip-lọ̄-nū′rạl), *a.* [Gr. *διπλόος*, double, + *νεῦρον*, sinew, nerve.] Having a double nerve-supply, each from a separate source: as, a *diploneural* muscle. *Encyc. Brit.*, XXV. 395.

diploperistomic (dip″lọ̄-per-i-stom′ik), *a.* [Gr. *διπλόος*, double, + E. *peristome* + *-ic.*] In mosses, having a double peristome.

diplophonia (dip-lọ̄-fō′ni-ạ̈), *n.* [Gr. *διπλόος*, double, + *φωνή*, sound.] Same as ★*diphthongia.*

diplopia, *n.*—**Crossed diplopia.** In this form the image on the left side belongs to the right eye, and conversely: called also *heteronymous diplopia.*—**Diplopia monophthalmica,** double vision affecting one eye.—**Direct diplopia,** the form of double vision in which the image belongs to the eye of the same side. This occurs in convergent squint. Also called *homonymous diplopia.*—**Heteronymous diplopia.** Same as *crossed* ★*diplopia.*

diplopodic (dip-lọ̄-pod′ik), *a.* [*diplopod* + *-ic.*] In *entom.*, like a diplopod.

diplopore (dip′lọ̄-pōr), *n.* [Gr. *διπλόος*, double, + *πόρος*, passage.] A term denoting the pairs of more or less vertical canals that pierce the thecal plates in the order *Diploporita* of the *Pelmatozoa.*

diploporite (di-plop′ọ̄-rīt), *a.* and *n.* **I.** *a.* Pertaining to, or having the characters of the order *Diploporita.*

II. *n.* A member of the *Diploporita.*

diplopterygous (dip-lop-ter′i-gus), *a.* Belonging to or resembling the *Diplopteryga.*

Diplosoma, *n.* **2.** [*l. c.*] Same as ★*diplosome.*

diplosome (dip′lọ̄-sōm), *n.* [NL. *diplosoma,* ‹ Gr. *διπλόος*, double, + *σῶμα*, body.] In *cytol.*, a double centrosome, or one that has divided into two daughter-centrosomes which have not yet moved apart to form the poles of a karyokinetic spindle.

diplospire (dip′lō-spīr), *n.* [Gr. *διπλόος*, double, + *σπεῖρα*, a spire.] A double spiral, as the spiral brachial supports of some extinct *Brachiopoda,* in which the secondary spirals are formed by the production of the branches of the jugum between the lamellæ of the primary spiral cones. Diplospires occur in the genera *Kayseria, Diplospirella, Thecospira,* and some others.

Diplospondyli (dip-lọ̄-spon′di-lī), *n. pl.* [NL., ‹ Gr. *διπλόος*, double, + *σπόνδυλος*, vertebra.] A suborder of sharks including those forms in which the vertebral column is imperfectly segmented so that two vertebral bodies and two neural arches arise from each segment. It includes the group known as *Notidanidæ,* most of the species being now extinct. The best-known of the living species is the common shark *Hexanchus griseus.*

[illegible]
(From Bulletin [illegible] U. S. Nat. Museum.)

diplospondylous (dip-lō-spon′di-lus), *a.* Of or pertaining to the suborder *Diplospondyli.*

diplospondyly (dip-lō-spon′di-li), *n.* Same as *diplospondylism.*

diplostichous (di-plos′ti-kus), *a.* [Gr. διπλόος, double, + στίχος, row.] Having a double layer of cells, separated by a membrane, beneath the lens of the central eyes, as in the king crab, *Limulus.* Contrasted with *monostichous.*

diplostreptococcus (dip″lō-strep-tō-kok′us), *n.*; pl. *diplostreptococci* (-sī). [NL., ‹ Gr. διπλόος, double, + NL. *streptococcus.*] A form of streptococcus in which the chains of cells occur in pairs.

The Portuguese describe a *diplo-streptococcus,* which they state they have found constantly in the cerebro-spinal fluid at the post-mortem examination of their cases.
Jour. Trop. Med., June 1, 1903, p. 167.

Diplostylus (dip-lō-stī′lus), *n.* [Gr. διπλόος, double, + στῦλος, a pillar.] A genus of amphipods of the Carboniferous period.

diplotegis (dip-lot′ē-jis), *n.* Same as *diplotegia.*

diplotegium (dip-lō-tē′ji-um), *n.* Same as *diplotegia.*

diplumbic (dī-plum′bik), *a.* [Gr. δι-, two-, + L. *plumbum,* lead.] Having two atoms of lead in the molecule.—**Diplumbic arseniate,** lead arseniate containing two atoms of lead in the molecule. It has been used as an insecticide.

Diporidium (dī-pō-rid′i-um), *n.* [NL. (Wendland, 1825), ‹ Gr. δι-, two-, + πόρος, pore, + dim. -ιδιον. The name alludes to the two apical pores by which the anthers of some species dehisce.] A genus of dicotyledonous plants of the family *Ochnaceæ.* See *Ochna,* 2.

dipped (dipt), *p. a.* In *ceram.,* immersed in a color-preparation so as to tint only the surface: applied to the superficially colored white jasper body of pottery manufactured by Josiah Wedgwood, in distinction from the solid jasper which was uniformly colored throughout its substance.

Dippel's animal oil. See ★*oil.*

dipper, *n.* **11.** In *ceram.,* a workman who dips ware in the glazing or coloring preparation: See ★*dipped.*—**12.** Any of the gastropod mollusks of the genus *Bulla.*

dipping-machine (dip′ing-ma-shēn″), *n.* In *candy-making,* a machine for coating with chocolate the prepared candies cast from the depositing-machine by dipping wire-work trays filled with them in hot chocolate, removing the surplus, and hardening and drying. It makes finished chocolates that exactly resemble those dipped by hand. See ★*depositing-machine* and ★*starch-buck.*

dip-pump (dip′pump), *n.* A device for elevating water or other liquid by dipping it in any manner. Some dip-pumps consist of a pair of barrels for raising the water, one barrel being lowered as the other is hoisted.

Diprion (di-prī′on), *n.* [NL., ‹ Gr. δι-, two-, + πρίων, a saw.] A name given by Barrande to graptolites with two rows of thecæ on the rhabdosome.

Diprionidæ (dip″ri-on′i-dē), *n. pl.* [NL., ‹ *Diprion* + *-idæ.*] A suborder of the graptolites comprising forms which have two to four vertical rows of thecæ placed back to back, as in the genera *Diplograptus* and *Phyllograptus.*

dipropargyl (dī-prō-pär′gil), *n.* A colorless, volatile, pungent liquid, $CHiCCH_2CH_2CiCH$, prepared by the action of potassium hydroxid on diallyltetrabromide. It readily polymerizes and is a homologue of acetylene, which it resembles in general properties. It melts at − 6° C., boils at 86–87° C., and is also called 1, 5-*hexadiene.*

dipropylketone (dī″prō-pil-kē′tōn), *n.* See ★*heptanone.*

dips, *n. pl.* See ★*dip,* *n.,* 7.

dip-section (dip′sek-shon), *n.* In *geol.,* a section across inclined strata in the direction of the dip.

dipsesis (dip′sē-sis), *n.* [NL., ‹ Gr. δίψησις, thirsting, ‹ διψᾶν, feel thirst, ‹ δίψα, thirst.] Pathological thirst.

dipsetic, *a.* **II.** *n.* A substance that produces thirst. *Syd. Soc. Lex.*

dip-side (dip′sīd), *n.* The side in the direction of dip, the low side: used with reference to the attitude of rock formations in underground workings.

dip-slope (dip′slōp), *n.* A natural slope of the surface of the ground which is parallel to the dip of the underlying strata.

Its (the Arun's) course was determined by the original *dip-slope* of the Wealden dome.
Geog. Jour. (R. G. S.), XV. 220.

dipteraceous (dip-tē-rā′shius), *a.* Same as ★*dipterocarpaceous.*

dipterid (dip′tē-rid), *n.* One of the *Dipteridæ.*

dipterocarp (dip′tē-rō-kärp), *n.* A plant of the family *Dipterocarpaceæ. Nature,* Jan. 1, 1903, p. 198.

dipterocarpaceous (dip″tē-rō-kär-pā′shius), *a.* Belonging to the plant family *Dipterocarpaceæ.*

dipterocarpous (dip″tē-rō-kär′pus), *a.* In *bot.,* belonging to the genus *Dipterocarpus* or to the family *Dipterocarpaceæ.*

dipterygian (dip-tē-rij′i-an), *a.* Two-finned, as certain fishes.

dip-turner (dip′tèr-nér), *n.* A workman in a pottery who decorates ware with a dip-compound, or colored slip. See ★*dip-ware.*

dip-ware (dip′wär), *n.* Earthenware decorated with a dip-compound, or colored slip. See the extract.

In the manufacture of this ware [*dip-ware*], the body or paste having been prepared as usual, is handed over to the "dip-turner." . . . Having coloured clays of the consistency of cream in a vessel with a spout that can be varied in form, he blows into this vessel through another tube, and thus forces the creamy clay out of the first-mentioned spout upon the piece of clay turning slowly on the lathe. In this manner rings of coloured clay can be deposited on the revolving piece of ware. . . . The arborescent or dendritic forms may also be produced by the "dip-turner," who, after covering the turned piece of the original paste or body with an evenly-spread coating of his "dip" compound in its creamy condition, drops upon it, before it becomes dry, another kind of "dip" compound, having a greater density than the first, and thus, by holding the piece so that the heavier compound or colour can descend amid the moist first-spread "dip" he permits it to disseminate its particles in an arborescent form.
Handbook Brit. Pottery and Porcelain, Mus. Prac. Geol., [p. 32.

dip-well (dip′wel), *n.* A well or spring from which water is obtained by dipping.

Dipylon vases. See ★*vase.*

dipyridine (dī-pir′i-din), *n.* [*di-*[2] + *pyridine.*] Same as ★*nicotyrine.*

Dir. An abbreviation of *director.*

diradiation, *n.* **2.** Same as *hypnotism. Syd. Soc. Lex.*

Dircæan (dèr-sē′an), *a.* Of or pertaining to the fountain of Dirce, in Bœotia, sacred to the Muses: applied by Horace in one of his Odes to Pindar, the lyric poet, whom he styled the *Dircæan Swan.*

direct, *a.* **8.** In *math.,* according to the natural order or correlation: in contradistinction to *inverse.*

In every other mathematical operation the inverse process is far more difficult than the *direct* process, subtraction than addition, division than multiplication, evolution than involution; but the difficulty increases vastly as the process becomes more complex.
Jevons, Prin. of Science, I. vii.

directable (di-rek′ta-bl), *a.* [*direct* + *-able.*] Capable of being directed or steered; dirigible: as, a *directable* balloon.

direct-connected (di-rekt′ko-nek″ted), *a.* Said of a machine, as an electric generator, in which the revolving generator or armature is borne on the shaft of the engine without any belt or other transmission device being required. Also called *direct-coupled.*

direct-coupled (di-rekt′kup″ld), *p. a.* In *mech.,* mounted upon a common shaft or upon shafts having the same axis and coupled so as to turn as one: said of the driving and driven portions of any mechanical system that are thus connected so that they revolve as a unit, without the intervention of belts or other devices for the transmission of motion.

direct-driven (di-rekt′driv″n), *p. a.* In *mech.,* driven without the use of belts or other devices for the transmission of power, the driving and driven parts being on a common shaft or direct-coupled: as, a *direct-driven* dynamo.

direct-geared (di-rekt′gērd″), *a.* Having no intermediate transmission-train of wheels or transforming mechanism intervening between the power-shaft and that which it drives: used of motor-cycles when a toothed wheel on the motor crank-shaft meshes into the gear fastened to the rear or driving-wheel. See also ★*direct-connected.*

direction, *n.*—**Converse directions,** in *astrol.,* directions made in the reverse order of the signs, as when a planet in Pisces is directed to another in Capricorn.—**Direct directions,** in *astrol.,* directions made according to the succession of the signs, as when a plane in Capricorn is directed to one in Pisces.—**Equation of arcs of direction,** in *astrol.,* the method of turning directions into time, to ascertain at what period they will operate. The measure most commonly adopted is Ptolemy's, which allows a year for every degree. **Line of direction.** (*c*) In *psychol. optics,* the straight line connecting a luminous point in space with the nodal point of the reduced eye, and continued thence to the retina. **Primary directions,** in *astrol.,* calculations of the motions of the heavenly bodies in forming aspects with one another, as in the ascendant and mid-heaven.—**Ray of direction,** in *psychol. optics,* the parts of the line of direction that lie before the cornea and behind the lens.—**Secondary directions,** in *astrol.,* calculations of the times of events derived from the aspects formed by the sun and moon after birth, allowing each day to represent a year of the native's life.

Directional calculus. Same as ★*calculus of extension.*

direction-word (di-rek′shon-wèrd″), *n.* Same as *catchword,* 1.

directive. **I.** *a.*—**Directive action force,** etc. See ★*action,* ★*force,* etc.

II. *n.* **1.** In *gram.,* a syntactic case expressing direction toward an object: also called *transitional.*—**2.** In a sea-anemone or coral polyp, a mesentery which forms one of the boundaries of the intermesenteric space at one of the poles of the principal axis.

directivity (di-rek-tiv′i-ti), *n.* The character of being directive. *Science,* July 31, 1903, p. 140. **Theory of Directivity,** an attempt to explain the creation and growth of living things, by means of a vital power which gives origin to them and determines their manner of growth. It is opposed to any mechanical explanation of organic nature.

director, *n.,* **2.** (*c*) In *geom.,* a fixed guiding line. (*d*) The small printed or written letter inserted as a guide in the space to be afterward filled by the designer or illuminator of the large initial.—**Director of an original line,** in *persp.,* the straight line which passes through the directing point of the original line and the eye or projection-vertex.—**Director of the eye,** in *persp.,* the intersection of the directing-plane with a plane through the eye perpendicular to the original plane and that of the picture, and hence also perpendicular to the directing and vanishing planes.

director-plane (di-rek′tor-plān″), *n.* In *math.,* a plane director, or given plane used in the description of a surface.

director-tube (di-rek′tor-tūb″), *n.* A tube with sights, or a telescope, by which a torpedo is aimed at the object attacked.

directrix, *n.* **4.** The first line traced on the ground in laying out a fortification.

directum (di-rek′tum), *n.*; pl. *directa* (-tä). [L., neut. of *directus,* straight: see *direct.*] A straight line.—**In directum,** costraight, that is, in one straight line.

diremption, *n.* **3.** In *veg. teratol.,* the abnormal displacement of leaves. See ★*displacement,* 6.

The term *diremption* has sometimes been applied to cases where leaves are thus apparently dragged out of position. *Masters,* Vegetable Teratol., p. 87.

dirhombohedron (dī-rom-bō-hē′dron), *n.*; pl. *dirhombohedra* (-drä). [NL., ‹ *di-* + *rhombohedron.*] A solid having the geometric form of a double hexagonal pyramid, but consisting in fact of two complementary rhombohedrons; a quartzoid.

Dirina (di-rī′nä), *n.* [NL. (Fries, 1825), ‹ Gr. δειρή, a ridge of a hill, lit. neck, + *ina*[1].] A genus of lichens, the type of the family *Dirinaceæ,* having simple crustaceous thalli, disciform or elongate apothecia, and hyaline, spindle-shaped, 4- to 8-celled spores. The species occur on tree-trunks and rocks and are widely distributed.

Dirinaceæ (di-ri-nā′sē-ē), *n. pl.* [NL., ‹ *Dirina* + *-aceæ.*] A small family of gymnocarpous lichens named from the genus *Dirina.*

dirinoid (dir′i-noid), *a.* [*Dirina* + *-oid.*] Resembling the genus *Dirina.*

dirt, *n.*—**To cut dirt,** to make off; take one's departure. *Haliburton.* [Slang, U. S.]

dirt-bar (dèrt′bär), *n.* A grid-bar, in a cotton-opening machine, so arranged in relation to the beater as to free the cotton from dirt. Also called *dirt-grid.*

dirt-grid (dèrt′grid), *n.* Same as ★*dirt-bar.*

dirt-line (dèrt′lin), *n.* A thin stratum of dirt and debris which has collected on the surface of a glacier and been preserved under the seasonal fall of snow. *J. Geikie,* The Great Ice Age, p. 30.

dirt-roller (dèrt′rō″lèr), *n.* A small cylinder, covered with card-clothing, on a roller-and-clearer cotton-carding machine, situated above the feed-rolls, designed to remove from the main cylinder heavy impurities, such as motes, etc.

dirt-stop (dèrt′stop), *n.* A strainer: a form of foot-valve placed at the end of a feed-pipe to prevent solid matter from getting into the feed-pump or injector.

dis[2] (dēs), *n.*; pl. *disir* (-ir). [ON. *dís,* a sister, a female guardian spirit, etc.] In *Norse mythol.,* a guardian spirit.

dis. (*b*) In *printing,* an abbreviation of *distribution,* that is, dead type which is to be distributed into the various boxes of the type-case. See *distribution,* 3, and *distribute, v. i.,* 2.

Disa (dī'sä), *n.* [NL. (Berg, 1767), of unknown derivation.] A large genus of terrestrial orchids, mostly native to tropical and south

Africa, characterized by free sepals, the upper sepal galeate and spurred, the petals small and joined to the column. Only one species, *Disa uniflora* (*D. grandiflora* of Linnæus), is cultivated to any extent; but this is very handsome and is sometimes called *flower-of-the-gods*. The flowers are several, large, rose-colored, crimson, and carmine-red in their various parts.

disabusal (dis-ạ-bū'zạl), *n.* [*disabuse* + *-al*[1].] The act of disabusing. *Mrs. Whitney.*

disaccharid, disaccharide (dī-sak'ạ-rid or rīd), *n.* Same as ★*biose.*

disaccord (dis-ạ-kôrd'), *n.* [*disaccord, v.*] Want of accord; disagreement; lack or absence of harmony. *Southey.*

disacrone (dis-ak'rōn), *n.* [Gr. δίς, twice, + *acr*(*olein*) + *-one.*] An old name for ★*disacryl.*

disacryl (dis-ak'ril), *n.* [Gr. δίς, twice, + *acr*(*olein*) + *-yl.*] An amorphous, resinous product formed by the spontaneous polymerization of acrolein.

disappearing (dis-ạ-pēr'ing), *p. a.* That disappears; vanishing. **Disappearing gun.** See ★*gun*[1], *gun-carriage.*

disapprobative (dis-ap'rō-bā-tiv), *a.* That expresses disapprobation: as, a *disapprobative* frown.

disarm, *v. t.* **5.** To press (the lips of a horse) outward so that they may not be bruised on the toothless portions, or bars, of the lower jaw.

Give your horse a bit with a cannon coupe, or cut, which will *disarm* his lips. *T. Wallis,* Farrier's Dict.

disartete (dis-är'tēt), *a.* [Appar. < L. *dis-,* apart, + Gr. *ἀρτητός, < ἀρτᾶν, hang, suspend.] Said of fishes in which the palatine cartilage or its derivates are attached to both the preethmoid and the par-ethmoid cornua rather than confined to the former, as is the case in the acrartete type of fishes.

The other Percesoces examined by him, as well as the Cyprinodonts, are *disartete* (the attachment being at the par-ethmoid and pre-ethmoid cornua); but the character is so indistinctly defined in some adult Cyprinodonts, that I feel some diffidence in making use of this character for systematic purposes in the present state of our knowledge. *Annals and Mag. Nat. Hist.,* March, 1904, p. 174.

disarticulator (dis-är-tik'ū-lā-tor), *n.* [*disarticulate* + *-or*[1].] One who or that which disarticulates or disjoints.

disassemble (dis-ạ-sem'bl), *v. t.*; pret. and pp. *disassembled,* ppr. *disassembling.* [*dis-* + *assemble.*] To take apart.

disassimilate (dis-ạ-sim'i-lāt), *v. t.*; pret. and pp. *disassimilated,* ppr. *disassimilating.* [*dis-* + *assimilate.*] To cause retrograde metamorphosis or disassimilation in.

disassimilation (dis-ạ-sim-i-lā'shon), *n.* The opposite of assimilation; specifically, the same as *retrograde metamorphosis* (which see, under *metamorphosis*) or *catabolism.*

disassimilative (dis-ạ-sim'i-lā-tiv), *a.* In *physiol.,* of the nature of catabolism (which see); resulting from disassimilation or catabolism: as, *disassimilative* products.

disattaint (dis-ạ-tānt'), *v. t.* [*dis-* + *attaint.*] To free from attainder. See *attaint, v.,* 4.

disazo- (dis-az'ō). A combining form used in organic chemistry to indicate the presence of two azo radicals, RN_2R, in the molecule of a compound. Compare *diazo-.*

disburdenment (dis-bêr'dn-ment), *n.* The act of disburdening; relief from the burden of something oppressive. *Bentham.*

disbursable (dis-bêrs'ạ-bl), *a.* Capable of being disbursed or expended; retailable.

Anecdotes also are portable, unlike the lightning-flash, which will not go into the pocket, they can be carried home, they are *disbursable* at other tables. *G. Meredith,* Diana, xiv.

disbury (dis-ber'i), *v. t.*; pret. and pp. *disburied,* ppr. *disburying.* [*dis-* + *bury*[3].] To disinter; resurrect: as, *disburied* secrets. *Bulwer.*

discal, *a.* **3.** In *bot.,* located on the surface of a frond; superficial: applied to ferns. *J. Smith.*

discalenohedron (dī-skā-lē″nō-hē'drọn), *n.*; pl. *discalenohedra* (-drạ). [*di-*[2] + *scalenohedron.*] A double twelve-sided (dihexagonal) pyramid, whose faces belong to two complementary scalenohedrons.

Discalia (dis-kā'li-ạ), *n.* [NL., < Gr. δίσκος, disk.] The typical genus of the family *Discalidæ.* *Haeckel,* 1888.

Discalidæ (dis-kal'i-dē), *n. pl.* [NL., < *Discalia* + *-idæ.*] A family of disconectous *Siphonophora* inhabiting the deep sea. They have an exumbrella without crest, gonostyles without mouth, pneumatocyst divided into a central chamber surrounded by 8 radial chambers, a circumferential arrangement of 5 to 10 concentric ring-chambers, and tentacles with cnidospheres. It includes the genera *Discalia* and *Disconalia.*

discard, *n.,* **1.** (*c*) In *poker,* the pile of cards made up by the hands which are abandoned without being bet upon, and the cards which have been laid off so as to get others in exchange for them.

discarnate, *a.* **2.** Disembodied; disincarnate.

We ought to expect a priori that a *discarnate* memory should be defective in its communications from a transcendental world. *J. H. Hyslop,* in Proc. Soc. Psychical Research, XVI. 216.

discept (di-sept'), *v. i.* [L. *disceptare,* decide, judge, dispute, < *dis-,* apart, + *captare,* take.] To dispute; take exception; differ: as, allow me to *discept.* *Peacock.*

discerptor (di-sêrp'tọr), *n.* One who discerps, dismembers, or disjoins.

The first *discerptor* [of the genus Cimex] was Fabricius, who, in a perfectly straightforward manner, removed our species [lectularius] from Cimex to form a part of his new genus Acanthia. *Nature,* March 17, 1904, p. 464.

dis. ch. In *chess,* an abbreviation of *discovered* ★*check.*

discharge, *v. t.* **9.** In *law,* to make an end of; annul; cancel: as, to *discharge* a rule to show cause.

discharge, *n.*—**Brush discharge,** in *elect.,* the brush-like electric discharge issuing from a high potential conductor, especially from its points or edges. It is accompanied by a bluish or pink glow, is either silent or produces a hissing noise, and frequently precedes disruptive sparks. See *electric spark,* under *spark*[1].—**Coefficient of discharge.** See ★*coefficient.*—**Electrodeless discharge,** the glow excited in the vapor within an exhausted glass tube or bulb having no electrodes, when the tube is placed within the oscillatory field of a Tesla coil or other device for the production of oscillatory electrical discharges of high frequency.

The *electrodeless discharge* is more simple in appearance and in constitution than the better known discharge in vacuum tubes between electrodes. *B. Davis,* in Physical Rev., xx. 129.

Law of nervous discharge, in Spencer's *psychol.,* the principle that "every feeling, peripheral or central, sensational or emotional, is the concomitant of a nervous disturbance and resulting nervous discharge, that has on the body both a special effect and a general effect." (H. Spencer, Prin. of Psychol., ii., § 495).—**Tesla discharge,** in *elect.,* the disruptive electric discharge of high frequency obtained from a Tesla coil. See *Tesla* ★*coil.*—**White discharge** an electric discharge through vacuum tubes, obtained when the tubes contain dry air or certain other gases, as carbon dioxid, under certain pressures. It is characterized by a bright glow of white light which fills the tube.

The *white discharge* may be produced in all the gases with which I have experimented. *B. Davis,* in Physical Rev., XX. 149.

discharge-pipe (dis-chärj'pīp″), *n.* Same as ★*delivery-pipe.*

discharger, *n.* (*c*) In *transportation,* a machine or appliance used in discharging freight, coal, grain, or other material in bulk, from a carrier, conveyer, or elevator. The most simple form is an opening at the end or bottom, at any point of the trough of a conveyer through which the load is pushed by the screw or the flights of the conveyer machine (see ★*conveyer*). In open carriers, belt-conveyers, and elevators the discharger may be the end wheel over which the belt or series of buckets passes, the change in direction (assisted by the momentum) serving to discharge the load upon a table or into a bin, hopper, spout, or another conveyer. Dischargers are divided into stationary machines that trip, upset, or invert the buckets of a horizontal conveyer and cause them to discharge their loads at a fixed point, and machines that travel along the line of the conveyer and automatically discharge the loads at any desired point. Also called *automatic dumper.* (*d*) In *mining* and *industrial railroading,* a device for unloading skips, ore cars, etc., upon inclined roads or slopes. One device consists of an open abrupt change in the grade of the track, whereby the forward end of the car, to which the hauling-cable is attached, is tilted up and the load discharged through a gate at the rear. Another device employs two tracks at the dumping-point, and a skip with four wheels of which the rear pair have a wider tread than the forward pair. The skip is hauled by a cable attached to a link pivoted at the rear end of the skip; and when the discharger is reached the forward wheels follow the inside or narrow tracks, which here run in a horizontal direction, while the rear wheels continue on the inclined rails. This causes the skip to be tilted up, discharging the load at the front and open end. When empty, the skip runs back down the incline in its normal or loaded position.

discharge-water (dis-chärj'wâ″ter), *n.* The water discharged by a pump: specifically water which is discharged after passing through a condenser.

discharm (dis-chärm'), *v. t.* [*dis-* + *charm*[1].] To deprive of charm or the power of charming; deprive of the protecting influences of charms; disenchant.

Brave Luther answered YES: that thunder's swell
Rocked Europe, and *discharmed* the triple crown.
Lowell, To W. L. Garrison, st. 5.

dischromatopsy (dis-krō'mạ-top-si), *n.* [Gr. δι-, two-, + χρώμα(τ-), color, + ὄψις, view.] Color-blindness.

disciferous, *a.* **2.** In *zoöl.,* provided with a disk.

discigerous (di-sij'ẹ-rus), *a.* [L. *discus,* disk, + *gerere,* bear, + *-ous.*] Disk-bearing: as, *discigerous* woody tissue.

discin (dis'in), *n.* [Gr. δίσκος, disk, + *-in*[2].] The albuminous component of the jelly of *Medusæ:* possibly an albuminoid.

Discinidæ (di-sin'i-dē), *n. pl.* [NL., < *Discina* + *-idæ.*] A family of neotrematous *Brachiopoda* having chitinous, subcircular plano-convex shells with an open pedicle-notch in early life which becomes inclosed as a long narrow slit partially covered behind or near the apex by a listrium.

Discinisca (dis-i-nis'kä), *n.* [NL., < *Discina* + dim. *-isca,* < Gr. *-ισκος.*] A genus of *Brachiopoda* resembling *Discina,* but having an internal septum behind which is an elevated area about the pedicle-opening. See *Discina.*

disciplinability (dis″i-plin-ạ-bil'i-ti), *n.* The quality of being disciplinable.

Marro lays chief stress upon *disciplinability* and sociability. *G. S. Hall,* Adolescence, I. 299.

disciplinatory (dis'i-plin-ạ-tō″ri), *a.* Promotive of discipline: as, *disciplinatory* educational methods.

discipline, *n.*—**Jamaica discipline,** a former buccaneer or pirate law, to the effect that all prizes should be divided among the captors and not shared by those who take no part or risk in the capture.—**Prefect of discipline,** in the Jesuit schools, one who has charge of the disciplinary regulations for the students.

discipular (di-sip'ū-lär), *a.* [L. *discipulus,* disciple, + *-ar*[3].] Pertaining to or characteristic of a disciple: as, *discipular* patience. *N. E. D.*

discission, *n.*—**Space of discission,** in *geol.,* a crevice or space of dynamic origin; a separation of walls that had been in contact: used in contrast with *space of* ★*dissolution.*

Formerly I called such spaces (with reference mainly to the accompanying fault-phenomena) "Spaces of Dislocation" but I believe the term "*Spaces of Discission*" . . . would be more suitable. *F. Pošepný,* in Trans. Amer. Inst. Min. Engin., XXIII. 208.

disclaimant (dis-klā'mạnt), *n.* [*disclaim* + *-ant.*] A disclaimer; specifically, one who enters a disclaimer in a patent case. See *disclaimer, n.,* 3 (*d*).

disclassed (dis-klâst'), *p. a.* Same as *declassed, a.*

disclassify (dis-klâs'i-fī), *v. t.* [*dis-* + *classify.*] To abolish classificatory distinctions in regard to; do away with the classification of.

The process of levelling, *disclassifying,* making everybody like everybody else. *Grote,* Utilit. Philos., xix. *N. E. D.*

disclosure, *n.* **3.** The hatching of the young from the egg, as in birds and reptiles, or the escape of insects from the pupa-case.

discloze, disclozure. Simplified spellings of *disclose, disclosure.*

discobolic (dis-kob'ō-lik), *a.* [*discobolus* + *-ic.*] Of or pertaining to a discobolus; quoit-throwing.

He gave loose to the full torrent of his indignation, by seizing . . . a vast dish of beef, more than fifty ancient yeoman could eat, and whirled it like a coit, in terrorem, over the head of the friar, to the extremity of the apartment,

Where it on oaken floor did settle,
With mighty din of ponderous metal. . . .

But . . . his *discobolic* exploit proved the climax of his rage, and was succeeded by an immediate sense that he had passed the bounds of legitimate passion.
T. L. Peacock, Maid Marian, v.

Discocampyli (dis-kọ-kam'pi-lī), *n. pl.* [NL., < Gr. δίσκος, a disk, + καμπύλος, crooked.] In Hyatt's classification of the ammonites, a suborder characterized by the rounded outline of the saddles of the septal sutures while the lobes become greatly divided, as exemplified in the genus *Ceratites* (which see, with cut). In highly advanced forms even the discocampylic saddle becomes much divided.

discocampylic (dis-kọ-kam'pi-lik), *a.* Of or pertaining to the *Discocampyli*; having rounded saddles, as the *Discocampyli*.

discocellular (dis-kọ-sel'ụ-lär), *a.* [L. *discus*, disk, + NL. *cellula*, cell, + *-ar*3.] Of or pertaining to the discal cell in the wings of lepidopterous insects.

discoctaster (dis-kok-tas'tėr), *n.* [NL., < Gr. δίσκος, disk, + ὀκτώ, eight, + ἀστήρ, star.] A sponge-spicule with eight rays, each terminating in a disk, the position of each of which corresponds to one of the eight corners of a cube.

Discocytis (dis-kos'i-tis), *n.* [Gr. δίσκος, a disk, + κύτος, a box.] A genus of Cretaceous *Bryozoa* forming obconic and cup-shaped zoaria the upper side of which has a decidedly radial structure.

discodactylous (dis-kọ-dak'ti-lus), *a.* [Gr. δίσκος, a disk, + δάκτυλος, a finger.] Having the toes ending in disks, as some tree-frogs. This enables these animals to cling to smooth surfaces.

discodepula (dis-kọ-dep'ū-lä), *n.* [NL., < Gr. δίσκος, a quoit, disk, + NL. *depula*.] The depula that develops from a discogastrula. *Haeckel.*

discoglossoid (dis-kō-glos'oid), *a.* Resembling the *Discoglossidæ*, a family of toads.

Discohelix (dis-kọ-hē'liks), *n.* [NL., < Gr. δίσκος, a disk, + ἕλιξ, a spiral.] A genus of rhipidoglossal gastropods of the family *Euomphalidæ*, having flat discoidal shells and rectangular whorls. The species occur in rocks from the Triassic to the Tertiary.

discohexact (dis-kō-heks'akt), *n.* [Gr. δίσκος, disk, + ἕξ, six, + ἀκτίς, ray.] Same as *discohexaster*.

discohexactine (dis"kō-hek-sak'tin), *n.* [Gr. δίσκος, a disk, + ἕξ, six, + ἀκτίς (ἀκτιν-), a ray.] In the nomenclature of the spicular elements of the sponges, a hexactine which bears at the end of each arm or ray a rosette or serrated umbel.

Discoidal stone. See ★*stone*.

Discoidea, *n. pl.* **3.** A family of peripylarian *Radiolaria* having the shell and central capsule discoid or lenticular. It includes *Cenodiscus*, *Phacodiscus*, *Coccodiscus*, and other genera.

discolichen (dis-kō-lī'ken), *n.* [NL. *discolichen*, < Gr. δίσκος, disk, + λειχήν, lichen.] Any one of the lichens which belong to the division *Discolichenes*.

Discolichenes (dis"kō-lī-kē'nēz), *n. pl.* [NL., pl. of *discolichen*: see *discolichen*.] A division of the *Ascolichenes* in which the fructification is in the form of open disk-like apothecia. Compare *Pyrenolichenes*.

discolith, *n.* 2. A disk-shaped coccolith convex on one side and concave on the other.

Discomedusæ, *n. pl.* 2. Same as *Octomeralia*.

discomfort, *n.* **Curve of discomfort.** See ★*curve*.

discomposedly (dis-kom-pōz'ed-li), *adv.* In the manner of one who is discomposed, perturbed, or disturbed in mind.

Disconanthæ (dis-kō-nan'thē), *n. pl.* [NL., appar. erroneously for **Discoanthæ* or **Discanthæ*, < Gr. δίσκος, disk, + ἄνθος, flower.] A suborder of *Siphonophora*; equivalent to *Disconectæ*. Contrasted with *Siphonanthæ*.

disconanthous (dis-kọ-nan'thus), *a.* Having the characteristics of, or relating to, the *Disconanthæ*.

Disconectæ (dis-kọ-nek'tē), *n. pl.* [NL., < Gr. δίσκος, disk, + νηκτής, swimmer.] A suborder or section of *Siphonophora*. The body, or cormosome, is formed by the umbrella of the original octoradial medusa and includes an apical chambered pneumatophore, without nectophores or bracts, on the lower surface of which occur the individuals consisting of a central gastrozoöid surrounded by concentric rings of blastostyles and dactylozooids. The larva is called a [illegible]. The group includes the families *Discalidæ*, *Porpitidæ* and *Velellidæ*. Equivalent to *Disconanthæ*.

disconectous (dis-kọ-nek'tus), *a.* Of or pertaining to the *Disconectæ*.

disconfidence (dis-kon'fi-dens), *n.* Lack of confidence.

He [an Indian chief] always treated me with a certain *disconfidence*, as is customary among the Indians, even in contact with their friends.
Geog. Jour. (R. G. S.), XII. 64.

disconform (dis-kon-fôrm'), *a.* Not conformable (to) or in conformity (with): as, the work is *disconform* to the specifications. [Scotch.]

disconnective (dis-kọ-nek'tiv), *a.* Disjunctive; that disconnects or serves to disconnect.

disconsider (dis-kọn-sid'ėr), *v. t.* To leave out of consideration; set aside as not worth consideration or respect.

As the man was now *disconsidered* and as good as deposed, we might reduce his proportion of the plunder.
R. L. Stevenson, Master of Ballantrae, iii.

disconsideration (dis-kọn-sid-e-rā'shọn), *n.* The state of being disconsidered; disrepute.

I have now arrived at such a pitch of *disconsideration* that . . . I do not know a soul that I can face.
R. L. Stevenson, The Dynamiter, p. 190. *N. E. D.*

discontiguity (dis-kon-ti-gū'i-ti), *n.* Lack of contiguity or continuity. *Dr. H. More.*

discontinuity, *n.* **Polar discontinuity,** a discontinuity of a function consisting of its assuming, in the environs of the point $x=a$, values differing little from $\frac{Fx}{(x-a)^m}$ where Fx varies regularly in that part. The exponent m is the order of the polar discontinuity.

discontinuous, *a.*—**Improperly discontinuous group.** See ★*group*.

disconula (dis-kon'ū-lä), *n.*; pl. *disconulæ* (-lē). [NL., irreg. dim. of Gr. δίσκος, a disk.] The octoradial larva of disconanthous *Siphonophora*.

discoperipheral (dis"kō-pe-rif'e-ral), *a.* [Gr. δίσκος, disk, + περιφέρεια, periphery, + *-al*1.] Arranged in a disk-like manner around the mouth, as the teeth and sucking-disk of the lampreys.

discoplacental, *a.* **2.** Relating to, or having the characters of the group of mammals known as *Discoplacentalia* from the character of the placenta.

discoplacentalian (dis-kọ-pla-sen-tā'li-an), *a.* and *n.* **I.** *a.* Relating to or resembling the *Discoplacentalia*.

II. *n.* A member of the *Discoplacentalia*.

discoplanula (dis-kọ-plan'ụ-lä), *n.*; pl. *discoplanulæ* (-lē). [NL., < Gr. δίσκος, disk, + NL. *planula*.] The discoidal blastoderm of an egg with a large unsegmented food-yolk, at the stage of development which is comparable with the blastula-stage of an egg that undergoes total segmentation.

discoplasm (dis'kọ-plazm), *n.* [NL. *discoplasma* (Ehrlich), < Gr. δίσκος, disk, + πλάσμα, anything formed.] The structural portion of the red blood-corpuscles in contradistinction to the hemoglobin. *Ehrlich.*

discopodous (dis-kop'ō-dus), *a.* [Gr. δίσκος, disk, + πούς (ποδ-), foot.] Having a disk-shaped foot, as certain gastropods.

Discopyge (dis-kọ-pī'jē), *n.* [NL., < Gr. δίσκος, disk, + πυγή, rump.] A genus of numb-fishes or torpedoes of the family *Narcobatidæ* found in the Panama region. *D. tschudii* is the common species.

discord, *n.* **2.** A discord is said to be *prepared* when the dissonant tone is first introduced in its voice-part as a consonance and then is held over into a dissonant relation by that part, or even when it is reached by its voice-part through a diatonic step; but it is *unprepared* when introduced by a skip or abruptly. See *preparation*, 9.

discordance, *n.* **3.** In *geol.*, a lack of parallelism or complete conformity in associated strata.

Discordant feeling, in Wundt's *psychol.*, a contrast feeling, exemplified among the sense-feelings by tickling, among the intellectual feelings by doubt, and among the elementary esthetic feelings by dissonance.

The oscillatory and the *discordant feelings* are, perhaps, the most instructive examples of these complex affective states.
W. Wundt (trans.), Human and Animal Psychol., p. 219.

Discordant valley. See ★*valley*.

discorhabd (dis'kọ-rabd), *n.* [Gr. δίσκος, disk, + ῥάβδος, rod.] In the nomenclature of the spicular elements of the sponges, a monaxial straight rhabd with one sharp and one blunt end and girdled with concentric rings.

discouple (dis-kup'l), *v. t.*; pret. and pp. *discoupled*, ppr. *discoupling*. To separate (couples) into units; uncouple.

We entered through the cleft, one before the other, ascending the steps whose narrowness *discoupled* those who mount.
W. S. Dugdale, Dante's Purgatorio, xxv.

discourse, *n.* **6.** That sort of mental operation, performed by one person or by several, in which a line of thought is followed out. In either case, it is conducted by signs which are in part general or typical, in their own mode of being, usually ordinary language, in part diagrams or other iconic signs, and in part indices, such as individual signs representing the typical signs. A sign in time becomes such, must be interpreted, or be translated into thought-signs, and must be addressed to some interpreter. In the case of inward discourse the person alternately plays the self of the [illegible] attitude of [illegible] and addresses the self of a moment later. Discourse, in this sense, is not identical with [illegible] restricted to [illegible].
C. S. Peirce, [illegible]

discover, *v. t.* **To discover check.** See ★*check*1.

discovery, *n.* **Bill of discovery.** See ★[illegible].

discreate (dis-krē-āt'), *v. t.*; pret. and pp. *discreated*, ppr. *discreating*. To cause (that which has been created) to return to its original nothingness or to chaos.

discreation (dis-krē-ā'shọn), *n.* The act of discreating.

discrepate (dis-krep'āt), *v. t.*; pret. and pp. *discrepated*, ppr. *discrepating*. [L. *discrepare*, differ, discriminate: see *discrepant*.] To discriminate; distinguish.

discriminability (dis-krim"i-nạ-bil'i-ti), *n.* The property of being discriminable; the character of that which may be discriminated.

Clearness implies a maximal *discriminability* or separability from other processes.
E. B. Titchener, Exper. Psychol., I. ii. 189.

discriminant. **I.** *n.* **Discriminant of f (x) = 0,** the product of the squares of all the differences between any two roots of the equation.

II. *a.* **2.** Discriminating.

discriminate, *v. t.* **Discriminating circle, cubic.** See *circle*, ★*cubic*, *n.*

Discrimination reaction, discriminative reaction, in *psychophysics*, a reaction in which the movement of response is delayed until an act of discrimination has been performed, that is, until the reactor has identified the given stimulus as some one of two or more stimuli previously known and agreed upon.

In the *discrimination reaction*, he [the subject] moves when he has apperceived some one of two or more familiar stimuli.
E. B. Titchener, Primer of Psychol., p. 260.

Law of discrimination. Same as *Weber's law* (which see, under *law*1). **Sensible discrimination,** in *psychophysics*, a term introduced by Fechner to cover the experiencing of mental processes, alike or different, and the report of their likeness or difference. It is used more especially of the methodical comparison of sensations, with a view to the determination of the difference limen. The German term, *unterschiedsempfindlichkeit*, has been variously translated *difference sensibility*, *differential sensitivity*, *discriminative sensibility*, and *sense discrimination*. J. M. Baldwin's Dict. of Philos. and Psychol. (II. 517) recommends *sense discrimination*, E. B. Titchener (Exper. Psychol., II.) uses *differential sensitivity* (abbreviated *D. S.*).

The instrument of this analysis [of sensations] was denominated by Fechner *sensible discrimination*.
O. Külpe (trans.), Outlines of Psychol., p. 31.

discrimination-time (dis-krim-i-nā'shọn-tīm), *n.* In *psychophysics*, the total duration of the discrimination reaction, or, more commonly, this time minus the duration of the simple reaction.

By subtracting the previously determined simple time from this longer time we get a *discrimination time*.
W. Wundt (trans.), Human and Animal Psychol., p. 279.

Discriminative limen, threshold. See ★*limen*.

disct. A contraction of *discount*.

disculor, *v. t.* and *a.* A simplified spelling of *discolor*.

disculus (dis'kụ-lus), *n.*; pl. *disculi* (-lī). [NL., dim. of *discus*, a disk: see *disk*.] In *Hepaticæ*, the occasional adventitious inflated lower lobe. See *auricle*, 3, (*c*). *Spruce.*

discumfort, *v. t.* and *n.* A simplified spelling of *discomfort*.

discurage, *v.* and *n.* A simplified spelling of *discourage*.

discurteous, discurtesy. Simplified spellings of *discourteous*, *discourtesy*.

discuver, discuvery. Simplified spellings of *discover*, *discovery*.

disdiaclasis (dis-dī-ak'lạ-sis), *n.* [Gr. δίς, twice, + διάκλασις, taken as 'refraction': see *diaclasis*.] In *optics*, double refraction.

disease, *n.* **Acarine diseases.** See ★*acarine*, *n.* **Adams-Stokes disease.** Same as *Stokes-Adams* ★*disease*. **Adenoid disease.** See ★*adenoid*. **Almond-disease.** See ★[illegible]. **American coffee-disease,** circular whitish blotches occurring on the leaves, shoots, and berries of the coffee-plant in America, said to be due to the fungus [illegible]. **Association disease.** See ★*association*. **Baelz's disease of the lip.** See ★[illegible]. **Banana-disease,** a disease of the banana-plant in the West Indies, attributed to the fungus [illegible] *ustis*.—**Banti's disease,** an affection marked by enlargement of the spleen with cirrhosis of the liver, anæmia, abdominal dropsy, and sometimes jaundice.—**Barcoo disease,** an affection, occurring in the elevated regions of South Australia, characterized by gastric disturbances, bulimia, and vomiting, followed by extensive desquamation and sometimes sloughing of the subcutaneous tissues. Also called *Barcoo vomit* and *Barcoo rot*.—**Barlow's disease,** infantile scurvy. **Bazin's disease,** tuberculous ulceration of the legs, psoriasis of the mouth, molluscum contagiosum.—**Bechterew's disease,** gen-

cral muscular atrophy with extreme stiffness of the spine. **Bermuda lily disease,** a disease of the cultivated lily characterized by spotting and distortion of the leaves and flowers and usually a stunting of the whole plant. It is believed to be caused by digging and using the bulbs before they have ripened. **Bottom disease.** See ★*crotalism.*— **Brindle disease.** Same as *mosaic* ★*disease.* **Brown disease,** a disease which affects potatoes, causing the fibrovascular bundles to turn brown. It is attributed to the fungus *Stysanus stemonites.*— **Brown-Séquard's disease,** paralysis of one side of the body with anæsthesia of the other side.— **Buhl's disease,** a disease of newborn infants, marked by fatty degeneration of the liver, edema, purpura, and other morbid conditions.— **Cabbage seedling disease,** a disease of seedlings of cabbage, caused by the fungus *Olpidium Brassicæ*, which attacks the stem near the surface of the soil and kills the plant.— **Cacao-disease,** dark dead patches on the cortex of *cacao*, which are doubtfully attributed to species of *Nectria.* **Cacao-pod disease,** a disease of cacao-pods, due to the fungus *Phytophthora omnivora.* **Calico disease.** Same as *mosaic* ★*disease.*— **California vine-disease,** a serious disease of the grape in California, characterized by the imperfect development of the flowers and fruit and finally the death of the plant. Its cause is unknown.— **Canna-disease,** a disease of canna-leaves, due to *Uredo Cannæ*, which causes orange spots at first and finally the death of the leaf.— **Carnation disease,** a disease of carnations following the attacks of aphides.

More recent researches by Woods go to show the correctness of his conclusion that aphides alone are responsible for the *carnation-disease. Encyc. Brit.*, XXVI. 60.

Carrot-disease, a disease characterized by brownish, sunken spots on the root of the carrot, caused by *Phoma sanguinolenta.* It also attacks the stem and prevents the formation of seed.— **Cattle-and-game disease,** a fatal infectious disease of cattle, deer, and other animals, due to a minute polar-stained micro-organism of the swine plague group, which gains access to and multiplies in the blood. Also called *hæmorrhagic septicæmia.*— **Chestnut disease,** an obscure disease of plants in which they die backwards from the top.— **Climacteric disease.** See ★*climacteric.*— **Climatic disease,** any disease supposed to be caused by a change of climate, as the so-called fever of acclimatization of the tropics.— **Coffee-disease,** a serious disease of the coffee-plant in India and other portions of the Old World. It is caused by one of the rust-fungi, *Hemileia vastatrix*, which attacks the leaves causing yellow discoloration and death.— **Coffee-leaf disease.** Same as *coffee-*★*disease.*— **Colocasia-disease,** a disease caused by *Peronospora trichotoma*, which attacks the roots of *Caladium Colocasia* in the West Indies.— **Conifer seedling disease,** a disease of conifers, especially of spruce and silver fir, caused by the fungus *Pestalozzia Hartigii*, which attacks the young plant at the surface of the soil and kills it.— **Coral-spot disease,** canker-like cracks or excrescences on the branches of various trees, associated with the bright red fungus, *Nectria cinnabarina.*— **Cretinoid disease.** Same as *myxœdema.*— **Darier's disease.** Same as ★*keratosis follicularum.*— **Dercum's disease.** Same as ★*adiposis dolorosa.*— **Divers' disease.** Same as *caisson-disease.*— **Drooping disease,** a disease of the peony caused by a fungus, *Sclerotinia Pæoniæ*, which attacks the plant at the surface of the soil causing it to wilt and die.— **Dubois's disease.** Same as *Dubois's* ★*abscesses.*— **Duhring's disease,** dermatitis herpetiformis.— **Echinococcus disease,** a morbid condition which results from the presence in the body of the encysted *Tænia echinococcus.* See *hydatid.*— **Elevator disease,** a form of pneumonoconiosis, or dust-disease, which affects those who run elevators in coal-mines.— **Family disease,** an hereditary disease, especially of the nervous system.— **Fan disease.** Same as ★*sereh.*— **Fig-tree disease,** canker-like cracks in the bark of the fig, attributed to the fungus *Libertella ulcerata.*— **File-cutters' disease,** lead-poisoning from inhalation of particles of lead arising from the leaden bed upon which the file rests while being cut.— **Flint-disease.** Same as *chalicosis.*— **Focal disease,** a localized affection of the central nervous system.— **Fourth disease,** a mild eruptive fever which presents some of the characteristics of measles, German measles, and scarlet fever, but is believed to be distinct from all these diseases.— **Frenching disease.** Same as *mosaic* ★*disease.*— **Friedreich's disease.** Same as *Friedreich's ataxia* (which see, under *ataxia*).— **Glénard's disease.** Same as ★*enteroptosis.*— **Gum disease.** Same as ★*foot-rot*, 2.— **Hair-combers' disease,** anthrax or malignant pustule.— **Hodgson's disease,** aneurism of the aorta.— **Hollyhock-disease,** a disease of hollyhocks, due to the fungi *Puccinia malvacearum* and *Colletotrichum Althææ.*— **Hoof-and-mouth disease.** Same as *foot-and-mouth disease* (which see, under *foot*).— **Hop-disease,** a mildew occurring on the leaves of the hop-plant, due to *Podosphæra Castagnei*; also the black fungus, *Capnodium salicinum*, which covers the leaves and stems.— **Innate disease,** congenital disease, not necessarily hereditary.— **Lily-disease,** a disease of *Lilium candidum* characterized by brown spots on the stem, leaves, and buds, which are said to be produced by a species of *Botrytis.*— **Little's disease,** muscular rigidity of congenital nervous origin.— **Marie's disease,** acromegaly; also hereditary cerebellar ataxia and pulmonary osteo-arthropathy.— **Mastoid disease.** Same as *mastoiditis.*— **Match-makers' disease,** necrosis of the jaw, due to phosphorus poisoning.— **Ménière's disease.** Same as *auditory vertigo* (which see, under *vertigo*).— **Mignonette-disease.** See *leaf-blight of mignonette* under ★*leaf-blight.*— **Miners' disease.** Same as ★*ankylostomiasis.*— **Mongrel-disease.** Same as *mosaic* ★*disease.*— **Mosaic disease,** a disease which affects the leaves of certain plants, especially the tobacco-plant. It is characterized by the formation of numerous light-colored spots scattered over the surface of the leaf, giving it a mosaic appearance. It is attributed to an abnormal activity of the oxidizing enzymes of the cells.— **Mottled-top disease.** Same as *mosaic* ★*disease.*— **Mulberry-root disease,** a disease which attacks and kills the roots of the mulberry in Japan, attributed to the fungus *Helicobasidium mompa.*— **Mummy disease,** a fungous disease of the guava produced by *Glœosporium Psidii*, which causes the fruit to shrivel and decay.— **Mushroom-disease,** a disease of the cultivated mushroom occasioned by species of *Verticillium* and other fungi.— **Navicular disease,** in *vet. surg.*, an inflammatory and carious disease of the navicular bone, starting usually as an inflammation of the lower portion of the great sesamoid sheath and causing severe intermittent lameness; seen exclusively in the horse.— **Oak-seedling disease,** a disease of the roots of seedling oaks due to the pyrenomycetous fungus *Rosellinia quercina.*— **Paget's disease.** Same as *malignant papillary* ★*dermatitis.*— **Pandanus-disease,** a disease which attacks the trunk and branches of the screw-pine, *Pandanus*, attributed to the fungus *Melanconium Pandani.*— **Parchment disease.** Same as *parchment-skin.*— **Parrot's disease,** a syphilitic inflammation of the articular ends of the long bones, giving rise to pseudoparalysis.— **Pearly disease,** a form of tuberculosis in cattle.— **Potato-disease.** (*b*) Same as *potato late* ★*blight.*— **Recklinghausen's disease,** an affection marked by the occurrence of fibrous growths on the nerves, of skin tumors resembling molluscum fibrosum, of pigmentation of the skin, and of pains in the joints.— **Red disease,** a former name in some parts of England of hog-cholera and swine-plague, on account of the red patches which appear on the skin of affected animals. See *hog-cholera* under *cholera.*— **Reichmann's disease,** hypersecretion of the gastric juice.— **Riga's disease,** a form of ulcerative inflammation of the mucous membrane of the under surface of the tongue and floor of the mouth.— **Sacred disease,** a name formerly applied to epilepsy.— **Sacro-iliac disease,** chronic tuberculous inflammation of the sacro-iliac joint.— **Savill's disease,** an epidemic inflammation of the skin accompanied by exfoliation of the epidermis.— **Screw-pine disease.** Same as *Pandanus* ★*disease.*— **Scythian disease,** a form of insanity occurring in adult males, preceded by atrophy of the sexual organs and impotence.— **Silver-fir leaf-disease,** a disease of *Abies Picea*, caused by the pyrenomycetous fungus, *Acanthostigma parasiticum*, which covers the under surface of the leaves and stems with a yellow-brown mycelium.— **Sleeping disease.** Same as *sleepy* ★*disease.*— **Sleepy disease,** a disease of tomatoes which attacks the roots and causes the plant to wither and die. It is caused by *Fusarium Lycopersici*, according to Massee.— **Soil-disease,** any disease the contagium of which is derived from the soil.— **Sore shin disease,** a disease which attacks cotton seedlings near the surface of the soil and causes their death. It is attributed to an undetermined fungus.— **Spot-disease,** any disease of plants which produces spots on the leaves, particularly the disease of the leaves of the violet caused by *Alternaria Violæ.* See ★*leaf-spot.*— **Steppe disease,** the Russian cattle-plague.— **Still's disease,** an affection in children in which there is enlargement of the spleen and lymphatic glands associated with an inflammatory state of many of the joints.— **Stokes-Adams disease,** a slowly progressive form of degeneration of the heart muscle, marked by attacks of fainting, dizziness, or convulsions, dropsy, slow pulse, and shortness of breath.— **Sutton and Gull's disease.** Same as *arteriosclerosis.*— **Talma's disease,** an affection marked by tonic muscular spasms, similar to those of Thomsen's disease, but coming on in later life and not congenital as is this affection.— **Thomsen's disease.** See *Thomsen.*— **Tsetse-fly disease,** a disease of animals in South Africa, caused by the presence in the blood of *Trypanosoma*, inoculation with which is effected by means of the tsetse-fly.— **Vagabond's disease** or **pigmentation,** a brownish discoloration of the skin of tramps caused by dirt, the irritation from scratching, and the action of the weather.— **Violet-disease.** Same as ★*leaf-spot of violet.*— **Water-borne disease,** a disease the pathogenic germ of which is transmitted mainly through the medium of the water-supply; among such diseases are typhoid fever, cholera, and dysentery.— **Weir Mitchell's disease.** Same as *erythromelalgia.*— **White face and foot disease,** redness and inflammation of the white face or white limbs of an animal on account of the decreased resistance of the non-pigmented areas of the skin to irritant influences.— **Wilt-disease,** a serious disease which attacks the roots of the cotton, the watermelon, and the cow-pea, causing the plants to wilt and die. It is caused by a pyrenomycetous fungus *Neocosmospora vasinfecta.* See ★*wilt* for other wilt diseases.— **Yellow disease of the hyacinth.** Same as ★*bacteriosis of the hyacinth.*

disease-fungus (di-zēz′ fung-gus), *n.*; pl. *disease-fungi* (-ī). A fungus capable of producing disease in either animals or plants.

disease-proof (di-zēz′ prōf), *a.* In *bot.*, proof against disease. See ★*resistant*, I. 2.

diseme (dī′sēm), *n.* [L. *disēmus*, < Gr. δίσημος, of doubtful quantity (having two possible quantities), < δι-, two-, + σῆμα, a mark, taken in sense of σημεῖον, a mark, sign, unit of time, mora.] In *anc. pros.*, a syllable containing two moræ or units of time. See *disemic.*

disenactment (dis-e-nakt′mẹnt), *n.* [*disenact* + *-ment.*] The repeal of an enactment. *S. Smiles.*

disengagement-gear (dis-en-gāj′mẹnt-gēr), *n.* A releasing-gear; a device for disengaging a catch from the notch or pin with which it is engaged. Such a gear is used in Corliss engines to let the admission-valve close at the right time.

disengagement-governor (dis-en-gāj′mẹnt-guv′ėr-nọr), *n.* A governor which works by disengaging the valve-gear when the speed is too high, thus closing the regulating-valve, and by engaging the valve-gear when the speed is too low and so opening the regulating-valve. When the engine runs normally the governor runs free.

disenmesh (dis-en-mesh′), *v. t.* To free from entanglements or entangling meshes.

> As ye behold this web of circumstance
> Deepen the more for every thrill and throe,
> Convulsive effort to disperse the films
> And *disenmesh* the fame o' the martyr.
>
> *Browning*, Ring and Book, xii. 565.

disentailment (dis-en-tāl′mẹnt), *n.* The act of destroying an entail, or an estate in fee tail.

disentombment (dis-en-tōm′mẹnt), *n.* The act of disentombing. *S. Smiles.*

disequilibrate (dis-ē-kwi-lī′brāt), *v. t.*; pret. and pp. *disequilibrated*, ppr. *disequilibrating.* To disturb or destroy the balance or equilibrium of; throw out of balance either physically or mentally.

disequilibration (dis-ē″kwi-lī-brā′shọn), *n.* An unbalanced condition: as, a *disequilibration* of the organism.

disequilibrium (dis-ē-kwi-lib′ri-um), *n.* [*dis-* + *equilibrium.*] An imperfect equilibrium, as of intellectual and moral faculties. *Smithsonian Rep.*, 1890, p. 648.

disfaith (dis-fāth′), *n.* Lack of faith; distrust. *Kingsley.*

disfever (dis-fē′vėr), *v. t.* To free from or allay fever. *G. Meredith.*

disforestation (dis-for-es-tā′shọn), *n.* 1. Same as *disafforestation.*— 2. The act of deforesting, or of clearing of woods and forests; the destruction of forests.

disfrock (dis-frok′), *v. t.* To unfrock or deprive of the clerical office or character. *Carlyle.*

disgorger, *n.* 2. In the manufacture of effervescing wine, the workman who temporarily removes the cork from a bottle of wine which has undergone secondary fermentation, thus allowing the yeasty sediment to be blown out of the neck of the bottle by the accumulated gas as it escapes. *Sadtler*, Handbook of Indust. Chem., p. 207.

disgregation, *n.* 2. In *thermodynamics*, the transformation-value of configuration of a body or system. The disgregation added to the transformation-value of the heat contained in a system equals the entropy of the system. *J. W. Gibbs*, Statistical Mech., p. 69.

disguize, *v. t.* and *n.* A simplified spelling of *disguise.*

dish, *n.* 3. In *mining*: (*c*) A small rough vessel used in diamond and gold washing: sometimes used attributively: as, he obtained good *dish* prospects after crudely crushing up the quartz.— **Petri dish,** a shallow glass dish with a cover, used for making separation-cultures of bacteria and other micro-organisms by means of the poured-plate method: named for the inventor R. J. *Petri*, a German bacteriologist. See *poured* ★*plate* and *poured-plate* ★*culture.*

dish, *v.* I. *trans.* 5. To form with a concave center, as a disk, a wheel, a running track, or a racing-track.

II. *intrans.* 2. In *trotting*, to throw the feet outward, moving them forward with a circular motion instead of in a straight line. Also *paddle.*

dishallucination (dis-ha-lū-si-nā′shọn), *n.* The act of disillusionizing or the fact of being disillusionized; a freeing from hallucination. *R. Buchanan.*

disharmonism (dis-här′mọ-nizm), *n.* Same as *disharmony. Ripley*, Races of Europe, p. 39.

disharten, *v. t.* A simplified spelling of *dishearten.*

dished (disht), *p. a.* Concave, as a dish; hollowed out.— **Dished face.** The face of an animal that is decidedly concave in profile.

> There was a time when swine-breeders had a delusion for "*dished faces*," and heavy jowls.
>
> *Rep. Kan. State Board Agr.*, 1901–02, p. 52.

Dished hoof. See ★*hoof.*

dish-faced, *a.* 1. (*b*) Said of a horse in which the profile of the face is concave.

dish-feed (dish′fēd), *n.* A device for feeding cotton into a carding-machine. It consists of a roller and a flat-plate, the latter curved upward at the delivery end. Also called *shell-feed.*

dish-keel (dish′kēl), *n.* A keel composed of a broad horizontal plate bent up slightly at the edges to give a connection with the side plating.

dish-machine (dish′ma-shēn′), *n.* In *woodworking*, a power-machine for cutting thin shallow dishes or platters from wood. The block of wood, previously steamed to soften it, is placed in the machine, firmly clamped to the feeding mechanism, and presented to the cutting-tools which cut off thin veneers of the required shape. It will cut 7,000 veneers ¼ of an inch in thickness, in an hour. The dishes when cold retain their dish-like form.

dishome (dis-hōm′), *v. t.*; pret. and pp. *dishomed*, ppr. *dishoming.* To deprive of a home; render homeless.

dishouse (dis-hous′), *v. t.*; pret. and pp. *dishoused*, ppr. *dishousing.* 1. To expel from a house; evict.— 2. To clear of houses, as in widening a street or in making other public improvements.

dishumanize (dis-hū′man-īz), *v. t.*; pret. and pp. *dishumanized*, ppr. *dishumanizing*. To dehumanize; deprive of human powers or attributes.

dish-washer, *n.* **4.** A machine for cleaning and washing plates, dishes, etc. It consists essentially of a large vessel kept full of boiling water charged with soapepowder. The crockery is placed in a large galvanized wire basket suspended by a chain from a crane and lowered into the water. Power is applied to large revolving paddles or agitators that keep the hot soapy water in violent motion through the basket, completely washing the contents. The soiled water is removed and clean water added as fast as required. The machine has a capacity of many hundreds of dishes an hour. When the dishes are washed the basket is raised out of the water, swung round on the crane and lowered for a moment into clean, hot water. On taking the basket out of the rinsing water the dishes dry quickly from the heat to which they have been subjected.

disilluminate (dis-i-lū′mi-nāt), *v. t.*; pret. and pp. *disilluminated*, ppr. *disilluminating*. To deprive of light; obscure; darken.

> The gods are heavy on me, and all the fates
> Shed fire across my eyelids mixed with night,
> And burn me blind, and *disilluminate*
> My sense of seeing.
>
> *Swinburne*, Atalanta.

disillusive (dis-i-lū′siv), *a.* Tending to disillusion or to disillusionize.

> A long line of *disillusive* centuries has permanently displaced that [Hellenic idea of life].
>
> *T. Hardy*, Return of the Native, iii. 1.

disimagine (dis-i-maj′in), *v. t.*; pret. and pp. *disimagined*, ppr. *disimagining*. To imagine not to be; cease to imagine; banish from the imagination.

> Truth, whose centre is everywhere and its circumference nowhere, whose existence we cannot *disimagine*.
>
> *Emerson*, Letters and Social Aims, Progress of Culture.

disimitate (dis-im′i-tāt), *v. t.*; pret. and pp. *disimitated*, ppr. *disimitating*. To cease to imitate and to undo the results of imitation. *Tarde* (trans.), Laws of Imitation, p. 20.

disimmure (dis-i-mūr′), *v. t.*; pret. and pp. *disimmured*, ppr. *disimmuring*. To free from immurement or confinement within prison walls; release; liberate.

disimprisonment (dis-im-priz′on-ment), *n.* Release from imprisonment; liberation. *Browning*.

disincarnate (dis-in-kär′nāt), *a.* Disembodied; freed from the trammels of the flesh, as the souls of the dead. *F. T. Palgrave*, Death in the Forest.

> On the hypothesis already explained, these appearances would be caused by the action of the *disincarnate* upon the living mind.
>
> *A. Lang*, in N. Y. Evening Post, Jan. 12, 1901.

disinfector, *n.* **2.** A machine or apparatus for disinfecting and cleaning garments, bedding, etc., by means of hot water, steam, chemicals, or the fumes of burning materials. One type employs a steam-tight drum in which the articles are either boiled or washed by the aid of chemicals, steam, or hot water. Another form is a gas-tight closet in which the things are submitted to disinfecting fumes.

disinfeudation (dis-in-fū-dā′shon), *n.* In *law*, the act of freeing from the obligations of a feudal tenure.

disinheritation (dis-in-her-i-tā′shon), *n.* Disinheritance.

disintegrant (dis-in′tē-grant), *n.* Whatever disintegrates or tends to disintegrate. *H. Spencer*.

disintegration, *n.*—**Boulders of disintegration,** rounded masses of rock which are produced by weathering from fragments originally angular. Granites and other massive varieties which are much cut up by joints are often covered by these boulders, which closely simulate water-worn specimens.—**Disintegration-product,** a substance formed by the breaking down or chemical disintegration of another. In radioactivity the idea of disintegration is extended to the elements, helium being regarded as a disintegration-product of radium.—**Disintegration theory,** in *radioactivity*, the theory that certain elements, as radium, thorium, actinium, and uranium, undergo successive spontaneous changes with the production of a series of new substances called disintegration products.

disintegrationist (dis-in-tē-grā′shon-ist), *n.* An advocate of disintegration or of some theory of disintegration.

disintegrator, *n.* **2.** See ★*sand-mixer*. **Carr disintegrator,** an impact crushing-machine consisting of a series of concentric cages revolving in opposite directions at high speed.

disintensify (dis-in-ten′si-fī), *v. t.*; pret. and pp. *disintensified*, ppr. *disintensifying*. To render less intense; tone down.

> And all-subduing black,—black's soul of black
> Beyond whites power to *disintensify*.
>
> *Browning*, Ferishtah's Fancies, Bean-Stripe.

disjected (dis-jek′ted), *p. a.* Torn or wrenched apart; dismembered; sundered; disconnected; scattered: as, a *disjected* series of lectures; *disjected* members.

disjunction, *n.* **2.** In *logic*: (*b*) a term consisting of two or more terms united by the conjunction *or* or its equivalent.—**3.** In *biol.*, the separation or alternative inheritance of the parental characters in crosses between inbred varieties or strains of domesticated plants and animals. Called also the *law of disjunction*, or *Mendel's law*. See ★*inheritance*.

Disjunctive absorption, term. See ★*absorption*, ★*term*.

disjunctor, *n.* **2.** In *bot.*, the minute spindle-shaped cellulose body formed in the middle lamella between each pair of conidia of certain fungi.

> These *disjunctors* serve as points of application for the elastic push of the swelling spore-ends, and as the connecting outer lamella of the cell wall suddenly gives way, the spores are jerked asunder.
>
> *Encyc. Brit.*, XXVIII. 557.

disk, *n.*, **5.** (*d*) In *Echinodermata*, the central part of the body from which the arms radiate. (*e*) In crinoids, that part of the theca which lies above the origins of the free arms. Also called *tegmen* and *vault*. See *dorsal* ★*cup*. (*f*) In *Rotifera*, that portion of the head which bears the ciliary wreath. (*g*) In mollusks, the lower surface of the foot or part used in locomotion, as in gastropods. (*h*) In some cœlenterates, the oral aspect of the body.

8. A small medicated gelatin tablet about $\frac{1}{25}$ of an inch thick, which contains a small amount of glycerin to prevent it from becoming hard and brittle: a simple means of applying accurately adjusted quantities of mydriatic, myotic, and anesthetic alkaloids such as atropin, physostigmine, and cocaïne to the eye.—**Acoustic disk.** See ★*acoustic*.—**Anangioid disk.** See ★*anangioid*. **Central disk,** a secondary chitinous extension between the bases of the branches of the rhabdosomes in some graptolites, notably the *Dichograptidæ*. It consists of two layers and serves partly as a basal support for the branches and partly as an organ of fixation.—**Hensen's disk,** a light band in the center of a Bowman's disk.—**Interfusion disk,** the disk formed by the interfusion and mingling of the rays which pass through the objective of an optical instrument. In a telescope it is the image of the object-glass formed by the eyepiece.—**Lagrange disk.** Same as *interfusion* ★*disk*. **Masson's disk,** in *exper. psychol.*, a disk of white cardboard along one of whose radii is drawn an interrupted black line of even thickness. On rotation, the disk shows a series of gray rings, dark near the center and lightening to imperceptibility toward the periphery. The disk has been much used for the determination of the difference limen of brightness, and also for the study of fluctuation of the visual attention. *Annales de Chimie et de Physique*, XIV. 150.—**Middle disk of Engelmann.** Same as *Hensen's* ★*disk*.—**Primary disk,** the disk of adhesion or fixation by which the sicula and young rhabdosomes of certain graptolites were attached. It was of tenuous structure and was frequently replaced by a secondary (central) disk. See *central* ★*disk*.—**Ramsden disk.** Same as *interfusion*-★*disk*.—**Retractile disk,** a flattened disk-shaped organ at the aboral pole of certain polyzoan larvæ, such as those of *Bugula*.—**Strobic disk,** a disk upon which concentric circles or wheels are drawn: so called because the circles appear to spin when the disk is moved rapidly through a circular path before the eye. See *strobic circles*, under *strobic*.—**Stroboscopic disk,** a disk, with equidistant openings or alternate open and closed sectors, used for stroboscopic observations of periodic phenomena. See *stroboscope*.—**Sun disk.** Same as *winged* ★*disk*.—**Winged disk,** in *Egyptian art*, the symbol of the sun, a complete circle, is represented with outspread vulture's wings and the uræus on either side. The symbol was borrowed by the Assyrians to represent Assur.

Masson's Disk.

Winged Disk

disk (disk), *v. t.* [*disk*, *n.*] In *agri.*, to cultivate with a disk-cultivator.

disk-carrier (disk′kar′i-ėr), *n.* In *photom.*, the support of a disk or screen which is movable along or fixed to the photometer-bench, according to the style of the photometer.

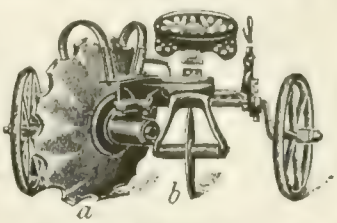
disk-cultivator (disk′kul′ti-vā-tor), *n.* A cultivator in which the part applied to the soil consists of sharp-edged disks placed vertically and rolling with the progress of the cultivator. Its use is to cut the weeds and pulverize the soil. See ★*cultivator*.

disk-cutter (disk′kut′ėr), *n.* A tool used by potters for cutting out disks of clay for making pie-plates. It consists of a wooden arm supported on one end by a small foot or block of wood, of circular or rectangular form, in which the arm revolves; at the other end is a metal point, usually a common horse-shoe nail, passing through the arm at a right angle, with the point down. The foot or block is placed on the rolled sheet of clay and held in place while the arm is revolved by the hand of the workman, the metal point cutting out a perfect disk. This is afterward shaped over a convex mold to form the concave pie-plate.

disk-flower (disk′flou′ėr), *n.* A flower of the disk of a composite plant. See *disk*, 4 (*c*).

disk-jelly (disk′jel-i), *n.* A sea-blubber; a discomedusan.

disk-plow (disk′plou), *n.* A plow having revolving disks, resembling those in a disk-harrow, in place of plow-shares. The action of this tool is not precisely that of the plow, since the disks break up and tear apart as well as turn over the soil.



Rear View of Sulky Disk-plow. *a*, Cut away [low disk in position for turning at end of furrow]; *b*, straight disk.

disk-saw (disk′sâ), *n.* A saw in the form of a disk, used for cutting rails or beams in the rolling-mill. Its cutting rim is either toothed or toothless. It is set in rapid rotation and the friction of the contact produces a heat sufficient to fuse the metal in contact with the disk as it revolves, even if the disk is softer in quality than the metal to be sawed. Also called *fusion-disk*.

disk-shell (disk′shel), *n.* The shell of certain brachiopods, as *Discina*.

disk-valve, *n.* **2.** Any valve in which the opening is closed by a disk, as in the ordinary stop-valve.

disk-wheel, *n.* **2.** A type of wheel for cars or motor-vehicles in which the hub is connected to the rim by a continuous web or plate, instead of by spokes with open intervals between. Such wheels appear to be solid disks. In car-wheels of this pattern the plates are of steel, bumped or dished to give lateral stiffness; or the plate is double with compressed card-board between. In motor-vehicles the disk is of thin steel, concaved to give elasticity by slight flexure of the plate under shock. Such wheels at high speed raise less dust than spoked wheels, and do not hum in moving through the air.

dislevelment (dis-lev′el-ment), *n.* Deviation from the level: as, a correction for *dislevelment* was made.

dislocation, *n.* **4.** The territorial distribution of an army.—**Dislocation of the lens,** displacement of the crystalline lens of the eye.

dislocatory (dis-lok′a-tō-ri), *a.* Involving dislocation or dislocations: as, *dislocatory* movements of the earth's crust.

disloyalist (dis-loi′al-ist), *n.* A disloyal or disaffected person.

dismal, *n.* **6.** *pl.* The blues; the dumps; a state of gloominess or despondency: as, to be in the *dismals*.

dismantlement (dis-man′tl-ment), *n.* The act of dismantling or the state of being dismantled.

dismarket (dis-mär′ket), *v. t.* To deprive (a market) of its status and privileges.

dismissible (dis-mis′i-bl), *a.* Liable to be dismissed or discharged from office; removable.

dismountable (dis-moun′ta-bl), *a.* That may be dismounted.—**Dismountable gun.** See ★*gun*1.

disobeyal (dis-ō-bā′al), *n.* [*disobey* + *-al*.] An act of disobedience: as, *disobeyal* of an order of the court.

disobliger, *n.* **2.** An English vehicle which was developed into the American track-sulky of the high-wheeled, springless type.

disodic (dī-sō′dik), *a.* [*di-*[2] + *sod*(*ium*) + *-ic*.] In *chem.*, containing two atoms of sodium, as the common phosphate of soda of commerce, $Na_2HPO_4.12H_2O$.

disomus (dī-sō′mus), *n.*; pl. *disomi* (-mī). [NL., < Gr. δίσωμος, having two bodies, < δι-, two-, + σῶμα, body.] A monster with two bodies.

disorder, *n.* **7.** In *logic*, disagreement with every conceivable general rule whatever. It is impossible for a finite collection of objects to be in disorder in this sense, nor is it possible for a continuum to be in disorder. Whether or not it is possible for an infinite discrete collection to be in disorder is a question that has not been solved.

disorderly, *a.* **II.** *n.* A person accused or guilty of disorderly conduct.

disorientation (dis-ō′ri-en-tā′shon), *n.* [*dis-* + *orientation*.] Loss of the ability to determine direction or to estimate correctly time and space. *Lancet*, June 25, 1904, p. 1808.

disoxidize (dis-ok′si-dīz), *v. t.*; pret. and pp. *disoxidized*, ppr. *disoxidizing*. [*dis-* + *oxidize*.] Same as *deoxidize*.

disp. An abbreviation of *dispensatory*.

dispansive (dis-pan′siv), *a.* [L. *dispansus*, pp. of *dispandere*, spread out: see *dispand.*] In *optics.*, serving to dispand or spread out: applied to a system of lenses which has a negative focal distance. Opposed to *collective*.

disparate, *a.* 2. In the psychology of sensation, belonging to or derived from different senses (said of sensations); appealing to different senses (said of stimuli).

> Diversion of the attention by *disparate* stimuli, when it occurs, is probably the more effective.
> *O. Külpe* (trans.), Outlines of Psychol., p. 110.

Disparate points. See ★*point*1.

dispendious (dis-pen′di-us), *a.* [L. *dispendiosus*, expensive, < *dispendium*, expense, loss, < *dispendere*, expend: see *dispend.*] Costly; expensive; extravagant; lavish: as, 'a *dispendious* use of material may in the end be true economy.' *A. J. Beresford-Hope*, Eng. Cathedrals, ii.

dispense, *v. t.* 5. To put up (a medical prescription).

dispermic (dī-spėr′mik), *a.* [Gr. δι-, two-, + σπέρμα, seed, + *-ic.*] Affected with or pertaining to dispermy: said of eggs containing two spermatozoa.

dispermin (dī-spėr′min), *n.* [Gr. δι-, two-, + σπέρμα, seed, + *-in*2.] Same as ★*piperazin*.

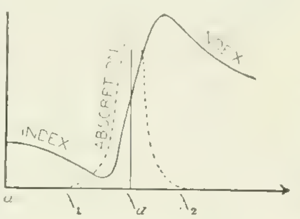
dispermy (dī-spėr′mi), *n.* [Gr. δι-, two-, + σπέρμα, seed, + *-y*3.] The entrance of two spermatozoa into a single egg.

disperse, *v. t.* 6. In *optics*, to refract by amounts which vary with the wave-length of the refracted ray; separate a composite beam of light, into its components, forming a spectrum. See *dispersion*, 3.

dispersion, *n.* 3. (*b*) In *physiol. optics*, the blurring of the retinal image due to faulty accommodation.

> The *dispersion* images indicate the position of the object as before or behind the object of distinct vision.
> *O. Külpe* (trans.), Outlines of Psychol., p. 353.

6. In *bot.*, the distribution of seeds and of plants by various means, as by the wind, by birds and animals, etc.—**Anomalous dispersion**, dispersion of light in which the direction is reversed, the refraction increasing with the wave-length instead of diminishing, as in ordinary cases. Anomalous dispersion is an accompaniment of selective absorption (see *selective*). It manifests itself only in the case of media having a large absorption coefficient, and in that region of the spectrum which is occupied



Anomalous Dispersion.

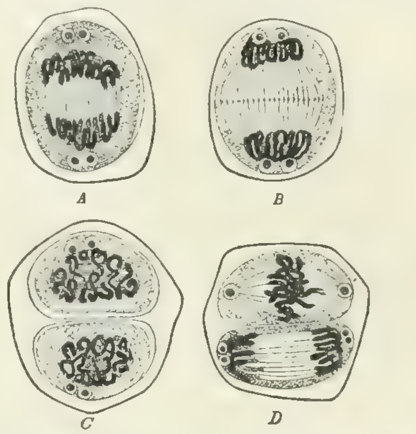
by the absorption-band. In transparent substances the frequency of the light-wave does not coincide with the natural frequency of vibration of the ions or particles of the refracting medium. In such cases the index of refraction in general diminishes as the wave-length of the light increases, and the result is normal dispersion in which the shorter waves are most strongly bent from their path. Whenever, however, the frequency of the light-wave coincides with the vibration-frequency of the particles of the medium, there is a disturbance of this relation. In the case of bodies having strong selective absorption, such as fuchsin, there is a marked diminution of the index of refraction with an increase of wave-length as the frequency of the light wave approaches the natural frequency of the particles of the substance (that is to say, as the absorption-curve is approached on the side toward the violet), followed by a sudden and very great rise in the value of the index for wave-lengths corresponding to the absorption-band. On the side toward the red the values of the index of refraction are very great, but they diminish again rapidly as the wave-length increases. The variations in the index of refraction which occur in anomalous dispersion are shown graphically in the figure, in which the dotted curve shows the values of the coefficient of absorption of the substance. The region inclosed by this curve is that of the absorption-band of the substance which has its maximum at the wave-length λ_a represented by the vertical line in the diagram. For those portions of the spectrum lying between o and λ_1 and also beyond λ_2, where the values of the absorption coefficient are small, dispersion follows its normal course, the index of refraction diminishing with increasing wave-length. Within the absorption-band, between λ_1 and λ_2, occurs the sudden change in the value of the index shown in the curve, and it is in this region that anomalous dispersion is observed. Anomalous dispersion occurs not only in certain solids having strong and well-marked absorption-bands, but likewise in certain vapors. Sodium vapor, for example, which is opaque to light of the wave-length of the yellow sodium lines .589 μ, exhibits the phenomenon in this region.—**Atmospheric dispersion**, the formation of a spectrum when a ray of white light is refracted by the atmosphere or by any part of it. A bright star seen near the horizon appears as a vertical spectrum band by reason of atmospheric dispersion.—**Dispersion-apparatus**, in *optics*, any optical system for producing a spectrum, as a spectroscope.—**Dispersion circle, lens, photometer.** See ★*circle*, ★*lens*, ★*photometer*.—**Law of dispersion.** (*a*) In the theory of errors, the law of the distribution of errors of observation as regards size, but without reference to size or direction. (*b*) The tendency of material particles of bodies, including conscious individuals, to go apart, as from a center; hence in the phenomena of population, the continual breaking down and dispersing of aggregations counteracting a tendency toward concentration. See *law of* ★*concentration*. *L. F. Ward*, Dynamic Sociol., I. 219.—**Sellmeier's theory of dispersion**, a theory of dispersion based upon the assumption that the particles of the refracting substance partake of the vibratory motion of the ether. This theory, proposed by Sellmeier in 1870 was subsequently further developed by Helmholtz, Lommel, Ketteler, and others.

dispetal (dis-pet′al), *v. t.*; pret. and pp. *dispetaled*, *dispetalled*, ppr. *dispetaling*, *dispetalling*. [*dis-* priv. + *petal.*] To strip (a flower) of its petals.

> Here all is sunny, and when the truant gull
> Skims the green level of the lawn, his wing
> *Dispetals* roses.
> *R. L. Stevenson*, Underwoods, I., Sch. xxxv.

disphenoid (dī-sfē′noid), *n.* [*di-*2 + *sphenoid.*] A crystalline form of the sphenoid group of the tetragonal system, bound by eight similar isosceles triangles in symmetrical pairs; a tetragonal scalenohedron. See *sphenoid*, 1.

dispireme (dī-spī′rēm), *n.* [Also *dispirem*; < Gr. δι-, two-, + σπείρημα, σπείραμα, a thing wound or coiled, a spire.] In *cytol.*, the stage of karyokinesis during which the chromosomes unite to form two skeins, one for each of the daughter-nuclei.



Division of pollen-mother-cells in the lily as described by Guignard.

A, anaphase of the first division, showing the twelve daughter-chromosomes on each side, the interzonal fibers stretching between them, and the centrosomes, already double, at the spindle-poles; *B*, later stage, showing the cell-plate at the equator of the spindle and the daughter-spiremes (dispireme-stage of Flemming); *C*, division completed, double centrosomes in the resting-cell; *D*, ensuing division in progress, the upper cell at the close of the prophases, the chromosomes and centrosomes still undivided, lower cell in the late anaphase, cell-plate not yet formed. (From Wilson's "The Cell.")

dispirous (dī-spī′rus), *a.* [Gr. δι-, two-, + σπεῖρα, coil, spiral.] Having double spirals: applied to the elaters of the *Hepaticæ*. *Spruce.*

displacement, *n.* 3. In *naval arch.*, displacement is the total weight of a vessel and of everything on board, which, in accordance with the laws of hydrostatics, is equal to the weight of the volume of water displaced by the vessel when afloat. It is usually given in long tons, and is ascertained by calculation, from the plans, of lines of the vessel for a series of mean drafts, in accordance with certain rules. The results of the calculations are then plotted in curves of displacement. See ★*curve*. *Light displacement* is that of the vessel without water, stores, provisions, ammunition, coal, or cargo. *Load displacement* is that of the ship fully loaded. *Normal load displacement*, or *normal displacement*, in a warship, is that fixed by the designer as the average condition and includes the weight of coal, stores, ammunition, etc., considered to be the average amount to be carried. *Deep load displacement* is that which corresponds to the full amount of coal, stores, ammunition, etc., which can be placed in the bunkers, storerooms, holds, and ammunition-rooms.

6. In *veg. teratol.*, a malformation, in leaves, due to abnormal cohesion or fusion of parts which results in dislocation and other apparent changes in the form. Thus two fused leaves may appear like a single lobed leaf, a whorl may be reduced to two opposite leaves, etc. *Masters.*—**Angles of displacement**, in *physiol. optics*, angles employed to determine the position of the foremost line of regard. The angle of *vertical displacement* measures the divergence of the plane of regard, up or down, from the primary position; the angle of *lateral displacement* is included between the foremost line of regard and the median line of the plane of regard.—**Curve of displacement.** See ★*curves of ship calculations*.—**Displacement lubricator, pump.** See ★*lubricator*, ★*pump*1.—**Law of displacement**, in *phys.*, the law of the shifting, with temperature, of the wave-length of the maximum of the energy-curve for the emission-spectrum of a black body. Also called *Paschen's law*.—**Wave of displacement.** See ★*wave*1.

displacement-tonnage (dis-plās′ment-tun″āj), *n.* In *ship-building*, the displacement of a vessel measured in tons weight: distinguished from *register-tonnage* which is measured in conventional tons of 100 cubic feet.

Displacer piston. See ★*piston*.

display, *n.* 2. In *printing*, the art of selecting and arranging types of unequal size, as in a title-page or advertisement, so as to make certain parts emphatic and the whole likely to attract attention.

display-man (dis-plā′man), *n.* An employee of the United States Weather Bureau whose duty is to display the weather flag-signals, storm-signals, or other warnings.

display-pipe (dis-plā′pīp), *n.* In *organ-building*, a pipe set in the front of the case and usually ornamented. Such pipes are sometimes those which sound, and sometimes mere dummies. Also *show-pipe*.

displezure, *n.* A simplified spelling of *displeasure*.

displuviate (dis-plū′vi-āt), *a.* [L. *displuviatus*, < *dis-*, apart, + *pluvia*, rain.] Protected from rain; provided with channels to carry off rain.—**Displuviate atrium.** See ★*atrium*.

dispope (dis-pōp′), *v. t.* To deprive of the popedom; depose as pope; unpope. *Tennyson.*

Disporea (dī-spō′rē-ä), *n. pl.* [NL., < Gr. δι-, two-, + σπορά, seed (spore).] A group of *Myxosporidia* in which only 2 spores are produced in each trophozoite. They are parasitic forms, living freely as amœboid organisms in the bile or urine of fishes and frogs. Also called *Disporocystidæ*.

disporous (dī-spō′rus), *a.* [Gr. δι-, two-, + σπορά, seed (spore).] Having 2 spores: said of certain *Coccidia*; producing only 2 spores, as some *Myxosporidia*.

disposability (dis-pō-za-bil′i-ti), *n.* The quality of being disposable: as, the *disposability* of one's time, one's property, or the like.

disposition, *n.* 10. Specifically, in *organ-building*: (*a*) the plan or specification in accordance with which the whole instrument is built; (*b*) the arrangement of the visible parts of the instrument, as of the display-pipes, the case, the desk or console, the stops, etc.—**Bond and disposition in security.** See ★*bond*1.—**Physiological disposition**, a tendency of certain organs or tissues to respond in definite ways to certain actions upon them.—**Psychical disposition**, a natural tendency of the mind to present certain definite kinds of phenomena under definite kinds of circumstances.—**Psychophysical disposition**, a tendency to the production of a certain kind of consciousness in response to certain kinds of physical stimulation; also a tendency to the production of certain physical effects in response to certain mental activities.

dispossessory (dis-po-zes′sō-ri), *a.* [*dispossess* + *-ory.*] Relating to or involving dispossession or eviction: as, a *dispossessory* warrant.

dispriest (dis-prēst′), *v. t.* To deprive of the status of priest. Same as *unfrock*. *N. E. D.*

disputably (dis-pū′ta-bli), *adv.* With some possibility of dispute; with less certainty; questionably.

> Linus and Thamyris, and, more *disputably*, Orpheus, are . . . precursors of Homer. *Bulwer*, Athens, I. 279.

disquiparant (dis-kwip′a-rant), *a.* and *n.* [*dis-* + (*e*)*quiparant.*] **I.** *a.* Belonging to a disquiparance.

II. *n.* An object so related to a second that the latter is in a different relation to it. Thus, a husband is a disquiparant, a spouse an equiparant.

disquisitionist (dis-kwi-zish′on-ist), *n.* The author of a disquisition. *Bagehot.*

disquisitor (dis-kwiz′i-tor), *n.* The author of a disquisition: a disquisitionist.

disregardant (dis-rē-gärd′ant), *a.* That pays no heed or attention: disregardful. *Ruskin.*

disruptionist (dis-rup′shon-ist), *n.* [*disruption* + *-ist.*] One who disrupts or favors disruption; specifically, one of those who seceded from the Established Church of Scotland in 1843 and founded the Free Church of Scotland. See *disruption of the Scottish Church*, under *disruption*.

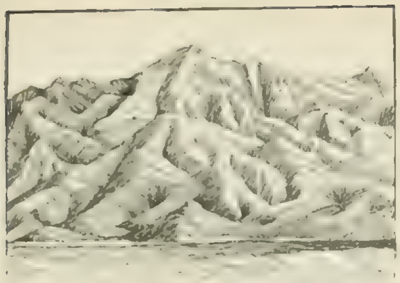
Disruptive strength. See ★*strength*.

disruptment (dis-rupt′ment), *n.* [*disrupt* + *-ment.*] The process of breaking off; disruption.

disruptor (dis-rup′tor), *n.* A high explosive: so named because the effect of such explosives is to separate forcibly surrounding matter into small particles rather than to propel it to a distance.

diss. An abbreviation of *dissertation*.

dissect, *v. t.* 4. In *geol.*, to cut up or erode (a plateau, mountain, etc.) into numerous irregu-


A Dissected Mountain-range, Utah

lar valleys or ravines: as, a *dissected* plateau; a *dissected* mountain range.

An excellent illustration of a well *dissected* upland is found in the Ozark plateau of southern Missouri.
W. M. Davis, Elem. Phys. Geog., p. 278.

To dissect out, in *surg.*, to remove entire by a process of dissection without injuring or removing any of the surrounding tissues.

dissecting-knife (di-sek'ting-nīf), *n.* A scalpel.

dissecting-wound (di-sek'ting-wönd), *n.* Same as *dissection-wound* (which see, under *wound*.)

dissection, *n.* 5. In *bot.*, the condition of being dissected. See *dissected*.—6. In *geol.*, the erosion of a land-surface into numerous irregular valleys. See ★*dissect*, 4. **Dissection tubercle.** Same as *anatomical tubercle* (which see, under *tubercle*).

disseizin, *n.*—**Fresh disseizin**, in *law*, a disseizin accomplished within the time in which the disseizee might of his own accord and by his own power, without the assistance of the king, or legal process, reënter and defeat the disseizin.

disseminule (di-sem'i-nūl), *n.* [Irreg. < L. *dissemin-are*, disseminate, + *-ule*.] In *phytogeog.*, the body by which a plant is propagated, whether seed, spore, offshoot, etc., or the whole plant.

Disseminules designed to pass through a resting period are often brought into conditions where they germinate at once. *F. E. Clements*, Bot. Surv. Neb., VII. 51.

dissentientism (di-sen'shent-izm), *n.* The principles or conduct of a dissentient.

Dissentis type. See ★*type*.

dissight (dis'sīt), *n.* [*dis-* + *sight*.] An unsightly thing; an eyesore. *Southey.* [Rare.]

dissimilar, *a.* 2. In *bot.*, having different forms in the same individual, as the anthers in the genus *Cassia*.

dissimilate, *v. t.*—**Dissimilated gemination.** See ★*gemination*.

dissimilatory (di-sim'i-la-tō-ri), *a.* Produced by dissimilation. *Scripture*, Exper. Phonetics, p. 203.

dissimulative (di-sim'ū-lā-tiv), *a.* Relating to or characterized by pretense or dissimulation: as, a *dissimulative* life; *dissimulative* arts.

Dissipation of energy. See ★*energy*.

dissipator (dis'i-pā-tor), *n.* One who or that which dissipates.—**Electric dissipator**, an instrument devised by Elster and Geitel for showing the relative number of electrified particles or electrons in the atmosphere at any place. It consists of a metallic body connected with the gold-leaf electroscope or equivalent electrometer. The metal body is first charged with a definite charge of electricity from some independent source. The rate at which this charge is neutralized by atmospheric electricity or free electrons is shown by the index of the electroscope.

dissociality (di-sō-shi-al'i-ti), *n.* The quality of being dissocial or unsocial. *Carlyle.*

dissociant (di-sō'shi-ant), *a.* and *n.* [L. *dissocian(t-)s*, ppr. of *dissociare*, dissociate.] **I.** *a.* In *chem.*, producing dissociation: as, the *dissociant* temperature. *Trans. Amer. Inst. Elect. Engin.*, Jan.–July, 1902, p. 284.

II. *n.* That which dissociates; a dissociating agent.

Dissociants in order of power: water, formic acid, methyl alcohol, ethyl alcohol. There are other *dissociants*, but the above are among the most common and generally employed. *Sci. Amer. Sup.*, Dec. 31, 1904, p. 24,242.

dissociate, *v.* **II.** *intrans.* To undergo dissociation; of an electrolyte in solution, to separate into ions some possessing positive and some negative electric charges, and capable of conveying an electric current by their motion through the solution with these charges.

With the exception of some bare statements to the effect that the yellow oxide, on heating, changes to the red, and that it *dissociates* at a lower temperature, the foregoing is all that has come to my notice which in any way bears on the subject.
Amer. Chem. Jour., April, 1903, p. 321.

dissociation, *n.* 3. In *psychol.*: (*a*) The disjunction of an associative connection, as by lapse of memory or by intercurrent associations, by the selective process of active attention, etc.

What is associated now with one thing and now with another tends to become dissociated from either. . . . One might call this the law of *dissociation* by varying concomitants. *W. James*, Prin. of Psychol., I. 486.

The part played by *dissociation* is evident. If there were no such breaking up of representations, imagination would be simply memory.
J. M. Baldwin, Handbook of Psychol., I. 218.

(*b*) A minor degree of the disintegration or disaggregation of consciousness, as it is termed, which culminates in the phenomena of dual or multiple personality.

If we now seek for some quality common to all the various states in which hallucinations occur, we shall find that their most striking characteristic is the *dissociation* of consciousness.
E. Parish, Hallucinations and Illusions, p. 71.

Arrhenius's theory of electrolytic or ionic dissociation. During the earlier half of the nineteenth century it was supposed that the electropositive and electronegative atoms in a dissolved compound were definitely combined, and that in electrolysis they did not part company until they were forcibly torn apart by the electric current. About the middle of the century it was found that if we eliminate the complication of polarization at the electrodes, a current through an electrolyte can be obtained by using even the smallest electromotive force; it was therefore obvious that the current is not concerned with tearing apart firmly combined ions. Clausius accordingly made the assumption that in a solution of an electrolyte an exchange of atoms between neighboring molecules is constantly going on, in such a way that some free ions constantly exist in solution; that is, that dissociation into ions exists, the amount of which was considered to be very small. The hypothesis of Arrhenius is, that a considerable number of the molecules of an electrolyte in aqueous solution are at all times dissociated into ions, and he supported this hypothesis with considerations derived from facts of two different kinds. One is the fact that, if we make a solution containing a certain number of molecules of a non-electrolyte (say one hundred molecules of sugar) and another solution of the same volume from the same number of molecules of an electrolyte (say one hundred molecules of common salt), the solution of the common salt gives an osmotic pressure which indicates that the hundred molecules of the solid have become nearly or quite two hundred molecules when dissolved. Similar statements can be made of the lowering of the freezing-point, the lowering of vapor pressure, and the raising of the boiling-point, of the solutions. The other fact is, that in the body of the solution electrolysis does no reversible work such as would be required to separate ions from each other, but is entirely expended in forcing ions against frictional resistance. Whatever freedom of the ions must be assumed in order to explain this phenomenon of electrolytic conduction exists whether the electric current is passing or not; that is, the molecules of the salt have been more or less dissociated into ions by going into solution. It is believed that at infinite dilution all the molecules of an electrolyte are dissociated into ions; at less dilution, according to Arrhenius's hypothesis, the degree of dissociation can be determined by comparing the osmotic pressure, or the conductivity, calculated from that at infinite dilution, with the observed osmotic pressure or conductivity.—**Dissociation coefficient.** Same as *dissociation* ★*constant*. **Dissociation constant, isotherm.** See ★*constant*, ★*isotherm*.—**Electrolytic dissociation**, in *phys. chem.*, the separation of the molecules of a dissolved (or fused) electrolyte into ions bearing opposite electrical charges and capable of carrying an electric current through the electrolyte. **Ionic dissociation.** See *electrolytic* ★*dissociation*.

dissociation-point (di-sō-shi-ā'shon-point″), *n.* In *phys. chem.*, the lowest temperature at which a heated gas or vapor perceptibly dissociates into simpler molecules.

dissoconch (dis'ō-konk), *n.* [Gr. δισσός, twofold, + κόγχη, a shell.] The shell of a veliger or larval mollusk.

dissogeny (di-soj'e-ni), *n.* [Gr. δισσός, twofold, + -γενης, producing.] In *zoöl.*, a form of reproduction among the *Ctenophora*, characterized by the presence of two periods of sexual maturity, one in the larval, the other in the adult form of the same individual.

dissogonous (di-sog'ō-nus), *a.* [NL. **dissogonus*, < Gr. δισσός, twofold, + γόνος, offspring.] Same as *pedogenetic*.

dissogony (dis-sog'ō-ni), *n.* [NL. **dissogonia*, < **dissogenus*: see *dissogonous*.] Same as *pedogenesis*.

dissolution, *n.*—**Space of dissolution**, in rocks, a cavity or space formed by the solvent action of circulating water or other corroding agent: contrasted with *space of* ★*discission*.

dissolutionism (dis-ō-lū'shon-izm), *n.* Anarchism or nihilism.

Coarseness is contrary, vulgarity is contradictory to elegance just as in politics the monarchical principle is contrary, but the principle — if any such principle there be — of disunionism, *dissolutionism*, or communalism, . . . is contrary to the republican principle.
Swinburne, in The Forum, Oct., 1891, p. 180.

dissolutionist (dis-ō-lū'shon-ist), *n.* One who advocates or aims at dissolution or dissolutionism.

dissolutive, *a.* 2. Pertaining to or characterized by dissolution or disintegration.

Much of the content is certainly rubbish, matter that Myers calls *dissolutive*, stuff that dreams are made of, fragments of lapsed memory, mechanical effects of habit and ordinary suggestion.
W. James, in Proc. Soc. Psych. Research, XVII. 20.

dissolv, *v.* A simplified spelling of *dissolve*.

dissolver, *n.* 2. In *paper-making* and other industries, a machine for dissolving, purifying, freeing from acids, and otherwise treating salts, chemicals, clays, colors, and paper pulp in water or other liquids. It consists of a large metal vessel having a bowl-shaped bottom and fitted with a horizontal turbine supported by an upright spindle passing through the bottom of the vessel. The clay, colors, chemicals, or other materials to be treated are placed in the vessel with the required amount of water to give the desired mixture or solution. By means of a belt to a pulley on the spindle the turbine is revolved at a high speed. This sets up a rapid motion in the liquid, drawing it downward in the center into the turbine and throwing it violently outward from the turbine against the sides of the vessel. The concave sides cause the liquid to move upward in a spiral path till again swept downward through the wheel. The rapid motion and attrition against the sides of the vessel disintegrate and dissolve the material, insoluble matter falling to the bottom and the solution being then drawn off.

dissonance, *n.* **Pure dissonance**, in *acoustics*, dissonance in which the relation of the frequencies of the dissonant tones is such that the harshness due to rapid tonal beats is absent.

dissonate (dis'ō-nāt), *v. i.* [L., *dissonare*: see *dissonant*.] To be dissonant or harsh: said of sounds.

dissonating (dis'ō-nāt-ing), *p. a.* Same as *dissonant*.

dissophyte (dis'ō-fīt), *n.* [Gr. δισσός, double, + φυτόν, plant.] In *phytogeog.*, a plant of which the subterranean parts are adapted to mesophytic or even hydrophytic conditions, and the aërial parts to xerophytic conditions.

Such plants grow on alpine gravel-slides, sand-bars, strands, etc. *F. E. Clements*, Bot. Surv. Neb., VII. 24.

dissophytic (dis-ō-fit'ik), *a.* [*dissophyte* + *-ic*.] Having the character of or in some way related to dissophytes. *F. E. Clements.*

dissymmetrically (dis-si-met'ri-kal-i), *adv.* In a dissymmetric way.

dissymmetry, *n.* 2. Symmetry between two objects, with respect to a plane of symmetry, as between the right and left hands, or between right and left crystals of tartaric acid.

distaf, *n.* A simplified spelling of *distaff*.

distaff, *n.*—**Descent by distaff**, maternal descent. See *distaff side*, under *distaff*.—**Frigg's distaff** [Sw. Friggerocken], a former Swedish name for the constellation of Orion.

Distal ligation. See ★*ligation*.

distalia (dis-tā'li-ä), *n. pl.* [NL., neut. pl. of **distalis*, distal.] A collective term for the bones of the third or distal, row of the carpus and tarsus.

distance, *n.* 9. In *psychol.*, extension in the third dimension; spatial depth.

An object is before us, and our perception of it as an object is at once associatively supplemented by the idea of its *distance*.
E. B. Titchener, Outline of Psychol., p. 204.

10. In *painting*, remoteness of objects as indicated by increased delicacy and harmony of color.

If Philip de Koninck is his [Jacob van Rüysdael's] equal in the presentment of immensity of *distance*, he is left far behind by Rüysdael's atmospheric achievements.
Burlington Mag., II. 59.

Distance circle, scale, sense. See ★*circle*, ★*scale*3, ★*sense*1.—**Interobjective distance**, the distance between the centers of the pupils of the two eyes in the primary position: to this distance opera-glasses and other binocular instruments are set.—**Interocular distance**, the distance between the eyepieces of a binocular instrument, as a field-glass.—**Out of distance**, beyond reach; too far away. **Principal distance.** See *perspective*, *n.*, 3. **Striking distance**, the distance through which a disruptive discharge will pass. See *electric spark*, under *spark*. **To know one's distance**, to know what distance should be kept in one's relations or intercourse with others.

distance-flag (dis'tans-flag), *n.* In *horse-racing*, the flag held by the man stationed at the distance-post. See *distance*, 3.

distance-language (dis'tans-lang″gwāj), *n.* A mode of communicating with distant persons or places.

Man [in the evolution of language] . . . from signs went on to sounds—he invented the telephone. By all the traditions of Evolution this marvellous instrument ought to be, and is even now on the verge of becoming, the vehicle of the *distance-language* of the future.
H. Drummond, Ascent of Man, p. 183.

distance-measurer (dis'tans-mezh″ūr-ėr), *n.* An instrument for determining distances; an angulometer or a telemeter.

distance-rod (dis'tans-rod), *n.* A reach-rod; a rod which holds two parts of a machine a fixed distance apart.

distance-stand (dis'tans-stand), *n.* The stand at the distance-post of a race-course.

distannic (di-stan'ik), *a.* [*di-*[2] + L. *stannum*, tin, + *-ic.*] In *chem.*, containing two atoms of tin: as, *distannic* tetraethides ($Sn_2(C_2H_5)_4$).

distater (di'stā-tėr), *n.* [Gr. *δι-*, two-, + *στατήρ*, stater.] An ancient Greek gold coin of the value of 2 staters.

distearoglycerophosphate (dī-stē″a-rō-glis″e-rō-fos'fāt), *n.* [*di-*[2] + *stear(ic)* + *glycer(ine)* + *phosphate.*] Glycerin-phosphoric acid in which two of the glycerin-hydroxyl groups are replaced by two stearic-acid radicals. In combination with choline, namely, as distearyl lecithin, distearoglycerine phosphoric acid is found as the predominating glycerophosphate of the animal lecithins.

distearyl (dī-stē'a-ril), *a.* [*di-*[2] + *stearyl.*] Noting a substance that contains two stearyl groups.

distegous (dis'tē-gus), *a.* [Gr. *δίστεγος*, of two stories, < *δι-*, two-, + *στέγος*, cover, roof.] Said of fishes in which a myodome is present, and the cranial cavity is thus double-floored.

distemper[1], *n.*—**Choking distemper**, a disease of horses thought to be produced by eating musty hay. See *forage* ★*poisoning.*

distensile (dis-ten'sil), *a.* [L. *distensus*, pp. of *distendere*, distend, + *-ile.*] Same as *distensible.* *Encyc. Brit.*, XXXI. 560.

distichal (dis'ti-kal), *n.* [As *distich* + *-al.*] One of the first duplicating plates of the radial series in the calyx of a crinoid, preceded below by the costals and followed by the palmars.

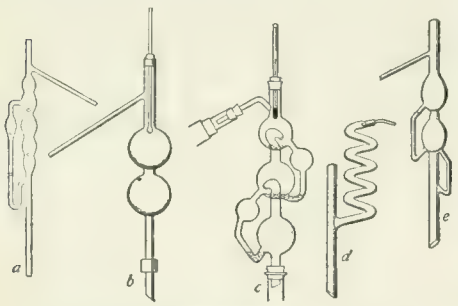
distigmatic (dī-stig-mat'ik), *a.* [Gr. *δι-*, two-, + *στίγμα*, mark: see *stigma.*] In *bot.*, having two stigmas.

distillation, *n.*—**Vacuum distillation**, in *phys. chem.*, the distillation of a substance under diminished pressure, so as to lower the temperature required for ebullition: often used to prevent decomposition of the substance by the higher temperature required for ebullition at atmospheric pressure.

Perhaps the two greatest aids to manufacturing pharmacy are *vacuum distillation* and centrifugal extraction. The former has long been in use, but the latter has only come into general use in this country during the past fifteen years. *Sci. Amer. Sup.*, Jan. 24, 1903, p. 22,631.

distiller, *n.* **2.** An apparatus for distilling water. On shipboard such apparatus is used to supply fresh water for drinking and washing, and for use in the boilers. A coil of boiler steam is placed in a tank of sea-water and the distillate caught and cooled. The deposited salt is removed at intervals as the solution of sea-water grows concentrated. For drinking, the distilled water is subsequently aërated.

distilling-tube (dis-til'ing-tūb″), *n.* An apparatus adapted to the fractional distillation



Distilling-tubes.

a, Glinsky's distilling-tube; *b*, Wurtz's distilling-tube; *c*, Volney's distilling tube; *d*, Hart's distilling-tube; *e*, Lebel and Henninger's distilling-tube.

of liquids, permitting only the vapor of that one to pass over whose boiling-point is shown by the thermometer. Such tubes are also frequently used to prevent spray from passing over.

distinctive, *a.* **II.** *n.* A distinctive mark; specifically, in *Heb. gram.*, a distinctive accent. There are 26 of these—18 disjunctive and 8 conjunctive.

distingué (dis-taṅ-gā'), *a.* [F., pp. of *distinguer*, distinguish.] Distinguished, especially in appearance or bearing; characterized by an air of distinction.

distinguished, *p.a.*—**Distinguished Service Order.** See ★*order.*

Distoma lanceolatum, a fluke occasionally found in the bile-ducts of herbivorous animals and of man.—**Distoma pulmonale** or **Ringeri**, a fluke which infests the bronchial tubes, causing a severe pulmonary disease, in the natives of Northern China, Korea, and Japan.—**Distoma westermanni**, a fluke which occasionally infests the lungs of domestic animals, and, very rarely, of man.

Distomatidæ (dis″tō-mat'i-dē), *n. pl.* [NL., < *Distomum* (*Distoma* (*distomat-*)), + *-idæ.*] A family of trematoid *Platyhelminthes*, of the order *Malacocotylea.* They are digenetic forms with 2 suckers, the posterior being on the ventral surface, and the genital opening usually median, ventral, and in the anterior third of the body. The forms included are parasitic in the alimentary canal and its appendages and in the blood-vessels of vertebrates. The family consists of the genera *Distoma*, *Rhopalophorus*, *Katlikeria*, and *Bilharzia.*

distomatosis (dis″tō-ma-tō'sis), *n.* [NL., < *Distoma*(*t-*) + *-osis.*] In *med.*, infection with trematoid worms. In man this occurs in four chief forms: *hepatic distomatosis*, with secondary pancreatic and intestinal infections in some cases, caused by *Fasciola*, *Dicrocœlium*, and *Opisthorchis*; *intestinal distomatosis*, caused by *Fasciolopsis*, *Heterophyes*, *Gastrodiscus*, and *Balanorchis*; *pulmonary distomatosis*, with secondary cerebral symptoms in some cases, caused by *Paragonimus westermani*; *venal distomatosis*, caused by *Schistosoma.*

distomatous (dī-stom'a-tus), *a.* [Gr. *δι-*, two- + *στόμα*(*τ-*), mouth, + *-ous.*] Provided with two mouth-like structures, like *Distoma* among the trematode worms.

distome (dis'tōm), *n.* An individual of the genus *Distoma* or of the family *Distomidæ.*—**Eye distome**, *Agamodistomum ophthalmobium* (Diesing, 1850), an immature, probably erratic distome, reported as parasitic in the human eye.

Distomea, *n. pl.* **2.** A group or tribe of mastigophorous *Protozoa*, of the order *Polymastigida*, having the flagella separated into two symmetrical groups, with a mouth-area at the base of each group (whence the name). It includes the genera *Trigonomonas*, *Hexamitus*, *Trepomonas*, *Spironema*, and *Urophagus.*—**3.** Same as ★*Malacocotylea.*

distomian (dis-tō'mi-an), *n.* One of the ★*Distomidæ.*

distomiasis (dis″tō-mi-ā'sis), *n.* [NL. *distoma* + *-iasis.*] A morbid state which results from the presence in the body of one of the species of *Distoma* or flukes. See ★*distomatosis.*

distomid (dis'tō-mid), *n.* A ★*distome.*

distomoid (dis'tō-moid), *a.* [Gr. *δι-*, two-, + *στόμα*, mouth, + *εἶδος*, form.] Same as ★*distomatous.*

distortional (dis-tôr'shon-al), *a.* [*distortion* + *-al*[1].] Of or pertaining to distortion or change of form under stress.—**Distortional wave**, a wave in an elastic solid due to the sudden application of a shearing or torsional stress.

distortionist (dis-tôr'shon-ist), *n.* A contortionist.

distortionless (dis-tôr'shon-les), *a.* [*distortion* + *-less.*] Free from the phenomena of distortion.

distraction, *n.* **11.** In *surg.*, the act of pulling upon the segments of a limb so as to cause a separation of the opposing joint-surfaces.

distrainee (dis-trā-nē'), *n.* In *law*, one whose property has been taken *by distress.*

distrib. An abbreviation (*a*) of *distributed*; (*b*) of *distributive.*

distribuend (dis-trib-ū-end'), *n.* [L. *distribuendus*, gerundive of *distribuere*, distribute.] That which is to be distributed. *H. Sidgwick.*

distributary, *a.* **II.** *n.* In *phys. geog.*, an outflowing branch of a river, such as occurs characteristically on a delta.

distribute, *v. t.*—**Distributed vector.** See ★*vector.*—**Distributing post-office.** See ★*post-office.*

distributee (dis-trib-ū-tē'), *n.* [*distribute* + *-ee*[1].] In *law*, one legally entitled to a share of the personal estate of an intestate.

distributer, *n.* **2.** In *printing*, the appliance in a linotype machine which returns to the magazine for re-use the matrices which have just been used in composition and casting.—**3.** In *elect.*, a panel, pillar or small switchboard by means of which the various circuits for a building or suite of rooms are connected to the mains.

distributer-bar (dis-trib'ū-tėr-bär), *n.* In *printing*, a bar in a linotype machine which has a series of tracks and combinations upon which the used matrices are carried to their proper position for distribution in the magazine. Also called *distributing-bar.*

distributing-bar (dis-trib'ū-ting-bär), *n.* Same as ★*distributer-bar.*

distributing-table (dis-trib'ū-ting-tā″bl), *n.* In *printing*, a surface of metal upon which inking-rollers distribute printing-ink. It is usually a part of the printing-machine. For the hand-press it is a separate attachment.

distribution, *n.*—**Bipolar distribution**, the occurrence in both polar regions of organisms, mostly marine, which are not known to occur in the tropics.—**Bipolar theory of distribution of species.** See ★*bipolar.*—**Canonical distribution.** See ★*canonical.*—**Combinational distribution**, the distribution obtained in the combinations presented by games of chance.—**Curve of distribution.** Same as *Quételet's* ★*curve.*—**Discontinuous distribution**, the occurrence in widely separated regions or geological formations of organisms or of the remains of organisms which are not known to inhabit the intervening area, nor the intervening formations. See ★*bipolarity.* **Geological distribution**, the vertical range, through successive rock strata, of extinct faunas and floras, or of the species constituting such assemblages: contrasted with *geographical distribution* or the contemporaneous distribution of such organisms, living or extinct.—**Horizontal distribution**, the distribution of organisms considered as ranging over the earth or through the sea horizontally, as distinguished from their distribution in altitude.—**Microcanonical distribution**, in *statistical mech.*, the limiting distribution in phase of part of a canonical ensemble when the difference of the limiting energies is indefinitely diminished.

From a certain point of view the *microcanonical distribution* may seem more simple than the canonical.
J. W. Gibbs, Statistical Mech., p. 116.

Normal distribution, the conformity of statistical events to the mathematical law of error.

The regression curve between pairs of blood relations... is within the limits of random sampling *linear.* This had already been suggested by Galton on the basis of the theory of *normal distribution.*
Biometrika, Nov., 1903, p. 395.

Vertical distribution, the distribution of organisms in altitude on the one hand from sea-level to the tops of mountains and on the other from the sea-level to the bottom of the sea; bathymetrical as distinguished from horizontal distribution.

Distributional area, the entire territory over which a given animal, or group of animals, is distributed. It need not be a continuous distribution: thus southern Europe is the distributional area of the chamois, although the animal is confined to a few mountain ranges which form its *station.*

distribution-valve (dis-tri-bū'shon-valv″), *n.* The main slide-valve in an engine which has a double valve or Meyer valve. It is so named to distinguish it from the expansion-valve which rides on the back of the main or distribution-valve.

Distributive fault, justice. See ★*fault*, ★*justice.*

district, *n.* **3.** A subdivision of an English county with its own elective council charged chiefly with jurisdiction in sanitary matters. These districts are classed as 'urban' and 'rural' according as they lie within or without a borough or city.—**District formation.** Same as *climatic* ★*formation.*—**Forecast district**, in *meteor.*, a district for which a weather forecast is made. The United States is divided into forecast districts, with rather arbitrary boundaries, for the convenience of the official forecasters. These are New England, the West Gulf district, the North Central district, the Rocky Mountain district, the South Pacific district, and the North Pacific district. Regions not included in these belong to the Washington forecast district. The forecasts emanating from the forecast division at Washington are sent to the district forecasters at Boston, New Orleans, Chicago, Denver, San Francisco, and Portland, Oregon, and distributed by telegraph, telephone, and mail, daily, through these respective forecast districts.

disturbance, *n.* **6.** In *astron.*, same as *perturbation*; the deviation of a body from the elliptical orbit it would otherwise pursue, caused by the attraction of bodies other than the primary.—**Disturbance of patronage**, in *old Eng. law*, the act of a patron by which he sought to prevent the presentation of his clerk to a benefice.

disturbant, *a.* **II.** *n.* In *law*, same as *disturber.*

disturnpike (dis-tėrn'pīk), *v. t.*; pret. and pp. *disturnpiked*, ppr. *disturnpiking.* [*dis-* + *turnpike*, *n.*] To convert (a turnpike) into an ordinary highway by the legal removal of toll-gates; free (a road) from tolls.

distylous (dī-stī'lus), *a.* [Gr. *δι-*, two-, + *στῦλος*, pillar: see *style*[2].] In *bot.*, having two styles.

disubstituted (dī-sub'sti-tū-ted), *a.* [*di-*[2] + *substituted.*] Noting compounds in which two hydrogen atoms are replaced by other atoms or radicals. See *substitution*, 6.

disulphid, *n.*—**Carbon disulphid.** See *bisulphid of carbon.* **Hydrogen disulphid.** See ★*hydrogen.*

disulphonic (dī-sul-fon'ik), *a.* [*di-*[2] + *sulph(ur)* + *-n-* + *-ic.*] In *chem.*, containing the sulpho group of atoms, HSO_3 or $HO.SO_2$, twice in union with carbon: as, anthraquinone *disulphonic* acid, $C_{14}H_6O_2(HSO_3)_2$, used in the manufacture of artificial alizarin.

disulphuret (dī-sul'fū-ret), *n.* [*di-*[2] + *sulphuret.*] Same as *bisulphuret.*

disulphuryl (dī-sul'fū-ril), *a.* [*di-*[2] + *sulphur* + *-yl.*] In *chem.*, containing the group of atoms known as sulphuryl, SO_2, twice: as, *disulphuryl* chlorid or oxychlorid, $(SO_2)OCl_2$.

disunite, *v.* **II.** *intrans.* Of a horse, in galloping, to move the left hind leg immediately after the right fore leg, or vice versa.

disvulnerability (dis-vul″ne-ra-bil'i-ti), *n.* [*disvulnerable* + *-ity.*] The quality possessed by some persons of a rude physical type of being comparatively difficult to wound seriously, that is, of recovering easily from wounds or injuries.

This insensibility shows itself also in *disvulnerability*, or rapid recovery from wounds, first pointed out by Benedikt, which appears to be a frequently observed phenomenon among criminals. *H. H. Ellis*, The Criminal, p. 113.

disvulnerable (dis-vul'nę-ra-bl), *a.* [*dis-* + *vulnerable.*] Possessing the faculty of being difficult to wound severely, that is, of being able to recover easily from wounds; not easily vulnerable (as to consequences of wounds).

Defectives are lacking in sympathy partly, at least, because they are insensitive, analgesic, and more or less *disvulnerable.*
Amer. Jour. Relig. Psychol. and Educ., May, 1904, p. 34.

dita (dē'tä), *n.* [Tagalog *dita.*] In the Philippines, a tree, *Pala scholaris*, belonging to the *Apocynaceæ*, which yields a valuable medicinal bark. See *devil-tree* and *dita-bark.*

ditaine (dē'ta-in), *n.* [*dita* + *-ine*[2].] A colorless, bitter alkaloid, $C_{22}H_{28}O_4N_2.4H_2O$, contained in dita-bark, *Echites scholaris* L. (*Alstonia scholaris* Brown), from the Philippines, which crystallizes in thick, glassy, lustrous prisms. It is used as a febrifuge. Also called *echitamine.*

ditamine (dit'a-min), *n.* [*dita* + *amine.*] An amorphous alkaloid, $C_{19}H_{19}NO_2$, contained in dita-bark from the Philippines. It melts at 75° C.

ditch, *n.*—**Behind-the-Ditch, The Devil's Ditch** or **Dike.** See *The* ★*Ditch.* **The Ditch,** a large prehistoric embankment near the race-course of Newmarket, England. It is 4 to 5 miles long, 18 to 20 feet high, and 100 feet broad on top, and has a slope of 50 feet on the southwest side. It separates the race-course proper from another, known as "Behind-the-Ditch," where certain races are also run. Also known as the *Devil's Ditch* or *Dike.*—**To put under the ditch,** to intersect with ditches or trenches for irrigation purposes. [U. S.]

ditcher, *n.* **2.** A ditch-machine.—**3.** In *lawn-bowls*, a ball which runs off the field of play into the surrounding gutter or ditch.

ditching-plow (dich'ing-plou), *n.* A strong, heavy plow used in loosening the earth at the bottom of ditches.

ditch-machine (dich'ma-shēn″), *n.* A machine for digging ditches or excavating trenches.

ditch-moss (dich'môs), *n.* The water-weed or water-thyme, *Philotria Canadensis.*

ditch-rider (dich'rī″dèr), *n.* A man, who is employed to ride along and inspect all parts of an irrigation-canal or ditch and to give especial attention to the distribution of water and the prevention of waste. *F. H. Newell*, Irrigation in U. S., p. 107.

diterebene (dī-ter'ę-bēn), *n.* Same as ★*diterpene.*

diterpene (dī-tèr'pēn), *n.* A terpene having the formula $C_{20}H_{32}$.

ditesseral (dī-tes'ę-ral), *a.* [Gr. *δι-*, two-, + L. *tessera*, a small square or cube: see *tessera.*] Having two small squares or cubes: noting certain symmetry classes belonging to the isometric system. See *symmetry.*

ditetragonal (dī-te-trag'ō-nal), *a.* [*di-*[2] + *tetragonal.*] In *crystal.*: (*a*) Twice four-angled or twice four-sided: said of the eight-faced prism and eight-faced pyramid (or double pyramid) of the tetragonal system. (*b*) Noting a type of symmetry characterized by a tetrad axis (that is, one of tetragonal or fourfold symmetry) in which four planes of symmetry intersect. See ★*symmetry.*

dithallious (dī-thal'i-us), *a.* [*di-*[2] + *thalli-um* + *-ous.*] In *chem.*, containing two atoms of the metal thallium.

dithionate (dī-thī'ō-nāt), *n.* [*dithion(ic)* + *-ate*[1].] In *chem.*, a salt of dithionic acid: as, sodium *dithionate*, $Na_2S_2O_6$ (formerly called *hyposulphate*).

Dithyrocaris (dith″i-rō-kā'ris), *n.* [Gr. *δι-*, double, + *θύρα*, a door, + *καρίς*, (prob.) a shrimp.] A genus of crustaceans of the order *Phyllocarida*, having a bivalved carapace ridged medially and at the sides, and several free segments, the last bearing two cercopods articulated to the telson. It occurs in the Devonian and Carboniferous formations.

ditokous, *a.* **2.** Producing two kinds of young, as some worms.

di-tri-. An elliptic combination of *di-* + *tri-*, meaning either '*di-* or *tri-*' or '*di-* and *tri-*': as, *di-trichotomous* (= 'dichotomous or trichotomous'), *di-trimerous*, etc.

ditrichotomously (dī-trī-kot'ō-mus-li), *adv.* In a ditrichotomous manner.

ditrichotriæne (dī″trik-ō-trī'ēn), *n.* [Gr. *δι-*, double, + *τρίχα*, threefold, + *τρίαινα*, a trident.] In the nomenclature of the spicular elements of sponges, a trichotriæne in which the subsidiary branches are also forked.

ditriglyphal (dī-trī'gli-fal), *a.* Same as ★*ditriglyphic.*

ditriglyphic (dī-trī-glif'ik), *a.* [*ditriglyph* + *-ic.*] Pertaining to or characterized by the presence of ditriglyphs: said of an arrangement of the Doric order which, by widening the intercolumniation, necessitates the use of two triglyphs between the columns instead of one. See *ditriglyph.*

ditrigonal, *a.* **2.** Noting a type of symmetry characterized by a trigonal axis (that is, one of threefold symmetry), in which axis three planes of symmetry intersect. See ★*symmetry.*

ditrigonally (dī-trig'ō-nal-i), *adv.* In a ditrigonal manner.

ditties (dit'ez), *n. pl.* [Detached from *ditty-bag.*] Any fabrics suitable for making ditty-bags for sailors' use: used only in the plural.

dittogram (dit'ō-gram), *n.* [Gr. *διττός*, double, + *γράμμα*, a writing.] Same as ★*dittograph.*

dittograph (dit'ō-graf), *n.* [Gr. *διττός*, double, + *γράφειν*, write.] An instance of dittography; a letter, syllable, word, or series of words, mechanically and unconsciously repeated by a copyist. Also *dittogram.*

dittographic (dit-ō-graf'ik), *a.* Of the nature of a dittograph.

Dittrich's plugs. See ★*plug.*

diureide (dī-ū'rē-id), *n.* [*di-*[2] + *ureide.*] One of a class of organic compounds, such as uric acid, which contain two ureide radicals in the molecule. These substances are of interest in connection with the metabolism of birds and reptiles, which excrete their nitrogenous material largely in the form of diureides.

diuretic, *n.*—**Cardiac diuretic,** a remedy which produces diuresis indirectly by increasing the force and efficiency of the heart-beats.—**Saline diuretic,** a salt of sodium or potassium which increases the urinary secretion.

diuretin (dī-ū-rē'tin), *n.* [*diuret-ic* + *-in*[2].] The proprietary name of a compound of sodium salicylate and sodium theobromine which possesses marked diuretic properties.

Diurnal revolution, sleep, variation. See ★*revolution*, ★*sleep*, ★*variation.*

diurnule (dī-èrn'ūl), *n.* [L. *diurnus*, daily, + *-ule*, as in *granule.*] A granule containing a fractional part of the daily dose of a drug, the size of the fraction denoting the number of granules that must be taken at even intervals in the course of twenty-four hours.

Diuturnal revolution of the earth, a phrase used by William Andrews (1899) to describe an imagined spiral revolution of the earth in the course of which "the north terrestrial polar point is taken within 30° of the south sidereal polar point, and returned to within 60° of the point under the North Star from whence it started."

div[2] (dēv), *n.* [Pers. *dīv*, *dīw*, formerly *dēv*, < Zend *daēva*, an evil spirit, = Skt. *dēva*, god: see *deva.* For the descent of meaning compare the history of *demon.*] In *Persian myth.*, an evil spirit or demon; a devil; an evil genius.

div. An abbreviation (*a*) of *dividend*, much used in exchange quotations with *cum* or *ex*: as, *cum div.*, with the dividend; *ex div.*, without the dividend; (*b*) of *division.*

divagate (dī-vā'gāt), *v. i.*; pret. and pp. *divagated*, ppr. *divagating.* To wander about, as from place to place or from subject to subject; stray; digress.

divalence (dī'va- or div'a-lens), *n.* The state of being divalent.

divalency (dī'vā- or div'a-len-si), *n.* Same as ★*divalence.*

Divers' disease, divers' palsy. Same as *caisson-disease.*—**Florentine diver,** one of the globes or human figures used in the experiment with Ferdinand's globes. See ★*globe.*

divergence, *n.* **4.** In *bot.*, gradual separation during the process of lengthening, as in the pods of *Asclepias.*

divergent, *a.* **4.** In *bot.*, gradually separating with growth. See ★*divergence*, 4.

diverginervate (di-vèr-ji-nèr'vāt), *a.* [Irreg. < *diver(gent)* + *nervate.*] In *bot.*, having divergent nerves.

diverginervous (di-vèr-ji-nèr'vus), *a.* Same as ★*diverginervate.*

diversicolored (di-vèr-si-kul'ord), *a.* Of various or varied colors.

diversiflorate (di-vèr-si-flō'rāt), *a.* [L. *diversus*, diverse, + *flos* (*flor-*), flower.] Same as *diversiflorous.*

diversifoliate (di-vèr-si-fō'li-āt), *a.* [L. *diversus*, diverse, + *folium*, leaf.] Same as *diversifolious.*

diversional (di-vèr'shon-al), *a.* [*diversion* + *-al*[1].] Relating, pertaining to, or used in diversion: as, *diversional* contrivances.

The uses to which the earthenware of the aborigines was applied were numerous and important; they may be classed roughly as domestic, industrial, sacerdotal, ornamental, and trivial or *diversional.*
Rep. Bur. Amer. Ethnol., 1898–99, p. 24.

Diversion weir. See ★*weir.*

diversisporous (di-vèr-si-spō'rus), *a.* [L. *diversus*, different, + Gr. *σπορά*, seed (spore).] Having different kinds of spores.

diverter, *n.*—**Electrical diverter,** a form of combined lightning guard and fuse for telephonic and other electrical apparatus. It consists essentially of a coil of fine copper wire the inductance of which serves to divert sudden surges of current to a neighboring ground-plate. The terminals of the coil, which are of fusible metal, afford protection from heavy currents.

divertibility (di-vèr-ti-bil'i-ti), *n.* The capability of being diverted into other channels: as, the *divertibility* of trade.

Diverticular hernia. See ★*hernia.*

diverticularization (di-vèr-tik″ū-lär-i-zā'shon), *n.* In *embryol.*, the act of forming diverticula, evaginations or pockets during development.

diverticulate (di-vèr-tik'ū-lāt), *a.* Same as *diverticulated.*

diverticulum, *n.* **2.** Any short side passage of the nature of a cul-de-sac or blind alley.

Four or five feet below the entrance was a *diverticulum*, or short side passage . . . probably used as a place in which to turn around when the animals come back to take a look at the intruder before finally disappearing in the bottoms of their burrows.
Yearbook U. S. Dept. Agr., 1901, p. 261.

3. In *algol.*, a protrusion of protoplasm communicating with the fused procarp cells and the placenta.—**False diverticulum,** a diverticulum of the intestine caused by a protrusion of the mucous membrane through a rent in the muscular wall.—**Meckel's diverticulum,** a diverticulum from the ileum resulting from non-obliteration of the ductus vitellinus in the embryo.—**Pulsion diverticulum,** a diverticulum caused by a protruding force acting from within. *Jour. Exper. Med.*, Jan. 15, 1901, p. 328.—**Traction diverticulum,** a diverticulum caused by a pulling force from without, as by the contraction of fibrous adhesions.—**True diverticulum,** a diverticulum of the intestine formed by a protrusion of the entire thickness of the wall: opposed to *false* ★*diverticulum* (which see).

divertimento (di-ver-ti-mān'tō), *n.* [It., < *divertire*, divert.] In *music*: (*a*) A dance interpolated in an opera; an entr'acte. (*b*) A piece of chamber music, made up of several movements rather loosely combined; a suite or sonata (in the older sense). (*c*) A potpourri or fantasia. (*d*) A free episode in a fugue.

divertisement, *n.* **3.** Same as ★*divertimento* (*a*): in this sense usually in the French form *divertissement.*

dives (dī'vēz), *n.* [L. *dives*, rich.] A rich man: [*cap.*] usually regarded as the proper name of the rich man of the parable in Luke xvi.—**Dives costs,** in *law.* See *cost*[2].

Divesian (dī-vē'si-an), *a.* [*Dives* in France.] In *geol.*, noting a division of the Jurassic system in the vicinity of Dives and elsewhere in France, in part equivalent to the Kellaways rocks or Middle Oolites of Britain.

divestitive (di-ves'ti-tiv), *a.* Having the power or property of divesting.

divide, *v. t.* **12.** In *billiards*, to divide balls (mentally) into sixteenths, eighths, quarters, halves, and three quarters of their diameters, in order to insure certain deviations. Strokes are divided into quarter-follows, half-draws, half-spread, and so on.

divide, *n.*—**Continental divide,** a water-parting between river systems that flow into different oceans.—**Great Divide,** specifically, the Rocky Mountain water-parting.

divided, *p. a.* (*d*) In *phonol.*, applied to a consonant, as *l*, formed with the mouth-passage divided in the middle by the tongue pressed against the gum or palate.—**Divided harmonically,** divided internally and externally into segments having the same ratio.—**Divided internally,** divided, as a sect AB, by a point P upon it.—**Divided self, divided will.** See ★*self.*

dividend, *n.*—**Cumulative dividend,** a dividend with regard to which it is agreed that if at any time it is not paid in full, the difference shall be added to the following payment. Thus if a cumulative dividend is 5 per cent., and only 4 per cent. is paid, the amount due at the next payment is 6 per cent.—**Preferential dividend,** a dividend on preferred stock.

A cumulative *preferential dividend* is sometimes said to be "guaranteed," and *preferential dividends* payable by all companies registered under the [British] Companies Acts, 1862 to 1900, are cumulative unless stipulated to be otherwise. *Encyc. Brit.*, XXVII. 471.

dividing-motion (di-vī'ding-mō″shon), *n.* An apparatus for dividing a straight line or circle into a given number of equal parts. It is commonly used on gear-cutters for spacing the teeth.

dividing-plate (di-vī'ding-plāt), *n.* A plate having series of holes spaced at proper inter-

vals to be used in dividing circles or distances into a given number of equal parts; an index-plate.

dividual, *a.* **2.** Divided; separate; distinct.

Me and Thee: some *dividual* Existence or Personality distinct from the Whole.
FitzGerald, Notes to Rubaiyat, st. 32.

3. Divisible; capable of being divided into parts: as, "a *dividual* essence in Truth," *Lowell*.

dividualism (di-vid'ū-al-izm), *n.* The opposite of individualism or subsistence as a distinct entity. See *individualism* and *individuality*.

We see in a general way that a condition of the presentation of visions lies in the over-sensitiveness of certain tracks or domains of brain action and the under-sensitiveness of others, certain stages in a mental process being represented very vividly in consciousness while the other stages are unfelt; also that individualism is changed to *dividualism*. *Francis Galton*, Human Faculty, p. 109.

dividuality (di-vid-ū-al'i-ti), *n.* [*dividual* + *-ity.*] The opposite of *individuality*. See the extract.

Dividuality [in dreams] replaces individuality, and one portion of the mind communicates with another portion as with a different person.
Francis Galton, Human Faculty, p. 207.

divinatorial (di-vin-a-tō'ri-al), *a.* [*divinatory* + *-al*1.] Based on conjecture; conjectural: as, *divinatorial* criticism.

diving-lamp (dī'ving-lamp), *n.* An electric lamp specially arranged for use by submarine divers.

divinify (di-vin'i-fī), *v. t.*; pret. and pp. *divinified*, ppr. *divinifying*. [*divine* + *-i-fy.*] To render divine; ascribe divine attributes or powers to; regard as divine.

Divisible offense. See ★*offense*.

division, *n.*, **5.** (*e*) In *railroads*, the longest undivided part of a line: distinguished from the smaller subdivisions called ★*sections*.

10. In *biol.*, the breaking up of an organism, either naturally or artificially, into two or more parts which restore what is lacking and become new organisms of the typical form, as contrasted with reproduction by buds, which begin as small parts of the parent organism and gradually increase in size until they attain the typical form.

For instance, the delevopment of a new individual at the side of the body of hydra is a typical example of budding, while the breaking up of lumbriculus or of a planarian into pieces that form new individuals is a typical example of *division*.
T. H. Morgan, Regeneration, p. 149.

Cassini division, in *astron.*, the principal division in Saturn's ring, discovered by Cassini in 1675.—**Chesapeake division**, in *geol.*, a division of the Miocene Tertiary developed along the Atlantic coast. **Heterotype division.** See ★*heterotype*.—**Homographic division**, in *math.*, projective division; the partition of a straight line or of two straight lines by two projective ranges or point-rows.—**Postreduction division**, a reduction division of the chromosomes in the secondary oöcyte or secondary spermatocyte, following an equation division in the primary oöcyte or primary spermatocyte.—**Prereduction division**, a reduction division of the chromosomes in the primary oöcyte or primary spermatocyte, preceding an equation division in the secondary oöcyte or secondary spermatocyte.

divisional, *a.* **3.** Fractional.

II. *n.* An aliquot part; a sub-multiple.
Divisional plane. See ★*plane*1.

division-center (di-vizh'on-sen"tėr), *n.* Same as ★*centrosome*.

division-engineer (di-vizh'on-en-ji-nēr"), *n.* The chief engineer having charge of the maintenance of way for a division of a railroad.

division-peg (di-vizh'on-peg), *n.* A hardened steel peg which is used with a division-plate. The peg is attached to an arm, the turning of which feeds the work in the machine into position for the next cut. When the arm has been turned the correct distance, the peg is pushed into a hole in the division-plate and holds the work steadily while the cut is being taken.

division-plane (di-vizh'on-plān), *n.* A joint in a rock which facilitates the separation of blocks of stone.

division-superintendent (di-vizh'on-sū-pėr-in-ten"dent), *n.* The chief officer in charge of the traffic of a division of a railroad.

divisor, *n.*—**Essential divisor of the discriminant**, a divisor unaffected by birational transformations. **Unessential divisor of a discriminant**, a perfect square which, multiplied by an essential divisor, gives the discriminant.

divisory (di-vī'zō-ri), *a.* [NL. **divisorius*, < L. *divisor*, divisor.] Relating to or concerned with the division of something and the distribution of the parts among a number: as, *divisory* actions in law; *divisory* contracts.

divorcé (dẹ-vôr-sā'), *n.* [F.] A divorced man.

divorced (di-vōrst'), *p. a.* Separated by legal decree from the bonds of matrimony; repudiated by a formal act of divorce.

divorcee (di-vôr-sē'), *n.* [*divorce* + *-ee*1, after the F. forms (which are also often used in Eng.), *divorcé*, m., *divorcée*, f.] A person who has been divorced. The term is more commonly applied to a woman.

divorcée (dẹ-vôr-sā'), *n.* [F.] A divorced woman.

divot, *n.* **2.** In *golf*, a piece of turf cut out with a club in playing a stroke.

divvy (div'i), *n.* [*divi(dend).*] A dividend; an amount to be divided or shared by the members of a party or ring. [Slang.]

divvy (div'i), *v. i.*; pret. and pp. *divvied*, ppr. *divvying*. To go shares.—**To divvy up**, to pay up the share that ought to come to one. [Slang.]

dix (dēs), *n.* [F., ten; OF. *dis*, < L. *decem*, ten: see *ten*.] The lowest trump in games such as penuchle, bezique, sixty-six, etc. It can be exchanged for the turned-up trump at any time, the holder of it scoring ten points.

Dixa (dik'sä), *n.* [NL. (Meigen, 1818), < Gr. διξός, Ionic for δισσός, double.] A genus of midges typical of the family *Dixidæ*. They are minute and inhabit damp places in forests. The larvæ are aquatic and resemble those of mosquitos. Less than ten species are known to inhabit the United States, and four are found in Great Britain.

dixeny (dik'se-ni), *n.* [Gr. δι-, two-, + ξένος, host.] The inhabiting by fungi of hosts of two different species. *De Bary*. See ★*polyxeny*, ★*monoxeny*.

dixid (dik'sid), *n.* and *a.* **I.** *n.* A member of the dipterous family *Dixidæ*.

II. *a.* Of or belonging to the family *Dixidæ*.

Dixidæ (dik'si-dē), *n. pl.* [NL., < *Dixa* + *-idæ.*] A family of midges intermediate between the *Culicidæ* and the *Tipulidæ* and consisting of the single genus *Dixa*.

dizoic (dī-zō'ik), *a.* [Gr. δι-, two- + ζῷον, animal.] Producing two young: as, a *dizoic* spore; specifically, producing two falciform bodies or sporozoites, as the spores of certain *Coccidiidea*. *Labbé*.

dizziness, *n.*—**Purkinje's dizziness**, in *psychol.*, an illusion of rotation, due to involuntary movements of the eyes. If one twirls upon one's heels until the surrounding objects seem to be moving in the opposite direction, and then stops, the surrounding objects will appear to continue their movement: this is Purkinje's dizziness. If the eyes are watched during the illusion, it will be seen that they execute slow movements in the direction of the original rotation, alternating with rapid movements in the opposed direction. *E. C. Sanford*, Exper. Psychol., p. 42.

dl. An abbreviation of *deciliter*.

D. L. An abbreviation (*a*) of *Deputy Lieutenant*; (*b*) of *Doctor of Law*, a degree equivalent to D. C. L.; (*c*) of *Doctor of Literature*, a degree equivalent to D. Lit.

D. L. D. An abbreviation of *Doctor of Letters and Didactics*, a degree conferred by some institutions.

D. Lit. or **D. Litt.** An abbreviation of *Doctor of Literature* or *Letters*.

D. L. O. An abbreviation of *Dead Letter Office*.

D. L. S. An abbreviation of *Doctor of Library Science*, a degree conferred by the University of the State of New York.

dm., dm.2**, dm.**3 Abbreviations of *decimeter*, *square decimeter*, *cubic decimeter*.

D. M. 2. In *astron.*, an abbreviation for ★*Durchmusterung* (which see). It usually refers to Argelander's Bonn Durchmusterung of the northern heavens, more properly referred to as B. D. M. or simply B. D.
3. Same as *M. D.* (which see).—**4.** An abbreviation of *Doctor of Mathematics*.

D. M. D. An abbreviation (*a*) of *Doctor of Dental Medicine*; (*b*) of *Doctor of Mathematics and Didactics*: degrees conferred by certain institutions.

D. N. P. P. An abbreviation of the Latin *Dominus noster Papa Pontifex*, 'our lord the Pope and Pontiff.'

do- or **dom-** (dō-, dom-). [*dom(inantly).*] In *petrog.*, in the quantitative system of classification (see ★*rock*1), a prefix used in forming words, denoting that one constituent or group of constituents dominates another within the ratios $< \frac{7}{1} > \frac{5}{3}$.

do1, *v. t.*—**To do the block.** See ★*block*1.

D. O. An abbreviation (*a*) of *Doctor of Oratory*; (*b*) of *Doctor of Osteopathy*.

Doassansia (dō-a-san'si-ä), *n.* [NL. (Cornu, 1883), named for Emile *Doassans*, a French botanical chemist.] A genus of smut-fungi of the order *Ustilaginales*, having the spore-masses inclosed in a layer of sterile cells and embedded in the tissue of the host, producing leaf-spots. About 16 species have been described, mostly occurring on aquatic or marsh plants. *D. Alismatis* is frequently found on the leaves of the water-plantain, *Alisma Plantago-aquatica*.

dob2 (dob), *n.* [Dial. var. of *dab*1.] A small piece of anything; a lump. [Prov. Eng.]

dobash, *n.* See *dobhash*.

dobber (dob'ėr), *n.* [*dob*2 + *-er*1.] **1.** A piece; a lump: a big lump.—**2.** A large heavy taw or marble.—**3.** The cork or float of a fishing-line. [U. S.]

He floated on the waves like a merman, or like an angler's *dobber*, until he landed safely on a rock.
Irving, Knickerbocker, ii. 5.

dobbin-cart (dob'in kärt), *n.* An Irish four-wheeled carriage used for traveling, and generally drawn by two horses. *N. E. D.*

dobby, *n.* **Center-shed dobby**, a form of dobby-loom chiefly used in weaving cotton fabrics the structure of which (as that of gauze) precludes high speed, or for which closed shedding is essential.

dobby-loom (dob'i-löm), *n.* Same as *dobby-machine*.

dobby-shedding (dob'i-shed"ing), *n.* A method of operating the harnesses of a loom for patterns beyond the range of tappets and too limited to be economically produced by a Jacquard loom.

doblon (dō-blōn'), *n.* [Sp.] A gold coin of Spain, the double escudo: same as *doubloon*.

doc (dok), *n.* A colloquial form of *doctor*, as a title of address.

doc.; pl. **docs.** Abbreviations of *document*, pl. *documents*.

docalcic (do-kal'sik), *a.* [*do(minantly)* + *calcic*.] In *petrog.*, dominantly calcic: used in the quantitative classification of igneous rocks (see ★*rock*1) to describe divisions of igneous rock-magmas characterized by a dominance of calcium oxid over contrasted constituents. In Classes I, II, III, docalcic rangs are those in which lime preponderates over potash and soda, in the salic constituents within the ratio $\frac{K_2O' + Na_2O'}{CaO'} < \frac{3}{5} > \frac{1}{7}$.
In Classes IV, V, docalcic sections of rangs are those in which lime preponderates over magnesia and ferrous iron in the femic constituents within the limits $\frac{MgO + FeO}{CaO'} < \frac{3}{5} > \frac{1}{7}$.

docetically (dō-sē'ti-kal-i), *adv.* According to the doctrines of the Docetæ (which see).

docetize (dō-sē'tīz), *v. t.*; pret. and pp. *docetized*, ppr. *docetizing*. [*Docetæ* + *-ize*.] To represent according to the doctrines of the Docetæ.

dochmiasis (dok-mi-ā'sis), *n.* [NL., < *Dochmius* + *-iasis*.] Same as ★*ancylostomiasis*.

docil, *a.* A simplified spelling of *docile*.

docimasy, *n.* **Pulmonary docimasy**, a method of determining whether or not air has entered the lungs of a dead infant, by which an indication is furnished whether the child was born alive or dead.

dock1, *n.* **Bloody dock**, *Rumex sanguineus*. Also called *red-veined dock* and *bloodwort*. See *bloodwort* (*a*).—**Blunt-leaved** or **broad-leaved dock**, the bitter dock, *Rumex obtusifolius*.—**Butterfly-dock.** Same as ★*butterdock*, 1.—**Can-dock.** See *candock*, 2, and *water-can*.—**Clustered dock**, *Rumex conglomeratus*, an Old World species naturalized in the United States from Virginia to South Carolina and in California: peculiar in having the small green flowers in whorls along the stems and branches.
Cuckold-dock, the burdock, *Arctium Lappa*. **Drop-seed dock**, *Rumex hastatulus*, a native American species ranging from New York to Florida and west to Kansas and Texas: it has winged fruit which early drops away. Also called *Engelmann's sorrel*.—**Golden dock.** (*a*) See *dock*1, 1. (*b*) *Rumex persicarioides*, an American species long confounded with the golden dock of the Old World, found on sandy shores from New Brunswick to Virginia and westward to Kansas and New Mexico, and also on the Pacific coast. **Pale dock**, the white dock, *Rumex salicifolius*; also the peach-leaved dock, *R. altissimus*, and sometimes the great water-dock, *R. Britannica*.—**Peach-leaved dock**, *Rumex altissimus*, a tall American species, sometimes 4 feet high, found along streams and in swamps from Massachusetts to Maryland and westward to Nebraska and Texas. The pale-green lanceolate leaves suggest the name, and it is also quite as appropriately called *tall dock*. **Prairie dock.** See ★*prairie-dock*. **Red-veined dock.** Same as *bloody* ★*dock*. **Sharp dock, sorrel-dock, sour-dock**, any one of several docks with more or less acid juice, as *Rumex Acetosa*, *R. Acetosella*, *R. crispus*, and *Oxyria digyna*. **Tall dock.** Same as *peach-leaved* ★*dock*.—**Water-dock.** See ★*water-dock*.

dock2, *v. t.* **5.** In *biscuit-* (*cracker-*) *making*, to prick holes in (each biscuit) before it is put in the oven, to provide for the escape of moisture.

dock3, *n.* Docks are distinguished broadly as *wet docks*, or those consisting of an inclosed water-space or basin in which ships lie to take in or discharge cargo, and which cannot be pumped dry; and *dry-docks*, in which vessels can be taken entirely clear of water. The latter are divided into *excavated* or *graving-docks*, *slip-docks*, *lifting-docks*, and *floating docks*. A *basin dock* is a wet dock whose entrance is continually open to the tide; a *closed dock*, one whose entrance is closed by a lock, caisson, or gate so as to maintain the interior water-level approximately constant. A *slip-dock* is one in which a vessel is partially hauled out on a marine railway in a slip provided with gates which are closed at low tide, excluding the water from the vessel. A *lifting-dock* is one in which a submerged platform on which the ship is landed on blocks and

is then raised vertically clear of the water with the ship by hydraulic power. An *off-shore dock* is a floating dock with a bottom and one side wall, maintained in an upright position by means of upper and lower parallel booms attached to the side wall and to strong vertical columns built on the foreshore. A *bar-dock* is a floating dock whose ends can be closed by caissons or gates after the entrance of the vessel, the interior space being then pumped out as in a graving-dock. A *balance-dock* is the ordinary type of floating dock with open ends, in which the side walls are utilized as ballast compartments to maintain the dock in level balance. A *self-docking floating dock* is one so arranged in detachable sections that all its underwater parts can be successively docked by the remaining parts for examination and repairs.

2. In *railroading*, a track at a siding or in a freight yard, having a raised platform on each side for convenience in loading at the level of the car door. [U. S.] **Bureau of yards and docks.** See ★*bureau*.—**Portable dock,** a dock, built on the principle of the caisson, which can be towed to a vessel needing repairs. **Ship-building dock,** any dry-dock or caisson within which the hull of a vessel may be built, and the use of cradle-construction and ways be avoided.

dock-cress (dok'kres), *n.* See *cress* and *Lapsana*.

docker[2] (dok'ėr), *n.* [*dock*[3] + *-er*[1].] **1.** An inhabitant of Devonport, England (formerly Plymouth Dock).—**2.** A laborer in the docks: as, a trades-union for *dockers* was formed.—**3.** A case secured by a lawyer from a prisoner after his arrest or upon arraignment. [Eng. law-slang.]

docking[2] (dok'ing), *n.* [*dock*[3], *v.*, + *-ing*[1].] The operation of placing a vessel in a dry-dock for cleansing, inspection, painting, and repairs.

docking-keel (dok'ing-kēl), *n.* In *ship-building*, one of a pair of exterior side keels secured under the bottom of a large armored warship, usually about half-way between the main keel and the turn of the bilge, to support the ship when in dry-dock. The lower surface of each of the docking-keels is parallel to that of the main keel and of about the same width, to give good bearing surface on the blocks in the bottom of the dock on which the ship is landed.

docmac (dok-mäk'), *n.* [Ar. *doqmāq*, *duqmāq*, a mallet, < *daqq*, knock, smash.] A catfish, *Bogrus docmac*, of considerable size, found in fresh waters in Egypt.

docoglossan (dok-ō-glos'an), *a.* [*Docoglossa* + *-an*.] Relating to the *Docoglossa*.

docosane (dok'ō-sān), *n.* A colorless compound, $CH_3(CH_2)_{20}CH_3$, found in paraffin from brown coal and prepared by the reduction of the chlorid $C_{22}H_{44}Cl_2$. It melts at 44.4° C. and boils at 224.5° C. under 15 millimeters pressure.

doctor, *n.* **10.** In *angling*, a name applied to several artificial flies: as, the blue *doctor*, the silver *doctor*, etc.—**11.** A boiler feed-pump such as has been preferred on the western rivers of the United States. It is a vertical steam-pump, with a fly-wheel between the steam-cylinder and water-cylinder, and is said to be especially reliable. In case of need it can be operated by turning the fly-wheel by hand.

12. The cook of a merchant vessel; also, the cook of a lumber-camp. [Slang.]—**Doctors of the church,** the designation of certain fathers of the early church, eminent for their knowledge and teaching of theology. The title is applied to four of the Greek fathers: Athanasius, Basil, Gregory, and Chrysostom; and to a number in the Latin church including Ambrose, Augustine, and Jerome. Some of the great schoolmen of the middle ages are also so designated. The title is still used in the Greek Church.

doctor-bird (dok'tor-bėrd), *n.* A local West Indian name for various humming-birds of the genera *Eulampis* and *Lampornis*: probably given on account of their dark plumage.

doctor-knife (dok'tor-nīf), *n.* The stationary blade in a roller cotton-gin. *Taggart*, Cotton Spinning, I. 32.

doctor-shears (dok'tor-shērz), *n.* In *calico-printing*, two pieces of metal that clamp, by means of pinching screws, the doctor-blade on a cylinder printing-machine.

doctrin, *n.* A simplified spelling of *doctrine*.

doctrinairism (dok-tri-nār'izm), *n.* Same as *doctrinarianism*.

doctrinism (dok'tri-nizm), *n.* [*doctrine* + *-ism*.] Adherence to doctrine or doctrinal preaching.

document, *n.*—**Document of title,** in *commercial law*, a bill of lading, or other paper which confers upon the holder possession or right of possession of the goods therein described.—**Judicial documents,** in *law*, the papers required to be filed which make up the record of an action or special proceeding. They include the writs, pleadings, intermediate orders, and papers upon which they are founded, affecting the proceedings, documentary evidence, inquisitions, verdicts, judgment, and decrees.

documentarily (dok-ū-men'tā-ri-li), *adv.* As a document.

documentary, *a.* **2.** Educational; instructional.

We now approach the time when for a century and a half French held a recognized position [in England] as the language of education, of society, of business, and of administration. Long before 1250 we get traces of the *documentary* use of French, and long after 1350 it was continued. Trevisa says it was a new thing in 1349 for children to construe into English in the grammar schools, where they had been used to do their construing into French.

Earle, Philol. Eng. Tongue, ¶ 52.

Documentary theory, same as *documentary hypothesis*.

documentation, *n.* **2.** The preparation of records or documents for use or for filing.—**3.** Formal or authoritative instruction.

Remonstrances arose against their perverse and narrow-minded devotion to "truth," or rather to minute exactitude, their pedantry and affectation of *documentation*; sometimes derived from some old colourists who had not renounced their former ideal, sometimes from younger men impelled unconsciously by literature, which had as usual preceded art in the revolt.

Encyc. Brit., XXXII. 443.

dodder[1], *n.* The various dodders are named, for the most part, from their principal host or from some leading character, and the specific names are usually translations of vernacular ones or vice versa. See the following phrases. —**American dodder.** See *glomerate* ★*dodder*. **Beaked dodder,** *Cuscuta rostrata*, a species of the Alleghany region from Maryland southward, growing on various herbs and shrubs.—**Button-bush dodder,** *C. Cephalanthi*, which grows on the button-bush, but also on other plants, and has a very wide range in North America.—**Clover-dodder,** the thyme-dodder, *C. Epithymum*, injurious to clover. See *dodder*[1].—**Dodder-cake plant,** the false flax or gold-of-pleasure, yielding dodder-seed, from which the oil is expressed and made into cakes.—**Field-dodder,** *C. arvensis*, one of the most common species, found in both North and South America.—**Flax-dodder,** *C. Epilinum*, an Old World species introduced in the United States, injurious to flax.—**Glomerate dodder,** *C. paradoxa*, chiefly confined to the Mississippi valley, peculiar from its dense clusters of flowers. It grows mainly on composite plants. Sometimes called *American dodder*.—**Gronovius's dodder,** *C. Gronovii*, a large, showy American species, very common in the Atlantic States, and ranging from Nova Scotia to Florida and Texas. It grows on many herbs and shrubs.—**Hazel-dodder,** *C. Coryli*, growing on the hazel and other shrubs, and ranging from Connecticut to Virginia and west to Nebraska and Arkansas.—**Lesser dodder,** the thyme-dodder, *C. Epithymum*.—**Lucerne-dodder,** the thyme- or clover-dodder, which is also injurious to lucerne.—**Smartweed-dodder,** *C. Polygonorum*, which grows chiefly on species of *Polygonum*, a large-fruited American species of the Mississippi valley, ranging eastward to Pennsylvania and Delaware. It is very common in the Potomac valley where it forms large yellow mats on the water-willow and other plants.—**Thyme-dodder,** *C. Epithymum*, growing on thyme in Europe, but most injurious to clover. See *clover*-★*dodder* and *dodder*[1] (cut).

dodder-laurel (dod'ėr-lâ″rel), *n.* A dodder-like plant, *Cassytha filiformis*, of the laurel family, found in the warm maritime regions of the world. Compare *scrub vine*, under *vine*.

doddy[1], *n.* **2.** Specifically, a local name for the Aberdeen-Angus polled cattle.

dodecafid (dō-dek'a-fid), *a.* [Gr. δώδεκα, twelve, + L. *-fidus*, < *findere*, divide.] Divided into twelve parts.

dodecahedron, *n.*—**Deltoid dodecahedron,** a crystalline form of the tetrahedral group of the isometric system embraced by twelve similar quadrilateral faces; the analogous form of the holosymmetric group is the trigonal trisoctahedron. Also called a *tetragonal trisoctahedron*.

dodecameral (dō-de-kam'ē-ral), *a.* [Gr. δώδεκα, twelve, + μέρος, division, + *-al*[1].] Divided into twelve parts or series of twelves, as in the septal divisions of the *Hexacoralla*.

dodecanaphthene (dō″dek-a-naf'thēn), *n.* [Gr. δώδεκα, twelve, + E. *naphthene*.] A colorless liquid, $C_{12}H_{24}$, found in Baku petroleum. It boils at 197° C.

dodecane (dō-dek'ān), *n.* [Gr. δώδεκα, twelve, + *-ane*.] A colorless hydrocarbon, $CH_3(CH_2)_{10}CH_3$, prepared by the action of hydriodic acid and phosphorus on lauric acid. It melts at −12° C. and boils at 214.5° C.

dodecant (dō'de-kant), *n.* [Gr. δώδεκα, twelve, + *-ant*[1].] One of the twelve divisions of a hexagonal crystal formed by the lateral axial plane with the three planes which pass through the vertical and each of the lateral axes.

dodecapartite (dō″dek-a-pärt'īt), *a.* [Gr. δώδεκα, twelve, + L. *partitus*, parted.] Made up of twelve segments; dodecafid.

dodecapharmacum (dō″dek-a-fär'ma-kum), *n.* [NL., < Gr. δώδεκα, twelve, + φαρμακον, drug.] Same as *apostles' ointment* (which see, under *apostle*).

dodecarch (dō'de-kärk), *n.* [Gr. δωδεκάρχης, < δώδεκα, twelve, + ἄρχειν, rule.] One of a ruling body of twelve.

Psammetichus I., one of the *dodekarchs*, and the legitimate heir of the crown. *Schaff*, Relig. Encyc., I. 707.

dodecatoic (dō″dek-a-tō'ik), *a.* [Gr. δωδέκατος, twelfth, + *-ic*.] Noting the isomeric fatty acids, $C_{12}H_{24}O_2$. The most important ones are the lauric and hordeic acids.

dodecylene (dō-des'i-lēn), *n.* [Gr. δώδεκα, twelve, + *-yl* + *-ene*.] A general name for isomeric, olefinic hydrocarbons. The normal compound is a colorless liquid, $CH_3(CH_2)_9CH{=}CH_2$, prepared by the distillation of palmitic acid under 600 millimeters pressure. It melts at −[illegible] C. and boils at 196° C. under 15 millimeters pressure.

dodge, *v. t.* **3.** In *change-ringing*, to change the place or order of (a bell) in the series used.

dodge, *n.* **2.** Of a bell in *change-ringing*, a change in its place or order in the series used.

Doegling oil or **train-oil.** See ★*oil*.

doeskin, *n.* **3.** An enameled cloth finished on one side to resemble leather in color.

dof, *v.* A simplified spelling of *doff*.

dofelic (dō-fel'ik), *a.* [*do*(*minantly*) + *felic* (< *fel*(*dspar*) + *-ic*).] In *petrog.*, dominantly felic: used to describe divisions of igneous rock magmas characterized by a dominance of normative feldspar over normative quartz or lenads (= nephelite, leucite, sodalite) within the limits $\frac{Q \text{ or } L}{F} < \frac{3}{5} > \frac{1}{5}$. See ★*rock*.

dofemane (dō-fem'ān), *n.* [*do*(*minantly*) + *fe*(*rro*)*m*(*agnesian*) + *-ane*.] In *petrog.*, the name of the fourth class of igneous rocks in the quantitative classification (see ★*rock*[1]); a rock in which the femic (ferromagnesian) normative minerals preponderate over the salic minerals, that is, normative quartz, feldspars, feldspathoids (lenads), and corundum, within the limits $\frac{Sal}{Fem} < \frac{3}{5} > \frac{1}{5}$. The salic and femic minerals used in determining the class are calculated from a chemical analysis of a rock. The dofemanes include rocks poor in feldspar or free from it, such as many peridotites, pyroxenites, some gabbros, and chemically similar lavas.

dofemic (dō-fem'ik), *a.* [*do*(*minantly*) + *femic* (< *fe*(*rro*)*m*(*agnesian*) + *-ic*).] In *petrog.*, dominantly femic. Used to describe divisions of igneous rocks, in the quantitative system (see ★*rock*[1]), characterized by a dominance of ferromagnesian normative minerals over salic minerals, that is, normative quartz, feldspars, feldspathoids (lenads), and corundum, within the limits $\frac{Sal}{Fem} < \frac{3}{5} > \frac{1}{5}$.

doferrous (dō-fer'us), *a.* [*do*(*minantly*) + *ferrous*.] In *petrog.*, in the quantitative system (see ★*rock*[1]), noting divisions of igneous rocks characterized by a dominance of ferrous oxid over magnesia, within the limits $\frac{MgO}{FeO} < \frac{3}{5} > \frac{1}{5}$. These divisions are subrangs in classes IV, V.

doffer-brush (dof'ėr-brush), *n.* An auxiliary device, on a cotton-combing machine, for keeping the comb-needles free from dirt.

doffer-comb (dof'ėr-kōm), *n.* A thin plate of steel, serrated on one of its edges, for combing, by an oscillating movement, the fibrous fleece, as cotton or wool, from the doffer-cylinder of a carding-machine.

doffer-cylinder (dof'ėr-sil″in-dėr), *n.* Same as *doffing-cylinder*.

doffer-roll (dof'ėr-rōl), *n.* The small roll in advance of the principal one in a calendering- or ironing-machine, or in a mangle, by which the fabric is stripped off and delivered to the receiving-table, instead of being allowed to follow around the pressing-roll.

doffing-motion (dof'ing-mō shon), *n.* Any mechanical arrangement for removing a product from a machine, as a hank from a reel in a textile-mill.

dog, *n.*, **9.** (*m*) A short, heavy piece of steel, bent and pointed at one end and with an eye or ring at the other. It is used for many purposes in logging, and is sometimes so shaped that a blow directly against the line of draft will loosen it. Also called *tail-hook*. (*n*) In *agri.*, an implement for dragging brush, roots, and poles out of the ground; a brush-puller. [Eng.]—**Big dog,** in *poker*, a hand which is ace high and nine low, with some one card of the sequence missing, as A K Q 10 9. When played, it beats a straight or little dog and loses to a flush.—**Borzor dog,** the Russian wolfhound, practically a large, long-haired greyhound, somewhat like the staghound, but with a soft, silky coat.—**Cape hunting-dog.** See cut and description under *Lycaon*.—**Coon-dog.** See ★*coon-dog*.—**Dog's letter.** See *dog-letter* and *R*, 1.—**Heel dog,** a dog that follows at heel.—**Hunting dog.** (*c*) *pl.* In *astron.*, a northern constellation closely following *Ursa Major*, *Canes Venatici*.

Dog. [illegible]

Limit dog, one that may be exhibited, or may compete for prizes, in a class limited to dogs that have certain required qualifications.—**Little dog,** in *poker*, a hand which is deuce low and seven high, with some one card of the sequence missing, as 2 4 5 6 7. When played, it beats a straight, but loses to a big dog or a flush.—**St. Bernard dog,** a variety of the dog, of large size and powerful build, named from the hospice of St. Bernard in the Alps. The breed was formerly used for searching out and aiding travelers. The original race died of distemper about 1814. There

are two varieties, the long- and the short-haired, but both have heavy, square heads. The color is tawny, orange and white, or grizzled.— **Straight-tailed dog**, a form of dog or driver for cylindrical stock to be turned in the metal-working lathe, in which the projection to engage the face-plate is straight, and intended to be acted on by a pin or bolt projecting from the face-plate. The other and more usual form, in small sizes, has the projecting arm L-shaped, the end of the L engaging in a slot or against a shorter stud on the driving face-plate.

dogberry, *n.* **3.** *Ribes Cynosbati.* See *wild ★gooseberry*, 1.

dog-boat (dog'bōt), *n.* See *★rigging-sled.*

dog-bolt[2] (dog'bōlt), *n.* [*dog, n.*, 9 + *bolt*[1].] The bolt which is used in connection with a dog, for holding a bonnet or a manhole or hand-hole cover in place.

dog-bur (dog'bėr), *n.* The wild comfrey, *Cynoglossum Virginicum*; less properly, the hound's-tongue or dog's-tongue, *C. officinale.*

dog-buttons (dog'but-nz), *n. pl.* The seeds of the *nux vomica.* Also called *quaker buttons.*

Dog-cart phaëton. See *★phaëton.*

dog-chuck (dog'chuk), *n.* A device which is clamped to a piece of work for the purpose of driving it while it is being machined. A tail, which is sometimes straight and sometimes bent at right angles, is provided on this device for catching in a face-plate or against a stop.

dog-crab (dog' krab), *n.* A swift-running crab, *Cancer caninus*, said by Rumphius to burrow under houses and to enter them.

dog-daisy, *n.* **2.** The mayweed or dog's-fennel, *Anthemis Cotula.*—**3.** The oxeye daisy.

dog-dance (dog'dans), *n.* A ceremony of some North American Indian tribes; the ritual of one of the age-fraternities, embracing warriors of approximately the same age, who form a semi-religious society.

dog-dandelion (dog'dan"dē-lī-on), *n.* The fall dandelion or hawk-bit, *Leontodon autumnale.*

Dog-day locust. See *★locust*[1].

dog-fall (dog'fâl), *n.* In *wrestling*, a fall in which both wrestlers strike the ground together.

dogfish, *n.*, **1.** (*i*) In Australasia, the name of various fishes of distinct families, chiefly sharks. In Australia it is used for *Scylliorhinus lima*, of the family *Scylliidæ.* In New South Wales it is *Scylliorhinus maculatus* Blainv. The *spine dogfish* of New Zealand is *Squalus maculatus*, of the family *Squalidæ*; the *spotted dogfish* of New South Wales, *Scylliorhinus anale*; the *dusky dogfish* of New South Wales, *Chiloscyllium modestum* Günther; and there are others in Tasmania and Australia. *Austral English.*— **California dogfish**, a species of dogfish found on the coast of California and Alaska, *Squalus sucklii.* **Dogfish shark**, any shark of the family *Squalidæ.*— **Electric dogfish**, any fish of the genus *Astroscopus*, inhabiting both shores of tropical America. These fishes have the power of giving an electric shock from an electric organ situated on top of the head.

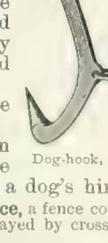
dog-flea (dog'flē), *n.* See *Pulex.*

dogger[3] (dog'ėr), *n.* [*dog* + *-er*[1].] In *lumbering*, one who attaches the dogs or hooks to a log before it is steam-skidded.

dog-grease (dog'grēs), *n.* The fat of the dog, once considerably used as a household remedy, but now replaced by petrolatum and related products: also used in glove-manufacturing to some extent.

dog-hobble (dog'hob"l), *n.* [*dog* + *hobble, n.*, 3.] One of the calfkills, *Leucothoë Catesbæi*: so called because its dense growth arrests dogs in the hunt. Also called *dog-laurel.*

dog-hook, *n.* **3.** In *lumbering*, a hook on the end of a haul-up chain of a size to permit it to be hooked into a link of the chain when the latter is looped around an object.



Dog-hook, 3.

dog-iron (dog'ī"ėrn), *n.* A short bar of iron or steel, bent near its ends at right angles into the shape of a square Z or a capital E, and pointed at the ends so that it may be driven into timber or logs: used as a cramp.

dog-laurel (dog'lâ"rel), *n.* Same as *★dog-hobble.*

dog-leg, (dog'leg) *n.* A name given to a number of things which have a bent form resembling that of a dog's hind leg. See *dog-legged.*— **Dog-leg fence**, a fence composed of rough timber piled up and stayed by crossed stakes called *dog-legs.* [Australia.]

dog-lily (dog'lil"i), *n.* The common pond-lily or spatter-dock, *Nymphæa advena.*

dog-line (dog'līn), *n.* The trace by which the harness of a sledge-dog is connected with the sledge.

dogmaticism (dog-mat'i-sizm), *n.* [*dogmatic* + *-ism.*] The quality of being dogmatic.

dog-mint (dog'mint), *n.* The basil-weed or horse-thyme, *Clinopodium vulgare.*

dog-nail (dog'nāl), *n.* A railroad-spike, having a spreading or wide head. [Eng.]

dog-nap (dog'nap), *n.* A short nap while in a sitting posture. *W. Phillips.*

dog-nettle (dog'net"l), *n.* The dead-nettle, *Lamium purpureum*; also, the hemp-nettle, *Galeopsis Tetrahit.*

dog-pole (dog'pōl), *n.* One of the poles of a dog-travail. See *travail*[2].

dogs-and-cats (dogz'and-katz'), *n.* The field-clover, *Trifolium arvense.*

dog's-bane, *n.*— **Bitter dog's-bane.** Same as *dog's-bane*, 1. Also called *bitter-root.*— **Clasping-leaved dog's-bane**, *Apocynum hypericifolium*, the upper leaves of which are clasping. Its range is well northward from Ontario to British Columbia, but it is found in Ohio, Illinois, and New Mexico.— **Climbing dog's-bane.** Same as *Virginia silk* (which see, under *silk*).— **Dog's-bane family**, the plant family *Apocynaceæ.*— **Spreading dog's-bane.** Same as *dog's-bane*, 1.

dog's-dinner (dogz'din"ėr), *n.* Same as *poverty-plant.*

dog's-fennel, *n.* **2.** *Eupatorium capillifolium*, an anomalous species having the leaves pinnatifid with filiform segments: found in fields from Virginia to Florida and in the West Indies.— **False dog's-fennel**, the fetid marigold (which see, under *marigold*).— **Yellow dog's-fennel**, *Helenium tenuifolium* of the southern United States. See *Helenium* and *sneezeweed.*

dog's-finger (dogz'fing"gėr), *n.* The foxglove, *Digitalis purpurea.*

dogsfoot-weed (dogz'fůt-wēd), *n.* A burweed, *Urena sinuata*, widely distributed in the tropics, having a tough fibrous bark. The leaves are more or less like a dog's foot in shape. See *Urena.*

dog's-head (dogz'hed), *n.* An American pierid butterfly, *Zerene cæsonia*, occurring abundantly in the southern United States. The wings are lemon-yellow bordered with black. The outlines of the yellow of the fore wings suggests the head of a dog. The larval food-plant is clover.

dog-sledge (dog'slej), *n.* A sledge designed to be drawn by dogs. Such sledges are used by the Eskimos and in northern Asia.

dog's-mouth (dogz'mouth), *n.* The great snapdragon, *Antirrhinum majus.*

dog-snapper (dog'snap"ėr), *n.* A fish, *Lutjanus jocu*, known from the Florida Keys to Brazil. See *snapper.*

dog's-rib (dogz'rib), *n.* The rib-grass or English plantain, *Plantago lanceolata.*

dog's-thistle (dogz'this"l), *n.* The Canada thistle. See *thistle.*

dog's-tongue, *n.* **2.** Same as *deer's-tongue.* See *Trilisa.*

dog-stopper (dog'stop"ėr), *n.* *Naut.*, a stopper or heavy rope put on to relieve the regular stopper when at anchor in a heavy sea, or to bitt the cable or fleet the messenger.

dog-strop (dog' strop), *n.* A strop of rope passed around a yard for the purpose of hooking a block into it for lifting a weight.

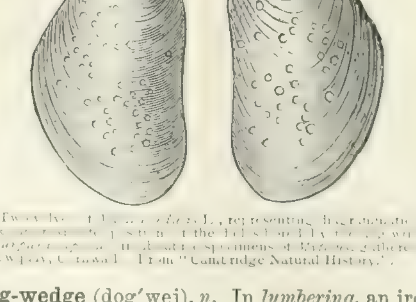
dog-throw (dog'thrō), *n.* The worst possible throw in a dice-game, such as hazard or craps.

dog-tie (dog'tī), *n.* A metal cramp or short anchor, used in stonework.

dog-toes (dog'tōz), *n.* The plantain-leaved or mouse-ear everlasting, *Antennaria plantaginifolia.* Also called *pussy-toes.*

dog-tooth (dog'töth), *v. t.* To ornament (an arch or other part of a building) by applying dog-tooth molding. See *dog-tooth, a.* and *n.*

dog-warp (dog'wârp), *n.* In *lumbering*, a rope with a strong hook at the end, which is used in breaking dangerous jams on falls and rapids, and in moving logs from other difficult positions.



[illegible] From "Cambridge Natural History."

dog-wedge (dog'wej), *n.* In *lumbering*, an iron wedge with a ring in the butt. It is driven into the end of a log, and a chain is hitched in the ring for skidding the log by horse-power. It is also used in gathering up logs on a drive. A rope is run through the rings of several logs, and they are dragged through marshes or partly submerged meadows to the channel.

dog-winkle (dog'wing"kl), *n.* A marine gastropod, *Purpura lapillus*, noted for its destruction of mussels by boring through the shell and devouring the mollusk, and for yielding the dye known as *Tyrian purple.*

dogwood, *n.*, **3.**— Also, in Australia, the sugar-tree, *Myoporum platycarpum*, a tall shrub or small tree yielding a beautifully mottled and grained wood, suitable for veneering and cabinet-work, and possessing a pleasant perfume when freshly worked. It also yields a very sweet exudation or manna, of a whitish or pinkish color, eagerly sought after and eaten by the aborigines, and a a resin used by them as a substitute for pitch and wax. — **Alder-dogwood**, the alder-buckthorn, *Rhamnus Frangula.* — **Alternate-leaved dogwood.** Same as *blue ★dogwood.*— **American dogwood**, the flowering dogwood, *Cornus florida.*— **Bastard dogwood.** (*a*) *Atelea Cubensis*, a small leguminous tree of Cuba. (*b*) *Pomaderris apetala*, a small rhamnaceous tree of Tasmania, yielding a beautiful satiny wood suitable for carving and turning. See *Pomaderris.*— **Black dogwood.** See *dogwood*, 3.— **Blue dogwood**, *Cornus alternifolia*, a small tree of eastern North America, sometimes 30 feet high and 8 inches in diameter, with cymes of cream-colored flowers and dark blue-black subglobose fruit: found from Nova Scotia to Georgia and Alabama, and westward in the northern range to Minnesota. The wood is similar to that of the flowering dogwood. Also called *alternate-leaved* and *purple dogwood.*— **California** or **Californian dogwood**, *Cornus Nuttallii*, a tree of the Pacific slope, 40–60 (or exceptionally 100) feet high and

California or Californian Dogwood (*Cornus Nuttallii*). (From Sargent's "Manual of the Trees of North America.")

1 to 2 feet in diameter. It is of the type of the flowering dogwood and is often so called. The involucral bracts are sometimes 3 inches long, narrowed at the base, and white or tinged with pink. The wood is very hard, strong, and fine-grained. It ranges from California to Vancouver Island, and east to the Sierra Nevada.— **Dwarf dogwood**, the bunch-berry or dwarf cornel. See *bunch-berry*, 1, *cornel*, and *Cornus.*— **False dogwood.** Same as striped maple (which see, under *maple*1).— **Florida dogwood**, the flowering dogwood, *Cornus florida.*— **Flowering dogwood.** See *Cornus* and *California ★dogwood.*— **Green-osier dogwood.** Same as *round-leaved ★dogwood.*— **Jamaica dogwood**, *Ichthyomethia Piscipula.* See *Piscidia* and *fish-poison.*— **Male dogwood**, the cornelian cherry, *Cornus mas.* See *cornel* and under *cherry.*— **Pacific dogwood.** Same as *California ★dogwood.*— **Poison-dogwood**, the poison-sumac, *Rhus Vernix.*— **Pond-dogwood**, the button-bush, *Cephalanthus occidentalis*, the leaves of which resemble those of the dogwood, and which grows around ponds and swamps.— **Purple dogwood.** Same as *blue ★dogwood.*— **Red-osier dogwood.** See *red osier*, under *osier.*— **Rough-leaved dogwood**, *Cornus asperifolia*, of eastern North America, the twigs and leaves of which are rough-pubescent.— **Round-leaved dogwood**, *Cornus circinata*, the leaves of which are orbicular. Its range is well north from Nova Scotia to Manitoba, not extending farther south than Virginia and Missouri.— **Striped dogwood.** Same as *striped maple* (which see, under *maple*1).— **Swamp-dogwood.** (*a*) The silky cornel, *Cornus Amomum.* (*b*) The poison sumac, *Rhus Vernix.* (*c*) The hop-tree, *Ptelea trifoliata.*— **Virginia dogwood**, the flowering dogwood, *Cornus florida.*— **Western dogwood.** Same as *California ★dogwood.*— **White dogwood.** (*a*) The guelder-rose, *Viburnum Opulus.* (*b*) Same as *Jamaica ★dogwood.*

dog-wrench (dog'rench), *n.* A spanner having a handle so that it can be turned like a crank.

dohemic (dō-hem'ik), *a.* [*do*(*minantly*) + *hemic* (< *he*(*matite*) + *m*(*agnetite*) + *-ic*).] In *petrog.*, dominantly hemic. Used in the quantitative classification (see *★rock*1) to describe divisions of igneous rocks characterized by having hemic minerals (normative magnetite, hematite) dominant over tilic minerals (normative titanite, ilmenite, perofskite), within the limits $\frac{H}{T} < \frac{7}{1} > \frac{5}{3}$.

dolang (dō'läng), *n.* [Tagalog *dolang*, a table, = Bisaya *dolang*, a tray, pan, trough.] In the Philippine Islands, a low table, used to eat from.

dolcan, *n.* **2.** In *organ-building*, a very soft stop of the flute class, having pipes wider at the top than at the bottom. Also *dulcan.*

dolcian (dol'si-an), *n.* [See *dolciano.*] In *organ-building*, a reed-stop. Also *dulcian.*

Dolcinist (dol-sē'nist), *n.* In *eccles. hist.*, an adherent of the party of Dolcino, a leader of the sect called the *Apostolic Brethren.*

dolcissimo (dōl-chēs'si-mō), *n.* [It., superl. of *dolce*, < L. *dulcis*, sweet.] In *organ-building*, a very soft stop of the flute or string class.

dole[6] (dōl), *v. t.* [F. *doler*, pare, OF. *doler*, hew, plane, < L. *dolare*, hew, plane.] To pare and thin (leather or skins). *N. E. D.*

dolenic (dō-len′ik), *a.* [*do*(*minantly*) + *lenic* (< *le*(*ucite*) + *n*(*ephelite*) + *-ic*).] In *petrog.*, dominantly lenic. Used in the quantitative classification (see ★*rock*1), to describe divisions of igneous rocks having the lenads (normative leucite, nephelite, and the sodalites) dominant over normative feldspar, within the limits $\frac{L}{F} < \frac{1}{3} > \frac{1}{5}$.

dolente (dō-len′te), *a.* [It., < L. *dolens* (*dolent-*): see *dolent*.] In *music*, sad, plaintive.

dolerine, dolerin (dō′le-rin), *n.* [Gr. δολερός, deceptive (< δόλος, deceit), + *-ine*2.] A name given by Jurine to a talc-schist, found in the Alps, containing feldspar and chlorite as essential constituents.

dolerite, *n.* **Concretionary dolerite.** Same as *pillow* ★*basalt*.

dolfin, *n.* A simplified spelling of *dolphin*.

dolichellipsoid (dol″ik-e-lip′soid), *n.* [Gr. δολιχός, long, + E. *ellipsoid*.] In *anthrop.*, an elongated cranium of ellipsoid form. *G. Sergi* (trans.), Var. of the Human Species, p. 49.

dolichocephal (dol″i-kō-sef′al), *n.* A dolichocephalous person.

dolichocercic (dol″i-kō-sėr′sik), *a.* [Gr. δολιχός, long, + κέρκις, radius of the arm.] Having the forearm disproportionately long in relation to the arm. Also written *dolichokerkic*.

dolichocerous (dol-i-kos′e-rus), *a.* [Gr. δολιχός, long, + κέρας, horn.] 1. Having long 'horns' or antennæ.—2. Of or belonging to the *Dolichocera*, a subtribe of *Muscides* in Latreille's classification. *Syd. Soc. Lex.*

dolichocnemic (dol″i-kok-nē′mik), *a.* [Gr. δολιχός, long, + κνήμη, the leg, tibia.] Having long legs. *Philos. Trans. Roy. Soc.* (London), 1897, ser. B, p. 173.

dolichofacial (dol″i-kō-fā′shial), *a.* [Gr. δολιχός, long, + L. *facies*, face, + *-al*1.] Having a long face: same as *leptoprosopic*. *Jour. Anthrop. Inst.*, XVIII. 23.

dolichohieric (dol″i-kō-hī-er′ik), *a.* [Gr. δολιχός, long, + ἱερόν, sacrum.] Characterized by a disproportionately long sacrum.

dolichokerkic, *a.* Same as ★*dolichocercic*.

dolicholekanic (dol″i-kō-le-kan′ik), *a.* [Gr. δολιχός, long, + λεκάνη, dish (pelvis), + *-ic*.] Same as ★*dolichopelvic*. *Turner*.

dolichopellic (dol″i-kō-pel′ik), *a.* [Gr. δολιχός, long, + πέλλα, a basin (taken, like L. *pelvis*, a basin, in a modern sense 'pelvis').] Same as ★*dolichopelvic*.

dolichopelvic (dol″i-kō-pel′vik), *a.* [Gr. δολιχός, long, + L. *pelvis*, basin (pelvis), + *-ic*.] Characterized by a pelvis which has a disproportionately long anteroposterior diameter.

dolichopodous (dol-i-kop′ō-dus), *a.* [Gr. δολιχόπους, < δολιχός, long, + πούς (ποδ-), foot.] Having disproportionately long feet.

dolichoprosopous (dol″i-kō-prō-sō′pus), *a.* [Gr. δολιχός, long + πρόσωπον, face.] Same as ★*dolichofacial*.

Dolichosauria, *n. pl.* 2. A group of *Pythonomorpha*, or mosasauroid reptiles, containing those with the rami of the jaw united by sutural symphysis. Variously considered as a superfamily, suborder, or order. Also *Dolichosauri*.

dolichosaurian (dol″i-kō-sâ′ri-an), *a.* and *n.* I. *a.* Related to or having the characters of the *Dolichosauria*.

II. *n.* One of the *Dolichosauria*.

Dolichosoma (dol″i-kō-sō′mä), *n.* [NL., < Gr. δολιχός, long, + σῶμα, body.] A genus of stegocephalous *Amphibia* from the Carboniferous and Permian formations, having a relatively small triangular skull with tapering snout and over 150 vertebræ.

dolichotmema (dol-i-kot-mē′mä), *n.*; pl. *dolichotmemata* (-ma-tä). [NL., < Gr. δολιχός, long, + τμῆμα, section.] In *bryol.*, a filiform cell which ruptures and sets free the gemma of a moss. *Correns*.

dolicho-uranic (dol″i-kō-ū-ran′ik), *a.* Same as ★*dolichuranic*. *F. Russell*, in Amer. Anthropologist, Jan.-March, 1901, p. 42.

dolichuranic (dol″i-kū-ran′ik), *a.* [Gr. δολιχός, long, + οὐρανός, palate.] Having a long palate; that is, in *craniom.*, having a palatomaxillary index less than 110. *Turner*.

dolina (dō-lē′nä), *n.* [Russ. *dolina*, dim. of *dolŭ*, a dale, valley.] A vertical cavity, usually leading into a cave, dissolved out of some soluble rock, such as limestone, by descending waters. *Geikie*, Text-book of Geol., p. 477.

doll[2], *n.* 2. A simple contrivance on a Jacquard loom which indicates to the weaver that something is wrong with the action of the pattern-card cylinder. Also called *detector* and *blackhead-board*.

dollar, *n.* **Bell dollar.** See ★*bell*1. **British dollar,** a silver dollar struck at the branch of the British Mint

Obverse. Reverse.
British Dollar
Two thirds size of original.

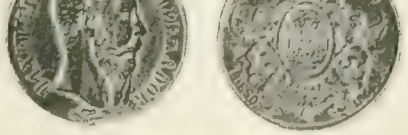
established at Hongkong in 1866. It was current for a few years at the same value as the Mexican dollar which it was intended to supersede. **Cannon dollar,** a Mexican or other pillar dollar. **Carolus dollar,** the old pillar dollar of Spain. This dollar remains the standard

Obverse. Reverse.
Carolus Dollar
Two thirds size of original.

coin of the Malay states.—**Conant dollar,** the new silver dollar struck for the Philippine Islands in 1904: so called from Charles A. Conant, financial adviser of the Philippine Commission.—**Dog dollar,** an English name for the lion dollar of Holland (see *dollar*), the chief metallic currency of Maryland in 1701. **Dollar of Scotland,** a silver coin of Charles II., struck in 1676.—**Globe dollar,** the Spanish-American silver piece of eight, with the device of two globes resting on the waves

Obverse. Reverse.
Globe Dollar
Two thirds size of original.

between the pillars; it first appeared in 1728.—**Holey dollar,** a Spanish silver dollar from which a small circular piece, called a *dump*, had been struck. It was circulated by order of the government of New South Wales in 1813, the object being to keep the silver coins in the colony. It was also current in Tasmania. [Australia.] **Independent dollar,** a silver dollar or peso of Chile, coined in 1817.—**Maximilian dollar,** the Mexican dollar or peso



Obverse. Reverse.
Maximilian Dollar.
Two thirds size of original.

of the emperor Maximilian (1864–67).—**Mexican dollar,** the silver dollar or peso coined in Mexico, extensively

Obverse. Reverse.
Mexican Dollar.
Two thirds size of original.

used as a circulating medium in the Far East, and having a present weight of about 417.5 grains, or 377.25 grains of fine silver.—**Morelos dollar,** a silver dollar or peso coined in Mexico in 1812–13 by the republican general Morelos.—**Pillar dollar.** See *pillar*.—**Republican dollar,** the dollar struck in Mexico without the king's head, after 1810. **Rigsbank dollar,** a silver coin issued by the National Bank of Denmark in 1813, with a nominal value of about 48 cents; also, a silver coin issued by the same bank in 1841, weighing 232.936 grains, 875 fine.—**Ring dollar,** a silver dollar from which a planchet was cut in order to keep the piece in local circulation, as in St. Vincent and the Leeward Islands. See *holey* ★*dollar*.—**Sand dollar,** a Mexican dollar molded in sand from a Spanish dollar, 1808–11.—**Scale dollar,** the Mexican silver dollar with the device of a pair of scales, first struck in 1868–69.—**Sicilian dollar,** a Sicilian silver coin, the *oncia d'argento*, which circ into Malta subsequent to the time of the British protectorate in 1797, and had a real value of about 4 shillings sterling. **Sun dollar,** the Mexican silver dollar or peso coined at Guanajuato, which is preferred by the Chinese of the northern ports of China. Also known as the *Shanghai dollar*.

dollar-fish, *n.* 3. A flat, disk-shaped echinoderm, *Echinarachnius parma*, found along the Atlantic coast. Also known as *cake-urchin* and *sand-dollar*.—4. The John dory, *Zeus australis*: so called from the mark on its side. The fishermen of Roman Catholic countries hold this fish in special respect, as they recognize in a black round spot on its side the mark left by the thumb of St. Peter, when he took the piece of money from its mouth. *Gunther*, Study of Fishes, p. 451.

dollar-leaf (dol′är-lēf), *n.* The round-leaved wintergreen, *Pyrola rotundifolia*: so called from the shape and size of the leaf.

dollfish (dol′fish), *n.* A species of butterfly-fishes, *Chætodon humeralis*. [Panama region.]

dolly[2], *n.*—**Dolly catch.** See ★*catch*1.

dolly[3], *n.* 5. A machine for washing pieces of cloth. The pieces are sewn together into an endless band, which is then passed through a detergent liquor and afterward wrung between two heavy rollers.

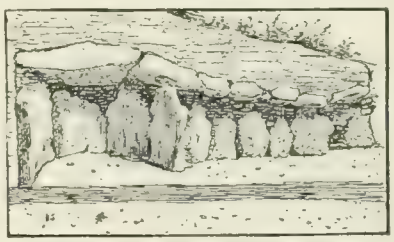
dolly-car (dol′i-kär), *n.* A small car attached to a cable, which is used for drawing cars up an incline. The dolly-car is placed behind the cars to be drawn up, and, being attached to the cable, pushes the cars up the incline.

dolly-pedal (dol′i-ped″al), *n.* A foot-treadle to hold down the upper or forming die of the forming-tool used in welding up links of hand-made wrought-iron chain.

dolly-tub (dol′i-tub), *n.* 2. A tub in which a dolly is used. See *dolly*3, 4.

Dolly Varden. 3. A large hat with a brim overloaded with flowers, worn at one time by women.

dolmen-tumulus (dol′men-tū″mū-lus), *n.* A dolmen, or cell composed of large stones, covered by a mound of earth. Probably many dolmens



Dolmen-tumulus of Kercado, Morbihan, France.

were originally so covered, but gradually were denuded by tillage of the surface soil and by erosion.

dolomedine (dol-ō-mē′din), *a.* Of or belonging to the araneid genus *Dolomedes*.

dolomite, *n.*—**Bertie dolomite** [*Bertie* township in Ontario], a stage of the New York series of formations represented by magnesian limestones, constituting a final phase in the Silurian of the Appalachian region. The formation is characterized by its remarkable profusion of merostome crustaceans of the genera *Eurypterus*, *Pterygotus*, *Eusarcus*, etc., and has commonly been known as the *Eurypterus beds*, corresponding in position to similar fossiliferous beds of Great Britain and the Baltic provinces.—**Gashed dolomite,** one in which there are narrow cavities resembling gashes. *Amer. Jour. Sci.*, April, 1905, p. 291.—**Guelph dolomite,** in *geol.*, a division of the Upper Silurian rocks highly developed in the Province of Ontario and notable for its profusion of fossils. The fauna extends eastward into New York where it is found in dolomites intercalated among the layers of the Lockport limestone. It is also represented in the Silurian dolomites of Wisconsin, Ohio, Indiana, and Iowa.—**Knox dolomite,** a mass of dolomite in Tennessee, the lower 2,000 feet of which are referred to the Upper Cambrian, while the upper part contains typical Beekmantown fossils. **Little Falls dolomite.** See *Beekmantown* ★*limestone*. **Mendola dolomite,** a division of the Triassic rocks of the Alps and the Tyrol.—**Namur dolomite,** a division of the Carboniferous limestone in Belgium, lying below the Visé limestone and above the Dinant limestone. **Plate dolomite,** any dolomite rock which breaks into thin plates; specifically, the middle member of the upper Zechstein Permian formation of Hesse, Germany, consisting of massive or honeycombed plate dolomites, included between the lower and upper gypsum-bearing clay members.—**Portlandian dolomite,** a division of the Jurassic rocks in the Jura Mountains, and equivalent, as a part to a whole, to the Portland sands of the Portland Islands.—**Schlern dolomite,** a division of the Triassic rocks in the southern Alps.

dolomitize (dol′ō-mī-tīz), *v. t.*; pret. and pp. *dolomitized*, ppr. *dolomitizing*. [*dolomite* +

-ize.] To convert (limestone) into dolomite. *Rep. Brit. Ass'n Advancement of Sci.*, 1900, p. 400.

Doloneia (dō-lō-nē'yä), *n.* [Gr. Δολώνεια, < Δόλων, Dolon, < δόλος, deceit: see *dole*[3].] The story of the spy Dolon, which is the main subject of the tenth book of Homer's Iliad. It is supposed by many critics not to be part of the original poem, but a later interpolation.

dolose (dō'lōs), *a.* [L. *dolosus*, < *dolus*, deceit: see *dole*[3].] Deceitful; crafty: involving criminal intent.

dolphin, *n.* **10.** In *lumbering*, a cluster of piles to which a boom is secured. [U. S.]—**11.** Same as *dolphin-fly.*—**Black dolphin.** Same as *collier* ★*plant-louse.* **Green dolphin,** *Nectarophora pisi.* **Small dolphin,** the smallest of the two species of dolphin, *Coryphæna equisetis.* See *Coryphena.*

dolus (dō'lus), *n.* [L.: see *dole*[3].] In *civil law*, malicious or criminal intent; fraud; deceit: same as *dole*[3].

Dom. An abbreviation of *Dominion.*

D. O. M. An abbreviation (*a*) of the Latin *Datur omnibus mori*, 'it is given unto all to die'; (*b*) of the Latin *Deo Optimo Maximo*, 'to the best and highest God.'

domagnesic (dō-mag-nē'sik), *a.* [*do*(*minantly*) + *magnesia* + *-ic.*] In *petrog.*, dominantly magnesic; used in the quantitative system (see ★*rock*[1]), to describe divisions of igneous rocks in which magnesia is dominant over ferrous iron within the limits $\frac{MgO}{FeO} < \frac{7}{1} > \frac{5}{3}$.

domain, *n.* **8.** In *math.*: (*a*) A set of numbers when the sums, differences, products, and quotients of any numbers in the set (excluding only the quotients of division by 0) always yield as results numbers belonging to the set. (*b*) The space within which a given function is developable in a series in powers of $z-a$: termed the *domain of the point*, $z=a$.—**9.** In *function-theory*, the region of the z-plane within a circle about a as center with any radius less than the distance from a to the nearest critical point: called the *domain of its center a.* For a power series (that is, a series of ascending positive integral powers, $a_0 + a_1x + a_2x^2 + \ldots$) if there is a frontier value R such that when $|x| < R$ there is absolute convergence but when $|x| > R$ there is divergence, the open region (R) [points within a circle whose center is at O and radius R] is called the *domain of the series.*—**Domain of rationality.** Same as ★*domain*, 8 (*a*).—**Galois domain.** If $f(x)=0$ is an equation in the domain Ω and of the nth degree with distinct roots a, a_1, $\ldots a_{n-1}$, then the domain $\Omega(a, a_1, \ldots, a_{n-1})$, obtained by the adjunction of all its roots to Ω, is called the *Galois domain* of the equation $f(x)=0$. Thus the roots of the cubic $x^3+3x^2-2x-6=0$ are $-3, \pm\sqrt{2}$; hence its Galois domain is $\Omega(1, \sqrt{2})$.

domalkalic (dō-mal-kal'ik), *a.* [*do*(*minantly*) + *alkalic.*] In *petrog.*, dominantly alkalic. Used in the quantitative classification (see ★*rock*[1]), to describe divisions of igneous rocks having alkalis dominant over lime in the salic minerals (normative feldspars and feldspathoids), and other divisions having alkalis dominant over magnesia, ferrous iron, and lime in the femic (normative ferromagnesian) minerals, within the limits $\frac{K_2O+Na_2O}{CaO} < \frac{7}{1} > \frac{5}{3}$ and $\frac{MgO+FeO+CaO}{K_2O+Na_2O} < \frac{3}{5} > \frac{1}{7}$, respectively. The first are rangs of classes I, II, III; the second rangs of classes IV and V.

domatic (dō-mat'ik), *a.* [Gr. *δωματικός, < δῶμα(τ-), house: see *dome*, *n.*] Of or pertaining to a dome: as, *domatic* cleavage: the *domatic* class of crystals: see ★*clinohedral* and ★*symmetry.*

domatium (dō-mā'ti-um), *n.*; pl. *domatia* (-ä). [NL., < Gr. δωμάτιον, dim. of δῶμα, a house.] A shelter formed on certain tropical plants for the protection of beneficial insects, especially mites and ants. See ★*acarodomatium.*

The acarodomatia are found at the angles of the veins on the back of the leaves and are hollowed out in the tissue of the nerves. The ant-shelters occur in the internodes which are hollow at a part only of their length; the internodes are fusiform, and the *domatia* in the part at the greatest diameter where there are one or two openings which at first are circular, but in the older and woody shoots become elongated and may reach a length of 3 cm.
Jour. Roy. Micros. Soc., Aug., 1904, p. 427.

domatophobia (dō″ma-tō-fō'bi-ä), *n.* [NL., < Gr. δῶμα(τ-), house, + -φοβία, fear.] A morbid repugnance to, or actual fear of, remaining within the four walls of a room.

dome[1], *n.* **6.** In *geol.*, an anticlinal fold whose axis equals or approximates a point; an anticlinal fold with quaquaversal dip. Domes are most commonly produced by laccoliths, but they may be due to intersecting folds.

It will be too great a digression to discuss here whether the Weald *dome* was breached by a branch of the Rhine running from the area of the channel toward the North Sea, or by the lower Rhine emptying into the Atlantic through the English Channel.
Geog. Jour. (R. G. S.), IX. 537.

Dome volcano. See ★*volcano.*—**Whispering-dome,** a cupola whose surface is such as to produce a very perfect echo, a person at one point hearing what is said even in a low tone at the opposite point. Compare *whispering-gallery*, under *gallery.*

dom. econ. An abbreviation of *domestic economy.*

dome-kiln (dōm'kil), *n.* A form of lime-burning or coke-making retort in which the roof is formed by a spherical arch or dome, as distinguished from the simple shaft-kiln and the ring-kiln.

Domestic piracy, science. See ★*piracy*, ★*science.*

domesticable (dō-mes'ti-kạ-bl), *a.* [NL. **domesticabilis*, < ML. *domesticare*, domesticate.] Capable of being domesticated: as, *domesticable* animals.

domesticator (dō-mes'ti-kā-tọr), *n.* One who domesticates plants and animals.

Taking the gifts of nature: Man is then a quarryman or miner, a gleaner, a fisherman, a hunter, and later a *domesticator.* *Smithsonian Rep.*, 1895, p. 643.

dome-top (dōm'top), *n.* The topsheet of the steam-dome on a boiler.

domicil, *v. t.* A simplified spelling of *domicile.*

domicile, *n.* **3.** The place at which a bill of exchange is payable.

domicile, *v. t.* **2.** To make payable, as a bill of exchange, at a specified place.

domiciliaris (dom″i-sil-i-ā'ris), *n.*; pl. *domiciliares* (-rēz). [NL., < L. *domicilium*, domicile.] An animal which uses another merely as a domicile, and does not prey upon it or share its food. The most common examples are sponges which attach themselves to, and bore into, shell-fish. [Rare.]

They are, more definitely, *domiciliares*, and excavate their burrows . . . solely for the purpose of a residence or domicile. *Smithsonian Rep.*, 1886, i. 320.

dominance, *n.* **2.** In *biol.*, the visible manifestation by a cross-bred organism and by some of its descendants of one or two mutually antagonistic parental characters to the exclusion of the other.

In each of these cases more or less definite *dominance* of one character has been found.
Bateson and Saunders, Rep. Evol. Com. Roy. Soc., I. 139.

dominant. I. *a.* **3.** Having the crown free to light on all sides because of greater height. See *crown* ★*class.*—**4.** Characterized by or exhibiting dominance. See ★*dominance*, 2.—**Dominant character,** one of the antagonistic or mutually incompatible characters of the parents of a cross-bred organism, that is exhibited or visibly manifested by the cross-bred organism and transmitted to descendants. See ★*inheritance.*—**Dominant estate.** Same as *dominant tenement* (which see, under *dominant*). **Dominant group.** See *subdominant* ★*group.*—**Dominant harmony, idea.** See ★*harmony*, ★*idea.*

II. *n.* **2.** In *biol.*, when the cross-bred offspring of parents with antagonistic or mutually exclusive characters visibly exhibits a character of one parent, while it does not visibly exhibit but is able to transmit to descendants the antagonistic character of the other parent, then the character (*a*) which is manifested, and the cross-bred organism (*b*) which exhibits it, and (*c*) those of its descendants which exhibit it, and (*d*) the parental character, and (*e*) the parent that exhibits it, are all called *dominants.* On the other hand, the parental character which is not visibly manifested by the cross-bred organism, but is transmitted to and visibly manifested by some of its descendants and their descendants, is called a *recessive*, as are also the organisms that exhibit it. See ★*inheritance.*
3. The greatest of a set of numbers without regard to sign.—**4.** In *petrog.*, in the quantitative classification (see ★*rock*[1]), a factor which dominates over another between the ratios $\frac{7}{1}$ and $\frac{5}{3}$.—**Extracted dominant,** in *biol.*, a dominant of pure blood; one that does not exhibit nor transmit the corresponding recessive character.—**Under dominant,** in *music*, the fifth below the key-note, that is, the same as *subdominant.* See ★*undertone*, 4, and *under* ★*scale.*—**Upper dominant,** in *music*, same as *dominant*, when it is to be distinguished from the *under dominant*; also, *over dominant.*

domine (dō'mi-nā), *n.* [Sp., a teacher of Latin, = E. *domine, dominie.*] A name applied to a fish, the black escolar, *Epinnula magistralis*, in the West Indies.

doming (dōm'ing), *n.* [*dome*, *v.*, + *-ing*[1].] Producing an anticlinal fold whose axis is a point and whose sides dip in all directions: the reverse of ★*basining* (which see).

They sometimes disturb the prevailing dip of the sediments and cause local *doming*, as on the divides to the southeast and southwest of Bald Mountain.
Contrib. to Econ. Geol., U. S. Geol. Surv., 1902, p. 38.

Dominique (dom-i-nēk'), *n.* Name of a West Indian island: applied to an old American breed of fowls having barred plumage resembling that of the Plymouth Rock.

Domino loo. See ★*loo*[2].

domiric (dō-mir'ik), *a.* [*do*(*minantly*) + *mir* (< *m*(*agnesium*) + *ir*(*on*)) + *-ic.*] In *petrog.*, dominantly miric. Used in the quantitative classification (see ★*rock*[1]), to describe divisions of igneous rocks having magnesia and ferrous iron dominant over lime in the femic (normative ferromagnesian) minerals, within the limits $\frac{MgO + FeO}{CaO''} < \frac{7}{1} > \frac{5}{3}$. Sections of rang in classes IV and V.

domirlic (dō-mėr'lik), *a.* [*do*(*minantly*) + *mirl* (< *m*(*agnesium*) + *ir*(*on*) + *l*(*ime*)) + *-ic.*] In *petrog.*, dominantly mirlic. Used in the quantitative classification (see ★*rock*[1]), to describe divisions of igneous rocks in which magnesia, ferrous oxid, and lime are dominant over potash and soda in the femic (normative ferromagnesian) minerals, within the limits $\frac{MgO + FeO + CaO''}{K_2O'' + Na_2O''} < \frac{7}{1} > \frac{5}{3}$. Rangs in classes IV and V.

domitic[2] (dō-mit'ik), *a.* [*do*(*minantly*) + *mit* (< *m*(*agnetite*) + *i*(*lmenite*) + *t*(*itanite*)) + *-ic.*] In *petrog.*, dominantly mitic. Used in the quantitative classification (see ★*rock*[1]), to describe divisions of igneous rocks in which mitic minerals (normative magnetite, hematite, ilmenite, titanite, etc.) are dominant over polic minerals (normative pyroxene, olivin, akermanite), within the limits $\frac{P'O}{M} < \frac{3}{8} > \frac{1}{3}$. Order 4 in classes IV and V.

domoid (dōm'oid), *a.* [*dome* + *-oid.*] Somewhat dome-shaped.

domolic (dō-mol'ik), *a.* [*dom*(*inantly*) + *ol*(*ivin*) + *-ic.*] In *petrog.*, dominantly olic. Used in the quantitative classification (see ★*rock*[1]), to describe divisions of igneous rocks in which normative olivin and akermanite are dominant over normative pyroxene, within the limits $\frac{P}{O} < \frac{3}{8} > \frac{1}{3}$. Sections of orders in classes IV and V.

Dom. Proc. An abbreviation of the Latin *Domus procerum*, 'house of peers,' or 'house of lords,' the upper branch of the British parliament.

don[3] (don), *n.* [A dial. variant of *dan*[2].] In *sea-fishing*, a buoy used to mark a fishing-ground.

When productive ground is discovered a "*don*," or buoy, is placed in the sea, with a red or black flag by day and a white globe light close to the surface at night.
Sci. Amer. Sup., Sept. 26, 1903, p. 23182.

donaciform (dō-nas'i-fôrm), *a.* [NL., *Donax* (*Donac-*) + L. *forma*, form.] Having the form of the pelecypod genus, *Donax.*

donarium (dō-nā'ri-um), *n.* [NL., appar. in allusion to L. *donarium*, a votive gift: see *donary.*] A supposed new chemical element, announced by Bergmann in 1851, shown afterward to be thorium.

doncella[2] (don-sel'ä), *n.* [Porto Rican Sp.: see *damsel.*] Either of two trees of the genus *Byrsonima* of the family *Malpighiaceæ*, *B. spicata* and *B. lucida*, especially the former. They yield hard, useful woods. See *surette.*

Donders' law. See ★*law*[1].

Dondia (don'di-ä), *n.* [NL. (Adanson, 1763), named in honor of Giacomo di *Dondi* (1298–1359), a physician and botanist of Venice.] A genus of dicotyledonous plants of the family *Chenopodiaceæ.* See *Suæda.*

donga (dong'gä), *n.* [S. African.] In South Africa, a channel formed by the action of water; a ravine; a gully.

dongola (don'gō-lä), *n.* [Appar. named from *Dongola* in Nubia, N. E. Africa.] A general term for leather made from goatskins or sheepskins with either a bright or a dull finish.—**Dongola process, race.** See ★*process*, ★*race.*

dongon (dông-ōn'), *n.* [Also *dungon*; < Bisayan *dongon.*] In the Philippine Islands, a tall tree, *Tarrietia sylvatica*, of the family *Sterculiaceæ*, with keeled fruit. It yields logs 50 feet long and 20 inches square, which are used in the construction of buildings and bridges and as keels for vessels.

doni[2] (dō'ni), *n.* In Guam, a name of several species of *Capsicum*, especially of varieties of *Capsicum annuum* and *C. frutescens.*

donium (dō'ni-um), *n.* [NL., appar. < L. *donum*, a gift: see *donate.*] A supposed new chemical element, announced by Richardson in 1836, but afterward shown to be beryllium.

donkey, *n.* **3.** In *mech.*, a subsidiary apparatus for carrying a weight or load, or coming into action to steady and support a primary element.—**4.** A driving-frame or truck acting as a tractor on rails, to pull or haul a weight or load.

The turntable is 70 ft. long and is operated by a 10-hp. direct-current motor of the street railway type geared to an independent traction wheel, the driving combination being supported in a pivoted frame, or "*donkey*," which rests with all its weight upon the turntable track, even when the table is tipped by a locomotive.
Elect. World and Engin., Feb. 21, 1903, p. 333.

Bull donkey, in *lumbering*, a large donkey-engine which, by drum and cable, drags logs from the place where they are yarded. **Road donkey,** a donkey-engine, mounted on a heavy sled, which drags logs along a skid-road by winding a cable on a drum. It has a second drum for the haul-back.—**Spool donkey,** a donkey-engine equipped with a spool or capstan, instead of a drum, for winding cable. **Yarding donkey,** a donkey-engine, mounted upon a heavy sled, used in yarding logs by drum and cable.

donkey-boiler (dung′ki-boi′lèr), *n.* **1.** A small boiler, usually upright, employed when only a small power is required.—**2.** *Naut.*, a small boiler which furnishes steam when there are no fires in the main boilers.

donkey-drop (dung′ki-drop), *n.* In *cricket*, a ball bowled very slowly, which seems easy to hit. [Slang.]

donkey-party (dung′ki-pär-ti), *n.* An entertainment in which the chief amusement is a game in which the players attempt to pin, blindfolded, a paper tail, in the right place, upon the picture of a tailless donkey.

donkey's-eye (dung′kiz-ī), *n.* Same as *horse-eye*, a sea-bean, *Mucuna urens*.

donnée (don-nā′), *n.* [F., a thing given, a condition, datum; pp. fem. of *donner*, give.] The motif or fundamental idea of a literary or dramatic composition.

Another story, a very good story, . . . arrests attention for a reason irrelevant to its goodness, and that is the resemblance of its "*donnée*" to Mr. Kipling's "His Private Honor."
N. Y. Times, Sup., July 30, 1904.

Donop's attack. See ★*attack*.

donzella (don-zel′ä), *n.* [It.] A damsel; a young lady: as, a 'beautiful *donzella*.' *Carlyle*.

doodle-bug (dö′dl-bug), *n.* **1.** The larva of any cicindelid beetle. [Southern U. S.]—**2.** The larva of certain species of the neuropterous genus *Myrmeleon*, which build pits in the sand for the capture of ants and other insects. Called also *ant-lion*.

doog (dög), *n.* [E. African (Somali).] The native name of a tabanid fly, *Pangonia tricolor*, common in Somaliland where it swarms on camels and other domestic animals, constantly drawing blood. *Proc. Zool. Soc. London*, 1900, I. 9.

doom, *n.*—**To false a doom** †, in *Scots law*: (*b*) To bring an action to set aside a decree.

doom-ring (döm′ring), *n.* A ring of stones, within which the primitive Norse courts of justice were held. *N. E. D.*

door, *n.*—**Charging door,** the door through which the charge is introduced into a furnace or cupola. In a reverberatory furnace the charging door is at one side; in a blast-furnace or cupola, it is near the top, on a level with the charging platform, and the fuel, as well as the ore or metal to be melted, is introduced through it.—**Dutch door,** a door divided in two horizontally, so that one half may be open while the other is closed.—**The open door,** commercial intercourse and opportunities for all nations on the same terms: a very modern phrase applied particularly to foreign trade with China when there was danger that the Chinese government was about to grant to some of the powers exclusive control of certain ports and sections of the empire; hence, the '*open door* policy' advocated by Great Britain, the United States, and Japan.—**Underwriters' door,** a door so made as to conform to certain requirements of the fire-insurance companies: as, a wooden door covered on both sides and all edges with tin-plate carefully soldered. *Underwriters' floor* and other similar terms are in use.—**Venetian door,** a door-space fitted with a door much smaller than itself, the place reserved on either side (and usually above) being filled with glass.

door-cam (dôr′kam), *n.* A device for retaining the window in a carriage-door at any height, or for preventing it from rattling.

door-chain (dôr′chān), *n.* A short chain used in fastening a door, usually so that it can be opened only a few inches.

door-check (dôr′chek), *n.* A combined spring and pneumatic device for controlling the closing of a door, especially a car-door. The door when left open is automatically closed by the spring, the movement being controlled by a piston which moves in a cylinder filled with compressed air: the air, first compressed by the movement of the door when opened, slowly escaping through a small opening, allows the piston to move, and, through suitable connections, permits the spring to close the door gently and without jar or noise. The movement of the piston is controlled by valves that may be set at any pressure required.

door-fastener (dôr′fäs″nèr), *n.* Any appliance for fastening a door; specifically, a fixture attached to a door to prevent it from being opened beyond the length of a short chain. When the end of the chain is placed in a slot in the fixture it cannot be drawn out until the door is closed. Often called *door-chain*.

door-grass (dôr′gras), *n.* Same as *doorweed*.

door-handle (dôr′han dl), *n.* Same as *door-knob*.

door-holder (dôr′hōl″dèr), *n.* A spring-catch placed on the floor or wall behind a car-door and designed to catch the door when it is opened and hold it open.

door-key (dôr′kē), *n.* A key for locking and unlocking a door.

door-man (dôr′man), *n.*; pl. *door-men* (-men). An officer or attendant stationed at a door to guard it, maintain order, etc.; a doorkeeper.

door-money (dôr′mun″i), *n.* The money taken at the door or entrance to any place of entertainment where an entrance-fee is charged. Compare *gate-money*.

doornboom (dôrn′bōm), *n.* [D. *doornboom*, 'thorntree.'] In South Africa, a thorny mimosa, *Acacia horrida*, growing as a shrub or small tree, very common along the course of the Karoo rivers, and very often used for hedges. The leaves and pods are eaten by goats and sheep in times of scarcity. Like many other mimosas this species is rich in tannin and yields a gum somewhat like that of gum arabic, but of an amber color. The bark is much used for tanning in South Africa. See *karoo thorn*, under *thorn*[1].

door-roller (dôr′rō″lèr), *n.* A contrivance for making a sliding door run easily; generally a wheel which runs on a rail at the top or the bottom of the door. There are also patented antifriction rollers.

door-stop, *n.* **3.** A strip of carriage-lace, or metal, used to prevent a carriage-door from opening beyond a fixed point.

door-track (dôr′trak), *n.* A rail secured to a plank or joist to receive the rollers of a sliding door.

door-valve (dôr′valv), *n.* A flat valve hinged at one edge and opening to allow passage of fluid by pressure from below, as a trap-door is lifted. Called also a *flap-* or *clack-valve*. Two door-valves, back to back, form a *butterfly-valve*.

doorwa (dôr′wä), *n.* [Skt. *dūrvā*, whence Pali *dubba*, Hind. *dūb*, E. *doob*.] Same as *doob*.

dop[3] (dop), *n.* [Cape D. *dop*, a tin cup in which vineyard workers receive, several times a day, their rations of wine; lit., a shell: see *dop*[2].] Cape brandy of a peculiarly fiery type. Also called *cape smoke*.

The Naval Brigade . . . went for the bottles like a cartload of bricks. Blessed if they weren't *Dop!* "Never mind," says the Naval Brigade, "if the quality ain't up to Admiralty pattern, we'll have to issue a double ration"—and he did—so help me!
J. Ralph, in War's Brighter Side, p. 170.

dope, *n.* **3.** In the manufacture of dynamite, to be used as an explosive agent, the liquid nitroglycerin, which is the most important ingredient, is absorbed by a solid material in fine powder; such absorbent is called the *dope*, and it may be inert as regards explosion, or active—in the latter case simply combustible, or itself explosive. **4.** Opium, especially the thick treacle-like preparation used in opium-smoking. [Slang.]—**5.** Any drug, such as opium, laudanum, morphine, cocaïne, hydrate of chloral, hashish, etc., which has the property of inducing sleep or of stupefying; a narcotic. [Slang.]—**6.** A person under the influence of, or addicted to the use of, some dope. [Slang.]

dope (dōp), *v.*; pret. and pp. *doped*, ppr. *doping*. **I.** *trans.* To drug; stupefy with drugs, such as 'knock-out drops' (hydrate of chloral), or the like: as, to *dope* a race-horse. [Slang.]

II. *intrans.* To indulge habitually in the use of opium or other drugs either for the pleasurable sensations produced or as anesthetics. [Slang.]

dope-book (dōp′bùk), *n.* A miscellaneous collection of racing information. [Racing slang.]

dope-fiend (dōp′fēnd), *n.* A habitual user of drugs, such as opium or cocaïne. [Slang.]

dope-sheet (dōp′shēt), *n.* A list of race-horses, giving the record of their performances in previous races. [Racing slang.]

dopey (dō′pi), *a.* See ★*dopy*.

dopolic (dō-pol′ik), *a.* [*do*(*minantly*) + *pol* (< *p*(*yroxene*) + *ol*(*ivine*)) + *-ic*.] In *petrog.*, dominantly polic. Used in the quantitative classification (see ★*rock*[1]), to describe divisions of igneous rocks in which polic minerals (normative pyroxene, olivin, akermanite) are dominant over mitic minerals (magnetite, ilmenite, titanite) within the limits $\frac{PO}{M} < \frac{7}{1} > \frac{5}{4}$.

dopotassic (dō-po-tas′ik), *a.* [*do*(*minantly*) + *potassic*.] In *petrog.*, dominantly potassic. Used in the quantitative classification (see ★*rock*[1]), to describe divisions of igneous rocks in which potash is dominant over soda in the salic minerals (normative feldspars and feldspathoids) within the limits $\frac{K_2O}{Na_2O} < \frac{2}{1} > \frac{5}{4}$.

doppel-flöte (dop″l-flē′te), *n.* [G., 'double flute.'] In *organ-building*, a stop of the flute class, the pipes of which have two mouths, giving a peculiarly sonorous tone.

doppio (dop′piō), **doppia** (dop′piä), *a.* [It., masc. and fem., < L. *duplus*, *dupla*, double: see *double*.] In *music*, double: as *doppio movimento*, *doppio tempo*, double movement, double time (twice as fast); *doppio valore*, double value (twice as slow), *pedale doppio*, with two parts for the pedals; *lira doppia*, a double or bass lyre: and so for other instruments.

doppione (dop-piō′ne), *n.* [It.: see *doubloon*.] **1.** A gold coin of Louis XII. of France, during his occupation of the Milanese (1500–12).—**2.** A gold coin of 10 scudi, struck by the Duke of Savoy in 1641, during the siege of Coni.

Dopplerization (dop′lèr-i-zā′shon), *n.* The application of Doppler's principle that from a source of waves, approaching or approached, the waves reach the receiver in greater number than when the source and receiver are relatively at rest, and vice versa. See *Doppler's* ★*principle*.

If the point-source is in motion, the pan-potential requires *Dopplerisation* as well as the ordinary potential.
Nature, Jan. 1, 1903, p. 203.

Doppler's effect, principle. See ★*effect*, ★*principle*.

dopy (dō′pi), *a.* [Also *dopey*; < *dope* + *y*[1].] Stupid, as if under the influence of some drug; dull; heavy. Also *dopey*. [Slang.]

The patients are said to be "*dopey*"; they are markedly prostrated, indifferent to their surroundings, and want only to be left undisturbed.
Buck, Med. Handbook, VI. 686.

dopyric (dō-pī′rik), *a.* [*do*(*minantly*) + *pyr* (< *pyr*(*oxene*)) + *-ic*.] In *petrog.*, dominantly pyric. Used in the quantitative classification (see ★*rock*[1]), to describe divisions of igneous rocks in which normative pyroxene is dominant over normative olivin and akermanite, within the limits $\frac{P}{O} < \frac{7}{1} > \frac{5}{4}$.

doquaric (dō-quâ′rik), *a.* [*do*(*minantly*) + *quaric* (< *quar*(*tz*) + *-ic*).] In *petrog.*, dominantly quaric. Used in the quantitative classification (see ★*rock*[1]), to describe divisions of igneous rocks in which normative quartz is dominant over normative feldspar, within the limits $\frac{Q}{F} < \frac{7}{1} > \frac{5}{4}$. Orders of classes I, II, III.

dor[3] (dôr), *n.* [Gr. δόρυ, a shaft, a spear: see *tree*.] In the nomenclature of the spicular elements of sponges, a monaxial lance-shaped or curved rod, one end of which is sharply pointed while the other has a two- or three-edged blade.

Dor. An abbreviation of *Doric*.

dorab (dō′rab), *n.* A fish, *Chirocentrus dorab*, of the family *Chirocentridæ*, which ranges from the Red Sea to the Malay Archipelago.

doradilla (dō-rä-dēl′yä), *n.* [Sp., dim. of *dorado*, gilded.] **1.** In Spain, the rustyback, or stone-fern, *Ceterach Ceterach*, formerly considered a valuable remedy for diseases of the spleen. See ★*Ceterach*, 2.—**2.** In Mexico, a name of several species of *Selaginella*, also called *flor de piedra*, or stone-flower, which grow on the bare, stony sides of cañons. The fronds of these plants roll up when dry so as to form a ball, and remain dormant until rain falls. The dried plants are offered for sale in the markets of San Luis Potosi and other Mexican cities, and are used as remedies for diseases of the liver and for other maladies. See *resurrection-plant* (*b*).

Doratonotus (dor″a-tō-nō′tus), *n.* [NL., < (?) *doratus* (< Sp. *dorado*), gilded, + Gr. νῶτος, back.] A genus of small bright green labroid fishes found in the West Indies. *D. megalepis* is the common species.

Dorcas society (dôr′kas sō-sī′e-ti). A society of women of a church whose work it is to provide clothing for the poor: so called in allusion to Dorcas, a disciple at Joppa who was "full of good works and almsdeeds which she did" (Acts ix. 36), including the making of "coats and garments" (ix. 39).

dorcastry (dôr′kas-tri), *n.*; pl. *dorcastries* (-triz). [Irreg. < *Dorcas* + *-t-ry*.] Same as ★*Dorcas society*.

Dordonian (dôr-dō′ni-an), *n.* [F. *Dordogne*, a river (a conflux of the rivers Dor and Dogne) and a department of southwest France.] In *geol.*, a division or substage of the uppermost Cretaceous in France.

Doridiidæ (dō-ri-dī′i-dē), *n. pl.* [NL., < *Doridium* + *-idæ*.] A family of tectibranchiate gastropods, having the shell completely internal, the mantle with 2 posterior lobes and a caudal filament, and the epipodia reflected. It contains the single genus *Doridium*.

doridioid (do-rid'i-oid), *a.* Of or pertaining to the *Doridioidea.*

Doridioidea (dō-rid-i-oid'ę-ä), *n. pl.* [NL., < *Doridium* + *-oidea.*] A group of nudibranchiate gastropods. The liver is unbranched; the anus median and posterior, generally dorsal, and surrounded by branched appendages which are cerata or gills, and the mantle contains spicules. The group includes the families *Polyceridæ*, *Dorididæ*, *Phyllidiidæ*, *Doridopsidæ*, and *Corambidæ.*

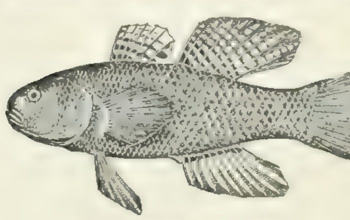
Doridium (dǫ-rid'i-um), *n.* [NL.; formation uncertain; appar. dim. of Gr. *δόρυ*, tree, shaft, spear.] The typical genus of the family *Dorididæ*. *Meckel*, 1809.

Dorm pennies. See ★*penny.*

dormant, *a.* 5. In *bot.*, not active or growing.
Dormant buds, dormant eyes, potential buds; buds which do not shoot unless specially stimulated. **Dormant mine, scale.** See ★*mine*2, ★*scale*2. **Dormant state,** the inactive state of a plant or organ, as in winter or a protracted dry season.

dormeuse (dôr-mėz'), *n.* [F., fem. of *dormeur*, sleeper, < *dormir*, sleep.] A coach designed to convey invalids. It had a curtained coach-top and was fitted with a cot so arranged that the passenger could either sit up or recline.

Dormitator (dôr-mi-tā'tǫr), *n.* [NL., < L. *dormitator*, sleeper.] A genus of gobies found



Dormitator maculatus.
(From Bulletin 47, U. S. Nat. Museum.)

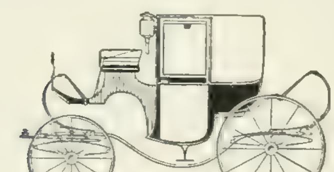
in the streams of the West Indies and Mexico, characterized by the robust body and small scales. *D. maculatus*, the common species, has been found as far north as the Carolinas.

dormy (dôr'mi), *a.* [*dorm* + *-y*1.] In *golf*, noting the condition of a player when he is as many holes ahead of his opponent as there remain holes to be played.

dorsal, *a.* 3. In *phonol.*, pronounced with the back or middle upper surface of the tongue raised to the palate.—4. In *bot.*, relating to the back of an organ. See *back*1, 3 (*h*).—**Dorsal canal, cup, eye,** etc. See ★*canal*, etc.

dorsalis (dôr-sā'lis), *n.*; pl. *dorsales* (-lēz). [NL.: see *dorsal.*] A blood-vessel or nerve which supplies the dorsum of any part: as, *dorsalis linguæ*, an artery in the dorsum of the tongue.

d'Orsay (dor-sā'), *n.* [Named after Count *d'Orsay* (?).] A coupé or brougham, suspended



Modern d'Orsay.

upon four elliptic and four C-springs, and formerly without a driver's seat, the horses being guided by postilions.

D'Orsay bit. See ★*bit*1.

dorse1, *n.* 3. The back of a book or of a folded document.

dorsibranch (dôr'si-brangk), *n.* An animal having gills upon the back, as certain annelids.

dorsicolous (dôr-sik'ǭ-lus), *a.* [L. *dorsum*, back, + *colere*, inhabit.] Inhabiting the back of another organism. [Rare.]

dorsiferous, *a.* 2. In *bot.*, borne on the back, as the sori of most ferns.

dorsiflex (dôr'si-fleks), *v. i.* [L. *dorsum*, back, + *flexus*, pp. of *flectere*, bend.] To bend toward the dorsum: noting movement of the foot. *Buck*, Med. Handbook, IV. 223.

dorsiflexion (dôr-si-flek'shǫn), *n.* [L. *dorsum*, back, + *flexio(n-)*, bending.] Movement toward the dorsum, as in approximation of the toes to the anterior surface of the leg. *Philos. Trans. Roy. Soc.* (London), ser. B., 1893, p. 48.

dorso-anterior (dôr″sǫ-an-tē'ri-ǫr), *a.* Having the back directed anteriorly: noting the position of a child during birth, in relation to the mother.

dorsocaudad (dôr-so-kâ'dad), *adv.* On the dorsal surface and the anal half of the body.

There is a pair of well-developed, brownish-colored setæ arising from caudal margin, and extending *dorsocaudad*, as in pupa-case.
U. S. Dept. Agr., Div. Entom., Techn. Ser. 8, 1900, p. 39.

dorsocentral (dôr-sǫ-sen'tral), *a.* and *n.* [L. *dorsum*, back, + *centrum*, center, + *-al*1.] **I.** *a.* Being toward the back and central.
II. *n.* The undermost plate in the calyx of the *Crinoidea*, usually obscured in the adult condition of stalked forms, but exposed in the stalkless genus *Uintacrinus*, and seen also in the larval stages of the recent *Antedon:* by some authors regarded as the topmost segment of the stalk. Also termed *centrodorsal.*

dorsocephalic (dôr″sǭ-se-fal'ik), *a.* Relating to the back and head collectively; situated on the back, or dorsal region, near the head.

dorsonasal (dôr-sǭ-nā'zal), *a.* Relating to the bridge of the nose.

dorsonuchal (dôr-sǭ-nū'kal), *a.* Relating to the back and the neck.

dorso-occipital (dôr″sǭ-ok-sip'i-tal), *a.* Relating to the back of the head and the body.

dorsoposteriad (dôr″sǭ-pos-tē'ri-ad), *adv.* On the back and behind.

dorsoposterior (dôr″sǭ-pos-tē'ri-ǫr), *a.* [L. *dorsum*, back, + *posterior*, posterior.] In *obstet.*, descriptive of the position of the child during birth, when its back is directed toward the back of the mother.

dorsoradial (dôr-sǭ-rā'di-al), *a.* [L. *dorsum*, back, + E. *radial.*] Relating to the radial (outer) side of the back of the forearm, wrist, hand, or fingers.

dorsoscapular (dôr-sǭ-skap'ū-lär), *a.* [L. *dorsum*, back, + *scapula*, scapula.] Relating to the posterior surface of the scapula.

dorso-ulnar (dôr-sǭ-ul'när), *a.* Relating to the ulnar (inner) side of the back of the forearm, wrist, hand, or fingers.

dorsoventrad (dôr-sǭ-ven'trad), *adv.* From the back toward the ventral side.

dorsoventrality (dôr″sǭ-ven-tral'i-ti), *n.* The condition or quality of being dorsoventral.

dorsum, *n.*, 2. (*b*) In the ammonite cephalopods, the inner or umbilical margin of the conch.—4. In *bot.*: (*a*) Same as *back*1, 3 (*h*). (*b*) The convex side of the girdle of a diatom.

dory1, *n.*—**Bastard dory.** (*a*) A fish, *Antigonia capros*, widely distributed in both the Atlantic and the Pacific oceans. (*b*) An Australian fish, *Zeus australis*, of the family *Zeidæ*, the Australasian representative of *Zeus faber*, the European 'John-dory.' [New Zealand.] (*c*) A broad-bodied, rough-scaled, bass-like fish, *Histiopterus recurvirostris.*

Dorycrinus (do-ri-krī'nus), *n.* [Gr. *δόρυ*, a tree, + *κρίνον*, a lily (see *crinoid*).] A genus of camerate *Crinoidea* from the Devonian and Carboniferous rocks having a corrugated calyx, thick calyx plates, and strongly elevated tegmen.

Doryichthys (dō-ri-ik'this), *n.* [NL., < *δόρυ*, spear, + *ἰχθύς*, fish.] A genus of pipe-fishes, of the family *Syngnathidæ*, found mainly in the Pacific. They sometimes ascend rivers.

dorylid (dor'i-lid), *n.* and *a.* **I.** *n.* A member of the hymenopterous family *Dorylidæ.*
II. *a.* Of or belonging to the *Dorylidæ.*

dorylophilous (dō-ri-lof'i-lus), *a.* [NL. *Dorylus* + Gr. *φιλεῖν*, love.] Fond of the *Dorylidæ:* said of the guest-insects which inhabit the nests of ants of that family.

There are guests of the "indifferent type," e.g. Myrmedonia, which retain more or less of the form of their non-*dorylophilous* relatives, and are connected by incipient and half-way transformations with one or other of the three preceding types.
Jour. Roy. Micros. Soc., April, 1903, p. 173.

doryphory (dǭ-rif'ǭ-ri), *n.* [Gr. *δορυφορία*, a guard, < *δορυφόρος*, one of a guard, lit. a spearman, spear-bearer, < *δόρυ*, spear, + *φέρειν*, bear.] In *astrol.*, a guard of planets attending the sun and moon.

Dorypterus (dō-rip'tę-rus), *n.* [NL., < Gr. *δόρυ*, a shaft, a tree, + *πτερόν*, wing (fin).] A scaleless ganoid fish from the Permian rocks of Germany, having an unossified skeleton and a very high dorsal fin.

dos (dōs), *n.* [L. *dōs* (*dōt-*), dower: see *dower*, *dotal.*] In *civil law:* (*a*) Property brought to a husband by his wife, upon marriage. See *dotal* ★*property.* (*b*) A common-law dower. See *dower*2, 2.

dosalane (dō-sa-lān'), *n.* [*do*(*minantly*) + *sal* (< *s*(*ilica*) + *al*(*umina*)) + *-ane*, the termination of the names of classes.] In *petrog.*, the name of the second class of igneous rocks in the quantitative classification. (See ★*rock.*) Rocks of this class have a preponderance of salic minerals (normative quartz, feldspars, or feldspathoids) over femic (normative ferromagnesian) minerals within the limits $\frac{sal}{fem} < \frac{7}{1} > \frac{5}{3}$. They include many granites, diorites, gabbros, syenites, and nephelite-syenites, with their aphanitic equivalents.

dosalic (dō-sal'ik), *a.* [*do*(*minantly*) + *sal* (< *s*(*ilica*) + *al*(*umina*)) + *-ic.*] In *petrog.*, dominantly salic. Used in the quantitative classification (see ★*rock*), to describe that division of igneous rocks in which the salic minerals (normative quartz, feldspars, feldspathoids) are dominant over the femic (normative ferromagnesian) minerals within the limits $\frac{sal}{fem} < \frac{7}{1} > \frac{5}{3}$. This is class II, dosalane.

dose, *n.*—**Fractional doses,** doses of medicine which are below the normal amount but are given at shorter intervals than are customary.

dose, *v. t.* 4. To divide into proper quantities for a dose; calculate the amount of (a drug) that should be prescribed for a dose.

In other words, we cannot exactly *dose* the application. Great as is the difficulty in *dosing* an X-ray exposure, it is vastly greater when we undertake to utilize the radio-active substances that at present are furnished commercially. *Med. Record*, March 7, 1903, p. 365.

dosimetric (dō-si-met'rik), *a.* [*dosimetr-y* + *-ic.*] Of or pertaining to dosimetry.

dosimetrician (dō″si-mę-trish'an), *n.* [*dosimetric* + *-ian.*] One who practises dosimetry.

For, as we have seen, the vulgar, called upon to choose between the mattoid and the man of genius, never hesitate to sacrifice the latter. Even at the present day, many practitioners who take the *dosimetricians* seriously, laugh at homœopathy.
C. Lombroso (trans.), The Man of Genius, p. 221.

dosimetrist (dǭ-sim'ę-trist), *n.* [*dosimetr-y* + *-ist.*] Same as ★*dosimetrician.*

dosimetry (dǭ-sim'ę-tri), *n.* [Gr. *δόσις*, dose, + *-μετρία*, < *μέτρον*, a measure.] 1. The accurate measurement of the doses of medicines. —2. A system of therapeutics in which treatment is directed chiefly toward the symptoms and consists in the administration of alkaloids in the form of granules at definite intervals, each granule containing a single dose of the remedy of proper amount for administration at the prescribed interval.

dosodic (dō-sō'dik), *a.* [*do* (*minantly*) + *sodic.*] In *petrog.*, in the quantitative system of classification (see ★*rock*1), dominantly sodic: said of divisions of rock magmas in which the ratio of the soda to the potash is greater than 5 to 3 and less than 7 to 1.

dosootee (dō-sö'tē), *n.* [Also *dosooty;* < Hind. *dosūtī*, *dusūtī* (also *dosūtā*), < *do*, *du*, two, + *sūt*, a thread (see *sutra*, *sew*1).] In India, a kind of cheap cotton cloth woven with threads doubled. *Yule.*

dossier (dos-iā'), *n.* [F., < *dos*, back.] A bundle of writings or documents relating to some one matter or subject, inclosed in a wrapper and briefed on the back; the 'papers in the case.'—**The secret dossier,** certain documents which in the trial of Captain Alfred Dreyfus, for treason, in France in 1894, were illegally and secretly presented as evidence against him. These documents were said to have been shown to the jury at a time when the court was not in session, and largely upon the strength of this evidence Dreyfus was convicted.

dot1, *n.* 1. (*f*). In *bot.*: (1) One of the small, usually circular and pellucid oil receptacles in certain leaves, as of *Hypericum.* (2) A pit in a cell-wall.
2. In *projective geom.*, one of the system of *n* coplanar points which determine a polystigm.

In each *dot* intersect (n–1) connectors, going through the remaining (n–1) *dots.*
Merriman and Woodward, Higher Mathematics, p. 75.

Double dot, in *musical notation*, see *dot*1, 1 (*c*) (1). **On the dot,** at the precise moment; with punctuality and regularity: as, to begin work *on the dot.*

dotted (dot'ed), *p. a.* 1. Marked with a dot or dots; spotted: as, a *dotted* pattern, the *dotted* i.—2. Consisting of dots, as, a *dotted* line.—**Dotted bar.** See ★*bar*1.

Dotal property. See ★*property.*

dotational (dō-tā'shǫn-al), *a.* [*dotation* + *-al*1.] Having the nature of a gift for the good of others; altruistic. [Rare.]

Natural selection thus becomes altruistic or *dotational.* *J. A. Ryder*, Biol. Lectures, 1895, p. 36.

dote3 (dōt), *n.* Decay or rot in timber. [Lumbermen's term.]

dothideaceous (dǭ-thid-ę-ā'shius), *a.* Belonging to the *Dothideaceæ*, a family of fungi.

Dothideales (dǭ-thid-ę-ā'lēz), *n. pl.* [NL., < *Dothidea* + *-ales.*] An order of pyrenomycetous fungi, containing the single family *Dothideaceæ*, and having the same general characters. See *Dothideaceæ.*

dotilic (dō-til′ik), *a.* [*do(minantly)* + *til* (< *t(itanite)* + *il(menite)*) + *-ic.*] In *petrog.*, dominantly tilic. Used in the quantitative classification (see ★*rock*1), to describe divisions of igneous rocks in which tilic minerals (normative titanite, ilmenite) are dominant over femic minerals (normative magnetite, hematite), within the limits $\frac{H}{T} \times \frac{1}{2} > \frac{1}{4}$.

dotriacontane (dot-ri-ạ-kon′tān), *n.* Same as ★*dotricontane.*

dotricontane (dot-ri-kon′tān), *n.* A colorless crystalline hydrocarbon, $C_{32}H_{66}$, of the methane series, prepared by the action of sodium amalgam on cetyliodide and contained in petroleum. It melts at 70.5° C., and boils at 310° C. under 15 millimeters pressure: also called *dotriacontane* and *dicetyl.*

dotter, *n.* **2.** In naval use, an apparatus used to train gun-pointers to aim accurately at a target. The apparatus carries a miniature target close to the muzzle of the gun. The target is given a vertical oscillating motion to imitate the effect of the rolling of a vessel at sea; the pointer follows the motion of the target with his gun by means of the gun-sight, and when he judges he is aiming at the center of the target he presses a firing-key as he would in actually firing the gun. The electric apparatus worked by the firing-key makes a dot at the point on the target at which he was actually aiming when he pressed the firing-key.

dotting-wheel (dot′ing hwel), *n.* A dotting-pen or tracing-wheel (which see).

dotty[1] (dot′i), *a.* [*dot*[1] + *-y*[1].] Having dots; covered or characterized by dots: as, a low, *dotty* underwood. *R. L. Stevenson.*

dotty[2] (dot′i), *a.* [Dial. var. of *doty.*] **1.** Of unsteady gait; feeble and tottering, as from stiffness or lameness: as, to be a little *dotty* on one's feet.—**2.** Feeble-minded; silly. [Colloq.]

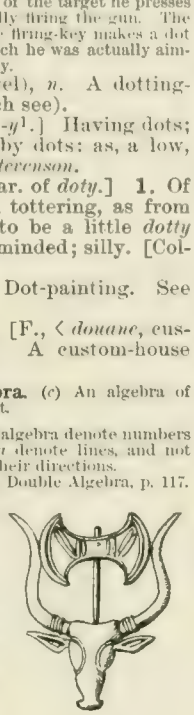
dot-work (dot′wêrk), *n.* Dot-painting. See ★*pointillism.*

douanier (dwän-yā′), *n.* [F., < *douane*, custom-house: see *douane.*] A custom-house officer.

double. I. *a.* —**Double algebra.** (*c*) An algebra of coplanar vectors. See the extract.

All the symbols which in single algebra denote numbers or magnitudes, in *double algebra* denote lines, and not merely the lengths of lines, but their directions.
A. De Morgan, Trig. and Double Algebra, p. 117.

Double ax, a pictographic and decorative type common in the prehistoric remains of the Levant. It is found in Hittite hieroglyphics, on Cypriote cylinders, and on Mycenean objects, on which it has some connection with Zeus Labrandeus. It is the most important of the Cretan pictographic symbols. Also called *labrys.*


Double Ax.

The most constantly recurring of these, indeed, is the labrys or *double ax* already referred to—the special symbol of the Cretan Zeus.
A. J. Evans, in Smithsonian Rep., 1901, p. 436.

Double chant, concerto, consciousness, counterpoint, court. See *chant* (*c*), *concerto* (*c*), ★*consciousness*, *counterpoint*2, 3 (*c*), ★*court.*—**Double flute,** etc. See ★*flute*, etc.—**Double fugue.** See *fugue.*—**Double green.** Same as *methyl green* (which see, under *green*1).—**Double pedal-point.** See *pedal-point.*—**Double pedro.** See ★*cinch*, 4.—**Double points of a homographic transformation.** See ★*point*1.—**Double quartet.** See *quartet.*—**Double shake** or **trill.** See *shake*, 5.—**Double sharp, slit, suspension.** See *sharp*, ★*slit*1, *suspension*, 5.

II. *n.* **14.** In *printing:* (*b*) Same as *mackle.* —**16.** In *lawn-tennis*, two successive faults in serving.—**17.** In *base-ball*, a play in which a fielder, either alone or with assistance, puts out two runners before the ball is returned to the pitcher for delivery.—**18.** In *astron.*, two stars which seem one to the unaided eye, but which are seen separated through the telescope. *Optical doubles*, probably very rare, are composed of two stars nearly in line with the observer, one of them far beyond the other, each having its own proper motion. *Physical doubles* are actually near together, and revolve around their common center of gravity; also, and more usually, called *binaries.* A *spectroscopic double* or *binary* is one in which the stars are too close to be separated by the telescope, but of which the duplicity is shown by the periodic doubling or shifting of lines in the spectrum. *Visual doubles* are pairs of stars near each other, but not so near as to require a telescope to separate them; α Capricorni and θ Tauri are typical examples.

19. *pl.* Sheet-iron plates, from 0.020 to 0.035 of an inch thick, which are ready for tinning. The term is also applied to plates which have already received an extra thick coating of tin and which have, besides, been hammered to make the tin adhere more firmly to the iron. —**Double and twist,** two strands of yarn twisted together; a two-ply thread.

double, *v.* **I.** *trans.* **8.** In the manufacture of spirituous liquors, to distil a second time (the low wines or weak spirit obtained in the first distillation), thus producing a liquid of increased alcoholic strength. *Sadtler*, Handbook of Indust. Chem., p. 225.—**9.** In *shipbuilding*, to cover (a surface, particularly part of a deck or of the exterior of a vessel), with two thicknesses of plating or planking.—**To double pawns,** in *chess*, to play so that two pawns of the same color are placed on the same file or row.—**To double rooks,** in *chess*, to place both rooks on the same file or row.

II. *intrans.* **6.** *Milit.*, to move with the double-quick step.

The Garrison Artillery lined the parapet . . . and cheered themselves hoarse as the British Infantry *doubled* along the road to the main Gate of the City.
R. Kipling, Soldiers Three, p. 399.

7. In *printing:* (*a*) In *type-setting*, to repeat words or lines through negligence. (*b*) In *presswork*, to make a second impression over the first.—**8.** In *billiards*, to cause an object-ball, almost invariably the first, to go to and return from a cushion, either for pocketing or for caroming.—**9.** In *base-ball*, to put out two men on one play. See ★*double*, *n.*, 17.

double-bowed (dub′l-boud), *a.* *Naut.*, said of a vessel in which both ends are alike, so that it is able to move in one direction or its opposite with equal facility without turning, as a ferryboat. *White*, Manual of Naval Arch., p. 699.

double-claw (dub′l-klâ), *n.* The unicorn-plant. See *Martynia.*

double-cropping (dub′l-krop″ing), *n.* The raising of two or more crops on the same land in one season. This is accomplished by means of companion crops and succession crops (see ★*crop*).

doubled (dub′ld), *p. a.* **1.** Made double; duplicated.—**2.** In *music*, reinforced by its octave: said of a tone in a melody or a chord.—**Doubled pawn, rook.** See *to double pawns, to double rooks*, under ★*double.*

double-double (dub′l-dub″l), *n.* A multiple star composed of two pairs. Epsilon Lyræ is perhaps the best example. Each pair is itself binary, and the two pairs (probably) revolve around their common center of gravity in a much longer period.

double-ender, *n.* **3.** A locomotive having either a truck or a pilot at each end: intended to haul trains in either direction without being turned.—**4.** A double-pointed file.

double entente (dö′bl oṅ-toṅt′). [F., 'double meaning.'] See *double entendre.*

double-ganger (dub′l-gang″ėr), *n.* [G. *doppelgänger.*] The apparition of a living person; a double; a wraith.

Either you are Hereward, or you are his *double-ganger.*
Kingsley, Hereward, xix.

double-geared (dub′l-gērd), *p. a.* Having two changes of the speed by means of gears, as in the back-gears of a lathe. This term is applicable only to the number of gear reductions, and not to the amount of change in the acting force which depends on the ratios of the diameters of the gears.

double-header, *n.* **2.** In *lumbering*, a place from which it is possible to haul a full load to the landing, and where partial loads are topped out or finished to the full hauling capacity of teams.

double-jacketed (dub′l-jak″et-ed), *p. a.* Fitted with two walls. The cavity between the walls may be filled with steam while the outer layer is covered with a non-conducting covering, or the double jacket may be of two layers of poor conductors of heat.

They are fitted with a strong bottom hoop and bands round the sides, and can be *double-jacketed* for steam-heating if required. *Encyc. Brit.*, XXVII. 358.

double-leaf (dub′l-lēf), *n.* Any plant of the genus *Ophrys.* Also called *twayblade* (which see).

double-lop (dub′l-lop), *a.* Having the ears bent directly downward: said of a rabbit.

The ears . . . hang down by the side of the head like a *double-lop* rabbit. *Encyc. Brit.*, X. 709.

double-opposed (dub′l-ọ-pōzd″), *a.* In *mach.*, composed of two parts which are opposed to each other either in position or in action. A double-opposed engine is one having two cylinders which are placed on opposite sides of the shaft and hence tend to balance each other when running.

double-ply (dub′l-plī), *a.* Made up of two layers or thicknesses: said of manufactured articles, such as hose or rubber belting, in which layers of canvas alternate with layers of rubber fabric. In double-ply hose there are two layers of canvas and three layers of rubber.

double-ported (dub′l-pōr″ted), *a.* Having two ports which open simultaneously so as to give a large opening with small motion: said of engine-valves.

double-riveted (dub′l-riv″et-ed), *a.* Having two rows of rivets in each joint. In lap-riveting this necessitates only two rows of rivets, while for butt-joints two rows are needed on each side of the butt, making four rows in all.

double-spar (dub′l-spär), *n.* Same as *doubly refracting spar.* See *calcite.*

double-standard (dub″l-stan′därd), *a.* That may be registered in two classes: applied to cattle. Thus the double-standard polled Durhams may be registered as shorthorns or as polled Durhams.

double-suspension (dub″l-sus-pen′shọn), *a.* Having a perch gear and the body suspended upon four elliptic and four C-springs, leather braces connecting the body to the C-springs: said of a coach.

doublet, *n.* **1.** (*c*) In *billiards*, the doubling of a ball. See ★*double*, *v.* II. 8.

5. In *organ-building*, a two-feet stop, or fifteenth. See *stop*1, 6. **Doublet game.** See ★*game*1. —**Photographic doublet,** a combination of four simple lenses arranged in pairs separated from each other by a distance equal to about three times the diameter of the lenses. This combination is used in astronomical photography, and possesses the advantage over other types of lenses used in this work, and also over reflecting mirrors, that it covers a comparatively large field.

double-thong (dub′l-thông), *v. t.* To strike or lash with the doubled thong of a whip: as, to *double-thong* the off-wheeler, in driving.

double-threaded (dub′l-thred″ed), *a.* **1.** Having or sewing with two threads, as a sewing-machine having both needle and shuttle.—**2.** Having two screw-threads which start at points 180 degrees apart and have each twice the pitch which appears from measuring from the tip of one thread to the tip of the next parallel to the axis. Double-threaded screws give very rapid motion to the nut.

doubleton (dub′l-ton), *n.* [*double* + *-ton*, as in *simpleton.*] In *whist* and *bridge*, a two-card suit.

double-tongue, *n.* **2.** A kind of dwarf butcher's-broom, *Ruscus Hypoglossum*, of southern Europe: so called from the appearance of the cladodes. See *Ruscus.*

double-tooth (dub′l-töth), *n.* The nodding bur-marigold or water-agrimony, *Bidens cernua*, translating the genus name.

double-touch, *n.* **2.** In *organ-building*, an adjustment of the keyboard action by which different effects are produced when the keys are depressed partially or wholly, so as to permit of a decided differentiation between simultaneous tones.

doubling, *n.*, **2.** (*d*) In *ship-building*, a second thickness of plating or planking covering a surface, particularly part of a deck or of the exterior of a vessel.

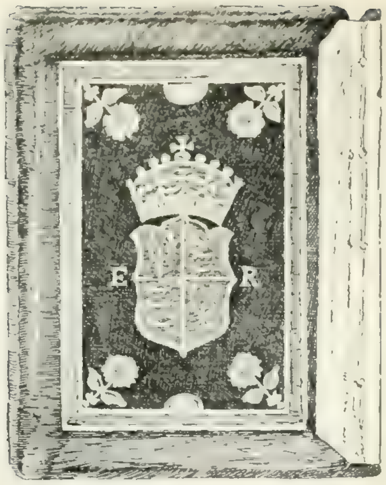
7. (*a*) In *textile-manuf.*, any process of combining two (or more) slivers and drawing them into a single sliver of smaller size than any of the separate ones, for the purpose of making more uniform roving. (*b*) In *weaving*, the process of winding two threads or rovings upon a spool or bobbin.—**8.** In *biol.*, same as *reduplication:* said of the chromosomes and centrosomes of the cell when they undergo fission.—**9.** In *bridge*, the act of doubling the value of the trick points after the dealer's side has declared. See ★*bridge*2.—**10.** In the production of metallic antimony from its ore, the remelting of the singles, or lumps of crude metal first obtained, and the mixing, in due proportion, of those containing surplus iron and those containing unseparated sulphur. The product of this second fusion is called *bowl-metal* because poured out into and solidified in a bowl of cast-iron.—**11.** In *bookbinding*, the thickening of the covers of a book by the addition of thick paper or thin boards.—**Doubling in balk,** in *billiards* and some kinds of *pool*, a mode of pocketing by first driving the object-ball to a cushion, this ball and the cue-ball being within the string-line.

doubling-frame, *n.*—**Flier doubling-frame,** a modified form of a throstle spinning-machine for the twisting together of two or more threads.

doublure (dub-lūr′), *n.* [F. *doublure*, a lining, < *doubler*, double, *v.*] **1.** The ornamental lining on the inner covers of a sumptuous book. The simpler styles are of silk, velvet, or brocade. Highly decorated books have linings of thin leather, with borders or centerpieces hand-tooled in gold. See cut on page 392.

One of Edward's books, however, has actually the first instance in an English book of a decorated "*doublure*," the name by which we understand the inner side of the boards of a book.
C. Davenport, in Portfolio, N. S., XXX. 28.

2. In *paleon.*, the reflexed inferior margin of the carapace in the *Trilobita*, specially noticeable on the cephalon and pygidium.



Doublure of Prayer-book of Edward VI.

douche (dösh), *v. t.* [*douche, n.*] To apply a douche to.

doucin (dö-saṅ′), *n.* [F.] A variety of dwarf apple-tree on which other kinds are grafted or budded when it is desired to secure a tree of small stature. Dwarf apple-trees are usually regarded as of two general types or tribes, the paradise and the doucin. The paradise is the smaller of the two; the doucin is used when a tree of intermediate stature is desired. Dwarf apple stocks are propagated by layers; any variety of apple can be grafted on them.

dough, *n.* **4**. Money; 'boodle.' [Slang, U. S.] —**Sour dough,** in Germany, the leaven used in making black rye bread. It consists of old dough which has been exposed to the air in a moist condition and has entered upon both alcoholic and lactic-acid fermentation.

dough-bag (dō′bag), *n.* A money-bag, especially one full of money for corrupt purposes; a corruption fund. [Slang, U. S.]

dough-belly (dō′bel″i), *n.* The steel-back chub, *Campostoma anomalum.* (Indiana). See cut, under *Campostoma.* [Local, U. S.]

dough-boy, *n.* **2**. An infantry soldier. [Colloq., U. S.]

dough-day (dō′dā), *n.* A day shortly before an election, on which the 'dough,' or money, for use (chiefly in purchasing votes) in the election is distributed to the 'workers' of a party. [Slang, U. S.]

dough-divider (dō′di-vī″dėr), *n.* A machine for cutting dough; a doughing-machine (which see). There are two sizes made: one for cutting the dough into thirty pieces, used for making rolls, biscuits, etc.; the other for cutting it into fifteen pieces, used for bread-loaves.

dough-head (dō′hed), *n.* A blockhead; a stupid fellow; a fool. [Slang, U. S.]

dough-mixer (dō′mik″sėr), *n.* A machine for mixing dough.—**Screw dough-mixer,** a dough-mixer which is operated by means of an iron or steel screw on a horizontal shaft. The dough is mixed and pressed through a circular iron box on to a platform.

dough-molder (dō′mōl″dėr), *n.* A machine for rolling and molding dough to prepare it to be placed in pans.

dough-trough (dō′trôf), *n.* A long box made of wood or iron, about 2 feet wide, 1½ deep, and from 8 to 12 long, in which dough is mixed by hand and left to prove or rise. It is also used to receive dough from the doughing-machine.

douglasite (dug′las-īt), *n.* [*Douglashall*, near Stassfurt, + *-ite*2.] A hydrated chlorid of potassium and ferrous iron found at Stassfurt, Germany.

Douglas's fold, ligament, or **line.** See ★*fold*1.

Douglas's fossa. Same as *rectovaginal pouch* (which see, under *pouch*).

Doukhobor (dö′kọ-bôr), *n.* See *Dukhobortsi.*

douma, *n.* See ★*duma.*

douping (dou′ping), *n.* [**doup*, *v.* (< *doup, n.*) *-ing*1.] In weaving gauze or leno fabrics, the arrangement of the doup-threads in the heddles and reed for crossing or twisting about others.

douping-warp (dou′ping-wârp), *n.* Same as ★*whip-thread.*

doup-thread (doup′thred), *n.* In *weaving*, a thread having a doup or loop at the end.

dourine (dö-rēn′), *n.* [Origin not ascertained.] A disease of horses, affecting chiefly the genitals and hind legs, thought to be due to the presence of a protozoan parasite, *Trypanosoma equiperdum.*

dourra (dö′rạ̈), *n.* See *durra.*

dout, doutful. Simplified spellings of *doubt, doubtful.*

douzain (dö-zaṅ′), *n.* [F.: see *dozen.*] **1.** A stanza of twelve lines.—**2.** A French plated or billon coin, the twelfth of the franc d'argent under the Valois kings and the twelfth of the silver écu d'argent under Louis XIII. and his successors.

douzaine (dö-zān′), *n.* [F.: see *dozen.*] An administrative council of twelve elected men. [Channel Islands.]

douzainier, douzenier (dö-zān-yēr′), *n.* [F., < *douzaine.*] A member of a body of an administrative council of twelve. [Channel Islands.]

Dove of Noah, *Columba Noachi*, a small modern constellation south of Lepus and close to the feet of Canis Major.—**Scaled dove, scaly dove.** See *scale-dove.*

dove-petrel (duv′pet″rel), *n.* Any of the small petrels of the genus *Prion*, especially the type species *P. turtur*, common in southern seas. The name was suggested by the size and color of the bird.

dove-pox (duv′poks), *n.* An infectious disease of doves identical with pigeon-pox. See ★*pigeon-pox.*

dover2 (dō′vėr), *n.* A clasp-knife of a kind originally made by a cutler named Dover. [Australia.]

Dove's law of the rotation of the winds. See ★*wind*1.

dovetail, *n.* **2**. *pl.* Two irons, one with a flange, the other with a recess, cut to a taper: used to hold carriage-doors in position.

dovetail-fish (duv′tāl-fish), *n.* A fish, *Abudefdul taurus*, of the family *Pomacentridæ:* found on the coast of Barbados.

dovetailing-machine (duv′tāl-ing-ma-shēn″), *n.* A machine for making the recesses which are to receive a dovetail-shaped tenon. The stock is cut away by a rapidly revolving cutter-head of the desired section, fed in against the end of the piece to be jointed and regulated for depth and for distance apart by cams and feed-devices. The tenons can be similarly cut, and will be standard and duplicates of each other.

dove-tick (duv′tik), *n.* A cosmopolitan tick, *Argas reflexus*, which inhabits dove-cotes and sucks blood for nourishment, but which is capable of living for at least two years without food. Also called *pigeon-tick.*

dove-weed (duv′wēd), *n.* The spotted spurge or milk-purslane, *Euphorbia maculata:* so named because its seed-capsules are a favorite food of the ground-dove. Also called *spotted eyebright.* [West Indies.]

dove-whistle (duv′hwis″l), *n.* A light whistle, single or compound, attached to pigeons and sounded by their flight against the wind. It is used in China and other countries of eastern Asia. Also *pigeon-whistle.*

dow6 (dou), *n.* [Hind. *dāo*, Burmese *dāh.*] A hewing-knife which serves on occasion as a sword. [Anglo-Indian.]

dow. An abbreviation of *dowager.*

dowdyism (dou′di-izm), *n.* The quality of being dowdy in dress or appearance; lack of smartness or 'style' in dress.

dowel-mill (dou′el-mil), *n.* A hollow cutter, which cuts on the inner face, used for making dowels.

dowel-plate (dou′el-plāt), *n.* An iron plate punctured with round holes, used for making dowels by driving the wood through the holes.

dowel-strip (dou′el-strip), *n.* **1.** A piece of stock from which round dowels are made.—**2.** A strip intended to receive dowel-pins and form a joint.

Dower by custom, in *common law*, the dower to which a widow became entitled by reason of some local or particular custom.—**Dower de la plus belle,** in *common law*, the process by which a widow was required to re-indow herself out of the lands held by her as guardian in socage, in order to release from dower the lands of her husband held in chivalry. This could be required by the guardian in chivalry when sued by the widow for dower. It was abolished with military tenures, of which it was an incident.—**Dower ex assensu patris,** in *common law*, the same as *dower ad ostium ecclesiæ* (which see, under *dower*2, 2), except that the property endowed belonged to the husband's father and was given by his consent.

dowlas, *n.* **2**. In modern use, a coarse cotton fabric made to imitate the linen cloth of the same name.

down2, *adv.*—**One down,** in *golf*, one hole down, or one hole by which the player is behind his opponent.

down2, **I.** *a.* **4**. In *stud poker*, said of the first card, which is dealt face down.

II. *n.* **2**. In *dominoes*, the first stone laid on the table.—**3.** A scrimmage in foot-ball. When a player is held so that he can no longer advance the ball, he cries 'down,' and the ball is then placed on that spot for a scrimmage.—**4.** A grudge or prejudice (against); a hostile attitude: usually with *on* or *upon:* as, to have a private *down* on one; the diggers had a *down* on made dishes. [Australia.]

down3, *n.*—**Vegetable down.** Same as ★*bombax cotton.*

down-bow (doun′bō), *n.* In *violin-playing*, a stroke of the bow downward, beginning with the nut: opposed to ★*up-bow.*—**Down-bow mark,** in violin music, a sign to use a down-bow, usually ⊓ or ⌐.

downcast, *n.* **3.** In *ship-building*, a duct or trunk with a cowl or hood at its upper end, arranged to drive air down into the interior of a vessel.

downcomer (doun′kum″ėr), *n.* **1.** Any tube or passage for leading solids or fluids downward.—**2.** A downtake.—**3.** The descending element of a sectional boiler, through which the cooler or heavier water descends in the process of circulation.—**4.** In a blast-furnace for smelting iron from the ore, a large pipe which takes combustible gas from the top of the furnace-shaft and brings it down to boilers, stoves, engines, etc., in which it is burned as a source of heat.

down-draft, *n.* **II.** *a.* Pertaining to a current of air or gas which flows downward: used in connection with furnaces. In down-draft furnaces the current of air is admitted on top of the grate and passes down through it.

down-faulted (doun′fâl″ted), *a.* Depressed by faulting to a relatively lower level.

> It was shown that the coals occur in a *down-faulted* block of coal measure beds surrounded by Pocous strata.
> *Science*, March 15, 1901, p. 426.

down-grade (doun′grād), *n.* and *a.* **I.** *n.* A downward sloping portion of a road or railway; hence, figuratively, a downward moral course.

II. *a.* Sloping downward; hence, relating to a downward moral course.

downmost (doun′mōst), *adv.* and *a.* Farthest down: opposed to *upmost* or *uppermost.*

> They affected to champion the cause of the "*downmost* man." *New York Independent*, June 14, 1900, p. 1440.

downright, *a.* **II.** *n.* One of the lower qualities or sorts of a fleece of wool. *Hannan*, Textile Fibres of Commerce, p. 191.

downtake, *n.* **2.** A passage or tube leading downward through which a material, as coal, ore, etc., is poured into hoppers or carts.

down-thrust (doun′thrust), *a.* Pertaining to or resulting from a downward movement, as in faults.—**Down-thrust fault,** a normal or gravity fault; one in which the chief movement is a downthrow of one side of the fault in the direction of the hade.

dowress (dou′res), *n.* A woman possessed of or entitled to the possession of a dowry.

dozen (duz′n), *v. t.* To make up into bundles of twelve, as certain kinds of dressed hides.

> The next day wipe off grain with flannel, and stock is finished, and may be sorted and *dozened* to ship away.
> *C. T. Davis*, Manuf. of Leather, p. 376.

D. P. An abbreviation of *Doctor of Pharmacy.*

d. p. In *elect.*, an abbreviation for *double pole.*

D. P. H. An abbreviation of *Diploma in Public Health.*

D. P. O. An abbreviation of *distributing post-office.*

D. P. S. An abbreviation of *Doctor of Physical Science.*

dpt. An abbreviation (*b*) of *department.*

drab2, *n.* **3.** An English collectors' name for a number of noctuid moths of a drab color: as, the clouded *drab, Tæniocampa instabilis;* the northern *drab, T. opima;* the lead-colored *drab, T. populeti.*

drac (drak), *n.* [Pr.; cf. *drake*2, *dragon.*] In southern France, formerly, an elf of popular fancy.

drach. A contraction of *drachma*, a drachm.

Draconism (drā′kọ-nizm), *n.* [Gr. Δράκων, L. *Draco*(*n*-), Draco, + *-ism.*] Draconic severity; harshness: as, the *Draconism* of the slave laws.

dracuncular (drạ-kun′kụ̄-lạ̈r), *a.* Relating to or caused by the guinea-worm, *Dracunculus medinensis.*

draf, *n.* A simplified spelling of *draff.*

draft1, *n.* **12.** *Draft aft* is that measured at the stern; *draft forward*, that measured at the bow; *mean draft*, the average between that at the bow and the stern, or that measured at the middle of the length; *draft extreme*, that measured to the lowest projecting portion of the vessel, as the rudder or the propellers when they are below the lowest point of the keel; *light draft*, that at light displacement; *load draft*, that at load displacement. See ★*displacement.*

34. In *textile-manuf.*, the amount of attenuation of a lap, sliver, or roving effected by

drawing it between rollers running at different speeds.—**35.** A body or bunch of cattle which have been separated from the rest of the herd. See *draft*[1], 10. [Australia.] **Direct draft,** an arrangement of the flues for the products of combustion such that these products move always in the same direction toward the chimney. **Fan draft,** a system of supplying the air for the combustion of coal in boiler-furnaces by means of mechanically driven fans or blowers.

Fan draught is also of great value under unfavourable conditions, such as hot weather, calms, or following winds, giving a command of steam not possible with funnel draught and ordinary ventilators.
White, Manual of Naval Architecture, p. 563.

Forced draft, an accelerated draft produced by supplying air to the furnace at a greater pressure than that of the atmosphere. **Induced draft,** an accelerated draft caused by drawing the gases away from the furnace by a centrifugal fan or other device, so that the pressure within the furnace and flues is less than that of the atmosphere. **Mechanical draft,** draft for a furnace which is produced by some mechanical contrivance such as a blower, steam-jet, etc., as distinguished from a *natural draft* produced by a chimney.—**Skip-shaft draft,** a plan for a plain weave (as for calicoes), with four or more shafts or harnesses in a loom, by skipping from the first shaft to the third in drawing in the warp-threads through the heddles, then from the second to the fourth, and so on.—**Straight-over draft,** the process of drawing in warp-threads for a loom through the harnesses in their regular order.

draft[1], *v. t.* **6.** In *cotton manuf.*, to attenuate (a lap, sliver, or roving) by drawing it between rollers which run at different speeds.—**7.** To separate (and sort) from the herd: as, to *draft* cattle. See def. 3. [Australia.]

draft-cord (dräft'kôrd), *n.* A cord or small rope attached to the draft-scroll on a spinning-mule.

draft-engine (dräft'en″jin), *n.* **1.** An engine used to cause a current or draft of air or other gas through flues.—**2.** An engine for hauling. This is an improper use: such an engine is a traction-engine if mobile and a windlass or derrick if stationary.

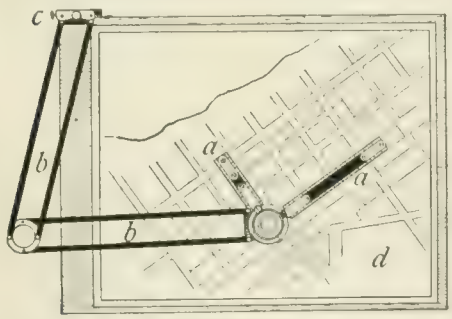
drafter (dräf'tèr), *n.* **1.** One who drafts; one who drafts a document: as, the *drafters* of the Constitution of the United States.—**2.** One employed in a drafting-yard to sort out sheep. [Australia.]—**3.** A draft-horse.

draft-furnace (dräft'fèr″nās), *n.* A furnace used in a primitive method of ventilating mines or shafts. It was placed at the base of the shaft, so that a column of air heated by it should rise and carry out with it the air or gases to be removed. In modern plants this ventilating is effected by fans.

draft-gage (dräft'gāj), *n.* A gage for measuring the force of a draft by ascertaining the difference in pressure between a point in the course of the draft and the pressure of the atmosphere.

draft-gear (dräft'gēr), *n.* In *car-building*, the entire system of couplers, draw-bars, springs, etc., used to connect one car with another or to the locomotive.—**Continuous draft-gear,** a draft-gear extending by means of rods, called *draft-rods*, from one draw-bar of a car to the other, and designed to distribute the pulling strains when the car is being hauled.—**Friction draft-gear,** a form of draw-head for railway-cars in which the action of the usual spring attachment is retarded by introducing friction surfaces which must move upon each other when shocks of traction or retardation occur.

drafting-machine (dräf'ting-ma-shēn″), *n.* An appliance for the rapid and accurate drawing



Drafting machine.
a, a, square; *b, b*, pivoted arms; *c*, fixed point of support on board; *d*, map.

of plans, diagrams, and mechanical drawings. It consists of a graduated square having extension arms which in a normal position are at a right angle and can be adjusted to other angles when desired. It is provided with two parallel arms hinged at the outer end to two more arms, which are, in turn, hinged to a fixed point on the edge of the drawing-board. The combined arms permit of a free movement of the square over the board, and yet keep it at all times at the same relative angle.

drafting-room (dräf'ting-röm), *n.* Same as *drawing-room*[1].

drafting-yard (dräf'ting-yärd), *n.* A stock-yard which has many small yards or pens arranged for sorting sheep. [Australia.]

draft-scroll (dräft'skrōl), *n.* A scroll on a spinning-mule for regulating the draft of the roving. *C. Vickerman*, Woollen Spinning, p. 233.

draft-tube (dräft'tūb), *n.* An air-tight tube which descends from the bottom of a turbine-casing into the tail-race, with its lower end below the surface of the water in the latter. The atmospheric pressure is balanced in part by the height of the water column, so that the motor can be placed above the level of the tail-race and yet suffer no loss of effective working head. This lessens the weight of the transmission shaft, and the turbine need not be placed so low as to be inaccessible. Applicable principally to downward flow wheels.

draft-wheel (dräft'hwēl), *n.* On a machine for textile-fibers, a gear for regulating the speed of the draft rollers for attenuating the sliver, roving, lap, etc.

drag, *n.* **Collapsible drag** (*naut.*), a drag which folds up into a comparatively small compass, such as the cornucopia and umbrella drags. **Cornucopia drag** (*naut.*), a heavy iron ring, varying in size according to the tonnage of a vessel, to which is laced a funnel-shaped canvas bound on the seams with rope. At the pointed end of the canvas a small iron eye is secured into which the tripping-line is bent; and a four-part bridle is formed at the mouth end of the bag by continuing the rope a couple of fathoms and ending it in an iron ring to which the hawser is secured with two half-hitches and a stopped end. The weight of the iron ring is generally sufficient to keep the mouth of the bag down in the water. After the hawser has been led through the hawse-pipe or over the bow-chock, it is bent on to the bridle-eye and the drag is tossed over the bow. A long scope of hawser is given to the drag, and the tripping-line, which is employed for reversing the drag and getting it on board, is kept well slack.—**Folding drag** (*naut.*), a hinged or swiveled set of wooden or iron frames to which is laced a shape of canvas. **Kite drag** (*naut.*), a form of drag popular among English seamen, consisting of several spars lashed together at or pinned through the center. When spread out they resemble the sticks of a kite. Around the outer ends of the spars, and encircling them, a chain is passed, and to this chain is laced a baggy canvas shaped to the frame. A bridle leads from the four spars to which the towing hawser is made fast, and a tripping-line is bent to the end of one of the spars to capsize the kite and haul it on board horizontally. **Portable drag** (*naut.*), a drag, easy of transportation, such as the cornucopia drag.—**Propeller drag** (*naut.*), the drag which the propeller exercises in a heavy sea if the engines are stopped and the vessel is allowed to take up its own position.—**Spar drag** (*naut.*), a single spar with a bridle leading from its extremities, into the slings of which a hawser is made fast. To the center of this spar a kedge-anchor is secured to hold the spar down in the water and to give it additional resisting power, and to one of its ends a tripping-line is made fast.—**Umbrella drag** (*naut.*), a patented folding drag, built like an umbrella, to a ring in the handle of which the hawser is bent, while the tripping-line is secured to a ring in the ferrule.

drag-bench (drag'bench), *n.* Same as *draw-bench*.

drag-buck (drag'buk), *n.* See ★*buck*[6], (*c*).

drag-cart (drag'kärt), *n.* Same as ★*bummer*, 3.

drag-lines (drag'līnz), *n. pl.* In *geol.*, a set of cross-striæ which are produced on the lee sides of older striæ. *T. C. Chamberlin*, in U. S. Geol. Surv., 1885-86.

dragma (drag'mä), *n.*; pl. *dragmata* (-ma-tä). [NL., < Gr. δράγμα, a handful, a sheaf.] In sponge-spicules, one of the microscleres, of which there are several in a cell or scleroblast, lying in sheaves.

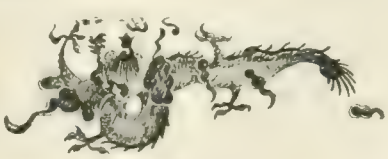
drag-mill (drag'mil), *n.* A mill for grinding ore by dragging massive rollers over the mass to be pulverized; an arrastre.

drag-nut (drag'nut), *n.* A nut on a bar, bolt, or rod for drawing two parts of a mechanism toward each other, or the reverse.

dragomanate (drag'ō-man-āt), *n.* [*dragoman* + *-ate*[3].] The office of a dragoman; the interpreter's department: as, the consular *dragomanate*.

dragomanic (drag'ō-man-ik), *a.* [*dragoman* + *-ic*.] Of or pertaining to a dragoman: as, *dragomanic* expenses.

dragon, *n.* **10.** The larva of a European notodontid moth, *Hybocampa millhauseri*, having remarkably angular outlines and conspicuous corners and humps, so that it resembles an oak-leaf curled and eaten by a tortricid larva. —**11.** The hellgrammite fly, *Corydalus cornutus*. [Local, eastern U. S.]—**Blue dragon.** Same as *Broseley* ★*dragon*. **Broseley dragon,** a


Broseley Dragon.

design used extensively by Thomas Turner of Caughley, near Broseley, England, in the decoration of tableware, in the latter part of the eighteenth century. This pattern was almost as celebrated as his willow pattern. Also called *blue dragon*.—**Dragon green.** Same as *malachite green*.—**Flying dragon,** a meteor with a luminous train.—**Order of the Double Dragon.** See ★*order*.—**Water-dragon.** See *water-dragon*.

dragonade, dragonnade (drag-ō-nād'), *v. t.*; pret. and pp. *dragonaded* or *dragonnaded*, ppr. *dragonading* or *dragonnading*. [*dragonade*, *n.*] To persecute by methods similar to those of the dragonades.

dragonet, *n.*—**Sword-dragonet,** a common name of the fish *Callionymus lyra*.

dragon's-blood, *n.* **2.** In *ceram.*, a red color resembling arterial blood, with iridescence, in places, due to the presence of copper; a variety of sang-de-bœuf.

dragon's-claw (drag'onz-klä), *n.* The coral-root, *Corallorhiza odontorhiza* or *C. multiflora*: so called from the claw-like form of the root.

dragon's-mouth (drag'onz-mouth), *n.* **1.** The snapdragon.—**2.** A terrestrial orchid, *Arethusa bulbosa*, of eastern North America, with gaping flowers.

dragon's-skin (drag'onz-skin), *n.* A name given by coal-miners to decorticated trunks and slabs of *Sigillaria* and *Lepidodendron*, from the resemblance of the scars to the scales of reptiles.

dragon's-tongue (drag'onz-tung), *n.* An occasional name of the spotted wintergreen, *Chimaphila maculata*.

drag-road (drag'rōd), *n.* Same as ★*dray-road*.

drag-sled (drag'sled), *n.* Same as ★*dray*[1], 3.

dragsman, *n.* **3.** One engaged in dragging a river, lake, pond, harbor, or the like, in search of something.

drain, *n.* **2.** (*d*) In *ship-building*, a large pipe which runs through or above the double bottom of a war-ship and is connected with the principal pumps to remove water from the various compartments. The *main drain* is from 12 to 15 inches in diameter, has openings into the large compartments controlled by valves, and is intended to pump out the water in case of damage by grounding, collision, etc. The *secondary* or *auxiliary drain* is also connected with all the large compartments and is used for all ordinary pumping. —**Block drain.** Same as *plug* ★*drain*.—**Bush, brush-wood,** or **wood drain,** an old style of drain consisting of poles or fagots placed at the bottom of a trench and covered with soil. The water passes among the material while it lasts, then through the cavity left by its decay. Of the same type are *spray drains* and *straw drains*, in which branches and straw are used.—**Cobble** or **cobble-stone drain.** Same as *rubble drain* (which see, under *drain*). *W. I. Chamberlain*, Tile Drainage, p. 29. —**Mole** or **mole-plow drain,** a drain made by a mole-plow, consisting of a cylindrical channel communicating with the surface by a slit which is closed by a furrow-slice.—**Plug drain,** a drain formed by placing in the bottom of a trench a row of connected poles or fagots and puddling clay over these, then drawing the poles along and repeating the process. Also called *block drain*. [Great Britain.]—**Sheep-drain,** one of the small ditches often made in upland pastures in Great Britain.—**Shoulder drain.** See *wedge-and-shoulder* ★*drain*.—**Stone drain,** either a rubble drain (which see, under *drain*) or one made with flat stones at the bottom of a trench so placed as to secure a passage, the trench above being filled with soil.—**Turf** or **wedge drain,** a drain formed by cutting a trench with or without ledges at the bottom and inserting turf, grass side down, to be supported either by the ledges or merely by its wedging, the space above being filled with soil. [Great Britain.]—**Wedge-and-shoulder drain** or **shoulder drain,** a turf drain which has ledges or shoulders.

drainage, *n.*—**Adjusted drainage,** a drainage-system in which the streams and valleys have come, by spontaneous changes, to follow chiefly the belts of weak rock, while the ridges and divides follow the belts of resistant rock. Rivers and divides also are similarly adjusted.—**Antecedent drainage.** See ★*antecedent*.—**Arterial drainage,** that part of drainage which is effected through large open channels which are either artificial water-courses or natural ones improved: opposed to *minor* ★*drainage*.—**Autogenetic drainage.** See ★*autogenetic*. —**Deep drainage.** Same as *thorough* ★*drainage* (*a*).—**Drainage cycle,** the initiation, development, and maturity of drainage of any given region to the time of interruption introduced by new conditions.

"The old drainage of this basin presents some interesting peculiarities, and the interpretation of these will enable us to determine some of the deformations of the basin during the development of this old *drainage cycle*."
W. G. Tight, U. S. Geol. Surv., Professional Paper 13, p. 76.

Dumb-well drainage. Same as *sink-hole* ★*drainage*. —**Epigenetic drainage.** Same as *inherited* ★*drainage*. —**Essex system of drainage,** an earlier British method of drainage in which drains of the bush and straw type (which see, under ★*drain*) were placed under each, or each second or third, water-furrow; hence, also called *furrow drainage*.—**Inherited drainage,** streams the courses of which have been determined by the slope of a once overlying series of strata now removed by erosion so as to disclose rock structures of another arrangement with respect to which the streams manifest no sympathy. Also called *superposed* or *epigenetic drainage*. **Minor drainage,** deep or thorough drainage as opposed to arterial ★drainage (which see).—**Mole drainage,** drainage with mole ★drains (which see).—**Parallel drainage.** Same as

thorough ★*drainage* (*a*). **Sink-hole drainage,** the draining of land which is underlain by an impervious clay, by sinking a shaft through the latter into a bed of gravel beneath. This is Elkington's system of drainage. Also called *dumb-well* and *swallow-hole drainage*. [Great Britain.] **Superposed drainage.** Same as *inherited* ★*drainage*. **Surface drainage,** draining by open furrows and ditches and natural watercourses. **Swallow-hole drainage.** Same as *sink-hole* ★*drainage*. **Thorough drainage.** (*a*) In *agri.*, drainage by means of thoroughs (see *thorough*, *n.*, 1 (*b*)); specifically, underground drainage by any of the modern systems, including the Essex (see above). The latter was followed by a system of parallel drains, somewhat shallow and rather closely placed, devised by Smith of Deanstone; this was displaced (but only temporarily) by Parkes's system of deeper and more distant drains. Also called *deep* and *parallel drainage*. [Mainly Great Britain.] (*b*) In *surg.*, drainage of a cavity by a tube which opens at the surface at two opposite points, allowing irrigation and drainage of the cavity without disturbance of the dressings.—**Tile drainage.** See *drain-tiles*, under *tile*[1]. **Underground drainage,** drainage by any system of closed drains; underdrainage. Underground drainage secures the benefits of drainage in the highest degree and escapes the disadvantages of surface drainage.

drainage-area (drā′nāj-ā″rē-ā), *n.* The entire basin drained by a river and all its tributaries.

drainage-level (drā′nāj-lev″el), *n.* A nearly horizontal tunnel in a mine or other underground working to receive and gather the water from upper levels, so that it can be pumped out.

drainage-way (drā′nāj-wā), *n.* A drain or drain-way; a drainage-channel.

drainer, *n.* **3.** A vessel or bag in which moist substances are put to drain.

draining (drān-ing), *n.* The drawing or running off of water, especially the artificial removal of water from land by surface or underground channels; drainage. Different methods are known, as *bush draining*, *furrow draining*, *mole draining*, *plug draining*, *thorough draining*, *tile draining*, etc. See ★*drain* and ★*drainage*.

drain-tube (drān′tūb), *n.* A drip-pipe; a pipe for draining the water from the cylinder of an engine or a pump.

drake[2], *n.* **4.** (*b*) Any one of several pseudo-neuropterous insects used as bait by fishermen, especially certain May-flies. *Ephemera danica* and *E. vulgata* are known to English fishermen as the *green drake* and the *gray drake*.—**5.** A man-of-war of the Vikings. *Marryat. N. E. D.*

dram[2] (dram), *v. t.*; pret. and pp. *drammed*, ppr. *dramming*. [*dram*, *n.*] To ascertain the fineness or size of by dram weight, as of a silk thread or yarn.

dram. An abbreviation of *dramatic* and *dramatist*.

dramaticism (dra-mat′i-sizm), *n.* [*dramatic* + *-ism*.] Dramatic character or quality.

dramaturgic, *a.* **2.** In *anthrop.*, bringing about effects by means of a dramatic performance, as in cases where a myth is dramatized with a view of bringing about the events the origin of which is accounted for in the myth. *F. H. Cushing*, in 13th Rep. Bur. Ethnol., p. 375.

drammage (dram′āj), *n.* [*dram* + *-age*.] The weight in drams of 1,000 yards of a raw-silk thread.

dranu (drä′nö), *n.* [Fijian name.] In the Fiji Islands, the giant taro, *Alocasia Indica*, the starchy root-stock of which is eaten by the natives in times of scarcity, though it is very acrid and often causes sickness. See ★*piga*.

drap d'été (drä′dā-tā′). [F., 'summer cloth.'] A fine woolen fabric for summer dresses.

Draper's actinometer, law. See ★*actinometer*, ★*law*[1].

drapery (drā′pėr-i), *v. t.*; pret and pp. *draperied*, ppr. *draperying*. [*drapery*, *n.*] To drape; cover with draperies.

> And then her dress—what beautiful simplicity
> *Draperied* her form with curious felicity.
> *Byron*, Don Juan, xvi. 102.

dratchel (drach′el), *n.* [Also *dratchell*, *drotchel*, *drotchell*; < *dratch*, *dretch*, linger, dawdle: see *dretch*[2].] A slovenly, untidy woman; a slattern. [Prov. Eng.] *Johnson*, Dict. of the Eng. Lang., 1755.

> She'll be a poor *dratchell* by then she's thirty, a-mar-r'in' a' that'n, a fore her teeth's all come.
> *George Eliot*, Adam Bede I. ii. 20.

drave (drāv), *n.* [Northern Eng. form of *drove*.] **1.** A fishing trip in which the members of the crew go as sharesmen, each supplying a net and receiving a share of the profits.—**2.** A haul. *N. E. D.*

Dravidian architecture. See *Indian architecture*, under *Indian*.

dravite (drav′it), *n.* [F., *Drave*, G. *Drau*, a river of Tyrol, Carinthia, etc., one of the tributaries of the Danube, + *-ite*[2].] A brown to black magnesian variety of tourmalin, found in the Drave district in Carinthia.

draw, *v.* **I.** *trans.* **31.** In *golf*, to 'pull' (a ball); to cause (it) to curve to the left.—**32.** To pull by means of a hook or similar device (threads of warp) through the heddle eyes of a loom.—**33.** In *organ-playing*, to pull out (a stop-knob) so as to cause a certain set of pipes to sound.—**34.** In *cotton-spinning*, to lengthen and attenuate (the sliver or roving) by drawing it between sets of rollers running at different speeds.—**35.** To make (wire, piping, or tubing) by drawing a piece of metal through successively diminishing holes in perforated plates.—**To draw stumps,** in *cricket*, to close a match finally, or for the day, by pulling the wickets from the ground. *E. H. Lyttelton*, Cricket and Golf, p. 114. **To draw to the ear,** in *archery*, to draw a bow so fully that the drawing hand is as far back as the archer's ear: a fault which makes against accurate shooting.

II. *intrans.* **13.** In *poker*, to discard part of the original hand and draw an equal number of cards so as to improve the value of the combination held.—**14.** In *agri.*, to effect drainage; to draw off water.

> A drain, in the language of farmers, is said to *draw*, which means that it renders the land dry on either side to a certain distance. *Low*, Pract. Agr., p. 268.

15. In *salt-boiling*, to take out from the pans the salt as it crystallizes and set it aside to drain.—**16.** In *cricket*, to turn the ball past the leg-wicket, by allowing it to glance off the bat and pass between the wicket and the body. —**To draw away,** in *cricket*, to shrink away from a ball bowled at the legs: said of the batsman.—**To draw level,** in *cricket*, to equalize a score.—**To draw up.** (*e*) To assume an erect or stiff attitude: used reflexively: as, she *drew* (herself) *up* disdainfully. (*f*) To come up with; gain on an opponent, as in racing.

draw, *n.* **11.** In *poker*, the second part of the deal; the filling of the hands after discarding. —**12.** A depression in the land through which surface-water flows after rains; a basin-like valley convertible into an irrigation-reservoir by damming its outlet.

> One of the characteristic inhabitants of *draws* and low meadows . . . is *Vernonia gigantea*.
> *F. E. Clements*, Phytogeog. Neb., p. 307.

13. In *hort.*, the sprouts or shoots that spring from the tuber of the sweet-potato when it is placed in a seed-bed and by means of which the plant is propagated.—**14.** In *organ-building*, same as *draw-stop*. [Colloq.]—**Continuous draw,** in *archery*, a style of shooting in which the string is loosed and the arrow discharged immediately upon the completion of the draw, without the usual pause.—**Sand draw,** a channel filled with sand overlying a subterranean stream; also, the stream itself.

> A *sand draw* is a subterranean stream. On the surface is seen only a broader or narrower band of pure sand, marking the channel.
> *F. A. Rydberg*, Contrib. U. S. Nat. Herb., III. 470.

Spread draw, in *billiards*, a stroke by which the cue-ball rebounds from the object-ball at an angle more obtuse than that of the direct draw. It is not always possible to say where the spread ends and the draw begins.

draw-bowl (drâ′bōl), *n.* One of two wooden rollers, of cylindrical form, running in contact with each other for the purpose of drawing cloth from a bleaching-keir.

draw-box (drâ′boks), *n.* In *cotton-manuf.*, a set of three or more pairs of rollers attached to combing- and certain other machines for attenuating, or drawing out, the sliver.

draw-cock (drâ′kok), *n.* A drain-cock; a pet-cock; a valve for draining water out of an engine- or pump-cylinder.

drawer, *n.* **6.** One who draws warp-threads through heddles, preparatory to putting them into the loom.

draw-game (drâ′gām), *n.* A game of dominoes in which the player may draw from the boneyard when he cannot play.

draw-hole (drâ′hōl), *n.* A hole through which the spent ore is removed from a furnace.

draw-hook (drâ′hůk), *n.* **1.** The hook-end of a draw-bar in the construction used in automatic car-couplers. The hook is so made that when two cars are run together the hooks of the two draw-bars pass each other and are locked together by powerful springs. The hooking, in the best systems, takes place in a horizontal plane, although many efforts have been made to have the hooks operate in a vertical plane.
2. Same as ★*gooseneck*, 4 (*b*).

drawing-hand (drâ′ing-hand), *n.* In *archery*, the hand used to pull the string and hold the arrow against it in drawing a bow; ordinarily, the right hand: opposed to *bow-hand*, 1.

drawing-pliers (drâ′ing-plī″ėrs), *n. pl.* A pair of gripping-pincers used, in the process of drawing wire, to seize the stock and pull it through the hole in the draw-plate.

drawing-ring (drâ′ing-ring), *n.* In *archery*, a ring worn on the thumb of the drawing-hand by tribes which use a thumb-loose to catch and pull back the bowstring.

draw-iron (drâ′ī″ėrn), *n.* A swaged iron rod, fitted with a forged shackle near the branched end, used for attaching shafts to sleighs.

draw-kiln (drâ′kil), *n.* A lime-kiln so constructed that the burned lime is drawn at the bottom. *N. E. D.*

drawn, *p. a.* **7.** Abnormally tall and slender because of too much crowding and too little sunlight and air: said of a plant, particularly a seedling. Badly drawn plants are of little value.—**Drawn game,** in *chess*, a position in which the game is even or the advantage on one side too slight to secure victory. A draw may also be arrived at by perpetual check, by stalemate, or by failure to mate after having received notice to mate within fifty moves. Of late a draw counts half a point in a tournament. **Drawn glass,** glass which has been pulled and stretched when heated.

draw-pit (drâ′pit), *n.* A pit in a furnace for the reception of the exhausted ore.

draw-plate, *n.* **3.** A transverse plate connecting the side-frames in a locomotive and forming part of the framing to which the draw-bar is attached.—**Diamond draw-plates,** tiny flat plates made of diamonds which are drilled with minute holes, sometimes as small as the thousandth of an inch, for the purpose of drawing platinum, gold, iron, or copper wire.

draw-rod, *n.* **2.** A straight rod with a thread and nut at one end and an eye and thread and nut at the other, used to secure the draw-bar of a sleigh.

draw-shave (drâ′shāv), *n.* A surgical instrument resembling a drawing-knife, with a single long handle, used to remove thin slices of tissue or pathological growths from the interior of a cavity.

draw-sheet (drâ′shēt), *n.* In hospitals, a wide sheet so disposed on the bed that it can easily be drawn from under a patient who is lying upon it.

draw-shot (drâ′shot), *n.* In *billiards*, a shot in which the cue-ball is struck underneath its center, so that after hitting the object-ball it comes back toward the player; a draw. Draw-shots are *live* or *dead* according as the cue-ball, for the sake of position for the next shot, is returned fast or slow.

draw-skid (drâ′skid), *n.* Same as ★*brow-skid*.

draw-stroke (drâ′strōk), *n.* In *cricket*, the stroke of the bat by which a draw is performed. *Hutchinson*, Cricket, p. 318.

draw-table (drâ′tā″bl), *n.* A draw-bench; a machine for drawing metal rods or tubes through a die to reduce them to a particular form and size.

draw-tube (drâ′tūb), *n.* One of the overlapping movable tubes of a field-glass or telescope.

drax (draks), *n.*; pl. *draces* (drā′sēz). [Gr. δράξ, a handful: akin to δραχμή, a drachm: see *drachm*, *dram*, *drachma*.] In the nomenclature of the spicular elements of sponges, a tuft of monaxial filaments.

dray[1], *n.* **3.** In *forestry*, a single sled used in dragging logs. One end of the log rests upon the sled.

dray[1], *v. t.*—**To dray in,** to drag logs from the place where they are cut directly to the skidway or landing.

dray-road (drā′rōd), *n.* In *lumbering*, a narrow road cut wide enough to allow the passage of a team and dray; a drag-road.

Dr. Bot. An abbreviation of *Doctor of Botany*, a European degree.

Dr. Chem. An abbreviation of *Doctor of Chemistry*, a European degree. Also *Ch. D.*

dream[1], *n.*—**Waking dream,** in *psychol.*, a dreamlike or visionary state, occurring in the waking life. It may be of all degrees, from the vivid visual imagery of normal reverie ('day-dreaming') to the hallucinatory state of the ecstatic.

dreamer, *n.* **5.** *pl.* See the quotation.

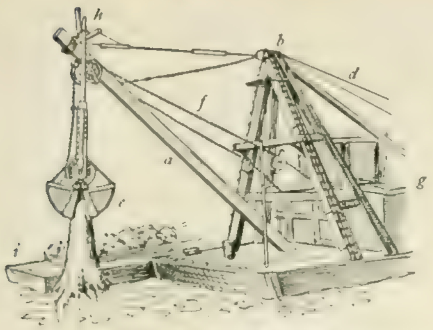
> A member of the band of chief Joseph, the leader of the non-treaty Nez Percés, was killed by whites, and the Indians are said to have made depredations on the crops of the latter; while a native religious sect, known as *Dreamers*, under the leadership of Smohalla, tended to widen the breach. *Encyc. Brit.*, XXIX. 463.

dred[2], **dredful.** Simplified spellings of *dread*, *dreadful*.

dredge-boat (drej′bōt), *n.* A large, flat-bottomed vessel equipped with a dredging-machine for removing mud, sand, etc., from the bottom of a harbor or in a channel.

dredge-machine (drej′ma-shēn″), *n.* The digging and hoisting mechanism on a dredge-boat.

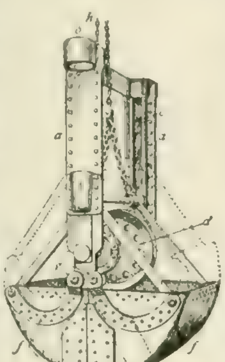
dredging-machine, *n.*—**Clam-shell dredging-machine,** a dredging-machine which employs a bucket



Clam-shell Dredging-machine.

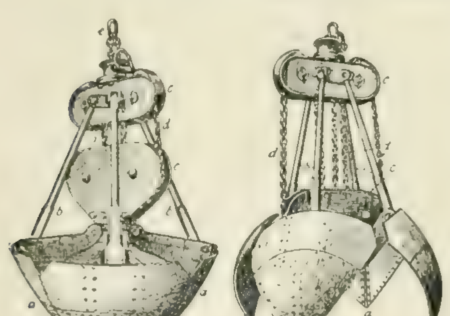
a, pivoted boom; b, "A"-shape frame; [illegible] supporting frame; [illegible]; e, [illegible] bucket lifting the scoop; f, chains lifting bucket and controlling its operation; g, power house; h, guide poles; i, spoil-boat.

resembling the bivalve shell of a clam. The open bucket is lowered into the water till it sinks into the silt. The leaves are then drawn together, inclosing a mass of silt, and it is raised to the surface and discharged by opening the two leaves. **Dipper dredging-machine,** a machine consisting essentially of a strong flat-bottomed boat upon which are boilers and engines for handling a derrick erected at the bow of the boat. The derrick has a massive boom which supports a shovel or dipper resembling the scoop of a steam-shovel. The dipper is lowered to the bottom of the water, and, by means of chains, is dragged through the mud or silt until it is filled; it is then raised from the water, and the boom is swung to the right or left, over the bank or over a scow, and its contents are discharged. Since the boom swings in a half-circle in front of the boat, the machine can dredge out a channel equal in width to the diameter.—**Hydraulic dredging-machine,** a dredging-machine which employs a rotary pump and hinged suction-pipe. The end of the suction-pipe is let down into the water until it rests upon the sand. A jet of water through a hose, or some other mechanical device is employed to loosen the sand, and the mingled sand and water are drawn up through the suction-pipe and forced into a discharge-pipe. The latter may be a long flexible pipe supported on boats or floats and extending over the water for a mile or more to the shore. The mingled sand and water are discharged on the shore, the water running back and the sand remaining on the shore. The sand forms about 20 per cent. of the discharge, but so large is the pipe and so rapid the flow that the machine has great capacity, excavating and delivering great quantities of sand in an hour. In the larger machines of this type the discharge is turned directly into hoppers in the hold of the sea-going vessel in which the machine is carried. The water escapes through gates, and when the vessel is loaded with sand, it proceeds to sea and discharges it in deep water.—**Orange-peel dredging-machine,** a dredging-machine having a bucket which is divided into four parts which resemble the skin of an orange divided into quarters. **Vacuum dredging-machine,** a dredging-machine which employs a vacuum, made by condensing steam in a suitable reservoir, in place of a pump to raise the mingled sand and water. Not in general use.



Bucket of Clam-shell Dredging-machine.

a, frame supporting shells; b, socket for guide poles; c, c, guide-way for arms supporting shells; d, mechanism for operating shells; e, chain controlling d; f, bivalve shells, in closed (loaded) position; open position shown by dotted lines; g, pivots supporting shells; h, lifting-chain.



Bucket of Orange-peel Dredging-machine.

a, leaves of bucket; b, arms supporting leaves, pivoted at top and bottom; c, mechanism controlling operation of leaves; d, chains controlling leaves; e, lifting-chains. Compare movements of parts as shown in open and closed position in two cuts.

dredging-pump (drej'ing-pump), *n.* A form of pump for use in the removal of water containing sand, mud, or other solid material such as occurs in dredging operations. See *hydraulic ★dredging-machine.*

dredging-tube (drej'ing-tūb), *n.* In a hydraulic dredging-machine, the tube which carries up the mud, sand, or other solid materials from the bottom, or which delivers it at a distance. See *hydraulic ★dredging-machine.*

dreibund (drī'bůnt), *n.* [G., < *drei*, three, + *bund*, alliance: see ★*bund*[2].] A triple alliance. See, specifically, *Triple Alliance*, 3, in Century Cyclopedia of Names.

dreikanter (drī'kän-tėr), *n. pl.* [G., 'three-cornered things.'] Angular and prismoidal pebbles whose flat faces have been cut by wind-blown sand. They sometimes closely resemble artifacts, for which they have been mistaken. *Nature*, Dec. 10, 1903, p. 143.

drenching (drench'ing), *n.* **1.** The act of soaking or covering with water: a thorough wetting.—**2.** In *vet. med.*, a dose of liquid medicine; a drench.

drenching-bit (drench'ing-bit), *n.* An appliance with a mouthpiece like that of a bridle-bit, used for administering medicine to horses. The mouthpiece is hollow and has an opening midway between the ends; connected with it is a funnel.

Drepanaspis (drep-a-nas'pis), *n.* [NL., < Gr. δρέπανον, a sickle, + ἀσπίς, a shield.] A genus of ostracoderm fishes having the armor of the head more or less completely fused into large plates, the caudal region short, with small plates and heterocercal tail.

Drepanididæ (drep-a-nid'i-dē), *n. pl.* [NL., < *Drepanis* (*-id-*) + *-idæ.*] The Sandwich Island honey-suckers of the genus *Drepanis* and related genera, considered as forming a distinct family of birds. They have curved, slender bills and extensile tubular, brushy tongues. See cut under *Drepanis.*

Drepanidiidia (dre″pa-nid″i-id'i-ä), *n. pl.* [NL.] A suborder of *Hæmosporidia* which infest the blood-corpuscles of amphibia, reptiles, and birds: contrasted with *Acystosporidia.* They are small uninucleated, gregarine-like organisms found in the red, rarely in the colorless, corpuscles. Destroying these, they are then liberated freely into the plasma. Later they pass through other changes, involving encystation in the red corpuscles, then fission, and migration into new cell-hosts.

dress, *v. t.* **11.** In *veg. pathol.*, to treat (grain and other seed) with hot water, formaldehyde solution, or a similar fungicide, for the purpose of destroying the spores of smut and other plant-diseases.—**12.** In *milling*, to clean and refine (flour); free (flour) from bran by passing it through bolters. See *milling.*

dress, *n.* **7.** In *printing*, a set of types with their appurtenances; also, their arrangement and their general appearance in print.

In consequence of this, a large number of small printing shops sprang up in obscure places, being generally known as "holes." These shops often used secondhand and worn-out *dresses* of type, and, operating secretly, produced pamphlets and small books of a very poor grade.
Census Bulletin 216, June 28, 1902, p. 52.

Fancy dress, an unusual dress or costume that is imagined or intended to represent that of some historical or fictitious type or person. Sometimes used attributively: as, a *fancy-dress* ball.

dresser[1], *n.* **6.** A mandrel having a round top face, used by blacksmiths in forging the forked ends of connecting-rods.—**Emery-wheel dresser,** a hand-tool for truing and dressing worn, eccentric, or ill-balanced emery-wheels.

dresser[2], *n.* **3.** A dressing- or toilet-table.

dressership (dres'ėr-ship), *n.* [*dresser* + *-ship.*] In a hospital, the office of a dresser, a medical student or young physician whose duty is to dress wounds, ulcers, etc.

He [Sir James Paget] had been too poor to afford a house-surgeoncy, or even a *dressership.*
Encyc. Brit., XXXI. 406.

dress-form (dres'fôrm), *n.* A frame, sometimes of wire, in the form of a woman, used in making dresses. Such forms are sometimes capable of being expanded and contracted, according to the proportions of the woman for whom the dress is fitted.

dress-guard (dres'gärd), *n.* **1.** A removable cover designed to be placed over the rim of a carriage-wheel to prevent the garments of persons who are entering or leaving the carriage from coming in contact with the wheel.—**2.** A similar guard placed on the wheels of a bicycle.

dress-improver (dres'im-prö″vėr), *n.* A bustle, usually in the shape of a pad or cushion, intended to give the desired curve to a woman's hips and back.

dressiness (dres'i-nes), *n.* Fondness for dress or fashionable dress; modishness; stylishness. [Colloq.]

dressing, *n.* **Dry dressing,** the application to a wound of dry gauze, absorbent cotton, or the like, impregnated (or not) with corrosive sublimate or other antiseptic. **Occlusive dressing,** one which covers the wound and adjacent parts, shutting out the air and obviating all possibility of infection from without. **Ore dressing,** in *metal.*, the breaking up of lumps of ore mixed with gangue so as to detach the former from the latter; the first stage of the mechanical purification of the ore before submitting it to chemical treatment.

dressing-forceps (drės'ing-fôr″seps), *n.* A forceps with pivoted blades and scissor-like handles used for grasping lint, drainage-tubes, etc., in dressing a wound.

dressing-machine, *n.* **Box-dressing machine,** a planing-machine which employs reciprocating planes moving between vertical guides, used to finish the corners of packing-boxes after they have been put together by a box-nailing machine (which see, under ★*nailing-machine*).

dressmakery (dres'mā kėr-i), *n.* A dressmaking establishment; a dressmaker's business.

She also gave her an insight into details . . . concerning the conduct of a *dressmakery.*
W. Besant, All Sorts and Conditions of Men, viii.

dressmaking (dres'māk″ing), *n.* The occupation of a dressmaker.

dress-preserver (dres'prẹ̄-zėr″vėr), *n.* A leather-covered iron frame extending from the step of a carriage upward over the rim of the wheel, designed to prevent mud or water from being thrown into the carriage.

dress-suit (dres'sūt), *n.* A gentleman's evening clothes. [Colloq.]—**Dress-suit case,** a flat, thin traveling-bag, intended originally to carry a gentleman's dinner or evening dress.

drias (drī'as), *n.* [Origin obscure.] The deadly carrot, *Thapsia Garganica.* See cut under *Thapsia.*

dribbler, *n.* **2.** In *foot-ball*, one who 'dribbles,' or kicks the ball lightly along the ground. See *dribble*[1], *v. t.*, 3.

driblet-cone (drib'let-kōn), *n.* A cone produced by the ejection of drops of molten lava or fragments of but partly solidified lava to no great height, so that they fall back still viscous and adhere to the surface wherever they fall.

A *driblet-cone* has no crater, but simply a hole for the projection of lava in small liquid masses, drops, driblets, or worm-like streamlets. *Dana*, Manual of Geol., p. 271.

driery (drī'ėr-i), *n.* A drying establishment: as, a peach or an apple *driery.* Also spelled *dryery.*

drift, *n.*, **7.** (*b*) The flow of a current. (*c*) The amount by which a ship is drifted by the action of a current, wind, or sea. (*d*) The place in the sheer where the rails are cut off.—**11.** (*b*) A conical steel pin used by riveters or fitters to drift or force two holes not quite in line with each other, so that the openings will coincide and let the rivet or bolt pass through.—**17.** (*a*) A set of fishing-nets. (*b*) A drift-net. (*c*) The catch of fish taken in a drift-net.—**18.** In *turpentining*, a subdivision of the crop, usually 2,100 boxes or cups.—**19.** In *oceanography*, a broad and shallow current which advances at a rate of ten or fifteen miles a day, like that which crosses the middle North Atlantic. *W. M. Davis*, Elem. Phys. Geog.—**20.** In *aëronautics*, the tendency of an object supported in the air (as a kite or a bird) to move in the direction of the air; opposed to *lift* or the ascensional force. *H. S. Maxim*, in The Aeronautical Annual, 1896, p. 50.—**Dead-reckoning drift** (*naut.*), the determination of drift by dead-reckoning. When a ship is hove to under sail she will come up and fall off, and the middle point between is considered the compass-course, to which must be applied the leeway, variation, and deviation, in order to obtain the true course, or the true drift of the vessel. The speed of the ship on this drift is determined by the patent-log.—**Drift of a projectile,** deviation of a projectile from the plane of fire, caused by the rifling of the gun. **Drift of zero.** See ★*zero.*—**Eskar drift,** coarse gravel and shingle in banks. *R. M. Johnston.*—**Extra-morainic drift,** glacial debris occurring outside of the area actually occupied by the ice. *R. D. Salisbury*, Geol. Surv. of New Jersey, 1892, p. 61.—**Lower terrace drift,** gravels and shingle in terraces occurring in Tasmania and Australia. *R. M. Johnston.*—**Overwash drift,** the material which is washed out from the front of a glacier. *R. D. Salisbury*, Geol. Surv. of New Jersey, 1893, p. 150.—**Preglacial drift,** loose sand or gravel lying beneath the till, in Ireland. *G. H. Kinahan.* **Quartz drift,** a drift containing quartz fragments as a prominent constituent of the loose rock-mantle. *Science*, March 15, 1901, p. 407.—**Ripple drift,** the process by which a moving current of water produces ripples upon the sand of its bed and thus leaves a record of its direction. *Geikie*, Text-book of Geol., p. 255.—**River drift,** the gravel deposits accumulated by a river in its torrential stages.—**Rubble drift,** a coarse agglomeration of angular debris and large blocks set in an earthy matrix. The fragments are of local type and the deposit of glacial or fluvioglacial origin.

drift, *v. t.* **5.** To drive: specifically, to drive by striking a set, pin, or block placed against the object to be driven.—**6.** To enlarge or shape a hole by the use of a drift-pin.

drift-angle (drift'ang gl), *n.* **1.** In *naval arch.*, the angle between a tangent to the circular path of the center of gravity of a vessel, when turning under the influence of the rudder, and the central longitudinal line of the vessel.—**2.** The angle by which the direction axis of the bore of a gun deviates from the true direction in order to compensate for the drift of the projectile.

drift-bed (drift'bed), *n.* In *geol.*, a layer of drift of sufficient uniformity to be distinguished from associated ones of similar origin; a drift-stratum.

drift-boat (drift'bōt), *n.* A boat used for putting out and taking in a drift-net.

drift-bottle (drift'bot″l), *n.* A bottle used for the same purpose as a ★drift-cask (which see).

drift-cask (drift'kask), *n.* An empty cask closely sealed, usually furnished with a pole and flag, numbered, lettered, labeled, and tagged, set adrift in some part of the ocean, to be observed from time to time by passing vessels, as an aid in the study of ocean-currents. If it is found cast upon the shore, the inclosed tags, or labels, or cards are sent to the nearest hydrographic office. See ★*drifter*.

drift-deposit (drift'dē-poz″it), *n.* Any accumulation of glacial origin; glacial or fluvioglacial deposit. *J. Geikie*, The Great Ice Age, p. 724.

drifter (drift'ėr), *n.* One who or that which drifts; specifically, a cask, buoy, float, or other light object, properly labeled and tagged, and allowed to drift freely in the ocean to determine ocean-currents. When the surface of the drifter above the water is intentionally made large, relatively to the immersed portion, the drift is due principally to the influence of the surface-winds. When the drifter is not exposed to the wind it shows the influence of the ocean-currents either at the surface or at a considerable depth, depending upon the depth of the layer in which it floats. This may be regulated to some extent by an arrangement similar to that of the Cartesian and Florentine divers. Drifters are set afloat in all parts of the ocean, and their paths are shown on the monthly pilot-charts, together with the paths of derelicts.

Excellent use has here been made of "*drifters*," or floats, supplementing the temperature and salinity observations. On the voyage from Iceland to Jan Mayen in 1896 twenty drifters were thrown overboard.
Geog. Jour. (R. G. S.), XV. 275.

drift-filled (drift'fild), *a.* Filled with drift: the condition of preglacial depressions, which were crossed by the great ice-sheet and filled with its morainal deposits.

A paper on the "*Drift-filled* and Post-glacial Glens of Ayrshire." *Geog. Jour.* (R. G. S.), XVIII. 83.

drift-fish (drift'fish), *n. pl.* Fish taken with a drift-net. *N. E. D.*

drift-fisher (drift'fish″ėr), *n.* One who uses a drift-net; one who is engaged in a drift-fishery.

drift-fishery (drift'fish″ėr-i), *n.* A fishery in which drift-nets are used.

drift-keel (drift'kēl), *n.* Same as *bilge-keel*.

drift-map (drift'map), *n.* A map showing the distribution of various glacial and glaciofluvial deposits, generally called *drift*.

drift-peat (drift'pēt), *n.* A peat deposit associated with or imbedded in glacial drift.

The ancient alluvia with their arctic flora must be older than the *drift-peat* and timber that underlie the carse deposits of the 45 to 50 foot level.
J. Geikie, The Great Ice Age, p. 308.

drift-piece (drift'pēs), *n.* See *drifts in the sheer draft*, under *draft*.—**Ordnance drift-piece,** an attachment to the rear sight of a gun, by means of which compensation for the drift of the projectile, caused by the rifling of the bore, is made.

drift-pin (drift'pin), *n.* A steel pin having a slight taper, preferably largest in diameter at about the middle of its length and tapering toward the ends: used in ship-building and structural work to force the punched holes in the material into line, so that a rivet or bolt can be inserted.

drift-way (drift'wā), *n.* In *stock-raising*, a right of way across neighboring land.

dril, drild. Simplified spellings of *drill, drilled*.

drill[1], *n.*—**Calyx drill,** a core-drill having a revolving cylindrical serrated cutting-tool. In soft rock, the cutter is used alone; in hard rock, chilled-steel shot are used as abradants. A stream of water is delivered to the cutter through the hollow drill-rod and, as it is under pressure, it sweeps the chips and stone-dust upward in the annular space between the outer casing of the drill-rod and the sides of the bore-hole. The rising stream of water and chips soon reaches the top of the short casing and here the current, having more room, slackens and the stone chips fall into the open top of the casing or calyx. The calyx, with its contents, is lifted out of the hole with the tools, and the core is broken off and raised as with any form of core-drill. **Half-round drill,** a form of boring- or perforating-tool for metals in which the cutting edge is made at the end of a bar of semi-cylindrical section or half-round rod. The flat part makes a channel up through which the borings may pass.—**Oil-tube drill,** a twist-drill in which is cut a slender channel, following the twist from the shank to the point, which is used to convey a fine stream of oil to the cutting-point and to cool and lubricate the tool: used in boring deep holes in steel. It can be used in any form of boring-machine.—**Paddy-drill,** a well-boring drill with expanding cutters. **Percussion-drill,** the ordinary drill for hand-work on rocks, which is struck by a sledge, or, where it is massive, is lifted up and allowed to fall into the drill-hole.—**Pillar-drill.** Same as *pillar drilling-machine*. **Pneumatic rotary drill,** a form of boring-machine for steel or other metals, usually portable, and driven by compressed air. The motor in the body of the tool has a rapid rotary motion, geared down to the slower speed desirable for the cutting edges of the drill proper.—**Pump-drill,** a rock-drill in which the bar or shank is raised and lowered by a lever-action like a pump-handle. The descent of the bar causes the cutting blow of the bit at its lower end. The bar is turned continually as it rises and falls.—**Sensitive drill.** See ★*drilling-machine*.—**Setting-up drill,** the methodical performance of certain calisthenic exercises designed to give an erect carriage.—**Slotting-drill,** a drill for metal which cuts at its sides rather than at its end: hence, if the work is fed crosswise to the axis of the drill, a long slit or slot will be cut.—**String-drill,** a form of drill for light work in which the holder or shank is caused to revolve by a round turn of a piece of cord or catgut, to which a to-and-fro motion is given by hand or by foot-treadle. For jewelers' use, the ends of the cord may be attached to the ends of a bow, making what is called a *bow-drill*.—**Wimble-drill.** (*a*) A drill which bores by means of the cutting edges on its end. (*b*) An apparatus used with a boring-tool which cuts on its end and is fed into the hole by a gimlet point, or with a tool such as is ordinarily turned by hand.

drill-bone (dril'bōn), *n.* A bone which sometimes develops in the deltoid muscle in soldiers: supposed to result from irritation caused by the pressure of the musket.

drill-clamp (dril'klamp), *n.* A portable frame for holding a drill, having, usually, a screw for feeding the drill; a portable drill; a frame for a ratchet-drill. This frame is often called in American shops an *old man*.

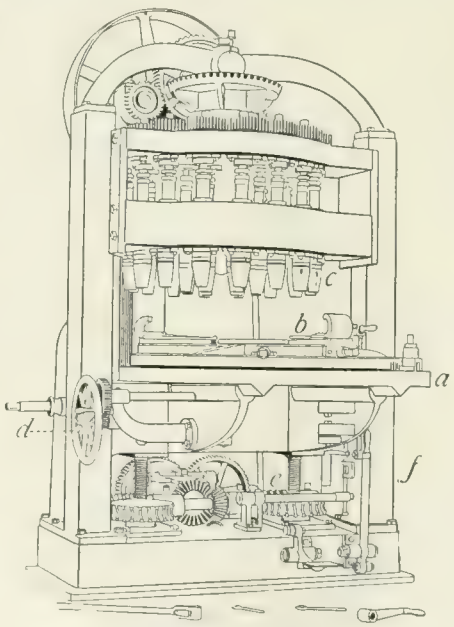
drill-core (dril'kōr), *n.* Same as *core*[1], 2 (*i*).

drill-extractor (dril'eks-trak″tor), *n.* A device, used in drilling tube-wells, by which the drill-rod or -bit can be drawn up out of the tube in case of breakage; a drill-tongs.

drill-grinder (dril'grīn″dėr), *n.* A grinding-machine for forming different kinds of twist-drills and other drills.

drilling-clip (dril'ing-klip), *n.* A frame or holder to force a drill against the service-pipe for gas or water when the latter is to be drilled and tapped to connect a new service-outlet.

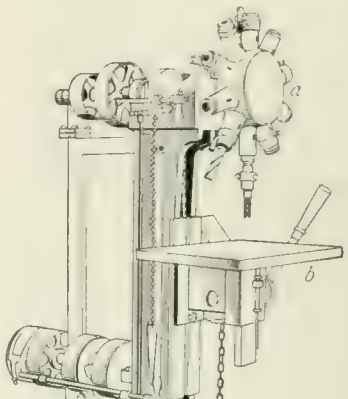
drilling-machine, *n.* Specifically, a power-machine of the first class, employed in drilling small holes in metals. Small machines and all hand-power machines used for this purpose are often called *drills*, as the *radial*



Multiple-spindle Drilling-machine.

a, traversing and partly rotating table; *b*, self-centering chuck; *c*, spindles (24), drilling tools not shown; *d*, wheel controlling traverse of table; *e*, feed mechanism; *f*, control. About 10 feet high.

drill (which is properly a radial drilling-machine). When the diameter of the boring-tool (drill) exceeds two inches the machine is properly a boring-machine. All machines for boring holes in wood are called *boring-machines*. See ★*boring-machine* and *boring-mill*. The essential features of the machine are a rotary spindle carrying the cutting-tool, a table for holding the work, and a suitable frame uniting these features into a complete machine. Drilling-machines are often named after the things on which the work is to be done, as *rail-drilling machine*, etc. Drilling-machines, when of superior construction, with great refinement of adjustment in the moving parts, are said to be sensitive; hence, the term *sensitive drill*, that is, one highly responsive to delicate and rapid adjustment. The drilling-machine is sometimes used also for other work, by employing tapping- and milling-cutters on additional spindles, as in the drilling-, tapping-, and milling-machine. **Boring-and-drilling machine.** See ★*boring-machine*. **Gang drilling-machine,** a drilling-machine having from two to ten spindles placed in a row above the work-table, each supported by a fixed column or frame. The spindles may all carry the same style of drill or different ones, according to the requirements of the work, and may be used in turn, or all at once.—**Multiple-spindle drilling-machine,** a drilling-machine having four or more spindles. Two principal types are in use. In one, the drill-heads which carry the spindles are supported on a cross-rail and are adjustable to any position, or at any angle on the cross-rail; in the other, the spindles are arranged in groups about a center, with adjustment along the radius of the circular group.—**Turret drilling-machine,** an upright drilling-machine, with a disk sup-



Turret Drilling-machine.

a, revolving turret with ten spindles, two shown with tools; *b*, table with vertical traverse and feed.

porting four or more radial spindles and having a rotary motion, under the control of the operator, whereby each spindle, with its special drilling-, reaming-, or other boring-tool, can be brought in turn to the work, thus making it possible to perform a series of operations upon the same piece without removing it from the table.—**Upright drilling-machine,** the most common and generally useful of the single-spindle drilling-machines. The spindle has a feed-motion, an automatic stop to control the depth of the hole, and a quick return in withdrawing the tool. The table is adjustable to the work and there is often a lower or floor table, the upper table swinging out of the way when this is used.

drilling-twill (dril'ing-twil), *n.* Same as *drilling*[2].

drill-pin (dril'pin), *n.* In a lock, the projecting pin that serves as a guide for a hollow key.

drill-ship (dril'ship), *n.* A practice-ship; a ship for the instruction of cadets; a vessel employed for teaching the rudiments of seamanship, navigation, gunnery, and marine engineering.

drill-templet (dril'tem″plet), *n.* A templet or jig in which the holes to be drilled in the work are carefully laid out as to location and relative distance and hardened steel bushings are inserted at these points. If the drill is inserted through these bushings and the templet firmly clamped to the work the drill will bore all the holes exactly in the same relations to each other, in every piece.

drill-tongs (dril'tôngz), *n.* **1.** A tool for gripping and extracting the drill-rod when the latter has been broken in the bore of a well and has fallen to the bottom.—**2.** A drilling- or boring-tool with one jaw which can go behind or below the object to be perforated, while the bit is on the face or end of the other jaw, so that closure of the jaws causes the bit to advance and make the hole.

drill-yard (dril'yärd), *n.* In *railroading*, a special yard for receiving, classifying, and forwarding freight-cars; a division or junction yard, as opposed to a freight, storage, way-station, or terminal yard. It is divided into three parts: the *receiving-yard*, where the arriving trains are received; the *classification-yard* or *car-sorting yard*; and the *forwarding-yard*, where departing trains are made up. The classification-yard is many times larger than the receiving- or the forwarding-yard and is always placed

between them, in a continuous line, so that all movements of cars shall be progressive or in the direction of their destination. The receiving-yard is a group of parallel tracks all connected by switches with the main-line tracks, and it always includes tracks leading to the roundhouse, coal-yard, etc., storage-tracks for cabooses, and cripple-tracks. On the arrival of the train at the receiving-yard the engine and crew are dismissed and the train is delivered to the yard crews. Drill-engines then proceed to rearrange the cars of the train. The caboose is sent to its storage-track and the cars are inspected and moved forward to the classification-yard. This yard consists of a large number of parallel tracks joined together by diagonal tracks, called *ladder-tracks*. The drill-engines push the train along the ladder, turning out each car (or group bound to one station) into its special track, thus sorting them into ways or through trains for the next division, or into the proper trains for other roads that have junction-points in the neighborhood. In this classification process, all injured, damaged, or unsafe cars, called *cripples*, are sorted out and sent to the cripple tracks. Four methods of drilling a train in a classification-yard are employed. One is to place the drill-engine in the rear of the train and to push it, as a whole, along the ladder, sending one car at a time, the first, second, etc., into its proper track. This implies 'kicking,' or sending a car off into its track by moving the whole train forward and casting off the end car to run into its place by its own momentum, the remaining cars being stopped or pulled backward ready for the next push forward. Another method is to send the train into the ladder-track and then to employ a second drill-engine, moving on a track parallel with the ladder, to pole one car at a time into its proper track. This is done by placing a wooden pole at one corner of the engine and fitting the other end into an iron pocket on one corner of the car. The forward movement of the engine poles or pushes the car along until it has sufficient momentum to enter its appropriate track. In this method only the engine moves backward and each car moves continuously forward. These two methods are used where the entire yard is upon one level. The third method is used when the entire yard is upon a down grade, or where the ladder-track alone is upon a down grade. The drill-engine pushes the train upon the down-grade ladder (this may be on an artificial grade) and the work of drilling is greatly hastened by using gravity to assist the engine in handling the train, or by using gravity to send each car down grade into its proper track, the train and engine moving only slightly or just enough to start the free car down the grade. The fourth method employs a hump-ladder, or a ladder-track laid upon a slight artificial hill or 'hump.' The engine pushes the train up the hill, and as each car reaches the summit or hump it is released and runs down the grade to its proper track. By this method no single car ever moves backward and its progress through the yard is hastened with a great saving of time and labor. At the farther end of the classification-yard is the smaller advance-yard, connected with it by ladder-tracks. In this yard the fresh engine and crew receive the train with the cars properly arranged according to destination. The train is made up by drill-engines that pull out the proper cars from each track of the classification-yard, and make up the new train in the advance-yard. Drill-yards are always double, one complete yard being assigned to trains moving one way, and the other to those moving in the opposite direction. Some drill-yards are a mile or more long and have trackage for a thousand cars. Such yards are usually outside of cities, and in the neighborhood of coal-storage yards and car-shops. In a well-planned yard trains are usually received, classified, and sent forward within an hour or two and at an expense of only a few cents per car.

drimin (drī'min), *n.* [*Drim(ys)* + *-in*^{2}.] A crystalline pulverulent compound, $C_{13}H_{14}O_4$, found in the bark of *Drimys Winteri*. It darkens and melts at about 256° C.

drimol (drī'mōl), *n.* [*Drim(ys)* + *-ol*.] A colorless compound, $C_{28}H_{58}O_2$, found in the leaves of *Drimys Winteri*. It crystallizes in needles, melts at 73–74° C., and boils without decomposition.

drinking-song (dring'king-sông), *n.* A song suited to convivial gatherings, or where toasts are drunk.

drip, *n.* **6.** In *meteor.*, the drops of water which fall from leaves and other objects which are enveloped by clouds or fog, or covered with dew. In some locations, such as the summit of Green Mountain, in the Island of Ascension, the cloud-drip is the only source of water for plants and animals. The fog-drip on the California coast is also important.
7. An inclined wooden platform, used in the manufacture of salt, for draining the salt before it is conveyed to the storehouse.—**8.** A deposit formed from dripping water, as stalactites in caves.—**9.** In *hort.*, the water that drips from the sash-bars and other roof-structure of a glass-house. The true drip is due to the water of condensation, although the term is also applied to the water of leakage.

dripcock (drip'kok), *n.* A waste-valve or releasing-valve used in hydrants. See ★*hydrant-cock*.

drip-cup (drip'kup), *n.* A shallow tray of tin or iron placed under a bearing or machine to catch the dropping oil, so that it will not soil anything underneath, and to preserve the oil which is usually strained and used again.

drip-grooves (drip'grōvz), *n. pl.* Channels, in bearings for machinery, in which lubricant may be caught, as it is fed in drops or collects from a splash or spray surface, and fed to the entire surface of contact between shaft and bearing.

drip-pan (drip'pan), *n.* Same as ★*drip-cup*.

dripping-point (drip'ing-point), *n.* See ★*drip-tip*.

drip-point (drip'point), *n.* **1.** The end of a metal rod or wire from which oil drips when it is to be used as a lubricant or when it is to be burned in some forms of internal-combustion engines.—**2.** See ★*drip-tip*.

drip-sheet (drip'shēt), *n.* In *med.*, a wet sheet from which the water (cold, cool, or warm, as the case may be) is wrung out and which is then wrapped around the naked body of a patient standing in a tub of water.

dripstone, *n.* **3.** Same as *stalagmite*.

drip-tip (drip'tip), *n.* In *bot.*, a long acuminate point of a leaf, common in regions where the rainfall is heavy, which serves to drain off the water rapidly. It occurs only on leaves with a wettable surface. Also *dripping-point*, and *drip-point*.

drip-valve (drip'valv), *n.* A valve for removing liquid which is superfluous, or undesired; specifically, a valve through which condensed steam, in the form of water, is removed from a cylinder of an engine, or any pipe carrying steam. Such water is not only inconvenient, but may become dangerous if accumulating in excess. Similar drip-valves are required to remove tar and other liquids from gas-mains.

drisk (drisk), *n.* [Appar. a mixture of *dri(zzle)* and *(du)sk*.] A drizzle or drizzly mist. [New Eng.]

drivable (drīv'a-bl), *a.* **1.** Capable of being driven: as, a *drivable* nail.—**2.** Suitable for driving: as, a *drivable* distance.—**3.** Suitable for the transportation of logs: as, a *drivable* stream, that is, one down which logs from a lumber-camp may be floated and directed in their course. [North America.]

drive, *v. t.*, **1.** (*e*) In *cricket*, to strike (a ball) forcibly, so as to send it somewhere in front of the wicket. (*f*) In *lumbering*, to float (logs or timbers) from the forest to the mill or shipping-point. (*g*) In *entom.*, to induce (a colony of honey-bees) to leave one hive and enter another: usually effected by pounding on the hive.

drive, *n.*, **1.** (*f*) In *croquet*, a roquet stroke that sends the object-ball to some particular spot. (*g*) In *golf*, the shot off the tee: usually made with a wooden club (driver). (*h*) In *cricket*, a stroke by which a ball, usually a half-volley, is hit somewhere in front of the wicket.
8. A driving mechanism, as of a motor-cycle or motor-carriage: used with some qualifying term, as a flexible *drive*, a gear-*drive*, etc.—**9.** In *lumbering*: (*a*) A body of logs or timbers in process of being floated from the forest to the mill or shipping-point. (*b*) That part of logging which consists in floating logs or timbers.—**Bevel-gear drive.** See ★*bevel-gear*.—**Drive bridge, euchre, whist,** etc. Same as *progressive bridge, euchre*, ★*whist*, etc. See *progressive* ★*games*. **Flying drive,** in *lumbering*, a drive of logs of which the main portion is put through with the utmost despatch, without stopping to pick up the rear.—**Union drive,** a drive of logs belonging to several owners who share the expense pro rata.

drive-off (drīv'ôf), *n.* In *golf*, the initial stroke played; a drive from the tee.

drive-pipe (drīv'pīp), *n.* **1.** The feed- or supply-pipe of a hydraulic ram.—**2.** A pipe to be driven into the ground for a driven well. A pointed strainer is put on the end of the pipe to make it drive easily and also to serve as a foot-valve.

driver, *n.*, **1.** (*i*) A horse which is fitted to be used for driving, in distinction from one used for riding or as a draft-horse. Drivers are classed as *roadsters* and *standard-bred* or *trotters*, the last being used for racing purposes. (*j*) In sporting phrase, a pigeon or other bird that when liberated from the trap, or flushed, flies rapidly and directly away. Contrasted with *twister*. (*k*) A wooden golf-club with which the ball is driven from the tee. Also *play-club*. See cut under *golf-club*.

driver-brake (drī'vêr-brāk), *n.* A brake applied to the rim of a driving-wheel on a locomotive. Also called *driving-wheel brake*.

driver-chuck (drī'vêr-chuk), *n.* A chuck fastened on the head-stock mandrel which drives work that is being turned between centers.

driver-mast (drī'vêr-mast), *n.* On a six-masted vessel, the after-mast. See ★*after-mast*.

driving-belt (drī'ving-belt), *n.* The belt by which an engine or other source of power drives the machinery of a factory, or any primary belt that conveys motion.

driving-bit (drī'ving-bit), *n.* A light bit of varying pattern and construction designed especially for trotting-horses.

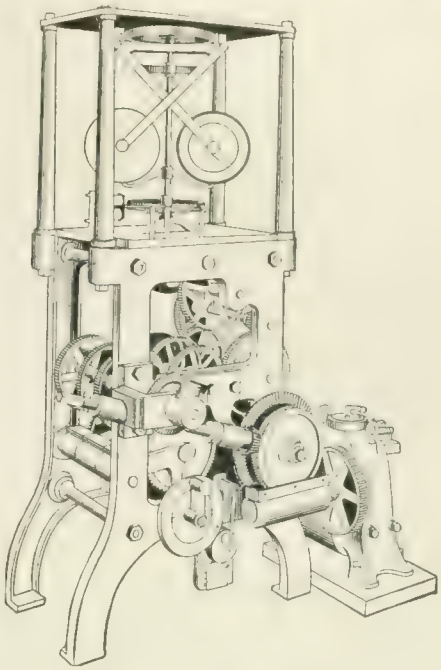
driving-chain (drī'ving-chān), *n.* Any form of chain used in transmitting power from a motor to a tool, machine, or conveyor, or from one part of a machine to another. It is usually made with detachable links, designed to run over sprockets, and is used in bicycles, motors, etc.

driving-cheek (drī'ving-chēk), *n.* A wing projecting from the face of a disk, by which another element may be made to move or to revolve; a crank which drives by pushing a follower by a flat surface.

driving-chuck (drī'ving-chuk), *n.* A lathe-chuck fitted with a driver for rotating the work. The chuck is usually a circular face-plate, having one or more pins projecting from its face. The name is sometimes applied to the cone-chuck, because the wood to be turned is driven into it by blows from a hammer.

driving-cleik (drī'ving-klēk), *n.* In *golf*, an iron club with a comparatively straight face: it is slightly deeper than the regular cleik.

driving-clock (drī'ving-klok), *n.* A form of clock which drives a mechanism or apparatus,



Driving-clock of the 26-inch Equatorial Telescope of the U. S. Naval Observatory at Washington.

as a telescope, heliostat, or chronograph, at a uniform rate which is directly related to the passage of time. Such clockwork is attached to an equatorial telescope, so that the tube shall move exactly in opposition to the motion of the earth on its axis, and the optical axis of the lenses be directed continuously upon a star. In stellar photography, calling for long exposures, the driving-clock of the telescope-tube must be of the greatest refinement and accuracy as a machine and as a timekeeper.

driving-cushion (drī'ving-kush'on), *n.* A wedge-shaped cushion for the driver of a carriage. It is placed on the carriage-seat, with the thin edge in front, so that the driver is held in a half-sitting position.

driving-flange (drī'ving-flanj), *n.* A flange or rim on a wheel or shaft which, by friction or by engagement, drives another part of the machine.

driving-iron (drī'ving-ī'ern), *n.* In *golf*, an iron club with less loft than the regular iron and a slightly deeper face.

driving-mashie (drī'ving-mash"i), *n.* In *golf*, an iron club with a small, deep face, with less loft than an ordinary mashie, and usually with a longer shaft.

driving-pinion (drī'ving-pin"yon), *n.* Any small toothed wheel which drives another, or from which another receives its motion. *Nasmith*, Cotton Spinning, p. 213.

driving-putter (drī'ving-put'er), *n.* In *golf*, a wooden putter with a straight face, used in playing against the wind.

driving-rein (drī'ving-rān), *n.* A rein fitted with a billet and buckle at one end for the attachment of the bit: the other end is stitched to the hand part.

driving-rod (drī'ving-rod), *n.* In locomotives, the connecting-rod; the main-rod: distinguished from the side-rod.

driving-wing (drī'ving-wing), *n.* One of the arms of a double crank, or of a crank formed in the shaft to be driven, at such a distance from either end that there is a bearing for the shaft on each side of the crank. If one of the arms is lighter in weight than the other, by reason of the smaller resistance to be overcome on one side of the crank-pin, the driving-wing will be the more massive arm.

Drobisch's spiral. See ★*spiral.*

drog (drog), *v. t.* To transport or carry in a droger: as, he was engaged in *drogging* sugar from the West Indies. *N. E. D.*

drogue, *n.* 2. Same as *drag,* 1, (*j*).

Dromatheriidæ (drō ma-thē′ri-i-dē), *n. pl.* [*Dromatherium,* the type genus, + *idæ,* family ending.] A family of small mammals, comprising extinct species from the Trias and Jurassic. The type genus *Dromatherium* has 3 premolars and 7 molars, the dentition somewhat resembling that of the living *Myrmecobius.* The family is commonly considered as belonging with the polyprotodont marsupials, but it has been suggested that some of the species assigned to the group may really be anomodont reptiles. *Gill,* 1872.

Dromiacea (drō-mi-ā′sē-ä), *n. pl.* [NL., < *Dromia* + *-acea.*] A group of brachyurous crustaceans or crabs in which the fifth pair of feet, which are sometimes chelate, are carried dorsally. The group belongs wholly to Mesozoic time.

dromograph (drō′mō-graf), *n.* [Gr. δρόμος, running, + γράφειν, write.] 1. A device for recording the rapidity of the blood-current.—2. An instrument for recording the apparent path of anything in the atmosphere. It has a vertical cylinder on which directions in azimuth and altitude may be inscribed by pencils which slide vertically. A telescope pointing toward a balloon, a bird, a kite, or a cloud carries the pencils with it, and the record made by the latter gives the altitude and azimuth of the object at any moment. Two dromographs, with observers at stations a short distance apart, can obtain a continuous record of the movement of an object that is mutually visible. Having clocks that agree perfectly, they make time-marks every five minutes on the respective records.

dromometer (drō-mom′e-tėr), *n.* An instrument for the measurement of velocity; a speed-indicator.

dromometry (drō-mom′e-tri), *n.* The measurement of speed; the use of the dromometer.

Dromornithidæ (drōm-ôr-nith′i-dē), *n. pl.* [NL., < *Dromornis,* (*Dromornith-*) + *-idæ.*] A family of large, extinct birds which contains species related to the emu.

dromos, *n.* 3. In *Gr. antiq.,* the shortest foot-race which was just the length of the stadium, or about 600 feet. See *stadium.*—4. The entrance to the Mycenæan beehive tomb. See ★*beehive tomb.*

dromoscope (drō′mō-skōp), *n.* An instrument for exhibiting the circulation of winds around a storm-center, or for locating a storm-center when the direction of the wind is known.

dromotropism (drō-mot′rō-pizm), *n.* Interference with the conductivity of muscle.

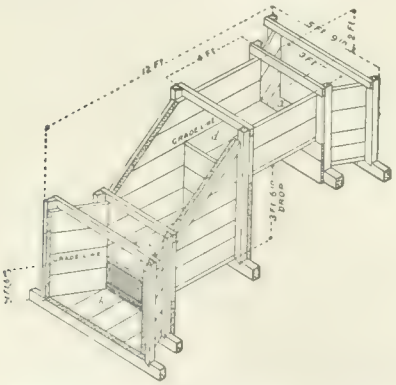
The centrifugal cardiac nerves influence the frequency, the force of contraction, and the conductivity of the excitatory wave (chrono-, ino-, and *dromo-tropism* of Engelmann). *Encyc. Brit.,* XXXI. 733.

drone[1], *n.* 3. The tone emitted by the drone of a bagpipe.

drong (drong), *n.* A lane or narrow passage. [Prov. Eng.] *N. E. D.*

Drooping disease, *n.* See ★*disease.*

drop, *v.* I. *intrans.* 10. In *archery,* to fall short of the mark aimed at: said of an arrow.—11. To show a tendency to lower the shoulders, due to weakness of the muscles: said of a horse. —**To drop asleep,** to sink quietly into slumber; figuratively, to die peacefully, without struggle, and as if unobserved.—**To drop off.** (1) To become detached and fall: as, the petals *dropped off,* one by one; (2) to drop asleep; (3) die peacefully, and as if unobserved; (4) become less regular; fail gradually: as, he began to *drop off* in his visits.—**To drop to,** to 'tumble to'; 'catch on'; become aware of; begin to understand; perceive: as, the crowd did not *drop* to his game for some time. [Slang.]



Drop.

[illegible] wings [illegible]

II. *trans.* 10. To lose or part with: as, to *drop* a thousand dollars at poker. [Slang.]

drop, *n.,* 9. (*b*) A device of timber, metal, or masonry for permitting the waters of irrigating and other canals and ditches to descend to a lower level without causing erosion. The drops are usually provided with a water-cushion to break the force of the fall.

15. In *elect.,* a fall of potential.—16. A steep slope.—17. A disease of lettuce, caused by the fungus, *Sclerotinia Libertiana.*—18. A fall or sudden vertical descent, as from a height or from a general level, either in space, or from some known position or condition, as in prices, values, temperature, etc.: as, an unexpected *drop* in the rate of discount; a *drop* in the price of steel.—19. The distance through which, or the extent to which, anything drops: as, a *drop* of twenty feet; a *drop* of ten points in copper; a *drop* of twenty degrees in temperature in as many hours.—20. In tabular work, a drop-line.—21. In *baseball,* a ball so delivered by the pitcher that it shoots downward.—22. In *tennis,* a ball so struck by the racket as to shoot sharply downward after crossing the net.—23. A patent-leather ornament, pear-shaped or of other ornamental form, used on the face-straps and hip-straps of a harness.—24. The newly born young of animals: most commonly used in speaking of sheep.—**Black drop,** vinegar of opium. —**Drop culture.** See ★*culture.*—**Green drops,** a solution of mercuric chlorid or corrosive sublimate, colored green to attract attention to its poisonous character.—**Hoffmann's drops,** the pharmaceutical name for a mixture of three parts of alcohol and one part of ether: used as an anodyne, and called after Hoffmann, of Halle, who died in 1742. Also called *Hoffmann's anodyne.* **Knock-out drops,** a powerful narcotic, such as a saturated solution of chloral hydrate in water, or a preparation of the fruit of *Cocculus Cocculus* (fishberries): employed by evil-doers to stupefy their intended victims.—**To have the drop on one.** Same as *to get the drop.*

drop-arch (drop′ärch), *n.* An arch lower in proportion than is usual: as, a blunt-pointed arch, a segmental arch, or a three-centered arch.

drop-berry (drop′ber″i), *n.* The Solomon's-seal, *Polygonatum,* applied to *P. multiflorum* and *P. commutatum.* See *Solomon's-seal.*

drop-bolt (drop′bōlt), *n.* 1. A bolt so constructed as to drop into a socket.—2. The bolt which keeps the drop of a gallows in place until the signal for its withdrawal is given.

drop-cake (drop′kāk), *n.* A small cake made by dropping thick batter from a spoon into hot, deep fat, or on a well-buttered pan to be baked in the oven.

drop-door (drop′dōr), *n.* In *car-building,* the gate or flap of a hopper or drop-bottom car. See *drop-bottom.*

drop-dry (drop′drī), *a.* Water-tight; proof against leaks: as, a *drop-dry* roof. *N. E. D.*

drop-ear (drop′ēr), *n.* An ear that turns downward, as in certain dogs. See ★*drop-eared.*

drop-eared (drop′ērd), *a.* Having ears that turn downward, but are not so long and pendulous as those of a hound: said of dogs.

drop-flower (drop′flou″ėr), *n.* Any plant of the genus *Nabalus,* so called from its nodding heads. It is better known as *rattlesnake-root* (which see).

drop-forge (drop′fôrj), *v. t.* To shape by the impact of a falling mass or weight. Usually the shaping is done by one blow received upon the stock while the latter is held between hardened steel dies carefully adjusted to each other, so as to hold each one half of the required shape. When the two halves come together by the fall of the weight, the stock takes both form and impress from the dies, and a finished product results, needing only trimming and polishing. Most manufactured forgings for the parts of sewing-machines, guns, bicycles, automobiles, and the like, are made by this process, and fine patterns in forks, spoons, and metal ware can be similarly produced, with great economy of labor and exact duplication of size and form. See *drop-press.*

drop-frame (drop′frām), *n.* In *candy-making,* a hand- or power-machine for making the many forms of fruit or other drops; a fruit-drop frame. It consists of a pair of rolls engraved with forms of fruits, fishes, toys, etc., between which the sheets of candy are passed and by which they are impressed and cut into drops. The finished drops are delivered to a traveling-apron and conveyed through cooling-boxes to be chilled and hardened.

drop-gate (drop′gāt), *n.* A gate in an irrigation-canal operated in such a way that it can be opened by dropping a shutter.

drop-handle, *n.* 2. A carriage-door handle which is attached to the spindle in such a manner that it hangs down when not held in the hand.

drop-hook (drop′hůk), *n.* A harness check-hook secured to its base by a collar which allows the hook to drop to the sides.

drop-jaw (drop′jä), *n.* Paralytic rabies in the dog: so called from the half-open mouth, due to paresis of the jaw muscles, which is characteristic of this form of the disease.

The dumb form of rabies is very common, and many persons know it as "*drop jaw*" who have no idea of its true nature. *Yearbook U. S. Dept. Agr.,* 1900, p. 233.

drop-key (drop′kē), *n.* In *lock-making,* a key having a hinged shank to allow the end or bow to hang down parallel to the door.

drop-leg (drop′leg), *n.* A vertical pipe which carries gas, steam, or water downward from a horizontal pipe.

drop-lever (drop′lev″ėr), *n.* 1. A lever having a drop or an offset to pass an obstacle or to bring the end to any desired point.—2. A lever that drops or swings on a pivot, used to disengage the feed or stop any part of a machine.

drop-light, *n.* 2. An electric lamp, analogous to a gas drop-light, for table use.—3. A coach-window that can be dropped in grooves in the framework of the coach, so as to be out of sight.

drop-line (drop′līn), *n.* 1. A hand-line; a fishing-line worked by hand without a rod. See *hand-line.*—2. A horizontal line, as in a genealogical table, which is carried lower down when the space for continuing it horizontally is insufficient.

drop-lubrication (drop′lū-bri-kā″shon), *n.* Lubrication by some device which drops the oil upon a bearing constantly, instead of applying it in a flood intermittently.

drop-meter (drop′mē″tėr), *n.* An instrument for measuring liquids by drops.

drop-motion (drop′mō″shon), *n.* An arrangement on a yarn-reel by means of which two of the arms of the reel can be shortened so as to release the hank and facilitate its removal.

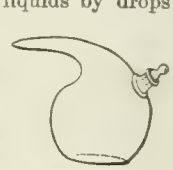
dropping, *n.* 5. *pl.* The waste material which drops under a machine, as in the process of scutching cotton.

The primary impurities from each of the two processes of opening and scutching are known as the *droppings.* *Hannan,* Textile Fibres of Commerce, p. 115.

6. A disease of cattle commonly known as milk fever, somewhat analogous to puerperal fever in women: so called because the cow drops to the ground when sick.—**Iceberg droppings,** debris deposited from an iceberg.

The results obtained by geologists, who have been studying the peripheral areas of the drift-covered regions of our continent, are such as to satisfy us that the drifts of those regions are not *iceberg-droppings.* *Smithsonian Rep.* 1890, p. 221.

dropping-flask (drop′ing-flâsk), *n.* A light glass vessel for delivering liquids by drops: also used for weighing out liquids.



Dropping-flask.

dropsy, *n.* —**Abdominal dropsy,** ascites. —**Amniotic dropsy,** hydramnios. —**Articular dropsy,** hydrarthrosis. **Cardiac dropsy,** dropsy consequent upon weak circulation due to heart-disease.—**Dropsy of the brain,** hydrocephalus.—**Dropsy of the chest,** hydrothorax.—**Dropsy of the pericardium,** hydropericardium.—**Dropsy of the peritoneum,** ascites.—**Dropsy of the pleura,** hydrothorax.—**Dropsy of the spine,** hydrorachis.—**Dropsy of the testicle,** hydrocele.—**Dropsy of the uterus,** hydrometra.—**False dropsy.** Same as *retention cyst* (which see, under *retention*).—**Hepatic dropsy,** dropsy (ascites) due to obstruction of the flow of blood in the veins of the liver.

dropsy-plant (drop′si-plant), *n.* The common garden- or lemon-balm, *Melissa officinalis,* reputed to cure dropsy.

dropt, *pp.* A simplified spelling of *dropped.*

drop-table, *n.* 2. A table, without legs, which is hinged to a wall. When not in use it may hang down against the wall; when in use it is propped up by one or two hinged braces or by a revolving bracket: used in boat-cabins and in small pantries.

drop-terret (drop′ter″et), *n.* A harness-terret attached to its base by a collar which allows it to drop to the sides.

dropwort, *n.*—**Western dropwort,** *Porteranthus trifoliatus.* See cut under *Gillenia.*

droseraceous (dros-e-rā′shius), *a.* Belonging to the plant-family *Droseraceæ;* pertaining or related to the sundews.

droshky, *n.* 2. A very low four-wheeled carriage of the cabriolet type.

Drosophilidæ (dros-ō-fil′i-dē), *n. pl.* [NL., < *Drosophila* + *-idæ.*] A family of acalyptrate

muscoid Diptera of which *Drosophila* is the type: commonly known as the *little fruit-flies*.

drosophore (dros'ō-fōr), *n.* [Gr. δρόσος, dew, + -φορος, ⟨ φέρειν, bear.)] A device for spraying water into air to increase its humidity; a kind of atomizer.

dross, *v. t.* **2.** To convert (lead) into dross or protoxid by melting in an oxidizing atmosphere. The operation is usually accomplished in a reverberatory furnace.

drove[2] (drōv), *v. t.* and *i.*; pret. and pp. *droved*, ppr. *droving*. To follow the occupation of a drover.

drove-road (drōv'rōd), *n.* An ancient road or track along which cattle may be driven, but which is not kept in repair: same as *drove*[2], *n.*, 2.

drown, *v. t.* **4.** In *phys. geog.*, to submerge beneath the waters of a lake or ocean: said of a valley that is thus converted into a bay by a relative change of land- and water-level. See ★*drowned stream.*—**5.** In *tobacco culture*, to injure by long-continued rain followed by warm sunshine. The tobacco soon wilts under these conditions. Also called *scald*.

This tobacco was cut after being *drowned* or scalded.
Yearbook U. S. Dept. Agr., 1897, p. 33.

drownd, *pp.* A simplified spelling of *drowned*.

drowned (dround), *p. a.* That has been drenched or submerged, as *drowned* lands; also, that has perished by drowning. **Drowned boiler.** (*a*) A type of sectional boiler in which the evaporating units deliver the steam formed in them into a drum or chamber below the level of the water in the latter: distinguished from a 'foaming' boiler, in which each unit disengages from the area of its own cross-section only, or above the water-level of the steam-and-water drum.

The Belleville boiler belongs to what is called the "foaming" class. This epithet is not applied as a mark of disparagement in any way, but simply to distinguish it from the "*drowned*" class. The difference between the two is that, whereas in the "foaming" class the tubes deliver the steam above the water level in the large steam drum, in the "*drowned*" type the steam is delivered in the drum below the water line.
Sci. Amer. Sup., Dec. 27, 1902, p. 22566.

(*b*) A fire-tube upright boiler in which the tubes forming the heating-surface are surrounded for their whole length by the water to be evaporated, instead of projecting for part of their length above the normal water-level. This construction diminishes the tendency to leakage at the upper tube-sheet, because the tubes are not subject to such wide ranges of temperature change, and to such changes of length relatively to the outer shell, as the fire varies in intensity or the water-level is carelessly lowered. —**Drowned level,** a horizontal passage or level, as in a mine, at each end of which an upward shaft, either inclined or vertical, rises above the level of the roof. Such passage and shafts form an inverted siphon, and water gathering there fills it up, and can only be removed by pumping, as no drainage is possible. **Drowned stream,** a stream whose valley has subsided until the sea, encroaching upon it, has formed a bay or estuary of its lower course. The St. Lawrence, Hudson, Chesapeake, and Delaware rivers are examples of drowned streams entering the sea. The St. Louis river flowing into Lake Superior illustrates similar inland relationships. See ★*drown*, 4.

drowner, *n.* **2.** In *irrigation*, one who works the sluices of reservoirs and side-channels, in the upper part of a valley, which flood or drown meadows below, so as to afford an equable distribution of water for irrigation. Locally called *drownder*.

Dr. Phil. An abbreviation of *Doctor of Philosophy*.

Dr. Phys. Sc. An abbreviation of *Doctor of Physical Science*. Also *D. P. S.*

drug-beetle (drug'bē″tl), *n.* Same as ★*biscuit-beetle* (which see, with cut).

drug-disease (drug'di-zēz), *n.* **1.** A morbid state caused by the long-continued or habitual use of a drug.—**2.** In homeopathic medicine, the complex of symptoms noted after the administration of any drug for purposes of proving.

The manifestations of drug action thus produced are carefully recorded, and this record of "*drug-diseases*," after being verified by repetition on many "provers," constitutes the distinguishing feature of the homœopathic materia medica. *Encyc. Brit.*, XXIX. 312.

druggy (drug'i), *a.* [*drug* + -*y*[1].] **1.** Of or relating to drugs.—**2.** Being under the influence of a drug.

drug-mill (drug'mil), *n.* A special grinding-mill used in the manufacture of drugs.

drum[1], *n.*, **1.** (*b*) The head or membrane of a banjo or similar instrument.

3. (*b*) A circular box, revolved by machinery, in which skins are tanned or colored. See also ★*coloring-wheel*. *C. T. Davis*, Manuf. of Leather, p. 357.

8. (*b*) A drummer in a military command.

12. An inflatable sac on the side of the neck of such a bird as the prairie-chicken: supposed to give resonance to the sound produced by the wings when drumming. See *tympanum*, **2.** (*c*) (2).—**13.** An Australian bushman's bundle; a swag.—**14.** The revolving cylinder of the kymograph, chronograph, or other instrument, upon the surface of which curves are drawn, time records made, etc.

The clockwork of the kymograph is wound up, and the *drum* swung round to its proper starting-point.
E. B. Titchener, Exper. Psychol., I. i. 104.

Black drum, the salt-water drum, *Pogonias chromis*. See cut under *drum*. **Conical drum,** in *mining*, a form of rope-drum used on hoisting-engines to equalize the variation in load due to the varying length of the hoisting-rope as the load ascends or descends in the shaft. Such drums are usually double and serve two hoisting-compartments, one load ascending as the other descends. **Drum-and-cone signal.** See ★*signal*. **Drum membrane.** Same as *tympanic membrane*. **Wash drum,** a drum for washing skins. *Modern Amer. Tanning*, p. 81.

drum[1], *v. t.* **5.** To treat in a drum, as skins. See ★*drum*[1], *n.*, 3 (*k*). *Modern Amer. Tanning*, p. 90.—**6.** In *forestry*, to haul (logs) by drum and cable out of a hollow or cove.

drum-barrage (drum'bär″äj), *n.* See ★*barrage*.

drum-beat (drum'bēt), *n.* The sound of a drum.

drumbledore (drum'bl-dōr), *n.* An imitative variant of *dumbledore* (a bumblebee). Compare *drumble-drone*. Sometimes applied figuratively to a person. [Prov. Eng.]

drum-dial (drum'dī″al), *n.* A revolving cylindrical surface on which a record is kept in a time-register. *Engin. Mag.*, July, 1904, p. 618. **Drumhead motion,** the vibratory motion or wave-motion of the head of a drum, boiler, or tank.

drum-language (drum'lang'gwäj), *n.* A system of communication in which certain ideas are expressed by rhythmical combinations of drum-beats. This method of signaling is found among the negroes of the west coast of Africa. *Ratzel* (trans.), Hist. of Mankind, II. 406.

drumlinoid (drum'lin-oid), *a.* and *n.* [*drumlin* + -*oid*.] **I.** *a.* Resembling a drumlin.

Some of the principal ridges present *drumlinoid* profiles, while their lateral slopes were greatly over-steepened.
Sci. Amer. Sup., Jan. 16, 1904, p. 23447.

II. *n.* A hill resembling a drumlin in shape.

drumlinoidal (drum-lin-oi'dal), *a.* Same as ★*drumlinoid*.

drumloid (drum'loid), *a.* and *n.* [*druml*(*in*) + -*oid*.] Same as ★*drumlinoid*.—**Drumloid hill,** a hill having a lenticular outline similar to that of a drumlin.

While the drumlin type is fairly distinct, drumlins grade into hills which are not drumlins. When they become somewhat irregular in form they are sometimes designated drumloids, *drumloid hills* or immature drumlins. It is not certain that some of them may not be over-mature drumlins—that is, drumlins made irregular by unequal surface deposits upon regular drumlin forms.
R. D. Salisbury, Geol. Surv. of New Jersey, 1891, p. 74.

drummer, *n.* **4.** A horse that beats the air by throwing its fore legs out irregularly as it goes. *Grose*. [Jockey cant.]—**5.** Same as *drum*[1], 11. —**6.** A local English name for a rabbit: so called on account of its habit of beating or drumming upon the earth with the hind feet.

drumstick, *n.* **4.** The tetanus bacillus, which has a round spore at one extremity.

drum-tannage (drum'tan″äj), *n.* Tannage by means of a drum. See ★*drum*[1], *n.*, 3 (*k*). *C. T. Davis*, Manuf. of Leather, p. 399.

drum-wheel, *n.* **2.** In *tanning*, same as ★*drum*[1], *n.*, 3 (*k*).

drunk, *p. a.* **3.** Bent; crooked: used to describe a bent screw which imparts a sidewise as well as an endwise motion to a nut.

drunkard, *n.* **2.** [*pl.*] The marsh-marigold. —**3.** [*pl.*] The wintergreen or checkerberry, *Gaultheria procumbens*.

drunken, *p. a.* **5.** Producing intoxication, or used in manufacturing intoxicants, as certain plants—for example, the betel-nut, called *drunken date*, the darnel, called *drunken rye-grass*.

drunken-fish (drung'kn-fish), *n.* One of the trunk-fishes, *Lactophrys triqueter*. [West Indies.]

drunkenness, *n.* **3.** In *mech.*, unsteadiness, crookedness, or inequality of pitch in a screw, such that the nut either wabbles or does not advance at a constant speed.—**Sleep drunkenness,** a confused mental state and muscular incoordination sometimes seen in one aroused from a deep sleep.

drunkery (drung'ke-ri), *n.*; pl. *drunkeries* (-riz.) [*drunk* + -*ery*.] A place in which to get drunk; a grog-shop or saloon. [Colloq.] *N. E. D.*

drupal (drö'pal), *a.* [*drupe* + -*al*.] Same as *drupaceous*.

drupiferous (drö-pif'e-rus), *a.* [NL. *drupa*, drupe, + L. *ferre*, bear.] Bearing drupes.

drusiness (drö'zi-nes), *n.* The state of being drusy; exhibiting a surface of minute crystals.

Drusiness is sometimes produced by a regular deposit upon the faces of one mineral of minute sub-individual belonging to a different species.
H. A. Miers, Mineralogy, p. 86.

Drusy vein. See ★*vein*.

dry. **I.** *a.* **14.** In *pathol.*, not attended with suppuration, a fluid discharge or exudation, or hemorrhage.—**Dry arch, element,** etc. See ★*arch*[1], etc. **Dry method,** in *chem.*, same as *dry way*. **Dry streak.** Same as *dry* ★*trace*.

II. *n.* **4.** Dry land: as, to execute a piece of engineering work in the *dry* (that is, not under water).

Owing to the annual rise and fall of the Nile, it was seldom that such work [the digging of a canal] could be executed in the *dry*.
Sci. Amer. Sup., Jan. 10, 1903, p. 22590.

dryback (drī'bak), *a.* Having no water-space at the back end: used in reference to boilers which have no water-space at the back of the combustion-chamber.

dry-blowing (drī'blō″ing), *n.* A method adopted in Western Australia, of freeing pounded gold ore from the powdered matter when water is not available. It consists in slowly pouring the crushed material from one dish into another and blowing away the powder with the mouth as it falls, when there is not wind enough to do the work.

Drydenian (drī-dē'ni-an), *a.* Of, pertaining to, or characteristic of John Dryden, the English poet (1631–1700).

He [Crabbe] reverted to the *Drydenian* triplet and Alexandrine on which Pope had frowned.
G. Saintsbury, Hist. Nineteenth Cent. Lit., p. 8.

Drydenic (drī-den'ik), *a.* Same as ★*Drydenian*.

Drydenism (drī'den-izm), *n.* A phrase, turn of expression, or the like, characteristic of John Dryden, the English poet.

dry-fly (drī'flī), *n.* In *angling*, an artificial fly intended to float on the surface of the water like the natural insect. Also called *floating fly*.

Dry-fly fishing, although more or less has been heard about it, is still little practiced in this country, and many anglers will be interested to see the work done at the tournament with *dry flies*.
Forest and Stream, Feb. 21, 1903, p. 151.

Dry-fly casting, in *angling*, a mode of fly-casting in which the fly is not allowed to sink below the surface of the water.—**Dry-fly fishing,** in *angling*, fishing with the dry-fly.

To define *dry-fly fishing*, I should describe it as presenting to the rising fish the best possible imitation of the insect on which he is feeding, in its natural position.
F. M. Halford, Floating Flies, p. 117.

dry-hole (drī'hōl), *n.* A hole in a mine or quarry in which no water can be used in the drilling process. Such is any hole the mouth of which is at a lower level than the bottom as the drilling proceeds.

drying-bath (drī'ing-bäth), *n.* In *chem.*, a vessel, often made of sheet-copper or sheet-iron, cubical or nearly so in form, in which substances are heated to a determinate temperature in order to drive off water, or sometimes alcohol or other liquids. The walls are often made double, and hot water or steam occupies the intervening space. An electric current is sometimes passed through resistance-coils so as to produce an easily regulated temperature. Also called *drying-oven*.

drying-cylinder (drī'ing-sil″in-dèr), *n.* A hollow metal cylinder, heated by steam, for drying textile fabrics brought into contact with it.

drying-room (drī'ing-röm), *n.* A room, as in a factory, where drying operations are carried on.

drying-stove (drī'ing-stōv), *n.* **1.** A core-oven. See *drying-oven*, under *oven*.—**2.** A laundry dry-room.

drying-train (drī'ing-trān″), *n.* A number of receptacles containing desiccating materials, so joined together that any gas passing through them is thoroughly dried.

dry-kiln (drī'kil), *n.* In *lumbering*, a kiln for drying and seasoning cut lumber, boards, etc.; a lumber drier. Such kilns are often made of great size, contain tracks for cars loaded with lumber, and are fitted with steam-heating pipes and power-fans for delivering warmed air.

dry-mixer (drī'mik″sèr), *n.* See ★*sand-mixer*.

Drynaria (drī-nā'ri-ä), *n.* [NL. (J. Smith, 1841, adopted from Bory de Saint-Vincent, 1825, as subgenus), ⟨ Gr. δρυς, oak.] A peculiar genus of mainly epiphytic polypodiaceous ferns mostly with fronds of two sorts, the sterile ones sessile, concave, cordate-oblong and sinuate or laciniate, having little chlorophyl and conspicuous, raised venation; the fer-

tile ones larger, pinnatifid or pinnate, the sori roundish, naked, sometimes confluent, borne at the junction of the compoundly anastomosing veinlets. There are about a dozen species, widely distributed in the eastern hemisphere, of which *D. quercifolia* is the best known.

Dryopterideæ (drī-op-te-rid'ē-ē), *n. pl.* [NL., < *Dryopteris* (*Dryopterid-*) + *-eæ*.] A large tribe of polypodiaceous ferns of various habit and venation, typified by the genus *Dryopteris*. They have the stipes continuous with the rhizome, the sori terminal or dorsal, the indusia superior and either free upon all sides or extrorse, or often lacking. The genera occurring within the United States and Canada are: *Dryopteris*, *Phegopteris*, *Goniopteris*, *Phanerophlebia*, *Polystichum*, *Sagenia*, and *Tectaria*.

Dryopteris (drī-op'te-ris), *n.* [NL. (Adanson, 1763), < Gr. δρυς, oak, + πτερις, a fern. The name alludes to frequent association of ferns with oaks and groves generally.] A large genus of polypodiaceous ferns, type of the tribe *Dryopterideæ* with fronds pinnate to tripinnate or dissected, the venation usually free, and the sori roundish with superior cordato-reniform indusia fixed at the sinus. The type of the genus is *D. Filix-mas*, the well-known male-fern or vermifuge, of wide distribution. Nineteen species occur within the United States and Canada, many of them the commonest woodland species. See *male-fern* and *Nephrodium*.

dryopteroid (drī-op'te-roid), *a.* Resembling or related to the genus *Dryopteris*, or the tribe *Dryopterideæ*.

dry-pipe (drī'pip), *n.* A pipe, running along near the top of the steam-space, which takes steam from the boiler. It is perforated with a number of small holes, the end being closed to prevent any large body of water from entering. The aggregate area of the holes is a little less than the area of a cross-section of the steam-pipe, so that the steam will be slightly expanded and superheated so as to become thoroughly dry.

dry-room (drī'röm), *n.* In *laundry-work*, an inclosed chamber heated by steam-pipes, used in drying shirts, collars, and other laundered articles. It is made of wood lined on the inside with sheet-metal and asbestos, or is made entirely of metal and fitted with wood or metal racks on which the articles are hung while being dried. Dry-rooms are also fitted with suction-fans for removing the heated air when it is saturated with moisture.

dry-rot, *n.*, **1.** *Trametes Pini*, *Thelephora pedicellata* and other *Hymenomycetes* cause a timber disease. See ★*conk*², 3, and *Thelephora*. *Fusarium Solani* and several species of *Phoma* cause a fungus disease of potatoes, turnips, and other root-crops.

dry-rot (drī'rot), *v. t.* To affect with dry-rot. *Lowell.*

dry-salt, *v. t.* **2.** In *dairying*, to add the salt to the butter while it is being worked. [Eng.]

dryster (drī'stèr), *n.* A drier; one employed in a drying establishment; one who is engaged in carrying on some drying operation.

Dr. Z., Dr. Zoöl. Abbreviations of *Doctor of Zoölogy*.

D. S. An abbreviation (*b*) of *Doctor of Science*.

D. Sc. D. An abbreviation of *Doctor of Science and Didactics*.

D. S. O. An abbreviation of *Distinguished Service Order*.

d. s. q. An abbreviation of *discharged to sick quarters*.

D. T., D. Th. Abbreviations of *Doctor of Theology*.

d. t. An abbreviation (*a*) of *delirium tremens*. [Slang.] (*b*) In *elect.*, of *double-throw*: as, a *d. t.* switch.

D-trap (dē'trap), *n.* In *plumbing*, a term sometimes applied to simple forms of traps resembling the letter **D**.

Du. An abbreviation of *Dutch*.

dual. I. *a.* **3.** In *geom.*, given by a principle of duality, as by interchanging point and straight in a plane.—**Dual consciousness.** See ★*consciousness*.

II. *n.* **2.** In *geom.*, a figure or theorem obtained by a principle of duality, as by interchanging side and angle in a plane.—**3.** In *chess*, a problem which has two solutions, that is, one in which the mate can be given either by one or by two pieces, or by one piece on two or more different squares.

dualism, *n.*—**Ethical dualism,** a moral system which demands one kind of conduct toward fellow-members of one's own social group, and the opposite kind of conduct toward all other men; especially, in primitive society, the recognition of one set of duties toward fellow-clansmen and of opposite duties toward strangers not of the blood-bond.—**Psychophysical dualism,** the metaphysical opinion that mind and matter are two different kinds of existents which are capable of acting upon each other.

dualistic, *a.* **3.** In *chem.*, pertaining to the dualistic system.—**Dualistic notation,** a notation based upon a principle of duality.—**Dualistic system,** the system, developed chiefly by Berzelius, of representing chemical compounds as constituted of two parts, a positive and a negative, chemically and electrically complementary, that is, mutually opposed. Thus sodium sulphate was represented as composed, not of sodium sulphur and oxygen, but of sulphuric acid (SO_3) and sodium oxid, which themselves were separated into positive and negative constituents. In some respects the theory is similar to the modern one of electrolytic dissociation.

duality, *n.* **The principle of duality,** in *geom.* (*b*) The principle that in theorems of configuration and determination any element or component may be interchanged with an element or component of like determining power in the universe under consideration, as straight for point or angle for sect in the plane.

dualize (du'a-līz), *v. t.*; pret. and pp. *dualized*, ppr. *dualizing*. To make or regard as two. *N. E. D.*

dub¹, *v. t.* **4.** (*f*) To make a fair show outside or on the surface, as by placing the good wares in the upper part of a basket and the inferior beneath. [Prov., Eng.]

dub-end (dub'end), *n.* The carved end of a cross- or spring-bar of a carriage.

dubitant (dū'bi-tant), *a.* and *n.* [L. *dubitans* (*-ant-*), ppr. of *dubitare*, doubt; see *doubt*.] **I.** *a.* Doubting; inclined to doubt: as, a shy, *dubitant* creature. *Bulwer.*

II. *n.* One who doubts; a doubter.

dubl, *a.*, *n.*, *v.*, and *adv.* A simplified spelling of *double*.

dubld, *pp.* A simplified spelling of *doubled*.

dublet, *n.* A simplified spelling of *doublet*.

Dubois's abscesses or **disease.** See ★*abscess*.

ducat, *n.*—**Barbary ducat,** an Arab gold coin current in the West Indies in the first half of the eighteenth century.

ducatello (dö-kä-tel'ō), *n.* [It., dim. of *ducato*, ducat.] A silver coin of Venice.

duchesse (dü-shes'), *n.* [F.: see *duchess*.] A type of sofa borrowed by the English designer Hepplewhite from the French. It is composed of two arm-chairs placed face to face with a stool connecting them, all three being framed together.

duck¹, *v.* **I.** *intrans.* **4.** In *bridge*, to lead a suit from the dealer or the dummy hand, and make no attempt to win the trick third hand, even when able to do so. See *underplay*.

II. *trans.*—**To duck up** (*naut.*), to lift (the clue of the foresail or mainsail on a square-rigger), so that the view ahead of the vessel may not be shut out from the steering-wheel. On cutters carrying a loose-footed mainsail the tack (junction of the foot and luff) of the sail is lifted by a small permanent purchase called a *tack-tackle* when the lower part of the sail near the mast obstructs the helmsman's view ahead.

duck², *n.* **5.** In *cricket*, no score; zero: short for *duck's-egg* (which see). [Slang.]—**Aylesbury duck,** a breed of ducks named from Aylesbury, England. They are large ducks, white with orange shanks, having a long, slender head and a pink beak.—**Call duck,** a duck of diminutive breed, raised for display rather than for the market: used originally for decoys, whence the name.—**Field-lane duck,** a local English name for a baked sheep's head.

duck-acorn (duk'ā'kôrn), *n.* The water-chinkapin, *Nelumbo lutea*.

duck-barnacle (duk'bär'na-kl), *n.* Same as ★*goose-barnacle*.

duckbill, *n.* **4.** *Polyodon spathula*, one of the ganoid fishes of the order *Salachostomi*. Two species are known, inhabiting fresh waters of the United States and China.

duck-boat (duk'bōt), *n.* A light, shallow-draft boat propelled by oars or a sail, and employed in duck-shooting.

Duck-egg porcelain. See ★*porcelain*.

ducker² (duk'èr), *n.* **1.** One who rears ducks. —**2.** A ducking-gun (which see).

duck-grass (duk'gràs), *n.* See ★*grass*.

duck-ladder (duk'lad'èr), *n.* A short ladder. [Local, Eng.]

duck-mud (duk'mud), *n.* Same as *crow-silk* (which see).

ducks (duks), *n. pl.* In *bot.*, a name indiscriminately applied to any of the American species of *Cypripedium* except *C. arietinum*.

duck-shover (duk'shuv'èr), *n.* A cabman who breaks rank in order to pick up a stray passenger instead of waiting his turn. [Australia.]

duckweed, *n.*—**Greater duckweed,** *Spirodela polyrhiza*, formerly included in the genus *Lemna*. Also called *water-flaxseed*.—**Tropical duckweed,** the water-lettuce, *Pistia Stratiotes*.

duckwheat (duk'hwēt), *n.* A local name for *Fagopyrum Tataricum*, the Tartarian buckwheat or India wheat. This species differs from the common buckwheat in having a grain with notched or wavy edges, a more slender habit of plant, smaller and hastate leaves, and greenish or yellowish flowers in smaller clusters.

duck-wing (duk'wing), *n.* Same as *duck-wing* ★*game*.

duct, *n.* **Aberrant duct of the liver.** See ★*aberrant*. - **Botal's duct.** Same as *ductus Botalli*.—**Closed duct,** in *bot.*, an elongated cell which is not continuous but has the intervening septa remaining.—**Dotted duct,** in *bot.*, a duct or vessel marked with dots or pits.—**Hermaphrodite duct,** in certain mollusks, as *Helix*, a duct leading from the hermaphrodite gland to the exterior or communicating therewith through other passages.—**Intercellular duct,** a duct or passage formed between the cells. **Nephric duct,** the duct of the kidney: a general term applied to the pronephric, mesonephric, and metanephric ducts.—**Reticulated duct,** a duct in which the markings seem to form a network. **Santorini's duct.** Same as *Santorini's* or *Bernard's canal* (which see, under *canal*¹).—**Scalariform duct,** a duct with ladder-like markings, characteristic of ferns. See *scalariform*, 1, (*b*), and *scalariform vessels* under *scalariform*. **Skene's ducts,** minute tubules which open into the female urethra near the meatus. **Thyroglossal duct,** the temporary connection between the thyroid gland in the embryo and the floor of the mouth. **Umbilical duct,** in *embryol.*, the tubular connection between the primitive intestine, or archenteron, and the umbilical vesicle.

duct (dukt), *v. i.* and *t.* [L. *ducere*, pp. *ductus*, lead, draw: see *duct*, *n.*, and cf. *abduct*, *adduct*, etc.] To draw: said of muscles which abduct, adduct, or circumduct a part, such as the leg or the eye.

The eyes can never be pronounced innocent in any case until the *ducting* and verting power of each separate muscle has been determined.
Med. Record, Feb. 7, 1903, p. 210.

ductil, *a.* A simplified spelling of *ductile*.

Ductus dorsopancreaticus. Same as *Santorini's* ★*duct* or *canal*. - **Ductus hepatopancreaticus.** Same as the *duct of Wirsung*.—**Ductus omphalo-entericus.** Same as *ductus vitellinus*.

ducu (dö'kö), *n.* [S. Amer.] A shrub or small tree, *Clusia Ducu*, of the gamboge family, found in the Andes of Ecuador and Colombia. It yields a fragrant gum-resin which is used by the natives like incense.

dudder-grass (dud'èr-gràs), *n.* The fern Venus's hair, *Adiantum Capillus-Veneris*. See *Venus's hair*.

dudish (dū'dish), *a.* Like a dude; characteristic of a dude.

dudler (dud'lèr), *n.* Same as ★*dudley*.

dudley (dud'li), *n.* [From the surname *Dudley*.] An engine for hauling logs which propels itself and drags its load by revolving a large spool around which are several turns of a cable, fixed at each end of the track.

dudleyite (dud'li-īt), *n.* [*Dudley(ville)*, in Alabama, + *-ite*².] A hydrous silicate allied to the vermiculites and derived from the alteration of margarite.

due-cento (dö'ā-chen'tō), *n.* [It., contraction for *mille due cento*, 1200.] The thirteenth century. In the history of Italian art the due-cento is characterized by a blending of romanesque and gothic influences, and by the proto-renaissance of Frederick II. (1215–1250), who showed peculiar appreciation of classic art. The chief master of the period is Niccola Pisano, the sculptor and architect (about 1207–1278).

dueling-pistol (dū'el-ing-pis'tol), *n.* A long-barreled pistol of fine workmanship, made especially for dueling.

duellant (dū-el'ant), *n.* [L. *duellum*, duel, + *-ant*.] A duelist.

The successful *duellant* had simply kept his guard and struck in the nick of time.
J. M. Hart, German Universities, p. 77.

duettist (dū-et'ist), *n.* [*duet* + *-ist*.] One who takes part in a duet.

duetto, *n.* **2.** A base coin of Lucca, equal to two quattrini.

duff² (duf), *v. i.* In *golf*, to miss a stroke by hitting the ground behind the ball.

duffadar (duf-a-där'), *n.* [Hind. Pers. *daf'a-dār*, an officer in command of a small body of men, < *daf'a*, a section, + *-dār*, suffix of agent.] A petty officer, such as a sergeant or corporal of irregular cavalry, a police officer, or the man in charge of a gang of laborers. [Anglo-Indian.]

We now composed a small party; besides our *Duffadar*, there remained Lassoo and Esau, twelve animals, and Ruby. *Geog. Jour.* (R. G. S.), XII. 268.

dufoil, *n.* **2.** In *bot.*, the twayblade, *Ophrys ovata*.

Dufton shales. See ★*shale*².

dugdug (dög'dög), *n.* [Chamorro name, in Guam.] The name in Guam of the fertile form of *Artocarpus communis*, the chestnut-like seeds of which, called *nangka*, are roasted and eaten by the natives. The latex is used as bird-lime, as a sizing for whitewash, and as a medium for mixing paints. The soft yellow wood is used for cupboards and interior woodwork of houses, but will not stand exposure to the weather. See *Artocarpus*, *breadfruit*, ★*breadnut*, 2, and ★*antipolo*.

Dugongidæ (dū-gong'gi-dē), *n. pl.* [*Dugong* + *-idæ*.] A family of sirenian mammals, including the existing species of dugong and the extinct genus *Prohalicore*. *J. E. Gray*, 1821.

duguan (dö-gö-än′), *n.* [Tagalog *duguan*, < Tagalog and Bisaya *dugó*, blood.] In the Philippines, the name of several species of nutmeg, especially *Myristica Philippensis*, a tree yielding a red resin. Its fruit is fragrant and was formerly used by the natives for making sweetmeats, but the inclosed nutmeg and its surrounding mace have little if any aroma. Also called *talangtalang*. See *Myristica*.

duiker (dī′kėr), *n.* [Cape D.] Short for ★*duiker-bok*.

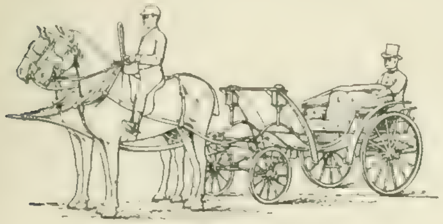
Mr. Oldfield Thomas exhibited and made remarks upon the skin of a female yellow-backed *duiker* (Cephalophus sylvicultrix) which had been obtained in the Awemba district of North-Eastern Rhodesia.
Athenæum, Jan. 25, 1902, p. 120.

duiker-bok (dī′kėr-bok), *n.* [Cape D., < *duiker*, diver, + *bok*, buck.] A small South African antelope, *Cephalophus grimmi*. It is about 26 inches high and typically of a yellowish-brown color. The males have small, straight pointed horns; the females are hornless. The name is extended to other antelopes of the same genus.

dukan (dö-kän′), *n.* [Aram., stage, platform.] The stage in the Jewish temple upon which the priests officiated, and the Levites stood when singing the daily psalms.

duk-duk (dök′dök), *n.* [New Britain.] The rituals of a secret society of the natives of New Britain. In these rites large masks are used which are said to represent the cassowary. *Ratzel* (trans.), Hist. of Mankind, I. 133.

duke[1], *n.* **6.** A vehicle having a victoria body suspended at the front on scroll-irons. At the rear is a rumble for a footman. It is some-



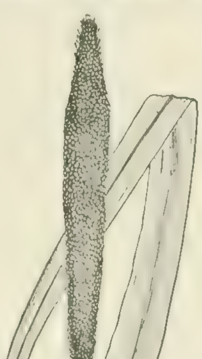
A Duke, appointed Demi-daumont.

times driven by a postilion. Now called a *ladies' driving-phaëton*. **Grand-duke.** See *duke*[1], 4†.

Duke bit. See ★*bit*[1].

duke-phaëton (dūk′fā″e-ton), *n.* A form of the duke which is provided with a detachable driver's seat at the front. See ★*duke*[1], 6.

dukhan (du̇′kạn), *n.* [Also *dukn*, *duchn*; < Ar. *dukhn*.] The pearl or negro millet, *Pennisetum spicatum*, a grass widely cultivated in warm countries for the sake of its seed and sometimes for fodder for cattle. The seeds are an important food-staple in many countries, but are not of such great economic importance as those of durra (*Andropogon Sorghum*). They are ground into meal, which in Africa is eaten in the form of mush, and in India, where it is the principal food-staple of the natives in many parts, in the form of bread or cakes, which are eaten together with buttermilk. In India called *cumboo-millet*.



Dukhan (*Pennisetum spicatum*), about one half natural size. (Drawn from Engler and Prantl's "Pflanzenfamilien.")

Dukhobors (dö′kō-bôrz), *n. pl.* See *Dukhobortsi*.

dulcamaretin (dul-kạ-mar′ẹ̄-tin), *n.* [*dulcamara* + *-et* + *-in*[2].] A resinous compound, $C_{16}H_{26}O_6$, formed by the action of dilute acids on dulcamarin.

dulcan (dul′kạn), *n.* See ★*dolcan*, 2.

dulcin, *n.* **2.** Same as ★*sucrol*.

dulcinan (dul′si-nan), *n.* Same as *dulcitan*.

dulcinea (dul-sin′ẹ̄-ä), *n.* [Sp., from the name of *Dulcinea* del Toboso, the lady beloved by Don Quixote, the hero of Cervantes's romance of that name; < L. *dulcis*, sweet.] A sweetheart; a mistress.

dulcitanide (dul-sit′ạ-nid), *n.* [*dulcitan* + *-ide*[1].] The general name employed in chemistry for compounds of acids and dulcitan: as, *benzodulcitanide*.

Dulidæ (dū′li-dē), *n. pl.* [NL., < *Dulus* + *-idæ*.] A family of passerine birds related to the shrikes, found in tropical America.

dull-witted (dul′wit″ed), *a.* Stupid; having a dull wit.

I do not believe that the average boy of the modern congregation is *duller-witted* or more restless now than I was then. *W. Gladden*, Parish Problems, p. 404.

dulotic (dụ-lot′ik), *a.* [Gr. *δουλωτικός, < δούλωσις, enslavement, < δουλοῦν, enslave, < δοῦλος, a slave: see *dulia*.] In *entom.*, slave-holding: applied to those genera of ants which enslave colonies or individuals of colonies of other ants.

Dahl is mistaken in supposing that L. bismarckensis is a *dulotic* ant, as a perusal of the above quoted passages from Wroughton's work will suffice to show.
Biol. Bulletin, May, 1904, p. 257.

dum, *a.* and *v.* A simplified spelling of *dumb*.

duma (dö′mạ̈), *n.* [Also *douma* (< F. *douma*); < Russ. *duma*, a council, a court, a chapter (of an order), also thought, idea, elegy, = OBulg. Bulg. *duma*, council, = Bohem. *duma*, thought, reflection, = Pol. *duma*, thought, idea, reflection, opinion, elegy (see ★*dumka*) = Little Russ. *duma*, thought, = White Russ. *duma*, pride, arrogance, = Lith. *duma*, opinion, = Lett. *pa-dōms*, council; of Teutonic origin, < Goth. *dōms* = OHG. *tuom* = AS. *dom*, E. *doom*, judgment: see *doom*[1], *n.*] In Russia, a council; an official assembly; specifically, an elective legislative assembly or council in Russia, established by ukase of Nicholas II. in 1905.

The *Doumas* of nearly all the principal cities have addressed the throne praying that the representatives of the people be summoned at once.
N. Y. Times, June 9, 1905.

In this [plans for a National Assembly] he [the Czar] has been influenced by the men who instituted the recent Congress at Moscow, of delegates from the zemstvos and *dumas*, or district and municipal councils.
Outlook, Aug. 12, 1905, p. 892.

dumaist (dö′mạ̈-ist), *n.* [*duma* + *-ist*.] A member of a duma.

The Czar, on March 3, issued a rescript addressed to the Minister of the Interior directing him to prepare plans for the assembling of representatives of the people. . . . [The plan] was received with derision by the zemstvoists and *dumaists* at their Congress in July.
Outlook, Aug. 12, 1905, p. 892.

dumaree, *n.* See ★*dumree*.

dumasin (dū′ma-sin), *n.* [*Dumas*, a French chemist, + *-in*[2].] An oily ketonic compound, $C_6H_{10}O$, prepared by passing the vapors of acetic acid or acetone through a red-hot tube. It has a spicy odor and boils at 120–125° C.

Dumas's method. See ★*method*.

Dumb jockey, peal, tooling. See ★*jockey*, ★*peal*[1], *blind tooling* (under *tooling*).

dumb-barge (dum′bärj), *n.* See ★*barge*[1].

dumb-bell, *n.* **2.** In *bacteriol.*, a diplococcus: so called from its shape.—**Dumb-bell crystals.** See ★*crystal*.

dumb-card (dum′kärd), *n.* See ★*card*[1].

dumbcow (dum′kou), *v. t.* To browbeat into silence or submissiveness; cow. *R. Kipling.* [Anglo-Indian.]

dumb-drift (dum′drift), *n.* An airway for conveying foul air and dangerous gases to the upcast shaft of a mine, past, but not through, the ventilating-furnace, to avoid explosions.

dumb-furnace (dum′fėr″nās), *n.* Same as ★*dumb-drift*.

dumb-iron (dum′ī″ėrn), *n.* In carriages, an iron shaped like the half of an elliptic spring attached to a half-elliptic and with it presenting the appearance of a full elliptic. It is sometimes covered with wood and richly carved.

dumb-pintle (dum′pin″tl), *n.* A rudder-pintle whose lower end rests on a disk in a socket-brace designed to take the weight of the rudder.

dumb-sound (dum′sound), *v. t.* To deaden the sound of or proceeding from: as, to *dumb-sound* an iron bridge. *N. E. D.*

dumb-telescope (dum′tel″e-skōp), *n.* See ★*telescope*.

dumb-watches (dum′woch″ez), *n.* The pitcher-plant, *Sarracenia purpurea*, also the trumpet-leaf, *S. flava*, in allusion to the convex circular expansion at the summit of the style, resembling a watch.

dumby, *n.* See ★*dummy*, 5 (*d*).

Dumdum bullet, fever. See ★*bullet*, ★*fever*[1].

dumka (döm′kạ̈), *n.* [Pol. *dumka*, dim. of *duma*, thought, elegy: see ★*duma*.] A Polish lament or threnody, or a piece of music in a melancholy style.

dummele (du̇m′ẹ-lẹ̄), *n.* [Cingalese?] A tar prepared from the wood of the bastard sandalwood, *Erythroxylum monogynum*, a shrub or small tree of southern India and Ceylon. It is used as a preservative of native boats. See *Erythroxylum*.

dumminess, *n.* **2.** Specifically, an abnormal mental condition of the horse, following acute inflammation of the brain, in which the various senses are dulled and the animal takes no notice of its surroundings. There is also a peculiar alteration in the method of taking in the food. *U. S. Dept. Agr.*, Rep. on Diseases of the Horse, 1903, p. 11.

dummy, *n.* **3.** (*c*) Proofs of pages of composed type pasted down upon a larger leaf in proper order, to show the general arrangement of an intended book or pamphlet.—**5.** (*c*) The dealer's partner at bridge. (*d*) In the game of rounce, an extra hand of 6 cards in the center of the table. *Amer. Hoyle*, p. 322.—**6.** A person who is put forward (by interested parties in the background) in some capacity in connection with a matter in which he has no real concern or as to which he is the mere tool of his movers: for example, (*a*) as an incorporator or a director of a bank, a railway, or other company, in order to satisfy some statutory requirement as to number, place of residence, or the like, or as (*b*) in Australia, when the public lands were thrown open, one who made application for an allotment in his own name, but really on behalf of another who had already made his own 'selection.'—**7.** A horse affected with dumminess, which follows an acute inflammation of the brain. See ★*dumminess*, 2.

The duration of the disease varies from a few hours to a week, the average being perhaps 72 hours. Horses which recover are said to become "*dummies*"—animals with a permanent cerebral lesion and defective intelligence. *Jour. Exper. Med.*, VI. 66.

dummy (dum′i), *v. i.* To act as a dummy. See ★*dummy*, 6.

dummyism (dum′i-izm), *n.* The practice of using or of acting as a dummy in any matter, as taking up land by perjury and false pretenses on the part of the dummy. See ★*dummy*, 6.

dummy-weed (dum′i-wēd), *n.* The coltsfoot, *Tussilago Farfara*.

dump[2], *v. t.* **5.** To press closely; subject to severe pressure, as bales of wool. [Australia.]

dump-car, *n.*—**Air dump-car**, a gondola-car of which the body can be tilted up to discharge the load. It is operated by compressed air. See ★*gravel-car*.

dumper, *n.* **2.** In *railroading*, any form of tilting-, dumping-, or unloading-car, whether operated by hand or by power.

dump-grate (dump′grāt), *n.* A furnace- or boiler-grate which can be tilted or tipped up so as to drop or dump its load of ash and cinder; a dumping-grate or tip-grate.

dump-hook (dump′hu̇k), *n.* A levered chain grab-hook attached to the evener, to which a team is hitched in loading logs. A movement of the lever releases the hook from the logging-chain without stopping the team.

dumping-boat (dum′ping-bōt), *n.* A boat or scow used in the removal of rubbish and in dumping it into the ocean. *Buck*, Med. Handbook, VI. 880.

dumping-car, *n.* Any railroad-car which is used to carry loose material in bulk and which,

Dumping-car for Industrial Railroad.
a, car tilted up for convenience [illegible] locked for transport; *c*, car released and upset, discharging load.

through its construction or fittings, can be made to discharge its load. The most simple form has a balance square, cup-, or V-shaped body, so supported that it can be tilted up to discharge the load at the side of the track. In another type the body is hinged to a turntable on the truck and can be swung around and tilted in any direction. Another simple form has a tilting-floor and fixed ends, or a fixed sloping floor and hinged sides, or two floors joined together and sloping outward, with hinged sides. In this type the car-body is fixed and the load is dumped by releasing the hinged sides. In this sense the hopper-car, having sloping floors for the automatic discharge of the load through the hopper, is a dump-car. The largest and most complicated type consists of an under-frame supporting two hinged and inclined floors which meet in the middle and, when closed, sustain the

load in a V-shaped trough. When the load is to be discharged, one section of one floor may be opened and the load dumped between the rails, or, by means of deflecting plates and a fixed apron on the side of the car, it may be dumped at the side of the track. Two sections may be opened and the load discharged on both sides or on one side. The dumping apparatus may be operated by hand or by compressed air (obtained from the air-brake system), either when the train is at rest or when it is in motion, and in any direction, one car at a time or all the cars of the train at the same instant.

dumpling, *n.* 3. Any one of two or three species of dwarf, stemless, succulent evergreen plants belonging to the genus *Mesembryanthemum*, especially *M. minimum*, called the *small dumpling*, a plant only half an inch high, and *M. obcordellum*, called the *greater dumpling*, which is about an inch higher. **Blue dumplings,** a favorite dish among the Creek Indians, consisting of two cups of corn meal, half a teaspoonful of baking-powder, and a little butter, made into small balls which are dropped into boiling water and cooked for five minutes. *Sci. Amer. Sup.*, May 7, 1904, p. 23703.

dump-moraine (dump′mō-rān″), *n.* A moraine formed of material dropped from a glacier.

dumpoke (dum′pōk), *n.* [A back-formation from *dumpoked.*] A stuffed duck; in general, any baked dish. [Anglo-Indian.]

dumpoked (dum′pōkt), *a.* [Hind. *dampukht*, cooking in steam, simmering, < *dam*, air, breath, steam, + *pukht*, cooked.] Boiled, as a fowl, with butter and spices; now, baked, as a fowl. [Anglo Indian.]

dump-skip (dump′skip), *n.* A bucket for hoisting coal or ore, so constructed as to overturn or open when its contents are to be dumped.

dumree (dum′rē), *n.* [Also *dumrie, dumaree;* < Hind. *damrī.*] A copper coin formerly in use in Central India, of very slight value. *Yule and Burnell.*

dumus (dū′mus), *n.*; pl. *dumi* (-mī). [L., a bush, OL. *dusmus*, prob. connected with *densus*, thick: see *dense.*] A bush or low-branching shrub.

dun[1]. **I.** *a.*—**Dun hackle, land, limestone, skipper.** See ★*hackle*[3], ★*land*[1], *Redesdale* ★*limestone*, ★*skipper*[1].

II. *n.* 2. A dun-colored natural or artificial fly used in angling: as, the pale-olive *dun*, made with a body of hair from the polar bear; goose-*dun*, with a body of gray goose-pinion; blue *dun*, with a body of pale mole-fur.

dunal (dū′nal), *a.* [*dune* + -*al*[1].] Of or pertaining to dunes.

At Lake of the Woods there is no evidence that the Isle aux Sables is tenanted by both *dunal* and predunal types of plants.
C. MacMillan, Minn. Bot. Studies, Bulletin IX. p. 993.

dun-bar (dun′bär), *n.* A British collector's name for a dun-colored moth (*Cosmia trapezina*) having two bars or transverse lines on the fore wings. *N. E. D.*

Duncanella (dung-ka-nel′ä), *n.* [NL., < *Duncan*, proper name, + -*ella.*] A genus of extinct tetracorals of the family *Cyathaxoniidæ*, including very simple conical cups with regular septa and no tabulæ or dissepiments. It is of Silurian age.

dunch[1] (dunch), *n.* [*dunch*[1], *v.*] A jog with the elbow; a nudge; a 'dig in the ribs.' [Scotch and prov. Eng.]

dunch[2], *a.* 2. Dull; stupid; slow of understanding.—3. Heavy, as bread; stodgy. [Prov. Eng. in both senses.]

II. *n.* 1. A stodgy pudding, made of flour, currants, and water. [Prov. Eng.]—2. Improperly baked bread. [Newfoundland.]

dune[1], *n.*—**Active dune,** a sand-dune in the wandering or shifting state.—**Barrier dune,** an artificial ridge created for the protection of inland areas by obstructing the shifting of the sand, as with living grasses, brush fences, etc.—**Gray dune,** a dune belonging to the innermost and highest of three lines found on some coasts: so called because the sand is tinged by an intermixture of humus; a land dune. The gray dunes and white dunes are inside of a low outer row.—**Land dune.** See *gray* ★*dune.*—**Sea dune.** See *white* ★*dune.*—**Wandering dune,** one which, being unprotected by vegetation, is continually changing its shape and place under the action of the wind. The movement of dunes is commonly inland from the shore.—**White dune,** a dune belonging to the middle of three lines as found on some coasts, and also medium in height: so named because the sand is uncolored by humus. Also called *sea dune.* See *gray* ★*dune.*

Dunelm. An ecclesiastical abbreviation of the Latin *Dunelmensis*, 'of Durham.'

dun-fly, *n.* See ★*dun*, *n.*, 2.

Dung substitute. Same as ★*dunging-salt.*

dunga-runga (dung″gä-rung′gä), *n.* [Aboriginal name in New South Wales.] A small tree of crooked growth, *Notelæa ovata*, yielding close-grained, hard wood, used for tool-handles. See *Notelæa.*

dung-beetle, *n.*—**Indian dung-beetle,** an East Indian scarabæid beetle, called by Kirby and Spence *Copris midas.*

dunging-salt (dung′ing-sâlt), *n.* A trade-name for sodium phosphate or arseniate when used in calico-printing as a more cleanly substitute for cow-dung in the bath in which, to remove superfluous mordant, the cloth is immersed after printing and before dyeing. Also called *dung substitute.*

dungon (dung-ōn′), *n.* See ★*dongon.*

dungstead (dung′sted), *n.* A dung-heap; a place where manure is piled; a midden.

The general conclusion arrived at, and clearly expressed by Pfeiffer, is that excessive loss in manure can be best avoided by storing it in a deep mass in a water-tight *dungstead* placed in a well-shaded situation, in which the material is firmly compressed.
Nature, Sept. 15, 1904, p. 491.

dung-worm (dung′wėrm), *n.* A worm or larva found in cow-dung, used as bait.

Dunkard series. See ★*series.*

Dunker[1], *n.*—**Seventh-day Dunkers,** a division of the Dunkers organized in Pennsylvania in 1728 by Conrad Beissel. The society, now almost extinct, was monastic in character, advocated celibacy for its members, and observed the Sabbath on the seventh day: whence its name.

dunkirk (dun′kėrk), *n.* A privateer vessel from Dunkirk in the seventeenth century.

dunkirker (dun′kėrk-ėr), *n.* 1. Same as ★*dunkirk.*—2. One of the crew of a dunkirk.

dunk-tree (dungk′trē), *n.* The jujube, *Zizyphus Jujuba.* See *Zizyphus.* [West Indian.]

dunner[2] (dun′ėr), *v. i.* [Var. of ★*dinner*, collateral form of *dinnle, dindle;* imitative.] To vibrate with a reverberating sound; make a thundering, reverberating noise. [Scotch.]

dunner[2] (dun′ėr), *n.* [*dunner*[2], *v.*] A hollow reverberating sound, as if made by heavy blows from the closed fist on a door; a thundering sound. [Scotch.]

dunnite (dun′īt), *n.* [*Dunn*, a proper name, + -*ite*[2].] Same as ★*explosive D.*

dunstone (dun′stōn), *n.* [*dun*[1] + *stone.*] In *petrog.*, stone of a dun or dull brown color, sometimes sedimentary, as dolomite or sandstone; occasionally, an altered dolerite. [Local, Eng.]

dunting (dun′ting), *n.* Knocking; hitting; dinting; in *ceram.*, the cracking of ware entirely through, while it is being fired in the kiln.

duny (dū′ni), *a.* [*dune* + -*y*[1].] Having numerous sand-dunes.

duodecagon (dū-ō-dek′a-gon), *n.* [Gr. δυώδεκα, twelve, + γωνία, angle.] Same as *dodecagon.*

duodecane (dū-ō-dek′ān), *n.* [Gr. δυώδεκα, twelve, + -*ane.*] Same as ★*dodecane.*

duodenary, *a.* 2. In *music*, pertaining to a duodene, or consisting of duodenes.

II. *n.* A musical instrument for acoustical research, played from a keyboard laid out in duodenes.

duodenate (dū′ō-dē-nāt), *v. i.*; pret. and pp. *duodenated*, ppr. *duodenating.* [*duodene* + -*ate*[2].] In *music*, to modulate by duodenes.

duodenation (dū-ō-dē-nā′shon), *n.* [*duodenate* + -*ion.*] In *music*, the act, process, or result of modulating by duodenes.

duodenocholecystostomy (dū-ō-dē″nō-kol″ē-sis-tos′tō-mi), *n.* [NL. *duodenum* + Gr. χολή, bile, + κύστις, bag, bladder, + στόμα, mouth.] In *surg.*, an operation for making an artificial opening between the gall-bladder and the duodenum.

duodenohepatic (dū-ō-dē″nō-hē-pat′ik), *a.* [*duodenum* + *hepatic.*] Relating to both the duodenum and the liver. *Buck*, Med. Handbook, I. 654.

duodenotomy (dū-ō-dē-not′ō-mi), *n.* [*duodenum* + Gr. -τομία, < ταμεῖν, cut.] In *surg.*, an operation for making an opening into the duodenum.

duogravure (dū″ō-grā-vūr′), *n.* [F. ★*duogravure*, irreg. < L. *duo*, two, + *gravure*, engraving.] A method of photo-engraving which requires two plates for the production of a print in one color. *N. Y. Times*, Jan. 1, 1904.

duole (dū′ōl), *n.* [L. *duo*, two, + dim. -*ole*, L. -*olus.*] In *music*, a group of two notes to be performed in the time normally occupied by three.

duoparental (dū″ō-pā-ren′tal), *a.* [L. *duo*, two, + *parens*, parent.] Of or from two parents or sexual elements; bisexual; amphigonic.

The conclusion that chromatin was the true hereditary-substance could only be deduced with convincing clearness after *duo-parental* . . . reproduction had been studied.
Nat. Sci., Nov., 1896, p. 312.

duotal (dū′ō-tal), *n.* The trade name of guaiacol carbonate, a white odorless and tasteless crystalline compound, $(C_6H_4O.CH_3O)_2CO$, obtained by the action of phosgen on guaiacol-sodium. It is decomposed in the intestines into guaiacol and carbonic acid, and is used as an intestinal antiseptic and in tuberculosis. It is official in the U. S. Pharmacopœia under the name *guaiacolis carbonas.*

dup[2] (dup), *n.* [D. *dop*, a shell, husk.] A trough used in South Africa for sheep-washing.

Dupin's cyclide. Same as *cyclide.*

duplex, *a.* **Cox duplex press.** See ★*press*[1].—**Duplex lock, paper, pump.** See ★*lock*[1], ★*paper*, ★*pump*[1].—**Duplex rail.** Same as *compound rail* (which see, under *rail*[1]).

duplexity (dū-plek′si-ti), *n.* Same as *duplicity*, 1.

duplicand (dū-pli-kand′), *n.* [L. *duplicandus*, fut. pass. part. of *duplicare*, double.] In *Scots law*, a double feu-duty due to a superior upon entry into possession by an heir, or at certain specified times.

duplicate, *v. i.* 2. In *whist* and *bridge*, to play the same cards over again, as nearly as possible under the same conditions, each side getting the hands originally held by its opponents.

duplicate. **I.** *a.* 4. In *bot.*, folded.—**Duplicate whist board.** See ★*board.*

II. *n.* **Memory duplicate,** in *whist*, a game in which the hands are preserved and played over again by the same players at the same table.

duplicator (dū′pli-kā-tor), *n.* 1. One who duplicates anything; one who makes duplicates.—2. A machine or other contrivance for making duplicates, as of a writing or drawing or the like.

duplicident (dū″plis′i-dent), *a.* [L. *duplex* (*duplic-*), double, + *dens* (*dent-*), tooth.] Same as *duplicidentate.*

duplicipennate (dū″pli-si-pen′āt), *a.* [L. *duplex* (*duplic-*), double, + *penna*, wing: see *pennate.*] In *entom.*, having the wings folded longitudinally in repose, as the moths. [Rare.]

duplicispinate (dū″pli-si-spī′nāt), *a.* [L. *duplex* (*duplic-*), double, + *spina*, spine: see *spinate.*] Bearing double or duplex spines.

duplicity, *n.* 4. In *biol.*, the division of a part of the body of an organism, such as a limb or a digit, into two equivalent parts which may be regarded as equivalent to normal single members. *W. Bateson*, Study of Variation, p. 406.—**Axial duplicity,** the presence in a bilateral animal of a pair of organs or parts in place of one which is normally single and median, as the presence of two tails in some breeds of goldfishes, or of two heads in monsters.

durative (dūr′a-tiv), *a.* [NL. ★*durativus*, < L. *durare*, continue: see *dure*, *v.*] In *philol.*, that expresses or serves to express continued or continuing action: as, to 'sit' and to 'strike' are *durative* verbs, while to 'strike down' and to 'sit down' are perfective verbs and express completed action.

durbachite (dūr′bach-īt), *n.* [*Durbach*, in Baden, Germany, + -*ite*[2].] In *petrog.*, a variety of syenite rich in mica which occurs as a basic facies of granite, and also as independent bodies.

Durchmusterung (dörch-mös′te-rong), *n.* [G., < *durchmustern*, inspect closely, review, scrutinize, < *durch*, through, + *mustern*, inspect, muster: see *muster*, *v.*] A German name given to certain extensive catalogues of stars which give their magnitudes and their approximate positions sufficiently for identification. The oldest and best-known is Argelander's Durchmusterung of the Northern Heavens, containing about 324,000 stars. It was made at Bonn, and is usually referred to by the initials B. D. M. His successor, Schonfeld, extended the work to stars south of the equator, in the Southern Durchmusterung (S. D. M.). A third is the Cordova Durchmusterung (Cord. D.), extending Schönfeld's work to the south pole. The three contain all the stars easily observable with a telescope of three inches aperture down to the ninth magnitude, and many between magnitudes 9 and 9½. There is also the Cape (of Good Hope) Photographic Durchmusterung (C. P. D. M.), covering nearly the whole of the southern hemisphere.

durdenite (dėr′den-īt), *n.* [Named for H. S. *Durden* of San Francisco.] A hydrous ferric tellurite occurring in greenish-yellow small mammillary forms: found with native tellurium in Honduras.

durene (dū′rēn), *n.* [? L. *durare*, last, + -*ene.*] A colorless compound found in coal-tar oil and prepared by the action of methyl chlorid on toluene in the presence of aluminium chlorid; 1, 2, 4, 5-tetramethyl benzene. It has an odor resembling that of camphor, crystallizes in leaves, melts at 79–80° C., and boils at 193–195° C.

durenol (dū′rē-nōl), *n.* [*durene* + -*ol.*] A colorless compound prepared by fusing durene-sulphonic acid with potassium hydroxid; 1, 2, 4, 5-tetramethyl phenol. It crystallizes in large flat prisms, melts at 117° C., boils at 249–250° C., and is volatile with steam.

durezza (dö-ret'zii), *n.* [It., < L. *duritia*, hardness, < *durus*, hard.] In *music*, harshness of tone or expression.

durgah (dur-gä'), *n.* [Also *durgaw*; < Hind. *dargāh*, < Pers. *dargāh*, threshold, door, place, court, mosque, shrine; < *dar*, door, + *gāh*, place.] In India, the shrine of a Mohammedan saint.

duridine (dū'ri-din), *n.* [L. *durare*, last, + *-id* + *-ine*[2].] A colorless compound prepared by heating xylidene with methyl alcohol. It melts at 14° C. and boils at 252–253° C.

durote (dö-rō'tā), *n.* [Sp. *duro*, hard.] In Venezuela, a large, leguminous tree of Guiana and Venezuela, *Bocoa Provacensis*, which yields the boco-wood. See *boco-wood*.

durrin (dur'in), *n.* [*durra* + *-in*[2].] A glucoside, $HOC_6H_4CH(CN)OC_6H_{11}O_5$, present in Egyptian durra. It crystallizes in brilliant leaflets.

durylic (dū-ril'ik), *a.* [*dur*(*ene*) + *-yl* + *-ic*.] Derived from durene.—**Durylic acid.** Same as *cumylic acid*.

duscle (dus'kl), *n.* [Appar. an artificial formation from *dusk*.] The black nightshade, *Solanum nigrum*.

dusky-wing (dus'ki-wing), *n.* Any butterfly of the genus *Thanaos*; so called on account of its dark color.—**Dreamy dusky-wing**, an American hesperiid butterfly, *Thanaos æolus*, occurring in nearly all parts of the United States. Its larvæ feed on the aspen. **Juvenal's dusky-wing**, an American hesperiid butterfly, *Thanaos juvenalis*, occurring throughout the eastern United States. Its larvæ feed on the oak. **Lucilius's dusky-wing**, an American hesperiid butterfly, *Thanaos lucilius*, occurring in the Atlantic United States. Its larvæ feed on wild columbine and on pigweed. **Martial's dusky-wing**, an American hesperiid butterfly, *Thanaos martialis*, occurring throughout the Atlantic United States and westward to Colorado. **Persius's dusky-wing**, an American hesperiid butterfly, *Thanaos persius*, of wide distribution in the United States. Its larvæ feed on the willow and poplar. **Sleepy dusky-wing**, an American hesperiid butterfly, *Thanaos brizo*, occurring throughout most of the United States except the far Northwest.

duss (dus), *n.* [E. Indian.] A shrubby labiate plant, *Sussodia oppositifolia*, indigenous to the Himalaya Mountains. It has opposite or ternate leaves, and spikes of minute white flowers with feathery calyx-teeth. The leaves are covered with downy wool, which is used to remove insect larvæ from old sores; they are also applied to wounds and bruises. The wood is moderately hard and close-grained and is used for making gunpowder charcoal.

dust[1], *n.* **11.** In *bot.*, pollen. *Blair.* **12.** Flour. [Slang, Australia.]—**Dust-particles of Müller.** See ★*homœomium*.—**Dust process**, in *ceram.*, a method of making buttons, tiles, etc., by pressing dampened clay-dust in molds.

dust-bar (dust'bär), *n.* In *cotton manuf.*, one of the parallel bars in a grid for the escape of dust and extraneous matter in cotton, in the scutching- and other preparatory machines.

dust-cage (dust'kāj), *n.* In a cotton-scutching machine, a drum or cylinder with a perforated surface, against which the cotton is blown and from which it is taken in the form of a fleece or sheet. By means of a draft-fan and conduits attached to the ends of the cylinder the dust is removed from the cotton through the perforations.

dust-collector (dust'kō-lek″tor), *n.* In *milling*, a machine for removing and collecting the dust from purifiers and other milling-machines. It consists of a large number of cloth cylinders, placed radially, through which the dust-laden air is blown, the air escaping through the cloth and leaving the dust in the cylinders to be removed as fast as it collects.

dust-counter (dust'koun″tèr), *n.* An instrument for counting the number of particles of dust in a unit volume of air. It is made in several forms, but in each a small volume of air is suddenly expanded so that it cools to the dew-point, and the moisture condensing on the dust-nuclei brings them down to rest on the surface of a glass mirror, where they may be counted. The air along the French and Italian Riviera, for example, contains sometimes many thousands of dust-particles per cubic centimeter, the purest observed having 750. On the Rigi Kulm the lowest number observed is 210. In the western Highlands of Scotland the lowest number is 16.

dustee (dus-tē'), *n.* [Varied from *fustee*?] The offspring of a fustee and a white. [West Indies.]

duster, *n.* **6.** An apparatus or device, usually employing a current of air, for removing dust or fine particles from any material, such as grain, ore, rags, and the like.—**7.** A light wool or linen blanket, embroidered or plain, used as a cover for the lap, in driving, to protect the clothing from dust.—**8.** A test-well which fails to reach water; a dry hole. [U. S.]

Great assistance would have been given in the location of this line of complete saturation had the unsuccessful test wells of the past been divided into two classes, as salt-water wells and *dusters*, instead of calling them all dry holes, as has generally been done.
Contrib. to Econ. Geol., U. S. Geol. Surv., 1902, p. 338.

dust-fall (dust'fâl), *n.* The settling of dust from the atmosphere.

dust-feather (dust'feтн″èr), *n.* See *feather*.

dust-figure (dust'fig″ūr), *n.* A regular figure formed on the surface of a body by the deposition of dust. The dust adheres to certain parts of the surface, sometimes by osmosis, sometimes by electric attraction, sometimes by a special physical or chemical affinity between special kinds of dust and special parts of the solid surface.

dust-flow (dust'flō), *n.* A stream or land-slide of water-saturated volcanic ashes.

Few days, however, pass without clouds of steam rising from the crater, accompanied from time to time by *dust-flows* down the gorge to the Rivière Blanche to the southwest or across the basin of the Lac des Palmistes to the east. *E. O. Hovey*, in Science, July 1, 1904, p. 24.

dust-fog (dust'fog), *n.* **1.** A whitish fog formed of vapor-dust or the finest kind of mist, differing from the dust-haze which frequently follows volcanic eruptions and is formed of fine dust-particles or nuclei upon which vapor has begun to condense.

Cold winds from the north-east, accompanied by *dust-fogs*, began only in December, and then the cold reached 11° Fahr., and even 5° Fahr. at night.
Geog. Jour. (R. G. S.), IX. 549.

dust-haze (dust'hāz), *n.* See *haze*[1].

dusting (dus'ting), *n.* **1.** The act of casting dust or powder upon anything; specifically, in *ceram.*, sprinkling over the damp, unburned clay, through a canvas bag, powdered lead or galena, which in the kiln will fuse into a glaze. This method of lead-glazing was employed in England for common red pottery. See *lead-glaze* and ★*plumbiferous*, 2.—**2.** The act of brushing the dust from a surface, as of a table, chair, floor, etc.

dust-plate (dust'plāt), *n.* A plate placed in front of the cinder-outlet of an iron blast-furnace, which usually serves also to support the slag-runner, so that the workmen may be protected from dust and solid particles which may be blown through the cinder-opening by the blast.

dust-pressed (dust'prest), *p. a.* See *Prosser's* ★*process*.

dust-proof (dust'pröf), *a.* Proof against dust; capable of excluding dust.

dust-shower (dust'shou″èr), *n.* A cloud of dust which, having been caught up into the upper atmosphere by a violent wind in one place, is blown, it may be, long distances, and precipitated with or without rain or snow. See also ★*sea-dust*.

dust-trunk (dust'trungk), *n.* A conduit through which cotton is blown (in the early processes of manufacture) and the dust knocked out by the cotton striking against projecting fins or plates.

dust-vapor (dust'vā-por), *n.* See ★*vapor-dust*.

dust-wind (dust'wind), *n.* A wind that brings dust-storms, such as the northwesterly gales on the eastern coast of Australia. *Geog. Jour.* (R. G. S.), XVIII. 91.

dust-wisp (dust'wisp), *n.* A delicate spray or stria of dust or ice-spiculæ floating in the sky among the sunrise and sunset colors; usually of a steely-white tint and hence high up in the atmosphere.

This was of an unmistakably volcanic character, different from anything that has appeared here since the Krakatoa sunsets, though not equal to those in splendour. Since that maximum, the colouring has been gradually lessening. Yesterday and to-day it was remarkably weak, the chief feature being the *dust-wisps*, which were more conspicuous than I have previously seen them during this apparition. *Nature*, Dec. 25, 1902, p. 174.

dusty, *a.* **4.** In *bot.*, covered with granulations simulating dust. Also *farinose*.

dusty-husband (dus'ti-huz″band), *n.* The alpine rock-cress, *Arabis alpina*.

dusty-miller, *n.* **3.** Same as *miller*, 3.

dusty-wing (dus'ti-wing), *n.* Any member of the neuropterous family *Coniopterygidæ*: so named from the fact that the wings are covered with a white powder.

Dutch. I. *a.*—**Dutch consolation, door, kiln, roof, sauce.** See ★*consolation*, etc.—**Dutch treat, yellow.** See *treat*, ★*yellow*.

II. *n.*—**Double Dutch.** (*a*) Unintelligible gibberish. (*b*) A form of the child's game of jumping the rope in which two ropes are used.

dutch, *v. t.*—**To dutch it,** in *euchre*, to name a different color when the trump is turned down.

Dutchman, *n.* **3.** [*l. c.*] A layer of suet fastened with skewers into a roast of lean beef or mutton.—**4.** [*l. c.*] In *lumbering*, a short stick placed transversely between the outer logs of a load to divert the load toward the middle and so keep the logs from falling off.

Dutchman's-breeches, *n.* **2.** The streaks of blue sky seen between the alto-stratus clouds after a storm begins to abate.

duty, *n.*—**Duty of water,** in *irrigation*, the relation which the quantity of water applied bears to the area irrigated. For example, one cubic foot of water per second flowing throughout the irrigating season should irrigate 100 acres. Under a high duty of water 160 or more acres may be irrigated; under a low duty 60 acres or less may be watered. Or, in other units, two and a half acre-feet of water held in a reservoir should be ample to furnish water for one acre; or under a high duty one acre-foot of water may irrigate half an acre or more. **Export duty,** a sum of money levied by a government upon the exportation of goods. Such duties are unconstitutional in the United States.—**Probate duty.** See *probate-duty*.

duv, *n.* A simplified spelling of *dove*.

duzen, *n.* A simplified spelling of *dozen*.

D. V. M. An abbreviation of *Doctor of Veterinary Medicine*.

D. V. M. S. An abbreviation of *Doctor of Veterinary Medicine and Surgery*.

D. V. S. An abbreviation (*a*) of *Doctor of Veterinary Science*; (*b*) of *Doctor of Veterinary Surgery*.

Dwarf male. See ★*male*[1].

dwarf-ear (dwârf'ēr), *n.* An ear-snail; a gastropod belonging to the family *Otinidæ*, having an auriform shell.

dwarfism (dwârf'izm), *n.* [*dwarf* + *-ism*.] The state of being a dwarf or dwarfed; dwarfishness.

Some predisposition to deformity is noted in funnel-breast, hallux valgus and *dwarfism*.
Phil. Med. Jour., Jan. 31, 1903, p. 215.

dway-berry (dwā'ber″i), *n.* [A reduction of ★*dwale-berry*.] Same as *dwale*, 3.

dwel, *v.* and *n.* A simplified spelling of *dwell*.

dwell, *n.* **2.** An automatic pause in the action of one part of a machine to enable another part to complete its work; specifically, in a sheet-metal drawing-press, a pause in the motion of one die to enable another to continue its work, or a pause in the motion of the two dies to enhance the effect of their combined pressure. It is also utilized to enable one die to serve as a binding-clamp, holding the blank firmly, while another die draws it into the required shape. A dwell can be produced by the use of a cam or by the omission of some of the teeth of a gear.

dyad. I. *n.* **5.** A group or association of two chromosomes in certain cells, such as the germ-cells in certain stages.—**6.** In *pros.*, a group of two lines having different rhythms.

Dyads and triads there are in Pindar, but they do not disturb the rhythmical working of the odes.
B. L. Gildersleeve, Pindar, p. liii. *N. E. D.*

II. *a.* **2.** Noting an axis of twofold symmetry. See ★*symmetry*.

dyadics (dī-ad'iks), *n.* That branch of pure mathematics which supposes no other regular relation between the principal objects of its study than those which are concerned with the assumption that there are two alternative ways in one or other, but not both, of which each of those objects is determined. For example, if the algebra of necessary reasoning, which is wholly concerned with the dyadic distinction between what is true and what is false, taking no account of greater or less probabilities, be considered in its pure mathematical relations, regardless of its application to logic, the simple mathematical theory that will so result belongs to dyadics.

dyakis-dodecahedral (dī″a-kis-dō″dek-a-hē'dral), *a.* Of or pertaining to a dyakis-dodecahedron or diploid; diploidal.

dyakis-dodecahedron, *n.* **2.** A solid of twenty-four faces, somewhat resembling the deltoidal icositetrahedron.

dyakis-hexacontahedron (dī″a-kis-hek″sakon-ta-hē'dron), *n.* [Gr. δύακις, twice, + E. *hexacontahedron*.] A solid of 120 faces, reciprocal to the great rhombicosidodecahedron.

Dyaus (dyä'ùs), *n.* [Skt. *dyāús* (stem *dyo*), gen. *dívás* (*dyos*): see *Zeus* and *Jupiter*.] In *Hindu myth.*, the god of the sky, answering to the Greek Zeus and the Roman Jupiter in their simpler aspects.

dye, *n.* **Basic dye.** (*a*) Same as ★*basic stain*. (*b*) See *basic* ★*color*.—**Neutral dye,** a dye which results through the interaction between a basic and an acid dye, whereby the acid and basic affinities of the two become mutually saturated: as, for example, the eosinate of methylene-blue.—**Oxyazo dyes,** a class of artificial coal-tar colors which includes Soudan brown, crocein orange, and others.—**Paste dye,** a coloring material prepared for dyers' use in the condition of a semi-liquid pasty mass. Artificial alizarin and indigo are among the dyestuffs supplied in this form.—**Triphenylmethane dyes,** an important class of artificial dyestuffs, of which magenta or fuchsin and Hofmann's violet are prominent examples; made from materials originally derived from coal-tar, and very extensively used in dyeing, especially on wool and silk.

dye-beck, *n.*—**Spiral dye-beck,** a kind of dye-vat with a winch, for dyeing piece-goods which are made to pass spirally along the winch, by means of guide-pins, from one end to the other.

dye-box (dī'boks), *n.* In *leather-manuf.*, a box or tray in which the dye is placed and in which the skins are dipped.

dye-leaves (dī'lēvz), *n. pl.* **1.** The inkberry or gallberry, *Ilex glabra.*—**2.** The sweetleaf, *Symplocos tinctoria.*

dyer's-weed, *n.* **2.** The woad, *Isatis tinctoria.* —**3.** Either of the two American goldenrods, *Solidago nemoralis* and *S. rugosa*, somewhat used in dyeing. See *Solidago.*

dyestuff, *n.* **Albumen dyestuff.** Same as *albumen* ★*color.*

dygogram (dī'gō-gram), *n.* [Gr. δύ (ναμις), power, + γω(νία), angle, + γραμμα, a writing.] A diagram that shows both the horizontal directive magnetic force of the compass-needle on board ship under local influences and its deviation from the meridian for any latitude and sailing-course; specifically, the dygogram of Captain Colongue (1870) and of A. Smith, from which Paugger obtained the idea of his mechanical dromoscope of 1872.

dyn., dynam. Abbreviations of *dynamics.*

dyname, *n.* See *dynam*, 2.

dynamic, *a.* **5.** Sthenic; functional, not organic: as, a *dynamic* disease.—**6.** In *bot.*, capable of strongly swelling on one side: applied to tissue.—**Dynamic action.** See ★*action.* —**Dynamic agent,** in society, whatever produces change, especially progressive change. *L. F. Ward,* Outlines of Sociol., p. 167.—**Dynamic cooling,** in *meteor.*, the cooling of a portion of the atmosphere when it expands against a slightly inferior pressure whereby its own internal heat is partly consumed in doing external work. **Dynamic density.** See ★*density.*—**Dynamic heating,** in *meteor.*, the warming of the air, when it is compressed, by virtue of a slightly superior external pressure whereby work is done upon it and an equivalent amount of heat is thereby generated.—**Dynamic knowledge, meteorology,** etc. See ★*knowledge,* ★*meteorology,* etc.

Dynamical capacity, in *physics,* same as *density.* [Rare.]

dynamicity (dī-na-mis'i-ti), *n.* [*dynamic* + *-ity.*] In *chem.*, same as *atomicity* or *valence.* The term has not come into general use.

dynamics, *n.*—**Chemical dynamics,** in *phys. chem.*, chemical mechanics as applied to a chemical system which is not in equilibrium but is undergoing changes in the active masses of the reacting substances; the study of the velocity of chemical reactions.—**Vital dynamics,** the theory of the vital forces in motion, as distinguished from mechanical or chemical forces acting upon the living organism.

dynamist, *n.* **2.** A student of dynamics.

dynamite, *n.* Nitroglycerin soaked up by silicious earth as an inert absorbent or 'dope' is now distinguished as *dynamite No. 1,* and the meaning of the word is extended so as to include also numerous mixtures of nitroglycerin with absorbents which increase the force of the explosion. See *dope,* 3. **Gelatin dynamite,** a high explosive used for blasting, made by mixing a cheap absorbent with explosive gelatin. **Lignin dynamite,** a trade-name for various mixtures of wood-pulp or sawdust with a nitrate, generally sodium nitrate, and more or less nitroglycerin: used as explosives in blasting.

dynamite-shell (dī'na-mīt-shel''), *n.* A projectile with thin walls and containing a large bursting-charge of dynamite; especially the shell fired from dynamite-guns.

dynamitic (dī-na-mit'ik), *a.* [*dynamite* + *-ic.*] Of or pertaining to dynamite or dynamiters.

dynamitist (dī'na-mī-tist), *n.* [*dynamite* + *-ist.*] One who favors dynamitism.

dynamo, *n.* **Compound dynamo,** a dynamo in which the field-magnets are excited by both series and shunt windings.—**Fly-wheel dynamo,** a dynamo in which the revolving part, either the armature or field, serves as a fly-wheel for the engine.—**Load of a dynamo.** See ★*load*[2].

dynamocosmical (dī''na-mō-koz'mi-kal), *a.* In *meteor.*, relating to the terms in the analytical expression for the variations of any meteorological element that are supposed to depend upon the influence of forces external to the earth and therefore solar or cosmical.

dynamogen (dī-nam'ō-jen), *n.* [Gr. δύναμις, power, + -γενής, -producing.] A trade-name of an explosive consisting of yellow prussiate of potash, potash, chlorate of potash, starch, and charcoal, made into a paste with boiling water and spread with a brush over porous paper, which is then to be dried, cut up, and rolled into cartridges.

dynamogenesis, *n.*—**Law of mental dynamogeny** or **dynamogenesis,** in *psychol.*, the doctrine that every consciousness tends to express or realize itself in corresponding muscular movements; or, more accurately, that every consciousness tends to kinæsthesis as its natural term. The law is a translation, so to speak, from the law of neural dynamogeny, which asserts that incoming energy of stimulation tends always to be transformed into outgoing energy of bodily movement. Its verification has usually been attempted by means of the dynamometer or some equivalent instrument; a normal pull or squeeze is recorded, and then the pull or squeeze as reinforced by the dynamogenic effect of some sensory stimulus.

If simultaneously with the contraction the subject received a sensorial impression, the contraction was sometimes weakened, but more often increased. This reinforcing effect has received the name of *dynamogeny.*
W. James, Prin. of Psychol., II. 379.

dynamogenetic (dī''na-mō-jē-net'ik), *a.* Same as *dynamogenic.*

dynamogenic, *a.* **2.** Producing force: as, the *dynamogenic* value of food. *Smithsonian Rep.,* 1898, p. 543.

dynamogenous (dī-na-moj'e-nus), *a.* Same as *dynamogenic.*

dynamogenously (dī-na-moj'e-nus-li), *adv.* In accordance with the principle of dynamogeny.

dynamographic (dī''na-mō-graf'ik), *a.* [Gr. δύναμις, power, + γράφειν, write, + *-ic.*] Of or pertaining to the graphic recording of force.

dynamology (dī-na-mol'ō-ji), *n.* [Gr. δύναμις, power, + *-λογία,* ⟨ λέγειν, speak.] The science of forces; dynamics.

In the sciences of organized bodies we find them subdivided by abstraction into categorical sciences, which we call chemology or chemistry, morphology, *dynamology* or dynamics, ontology or evolution, and psychology.
J. W. Powell, in Amer. Anthropologist, Oct.–Dec., 1901, [p. 603.

dynamometamorphic (dī''na-mō-met-a-môr'fik), *a.* Pertaining to or characteristic of dynamometamorphism, or changes effected in rocks by movement and pressure. *Nature,* Aug. 4, 1904, p. 317.

dynamometamorphism (dī'' na-mō-met-a-môr'fizm), *n.* [Gr. δύναμις, power, + *metamorphism.*] In *petrog.*, metamorphic changes produced by mechanical rather than chemical processes. See *metamorphism.*

dynamometamorphosed (dī'' na-mō-met-a-môr'fōzd), *p. a.* Metamorphosed by processes among which earth-movements are the controlling factors.

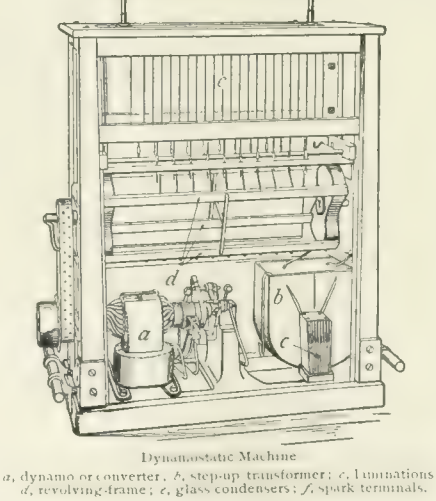
dynamometer, *n.* **2.** An instrument for determining the magnifying power of a telescope by measuring the diameter of the little image of the object-glass which is formed just outside of the eyepiece: usually, and better, called *dynameter,* to distinguish it from the instrument for measuring stress.

dynamophone (dī-nam'ō-fōn), *n.* [Gr. δύναμις, power, + φωνή, sound.] A form of transmission dynamometer in which the twist of a running-shaft is determined by the aid of specially mounted telephones whose relative angular positions, when giving the same tone vibrations, can be accurately measured and compared with those when the shaft is at rest. *Science,* Aug. 29, 1902, p. 339.

dynamoscope (dī-nam'ō-skōp), *n.* [Gr. δύναμις, power, + σκοπεῖν, view.] An appliance for auscultating a muscle during its contraction.

dynamoscopy (dī-na-mos'kō-pi), *n.* [*dynamoscope* + *-y*[3].] The use of the dynamoscope in listening to the murmur produced by contracting muscular fibrils.

dynamostatic (dī'na-mō-stat'ik), *a.* [Gr. δύναμις, power, + στατός, ⟨ ἵστασθαι, stand: see *static.*] Static in connection with power. —**Dynamostatic machine,** a machine designed by



Dynamostatic Machine

a, dynamo or converter; *b*, step-up transformer; *c*, luminations; *d*, revolving-frame; *e*, glass condensers; *f*, spark terminals.

Professor E. Thomson, which gives very high direct-current voltage of considerable power. It consists of an alternating-current generator or inverted converter (see ★*converter*), a step-up transformer (see ★*transformer*), a series of glass-plate condensers, and a frame revolved synchronously with the converter, which charges the condensers in parallel and connects them in series for discharge.

dynamotor (dī'na-mō-tor), *n.* [Gr. δύνα(μις), power, + E. *motor.*] A combined electrical motor and generator by means of which direct current can be drawn from the source of supply at one voltage and delivered for use at another voltage. The dynamotor is used for electroplating, and has various functions in laboratories which employ electric power. *Scripture,* Exper. Phonetics, p. 209.

dyne-centimeter (dīn-sen'ti-mē-tèr), *n.* **1.** The c. g. s. unit of work; the work done by a dyne of force acting through one centimeter; an erg.—**2.** The c. g. s. unit for moment of force; a unit of torque; the moment of a force of one dyne acting at the end of an arm one centimeter in length.

dyophone (dī'ō-fōn), *n.* [Gr. δύο, two, + φωνή, sound.] In *acoustics,* an instrument for the simultaneous production of two tones differing in composition or timbre but of equal pitch.

dyophysite (dī-of'i-zīt), *n.* [Gr. δύο, two, + φύσις, nature, + *-ite*[2].] Same as *diphysite.*

dyophysitism (dī-of'i-zī-tizm), *n.* [*dyophysite* + *-ism.*] Same as *diphysitism.*

dyotheletian (dī-oth-e-lē'shian), *a.* [Gr. δύο, two, + θελητής, one who wills, + *-ian.*] Of or pertaining to the doctrine that there are two wills in Christ.

The monotheletian patriarchs and the *dyotheletian* popes mutually anathematized each other.
A. F. Heard, Russ. Church and Russ. Dissent, p. 2.

dyotheletism (dī-oth'e-lē-tizm), *n.* Same as *dyothelism.*

dyphone (dī'fōn), *n.* [Irreg. spelling for *diphone,* as if meaning 'having a doubled, that is, increased sound.'] A powerful double lute with fifty strings, invented by Thomas Mace of London in 1672.

dysacousis (dis-a-kō'sis), *n.* [Also *disacusis;* NL., ⟨ Gr. δυσ-, ill, + ἀκουσις, hearing.] Incomplete deafness; hardness of hearing. Also *dysacusis.*

dysalbumose (dis-al'bū-mōs), *n.* [*dys-* + *albumose.*] A variety of hetero-albumose which results from the latter on standing. It is insoluble in a dilute saline solution.

dysaphe (dis'a-fē), *n.* [NL., ⟨ Gr. δυσ-, ill, + ἁφή, touch, ⟨ ἅπτειν, touch.] Impaired sense of touch.

dysaphia (dis-ā'fi-ä), *n.* [NL.] Same as ★*dysaphe.*

dysarthrosis (dis-är-thrō'sis), *n.* [NL., ⟨ Gr. δυσ-, ill, + ἀρθρωσις, jointing: see *arthrosis.*] **1.** Same as *dysarthria.*—**2.** Congenital defect causing limited movement of a joint.—**3.** Dislocation of a joint.—**4.** A false joint.

dysboulia (dis-bō'li-ä), *n.* [NL., ⟨ Gr. δυσβουλία, ill counsel (taken as 'difficult willing'), ⟨ δυσ-, hard, ill, + βουλή, will, wish, counsel.] Impairment of the power of the will. Also written *dysbulia. Baldwin,* Dict. of Philos. and Psychol., II. 817.

dyschromia (dis-krō'mi-ä), *n.* [NL., ⟨ δυσ-, hard, ill, + χρῶμα, color.] Same as *dyschroia.*

dyschronous (dis'krō-nus), *a.* [Gr. δυσ-, ill, + χρόνος, time.] Ill agreeing, or disagreeing, in time: opposed to *synchronous.*

It [consciousness] has a selective power, manifest both in choosing and in combining sensations received at different times. It can make synchronous impressions *dyschronous* in their effects, and *dyschronous* impressions synchronous. *Science,* July 4, 1902, p. 5.

dyscinesia, *n.* Same as *dyskinesia.*

dyscoria (dis-kō'ri-ä), *n.* [NL., ⟨ Gr. δυσ-, ill, + κόρη, pupil of the eye.] Irregularity in the contour of the pupil of the eye.

dyscrasial (dis-krā'si-al), *a.* [*dyscrasia* + *-al*[1].] Same as *dyscrasic.*

dysderid (dis'dē-rid), *n.* and *a.* **I.** *n.* A member of the family *Dysderidæ.*

II. *a.* Having the characteristics of or belonging to the family *Dysderidæ.*

dysenteriform (dis-en-ter'i-fôrm), *a.* [L. *dysenteria,* dysentery, + *forma,* form.] Resembling dysentery.

dysentery, *n.* Recent researches have shown that there are at least two diseases, and possibly more, having the same general symptoms and still grouped under the common designation of *dysentery.* One form, distinguished as *bacillary dysentery,* is characterized by the presence of a specific bacillus, *Bacillus dysenteriæ* or Shiga's bacillus (so named after the Japanese physician who discovered it). Another form, *amebic dysentery,* is associated with the presence in the intestine of a unicellular animal micro-organism, *Amœba dysenteriæ.* This form is less acute in its onset than bacillary dysentery,

but may continue for months or even years, causing great emaciation and anemia, and not infrequently leading to abscess of the liver.

dysentery-root (dis'en-ter-i-röt), *n.* The stick-seed or beggar's-lice, *Lappula Virginiana*, from the supposed medicinal properties of the root. Also called *dysentery-weed*.

dysentery-weed (dis'en-ter-i-wēd), *n.* **1.** Same as ★*dysentery-root*.— **2.** The low cudweed or wartwort, *Gnaphalium uliginosum*.

dysgalactia (dis-ga-lak'ti-ä), *n.* [NL., < Gr. δυσ-, ill, hard, + γάλα (γαλακτ-), milk.] Diminished secretion of milk, or secretion of milk of an unhealthy character.

dysgenesia (dis-je-nē'si-ä), *n.* [NL.] Same as *dysgenesis*.

dysgeogenous (dis-jē-oj'e-nus), *a.* [Gr. δυσ-, ill, + γῆ, earth, + -γενης, -producing.] Disintegrating slightly or not at all into detritus (said of rocks); resisting decomposition; hence, coarse and little retentive of water (said of soils): opposed to ★*eugeogenous*.

dyslexic (dis-lek'sik), *a.* [*dyslexia* + *-ic*.] Relating to or affected with dyslexia.

dyslochia (dis-lō'ki-ä), *n.* [Gr. δυσ-, ill, + λοχία, lochia.] Cessation in whole or in part of the lochial discharge.

dyslogia (dis-lō'ji-ä), *n.* [NL., < Gr. δυσ-, ill, + λογος, reason.] Impairment of the reasoning faculties. *Baldwin*, Dict. of Philos. and Psychol., II. 571.

dyslogical (dis-loj'i-kal), *a.* Characterized by dyslogia or the disturbance of thought shown by a jumbled order of words in speech or in writing.

dyslysin (dis'li-sin), *n.* [Gr. δυσ-, ill, + λύσις, dissolution, + *-in*[2].] A decomposition-product of cholalic acid, $C_{24}H_{36}O_3$, formed during the process of intestinal putrefaction.

dysmenia (dis-mē'ni-ä), *n.* [NL., < Gr. δυσ-, ill, + μήν, month.] Same as *dysmenorrhea*.

dysmenorrheic (dis-men-ō-rē'ik), *a.* Same as *dysmenorrheal*.

dysmnesia (dis-mnē'si-ä), *n.* [NL., < Gr. δυσ-, hard, ill, + μνῆσις, memory.] Forgetfulness; impaired memory.

dysodontiasis (dis″ō-don-tī-ā'sis), *n.* [NL., < Gr. δυσ-, ill, + ὀδούς (ὀδοντ-), tooth, + *-iasis*.] Delayed or defective dentition.

dysosmia (dis-os'mi-ä), *n.* [NL., < Gr. δυσοσμία, ill smell (taken in NL. as 'difficulty of smelling'), < δύσοσμος, ill-smelling, < δυσ-, ill, + ὀσμή, ὀδμή, smell.] Loss in whole or in part of the sense of smell.

dysostosis (dis-os-tō'sis), *n.* [NL., irreg. for ″*dysosteosis*, < Gr. δυσ-, ill, + ὀστέον, bone, + *-osis*.] Imperfect formation of bone.

dyspepsia, *n.*—**Acid dyspepsia**, impaired digestion due to extreme acidity of the gastric juice.—**Reflex dyspepsia**, impairment of the digestive powers as a result of reflex nervous influence, due, for example, to eye-strain.—**Salivary dyspepsia**, impaired digestion due to deficiency or altered character of the saliva.

dyspepsiodynia (dis-pep″si-ō-din'i-ä), *n.* [NL., < Gr. δυσπεψία, dyspepsia, + ὀδύνη, pain.] Heartburn.

dyspeptodynia (dis-pep″tō-din'i-ä), *n.* [NL.] Same as ★*dyspepsiodynia*.

dyspeptone (dis-pep'tōn), *n.* [*dys-* + *peptone*.] An insoluble modification of hetero-albumose which results from the latter on prolonged exposure to water or on drying. Also termed *dysalbumose*.

dysphasia (dis-fā'zi-ä), *n.* [NL., < Gr. δυσ-, hard, + φάσις, a speaking.] Difficulty of speech which does not amount to actual aphasia.

dysphasic (dis-fā'zik), *a.* Relating to or suffering from dysphasia.

dysphonic (dis-fō'nik), *a.* Relating to or suffering from dysphonia.

dysphotic (dis-fō'tik), *a.* [Gr. δυσ-, ill, + φῶς (φωτ-), light, + *-ic*.] In *phytogeog*: (*a*) Poorly lighted: designating the dim tract between the photic and aphotic levels in a body of water.

The flora of the *dysphotic* region [in fresh-water lakes] is composed almost exclusively of microphytes, Diatomaceæ in particular; but exceptionally a few macrophytes have been observed in it.
A. F. W. Schimper (trans.), Plant Geog., p. 811.

(*b*) Adapted to live in such a tract: as, a *dysphotic* plant, a *dysphotic* flora.

dyspnœa, *n.*—**Cardiac dyspnœa**, difficult respiration due to sluggish pulmonary circulation, and consequent deficient aeration of the blood, from heart-disease.—**Expiratory dyspnœa**, a form of dyspnœa in which the chief difficulty is in expelling the air from the lungs.—**Inspiratory dyspnœa**, a form of dyspnœa in which the chief difficulty is in inspiration.—**Renal dyspnœa**, difficulty in respiration accompanying disease of the kidneys.—**Traube's dyspnœa**, a form occasionally observed in diabetes, in which the desire for air is urgent yet the respirations are slow.

dysprosia (dis-prō'si-ä), *n.* [NL.] Oxid of dysprosium.

dysprosium (dis-prō'si-um), *n.* [NL.] In *chem.*, one of the supposedly distinct elements of the yttrium group contained in samarskite and gadolinite, closely related to holmium, but distinguished from it by a special absorption-spectrum. Symbol, Dy; atomic weight, 162.5.

dysrhythmia (dis-rith'mi-ä), *n.* [NL., < δυσ-, ill, + ῥυθμός, rhythm.] In *pathol.*, an occasional disturbance of rhythm.

dyssynchronous (di-sing'krō-nus), *a.* [Gr. δυσ-, bad, ill, + σύν, with, + χρόνος, time.] Not coincident as to time; not synchronous.

dystaxia (dis-tak'si-ä), *n.* [NL., < Gr. δυσ-, ill, + τάξις, disposition, order.] Tremor similar to that which occurs in paralysis agitans.

dysteleological, *a.* **2.** Of the nature of or pertaining to dysteleology.

Arguments [from design] . . . cut both ways, as the formidable array of facts capable of an equally cogent *dysteleological* application sufficiently shows.
J. Ward, Naturalism and Agnosticism, I. 6.

dysteleologist, *n.* **2.** Any agent which evades the functional end, as a bee which secures honey from a flower by means not conducive to cross-fertilization.

dysteleology, *n.* **2.** Any evasion of the functional aim or end, as where an insect punctures a nectary from below without coming into contact with the anthers, thus frustrating the end of cross-fertilization.

dysthanasia (dis-thạ-nā'si-ä), *n.* [NL., < Gr. δυσθάνατος, bringing a hard death, < δυσ-, hard, + θάνατος, death.] A painful death.

dysthymia (dis-thī'mi-ä), *n.* [NL., < Gr. δυσθυμία, despondency, < δύσθυμος, despondent, melancholy, low in mind, < δυσ-, ill, + θυμός, mind.] Mental depression.

dysthyroidism (dis-thī'roid-izm), *n.* [*dys-* + *thyroid* + *-ism*.] A morbid state marked by impaired function of the thyroid gland.

dystopia (dis-tō'pi-ä), *n.* [NL., < Gr. δυσ-, hard, + τόπος, place.] Malposition; dislocation.

dystraumia (dis-trâ'mi-ä), *n.* [NL., < Gr. δυσ-, hard, + τραῦμα, wound. The formation really means 'a condition of being hard to wound.'] A condition in which the healing processes are sluggish.

dystrophy, *n.*—**Progressive muscular dystrophy.** Same as *progressive muscular atrophy* (which, see, under *progressive*). **Pseudohypertrophic dystrophy.** Same as *pseudohypertrophic paralysis* (which see, under *paralysis*).

dysuresia (dis-ū-rē'si-ä), *n.* [NL., < Gr. δυσ-, hard, + οὔρησις, urination.] Same as *dysuria*.

dysuresis (dis-ū-rē'sis), *n.* [NL., < Gr. δυσ-, hard, + οὔρησις, urination.] Same as ★*dysuresia*.

dysyntribite (di-sin'tri-bīt), *n.* [Appar. an error for ″*dyssyntribite*, irreg. < Gr. δυσ-, ill, + συντρίβειν, shatter (σύν, together, + τρίβειν, rub, scrape), + *-ite*[2].] An impure massive mineral or rock, resembling serpentine in appearance, but near pinite in composition: it occurs in Jefferson county and elsewhere in northern New York and is doubtless pseudomorphous in origin.

Dyvour's habit. See ★*habit*.

dzo (dzō), *n.*: pl. *dzos* (collective *dzo*). [Tibetan *dzo* (Jaeschke, 1866, p. 33).] A hybrid, the

Dzo.

result of a cross between the male of the water buffalo and the female of the domesticated yak. The dzo are kept for beasts of burden and for the milk yielded by the cows.

They also breed herds of *dzo*, a very valuable hybrid between the cow [buffalo] and yak, and capable of carrying eighty pounds more than either the horse or mule. The male *dzo* is used for ploughing, and the female gives more milk than any other of the bovine race. . . . From the hair of the *dzo* and yak the Mantzu prepare a heavy felt used for boots and for circular cloaks, worn in cold or wet weather.
Geog. Jour. (R. G. S.), X. 36.

3. (*c*) (3) [*cap.*] The sign of residuation (which see). (*d*) [*cap.*] In *chem.*, sometimes used as the symbol for erbium: more commonly *Er*. (*e*) The common symbol for the modulus of elasticity, or the force, in pounds, required to stretch a bar of any material one square inch in cross-section until its length is increased by one hundred per cent. (*f*) In *elect.*, a symbol for *electromotive force*. — **5.** An abbreviation (*c*) of *Earl*; (*d*) of *Eastern*; (*e*) of *English*; (*f*) in *exper. psychol.*, of *experimenter*.

E. A. An abbreviation of *entered apprentice*, in freemasonry.

eacid (ē′as″id), *n.* [Prop. *e-acid* or *E-acid*, appar. for *E(mmens's) acid*.] The name given by Dr. Emmens of New York, in 1888, to a substance which he assumed to be a new organic acid, but which in fact was merely picric acid or trinitrophenol crystallized from solution in strong nitric acid and perhaps retaining a little of the latter. Also *Emmens's acid*.

eagle, *n.*, **1.** The eagle is the emblem of St. John the Evangelist and for this reason is placed on lecterns from which the gospels are read. It is also the emblem of regal and imperial power and as such was adopted by the Roman and Holy Roman Empires.

9. A base foreign coin which circulated in England in the reign of Edward I.—**Bearded eagle.** Same as *bearded vulture*.

eagle-fern (ē′gl-fèrn), *n.* See ★*fern*[1].

eagle-hawking (ē′gl-hâk″ing), *n.* The plucking of wool from dead sheep. [Bushman's Eng., Australia.]

ear[1], *n.*, **8.** (*g*) In *archery*, the stiff portion of a reflex bow at the end of each limb and including the nock. The ear works stiffly in order that the curve of the bow may be more readily reversed in stringing it.—**Blainville ears**, congenital inequality in size and configuration of the two ears.—**Cagot ear**, absence of the lobule of the ear.—**Cauliflower ear**, a shrunken ear following the absorption of effused blood after an injury. **Darwinian ear**, an ear in which the upper portion of the helix is defective.—**Diabetic ear**, mastoiditis occurring as a complication of diabetes.—**Ear vesicle**, a cystic structure constituting the organ of hearing in mollusks and worms. See cut under *Synaptidæ*.—**Insane ear**, hematoma auris.—**Morel ear**, a large flabby ear in which the curves of the concha are not pronounced.—**Stahl ear**, an abnormally broad external ear.—**To be on one's ear**, to be very angry or much exasperated. [U. S. slang.]

Vestibule of the ear. See *membranous vestibule*, under *vestibule*.—**Wildermuth ear**, abnormal prominence of the antihelix.

earbow (ēr′bō), *n.* The forehead-piece of a bridle when it is made to pass before one ear and behind the other.

ear-covert (ēr′kuv″èrt), *n.* In *ornith.*, one of the tufts of feathers covering the external opening of the ear.

ear-crystal (ēr′kris″tal), *n.* Same as *otolith*.

ear-cushion (ēr′kùsh″ŏn), *n.* A small cushion designed to be hung in the back of a coach as a head-rest.

ear-finger (ēr′fing″gèr), *n.* The fifth or little finger: also called the *auricular finger*.

ear-fly, *n.*—**Black-striped ear-fly**, *Chrysops vittatus*, an American gadfly of the dipterous family *Tabanidæ*, which particularly attacks the ears of horses and cattle. *C. univittatus* is a very common species, also annoying to live stock.

Ear-fly (*Chrysops univittatus*). Much enlarged. (U. S. D. A.)

ear-forceps (ēr′-fôr″seps), *n.* A very delicate forceps for removing foreign bodies from the external auditory canal.

ear-learning (ēr′lèr″ning), *n.* Learning that is acquired through the sense of hearing. *Scripture*, Exper. Phonetics, p. 114.

ear-minded (ēr′mīn″ded), *a.* In *psychol.*, having a marked tendency to carry on mental operations (remembering, thinking, imagining, dreaming, etc.) in terms of auditory images; of an auditory, as opposed to a visual or motor type of mental constitution. A person is called *ear-minded*, in a narrower sense, when his memory is chiefly or exclusively auditory; and, in a still narrower sense, when his verbal memory is thus auditory in type.

Notwithstanding the fact that he was decidedly visual, he had a strong tendency to be *ear-minded*.
W. B. Secor, in Amer. Jour. Psychol., XI. 228.

ear-mindedness (ēr′mīn″ded-nes), *n.* In *psychol.*, a type of mental constitution, characterized by the predominance of auditory processes as vehicles of the complex mental functions (thought, memory, etc.). *Baldwin*, Dict. Philos. and Psychol., II. 571.

ear-muff (ēr′muf), *n.* One of a pair of coverings for the ears, made of cloth or fur, worn as a protection against wind and cold.

ear-plug (ēr′plug), *n.* **1.** An ornament in the form of a plug, worn in the lobe of the ear.

Numerous copper ornaments were found, such as pendants and *ear-plugs*, some of the latter being decorated with symbolic designs. *Nature*, June 9, 1904, p. 138.

2. A stopper (made of cotton-wool and wax, of a vaselined cork, etc.) for closing the aperture of the one ear, while a stimulus is applied to the other.

ear-sand (ēr′sand), *n.* Same as *ear-dust*.

ear-splitting (ēr′split″ing), *a.* Deafeningly or overpoweringly noisy.

ear-tab (ēr′tab), *n.* One of a pair of tabs or tags fastened to a cap and tied down over the ears and under the throat as a protection from the cold.

earth[1], *n.*—**Barbados earth**, a friable earthy marl of Miocene age, occurring in the Barbados Islands and accumulated in deposits which rise to a height of over one thousand feet. It is largely composed of the minute silicious skeletons of radiolarians with an intermixture of the calcareous tests of the *Foraminifera*. According to Haeckel the number of species of *Radiolaria* in the Barbados earth is not less than 400 and probably more than 500. This authority regards it as a deep-sea deposit and states that very many of the Barbados radiolarians "are to-day extant and unchanged in the radiolarian ooze of the deep Pacific Ocean."—**Black earth.** (*b*) Same as *chernozem*. **Blue earth**, a local name for the stratum which yields amber on the shores of the Baltic Sea.—**Cassel earth.** Same as *Vandyke brown*.—**Earth quadrant.** See ★*quadrant*.—**Golden earth**, in early chemistry, one of the names for orpiment or arsenic trisulphid.—**Japonic earth**, terra Japonica; catechu; cutch.—**Rare earth.** in *chem.*, one of those earths of which the compounds are found in nature only in small quantity and sparingly distributed. The principal rare earths are beryllia, scandia, ceria, lanthana, neodymia, praseodymia, yttria, erbia, terbia, ytterbia, samaria, zirconia, and thoria; but there is doubt as to the individuality of some of these, and several others have received partial recognition.—**Rare-earth metals**, the metals the oxids of which are known as the *rare earths*. See ★*earth*.—**Red earth**, red residual soil which results from the decomposition of ferruginous rocks; terra rossa.—**Residuary earth**, soil formed by the decomposition and disintegration of rock, without undergoing transportation. *R. D. Salisbury*, Geol. Surv. of New Jersey, 1892, p. 45.—**Santorin earth**, a mineral material of volcanic origin, resembling the Italian pozzuolana, found in the Greek island of Santorin, used in making hydraulic cement.

earth-almond (èrth′ä″mond), *n.* The yellow nut-grass or earthnut, *Cyperus esculentus*. More frequently in the plural.

earth-apple (èrth′ap″l), *n.* The Jerusalem artichoke, *Helianthus tuberosus*.

earth-bar (èrth′bär), *n.* In *elect.*, a metallic bar forming part of a switchboard and used as a conductor for grounding such circuits as may be connected with it.

earth-club (èrth′klub), *n.* The squawroot, *Conopholis Americana*, so called from the club shape of the plant.

earth-drop (èrth′drop), *n.* In *elect.*, the voltage or difference of potential at any point between the return conductor of an electric system and the ground.

earth-fork (èrth′fôrk), *n.* A fork with flat tines, used, like a spade, for turning up the earth.

earth-glacier (èrth′glā″shièr), *n.* A mass of land-waste and snow which slides down hill as the snow melts in the spring. *J. Geikie*, The Great Ice Age, p. 600.

earthing (èrth′ing), *n.* In *elect.*, the act of connecting to earth; grounding.

earth-lamp (èrth′lamp), *n.* In *elect.*, an incandescent lamp one terminal of which is grounded while the other is connected through a switch to a circuit. It thus serves as an indicator of the insulation of the circuit from earth.

earth-lard (èrth′lärd), *n.* The subterranean larvæ of the common European cockchafer, *Melolontha vulgaris*. [Great Britain.]

earth-light (èrth′līt), *n.* Light reflected by the earth: same as *earth-shine*.

earth-louse (èrth′lous), *n.* **1.** Any root-feeding aphidid, as the corn root-louse, *Aphis maidi-radicis*, or the lettuce root-louse, *Rhizobius lactucæ*.—**2.** Any one of many soil-inhabiting thysanurous insects, especially those of the family *Poduridæ*.

earth-metal (èrth′met″al), *n.* A metal the oxid of which is classed among the earths, as aluminium, the oxid of which is alumina.

earth-pillar (èrth′pil″är), *n.* A column of loose, unconsolidated material produced by erosion. The best known examples are found in the Tyrol.

A paper by Dr. Christian Kittler on *earth-pillars* and similar structures. *Geog. Jour.* (R. G. S.), XI. 441.

earth-pitch (èrth′pich), *n.* Same as *mineral pitch* (which see, under *mineral*).

earthquake, *n.*—**Submarine earthquake**, one whose origin or focus is beneath the sea, and which affects the overlying sea-bottom.

earth-return (èrth′rē-tèrn″), *n.* In *elect.*, a return-circuit which, instead of being insulated, is grounded throughout, or of which the ground itself forms a principal part: opposed to *metallic* ★*return*.

earth-sculpture (èrth′skulp″tūr), *n.* The modifying of surface features of the earth by surface agencies; the carving of relief by erosion.

earth-shaker (èrth′shā″kèr), *n.* A poetic epithet (Gr. σεισίχθων), applied to Poseidon and Zeus.

He [Poseidon] is clearly the impersonation of water rather than either the *earth-shaker* or the brother of Zeus.
P. Gardner, Types of Greek Coins, p. 203.

earth-shock (erth′shok), *n.* An earthquake; specifically, the most violent oscillations during the continuance of an earthquake; also, the sudden movement of the ground consequent upon the intentional explosion of a mine or the accidental explosion of a magazine of explosives.

earth-shrinkage (èrth′shring″kāj), *n.* In *geol.*, the shortening of the earth's diameter and the lessening of its volume, which are inferred from the deformation of its outer portion, and which are explained by loss of heat, by loss of centrifugal energy, and by loss of porosity.

Under the new hypothesis the *earth-shrinkage* is due to original porosity and gravitational compression, and is in active operation today. The amount of such spacial reduction has not been estimated, but it must be several times any possible reduction due to cooling.
Amer. Geol., Feb., 1904, p. 112.

earth-slope (èrth′slōp), *n.* The slope which loose rock-waste will assume under the influence of gravity.

earth-wave (èrth′wāv), *n.* An oscillation of the ground, either vertically or horizontally, on a small scale, as by the explosion of a mine, or on a large scale, as by earthquakes; a vibration of the crust of the earth as an elastic solid.

earth-wax (èrth′waks), *n.* Same as *ozocerite* or *mineral wax*.

earthy, *a.* **6.** In *chem.*, having the general character of the substances known as earths, and of their compounds: as, an *earthy* salt.—**Earthy degeneration.** Same as *calcareous degeneration* (which see, under *degeneration*).

ear-tone (ēr′tōn), *n.* In *psychol.*, a tone due to the constitution of the ear itself, and not to the presence of a wave-motion in the surrounding medium.

The first difference-tone . . . is an *ear-tone* and not an air-tone. *E. B. Titchener*, Exper. Psychol., I. i. 40.

ear-tuft (ēr′tuft), *n.* 1. A tuft of feathers suggesting an ear, as those of the great horned owl.—2. A tuft of feathers arising near the ear-opening, as in the Inca tern.—3. A tuft or pencil of hair on the tip of the ear, as in the lynx.

east, *n.* **East-by-north,** the seventh point of the compass, counting from north, equal in angular value to 78° 45′.—**East-by-south,** the seventh point of the compass, counting from south, equal in angular value to 78° 45′. **East Coast fever.** Same as *African Coast* ★*fever.* **East-northeast,** the sixth point of the compass, counting from north, equal in angular value to 67° 30′.—**East-southeast,** the sixth point of the compass, counting from south, equal in angular value to 67° 30′.

east-ender (ēst′en″dẽr), *n.* An inhabitant of the eastern part of a city or town, specifically [cap.] of the East End of London.

easter (ēs′tẽr), *v. i.* [*easter(ly).*] To change toward the east, as the wind; move toward the east, as the head of a vessel.

Easter card, lily. See ★*card*[1], *Bermuda* ★*lily.*

Easter-bell (ēs′tẽr-bel), *n.* The greater stitchwort, *Alsine Holostea.*

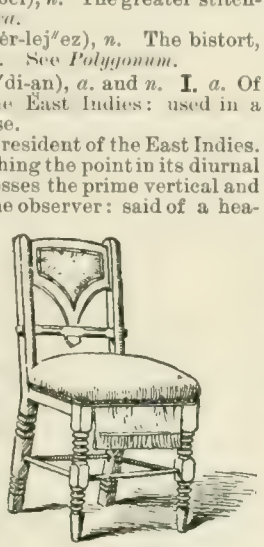
Easter-ledges (ēs′tẽr-lej″ez), *n.* The bistort, *Polygonum Bistorta.* See *Polygonum.*

East-Indian (ēst-in′di-an), *a.* and *n.* **I.** *a.* Of or pertaining to the East Indies: used in a comprehensive sense.

II. *n.* A native or resident of the East Indies.

easting, *n.* 2. Reaching the point in its diurnal motion where it crosses the prime vertical and is exactly east of the observer: said of a heavenly body.

Eastlake (ēst′lāk)′ *a.* Noting a style of design in furniture, current in England and the United States in the latter half of the nineteenth century. It was based on a book entitled "Hints on Household Taste" written by Sir Charles L. Eastlake and published in London in 1869. Eastlake's designs are, for the most part taken from the medieval work of England.



Eastlake Chair.

eastmost (ēst′mōst), *a.* Farthest east (of a series or row): as, the *eastmost* house on a street that runs east and west: easternmost.

Eastralia (ēs-trā′li-ą), *n.* [*East (Aust)ralia.*] A modern colloquial designation for the eastern Colonies of Australia. [Australia.]

Eatonia (ē-tō′ni-ą), *n.* [NL., named for Amos *Eaton.*] A genus of telotrematous *Brachiopoda* characterized by large flabellate, deeply excavate muscular scars in the ventral valve and a large bifurcate cardinal process. It is of early Devonian age.

Eau céleste [F., 'sky water,' alluding to its deep-blue color], a fungicide applied to fruit-trees and other plants as a spray, originally made with copper sulphate and ammonia largely diluted with water, forming a solution of a deep-blue color. The modified eau céleste is now made with 4 pounds of crystallized copper sulphate, 5 pounds of sodium carbonate, 3 pounds of water of ammonia, and 45 gallons of water. **Eau-de-vie de piquette,** an inferior brandy, made by distilling the weak wine or piquette obtained by adding water to the marc, or residue of grape-skins, seeds, etc., left in the first expression of grape-juice, re-pressing and fermenting the liquid. *Jour. Soc. Chem. Industry*, XI. 256.—**Eau forte** [F., 'strong water']. See *aqua fortis.*

eau-fortist (ō-fôr′tist), *n.* [F., ⟨ *eau forte* + *-iste*, E. *-ist.*] One who uses *eau forte* or *aqua fortis* especially in etching; an etcher.

eaves-martin (ēvz′mär″tin), *n.* The European house-martin or swallow, *Hirundo urbica:* so called because it nests beneath the eaves of houses.

eb, *n.*, *a.*, and *v.* A simplified spelling of *ebb.*

Eb. In *chem.*, a symbol sometimes used (instead of the more common *Er.*) for erbium.

ebb, *n.*—**Ebb-and-flow structure,** in *geol.*, an alternation, in a sandstone, of a cross-bedded layer with a horizontal one indicating a period of deposition in a considerable current succeeded by one of comparative quiet.

Ebenezer (eb-en-ē′zẽr), *n.* [Heb., 'stone of help.'] 1. A stone erected by Samuel (1 Sam. vii. 12) as a memorial of divine aid in defeating the Philistines. Hence—2. Any memorial of divine assistance: often adopted as a name for a chapel or church.

Here I raise my *Ebenezer*,
Hither by thy help I'm come;
And I hope, by thy good pleasure,
Safely to arrive at home.
R. Robinson, Come Thou Fount of Every Blessing (old version), st. 3.

3. A contemptuous name for a 'dissenting' chapel or church. [Eng.]

Eberth's bacillus. See ★*bacillus.*

Ebionize (ē′bi-ọn-īz), *v. i.* pret. and pp. *Ebionized*, ppr. *Ebionizing.* [*Ebionite*) + *-ize.*] To become an Ebionite, or to affect or imitate the doctrines and practices of the Ebionites.

ebonine (eb′ọ-nin), *a.* [*ebon* + *-ine*[1].] Black; dark; somber: as, "the *ebonine* gate of doom," *F. T. Palgrave.*

ebony, *n.* **Black ebony,** a trade-name for the wood of *Diospyros Dendo.* See *Negro* ★*ebony.* **Calabar, Gaboon, Lagos ebony.** Same as *Negro* ★*ebony.* **Ceylon ebony,** the wood of several species of *Diospyros*, especially *D. Ebenaster*, *D. Ebenum*, *D. montana*, and *D. sylvatica.* **False ebony, ebony of the Alps.** See *laburnum.*—**Green ebony** of India, the hard, greenish-yellow wood of *Diospyros chloroxylon.*—**Madagascar ebony,** the highly prized wood of two species of *Diospyros*, *D. haplostylis* and *D. microrhombus.*—**Manila ebony,** the wood of either of two trees, *Diospyros Ebenaster* and the mabolo, *D. discolor.* See ★*mabolo* and ★*kamagon.* **Mauritius ebony,** the wood of *Diospyros tessellaria* often called *black Mauritius ebony* to distinguish it from the white ebony.—**Mountain ebony** of Australia. Same as *Queensland* ★*ebony.*—**Niger ebony,** the black wood of the dendo, *Diospyros Dendo.* Also called *Calabar*, *Lagos*, *Gaboon*, and *black ebony.* See ★*dendo.*—**Orange River ebony,** the hard, black wood of *Euclea Pseudebenus*, a shrub or small tree of the family *Diospyraceæ.* See ★*Euclea*, 2.—**Queensland ebony,** the wood of either of two leguminous trees, *Bauhinia Carronii* and *B. Hookeri.* Also called *mountain ebony.*—**Red ebony** of Mauritius, the wood of *Diospyros rubra.*—**St. Helena ebony,** the hard, black wood of *Trochetia Melanoxylon*, a small tree of the family *Sterculiaceæ* indigenous to the island and now nearly exterminated.—**Sénégal ebony,** the jet- or brownish-black wood of *Dalbergia melanoxylon*, called by the natives *dialambam.*—**Siam ebony,** a commercial term for the wood of several species of the genus *Diospyros*, especially *D. Ebenum*, *D. montana*, *D. ramiflora*, *D. Ebenaster*, and *D. peregrina.* See *gaub.*—**Texan ebony,** a handsome leguminous tree, *Zygia flexicaulis*, of western Texas, Arizona, and northern Mexico, especially of the Gulf coast and lower Rio Grande, with light-yellow fragrant flowers in dense spikes, large curved, woody pods, and very hard and heavy close-grained wood, often beautifully colored, and hence much prized

Texan Ebony (*Zygia flexicaulis*).
(From Sargent's "Manual of the Trees of North America.")

for furniture, etc.—**White ebony,** a trade-name for the grayish or white-streaked woods of *Diospyros melanida* and *D. chrysophyllos* of the Mascarene Islands. *D. Malacapai*, of the Philippine Islands, also furnishes some of the wood sold under this name.—**Zanzibar ebony,** the wood of *Diospyros mespiliformis*, a tree distributed over the whole of tropical Africa.

Ebor. An abbreviation of the Latin *Eboracum*, York, or of the Latin *Eboracensis*, of York.

ebriose (ē′bri-ōs), *a.* [L. *ebriosus*, ⟨ *ebrius*, drunk: see *ebrious.*] Drunk: same as *ebrious.*

ebriously (ē′bri-us-li), *adv.* Drunkenly.

Not *ebriously* swilled but moderately tasted.
T. Newton, Fowre Severall Treatises.

ebulliently (ē-bul′yẹnt-li), *adv.* In an ebullient manner; overflowingly; 'gushingly': as, *ebulliently* sentimental.

ebullioscopic (ē-bul″yọ-skop′ik), *a.* 1. Of or pertaining to those methods of determining molecular weight, dissociation, osmotic pressure, etc., which depend upon measurements of the boiling-point. In the ebullioscopic method for the determination of the molecular weight of a substance the boiling-point of a liquid is observed as affected by the presence of a given proportion of the substance in question dissolved in such liquid. *Amer. Chem. Jour.*, April, 1903, p. 342. [Rare.]

ebullitionary (eb-u-lish′ọ-nā-ri), *a.* [*ebullition* + *-ary*[1].] Of the nature of an ebullition; characterized by a bubbling or boiling commotion; bubbling: as, an *ebullitionary* agitation.

eburated (eb′ū-rā-ted), *a.* [L. *eburatus*, ⟨ *ebur*, ivory.] Covered with, or as with, ivory; having the appearance of ivory. *Proc. Zool. Soc. London*, 1898, p. 318.

eburnean, *a.* 2. [*cap.*] In the classification of late geological deposits bearing human relics, a subdivision of the Paleolithic section in France. It includes the oldest deposits containing well-finished implements associated with carved bone and ivory. It was the period of the mammoth, went back into glacial time, and was followed by the Tarandean or reindeer epoch.

eburneoid (ē-bẽr′nē-oid), *a.* [L. *eburneus*, of ivory, + *-oid.*] Ivory-like as regards color; eburneous.

eburnitis (eb-ẽr-nī′tis), *n.* [NL., ⟨ L. *eburnus*, of ivory, + *-itis.*] A condition of increased density and hardness of the dentine of teeth.

E. C. An abbreviation (*a*) of *Eastern Central*, a London postal district; (*b*) of *Established Church.*

ecardine (ē-kär′din), *n.* [NL. *Ecardines.*] A mollusk having a shell without a hinge; a brachiopod.

écartelé (ā-kär″tẹ-lā′), *a.* [F., pp. of *écarteler*, divide into quarters.] In *her.*, divided into quarters: said of a shield.

ecboline (ek′bọ-lin), *n.* [Gr. *ἐκβολή*, a throwing out, + *-ine*[2].] A brownish amorphous, slightly bitter alkaloid contained in ergot.

eccaleobion (e-kal″ē-ọ-bī′on), *n.* [Irreg. ⟨ Gr. *ἐκκαλέω*, I call forth, + *βίον*, acc. of *βίος*, life.] An apparatus for hatching eggs by artificial heat; an incubator.

eccentric. **I.** *a.* 7. In *astron.*, noting orbital motion which is not in a circle around the center of attraction; as applied to curves generally, deviating from circularity, as the ellipse and hyperbola.—**Eccentric projection.** See ★*projection.*—**Eccentric wheel.** (*b*) In carriages, a fifth wheel so centered that when backing to either side the body of the carriage is thrown to one side of the center, to facilitate turning in a short radius.

II. *n.*—**Adjustable eccentric,** an eccentric which is so constructed that the distance between the center of figure and the center of motion can be varied in order to vary the throw of the rod. This result is secured either by slotting the disk of the eccentric, or by mounting one eccentric upon another so that the effective eccentricity may be the sum or the difference of the eccentricity of each disk, or may have intermediate values.—**Backward eccentric,** that eccentric which is used when a locomotive or a ship goes backward and the valve-gear is adjusted accordingly. See *reversing-gear.*—**Movable eccentric.** Same as *adjustable* ★*eccentric.*

eccentrolinead (ek-sen-trọ-lin′ē-ad), *n.* [*eccentr(ic)* + L. *linea*, line, + *-ad*[3].] A ruler for drawing eccentric radial lines. It is used in designing gears and making drawings of gear-teeth, etc.

ecchondrotic (ek-ọn-drot′ik), *a.* Same as ★*epichondrotic.*

ecchondrotome (e-kon′drọ-tōm), *n.* [Gr. *ἐκ*, out, + *χονδρος*, cartilage, + *-τομος*, ⟨ *ταμεῖν*, cut.] An instrument for cutting cartilage.

Eccl. An abbreviation (*c*) [*l. c.*] of *ecclesiastic;* (*d*) [*l. c.*] of *ecclesiology.*

ecclesiarchy (e-klē′zi-är-ki), *n.* [Gr. *ἐκκλησία*, church, + *ἀρχή*, rule.] The rule of a church; government by ecclesiastics.

ecclesiast, *n.* 3. A member of the ancient Greek ecclesia; a free Greek citizen having the right to vote in the ecclesia or assembly.

Ecclesiastical emerald. Same as *Brazilian* ★*emerald.*

ecclesiasticize (e-klē-zi-as′ti-sīz), *v. t.*; pret. and pp. *ecclesiasticized*, ppr. *ecclesiasticizing.* To render ecclesiastical; bring under the influence of, or into conformity with, the church.

ecclesiol. An abbreviation of *ecclesiology.*

ecclesiolater (e-klē-zi-ol′ą-tẽr), *n.* [Gr. *ἐκκλησία*, church, + *-λατρης*, worshiper.] One who shows excessive reverence for church authority, form, and traditions.

ecclesiolatry (e-klē-zi-ol′ą-tri), *n.* [Gr. *ἐκκλησία*, church, + *λατρεία*, worship.] Worship of the church as such; extreme, undue respect for the formal observances and authority of the church.

eccrisiologia (ek-ris-i-ọ-lō′ji-ą), *n.* [NL., ⟨ Gr. *ἔκκρισις*, secretion, + *-λογια*, ⟨ *λέγειν*, speak.] That branch of physiology which treats of secretion: same as *eccrinology.*

eccritic, *n.* **II.** *a.* Relating to excretion or to any of the excretory organs: said of a disease which affects these functions or organs, or of a remedy which promotes excretion.

eccyclema (ek-si-klē′mą), *n.*; pl. *eccyclemata* -klem′ą-tą). [Gr. *ἐκκύκλημα*, ⟨ *ἐκκυκλεῖν*, wheel out, ⟨ *ἐκ*, out, + *κυκλεῖν*, wheel, ⟨ *κύκλος*, a wheel.] A machine in the Greek theater which in some way disclosed an interior to the spectators, as in the murder scene of the "Agamemnon" of Æschylus.

ecdemic (ek-dem′ik), *a.* [Gr. *ἐκδημος*, from home, in foreign lands, abroad, < *ἐκ*, out, + *δῆμος*, people.] Originating from without; not endemic: said of diseases.

ecdemiomania (ek-dem′i-ō-mā′ni-ä), *n.* [NL., < Gr. *ἐκδημία*, a going or being abroad (< *ἐκδημος*, abroad), + *μανία*, madness.] A morbid impulse to travel unceasingly.

ecdemite (ek′de-mīt), *n.* [Gr. *ἐκδημος*, abroad, + *-ite*[2].] An arsenite of lead containing 8 per cent. of chlorin. It occurs in crystals and in massive forms, ranging in color from yellow to green: found in Sweden. Also called *heliophyllite*.

ecesis (ē-sē′sis), *n.* [NL. **œcesis*, < Gr. *οἴκησις*, habitation, < *οἰκεῖν*, inhabit.] The fixation of a migrating plant in a new habitat.

In a word, *Ecesis* is the adjustment of a plant to a new habitat. It comprises the whole process covered more or less incompletely by acclimatisation, naturalisation, accommodation, etc.
F. E. Clements, Bot. Surv. Neb., VII. 50.

ecethmoid (ek-eth′moid), *a.* [*ec-* + *ethmoid*.] In *ichth.*, same as ★*ecto-ethmoid*. *Science*, March 8, 1901, p. 379.

echelon, *n.* **2.** *Milit.*, one of the subdivisions of a command marching in echelon.—**3.** In *optics*, a set of glass plates placed one upon another, with the edge of each projecting slightly, stepwise, beyond the edge of the preceding one. The device, which is due to A. A. Michelson, is used for the production of diffraction spectra of high dispersion and resolving power.—**Echelon diffraction grating.** See ★*grating*[2].—**Echelon spectroscope.** See ★*spectroscope*.

echidnase (e-kid′nās), *n.* [Gr. *ἔχιδνα*, viper, + *-ase*.] A supposed temperature-raising substance analogous to diastases, found in viper venom.

echidnotoxin (e-kid-nō-tok′sin), *n.* [Gr. *ἔχιδνα*, viper, + *toxin*.] A general poison found in viper venom.

echidnovaccine (e-kid-nō-vak′sin), *n.* [Gr. *ἔχιδνα*, viper, + E. *vaccine*.] Viper venom that has been heated for a few minutes to 75–85° C., and has thus lost its poisonous properties. The remaining solution has the properties of a venom vaccine.

echin. An abbreviation of ★*echinology*.

echinal (e-kī′nal), *a.* [Gr. *ἐχῖνος*, hedgehog, sea-urchin (see *echinus*), + *-al*[1].] Pertaining or belonging to a sea-urchin.

echinastrin (ek-i-nas′trin), *n.* [*Echinaster* + *-in*[2].] A red pigment found in certain invertebrates, as in starfishes.

echinate (ek′i-nāt), *v.*; pret. and pp. *echinated*, ppr. *echinating*. [Gr. *ἐχῖνος*, hedgehog, + *-ate*[2].] **I.** *trans.* To project at an acute angle to the axis of (a fiber), giving it a feathery or plumed appearance: said of the spicules in the axinellid type of sponge skeleton.

The spicules so placed are said to "*echinate*" the fibre.
E. R. Lankester, Treatise on Zool., II. 140.

II. *intrans.* To project at an acute angle to the axis of a fiber: said of the spicules in a sponge skeleton.

Echinocaridæ (e-kī″nō-kar′i-dē), *n. pl.* [NL., < *Echinocaris* + *-idæ*.] A family of phyllocarid crustaceans of the suborder *Ceratiocarina*. Its genera possess an elongate bivalved carapace with nodes in the cephalic region and one or more lateral carinæ. They are mostly of Devonian age.

Echinocaris (ek-i-nok′a-ris), *n.* [NL., < Gr. *ἐχῖνος*, a sea-urchin, + *καρίς*, (prob.) a shrimp.] The typical genus of the family *Echinocaridæ*.

Echinocereus (e-kī-nō-sē′rē-us), *n.* [NL. (Engelmann, 1848), < *Echino* (*cactus*) + *Cereus*. The name refers to its intermediate position between these two genera.] A large genus of globular or columnar cacti, very closely allied to *Cereus*, with which some authors unite it. It is distinguished by the spines, bristles, or wool arising from the bracteate ovary, short funnel-shaped flowers, and spiny globose or elliptical fruit. The species are native from Texas south and west. Some of them are usually found in the collections of cactus cultivators.

Echinochloa (ek-i-nok′lō-ä), *n.* [NL. (Palisot de Beauvois, 1812), in allusion to the bristly spikelets; < Gr. *ἐχῖνος*, hedgehog, + *χλόη*, grass.] A genus of grasses, including about 12 species, widely distributed in warm and tropical regions. Four species occur in the United States, ranging from New York to Texas. They are usually tall annual grasses with broad leaves and a terminal inflorescence composed of several one-sided spike-like racemes. The European *E. Crus-galli*, the cockspur or barn-yard grass, is widely distributed as a weed in all cultivated regions except the extreme north.

echinochrome (e-kī′nō-krōm), *n.* [Gr. *ἐχῖνος*, sea-urchin (see *echinoderm*), + *χρῶμα*, color. Same as ★*echinochromogen*.

echinochromogen (e-kī-nō-krō′mō-jen), *n.* [Gr. *ἐχῖνος*, sea-urchin, + *χρῶμα*, color, + *-γενής*, -producing.] A yellowish pigment found in echinoderms; also called *echinochrome*.

echinococcosis (e-kī″nō-ko-kō′sis), *n.* [NL., < *Echinococcus* + *-osis*.] Infection with *Echinococcus*, the larval stage of a tapeworm which lives in the dog; hydatid disease.

Echinocorys (ek-i-nok′ō-ris), *n.* [Gr. *ἐχῖνος*, sea-urchin, + *κόρυς*, a helmet.] A genus of spatangoid *Echinoidea* or sea-urchins. It has a large oval actinally high test, biporose ambulacra, oval peristome, and inframarginal posterior periproct. It is very common in the Upper Cretaceous formation. Same as *Ananchytes*.

Echinocotyle (ē-kī-nō-kot′i-lē), *n.* [NL., < Gr. *ἐχῖνος*, hedgehog, + *κοτύλη*, a socket.] The typical genus of the family *Echinocotylidæ*. The metacestode stage of *E. rosseteri*, which is parasitic in the duck, occurs in the ostracode crustacean, *Cypris cinereus*. *Blanchard*, 1891.

Echinocotylidæ (ē-kī″nō-kō-til′i-dē), *n. pl.* [NL., < *Echinocotyle* + *-idæ*.] A family of tetracotylean *Cestoidea* having the acetabula armed and the rostellum furnished with one or two circlets of hooklets. They are parasitic in birds. The typical genus is *Echinocotyle*.

Echinocystis, *n.* **2.** A genus of Lower Silurian cystideans of the family *Cryptocrinidæ*.—**3.** A genus of Silurian *Palæechinoidea*, of the family *Cystocidaroida*.

echinoidean (ek-i-noi′di-an), *a.* and *n.* Same as *echinoid*.

echinologist (ek-i-nol′ō-jist), *n.* [*echinolog(y)* + *-ist*.] One who is versed in echinology or the study of echinoderms.

echinology (ek-i-nol′ō-ji), *n.* [Gr. *ἐχῖνος*, sea-urchin, + *-λογία*, < *λέγειν*, speak.] That branch of zoölogy which treats of echinoderms.

echinophthalmia (e-ki-noph-thal′mi-ä), *n.* [NL., < Gr. *ἐχῖνος*, hedgehog, + *ὀφθαλμός*, eye.] A form of inflammation of the eyelids characterized by stiffness and projection of the lashes.

echinoplute (e-kī′nō-plōt), *n.* [NL. *echinopluteus*.] Same as ★*echinopluteus*.

echinopluteus (e-kī-nō-plō′tē-us), *n.* [NL., < Gr. *ἐχῖνος*, sea-urchin, + NL. *pluteus*.] The pluteus, or free-swimming larva, of a sea-urchin.

Echinopsis (ek-i-nop′sis), *n.* [NL. (Zuccarini, 1836), in allusion to the spiny character of the plant; < Gr. *ἐχῖνος*, hedgehog, + *ὄψις*, view.] A South American genus of *Cactaceæ*, marked by spherical or very short sharp-ribbed stems and very long tubed cereus-like flowers with the ovary and tube narrow-bracted. It is closely related to *Cereus* and has been combined with that genus by some authors. It consists of about 20 species. A number of them are in cultivation, for example, *E. multiplex*, *E. Eyriesii*, *E. gemmata*, and *E. tubiflora*.

echinosphærite (e-kī-nō-sfē′rīt), *n.* [NL. *Echinosphærites*.] A cystid of the genus *Echinosphærites*, notably *E. aurantium*, a form characteristic of the echinosphærite limestone. See ★*limestone*.

Echinosphærites (e-kī″nō-sfē-rī′tēz), *n.* [NL., < Gr. *ἐχῖνος*, sea-urchin, + *σφαῖρα*, a ball, + *-ites*, E. *-ite*[2].] A genus of cystideans of the family *Echinosphæritidæ*. It is characterized by globose non-pedunculate calyx, central mouth, short ambulacral grooves, and anal pyramid, and is very abundant in the Lower Silurian of Russia and Scandinavia.

Echinosphæritidæ (e-kī″nō-sfē-rit′i-dē), *n. pl.* [NL., < *Echinosphærites* + *-idæ*.] A Silurian family of the *Cystoidea*, typified by the genus *Echinosphærites*.

echinothuriid (e-kī-nō-thū′ri-id), *a.* and *n.* **I.** *a.* Of or pertaining to the family *Echinothuriidæ*.

II. *n.* A member of the *Echinothuriidæ*.

echinothurioid (e-kī-nō-thū′ri-oid), *a.* Having characters similar to those of the *Echinothuriidæ*.

echinulation (e-kin-ū-lā′shon), *n.* [NL. **echinulus*, dim. of L. *echinus*, sea-urchin, + *-ation*.] A small spiny or prickly outgrowth.

echinus, *n.* **5.** [*cap.*] A genus of dicotyledonous plants belonging to the family *Euphorbiaceæ*. See *Mallotus*.

Echiostoma (ek-i-os′tō-mä), *n.* [NL., < Gr. *ἔχις*, serpent, + *στόμα*, mouth.] A genus of deep-sea fishes of the family *Stomiatidæ*. *E. barbatum* is the common species.

echiretin (e-ki-rē′tin), *n.* [*Echi(tes)* + Gr. *ῥητίνη*, resin.] An amorphous dextrorotatory compound, $C_{35}H_{56}O_2$, contained in dita-bark, *Pala scholaris* (*Echites scholaris* of Linnæus). It melts at 52° C.

echitamine (e-ki-tam′in), *n.* [*Echit(es)* + *amine*.] Same as ★*ditaine*.

echitein (e-kit′ē-in), *n.* [*Echit(es)* + *-e-in*.] A colorless dextrorotatory compound, $C_{42}H_{70}O_2$, contained in dita-bark, *Pala scholaris* (*Echites scholaris* of Linnæus). It crystallizes in needles or prisms melting at 195° C.

echitenine (e-kit′e-nin), *n.* [*Echit(es)* + *-ene* + *-ine*[2].] A brown amorphous alkaloid, $C_{20}H_{27}O_4N$, contained in dita-bark, *Pala scholaris* (*Echites scholaris* of Linnæus). It melts above 120° C.

Echites (e-kī′tēz), *n.* [NL. (Patrick Browne, 1756), < L. *echites*, < Gr. *ἐχίτης* (otherwise read as L. *echitē*, < Gr. **ἐχίτη*), the name in Pliny (not recorded in Greek authors) for some climbing plant, prob. clematis, prob. < Gr. *ἔχις*, adder.] A large genus of twining plants belonging to the family *Apocynaceæ*. The genus differs from *Dipladenia* in having a five-lobed disk in the flowers and in bearing a five-scaled or glandular calyx. They are tropical American plants, extending as far north as southern Florida. In choice horticultural collections a few of the 40 species may be found, as *E. umbellata*, *E. Andrewsii*, and *E. paludosa*.

Echites umbellata.
One fifth natural size.

echitin (ek′i-tin), *n.* [*Echit(es)* + *-in*[2].] A colorless dextrorotatory compound, $C_{32}H_{52}O_2$, contained in dita-bark, *Pala scholaris* (*Echites scholaris* of Linnæus). It crystallizes in leaflets melting at 170° C.

echiurid (ek-i-ū′rid), *n.* Any member of the family *Echiuridæ*.

echo, *n.* **7.** In *whist*, a response to a partner's signal for trumps.—**8.** In *bridge*, a method of showing the leader how many cards his partner holds in the suit led, or of indicating that the third hand can trump the third round. The first is called the *plain-suit echo*, the second the *down-and-out echo*.—**Echo sign**, a frequent indication of epilepsy, being the repetition of words or phrases in speech or writing.—**Plain-suit echo**, in *whist* and *bridge*, a method of playing the pone's cards so as to show the leader how the former's suit is distributed. See ★*echo*, *n.*, 7.

echo, *v. i.* **4.** In *bridge*, to show the leader how many cards the third hand holds in the suit led.

echolalia, *n.* **2.** An agreeable but meaningless arrangement of words in poetry.

The "Eve of Crecy" contains two magnificent examples of that mode of poetic expression dubbed "*echolalia*" by Max Nordau, and as such condemned by him.
A. Vallance, William Morris, p. 19.

echo-organ (ek′ō-ôr-gan), *n.* In *organ-building*, a section of the instrument, containing very delicate stops, inclosed in a thick swell-box, which is often placed at a distance from the rest of the organ, so as to be capable of echo or distant effects. Sometimes the echo-organ has a keyboard of its own in the console, but often it is played from either the swell or the choir keyboard through a special mechanism.

echopathy (e-kop′a-thi), *n.* [Gr. *ἠχώ*, echo, + *-παθεια*, < *πάθος*, disease.] A neurosis characterized by the meaningless repetition of words or movements.

echophrasia (ek″ō-frā′si-ä), *n.* [NL., < Gr. *ἠχώ*, echo, + *φράσις*, speaking.] Same as *echolalia*.

echurin (ek′ū-rin), *n.* [Prob. for **echyrin*, < Gr. *ἔχυρος*, strong, secure (< *ἔχειν*, hold) + *-in*[2].] A dyestuff made by treating a mixture of 3 parts of flavin and 5 parts of picric acid with 12 parts of nitric acid. It dyes wool a reddish yellow in an acid bath.

ecitophile (e-sit′ō-fil), *n.* [*Eciton* + Gr. *φιλεῖν*, love.] Any inquiline in the nests of ants of the genus *Eciton*.

ecl., eclect. Abbreviations of *eclectic*.

eclabium (ek-lā'bi-um), *n.* [NL., < Gr. ἐκ, out, + L. *labium*, lip.] Eversion of the lip.

Eclampsia infantum, convulsions occurring in infancy, epileptic in nature or of reflex origin.

Eclectic school. See ★*school*.

eclecticize (ek-lek'ti-sīz), *v. t.*; pret. and pp. *eclecticized*, ppr. *eclecticizing*. [*eclectic* + *-ize*.] To make selections from: as, to *eclecticize* and harmonize all mythologies. *Maurice*.

eclectist (ek-lek'tist), *n.* [*eclect-ic* + *-ist*.] One who favors or who practises eclecticism. *N. E. D.*

eclipsareon (ē-klip-sa'rē-on), *n.*; pl. *eclipsarea* (-ä). [Irreg. < *eclipse* + *-areon* (for *-arium*, *-arium*).] An apparatus for illustrating eclipses.

eclipse, *n.*—**Cycle of eclipses.** See ★*cycle*1. **Eclipse cyclone.** See ★*cyclone*. **Eclipse variable.** Same as ★*Algol variable*.

eclipser (ē-klip'sèr), *n.* A mechanical device for automatically interrupting the beam of light from a lighthouse.

A double or divided *eclipser* is used which occults the light during every alternate revolution.
Encyc. Brit., XXX. 256.

eclipsis (e-klip'sis), *n.* [L. *eclipsis*, < Gr. ἔκλειψις, a failing, cessation, non-appearance, eclipse: see *eclipse*.] 1. An eclipse.—2. Omission of a sound or letter; specifically, in *Celtic gram.*, the suppression of the sound of a radical consonant when preceded by another of the same organ. *J. O'Donovan*, Irish Gram. p. 58.—3. A momentary loss of consciousness.

ecliptical (e-klip'ti-kal), *a.* Relating or pertaining to the ecliptic.

ecloge (ek'lo-je), *n.* [NL. *eclogē*, < Gr. ἐκλογή, selection: see *eclogue*.] Selection; specifically, in *rhet.*, a judicious selection of the most striking circumstances in describing anything. *J. de Mille*, Rhet., § 157.

ecmnesia (ek-mne'si-ä), *n.* [NL., < Gr. ἐκ, out, + μνήσις, memory.] Loss of memory of events occurring during a limited period of time, recollection of what has happened before or after that time being retained.

ecoid, *n.* See *œcoid*.

ecologic, ecological, ecology. The simpler and now the preferred spellings of *œcologic*, *œcological*, *œcology*.

econ. An abbreviation of *economics*.

econometer (ē-kō-nom'e-tèr), *n.* An apparatus for determining the economy of a steam-boiler by measuring the amount of carbon dioxid (CO_2) which passes up the chimney.

economic, *a.* 6. Relating to value as viewed from the standpoint of material welfare in contrast with values of other orders. Thus higher education may represent an *economic* loss to the community, although the social and moral advantages derived from it far outweigh that loss. **Economic botany, cure, freedom,** etc. See ★*botany*, etc.

economics, *n.*—**Dynamic economics,** a proposed division of political economy dealing with changes in the production, distribution, and consumption of wealth, and the effects of such changes upon social organization.—**National economics,** a type of political economy which exaggerates the economic significance of national boundaries, bases its deductions upon the idea of a self-sufficing state, and regards international economic relations as merely accidental. Most frequently, however, the term is used synonymously with *political economy*, in imitation of the German usage. **Pure economics,** theoretical political economy, conceived of as an independent, abstract science: contrasted with economics viewed as an integral part of social science, and with the art of political economy, that is, a body of precepts for the guidance of political and social action.—**Social economics,** the science which deals with economic laws in their relation to social welfare. The term is frequently used as a synonym for *political economy* or *economics*.

economizer, *n.* 2. Specifically—(*b*) In fog-signaling on British railways, a device by which the detonation of one track-torpedo on the rail by the passage of the engine-wheels removes the second one in series before the wheels reach it.

economy, *n.* 5. In *theol.*: (*a*) The practical measures employed in giving effect to a divine dispensation. (*b*) The cautious presentation of doctrine, accommodating it to the feelings and prejudices of the hearers: used by J. H. Newman to describe the accommodated method (κατ'οἰκονομίαν) of the early fathers; in a bad sense, the system of withholding a large portion of gospel doctrine in teaching the mass of Christians. **Motor economy,** in *linguistics*, the principle of ease of utterance. *Scripture*, Exper. Phonetics, p. 123. **Perceptive economy,** in *linguistics*, the principle of the neglect, by language, of certain differences and the exaggeration of others, in order to bring the essential part of the sentence into prominence.

Perceptive economy requires not only the suppression of needless distinctions but also the emphasis of needful ones. *Scripture*, Exper. Phonetics, p. 123.

ecotone (ē'kō-tōn), *n.* [Gr. οἶκος, habitat, + τόνος, tension, stress.] In *phytogeog.*, the line along which two types of vegetation compete for the same ground. See ★*tension-line*. *F. E. Clements*.

ecphrasis (ek'fra-sis), *n.* [NL., < Gr. ἔκφρασις, description, < ἐκφράζειν, tell, recount, < ἐκ, out, + φράζειν, speak.] A description or interpretation; a plain declaration or utterance.

ecphyaditis (ek-fi-ä-di'tis), *n.* [NL., < Gr. ἐκφυάς (-φυαδ-), an appendage, outgrowth (< ἐκφύεσθαι, grow out), + *-itis*.] Same as *appendicitis*.

ecphyma, *n.* 2. Same as *measles*.

ecphysis (ek'fi-sis), *n.* [NL., < Gr. ἔκφυσις, a growing out, an outgrowth, < ἐκφύεσθαι, grow out, ἐκφύειν, produce, bear, < ἐκ, out, + φύεσθαι, grow, φύειν, produce.] In crustaceans, a branch of any joint of an appendage, as a basiophysis. *Trans. Linnean Soc. London*, Zoöl., Feb., 1903, p. 448.

ecpyrosis (ek-pi-ro'sis), *n.* [NL., < Gr. ἐκπύρωσις, < ἐκπυροῦν, burn up, < ἐκ, out, + πυροῦν, burn, < πῦρ, fire: see *pyre*.] Destruction by fire.

The sect of Stoics adopted most fully the system of catastrophes destined at certain intervals to destroy the world . . . the Cataclysm, or destruction by water, which sweeps away the whole human race, and annihilates all the animal and vegetable productions of nature; and the *Ecpyrosis*, or destruction by fire, which dissolves the globe itself. *Sir C. Lyell*, Princip. Geol., I. 13.

ecrasite (ek'ra-sīt), *n.* [F. *écrasite*, < *écraser*, crush, destroy (see *acrazo*), + *-ite* (*-ite*2).] The ammonium salt of trinitrocresol, experimented with in Austria as an explosive for charging shells. The same name is said to have been given to an explosive consisting of the so-called blasting-gelatin with picrate and either sulphate or hydrochlorate of ammonium.

écroulement (ā-krōl-mon'), *n.* [F., < *écrouler*, fall to pieces, < *é-* (L. *ex-*) + *crouler*, shake, fall to pieces.] A falling down or to pieces, as a building, great masses of rock, or the like; a land-slide.

ecstrophy, *n.* See *exstrophy*.

Ectal origin, valve. See *superficial origin* (under *origin*, 5 (*b*)), ★*valve*.

ectally (ek'tal-i), *adv.* Externally; on the exterior; superficially.

ectatic, *a.* 2. Distensible.

ectenic (ek-ten'ik), *a.* [Gr. ἐκτενής, strained, zealous, eager, < ἐκτείνειν, stretch: see *ectasis*.] Subjected to tension, literally or figuratively; strained. **Ectenic phenomena.** See ★*phenomenon*.

ectepicondylar (ek-tep-i-kon'di-lär), *a.* [Gr. ἐκτός, without, + ἐπί, upon, + κονδύλος, condyle.] Situated just above the outer condyle of the humerus. **Ectepicondylar foramen,** a perforation in the outer, distal portion of the humerus, found in some reptiles and characteristic of the anomodont reptiles.—**Ectepicondylar process,** a process just above the outer condyle of the humerus of such birds as gulls and sandpipers.

ectepicondyloid (ek-tep-i-kon'di-loid), *a.* Same as ★*ectocondylar* and ★*ectocondyloid*.

ectethmoid (ek-teth'moid), *a.* and *n.* [Gr. ἐκτός, outside, + E. *ethmoid*.] **I.** *a.* External to the ethmoid bone.

II. *n.* A portion of the alicthmoid forming a plate on either side of the mesethmoid and usually constituting part of the anterior wall of the orbit. It appears as a transverse, vertical plate in the skull of birds and is frequently termed the *antorbital* or *pars plana*.

ectethmoidal (ek'teth-moi-dal), *a.* [*ectethmoid* + *-al*1.] Relating to the ectethmoid or antorbital plate. Also *ecto-ethmoidal*.

ecthronym (ek'thro-nim), *n.* [Gr. ἐχθρός, hostile, + ὄνομα, ὄνυμα, name.] The name by which a people is called by its neighbors: opposed to *autonym*, the name by which the people call themselves.

ecthymatoid (ek-thim'a-toid), *a.* [*ecthyma*(*t-*) + *-oid*.] Resembling ecthyma.

ecthymatous (ek-thim'a-tus), *a.* [*ecthyma*(*t-*) + *-ous*.] Relating to or affected with ecthyma.

ecthyrosis (ek-thi-rō'sis), *n.* [NL., < Gr. ἐκ, out, + θύρα, door (see *thyroid*), + *-osis*.] A myxœdematoid condition following excision of the thyroid gland.

ectiris (ek-tī'ris), *n.* [NL., < Gr. ἐκτός, without, + ἶρις, iris.] The external layer of the iris.

Ectobiides (ek-tō-bī'i-dēz), *n. pl.* [Erroneous form for NL. *Ectobiidæ*, < *Ectobia* + *-idæ*.] A tribe of cockroaches of which *Ectobia* is the type. It contains species with spiny thighs, the last ventral plate of the female large and valveless, the supra-anal lamina of both sexes transverse and narrow, and the egg-capsules with a longitudinal suture. This tribe corresponds to the subfamily *Anaplectenæ* of Saussure.

Ectobranchiata (ek-to-brang-ki-a'tä), *n. pl.* [NL.: see ★*ectobranchiate*.] A group of regular *Echinoidea* having the mouth and anus at opposite poles and an apical system of plates. They are endocyclic and have external gills present. It includes the order *Diadematoida*. Compare ★*Endobranchiata*.

ectobranchiate (ek-to-brang'ki-at), *a.* [NL. *ectobranchiatus*, < Gr. ἐκτός, without, + βράγχια, gills: see *branchiate*.] Having an exsertile branchia, as the gastropod *Valvata*.

ectobronchium (ek-to-brong'ki-um), *n.*; pl. *ectobronchia* (-ä). [NL., < Gr. ἐκτός, without, + βρόγχος, windpipe.] In *ornith.*, one of several branches given off laterally and dorsally from the mesobronchium or prolongation of the bronchus.

ectocalcaneal (ek-to-kal-kā'ne-al), *a.* [Gr. ἐκτός, without, + NL. *calcaneum* + *-al*1.] On the outer side of the calcaneum or bone of the heel: specifically applied by Owen to the outermost of the ridges on the posterior side of the proximal end of the tarsometatarsus of a bird.

ectocarpaceous (ek-tō-kär-pā'shius), *a.* Belonging to the family of algæ *Ectocarpaceæ*.

ectochoroidea (ek-tō-kō-roi'dē-ä), *n.* [NL., < Gr. ἐκτός, without, + NL. *choroidea*, choroid.] The external layer of the choroid.

ectocnemial (ek-tok-nē'mi-al), *a.* [Gr. ἐκτός, without, + κνήμη, tibia, + *-al*1.] On the outer side of the tibia: as, the *ectocnemial* ridge, the outer of the two prominent ridges on the tibia of a bird, the other being the *procnemial* ridge.

ectocondylar (ek-tō-kon'di-lär), *a.* [Gr. ἐκτός, without, + κονδύλος, condyle, + *-ar*3.] Relating to the ectocondyle or outer articular face of such a bone as a femur: contrasted with ★*entocondylar*.—**Ectocondylar depression** or **cavity,** the hollow receiving the ectocondyle.

ectocondyloid (ek-tō-kon'di-loid), *a.* [Gr. ἐκτός, without, + κονδύλος, condyle.] Same as ★*ectocondylar*.

ectocornea (ek-tō-kôr'nē-ä), *n.* [NL., < Gr. ἐκτός, without, + NL. *cornea*, cornea.] The outer layer of the cornea.

ectodactylism (ek-tō-dak'ti-lizm), *n.* An abnormal absence of digits. *Bateson*, Study of Variation.

ecto-ethmoid (ek-to-eth'moid), *n.* [Gr. ἐκτός, without, + E. *ethmoid*.] In *ichth.*, same as *prefrontal*.

ectogenesis (ek-tō-jen'e-sis), *n.* [Gr. ἐκτός, outside, + γένεσις, origin, production.] The production of or the giving rise to structures from without: opposed to ★*endogenesis*.

ectolateral (ek-tō lat'e-ral), *a.* [Gr. ἐκτός, without, + L. *latus* (*later-*), side, + *-al*1.] Situated on the outer side.

ectoloph (ek'to-lof), *n.* [Gr. ἐκτός, without, + λόφος, crest.] The external ridge or crest on such an upper molar as that of a horse or rhinoceros. From it arise the parastyle, mesostyle, and metastyle. See cut under ★*tooth*.

ectomesoblast (ek-tō-mes'ō-blast), *n.* [Gr. ἐκτός, without, + E. *mesoblast*.] In *embryol.*, the cell-layer or cells which have not yet differentiated into ectoblast and mesoblast proper.

ectonephridium (ek-tō-ne-frid'i-um), *n.*; pl. *ectonephridia* (-ä). [Gr. ἐκτός, without, + NL. *nephridium*.] A nephridium of ectodermal origin, as in the annelids.

ectonuclear (ek-tō-nū'klē-är), *a.* [Gr. ἐκτός, outside, + L. *nucleus*, kernal, nucleus.] Situated or occurring outside the nucleus of the cell: opposed to ★*endonuclear*.

ectopagus (ek-top'a-gus), *n.*; pl. *ectopagi* (-jī). [NL., < Gr. ἐκτός, outside, + πήγνυναι (√παγ-), fix, fasten.] A double monster with lateral union of the trunk from the umbilicus upward.

ectoparenchyma (ek-tō-pa-reng'ki-mä), *n.* [NL., < Gr. ἐκτός, outside, + NL. *parenchyma*.] In trematodes, the outer portion of the parenchyma. *Jour. Roy. Micros. Soc.*, Aug. 1903, p. 500.

ectoperitoneal (ek-tō-per-i-tō-nē'al), *a.* [Gr. ἐκτός, outside, + περιτόναιον, peritoneum.] Relating to the surface of the peritoneum which is in contact with the viscera or the abdominal wall.

ectophyte (ek'to-fīt), *n.* [Gr. ἐκτός, outside, + φυτόν, plant.] An external vegetable parasite.

ectophytic (ek-tō-fit'ik), *a.* [*ectophyte* + *-ic*.] Of the nature of an ectophyte.

Moreover fewer of their rootlets have their extremities invested by a weft of hyphal mycelium as an *ectophytic* mycorhiza. *Encyc. Brit.*, XXV, 439.

Ectopic gestation. Same as *extra-uterine pregnancy* (which see, under *pregnancy*).

ectoplast (ek'tō-plăst), *n.* [Gr. ἐκτός, without, + πλαστός, formed.] The outermost layer or membrane bounding and inclosing the cytoplasm of the plant cell.

ectopocystic (ek″tō-pō-sis'tik), *a.* [Gr. ἐκτοπος, out of the place, + κυστις, bladder, + *-ic.*] Relating to or caused by malposition of the bladder.

ectoretina (ek-tō-ret'i-nä), *n.* [NL., < Gr. ἐκτος, outside, + NL. *retina*, retina.] The outer layer of the retina.

ectorganism (ekt-ôr'gan-izm), *n.* [Gr. ἐκτός, outside, + E. *organism.*] Same as *ectoparasite.*

ectorhinal (ek-tō-rī'nal), *a.* [Gr. ἐκτός, without, + ῥις (ῥιν), nose, + *-al.*] Situated on the outer side of the nose.—**Ectorhinal fissure.** See ★*fissure.*

ectosac (ek'tō-sak), *n.* [Gr. ἐκτός, outside, + σάκκος, sack, bag.] The membrane inclosing the ovum, or egg.

ectosaccal (ek-tō-sak'al), *a.* Of or pertaining to the ectosac.

ectosipho (ek-tō-sī'fō), *n.* [NL., < Gr. ἐκτός, without, + σίφων, L. *sipho*, a pipe: see *siphon.*] The outer siphuncular tube in the nautiloid cephalopods of the extinct family *Endoceratidæ.*

ectoskeletal (ek″tō-skel'e-tal), *a.* [Gr. ἐκτός, without, + σκελετόν, skeleton, + *-al*[1].] Same as *exoskeletal.*

ectoskeleton (ek-tō-skel'e-ton), *n.* [NL., < Gr. ἐκτός, outside, + σκελετόν, skeleton.] Same as *exoskeleton.*

ectosolenian (ek-tō-sō-lē'ni-an), *a.* [Gr. ἐκτός, outside, + σωλήν, channel, pipe, + *-ian.*] Having an extended neck-like orifice, as the foraminifer *Lagena sulcata.* Compare ★*entosolenian.*

ectosome, *n.* **2.** In *cytol.*, one of the deeply staining granules eliminated from the chromatin of the nuclei of the germ-track during their karyokinetic divisions. *Haeckel*, 1902.

ectosphenotic (ek-tō-sfē-not'ik), *a.* and *n.* **I.** *a.* [Gr. ἐκτός, without, + E. *sphenotic.*] Relating to the external portion of the sphenotic bone. —**Ectosphenotic process,** a name given by Mivart to a small, slightly hooked process which arises on the sphenotic process of the skull in birds, just in advance of the articulation of the quadrate.

II. *n.* The ectosphenotic process.

ectosphere (ek'tō-sfēr), *n.* [Gr. ἐκτός, outside, + σφαῖρα, ball.] In *cytol.*, the outer or cortical zone of the centrosphere.

Ectospora (ek-tō-spō'rä), *n. pl.* [NL., < Gr. ἐκτός, outside, + σπορά, seed (spore).] A group of *Sporozoa* in which sporulation takes place at the close of the trophic period and the spore mother-cells or sporoblasts are formed at the periphery of the sporonts. It includes the *Gregarinida*, *Coccidiidea*, and the *Hæmosporidia.* Compare ★*Endospora.* *Mesnil.*

ectostracal (ek-tos'tra-kal), *a.* Of or pertaining to the ectostracum.

ectostracum (ek-tos'tra-kum), *n.*; pl. *ectostraca* (-kä). [NL., < Gr. ἐκτός, outside, + ὄστρακον, shell.] The second layer of the integument of mites, lying between the epiostracum and the hypostracum. It consists, in the *Hydrachnidæ*, of a single layer of subcubical cells forming a dense tissue flat on both sides.

ectosylvian (ek-tō-sil'vi-an), *a.* [Gr. ἐκτός, outside, + *Sylvian.*] Situated at the outer side of the Sylvian sulcus.—**Ectosylvian sulcus.** See ★*sulcus.*

ectotheca (ek-tō-thē'kä), *n.* [NL., < Gr. ἐκτός, outside, + θήκη, receptacle.] In certain hydroids, the external layer of the chitinous covering; an exotheca.

ectothrix (ek'tō-thriks), *n.* [From the specific name of the fungus, *Megalosporon ectothrix*: < Gr. ἐκτός, outside, + θρίξ, hair (see def.).] The form of the parasitic fungus causing *tinea* or ringworm which produces its spores on the outside of the hairs.

ectotrachea (ek″tō-trā-kē'ä), *n.* [NL., < Gr. ἐκτός, outside, + τραχεία, windpipe.] The outer epithelial layer of the tracheæ of insects.

It is the so-called peritoneal membrane or invaginated epiblast: a true pavement epithelium.
A. S. Packard, Text-book of Entom., p. 432.

ectotrochlea (ek-tō-trok'lē-ä), *n.* [NL., < Gr. ἐκτός, outside, + NL. *trochlea.*] In *ornith.*, a name sometimes applied to the articular facet or trochlea on the outer distal end of the tarsometatarsus, with which the outer toe articulates.

In both groups [Grebes and Divers] the tarso-metatarsus is much compressed laterally, and the *ectotrochlea* is much reduced. *Proc. Zool. Soc. London*, 1899, p. 1041.

Ectotrophi (ek-tot'rō-fī), *n. pl.* [NL., < Gr. ἐκτοῦ, outside, + τρόφος, < τρέφειν, nourish.] A group of thysanurous insects having external mouth-parts, and comprising the *Machilidæ* and *Lepismatidæ.*

ectotrophic (ek-tō-trof'ik), *a.* [Gr. ἐκτός, outside, + -τροφος, < τρέφειν, nourish.] Getting nourishment outside: in *bot.*, said of fungi which envelop the roots of a plant without penetrating them.

ectotrophous (ek-tot'rō-fus), *a.* Of or belonging to the *Ectotrophi.*

ectrimma (ek-trim'ä), *n.*; pl. *ectrimmata* (-ma-tä). [NL., < Gr. ἐκτριμμα, < ἐκτρίβειν, rub constantly, < ἐκ, out, + τρίβειν, rub.] An ulcer resulting from long-continued pressure or friction; a bed-sore.

ectrosis (ek-trō'sis), *n.* [Gr. ἔκτρωσις, miscarriage.] Abortion; abortive treatment of disease.

ectylosis (ek-ti-lō'sis), *n.* [NL., < Gr. ἐκ, out, + τύλωσις, a becoming callous, < τύλος, a knob, callus.] The removal of corns or other callosities.

ectylotic (ek-ti-lot'ik), *a.* Pertaining to or effecting ectylosis.

Ecua. An abbreviation of *Ecuador.*

écuelle (ā-kü-el'), *n.* [F.: see *sculler*[2].] A low porringer, with handles, used for soup or broth, common in the middle ages: usually of wood, but sometimes of pewter or even silver.

écuelle (ā-kü-el'), *v. t.* [F. *écuelle*, a porringer or bowl: see ★*écuelle.*] To grate or rub gently in a pan lined with rounded knobs, made for the purpose.

From the rind of the fruit, by a process known as *ecualling*, which consists of gently rubbing the fruit on rounded projections arranged inside a brass basin, a very fine essence of limes is obtained.
Bulletin Roy. Gardens (Kew), May–June, 1891.

ecumene (ek'ū-mēn), *n.* [Gr. οἰκουμένη: see *ecumenic.*] The habitable part of the world; the part of the world inhabited by man.

Ecumenical patriarch. See ★*patriarch.*

écurie (ā-kü-rē'), *n.* [F.: see *equery*, *equerry.*] A stable; stabling.

ecurvature (ē-kèr'va-tūr), *n.* [L. *e-*, out, + E. *curvature.*] An outward curve.

ecurved (ē-kèrvd'), *a.* [L. *e-*, out, + E. *curved.*] Curved outward.

eczema, *n.*—**Eczema epizoöticum.** Same as *foot-and-mouth disease* (which see, under *foot*).—**Eczema marginatum,** an eczematous eruption occurring on the inner side of the thighs.

eczematoid (ek-zem'a-toid), *a.* [*eczema(t-)* + *-oid.*] Resembling eczema.

eczematosis (ek″ze-ma-tō'sis), *n.* [NL., < *eczema(t-)* + *-osis.*] One of several skin-diseases characterized by an abnormal secretion from the surface.

Edam cheese. Same as *Dutch cheese* (*a*) (which see, under *cheese*[1]).

edaphic (ē-daf'ik), *a.* [Gr. ἔδαφος, base, ground, + *-ic.*] Influenced or produced by the soil or its contents; arising from the soil: as, *edaphic* formations (see ★*formation*); *edaphic* influences.

The edaphic factors in climatology are the temperature, moisture, and sunlight favorable or unfavorable to the growth of the plant; the edaphic factors of soil-structure are those that more intimately relate to the growth of vegetation, such as its moisture, capillary structure, and soluble chemical contents.

The water-supply is an important *edaphic* factor. A series of springs emerging from some rock-stratum rarely fails to alter the vegetation.
Geog. Jour. (R. G. S.), Aug., 1903, pp. 149, 151.

eddering (ed'èr-ing), *n.* [*edder*[1] + *-ing*[1].] **1.** The act of binding or strengthening a hedge at the top by an interlacing of flexible rods or osiers or other material.—**2.** The rods, osiers, etc., used for this purpose. [Prov. Eng. in both uses.]

eddoes, *n.*—**Blue or nut eddoes.** In the British West Indies, *Xanthosoma violaceum*, a large-leaved aroid plant with violet-blue petioles, widely cultivated for the sake of its edible starchy root-stock.

eddy, *n.*—**Tidal eddy,** a whirl or gentle local circulation in some corner of the ocean formed by the deflection of one or more tidal streams.

eddy-chamber (ed'i-chām″bèr), *n.* A chamber in which, by jets or otherwise, a current of fluid is compelled to whirl in eddies, as in a spray-nozle. *Yearbook U. S. Dept. Agr.*, 1899, p. 153.

eddy-current (ed'i-kur″ent), *n.* In *elect.*, currents induced by alternating, rotating, or moving magnetic fields in places where they are not desired and are objectionable because they consume energy and produce heat. To avoid or reduce eddy-currents, the iron of changing magnetic circuits is subdivided by lamination in the direction at right angles to the path of induced electromotive force (so as to give no closed circuits for the production of eddy-currents), and large copper conductors exposed to changing magnetic fields are *stranded*, that is, composed of a number of smaller conductors more or less insulated from one another. Reduction of eddy-currents is the cause of the lamination of the iron in transformers, induction-motors, and armatures of electric machines in general. Also called *parasitic current* and *Foucault current.*

Eddying suspension. See ★*suspension.*

eddy-rock (ed'i-rok), *n.* A rock, generally a sandstone, which shows marked cross-bedding or flow-and-plunge structure.

edelweiss, *n.*—**New Zealand edelweiss,** either of two species of *Gnaphalium*, *G. Coleensoi* and *G. grandiceps*, so called from the resemblance of their woolly, silvery-white flowers to the edelweiss, to which they are closely related botanically.

edema, *n.* **Angioneurotic edema.** See ★*angioneurotic.* **Collateral edema,** serous infiltration into the tissues outside of an area of inflammation.—**Flying edema, œdema fugax,** evanescent swellings, due to effusion of fluid, occurring in various portions of the body: differing from urticaria in not being accompanied by itching or other signs of irritation.—**Malignant edema,** an edematous swelling extending rapidly and accompanied by gangrene and the subcutaneous formation of gas.—**Mucous edema, solid edema.** Same as *myxedema.*

edentate, *a.* **3.** In *bot.*, having no teeth, as an entire leaf.

edestin (ē-des'tin), *n.* [Gr. ἐδεστός, eatable (< ἔδειν, eat), + *-in*[2].] A crystallizable vegetable globulin found in wheat, rye, oats, etc.

Edestus (ē-des'tus), *n.* [NL., < Gr. ἐδεστής, an eater, < ἔδειν, eat: see *eat.*] A genus of extinct cestraciont selachians: known only by the large-arched symphysial dentitions (fin-spines according to some authors) which occur in the Carboniferous of North America, Russia, and Australia.

edge, *n.* **7.** In *poker*, same as (and a substitution for) *age*, 13.—**To the edge,** to the highest degree; in all completeness. [Colloq.]

edge-laid (ej'lād), *a.* Made of narrow strips laid together face to face, and with the edges up and exposed, as floors and table-tops: said also of built-up leather belting when to secure thickness and strength the elements of the belt run on their edges.

edge-molding (ej'mōl″ding), *n.* In *arch.*, any molding which has as its chief or an important part a projecting sharp arris.

edge-plate (ej'plāt), *n.* A heavy iron plate placed against the inside of the rockers, or sills, of a heavy carriage-body to insure stability and strength.

edge-roll, *v. t.* **3.** To roll (a flat strip, as of steel) in a coil or helix around a cylindrical rod with the flat face of the strip perpendicular to the axis.

edge-runner (ej'run″èr), *n.* A form of grinding-apparatus or -mill for ores or similar material, in which a heavy disk or wheel runs in a circular path upon its edge in a pan or mortar. By its weight and the sliding motion of its edge as it revolves, it comminutes the material.

edge-stitching (ej'stich″ing), *n.* In *sewing-machine work*, the process of sewing two parallel rows of stitches along the edge of the fabric to form a double edge-stitch. See *multiple-needle* ★*sewing-machine.*

edge-weed (ej'wēd), *n.* The fine-leafed water-hemlock or water-fennel, *Œnanthe Phellandrium.*

edge-zone (ej'zōn), *n.* In corals, a fold of tissue extending over the theca and usually containing a cavity continuous over the lip of the calycle with the cœlenteron. In colonial forms the buds arise from this part. *Annals and Mag. Nat. Hist.*, Jan. 1904, p. 22.

edging, *n.* **5.** In *photog.*, a coat of albumen, gelatin, or india-rubber along the edges of a collodion-covered dry-plate; a protection to the film during development. Generally the whole surface of the plate is given a substratum for the collodion.

edging-machine, *n.* **3.** In *sheet-metal work*, a machine for turning and forming an edge in tinware and sheet-metal. By changing the forming-rolls it becomes a turner or turning-machine; by the use of still other rolls it becomes a burring-machine. See ★*beading-machine.*

edgy, *a.* **3.** Having contours which are too sharply defined: said of a picture.

edh (eтн), *n.* [*e*, auxiliary vowel (as in *em*, *ess*, etc.), + *dh* = *th* in *this*, *that*, etc., AS. *d.*] A name of the Anglo-Saxon letter d or ð representing the sound of *th* in *that*, *this*, *smooth*, etc.

edictally (ē′dik-tal-i), *adv.* By edict or public proclamation: as, to be *edictally* notified or enjoined.

edility, ædility (ē-dil′i-ti), *n.* [L. *ædilitas*, < *ædilis*, edile.] The office of edile or the duties pertaining to it.

edinol (ed′i-nōl), *n.* The trade-name of a photographic developer, said to be m-amino-o-hydroxybenzylalcohol hydrochlorid,

$$\overset{4}{N}H_2C_6H_3(\overset{2}{O}H)\overset{1}{C}H_2OH.HCl.$$

Edison effect. See ★*effect.*

edition, *n.* **Acting edition.** See ★*acting.*

editor, *n.* **2.** An exhibitor: in the phrase *editor of the games* (translating the Latin *editor ludorum*), an officer who superintended the Roman public games. *L. Wallace*, Ben-Hur, p. 347.

edobole (ē′dō-bōl), *n.* [Gr. *οἴδος*, a swelling, + *βόλος*, a throwing.] In *phytogeog.*, a bolochore in which propulsion is effected by means of turgescence. *F. E. Clements.*

Edomite (ē′dom-īt), *n.* [*Edom* + *-ite*[2].] A descendant of Esau or Edom; one of the race which dwelt in southern Palestine (called *Edom*, or *Idumæa*), and which was bitterly hostile to the Israelites, a kindred nation.

Edomitish (ē′dom-ī-tish), *a.* [*Edomite* + *-ish.*] Pertaining to or characteristic of the Edomites, the descendants of Esau and the hereditary enemies of the Israelites.

Edrioaster (ed″ri-ō-as′tèr), *n.* Same as *Edriaster.*

edriophthalmate (ed″ri-of-thal′māt), *a.* Same as *edriophthalmous. Annals and Mag. Nat. Hist.*, Feb. 1904, p. 154.

edriophthalmian (ed″ri-of-thal′mi-an), *a.* and *n.* **I.** *a.* Same as *edriophthalmous.*

II. *n.* Any individual of the order *Edriophthalma*; a sessile-eyed crustacean.

E. D. S. An abbreviation of *English Dialect Society.*

educand (ed′ū-kand), *n.* [L. *educandus*, that is to be educated, < *educare*, educate.] One who is to be educated; a pupil or student.

We wish therefore that the *educands* be taught to observe. *Petty.*

educatory (ed′ū-kā-tō-ri), *a.* [*educate* + *-ory.*] Educative; that has an educating effect or influence; as, an *educatory* regimen.

educement (ē-dūs′ment), *n.* [*educe* + *-ment.*] The act of drawing out or developing.

Edwardian (ed-wär′di-an), *a.* [*Edward* + *-ian.*] Of, pertaining to, or characteristic of any one of the sovereigns of England named Edward or his reign: as, the *Edwardian* period; *Edwardian* architecture.

Edwardsian (ed-wärd′zi-an), *a.* and *n.* [*Edwards* + *-ian.*] **I.** *a.* Pertaining to Jonathan Edwards or his opinions (★Edwardsianism, which see).

II. *n.* One of the school of American theologians which has followed the lines laid down by Jonathan Edwards (1703–58). The members of the school differ widely from the founder and among themselves. For their general view, see ★*Edwardsianism.*

Edwardsianism (ed-wärd′zi-an-izm), *n.* The system of modified Calvinism which is the outgrowth of the teachings of Jonathan Edwards (1703–58). The majority of its defenders recognize the following tenets: all moral character lies in the will; man's ability to choose does not lessen his dependence on the interposition of the Holy Spirit; without such interposition man, by nature depraved, infallibly chooses evil; God's decrees are consistent with human liberty; the governmental theory of the atonement. Also called *New England Theology* and *New-light Divinity.*

E. E. An abbreviation (*b*) of *Early English*; (*c*) of *Electrical Engineer.*

E. E. and M. P. An abbreviation of *Envoy Extraordinary and Minister Plenipotentiary.*

eel, *n.* **Black eel,** *Anguilla australis*, of Australia and New Zealand. **Common eel.** Same as *black* ★*eel.*—**Fresh-water eel,** a name applied to eels of the genus *Anguilla*, which live chiefly or wholly in fresh water.—**Green eel,** *Muræna afra*, an eel of the family *Murænidæ*, found in Australian waters.—**Long-necked eel,** an eel of the family *Derichthyidæ.* **Mother of eels.** See *mother*[1]. **Silver eel.** (*a*) *Murænesox cinereus*, of New South Wales. Also called *sea-eel.* (*b*) *Leptocephalus wilsoni* of Australia. (*c*) *Congromuræna habenata* of New Zealand.—**Symbranchoid eel,** an eel-like fish of the family *Symbranchidæ.* Also known as *rice-eel.*

eel-cake (ēl′kāk), *n.* Small eels fried together and turned out of the pan like a flat cake. *Wallin.*

eel-cat (el′kat), *n.* One of the channel catfish, *Ictalurus anguilla.*

eelery (e′le-ri), *n.* [*eel* + *-ery.*] A place where eels are caught; an eel-fishery.

eel-grass, *n.* **Green eel-grass,** the white-water-crowfoot, *Batrachium trichophyllum*, ranging from Nova Scotia to North Carolina, and also found in California, Europe, and Asia.

eel-pick (ēl′pik), *n.* An eel-spear.

eel-picker (ēl′pik″èr), *n.* One who fishes with an eel-pick.

In its [the Broad's] deep mud eels abound; and the *eel-picker* in his little punt, . . . is a common object on the flats. *G. C. Davies*, Norfolk Broads, xxvi.

eel-pump (ēl′pump), *n.* A portable pump for forcing eels and fish out of water-pipes. [Rare.]

eelskin, *n.* **2.** In *ceram.*, a peculiar glaze of a brownish-yellow tint, seen on old Chinese porcelain.

eel-trap (ēl′trap), *n.* In *mech.*, a screen or net used in water-pipes to prevent the entrance of fish which might otherwise pass into machines and clog their valves.

eel-trunk (ēl′trungk), *n.* A box with holes in it in which eels are kept alive until they are wanted. [Prov. Eng.]

eel-worm (ēl′wèrm), *n.* Any one of the free-living nematoid worms of the family *Anguillulidæ* (which see). *Yearbook U. S. Dept. Agr.*, 1897, p. 568.

E. E. T. S. An abbreviation of *Early English Text Society.*

efemeral, *a.* and *n.* A simplified spelling of *ephemeral.*

effect, *n.* **9.** In *art*, an accidental or unusual combination of colors, lights, or forms which especially excite the interest of a painter and form a suitable motive or key in painting or etching.

It is evident that such perfectly favorable *effects* are likely to be rare, but they do occur, and the business of the imaginative artist is either to seize upon them when they do occur, or imagine them in their absence. *P. G. Hamerton*, in Portfolio, 1886, p. 152.

Budde effect, the effect, not due to heating, of the chemically active rays of the sun in causing expansion of dry chlorin gas: observed and described by Budde.—**Coefficient of Peltier effect,** a numerical constant denoting the size of the Peltier effect; the heat developed in a circuit consisting of more than one metal, other than that due to the overcoming of the resistance of the circuit, divided by the product of the current and the absolute temperature.—**Doppler's effect,** the effect, upon the apparent frequency of a train of waves, of a movement of the source of the wave-motion toward or away from the observer; Doppler's principle (see *principle*). Thus there is a displacement of lines in the spectrum of a star toward the violet when the earth and star are approaching each other, and vice versa.—**Edison effect,** a phenomenon of the vacuum of incandescent lamps, consisting of an electric glow near the ends of the filament, caused by a current flowing through the gases between the terminals or from a third terminal and the negative leg of the filament.—**Faraday effect,** the rotatory effect of a magnetic field upon the plane of polarization of light.—**Ferranti effect,** in *elect.*, the rise of voltage occurring in underground cables under certain conditions due to the effect of distributed capacity and self-induction.—**Fly-wheel effect,** a property common to all revolving wheels, or balanced masses, of storing up energy when accelerated by a force greater than the average and of giving up this energy when retarded.—**Illuminating effect,** the illuminating power of a source of light or of a group of such sources. It is measured by comparing the brightness of a surface at the position in question with the brightness of the same surface when illuminated by a unit light-source, such as the Hefner lamp, placed at a distance of one meter.—**Joule effect,** the heating effect produced by the passage of an electric current through a conductor, arising from its resistance only. **Joulean** or **Joule-Kelvin effect.** Same as *Joule-Thomson* ★*effect.*—**Joule-Thomson effect,** the effect upon the temperature of a gas of forcing it to pass through a porous plug or small aperture. It was found by Joule and Thomson (Lord Kelvin) that hydrogen rose in temperature by this process, but that other gases were cooled. It has since been shown that at very low temperatures hydrogen is likewise cooled by passage under pressure through an orifice.—**Kerr effect,** a phenomenon occurring when light is reflected from the surface of a magnet. It consists in a rotation of the plane of polarization of the reflected ray when the light falling upon the magnetized mirror is polarized at right angles to or parallel with the plane of incidence.—**Lenard effect,** the ionization of gases by ultra-violet light.—**Mechanical effect,** the result obtained from a mechanical device or the useful work done by a machine; the available power developed by an engine.—**Multiplication of effects,** the law, formulated by Spencer, that in society, as throughout the cosmos, every cause produces more than one effect. **Purkinje effect.** See *Purkinje* ★*phenomenon.*—**Pyrometric effect.** Same as ★*calorific intensity.*—**Rowland effect,** in *elect.*, the magnetic effect of electric convection or of a moving electrostatic charge.—**Skin effect,** in *elect.*, the tendency of an alternating current to concentrate itself most upon the surface of the conductor through which it flows at high frequency, due to the magnetic field of the current inside of the conductor. **Vacuum effect,** the effect produced by a vacuum, or the amount of pressure less than that of the atmosphere which exists in an evaporating apparatus, as in sugar-boiling. **Young effect.** See *recurrent* ★*reason.* **Zeeman effect,** the effect of a strong magnetic field upon the lines in the spectrum of a beam of light passing through it. The lines of the spectrum are widened and subdivided, the light of the components due to the division being polarized.

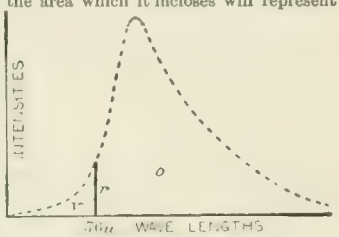
effect-carbon (e-fekt′kär″bon), *n.* See *electric* ★*arc.*

Effective head, pressure, resistance, section, utility, value. See ★*head*, etc.—**Mean effective pressure.** See ★*pressure.*

efferential (ef-e-ren′shal), *a.* [*efferent* + *-i-al.*] That carries outward or away; that serves to carry off; of the nature of an efferent: as, an *efferential* blood-vessel.

efficacity (ef-i-kas′i-ti), *n.* [L. *efficacitas*, < *efficax*, efficacious: see *efficacious.*] The quality of being efficacious; efficaciousness; efficacy; effectiveness. *Browning.*

efficiency, *n.*—**Apparent efficiency,** in *elect.*, the ratio of the power-output divided by the apparent power-input. (See *apparent* ★*power.*) If the apparent power is greater than the true power, the apparent efficiency is less than the true efficiency and equals the product of power-factor and true efficiency.—**Efficiency of a source of light,** the ratio of the luminous energy of a source of light to its total energy. *Radiant efficiency* or *luminous efficiency* is the ratio of the light-giving radiation of a source to the total radiation. The method formerly employed in the determination of this important constant consisted in measuring the total radiation received upon the face of a thermopile or bolometer placed at a given distance from the source of light and comparing the same with the radiation reaching the heat-measuring instrument when a glass cell containing water or a solution of alum was interposed in the path of the rays. If such a cell were capable of transmitting all the light-giving radiation and that alone, the ratio of the effects thus obtained would be the radiant efficiency. It was known at an early day that this assumption was not warranted, and a correction, thought to be approximately accurate, was applied. It has recently been shown that even with this correction the values obtained for the radiant efficiency are much too large, and more rigorous methods have been devised, as follows: (1) *Langley's method.* The first of these methods consists in dispersing the light from the source by means of a prism of rock-salt or fluorite, which is transparent to all wave-lengths, and in determining the distribution of intensities throughout the spectrum thus obtained. If a curve be then drawn having as abscissæ wave-lengths and as ordinates the intensity of each wave-length of the spectrum, the area which it incloses will represent the energy of total radiation from the source. If a vertical line (*r*) be drawn at 76*μ*, which corresponds to the boundary of the visible spectrum in the red, this line will divide the inclosed area into two parts, one of which (*r*) represents the light-giving energy, the other (*o*) that portion of the energy which is non-luminous. The ratio of the light-giving area to the total area of the curve will then be the radiant efficiency of the source of light. The first experimenter to obtain such curves was S. P. Langley. (2) *Ångström's method.* Another method of measuring the radiant efficiency of a source of light is due to Knut Ångström. An opaque screen is mounted in such a position as to cut off all rays lying beyond the red end of the visible spectrum, and the remaining radiation is assembled upon the face of a bolometer by means of a cylindrical lens. The ratio of this quantity to the total radiation, measured by the same instrument, gives the radiant efficiency of the source of light. The radiant efficiency of such sources of light as have been measured by the two methods thus described is given in the following table. The values obtained by the integration of the energy-curves and by Ångström's method are marked respectively L and Å.



Efficiency of a Light Source.

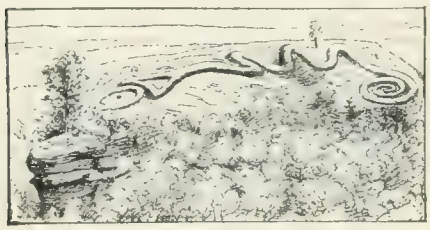
Source.	Efficiency.	Method.	Observer.
Hefner lamp	.0096	Å	Ångström
Acetylene flame	.056	Å	Ångström
Acetylene flame	.033–.040	L	Nichols & Coblentz
Nernst lamp	.036–.047	Å	Ingersoll
Mercury arc	.20	L	Nichols
Geissler tube	.20	L	Drew

While other sources of light have not as yet been measured by these methods, their relative efficiencies are approximately known, and by comparison with the above data we know that the radiant efficiency of ordinary oil- and gas-flames is about .01, that of the glow-lamp from .01 to .03, and that of the electric arc from .04 to .08. *Gross efficiency.* The term *efficiency* is likewise used to express the ratio of the energy in light-giving form developed in unit time by a source to the energy of combustion of the fuel which it is necessary to consume in order to maintain the source during that time. The efficiency thus defined takes into account the total heat-losses in the production of light. In the case of the flames of candles and of oil-lamps the heat lost by convection and conduction is very large compared with the total radiation from the flame. In the case of gas-flames the heat of combustion of the coal necessary to produce the gas to maintain the flame, as com-

pared with the luminous energy emitted by the flame, gives the gross efficiency. In computing the gross efficiency of electric lights the heat of combustion of the fuel used to generate the current supplied to the lamps or the equivalent amount of energy, whatever be its source, is to be taken. In the case of a steam-plant for electric lighting the losses by dissipation of heat in the boiler, engine, dynamo, and lead-wires, together with the loss by convection and conduction in the electric lamp itself, all enter into the computation of the gross efficiency. Whatever process for the production of light may be employed, the amount of energy dissipated for the purpose of obtaining luminous radiation is very great, and the gross efficiency of luminous flames used in lighting ranges from .001 to .002, while the gross efficiency of electric lamps under the best existing conditions for the production of power is little if any above these figures. *Electric efficiency.* It is convenient in the case of the electric light to express the efficiency in watts per candle—a method not comparable with the energy-ratio defined above, but useful for the comparison of the various types of lamp used in electric lighting. The electric efficiency of the ordinary lamp ranges between four watts per candle and three watts per candle, according to the temperature of the filament, that of the arc-light from two watts per candle to one watt per candle (mean spherical candle-power), while the efficiency of the Nernst lamp is intermediate between that of the arc and the glow-lamp.—**Luminous efficiency.** See ★*efficiency of a source of light.*—**Projected efficiency,** the hypothesis that, in the process of evolution, existing individuals and their present interests are by natural selection subordinated to the interests of a much larger number of future individuals. *Kidd*, Western Civilization, p. 65. **Radiant efficiency.** See ★*efficiency of a source of light.*—**Thermal efficiency,** the ratio of the heat converted into work by a thermal engine to the total amount of heat supplied to it.—**Transmission efficiency,** the ratio of the power delivered by a transmission-mechanism to the power received by it; the efficiency with which anything can be transmitted.

Efficient zone. See ★*zone.*

effigy-mound (ef′i-ji-mound), *n.* A mound or earthwork representing some object, especially



Serpent Effigy-mound, Adams County, Ohio.

some animal. Mounds of this form are particularly frequent in the northwestern United States.

efflagration (ef-la-grā′shon), *n.* [L. *ef-* for *ex*, out, + *flagrare*, burn: see *flagrant.*] In *geol.*, a burst of flame or incandescent material from a volcano.

effluviography (e-flö-vi-og′ra-fi), *n.* [L. *effluvium*, outflow, + Gr. -γραφια, ⟨ γράφειν, write.] In *photog.*, the action of the silent electric discharge upon a sensitized gelatinobromide plate. An image is obtained in complete darkness and may be developed in the usual manner. *Woodbury*, Encyc. Dict. of Photog., p. 179.

effort, *n.* **Tractive effort,** the force required or exerted to draw a given load along a road or track at a given speed; in locomotives, the draw-bar pull.

effraction (e-frak′shon), *n.* [NL. **effractio*(*n-*), ⟨ L. *effringere* (pp. *effractus*), break open: see *effracture.*] A breaking-open or breaking-in; house-breaking; burglary.

effractor (e-frak′tor), *n.* [ML. *effractor*, ⟨ L. *effringere*, break open: see *effracture.*] One who breaks in by force; a house-breaker; a burglar. *Bouvier*, Law Dict.

effranchisement (e-fran′chiz-ment), *n.* [*ef-franchise* + *-ment.*] The act of effranchising, or the state of being effranchised or invested with privileges.

effuse, *v.* **II.** *intrans.* To flow, as a fluid, through an aperture or through a porous partition the openings in which are large compared with the diameter of a molecule.

Effusion of gases. (*b*) In *physics*, the passage of gases through a perforated diaphragm the openings in which are very large as compared with the diameter of a molecule. The phenomena of effusion differ from those of diffusion (which is the passage of a gas through a membrane the pores of which are of molecular dimensions) in some important respects. In effusion, the rate of flow of a gas or mixture is inversely as the square root of the density and the composition of a mixture remains unchanged: in diffusion, each component of a mixture is transmitted at a rate inversely proportional to the square root of its molecular weight and the composition of the mixture is therefore changed.—**Thermal effusion of gases,** the effusion of gases through a porous diaphragm when the pressures on the two sides are the same but the temperatures vary. The gases move from the cold to the hot side of the partition.

effusion-plug (e-fū′zhon-plug), *n.* A small section of glass tubing, closed at one end by a platinum plate in which there is a minute hole, which serves as a stopper to a vessel from which a gas is allowed to escape in determining its density by the rate of effusion. *M. W. Travers*, Exper. Study of Gases, p. 281.

effusive. **I.** *a.* **The effusive period,** in the solidification of an igneous rock, that period in which it cools after having been poured out on the surface of the earth: at this time the finer-grained portion or ground-mass of the rock is usually crystallized.

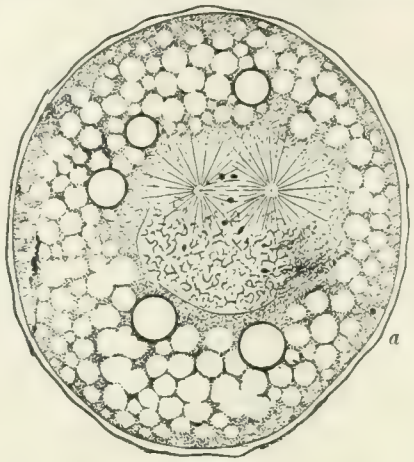
II. *n.* In *petrog.*, a volcanic rock poured out on the surface of the earth: contrasted with *intrusive rocks.* Also *extrusive.* *Amer. Jour. Sci.*, Aug., 1903, p. 121.

eg, *n.* and *v.* A simplified spelling of *egg.*

egeriid (e-jē′ri-id), *n.* and *a.* **I.** *n.* A member of the family *Egeriidæ.*

II. *a.* Of or belonging to the lepidopterous family *Egeriidæ* or *Ægeriidæ.*

egg[1], *n.* **3.** In *cricket*, no score; zero; a duck's egg. [Slang.]—**Egg apparatus,** the three nucleated cells at the micropylar end of the embryo-sac of plants, two of which form the synergidæ and the third the oosphere. See *oosphere* and *synergida.*—**Egg centrosome,** a centrosome belonging to the egg, as distinguished



Egg Centrosome.

Fertilization of the egg of *Nereis*, from a section. Magnified 400 times.

Appearance presented soon after the entrance of the spermatozoön, showing the minute sperm-nucleus at *a*, the germinal vesicle disappearing, and the first polar mitotic figure forming. The empty spaces represent deutoplasm-spheres (slightly swollen by the reagents), the firm circles oil-drops. (From Wilson's "The Cell.")

from the sperm centrosome.—**Immediate egg,** in rotifers, a parthenogenetic summer egg.—**Philosopher's egg.** See *philosopher.*—**Resting egg.** Same as *winter* ★*egg.*—**Summer egg,** one of the parthenogenetic eggs produced by rotifers in summer, the large form giving rise to females and the small to males. In some entomostracans, as *Daphnia*, one of the parthenogenetic eggs which are produced in summer and develop rapidly in the brood-pouch. Compare *winter* ★*egg.*—**Warty egg,** the shell of *Amphiperas ventricosum*, which is egg-shaped and has a wart-like tubercle at each end.—**Winter egg,** in rotifers, a thick-shelled egg, produced in autumn and probably impregnated by the male: it remains inert all winter and develops in the spring; in some entomostracans, one of the fertilized eggs, produced in autumn, which remain inactive all winter in the detached ephippium and develop in the spring. Compare *summer* ★*egg.*

egg-assorter (eg′a-sôr″tèr), *n.* A simple form of egg-tester. [Eng.]

egg-bath (eg′bâth), *n.* In *tanning*, a bath of egg-yolks.

egg-boiler (eg′boi″lèr), *n.* An arrangement for boiling water so that eggs may be easily cooked in it, particularly on the table.

egg-bound (eg′bound), *p. a.* A condition in birds in which they are unable to expel the fully developed egg, either on account of its excessive size or because of the presence of some disease.

egg-breaker (eg′brā″kèr), *n.* Same as *egg-tooth.*

egg-candler (eg′kan″dlèr), *n.* One who candles or tests the freshness of eggs by holding them between the eye and a lighted candle.

egg-candling (eg′kan″dling), *n.* The practice of testing eggs by holding them between the eye and a lighted candle. The translucency of the egg shows its freshness.

egg-cement (eg′sē-ment″), *n.* A sticky fluid by which the eggs of some animals, such as certain frogs, are united with one another.

egg-coal (eg′kōl), *n.* A size of broken coal suitable for use in a hot-air furnace or the like, as distinguished from a smaller size called 'chestnut' used in a kitchen range or stove, and a still smaller size called 'pea-coal.'

egg-covering (eg′kuv″èr-ing), *n.* The covering of the egg-masses of many insects. It varies greatly in character and, in general, is secreted by the accessory glands of the oviduct. Also called *egg-case, egg-pod, egg-sac.*

Eggertz test. See ★*test*[1].

eggette (eg-et′), *n.* [Irreg. *egg* + *-ette* as in *briquette.*] A lump of artificial fuel of the shape and size of a hen's egg. [Trade-name, U. S.]

egg-fruit (eg′fröt), *n.* In the Bahamas, the fruit of *Achras serpentaria* (*Lucuma serpentaria* of Humboldt, Bonpland, and Kunth). It is of the size of a small egg, has a thick skin, and is edible.

egg-guide (eg′gīd), *n.* A ventral movable triangular flap at the external opening of an oviduct, which serves to guide the eggs as they are laid. *A. S. Packard*, Text-book of Entom., p. 183.

egg-mite (eg′mīt), *n.* Any predatory mite which feeds on the eggs of insects.

egg-oil (eg′oil), *n.* The oleaginous material obtained from the yolks of hens' eggs. It contains olein and palmitin, with lecithin, cerebrin, neurine, etc., and is used in dressing alum-tanned leather.

egg-parasite (eg′par″a-sīt), *n.* Any insect of the family *Chalcididæ* or the family *Proctotrypidæ* which lays its eggs in the eggs of other insects. The chalcidid subfamilies *Trichogrammina* and *Mymarinæ* seem to be exclusively composed of egg-parasites, and the same may be said of the proctotrypid subfamily *Scelionina*. The genus *Hadronotus* is a parasite of the eggs of *Heteroptera*. *H. rugosus* is described by Howard from eggs supposed to be those of the cotton-stainer, *Dysdercus suturellus.* See cut under ★*cotton-worm egg-parasite.*

Egg-parasite (*Hadronotus rugosus*). (Howard, U. S. D. A.)

Egg-plant blight, flea-beetle. See ★*blight,* ★*flea-beetle.*

egg-powder (eg′pou″dèr), *n.* The trade-name of a prepared form of casein obtained from skim-milk, offered for use as an article of food. *Yearbook U. S. Dept. Agr.*, 1900, p. 623.

egg-roller (eg′rō-lèr), *n.* A form of machine for making oval briquettes of the shape and size of a hen's egg from refuse from collieries or dumps. The small particles are cemented together by a tar or pitch and molded and compacted under pressure.

egg-sac (eg′sak), *n.* **1.** The silken cocoon in which the eggs of most spiders are deposited and in which they hibernate. *Comstock*, Manual of Insects, p. 41.—**2.** In earthworms, one of the reniform sacs which open into the funnel-shaped ends of the oviducts; a *receptaculum ovorum.*—**3.** In crustaceans, as some copepods, one of the pair of egg-containing receptacles at the hinder end of the body.

egg-sleeker (eg′slē″kèr), *n.* A molder's tool having a face in the shape of a segment of an annular ring, used for giving a smooth or sleek surface in facing or finishing the hollow faces of curved molds.

egg-Sunday (eg-sun′dā), *n.* The Sunday before Shrove-Tuesday.

egg-timer, *n.* **2.** An apparatus for the automatic cooking of eggs. It consists of a vessel containing boiling water and a series of three or more wire baskets suspended over the water. On placing an egg in a basket the basket sinks into the water and keeps the egg there for a fixed time. When the time has elapsed the basket automatically rises out of the water and stops the process of cooking. Each basket is adjusted to lift the eggs it may contain out of the water at the end of one, two, or three minutes as desired.

egg-whip (eg′hwip″), *n.* A hand-tool or machine for beating or whipping eggs, sponge, or batter; an egg-beater. The tool is a slender balloon-shaped form of wire fitted with a handle; the machine is a cylinder of wires, or two sets of wire paddles, held in the hand and made to revolve at a high speed by means of gearing.

eglantine, *n.* **3.** A stone of the hardness and grain of marble. *Goldsmith*, Nat. Hist., I. vi. *N. E. D.*—**Eglantine gall.** Same as *bedegar.*

eglestonite (eg′l-ston-īt), *n.* [Named after Professor Thomas *Egleston* (1832-1900) of Columbia University.] An oxychlorid of mercury (said to be $Hg_6Cl_3O_2$) occurring in yellow to brown isometric crystals: found at Terlingua, Texas.

ego-altruism (ē″gō-al′trö-izm), *n.* Altruism conjoined with self-respect; the subjective aspect of morality.

Subjectively, morality is self-respect, and that desire for the good opinion of others, and that endeavour to deserve it, which Mr. [Herbert] Spencer has called *ego-altruism*. *Giddings*, Inductive Sociol., p. 257.

egocentric (ē-gō-sen′trik), *a.* [L. *ego*, I, + *centrum*, center, + *-ic*.] Having or regarding self as the center of all things; centering in self; egoistic.

The heliocentric system was expanded out of an antecedent geocentric system, itself the offspring of a demonocentric system, which sprang from an earlier ethnocentric system born of the primeval *egocentric* cosmos of inchoate thinking.
19th An. Rep. Bur. Amer. Ethnol., 1897-98, p. 831.

egocentricity (ē-gō-sen-tris′i-ti), *n.* [*egocentric* + *-ity*.] The character of being egocentric; specifically, an extreme and abnormal state of self-concentration or egoism.

Ziehen limits the hysterical constitution to emotional instability, *egocentricity*, craving for attention, peculiar predilections, disorders of imagination and attention (fantastic instability).
Amer. Jour. Psychol., July-Oct., 1903, p. 100.

ego-idea (ē″gō-ī-dē′ä), *n.* In *psychol.*, the empirical or psychological idea of the self.

Besides the idea of one's present corporeal and mental ego, there is still a third member participating in the usual *ego-idea*. This is the very essential total idea that has been deposited in memory by the succession of one's most important mental and physical experiences in the past. *T. Ziehen* (trans.), Introd. to Physiol. Psychol., xi.

egols (eg′ōlz), *n. pl.* A name of the potassium-mercury salts of o-nitro-phenol-, o-nitro-cresol- and o-nitro-thymol-p-sulphonic acids. The former, called phenegol, is best known. The others are *cresegol* and *thymegol*. They are bactericides.

egomania (ē″gō-mā′ni-ä), *n.* [L. *ego*, I, + Gr. *μανία*, madness.] An exaggerated egotism, amounting to an actual mental disorder.

egomaniac (ē-gō-mā′ni-ak), *n.* One who exhibits egomania.

egotic (ē′got-ik), *a.* [Irreg. *ego* + *-t-* + *-ic*.] Self-regarding; egoistic.

Under sociability are lumped together desires so diverse as the craving for companionship, and the eagerness for appreciation, the one effective, the other *egotic*.
E. A. Ross, in Amer. Jour. of Sociol., IX. 539.

egressive (ē-gres′iv), *a.* [L. *egressus*, pp. of *egredi*, go out (see *egress*), + *-ive*.] That proceeds forth or downward from an ultimate source or cause, as in tracing some process of development or evolution.

We may follow two methods [in working out a problem] ... the regressive and the *egressive*. The regressive ... starts from the completed process and proceeds backward ... in search of the factors and the forces which have produced the completion; and ... cannot terminate till the sufficient reason or the ultimate cause be reached. If we follow the *egressive* method we simply reverse the procedure and reason downward.
A. M. Fairbairn, Philos. Christ. Relig., p. 40.

egret, *n.*—**Cattle egret**, a small heron, *Bubulcus ibis*, formerly abundant in Egypt and frequently confused with the sacred ibis.

egurgitate (ē-gėr′ji-tāt), *v. t.*; pret. and pp. *egurgitated*, ppr. *egurgitating*. [L. *egurgitare*, < *ē*, out, + (LL.) *gurgitare*, < *gurges* (gurgit-), gulf.] To throw up or out.

Egyptian bath-sponge. Same as *sponge-gourd*.—**Egyptian bondage**, a state of servitude or bondage as oppressive and degrading as that of the Israelites in Egypt.—**Egyptian brown, clover, cotton**, etc. See ★*brown*, *n.*, etc.—**Egyptian cross**, the ankh (which see).—**Egyptian ophthalmia**. Same as *trachoma*.—**Egyptian thorn**. See *thorn*.—**Egyptian type, letters**, or **figures**. See *antique*, *n.*, 3.—**White Egyptian corn**. Same as ★*chicken-corn*.

Egyptianism (ē-jip′shian-izm), *n.* [*Egyptian* + *-ism*.] The characteristics of the Egyptians; also the inclination to adopt Egyptian customs.

Egyptianize (ē-jip′shian-īz), *v. t.*; pret. and pp. *Egyptianized*, ppr. *Egyptianizing*. [*Egyptian* + *-ize*.] **1.** To make similar to an Egyptian in appearance and customs.—**2.** To treat (clay) by a patented process involving the use of tannic acid, in order to give it increased adhesiveness and tenacity. See ★*Egyptianized clay*.—**Egyptianized clay**, clay treated by a special process discovered by E. G. Acheson, of Niagara Falls, by which it is rendered more soluble and plastic and its tensile strength is increased 50 per cent. in the burned form and 350 per cent. in the sun-dried form, by the addition of a small proportion of tannin; an effect assumed to be similar to that produced by the use of straw in the manufacture of bricks by the ancient Egyptians. *Sci. Amer.*, April 25, 1903, p. 311.

Egypticity (ē-jip-tis′i-ti), *n.* [*Egyptic* + *-ity*.] The quality of belonging to Egypt.

Egyptologic (ē-jip-tō-loj′ik), *a.* [*Egyptolog-y* + *-ic*.] Of or pertaining to Egyptology.

Egyptologue (ē-jip′tō-log), *n.* [Gr. *Αἴγυπτος*, Egypt, + *-λογος*, < *λέγειν*, speak.] An Egyptologist.

E. H. P. An abbreviation of *electrical horse power*.

Ehrlich's side-chain hypothesis. See ★*immunity*, 5., with cut.

ehuawa (ā-hö-ä′wä), *n.* [Hawaiian; also *ahuawa*.] In the Hawaiian Islands, *Cyperus lævigatus*, a sedge, very widely spread in the tropics, from which the natives of the island of Niihau make fine, very flexible, highly-prized mats.

E. I. An abbreviation (*a*) of *East India*; (*b*) of *East Indian*.

E. I. C. An abbreviation of *East India Company*.

Eichhornia (īk-hôr′ni-ä), *n.* [NL. (Kunth, 1843), named in honor of J. A. F. *Eichhorn* (born in 1779), patron of science and adviser to the king of Prussia.] An untenable name for *Piaropus*, a genus of plants of the family *Pontederiaceæ*. See ★*Piaropus*.

Eichwaldia (īch-väl′di-ä), *n.* [NL., < *Eichwald*, a Russian geologist.] A genus of protrematous *Brachiopoda*, of the family *Eichwaldiidæ*, characterized by the fine epidermal network covering the surface of both valves. It occurs in Silurian rocks.

eicosane, *n.* See ★*icosane*.

eicosylene (ī-kos′i-lēn), *n.* [Also *eikosylene*; Gr. *εἴκοσι*, twenty (= L. *viginti*, twenty: see *twenty*), + *-yl* + *-ene*.] A colorless liquid hydrocarbon, $C_{20}H_{38}$, obtained from paraffin. It boils at 314–315° C. and is also called *icosinene*.

E. I. C. S. An abbreviation of *East India Company's Service*.

Eider-down cloth, a heavily napped wool or cotton knitted fabric of thick texture, in plain and fancy colors and effects, used for blankets, cloakings, women's sacks, robes, etc.

eidolic (ī-dol′ik), *a.* [Gr. *εἰδωλικός*, mythologic, < *εἴδωλον*, an image, idol, myth.] Of the nature of an eidolon; eidolon-like.

eidoloclast (ī-dol′ō-klast), *n.* Same as *idoloclast*.

To be an *eidoloclast* is not a pleasant office, because an invidious one ... It is prudent to devolve the odium of such an office upon the idol himself. Let the object of the false worship always, if possible, be made his own *eidoloclast*.
De Quincey, Goethe as Reflected in "Wilhelm Meister."

eidolon, *n.* **3.** One of the small floating winged figures frequently found in Greek art, especially on Greek vases. They are sometimes quite human, with wings; sometimes half human, half bird, like harpies, and of both sexes. They are supposed to represent the human soul, being similar to the Egyptian conception.

eidoloscope (ī-dol′ō-skōp), *n.* A form of kinetoscope or moving-picture machine.

eidophone (ī′dō-fōn), *n.* [Gr. *εἶδος*, form, + *φωνή*, sound.] A cylindrical box, with a lateral tube and mouthpiece, over the open end of which sheet-rubber is fastened. Sand or lycopodium powder dusted on the rubber assumes various geometrical designs called *voice-figures* when one sings into the instrument. *Athenæum*, Feb. 4, 1893.

eidophusikon (ī-dō-fö′si-kon), *n.* [Gr. *εἶδος*, form, + *φυσικόν*, neut. of *φυσικός*, natural: see *physic*.] A kind of magic lantern or stereopticon constructed by an Alsatian painter, Philip de Loutherbourg, in London about 1780. A set of colored slides was made for it by the painter Gainsborough. The machine and slides were exhibited at the Grosvenor gallery in London in 1885.

The *eidophusikon*, as the Anglo-Alsatian called it, seems to have emotionné his fellow Academician much in the same way as a fine violin.
W. Armstrong, in Portfolio, N. S., IX. 51.

eidoptometry (ī-dop-tom′e-tri), *n.* [Gr. *εἶδος*, form, + *ὀπτ(ικός)*, of seeing, + *-μετρία*, < *μέτρον*, measure.] Determination of the degree of acuteness of vision.

eidotrope (ī′dō-trōp), *n.* [Gr. *εἶδος*, form, + *τρόπος*, a turning.] A device for exhibiting, by means of revolving disks, certain phenomena which arise from persistence of vision. The form of the instrument is similar to that of the ordinary chromatrope, but the revolving disks carry perforated patterns in gauze, lace, etc.

eidotropic (ī-dō-trop′ik), *a.* Pertaining to or exhibited by means of the eidotrope.

Eifelian (ī-fē′li-an), *a.* and *n.* [*Eifel* in Germany.] **I.** *a.* In *geol.*, designating a subdivision of the Middle Devonian in the Eifel region in Germany and Belgium regarded by German geologists as equivalent to the Calceola group of the Rhineland. It is underlain by the Coblenzian and overlain by the Givetian.
II. *n.* The Eifelian subdivision.

Eigenmannia (ī-gen-man′i-ä), *n.* [NL., named after C. H. *Eigenmann*, a German-American ichthyologist.] A genus of fishes of the family *Gymnotidæ*, found in Central and Southern America. *E. humboldti* is the common species.

eight[1]. **I.** *a.*—**Eight-hour movement**, a movement which aims to establish, either through the combined action of trade-unions or by compulsion of law, a working-day of no more than eight hours in all industries.
II. *n.* **In eights.** (*a*) In *bibliography*, having eight leaves to the sheet: applied to early printed books. (*b*) In *meter*, in lines of eight syllables. (*c*) In companies or 'teams' of eight. (*d*) In *printing*, containing eight pages only: said of a type-form or a printed and folded sheet.

eight-coupled (āt′kup″ld), *a.* Having eight driving-wheels coupled by side-rods. The driving-wheels of heavy freight or consolidation engines are often coupled in this manner, there being four wheels on each side coupled together.

eighteen, *n.*—**In eighteens**, containing eighteen pages: said of a type-form or a printed and folded sheet; in *bibliography*, an octodecimo.

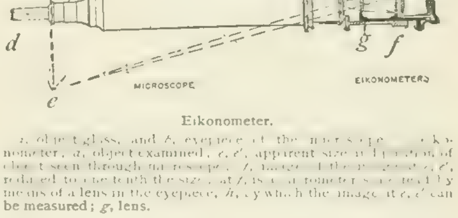
eight-square (āt′skwār), *a.* and *n.* **I.** *a.* Having eight corners; octagonal.
II. *n.* An octagon or an octagonal solid.

eight-square (āt′skwār), *v. t.* [*eight-square*, *a.*] To make octagonal.

eikonogen (ī-kon′ō-jen), *n.* [Gr. *εἰκών*, an image (see *icon*), + *-γενής*, -producing.] The trade-name of the sodium salt of amido-β-naphthol-monosulphonic acid, used in photography as a developer.

eikonolatry, *n.* Same as *iconolatry*.

eikonometer (ī-kō-nom′e-tėr), *n.* [Gr. *εἰκών*, image, + *μέτρον*, measure.] A device for measuring the size of an object under the microscope, or for obtaining the magnifying power of a microscope.



Eikonometer.

a, object-glass, and *b*, eyepiece of the microscope; *c*, eikonometer; *d*, object examined; *e*, *e′*, apparent size and position of object seen through microscope; *f*, image of the magnified object *e*, *e′*, reduced to one-tenth the size, at *f*, is ... by means of a lens in the eyepiece, *h*, by which the image at *e*, *e′* can be measured; *g*, lens.

Eimeria (ī-mē′ri-ä), *n.* [NL. (Schneider, 1875), from the German surname *Eimer*.] A spurious genus of *Coccidiidea*, of the family *Asporocystidæ*, characterized by the absence of sporocysts. With scarcely an exception, the species are nothing but the schizogenic generations of *Coccidia* belonging to other genera and species.

Eimerian cycle. Same as *schizogenic* ★*cycle*.

E. Ind. An abbreviation (*a*) of *East Indies*; (*b*) of *East Indian*.

eirenarchical, *a.* Same as ★*irenarchical*.

eirenarchy, *n.* Same as ★*irenarchy*.

eisegesis (īs-ē-jē′sis), *n.* [Gr. *εἰσήγησις*, < *εἰσηγεῖσθαι*, lead into, < *εἰς*, into, + *ἡγεῖσθαι*, lead.] A subjective method of interpretation by introducing one's own opinions into the original: opposed to *exegesis*.

eisegetical (īs-ē-jet′i-kal), *a.* Relating to or of the nature of eisegesis.

eisne, *a.* See *eigne*.

eisodic, *a.* Same as *esodic*.

ejaculative (ē-jak′ū-lā-tiv), *a.* [*ejaculate* + *-ive*.] Of the nature of an ejaculation; ejaculatory: as, an *ejaculative* expression.

eject, *n.* **2.** In *projective geom.*, the figure composed of straights and planes made in projecting the original.—**Axial eject**, a figure composed of planes obtained by projecting from a fixed straight (the projection-axis) an original composed of points.

ejection, *n.* **3.** In *philos.*, the mental act of forming an eject.

ejectivism (ē-jek′tiv-izm), *n.* [*ejective* + *-ism*.] In *philos.*, the doctrine that the formation of ejects is an indispensable factor in the formation of the consciousness of personality. *Baldwin*.

ejectivity (ē-jek-tiv′i-ti), *n.* [*ejective* + *-ity*.] The fact of being an eject or inferred existence. *G. J. Romanes*.

ejector, *n.* (*d*) In sheet-metal work, an attachment to a press for throwing out the finished stamped or drawn object while the die is rising and before the operator or the feed-motion places the next blank in position. The push-out plate used with presses employing double dies is a form of ejector. (See *double dies*, under ★*die*.) The stripper, on the other hand, is not an ejector, since it releases the work from the die only, without removing it from the press. See *stripper*.

ejector-blade (ē-jek'tor-blād), *n.* In the Mergenthaler linotype, a device which ejects the slug from a mold into a stick or galley; on a Dow machine, one which ejects types, after they are assembled, into a stick or galley.

ejector-washer (ē-jek'tor-wosh″ėr), *n.* A tank or receptacle in which sand for filter-beds is washed or scoured by streams of water from an ejector.

eka-aluminium (ek″a-al-ū-min'i-um), *n.* See *eka-*.

eka-boron (ek″a-bō'ron), *n.* In *chem.*, the name given by Mendeléjeff to an element, the existence of which he predicted, occupying the same position in his fourth series that boron does in the second. When this element was subsequently discovered it was named *scandium*.

ekaha (ā-kä'hä), *n.* [Native name.] In the Hawaiian Islands, the bird's-nest fern, *Neottopteris Nidus*, a fern with large simple fronds usually growing as an epiphyte on forest trees. See *bird's-nest*, 1 (*c*).

eka-iodoform (ek″a-ī'ō-dō-fôrm), *n.* Iodoform with which 5 per cent. of formaldehyde has been mixed.

eka-silicon (ek″a-sil'i-kon), *n.* In *chem.*, the name given by Mendeléjeff to an element, the existence of which he predicted, occupying the same position in his fifth series that silicon does in the third. When this element was subsequently discovered it was named *germanium*.

eka-tellurium (ek″a-te-lū'ri-um), *n.* In *chem.*, a supposed new element, announced by Grünwald, occupying the same position in Mendeléjeff's eleventh series that tellurium does in the seventh, and presumably identical therefore with the austriacum of Brauner. As yet there is no confirmation of the existence of either of these hypothetical substances.

eke, *n.* (*c*) An added structure. (*d*) In *agri.*, an oblong stack.

Ricks are built either as long *ekes* or round stacks.
J. Wrightson, Farm Crops, p. 127.

ekkyklema, *n.* See ★*eccyclema*.

Elachistidæ (el-a-kis'ti-dē), *n. pl.* [NL., < *Elachista* + *-idæ*.] A family of tineoid moths containing many large and prominent genera, some of its forms having considerable economic importance.

elæagnaceous (el″ē-ag-nā'shius), *a.* Belonging to the plant family *Elæagnaceæ*.

Elæocarpaceæ (e-lē-ō-kär-pā'sē-ē), *n. pl.* [NL. (Lindley, 1836), < *Elæocarpus* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Malvales*, typified by the genus *Elæocarpus*. They were formerly included in the *Tiliaceæ*, but differ from that family chiefly in the fact that the 2-celled anthers open by terminal pores, and in the absence of mucilage-cells in the bark and pith. There are 8 genera and about 120 species, half of which belong to *Elæocarpus* and 44 to *Sloanea*. They are chiefly natives of the tropics or of temperate regions of the southern hemisphere, a few growing in China and Japan. They are trees or shrubs with undivided leaves and flowers in racemes, cymes, or clusters. The wood is often valuable. See *breakax*, 1, *maqui*, and *hedgehog-fruit*.

elæocarpaceous (e-lē-ō-kär-pā'shius), *a.* Belonging to the plant family *Elæocarpaceæ*.

Elæococca (e-lē-ō-kok'kä), *n.* [NL., < Gr. ἔλαιον, oil (or ἐλαία, the olive-tree), + κόκκος, berry.] In *bot.*, a genus of trees. *E. vernicia* is the tung-tree, the varnish-tree of China and Japan.

Elæococca oil, a drying oil obtained in China and Japan from the kernels of *Elæococca vernicia* (*Aleurites cordata*). It contains the radical of a special acid, elæomargaric acid, $C_{17}H_{30}O_2$. Same as *tung-oil* (which see).

Elæocrinidæ (e-lē-ō-krin'i-dē), *n. pl.* [NL., < *Elæocrinus* + *-idæ*.] A Devonian family of blastoid *Echinodermata* or blastoids, characterized by having the posterior deltoid divided into two parts by an anal plate and the anus distinct from the posterior spiracles.

elæoleic (e-lē-ō-lē'ik), *a.* Pertaining to elæoleic acid.—**Elæoleic acid,** a liquid acid, $C_{17}H_{30}O_2$, which is found as a glyceride together with elæomargaric acid in the oil from the seeds of *Elæococca vernicia*. It is also formed when the isomeric elæomargaric or elæostearic acid is heated to 175°–180° C. in a tube filled with hydrogen.

elæomargaric (e-lē″ō-mär-gar'ik), *a.* [Gr. ἔλαιον, oil, + μαργαρίτης, a pearl, + *-ic*. Cf. *margaric*.] Noting an acid, a colorless compound, $C_{17}H_{30}O_2$, prepared by the saponification of elæococca oil with alcoholic potassium hydroxid. It melts at 41° C. and is readily converted into elæoleic acid, with which and with elæostearic acid it is isomeric.

elæoplast[1], **eleoplast** (e-lē'ō-plāst), *n.* [Gr. ἔλαιον, oil, + πλαστός, formed.] 1. In *cytol.*, a highly refractive globular body consisting of granular protoplasm and containing drops of oil.—2. A minute body of unknown function arising within the endochrome of certain diatoms. It may be genetically connected with the pyrenoid. *Meresckkowsky*.

elæosaccharum (e-lē-ō-sak'a-rum), *n.* [Gr. ἔλαιον, oil, + σάκχαρον, sugar.] A mixture of an essential oil and sugar; oil-sugar.

elæostearic (e-lē″ō-stē-ar'ik), *a.* [Gr. ἔλαιον, oil, + στέαρ, suet, + *-ic*.] Noting an acid, a colorless compound, $C_{17}H_{30}O_2$, prepared by the saponification of elæococca oil which has been exposed to sunlight. It melts at 71° C., is isomeric with elæomargaric and elæoleic acids, and is converted into the latter by heating.

elæothesium (e-lē-ō-thē'si-um), *n.*; pl. *elæothesia* (-si-ä). [L. (Vitruvius), < Gr. ἐλαιοθέσιον, < ἔλαιον, oil, + θέσις, putting.] In an ancient Roman or Greek bathing establishment, the room where the bathers were anointed after bathing.

Elagatis (el-a-gā'tis), *n.* [NL.] A genus of carangoid fishes related to *Seriola*, distinguished by the presence of the finlet behind the dorsal and anal fins.

Elaidic ethers. Same as ★*elaidic esters*.—**Elaidic esters,** the esters of elaidic acid.

Elaidin test, a test applied for the identification of particular fixed oils, depending upon their reaction with nitric acid which converts olein into elaidin.

elaidinic (el″a-i-din'ik), *a.* [*elaidin* + *-ic*.] Having reference to elaidin.—**Elaidinic acid,** a substance isomeric with oleic acid.

Elaphebolia (el″a-fē-bō'li-ä), *n. pl.* [Gr. Ἐλαφηβόλια, < ἐλαφηβόλος, an epithet of Artemis: see *Elaphebolos*.] A feast of Artemis Elaphebolos in Phocis. It is mentioned by Plutarch in connection with the city of Hyampolis.

Elaphebolion (el″a-fē-bō'li-on), *n.* [Gr. Ἐλαφηβολιών, < Ἐλαφηβόλια: see *Elaphebolia*.] The ninth month of the Greek calendar, from the middle of March to the middle of April, approximately. In this month the Elaphebolia were held.

Elaphebolos (el-a-feb'ō-los), *n.* [Gr. ἐλαφηβόλος, shooting deer, < ἔλαφος, deer, + βάλλειν, throw.] The deer-slayer: an epithet of Artemis.

Elaphoglossum (el″a-fō-glos'um), *n.* [NL. (Schott, 1834), < Gr. ἔλαφος, a stag, + γλῶσσα, the tongue. The fertile fronds are fancifully compared to a deer's tongue.] A well defined genus of tropical polypodiaceous ferns. The fronds are simple, tongue-like, glabrous to densely scaly, from a few inches to two feet high, usually clustered from a decumbent rhizome, and are of two sorts, the fertile somewhat contracted and wholly covered on the lower surface with sporangia. There are about 150 species, generally distributed throughout the tropics, alike in having the simple or forked veins free and parallel, directed nearly at right angles to the margin.

Elaphomycetaceæ (el″a-fō-mī-sē-tā'sē-ē), *n. pl.* [NL., < *Elaphomyces* (*Elaphomycet-*) + *-aceæ*.] A family of subterranean ascomycetous fungi, named from the single genus *Elaphomyces*, having the ascocarps inclosed in a distinct peridium. The spores form a powdery mass at maturity.

elapine[2] (el'a-pin), *a.* [*Elaps* + *-ine*[1].] Relating to the snakes of the genus *Elaps* and their relatives, usually considered as forming the family *Elapidæ*.

elapine[2] (el'a-pin), *n.* [*Elaps* + *-ine*[2].] A poisonous constituent of snake-poison.

elasmometer (ē-las-mom'e-tėr), *n.* [*elas(tic)* + Gr. μέτρον, measure.] A form of interferometer for the measurement of the elasticity of flexure.

Elastic fatigue. See ★*after-strain*.—**Elastic force of vapor, hysteresis.** See ★*vapor*, ★*hysteresis*. **Elastic limit.** See *limit of elasticity*. **Elastic nut.** See ★*nut*.—**Elastic-piston pump.** See ★*pump*[1].—**Elastic resistance, spindle.** See ★*resistance*, ★*spindle*.

elastica (ē-las'ti-kä), *n.* [NL.] 1. The elastic (middle) layer of the walls of the arteries: an abbreviation of ★*tunica elastica* (which see, with cut).—2. In *physics*, a curve such that the reciprocal of the radius of curvature at any point is proportional to the distance of the point from a straight line. Also called *elastic curve*.

Elastica Curves.

elasticin (ē-las'ti-sin), *n.* [*elastic* + *in*[2].] Same as *elastin*.

Elasticity of elongation, the resistance to stretching or compression of a body subjected to longitudinal stress. Its value is denoted by Young's modulus. See *modulus of elasticity*, under *modulus*.—**Elasticity of flexure,** the resistance to bending manifested by a body subjected to transverse stress.—**Elasticity of liquids,** the resistance to change of volume under compression, shown by liquids. Liquids at rest offer no resistance to change of form but their elasticity of volume is in general very high and the return to their original volume when relieved from stress is complete. **Elasticity of volume.** Same as *elasticity of bulk*.—**Equation of elasticity,** the characteristic equation of a perfect gas; an equation of condition expressing the relation between elastic pressure, volume, density, and temperature prevailing in the ideal gas; the combined laws of Boyle, Mariotte, Gay-Lussac, and Charles; the equation of Van-der-Waals. **Rotational elasticity,** the power of a medium to resist rotational stress and when released to return to its original conformation: specifically applied to certain conceptions of the luminiferous ether.

elastoidin (ē-las-toi'din), *n.* [*elast(ic)* + *-oid* + *-in*[2].] An albuminoid belonging to the skeletins, found in certain cartilaginous structures of a shark (*Mustelus lævis*).

elastose (ē-las'tōs), *n.* [*elast(in)* + *-ose*.] An albumose derived from elastin.

elater[2], *n.*—**Eyed elater,** an American elaterid beetle, *Alaus oculatus*, so called on account of two large eye-like spots on its thorax. Its larvæ live in decaying wood.

Eyed elater (*Alaus oculatus*). Nearly natural size.

elaterics (el-a-ter'iks), *n. pl.* [NL. ★*elaterius*, Gr. ἐλατήρ, a driver, < ἐλαύνειν, drive, set in motion: see *elastic*.] The science of the elasticity of solids. *C. S. Peirce*.

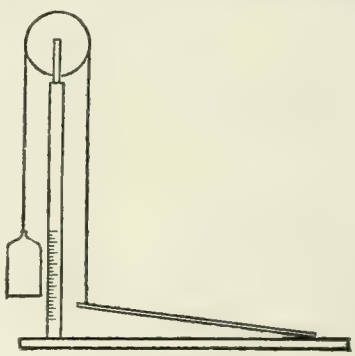
elaterist† (e-lat'ē-rist), *n.* One who holds a particular theory of elasticity: used by Boyle with reference to his law. See quotation under *elastic*, *a.*, 2.

elatinaceous (ē-lat-i-nā'shius), *a.* Belonging to the plant family *Elatinaceæ*.

elbow, *n.* 7. In carriages, the rail that forms the upper part of the frame of the quarter.—**False elbow,** a piece of timber shaped to fit the elbow of a carriage-body. It is used as a form for the roll or elbow-cushion.—**Miners' elbow,** enlargement of a bursa at the point of the elbow, due to pressure, occurring in miners who work in low tunnels resting the weight of the body on the elbow.

elbow-bit (el'bō-bit), *n.* A coach-bit with long cheek-pieces which have a double-elbow bend below the mouth piece.

elbow-board, *n.* 2. In *psychol.*, an apparatus for determining the just noticeable (passive)


Elbow-board.

motion of the forearm, that is, the just noticeable change of articular sensation at the elbow. Also called *arm-board*. The forearm and hand (palm down) are laid upon the hinged board, which is thus brought to the horizontal: the elbow-joint rests directly above the hinge. The experimenter then gently draws down the weight, and thus raises the forward end of the board. The observer reports the first indication of articular sensation at the elbow.

elbow-spring (el'bō-spring), *n.* A carriage-spring slightly curved. The spring-plates are graduated toward one end, and the other end is bolted to the body, it being used as a spring body-loop.

elder[2], *n.*—**American elder,** *Sambucus Canadensis*. See cut under *Sambucus*. **Blood-elder,** the dwarf elder, *Sambucus Ebulus*.—**California elder.** Same as *pale* ★*elder*.—**Common elder.** Same as *American* ★*elder*.—**Dwarf elder.** (*a*) See *elder*[2]. (*b*) Same as *wild elder* (*a*) (under *elder*[2]). (*c*) Same as *wild elder* (*b*) (under *elder*[2]).—**German elder,** the Old World elder, *Sambucus nigra*. See *elder*[2], *hour-tree*, *hawthorn*, 2, and *Judas-tree*, 3.—**Ground-elder,** the dwarf elder, *Sambucus Ebulus*.—**Horse-elder.** Same as *horseheal*.—**Marsh-elder.** See *marsh-elder*. The name is applied to all the species of *Iva*.—**Mexican elder,** a tree 25–30 feet high, *Sambucus Mexicana*, of the Southwestern United States, Mexico, and Central America, with creamy-white flowers, small, blackish, shining, juicy berries, and light, soft, fine-grained wood. It makes a fairly good shade-tree in the dry regions of Mexico and Lower California, and the berries are eaten by the Mexicans and Indians.—**Mountain-elder.** (*a*) The red-berried elder. (*b*) Same as *pale* ★*elder*.—**Pale elder,** a tree 30–50 feet high, *Sam-*

Pale Elder (*Sambucus glauca*).
(From Sargent's "Manual of the Trees of North America.")

bucus glauca, common on the Pacific slope from British Columbia to southern California, and extending inland to the Sierras and the Wasatch Mountains. The flowers are yellowish white; the berries blue-black, whitened with a mealy bloom, rather sweet and juicy; the wood light, soft, weak, and coarse grained. It is sometimes planted for ornament.—**Parsley-elder, parsley-leaved elder,** the Old World elder, *Sambucus nigra*, especially a form with narrowly lobed or cut leaflets. **Prickly-elder,** the Hercules'-club or angelica-tree, *Aralia spinosa*. **Red-berried elder,** *Sambucus pubens*, a North American shrub of wide distribution across the continent, differing from other species by its conical inflorescence and red or scarlet drupes. **Sweet elder.** Same as *American* ★*elder*. **Water-elder.** See *water-elder*.

elder-blow (el′dĕr-blō), *n.* The common American elder, *Sambucus Canadensis*.

elder-rob (el′dĕr-rob), *n.* The juice of the fruit of the Old World elder, *Sambucus nigra*. Also called *elder-roob*.

elect. An abbreviation (*b*) of *electrical;* (*c*) of the Latin *electuarium*, electuary.

election, *n.* **Judge of election,** one of a body of voters appointed to receive, count, and record the ballots cast at an election and to report the same to the proper authorities. **Supervisors of election,** in *United States law*, the persons appointed by the United States Circuit Court judge to supervise the registration of voters and the holding of elections for members of the House of Representatives. The law providing for such supervisors was repealed in 1894.

electionary (ē-lek′shon-ā-ri), *a.* [*election* + *-ary*[1].] Relating or pertaining to the exercise of one's right to vote at a popular election, or the casting of one's vote at such an election.

election-committee (ē-lek′shon-ko-mit″ē), *n.* In parliamentary or municipal elections in the United Kingdom, a committee of voters voluntarily formed to promote the election of a particular candidate.

electric. **I.** *a.*—**Electric arc, bath, blue, calamin, capstan, car,** etc. See ★*arc*, etc.—**Electric chorea.** Same as ★*chorea electrica*. **Electric efficiency.** See ★*efficiency of a source of light*.—**Electric inertia.** See *inertia*. **Electric motor.** (*a*) See *electric*. (*b*) See ★*motor*. **Electric osmose.** See *electrical endosmosis*, under *endosmosis*. **Electric steel process.** See ★*process*. **Electric sunstroke.** Same as *electric* ★*prostration*.

II. *n.* 2. A railway or car operated by electricity: usually in the plural.

Electrical fire, kiss, syntony. See ★*fire*, etc.

electricity, *n.*—**Atmospheric electricity,** the free electricity present in the atmosphere of the earth and supposed to be equivalent to the sum of the small charges of electricity accompanying the particles of dust and atmospheric vapor, and especially of those on the electrified ions or electrons of Elster and Geitel and the free corpuscles of J. J. Thomson. Both positive and negative electrons exist in the atmosphere, and the charges are equal, so that the general character of any electric reaction depends on the preponderance of positive or negative electrons. The upper layers of air are usually electrified positively relative to the lower layers; the ground is ordinarily negative. The descending air of the foehn contains more positive than negative electrons. At a lower cloud-level of about two thousand meters Ebert finds the electronic charge greater than at the earth's surface. At the earth's surface, under normal conditions, there are from one to three electrostatic units of charge per cubic meter of air, and somewhat more free positive than free negative units. This latter difference diminishes with altitude, and at three kilometers the charge is four electrostatic units per cubic meter for each kind of electricity. —**Atom of electricity, natural unit of electricity,** in *phys. chem.*, terms sometimes used to denote the quantity of electricity which is carried by a single ion of a univalent element, such as an atom of hydrogen. —**Cleavage electricity,** electrification produced by the cleavage of crystalline substances.—**Contact electricity,** electricity supposed to be produced by the mere contact of two substances. Since the production of electricity requires energy, this energy must be supplied when producing electricity by contact, by chemical action, as corrosion of one of the contact plates, by heat, etc. —**Terrestrial electricity,** the electrified condition of the earth as distinguished from that of the atmosphere. It is usually negative and more intense in equatorial than in polar regions. It was formerly supposed to have originated in the earth either by chemical, thermal, or piezo-electric processes; but the theory of electrons or corpuscles and the discovery of the ionization of the air and the emanation of radio-active gases from the earth have modified these views.

electricize (ē-lek′tri-sīz), *v. t.*; pret. and pp. *electricized*, ppr. *electricizing*. To charge, as a Leyden jar; to electrify.

Then *electricise* the bottle and place it on wax.
Franklin, Experiments and Observations on Elect., p. 16.

electrics (ē-lek′triks), *n.* The science of electricity.

electricute (ē-lek′tri-kūt), *v. t.* [Also *electrocute;* absurdly formed from *electri(city)* + *(exe)cute*.] To execute or put to death by electricity. [Recent and colloq.]

electricution (ē-lek-tri-kū′shon), *n.* The act of electricuting. Also *electrocution*. [Recent and colloq.]

electrification, *n.* 2. The substitution, upon a railway system, of electric for steam or other motive power; the conversion of a steam-, cable-, or horse-railway into an electric railway.

electrion (ē-lek′tri-on), *n.* [Gr. ἤλεκτρον, amber (repr. electricity), + *ion*, going (see *ion*).] In *phys. chem.*, a name given by Lord Kelvin to an atomic quantity of negative electricity.

According to it each atom of matter has positive electricity distributed uniformly through its mass, and, concentrated at one or more points, in general within it, atomic quantities of negative electricity, to which Lord Kelvin gives the name "*electrions*."
Nature, Oct. 22, 1903, p. 611.

electro-anæsthesia (ē-lek″trō-an-es-thē′si-ä), *n.* Insensibility to electrical stimulation.

electro-analysis (ē-lek″trō-a-nal′i-sis), *n.* In *chem.*, the method of determining the amounts of metals in solutions by causing the metal to be deposited, by electrolysis, in a form convenient for weighing.

The differences observed in the *electro-analysis* of mercury from a potassium cyanide solution are due to an attack of the platinum disc serving as cathode and to the solubility of platinum in potassium cyanide.
Elect. World and Engin., March 28, 1903, p. 530.

electro-analytical (ē-lek″trō-an-a-lit′i-kal), *a.* In *chem.*, utilizing, or related to, methods of analysis by electrolysis, and especially by the electrolytic deposition of metals.

Electro-analytical methods, on account of their simplicity and quickness, are becoming more and more used in practice.
Elect. World and Engin., Nov. 21, 1903, p. 853.

electrocardiogram (ē-lek-trō-kär′di-ō-gram), *n.* A record showing the variations in the electric currents in the body which occur with the pulsations of the heart. *Sci. Amer.*, March 5, 1904, p. 197.

electrochemical energy, equivalent of an element, filtration. See ★*energy*, etc.

electro-copper (ē-lek-trō-kop′er), *n.* Copper which has been deposited from solution by means of electrolysis.

electrocute, electrocution. See ★*electricute*, ★*electrication*.

electrocyanide (ē-lek″trō-sī′a-nid), *a.* Employing cyanides and electrolysis.—**Electrocyanide process,** a cyanide process in which the solution of the gold is aided by electrolysis.

electrode, *n.*—**Brush electrode,** a wire brush connected with one of the poles of an electric battery, used in the therapeutic application of electricity to the body.—**Calomel electrode,** in *phys. chem.*, a non-polarizable or reversible electrode consisting of metallic mercury covered with the insoluble mercurous chlorid (calomel) and with the chlorid of the other metal indicated by the conditions. Suppose the other metal to be zinc; then, if a current passes from the electrode to the electrolyte, chlorin ions from the mercurous chlorid go into solution, leaving their equivalent of metallic mercury; if the current passes from electrolyte to electrode, chlorin ions from the zinc chlorid combine with mercury to reproduce mercurous chlorid. All succeeding currents in either direction meet precisely the same conditions, and the electromotive force is constant.—**Indifferent electrode,** in *electrotherap.*, the electrode which serves to complete the circuit. The one employed to make the therapeutic application is called the *therapeutic electrode*. **Reversible** or **non-polarizable electrode,** in *phys. chem.*, a metallic plate standing in a solution of a salt of the metal. When a current passes from the plate into the solution, part of the metal is dissolved; when the current passes from the solution to the plate, part of the metal of the solution is deposited on the plate: the chemical process in one case is precisely the reverse of that in the other. Moreover, the two currents in the two opposite directions have precisely the same electromotive force, assisting or opposing the current; that is, the electrode is non-polarizable.

electrodeless (ē-lek′trōd-les), *a.* Without electrodes: said specifically of a vacuum-tube through the glass of which no metal terminals are inserted, or of the electrical discharge within such a tube when the latter is placed in a suitable oscillatory field.

electrodiagnosis (ē-lek″trō-di-ag-nō′sis), *n.* The locating and determination of disease by testing the reaction of nerves and muscles to a current of electricity.

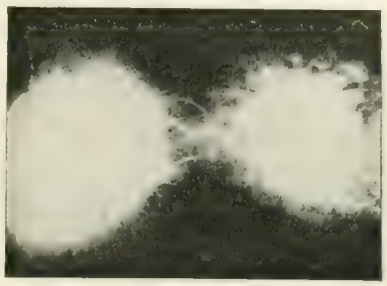
electro-ethereal (ē-lek″trō-ē-thē′ri-al), *a.* Of or pertaining to the ether, considered as the medium to the disturbance of which electrical phenomena are ascribed.—**Electro-ethereal theory of light,** a theory of light, propounded by Kelvin (1903), according to which the electrons in a source of light are vibrators that derive energy by collisions with surrounding atoms and radiate it in the form of ether-waves.

electrogoniometer (ē-lek″trō-gō-ni-om′e-tèr), *n.* An instrument devised by Rontin for measuring the difference of phase between the electromotive force and current in a three-phase system.

electrogram (ē-lek′trō-gram), *n.* A diagram exhibiting continuously the electric condition of the atmosphere at any station.

electrograph, *n.* 3. In *photog.*, a photograph of an electric spark. See the extract.

Perhaps it is not exactly correct to describe this as a photograph, since light plays no part in its production. It may more properly be called an "*electrograph*." The manner in which such representations of electric discharges are produced is as follows: An ordinary photographic plate, inclosed in two light-proof paper bags (as used in X-ray work), is placed film upward on a metal plate, which is insulated. The pointed dischargers of an induction coil, in this case one giving a 10-inch spark, are placed a few inches apart, touching the paper envelope. The circuit is then closed, and a single discharge brought about by holding the hammer of the coil and letting it go suddenly. The spark in its passage through the sensative film decomposes it. The negative is then developed in the ordinary way.
Sci. Amer. Sup., March 11, 1905, p. 24165.



Electrograph.

4. An instrument for the continuous recording of atmospheric electricity.

electrography, *n.* 3. In *photog.*, a process by which a dry sensitized paper is made to reproduce a design through the agency of electric sparks. It consists in placing a bromo-iodide of silver paper on a spotted metallic plate, pressing the same down by means of a glass, and passing sparks from a powerful Leyden jar along the metallic plate. Each break in continuity of the metallic surface causes a spark which discolors the paper at this point.

electrohorticulture (ē-lek-trō-hôr′ti-kul-tūr), *n.* The growing of plants by means of the electric light, the electric light either (and usually) supplementing the sunlight or affording the only illumination for the plants: the latter condition is commercially impossible.

electro-industrial (ē-lek″trō-in-dus′tri-al), *a.* Relating to electricity as applied to industrial operations.

electro-irrigation (ē-lek″trō-ir-i-gā′shon), *n.* Irrigating by means of water pumped by electric power.

electroluminescence (ē-lek″trō-lū-mi-nes′ens), *n.* Luminescence electrically excited, as by the discharge in a vacuum tube. See ★*luminescence*.

electroluminescent (ē-lek″trō-lū-mi-nes′ent), *a.* Rendered luminescent by the electric discharge.

electrolysis, *n.* 2. In *surg.*, the destruction of tumors, cicatricial bands, calculi, and other pathological formations by means of the electric current.—**Arrhenius's theory of electrolysis,** in *phys. chem.*, the hypothesis that an electric current is carried through an electrolyte only by dissociated ions, coupled with a proposed method of determining the relative amounts of the dissociated and the undissociated molecules.—**Laws of electrolysis.** The principal laws relating to electrolysis are as follows: (*a*) The amount of chemical action in a given time is equal in all parts of the circuit. (*b*) The number of ions set free in a given time is proportional to the strength of the current. The current is carried through the electrolyte by the motion of ions possessing electric charges, and the ions of each element carry an unalterable charge of electricity; increase of current therefore involves an increase in the number of ions liberated. (*c*) If the same current be passed simultaneously through several cells in series, containing different electrolytes, the weight of the ions liberated in each cell is equal to the total quantity of electricity conveyed, multiplied by the electrochemical equivalent of the ions of that cell.

Electrolytic detector. See ★*detector*.—**Electrolytic dissociation.** See ★*dissociation*. **Electrolytic gas,** in *chem.*, the mixture of gases set free in the electrolysis of dilute oxacids or of alkaline solutions, as well as of other substances. In the cases specified, the gas is an explosive mixture of one volume of oxygen with two volumes of hydrogen. The volume produced in a given time is sometimes used to measure the strength of the current of electricity by means of one of the forms of voltameter. **Electrolytic hysteresis, interrupter.** See ★*hysteresis*, ★*interrupter*.—**Electrolytic meter,** in *phys.*, a meter for measuring an electric current by the weight of metal which is dissolved or deposited by the passage of the cur-

rent (or of a convenient fraction of it) through an electrolytic cell. **Electrolytic refining,** a mode of purification now applied on a very large scale and with great advantage to several of the metals, especially to copper, which is thus obtained for electrical conductors of a far higher degree of purity than would otherwise be possible, while notable quantities of gold and silver present in minute proportion are at the same time saved. The principle of the process is the decomposition of a salt of the metal to be refined, dissolved in water, by passing an electric current through it, the metal in question being deposited in a pure state on the negative electrode, while the acid constituent of the salt attacks and dissolves a slab or plate of the impure metal which forms the positive electrode, reproducing the salt. By suitable regulation of the current some impurities are not dissolved, while others, which pass into solution, are not deposited.—**Electrolytic slime,** the finely divided deposit of material left undissolved at the anode in electrolytic refining, as of copper. From it the precious metals are recoverable with profit, even when they have formed but a very minute proportion of the original copper.

Electromagnetic coupling, inertia, waves. See ★*coupling*, etc.

electrometallurgical (ē-lek″trō-met-a-lêr′ji-kal), *a.* Relating to or connected with electrometallurgy.

electrometallurgist (ē-lek-trō-met′al-êr-jist), *n.* One who is versed in the art of electrometallurgy (which see).

electrometallurgy, *n.* 2. The process of extracting metals from their ores, or the manufacture of metals by the use of heat from an electric arc.

electrometer, *n.*—**Dolazalek electrometer,** a quadrant electrometer of great sensitiveness used in the study of radioactivity. It has a very light needle of silvered paper suspended by a quartz fiber. It can be made to indicate a potential difference of 0.05 millivolt. -**Ebert electrometer,** an apparatus for observing the charge of electrons contained in the air at a given time and place. It consists of a clockwork aspirator which draws a definite quantity of air through the space between two metal cylinders fitting one into the other. If the capacity of the system and the quantity of air drawn through it at a given time are known, the quantity of electricity that has been contained in a cubic meter as a charge of electrons can be determined. It is especially adapted for use in balloon ascensions.

electromobile (ē-lek-trō-mō′bil), *n.* An electric automobile; a motor-car driven by electric motors whose current is derived from electric storage-batteries or accumulators.

electromotive, *a.*—**Contact electromotive force,** in *elect.*, the electromotive force due to the contact between two different metals. The existence of a true contact electromotive force which does not depend on chemical action is denied by many physicists.—**Energy electromotive force,** in *elect.*, an alternating electromotive force or component of electromotive force in phase with the current.

electromotivity (ē-lek″trō-mō-tiv′i-ti), *n.* [*electromotive* + *-ity.*] The power of exciting electrical action.

The original positive current of a freshly excised eyeball has two factors: *electromotivity* of the cut end of the optic nerve and *electromotivity* of the disturbed retina.
Philos. Trans. Roy. Soc. (London), 1900, ser. B, p. 128.

electron, *n.* 2. In *phys. chem.*, the definite charge of electricity which is associated with a univalent ion. Sometimes called an *atom of electricity.* See ★*electricity.*—3. According to a recent hypothesis, a minute particle detached from an atom of a gas by certain agencies, as when the gas is carrying an electric current. The electron has a mass of something like one thousandth of the mass of an atom of hydrogen, and possesses (or consists of) a negative electric charge equal to that of the negative univalent ion of electrolytic conduction. In a gas at very low pressures, the electron constitutes the negative ion of gaseous conduction, while the atom from which the electron has been detached constitutes the positive ion. In gases at greater pressures, electrically neutral molecules become attached to the electron and to the atom from which the electron has been detached, and these complex systems constitute the ions of gaseous conduction at atmospheric pressure. In liquid electrolytes, according to this theory, an atom or radical from which one, two, or three electrons have been detached is a positive univalent, bivalent, or trivalent ion. An atom or radical to which one or more electrons have been attached constitutes a negative ion of the corresponding valence. In metallic conductors the electrons pass from an atom to an adjacent atom without producing electrolysis or chemical decomposition. The experimental basis of the hypothesis has been chiefly discovered by J. J. Thomson, with the aid of some of his pupils.

These negative ions perhaps realize the conception of *electrons* due to Lorentz and Larmor. . . . An atom plus an *electron* is a monovalent anion, an atom minus an electron, a monovalent cation. In metallic conductors the *electrons* can pass from one atom to the next, and thus allow a current to flow without chemical decomposition. *J. J. Thomson,* Encyc. Brit., XXVIII. 16.

It may be convenient here to emphasize the dimensions of an *electron* as above specified, for the arguments in favor of that size are very strong, though not absolutely conclusive; we are sure that their mass is of the order one thousandth of the atomic mass of hydrogen, and we are sure that if they are purely and solely electrical their size must be one hundred-thousandth of the linear dimensions of an atom; a size with which their penetrating power and other behavior is quite consistent. Assuming this estimate to be true, it is noteworthy how very small these electrical particles are, compared with the atom of matter to which they are attached. If an *electron* is represented by a sphere an inch in diameter, the diameter of an atom of matter on the same scale is a mile and a half. Or if an atom of matter is represented by the size of this theater, an *electron* is represented on the same scale by a printer's full stop.
Sir Oliver Lodge, in Pop. Sci. Mo., Aug., 1903, p. 291.

Electron theory in *phys. chem.*, the hypothesis, not yet fully developed, that the atom of any element consists of a definite (large) number of electrons, describing orbital and vibratory motions under the influence of the forces acting between them. Optical considerations led Larmor and Lorentz to adopt the hypothesis as a basis for mathematical studies, before J. J. Thomson isolated electrons (called corpuscles by him) and found that the electrons produced in a vacuum-tube are identical in mass, whatever the gas and whatever the metal of the electrodes. That atoms of all elements are made up of different numbers of identical electrons is an attractive and valuable working hypothesis.

The *electron theory* fits and luminously explains Ampère's idea that magnetism is due to a rotating current of electricity round each atom of iron; and following these definite views of the existence of free electrons, has arisen the *electronic theory* of matter.
Sir W. Crookes, quoted in Science, June 26, 1903, p. 1001.

electronic (ē-lek-tron′ik), *a.* Pertaining to or of the nature of electrons. See ★*electron,* 2 and 3. -**Electronic charge,** the number of electrons contained in a unit volume, as one cubic meter of gas or air. This increases rapidly with altitude above sea-level. The upper strata of air have high electric conductivity, as is shown by the auroral displays and heat-lightning. According to some authorities, the electric charge of the upper air is the effect of the violet rays of sunlight; according to others, it is due to corpuscles emanating directly from the sun's atmosphere. The condensation and precipitation of aqueous vapor takes place on the negative nuclei more easily than on the positive; the former are therefore washed from the lower air down to the earth, thus leaving the positive charge to preponderate in the atmosphere. Victor Conrad computes the amount of electricity attached to one gram of water in a cumulus cloud as 0.028×10^{-8} of a coulomb.—**Electronic theory.** See ★*electron theory.*

electron-trap (ē-lek′tron-trap), *n.* An arrangement by which plus and minus electrons may be separated from each other by taking advantage of the different velocities with which they move.

electro-osmose (ē-lek-trō-os′mōs), *n.* See *electrical endosmosis,* under *endosmosis.*

electro-osmotic (ē-lek″trō-os-mot′ik), *a.* In *phys. chem.*, producing, produced by, or connected with electric osmose.

electropath (ē-lek′trō-path), *n.* [A back formation from *electropathy.*] One who is skilled in the art of electrotherapy.

electrophore (ē-lek′trō-fōr), *n.* [See *electrophorus.*] Same as *electrode.*

electrophototherapy (ē-lek″trō-fō-tō-ther′a-pi), *n.* The treatment of disease by means of the electric light. *Lancet,* July 11, 1903, p. 104.

electrophysics (ē-lek-trō-fiz′iks), *n.* Same as *electrology.*

electropneumatic (ē-lek″trō-nū-mat′ik), *a.* Moved by electric and (then) pneumatic power.—**Electropneumatic action,** in *organ-building,* an action in which the original impulse from the console is conveyed by electricity, but the force exerted within the instrument (in opening valves, etc.) is derived from compressed air.—**Electropneumatic organ,** an organ with an electropneumatic action.—**Electropneumatic thermostat.** See ★*thermostat.*

electroprocess (ē-lek′trō-pros″es), *n.* The arts or manipulations needed to produce an electrotyped duplicate.

electroprognosis (ē-lek″trō-prog-nō′sis), *n.* A prognosis based upon the reactions obtained upon a trial application of electricity to diseased nerves or muscles.

electrorefine (ē-lek″trō-rē-fīn′), *v. t.*; pret. and pp. *electrorefined,* ppr. *electrorefining.* To refine by means of electrolysis. A plate of the crude metal is made the anode in an electrolyte consisting of a salt of the same metal; when the current passes, the crude metal dissolves from the anode, and the pure metal, if suitable conditions are maintained, is deposited on the cathode.

electrorefining (ē-lek′trō-rē-fī″ning), *n.* The refining of a metal by means of electrolysis.

electroreplica (ē-lek″trō-rep′li-ka), *n.* A metallic duplicate of an orginal produced by electrodeposition.

An *electro replica* of Tycho Brahe's quadrant, from the original in the British Museum, is deposited in the Smithsonian Institution. *Smithsonian Rep.,* 1890, p. 728.

electroscope, *n.*—**Lantern electroscope,** an electroscope so constructed that it may be placed in the field of a projecting lantern and an enlarged image of the moving parts thus be thrown upon a screen for observation at a distance.—**Radium electroscope,** an electroscope, devised by Strutt, in which the charge is permanently maintained by the action of a small mass of radium, or in which the leaves of the instrument, thus charged, are discharged by contact, collapse, and are recharged by the radium at a regular rate indefinitely.

electrostenolysis (ē-lek″trō-stē-nol′i-sis), *n.* [*electro-* + Gr. στενός, narrow, + λύσις, dissolution.] Electrodeposition within the interstices of a permeable substance traversed by the current within an electrolytic cell.

electrostenolytical (ē-lek″trō-sten-ō-lit′i-kal), *a.* Of, pertaining to, or by means of electrostenolysis.

electrostenolytically (ē-lek″trō-sten-ō-lit′i-kal-i), *adv.* In an electrostenolytic manner or by an electrostenolytic process.

electrostriction (ē-lek-trō-strik′shon), *n.* [*electro-* + LL. *strictio(n-),* compression.] Change in the dimensions of, or deformation of, a dielectric produced by the action of an electrostatic field.

electrosurgical (ē-lek-trō-sêr′ji-kal), *a.* Relating or pertaining to the use of electricity in surgery: as, *electrosurgical* devices.

electrosynthesis (ē-lek-trō-sin′the-sis), *n.* Chemical synthesis effected by the aid of electrolysis.

electrotactic (ē-lek-trō-tak′tik), *a.* [*electrotaxis* (*-tact-*) + *-ic.*] Of or pertaining to the locomotion of organisms in relation to electric currents; exhibiting electrotaxis.

electrotaxis (ē-lek-trō-tak′sis), *n.* [NL., < *electro-* + Gr. τάξις, disposition]. The orientation or the locomotion of organisms or of cells in relation to electric currents: a phenomenon first observed in vertebrates in the frog's tadpole, in 1885.

electrotelethermometer (ē-lek″trō-tel″ē-thêr-mom′e-têr), *n.* An apparatus consisting of a mercurial thermometer with platinum wires sealed into the glass at the bulb and at different points on the stem. These wires are connected with a switch, an alarm-bell, and a battery in such a manner that, when the mercury expands to a particular point corresponding to the position of the switch, the circuit is closed and the alarm rings. *Sci. Amer.,* Sept. 12, 1903, p. 184.

electrothanasia (ē-lek″trō-tha-nā′zia), *n.* [*electro-* + Gr. θάνατος, death.] Death caused by electricity.

electrotherapist (ē-lek-trō-ther′a-pist), *n.* Same as *electrotherapeutist.*

electrothermal (ē-lek-trō-thêr′mal), *a.* Relating to heat produced by electricity.—**Electrothermal detector.** See ★*detector.*

electrothermic (ē-lek-trō-thêr′mik), *a.* Same as ★*electrothermal. Engineering Mag.,* June, 1899.

electrothermometer (ē-lek″trō-thêr-mom′e-têr), *n.* An instrument for the measurement of temperature by electrical means; an electrical thermometer.

electrothermy (ē-lek-trō-thêr′mi), *n.* [*electro-* + Gr. θέρμη, heat, + *-y*[3].] The science of the electricity developed by heat. *N. E. D.*

electrotonus, *n.*—**Physical electrotonus,** an electrical change, analogous to physiological electrotonus, which takes place in a wire during the passage of an electric current.—**Physiological electrotonus,** an altered excitability of a nerve brought about as the result of the passage of a constant current, such that at the positive pole the excitability is diminished (region of anelectrotonus), while it is increased at the negative pole (region of catelectrotonus).

electrotropic (ē-lek-trō-trop′ik), *a.* [*electro-* + Gr. τροπικός, of turning: see *tropic.*] Of or pertaining to the growth or bending of an organism under the influence of electricity; exhibiting electrotropism.

electrotropism (ē-lek-trot′rō-pizm), *n.* [Also by error or ellipsis *electropism*; < *electrotrop(ic)* + *-ism.*] The growth or bending of an organism under the influence of electricity.

electrotype, *n.*—**Electrotype shell,** the thin sheet of metal, usually of copper, deposited by electrolysis in the previously prepared mold of wax, that has been pressed upon a surface of type or of engraving in relief. The shell so obtained, of the thickness of an ordinary sheet of paper, is made usable for printing by the addition of a type-metal backing.

electrotypograph (ē-lek-trō-tī′pō-gráf), *n.* A type-making and type-setting apparatus, invented by Meray-Rozar of Nuremberg, in which some operations are controlled by electricity. Its types are cast singly.

The "*Electrotypograph*" . . . justifies automatically . . . and offers the greatest facility for corrections. . . . There are two distinct machines combined in one. One of these is a writing and the other a casting and composing machine.
La Nature, as quoted in Sci. Amer. Sup., Aug. 30, 1902. [p. 22288.

electrotypoplate (ē-lek-trō-tī′pō-plāt), *n.* An electrotype plate produced from types made and composed by the electrotypograph.

electrovitalism (ē-lek-trō-vī′tal-izm), *n.* The doctrine of the electrical nature of nervous action.

electrozone (ē-lek′trō-zōn), *n.* [*electr(ic)* + *ozone.*] A trade-name for a weak solution of common salt, as, for instance, sea-water, in which by means of an electric current sodium hypochlorite has been formed. It is antiseptic, and has been proposed as a material to be added in small proportion to a public water-supply in order to destroy bacteria or other micro-organisms.

electrum, *n.* **2.** Native argentiferous gold in which the silver amounts to one third or more.

electuary-pot (ē-lek′tū-ā-ri-pot), *n.* A vessel designed to hold an elixir or cordial, such as the majolica drug-pots of Faenza. See *albarello.*

elegante (el-e-gant′), *n.* [F. *élégante,* fem. of *élégant,* elegant.] A lady of fashion.

If my Waverley had been entitled "A Tale of the Times," wouldst thou not . . . have demanded from me a dashing sketch of the fashionable world, . . . with a set of subordinate characters from the *elegantes* of Queen Anne Street East? *Scott,* Waverley, i.

elem. An abbreviation of *elementary.*

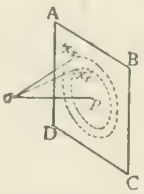
eleme (el′ē-mi), *n.* [Also *elemi:* < Turk. *eleme, elemeh,* something sifted or selected.] A kind of Turkish fig: generally used attributively: as, *eleme* figs, selected figs (that is of superior quality) from Turkey.

element, *n.,* **1.** (*d*) In *math.*: (2) any one of the different products of which a determinant is the sum. See *determinant,* 3. (*j*) In *anat.,* one of the indivisible constituents of a tissue, as a cell or ultimate fiber. (*k*) In *pathol.,* an individual lesion among several the aggregation of which constitutes the anatomical disease, as a single pustule in the smallpox eruption. *Lancet,* April 4, 1903, p. 949. (*l*) In any complex mechanical structure, one of the simpler or irreducible parts: as, the *elements* of a machine, the *elements* of a sectional boiler.

3. The common division of the chemical elements, as at present known, into metals and non-metals is not based upon any chemical distinction of scientific value, but rather upon a more or less general consideration of physical properties of the elements in an uncombined state; hence the line between the two classes is arbitrarily drawn and is without entire uniformity of usage, certain elements, as arsenic, antimony, bismuth, and tellurium, being by some writers counted as metals, by others as non-metals. The following table furnishes a list of the elements as at present (1909) generally recognized by chemists, omitting those of imperfectly established character. The number is 83. The atomic weights given are those of the last table published by the International Committee on Atomic Weights.

Elements.	Symbols.	Atomic Weights. O = 16.
Aluminium	Al	27.1
Antimony	Sb	120.2
Argon	A	39.9
Arsenic	As	75.0
Barium	Ba	137.37
Beryllium	Be	9.1
Bismuth	Bi	208.0
Boron	B	11.0
Bromine	Br	79.92
Cadmium	Cd	112.40
Cæsium	Cs	132.81
Calcium	Ca	40.09
Carbon	C	12.00
Cerium	Ce	140.25
Chlorin	Cl	35.46
Chromium	Cr	52.1
Cobalt	Co	58.97
Columbium	Cb	93.5
Copper	Cu	63.57
Dysprosium	Dy	162.5
Erbium	Er	167.4
Europium	Eu	152.0
Fluorin	F	19.0
Gadolinium	Gd	157.3
Gallium	Ga	69.9
Germanium	Ge	72.5
Glucinum	Gl	9.1
Gold	Au	197.2
Helium	He	4.0
Hydrogen	H	1.008
Indium	In	114.8
Iodine	I	126.92
Iridium	Ir	193.1
Iron	Fe	55.85
Krypton	Kr	81.8
Lanthanum	La	139.0
Lead	Pb	207.10
Lithium	Li	7.00
Lutecium	Lu	174.0
Magnesium	Mg	24.32
Manganese	Mn	54.93
Mercury	Hg	200.0
Molybdenum	Mo	96.0
Neodymium	Nd	144.3
Neon	Ne	20.0
Nickel	Ni	58.68
Niobium	Nb	93.5
Nitrogen	N	14.01
Osmium	Os	190.9
Oxygen	O	16.00
Palladium	Pd	106.7
Phosphorus	P	31.0
Platinum	Pt	195.0
Potassium	K	39.10
Praseodymium	Pr	140.6
Radium	Ra	226.4
Rhodium	Rh	102.9
Rubidium	Rb	85.45
Ruthenium	Ru	101.7
Samarium	Sm	150.4
Scandium	Sc	44.1
Selenium	Se	79.2
Silicon	Si	28.3
Silver	Ag	107.88
Sodium	Na	23.00
Strontium	Sr	87.62
Sulphur	S	32.07
Tantalum	Ta	181.0
Tellurium	Te	127.5
Terbium	Tb	159.2
Thallium	Tl	204.0
Thorium	Th	232.42
Thulium	Tm	168.5
Tin	Sn	119.0
Titanium	Ti	48.1
Tungsten	W	184.0
Uranium	U	238.5
Vanadium	V	51.2
Xenon	Xe	128.
Ytterbium (neoytterbium)	Yb	172.0
Yttrium	Y	89.0
Zinc	Zn	65.7
Zirconium	Zr	90.6

Dry element, in *elect.,* a battery element having the exciting fluid absorbed in a porous or spongy mass, as sawdust. **Element of an analytic function.** An analytic function is defined by an aggregate of series composed of a primary series and its continuations, the separate series are called *elements* of the analytic function, and the primary series is called the primary element. **Euclid's elements of geometry.** See *Euclidean,* 1. **Half-period element,** in *optics,* an annular or zonal element of area upon a wave-front such that the difference of the distances from its outer and inner boundaries to a point, external to the wave, with respect to which the element is taken, is half a wave-length. Also called *Huygens' zone.* Let ABCD be a portion of the wave-front and *op* the line from *o* to the pole of the wave. If $ox_2 - ox_1$ is everywhere equal to $\frac{1}{2}\lambda$, where λ is the wave-length, the zone included between the closed curves x_1 and x_2 is a *half-period* element with respect to *o.*—**Leading element,** in a determinant, the leading term; the product of the diagonal constituents or elements from the top left-hand corner.—**Natural system of the elements,** the arrangement of the chemical elements according to the periodic law, by Mendelejeff and Lothar Meyer. See *periodic law,* under *periodic.*—**Noble elements,** the differentiated cells which constitute the functionating parts of organs, as distinguished from the connective-tissue cells which constitute the framework of the organs.—**Null element,** one whose addition to any other element *a* of the manifold yields the same element *a.*—**Phonetic element,** any distinguishable spoken sound.—**Plastic element,** in *physiol.,* an alimentary element which is destined for the formation of new tissue.—**Radial elements,** in *ichth.,* the interspinal bones, actinosts and baseosts; the fin-supporting elements.—*T. W. Bridge,* in Jour. Linn. Soc. Zool., XXV. 533.—**Surface elements,** in *math.,* infinitesimal strips perpendicular to an axis.



Half-period Element.

elementaloid (el-ē-men′ta-loid), *a.* [*elemental* + *-oid.*] Resembling an element in character.

elementarize (el-ē-men′ta-rīz), *v. t.*; pret. and pp. *elementarized,* ppr. *elementarizing.* [*elementar(y)* + *-ize.*] To confine or restrict (one's teaching) to elementary principles.

The very word passion is becoming obsolete in psychological literature, which on this subject *elementarizes,* repeats, is pedantic, or affectedly didactic. *G. S. Hall,* Adolescence, II. 59.

elementary, *a.* **4.** Of the nature of an infinitesimal element or part.—**Elementary integral** See ★*integral.*

elementist (el-ē-men′tist), *n.* One who discovers or expounds the elements of a subject; specifically [*cap.*], Euclid, the geometer.

The man and the book are, of course, Euclid and his Elements, but the book so overshadowed the man that not long after his day Euclid was regularly called the *Elementist.* *W. B. Frankland,* Story of Euclid, p. 16.

elemi, *n.*—**Luban elemi.** Same as *Oriental* or *African elemi.* See *elemi.*—**Mexican elemi,** the oleoresin derived from *Terebinthus Mexicana* and *T. Jorullensis.* Also called *copal blanco* and *copal de santo.* See ★*copal.*

elemic (e-lem′ik), *a.* [*elemi* + *-ic.*] Pertaining to or derived from elemi.—**Elemic acid,** a crystalline acid, $C_{35}H_{46}O_4$, present in small quantities in elemi.

elenchus, *n.*—**Socratic elenchus,** the method of question and answer employed by Socrates in eliciting truth.

eleolite, *n.* See *elæolite.*

eleonorite (el″e-ō-nō′rīt), *n.* [*Eleonore* (see def.) + *-ite*[2].] A variety of beraunite, first described from the Eleonore mine near Giessen, Germany.

Elephant boiler, cent. See ★*boiler,* ★*cent.*

elephanteer (el″ē-fan-tēr′), *n.* A mahout or elephant-driver.

elephantiac, *a.* **II.** *n.* A person suffering from elephantiasis.

elephantiasic (el-ē-fan-ti-ā′sik), *n.* Same as ★*elephantiac.*

elephantoid, *a.* **2.** Pertaining to or having the character of elephantiasis.—**Elephantoid fever,** elevation of temperature and other symptoms marking the onset of elephantiasis.

Elephantomyia (el-e-fan-to-mī′yia), *n.* [NL. (Osten Sacken, 1859), < Gr. ἐλέφας (ἐλεφαντ-), elephant, + μυῖα, fly.] An extraordinary genus of tipulid flies, occurring in North America and characterized by an extremely long proboscis.

elephantry (el′ē-fan-tri), *n.* [*elephant* + *-ry.*] Troops mounted on elephants. *F. Hall.*

elephant's-ear, *n.* **2.** In India, *Sphomanthus hastata,* a Himalayan shrub belonging to the verbena family. The name translates the native name *hattee-kana,* and refers to the shape of the leaves.—**3.** In the United States, a common name for the large-leaved *Caladium Colocasia,* planted for ornament.

elephant-shark (el′ē-fant-shärk), *n.* Same as *basking-shark.*

elephant's-tooth (el′ē-fants-töth), *n.* A tooth-shell, *Dentalium.*

elephant's-trunk (el′ē-fants-trungk), *n.* **1.** The unicorn-plant, *Martynia Louisiana.*—**2.** The bastard bryony or china-root, *Cissus sicyoides.*

eleutherarch (e-lū′ther-ärk), *n.* [Gr. ἐλεύθερος, free, + ἀρχός, a chief.] The chief of an imaginary secret society called the 'Eleutheri.' *N. E. D.*

Do not persevere in writing after you grow weary of your toil; . . . the swans and the *Eleutherarchs* are proofs that you were a little sleepy. *Shelley,* in Contemporary Rev., Sept., 1884, p. 387.

eleutherism (e-lū′the-rizm), *n.* [Gr. ἐλεύθερος, free, + *-ism.*] The cause of freedom or zeal in promoting it.

Eleutherognathi (e-lū-the-rog′na-thī), *n. pl.* [NL., < Gr. ἐλεύθερος, free, + γνάθος, jaw.] Same as *Acanthopteri* or *Acanthopterygii,* a large suborder of fishes, commonly called the *spiny-rayed fishes.*

eleutherorhabdic (e-lū″the-rō-rab′dik), *a.* [Gr. ἐλευθερία, free, + ῥάβδος, rod.] Relatively free from union with one another, as the gill-filaments provided with ciliated disks in certain lamellibranchs. See ★*synaptorhabdic.* *Lankester,* Philos. Trans. Roy. Soc. (London), ser. B, p. 154.

Eleutherozoa (e-lū″the-rō-zō′ä), *n. pl.* [NL., < Gr. ἐλεύθερος, free, + ζῷον, animal.] A grade of echinoderms in which the theca, which may be only slightly or not at all calcified, is not attached by any portion of its surface, but is usually placed with the oral surface downward or in the direction of forward locomotion. It includes the *Holothuroidea, Stelleroidea,* and *Echinoidea.*

eleutherozoic (e-lū″the-rō-zō′ik), *a.* Of or pertaining to the *Eleutherozoa.*

elevated (el′ē-vā-ted), *p. a.* **1.** Lifted or raised to, or placed or situated in, a position above the ground or general level; situated higher than the plane with which the comparison is made. See *elevate.* In *astrol.,* a planet is said to be elevated above another when it is nearer to the meridian. **2.** In *math.,* containing high powers of the unknown or variable: said of an equation.

elevate-reticulate (el″ē-vāt-rē-tik′ū-lāt), *a.* Reticulate with elevated lines or carinæ, as the sculpturing of the integument of certain coleopterous and hymenopterous insects. *Proc. Zool. Soc. London,* 1901, p. 155.

elevating-block (el′ē-vā-ting-blok″), *n.* The sheave or block, in a cable or overhead tramway system, over which the hoisting-rope passes, and by means of which the load is elevated sufficiently for it then to be conveyed on the cable by the carrier of which the block or sheave is a part.

elevation, *n.* **9.** In *old music,* a grace or embellishment consisting of a short upward run connecting two notes separated by a skip.—**Axis of elevation.** See ★*axis.*

elevator, *n.* **3.** In *surg.*: (*b*) An instrument for extracting the stump of a tooth. (*c*) Same as *repositor.*—**4.** (*c*) Any form of hoisting-machinery employing an endless belt (composed of link-belt chains, or of leather, rubber, or fabric) which carries buckets, brackets, or trays. Where buckets are used, the material (grain, sand, coal, phosphate, nails, small fish, etc.) is handled in bulk, each bucket being filled at the foot of the elevator and discharging its load at the top. Where brackets, arms, or trays are used, general freight (in packages, rolls, boxes, barrels, etc.) is handled by placing it on the brackets or trays by hand or by some form of feeder, and unloading it by hand or by automatic dumping- or discharging-machines. While all are essentially alike, such

machines differ materially in form and application, and are given many different names, according to their construction or the uses to which they are put. They are often combined with conveyers. **Derrick-elevator,** an apparatus for lifting grain stored in bulk in a vessel's hold and transferring it to lighters or into the bins of storage-elevators. The elevator proper is borne upon a frame on a flat-bottomed vessel, as in the case of the marine derrick used

Derrick- or Grasshopper-Elevator.

a, a, hull of scow or lighter; *b*, propelling engine and steam-boiler for *c*, the elevator operating and adjusting engine; *d*, the bucket-elevator and its casing; *e*, chute into which the buckets discharge; *f*, conveyer delivering to the spouts; *g*, discharge or loading spouts or chutes fed from *h*, conveyer receiving from *f*, and delivering to *g*.

for placing machinery in vessels. The truss carrying the elevator has jointed members, so that the elevator can drop down through hatchways in the decks of the vessels to be unloaded. Hence another common name, *grasshopper-elevator*. *Sci. Amer.*, Jan. 31, 1903, p. 75.—**Elevator disease.** See ★*disease*.—**Uterine elevator.** Same as *repositor*.

elevator-cage (el′ē-vā-tor-kāj″), *n.* The cage or inclosed car by which passengers and freight are carried in an elevator. In mines, the sides are grated or protected with bars only.

elevator-cup (el′ē-vā-tor-kup″), *n.* The metal receptacle attached to the chain or belt of a bucket elevator: usually called *bucket*.

elevator-scales (el′ē-vā-tor-skālz″), *n.* Platform-scales for weighing grain as it comes from an elevator. Such scales are usually automatic, receiving about 100 bushels as a load, recording the weight, and then emptying the grain into a storage-bin. Two hoppers work alternately, filling and emptying.

elevator-shaft (el′ē-vā-tor-shaft″), *n.* In modern buildings, the inclosed space, of uniform height from top to bottom, in which an elevator-car moves up and down.

Eleven rule, in *bridge*, a mathematical rule invented by R. F. Foster to enable the pone to determine how many cards in the leader's suit are out against him higher than the one led, when this is the fourth best. It is the following: Deduct from eleven the number of spots on the card led, and the remainder is the number of cards in the suit higher than the one led, which the leader does not hold. From the remainder thus found the pone deducts the number he holds himself, and sees in the dummy, higher than the one led, and this second remainder, if any, is the number the dealer holds. For instance, the 7 is led, dummy lays down Q, 10, 5, and the pone holds A, 8, 6. Deducting the 7, led, from 11, 4 higher than the 7 are left, all of which are in sight, so that the dealer has no card higher than the 7, and the leader must hold K, J, 9, 7. Therefore, if dummy does not cover the 7, the pone will pass it, and it will win the trick. The dealer, if he knows the eleven rule, will of course avail himself of it and cover the 7 led with the 10 in dummy's hand, so as to force the pone to play higher and lead up to dummy's guarded queen, if he continues the suit.

elf-cup (elf′kup), *n.* A small stone perforated by the action of water at a waterfall.

elf-god (elf′god), *n.* The elfish god, that is, Cupid. *Tennyson*.

elfic (el′fik), *a.* [*elf* + *-ic*.] Of or pertaining to an elf; proper to an elf.

elfin, *n.* **3.** An American lycænid butterfly of the genus *Incisalia*.—**Banded elfin,** a lycænid butterfly *Incisalia niphon*, occurring throughout the United States and found commonly in open spaces in pine woods. It is brown in color, with the under sides of the wings checkered with brown and white. Its larvæ live on pine-leaves.—**Brown elfin,** an American lycænid butterfly, *Incisalia angustus*, of dark-brown color, inhabiting the northern United States. Its food-plant is unknown.—**Hoary elfin,** *Incisalia irus*, a species occurring east of the Mississippi, feeding in the larval state on the fruit of the wild plum.

elfin-tree (el′fin-trē). [Tr. of G. *zwergbaum* (Schimper).] In *phytogeog.*, an alpine type of tree with short, gnarled, often oblique or horizontal stem, and long serpentine branches bent in all directions, occuring mainly in the tropics. *A. F. W. Schimper* (trans.), Plant-Geog., pp. 704, 705.

elfin-wood (el′fin-wŭd), *n.* A wood composed of elfin-trees. See ★*elfin-tree*. *A. F. W. Schimper* (trans.), Plant-Geog., p. 704.

elf-owl (elf′oul), *n.* A diminutive species of owl, *Micropallas whitneyi*, found in the southwestern United States.

Elgin sandstone. See ★*sandstone*.

Elian (ē′li-an), *a.* Of or pertaining to "Elia," that is, Charles Lamb, who wrote essays under this pseudonym.

Many of the new letters are of no literary account; perhaps a score have the true *Elian* cachet, and one or two supply a link hitherto missing in the writer's life. *Athenæum*, June 3, 1905, p. 681.

eliasite (ē-lī′a-sīt), *n.* [*Elias*, name of the mine of origin, + *-ite*[2].] An alteration-product of the pitch-blende of Joachimsthal, Bohemia; a kind of gummite.

Elijah's cup. See ★*cup*.

eliminant, *n.* **2.** In *med.*, an agent which stimulates excretion.

Eliminative selection. See ★*selection*.

eliminator, *n.* **2.** A combination of a separator for taking the water out of steam and a trap for automatically discharging the water from the collector.

elittoral (ē-lit′ō-ral), *a.* [L. *e*, out, + *litus*, *littus* (*littor-*), shore, + *-al*.] Out from shore; that is, occurring in the sea near shore, at least below high water mark.

She finds that the plant *Callymenia phyllophora* is *elittoral*, and occurs in crevices in the rocky caverns where the tidal surge is strong. Only young plants were uncovered by low tides; mature plants were well beyond low tide line. *Jour. Roy. Micros. Soc.*, April, 1905, p. 215.

elixir, *n.*—**Brown-Séquard's elixir,** a sterilized testicular fluid used in the treatment of mental and nervous diseases.—**McMunn's elixir,** a watery solution of opium of the same strength as laudanum.

Eliz. An abbreviation of *Elizabethan*.

Eliza, *n.* See ★*Long Eliza*.

Elizabethan, *a.* **II.** *n.* One who lived during the Elizabethan period; especially a poet, or dramatist of that period.

Elizabethanize (ē-liz-a-beth′an-īz), *v. t.*; pret. and pp. *Elizabethanized*, ppr. *Elizabethanizing*. To give an Elizabethan character to; pattern after the style of the Elizabethan period.

elk[1], *n.* **5.** [*cap.*] A member of a benevolent and fraternal society known as the *Benevolent and Protective Order of Elks*, organized in New York in 1868. Its membership is restricted to citizens of the United States.

Elk-horn fern. See ★*fern*[1].

elk-game (elk′gām), *n.* A ceremonial game of the Dakota Indians of North America, played with a ring and darts: similar to the hoop-and-pole game.

Elk River series. See ★*series*.

elk-yard (elk′yärd), *n.* A space cleared in the deep snow by the trampling of a small band of elk, within which they live and feed. Called, in America, *moose-yard*. See *elk*[1].

ellagitannic (e-laj-i-tan′ik), *a.* [*ellagi*(*c*) + *tannic*.] Pertaining to gallnuts and tannin.—**Ellagitannic acid** an acid substance resembling ellagic and tannic acid, but derived from the tannin of divi-divi and myrobalans rather than from gallnuts or sumac. Its empirical formula is $C_{14}H_{10}O_{10}$.

Elliott eye. See ★*eye*[1].

Elliott's apparatus. See ★*apparatus*.

ellipse, *n.*—**Aberrational ellipse,** the little ellipse which a star appears to describe annually on account of the aberration of light. Its major axis is always 41 seconds long and parallel to the ecliptic. Its minor axis varies with the star's latitude, that is, its distance from the ecliptic.—**Ellipse of stress,** a geometrical construction, devised by Rankine, for finding the stresses at a point within a solid in a state of strain. It is an ellipse whose center is at the given point, whose principal axes are the normals to the planes of principal stress, and whose principal semi-axes are proportional to the intensities of the principal stresses.

ellipsoid, *n.* **2.** In *anthrop.*, a cranium the norma verticalis of which has an ellipsoidal form. *G. Sergi*, Var. of the Human Species, p. 27.—**Fresnel's ellipsoid,** an ellipsoid whose semi-axes are taken proportional respectively to the maximum, minimum, and mean values of the light-velocity for a given biaxial crystal. See *axes of light-elasticity*, under *axis*[1].—**Irrotational ellipsoid,** an ellipsoid that is not a solid of revolution.—**Planetary ellipsoid,** an oblate ellipsoid.

Ellipsoidal harmonic, structure. See *Lamé's function*, under *function*, and ★*structure*.

ellipsone (e-lip′sōn), *n.* [*ellipse* + (*cycl*)*one*.] A whirlwind in which the winds describe ellipses instead of circles. *Fitz Roy*. [Rare.]

ellipsonic (e-lip-son′ik), *a.* Having the shape, motion, or property of an ellipse.

Elliptic spheroid, substitution. See ★*ellipsoid of revolution*, ★*substitution*.

Elliptical vibration. See ★*vibration*.

ellipticity, *n.*—**Coefficient of ellipticity.** See ★*coefficient*.

ellwife (el′wīf), *n.* A dialectal variant of *ale-wife*.

elm, *n.* Of other varieties of elm (comprising some trees more or less closely related to the elm and a few belonging to different families but somewhat resembling elms: those given below are among the most important.—**American elm.** Same as *white* ★*elm*.—**Basket-elm.** Same as ★*cedar-elm*. **Bastard elm,** the hackberry, *Celtis occidentalis*. See *hackberry*, 2 (with cut). **Broad-leaved elm.** Same as *witch-elm*.—**Cedar-elm.** See ★*cedar-elm*. **Cork-elm.** See ★*cork-elm*. **Corky white elm,** an occasional name of the cork-elm.—**Dutch elm,** a form of the English elm with corky ridges on the branches: distinguished by some authors as a species, *Ulmus suberosa*.—**Dwarf elm** of Siberia. See *Ulmus*.—**Elm bark-beetle, elm flea-beetle, elm leaf-beetle, elm spanworm.** See ★*bark-beetle*, ★*flea-beetle*, ★*leaf-beetle*, ★*spanworm*.—**English elm,** *Ulmus campestris*. See *elm* (with cut). This tree was extensively planted in some American cities, especially Washington, by the English and Scotch gardeners, who apparently were not aware of the superior claims of indigenous species. **False elm.** Same as *bastard* ★*elm*. **Himalayan elm.** See *Ulmus*. **Indian elm,** the slippery-elm (which see).—**Mountain-elm.** (*a*) The Scotch elm. (*b*) The wing-elm or winged elm. See *wahoo*, 3.—**Red elm.** (*a*) The slippery-elm, from the red wood, by which it is distinguished from the white elm, and well known among lumbermen. (*b*) The winged elm, *Ulmus alata*, so called in Florida and Arkansas. (*c*) *Ulmus serotina*, a tree of limited distribution on limestone hills and river-banks in southern Kentucky and northern Alabama and Georgia, only recently distinguished from *U. fulva*, from which it differs in its much smaller fruit, in the absence of mucilage in the inner bark, and in other respects. The wood is reddish in color.—**Sweet elm,** the slippery-elm, from the sweet aromatic taste and smell of the inner bark.—**White elm,** *Ulmus Americana*, the most important of American elms. It sometimes reaches

White Elm (*Ulmus Americana*).

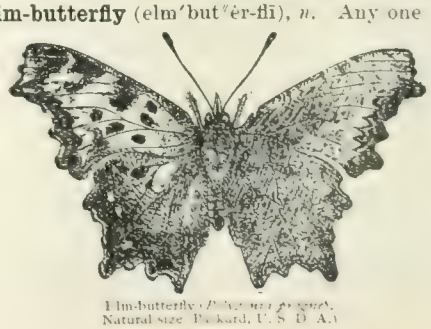
a height of 120 feet and a diameter near the base of 10 feet, with 60 feet or more clear of limbs. The trunk then normally divides up into a large number of more or less equal branches or subsidiary trunks, which diverge in graceful curves in all directions, forming an inversely pyramidal or umbrella-shaped top of wide expanse and great beauty, the dense foliage furnishing a perfect shade. The wood is tough and difficult to split, but very durable and of great value in the arts. The tree ranges from Newfoundland to Florida and westward to the base of the Rocky Mountains.

elm-beetle (elm′bē″tl), *n.* **1.** The elm bark beetle. See ★*bark-beetle*.—**2.** A native American beetle, *Monocesta coryli*, of the family *Chrysomelidæ*, which feeds on elm-leaves in the more northern of the Southern States.

Elm-borer (*Dudarius brevilineus*). (Packard, U. S. D. A.)

elm-borer (elm′bōr″ėr), *n.* Any one of several coleopterous insects whose larvæ bore into elm-trees. Among them are the cerambycids *Saperda tridentata*, *S. lateralis*, *S. vestita*, *Dryobius sex-maculatus*, *Dudarius brevilineus*, *Neoclytus erythrocephalus*, and *N. capræa*; the curculionid *Magdalis armicollis*; the buprestid *Anthaxia viridicornis*; and the scolytid *Hylesinus opaculus*.

elm-butterfly (elm′but″ėr-flī), *n.* Any one of



Elm-butterfly (*Polygonia progne*). Natural size. (Packard, U. S. D. A.)

several nymphalid butterflies whose larvæ feed on elm-leaves, as *Euvanessa antiopa*, *Polygonia interrogationis*, *P. faunus*, and *P. progne*.

elm-gall (elm′gäl), *n.* A gall upon the leaves of the elm. **Cockscomb elm-gall,** a gall resembling in shape a miniature cockscomb, made on the leaves of elm by an aphidid, *Colopha ulmicola*.

elm-grass (elm′grȧs), *n.* See ★*grass*.

elm-moth (elm′môth), *n.* Any one of several species of moths whose larvæ feed on elm-leaves, notably *Palæacrita vernata*, known in the larval state as the *spring canker-worm*.

elm-scale (elm′skāl), *n.* An American diaspine scale-insect, *Chionaspis americana*.

Elohimic (el-ō-him′ik), *a.* [*Elohim* + *-ic*.] Characterized by the use of the Hebrew word *Elohim*, 'God,' instead of 'Jahveh,' or 'Jahwè,' the proper name of God; Elohistic: applied to certain passages in the Hebrew scriptures: as, the *Elohimic* psalms; the *Elohimic* portions of Genesis; *Elohimic* documents.

eloiner (ē-loi′nėr), *n.* One who eloins; one who causes an eloinment; for example, one who removes chattels so that they cannot be replevied.

E. lon. An abbreviation of *east longitude*.

elongation, *n.*—**Elasticity of elongation.** See ★*elasticity*. **Elongation strain.** See ★*strain*1. **Percentage of elongation.** See *elongation* ★*strain*.

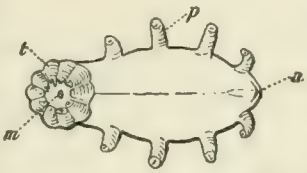
elongato-conical (ē-long-gā′tō-kon′i-kal), *a.* Shaped like an elongated cone.

elongato-ovate (ē-long-gā′tō-ō′vāt), *a.* Shaped like an elongated egg.

elotillo (ā-lō-til′yō), *n.* [Mex. Sp. *elotillo*, dim. of Mex. (Nahuatl) *elotl*, an ear of green maize.] In Mexico, a name of the fleshy, leafless parasitic plant, *Conopholis Americana*, which somewhat resembles a small ear of corn. See cut under *squawroot*.

elpasolite (el-pä′sō-līt), *n.* [*El Paso*, a county in Colorado, + *-lite* for Gr. λίθος, stone.] A fluoride of aluminium, potassium, and sodium, perhaps analogous to cryolite in composition: found in El Paso county, Colorado.

Elpidia (el-pid′i-ä), *n.* [NL. (Théel, 1876).] The typical genus of the family *Elpidiidæ*.



Ventral View of *Elpidia glacialis*, Th. *a*, anus; *m*, mouth; *p*, tube-foot; *t*, tentacle. (From Lankester's "Zoology.")

Elpidiidæ (el-pi-dī′i-dē), *n. pl.* [NL., ⟨ *Elpidia* + *-idæ*.] A family of deep-sea holothurians of the order *Actinopoda*. They have the body generally flattened ventrally, mouth more or less ventral, tentacles from 10 to 20, stone-canal single, respiratory trees absent or rudimentary, calcareous ring of 5 or 10 pieces, and the spicules of various shapes. The family contains about 20 genera, of which *Elpidia* is the typical one.

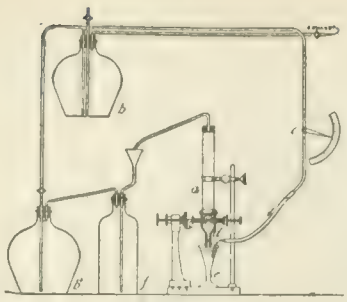
elpidite (el′pi-dīt), *n.* [Gr. ἐλπίς (ἐλπιδ-), hope, + *-ite*2.] A silicate of zirconium and sodium occurring in from white to brick-red masses, rarely in orthorhombic crystals: found in southern Greenland.

eltrot (el′trot), *n.* [Also *altrot*, *heltrot*, *hiltrot*, *hilltrot*, *eldertrot*, *eldroot*, *eldrop*, etc.; a not understood compound of E. dial. *elt*, *yelt*, var. of *gilt*, AS. *gilte*, a young sow, + *root*1.] **1.** The cow-parsnip.—**2.** The water-parsley.—**3.** The wild or cow parsley.—**4.** The wild carrot.—**5.** A stalk of certain plants, especially the wild parsley. [Prov. Eng. in all uses.]

elutor (ē-lū′tor), *n.* [NL. ★*elutor*, ⟨ L. *eluere*, wash out, ⟨ *e*, out, + *-luere*, *lavare*, wash: see *lava*.] A vessel in which tribasic calcium sucrate, produced by the addition of lime to beet-root molasses, is washed with dilute alcohol in order to free it from impurities before it is decomposed by carbon dioxid and crystallizable sugar thereby recovered from it.

elutriator (ē-lū′tri-ā-tor), *n.* [NL. ★*elutriator*, ⟨ L. *elutriare*, wash out, rack off, ⟨ *eluere*, wash out: see ★*elutor*.] An apparatus for the analysis of finely divided solids, such as soils, by means of which the particles of different size and weight are separated from each other by falling through water or a current of water. See cut in middle column.

eluvial (ē-lū′vi-al), *a.* [*eluvium* + *-al*1.] Of the nature of eluvium; formed by wind-drift or atmospheric weathering: as, *eluvial* accumulations. *Nature*, XXIII. 225.



Elutriator

a, cylinder for sample; *b* and *b′*, reservoirs for water; *c*, stopcock to control flow of water; *d*, agitator; *e*, receptacle for coarse particles; *f*, settling-vessel for fine particles.

eluvium (ē-lū′vi-um), *n.* [NL. ★*eluvium*, parallel to L. *eluvio*(*n*-), a washing away, ⟨ *eluere*, wash out: see ★*elutor*. Cf. *alluvium*.] In *geol.*, an accumulation of dust and soil produced by decomposition of rocks in situ, or drifted by winds.

For atmospheric accumulations of this nature [loess] Trautschold has proposed the name *eluvium*. They originate in situ, or at least only by wind-drift, whereas alluvium requires the operation of water, and consists of materials brought from a greater or less distance.
Geikie, Text-book of Geol., p. 322.

elvanitic (el-va-nit′ik), *a.* [*elvanite* + *-ic*.] Containing, resembling, or characterized by elvanite.

elydoric (el-i-dor′ik), *a.* [F. *eludorique*, erroneously formed from Gr. ἔλ(αιον), oil, + ὕδωρ (ὑδρο-), water, + F. *-ique*, E. *-ic*.] Noting a complicated method of painting, invented by Armand-Vincent de Montpetit in the eighteenth century, supposed to combine the effects of oil- and water-color.

elytriferous (el-i-trif′e-rus), *a.* [NL. *elytrum* + L. *ferre*, bear.] Bearing an elytrum: as, an *elytriferous* segment of certain polychætes.

elytrodema (el″i-trō-dē′mä), *n.*; pl. *elytrodemata* (-ma-tä). [NL.] Edema of the submucous tissues of the vagina.

elytroncus (el-i-tron′kus), *n.*; pl. *elytronci* (-sī). [NL., ⟨ Gr. ἔλυτρον, a sheath (vagina), + ὄγκος, a mass.] A tumor of the vagina.

elytrophore (el′i-trō-fōr), *n.* [Gr. ἔλυτρον, a sheath, + *-φορος*, ⟨ φέρειν, bear.] A special part of the parapodial ridge bearing an elytrum, as in some polychætes.

elytrous (el′i-trus), *a.* Resembling or suggesting the elytra of a beetle.

Elz. An abbreviation of *Elzevir*.

Elzeviran, *n.* **II.** *a.* Noting a style of book-making practised by the Elzevir family. See *Elzevir editions*, under *Elzevir*.

E. M. An abbreviation (*a*) of *Engineer of Mines*; (*b*) of the Latin *equitum magister*, master of the horse.

ema-fiber (ā′mä-fī″bėr), *n.* The fiber of the kendir, *Apocynum venetum*. See ★*kendir*.

emailloid (e-māl′oid), *n.* [F. ★*émailloïde*, ⟨ *émail*, enamel, + *-oïde*, E. *-oid*.] A tumor which arises from the enamel of a tooth.

emajagua (ā-mä-hä′gwä), *n.* [Porto Rico.] Same as ★*majagua*, 2.

emanation, *n.* **5.** Specifically, in radioactivity, an unstable gaseous disintegration-product spontaneously produced from a radioactive substance. The radioactive elements thus far known to give off an emanation are thorium, radium, and actinium. The emanations are inert gases resembling in their chemical relations the gases of the argon group, but differing from these and from all other known chemical compounds in the fact that they are produced as disintegration-products continuously at a rate which is independent of the temperature and the chemical and physical state of the compounds from which they are formed and which are converted spontaneously into other and non-volatile disintegration-products at a constant rate. The existence of an emanation, which is produced only in very small quantities, is detected by means of its radioactive effects. The rate at which it is produced and at which it disappears by disintegration is determined from the change in the intensity of these effects, and it is by such observations that the emanations of radium, thorium, and actinium are distinguished from one another. The radium emanation differs from the others in that it is the first disintegration-product of that element, whereas with thorium and actinium the emanation in the case of the former is the fifth, and in the case of the latter the third, disintegration-product to be produced. These three emanations differ greatly in the degree of instability which they exhibit. The rate of decay (which measures the rate at which the radium emanation is converted into the next following and non-volatile disintegration-product) is comparatively slow, about 3.7 days being required to reduce its activity to one half; whereas the thorium emanation suffers the corresponding reduction in about one minute, and the actinium emanation in 3.9 seconds. The properties of the emanations, which are in the main similar, have been most completely studied in the case of radium emanation. Its chemical inertness is shown by the fact that it will pass through tubes containing reagents which absorb all gases except those of the argon family, that it is unaffected by the electric spark in an atmosphere of oxygen, and that it may be kept in contact with incandescent magnesium or calcium for hours without loss. Both radium emanation and thorium emanation are capable of condensation at low temperatures, the point of liquefaction of the thorium emanation being −120° C. and that of the radium emanation −150° C. All three emanations are radioactive, giving off α-rays, and they possess the property of imparting temporary radioactivity to all substances with which they come in contact. This imparted radioactivity disappears much more slowly than the emanation itself, having its own law of decay, and the imparted radioactivity is of the same character, whatever the nature of the substance affected. The imparted radioactivity, or excited radioactivity, is ascribed to the formation, on the surface of the body made active, of a solid disintegration-product; and it has been found possible to remove this product by rubbing the surface with sandpaper, and to transfer the activity to the latter. The radioactive matter can also be dissolved by certain acids. However, it is not destroyed, but reappears on the surface of the dish after the acid has been evaporated. Thus it appears that a film of radioactive matter is deposited upon surfaces with which the emanation comes in contact, and that this active deposit consists of a series of successive disintegration-products of the emanation. A series of changes of this sort has been traced, and the successive disintegration-products, which differ as regards their stability and radioactive character, have been studied. They are known respectively as *radium A*, *radium B*, *radium C*, *radium D*, *radium E*, *radium F*, *radium G*; *thorium A*, *thorium B*, *thorium C*; and *actinium A*, *actinium B*, and *actinium C*. These disintegration-products behave as solids, being in general volatilized at a white heat. They are soluble in strong acids, and separable from one another by electrolysis. Each disintegration-product is spoken of as the *parent* of the one which it produces, and the first of the series is known as the *parent substance*. In most of these changes in radioactive bodies rays are emitted; but certain changes (known as *rayless changes*) unaccompanied by radiation have been recognized. The emission of β-rays and γ-rays appears to be characteristic of the last of the succession of changes to which the radioactive elements are subject, and to result in the appearance of a product more stable than those which have gone before.

emanational (em-a-nā′shon-al), *a.* [*emanation* + *-al*1.] Relating or pertaining to the theory of emanation: as, *emanational* ideas.

emanatism (em-a-nā′tizm), *n.* The cosmological theory of emanation.

His idea on the Word bore the impress of *emanatism*.
Cockran, Pressensé's Rep. to Renan, p. 21. *N. E. D.*

emancipative (ē-man′si-pā-tiv), *a.* [*emancipate* + *-ive*.] Having the property of emancipating; serving to emancipate: as, *emancipative* knowledge. *Fitzedward Hall*, Hindu Philos. Syst.

emanium (e-mā′ni-um), *n.* [NL., irreg. ⟨ L. *emanare*, emanate.] A radioactive substance separated from pitchblende by Giesel. It was at first believed to be a distinct element, but was afterward shown to be identical with the *actinium* of Debierne (see ★*actinium*, 2).

emarginate, *v. t.* **2.** [An erroneous use of the word, as if 'to bring out the margin' (into view). The proper word would be ★*demarginate*, parallel to *delimitate*, etc.] To render visible or conspicuous the boundary or margin of (something); specifically, to bring out clearly the outlines of (objects under the microscope) by adjustment of the focus and lighting.

emasculate, *v. t.* **4.** In *plant-breeding*, to remove the anthers from a hermaphrodite flower in order to prevent self-fertilization. In case of monœcious plants, as Indian corn, the whole male inflorescence is removed. See ★*detasseling*.

emasculative (ē-mas′kū-lā-tiv), *a.* Tending or serving to emasculate (in any sense).

émaux ombrants (ā-mō′zōn broṅ′). [F., 'shading enamels.'] In *pottery* and *tile-making*, enamels in which the design is modeled in intaglio and tinted glaze is poured in to a level with the surface. The different thicknesses of glaze produce the lights and shades of a picture, on the principle of lithophanes.

embarcadero (em-bär-kä-dä′rō), *n.* [Sp., ⟨ *embarcar*, embark.] A wharf; a quay. [Spanish America and Philippine Is.]

Embayed mountain. See ★*mountain*.

embedment (em-bed′ment), *n.* [*embed* + *-ment*.] **1.** The act of embedding or the state of being embedded or firmly fixed in some surrounding mass.—**2.** The mason work, clay, cement, or the like, in which something is or is to be embedded.

embelic (em-bel′ik), *a.* [*Embelia* + *-ic*.] Noting an acid, an orange-colored crystalline principle, $C_9H_{14}O_2$ or $C_{18}H_{28}O_4$, obtained from the dark-red fruit of *Embelia Ribes*: said to be anthelmintic.

embira (em-bē′rä), *n.* [Tupi *embira*, bark, bast.] A name in Brazil of a number of trees which yield bast-fiber, especially of *Xylopia frutescens* and *X. sericea*. The name *embira branca* (white bast) is applied to *X. grandiflora* and *Daphnopsis Brasiliensis* and *embira guassú* to *Bombax pubescens*, the fiber of which is strong and resembles jute in color.

emblematology (em-blem-ą-tol′ō-ji), *n.* [Gr. ἐμβλημα(τ-), emblem, + -λογία, ⟨ λέγειν, speak.] The science of emblems; the study of the origin and significance of emblems.

emblemist (em′blem-ist), *n.* [*emblem* + *-ist*.] A writer or inventor of emblems: as, "Quarles the *Emblemist*," *Southey*, Doctor, I. xlviii.

embody, *v. t.* **3.** To paint with body or solidity. See *impasto*.

emboîtement, *n.* **2.** In *anat.*, the fitting of one bone, or assemblage of bones, into another, as a box fits within its cover. *N. E. D.* [Rare.]

embole (em′bō-lē), *n.* [NL., ⟨ Gr. ἐμβολή, insertion.] Same as *emboly*.

embolism, *n.*—**Air embolism,** obstruction to the passage of blood by the froth which results from the entrance of air into the circulation.—**Bacillary embolism,** obstruction in a small blood-vessel caused by an aggregation of micro-organisms. **Fat embolism,** obstruction in a blood-vessel caused by fat-globules, a condition sometimes observed in cases of fracture of a long bone.

embolo (em-bō′lō), *n.* [Aboriginal name, southwest Africa.] The bluish, fleshy, edible fruit of *Euclea Pseudebenus*, a shrub or small tree of southwest Africa yielding the Orange River ebony. See ★*Euclea*, 2.

embolus, *n.* **4.** The terminal portion of the digital joint of the palpus of a male spider, containing an orifice near the tip through which the seminal fluid is collected and later ejected.

Palpus. . . . The *embolus* of the bulb has a stout erect spur springing from the cavity below the apex of the lamina of the bulb, while the *embolus* itself is short, strongly curved, and conspicuously flanged on each side.
Proc. Zool. Soc. London, 1903, I. 161.

Embossed printing. See ★*printing*.

embossing-machine, *n.* **4.** A machine which stamps a figure or design on leather, such as alligator or seal, as it passes under or through the steel plates or rollers on which the figure or design has been cut.

embossing-press, *n.* **2.** A press which has dies for embossing coins, jewelry, and silverware. The upper die is fixed to the top of the frame, and the lower die, carrying the blank, is moved upward against it under heavy pressure.

embouchement (oṅ-bösh-moṅ′), *n.* [F., ⟨ *emboucher*, open into another body: see *embouchure*.] The opening of one vessel into another: as, the *embouchement* of the cloaca.

embouchure, *n.* **3.** In *vocalization*: (*a*) The position of the vocal organs in forming a tone. (*b*) The particular character of the tone itself, especially at its beginning. Occasionally the term is further defined as *palatal*, *dental*, etc., according to the apparent position of the center of resonance.

embouchure-tube (oṅ-bö-shür′tūb), *n.* The cavities of the pharynx and mouth collectively, when used in vocalization.

embowerment (em-bou′ėr-mėnt), *n.* [*embower* + *-ment*.] The act of embowering or of placing within a bower: as, the *embowerment* of Mrs. Pipchin. *Dickens*, Dombey and Son.

embrasure (em-brā′zūr), *v. t.*; pret. and pp. *embrasured*, ppr. *embrasuring*. [*embrasure*, *n.*] To furnish with embrasures, as a wall or fort: used chiefly in the past participle.

embreastment (em-brest′mėnt), *n.* [*em-* + *breast* + *-ment*.] A breast-like swelling on the surface of the ground. *Coleridge*. *N. E. D.*

embrittle (em-brit′l), *v. t.*, pret. and pp. *embrittled*, ppr. *embrittling*. [*em-* + *brittle*.] To make brittle, or liable to break under sudden load or shock. This result will follow any cause which raises the elastic limit relatively to the ultimate resistance of the material, or which lowers its ductility. Hardening of steel in the tempering process does this.

Sudden cooling hardens and *embrittles* steel and cast iron. *Encyc. Brit.*, XXIX. 574.

embrocado, *n.* **2.** A brocaded fabric of gold, silver, and silk.

embryectomy (em-bri-ek′tō-mi), *n.* [Gr. ἔμβρυον, embryo, + ἐκτομή, excision.] Removal of the embryo by an operation, in cases of extra-uterine pregnancy.

embryo, *n.*—**Hexacanth embryo,** a tapeworm embryo having six chitinoid hooks by which it bores its way through the wall of the alimentary canal of its host to enter the body cavity or to become encysted in the voluntary muscles.

embryoctonic (em′bri-ok-ton′ik), *a.* Relating to embryoctony; destructive to the fetus in the uterus.

embryoferous (em-bri-of′ē-rus), *a.* [Gr. ἔμβρυον, embryo, + L. *-fer*, bearing, ⟨ *ferre*, bear.] Inclosing or producing an embryo.

embryogenesis (em-bri-ō-jen′e-sis), *n.* [NL., ⟨ Gr. ἔμβρυον, embryo, + γένεσις, generation.] The generation of embryos, or development from embryos; embryogeny; the subject-matter of the science of embryology.

embryogenetic (em-bri-ō-jē-net′ik), *a.* Of or pertaining to embryogenesis.

embryographer (em-bri-og′rą-fėr), *n.* One who is versed in the science of embryography or embryology; an embryologist.

embryol. An abbreviation of *embryology*.

embryology, *n.*—**Experimental embryology,** the study of the development of eggs and embryos under artificial conditions. Among the many remarkable discoveries made by experimental methods in embryology are the following: that some unfertilized eggs may be made to develop in a normal or nearly normal way by treatment with certain inorganic substances; that perfect but diminutive embryos may be produced from the separated cells of an organism during its early stages of development; that a small nucleate fragment of an unfertilized egg may be fertilized and give rise to a diminutive embryo; and that the constituent cells of certain embryos may be shifted around with reference to one another without affecting the future history of development.

embryoma (em-bri-ō′mą), *n.*; pl. *embryomata* (-mą-tą). [NL., ⟨ Gr. ἔμβρυον, embryo, + *-oma*.] A tumor composed wholly or in part of fetal tissues or structures.

Embryonic shield, variation. See ★*shield*, ★*variation*.

embryonoid (em′bri-ọn-oid), *a.* [*embryon* + *-oid*.] Resembling an embryo in form or structure.

embryopathology (em′bri-ō-pą-thol′ō-ji), *n.* [Gr. ἔμβρυον, embryo, + E. *pathology*.] The study of abnormal embryos or of pathological conditions traceable to defective development.

embryophore (em′bri-ō-fōr), *n.* [Gr. ἔμβρυον, embryo, + -φορος, ⟨ φέρειν, bear.] A cellular envelop inclosing the six-hooked oncosphere, or tapeworm embryo.

Embryophyta (em-bri-of′i-tą), *n. pl.* [NL. (Engler, 1892): see ★*embryophyte*.] A great division of the vegetable kingdom, including all plants which possess an embryo proper, these being also the only ones which have vascular tissues. It is therefore the equivalent of the vascular plants of other authors. The *Embryophyta* are subdivided by Engler into the *Embryophyta asiphonogama* and the *Embryophyta siphonogama*, the former of which is the same as the ★*Archegoniatæ*, recognized by him as synonymous, while the latter is the same as the *Phanerogamia* or *Spermatophyta*.

embryophyte (em′bri-ō-fīt), *n.* [NL. *embryophytum*, ⟨ Gr. ἔμβρυον, embryo, + φυτόν, a plant.] A plant generated by means of an embryo; a plant belonging to the group *Embryophyta*.

embryothlasis (em-bri-oth′lą-sis), *n.* [Gr. ἔμβρυον, embryo, + θλάσις, break, ⟨ θλᾶν, break.] In *surg.*, the operation of breaking the bones of the fetus, in cases of difficult labor, to facilitate its removal.

embryothlast (em′bri-ō-thlȧst), *n.* Same as *embryothlasta*.

embryotome (em′bri-ō-tōm), *n.* [Gr. ἔμβρυον, embryo, + -τομος, ⟨ ταμεῖν, cut.] An instrument for dismembering the fetus in embryotomy.

embryotroph (em′bri-ō-trof), *n.* [Gr. ἔμβρυον, embryo, + -τροφος, ⟨ τρέφειν, nourish.] In *embryol.*, that which nourishes the embryo; the food-yolk or deutoplasm.

embryotrophy (em-bri-ot′rō-fi), *n.* [Gr. ἔμβρυον, embryo, fetus, + -τροφια, ⟨ τρέφειν, nourish.] The nutrition or nourishment of the embryo.

embryulcia (em-bri-ul′si-ą), *n.* [NL., ⟨ Gr. ἐμβρυουλκία, ⟨ ἐμβρυουλκός, an obstetric forceps; see ★*embryulcus*.] In *surg.*, instrumental extraction of the fetus.

embryulcus (em-bri-ul′kus), *n.*; pl. *embryulci* (-sī). [NL., ⟨ Gr. ἐμβρυουλκός, an obstetric forceps, ⟨ ἔμβρυον, embryo, + ἕλκειν, draw.] A hook-shaped instrument used in the forcible extraction of the fetus.

Embryx (em′briks), *n.* [NL., (?) irreg. ⟨ Gr. ἐμβρύκειν, bite at, bite.] A genus of deep-sea fishes of the North Pacific, belonging to the family of *Zoarcidæ*.

emendate (ē-men′dāt), *v. t.*; pret. and pp. *emendated*, ppr. *emendating*. [L. *emendare* (pp. *-atus*), emend: see *emend*.] To remove errors and corrupt readings from (a text).

First, then, he compared, *emendated*, and transcribed the text of Scripture.
J. H. Newman, Hist. Sketches, III. v. 5.

emerald, *n.*—**Brazilian emerald,** a jewelers' name for the rich green variety of tourmalin found in Brazil. See *tourmalin*. **Ecclesiastical emerald.** Same as *Brazilian* ★*emerald*.

emergence, *n.* **Grazing emergence,** in *optics*, emergence of a ray of light from within a refractive medium in a direction such that the angle of refraction is nearly 90° and the ray, after leaving the denser medium, travels nearly parallel to the interface. **Path of emergence,** in *geol.*, the path followed by the undulations of an earthquake from the focus to the point of emergence.

Emergency brake. See ★*brake*[3].

emerse (ē-mėrs′), *v. t.*; pret. and pp. *emersed*, ppr. *emersing*. [L. *emersus*, pp. of *emergere*, emerge: see *emerge*.] To rise, or cause to rise, from a liquid: opposed to *immerse*.

The following rules express, with a considerable amount of accuracy, the number of tons required to immerse or *emerse* the ship one inch when floating at her load-draught. *White*, Manual of Naval Arch., p. 7.

emersion, *n.* **Wedge of emersion.** See ★*wedge*[1].

emery (em′ė-ri), *v. t.*; pret. and pp. *emeried*, ppr. *emerying*. [*emery*, *n.*] **1.** To coat or cover with emery, as in making emery-cloth, emery-paper, or the like.—**2.** To rub or polish with emery or with emery-paper, emery-cloth, etc.

emerylite (em′ė-ri-līt), *n.* [*emery* + Gr. λίθος, stone.] In *mineral.*, a silicate of calcium and aluminium better known as *margarite* (which see).

emery-surfacer (em′ė-ri-sėr fą-sėr), *n.* A surface-grinder; a machine in which a broad, solid emery-wheel is employed to finish a flat surface. The work to be surfaced is fastened to a sliding table guided to move on a true plane surface, and passed underneath the revolving wheel.

emetatrophia (em ė-tą-trō′fi-ą), *n.* [NL., ⟨ Gr. ἔμετος, vomiting, + -τροφια, ⟨ τρέφειν, nourish.] Wasting of the body resulting from the persistent vomiting of food.

emetic-root (ē-met′ik-rot), *n.* The flowering spurge, *Euphorbia corollata*. See *spurge*[2].

emetocatharsis (em′e-tō-ką-thär′sis), *n.* [NL., ⟨ Gr. ἔμετος, vomiting, + καθαρσις, purging.] Combined vomiting and purging.

emetomorphine (em′e-tō-mor′fin), *n.* [Gr. ἔμετος, vomiting, + E. *morphine*.] Same as *apomorphine*.

E. M. F.—**Contact E. M. F.** See *contact* ★*electromotive force*.

emfasis, emfasize, emfatic. Simplified spellings of *emphasis*, etc.

emigrant, *n.* **2.** In *biol.*, one of a generation of parthenogenetic insects which migrate from the plant upon which they were born to a plant of another kind upon which they multiply.

A winged parthenogenetic generation frequently appears, and then may migrate to a different plant there to reproduce itself, and in a later generation return to the original host. . . . These generations have been distinguished . . . as *emigrants*, *alienocolæ*, and *remigrants*.
Proc. Amer. Philos. Soc., 1903, p. 297.

emigrationist (em-i-grā′shọn-ist), *n.* [*emigration* + *-ist*.] One who favors or advocates emigration—for example, as a remedy for dull times, overcrowding, or the like.

emigratory (em′i-grą-tō-ri), *a.* Migratory. [Rare.]

Emilia (ē-mil′i-ą), *n.* [NL. (Cassini, 1817), appar. from a personal name.] A genus of plants of the family *Asteraceæ*, allied to *Senecio*, but with simple involucre, no ray-florets, and achenia with 5 acute ciliate angles. They are natives of Africa, tropical Asia, and Oceanica. They are of general interest only from the tassel-flower or lady's paint-brush, an old-fashioned garden annual known under a number of botanical names, being referred to both *Senecio* and *Cacalia*, but now distinguished as *Emilia sagittata*. It is an attractive plant of easy culture, bearing small scarlet or sometimes golden-yellow heads.

Emilian, *a.* **II.** *n.* An inhabitant of the province of Emilia, Italy.

Emin red. See ★*red*[1].

eminent, *a.* **5.** In *mineral.*, highly perfect: said of cleavage.

emission, *n.* **Coefficient of emission.** See ★*coefficient*. **Emission spectrum.** See ★*spectrum*.—**Selective emission,** emission of light confined to certain regions of the spectrum; selective radiation.

emission-band (ē-mish′ọn-band), *n.* In *optics*, a band of light, or of infra-red or ultra-violet radiation, occupying a limited region of the spectrum. Emission-bands are distinguished from bright lines in the spectrum by the fact that they are not monochromatic.

emission-line (ē-mish′ọn-lin), *n.* One of the bright lines in the spectrum of an element: opposed to *absorption-line*.

emissivity, *n.* Specifically—**2.** A physical constant by means of which the power of radiation of a body is quantitatively expressed. It

is the quantity of heat emitted per second by a square centimeter of the surface of the body when the difference of temperature between the body and its surroundings is one degree centigrade. *Emissivity* is frequently used as the equivalent of *emissive power* or *coefficient of emission*, which is the radiating power of the body as compared with that of an ideal black body at the same temperature. See *radiation*.

emmensite (em′en-zīt), *n.* [*Emmens* (see def.) + *-ite*[2].] A name given by Dr. Emmens of New York to a class of explosives proposed by him. The chief varieties were No. 3, for blasting, consisting of picric acid with sodium and ammonium nitrates; No. 239, for military and naval use, consisting of the same ingredients and dinitrobenzene; and No. 5, proposed as a substitute for gunpowder, consisting of picric acid, sodium nitrate, and charcoal or flour.

emmer (em′ėr), *n.* [G. *emmer*, a dial. form of *amer*: see *amer-corn*.] A species of wheat, *Triticum dicoccum*; amel-corn. Though commonly known as *Russian spelt*, it differs markedly from true spelt, having the heads much flattened and very compact, the spikelets in two rows, almost always bearded, and usually two-seeded, and being much more hardy. It is produced in some quantity in Russia and several European countries, but the grain is used rather for grits, porridge, etc., than for bread. Varieties have recently been experimentally introduced into the United States. See *amel-corn* and *nommer*.

emoloa (ā-mo-lō′ä), *n.* [Hawaiian **emoloa*.] A grass, *Eragrostis variabilis*, indigenous to the Hawaiian Islands. It grows in tufts from one to three feet high, and is distinguished from all other Hawaiian grasses by the roughness of its rachis and branches of the panicle. Also called *kalamalo*.

emolumentary (ē-mol-u-men′tā-ri), *a.* [*emolument* + *-ary*[1].] Productive of emolument or profit; financially advantageous.

emotion, *n.* **Asthenic emotion,** in *psychol.*, weakening, depressing, paralyzing emotion: thus, fear and anxiety are *asthenic emotions*. The distinction between sthenic and asthenic emotions is due to Kant.—**Sthenic emotion,** in *psychol.*, emotion which is accompanied by heightened muscular innervation and the corresponding feelings of power or activity, such as joy or anger: opposed to *asthenic* emotion.

Emotional memory. Same as ★*affective memory*.

emotionalize (ē-mō′shon-al-īz), *v. t.*; pret. and pp. *emotionalized*, ppr. *emotionalizing*. To render emotional; infect with emotional excitement; regard as a mere matter of emotion.

A pious family, where religion was not *emotionalized*.
Froude, Carlyle, I. v.

emperor, *n.* 4. [*cap.*] The trade-name of a standard quality of fine English drawing-paper made in sheets 72 by 48 inches.—**Goatweed emperor,** a nymphalid butterfly, *Anæa andria*, whose larva feeds on the goatweed: found in the western United States from Illinois to Texas. **Gray emperor,** a nymphalid butterfly, *Chlorippe celtis*, whose larva feeds on hackberry.

empetraceous (em-pe-trā′shius), *a.* Belonging to the plant-family *Empetraceæ*.

Empetrichthys (em-pe-trik′this), *n.* [NL., < Gr. ἐν, in, + πέτρα, rock, + ἰχθύς, fish. The

Death Valley Fish (*Empetrichthys merriami*, Gilbert).

name alludes to the large pharyngeal bones.] A genus of pœcilioid fishes remarkable for the great size of the pharyngeal bones and teeth. *E. merriami* is found in the desert springs of Death Valley, California.

emphraxis (em-frak′sis), *n.* [NL., < Gr. ἔμφραξις, obstruction, < ἐμφράσσειν, shut up, < ἐν, in, + φράσσειν, fence in, shut up.] Obstruction of a canal or duct by some morbid product.

emphysema, *n.*—**Subcutaneous** or **surgical emphysema.** Same as *interstitial emphysema*.

empided (em′pi-did), *n.* and *a.* **I.** *n.* A member of the family *Empididæ*.

II. *a.* Of or belonging to the dipterous family *Empididæ*.

Empire style, a name applied, in the history of French decorative art, to the types developed during the supremacy of Napoleon I., especially by the imperial architects Percier and Fontaine. Interesting examples of the empire style are illustrated in Percier and Fontaine's "Recueil des Décorations Intérieures" (Paris, 1801). The empire style is contemporaneous with the classical school of Jacques Louis David. See *French schools of* ★*painting*.—**The New Empire,** the great historical period inaugurated in ancient Egypt on the expulsion of the Hyksos or Shepherd Kings by Aahmes (Amasis), the founder of the eighteenth dynasty about 1700 B. C.

Empiric function. See ★*function*.

empiricistic (em-pir-i-sis′tik), *a.* [*empiricist* + *-ic*.] Same as *empiristic*.

An *empiricistic* psychology [of *Bernardino Telesio*], the singular completeness and consistency of which accounts for its wide influence on Italian philosophy.
Jour. Philos., Psychol. and Sci. Methods, May 26, 1904, [p. 30.]

empirico-psychological (em-pir″i-kō-sī-kō-loj′i-kal), *a.* Pertaining to or characteristic of empirical, as distinguished from speculative or philosophical, psychology.

The principle of psycholphysical parallelism has an *empirico-psychological* significance, and is thus totally different from certain metaphysical principles that have sometimes been designated by the same name.
W. Wundt (trans.), Outlines of Psychol., p. 318.

empiriocritical (em-pir″i-ō-krit′i-kal), *a.* Of or pertaining to empiriocriticism.

empiriocriticism (em-pir″i-ō-krit′i-sizm), *n.* [Gr. ἐμπειρία, experience, + NL. *criticismus*, criticism.] The system of philosophy of Richard Avenarius (1843-96), founded on pure experience, that is, natural experience conceptually amplified, clarified, and completed. The only assumption of the system not given in experience is supposed to be that the motions of our fellow-men have the same interpretation as our own. This is one of the most important philosophical developments of the latter half of the nineteenth century, but is understood by few, owing to the difficulty of its author's principal treatise and his employment of a novel terminology, which is insufficiently explained.

Empirio-criticism . . . is the hypothesis of the inseparability of subject and object, or . . . of ego and environment, in purely empirical, or à posteriori form.
Encyc. Brit., XXX. 668.

emplastrum (em-plas′trum), *n.*; pl. *emplastra* (-trä). [L., < Gr. ἔμπλαστρον, plaster.] Same as *plaster*, 1.

empleomania (em-plā″ō-mā-nē′ä), *n.* [Sp., < *empleo*, employ, + *manía*, mania.] A mania for public employment; a thirst for public office and its opportunities for personal enrichment.

The *empleomania*, which is the dry-rot of Spain, as it threatens to become of the United States, supplies every leader with a momentarily devoted band of adherents.
Lowell, in The Century, Nov., 1898, p. 144.

empress, *n.*—**Red empress,** an old English collectors' name for *Vanessa polychloros*, more commonly known as the large tortoise-shell.

emprosthotonic (em-pros-thō-ton′ik), *a.* [*emprosthotonos* + *-ic*.] Characterized by the tonic muscular spasm known as emprosthotonos.

emptor (emp′tor), *n.*; pl. *emptores* (-tō′rēz). [L., < *emere*, buy.] In *law*, a buyer. Its most frequent use is in the maxim *caveat emptor*, 'let the buyer take heed': that is, a purchaser of property without warranty takes it at his own risk.

empyema, *n.*—**Mastoid empyema,** suppurative inflammation of the mucous membrane which lines the cavities in the mastoid process.

Empyreal air. See ★*air*[1].

Emscherian (em-shē′ri-an), *n.* [G. *Emscher*, or *Emsche*, a small river in west Prussia.] In *geol.*, a division of the Senonian in western Europe, comprising the two Cretaceous substages, Coniacian and Santonian. It is preceded by the Turonian (Angoumian substage) and followed by the Campanian. In the Anglo-Parisian Basin it is characterized by *Micraster cor-testudinarium* (Coniacian) and *M. cor-anguinum* (Santonian), and in southern France by *Hippurites*.

emu[1], *n.*, 2. (*d*) A name erroneously applied to the rhea, or South American ostrich.

emu-apple (ē′mū-ap″l), *n.* A name of two Australian trees and their fruits: (*a*) *Rancooria acidula* (*Owenia acidula* of F. von Mueller), belonging to the mahogany family, with fruits the size of a small peach, which are eaten by the colonists and aboriginals. (*b*) Same as ★*bitter-bark*, 1.

emu-bush (ē′mū-bush), *n.* A name of two Australian shrubs or small trees, *Stenochilus longifolius*, of the family *Myoporaceæ*, and *Heterodendrum oleæfolium*, of the soapberry family, whose leaves are greedily eaten by sheep, affording food when grass and other herbage are killed by drought and heat. Called also *emu-tree*.

emulsifier (ē-mul′si-fī-ėr), *n.* An agent, such as gum arabic, employed to effect the emulsification of a fixed oil.

emulsion, *n.*—**Bromide emulsion,** in *photog.*, finely divided silver bromide suspended in gelatin. It is made by adding silver nitrate and a soluble bromide to warm gelatin, cooling the mass, and thoroughly washing the jelly. The mass is next worked into a state of fine division. All operations are conducted in a dark room.—**Chlorid emulsion,** in *photog.*, an emulsion consisting of silver chlorid suspended in gelatin: largely used in the preparation of lantern-slides. It is not so rapid in action as the bromide emulsion.—**Chloriodobromide emulsion,** in *photog.*, finely divided silver chlorid, bromide, and iodide suspended in gelatin.—**Chlorobromide emulsion,** in *photog.*, finely divided silver chlorid and bromide suspended in gelatin.—**Collodiobromide emulsion,** in *photog.*, finely divided silver bromide held in suspension in collodion. Used in the preparation of sensitive surfaces on glass or paper.—**Collodiobromochlorid emulsion,** in *photog.*, finely divided silver bromide and silver chlorid held in suspension in collodion: used in the preparation of sensitive surfaces on glass or paper.—**Collodiochlorid emulsion,** in *photog.*, an emulsion consisting of silver chlorid in a finely divided state held in suspension in collodion. Two varieties are made: one needing development when used, the other serving for 'printing-out.'—**Collodion-albumin emulsion,** in *photog.*, an emulsion consisting of collodion to which a small quantity of albumin has been added, together with zinc bromide and silver nitrate, to render it sensitive to light.—**Collodion emulsion,** in *photog.*: (*a*) *Washed*, a collodion sensitized by the use of zinc bromide, silver nitrate, and nitric acid, and allowed to evaporate. The pellicle is washed with water, then with alcohol, and is afterward emulsified with ether and alcohol. (*b*) *Unwashed*, a collodion containing finely divided silver bromide held in suspension.—**Gelatin emulsion,** finely divided sensitive silver compounds suspended in gelatin.—**Gelatinobromide emulsion,** finely divided silver bromide held in suspension in gelatin.—**Gelatinochlorid emulsion,** in *photog.*, finely divided silver chlorid suspended in gelatin. The image produced is latent and requires development. When a certain percentage of free silver nitrate is added the image is printed out by the action of light.—**Kerosene emulsion.** See *kerosene-soap* ★*emulsion*.—**Kerosene-soap emulsion,** an emulsion of kerosene and soap, used as a standard insecticide. The best formula is kerosene 2 gallons, whale-oil soap ½ pound, water 1 gallon. The soap, finely divided, is dissolved in boiling water and immediately added to the kerosene. The mixture is then violently agitated while hot until it has increased somewhat in bulk and has assumed the consistency of cream. It will keep indefinitely and should be diluted only when used. *Yearbook U. S. Dept. Agr.*, 1899, p. 150. **Silver emulsion,** in *photog.*, an emulsion containing silver in the form of bromide, chlorid, or iodide, or a mixture of these held in suspension in a viscous material, as collodion, gelatin, etc.

emulsor (ē-mul′sor), *n.* [NL. **emulsor*, < L. *emulgere*, milk out: see *emulsion*.] An apparatus for lifting water by an air-lift, that is, by forcing air down a tube and allowing it to escape at the mouth of a vertical discharge-pipe. As the air rises it carries water along with it.

emu-tree (ē′mū-trē), *n.* Same as ★*emu-bush*.

emydosaurian (em″i-dō-sâ′ri-an), *a.* and *n.* **I.** *a.* Relating to or having the characters of the *Emydosauria*.

II. *n.* A member of the order *Emydosauria*; a crocodilian.

en., enc. Abbreviations of *encyclopedia*.

enable, *v. t.*—**Enabling act,** an act or a statute which removes a restriction or disability and empowers a person or a corporation to do what he or it could not do.

enaction (e-nak′shon), *n.* [*enact* + *-ion*.] The act of enacting or the state of having been enacted or made law; enactment.

enactory (e-nakt′ō-ri), *a.* [*enact* + *-ory*.] Of the nature of an enactment or of enactments; relating to enactments: as, bills *enactory* and declaratory.

enaena (ā-nä-ā′nä), *n.* [Hawaiian **enaena*.] A composite plant, *Gnaphalium luteo-album*, widely distributed over the warmer parts of the earth, with heads of brownish flowers. See *Jersey livelong*, under *livelong*[2]. [Hawaii.]

enalid (en′a-lid), *n.* [NL. *Enalus*, also *Enhalus* (L. C. Richard) (see def.) (< Gr. ἐν, in, + ἅλς, sea), + *-id*[2].] A plant with the œcological character of the genus *Enhalus*, family *Vallisneriaceæ*. See *sea-grass*.

enamel, *n.* **8.** The firm white substance which covers the bony scales of some ganoid fishes.—**Bilston enamel,** painted enamel on copper produced at Bilston, Staffordshire, England, in the latter half of the eighteenth century: usually consisting of small objects such as snuff-boxes, patch-boxes, and trinkets. Compare *Battersea enamel*, under *enamel*.—**Cluny enamel,** pottery decorated with colored enamels by the method practised at Cluny and Longwy, France, and at other places. Outlines of the designs are first applied to the surface of the ware in black or dark color containing iron, which repels the enamels. The spaces between are then filled in with relief enamel colors, which, after firing, resemble cloisonné enameling, appearing as convex drops, raised in the center and thin at the edges. Also called *Longwy enamel*.—**Longwy enamel.** Same as *Cluny* ★*enamel*.—**Stanniferous enamel,** in *ceram.*, a thick, opaque glaze, of milky whiteness, containing oxid of tin; tin enamel. It resembles white-lead paint. This enamel is used on majolica and delf.—**Tin enamel.** Same as *stanniferous* ★*enamel*.

enamel-cell (e-nam′el-sel), *n.* One of the cells which are concerned in producing the enamel in the embryonic tooth; an adamantoblast or ameloblast.

enameling-furnace (e-nam′el-ing-fėr″nās), *n.* A furnace used for vitrifying the enamel coating on metal, glass, or biscuit. The work is placed in a muffle, which consists of an arched chamber in the midst of a small furnace.

enameling-lamp (e-nam′el-ing-lamp), *n.* A glass-blower's lamp with a blowpipe for performing some of the more delicate surface ornamentation on glass.

enamel-prism (e-nam′el-prizm), *n.* One of the microscopic rods, set side by side in close con-

tact, of which the enamel of the teeth is formed. In section they are five- or six-sided, hence the term.

enamel-pulp (e-nam'el-pulp), *n.* The central portion of the enamel-organ lying between the cubical cells and the enamel-membrane which incloses the superior part of the dental papilla.

enanthem (en'an-them), *n.* Same as *enanthema.*

enanthematous (en-an-them'ą-tus), *a.* Relating to or affected with an enanthema.

enanthylic, *a.* Same as *œnanthylic.*

enantiobiosis (e-nan-ti-ō-bī-ō'sis), *n.* [NL., < Gr. ἐναντίος, opposite, + βίωσις, living.] The living together of organisms which mutually impede each other's development.

Enantioliparis (ē-nan-ti-ō-lip'ą-ris), *n.* [NL., < Gr. ἐναντίος, opposite, + NL. *Liparis.*] A genus of snail-fishes of the family *Liparidæ,* found in the Antarctic Ocean.

enantiomorph (e-nan'ti-ō-môrf″), *n.* [Gr. ἐναντίος, opposite, + μορφή, form.] Noting the stereomeric isomer of a compound containing one or more asymmetric carbon atoms: thus, levorotatory lactic acid is the enantiomorph of the dextrorotatory acid, and vice versa. The word is also used of crystals.

enantiomorphism (e-nan″ti-ō-môr'fizm), *n.* **1.** The property or condition of being enantiomorphous. Specifically—**2.** In *crystal.,* the relation of similarity of form between crystals which are not superposable, so that one of two crystals differs from the other as it differs from its own image in a mirror. See *enantiomorphous.*

enantiomorphously (e-nan″ti-ō-môr'fus-li), *adv.* In an enantiomorphous manner: as, *enantiomorphously* related crystals.

enantiotropic (e-nan″ti-ō-trop'ik), *a.* [Gr. ἐναντίος, opposite, + -τροπος, < τρέπειν, turn.] In *phys. chem.,* capable of transformation in opposite directions.

Sulphur is *enantiotropic:* if rhombic sulphur, which is stable below 96° C., is kept at a temperature above 96° C. but below its melting point, it is transformed into monoclinic sulphur; and if monoclinic sulphur, which is stable at temperatures between 96° C. and its melting point, is kept below 96° C., it is transformed into rhombic sulphur.
H. C. Jones, Prin. Inorganic Chem., p. 172.

enantiotropy (e-nan-ti-ot'rō-pi), *n.* The state or condition of being enantiotropic. *A. Findlay,* The Phase Rule, p. 42.

Enargea (en-är-jē'ą), *n.* [NL. (Banks, 1788), < Gr. ἐνάργεια, clearness, distinctness, < ἐναργής, clear, distinct.] A genus of plants of the family *Liliaceæ.* See *Luzuriaga.*

enarkyochrome (en-är'ki-ō-krōm), *n.* [Gr. ἐν, in, + ἀρκύς, a net, + χρῶμα, color.] In *neurol.,* a nerve-cell in which fine threads of chromatic substance connect the nodal points in the nuclear network or reticulum.

enate (ē'nāt), *n.* [L. *enatus,* pp. of *enasci,* be born, < *e,* out, + *nasci,* be born. Cf. *agnate, cognate.*] A relative on the mother's side.

enatic (ē-nat'ik), *a.* [*enate* + *-ic.*] Pertaining to or characteristic of a clan in which descent is reckoned from mother to children: opposed to *agnatic,* which designates clans in which descent is reckoned from father to children. *Giddings,* Prin. of Sociol., p. 167.

en axe (oṅ äks), [F.] In or upon the axis: used in architecture. Thus, an entrance-door or a fireplace may be on the principal axis of the room, and is then said to be *en axe.*

en barbette (oṅ bär-bet'). [F.] In barbette; so as to fire over the parapet. See *barbette.*

encarditis (en-kär-dī'tis), *n.* Same as *endocarditis.*

encash (en-kash'), *v. t.* [*en-*[1] + *cash*[1], after F. *encaisser.*] **1.** To turn (a note, draft, or check) into cash; cash.—**2.** To convert into cash; obtain in the form of cash; realize in cash.

encelialgia, encœlialgia (en-sē-li-al'ji-ą), *n.* [NL. *encœlialgia,* < Gr. εγκοίλια, the intestines, + ἄλγος, pain.] Pain located in any of the abdominal viscera.

encelitis, encœlitis (en-sē-lī'tis), *n.* [NL. *encœlitis,* < Gr. εγκοίλια, the intestines, + *-itis.*] Inflammation of one or more of the abdominal viscera.

encephalin (en-sef'ą-lin), *n.* [Gr. ἐγκέφαλος, brain, + *-in*[2].] A derivative of cerebrin.

encephalodialysis (en-sef″ą-lō-dī-al'i-sis), *n.* [NL., < Gr. ἐγκέφαλος, brain, + διάλυσις, dissolution.] Softening of the brain.

encephalolith (en-sef'ą-lō-lith), *n.* [Gr. ἐγκέφαλος, brain, + λίθος, stone.] A concretion within the brain-substance.

encephalomalacosis (en-sef″ą-lō-mal-a-kō'sis), *n.* [NL., < Gr. ἐγκέφαλος, brain, + μαλακός, soft, + *-osis.*] Same as *encephalomalacia.*

encephalomalaxis (en-sef″ą-lo-ma-lak'sis), *n.* [NL., < Gr. ἐγκέφαλος, brain, + μαλαξις, softening, < μαλάσσειν, soften, < μαλακός, soft.] Same as *encephalomalacia.*

encephalomeningocele (en-sef″ą-lō-mē-ning'gō-sēl″), *n.* [Gr. ἐγκέφαλος, brain, + μήνιγξ, membrane, + κήλη, tumor.] Protrusion, through a fissure of the skull, of brain-substance with a portion of the attached membranes.

encephalomeric (en-sef-ą-lō-mer'ik), *a.* Of or relating to an encephalomere or brain-segment.

encephalometric (en-sef-ą-lō-met'rik), *a.* [Gr. ἐγκέφαλος, brain, + μέτρον, measure, + *-ic.*] In *anat.,* relating to measurements of the brain.

encephalomyelitis (en-sef″ą-lō-mī-e-lī'tis), *n.* [NL., < Gr. ἐγκέφαλος, brain, + μυελός, marrow, + *-itis.*] Inflammation of both the brain and the spinal cord.

encephalopathic (en-sef-ą-lop'ą-thik), *a.* Of, pertaining to, or of the nature of encephalopathia, or disease of the brain.

encephalorachidian (en-sef″ą-lō-rā-kid'i-ąn), *a.* [Gr. ἐγκέφαλος, brain, + ῥάχις, spine, + *-id* + *-ian.*] Same as *cerebrospinal.*

encephalorhachidian, *a.* See ★*encephalorachidian.*

encephaloscope (en-sef'ą-lō-skōp), *n.* [Gr. ἐγκέφαλος, brain, + σκοπεῖν, view.] A tubular device resembling a speculum, with a reflecting mirror or electric light attachment: used for inspecting the brain in operations on the cranium.

encephaloscopy (en-sef″ą-los'kō-pi), *n.* [*encephaloscope* + *-y*[3].] Examination (not necessarily visual) of the brain.

enchannel (en-chan'el), *v. t.;* pret. and pp. *enchanneled* or *enchannelled,* ppr. *enchanneling* or *enchannelling.* [*en-*[1] + *channel.*] To confine within its proper channel.

Enchanter's plant, the common vervain, *Verbena officinalis.*

Enchodontidæ (eng-kō-don'ti-dē), *n. pl.* [NL., < *Enchodus* (*-odont-*) + *-idæ.*] A family of extinct teleost fishes whose rapacious habit is indicated by their powerful jaws and teeth. The species were without scales, but bore a series of dorsal and lateral bony scutes. They are found only in Cretaceous rocks.

Enchodus (eng'kō-dus), *n.* [NL., < Gr. ἐγχος, a spear, + ὀδούς (ὀδοντ-), a tooth.] The typical genus of the *Enchodontidæ.*

enchondrosis (en-kon-drō'sis), *n.;* pl. *enchondroses* (-sēz). [NL., < Gr. ἐν, in, + χόνδρος, cartilage, + *-osis.*] An outgrowth from cartilage; also, a tumor composed of cartilage, or *chondroma.*

enchyma (eng'ki-mą), *n.* [NL., < Gr. ἐγχυμα, an infusion: see *enchymatous.*] A liquid elaborated from chyme and used in the formation of the living cells and tissues.

Enchytræidæ (eng-ki-trē'i-dē), *n. pl.* [NL., < *Enchytræus* + *-idæ.*] A family of limicolous *Oligochæta,* consisting of small worms having straight or curved setæ, sometimes a single pair of calciferous glands, a dorsal vessel in the anterior region, and usually a single pore on the præstomium. It contains *Enchytræus, Pachydrilus,* and several other genera found in fresh and salt water and in damp earth.

Enchytræus (eng-ki-trē'us), *n.* [NL., < Gr. ἐν, in, + χύτρα, an earthen pot: see *chytra.*] The typical genus of the family *Enchytræidæ. Henle,* 1837.

encinillo (en-thē-nēl'yō), *n.* [Sp., dim. of *encina,* oak. It resembles certain European species of oak.] In Porto Rico, an indigenous shrub of the spurge family, *Drypetes ilicifolia.*

encliticism (en-klit'i-sizm), *n.* [*enclitic* + *-ism.*] In *gram.,* the tendency of a symbolic word to lose its accent in a stronger adjacent (like an enclitic) word. *J. Earle,* Philol. Eng. Tongue, ¶ 254.

encœlialgia, encœlitis, *n.* See ★*encelialgia,* ★*encelitis.*

encoffinment (en-kof'in-ment), *n.* [*en-* + *coffin* + *-ment.*] The act of placing a corpse in a coffin; coffining.

encoil (en-koil'), *v. t.* [*en-*[1] + *coil*[1].] To wrap or hold captive in, or as in, a coil. *P. J. Bailey,* Festus.

encolumn (en-kol'um), *v. t.* [*en-*[1] + *column.*] To ornament with columns: as, *encolumned* walls.

encomienda (en-kō-mi-en'dä), *n.* [Sp., a commission, charge, grant, < ML. *in commendam:* see *commendam.*] In a special use, an estate in Spanish America, comprising land and Indian inhabitants, granted to one of the early military adventurers.

encorbelment (en-kôr'bl-ment), *n.* Corbeling (in the general sense of the projection of one mass or surface beyond the substructure) and the construction of it in masonry.

encounter, *n.* **Molecular encounter,** in *phys.,* a collision between two or more molecules of a gas, taking place during the translatory motion of each molecule, postulated by the kinetic theory of gases. See *gas,* 1.

encranial (en-krā'ni-ąl), *a.* [Gr. ἐν, in, + κρανίον, skull, + *-al*[1].] Same as *intracranial.*

Encrinal limestone. See ★*limestone.*

Encrinasteriæ (eng″kri-nas-tē'ri-ē), *n. pl.* [NL., < *Encrinus,* + Gr. ἀστήρ, a star.] A subclass of the *Asteroidea* or starfishes. They are of paleozoic age and characterized by the alternate meeting in the middle of the ambulacral groove of the slightly inclined ossicles and by the position of the madreporite on the oral side of the disk.

Encrinite limestone. See ★*limestone.*

encrinoid (eng'kri-noid), *a.* Pertaining to or having the characters of the pelmatozoan order *Encrinoidea.*

encurage, *v. t.* A simplified spelling of *encourage.*

encyclopedize, encyclopædize (en-sī'klō-pē-dīz″), *v. t.;* pret. and pp. *encyclopedized, -pædized,* ppr. *encyclopedizing, -pædizing.* [*encyclopedia* + *-ize.*] To treat, describe, or arrange as in an encyclopedia, or with encyclopedic fullness, accuracy, and system: as, to *encyclopedize* knowledge.

end, *n.* **10.** One length of a piece of woven woolen or cotton goods. In dyeing, 'goods given four *ends*' means that the piece is passed through the coloring-liquor four times.

11. In *mining,* that one of two vertical sets of joints in coal which shows the rougher surface. [Eng.] *Geikie,* Text-book of Geol., p. 660.—**Both ends against the middle,** a system of dealing at faro with prepared cards, so that if the end of the layout wins the middle shall lose, or vice versa.—**Change of end,** in *cricket,* the shifting of a bowler from one wicket to the other. **End-on tube.** See ★*tube.*—**Law of heterogony of ends,** in Wundt's psychology and ethics, the principle that "manifestations of will, over the whole range of man's free voluntary actions, are always of such a character that the effects of the actions extend more or less widely beyond the original motives of volition, so that new motives are originated for future actions, and again, in their turn, produce new effects." *W. Wundt* (trans.), Ethics, I. 330.—**Open-end straight.** See ★*straight.*

endangiitis (en-dan-ji-ī'tis), *n.* [NL., < *endangium* + *-itis.*] Inflammation of the lining membrane of a lymphatic or blood-vessel.

endangium (en-dan-jī'um), *n.;* pl. *endangia* (-ą). [NL., < Gr. ἐνδον, within, + ἀγγεῖον, vessel.] Same as *intima.*

endaortic (en-dā-ôr'tik), *a.* [NL. **endaorta* (Gr. ἐνδον, within, + ἀορτή, aorta) + *-ic.*] Referring to the interior or the lining membrane of the aorta.

endaortitis (end-ā-ôr-tī'tis), *n.* [NL., < **endaorta* + *-itis.*] Inflammation of the lining membrane of the aorta.

endarterial (end-är-tē'ri-ąl), *a.* [Gr. ἐνδον, within, + ἀρτηρία, artery, + *-al.*] Relating to the interior of an artery.

endarteritic (end″är-tē-rit'ik), *a.* Relating to or affected with endarteritis.

Endarteritis deformans of Virchow. Same as ★*arteritis deformans.*—**Endarteritis obliterans,** endarteritis of the smaller vessels, causing occlusion.—**Endarteritis proliferans,** a chronic degenerative process marked by an overgrowth of fibrous tissue in the inner layers of the arteries.

end-brush (end'brush), *n.* The terminal ramification of a motor nerve-fiber in the granular sole of a Doyère's elevation on the side of a muscle-fiber.

end-bud (end'bud), *n.* An organ consisting of a number of sensory cells, each bearing sensory hairs, compacted into a bud-like mass. Such organs are scattered over the surface of the body of fishes, but in mammals are confined to the mouth cavity and serve as organs of taste.

Allied to the sense organs of the lateral line are structures known as *end buds.*
J. S. Kingsley, Vert. Zool., p. 68.

end-chase (end'chās), *n.* End play; end motion; motion axially along a shaft.

end-correction (end'kō-rek″shon), *n.* In *phys.,* the correction to be applied in the determination of the thermal, electrical, or magnetic conductivity of a rod or of the magnetic flux within a coil or of the capacity of a cylindrical condenser, on account of the

effect of the ends of the rod or cylinder upon the quantity to be computed.

endecanaphthene (en-dek-a-naf′thēn), *n.* [Prop. *hendeca*; < Gr. ἕνδεκα, eleven, + *naphthene*.] A colorless, liquid hydrocarbon, $C_{11}H_{22}$, found in Baku petroleum. It boils at 179–181° C.

endeiolite (en-dī′ọ-līt), *n.* [Gr. ἔνδεια, want, lack, + λίθος, stone. Analysis showed a large loss, assumed to be silica.] A rare mineral from southern Greenland, of uncertain composition but containing niobium, zirconium, cerium, iron, calcium, sodium, and probably silicon: it is allied to pyrochlore and occurs in chocolate-brown octahedrons.

endemia (en-dē′mi-ạ̈), *n.* An endemic disease.

endemic, *a.*, 2. (*b*) In *phytogeog.*, properly, confined to a particular region, whether indigenous or not: sometimes confused with *indigenous*. Originally used (A. P. De Candolle, 1820) of genera whose species are all grouped in one region; later, also of species whose distribution is similarly limited. Compare ★*polydemic*, ★*pandemic*, and *sporadic*.

endemio-epidemic (en-dē″mi-ọ-ep-i-dem′ik), *a.* Noting an endemic disease when it suddenly assumes increased virulence and attacks a large proportion of the population.

endemiological (en-dē″mi-ọ-loj′i-kạl), *a.* Pertaining or relating to endemiology.

endermically (en-dėr′mi-kal-i), *adv.* In *med.*, by the endermic method of administering certain medicines, that is, by direct application to the skin.

end-game (end′gām), *n.* In *chess*, the third or last stage of a game, arising after the forces on both sides have been sufficiently diminished to make the pawns the paramount issue. The other stages are the opening and the middle games.

endite (en′dīt), *n.* [Gr. ἔνδον, within, + *-ite*[2].] One of the processes on the inner or mesial border of the leaf-like abdominal appendages of the branchiopod *Crustacea*.

endive, *n.*—**Sea-endive,** any seaweed of the genus *Haloseris*, translating the genus name.

end-measure (end′mezh-ụ̈r), *n.* A measure of length which is defined by the distance between certain points in the surfaces of the ends of a bar, and not by the distance between lines engraved on the bar. *Nature*, Aug. 7, 1902, p. 350.

end-moraine (end′mọ-rān″), *n.* A terminal moraine.

end-motion (end′mō″shọn), *n.* Axial motion; the motion of a part of a machine along the line of its shaft, as distinguished from its motion of rotation.

endoabdominal (en″dọ-ab-dom′i-nạl), *a.* [Gr. ἔνδον, within, + L. *abdomen*, abdomen, + *-al*[1].] Situated or occurring in the abdomen.

endobiotic (en″dọ-bī-ot′ik), *a.* [Gr. ἐνδον, within, + βίωσις, way of living: see *biotic*.] Living as a parasite within the tissue of the host, as *Chrysophlyctis endobiotica* in potato tubers.

Endobranchiata (en-dọ-brang-ki-ā′tạ̈), *n. pl.* [NL., < Gr. ἐνδον, within, + βράγχια, gills: see *branchiate*.] A group of regular *Echinoidea*, having the mouth and anus at opposite poles, the anus surrounded by the apical system of plates when they are present, and no external gills. It includes the orders *Bothriocidaroida*, *Cystocidaroida*, *Cidaroida*, *Melonitoida*, and *Plesiocidaroida*. Compare ★*Ectobranchiata*.

endocannibalism (en-dọ-kan′i-bạl-izm), *n.* [Gr. ἔνδον, within, + E. *cannibalism*.] Cannibalism within the family; the custom of eating parents and relatives. *Keane*, Man Past and Present, p. 79.

Endocardial murmur. See ★*murmur*.

endocarditis, *n.*—**Infectious** or **ulcerative endocarditis,** a septic form, marked by ulceration of the valves, leading to loss of substance and permanent impairment of function.—**Plastic endocarditis,** a form of endocarditis marked by a fibrinous exudate which causes adhesions of the valves to the neighboring parts.

endocellular (en-dọ-sel′ū-lạ̈r), *a.* [Gr. ἔνδον, within, + L. *cellula*, cell, + *-ar*[3].] Within a cell; intracellular.

Endoceras (en-dos′e-ras), *n.* [NL., < Gr. ἔνδον, within, + κέρας, horn.] A genus of Silurian nautiloid cephalopods of the family *Endoceratidæ*, characterized by the development of the endocones inclosing a central canal, the endosiphuncle, and by the projection of the funnels from one septum apically toward the next.

Endoceratida (en″dọ-se-rat′i-dạ̈), *n. pl.* [NL., < *Endoceras* (*-cerat-*) + *-ida*.] A subdivision of the order *Nautiloidea* of the tetrabranchiate *Cephalopoda*, characterized by large tubular siphuncles and a complete isolation, by the funnels, of the interior of the siphuncle from the interior of the cameræ.

endoceratite (en-do-ser′a-tīt), *n.* [As *Endoceras* (*-at-*) + *-ite*[2].] A member of the genus *Endoceras*.

endoceratitic (en-do-ser-a-tit′ik), *a.* [*endoceratite* + *-ic*.] Having an endosiphon, as cephalopods.

endochylous (en-dọ-kī′lus), *a.* [Gr. ἔνδον, within, + χυλός, juice, moisture, + *-ous*.] In *bot.*, placed inside the chlorenchyma: said of aqueous tissue which serves as a defense against physiological dryness, as in *Cactaceæ* and most other stem succulents. *A. F. W. Schimper*.

endoclinal, *a.* 2. In *geol.*, pertaining to or of the nature of an endocline.

Finally he proved that the complicated tectonics of the Silurian tableland, its endless overfolds, its *endoclinal* and exoclinal structures, can be unravelled by means of the graptolite zones.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 625.

endocline (en′dọ-klīn), *n.* In *geol.*, a fan-fold of anticlinal type.

endocœle (en′dọ-sēl), *n.* [Gr. ἔνδον, within, + κοῖλος, hollow.] The cavity in the endoderm; the archenteron.

endocolitis (en″do-kọ-lī′tis), *n.* [NL., < Gr. ἔνδον, within, + κόλον, colon, + *-itis*.] Inflammation of the lining membrane of the colon.

endocomplement (en-dọ-kom′plẹ-ment), *n.* [Gr. ἔνδον, within, + E. *complement*.] A complement which occurs in the body of a cell, in contradistinction to complements which occur free in the serum.

endoconal (en-dọ-kōn′ạl), *a.* [*endocone* + *-al*[1].] Relating to an endocone.

endocorpuscular (en″dọ-kôr-pus′kū-lạ̈r), *a.* [Gr. ἔνδον, within, + NL. *corpusculum*, corpuscle, + *-ar*[3].] Within a corpuscle, especially a blood corpuscle.

endocrane (en′dọ-krān), *n.* Same as *endocranium*.

endocranium, *n.* 2. The lining membrane of the skull; the dura mater.

endocrystallic (en″dọ-kris-tal′ik), *a.* [Gr. ἐνδον, within, + κρύσταλλος, crystal, + *-ic*.] In *petrog.*, a term used by J. D. Dana (1894) to describe that form of metamorphism which may be referred to the effects of pressure in modifying the structure of crystals, as in the production of secondary twinning, or in fracturing them.

endocystitis (en″dọ-sis-tī′tis), *n.* [NL., < Gr. ἔνδον, within, + κύστις, bladder, + *-itis*.] Inflammation of the mucous membrane of the urinary bladder or gall-bladder.

endoderm, *n.*—**Secondary endoderm,** in *embryol.*, a name for the endoderm cells which form the wall of the mesenteron or mid-gut in certain animals such as the insects, which have a primary endoderm in the form of vitellophags, or cells which are early set free into the yolk and aid in its assimilation by the growing embryo.

endodontitis (en″do-don-tī′tis), *n.* [NL., < Gr. ἔνδον, within, + ὀδούς (ὀδοντ-), tooth, + *-itis*.] Inflammation of the membrane which incloses the pulp-cavity of a tooth.

endoectothrix (en-dọ-ek′tō-thriks), *n.* [Gr. ἔνδον, within, + ἐκτός, without, + θρίξ, hair.] That form of the fungus causing tinea or ringworm which produces its mycelium and spores both on the exterior and on the interior of the affected hairs.

The spores in this variety are arranged in chains with short jointed mycelium here and there; these elements being in more or less profusion either in or outside the shaft or they may occupy both localities—*endo-ectothrix*.
Buck, Med. Handbook, VII. 781.

endoenzyme (en-dọ-en′zīm), *n.* [Gr. ἔνδον, within, + *enzyme*.] An intracellular ferment; a ferment which exercises its peculiar function within the cell.

endogamic (en-dọ-gam′ik), *a.* Same as *endogamous*.—**Endogamic mating.** See ★*mating*.

endogamy, *n.* 2. In *bot.*, the fusion or coalescence of two or more female gametes.

endogastric (en-dọ-gas′trik), *a.* [Gr. ἔνδον, within, + γαστήρ, stomach, + *-ic*.] Situated within the abdomen; coiled posteriorly, as the shell of *Spirula*. Compare ★*exogastric*. *Encyc. Brit.*, XXX. 795.

endogenesis (en-dọ-jen′e-sis), *n.* [NL., < Gr. ἔνδον, within, + γένεσις, origin, production.] The production of or the giving rise to structures from within: opposed to ★*ectogenesis*.

endogenetic, *a.* 2. Formed directly from solutions, as a rock, whether from silicate solutions (igneous magmas), aqueous solutions, or gaseous solutions (sublimation), including those formed through organic agencies. *Grabau*, 1904.

Endogenetic rocks may also be called nonclastic, since they are never composed of fragments of older rocks, as are the clastic rocks, though they include regenerated rocks or those in which the material of the older rocks has gone back to the original state of fusion or solution, from which it is then redeposited in a chemical way.
Amer. Geol., April 1904, p. 229.

endogenous, *a.* 3. In *geol.*, formed within a mass of rock or even within the earth itself: especially employed to describe the effects, in contact-metamorphism, produced in the intrusive rock itself, as distinguished from those in the walls. The common endogenous results are a dense or even felsitic or glassy texture due to the relatively quick chill.

endogeny (en-doj′e-ni), *n.* [Gr. ἔνδον, within, + -γένεια, < -γενής, -produced.] 1. Same as ★*endogenesis*.—2. In sporozoans, sporulation taking place while the cyst is within the host. Compare ★*exogeny*.—3. Same as *endogamy*.

endoglobular (en″dọ-glob′ụ-lạ̈r), *a.* [Gr. ἔνδον, within, + L. *globulus*, globule, + *-ar*[3].] Situated or occurring within a blood-globule, especially an erythrocyte. *Jour. Exper. Med.*, March 25, 1901, p. 473.

endognath (en′dog-nath), *n.* [Gr. ἔνδον, within, + γνάθος, jaw.] The inner branch of a gnathite or mouth-appendage in crustaceans. *Proc. Zool. Soc. London*, 1899, p. 705.

endognathal (en-dog′na-thal), *a.* [Gr. ἔνδον, within, + γνάθος, jaw, + *-al*.] Within the jaw.

endognathion (en-dog-nā′thi-on), *n.*; pl. *endognathia* (-ạ̈). [NL., < Gr. ἔνδον, within, + γνάθος, jaw.] Same as *intermaxilla*.

endolabium (en-dọ-lā′bi-um), *n.*; pl. *endolabia* (-ạ̈). [NL., < Gr. ἔνδον, within, + L. *labium*, lip.] The tongue, lingua, or hypopharynx of an insect. It is placed inside the mouth and is attached to the labium.

endolemma (en-dọ-lem′ạ̈), *n.*; pl. *endolemmata* (-a-tạ̈). [NL., < Gr. ἔνδον, within, + λέμμα, scale.] In *histol.*, a structureless membrane lying beneath the exolemma and inclosing the axis-cylinder in the tail of certain spermatozoa.

endomesoderm (en-dọ-mes′ọ-dėrm), *n.* [Gr. ἔνδον, within, + μέσος, middle, + δέρμα, skin.] In *embryol.*, that portion of an embryo not yet differentiated into endoderm and mesoderm proper. Same as ★*mesentoderm*.

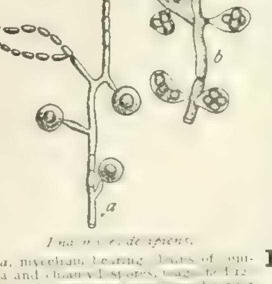
endometritis, *n.*—**Exfoliative endometritis,** inflammation of the mucous lining of the uterus with the casting off of the superficial portion of this membrane.—**Membranous endometritis,** a form of inflammation in which there is a fibrinous exudate which forms a false membrane.

endometry (en-dom′e-tri), *n.* [Gr. ἔνδον, within, + -μετρία, < μέτρον, measure.] The determination of the capacity of a cavity, especially that of the cranium.

endomorphic, *a.* Specifically—2. In *petrog.*, having the character of those phases of contact-metamorphism which are developed within the intrusive rock. See ★*endomorphism*.

endomorphism (en-dọ-môr′fizm), *n.* [Gr. ἔνδον, within, + μορφή, form, + *-ism*.] In *petrog.*, changes brought about within the mass of an intrusive igneous rock by contact with the intruded rock. The commonest modifications are in the crystallization of the intrusive rock, which is usually more finely grained, sometimes glassy, and often more porphyritic near the contact. Less often there are changes in the composition of the intrusive rock, resulting in some cases from differentiation within the igneous magma. In rare instances there has been a diffusion of material from the surrounding rock into the intruded rock. Also called *endomorphic contact-metamorphism*.

endomusia (en-dọ-mū′zi-ạ̈), *n.* [NL., < Gr. ἐνδον, within, + μοῖσα, muse.] In *psychol.*, a term suggested by Baldwin and Stout, on the analogy of *endophasia*, for 'internal song,' that is, for the mental processes which constitute melodic imagery and which may prompt to melodic expression. *Baldwin*, Dict. of Philos. and Psychol., I. 564.



Endomyces decipiens.

a, mycelium bearing chains of conidia and chlamydospores, magnified 12 times; *b*, portion of mycelium bearing asci, magnified 160 times.
(Drawn from Engler and Prantl's "Pflanzenfamilien.")

Endomyces (en-dom′i-sēz), *n.* [NL. (Reess, 1870), < Gr.

ἔνδον, within, + μύκης, fungus.] A genus of *Ascomycetes*, the type of the family *Endomycetaceæ*, having a loose mycelium bearing naked 4-spored asci at the ends of short, simple branches. So called from the fact that some of the species grow within the tissues of their host. *E. decipiens* is a parasite of *Armillaria mellea*. According to Ludwig certain species are concerned in producing the slime flux of trees.

Endomycetaceæ (en-dō-mī-se-tā'sē-ē), *n. pl.* [NL., < *Endomyces* (*Endomycet-*), + *-aceæ*.] A family of ascomycetous fungi named from the genus *Endomyces*. The asci are naked, that is, are not inclosed in an ascocarp, but are produced at the sides or end of the hyphæ.

endomyocarditis (en-dō-mī-ō-kär-dī'tis), *n.* [NL., < Gr. ἔνδον, within, + μῦς, muscle, + καρδία, heart.] Inflammation which involves both the lining membrane and the muscular substance of the heart.

endonomic (en-dō-nom'ik), *a.* [Gr. ἔνδον, within, + νόμος, custom, law.] Concerning or pertaining to the sort of selection which is due to the aptitude of a race for dealing with its environment.

This form of selection, determined by the aptitudes and habitudes of the species in dealing with the environment, I call *endonomic* selection.
T. Gulick, in Amer. Nat., Aug., 1904, p. 495.

endonuclear (en-dō-nū'klē-är), *a.* [Gr. ἔνδον, within, + L. *nucleus*, a nucleus, + *-ar*[3].] Situated or occurring within the nucleus of the cell: opposed to ★*ectonuclear*.

endopelvic (en-dō-pel'vik), *a.* [Gr. ἔνδον, within, + L. *pelvis*, basin (pelvis), + *-ic*.] Situated or occurring within the pelvis.

endopericardial (en″dō-per-i-kär'di-al), *a.* [Gr. ἔνδον, within, + περικάρδιον, pericardium, + *-al*.] Relating to both the endocardium and the pericardium.

endophasia (en-dō-fā'si-ä), *n.* [NL., < Gr. ἔνδον, within, + φάσις, speech.] In *psychol.*, internal speech: a term proposed by Morselli for the auditory or motor processes which constitute imagery of spoken words and which may prompt to verbal expression. *Baldwin*, Dict. of Philos. and Psychol., I. 564.

endophasic (en-dō-fā'sik), *a.* [*endophasia* + *-ic*.] Pertaining to endophasia or internal speech.

A person may be gifted with an excellent visual imagination of objects or words, and may yet use in his processes of ideation only the auditive images of words. He makes use in this case of a cerebral mechanism that connects the working of the intellectual centers with the sympathetic action of the *endophasic* center.
Amer. Inventor, May 1, 1904, p. 206.

endophragma (en-dō-frag'mä), *n.* [NL.] Same as *endophragm*.—**Endophragmal system**, in some crustaceans, a kind of internal skeleton consisting of a segmental series of calcified plates, projections of the ventral and lateral regions of the thoracic exoskeleton into the interior of the body, so arranged as to form a row of lateral chambers in which the muscles of the limbs lie, and a sternal canal which contains the thoracic portion of the nervous system.

Endophyllaceæ (en-dō-fi-lā'sē-ē), *n. pl.* [NL., < *Endophyllum* + *-aceæ*.] A small family of rust-fungi, of the order *Uredinales*, named from the genus *Endophyllum*: characterized by having the teleutospores produced in a chain-like series.

Endophyllum (en-dō-fil'um), *n.* [NL. (Léveillé, 1825), < Gr. ἔνδον, within, + φύλλον, leaf.] A genus of rust-fungi of the order *Uredinales*. They produce only teleutospores which form in chains and are surrounded by an æcidium-like peridium, more or less buried in the tissue of the host, whence the name. *E. Sempervivi* is parasitic on the leaves of *Sempervivum*.

endoplastron (en-dō-plas'tron), *n.* [NL.] Same as *entoplastron*.

endoplutonism (en-dō-plö'tō-nizm), *n.* [*endopluton-ic* + *-ism*.] In *petrol.*, the theory which assumes the cooling of a molten earth.

endoplutonist (en-dō-plö'tō-nist), *n.* [*endopluton-ic* + *-ist*.] One who advocates the theory of an originally molten earth.

endopod (en'dō-pod), *n.* Same as *endopodite*.

endoproct (en'dō-prokt), *n.* One of the *Endoprocta*.

Endopterygota (en″dop-ter-i-gō'tä), *n. pl.* [NL., < Gr. ἔνδον, within, + πτερυγωτός, winged.] A superorder of insects whose wings, in the early stages, are developed within the body. It includes the *Coleoptera, Diptera, Lepidoptera*, etc.

endopterygote (en-dop-ter'i-gōt), *a.* and *n.* **I.** *a.* Of or belonging to the superorder *Endopterygota*.
II. *n.* An insect of the superorder *Endopterygota*.

endopterygotic (en-dop-ter-i-gō'tik), *a.* Pertaining to, or characteristic of, the *Endopterygota*.

endopterygotism (en″dop-ter-i-gō'tizm), *n.* The development of wings in the early stages within the body, as with the *Endopterygota*.

We have no evidence that any Endopterygota existed amongst Palæozoic insects, so that the phenomena of *endopterygotism* are comparatively recent.
Encyc. Brit., XXIX. 562.

endopterygotous (en-dop-ter-i-gō'tus), *a.* Pertaining to or having the characteristics of the *Endopterygota*.

endorachis (en-dor'a-kis), *n.* [Also *endorhachis*; < Gr. ἔνδον, within, + ῥάχις, spine.] The delicate membrane which lines the spinal canal.

end-organ (end'ôr″gan), *n.* In *physiol.*, any specialized structure which forms the terminus of a path of nervous conduction: usually applied to the terminal organs at the periphery of the body.

The sensation which we isolate in the present experiment is the sensation whose peripheral *end-organ* is striped muscle, and whose stimulus is muscular contraction. *E. B. Titchener*, Exper. Psychol., I. ii. 144.

endosarcode (en-dō-sär'kōd), *n.* [Gr. ἔνδον, within, + σαρκώδης, σαρκοειδής, fleshy: see *sarcode*.] Same as *endoplasm* or *endosarc*.

endoscopy (en-dos'kō-pi), *n.* [Gr. ἔνδον, within, + -σκοπία, < σκοπεῖν, view.] Inspection of the interior of any cavity or canal of the body. *Therapeutic Gazette*, Jan., 1903, p. 59.

Endosepsis (en-dō-sep'sis), *n.* [NL., < Gr. ἔνδον, within, + σῆψις, putrefaction.] Sepsis excited by a poison formed within the organism; autotoxemia.

endosipho (en-dō-sī'fō), *n.* [NL., < Gr. ἔνδον, within, + σίφων, L. *sipho*, a pipe: see *siphon*.] In the extinct nautiloid cephalopods of the family *Endoceratidæ*, the contents of the ectosipho of the siphuncle as a whole.

endosipho-blade (en-dō-sī'fō-blād), *n.* [*endosipho* + *blade*.] In some of the extinct nautiloid cephalopods, as the *Endoceratida*, a membrane supporting the endosiphuncle and extending to the ectosipho.

endosiphocoleon (en″dō-sī-fō-kol'ē-on), *n.*; pl. *endosiphocolea* (-ä). [NL., < Gr. ἔνδον, within, + σίφων, pipe, + κολεός, sheath.] In some of the Silurian nautiloid cephalopods, as *Endoceras*, a flat, broad, conchiolinous tube extending from the posterior end of the visceral sac (inclosed in the endosiphocone) toward the apex.

endosiphocone (en-dō-sī'fō-kōn), *n.* [NL., < Gr. ἔνδον, within, + σίφων, pipe, + κῶνος, cone.] In *paleon.*, the posterior conical continuation of the endosiphocylinder of the siphuncle of certain Paleozoic *Nautiloidea* (*Endoceratidæ*).

endosiphocylinder (en″dō-sī-fō-sil'in-dėr), *n.* [Gr. ἔνδον, within, + σίφων, a siphon, + κύλινδρος, a cylinder.] In some of the extinct nautiloid cephalopods (*Endoceratida*), a calcareous cylinder lining the anterior and wider part of the siphuncular tube.

endosiphofunicle (en″dō-sī-fō-fū'ni-kl), *n.* [NL., *endosipho* + L. *funiculus*, a little rope.] In certain extinct nautiloid cephalopods (*Piloceras*), one of the supporting cords which extend from the endosiphuncular structures to the ectosipho.

endosipho-sheath (en-dō-sī'fō-shēth), *n.* [NL. *endosipho* + E. *sheath*.] In some of the Silurian cephalopods (*Endoceratida*), the membranous wall of the endosiphocone which becomes hardened by deposition of lime carbonate.

endosiphotube (en-dō-sī'fō-tūb), *n.* [Gr. ἔνδον, within, + σίφων, pipe, + L. *tubus*, tube.] See ★*endosiphuncle*.

endosiphuncle (en-dō-sī'fung-kl), *n.* [Gr. ἔνδον, within, + NL. *siphunculus*, dim. of L. *sipho*, pipe.] An axial tube in the fossil nautiloid *Cephalopoda*, passing through the center of the siphuncle in forms with endosiphuncular organic deposits. Same as *prosiphon*, *endosiphon*, and ★*endosiphotube*.

endosiphuncular (en″dō-sī-fung'kū-lär), *a.* Situated within the siphuncle.

endosmosic (en-dos-mō'sik), *a.* An erroneous form for *endosmotic*.

endosmotic equivalent. See *osmotic* ★*equivalent*.

Endosphæraceæ (en″dō-sfē-rā'sē-ē), *n. pl.* [NL., < Gr. ἔνδον, within, + *Sphæraceæ*.] A subfamily of the *Protococcaceæ*, (which see).

Endospora (en-dos'pō-rä), *n. pl.* [Gr. ἔνδον, within, + σπορά, seed (spore).] A group of *Sporozoa* in which the spore-formation goes on during the growth of the trophozoite, and the spore mother-cells or pansporoblasts are cut off in the interior of the body. It includes the *Myxosporidia*, *Sarcosporidia*, and the *Haplosporidia*. Compare ★*Ectospora*. *Minchin*.

endosternitic (en-dō-stėr-nit'ik), *a.* Of or pertaining to an endosternite.

endosternum (en-dō-stėr'num), *n.* [NL., < Gr. ἔνδον, within, + στέρνον, breast-bone: see *sternum*.] Same as *entosternum*.

endostitis (en-dos-tī'tis), *n.* [NL., < *endosteum* + *-itis*.] Inflammation of the endosteum.

endotheliolysin (en-dō-thē-li-ol'i-sin), *n.* [*endothelium* + *lysin*.] A lysin, belonging to the class of cytotoxins, which causes the destruction of vascular endothelial cells, leading to the extravasation of blood. Also termed *hemorrhagin*.

endotheliolytic (en-dō-thē″li-ō-lit'ik), *a.* Of or pertaining to an endotheliolysin: noting the action of an endotheliolysin.

The agglutinative hemolytic and *endotheliolytic* action of the blood serum. *Jour. Med. Research*, Oct., 1904, p. 359.

endotheliotoxin (en-dō-thē″li-ō-tok'sin), *n.* [*endothelium* + *toxin*.] The antibody which results on immunization with endothelial cells. Also *endotheliolysin*.

endotherm (en'dō-thėrm), *n.* [Gr. ἔνδον, within, + θέρμη, heat.] In *chem.*, a compound substance in the formation of which from its constituents energy is absorbed, and in its decomposition energy (usually heat) is evolved.

Endothiodon (en-dō-thī'ō-don), *n.* [Gr. ἔνδοθι, within, + ὀδούς (ὀδοντ-) tooth.] A genus of anomodont reptiles, comprising large animals from the Karoo formation of South Africa, characterized by their palatal teeth, elongated muzzle, and terminal nares overhung by great nasalia.

endothiodont (en-dō-thī'ō-dont), *a.* Related to or having the characters of *Endothiodon*.

endothrix (en'dō-thriks), *n.* [Gr. ἔνδον, within, + θρίξ, hair.] That form of the fungus causing tinea or ringworm which produces its mycelium and spores within the shaft of the affected hairs.

endotoxin (en-dō-tok'sin), *n.* [Gr. ἔνδον, within, + E. *toxin*.] A toxic substance set free during the process of bacteriolysis by means of immune sera against which the animal body does not appear to be capable of producing an antitoxin. These specific toxins are only liberated after or during the destruction of the micro-organism.

endotrachea (en-dō-trā-kē'ä), *n.*; pl. *endotracheæ* (-ē). [NL., < Gr. ἔνδον, within, + τραχεῖα, trachea.] The inner layer of the tracheæ of insects. It consists of a membrane, part of which is thickened in such a way as to form chitinous transverse bands or a spiral strengthening which serves to hold the tube open. *A. S. Packard*, Text-book of Entom., pp. 432, 448.

endotrypsin (en-dō-trip'sin), *n.* [Gr. ἔνδον, within, + E. *trypsin*.] An intracellular proteolytic ferment having the general character of trypsin.

endotryptase (en-dō-trip'tās), *n.* [Gr. ἔνδον, within, + E. *tryptase*.] An intracellular proteolytic ferment which has been found in yeast and which is capable of digesting and destroying zymase. *Nature*, Aug. 27, 1903, p. 385.

endovasculitis (en-dō-vas-kū-lī'tis), *n.* [NL., < Gr. ἔνδον, within, + L. *vasculum*, vessel, + *-itis*.] Same as ★*endangiitis*.

Endozoa (en-dō-zō'ä), *n.* [NL., < Gr. ἔνδον, within, + ζῷον, animal.] Same as *Entozoa*.

endozoic (en-dō-zō'ik), *a.* Same as *entozoic*.

end-point (end-point'), *n.* **1.** In *analyt. chem.*, the point at which a chemical reaction is completed without excess of either reagent. The end-point is commonly determined by means of an indicator: for instance, when the amount of an alkali is to be determined by measuring the amount of acid required to neutralize it, litmus may be the indicator, and the end-point is known by the change of color of the litmus.
2. In function-theory, of an interval or path from x_0 to x, either of the points x_0, x. Also called *end-value*, of the path.

end-port (end'pōrt), *n.* In *mach.*: (*a*) The opening at either end of the face of the valve-seat of a steam-engine, or the traverse of the valve thereon, through which steam is admitted alternately to the crank-end and to the head-end of the cylinder. (*b*) In gas-engines, an opening through the wall of the cylinder which is uncovered by the travel of the piston just as it reaches the end of its stroke. Such

end-ports release the exhaust gases at the end of the stroke, particularly in the two-phase cycle type of engine.

end-product (end'prod-ukt), *n.* The substance finally produced as a result of a series of chemical reactions.

end-reaction (end-rē-ak'shon), *n.* In *chem.*, a reaction easily recognized by the senses, as by a change of color, and which takes place only when some other reaction has been completed, thus serving to indicate that this latter is at an end. Thus, if a little yellow potassium chromate is added to a solution of sodium chlorid, and then a solution of silver nitrate is gradually dropped in, as soon as the precipitation of the chlorin as silver chlorid is complete a permanent red color makes its appearance, due to the formation of silver chromate.

end-rib (end'rib). In *organ-building*, the board forming one end of a wind-chest.

end-stopped, end-stopt (end'stopt), *a.* Having a break or pause at the end of the line: applied to poetry.

At first Shakspere has his breaks and pauses at the end of the line — the verse is '*end-stopt*'; gradually he more and more found pleasure in carrying on the sense from one line to another without a pause at the end of the line — the verse is 'run on,' and the breaks and pauses occur with great frequency in some part of the line other than the end. *Dowden*, Shakspere Primer, p. 39.

end-thrust (end'thrust), *n.* The push exerted through the axis of a shaft in transmitting power, or in resisting the action of weights. In marine engines the propeller tends to force the shaft inboard by a force equal to that by which the boat is propelled; in driving through bevel gears the pressure is oblique to the teeth and causes end-thrust on both shafts; in vertical shafts, the weight of machinery (and perhaps the load) forces the shaft downward. The end-thrust is resisted by some form of thrust-bearing or by a ball bearing.

end-value (end'val″ū), *n.* 1. In the calculus, an upper or a lower limit. Thus in $\int_a^b f(x)dx$, the numbers a and b are the end-values of x. — 2. In function-theory. Same as ★*end-point*, 2.

end-wool (end'wůl), *n.* Parts of a fleece of wool which are of little or no value.

energesis (en-ėr-jē'sis), *n.* [NL., < Gr. ἐνεργεῖν, be in action, show energy: see *energy*.] In *veg. physiol.*, a term proposed by Professor Charles R. Barnes "to designate the disruptive processes by which energy is released." It has heretofore been included in respiration. See *respiration*, 4.

It will at least do no harm to propose that the terms aerobic and anaerobic *energesis* be considered, to which fermentative *energesis* may be added if necessary. *C. R. Barnes*, in Science, Feb. 17, 1905, p. 252.

energetic, *a.* 2. In *phys.*, of or pertaining to energy or to the science of energetics.

It is used to find equations of motion from *energetic* data. *Nature*, Jan. 29, 1903, p. 297.

energid (en'ėr-jid), *n.* [Gr. ἐνεργός, at work (see *energy*), + *-id*².] In *biol.*, the cell-nucleus together with the cytoplasm which it influences or dominates: almost synonymous with *cell*, except that it does not include such structures as the wall of the plant-cell. *Sachs*, 1892.

energism (en'ėr-jizm), *n.* [G. and NL. *energismus*; as *energ-y* + *-ism*.] Any theory of ethics which makes the summum bonum to consist, not in the excitement of particular feelings, but in a particular state of mind considered as an activity. The term originated with F. Paulsen, and is employed by Thilly and other of Paulsen's disciples. The distinction upon which the definition turns is not between an external fact and an internal fact, nor between the state of mind of society and that of the moral agent himself, but is rather partly between a state which modifies all others and a possibly transient state, and partly between a state of mind regarded as a fact in itself and a state of mind regarded as a seeming, that is, as a sort of sign, possibly deceptive, of another state of mind. Perfectionism seems to be nearly coextensive with the principal kind of energism.

Energopoda (en-ėr-gop'ō-dä), *n. pl.* [NL., < Gr. ἐνεργός, active, + πούς (ποδ-), foot.] A superfamily of dipterous insects, in the classification of Brauer, containing the families *Asilidæ*, *Dolichopodidæ*, *Empidæ*, *Lonchopteridæ*, and (doubtfully) *Phocidæ*.

energy, *n.* **Angular energy**, the kinetic energy of rotation; the product of the moment of inertia of a rotating body into one half of its angular velocity.— **Apparent energy**, in *elect.* Same as *apparent* ★*power*.— **Available energy**, in *thermodynam.*, that part of the energy of a system which can be employed for mechanical purposes. *J. W. Gibbs.* **Bound energy**, in *thermodynam.*, the change of total energy, in an isothermal process, minus the change of free energy occurring in that process. – **Condensational energy**, energy stored in a medium as the result of work done in condensing or compressing it. **Curve of energy.** See ★*curve*. **Degradation of energy.** See ★*degradation*.— **Doctrine of the dissipation of energy**, the doctrine that in the processes of nature there is a tendency for energy to be converted into unavailable forms, so that while the total energy of the universe remains constant in amount the proportion of it that is available for the production of work is continually diminishing. See *correlation of energies*. **Electro-chemical energy**, in *phys. chem.*, either electrical energy when it performs chemical work, or chemical energy when it is manifested as electrical energy.— **Energy electromotive force.** See ★*electromotive*.— **Energy spectrum.** See ★*spectrum*. **Energy surface**, that one of the thermodynamic surfaces which has for its equation $E = f(v, \eta)$ where E is the energy of the system, v its volume, and η its entropy. **Equation of energy.** See ★*equation*. **Factors of energy**, in *phys.*, two factors such that one defines the direction in which energy shall be transferred in the case of a given body, while their product defines the whole quantity of energy possessed by the body. The first factor is called the *intensity-factor*, the second the *capacity-factor*. If a small vessel of water is suspended in a larger, our knowledge of the whole energy of heat contained in the two masses of water does not inform us as to the direction in which energy shall be transferred. If, however, we know the temperature of the two masses of water, we know the direction in which the transfer will take place. In this case the intensity-factor depends on temperature, and the capacity-factor on the mass of the water. For volume-energy, as of steam or compressed air, the intensity-factor depends on the pressure and the capacity-factor on the volume of the steam or air.— **Free energy**, in *thermodynam.*, a name given by Helmholtz to that part of the intrinsic energy of a thermodynamic system whose diminution determines the maximum work which the system can perform upon bodies external to it. The remaining part of the total energy of the system, which cannot be transformed into external work, Helmholtz called *bound energy*.

From a theoretical point of view, it would be preferable if we would not base our calculation on the thermochemical value of the heat of reaction, but on Helmholtz's "*free energy*" of the reaction. *Electrochem. Industry*, June, 1904, p. 213.

Intrinsic energy, the internal energy of a body or system, due to its configuration, position and motion, or to the motion of its parts, as measured by the work it is capable of doing without the introduction of energy from other bodies.— **Law, principle,** or **theory of specific nervous energy**, in *neurol.*, the doctrine that every sensory nerve is specific in function, so that, however stimulated or connected, it can, or could, mediate only such sensations as it gives rise to under normal conditions.

In opposition to the principle of indifference of function, it is generally held, at the present time, that the *law of specific energy*, as it is termed, is an especially valuable asset of modern nerve and sense physiology. Nevertheless, the history of the law shows a gradual regression. *W. Wundt* (trans.), Physiol. Psychol., I. 330.

Law of equipartition of energy, the Boltzmann-Maxwell law for the partition of energy in a gas; the law that in a gas the distribution of energy will be such that every mode of vibration of its particles is equally favored. — **Radial energy.** Same as *radiant energy*. [Rare.] – **Strain-energy method.** See ★*strain*¹. – **Thermal energy**, that form of energy which manifests itself as heat; the lower form of energy into which the higher forms (kinetic energy, potential energy, etc.) tend to degenerate, and which is only in part recoverable into more available forms. — **Traction energy.** Same as *tractive* ★*effort*.— **Translatory energy**, kinetic energy due to the motion of translation of a body or particle.

energy-meter (en'ėr-ji-mē″tėr), *n.* An apparatus for measuring and usually also for recording the passage of power or energy through it. It records both the quantity of force and the time through which this force has been exerted: used in the sale of electric current to consumers and to determine expenditure of mechanical energy.

enface (en-fās'), *v. t.*; pret. and pp. *enfaced*, ppr. *enfacing*. [*en-*¹ + *face* (after *endorse*).] To write, print, or stamp some mark or form of words on or across the face of (a note, bond, certificate, map, or the like). — **Enfaced paper**, the name given to the bonds or certificates of certain India loans: so called because they are marked on the top, bottom, and left margins by a broad band impressed upon them from an enchased copper plate. *Bithell*, Counting-house Dict.

enfacement (en-fās'ment), *n.* [*enface* + *-ment*.] The mark or form of words written, printed, or stamped on or across the face of a bond or note, etc.: such as "interest payable in London," or the like.

enfilade, *n.* *Milit.*, (*b*) An infantry or artillery fire which sweeps a line of works or men from flank to flank.

enfranchise, *v. t.* 5. The *feudal law*, to free from the obligations of feudal tenure, as to convert a copyhold estate into a freehold.

engage, *v. t.* 9. In *construction*, to fasten or let into a wall for support, as to secure a column to a wall. See *engaged column*, under *column*.

engagement ring. See ★*ring*¹.

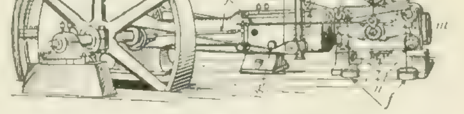
engarb (en-gärb'), *v. t.* [*en-*¹ + *garb*.] To dress; attire; garb.

engastration (en-gas-trā'shon), *n.* [Gr. ἐν, in, + γαστήρ (γαστρ-), belly, + *-ation*.] The placing of a fowl, as a stuffing, inside another fowl. *N. E. D.*

engenderment (en-jen'dėr-ment), *n.* [*engender* + *-ment*.] The act of engendering, procreating, or reproducing.

engin, *n.* and *v. t.* A simplified spelling of *engine*.

engine, *n.*— **Aëro-steam engine**, an engine in which the motor energy is derived both from hot air and from steam, admitted together to the cylinder. Its theory is that the hot steam will impart heat and therefore greater tension to the air, or that the hot air will raise the steam-tension, and that the mixture will be less liable to loss from condensation in the cylinder than steam alone. It has not proved to be of practical advantage. The name is also applied, less correctly, to engines in which the crank-shaft is driven by two cylinders, of which one is supplied with steam from a boiler and the other with hot air from a heating-chamber.— **Balanced engine**, an engine so constructed as to be free from unbalanced forces which would make it shake or rock.— **Balance-valve engine**, a steam-engine provided with a balance-valve (which see).— **Camel-back engine.** Same as ★*camel-back*¹.— **Closed heat engine**, a closed-cycle engine; an engine in which the same charge is used repeatedly, being alternately heated, allowed to expand doing work, cooled and compressed, heated, etc.; an engine operating on the Carnot, Joule, or Ericsson cycle.—**Coal-dust engine**, an internal-combustion engine which uses coal-dust as a fuel. The coal-dust is blown on to a hot plate and vaporized by heat in a chamber filled with compressed air.—**Condensing engine**, a steam-engine in which the steam, after working in the cylinder, is exhausted into a chamber in which a pressure less than that of the atmosphere prevails. This condition can continue only by continually condensing the steam to water, either by a jet of water directly or by contact with a water-cooled metal surface. The vacuum is maintained by pumping out the water and air or by placing the condensing chamber over 32 feet in the air with its discharge-pipe sealed by water at its foot so as to cause and maintain a vacuum above the water-column. A condensing-engine will be smaller than a non-condensing engine of the same power as respects its cylinder-volume. It is theoretically more efficient thermally, since it rejects its fluid at a lower temperature: and the discharge of condensed steam and warmed injection-water gives the boiler a supply of pre-heated feed-water.—**Corliss engine**, a four-valve engine having cylindrical rock-

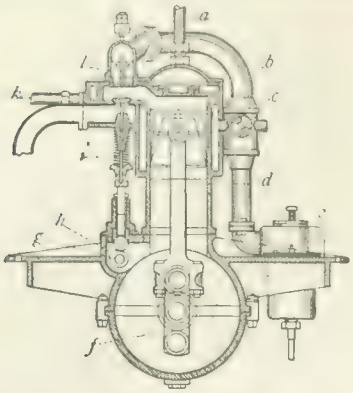


Corliss Engine.

a, steam inlet-valves; *b*, exhaust- or outlet-valves; *c*, wrist-plate actuating the four valves; *d*, governor controlling point of release or trip of valves *a a*; *e*, rod from governor to tripping latches or levers; *f*, dash-pots acting as air-springs to close *a* quickly and by compression of air prevent shock of closure; *g*, roller resting on governor-driving-belt and by its weight throwing the arms and balls up in the governor-belt breaks or runs-off; *h*, hand-control throttle-valve in the pipe from boiler; *j*, rods from eccentric causing wrist-plate *c* to oscillate; *k*, oil-pump to force lubricant at intervals into cylinder and valve casings; *l*, dash-pot to diminish oscillation of the governor-balls, or the "hunting" of the governor up and down its spindle; *m*, cover or head of the steam-cylinder; *n*, outlet for exhaust-pipe.

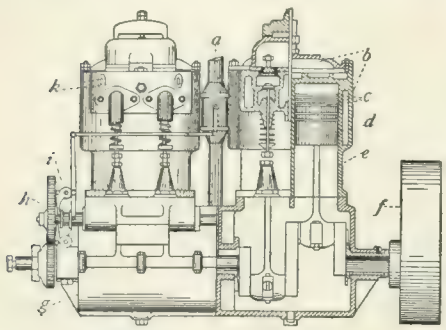
ing-valves to open and close the ports alternately. The inlet- and exhaust-valve being separate, the latter are opened to their full extent at each stroke, while the former are opened only so much as the governor permits. All the valves are actuated from a disk or wrist-plate which receives motion from the eccentric, though the inlet-valves are disconnected from this plate by a trip and closed by a dash-pot. The advantages of the Corliss engine are the small clearance spaces, the large port areas, and the sharp cut-off; the latter easily variable by the governor through a wide range as the load varies, while the point of release of exhaust and the point of closure which causes compression are constant. The engine was promoted by George H. Corliss of Providence, Rhode Island.— **Coupled engine.** (*a*) A duplex or twin engine, two cylinders acting through their mechanism on one crank-pin or on one revolving shaft. (*b*) A locomotive which has two or more pairs of driving-wheels coupled together by side or parallel rods.— **Diagonal engine**, an engine so set that the direction of the piston's travel is neither horizontal nor vertical; an inclined engine.— **Explosion engine**, internal-combustion engine: so named because early forms of the internal-combustion motor used mixtures of gas and air which were explosive and detonated when set on fire. The modern engine, with compression, does not detonate, but a true ignition takes place at constant volume, and little or no noise is audible aside from that due to the power. When the ignition takes place outside the cylinder, and without doing work against the piston, the free expansion of the same mixture is noisy, because the air receives the impact of the expanding gases.— **Fan engine**, an engine which drives a fan or rotary blower, usually directly connected on the common revolving shaft.— **Hot-water engine.** Same as *fireless locomotive*. See *locomotive*.- **Hydro-oil engine**, an internal-combustion engine in which water in equal quantities to that of the oil which constitutes the fuel is drawn into the cylinder on the aspiration stroke. The water is atomized by the air which enters to furnish oxygen for combustion, and a complete mechanical mixture of water and oil-vapor is made. On ignition the water-vapor becomes steam, tending to keep down the temperature and pressure of the mixture and to absorb heat during expansion. The presence of the water-vapor diminishes the volume of fuel-vapor in a given cylinder, and diminishes the danger of pre-ignition on compression. The principle is specially adapted to the use of crude petroleum as fuel, since the retarded combustion and lower temperatures mitigate mechanical difficulties from the varying volatility of the elements in unrefined oil.— **Inside-connected engine**, a locomotive in which the driving mechanism is so constructed that the cranks are formed in the driving axles of the front pair of wheels and therefore come within the frames. The cylinders are also between the frames, under the smoke-box. This type was much used in Europe and was followed in early American practice, but the greater convenience and accessibility for

adjustment and repair of the outside-connected type soon made this latter form standard in the United States.—**Internal-combustion engine,** any engine in which the pressure for driving the piston is obtained by burning



Internal-combustion Engine (sectional view).

a, water-outlet, *b*, vapor-pipe, *c*, throttle-valve, *d*, connecting-rod, *e*, air-meter, *f*, crank-shaft, *g*, cam-shaft, *h*, cam, *i*, exhaust-valve, *k*, water-inlet, *l*, induction-valve.

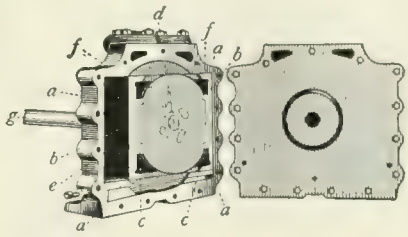


Internal-combustion Engine (side view).

a, inlet pipe for fuel mixture; *b*, water jacket; *c*, piston-rings; *d*, piston; *e*, cylinder; *f*, fly-wheel; *g*, base-chamber; *h*, half-speed wheel; *i*, governor-gear; *k*, holes for sparking-plugs.

or exploding a mixture of oxygen and fuel in the cylinder of the engine, as in a gas-, gasolene-, or oil-engine. See ★*motor* and ★*cycle*.—**Inverted-cylinder engine,** a vertical engine having an inverted cylinder. From its use, also called the steam-hammer pattern. Most marine screw-engines are now built in this way.—**Liquid-fuel engine,** an internal-combustion engine which uses a liquid, such as gasolene, for fuel, as distinguished from an engine which uses gas or a solid for fuel.—**Multicylinder engine,** an engine having more than two steam-cylinders.

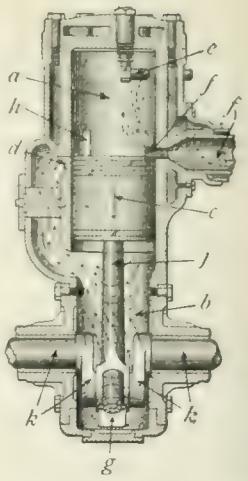
Nigger engine, an engine intended for rough and heavy work out of doors or in exposed places where little care can be taken of it. It is usually cheaply made, and without finish or polished surfaces except where unavoidable.—**Outside-connected engine,** the usual American form of simple locomotive engine, in which the cylinders are outside of the frames, and their pistons are connected by rods, also outside the frames, to pins outside of the driving-wheels.—**Quadrant engine,** a form of steam-engine mechanism in which the piston was rectangular in shape and was pivoted on one edge which coincided with the axis of a geometric cylinder. The opposite edge was free to move through an arc of such cylinder, which was usually a quadrant or 90°. The other two edges fitted the two heads steam-tight, and the piston oscillated through 90° as the steam was admitted alternately on its opposite faces. The motion was transmitted through connecting-rods from the axis by means of vibrating arms which worked like half-beams of a beam-engine.—**Quarter-crank engine,** an engine in which the angle between the cranks, which work in pairs, is 90°, or a quarter of the complete circle. Locomotives are made with their cranks quartered, so as to have one cylinder always at its most advantageous crank-angle when the other is at or near its dead-center. Blowing or compressing engines are often similarly designed, with one cylinder vertical and the other horizontal and with the two connecting-rods on one crank-pin. Then the maximum resistance of the compressing cylinder comes when the effort of the driving steam-cylinder is most powerful.—**Quintuple expansion engine,** an engine in which the expansion of the steam takes place in five steps or stages, either in five successive cylinders, or in more. In the latter case, the steam will expand from one of smaller capacity into two others of larger, but as respects each other of equal, capacity somewhere in the series: if eight cylinders are used this will occur three times.—**Reaction engine,** an engine in which the moving or propelled part or element, which corresponds to the piston, is impelled by reaction or unbalanced pressure instead of by the direct pressure of the motor fluid, as is usually the case. Turbines are often driven by reaction.—**Reversing rolling-mill engine,** a type of engine designed to drive the massive rolls for rolling plate or iron or steel beams or rails, when the roll-train is 'two-high,' or consists of one roll above another, with the 'pass' for rolling between them. When only two rolls are used, the hot metal must be passed back over the top of the upper roll to be inserted a second time between them if the engine and rolls turn in one direction only. If the rolls and engine reverse their motion, the piece undergoing rolling may be passed back on the same level. Practice in the United States has favored the 'three-high' roll-train, with continuous motion of engine and rolls, the piece receiving its compression in a pass when being passed back over the top of the middle roll. For heavy and massive sections, such as an ingot or bloom, the lifting of the piece requires a mechanical lifting table, but to install this diminishes the labor cost while increasing only the first cost and repair-account. The reversing engine will be more approved when the rolls are of large diameter. In England such reversing engines were often geared to the rolls, perhaps three to one, and were reversed by a Stephenson or Joy link-motion operated by a steam or hydraulic cylinder or by hand. To diminish the weight of the fly-wheel and its living force, which would retard quick-reversal, the engine was often of two-cylinder design, simple or compound, with cranks quartering, or at 90 degrees apart. **Rotative engine,** a term commonly used in specifications to distinguish the ordinary engine with connecting-rod and crank from an engine in which the reciprocating movement is not converted into circular motion, as in pumps of the direct-acting type. **Saddle-tank engine.** Same as *saddle-tank locomotive*. **Series-expansion engine,** a compound or multiple-expansion engine in which the steam expands in steps or stages in a series of cylinders. **Side-beam engine,** a form of beam- or lever-engine in which the working-beam is placed at the side of the vertical cylinder instead of above it, as is more common. For symmetry of the stresses there are usually two of these side-beams, one on each side of the cylinder. This form of engine was once used widely for side-wheel war-vessels, but it is now out of use.—**Simple engine,** a form of engine in which the process of expanding the working fluid is completed in one cylinder, instead of in two or more as occurs in the compound engine.—**Single-acting engine.** See *single-acting*.—**Solar engine.** See *solar*.—**Spherical engine,** any engine which has a spherical form, as Hero's engine; specifically, the Tower spherical engine, which consists of a pair of quarter-spheres hinged to a disk along diameters at right angles with each other, and inclosed in a hollow sphere which the disk and also the quarter-spheres just fit. The hollow sphere is steam-tight and forms the cylinder. The two spaces between the sections and disk will, in the course of a revolution, open and close in pairs, thus giving the effect of the action of steam admitted to a hollow sphere. In principle this spherical engine is similar to a Hooke's universal joint, the sections corresponding to the bows and the disk to the cross-piece which connects the bows.—**Spiral-vane engine,** a form of rotary engine in which the revolving pistons were portions of helices instead of being planes.—**Square engine.** (*a*) A reciprocating engine in which the stroke or traverse



Square Engine.

a, exterior casing of the steam-cylinder; *b*, *b*, first piston, sliding horizontally in casing *a*; *c*, *c*, second piston, sliding vertically in piston *b*; *d*, crank-pin, receiving motion from the combined effort of *c* and *c*; *e*, space receiving steam to impel *b*; *f*, space receiving steam to impel *c*; *g*, shaft to take off the power.

of the piston is equal to the diameter of the cylinder. (*b*) A form of engine in which the crank is driven by the pressure on two rectangular pistons, the second of which traverses in a suitable recess in the first. This double motion enables the pistons to follow the angular displacement of the crank without the use of connecting-rods, and gives a square section to the case inclosing the two pistons.—**Sulphur-dioxid engine,** an engine in which the vapor of sulphur-dioxid (SO_2) is used in place of the vapor of water. This is done for the purpose of utilizing the low boiling-temperature of SO_2 and perhaps its smaller cylinder-condensation at the temperatures at which it is operated. But the material has to be purchased or manufactured, and its odor is objectionable, while no economy in its use has been demonstrated.—**Surgical engine,** an apparatus similar to the dental engine, used by surgeons in certain operations on bone.—**Tangye engine,** an engine having a bed-plate of the design first proposed by C. T. Porter, of the United States, and adopted in England by Tangye Brothers. The cylinder is overhung at the back end of the bed to allow of free expansion by heat, and the front part curves downward in front of the cylinder to carry the guides and give free play to the sway of the connecting-rod. The bed-plate thus consists of two parts only, and the metal is disposed so as to give rigidity and mass and present a pleasing effect to the eye by its lines.—**Thermodynamic engine,** an engine which derives its motive power from rise in temperature or increase and diminution of intrinsic or heat energy in the medium which it employs: applied to hot-air and gas-engines, often to distinguish them from steam-engines, although by strict definition the last belong also in the same class.—**Three-cylinder engine,** an engine with three cylinders, each taking hold upon a crank which is set at an angle of 120° from the other two. Such an engine has no dead-center and gives a very uniform turning effort: much used with capstans and winches and steam steering-gear.—**Twin-screw engine,** an engine designed to propel twin screws, one on each side of the keel of a vessel. Such an engine is usually, in effect, two engines, so that each screw and shaft may be driven independently.—**Two-cycle engine,** an internal-combustion engine having only two phases or strokes in a complete cycle. The explosion, expansion, and exhaust take place in one (the out or working) stroke, and admission and compression of the charge take place in the other (or return) stroke. The mixture has to be under slight compression either from a second cylinder, or from the front face of the working-piston. Many small gas-engines are built on this plan, as by it each cylinder gives an impulse to the crank for each revolution of the latter, while in the four-cycle engine two revolutions take place for each impulse. In the form shown, the working piston acts as a valve and no others are required. The piston uncovers the exhaust outlet at the end of the stroke before it uncovers the inlet port leading from the combustible mixture. The return of the piston compresses the charge, and the igniter fires it. See *internal-combustion* ★*motor*.—**Vacuum-engine,** an engine in which the power in the cylinder results from the presence, on the negative side of the cylinder, of a tension of vapor less than that of the atmosphere, while on the positive or pressure side a low pressure above the atmosphere, or that of the atmosphere alone, is exerted. Hence the power comes from the vacuum or absence of pressure opposed to the motion of the piston. Very low pressure condensing steam-engines would be of this class, but modern engines have always the positive pressure much above the atmosphere. The Newcomen atmospheric engine was of this type.—**Vibrating-piston engine,** an engine whose rectangular piston is free to move around a fixed hinge-joint on one of its sides, so that the piston moves in its casing as a door swings upon its hinges. It is no longer used. See *quadrant* ★*engine*.—**Waste-heat engine,** an engine which utilizes as a source of heat the discharge of a primary motor. In such engines steam may be made by conducting the hot exhaust discharge of gas-engines under a boiler; or the waste heat of the boiler-furnace gases may be used to superheat and mix with the steam from the boiler; or the exhaust from a large engine at high pressure may be used to operate a second smaller engine with a lower pressure-range.—**Wollaston's engine,** an experimental apparatus designed to illustrate the expansive force of steam.



Two-cycle Engine.

a, working-end of cylinder, *b*, inclosed crank-case filled with slightly compressed aspirated and combustible mixture of air and gasified fuel, *c*, working-piston; *d*, inlet-port for mixture from crank-case; *e*, igniter, or spark-plug; *f*, *f*, exhaust-port and -pipe, *g*, inlet for air and fuel, *h*, deflector to prevent inlet mixture from crossing over to exhaust-port before the piston has closed the latter on its return stroke, *j*, connecting-rod; *k*, crank and crank-shaft.

Wollaston's Engine.

engine-cycle (en'jin-sī kl), *n.* The various phases attending one complete revolution of the crank of an engine, including admission, expansion, exhaust, and compression. In some engines, particularly gas-engines, two revolutions are sometimes needed for a complete cycle. See ★*cycle*.

engineer, *n.*—**Cadet engineer,** formerly the title of a student at the United States Naval Academy who entered the corps of engineer officers of the navy: now abolished.—**Chemical Engineer,** a degree given to graduates of a technical or engineering school for special knowledge of the scientific laws and the rules of practice concerned with the manufacture of chemical products. Abbreviated *Ch. E.*—**Civil engineer.** (*a*) See *engineer*, 1. (*b*) The title of an officer of the corps of civil engineers of the United States Navy. See ★*corps*[2].—**Forest Engineer,** a degree given for a course in the study of forestry. Abbreviated *F. E.*—**Hydrographic engineer.** (*a*) An engineer skilled in hydrography; a hydrographer. (*b*) An official grade of governmental engineering officers in some countries, as in France.—**Sanitary engineer,** an engineer skilled in the relation (and application) of the principles of public sanitation to engineering works and public improvements; one who is competent to design, construct, and operate public works as aids to public sanitation.—**Topographic engineer,** an engineer skilled in topographic surveying and mapping; a topographer.—**Traveling engineer,** an expert locomotive engineer sent out by railroad companies to inspect the locomotives and to instruct engine-drivers and firemen in their duties.

engineering, *n.*—**Agricultural engineering.** See *rural* ★*engineering*.—**Chemical engineering,** a department of manufacturing in which the productive processes are chemical reactions, or depend upon the laws of chemistry.—**Dynamic engineering.** See *engineering*.—**Rural or agricultural engineering,** the science and the art of producing and maintaining a farming plant, including the laying out of the farm, fencing, drainage, irrigation, the construction of buildings, and the provision of machinery, also the construction and care of roads.—**Sanitary engineering,** that division of civil engineering which deals with the relation (and application) of the principles of public sanitation to engineering works and public improvements.—**Steam engineering,** that department of engineering which deals with the generation and distribution of energy by means of steam-power.—**Topographical engineering.** Same as *topographical surveying* (which see, under *surveying*).

engine-frame (en'jin-frām), *n.* The structure

which connects, or ties together, the various parts of an engine. It is usually a heavy iron casting connecting the cylinder to the shaft-journals and supporting the weight of practically all the parts of the engine.

engine-pit (en′jin-pit), *n.* A cleaning-pit; a pit made between the rails of a railroad-track to allow room for getting underneath a locomotive to clean or repair it. The pits are usually as wide as the distance between the tracks permits, and about 3 feet deep.

engine-stop (en′jin-stop), *n.* A device for closing, either automatically or by hand, the steam-valve of an engine in case of accident. One form consists of a falling weight with an electrical release which may be operated automatically, if the engine runs too fast, from the breakage or loss of the governor-belt, or may be operated from any one of a number of stations in case of an accident in a remote part of the works.

engine-telegraph (en′jin-tel″ē-gräf), *n.* An apparatus used in large steam-vessels to send signals from the bridge or other station of the executive officers to the engine-room. One dial is placed at the transmitting and another at the receiving end. A pointer on each dial is actuated by an operating handle at the other instrument. The connection between them is made by chains and wires, or is electric or pneumatic. The right-hand half of the dial is for orders ahead, and the left hand for orders astern. The usual arrangement is to place the order 'Stop' in the center, and others are 'Stand by,' 'Quarter-speed,' 'Half-speed,' 'Full-speed' (ahead or astern as the case may be). The telegraph is also connected with a bell-sounding device.

englacial (en-glā′shial), *a.* [*en-* + *glacial.*] Being within a glacier: used, in *geol.*, with reference to detritus carried within the ice of a glacier or ice-sheet: as, *englacial* drift.

The water which descended into the ice from its surface through crevasses, or through smaller cracks or pores, had a various course. It is possible that it was sometimes concentrated into streams which had longer or shorter courses within the ice itself. On one of the Alaskan glaciers at the present time, an *englacial* stream appears at the surface of the ice, issuing from an ice tunnel, pursues a superglacial course for a short distance, and plunges again beneath an ice arch and pursues for an undetermined distance an *englacial* course.
R. D. Salisbury, Geol. Surv. of New Jersey, 1891, p. 87.

Englander, *n.* **Little Englander,** in recent English politics, an opponent of colonial extension or of territorial aggrandizement.

Englerophœnix (eng″lèr-ō-fē′niks), *n.* [NL. (Kuntze, 1891), ⟨ G. *Engler* (Adolph Engler, director of the Berlin Botanical Garden) + Gr. φοῖνιξ, palm.] A genus of palms. See *Maximiliana.*

English. **I.** *a.* **English cholera.** See ★*cholera.* **English schools of painting.** See ★*painting.* **English yellow.** See ★*yellow.*

II. *n.*—**Reverse English,** in *billiards,* a stroke which twists the cue-ball on the side opposite to the direction in which it should go after taking the first cushion.

englobe (en-glōb′), *v. t.*; pret. and pp. *englobed,* ppr. *englobing.* [*en-* + *globe.*] **1.** To inclose as in a globe: as, "youthful energy *englobed* within the bosom of the young." See *inglobe.* —**2.** Specifically, to absorb or take within the substance of a white blood-globule, amœba, or other single-celled body.

Red blood corpuscles are often *englobed* by this amœba [in amœbic dysentery], as are also micrococci and bacilli. *Encyc. Brit.*, XXXI. 536.

englobement (en-glōb′ment), *n.* [*englobe* + *-ment.*] The process of englobing.

It is difficult to explain this difference except on the ground that the *englobement* of parasites in the liver is more active at certain periods of the cycle, or occurs intermittently, and that the destruction of englobed parasites may be completed very rapidly, i. e. within a few hours. *Jour. Exper. Med.*, Feb. 5, 1902, p. 155.

englyn (en′glin), *n.* [Also *englin,* ⟨ W. *englyn,* pl. *englynion.*] In Welsh poetry, a stanza (now always a quatrain) of a certain metrical structure. *N. E. D.*

engouement, engoûment (äṅ-gö-moṅ′), *n.* [F., ⟨ *engouer,* be choked in gorging.] Infatuation; an unreasoning fondness.

The young lady . . . had never received kindness except from this old spinster and her brother and father; and she repaid Miss Crawley's *engoûment* by artless sweetness and friendship.
Thackeray, Vanity Fair, xxxiv.

engr. An abbreviation of *engraving.*

engraver, *n.* **2.** A tool used in engraving; a triangular rod of steel, of different widths, with a plow-shaped point, pushed forward to make a furrow on the surface of wood or metal that is being engraved.

engraver-beetle (en-grā′vèr-bē″tl), *n.* Any beetle of the family *Scolytidæ.* Also called *bark-beetle.*

engraving, *n.* The taking of impressions from raised or incised seals has always been practised by civilized people. The goldsmiths of the Middle Ages and Renaissance in Europe used engraving in the decoration of their work, and were accustomed to take impressions from their designs. Such impressions have been traced to the twelfth century. Among the earliest examples of engraving, properly so called, on metal are about three hundred prints in the dotted style (*manière criblée*) in which black spots are relieved against white and white spots against black, which date from about 1450 A.D. The practice of engraving was encouraged by the use of niello in the decoration of metals. (See *niello.*) Undoubtedly frequent impressions were taken from niello designs. For making plates to print upon paper, copper and later steel were substituted for other metals. Engraving on copper was extensively practised by the great artists of the Renaissance, as Pollajuolo, Mantegna, Botticelli, and Marcantonio Raimondi in Italy, and Martin Schongauer and Albert Dürer in Germany. In France engraving on copper found its first development in the illustration of books, as in the architectural series of Jacques I. Androuet Du Cerceau. In the seventeenth century the largest development of engraving on metal, occurred about the powerful personalities of Rembrandt and Rubens. The influence of Rubens, especially, brought about the culmination of the art. After this period, engraving on copper and steel became universal throughout modern civilization. The special contribution of England to the art of engraving on metal was the development of mezzotint, which was, however, invented in Holland in the middle of the seventeenth century. Wood-engraving was brought to perfection by the large school of German artists of the Renaissance grouped about the court of the Emperor Maximilian I. The chief of them was Albert Dürer who may still be considered the greatest master of the art. From Germany the art of wood-engraving was carried into Italy, and practised with a peculiar charm by the painters of the quattrocento and cinquecento. The father of the modern art of wood-engraving is Thomas Bewick of Newcastle, England (1753–1828). Previous to his time the practice was chiefly in black line, that is, a drawing in black lines was made upon the block and the portions of the surface not touched by the draftsman were cut away by the engraver. Bewick established the ascendancy of the white line, that is, the incision made by the engravers' tools. This change in point of view vastly increased the effectiveness and artistic interest of the engraved block. The principles of Bewick have been accepted by all modern engravers whose interest is artistic rather than commercial. As in the case of engraving on copper and steel, the development of wood-engraving in modern times has been great, but little has been added to the fundamental principles established by the older masters. —**Photochemical engraving.** (*a*) The art of preparing engraved printing-plates by photographic and chemical methods. (*b*) An engraved printing-plate produced by this process. See *photo-engraving* and *photogravure.*

engreen (en-grēn′), *v. t.* [*en-*[1] + *green.*] To cover or clothe with green: as, to *engreen* the hills. *J. S. Blackie.*

engroove (en-gröv), *v. t.*; pret. and pp. *engrooved,* ppr. *engrooving.* [*en-*[1] + *groove.*] **1.** To fit into a groove. *Tennyson.* —**2.** To channel: as, "a narrow glen, *engrooved* with sliding water," *R. D. Blackmore.*

Enhanced line. See ★*line*[2].

enhancive (en-han′siv), *a.* [*enhance* + *-ive.*] That tends or serves to enhance, heighten, or intensify; that imparts added force: as, an *enhancive* sentence, or expression. Also *enhansive.*

enhemospore (en-hem′ō-spōr), *n.* [Gr. ἐν, in, + αἷμα, blood, + σπορά, seed (spore).] In the division of the malarial parasite within a red blood-corpuscle, one of the nucleated segments into which the protoplasmic body of the parasite separates. On the breaking up of the corpuscle the segments are set free and then invade fresh corpuscles.

enhydritic (en-hī-drit′ik), *a.* [*enhydrite* + *-ic.*] Of or pertaining to an enhydrite.

enjewel (en-jö′el), *v. t.*; pret. and pp. *enjeweled, enjewelled,* ppr. *enjeweling, enjewelling.* [*en-*[1] + *jewel.*] To bejewel.

To lone lake that smiles,
In its dream of deep rest,
At the many star-isles
That *enjewel* its breast.
Poe, Al Aaraaf, ii.

en l'air (oṅ lâr). [F.] In the air; unsupported: said of the flank of a line of battle which does not rest on an impassable obstacle.

enlarge, *v. t.* **8.** To cause (a horse) to spread his legs wider apart, so as to prevent him from interfering.

To *enlarge* your horse you should prick him with both heels, or aid him with the calves of your legs, and bear your hand outwards. *T. Wallis,* Farrier's Dict.

To enlarge an estate, to give to the tenant of a particular estate another estate in the same property superior to that already held.—**To enlarge the pocket.** See ★*pocket.*

enlife (en-līf′), *v. t.*; pret. and pp. *enlifed,* ppr. *enlifing.* [*en-*[1] + *life.*] To impart life to; enliven.

. . . As if they knew
What music slept enchanted in each stem,
Till Pan should choose some happy one of them,
And with wise lips *enlife* it through and through.
Lowell, Invita Minerva, st. 5.

enneacontahedral (en″ē-a-kon-ta-hē′dral), *a.* [*enneacontahedron* + *-al.*] Having 90 faces.

enneacontahedron (en″ē-a-kon-ta-hē′dron), *n.* [Gr. *ἐννεάκοντα, assumed form for the actual ἐνενήκοντα, ninety, + ἕδρα, seat, base. [A polyhedron of 90 faces.

enneaeteric (en″ē-a-e-ter′ik), *a.* [Gr. ἐνναέτηρος, nine years old, ⟨ ἐννέα, nine, + ἔτος, a year.] Containing or consisting of nine years: as, an *enneaeteric* period. *Grote.*

Enneagynia (en″ē-a-jin′i-ä), *n. pl.* [NL., ⟨ Gr. ἐννέα, nine, + γυνή, female (style).] In the Linnæan artificial system of botanical classification, an order in any of the first thirteen classes characterized by having flowers with nine styles.

enneaphyllous (en-ē-af′i-lus), *a.* [Gr. ἐννέα, nine, + φύλλον, leaf, + *-ous.*] Having nine leaflets: said of a compound leaf.

Enneapla (en″e-ap′lä), *n.* [Gr. ἐννέα, nine, + -πλόος (neut. pl. -πλᾶ), -fold. Cf. *Hexapla.*] An edition of the Old Testament ascribed to Origen, containing nine versions of the Scriptures in parallel columns. Only a single reference is found to the work and there is doubt as to its existence.

ennearctic (en-ē-ärk′tik), *a.* [Gr. ἐν, in, + E. *Nearctic.*] Confined to the Nearctic region.

ennomoclon (e-nom′ō-klōn), *n.*; pl. *eunomoclones* (-klō′nēz). [Gr. ἔννομος, lawful, regular, + κλών, a twig.] In the terminology of the spicular elements of the sponges, a four-rayed spicule, in which one arm is shortened and inflated.

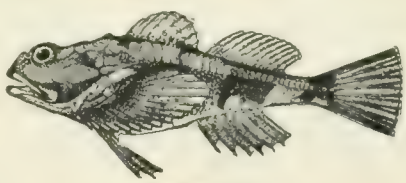
Enochic (ē-nok′ik), *a.* [*Enoch* + *-ic.*] Of or pertaining to the patriarch Enoch, the seventh from Adam, whose alleged prophecies (as recorded in the apocryphal Book of Enoch) are supposedly quoted in the Epistle of Jude, verse 14.—**Enochic literature,** the literature that has grown up around the apocryphal Book of Enoch, mentioned by the early Christian fathers and later writers, but first made definitely known in Europe through three copies of an Ethiopic version of it brought from Abyssinia by Bruce, the African traveler (1730–94), and translated into English in 1821.

enol (en′ōl), *n.* [Appar. for ★*henol,* ⟨ Gr. εἷς (ἑν-), one, + *-ol.*] One of several compounds containing the unsaturated alcoholic group –CH:COH–. These compounds pass more or less readily into the isomeric or tautomeric group –CH_2.CO–, which is called the ketone form.

enolic (e-nol′ik), *a.* Of or pertaining to an enol.

enophite (en′ō-fīt), *n.* [Gr. ἐν, in, + ὄφις, serpent, + *-ite.*] An uncertain alteration-product from the chrysolite rocks of Krems, Bohemia. It is intermediate in composition between the chlorites and serpentine.

Enophrys (e-nof′ris), *n.* [NL., ⟨ Gr. ἐν, in, + ὀφρύς, brow.] A genus of sculpins of the



Enophrys bison.
(From Bull. 47, U. S. Nat. Museum.)

North Pacific, characterized by the long unbranched preopercular spine. *E. bison* is the buffalo-sculpin of the Puget Sound region.

enophthalmia (en-of-thal′mi-ä), *n.* [NL.] A more correct form for *enophthalmus.*

enoplan (en-op′lan), *a.* and *n.* **I.** *a.* Relating or pertaining to the *Enopla.*

II. *n.* One of the *Enopla.*

enorganic (en-ôr-gan′ik), *a.* [Gr. ἐν, in, + ὄργανον, organ.] Existing as a permanent attribute of the organism.

en plein (oṅ plaṅ). [F.] In *roulette* and other banking games, flat upon any number.

en prise (oṅ prēz). [F.] In *chess,* in a position to be taken: as, a piece or pawn may be put or left *en prise.*

enroll, *v. t.* **4.** In *law,* to engross; to prepare in proper legal form; also, specifically, to make a legislative bill ready for the consideration of the Executive.—**Enrolled bill.** See ★*bill*[3].

ens. An abbreviation of *ensign.*

Ens legis (L., a being of the law), in *law,* a thing created by law, as a corporation.

ensanguin, *v. t.* A simplified spelling of *ensanguine.*

ensellure (aṅ-se-lür′), *n.* [F., ⟨ *enseller,* saddle, ⟨ *en,* in, + *selle,* saddle: see *sell*[2].] In *anthrop.,* a strongly marked curve of the dorso-lumbo-sacral region. *Deniker,* Races of Man, p. 93.

ensemble, *n.* **Grand ensemble,** in statistical mechanics, an ensemble of systems, in which the various systems are composed of particles of various kinds and in which the systems differ both in phase and in the number of particles which they contain.

A *grand ensemble* is therefore composed of a multitude of petit ensembles. *J. W. Gibbs,* Statistical Mech., p. 190.

Microcanonical ensemble, an ensemble of systems, in statistical equilibrium, such that all the systems have the same energy.

In a *microcanonical ensemble* of systems the energy (E) is constant but the kinetic energy (E_p) and the potential energy (E_q) vary in the different systems.
J. W. Gibbs, Statistical Mech., p. 116.

Petit ensemble, an ensemble of systems in which the systems differ only in phase. *J. W. Gibbs.* **Time ensemble,** the "ensemble of phases through which a single system passes in the course of time." *J. W. Gibbs,* Statistical Mech., p. 169.

II. *a.* In *music,* same as *concerted:* as, an *ensemble* passage or work.

ensepulcher, ensepulchre (en-sep′ul-kėr), *v. t.*; pret. and pp. *ensepulchered, ensepulchred,* ppr. *ensepulchering, ensepulchring.* [*en-* + *sepulcher.*] To entomb; bury. *Pollok.*

ensient (en-si-ent′), *a.* In *law,* same as *enceinte* (which see).

Ensign halyards. See ★*halyard.*

ensign-fly (en′sīn-flī′), *n.* Any parasitic hymenopterous insect of the family *Evaniidæ. Comstock,* Manual of Insects, p. 626.

ensilage, *v. t.* 2. To make into silage; to ensile.—3. To affect by feeding silage, as *ensilaged* milk.

The crops *ensilaged* should contain no more water than can be retained in the cells of the plant, etc.
M. Miles, Silos, Ensilage, and Silage, p. 80.

ensilage-cutter (en′si-lāj-kut ėr), *n.* A large power-machine having revolving cutters fed by hand, or by a self-acting feed-table that moves the corn-stalks, etc., to the cutters. Since silos are now lofty cylindrical bins placed above ground, ensilage-cutters are fitted with conveyers for delivering the cut ensilage at the top of the bins. These may be belt-and-bucket elevators of the ordinary type, or pneumatic conveyers, consisting of sheet-metal pipes through which the cut ensilage may be blown by a blast from a fan placed at the side or end of the cutter. These conveyers may be fixed in one position or pivoted at the bottom. Ensilage-cutters are sometimes fitted with splitting and shredding appliances for splitting corn-stalks and reducing the material more completely than is possible by cutting alone.

ensilate (en′si-lāt), *v. t.*; pret. and pp. *ensilated,* ppr. *ensilating.* [*ensile* + *-ate*[2].] To ensile. [Rare.] *N. E. D.*

ensilation (en-si-lā′shon), *n.* [*ensile* + *-ation.*] The making into and preserving as silage. [Rare.]

The life of the plant under the restricting conditions of *ensilation.* *Nature,* Oct. 22, 1885, p. 606.

ensilist (en-sī′list), *n.* [*ensile* + *-ist.*] One who constructs or uses silos for the storing of fodder.

En-Soph (en-sōf), *n.* [Heb., the infinite, lit. 'no end.'] In cabalistic doctrine, the Deity, prior to the creation of the universe, from which the ten attributes forming the Adam Kadmon emanated. See ★*Sephiroth,* ★*Adam Kadmon.*

enspell (en-spel′), *v. t.* [*en-*[1] + *spell*[1].] To cast a spell upon; charm; fascinate; enchant.

enstatitic (en-stā-tit′ik), *a.* [*enstatite* + *-ic.*] Pertaining to, resembling, or containing enstatite.

ent., entom. Abbreviations of *entomology.*

entacmæous (en-tak-mē′us), *a.* [Gr. ἐντός, within, + ἀκμαῖος, adj., < ἀκμή, point: see *acme.*] In actinians, having the tentacles of the inner longer than those of the outer cycles. *Trans. Linnean Soc. London,* Zool., Oct., 1902, p. 299.

entacoustic (en-ta-kōs′tik), *a.* [Gr. ἐντός, within, + ἀκουστικός, of hearing.] Relating to or originating within the organ of hearing.

entailable (en-tā′la-bl), *a.* [*entail* + *-able.*] Capable of being left in fee-tail; also, often used with reference to any property that is capable of being left by will.

Ental valve. See ★*valve.*

entapophysial (en-ta-po-fiz′i-al), *a.* Of or pertaining to an entapophysis. See ★*entapophysis.*

entapophysis (en-ta-pof′i-sis), *n.* [Gr. ἐντός, within, + ἀπόφυσις, apophysis.] An internal apophysis; an apophysis that projects internally, as with many arthropods.

The wall of the œsophageal portion of the foregut [in spiders] . . . is supplied with a well-developed post-cerebral sucking-apparatus lying on the upperside of the entosternite and worked by powerful lateral muscles which attach it to this plate, and by a dorsal muscle which passes from its chitinous dorsal wall through the aortic space of the "stomach" to the median *entapophysis* of the carapace. *Proc. Zool. Soc. London,* 1902, p. 185.

entarthrotic (en-tär-throt′ik), *a.* [Gr. ἐντός, within, + ἄρθρον, joint, + *-ot-ic.*] Same as *interarticular.*

entepicondylar (en-tep-i-kon′di-lär), *a.* [Gr. ἐντός, within, + ἐπί, upon, + κονδύλος, condyle, + *-ar*[3].] 1. On the inner side of the humerus and above the condyle: as, the *entepicondylar* foramen, a foramen so situated, found in the humeri of many mammals and very characteristic of the cats.—2. Relating to the internal epicondyle or entepicondyle.

entepicondyle (en-tep-i-kon′dil), *n.* [Gr. ἐντός, within, + κονδύλος, condyle.] The process or projection just above the inner condyle of the humerus; the internal epicondyle or epitrochlea. See cut under *epicondyle.*

enteraden (en-ter′a-den), *n.* [Gr. ἔντερον, intestine, + ἀδήν, a gland.] An intestinal gland.

enteradenitis (en-te-rad-e-ni′tis), *n.* [NL., < *enteraden* + *-itis.*] Inflammation of the intestinal glands.

enterectasis (en-te-rek′ta-sis), *n.* [Gr. ἔντερον, intestine, + ἔκτασις, extension.] Distention of the intestines with gas.

enterelcosis (en-te-rel-kō′sis), *n.* [Gr. ἔντερον, intestine, + ἕλκωσις, ulceration.] Ulceration of the mucous membrane of the intestines.

entero-anastomosis (en″te-rō-a-nas″tō-mō′sis), *n.* [Gr. ἔντερον, intestine, + ἀναστόμωσις, anastomosis.] Intestinal anastomosis.

enterocentesis (en-te-rō-sen-tē′sis), *n.* [NL., < Gr. ἔντερον, intestine, + κέντησις, puncture.] In *surg.,* operative puncture of the bowel.

enterocholecystostomy (en″te-rō-kol-ē-sis-tos′tō-mi), *n.* Same as *enterocholecystotomy.*

enterocleisis (en″te-rō-klī′sis), *n.* [NL., < Gr. ἔντερον, intestine, + κλεισις, κλῆσις, a closing, < κλείειν, close.] Obstruction of the bowel.

enteroclysis (en″te-rok′li-sis), *n.* [NL., < Gr. ἔντερον, intestine, + κλύσις, drenching, < κλύζειν, drench: see *clyster.*] Rectal injection of large quantities of water, usually for the purpose of washing out the large intestine. *Med. Record,* July 18, 1903, p. 107.

enteroclysm (en′te-rō-klizm), *n.* [Gr. ἔντερον, intestine, + κλυσμός, drenching, < κλύζειν, drench.] Same as ★*enteroclysis.*

enterocœle, *n.* 2. A body-cavity or cœlom which arises as a diverticulum from the digestive cavity of the embryo. *Parker and Haswell,* Zoology, I. 359.

Enterocœlic pouch. See ★*pouch.*

enterocolostomy (en″te-rō-kō-los′tō-mi), *n.* [Gr. ἔντερον, intestine, + κόλον, colon, + στόμα, mouth.] In *surg.,* the establishment of an artificial communication between the colon and some portion of the small intestine.

enterocyst (en′te-rō-sist), *n.* [Gr. ἔντερον, intestine, + κύστις, bladder (cyst).] Cystic tumor of the intestine.

entero-enterostomy (en″te-rō-en-te-ros′tō-mi), *n.* [Gr. ἔντερον, intestine, + ἔντερον, intestine, + στόμα, mouth.] The operative formation of a permanent communication between two originally non-continuous portions of the intestine. *Med. Record,* Feb. 28, 1903, p. 352.

enterograph (en′te-rō-gräf), *n.* [Gr. ἔντερον, intestine, + γράφειν, write.] A medical instrument for recording the peristaltic movements of the intestines.

enterohematin (en″te-rō-hem′a-tin), *n.* [Gr. ἔντερον, intestine, + αἷμα(τ-), blood, + *-in*[2].] A red pigment found in the so-called livers of certain invertebrates.

enteroid (en′te-roid), *a.* [Gr. ἔντερον, intestine, + εἶδος, form.] Shaped like a bowel or intestine.

enterokinase (en″te-rō-kin′ās), *n.* [Gr. ἔντερον, intestine, + E. *kinase.*] A kinase found in the intestinal mucous membrane, which renders the pancreatic trypsin physiologically active. Similar bodies probably occur elsewhere in the mammalian organism, and have also been noted in bacteria and in snake-venom.

enteromere (en′te-rō-mēr), *n.* [Gr. ἔντερον, intestine, + μέρος, part.] A segment of the intestinal tract in the embryo.

enteromyiasis (en″te-rō-mī-i-ā′sis), *n.* [NL., < Gr. ἔντερον, intestine, + μυῖα, fly.] Presence of larvæ in the intestine, and the morbid state resulting therefrom.

enteropexy (en″te-rō-pek′si), *n.* [Gr. ἔντερον, intestine, + πῆξις, attachment.] In *surg.,* an operation for the attachment of a portion of the intestine to the anterior abdominal wall.

enterophthisis (en″te-rof′thi-sis), *n.* [NL., < Gr. ἔντερον, intestine, + φθίσις, consumption: see *phthisis.*] Intestinal tuberculosis.

enteroplegia (en″te-rō-ple′ji-ä), *n.* [NL., < Gr. ἔντερον, intestine, + πληγή, stroke.] Paralysis of the muscular coat of the intestine.

enteropneust (en′te-rop-nūst), *n.* In *zoöl.,* a worm-like animal belonging to the group *Enteropneusta.*

enteroptosis (en-te-rop-tō′sis), *n.* [NL., < Gr. ἔντερον, intestine, + πτῶσις, falling.] Prolapse or sinking down of the intestines, and usually of some or all of the other abdominal viscera, due to want of tone in the abdominal wall. Also called *Glenard's disease.*

enterorrhexis (en-te-rō-rek′sis), *n.* [NL., < Gr. ἔντερον, intestine, + ῥῆξις, rupture.] Rupture of the intestine.

enterosepsis (en-te-rō-sep′sis), *n.* [NL., < Gr. ἔντερον, intestine, + σῆψις, putrefaction.] Blood-poisoning by absorption of toxic materials formed within the intestine.

enterospasm (en′te-rō-spazm), *n.* [Gr. ἔντερον, intestine, + σπασμός, spasm.] Spasmodic colic.

enterostomy (en-te-ros′tō-mi), *n.* [Gr. ἔντερον, intestine, + στόμα, mouth.] Formation, by a surgical operation, of a permanent opening into the intestine. Same as *enterotomy,* 2.

enterotome (en-ter′ō-tōm), *n.* [Gr. ἔντερον, intestine, + -τομος, < ταμεῖν, cut.] A portion of the embryo of vertebrates containing those structures which later develop into the digestive tract. [Rare.]

enterozoic (en-te-rō-zō′ik), *a.* Of or pertaining to the *Enterozoa.*

Enthelminthes (en-thel-min′thēz), *n. pl.* [NL.] Same as *Enthelmintha.*

entheomania (en″thē-ō-mā′ni-ä), *n.* [NL., < Gr. ἐνθεος, inspired, frenzied, + μανία, madness.] Religious frenzy.

enthlasis (en′thla-sis), *n.* [Gr. ἐνθλασις, a dent caused by pressure, < ἐνθλᾶν, dent by pressure, < ἐν, in, + θλᾶν, crush.] A comminuted depressed fracture of the skull.

enthymematic (en-thi-mē-mat′ik), *a.* In *logic,* of the nature of or containing an enthymeme; incompletely stated: as, an *enthymematic* syllogism.

entiris (en-tī′ris), *n.* [NL., < Gr. ἐντός, within, + ἶρις, iris.] The posterior pigmented layer of the iris.

entity, *n.* 3. An individual fact or conception, having in itself all that is needed to constitute a characteristic whole.

Palpable enlargement of the pylorus, in infants a few weeks old, has now come to be recognized as a definite clinical and pathological *entity.*
Therapeutic Gazette, Feb. 15, 1903, p. 141.

entoblast, *n.* 2. In *embryol.,* one of the blastomeres or segments of the egg which takes part in forming the wall of the intestine, or enteron.

entobronchium (en-tō-brong′ki-um), *n.*; pl. *entobronchia* (-ä). [NL., < Gr. ἐντός, within, + βρόγχος, windpipe.] In *ornith.,* one of several tubes branching off from the vestibule or dilatation of the bronchus.

entocalcaneal (en-tō-kal-kā′nē-al), *a.* [Gr. ἐντός, within, + NL. *calcaneum* + *-al.*] Situated on the inner side of the calcaneum or heel-bone: specifically applied by Owen to the innermost of the ridges or projections on the posterior face of the proximal end of the tarsometatarsus of a bird.

entochoroidea (en-tō-kō-roi′dē-ä), *n.* [NL., < Gr. ἐντός, within, + NL. *choroidea.*] The posterior layer of the choroid.

entocnemial (en-tok-nē′mi-al), *a.* [Gr. ἐντός, within, + κνήμη, tibia, + *-al.*] Situated on the inner side of the tibia.

entocœle (en′tō-sēl), *n.* [Gr. ἐντός, within, + κοῖλος, hollow.] The portion of the cœlenteron or gut-cavity of a hexactinian polyp inclosed within each pair of mesenteries; the intramesenterial space: opposed to ★*exocœle. Trans. Linnean Soc. London,* Zool., Oct., 1902, p. 304.

entocœlic (en-tō-sē′lik), *a.* Same as *enterocœlic.*

entocondylar (en-tō-kon′di-lär), *a.* [Gr. ἐντός, within, + κονδύλος, condyle, + *-ar*[3].] Relating to the entocondyle, or inner articular face of such a bone as a femur: contrasted with ★*ectocondylar.*—**Entocondylar cavity,** the cavity or depression receiving the entocondyle, as in the tarsometatarsus of a bird.

entocondyloid (en-tō-kon′di-loid), *a.* [*entocondyl-ar* + *-oid.*] Relating to the inner side

or portion of a condyle, or such an articulation as that of the distal end of the humerus.

entoconid (en-tọ-kon′id), *n.* [Gr. ἐντός, within, + κῶνος, cone, + *-id*².] The postero-internal cusp of a lower molar. See cut under ★*tooth.*

entocornea (en-tō-kôr′nẹ̄-ä), *n.* [NL., < Gr. ἐντός, within, + NL. *cornea*, cornea.] Same as *membrane of Demours* or *Descemet* (which see, under *membrane*).

entocranial (en-tọ̄-kra′ni-ạl), *a.* [Gr. ἐντός, within, + κρανίον, cranium, + *-al.*] Same as *endocranial.*

entocyst (en′tọ-sist), *n.* Same as *endocyst.*

entoglossum (en-tọ̄-glos′um), *n.*; pl. *entoglossa* (-ä). [NL., < Gr. ἐντός, within, + γλῶσσα, tongue.] The foremost bone of the hyoid apparatus of a bird, lying in the substance of the tongue: really composed of a pair of bones properly known as *ceratohyals.*

Entognathi (en-tog′nạ-thī), *n. pl.* [NL., < Gr. ἐντός, within, + γνάθος, jaw.] A proposed group of thysanurous insects including the *Campodeidæ*, the *Japygidæ*, and the various families of *Collembola.*

entohyal (en-tọ̄-hī′ạl), *n.* [Gr. ἐντός, within, + *hyal(oid).*] One of a chain of median bones in the lower part of the gill-arches in fishes: same as *basibranchial.* *Starks*, Synonymy of the Fish Skeleton, p. 518.

Entoloma (en-tọ̄-lō′mä), *n.* [NL. (Quélet, 1882), < Gr. ἐντός, within, + λῶμα, fringe.] A genus of agarics having reddish or pinkish angular spores, a somewhat fleshy stem and pileus, and no volva or annulus. The species are widely distributed, occurring in fields and woodlands.

Entomacrodus (en-tọ̄-mak′rọ̄-dus), *n.* [NL., < Gr. ἔντομος, cut in, + ἄκρος, at the extremity, + ὀδούς (ὀδοντ-), tooth.] A genus of small blennies of the tropics, differing from *Salarias* in the presence of the long canines.

entomeric (en-tọ̄-mer′ik), *a.* Pertaining to or of the nature of an entomere.

entomesoblast (en-tọ̄-mes′ọ̄-blȧst), *n.* [Gr. ἐντός, within, + μέσος, middle, + βλαστός, germ.] A layer or cluster of embryonic cells which have not yet been differentiated into entoblast and mesoblast proper.

entometatarse (en-tọ̄-met′ạ-tärs), *n.* [Gr. ἐντός, within, + E. *metatarsus.*] The internal face of the tarsometatarsus of a bird. *Owen.* [Rare.]

Entomidæ (en-tom′i-dē), *n. pl.* [NL., < *Entomis* + *-idæ.*] A Paleozoic family of ostracode crustaceans, characterized by short, strongly convex, subequal bivalve tests with a depression near the middle of the dorsal region.

entomion (en-tō′mi-ọn), *n.*; pl. *entomia* (-ä). [NL., < Gr. ἐντός, within, + ὦμος, shoulder.] In *craniom.*, the anterior point of the mastoid angle of the parietal bone. *Von Török.*

Entomis (en′tọ̄-mis), *n.* [NL., < Gr. ἐντομίς, a gash, < ἔντομος, cut in.] The typical genus of the family *Entomidæ.*

Entomoconchidæ (en″tọ̄-mọ̄-kong′ki-dē), *n. pl.* [NL., < *Entomoconchus* + *-idæ.*] A family of Carboniferous ostracode crustaceans, characterized by subglobose, somewhat inequivalve shells, with a truncate front edge and a slit on the central portion of the margin.

Entomoconchus (en″tọ̄-mō-kong′kus), *n.* [NL., < Gr. ἔντομος, cut in, + κόγχη, a shell.] The typical genus of the family *Entomoconchidæ.*

Entomophila (en-tọ̄-mof′i-lạ̈), *n. pl.* [NL., < Gr. ἔντομον, insect, + φίλος, loving.] A group of hymenopterous insects (according to Ashmead's classification) having the hypopygium entire, the pronotum not extending back to the tegulæ, and the tarsi slender. It includes the families *Crabronidæ, Pemphredonidæ, Bembecidæ, Larridæ, Trypoxylonidæ, Philanthidæ, Nyssonidæ, Sphecidæ*, and *Ampulicidæ.*

entomophilous, *a.* 2. In *phytogeog.*, parasitic on insects: said of a class of fungi. *Pound and Clements.*

Entomophthoraceæ (en″tọ̄-mof-thọ̄-rā′sē-ē), *n. pl.* [NL., < *Entomophthora* + *-aceæ.*] A family of phycomycetous fungi named from the genus *Entomophthora.* See *Entomophthoreæ.*

entomophthoraceous (en-to-mof-thọ̄-rā′shius), *a.* Belonging or pertaining to the *Entomophthoraceæ.*

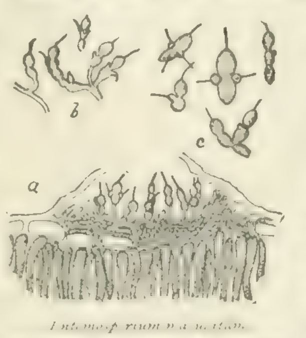
Entomophthorales (en″tọ̄-mof-thọ̄-rā′lēz), *n. pl.* [NL., < *Entomophthora* + *-ales.*] An order of entomogenous fungi containing the single family *Entomophthoraceæ.* See *Entomophthoreæ.*

Entomophthorineæ (en″tọ̄-mof-thō-rin′ẹ̄-ē), *n. pl.* [NL.] Same as ★*Entomophthorales.*

entomophthorous (en-tọ̄-mof′thọ̄-rus), *a.* Pertaining to or caused by a fungus of the genus *Entomophthora.*

A view of grasshoppers dead or dying from *entomophthorous* disease.
L. O. Howard, in Yearbook, U. S. Dept. Agr., 1901, p. 460.

Entomosporium (en-tọ̄-mos-po′ri-um), *n.* [NL. (Léveillé, 1858), < Gr. ἔντομον, insect, + σπορά, seed (spore).] A genus of parasitic fungi of the order *Sphæropsidales*, having black flattened pycnidia without ostiola. The spores usually become four-celled and furnished with slender appendages. *E. maculatum* causes the leaf-blight of the pear and quince. See *leaf-*★*blight.*



Entomosporium maculatum.
a, section of leaf, through a diseased spot, showing a fruiting pustule of the fungus containing spores in different stages of development; b, young spores showing method of development and attachment to the mycelium; c, mature spores, highly magnified. (Drawn from Report of U. S. D. A.)

entomostegous (en-tọ̄-mos′tẹ̄-gus), *a.* Belonging to the *Entomostega*, a division of *Foraminifera;* characterized by having the cells subdivided by transverse partitions.

entomostomatous (en″tọ̄-mos-tō′mạ-tus), *a.* Belonging to the *Entomostomata*, siphonobranchiate gastropods which have the lip of the shell notched.

entophthalmia (en-tof-thal′mi-ä), *n.* [NL., < Gr. ἐντός, within, + ὀφθαλμία, ophthalmia.] Inflammation of the inner structures of the eyeball.

entopic (en-top′ik), *a.* [Gr. ἔντοπος, in or of a place, < ἐν, in, + τόπος, place.] Being or occurring in the proper place: as, *entopic* gestation.

entoplasm (en′tō-plazm), *n.* [Gr. ἐντός, within, + πλάσμα, anything formed.] Same as *endoplasm.*

entoplastral (en-tọ̄-plas′trạl), *a.* [*entoplastr-on* + *-al*¹.] Relating to the entoplastron, the bone in the plastron of a turtle that corresponds to the interclavicle of other reptiles.

entoptoscope (en-top′tọ̄-skōp), *n.* [Gr. ἐντός, within, + ὀπτ(ικός), of seeing (see *optic*), + σκοπεῖν, view.] An instrument employed in testing the transparency of the media of the eye. A beam of light enters the eye through a minute hole in an opaque diaphragm, and any opacities in the lens or humors of the eye are projected as distinct shadows on the retina.

entoretina (en-tọ̄-ret′i-nạ̈), *n.*; pl. *entoretinæ* (-nē). [NL., < Gr. ἐντός, within, + NL. *retina.*] The inner layer of the retina.

entorganism (ent-ôr′gan-izm), *n.* [Gr. ἐντός, within, + E. *organism.*] An internal parasite.

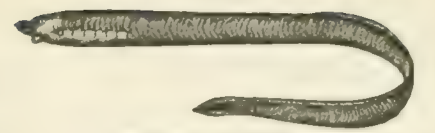
entosclerite (en-tọ̄-sklē′rīt), *n.* [Gr. ἐντός, within, + σκληρός, hard, + *-ite*².] A sclerite that is entirely internal, having no external portion, as the prophragma or mesophragma of an insect. *Proc. Zool. Soc. London*, 1902, p. 174.

entoseptum (en-tọ̄-sep′tum), *n.*; pl. *entosepta* (-tạ̈). [NL., < Gr. ἐντός, within, + L. *septum, sæptum*, a partition.] In corals, a septum developed within an entocœle. Compare ★*exoseptum.* *Annals and Mag. Nat. Hist.*, Feb., 1903, p. 147.

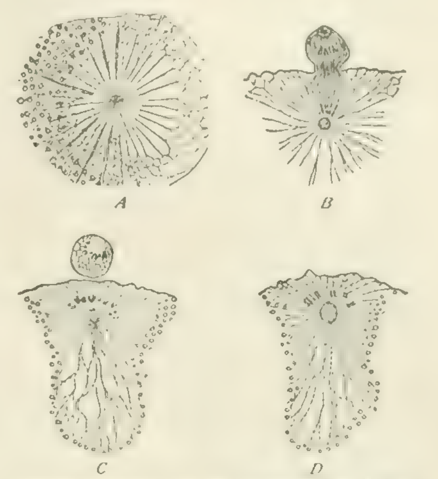
entosolenian (en″tọ̄-sọ̄-lē′ni-ạn), *a.* [Gr. ἐντός, within, + σωλήν, a channel, pipe.] Having an internal neck or tube, as the foraminifer *Lagena globosa.* Compare ★*ectosolenian.* *Smithsonian Rep.* (*Nat. Mus.*), 1897, p. 306.

entosphenal (en-tọ̄-sfẹ̄′nạl), *n.* [Gr. ἐντός, within, + σφήν, a wedge, + *-al*¹.] A bone in fishes anterior to the bones above the myodome: same as *basisphenoid.* *Starks*, Synonymy of the Fish Skeleton, p. 512.

Entosphenus (en-tọ̄-sfē′nus), *n.* [NL., < Gr. ἐντός, within, + σφήν, wedge.] A genus of lampreys running in the rivers from California northward on the Pacific slope. *E. tridentatus* is the common large lamprey of the Pacific coast.


Entosphenus tridentatus.
(From Bull. 47, U. S. Nat. Museum.)

entosphere (en′tọ̄-sfēr), *n.* [Gr. ἐντός, within, + σφαῖρα, a ball.] In *cytol.*, the inner or medullary zone of the centrosphere of the cell. *Ziegler*, 1899.



Centrosome and aster in the polar mitoses of *Unio.* (Lillie.)
A, aster of the first polar figure, central granule (centrosome) surrounded by medullary (*entosphere*) and cortical (ectosphere) zones. *B*, late anaphase of second polar mitosis, radii, *entosphere* bounded by continuous membrane. *C, D*, prophases of second mitosis, formation of central spindle within and from the substance of the old entosphere. (From Wilson's "The Cell.")

entostosis (en-tos-tō′sis), *n.* [NL., < Gr. ἐντός, within, + ὀστ(έον), bone, + *-osis.*] Same as *enostosis* or *endostosis.*

entotentacle (en-tọ̄-ten′tạ-kl), *n.* [Gr. ἐντός, within, + NL. *tentaculum*, tentacle.] One of the radially arranged tentacles which arise later than the exotentacles and from the entocœles of a coral polyp.

entothorax (en-tọ̄-thō′raks), *n.* [Gr. ἐντός, within, + θώραξ, thorax.] A chitinous process, probably an elaborate inward fold of the integument, which projects upward in a forked manner from the sternum. Also called *apophysis.*

Entotrophi (en-tot′rọ̄-fī), *n. pl.* [NL., < Gr. ἐντός, within, + τροφός, feeder, nurse: see *trophi.*] Same as ★*Entognathi.*

entotrophous (en-tot′rọ̄-fus), *a.* Pertaining to or having the characteristics of the *Entotrophi* or *Entognathi.*

entotympanic (en″tọ̄-tim-pan′ik), *a.* [Gr. ἐντός, within, + τύμπανον, drum: see *tympanum.*] Situated or occurring within the drum of the ear.

entozoal (en-tọ̄-zō′ạl), *a.* [*entozo-on* + *-al*¹.] Caused by the presence of *Entozoa:* as, an *entozoal* disease.

entozoölogically (en″tọ̄-zō-ọ̄-loj′i-kạl-i), *adv.* From the point of view of an entozoölogist, or regarding entozoölogy.

entrain¹, *v. t.* 2. To carry along mechanically by the flow of another fluid at high velocity. Thus water may be carried through a pipe with steam at such a rate that it cannot be precipitated and attach itself to the walls of the pipe, but must move with the steam into the engine-cylinder or other vessel into which the pipe delivers. *Sci. Amer. Sup.*, Dec. 27, 1902, p. 22558.

entrain² (en-trān′), *v.* [*en-*¹ + *train*¹.] **I.** *trans.* To put aboard a train.

I doubt very much whether, in Russia, a whole army corps was ever *entrained* or embarked, secretly and noiselessly, in the latter half of a single night; but in Japan this has been done again and again.
George Kennan, in Outlook, June 18, 1904, p. 402.

II. *intrans.* To go aboard a train.

entrainer (en-trān′ėr), *n.* A device for saturating a current of gas or steam with liquid: usually a hollow or pocket for collecting a liquid in such a way that it will be picked up by a passing current of gas or steam.

entrainment (en-trān′mẹnt), *n.* The act of entraining; specifically, the catching up and conveying away by live steam of minute drops of water from a boiler or of particles of sugar from an evaporating-pan or other vessel from which steam is exhausted.

entrance[1], *n.* 7. In *phonetics*, the initial movement in producing a sound; the 'attack' or on-glide. *Scripture*, Exper. Phonetics, p. 429.—8. In music of a concerted sort, the point at which or the effect with which any one of the parts begins, especially when not at the beginning of a piece or passage. **Pupil of entrance**, same as ★*entrance-pupil* and *interfusion* ★*disk* (which see). *Jour. Roy. Micros. Soc.*, June, 1904, p. 283.

entrance-cone (en'-trans-kōn), *n.* In *embryol.*, the conical protrusion of the surface protoplasm of the egg at the point of entrance of the spermatozoön.

Entrance-cone in Sea-urchin's Egg. Magnified.

A, sperm-head before entrance; *n*, nucleus; *m*, middle-piece and part of the flagellum; *B*, *C*, sperm-head immediately after entrance, showing entrance-cone; *D*, rotation of the sperm-head, formation of the sperm-aster about the middle-piece; *E*, casting off of middle-piece, centrosome at focus of the rays. The changes figured occupy about eight minutes. (From Wilson's "The Cell.")

entrance-pupil (en'-trans-pū″pil), *n.* In a lens system, the circular space corresponding in size and position to the image which is formed of the stop by that portion of the system which lies between the stop and the object. See *interfusion* ★*disk*.

entrancing (en-trans'-ing), *p. a.* That entrances or transports with delight or wonder: as, *entrancing* music; an *entrancing* tale.

entrechat (oṅ-tr-shä'), *n.* [F., < It. *intrecciata* (sc. *capriola*), a complicated caper, pp. of *intrecciare*, complicate, < *in*, in, + *treccia*, plait, tress.] A leap in ballet-dancing, during which the performer strikes his heels together several times.

"Mr. Edgeworth excelled me so much" [said the stranger], "that I sat down upon the ground, and burst out a crying; he could actually complete an *entrechat* of ten distinct beats, which I could not accomplish."
Edgeworth, Memoirs, II. vi.

entrée, *n.* 5. An old dance resembling the polonaise, or the music for it.

Entropy leakage, a lowering of the value of the entropy factor in the expansion of a heat-medium, and a consequent lowering of the intrinsic energy of the medium, without a corresponding useful expenditure of mechanical energy to overcome a resistance. The heat-energy of the medium is dissipated without doing work, as the water is wasted which leaks from a mill-dam.—**Principle of the increase of entropy**, the principle (due to Clausius) that, owing to the inequalities of temperature between different points, the *entropy* of the universe continually tends to increase.—**Unit of entropy**, the ★claus (which see).

entry, *n.*—**Catchword entry.** See ★*catchword*.—**Entry sign**, in *music*: (*a*) In a canon that is but partly written out, a mark indicating the point at which the imitating part is to begin. (*b*) A sign from a conductor to a singer or player to begin.—**Table of double entry**, a table having two arguments, as, for example, a multiplication table. It may or may not be arranged so that one argument is entered at the top and the other at the side. As long as the quantities in the table vary with two independent quantities, or appellations, to be entered, it remains a table of double entry, however arranged. Tables of triple, quadruple, etc., entry would be possible; but they are little used, since any table of $N + 1$ arguments can be replaced by N tables of double entry, though a larger number will often be convenient. A table of double entry cannot be reduced to a table of single entry.—**Writ of entry**, in *common law*, a writ which lies in favor of one having a right of entry to recover possession of lands wrongfully withheld.

entry-clerk (en'tri-klėrk), *n.* A clerk whose business is to make entries in the proper book or books; in common usage, a clerk in a mercantile establishment who keeps a book of original entry in which all purchases and sales are recorded in the order of their occurrence.

entry-word (en'tri-wėrd), *n.* The word under which a book is listed or entered in a catalogue.

Entyloma (en-ti-lō'mạ̈), *n.* [NL. (De Bary, 1874), < Gr. ἐντυλοῦσθαι, to grow hard, < ἐν, in, + τύλος, a callus.] A genus of parasitic fungi of the order *Ustilaginales*. The mycelium is intercellular and not gelatinous as in most smut-fungi. The spores are intercalary or terminal, usually forming groups in the tissue of the host, but not separating from it. Some of the species produce gall-like swellings, and many bear simple conidia. About 70 species have been described. *E. Physalidis* is common on species of *Physalis*.

enucleate, *v. t.* 3. In *cytol.*, to deprive (the cell) of its nucleus; to denucleate.

enuf, *a.*, *n.*, *adv.*, and *interj.* A simplified spelling of *enough*.

Env. Ext. An abbreviation of *Envoy Extraordinary*.

enzoöty (en-zō'ọ-ti), *n.* [Gr. ἐν, in, + (*epi*)-*zoöty*.] A contagious disease of animals, such as infectious abortion of cattle, confined to small localized regions.

enzymatic (en-zi-mat'ik), *a.* [Irreg. < *enzym* + *-atic*. The proper form is *enzymic*.] Relating to an enzym or ferment; enzymic.

enzymation (en-zi-mā'shọn), *n.* [*enzym* + *-ation*.] The process of affecting with an enzym.—**Oxidizing enzymation**, the so-called tobacco ★fermentation (which see). Also *oxidizing enzymosis*.

enzymic (en-zim'ik), *a.* Relating to or of the nature of an enzym.

enzymol (en'zi-mōl), *n.* [*enzym* + *-ol*.] A proteid ferment used in place of hydrogen peroxid as a wash for the ulcerated surface of the pharynx.

enzymology (en-zi-mol'ọ-ji), *n.* [MGr. ἔνζυμος, leavened (see *enzym*), + -λογία, < λέγειν, speak.] The study of enzyms.

enzymosis (en-zi-mō'sis), *n.* [*enzym* + *-osis*.] Fermentation by non-organized ferments. *Roberts*.

E. O. A game of chance, in which the appropriation of the stakes is determined by the falling of a ball into one of several niches marked E or O respectively. *N. E. D.*

eo- (ē'ō). [Gr. ἠώς, dawn: see *eocene*, etc.] In *petrog.*, specifically, a prefix used before the names of rocks, chiefly volcanic, to indicate that they were erupted in geologically ancient time as distinguished from Tertiary or recent time. Its use was suggested by O. Nordenskjold in 1893. The resulting terms are *eobasalt*, *eodacite*, *eorhyolite*, etc.

Eocardidæ (ē-ọ-kär'di-dē), *n. pl.* [NL. *Eocardia*, the type genus, + *-idæ*.] A family of small fossil rodent mammals, containing species of the genera *Helomys*, *Phanomys*, *Palæocarida*, etc., from the Santa Cruz formation (Miocene) of Patagonia. *Ameghino*, 1891.

Eocicada (ē″ọ-si-kā'dạ̈), *n.* [NL., < Gr. ἠώς, the dawn, + L. *cicada*, cicada.] A genus of the *Cicadidæ* or harvest-flies occurring in the Jurassic lithographic slates of Bavaria.

eodemotic (ē″ọ-dē-mot'ik), *a.* [Gr. ἠώς, dawn, + *demotic*.] Pertaining to the dawn of demotic (civil as contrasted with tribal) organization of society.

On comparing the method classes with the periods and culture-grades, it is found that archaic trephining was chiefly prehistoric and exclusively *eodemotic*, but that neoteric trephining persists, at least vestigially, among backward representatives of civilized peoples.
Rep. Bur. Amer. Ethnol., 1894–95, p. 18.

eohistoric (ē″ọ-his-tor'ik), *a.* Pertaining to the dawn of history: as, *eohistoric* times; *eohistoric* man.

eolation (ē-ọ-lā'shọn), *n.* [L. *Æolus*, the wind-god, + *-ation*.] In *geol.*, the process of earth-sculpture by wind; the scouring of exposed formations by wind-driven dust and sand, the chiseling of cliffs and modeling of beaches by wind-driven waves, and the modification of existing features by transportation and deposition of rock material by wind.

eolith (ē'ọ-lith) *n.* [Gr. ἠώς, dawn, + λίθος, a stone.] A rudely chipped flint implement (or what appears to be such) regarded, from its workmanship, as older than the paleoliths. Eoliths are found in the oldest Quaternary deposits of Europe. *Keane*, Ethnology, p. 74.

eolithic (ē-ọ-lith'ik), *a.* Pertaining to or characterized by the presence of eoliths.

eolotropic (ē″ọ-lọ-trop'ik), *a.* [*eolotrop-y* + *-ic*.] Characterized by eolotropy; having a different structure in different directions: opposed to *isotropic*. An eolotropic medium shows different elastic properties according to the direction of the stress, and, when transparent, exhibits double refraction.

eolotropy (ē-ọ-lot'rọ-pi), *n.* [Gr. αἰόλος, changeable, shifting, + -τροπος, < τρέπειν, turn.] Difference of structure in different directions. Doubly refracting crystals are eolotropic, and isotropic bodies, when twisted or subjected to longitudinal or shearing stress, show a temporary eolotropy.

Bodies . . . whose electro-magnetic properties merge into those of isotropic non-conductors as the *eolotropy* disappears. *H. Hertz* (trans.), Electric Waves, p. 203.

eon, *n.* 3. The largest division of geologic time: used by J. D. Dana especially in dividing the archæan into astral and archæozoic eons.

eonial, æonial (ẹ-ō'ni-al), *a.* Same as *eonian*.

eophone (ē'ọ-fōn), *n.* [Gr. ἠώς, dawn, the east, the orient, + φωνή, sound. The intended meaning seems to be 'that which orients, or fixes the direction of, the sound.'] An apparatus for ascertaining at sea the direction or bearing of a source of sound-waves. It consists of a pair of trumpet-shaped receivers pointing in the same direction and mounted on opposite sides of a separating screen. From these condensing-receivers tubes lead downward and are attached to the two ears of the observer. The screen and trumpets are mounted on a short vertical mast free to be turned so that the edge of the screen can point in any direction. When the observer receives by trial the most intense vibration of the air, then both mouthpieces and the screen between them are pointed to the source of sound. Used in thick weather or at night.

Eophone.

a, collecting-cones for sound-vibrations; *b*, screen to separate the sound-waves coming to each cone from different directions and to reflect those coming obliquely; *c*, ear-tubes connecting each cone separately to one of the operator's ears; *d*, sus; ending-spring to carry weight of *e*, clamp to press the tube-outlets against the ears; *f*, revolving mast carrying collecting-cones and screen; *g*, hand-wheel to point the screen and cones to the point of greatest intensity of sound; *h*, dumb compass in a fixed relation to the axis of the ship; *i*, pointer indicating the bearing of the screen and cones.

Eoplacophora (ē″ọ-pla-kof'ọ-rạ̈), *n. pl.* [Gr. ἠώς, dawn, + πλάξ (πλακ-), plate, + -φορος, < φέρειν, bear.] A suborder of the polyplacophorous chitons. It is characterized by having the tegumentum coextensive with the articulamentum, or the latter projecting in smooth insertion-plates, and by having posterior gills. One of its two families is Paleozoic, the other Tertiary and recent.

Eopsetta (ē-op-set'ạ̈), *n.* [NL., < Gr. ἠώς, dawn, + ψῆττα, a flat-fish.] A genus of flounders closely allied to *Hippoglossoides*, found on the coast of California. *E. jordani*, the single known species, is frequently sold as English sole.

eorhyolite (ē-ọ-rī'ọ-līt), *n.* [*eo-* + *rhyolite*.] In *petrog.*, a geologically ancient rhyolite. See ★*eo-*.

Eosaurus (ē-ō-sâ'rus), *n.* [NL., < Gr. ἠώς, dawn, + σαῦρος, a lizard.] A genus of stegocephalous *Amphibia* represented only by detached amphicœlous vertebræ from the Coal-measures of Nova Scotia.

Eoscorpius (ē-ọ-skôr'pi-us), *n.* [NL., < Gr. ἠώς, dawn, + σκορπίος, a scorpion.] A genus of fossil scorpions from the Carboniferous rocks of Illinois.

Eosebastes (ē″ọ-sē-bas'tēz), *n.* [NL., < Gr. ἠώς, dawn, + *Sebastes*.] A subgenus of the genus *Sebastodes*, including the red rockfishes of the coast of California.

Eosin B, BN, or **BW**, a coal-tar color of the xanthene type, the sodium salt of dibrom-dinitro-fluorescein. It is applied like eosin, but gives bluer pinks. Also called *eosin scarlet*.—**Eosin J.** Same as ★*erythrosin*.—**Eosin S** or **BB**, a coal-tar color of the xanthene type, the potassium salt of the ethyl ether of tetrabromfluorescein. It is insoluble in cold water, but readily soluble in alcohol, and for this reason it is often called spirit-soluble eosin. Its application is the same as that of eosin.—**Eosin scarlet.** Same as ★*eosin B, BN*, or *BW*.—**Eosin 10B.** Same as *phloxin*.—**Methyl eosin.** Same as *erythrin*, 1.

eosinophil, *a.* **II.** *n.* A leucocyte which stains only with the acid dyes, such as eosin. Also called *acidophil* and *oxyphil*.

eosinophilia (ē″ọ-sin-ọ-fil'i-ạ̈), *n.* [*eosin* + Gr. -φιλία, < φιλεῖν, love.] The presence in the blood of eosinophil leucocytes in markedly increased numbers. *R. C. Cabot*, Clinical Exam. of the Blood, p. 116.

eosinophilic (ē″ọ-sin-ọ-fil'ik), *a.* Same as *eosinophil*.

eosinophilous (ē″ọ-si-nof″i-lus), *a.* [*eosinophil* + *-ous*.] Staining readily and intensely in eosin; of or pertaining to an eosinophil.

eosium (ē-ō'si-um), *n.* [NL., irreg. < Gr. ἠώς, dawn (aurora), + *-ium*.] A name suggested by Berthelot for the recently discovered atmospheric gas *krypton*.

eosolate (ē-ō'sọ-lāt), *n.* [*eos*(*in*) + *-ol* + *-ate*[1].] A salt of sulpho-acids of the aliphatic creosote esters. *Calcium eosolate* is a gray, gritty powder, with slightly pungent ethereal odor and somewhat acrid leathery taste: used in diabetic affections. *Silver eosolate* is used in gonorrhea, and *quinine eosolate* in malaria.

Eotrochus (ē-ot'rọ-kus), *n.* [NL., < Gr. ἠώς, dawn, + NL. *Trochus*, a genus of gastropods.] A genus of platypodous *Mollusca*, characterized by turbinate, widely umbilicate shells which have flat whorls and concave base, and which sometimes carry agglutinated foreign particles. The genus was described from Silurian rocks.

epacme (ep-ak'mẹ), *n.* [Gr. ἐπί, upon, + ἀκμή, acme.] A stage in the ancestral or phylogenetic history of a group of organisms, such as a family or a genus or a species, before the perfection of development, or acme, is reached. *Jour. Roy. Micros. Soc.*, Oct., 1903, p. 616. [Rare.]

epagomenic (ep″ạ-gō-men'ik), *a.* Same as *epagomenal*.

epanorin (ep-ạ-nō'rin), *n.* [NL. *epanora* (see def.) + *-in*[2].] A yellow compound contained

in the lichen *Lecanora epanora*. It crystallizes in needles, melting at 131–132° C.

Epanorthidæ (ep-a-nôr'thi-dē), *n. pl.* [NL. (*Ameghino*, 1889), < *Epanorthus*, the type genus, + *-idæ*.] A family of mammals, comprising small species, known from fragmentary remains in the Santa Cruz formation (Miocene) of Patagonia, and placed with the diprotodont marsupials.

epanorthotic (ep″an-ôr-thot'ik), *a.* Of the nature of or characterized by epanorthosis; given to epanorthosis.

eparchæan (ep-är-kē'an), *a.* [Gr. ἐπί, upon, + E. *archæan*.] Situated above the recognized archæan: applied to a group of rocks which contain no fossils and are not yet accepted as Paleozoic, but which apparently are later in age than the true archæan. *Dana*, Manual of Geol., p. 446.—**Eparchæan interval**, the time-interval between the formation of an archæan rock and the next overlying one. As first used by A. C. Lawson it was restricted to Precambrian time, but it has had a wider significance in the writings of others. *Science*, N. S., Feb. 20, 1903, p. 290.

eparchate (ep'ärk-āt), *n.* [*eparch* + *-ate*3.] Same as *eparchy*. *Schaff*.

eparchial (ep-ärk'i-al), *a.* Of or pertaining to an eparchy. *Schaff*.

eparcuale (ep-är-kū-ā'lē), *n.*; pl. *eparcualia* (-li-ä). [Gr. ἐπί, upon, + L. *arcus*, arch.] The independent ossification from which the neural spine is developed; the supradorsal of Gadow.

eparitoi (e-par'i-toi), *n. pl.* [Gr. ἐπάριτοι or ἐπαρίται.] A picked body of hoplites created in Arcadia, in ancient Greece, after the foundation of Megalopolis in 370 B. C. They probably formed a considerable troop.

Here too the *Eparitoi* must have had their quarters; and it was their duty, in case of an hostile assault, to defend the southern circuit of the walls. *J. B. Bury*, in Jour. Hellenic Studies, XVIII. 18.

Epaxial actinophores. See ★*actinophore*.

epeirogenetic, epeirogenic. Same as ★*epirogenic*.

epembryonic (ep-em-bri-on'ik), *a.* [Gr. ἐπί, upon, + *embryonic*.] Of or pertaining to stages in the life of an organism later than the embryonic stages. *Hyatt*, Biol. Lect., 1899, p. 132. [Rare.]

éperlan (ā-pãr-loṅ'), *n.* [F., OF. *esperlanc*, *esperlan*, *esperlen*, etc., < MLG. *sperlink* = E. *sparling*1.] The European smelt, *Osmerus eperlanus*, found along the shores of northern Europe, and esteemed as a food-fish.

eph-. See *epi-*.

Eph., Ephes. Abbreviations of *Ephesians*.

Ephebaceæ (ef-ē-bā'sē-ē), *n. pl.* [NL., < *Ephebe* + *-aceæ*.] A family of gymnocarpous lichens named from the genus *Ephebe*.

ephebarch (ef'ē-bärk), *n.* [Gr. ἐφήβαρχος, < ἔφηβος, a boy, + ἀρχός, leader.] In *Gr. antiq.*, an overseer of youth: a kind of magistrate whose precise duties are not now known.

ephebastic (ef-ē-bas'tik), *a.* Of or pertaining to ephebasty: having characters which belong to the mature growth-stage of a colony.

ephebasty (ef'ē-bas-ti), *n.* [Gr. ἔφηβος, mature, + ἄστυ, city.] In *paleon.*, the condition of having attained mature growth, as a colony of corals; the stage of mature growth.

Ephebe2 (e-fē'bē), *n.* [NL. (Fries, 1825), < Gr. ἐπί, upon, + ἥβη, youth, > pubescence, in allusion to the pubescent thallus.] A genus of lichens having the thallus small and branched and composed chiefly of the algal element. The apothecia are small and round. The species are few and occur on wet rocks and earth.

Ephebeitic (e-fē-bē-it'ik), *a.* [*ephebeitis* + *-ic*.] Of or pertaining to ephebeitis. [Rare.]

Many of the phenomena are those of over-accentuation of processes normal at puberty, which I have for years called *ephebeitic*. *G. S. Hall*, Adolescence, I. 308.

ephebeitis (e-fē-bē-ī'tis), *n.* [NL., < Gr. ἐφηβεία, man's estate, + *-itis* (implying inflammation).] The fever of maturing youth. [Rare.]

When the youth takes the helm of his own being, he navigates a choppy sea. . . . He must strive, fight, and storm his way up, if he would break into the kingdom of man. . . . Many an impulse seeks expression, . . . which will never be heard of later. Its function is to stimulate the next higher power. . . . Never is it so true that nothing human is alien from each individual, as in this fever of *ephebeitis*. *G. S. Hall*, Adolescence, II. 89.

ephebiate (e-fē'bi-āt), *n.* [Gr. ἐφηβεία, man's estate, + *-ate*3.] In *Gr. antiq.*, the period of adolescence in boys or the period of ephebic education.

ephebic, *a.* **2.** Of or pertaining to the adult stage of individual development or ontogeny, as contrasted with the adolescent and the senile stages.

[The] *ephebic* stages give the differentials elaborated in the ontogeny at the acme of the evolution of the stock. *Hyatt*, Biol. Lect., 1899, 132.

The *ephebic* stages begin with the assumption of characters of lowest taxonomic rank (varietal). *Amer. Jour. Sci.*, Jan., 1903, p. 12.

ephebolic (ef-ē-bol'ik), *a.* [Gr. ἔφηβος, youth, + βολή, a throw, cast (cf. *metabolic*, etc.).] Same as ★*ephebic*, 2.

ephebus (e-fē'bus), *n.* Same as *ephebe*.

epheby (ef'ē-bi), *n.* [Gr. ἐφηβία (or ἐφηβεία, man's estate, < ἐφηβεύειν, arrive at man's estate), < ἔφηβος, adult: see *ephebic*.] The adult condition; adulthood; the ephebic stage: used in the classification of the stages of ontogeny.

ephectic (e-fek'tik), *a.* and *n.* [Gr. ἐφεκτικός, able to hold back, < ἐπέχειν, hold back, < ἐπί, to, unto, + ἔχειν, hold.] **I.** *a.* Holding the judgment in check.

II. *n.* One who suspends judgment.

All these men were called Pyrrhoneans from their master; and also doubters, and sceptics, and *ephectics*, or suspenders of their judgment, and investigators, from their principles. And their philosophy was called investigatory from their investigating or seeking the truth on all sides; and sceptical from their being always doubting (σκεπτομαι), and never finding; and *ephectic*, from the disposition which they encouraged after investigation, I mean the suspending of their judgment, epoche; and doubting, because they asserted that the dogmatic philosophers only doubted, and that they did the same. *Diogenes Laertius* (trans.), Lives of the Philosophers, [p. 405.

ephedrine (ef'ē-drin), *n.* [*Ephedra* + *-ine*2.] A crystalline alkaloid, $C_{10}H_{15}ON$, contained in the leaves of *Ephedra distachya* and other species of *Ephedra*. It is mydriatic.

ephedrismos (ef-ē-dris'mos), *n.* [Gr. ἐφεδρισμός, lit. 'sitting or riding upon (another's back),' < ἐφεδρίζειν, sit or ride upon another's back, < ἔφεδρος, sitting upon, < ἐπί, upon, + ἕδρα, a seat.] A Greek game in which a stone was set up at a given distance and balls were thrown at it. The player who failed to hit the stone was blindfolded and made to carry the victor to the stone.

This is also the case with the group illustrating the oft-repeated theme of the *Ephedrismos* or Encotyle. *M. B. Huish*, Greek Terra-cotta Statuettes, p. 123.

ephelkustic (ef-el-kös'tik), *a.* [Gr. ἐφελκυστικός, attracted, drawn after, < ἐφέλκυσις, power of attraction, < ἐφέλκειν, draw after, attract, < ἐπί, upon, + ἕλκειν, draw.] In *Gr. gram.*, attracted or appended: applied to the letter ν (*n*) when, for the sake of euphonious utterance, it is appended to a word ending in a vowel and followed by another beginning with a vowel.

ephemeranthy (e-fem'e-ran-thi), *n.* [Gr. ἐφήμερος, of the day, fleeting, + ἄνθος, flower.] In *bot.*, the phenomenon of lasting only one day or less: referring to flowers or, chiefly, their corollas. *F. E. Clements*.

Ephemerida (ef-ē-mer'i-dä), *n. pl.* [NL.] The *Ephemeridæ* considered as of ordinal rank.

ephemeromorphic (e-fem″e-rō-môr'fik), *a.* [Gr. ἐφήμερος, of the day, + μορφή, form.] Of or pertaining to the ephemeromorphs; of or pertaining to a form of organic life that is transitory and unstable—in particular, a form of life which, being definitely neither plant nor animal, has no permanent place in nature; ephemeromorphous. [Rare.]

Ephemeroptera (e-fem-e-rop'tē-rä), *n. pl.* [NL., < Gr. ἐφήμερος, of the day, + πτερόν, wing.] In *entom.*, the *Ephemeridæ* considered as an order.

ephete (ef'ēt), *n.* [Gr. ἐφέτης, a commander, a magistrate, < ἐφιέναι, send to, command, < ἐπί, to, + ἰέναι, send.] In *Gr. antiq.*, a criminal magistrate in Athens, especially one who tried cases of murder.

ephetic (e-fet'ik), *a.* [*ephete* + *-ic*.] Of or pertaining to the office of ephete.

ephippial, *a.* **2.** Having or carrying a brood-pouch: as, the *ephippial* females of certain crustaceans.

ephippic (e-fip'ik), *a.* [Gr. ἐφίππιον, a saddle-cloth (taken for 'saddle'), + *-ic*.] Saddle-shaped; specifically, having the ends of the vertebral centra concave in one plane and convex in the other, as are the cervical vertebræ of birds; heterocœlous. *Wieland*, 1899.

ephor, *n.* **2.** In modern Greece, an overseer or superintendent of public works.

ephoric (e-for'ik), *a.* [*ephor* + *-ic*.] Same as *ephoral*.

Ephraimite (ē'fra-im-īt), *n.* **1.** In *Old Test. hist.*, a member of the tribe of Ephraim, one of the 12 tribes of Israel.—**2.** A nickname for pieces of 8 groschen struck at Berlin by Frederick the Great about 1759: so called from one of the directors of the mint.

ephydriad (e-fid'ri-ad), *n.* [Gr. ἐφυδριάς (-αδ-), of the water (sc. νύμφη, nymph), < ἐπί, upon, + ὕδωρ, water.] A water-nymph. *L. Hunt*. [Rare.]

ephydrid (ef'i-drid), *a.* Of or belonging to the dipterous family *Ephydridæ*.

ephydrogamic (ef'i-drō-gam'ik), *a.* [Gr. ἐπί, upon, + ὕδωρ, water, + γάμος, marriage, + *-ic*.] Hydrophilous, with the pollination occurring on the surface of the water.

ephyrula (ef-ir'ū-lä), *n.*; pl. *ephyrulæ* (-lē). [NL.] A young acraspedote medusa newly set free from the scyphistoma.

epial (ep'i-al), *n.* [F. *épial* (Geoffroy), < Gr. ἐπί, upon, + *-al*.] In *ichth.*, the neural spine; the spine in which the neural arch ends. *Starks*, Synonymy of the Fish Skeleton, p. 524.

epialid, hepialid (ē-, hē-pī'a-lid), *n.* and *a.* **I.** *n.* A member of the family *Epialidæ* (*Hepialidæ*).

II. *a.* Of or belonging to the lepidopterous family *Epialidæ* (*Hepialidæ*).

epiandrium (ep-i-an'dri-um), *n.*; pl. *epiandria* (-ä). [NL., < Gr. ἐπί, to, + ἀνήρ (ἀνδρ-), male.] In the *Arachnida*, the opening of the male genital organs.

Epibaterium (ep″i-bā-tē'ri-um), *n.* [NL. (Forster, 1776), in allusion to the climbing habit, < Gr. ἐπιβατήριος, of or for climbing, < ἐπιβαίνειν, go upon: see *epibatus*.] A genus of plants of the family *Menispermaceæ*. They are usually twining shrubs with axillary panicles of small flowers, but the leaves not peltate as in some related genera. There are about 30 species, widely distributed, chiefly in the tropical and subtropical regions of the Old World. One species, *E. Carolinum* (*Cocculus Carolinus* of Linnæus), occurs in the southern United States, and another, *E. diversifolium* (*Cocculus diversifolius* of de Candolle), extends from Texas to Arizona and Mexico.

epibenthic (ep-i-ben'thik), *a.* [*epibenthos* + *-ic*.] Living upon or in the bottom of the continental shelf or littoral zone of the ocean; of or pertaining to epibenthos. See ★*epibenthos*, ★*benthos*, ★*benthonic*.

Everywhere, however, the *epibenthic* fauna is exposed to certain definite environmental conditions, as compared with a deeper fauna. *Encyc. Brit.*, XXXIII. 933.

epibenthos (ep-i-ben'thos), *n.* [NL., < Gr. ἐπί, upon, + βένθος, depth (see ★*benthos*).] The animals and plants that exist next to the benthos, or deep-sea fauna and flora—namely, those that live in the sea-bottom of the continental shelf or littoral zone, and those that are attached to its surface, and those that creep or run over its surface, considered collectively. See ★*benthos*.

The fauna of this zone [continental shelf or littoral zone], generally very well characterized, may be distinguished as the *epibenthos*. *Encyc. Brit.*, XXXIII. 933.

epiboulangerite (ep″i-bō-lan'jėr-īt), *n.* [*epi-* + *boulangerite*.] A lead sulphantimonate, $Pb_3Sb_2S_8$, occurring in dark bluish-gray to black masses. It is perhaps derived by alteration from boulangerite.

epibranchial, *n.* **2.** In *ichth.*, one of the upper bones of the gill-arches. They lie just above the angle of each arch, between the superior pharyngeals (which they support) and the ceratobranchials below.

epibranchiale (ep″i-brang-ki-ā'le), *n.*; pl. *epibranchialia* (-li-ä). [NL., neut. of **epibranchialis*, < Gr. ἐπί, upon, + βράγχια, gills: see *branchial*.] In *ichth.*, the uppermost of the three pieces of the gill-branches (*branchialia*) in the gill-apparatus.

Epibulia (ep-i-bū'li-ä), *n.* [NL.] The typical genus of the family *Epibulidæ*. *Eschscholtz*, 1829.

Epibulidæ (ep-i-bū'li-dē), *n. pl.* [NL., < *Epibulia* + *-idæ*.] A family of calyconectous *Siphonophora*. It consists of polygastric forms with a short, inflated, spirally convoluted stem, cormidia ordinate in a spiral ring protected by a corona of palpons, pneumatophore without pericystic radial pouches but with hypocystic villi. It includes the genera *Epibulia* and *Annula*.

epicheilous, *a.* See ★*epichilous*.

epichilous (ep-i-kī'lus), *a.* [Gr. ἐπιχειλής, on or at the lips, < ἐπί, upon, + χεῖλος, lip.] Of or pertaining to the lip or buccal segment: specifically applied to earthworms having the prostomium separated from the buccal segment by a complete groove. Also *epicheilous*. *Proc. Zool. Soc. London*, 1901, p. 199.

Epichloë (e-pik'lọ̄-ē), *n.* [NL. (Tulasne, 1865), < Gr. ἐπί, upon, + χλόη, grass, verdure.] A genus of parasitic fungi of the order *Hypocreales*, having the perithecia embedded in a smooth, bright-colored, fleshy stroma which is at first covered with a conidial layer. The asci are cylindrical and contain 8 hyaline filiform spores. The species are mostly parasitic on grasses, as the name indicates. *E. typhina* frequently attacks the cultivated grasses, *Poa pratensis*, blue-grass, and *Phleum pratense*, timothy.

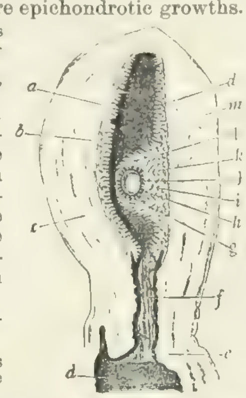
epichondrosis (ep″i-kon-drō'sis), *n.* [NL., < Gr. ἐπί, upon, + χόνδρος, cartilage, + *-osis.*] A growth of cartilage upon the periosteum, such as that producing the antlers of a deer.

epichondrotic (ep″i-kon-drot'ik), *a.* [*epichondrosis* (*-ot-*) + *-ic.*] Relating to a growth of cartilage upon the periosteum or perichondrium. The antlers of deer are epichondrotic growths.

Epichondrotic growths preponderate, with multiple and broadened bases. *Proc. Zool. Soc. London*, 1902, I. 218.

epichordal, *a.* **2.** Noting a type of vertebræ, found in some *Batrachia*, in which the cartilaginous elements from which the centra of the vertebræ are developed are suppressed on the ventral side of the notochord, as in *Pipa*, *Bombinator*, and *Alytes*.

The *epichordal* feature is not necessarily indicative of relationship. *H. Gadow*, Amphibia and Reptiles, p. 20.



l, epichorion.
A longitudinal section of the human uterus with an ovum in situ estimated as about the thirteenth day. (After Kollman.) One-half natural size.

a, cavity of uterus; *b*, decidua vera; *c*, dorsal wall of uterus; *d*, vagina; *e*, os uteri; *f*, cervix uteri; *g*, villi projecting from wall of blastodermic vesicle; *h*, wall of blastodermic vesicle; *i*, uterine glands; *j*, cavity of ovum or blastodermic vesicle; *k*, decidua serotina; *l*, epichorion; *m*, ventral wall of uterus. (From Marshall's "Vertebrate Embryology.")

epichorion (ep-i-kō'ri-on), *n.*; pl. *epichoria* (-ä). [Gr. ἐπί, upon, + χόριον, the membrane that incloses the fetus.] In *embryol.*, that portion of the uterine mucosa which folds over and incloses the egg in mammals.

epichrosis (ep-i-krō'sis), *n.* [NL., < Gr. ἐπίχρωσις, a surface stain, < ἐπιχρωννύναι, color on the surface, < ἐπί, upon, + χρωννύναι, color.] Cutaneous discoloration, as in chloasma, freckles, etc.

epichysis (ep-i-kī'sis), *n.* [NL., < Gr. ἐπίχυσις, a pouring in, also a pitcher, < ἐπιχεῖν, pour in, < ἐπί, on, in, + χεῖν, pour.] In *Gr. archæol.*, a pitcher for wine, etc.; a beaker.

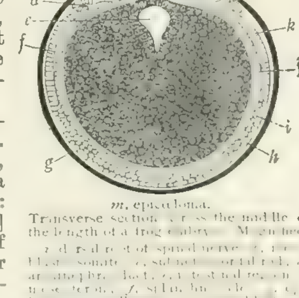
epiclastic (ep-i-klas'tik), *a.* [Gr. ἐπί, upon, + κλαστός, broken, + *-ic.*] In *petrog.*, noting detrital, surficial rocks made up of fragments of preëxisting rocks. *Teall*, 1887.

epiclavicle (ep-i-klav'i-kl), *n.* **1.** In *ichth.*, same as *supraclavicle* (which see).—**2.** A bone of the shoulder-girdle of stegocephalian amphibians extending dorsally from the clavicle; the clithrum.

epicnemial (ep-ik-nē'mi-ạl), *a.* [*epicnemis* + *-al*[1].] Relating to the superior and anterior portion of the tibia.—**Epicnemial process**, the long, upwardly directed process on the superior part of the tibia, particularly pronounced in grebes and loons.

epicnemis (ep-ik-nē'mis), *n.* [NL., < ἐπί, upon, + κνήμη, tibia.] A small sclerite sometimes found at the base of the tibia in some *Arachnida*, which does not appear to have separate motion.

epicœloma (ep-i-sē-lō'mä), *n.* [Gr. ἐπί, upon, + κοίλωμα (-τ-), a hollow, cavity: see *cœloma*.] The portion of the cœloma, or true body-cavity, nearest the notochord in the vertebrate embryo. Also *epicœlom*.



m, epicœloma.
Transverse section across the middle of the length of a frog embryo. Magnified.

[illegible] (From Marshall's "Vertebrate Embryology.")

epicontinental (ep″i-kon-ti-nen'tạl), *a.* [*epi-* + *continental.*] In *geol.*, resting upon a continent: said of shallow seas formed by the submergence of continental areas in certain geological periods. *Chamberlin and Salisbury*, Geol., I. 11.

epicostal (ep-i-kos'tal), *a.* [Gr. ἐπί, upon, + L. *costa*, rib, + *-al*[1].] Lying upon a rib.

epicotyleal (ep″i-kot-i-lẹ̄'al), *n.* [Gr. ἐπί, upon, + κοτύλη, cup, + *-al*[1].] In *ichth.*, the metapterygoid, one of the lateral bones of the head of fishes. *Starks*, Synonymy of the Fish Skeleton, p. 514.

epicrisis, *n.* **3.** A secondary crisis in an infectious disease.

epicrystalline (ep-i-kris'tạ-lin), *a.* [*epi-* + *crystalline.*] In *geol.*, noting a crystalline structure or character which is superimposed (as often in regional metamorphism) upon an older sedimentary one. *Geikie*, Text-book of Geol., p. 802.

epicurrent (ep'i-kur-ẹnt), *n.* [Gr. ἐπί, upon, + L. *currens*, current.] A stream or current at the surface of the sea, such as the Gulf Stream. *Haeckel* (trans.), Planktonic Studies, p. 625.

epicycle, *n.* **2.** (*b*) In *mod. astron.*, sometimes used for the geocentric path of a planet, or its path relative to the earth regarded as fixed.

epicyclic, *a.* **II.** *n.* A curve which is the path of a point P describing uniformly a circular orbit relatively to a point Q which itself has a uniform circular motion about O. If the angular velocities have the same sign, the epicyclic is *direct*; if opposite, *retrograde*.

epidemicity (ep-i-dẹ̄-mis'i-ti), *n.* [*epidemic* + *-ity.*] The condition of being epidemic. *Encyc. Brit.*, XXVII. 468.

epidemiographist (ep-i-dē-mi-og'rạ-fist), *n.* A writer on the subject of epidemics. *N. E. D.*

epidendral (ep-i-den'drạl), *a.* [Gr. ἐπί, upon, + δένδρον, tree, + *-al*[1].] Growing on trees: applied chiefly to epiphytes: as, an *epidendral* orchid.

epidendric (ep-i-den'drik), *a.* Same as ★*epidendral*.

epiderma (ep-i-dėr'mạ̈), *n.*; pl. *epidermata* (-mạ-tạ̈). [NL., < Gr. ἐπί, upon, + δέρμα, skin.] A cutaneous excrescence, such as a wart.

epidermatic (ep″i-dėr-mat'ik), *a.* Same as *epidermic*.

epidermatous (ep-i-dėr'mạ-tus), *a.* Pertaining to or affecting the epidermis.

Epidermic globes. Same as *epithelial pearls* (which see, under *pearl*).—**Epidermic medication.** See *epidermic method*, under *epidermic*.

epidermin (ep-i-dėr'min), *n.* [*epidermis* + *-in*[2].] An emollient consisting of equal parts of white wax, acacia, glycerin, and water, employed as a vehicle for exhibiting skin-medication.

epidermoid, *a.* **II.** *n.* A tumor composed of cells resembling those of, or derived from, the epidermis.

epidermoidal (ep″i-dėr-moi'dạl), *a.* Resembling the epidermis.

epidermolysis (ep″i-dėr-mol'i-sis), *n.* [Gr. ἐπιδερμ(ίς), epidermis, + λύσις, loosening.] A loosening of the epidermis from the next underlying layer of the skin.

epidermoma (ep″i-dėr-mō'mạ̈), *n.*; pl. *epidermomata* (-mạ-tạ̈). [Gr. ἐπιδερμ(ίς), epidermis, + *-oma.*] A cutaneous excrescence or outgrowth, such as a wart.

epidermosis (ep″i-dėr-mō'sis), *n.*; pl. *epidermoses* (-sēs). [Gr. ἐπιδερμ(ίς), epidermis, + *-osis.*] A disease of the skin which affects chiefly the superficial layer, or epidermis.

epidiabase (ep-i-dī'ạ-bās), *n.* [*epi-* + *diabase.*] In *petrog.*, a diabase the augite in which has been changed to amphibole, uralite, or hornblende: applied to rocks previously called *epidiorite*. *Issel*, 1892.

epidiascope (ep-i-dī'ạ-skōp), *n.* [Gr. ἐπί, upon, + διά, through, + σκοπεῖν, view.] An instrument for the optical projection of the images of opaque bodies on a screen by means of reflected or transmitted light. It consists of a lantern-box containing a powerful arc-light, a water-tank for removing heat-rays, and a series of mirrors beneath and above the objective. *Nature*, Feb. 19, 1903, p. 376. See cut at *projecting-★lantern*.

epididymectomy (ep-i-did-i-mek'tọ̄-mi), *n.* [NL. *epididymis* + Gr. ἐκτομή, excision.] Excision of the epididymis. *Jour. Trop. Med.*, Jan. 15, 1903, p. 25.

epididymite (ep-i-did'i-mīt), *n.* [Gr. ἐπί, upon, + E. (*eu*)*didymite.*] A silicate of beryllium and sodium, $HNaBeSi_3O_8$, occurring in colorless twinned orthorhombic crystals of tabular habit: found in southern Greenland. It has the same composition as eudidymite, but differs from it in crystallization.

epidotiferous (ep″i-dọ̄-tif'ẹ-rus), *a.* [*epidote* + L. *ferre*, bear.] Containing epidote; epidotic.

epidotization (ep″i-dō-tī-zā'shọn), *n.* [*epidote* + *-ize* + *-ation.*] In *petrog.*, that form of metamorphism which is accompanied by the formation of epidote, usually at the expense of the ferromagnesian minerals, but also from the feldspars in some instances.

epidural (ep-i-dū'rạl), *a.* [*epi-* + *dura* (*mater*) + *-al*[1].] Situated upon the dura mater: as, the *epidural* space, an interval between the periosteum which lines the spinal canal and the dura mater of the spinal cord.

epifocal (ep-i-fō'kạl), *a.* [*epi-* + *focal.*] Lying about the focus; arranged with reference to the focus; near the focus; specifically, above the seismic center or focus of an earthquake.

When this material is volcanic it is almost invariably magnetic, and we perceive in its sudden rearrangement causes which should produce magnetic effects within an *epifocal* district. *Encyc. Brit.*, XXVII. 608.

epifolliculitis (ep″i-fo-lik-ū-lī'tis), *n.* [NL., < Gr. ἐπί, upon, + NL. *folliculus*, follicle, + *-itis.*] Inflammation of the hair-follicles of the scalp.

epigamic (ep-i-gam'ik), *a.* [Gr. ἐπί, upon, + γάμος, marriage.] Relating to the mating of animals: as, *epigamic* colors, those worn by males during the mating period and supposed to attract the females. *E. B. Poulton*, Colors of Animals, p. 338.—**Epigamic character**, any characteristic of color, markings, structure, or conduct which serves to attract or excite the other sex during the courtship of animals, such as the song of birds, the drumming of the grouse, the plumage of the peacock, etc.—**Epigamic coloring.** See ★*coloring*.

Epigastric angle, fold, fossa, zone. See ★*angle*[3], ★*fold*[1], ★*fossa*, and *abdominal regions*, under *abdominal*.

epigenetic (ep″i-jẹ̄-net'ik), *a.* [*epigenesis*, after *genetic.*] **1.** Of, pertaining to, or produced by epigenesis.

He criticises the ideas of progress and of the unity of history, and contends for an *epigenetic* as distinguished from an evolutionary view of the origins of civilisation. *Mind*, XII. 629.

2. In *phys. geog.*, a term applied to those rivers whose courses have been determined by the slope of a once overlying series of strata, now removed by erosion so as to disclose rock-structures of another arrangement; superposed; inherited.

epigenist (e-pij'e-nist), *n.* [*epigen*(*y*) + *-ist.*] One who accepts the doctrine of epigenesis as opposed to evolution in the sense of preformation: same as *epigenesist*.

epigenite (e-pij'e-nīt), *n.* [Gr. ἐπιγενής, growing after, + *-ite*[2].] A sulpharsenate of copper and iron occurring in steel-gray prismatic crystals: found near Wittichen, Baden.

epiglottitis (ep″i-glo-tī'tis), *n.* [NL., < *epiglottis* + *-itis.*] Inflammation of the epiglottis.

epignath (ep'ig-nath), *n.* [Gr. ἐπί, upon, + γνάθος, jaw.] In *Isopoda*, an epipodite usually consisting of one article affixed to the external margin of the protopodite or basal part of a maxilliped.

epigonal (e-pig'ọ̄-nạl), *a.* Characteristic of or pertaining to an epigone. See *epigone*[1].

epigraf, *n.* and *v. t.* A simplified spelling of *epigraph*.

epigramme (ep-i-gram'), *n.* [F. *épigramme*: see *epigram*.] A small fillet of game, poultry, lamb, or other delicate meat prepared and served as an entrée.

epiguanine (ep-i-gwä'nin), *n.* One of the xanthin bases, $C_6H_7N_5O$.

epigyne (ep'i-jīn), *n.* [Gr. ἐπί, to, + γυνή, female.] The female aperture or vulva in arachnids. *Proc. Zool. Soc. London*, 1900, p. 387.

epigynum (e-pij'i-num), *n.*; pl. *epigyna* (-nä). [NL., < Gr. ἐπί, to, + γυνή, female.] In the *Arachnida*, the opening of the female genital organs; the epigyne. *Trans. Linnean Soc. London*, 2d ser., Zool., 1892, p. 297.

epigyny (e-pij'i-ni), *n.* [*epigyn-ous* + *-y*[3].] In *bot.*, the character of being epigynous; the growth of corolla and stamens on the top of the ovary.

Apart from this, botanists are generally agreed that the concrescence of parts of the flower-whorls . . . is an indication of advance, as is also the concrescence that gives the condition of *epigyny*. *Encyc. Brit.*, XXV. 440.

epihypocycloidal (ep″i-hī-pō-sī-kloi′dal), *a.* [*epi-* + *hypocycloidal.*] In *math.*, having a generating rolling curve of such a form that the portion of the profile without the primitive circle is epicycloidal, while that within it is hypocycloidal.

epilaryngeal (ep″i-la-rin′je-al), *a.* [Gr. ἐπί, upon, + λάρυγξ, larynx, + *-eal.*] Above the larynx; falsetto.

epilate, *v. t.* **Epilating forceps.** See ★*forceps.*

epilatory (e-pil′a-to-ri), *n.* [L. *e*, out, + *pilus*, hair, after *depilatory.*] Same as *depilatory.*

epilemma (ep-i-lem′ä), *n.*; pl. *epilemmata* (-ma-tä). [Gr. ἐπί, upon, + λέμμα, scale.] The fine, transparent sheath of a terminal nerve-fibril.

epilemmal (ep-i-lem′al), *a.* Of or pertaining to the epilemma. *Jour. Exper. Med.*, March 25, 1901, p. 506.

epilepsy, *n.* **Cursive epilepsy,** epilepsy in which the prodromes take the form of an impulse to run. **Diurnal epilepsy,** a form of epilepsy in which the attacks occur only or chiefly during the daytime. **Focal epilepsy.** Same as *cortical epilepsy.* **Laryngeal epilepsy.** Same as *laryngeal* ★*vertigo.* **Nocturnal epilepsy,** a form of epilepsy in which the paroxysms occur only at night, and usually during sleep. **Psychic epilepsy,** a form of epilepsy attended with mental derangement.

Epileptic cry. See ★*cry.* **Epileptic status** a morbid condition marked by almost continuous epileptic seizures, the intervals between which are passed in a state of coma and fever.

epileptoid, *a.* **II.** *n.* A person who is prone to have epileptic seizures.

epilobe, *n.* **2.** In *bot.*, a plant of the genus *Epilobium.* Also applied to *Chamænerion angustifolium*, the great willow herb, long included in *Epilobium.*

epilog, *n.*, and *v. t.* A simplified spelling of *epilogue.*

epilogism†, *n.* **2.** Something added; an epilogue.

epilogist (e-pil′ō-jist), *n.* [*epilogue* + *-ist.*] The writer or the speaker of an epilogue.

The *epilogist* says that missing sections of the tale will be lost unless he finds time to treat them; this is a confession that the pretended book of the Grail (assumed according to the usual mediæval fiction) has no existence outside of his mind consciousness.
Jour. Amer. Folk-lore, Jan.-March, 1902, p. 55.

epimagmatic (ep-i-mag-mat′ik), *a.* [*epi-* + *magmatic.*] In *petrog.*, noting those minerals in igneous rocks which have been formed since the solidification of the magma: not pyrogenetic. Such minerals are often called *secondary* minerals. See *secondary*, 4.

epimere (ep′i-mēr), *n.* [Gr. ἐπί, upon, + μέρος, part, portion.] **1.** In *embryol.*, a portion of the mesodermal wall of the epicœloma in the vertebrate embryo. See cut under ★*epicœloma.*—**2.** In *zoöl.*, same as *epimeron.*

epimorphosis (ep″i-môr-fō′sis), *n.* [Gr. ἐπί, upon, + μόρφωσις, forming, ⟨ *μορφοῦν*, *v.*, form, ⟨ *μορφή*, form.] The regeneration of a piece or fragment of an organism by cell-proliferation at the cut or injured surfaces: a more common form of regeneration, distinguished from ★*morphallaxis.*

epimysium (ep-i-mī′si-um), *n.* [NL., erroneously formed from Gr. ἐπί, upon, + μύς (*μυ-*), muscle.] The connective-tissue sheath of a muscle.

epimyth (ep′i-mith), *n.* [NL. *epimythium*, ⟨ Gr. ἐπιμύθιον, ⟨ ἐπί, upon, + μῦθος, fable. Compare *affabulation.*] The moral appended to a fable or story.

epimythium (ep-i-mith′i-um), *n.*; pl. *epimythia* (-ä). [NL.] Same as ★*epimyth.*

Such are the repetition in cursive of a fable . . . and of an *epimythium.*
D. C. Hesseling, in Jour. Hellenic Studies, XIII. 296.

epinephridial (ep″i-nef-rid′i-al), *a.* [Gr. ἐπί, upon, + NL. *nephridium* + *-al*[1].] Of or pertaining to the spaces above the renal organ or nephridium. See the quotation under ★*perigonadial.*

epinephrin (ep-i-nef′rin), *n.* [Gr. ἐπί, upon, + νεφρός, kidney, + *-in*[2].] **1.** A term introduced by J. J. Abel to designate the active blood-pressure raising principle of the adrenal glands. See also ★*adrenalin.*—**2.** The proprietary name of a preparation made from the suprarenal capsule, which possesses marked hemostatic properties.

epineural, *a.* **2.** Lying upon or over a nerve. —**Epineural canal,** in some echinoderms, one of the canals which run between the nervous system and the adjacent body epithelium.

Epinnula (e-pin′ū-lä), *n.* [NL., ⟨ L. *ē-*, out, + *pinnula*, dim. of *pinna*, fin.] A genus of scombroid fishes of the family *Gempylidæ*: found in the West Indies.

epinotum (ep-i-nō′tum), *n.*; pl. *epinota* (-tä). [NL., ⟨ Gr. ἐπί, upon, + νῶτον, back.] Same as *metanotum.* *Biol. Bulletin*, May, 1904, p. 258.

epionychium (ep′i-ō-nik′i-um), *n.*; pl. *epionychia* (-ä). [NL., ⟨ Gr. ἐπί, upon, + ὄνυξ (*ὀνυχ-*), nail.] The membrane which covers the nails of the fetus.

epiopticon (ep-i-op′ti-kon), *n.*; pl. *epioptica* (-kä). [NL., ⟨ Gr. ἐπί, upon, + ὀπτικός, optic.] The second of the three ganglionic swellings in each of the optic ganglia of an insect. *A. S. Packard*, Text-book of Entom., pp. 253, 254.

epiostracum (ep-i-os′tra-kum), *n.* [NL., ⟨ Gr. ἐπί, upon, + ὄστρακον, shell.] The outer layer in the integument of *Acarina.* It consists of a single layer of cells, rounded or conical on the outer side and flat on the inner side. These cells form the papillæ with which the soft parts of the body are often coated.

epiotic, *n.* **2.** One of the outer or lateral pair of the supratemporal bones in the cranial roof of the stegocephalian *Amphibia*, regarded as bones of dermal origin.—**3.** In *ichth.*, a lateral, posterior paired bone of the cranium, usually forming a blunt projection. It lies at the side of the supraoccipital behind the parietal, and articulates below with the exoccipital. The upper limb of the post-temporal is attached to it.

epiparasite (ep-i-par′a-sīt), *n.* [Gr. ἐπί, upon, + παράσιτος, parasite.] Same as *ectoparasite.*

epipastic (ep-i-pas′tik), *a.* and *n.* [F. *épipastique*, ⟨ Gr. ἐπιπαστός, sprinkled over, ⟨ ἐπιπάσσειν, sprinkle over, ⟨ ἐπί, upon, + πάσσειν, sprinkle.] **I.** *a.* Sprinkled over, as silk or paper with cantharides or other blistering agents, or with a powder.

II. *n.* A substance which causes a blister when applied to the skin; blister-plaster; a vesicatory.

Epiph. An abbreviation of *Epiphany.*

epiphallus (ep-i-fal′us), *n.*; pl. *epiphalli* (-ī). [NL., ⟨ Gr. ἐπί, upon, + φαλλός, phallus.] In some pulmonate gastropods, an enlargement of the vas deferens, which does not enter the penis directly, but is continued beyond the apex of that organ and frequently bears a long blind duct, the flagellum. *Proc. Zool. Soc. London*, 1897, p. 447.

epiphenomenal (ep″i-fē-nom′e-nal), *a.* [*epiphenomenon* + *-al*[1].] Pertaining to or of the nature of an epiphenomenon.

The spiritual becomes the "*epiphenomenal*," a merely incidental phosphorescence, so to say, that regularly accompanies physical processes of a certain type and complexity. *Encyc. Brit.*, XXXI. 88.

From the standpoint of naturalism a world described in such terms is *epiphenomenal.*
J. Ward, Naturalism and Agnosticism, ii.

epiphenomenalism (ep″i-fē-nom′e-nal-izm), *n.* [*epiphenomenal* + *-ism.*] The doctrine that consciousness, or mind, is an added or secondary phenomenon (epiphenomenon); the doctrine that consciousness is the incidental result of the phenomena of neural structure and of neural activity according to the laws of mechanics. According to this view, freedom and responsibility are illusions or a routine, having no more real relation to conduct than has the sound of the bell to its tolling or the whistle of the engine to its movements. The aim of science is held to be the objective study of a material universe, into which our minds must not be thrust as part of the problem, which is complete and intelligible only when considered objectively and as separated from our minds by a chasm that is intellectually impassable. Sensible knowledge is held to consist of phenomena or appearances which are produced in our minds by a natural world that in itself is, and always must be, utterly unknown and unknowable; and as the human brain is part of the phenomenal world of appearances in our minds, critical epiphenomenalism resolves itself into the assertion that our minds are the by-products of appearances in our minds, produced by we know not what.

How does *epiphenomenalism* arise? By immediate inference from the fundamental thesis of parallelism, the denial of causal relations between mental and physical. If the volition is not the cause of its movement, then consciousness is inefficient. If the physical world is a closed circle, then the mind is a mere epiphenomenon on the roof of things but looking helplessly down. Everything goes on exactly as if it were not present. It is therefore, so to speak, a potential absentee. If it were an actual absentee, the world would be no different.
C. A. Strong, Why the Mind has a Body, p. 80.

epiphenomenalist (ep″i-fē-nom′e-nal-ist), *n.* [*epiphenomenal* + *-ist.*] One who holds consciousness to be an epiphenomenon. See ★*epiphenomenalism.* *C. A. Strong*, Why the Mind has a Body, p. 83.

epiphenomenalistic (ep″i-fē-nom″e-nal-is′tik), *a.* Partaking of the character of epiphenomenalism. *C. A. Strong*, Why the Mind has a Body, p. 350.

epiphenomenon, *n.* **2.** A phenomenon which is secondary to another or others; a phenomenon which is a sort of by-product in no wise affecting other phenomena. The term is used especially to denote the consciousness as conceived by Dr. Shadworth Hodgson, who thinks that not only is consciousness without effect upon the brain, but that one idea is without effect upon other ideas.

The human soul Herbart conceived to be such a real, its various presentations and mental processes being but passing *epiphenomena* of its simple underlying existence. These *epiphenomena* he attributed to the interaction of the reals. *H. Nichols*, Cosmology, § 121.

To say that consciousness is an aura or *epiphenomenon* of the organism, which itself is but a mechanical automaton, is to shirk the difficulty, not to face it.
J. Ward, Naturalism and Agnosticism, II. 37.

Specifically—**3.** In *psychol. theory*, a collateral product of a given set of conditions; a phenomenon which accompanies the effect of a given cause, but which itself has no place in the chain of cause and effect.

They [psychical changes] are called collateral products or "*epiphenomena*" to obviate the charge of materialism and to conform to the interpretation of the conservation of energy that we have just discussed.
Encyc. Brit., XXXII. 68.

4. In *neurol.*, a supererogatory phenomenon; something added after the plan of the work is complete.

The cortex cerebri [is] the most important portion of the brain from a psychical point of view, though from the physiological standpoint it may seem rather an *epiphenomenon* of all thought. *Buck*, Med. Handbook, II. 2[illegible].

Epiphenomenon hypothesis. See ★*epiphenomenalism.*

epiphonematical (ep″i-fō-nē-mat′i-kal), *a.* [*epiphonemat(i-)* + *-ic* + *-al*[1].] Of the nature of an epiphonema.

epiphylly (ep′i-fil-i), *n.* [Gr. ἐπί, upon, + φύλλον, a leaf, + *-y*[3].] The occurrence of epiphytes upon leaves. *Kearney*, Contrib. National Herb., V. 436.

epiphyma (ep-i-fī′ma), *n.*; pl. *epiphymata* (-ma-tä). [NL., ⟨ Gr. ἐπί, upon, + φύμα, a growth.] Any disease of the skin.

epiphyseolysis (ep-i-fi-sē-ol′i-sis), *n.* [NL., ⟨ Gr. ἐπίφυσις, epiphysis, + λύσις, dissolution.] Separation of an epiphysis.

epiphysitis (ep″i-fi-sī′tis), *n.* [NL., ⟨ *epiphysis* + *-itis.*] Inflammation of an epiphysis.

epiphyte, *n.*, **1.** Schimper classifies epiphytes as follows: (*a*) *proto-epiphytes*, comprising the little-homogeneous species which are compelled to obtain nourishment from the surface of their support and directly from atmospheric sources; (*b*) *hemi-epiphytes*, which germinate and pass through their earliest stage on trees, but which later become connected with the ground by their roots; (*c*) *nest-epiphytes*, consisting of species which by appropriate devices collect large quantities of humus and water; (*d*) *tank-epiphytes*, in which the root system is developed only as an anchoring apparatus or is entirely suppressed, so that the whole process of nutrition is carried on by the activity of the leaves.

epiphytism (ep′i-fi-tizm), *n.* [*epiphyte* + *-ism.*] The character or habit of being epiphytic.

epiphytotic (ep″i-fi-tot′ik), *a.* [Gr. ἐπί, upon, + φυτόν, plant, + *-otic* (as in *epizootic*).] In *bot.*, noting an epidemic of a plant-disease.

epiphytous (ep″i-fī′tus), *a.* Same as *epiphytic.*

epiplankton (ep-i-plangk′ton), *n.* [NL., ⟨ Gr. ἐπί, upon, + NL. *plankton.*] The animals and plants which float or swim at the surface or above the hundred-fathom line, considered collectively and in contrast with the dwellers in deeper water; the pelagic plankton (which see, under ★*plankton*).

The *epiplankton* of the open sea is described as *oceanic*; it consists almost entirely of holoplanktonic forms and their larvæ. *Encyc. Brit.*, XXXIII. 936.

Limnitic epiplankton, the animals and plants which float or swim at or near the surface of fresh water.—**Neritic epiplankton,** the floating or swimming animals and plants of the waters near the coast.—**Oceanic epiplankton,** the floating and swimming organisms of the high sea.

epiplanktonic (ep″i-plangk-ton′ik), *a.* [*epiplankton* + *-ic.*] Of or pertaining to epiplankton; floating or swimming in the water at the surface or above the hundred-fathom line; pelagic. See ★*planktonic.*

epiplasmic (ep-i-plaz′mik), *a.* [*epiplasm* + *-ic.*] Of or pertaining to the epiplasm.

epiplastral (ep-i-plas′tral), *a.* and *n.* [*epiplastron* + *-al*[1].] **I.** *a.* Of or pertaining to the epiplastron.

II. *n.* One of the pair of bones which lie behind the entoplastron bone of the plastron of the *Chelonia*, or turtles. Together these bones form the epiplastron. See the cuts under *Chelonia* and *plastron.*

epipleur (ep′i-plōr), *n.* [Gr. ἐπί, upon, + πλευρά, the side.] A cavity in *Amphioxus*, surrounding the pharynx at the sides and below, into which the respiratory stream of

water passes through the gill-openings and from which it escapes through the atrial pore.

epipleural, *n.* 2. Same as *epipleura*, 1.

epiploenterocele (e-pip″lō-en′tę-rō-sēl), *n.* [Gr. ἐπίπλοον, omentum, + ἔντερον, intestine, + κήλη, a tumor.] Hernia of a loop of intestine and portions of the omentum.

epiplopexy (e-pip′lo-pek-si), *n.* [Gr. ἐπίπλοον, omentum, + πήξις, fastening.] Attachment, by a surgical operation, of the omentum to the anterior abdominal wall in order to cause anastomosis between the blood-vessels of the two parts.

epipod (ep′i-pod), *n.* Same as *epipodite.*

epipodal (e-pip′ō-dal), *a.* Same as *epipodial.*

epipodium, *n.* 2. In some *Echinoidea*, a raised ring surrounding each pair of pores on each primary ambulacral plate.

epipolize (e-pip′ō-līz), *v. t.*; pret. and pp. *epipolized*, ppr. *epipolizing.* [Gr. ἐπιπολή, a surface, + *-ize.*] To render fluorescent. See *epipolized.*

epipterygoid (ep-ip-ter′i-goid), *a.* and *n.* **I.** *a.* Situated upon or above the pterygoid bone.

Epipterygoid bone, a rod-shaped bone articulating with the pterygoid bone.

II. *n.* 1. In *herpet.*, a cartilage-bone, developed in some reptiles, which abuts on the superior face of the pterygoid.—2. In *ornith.*, a hook-like process developed on the inner edge of the pterygoid near its articulation with the quadrate.

epipygium (ep-i-pij′i-um), *n.*; pl. *epipygia* (-ä). [Gr. ἐπί, upon, + πυγή, the buttocks.] The last dorsal segment of an insect's abdomen: applied especially to the aculeate *Hymenoptera.* *Proc. Zool. Soc. London*, 1901, p. 236.

epirhizous (ep-i-rī′zus), *a.* [Gr. ἐπί, upon, + ῥίζα, root.] Growing on roots.

epirogenic (e-pī-rō-jen′ik), *a.* [Gr. ἤπειρος, a continent, + *-γενης*, -producing.] Continent-making; in *geol.*, pertaining to movements by which wide changes of level have occurred without special orogenic results; noting continent-making movements or the up-and-down movements or oscillations of continental areas. *G. K. Gilbert*, 1890.—**Epirogenic physiography,** land-features controlled and limited largely by epirogenic disturbances which give rise to cycles of change: a term proposed by W. H. Hobbs, together with the contrasted term *orogenic physiography*, which emphasizes the importance of earlier structural features and orogenic disturbances in controlling surface-contour. *Science*, Oct. 23, 1903, pp. 538, 539.

epirogeny (ē-pī-roj′e-ni), *n.* ¶Also *epeirogeny*; < Gr. ἤπειρος, the mainland, a continent, + *-γενεια*, < *-γενης*, produced.] The production of a continent; the appearance of a continent due to continental oscillation of level. See ★*diastrophism.* *Geikie*, Text-book of Geol., pp. 392, 1374.

epirotulian (ep″i-rō-tū′li-an), *a.* [Gr. ἐπί, upon, + NL. *rotula*, patella, + *-ian.*] Situated or directed upon the patella or knee-cap: as, an *epirotulian* blow. *Buck*, Med. Handbook, III. 846.

epirrhysa (ep-i-rī′sä), *n. pl.* [NL., irreg. pl. based on Gr. ἐπίρρυσις, a flowing in, < ἐπιρρεῖν, flow in or upon, < ἐπί, upon, + ῥεῖν, flow.] In the sponges, the canals which carry water from the exterior of the body inward to the flagellate chambers; the inhalant canals: contrasted with *aporrhysa*, or exhalant canals, which are the conduits carrying water from the flagellate chambers inward to the paragastral cavity.

Episc. Abbreviations of *Episcopal.*

episarcine (ep-i-sär′sin), *n.* [Gr. ἐπί, upon, + σάρξ (σαρκ-), flesh, + *-ine*[2].] A basic substance, $C_4H_6ON_3$(?), possibly belonging to the pyrimidin group.

epischesis (e-pis′kē-sis), *n.* [NL., < Gr. ἐπίσχεσις, stopping, holding back, < ἐπέχειν, hold back, < ἐπί, upon, to, + ἔχειν, hold.] Suppression of any of the normal excretions.

episclera (ep-i-sklē′rä), *n.* [NL., < Gr. ἐπί, upon, + σκληρός, hard: see *sclere.*] The superficial layer of the sclerotic.

episclerotitis (ep-is-klē-rō-tī′tis), *n.* [NL., < Gr. ἐπί, upon, + *sclerot-ic* + *-itis.*] Same as *episcleritis.*

episcopality (ē-pis-kō-pal′i-ti), *n.* [*episcopal* + *-ity.*] 1. The essence of the episcopacy.—2. The office of bishop.—3. The dignity or bearing of a bishop. *N. E. D.*

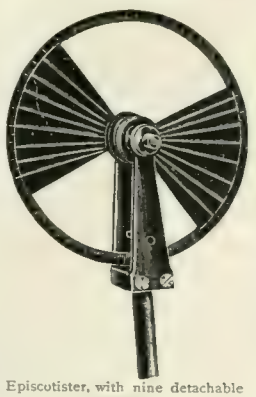
episcopation (ē-pis-kō-pā′shon), *n.* [NL. **episcopatio(n-)*, < LL. *episcopari*, be a bishop, < *episcopus*, bishop.] The act of consecrating to the episcopal office; the being made a bishop.

episcope (ep′i-skōp), *n.* A form of projection-lantern, for opaque objects, in which reflected light is used: a simplified form of ★*epidiascope.* See ★*lantern.*

episcopolatry (ē-pis-kō-pol′a-tri), *n.* [Gr. ἐπίσκοπος, bishop, + λατρεία, worship.] Worship of bishops; blind devotion to the episcopal system in church organization. *N. E. D.*

Those Englishmen who, in the violence of their recoil from Presbyterianism and Congregationalism, have cherished proclivities in the direction of *Episcopolatry.*"
Ch. Times, Dec. 22, 1882, p. 915.

episcotister (ep″is-kō-tis′tèr), *n.* [Gr. ἐπισκοτίζειν, darken, < ἐπί, upon, + σκοτίζειν, make dark, < σκότος, darkness.] In *psychophys.*, an instrument devised by H. Aubert for the accurate graduation of intensity of light. In its original form the episcotister consists of two similar disks of blackened brass from each of which four octants have been cut out. The disks are pierced at the center for mounting upon a color-mixer. The nearer or outer disk is furnished with a retaining-rim, and is graduated, over 45 degrees of its periphery, in units of one degree. When the episcotister is rotated before a source of light, the light is darkened to a degree which can be measured in terms of the angular value of the black sectors. The construction of the episcotister may be widely varied, to suit different conditions.



Episcotister, with nine detachable sectors.

A small motor was attached to the stimulus-lantern, and an *episcotister* was mounted upon it.
J. W. Baird, Carnegie Inst. Pub., xxix. 60.

episematic (ep″i-sē-mat′ik), *a.* [Gr. ἐπί, upon, to, + σῆμα, mark: see *sematic.*] Serving as a special means of recognition: applied to characteristics or animals which, when displayed, serve as recognition-marks for the guidance of other individuals of the species.—**Episematic coloring.** See ★*coloring.*

episioplasty (ep-i-sī′ō-plas-ti), *n.* [Gr. ἐπίσειον, the region of the pubes, + πλαστός, < πλάσσειν, form.] Operative restoration of a defect in the vulva.

episiotomy (ep″i-sī-ot′ō-mi), *n.* [Gr. ἐπίσειον, the region of the pubes, + *-τομια*, < ταμεῖν, cut.] In *surg.*, incisions into the labia during childbirth, made to relieve dangerous stretching of the perineum.

epispadiac (ep-i-spā′di-ak), *a.* and *n.* **I.** *a.* Relating to or affected with epispadias.

II. *n.* One who has an epispadias.

epispadias (ep-i-spā′di-as), *n.* [NL., < Gr. ἐπί, upon, + σπαδών, a rent.] Abnormal opening of the urethra upon the dorsum of the penis.

epispinal (ep-i-spī′nal), *a.* [*epi-* + *spinal.*] Situated on or above the spinal cord.—**Epispinal spaces,** intervals between the spinal cord substance and the pia mater.

episplenitis (ep″i-splē-nī′tis), *n.* [NL., < Gr. ἐπί, upon, + σπλήν, spleen, + *-itis.*] Inflammation of the peritoneal covering of the spleen.

epistapedial (ep″i-stā-pē′di-al), *a.* [Gr. ἐπί, upon, + NL. *stapedius* (see *stapes*) + *-al*[1].] Lying upon or relating to the stapes: as, the *epistapedial* cartilage, a branch of cartilage running from the columella to the tympanum.

epistasis, *n.* 2. An arrested or stationary condition in the ancestral history of a group of organisms.

Epistasis is a modified form of the process emphasized by Boas under the name of neotenia, a reversion of a phylum to a modified embryonic condition.
Science, March 6, 1903, p. 381.

Epistemological parallelism. See ★*parallelism.*

episternal, *a.* **II.** *n.* In *ichth.*, the lower median bone in the hyoid arch. Also called *urohyal.*

episternum, *n.* 6. In spatangoid sea-urchins, the third pair of plates on the ventral face of the posterior interradius.

epistolite (e-pis′tō-līt), *n.* [So called in allusion to its flat rectangular form and white color; < Gr. ἐπιστολή, letter, + *-ite*[1].] A rare mineral, consisting essentially of the silicate, niobate, and titanate of sodium with water, occurring in silver-white tabular crystals with pearly luster: found in southern Greenland.

epistoma, *n.* (*d*) The anterior part of the cephalic doublure of the *Trilobita*, sometimes isolated by the sutures.

epistomian (ep-i-stō′mi-an), *a.* Of or pertaining to an epistoma.

epistroma (ep-i-strō′mä), *n.* [LGr. ἐπίστρωμα, trappings, < Gr. ἐπιστορεννύναι, spread over, < ἐπί, over, + στορεννύναι, spread.] A varied form of ornamentation of the echinoid test, which arises early during postlarval development, and which is due to the deposit of calcareous substance on the plates.

epit. An abbreviation (*a*) of *epitaph*; (*b*) of *epitome.*

epitactic (ep-i-tak′tik), *a.* [Gr. ἐπιτακτικός, < ἐπίταξις, command, injunction, < ἐπιτάσσειν, put upon as a duty, < ἐπί, upon, + τάσσειν, order, arrange.] Of the nature of an injunction or command.

The categorical form involves an *epitactic* meaning.
Whewell, Elem. of Morality, Preface, p. 16.

epitaf, *n.* and *v.* A simplified spelling of *epitaph.*

epithecal, *a.* 2. Situated on the outside of the body, as the radial water-vessels of a starfish. Compare ★*hypothecal.*

Epithelial cancer. See ★*cancer.*—**Epithelial pearl** or **nest.** Same as *onion* ★*body.*

epithelioglandular (ep-i-thē″li-ō-glan′dū-lär), *a.* Relating to the epithelial cells of a gland or of its duct. *Nature*, April 24, 1902, p. 604.

Epithelioid cell, in *histol.*, a cell resembling an epithelial cell in shape.

epitheliolysin (ep-i-thē-li-ol′i-sin), *n.* [*epithelium* + *lysin.*] A lysin which is the product of immunization with epithelial cells and is antagonistic toward them.

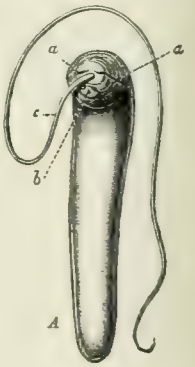
epitheliomuscular (ep-i-thē″li-ō-mus′kū-lär), *a.* Concerning or pertaining to epithelial cells with muscular processes.

epitheliotoxin (ep-i-thē″lī-ō-tok′sin), *n.* [*epithelium* + *toxin.*] A cytotoxin produced by immunization with epithelial cells and toxic for the homologous cells.

epithelium, *n.*—**Auditory epithelium.** See ★*auditory.*—**Cubical epithelium,** epithelium composed of cells having a more or less cubical shape. This variety grades into columnar epithelium.—**Glandular epithelium,** any epithelium consisting of glandular or secreting cells.—**Sensory epithelium,** an epithelium which gives rise to sensory cells, such as that which forms the essential layer of the organs of the special senses.

epithelization (ep-i-thē-lī-zā′shon), *n.* [*epithelium* + *-ize* + *-ation.*] Conversion into epithelium.

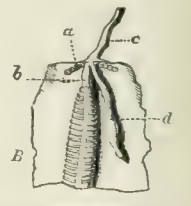
Epithetosomatidæ (ep-i-thet″ō-sō-mat′i-dē), *n. pl.* A family of gephyreans, peculiar in having a hollow proboscis whose lumen opens into the body-cavity, and a series of pore-like openings which lead from the exterior to the same cavity. The typical and only genus is *Epithetosoma.*



epithyme (ep′i-thīm), *n.* [NL. *epithymum.*] The lesser or thyme-dodder, *Cuscuta Epithymum.* See *dodder*[1] (with cut).

epitokal (e-pit′ō-kal), *a.* Of or pertaining to an epitoke; sexual: as, the *epitokal* region of the palolo. *Nature*, April 21, 1904, p. 582.

epitoke (ep′i-tōk), *n.* [Gr. ἐπί, upon, + τόκος, birth, production.] The sexual portion of polychætous worms, as the palolo. See ★*atoke.*



A, *Epithetosoma norvegicum*: *a*, *a*, right and left slits leading to the pores; *c*, mouth; *c*, proboscis. *B*, The same animal opened dorsally. *a*, pores; *b*, œsophagus; *c*, proboscis; *d*, brown tube. (From "Cambridge Natural History.")

epitomatory (ē-pit′ō-ma-tō-ri), *a.* [*epitomate* + *-ory.*] Of the nature of an epitome; epitomized.

epitonic (ep-i-ton′ik), *a.* [Gr. ἐπίτονος, stretched, < ἐπιτείνειν, stretch, < ἐπί, upon, + τείνειν, stretch.] Stretched; overstrained. *G. Meredith.*

epitoxoid (ep-i-tok′soid), *n.* [*epi-* + *toxoid.*] A toxoid which has a less marked affinity for the corresponding antitoxin than has the toxin proper.

epitoxonoid (ep-i-tok′sō-noid), *n.* [*epi-* + *toxonoid.*] A toxonoid which has the least affinity for the corresponding antitoxin.

epitrachelion (ep″i-tra-kē′li-on), *n.*; pl. *epitrachelia* (-ä). [NGr. ἐπιτραχήλιον, neut. of MGr. ἐπιτραχήλιος, upon the neck, < Gr. ἐπί, upon, + τράχηλος, the neck.] In the *Gr. Ch.*, a priest's stole, as distinguished from the *orarion*, or deacon's stole.

Epitrapezios (ep″i-tra-pē′zi-os), *a.* [Gr. ἐπιτραπέζιος, at table, < ἐπί, at, + τράπεζα, table.] An epithet of Hercules; specifically, noting a table-statue of Hercules seated, in bronze, which was made by the Greek sculptor Lysippus and presented by him to Alexander the Great. It was afterward owned by Hannibal and by Sulla. In the time of Domitian it had passed to the collection of a Roman amateur poet named Vindex. It is described by Martial and Statius. A plaster cast in the École des Beaux Arts, Paris, taken from an original now lost, is supposed to represent the statue.

epitrichial (ep-i-trik′i-al), *a.* [*epitrichium* + *-al*[1].] 1. Of or pertaining to the epitrichium.—2. Situated upon a hair or hairs. **Epitrichial layer,** a layer of larger cells representing the most superficial layer of the epidermis in the human embryo of the third month.

epitympanic, *a.* 2. Situated upon or above the tympanum. **Epitympanic bone.** See *tympanic, n.*, 2. **Epitympanic space.** Same as ★*attic*[2], 3.

epitympanum (ep-i-tim′pa-num), *n.* [NL., < Gr. ἐπί, upon, + τύμπανον, a drum: see *tympanum.*] The attic of the tympanum.

epityphlitis (ep″i-ti-flī′tis), *n.* [NL., < **epityphlum* (< Gr. ἐπί, upon, + τυφλός, blind: see *cæcum*) + *-itis.*] Same as *appendicitis.*

epivertebral (ep-i-vėr′tē-bral), *a.* and *n.* [*epi-* + *vertebral.*] **I.** *a.* Situated upon or above a vertebra.

II. *n.* Same as *neural spine* (which see, under *neural*). *Starks*, Synonymy of the Fish Skeleton, p. 524.

epizoicide (ep-i-zō′i-sīd), *n.* [*epizoa* + L. *-cida*, < *cædere*, kill.] An agent which destroys external animal parasites.

epizygal (e-piz′i-gal), *a.* and *n.* [Gr. ἐπί, upon, + ζυγόν, a yoke, + *-al*[1].] **I.** *a.* Having reference to the upper pinnule-bearing of two arm-segments in the *Crinoidea*, which meet transversely in a rigid suture and form a syzygy, constituting physiologically but one segment.

II. *n.* An epizygal segment.

E-plan (ē-plan), *n.* In *arch.*, a plan according to which three main structures of approximately equal importance are connected, with usually a smaller one projecting into the court of honor between the main wings, the shape of the whole being like that of the letter E. Compare ★*L-plan.*

epoch, *n.* 5. In the mechanics of vibration, a term introduced into the equation for a simple harmonic motion in cases where time is not reckoned from the instant when the vibrating particle has reached its greatest positive elongation. The equation then becomes $x = a \cos (t\omega + e)$, in which e is the epoch. The epoch is the angle traversed by the point of reference in the interval between the era of reckoning and the instant of greatest elongation.—**Chellean epoch.** See ★*Chellean.*—**Diluvian, forestian epoch.** See ★*diluvian,* ★*forestian.*—**Helvetian epoch,** in *geol.*, a name given by some glaciologists to the second interglacial epoch of Europe, represented by the lignites of Switzerland and Great Britain. It intervened between the Saxonian or second glacial epoch and the Polandian or third glacial epoch.—**Interglacial epoch,** in *geol.*, one of the intervals of mild temperature in the glacial period, when the ice retired. These intervals are recognized by intercalations in the boulder-clay of stratified beds of sand, gravel, and clay, often containing plant-remains or marine or fresh-water shells.—**Mecklenburgian epoch** [*Mecklenburg* in north Germany], in *geol.*, a subdivision of the Pleistocene or glacial period, of northern Europe. It is equivalent to the fourth glacial epoch, and is evinced in the ground-moraines and terminal moraines of the last great Baltic glacier, which reach their southern limit in Mecklenburg.—**Neudeckian epoch** [*Neudeck* in Prussia], in *geol.*, a subdivision of the Pleistocene or glacial period of northern Europe. It is equivalent to the third interglacial epoch, and is represented by marine and fresh-water deposits between the boulder-clays of the southern Baltic coast-lands. It is preceded by the Polandian or third glacial epoch and followed by the Mecklenburgian or fourth glacial epoch.

Norfolkian epoch [*Norfolk* in England], in *geol.*, a subdivision of the Pleistocene or glacial period of northern Europe. It is equivalent to the first interglacial epoch, and is typically represented by the forest-bed period of Norfolk. It is preceded by the Scanian or first glacial epoch and followed by the Saxonian or second glacial epoch.—**Polandian epoch** [*Poland* in Europe], in *geol.*, a subdivision of the Pleistocene or glacial period of northern Europe. It is equivalent to the third glacial epoch, and is represented by the glacial and fluvioglacial accumulations of the minor Scandinavian ice-sheet and the upper boulder-clay of northern and western Europe. It is preceded by the Helvetian or second interglacial epoch and followed by the Neudeckian or third interglacial epoch.—**Saxonian epoch,** in *geol.*, a subdivision of the Pleistocene or glacial period of northern Europe. It is equivalent to the second glacial epoch, and includes the accumulations of the time of maximum glaciation, when the northern ice-sheet extended to the low grounds of Saxony. It is preceded by the Norfolkian or first interglacial epoch and followed by the Helvetian or second interglacial epoch.—**Scanian epoch** [L. *Scania*, Scandinavia, Sweden], in *geol.*, a subdivision of the Pleistocene or glacial period of northern Europe. It is equivalent to the first glacial epoch, and is represented only in the south of Sweden (Scania), which was overridden by a great Baltic glacier.—**Terrace epoch,** in *geol.*, a subdivision of the Pleistocene or glacial period of North America. It is regarded by American geologists as equivalent to a part of the Champlain period and is characterized by a great abundance of terraces of fluviatile, lacustrine, and marine origin.

eponym, *n.* 4. The *archon eponymus* at Athens (see *archon*): also, one of certain Assyrian functionaries who gave their names to the years during which they held office.

Eponymic disease, a disease which bears the name of a person, usually of the one who discovered or first accurately described it, as *Bright's* disease.

epsilon, *n.* 2. In *math.*, a quantity which approaches zero when the independent variable approaches a certain limit fixed for it by the conditions of the particular problem or discussion.

epsomite (ep′so-mīt), *n.* [*Epsom* + *-ite*[2].] See *stylolite.*

eq. An abbreviation of *equity.*

equal, *a.*—**Identically equal,** congruent; the same in everything but place or name.

equalizer, *n.* 3. In a wide sense, any form of balanced bar designed to equalize irregular strains, as in the buffers of a car-platform or the springs used to keep a car-vestibule closed under the swaying of the cars when in motion.—4. A box or tank, loosely filled with sand, coke, sawdust, or other cleansing material, through which the gas from a producer is passed to make its quality uniform.

equalizing-gear (ē′kwal-ī-zing-gēr″), *n.* Any device for making each of the driving parts do its proportionate share of the work; in motor-vehicles, the differential gear.

equalizing-lever (ē′kwal-ī-zing-lev″ėr), *n.* A lever to which the two adjacent ends of the springs of a locomotive are attached. It insures the equal distribution of the weight of the engine between the springs, no matter how the track-surface may depart from a true plane; this mitigates shocks and maintains equal tractive effect on the driving-wheels so as to lessen the tendency to slip on defective alinements.

equalizing-machine (ē′kwal-ī-zing-ma-shēn″), *n.* In *wood-working*, a machine for sawing off the ends of blanks of hubs, spokes, handles, etc., to make them of equal length preparatory to turning them in a lathe or treating them in some other machine. The simplest machine is a sliding saw-table provided with a length-gage, on which the blank is cut one end at a time. The better and more common types have two circular saws adjustable to positions for blanks of different lengths, and fitted with some form of feed-table for bringing the blanks to the saws. Sometimes called *equalizing-saw.*

equalizing-pipe (ē′kwal-ī-zing-pīp″), *n.* A pipe which connects two or more pipes in such a manner as to permit a free flow from one to the other, thus maintaining an equal pressure in all of them.

equate, *v.* **I.** *trans.* 4. To join by the sign of equality.—**Equating motion.** Same as ★*jack-in-a-box motion.*

II. *intrans.*—**To equate for curves.** (*a*) In railroad construction, to diminish the slope of grade of a railroad while passing around a curve, in order to compensate for the increased tractive resistance due to the curve, so that the total tractive resistance on the curve shall be the same as on a straight portion of track having the original grade. (*b*) In the preparation of the running schedules for trains, to make an allowance of an imaginary increase in length of line, on account of and as an equivalent of the retardation due to curves.—**To equate for grades,** in the preparation of the running schedules for railroad-trains, to make an allowance of an imaginary increase in length of line, on account of and as an equivalent of the retardation due to grades.

equation, *n.* 4. It is to be noted that a chemical equation, used to represent the results of a chemical change under certain conditions, does not of itself imply that such results necessarily occur; this can be established only by actual experiment, and the equation merely furnishes a brief form of statement of what the experiment has shown to be true.—**Annual equation,** a periodic variation of the motion of the moon owing to the variation of the sun's distance, in consequence of which as the earth moves from perihelion to aphelion the length of the month becomes shorter, the moon's angular motion being accelerated, while the reverse effect takes place as the earth returns from aphelion to perihelion. The effect, equal to a little more than 11 minutes, was discovered by Tycho Brahe about 1590.—**Beltrami's equation,** an equation analogous to Laplace's equation for a plane. It is of the form

$$\frac{d}{du}\left(\frac{G\frac{d\phi}{du} - F\frac{d\phi}{dv}}{H}\right) + \frac{d}{dv}\left(\frac{E\frac{d\phi}{dv} - F\frac{d\phi}{du}}{H}\right) = 0;$$

where $H = \sqrt{EG - F^2}$, and u, v are variables determining the position of a point on a surface such that the square of its linear element $ds^2 = E\,du^2 + 2F\,du\,dv + G\,dv^2$. *Beltrami*, Opere Matematiche, I. 325.—**Brightness equation,** in *psychol.-optics*, the subjective match of two impressions in regard to brightness or luminosity. A typical brightness equation would be given with the matching of two grays. The term is, however, generally reserved for the matching (in respect of brightness) of a color with a color, or of a color with a gray.—**Consistent equations,** simultaneous equations.—**Cyclotomic equation,** an equation related to the partition of the perigon, such as $(x^n - 1)/(x - 1) = 0$, where n is prime.—**Dimensional equation,** in *phys.*, a formula or equation indicating the manner in which the fundamental units of any system of physical measurements enter into a derived unit or quantity.—**Equation of acceleration.** See ★*acceleration.*—**Equation of elasticity.** See ★*elasticity.*—**Equation of energy.** Denoting kinetic energy by E(K), and potential energy by E(P), we may write the energy equation

$$-[E(P) - E_0(P)] = E(K) - E_0(K)$$

In words: The total energy of the system, or the sum of the kinetic energy and the potential energy, is a constant quantity.—**Equation of equilibrium,** an equation expressing the conditions under which the parts of a dynamical system will remain at rest. The complete specification of the conditions of equilibrium usually demands a set of such equations.—**Equation of force,** an equation expressing the dimensions of the derived entity force (P) in terms of the fundamental entities, mass, length, and time: $[P] = [M]\,[L]\,[T]^{-2}$.—**Equation of state,** the law $f(p, v, \theta) = a$, connecting the pressure (p), volume (v), and temperature (θ) defining the change of state of a homogeneous liquid or gaseous substance.—**Equation of the equinoxes,** the difference between the mean and apparent places of the equinoxes, arising from the variation in the force which produces their precession. This force is a maximum when the sun passes the solstices, and disappears at the time of the equinoxes.—**Equations of the transformation,** the equations which express x' and y' in terms of x and y, or inversely, when a point transformation replaces $P(x, y)$ by $P'(x', y')$.—**Equation time-piece,** a timepiece which shows the difference between mean and apparent solar time. [Now obsolete.]—**Equivalent equations,** equations such that every root of either is also a root of the other.—**Exact differential equation,** an equation in which an exact differential is equated to zero.—**Formulaic equation,** an equation which has to do only with the very nature of the operations involved, and not at all with the particular numbers operated with. Thus the equation $(a + b) + c = a + (b + c)$ expresses the fact that addition is an associative operation.—**Fractional equation,** one containing an expression in which an unknown or variable is contained in a denominator; for example, $\frac{2}{x} + 1 = 0$.—**Galoisian equation,** for a domain R, an irreducible equation of prime degree whose roots are all rational functions of two of the roots.—**Gas equation,** the equation $pv = R\,\theta$, where p is pressure, v volume, θ temperature, and R a constant.

Gauss's equation,

$$x(1-x)\frac{d^2y}{dx^2} + \{c - (a + b + 1)x\}\frac{dy}{dx} - aby = 0.$$

where a, b, c are constants, and x is the independent variable.—**Graph of an equation.** See ★*graph.*—**Green's equation,**

$$\iiint \nabla u \cdot \nabla v\,dv = \iint u\nabla v \cdot d\sigma - \iiint v\nabla^2 v\,dv,$$

an equation useful for problems in gravitation, hydrodynamics, and electrostatics.—**Hypergeometric equation.** Same as *Gauss's* ★*equation.*—**Incompatible equations,** equations having no solution whatever in common; for example, $x + y = 4$ and $2x + 2y = 9$.—**Inconsistent equations,** incompatible equations.—**Integral equation.** (*a*) In *alg.*, an equation whose terms are integral expressions so far as concerns the unknown or variable. (*b*) In the *calculus*, an equation which contains no differentials.—**Irrational equation,** an equation which contains an indicated root of an unknown or variable.—**Laplace's spherical harmonic equation.** Same as *Laplace's principal equation.* See *Laplace's equation.*—**Metacyclic equation,** of degree p, an equation whose group for a domain R is the metacyclic group of degree p.—**Octic equation,** an equation of the eighth degree.—**Poisson's equation,**

$$\frac{\partial^2V}{\partial x^2} + \frac{\partial^2V}{\partial y^2} + \frac{\partial^2V}{\partial z^2} = \frac{1}{\kappa}\,\frac{\partial V}{\partial t} = 4\pi\rho,$$

where κ is a constant; x, y, z are the coördinates of a point in space; t denotes the time; ρ is a function of x, y, z; and V may denote temperature, potential, etc.—**Primitive of a differential equation,** an integral equation which satisfies a differential equation.—**Radical equation,** an irrational equation.—**Reflection equations,** in *optics*, equations from which the phase and intensity of the reflected ray may be computed from the angle of incidence and the index of refraction of the mirror. The two best-known forms of such equations are those of Fresnel and of Neumann.—**Symmetric equation,** an equation which is unchanged by interchange of the unknowns or variables.—**Tidal equations,** equations which are involved in the theory of the tides.—**To reduce an equation.** See ★*reduce.*—**Van der Waal's equation,** an equation which represents the relation between volume and pressure of a gas with much better approximation than the law of Boyle and Gay-Lussac. The law of Boyle may be written $pv = RT$; where p is the pressure exerted by a gram-molecule of the gas when its volume is v, T is the absolute temperature, and R is a constant. To the pressure, p, Van der Waal adds the attraction of the molecules of the gas on one another, represented by $\frac{a}{v^2}$, and he subtracts from the volume, v, that part of this volume which is so occupied by the molecules that it is not left free for their motion. The equation becomes $\left(p + \frac{a}{v^2}\right)(v - \beta) = RT$, where a and β are constants depending on the properties of the gas in question.—**Vertical equation,** the equation of a conic referred to a vertex as origin.—**Zonal equation.** See ★*zonal.*

equational, *a.* 2. Operating with equations: as, *equational* logic.

equationally (ē-kwa'shon-al-i), *adv.* As an equation or as equations: in the form of equations; by use of equations.

equationism (ē-kwa'shon-izm), *n.* [*equation* + *ism*.] The principle of solving problems equationally.

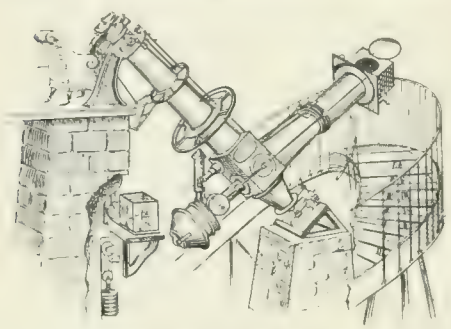
equator, *n.* **Hydrometeoric equator,** the line which divides regions in which the rainfall varies with the slight movement of the equatorial belt of calms and attending winds, the pluviometric equator. This line varies not only with the variation of the winds, but also with the orography, and is often determined by the presence of an elevated ridge trending nearly east and west. Supan's hydrometeoric equator bends south of the astronomical equator on the east of the continents, and north on the west.

Dr. Supan draws a line, the *hydrometeoric equator*, dividing regions experiencing the rainfall conditions of the northern winter half-year from regions which have those of the southern summer half-year and vice versa. This bends south of the astronomical equator in the east, and north in the west, of the continents, which may be interpreted, in the present writer's opinion, as a monsoonal phenomenon. *Geog. Jour.* (R. G. S.), XIII. 64.

Meteorological equator, the region on the globe near the geographic equator, which corresponds to the belt of calms, midway between equal opposing winds, and with reference to which the general circulation of the atmosphere is approximately symmetrical.

equatorial. **I.** *a.* **2.** In *crystallog.*, of or pertaining to the horizontal or lateral plane. **Equatorial acceleration of the sun.** See ★*acceleration.* **Equatorial belt of low pressure.** See ★*pressure.* **Equatorial crystal,** a crystal in which the principal axis of symmetry is perpendicular to the equatorial plane of symmetry. **Equatorial horizontal parallax.** See ★*parallax.* **Equatorial mounting,** the mechanical part of an equatorial telescope, consisting of the stand, axes, circles, driving-clock, etc., with their appendages.—**Equatorial symmetry.** See ★*symmetry.*

II. *n.* **Elbow equatorial,** or (F.) **équatorial coudé,** an equatorial so arranged that by the use of two



Equatorial Coudé at the Paris Observatory.

plane mirrors the observer is able to view an object in any part of the heavens by looking down the polar axis from a fixed position. It has great advantages and some drawbacks.—**Twin equatorial,** two telescopes, which may be of different sizes and forms, attached to the same equatorial mounting. In some cases the two tubes are firmly connected; in others they are independent as to their motion in declination.—**Universal equatorial,** an equatorial so constructed that its mounting and driving-clock can easily be adjusted to suit any latitude.

equatorward (ē-kwā'tor-ward), *adv.* [*equator* + *-ward.*] In the direction of the equator; with motion toward the equator.

equianchorate (ē-kwi-ang'kor-āt), *a.* and *n.* [L. *æquus*, equal, + *anchora*, prop. *ancora*, anchor, + *-ate*[1].] **I.** *a.* Having similar anchorate processes at each end. See *anchorate.*

II. *n.* An equianchorate sponge-spicule.

equiangular, *a.*—**Mutually equiangular,** having the angles of the one equal respectively to the angles of the other, taken in the same order.

equiangularity (ē-kwi-ang-gu-lar'i-ti), *n.* The condition or quality of being equiangular.

Equianharmonic quadrangle. See ★*quadrangle.*

equiarcal (ē-kwi-är'kal), *n.* [For **equiarcual*, < L. *æquus*, equal, + *arcus*, bow (arc), + *-al*[1].] A line which cuts off, on a system of curves, equal arcs measured from the origin.

equiarticulate (ē″kwi-är-tik'ū-lāt), *a.* [L. *æquus*, equal, + *articulus*, joint, + *-ate*[1].] **1.** Alike in the number and arrangement of articulations.—**2.** Having joints of equal length, as the legs of some crustaceans.

equiaxial (ē-kwi-ak'si-al), *a.* [L. *æquus*, equal, + *axis*, axis, + *-al*[1].] Having axes of equal length. *Buck.*, Med. Handbook, II. 320.

equicellular (ē-kwi-sel'ū-lär), *a.* [L. *æquus*, equal, + *cellula*, cell, + *-ar*[3].] Composed of an aggregation of similar cells, as some colonial protozoans.

equicross (ē'kwi-krôs), *a.* [L. *æquus*, equal, + E. *cross*[1], *a.*] Having equal cross-ratios.

equidiagonal (ē″kwi-di-ag'ō-nal), *a.* [L. *æquus*, equal, + E. *diagonal.*] With equal diagonals.

equidimensional (ē″kwi-di-men'shon-al), *a.* [L. *æquus*, equal, + *dimensio(n-)*, dimension, + *-al*[1].] Having equal dimensions: used especially in description of the grain of rocks.

equidistant, *a.* **Equidistant projection.** See ★*projection.*

II. *n.* Same as ★*equidistantial.*

equidistantial (ē″kwi-dis-tan'shal), *n.* [NL. *æquidistantia*, equidistance, + *-al*[1].] A curve, in Bolyai's non-Euclidean geometry, coplanar with a straight line, perpendiculars to which from all points of the curve are equal.

In the Euclidean geometry all points equidistant from a straight line are on a straight line. In this non-Euclidean geometry all points equidistant from a straight line are on a curve called the *equidistantial.*
Science, March 11, 1904, p. 404.

Equidistantial surface, in Bolyai's geometry, the locus of points on one side of a plane from which perpendiculars to that plane are equal.

equielliptic (ē″kwi-e-lip'tik), *a.* [L. *æquus*, equal, + NL. *ellipticus*, elliptic.] Of equal elliptic eccentricity.

equiglacial (ē-kwi-glā'shal), *a.* [L. *æquus*, equal, + *glacies*, ice, + *-al*[1].] Being in the same condition as regards ice.—**Equiglacial lines,** lines drawn by Hildebrandsson connecting those points on the earth's surface at which the condition of the ice-formation is the same as to thickness or amount on any given day in the year.

equigraphic (ē-kwi-graf'ik), *a.* [L. *æquus*, equal, + Gr. *-γραφια*, < *γράφειν*, write.] Homolographic; noting a method of map-projection in which equal areas of the earth's surface are reduced to equal areas on the map.

equilarcenous (ek-wi-lär'se-nus), *a.* [L. *equus*, a horse, + E. *larcenous.*] Given to horse-stealing. [Humorous.]

equilateral, *a.*—**Mutually equilateral,** having the sides of one equal respectively to the sides of the other taken in the same order.

equilateralness (ē-kwi-lat'ėr-al-nes), *n.* The condition or quality of being equilateral.

equilibration, *n.*—**Artificial equilibration,** in *sociol.*, adjustment to environment by artificial means or intelligent choice, as opposed to the equilibration brought about by natural selection. *L. F. Ward*, Dynamic Sociol., II. 484.—**Law of equilibration,** the law, formulated by Spencer, that in society, as throughout the cosmos, a group or aggregate highly charged with energy transforms a neighboring group or aggregate less highly charged.

equilibristic (ē″kwi-li-bris'tik), *a.* [*equilibrist* + *-ic.*] Of, or characteristic of, an equilibrist; balancing.

equilibrium, *n.*, **1.** In *phys. chem.*, the equilibrium of a thermodynamic system is said to be *indifferent* if it is not disturbed by changing the mass of some or all its phases. If a system consists of a liquid and of its vapor, at a certain temperature, and at the pressure of the vapor saturated at that temperature, we may, without changing temperature or pressure, condense a certain mass of vapor or evaporate a certain mass of liquid, and the system will be in equilibrium indifferently in every one of the states through which it is made to pass. The same is true of a system consisting of a hydrated salt and of a solution of the hydrated salt, at the temperature at which the solid salt and the solution have the same composition: a certain amount of the solid may be dissolved or precipitated, but the system is indifferently in equilibrium in every one of the states through which it is made to pass.—**Absorptiometric equilibrium.** See ★*absorptiometric.*—**Atmospheric equilibrium,** the tendency of the force of gravity to produce motion in any portion of the atmosphere, either horizontally or vertically, relatively to the earth's surface. In static equilibrium there is no tendency to move in any direction. In thermal equilibrium there is no tendency to move so far as the temperature influence is concerned. The equilibrium of mixed gases is disturbed by the fact that dry air is denser than moist air, the former sinking under the influence of gravity and being driven equatorward under the influence of centrifugal force more energetically than the latter. These conditions give rise to problems in thermal-gravitational and thermal-centrifugal equilibrium, or in general thermodynamic or convective equilibrium. In thermal-gravitational equilibrium three stages are recognized: (1) *Stable equilibrium*, when the decrease of temperature with altitude in the surrounding still air is less than the adiabatic rate in moving air, or one degree Fahrenheit for each 183 feet. In this case a mass of air at any height in the atmosphere has a tendency to return to its original level when it has once been displaced. (2) *Indifferent or neutral equilibrium*, when the vertical gradient of temperature in still air is exactly equal to the adiabatic rate in moving air, and a disturbed mass stays in its new location. (3) *Unstable equilibrium*, when the vertical gradient of temperature in still air is greater than the adiabatic rate in moving air. In this case the mass of air when once started in vertical motion continues to rise or fall as the case may be, because the thermodynamic change in its own temperature is less than the change actually existing in the surrounding atmosphere. A thunder-storm, with its ascending currents and formation of tall cumuli, illustrates unstable equilibrium.—**Chemical equilibrium,** the state of a chemical system in which the concentrations of the acting substances remain unchanged. If the transformation is irreversible, equilibrium comes when one or more acting substances are consumed; if the transformation is reversible, equilibrium is attained when a given substance is decomposed and reproduced at the same rate.—**Convective equilibrium,** the tendency or liability of a mass of air to ascend or descend in the atmosphere because of buoyancy. In *stable convective equilibrium* the ascending and descending masses return to their initial levels because the rate of cooling due to expansion, or warming due to compression, exceeds the gradient in the quiet air. In *unstable convective equilibrium* ascending masses continue to ascend and descending masses continue to descend because their changes of temperature and density are less than those in the quiet air about them. In *indifferent convective equilibrium* the ascending and descending masses remain always in equilibrium with the strata into which they come, because their changes of temperature coincide with those of the quiet air through which they pass.—**Criterion of equilibrium,** a simple law or rule, based upon a study of the conditions of equilibrium of a system, by means of which the question whether equilibrium exists in any given case may be decided. Gibbs has shown that in an isolated system the energy of which is constant, thermodynamic equilibrium exists when the entropy is constant or decreasing; and that in such a system, the entropy of which is constant, equilibrium exists when the energy is constant or increasing.—**Equation of equilibrium.** See ★*equation.*—**False equilibrium,** in *phys. chem.*, a state of equilibrium not capable of prediction by thermodynamics in its present development. All the equilibriums predicted by thermodynamics can be verified by experiment, but many cases of equilibrium occur which cannot now be predicted by thermodynamics, or which are contradicted by thermodynamics. If the discrepancy is due to some unwarranted simplification introduced into the theory, Duhem calls the equilibrium an *apparent false equilibrium*; otherwise, a *genuine false equilibrium.* If water is cooled ten degrees below the freezing-point, according to thermodynamics the water should not remain in equilibrium as liquid water, but should become ice; yet sometimes the solidification does not take place, and the water remains unchanged as liquid water. This is an *apparent false equilibrium*, for we know what unwarranted omission of considerations has led to the erroneous prediction of disturbance of equilibrium which does not take place.—**Labile equilibrium.** (*a*) A type of equilibrium existing in the case of fluids, in which there is a continuous slipping of the molecules. (*b*) In *chem.*: (1) An assumed condition of a mass consisting of the same or of different kinds of matter, in which apparently no chemical change is going on, but in which it is imagined that individual atoms are exchanging places with others of exactly similar character, so that in a given (perhaps extremely short) time many molecules may be decomposed and precisely as many molecules, of absolutely similar character, formed. (2) The equilibrium of a liquid cooled, out of contact with its solid phase, below the temperature of equilibrium between the liquid and the solid; or of a liquid heated, out of contact with its vapor, above the temperature of equilibrium between the liquid and the vapor having a pressure equal to the actual pressure on the liquid. Water, free from ice, may be cooled many degrees below its usual freezing-point; when brought into contact with a fragment of ice, sometimes when disturbed mechanically, part of the water instantly freezes, and the temperature rises, from that of the labile equilibrium of water alone, to that of the stable equilibrium between water and ice.—**Point of equilibrium,** in a field of force, any point at which the forces are balanced.—**Statistical equilibrium,** in statistical mechanics, an equilibrium, as regards phase, between the systems of an ensemble, such that the distribution of the ensemble in phase remains unchanged.

equilibrium-ring (ē-kwi-lib'ri-um-ring), *n.* A balancing-ring; a metal ring placed on the back of a slide-valve, or in the casing of a steam-chest, to keep the steam-pressure from acting over an area on the back of the valve equal to the area of the exhaust-port. This so relieves the valve of pressure that it is practically balanced. The ring is usually placed in a recess and kept tight by placing springs behind it.

equilibrize (ē-kwil'i-brīz), *v. t.*; pret. and pp. *equilibrized*, ppr. *equilibrizing.* [*equilibr(ium)* + *-ize.*] To bring into a state of equilibrium or equipoise; balance or cause to balance.

equilobate (ē-kwi-lō'bāt), *a.* [L. *æquus*, equal, + *lobus*, lobe, + *-ate*[1].] Having lobes of equal size, as the tails of some fishes.

equimolecular (ē″kwi-mō-lek'ū-lär), *a.* [L. *æquus*, equal, + NL. *molecula*, molecule, + *-ar*[3].] Having or containing an equal number of molecules. **Equimolecular solutions,** in *phys. chem.*, solutions in which equal volumes contain the same number of molecules of the two dissolved substances, that is, solutions which contain quantities of the two dissolved substances which are in the ratio of their molecular weights.

equinate (ek'wi-nāt), *v. t.*; prep. and pp. *equinated*, ppr. *equinating.* [*equine* + *-ate*[1].] To inoculate with glanders.

equinocavus (ek-wi-nok'a-vus), *n.* [NL., < L. *equinus*, of a horse, + *cavus*, hollow.] Same as ★*talipes equinocavus.*

Equinoctial year. See ★*year.*

equinovarus (ek″wi-nō-vā'rus), *n.* [NL., < L. *equinus*, of a horse, + *varus*, bent.] Same as *talipes equinovarus.*

equinox, *n.*—**Equation of the equinoxes.** See ★*equation.*—**Mean equinox,** the point on the equator which is determined by correcting the true equinox of the date for the equation of the equinox and the nutation.

equinus (ē-kwī'nus), *n.* [NL., < L. *equinus*, of a horse: see *equine.*] Same as *talipes equinus.*

equipartile (ē-kwi-pär′til), *n.* [L. *æquus*, equal, + *pars* (*part-*), part, + *-ile.*] One of the divisions between which stand equipostiles. *Biometrika*, Aug., 1902, p. 386.

equipartition (ē-kwi-pär-ti′shon), *n.* [L. *æquus*, equal, + *partitio*(*n-*), partition, distribution.] In *phys.*, the distribution of energy throughout a medium, consisting of molecules in motion, in accordance with the law of the partition of energy. See ★*energy.*

Equipartition of energy is supposed to establish itself within a small fraction of a second.
Lord Rayleigh, in Nature, LXXII. 54.

equiped (ē′kwi-ped), *a.* and *n.* [Also *equipede*: L. *æquus*, equal, + *pes* (*ped-*), foot.] **I.** *a.* Having legs of equal length: said of some crustaceans: as, the *equiped* chilopods.

II. *n.* One of the chilopods whose legs, save the last pair, are of approximately equal length; a member of the *Equipedes* of Kirby.

equipment, *n.*—**Bureau of Equipment.** See ★*bureau.*

equipoise (e′kwi-poiz), *v. t.*; pret. and pp. *equipoised*, ppr. *equipoising.* [*equipoise*, *n.*] 1. To bring into a state of equipoise or balance; hold in equipoise.—2. To counterbalance.

equipostile (ē-kwi-pos′til), *n.* [L. *æquus*, equal, + (?) *post*, after, + *-ile.*] An object, value, or term in a series or array corresponding to values of an argument in arithmetical progression. *Biometrika*, Aug., 1902, p. 390.

equipotent (ē-kwip′ō-tent), *a.* [L. *æquus*, equal, + *potens*, powerful: see *potent.*] Equal in power.

Equipotential function. See ★*function.* **Equipotential system,** a system of forces such as is represented by certain animal ova or adult lower animals, like *Fabularia* or *Clavellina*, each portion of which has the same prospective potency in development or regeneration, that is, is capable of responding adaptively to a number of conditions.

equipotentiality (ē″kwi-pō-ten-shi-al′i-ti), *n.* The quality of being equipotential.

equiprobabilism (ē-kwi-prob′a-bil-izm), *n.* [L. *æquus*, equal, + *probabilis*, probable, + *-ism.*] The opinion in moral theology that where the reasons for either of two opposed courses of action are equally balanced, a man may use his liberty to follow either.

equiradial (ē-kwi-rā′di-al), *a.* [L. *æquus*, equal, + *radius*, spoke (radius?).] Having equal radii.

equiradiate (ē-kwi-rā′di-āt), *a.* [L. *æquus*, equal, + NL. *radiatus*, radiate.] Having radii of equal length, as certain sponge-spicules. *Proc. Zool. Soc. London*, 1900, p. 129.

equirotal, *a.* **II.** *n.* A vehicle, invented in the early part of the nineteenth century, having wheels of uniform size and the body jointed in the middle, the forward portion turning with the front axle.

Equisetales (ek-wi-sē-tā′lēz), *n. pl.* [NL., < *Equisetum* + *-ales.*] An order of pteridophytic plants of the class *Equisetineæ*, containing the family *Equisetaceæ* only, which see for characters.

Equisetineæ (ek-wi-sē-tin′ē-ē), *n. pl.* [NL., < *Equisetum* + *-ineæ.*] A class of cryptogamic plants of the phylum *Pteridophyta.* It embraces the orders *Equisetales* and *Calamariales.* Engler now uses the name *Equisetales* for this group, calling the order *Eucquisetales*, a change of doubtful propriety.

equisized (ē′kwi-sīzd), *a.* [L. *æquus*, equal, + E. *sized.*] Of the same size.

The two Rhomboidea are about *equisized.*
Proc. Zool. Soc. London, 1897, p. 290.

Equitable assignment. See ★*assignment.*

equitative (ek′wi-tā-tiv), *a.* [*equitate* + *-ive.*] Of or pertaining to equitation or horsemanship.

equitensal (ē-kwi-ten′sal), *n.* [L. *æquus*, equal, + *tens*(*io*(*n-*)), tension, + *-al*[1].] A line which cuts a system of tense lines so that the tensions at the crosses are all equal.

Equitinæ (ek-wi-tī′nē), *n. pl.* [NL., < *Eques* (*Equit-*) + *-inæ.*] A subfamily of drumfishes typified by the genus *Eques*: called *ribbonfishes* from their lengthwise black stripes.

equiv. An abbreviation of *equivalent.*

equivalence, *n.* **2.** In *chem.*, capability of mutual replacement, in chemical combination, of definite quantities of different substances: thus, there is *equivalence* between approximately 18.07 parts of aluminium, 40.1 of calcium, 46.1 of sodium, and 55.9 of (ferrous) iron in combining with the same fixed quantity of oxygen.

equivalent. I. *a.* **3.** In *geom.*: (*b*) Said of two polygons if they can be cut into a finite number of triangles congruent in pairs.—**5.** In *chem.*, applied to the respective quantities of different substances which are capable of replacing each other in combination with a fixed quantity of some particular substance. These mutually replaceable quantities of such substances are said to be *equivalent* to each other. See ★*equivalence*, 2.—**Equivalent by completion,** in *geom.*, said of two polygons if it is possible so to annex equivalent polygons to them that the two polygons so composed are equivalent.—**Equivalent equations, focus, illumination, lens, projection, sets.** See ★*equation*, etc.

II. *n.* **3.** See ★*equivalence*, 2. **Electrochemical equivalent of an element,** in *phys. chem.*, the weight in grams of that element which, in electrolysis, is transformed from the ionic to the non-ionic condition, or conversely, by the passage of the unit quantity of electricity, or one coulomb. If this equivalent is known for any one element, it thereby becomes known for all other elements by the third of Faraday's laws of electrolysis. Silver is the element selected for the experimental determination, and the value adopted for its electrochemical equivalent by the International Congress of Electricity at Chicago, in 1893, is 0.001,118 gram. This number is perhaps too small by about one part in a thousand. If we divide this equivalent by the atomic weight of silver and multiply by the equivalent weight of any other element, we obtain the weight of the second element which would be deposited by the passage of one coulomb of electricity. For instance, the atomic weights of silver and of copper being 107.93 and 63.6, and the equivalent weight of copper being half its atomic weight, we have $\frac{31.8}{107.93} \cdot 0.001,118$ gram equals the electrochemical equivalent weight of copper, or 0.000,328 gram.—**Mechanical equivalent of light,** the numerical quantity which expresses in ergs, or other units of mechanical energy, the value of a unit of light. If we take as the unit of light that which produces an illumination of one lux, we may define the mechanical equivalent of light as the energy in ergs of the light-giving ether-waves received in one second upon one square centimeter of surface at a distance of one meter from a source of light having an intensity of one hefner. The first attempt to estimate the mechanical equivalent of light (although not in precisely the above terms, which are of more recent origin) was made by Julius Thomsen in 1865. He determined in absolute measure the radiation from an incandescent body, as a gas or oil-flame; then filtered out the infra-red rays by interposition of a cell of water, and measured the transmitted light. On account of the incomplete adiathermancy of the cell, his values are, however, subject to a large correction. Measurements by more refined methods have since been made by Tumlirz and by Ångström. (See ★*efficiency of a source of light.*) Ångström found the luminous energy received by a square centimeter of surface at a distance of one meter from the flame of a Hefner lamp to be $20.6 \cdot 10^{-8}$ gram-calories per second, or, in mechanical units, 8.63 ergs per second. The composition of light from various sources, as gas-flames, the electric arc, or the sun, differs, and the effect of radiation upon the eye varies greatly with the wave-length. The luminosity is a maximum for rays in the middle of the spectrum and diminishes rapidly toward the red and violet. The mechanical equivalent should therefore depend on the composition of the light. From Ångström's value it is possible to compute that of all other sources of light that have been spectrophotometrically compared with the Hefner flame. The results of such a computation are given in the following table:

Source of light.	Ergs per second per square centimeter for one lux.
Untreated carbon at 1,000° C.	29.0
Untreated carbon at 1,400° C.	9.14
Glow-lamp at 2,000° C.	7.26
Hefner lamp	8.63
Petroleum-flame	8.69
Gas-flame	9.13 to 7.70
Acetylene-flame	7.12
Zircon-light	7.17
Lime-light	7.21 to 5.89
Arc-light	5.89 to 5.79
Welsbach light	4.50 to 4.39
Sunlight	4.85
Daylight (from sky)	5.53

The energy in ergs given in the above table does not include the total energy received at the surface by radiation, but only that portion which is capable of affecting the eye—in other words, of producing illumination. The amount of energy falls off rapidly as the temperature of the source rises. It is less for a given temperature in the case of treated carbon surfaces, as in the incandescent-lamp filament, than with untreated carbon, and still less in the case of light obtained from incandescent oxids. Thus the ergs of luminous energy per centimeter per second, corresponding to an illumination of one lux, are less for the Welsbach mantle and for the magnesium flame than for the electric arc, although the temperatures for the former sources are much lower.—**Osmotic equivalent,** that quantity of any substance which, if contained in a given volume of solution, will produce the same osmotic pressure as a standard quantity of some other substance when contained in the same volume of solution.—**Principle of kinesthetic equivalents,** in *psychol.*, the principle that "for each of our intentional actions we must have some way of thinking about the action, of remembering how it feels, looks, etc.; we must have something in mind equivalent to the experience of the movement." *J. M. Baldwin*, Story of the Mind, p. 20.—**Saponification equivalent,** in *chem.*, the quantity of any particular oil or fat which can be saponified by a fixed quantity of an alkali: usually expressed in the form of the number of grams of the oil saponified by 56.1 grams of caustic potash or 40 grams of caustic soda. *Sadtler*, Handbook of Indust. Chem., p. 268. **Water equivalent,** in *calorimetry*, the quantity of water which is equivalent, in capacity for heat, to a given body; the mass of a given body multiplied by its specific heat.

equivoluminal (ē′kwi-vō-lū′mi-nal), *a.* Equal as to volume: of equal cubical content.

equivote (ē′kwi-vōt), *n.* [L. *æquus*, equal, + *votum*, wish (vote).] A tie in voting, an equal number of votes being cast on each side.

equoid (ē′kwoid), *a.* [L. *equus*, horse, + *-oid.*] Resembling or having the characters of the *Equidæ*, or horse family; horse-like.

Equus beds. See ★*bed*[1].

er, *v.* A simplified spelling of *err.*

era, *n.* **4.** In *geol.*, a division of geologic time which, according to the recommendation of the International Congress of Geologists, is to be regarded as of highest rank, corresponding to the stratigraphic term *group.* See *group*[1], 3 (*b*).—**Lithic era,** the first half of J. D. Dana's azoic eon, during which there was a solid crust on the earth, but the temperature was too high to permit condensation of the vapors as oceans. It was followed by the oceanic era.—**Oceanic era,** according to the classification of the early stages in the earth's history, that era of the azoic eon in which the atmospheric waters were condensed into an ocean over all the sphere or in an oceanic depression, with finally some emerging lands cooled from molten rock. The temperature of this ocean is conceived to have been about 5,000° F. at the beginning of the period, and before its close the action of the ocean waters had caused the deposition of sediments which formed the earth's supercrust.—**Psychozoic era,** the present age, or the age of man, as distinguished from former geological ages before the appearance of man.

eradicator (ē-rad′i-kā-tor), *n.* **1.** One who roots up or roots out and destroys.—**2.** An agricultural implement or machine used in uprooting.

erasion, *n.* **2.** In *surg.*, the removal of morbid tissue by scraping.

Erasmianism (ē-raz′mi-an-izm), *n.* [*Erasmian*, *adj.* (< *Erasmus*), + *-ism.*] The religious system of the scholar and humanist Erasmus (1466–1536). He anticipated Luther in affirming the Bible to be the true source of theology. He condemned the subtleties of the scholastic systems; emphasized the moral elements of Christianity; and satirized the faults of the clergy, but refused to follow Luther, remaining in the communion of the Roman Catholic Church. The term is applied, therefore, to the attitude of men who protest against error, but compromise with existing institutions.

Erastianize (ē-ras′tian-īz), *v.* [*Erastian* + *-ize.*] **I.** *trans.* To make to accord with Erastianism.

II. *intrans.* To favor Erastianism.

E-rays. See ★*ray*[1].

erbin (ėr′bin), *n.* [Also *erbine*, < *erb*(*ium*) + *-in*[2].] Same as *erbia.*

erdmannite (erd′man-īt), *n.* [Named after O. *Erdmann*, a German chemist.] A complex mineral substance near allanite in composition, but perhaps only a mixture: obtained from Norway.

Erdmann's float, reagent. See ★*float*, ★*reagent.*

erecting-shop (ē-rek′ting-shop), *n.* A building or room in which engines or machines are assembled, as the parts are completed, to insure that all the parts will fit properly. Such a shop is provided with foundations, base-plates, benches, cranes, and other conveniences, according to the character of the machines to be erected.

erection, *n.* **10.** In *astrol.*, the construction of a scheme or figure of the heavens.

By *erection* of her figure, I gest it.
B. Jonson, Alchemist, iv. 4.

erector, *n.* **3.** A workman employed to put in place the steel part of buildings, bridges, or ships.—**4.** A machine, such as a derrick, used to place material in position in any structure.

eremian (e-rē′mi-an) *a.* [Gr. ἐρημία, a desert, a solitude, < ἐρῆμος, solitary.] Of or pertaining to the desert.—**Eremian subregion,** in *zoögeog.*, a division or subregion embracing northern Africa, northern Arabia, the greater part of Persia and Afghanistan, and the desert region of central Asia from the steppes of southern Russia to Manchuria.

Eremochæta (e-rē-mō-kē′tä), *n. pl.* [NL., < Gr. ἐρῆμος, solitary, + χαίτη, bristle.] In the classification of Osten-Sacken, a superfamily of dipterous insects, including the families *Stratiomyidæ*, *Tabanidæ*, *Acanthomeridæ*, and *Leptidæ.*

eremochætous (e-rē-mō-kē′tus), *a.* Belonging to or characteristic of the superfamily *Eremochæta.* *Cambridge Nat. Hist.*, VI. 446.

eremomeline (er-ē-mom′e-lin), *n.* One of the group of African birds known as *Eremomelinæ.*

eremophobia (e-rē-mō-fō′bi-ä), *n.* [NL., < Gr. ἐρημος, solitary, + -φοβία, < φοβεῖν, fear.] Morbid fear of being alone.

Eremurus (er-ē-mū′rus), *n.* [NL. (Bieberstein, 1818), < Gr. ἐρῆμος, solitary, + οὐρά, tail, stalk. The name alludes to the leafless flower-stalk and raceme.] A genus of plants of the family *Liliaceæ.* There are about 18 species, natives of the mountains of western and central Asia. Several are

cultivated for their striking habit and great flower-stalks crowned with showy white, rose-colored, or yellow flowers. The leaves rise from the root in a dense clump or rosette; the flowers have 6 segments, usually withering on the stalk, 6 stamens, and a 3-partitioned and 3-cornered ovary. Among the garden species are *E. robustus*, *E. Himalaicus*, and *E. spectabilis*. The best known is *E. robustus*, which often sends up a stalk 8 feet high bearing rose-colored flowers.

Eremurus [illegible]
One fourth natural size

erepsin (e-rep′sin), *n.* [L. *erep-(tus)*, pp. of *eripere*, snatch away, + *-s-* + *-in*[2].] A ferment discovered by O. Cohnheim in the intestinal mucosa, which is capable of causing the cleavage of acid albumins and albumoses into crystalline end-products of proteolytic digestion, but which is without effect upon the native albumins. It acts in neutral or feebly alkaline media. A similar ferment has apparently been found also in the vegetable world.

Erethizontidæ (er″ē-thī-zon′tī-dē), *n. pl.* [*Erethizon(t-)* + *-idæ*.] The American porcupines of the genera *Erethizon* and *Coendoo* (*Synetheres*), considered as constituting a family, a view generally held by American zoölogists. *O. Thomas*, 1897. See cut under *porcupine*.

eretmologist (er-et-mol′ō-jist), *n.* [**eretmology* (< Gr. ἐρετμός, oar, + *-λογια*, < λέγειν, speak) + *-ist*.] One who is skilled in the science of rowing; a professional oarsman. [Humorous.]

ergal (ėr′gal), *n.* [G. *ergal*, < Gr. ἔργον, work, + *-al*[1].] In *phys.*, potential energy: a word introduced by Clausius. It is that portion of the total energy of a system which diminishes as work is done by the system, and it corresponds, therefore, to the negative value of the force-function and also to Helmholtz's term *free energy*.

ergasiomania (ėr-gas″i-ō-mā′ni-ä), *n.* [NL., < Gr. ἐργασία, work, labor, + *μανία*, madness.] A restless desire, amounting at times to an insane impulsion, to be continually at work; also, a desire on the part of a surgeon to operate at every opportunity, whether or not the operation is indicated or justifiable.

ergasiophobia (ėr-gas″i-ō-fō′bi-ä), *n.* [NL., < Gr. ἐργασία, work, labor, + *-φοβία*, < φοβεῖν, fear.] An excessive disinclination, which may amount to an insane aversion, to work; also, excessive timidity, on the part of a surgeon, and fear to perform an operation even when it is urgently indicated.

ergastic (ėr-gas′tik), *a.* [Gr. ἐργαστικός, able to work, working, < ἐργάζεσθαι, work, < ἔργον, work.] Being the result of biologic activity: a term applied to rather stable substances formed by the activity of the cell-cytoplasm. *A. Meyer*, 1896.

ergastinæ (ėr-gas-tī′nē), *n. pl.* [Gr. ἐργαστίναι (Hesychius), < ἐργαστής, < ἐργάζεσθαι, work.] In *Gr. antiq.*, maidens who were chosen to weave and embroider the peplum of Athena. Certain figures in procession in the eastern frieze of the Parthenon are supposed to represent them.

ergastoplasm (ėr-gas′tō-plazm), *n.* [Gr. ἐργαστ-(ικός), able to work, + πλάσμα, anything formed.] The more active portion of the protoplasm which forms the fibrillar structures of the cell: nearly the same as *kinoplasm* (Strasburger) and *ergoplasm* (Davidoff). *Garnier*, 1897.

ergastoplasmic (ėr-gas-tō-plas′mik), *a.* Of or pertaining to ergastoplasm. *Nature*, March 12, 1903, p. 455.

ergastulum (ėr-gas′tū-lum), *n.*; pl. *ergastula* (lä). [L., an accommodated form (as if dim.) of an Italian Gr. *ἐργαστρον, < Gr. ἐργάζεσθαι, work, labor: see ★*ergastic*.] In *Rom. antiq.*, a prison for slaves attached to a Roman villa or farm; a house of correction.

ergatandrous (ėr-ga-tan′drus), *a.* [Gr. ἐργάτης, a worker, + ἀνήρ (ἀνδρ-), male, + *-ous*.] Having worker-like males: said of certain ants.

ergatandry (ėr-ga-tan′dri), *n.* [Gr. ἐργάτης, worker, + ἀνήρ (ἀνδρ-), male, + *-y*[3].] In *entomol.*, the condition of certain male ants which fail to develop wings and resemble the worker-ants in form.

ergatogyne (ėr′ga-tō-jin), *n.* [Gr. ἐργάτης, worker, + γυνή, female.] A female ant of worker-like aspect due to the absence of wings and wing-muscles; an ergatoid female.

ergatogynic (ėr-ga-tō-jin′ik), *a.* Same as ★*ergatogynous*. *Biol. Bulletin*, May, 1904, p. 252.

ergatogynous (ėr-ga-toj′i-nus), *a.* [Gr. ἐργάτης, a worker, + γυνή, female, + *-ous*.] Having worker-like females: said of certain ants.

ergatoid (ėr′ga-toid), *n.* and *a.* [Gr. ἐργάτης, a worker, + εἶδος, form.] **I.** *n.* A wingless although sexually competent ant of either sex. The females are really secondary queens. *Cambridge Nat. Hist.*, VI. 140.

II. *a.* Having the characteristics of an ergatoid.

ergatomorphic (ėr″ga-tō-môr′fik), *a.* [Gr. ἐργάτης, a worker, + μορφή, form, + *-ic*.] Of or pertaining to ergatomorphism; having the appearance of a worker-ant.

ergatomorphism (ėr″ga-tō-môr′fizm), *n.* [*ergatomorph-ic* + *-ism*.] The resemblance of certain male and female ants to workers, through a failure to develop the wings and their musculature.

erg-nine (ėrg′nīn), *n.* A practical unit of work or energy equal to 1×10^9 ergs. See *ergten*. [Rare.]

ergogram (ėr′gō-gram), *n.* [Gr. ἔργον, work, + γράμμα, anything written.] A record of muscular work; a tracing obtained by means of the ergograph. See ★*ergograph*.

The *ergogram* pictures a very specific form of fatigue and shows a very wide range of individual differences.
G. S. Hall, Adolescence, I. 150.

ergograph (ėr′gō-gräf), *n.* [Gr. ἔργον, work, + γράφειν, write.] An instrument for recording muscular work; a recording dynamometer or ergometer: used especially in the study of muscular fatigue. The work recorded by the ergographs ordinarily employed is that done by a single finger pressing against a spring or pulling against a weight. In Mosso's instrument, the earliest form of the ergograph, there are three principal parts: the padded arm-rest, with arm-straps and brass tubes which hold the unused fingers in position; the weights, attached to a cord which passes over a pulley to a finger-cap adjusted to the lifting finger; and the recording carriage, which moves between metal guides with the movement of finger and spring, and carries a writing-point by which the ergogram or work-record is traced upon the smoked surface of a kymograph drum. An ergograph of this type is termed a *weight ergograph*. In other forms of the instrument, the compression of a spring replaces the pull-up of the weight: *spring ergographs* have been devised, for example, by Cattell and Binet. In yet other forms, among which Meumann's ergograph may be mentioned, there is no graphic record; the recording carriage and kymograph are replaced by a work-adder.

This greatly increased range of individual variation in early puberty was no less marked in vital capacity and in resistance to fatigue as tested by the *ergograph*.
G. S. Hall, Adolescence, II. 151.

ergographic (ėr-gō-graf′ik), *a.* [*ergograph* + *-ic*.] Relating to, or obtained by means of, the ergograph.

He studied the effect on the *ergographic* curve of drinking-water, and of the injection of cocaine and caffeine.
Stud. Yale Psychol. Lab., VIII. 104.

ergology (ėr-gol′ō-ji), *n.* [Gr. ἔργον, work, + *-λογια*, < λέγειν, speak.] Physiology and psychology considered dynamically, as the performance of work.

ergometric (ėr-gō-met′rik), *a.* Of or pertaining to the ergometer or the results shown by it; recorded or furnished by the ergometer: as, an *ergometric* diagram; *ergometric* measurements.

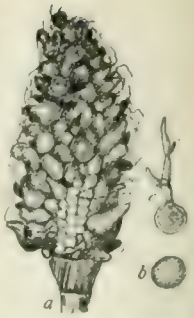
ergonomy (ėr-gon′ō-mi), *n.* [Gr. ἔργον, work, + νόμος, distribution.] Physiological division of labor. *Haeckel* (trans.), Wonders of Life, p. 35.

ergophobia (ėr-gō-fō′bi-ä), *n.* [NL., < Gr. ἔργον, work, + *-φοβία*, < φοβεῖν, fear.] A morbid aversion to labor. Compare ★*ergasiophobia*. *N. Y. Times*, Oct. 17, 1903.

ergoplasm (ėr′gō-plazm), *n.* [Gr. ἔργον, work, + πλάσμα, anything formed.] The active protoplasm which arises from the achromatic portion of the germinal vesicle of the egg and produces, wholly or in part, the first polar spindle. *Davidoff*, 1889.

ergosterin (ėr-gos′te-rin), *n.* [*ergo(t)* + Gr. στερεός, solid, + *-in*[2].] A colorless compound, $C_{26}H_{40}O.H_2O$, contained in ergot of rye. It crystallizes in pearly leaflets or in pointed needles, melts at 154° C., and boils at 185° C. under 20 millimeters pressure.

ergot[1], *n.* **Corn ergot**, the fungus *Ustilago Zeæ*, which transforms the kernel of corn into black spores. See *smut*.



a, Corn infected with *Ustilago Zeæ*, on an ear of corn. The infected kernels are enormously increased in size (reduced). *b*, spore enlarged. *c*, germinating spore (enlarged).

ergotinic (ėr-gō-tin′ik), *a.* [*ergot* + *-in*[2] + *-ic*.] Pertaining to or derived from ergot. **Ergotinic acid**, a poisonous substance found in ergot, but probably not concerned in the production of the clinical picture of ergotism.

ergotism[2], *n.* **2.** Logical reasoning; ratiocination.

The ratiocination or *ergotism* of the logicians is only one kind of reasoning and one little used by the ordinary mind.
L. F. Ward, Pure Sociol., p. 462.

ergotization (ėr′gō-tī-zā″shon), *n.* [*ergotize* + *-ation*.] The act or process of affecting with the poison of ergot.

ergotol (ėr′gō-tōl), *n.* [*ergot* + *-ol*.] A liquid preparation of ergot two and a half times as strong as the United States Pharmacopœia fluid extract.

Erian, *a.* **II.** *n.* In *geol.*, a major group of geological units comprising the Marcellus, Hamilton, Genesee, Portage, and Chemung divisions as used by the original New York geologists. The term was applied by Dawson to the entire Devonian system as represented in New York and Canada as a more appropriate term, but it is now restricted to that part of the Devonian which is represented by the Marcellus and Hamilton shales.

Ericales (er-i-kā′lēz), *n. pl.* [NL. (Lindley, 1833), < *Erica* + *-ales*.] An order of dicotyledonous sympetalous plants characterized by regular flowers, usually free stamens as many or twice as many as the lobes of the corolla, and a compound ovary. It embraces 8 families, of which *Ericaceæ* is the most important. See *Diapensiaceæ* and *Epacridaceæ*.

erichthoid (e-rik′thoid), *a.* [*erichthus* + *-oid*.] Of or pertaining to an erichthus: as, an *erichthoid* larva.

erichthus (e-rik′thus), *n.* [NL., irreg. < Gr. ἦρι, early, + ἰχθύς, fish.] A late larval stage of a stomatopodous crustacean, as the mantis-shrimp, in which the full number of segments and of limbs of the adult animal is reached.

ericineous (er-i-sin′ē-us), *a.* Same as *ericaceous*.

ericinol (e-ris′i-nōl), *n.* [*eric(olin)* + *-in*[2] + *-ol*.] A colorless, volatile, oily compound, $C_{20}H_{26}O$, prepared by the action of dilute acids on ericolin. It turns brown in the air.

ericolin (e-rik′ō-lin), *n.* [L. *erica*, heath, + *-ol* + *-in*[2].] A very bitter, brown, resinous compound, $C_{34}H_{56}O_{21}$, found in several plants of the heath family, in *Arctostaphylos Uva-ursi*, and in *Ledum palustre*.

ericophyte (e-rik′ō-fīt), *n.* [L. *erica*, heath, + Gr. φυτόν, plant.] In *phytogeog.*, one of a class of plants, typified by the genus *Erica*, which are adapted to live on the soil of heaths and peat moors. *Encyc. Brit.*, XXV. 432.

Ericsson gun. See ★*gun*.

Ericymba (er-i-sim′bä), *n.* [NL., < Gr. ἐρι-, much-, + κύμβη, a cup, bowl.] A genus of small minnows found in the Mississippi valley, distinguished by the silvery mucous cavities on each side of the head. *E. buccata* is the common species.

Erie blue, Erie Canal china, Erie clay. See ★*blue*, etc.

erikite (er′i-kīt), *n.* [Named after *Erik* the Red, the discoverer of Greenland.] A silicate and phosphate of the cerium metals and sodium, with also aluminium and thorium. It occurs in complex orthorhombic crystals of a brownish color, in southern Greenland.

erinaceine (er-i-nā′sē-in), *n.* A hedgehog of the subfamily *Erinaceinæ*.

erinite (ē′rin-īt), *n.* [*Erin* + *-ite*[2].] A basic copper arsenate occurring in green mammillary crystalline forms: from Cornwall, but earlier supposed to come from Ireland, hence the name.

Eriobotrya (er″i-ō-bōt′ri-ä), *n.* [NL. (Lindley, 1821), in allusion to the lanate inflorescence, < Gr. ἔριον, wool, + βότρυς, a bunch of grapes.] A genus of plants of the family *Malaceæ*. They are small trees with evergreen leaves, racemose-paniculate inflorescence covered with woolly hairs, thick 5-toothed calyx, crenulate petals, and 3-5 seeds, one in each compartment of the fruit. There are about 10 species, natives of eastern Asia. The loquat, *Eriobotrya Japonica* (*Photinia Japonica* of Gray), sometimes erronc-

ously called *Japanese plum* and *Japanese medlar*, is practically the only representative of this genus grown in the United States. It is hardy in the Gulf States, where it is grown for the small, acid, yellow, plum-like fruits. The flowers are white and are borne in terminal clusters late in the season; the fruits mature in the following spring.

eriocaulaceous (er″i-ō-kâ-lā′shius), *a.* Of, pertaining to, or having the characters of the plant family *Eriocaulaceæ*.

eriocome (er′i-ō-kōm), *n.* [NL. *eriocomus*, < Gr. ἔριον, wool, + κόμη, hair.] A woolly-haired person: a member of a division of mankind, the eriocomi, characterized by fleecy hair, like that of the Melanesians and negroes. *Deniker*, Races of Man, p. 40.

eriocyanine (er′i-o-sī′a-nin), *n.* [Gr. ἔριον, wool, + *cyanine*.] An acid coal-tar color of the triphenylmethane carbinol type. It dyes wool a bright blue in an acid bath.

erioglaucine (er″i-ō-glâ′sin), *n.* [Gr. ἔριον, wool, + γλαυκός, greenish blue, + *-ine*[2].] An acid coal-tar color of the triphenylmethane type. It dyes wool and silk greenish-blue shades in an acid bath.

eriometer, *n.*—**Young's eriometer,** an instrument used in measuring the diameter of the rings of color seen when a bright light is examined through a mass of small particles or fine fibers. It consists essentially of two glass plates between which the fibers are placed and an aperture in a sliding-screen through which the eye may view the bright light. If the angular diameter of the colored ring is observed a numerical table gives the corresponding linear diameter of the particles. A corresponding graduation may be inscribed on the instrument so that the numerical tables need not be used.

eriometric (er″i-ō-met′rik), *a.* Of or pertaining to an eriometer; obtained by the eriometer.

Young's eriometric scale. In the eriometer, as constructed by Young, the first red-and-green ring is made to cover a given circle by moving the sliding-tube to and fro, and an index shows the diameter of the particles. On the arbitrary scale used by him, 1 is equivalent to a diameter of 0.00003 of an inch, and the other scale numbers represent simple multiples of these: 3, the size of the particles observed in a thin layer of milk; 3.5, the spores of *Lycoperdon bovista*; 32, lycopodium seed or spores; 46, diameter of coarse wool.

erionite (er′i-on-īt), *n.* [Irreg. < Gr. ἔριον, wool, + *-ite*[2].] A hydrated silicate of aluminium, calcium, sodium, and potassium, occurring in aggregates of wool-like fibers in cavities in a rhyolite tuff: found at Durkee, Oregon.

eriophorous (er-i-of′ō-rus), *a.* [Gr. ἐριοφόρος, wool-bearing, < ἔριον, wool, + -φορος, < φέρειν, bear.] Wool-bearing; cottony; flocculent.

eriophyllous (er-i-of′i-lus), *a.* [Gr. ἔριον, wool, + φύλλον, leaf.] Having woolly leaves.

Eritrean (ā-rē-trē′an), *a.* [It. *Eritrea* + *-an*.] Of or pertaining to the Italian Red-Sea colony of Eritrea: as, *Eritrean* currency; *Eritrean* defenses.

erizo (ā-rē′thō), *n.* [S. Amer. Sp., so named from the prickly, bur-like fruit, < Sp. *erizo*, < L. *ericius*, hedgehog. See *urchin*.] In Venezuela and Colombia, the tibourbou, *Apeiba Tibourbou*. See ★*tibourbou*.

erl, *n.* A simplified spelling of *earl*.

erlan (ėr′lan), *n.* [*Erla*, Crandorf, Saxony, + *-an*.] In *petrog.*, a fine-grained metamorphic rock composed chiefly of augite, with some feldspar, quartz, and other minerals. Also called (in German) *erlanfels*. *Breithaupt*.

erly, *adv.* and *a.* A simplified spelling of *early*.

erm. In *her.*, an abbreviation of *ermine*.

ermin, *n.* and *v. t.* A simplified spelling of *ermine*.

ernest, *n.*, *a.*, and *v. t.* A simplified spelling of *earnest*.

Ernestine order. See ★*order*.

Ernogrammus (ėr″nō-gram′us), *n.* [NL., < Gr. ἔρνος, a sprout, + γραμμή, a line.] A genus of blennies found in Japan, remarkable for the branching lateral lines.

erodent, *n.* **II.** *a.* Producing erosion; erosive.

erodible (ē-rō′di-bl), *a.* [*erode* + *-ible*.] In *geol.*, yielding to erosive action; subject to the destructive processes of surface agencies.

Eros, *n.* **3.** In *astron.*, No. 433 of the asteroid group, discovered photographically by Witt, at Berlin, in 1898, and for a time provisionally referred to as D. Q. Its orbit is much smaller than that of any other minor planet, its mean distance from the sun being less than that of Mars. Its period is 643.11 days. At times it can approach the earth within about 13,000,000 miles (nearer than any other member of the solar system), and thus furnishes perhaps the most precise of all methods for finding the solar parallax. At these rare approaches it may nearly reach the limit of naked-eye visibility, but it is usually observable only in large telescopes, its diameter being not more than 15 or 20 miles. At certain times there are regular variations in its brightness from which an axial rotation in 5 hours 16 minutes is inferred.

erosible (ē-rō′si-bl), *a.* [L. *erosus*, pp. of *erodere*, erode, + *-ible*.] Capable of being eroded: as, an *erosible* rock.

In some parts the tufa is traversed by vertical veins of a harder and less easily *erosible* rock.
Geog. Jour. (R. G. S.), X. 478.

erosion, *n.* Cycle of erosion. See ★*cycle* 1. **Erosion column.** See ★*column*. **Glacial erosion,** the erosion produced by glaciers and subglacial streams. The efficacy of this process has been much discussed, but its importance is coming to be more and more accepted by geologists. See *corrie*, *comb*[3], *fiord*, *hanging* ★*valley*, *rock-basin*. **Head erosion.** Same as *head-water* ★*erosion*.—**Head-water erosion,** the erosion of a valley-head or escarpment so that it is worn back in a direction opposite to the flow of its stream. Also retrogressive erosion. **Retrogressive erosion.** Same as *head-water* ★*erosion*.—**Sheet-flood erosion,** erosion accomplished by sheets of running water, as distinct from streams. *J. W. McGee*, in Bulletin Geol. Soc. Amer., VIII. 88. **Table-land of erosion.** See ★*table-land*. **Unconformability by erosion.** Flat strata forming a land area are often carved into valleys by running water. Without appreciable tilting they may then be depressed beneath the sea and the valleys may be filled with new sediments which do not differ in dip, although usually contrasted in kind with the old. The stratigraphic break between the two is called *unconformability by erosion*.

Wind-erosion, the wearing away and transportation of rock material by the wind.

He particularly commended to geologists the study of *wind-erosion* of snow hardened by pressure and low temperature. . . . One could see the structure change from form to form under one's very eyes, and thus quickly gain such an insight into the processes of *wind-erosion* as, in the case of more stubborn rock, could only be obtained by prolonged study. *Athenæum*, Dec. 7, 1901, p. 778.

erosional (ē-rō′zhon-al), *a.* [*erosion* + *-al*[1].] Of, pertaining to, or produced by erosion.

The terraced character of the outlet at Horseheads was also described, and the opinion expressed that the broader terrace is an *erosional* and not a constructional (flood-plain) feature, and that it represents the outlet of Lake Newberry at its principal stage.
Science, Jan. 2, 1903, p. 26.

erosodentate (ē-rō″sō-den′tāt), *a.* [L. *erosus*, eroded, + *dentatus*, toothed.] Having irregular tooth-like projections; specifically, in *bot.*, dentate with erose teeth.

erosodenticulate (ē-rō″sō-den-tik′ū-lāt), *a.* [L. *erosus*, eroded, + *denticulus*, dim. of *dens*, tooth, + *-ate*[1].] Having small, irregular, tooth-like points.

erotically (e-rot′i-kal-i), *adv.* In an erotic manner or sense.

eroticism (e-rot′i-sizm), *n.* [*erotic* + *-ism*.] The state or character of being erotic; undue prominence of sexuality or the sexual emotions; in *pathol.*, excessive sexual desires.

eroticist (e-rot′i-sist), *n.* One affected with eroticism.

eroticomania (e-rot″i-kō-mā′ni-ä), *n.* [NL., < Gr. ἐρωτικός, erotic, + μανία, madness.] Same as *erotomania*.

erotism (e-rot′ism), *n.* A condition marked by erotic tendencies; eroticism.

erotogenic (er″ō-tō-jen′ik), *a.* Exciting sexual desire.

erotology (er-ō-tol′ō-ji), *n.* [Gr. ἔρως (ἐρωτ-), sexual love, + -λογία, < λέγειν, speak.] The study of the phenomena of sexual love.

These [unwritten codes of modesty] are like psychic garments with changing fashions, but *erotology* well understands that sometimes to ignore their existence is itself to win. *G. S. Hall*, Adolescence, II. 118.

erotometer (er-ō-tom′e-tėr), *n.* [Gr. ἔρως (ἐρωτ-), sexual love, + μέτρον, measure.] A standard or gage of sexual love. *G. S. Hall*, Adolescence, II. 132.

erotopath (e-rot′ō-path), *n.* [A back-formation from *erotopathy*.] One who is dominated by perverted sexual ideas. *Alien. and Neurol.*, Feb., 1903, p. 72.

erotopathia (er″ō-tō-path′i-ä), *n.* [NL., < Gr. ἔρως (ἐρωτ-), sexual love, + πάθος, disease.] Perversion of the sexual instinct. *Amer. Jour. Psychol.*, XIII. 328.

erotopathic (er″ō-tō-path′ik), *a.* Relating to or suffering from erotopathia; erotic. *Alien. and Neurol.*, Feb., 1903, p. 75.

erotopathy (er″ō-top′a-thi), *n.* Same as ★*erotopathia*.

erotopsychic (er″ō-top-sī′kik), *a.* [Gr. ἔρως (ἐρωτ-), sexual love, + ψυχή, mind.] Same as ★*erotopathic*.

errancy (er′an-si), *n.* The condition of erring; liability to err.

erratic, *a.* **6.** In *zoöl.*, occurring in an unusual location.

Parasites which occur in their normal host, but in an unusual location, like the brain cysticerci . . . in a subcutaneous cyst . . . may be spoken of as *erratic*.
Trans. Amer. Micros. Soc., 1903, p. 128.

error, *n.* **8.** In *base-ball*, a failure by one of the fielders to put out an opponent when he has the opportunity; a misplay by which a runner secures a base. **Average error.** See ★*method of average error*. **Clock error.** See ★*clock*[2]. **Defendant in error,** a party to an action, either plaintiff or defendant in the court below, who is opposed to the plaintiff in error in the appellate court. See *plaintiff in* ★*error*.—**Error of a planet,** the difference between its observed and its calculated position. **Error of expectation, fatigue, habituation,** in *psychophys.*, variable errors, incidental more especially to work by the gradation methods. The error of expectation may make a change of judgment come either too soon or too late, according as the expectation is directed upon change or uniformity of the stimuli; the errors of fatigue and habituation delay the change of judgment beyond the normal point. The errors can be avoided by a fitting disposition of the series: in certain cases the error of expectation, may, perhaps, for all practical purposes, be eliminated by treating it as a constant error; that is, by repeating the series with reversal, and taking the average result. **Fechnerian time-error,** in *psychophys.*, a constant or systematic error, due to temporal arrangement, which may be eliminated by performing the experiment twice over,—once in the time-order *ab*, and once in the time-order *ba*,—and by averaging the result of the two experiments to a single value.—**Law of frequency of error.** Same as *law of error*. See *error*, 5.—**Method of average error.** See ★*method*.—**Plaintiff in error,** in *law*, a party to an action, either plaintiff or defendant in the court below, who sues out in an appellate court, a writ of error, to review proceedings upon which the error is alleged.—**Probable error of an event.** See ★*coefficient of variability*.—**Space error,** in *psychophys.*, a constant or systematic error, due to spatial arrangement, which may be eliminated (like the Fechnerian time-error) by repeating the experiment with reversal of spatial conditions, and averaging the two results.—**Station error,** in *geod.* and *astron.*, the difference between the position of a point on the earth's surface determined by astronomical means (its astronomical latitude and longitude) and the same as fixed by combination with data obtained from an extended geodetic survey. The differences arise from local deviations in the direction of gravity, due to local accidents of the surface or the underlying strata, and seldom exceed a few seconds, but in mountainous regions and mining districts are often much larger.

error (er′or), *v. t.* In *law*, upon an appeal, to reverse the judgment or other determination of the court below, on account of error in its proceedings. [Rare.]

ersæiform (ėr-sē′i-fôrm), *a.* [NL. *Ersæa* (?) + L. *forma*, form.] Resembling or having the structure of the *Ersæidæ*; composed of three medusoids, a sterile, a fertile, and a special nectocalyx. Compare ★*eudoxiform*.

ersæome (ėr-sē′ōm), *n.* [Gr. ἐρσαῖος, dewy (< ἕρση, dew), + *-ome*.] One of the two main forms of cormidium in hydrozoans, consisting typically of a hydrophyllium, a gastrozoid with a tentacle, one or more medusoid gonophores, and generally a nectocalyx.

erthen, erthling, erthly. Simplified spellings of *earthen*, *earthling*, *earthly*.

erubim (e-rō′bēm), *n. pl.* [Heb. *'erūbīm*, pl. of *'erūb*, mixture, combination.] Among the Jews, certain devices to get around the strict observance of the Sabbath rules, when circumstances make such observance difficult or impossible. The strict follower of rabbinical injunctions must not go out on the Sabbath beyond a certain distance. In order to establish the legal boundaries the rabbis have ordained that certain eatables may be deposited beyond the limit on the day preceding the Sabbath or festival, so as to make it appear that the place where the food is deposited is one's domicile, extending thereby the limit for one's movements.

Erucæformia (e-rō-sē-fôr′mi-ä), *n. pl.* [NL., erroneously for **eruciformia*, neut. pl. of **eruciformis*, < *eruca*, a caterpillar, + *forma*, form.] A group of flies of the family *Tipulidæ*, having caterpillar-like larvæ: supposed to be the most primitive of existing *Diptera*. *Phalacrocera* is an example.

erucic (e-rō′sik), *a.* [L. *eruca*, a sort of cole-wort.] Noting an acid, a colorless compound, $C_{22}H_{42}O_2$, contained, in combination with glycerol, in white and black mustard-seed oil. It crystallizes in long slender needles, melts at 33–34° C., and is readily converted into the isomeric brassidic acid.

erucin (e-rō′sin), *n.* [*eruc(ic)* + *-in*[2].] The glycerin ester of erucic acid, found in rape-seed oil.

erugatory (e-rō′ga-tō-ri), *a* and *n.* [NL. **erugatorius*, < L. *erugare*, free from wrinkles, < *e*, out, + *ruga*, wrinkle.] **I.** *a.* Having the property of removing wrinkles.

II. *n.* A remedy used to eradicate wrinkles.

eruption, *n.*—**Cone of eruption.** See ★*cone*.—**Massive eruption,** the protrusion of lava without the formation of a volcanic cone. Compare ★*fissure-eruption*. *Geikie*, Text-book of Geol., p. 342.—**Subaërial eruption,** outbreaks of lava or tuff upon the land, as contrasted with those beneath the sea.

Eruptive center, vein. See ★*center*[1], ★*vein*.

Eryops (er′i-ops), *n.* [NL., (?) irreg. < Gr. ἐρύειν, draw out, + ὤψ, face.] A genus of stegocephalian reptiles from the Permian rocks of North America, having an elongated triangular skull with somewhat tapering snout, relatively small

round orbits, and rugose cranial bones with indistinct sutures.

erysipeloid (er-i-sip'e-loid), *n.* and *a.* [*Erysipelas* + *-oid.*] **I.** *n.* A chronic inflammation of the skin resembling erysipelas, occurring sometimes in persons who have been brought into contact with the skins of wild animals, either living or recently dead.

II. *a.* Resembling erysipelas.

Erysiphaceæ (er″i-si-fā'sē-ē), *n. pl.* [NL., < *Erysiphe* + *-aceæ.*] The family of fungi typified by the genus *Erysiphe.* See *Erysiphea.*

Erythea (er-i-thē'ä), *n.* [NL. (Watson, 1880), < Gr. *Ἐρύθεια*, one of the Hesperides.] A genus of palms. They have fan-shaped leaves, slender, naked trunks, perfect flowers in large, decompound panicles, and for fruit a black globose drupe. There are two species, *E. armata*, from Lower California, and *E. edulis*, a native of Guadalupe Island, off the western coast of Mexico. Both species are cultivated out of doors in favored localities of southern California.

erythran (er'i-thran), *n.* [Gr. *ἐρυθρός*, red, + *-an.*] A colorless liquid compound,

$$HOCH_2CH_2OCH_2CHOH,$$

prepared by the long boiling of erythrol with dilute sulphuric acid. It boils at 154–155° C. under 18 millimeters pressure.

erythrarsin (er-i-thrär'sin), *n.* [Gr. *ἐρυθρός*, red, + *ars(enic)* + *-in*[2].] A red pigment, $C_4H_{12}O_3As_6$, formed, in very small quantity, by the oxidation of cacodyl.

erythrasma (er-i-thras'mä), *n.* [NL., < Gr. *ἐρυθρός*, red, + *-ασμα*, a termination.] A contagious skin disease, running a chronic course, due to the presence of a vegetable parasite, *Microsporon minutissimum.*

erythrin, *n.* **3.** A coal-tar color of the xanthene type, prepared by the methylation of eosin. It dyes silk a bluish red with a red fluorescence. Also called *primrose.*—**Erythrin X,** an acid coal-tar color. Same as ★*ponceau 5R.*

erythrism, *n.* **2.** In *anthrop.*, redness of hair, generally combined with light complexion.—**3.** In *zoöl.*, the assumption of red in animals, in place of their ordinary coloration.

Erythrism is particularly common among the Mungooses and is responsible for a large number of the untenable species which have been formed in that group.
Proc. Zool. Soc. London, 1886, p. 77.

erythroblast, (e-rith'rō-blăst), *n.* [Gr. *ἐρυθρός*, red, + *βλαστός*, germ.] One of the colored amœboid cells found in the marrow of the bones and supposed to give rise to the red blood-corpuscles.

erythroblastic (e-rith-rō-blas'tik), *a.* Of or pertaining to erythroblasts.

erythrocentaurin (e-rith″rō-sen-tâ'rin), *n.* [*Erythr(æa) centaur(ium)* (see def.) + *-in*[2].] A neutral, bitter, glucoside-like body, $C_9H_{14}O_5$, formed in *Centaurion Centaurium* (*Erythræa Centaurium of Persoon*).

Erythrochæte (er″i-thrō-kē'tē), *n.* [NL. (Siebold and Zuccarini, 1846), < Gr. *ἐρυθρός*, red, + NL. *chæta*, bristle, < Gr. *χαίτη*, mane. The allusion is to the color of the pappus in the type species.] A genus of plants of the family *Asteraceæ*, closely related to *Senecio.* There are about thirty species, chiefly Asiatic. One species, the leopard-plant, a variety of *E. Kæmpferi* (*Senecio Kæmpferi* of De Candolle), is well known in cultivation. It is called by gardeners *Farfugium.* It is grown in the North as a foliage pot-plant, and was at one time a favorite window-garden subject. From Washington southward, it is hardy in the open. The plant has large orbicular-cordate leaves, blotched and spotted with yellow, white or rose-colored patches. A form with glaucous-green leaves edged with creamy white is known as *silver-leaf.*

erythrochroic (e-rith-rō-krō'ik), *a.* Of or relating to erythrochroism.

erythrochroism (e-rith-rō-krō'izm), *n.* [Gr. *ἐρυθρός*, red, + *χροα*, color, + *-ism.*] Same as *erythrism.*

erythroclastic (e-rith-rō-klas'tik), *a.* [Gr. *ἐρυθρός*, red, + *κλαστός*, < *κλᾶν*, break, + *-ic.*] Relating to destruction of the red blood-cells.

erythrocyte (e-rith'rō-sīt), *n.* [Gr. *ἐρυθρός*, red, + *κύτος*, a hollow (a cell).] A red blood-corpuscle as distinguished from a white or colorless blood-corpuscle (leucocyte).

erythrocytolysis (e-rith″rō-sī-tol'i-sis), *n.* [NL., < Gr. *ἐρυθρός*, red, + *κύτος*, a hollow (a cell), + *λύσις*, dissolution.] Destruction of the protoplasm of the red blood-corpuscles.

erythrocytolytic (e-rith″rō-sī-tō-lit'ik), *a.* Of or pertaining to erythrocytolysis or the destruction of red blood-cells by hemolysins.

erythrocytorrhexis (e-rith″rō-sī-tō-rek'sis), *n.* [Gr. *ἐρυθρός*, red, + *κύτος*, a hollow (a cell), + *ῥῆξις*, rupture.] Rupture of an erythrocyte or red blood-cell.

erythrocytoschisis (e-rith″rō-sī-tos'ki-sis), *n.* [Gr. *ἐρυθρός*, red, + *κύτος*, a hollow (a cell), + *σχισις*, cleaving.] Division by fission of a red blood-corpuscle.

erythrocytosis (e-rith″rō-sī-tō'sis), *n.* [NL., < Gr. *ἐρυθρός*, red, + *κύτος*, a hollow (a cell), + *-osis.*] The formation of erythrocytes, or red blood-corpuscles.

erythrodermatitis (e-rith″rō-dêr-ma-tī'tis), *n.* [NL., < Gr. *ἐρυθρός*, red, + *δερμα(τ-)*, skin, + *-itis.*] Inflammatory redness of the skin.

erythrogen (e-rith'rō-jen), *n.* [Gr. *ἐρυθρός*, red, + *-γενής*, -producing.] **1.** A fatty, green crystalline compound, said to occur in certain specimens of pathological bile.—**2.** A substance, possibly a chromogen, found in flowers.

erythrogenic (e-rith-rō-jen'ik), *a.* [Gr. *ἐρυθρός*, red, + *-γενής*, -producing, + *-ic.*] Producing or giving rise to red blood-corpuscles.

erythroglucin (e-rith-rō-glō'sin), *n.* [Gr. *ἐρυθρός*, red, + *γλυκύς*, sweet, + *-in*[2] (see ★*glucin*).] Same as ★*erythrol.*

erythrogranulose (e-rith-rō-gran'ū-lōs), *n.* [Gr. *ἐρυθρός*, red, + E. *granulose.*] A variety of soluble starch which is colored red by iodine.

erythrol (er'i-thrōl), *n.* [Gr. *ἐρυθρός*, red, + *-ol.*] The correct name (by regulation) for *erythrite.*

erythroleinic (er″i-thrō-lē-in'ik), *a.* [*erythrolein* + *-ic.*] Noting an acid coloring-matter of unknown composition contained in archil or orchil.

erythrolysin (er-i-throl'i-sin), *n.* [*erythrolysis* + *-in*[2].] A lysin which is specially directed against the red corpuscles of the blood. The term *hemolysin* is more generally used, although strictly speaking it would comprise the leucolysins as well as the erythrolysins.

erythrolysis (er-i-throl'i-sis), *n.* [NL., < Gr. *ἐρυθρός*, red, + *λύσις*, dissolution.] The destruction of red cells by means of specific cytolysins. See also ★*erythrolysin.*

erythromelia (e-rith-rō-mē'li-ä), *n.* [NL., < Gr. *ἐρυθρός*, red, + *μέλος*, limb.] A neurosis characterized by redness of the skin on the exterior surfaces of the extremities.

erythrophage (e-rith'rō-fāj), *n.* [Gr. *ἐρυθρός*, red, + *φαγεῖν*, eat.] A phagocyte which destroys the red blood-globules.

erythrophilous (er-ith-rof'i-lus), *a.* [Gr. *ἐρυθρός*, red, + *φιλεῖν*, love, + *-ous.*] Readily staining in a red dye, such as erythrosin: said of cells: opposed to ★*cyanophilous.*

erythrophleine (e-rith-rō-flē'in), *n.* [*Erythrophleum* + *-ine*[2].] A crystalline poisonous alkaloid, $C_{28}H_{43}O_5N$ (?), contained in the bark of *Erythrophleum Guineense:* a local anesthetic and heart-poison. It is used by the natives of the west coast of Africa as an arrow-poison.

erythrophobia (e-rith-rō-fō'bi-ä), *n.* [NL., < Gr. *ἐρυθρός*, red, + *-φοβία*, < *φοβεῖν*, fear.] A morbid aversion to the color red.

erythrophore (e-rith'rō-fōr), *n.* [Gr. *ἐρυθρός*, red, + *-φόρος*, bearing, < *φέρειν*, bear.] The red chromatophore of algæ.

erythropia (er-i-thrō'pi-ä), *n.* [NL., < Gr. *ἐρυθρός*, red, + *ὤψ* (*ὠπ-*), eye.] Red vision: a condition in which all objects appear to be tinged with red.

erythroplate (e-rith'rō-plāt), *n.* In *photog.*, a plate impregnated with erythrosin and used in the orthochromatic process.

erythropsia (er-i-throp'si-ä), *n.* [NL., < Gr. *ἐρυθρός*, red, + *ὄψις*, view.] Same as ★*erythropia.*

erythropsin (er-i-throp'sin), *n.* [Gr. *ἐρυθρός*, red, + *ὄψις*, view, + *-in*[2].] Same as *rhodopsin.*

erythroretin (e-rith-rō-rē'tin), *n.* [Gr. *ἐρυθρός*, red, + *ῥητίνη*, resin.] One of the resinous substances remaining after the crystalline substances have been removed from rhubarb extract. *Buck*, Med. Handbook, VI. 974.

erythrose (er'ith-rōs), *n.* [Gr. *ἐρυθρός*, red, + *-ose.*] A sugar, $HOCH_2CH(OH)CH(OH)CHO$, belonging to the group known as tetroses. It is closely related to erythrol.

erythrosiderite (e-rith-rō-sid'e-rīt), *n.* [Gr. *ἐρυθρός*, red, + *σιδηρίτης*, of iron (see *siderite*).] A hydrous chlorid of potassium and ferric iron, found as a red deliquescent coating on the lava of Vesuvius after the eruption of April, 1872.

erythrosin, erythrosine (e-rith'rō-sin), *n.* [Irreg. < Gr. *ἐρυθρός*, red, + *-in*[2].] A coal-tar color of the xanthene type, the sodium or potassium salt of tetra-iodofluorescein. It dyes wool and silk bluish red or pink in a slightly acid bath. Also called *erythrosin B, erythrosin D, eosin J, pyrosine B,* and *iodeosine B.*—**Erythrosin BB.** Same as ★*phloxin B.*—**Erythrosin G,** a coal-tar color of the xanthene type, the sodium or potassium salt of di-iodofluorescein. It dyes wool and silk yellow, red, or pink in a slightly acid bath. Also called *dianthine G, pyrosine J,* and *iodeosine G.*—**Erythrosin plates,** in *photog.*, sensitized plates stained with the red organic dyestuff erythrosin to increase their sensitiveness to the longer wave-lengths of the spectrum.

erythrotoxin (e-rith-rō-tok'sin), *n.* [Gr. *ἐρυθρός*, red, + E. *toxin.*] Same as ★*erythrolysin.*

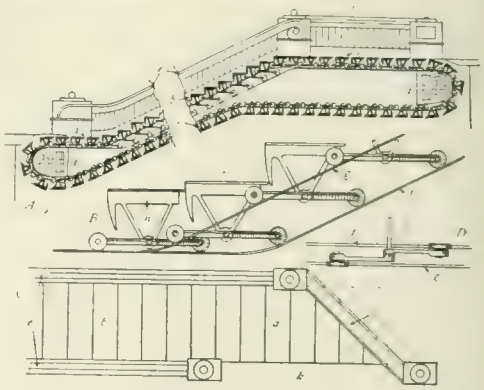
erythrozinkite (e-rith-rō-zing'kīt), *n.* [Gr. *ἐρυθρός*, red, + E. *zinc, zink,* + *-ite*[2].] Probably a manganesian variety of the zinc sulphid wurtzite: from Siberia.

erythrozym (e-rith'rō-zim), *n.* [Gr. *ἐρυθρός*, red, + *ζύμη*, ferment.] A peculiar ferment of the nature of an enzym occurring in madder-root. It possesses the power of decomposing rubian, yielding several products the most important of which is alizarin. The formula assigned to it by Schunck is $C_{26}H_{44}N_2O_{10} + CaO$.

erythruria (er-ith-rō'ri-ä), *n.* [NL., < Gr. *ἐρυθρός*, red, + *οὖρον*, urine.] The passing of red urine. Usually *hematuria* or *hemoglobinuria.*

Esbach's albuminimeter. See ★*albuminimeter.*

escalator (es'ka-lā-tor), *n.* [F. **escalateur*, < NL. **scalator*, < ML. *scalare*, climb a stair: see *scale*[3], *v.*] A moving stairway. It is essentially a conveyer, employing two chains which form an endless belt that travels on a double track, passing over two large sheaves, one below the floor at the foot of the stairway and one under the floor at the head of the stairway. The links of the chains support the treads and risers of a flight of steps, each pair supporting one tread and one riser. When the tracks are level, as at the landings of the stairway, the treads and risers travel on two pairs of wheels, each pair moving on one track, and the treads form a continuous platform, the risers hanging below out of sight. Where the tracks are inclined they separate, one pair of wheels following the upper track and the other the lower track; the treads separate and the risers fill the spaces between the steps, thus forming a continuous traveling stairway. In operation the belt travels over the lower sheave up the stairway and, turning downward over the second sheave, returns with the treads and risers hanging below until they are again reversed in turning upward over the lower sheave. The two landings are thus traveling horizontal walks, and the stairway is a series of steps continually moving upward. The passenger steps upon the lower platform and stands still, the steps lifting him until the upper platform is reached, where he walks off upon the floor. At the side of the casing an endless hand-rail travels upward at the same speed as the stairway. Very large escalators have two stairways, one carrying passengers up and the other down. A single escalator, having steps three feet wide, has a capacity of six thousand passengers an hour. See ★*conveyer.*



Escalator.

A: *a*, escalator operating as a horizontal apron-conveyer; *c*, escalator operating as an elevator; *c*, conveyer returning inverted and idle; *d, d*, sheaves over which conveyer turns, one being a live sheave giving motion to the conveyer; *e*, traveling hand-rail. *B*: *f*, lower track; *g*, upper track; *h*, frame supporting one tread and riser; *i*, four-wheel truck supporting frame, first pair on level position, others with forward pair of wheels on lower (inside) track, rear pair on upper (outside) track. (See *D*, showing wheels and tracks.) *C*: *a*, treads traveling horizontally; *b*, treads ascending; *j*, preventer or guard, guiding passenger off to *k*, second-story floor; *e*, traveling hand-rail. *D*: *f*, lower rail; *g*, upper rail; *i*, track and wheels.

escalin (es-ka-laṅ'), *n.* [F., < D. *schelling*, E. *shilling:* see *shilling.*] A name of various coins: (*a*) A coin of Haiti, equal to 6 sols, and later to 15 sols. (*b*) A silver coin of Liège, equal to ⅛ florin or 10 stivers. (*c*) A silver and billon coin, equal to 3 stivers, struck for a long period in the Low Countries. (*d*) A copper coin struck, by Russia, for Prussia, 1759–61. (*e*) A coin of Basel the one forty-fifth of a rix-dollar.

Escalloniaceæ (es-ka-lō-ni-ā'sē-ē), *n. pl.* [NL. (Dumortier, 1829), < *Escallonia* + *-aceæ.*] A family of dicotyledonous choripetalous plants of the order *Rosales*, typified by the genus *Escallonia* (which see), included by many authors in the *Saxifragaceæ.* It includes 25 genera of trees and shrubs, mostly natives of the southern hemisphere. *Itea* (which see) is the only genus which occurs in the United States.

escambron (es-kăm-brōn'), *n.* [Sp. *escambron*, buckthorn (*Rhamnus* sp.).] A name of several plants armed with spines, especially the cat's-claw, *Pithecolobium Unguis-cati*, called *escambron colorado; Pisonia aculeata*, the cockspur; and *Volkameria aculeata*, called *escambron blanco.* [Porto Rico.]

escapado (es-kä-pä'dō), *n.* [Sp.] An escaped prisoner. *Mayne Reid.*

escape, *n.* 11. The outlet or gate in an irrigation or other hydraulic work by which water may be permitted to escape from the canal, either automatically or under direct control.

escapee (es-kā-pē'), *n.* An escaped person: used particularly with reference to convicts who have escaped from penal settlements, or have escaped and been recaptured.

escape-head (es-kāp'hed), *n.* A device by which an escape is operated. See ★*escape*, 11.

escapement, *n.* 3. In *pianoforte-making*, that part of the action which provides that the hammer, after striking the string, shall instantly recoil, whether or not the key is released. The escapement is called *double* when the mechanism admits of giving a second blow without fully releasing the key. **Vertical escapement,** a form of clock escapement in which the escape wheel is on a vertical axis, the rest of the train having horizontal axes: also called the crown-and-verge escapement, since the change from horizontal to vertical axes is usually made by a crown-wheel having teeth on the edge of the cylinder.

escapement-anchor (es-kāp'ment-ang″kor), *n.* In clockwork, the two arms of the detent or pawl which engage with the teeth of the escape-wheel, so as to allow only one of its teeth to pass at each oscillation of the pendulum or balance-wheel. The shape given to these two arms so as to envelop a part of the arc of the escape-wheel resembles that of the flukes of an anchor.

escape-pipe (es-kāp'pīp), *n.* An exhaust-pipe; the pipe through which steam escapes from an engine or a blow-off valve.

escape-scuttle (es-kāp'skut″l), *n.* In *shipbuilding*, a scuttle which can be opened from a confined space such as a coal-bunker, to permit escape therefrom when the ordinary entrance is blocked.

escape-warrant (es-kāp'wor″ant), *n.* See ★*warrant.*

escape-way (es-kāp'wā), *n.* The channel through which the water is discharged from an escape. See ★*escape*, 11.

escape-wheel (es-kāp'hwēl), *n.* The last wheel in the mechanism in clock- and watch-work by which the power of spring or weight is released or allowed to escape, by the catch and release of detent elements controlled by the timed swing of the pendulum or the oscillation of the balance-wheel.

escarole (es-ka-rōl'), *n.* Blanched endive: a salad vegetable. Also *escarolla.*

eschar, *n.* 2. Same as *slough*², 2.

escharine (es'ka-rin), *a.* Having the characters of, or resembling, the *Escharina.*

eschrolalia (es-krō-lā'li-ä), *n.* [NL. ★*æschrolalia*, ⟨ Gr. αἰσχρός, shameful, + λαλεῖν, speak.] Obscenity in speech.

escigenin, æscigenin (ē-sij'e-nin), *n.* [*æsci*(*n-ic*) + L. *-gen-*, produce, + *-in*.] A compound, $C_{12}H_{20}O_2$, formed from escinic acid, a glucoside found in horse-chestnuts. It is a crystalline powder insoluble in water.

escinic, æscinic (ē-sin'ik), *a.* [L. *æsc*(*ulus*), horse-chestnut, + *-inc* + *-ic*.] Obtained from horse-chestnuts.—**Escinic acid,** an acid, $C_{24}H_{40}O_{12}$, which is also a glucoside: found in horse-chestnuts.

esciorcein, æsciorcein (ē-si-ôr'sē-in), *n.* [*æscu*(*letin*) + *orcein*.] A substance, $C_9H_7NO_5$, resembling orcein, formed by the action of ammonia on para-esculetin.

escoba (es-kō'bä), *n.* [Sp. *escoba*, broom, ⟨ L. *scopa*, broom.] A name, in many countries settled by the Spanish, of tough-stemmed undershrubs used for making temporary brooms for sweeping the floor or ground about a house, especially of species of *Sida* and plants resembling them. In Porto Rico, *Sida acuta* is called *escoba blanca*, or white broomweed; *S. rhombifolia*, *escoba colorada*, or red broomweed; and *S. ulmifolia*, *escoba dulce*, or sweet broomweed. These weeds are also called *escobilla*. See *Sida*, 1.

escobilla (es-kō-bil'yä), *n.* [Sp., dim. of *escoba*, broom.] Same as ★*escoba.*

escobita (es-kō-bē'tä), *n.* [Sp. *escobita*, a little whisk-broom, dim. of *escoba*, a broom.] In California, one of two species of the plant-genus *Orthocarpus*, the name referring to the brush-like inflorescence. *O. densiflorus* is the common escobita, *O. purpurascens* the purple escobita: the latter is also called *pink paint-brush*. See ★*owl's-clover.*

escolar (es-kō-lär'), *n.* [Sp., a scholar, a student: appar. first with reference to the black escolar, called also *domine* (see ★*domine*): in allusion to the 'black robe.'] A Cuban name for a scombroid fish of elongate body and swift movements, especially the species *Ruvettus pretiosus.*

escorzonera (es-kôr-thō-nā'rä), *n.* [Sp. *escorzonera*, scorzonera.] A name in tropical America of several plants having fleshy roots, especially *Cranolaria annua*, belonging to the family *Martyniaceæ*, and in Mexico to a composite plant, *Pinaropappus roseus*, the roots of which are used medicinally and are offered for sale in the markets. In Spain the name is applied to *Scorzonera Hispanica* and *Reichardia picroides*. See *black salsify*, under *salsify*, and *Scorzonera.*

escribano (es-krī-bä'nō), *n.* [Sp., a writer, a notary: see *scriven*.] A Cuban name for the fish called in English halfbeak (*Hemiramphus roberti*).

escudo, *n.* 2. A gold coin of Chile, of the value of five pesos, equal to $1.825.

esculetic (es-kū-let'ik), *a.* [*esculet*(*in*) + *-ic*.] Derived from esculetin. **Esculetic acid,** an acid, $C_6H_2(OH)_3CH:CHCO_2H$, formed by boiling esculetin with a solution of barium hydroxid.

esculic (es-kū'lik), *a.* [*escul-in* + *-ic*.] Derived from esculin. **Esculic acid.** Same as ★*saponetin.*

esculotannic (es″kū-lō-tan'ik), *a.* [L. *æsculus*, horse-chestnut, + E. *tannic*.] Tannic, and derived from the horse-chestnut. **Esculotannic acid,** a variety of tannic acid or tannin having the composition $C_{26}H_{24}O_{18}$, and found in the bark, leaves, and other parts of the horse-chestnut.

Escurial lace. See ★*lace.*

escutcheon, *n.* **Sacral escutcheon,** a name given by Mivart to the slightly raised shield-shaped figure (apex backward) on the posterior portion of the dorsal face of the sacrum of parrots. The term is of limited application, since in most birds this portion of the sacrum is smooth.

esdragol (es'dra-gōl), *n.* A colorless liquid, $CH_3CH:CHC_6H_4OCH_3$, found in Chinese anise-oil. It boils at 215–216° C.

eseridine (ē-ser'i-din), *n.* [*eser*(*ine*) + *-id* + *-ine*².] A colorless crystalline alkaloid, $C_{15}H_{23}N_3O_3$, accompanying physostigmine (eserine) in Calabar bean, *Physostigma venenosum.* It has a pronounced action on the heart.

eserine-pilocarpine (es″e-rin-pī-lō-kär'pin), *n.* A combination of the alkaloids eserine (physostigmine) and pilocarpine: used in the treatment of horses for colic, and as a purge in herbivorous animals.

eshreen (esh-rēn'), *n.* [Ar. *'ishrīn*, twenty, ⟨ *'ashar*, ten.] A coin of modern Egypt, the 20-faddah piece.

Esmarch bandage. See ★*bandage.*

esmeralda (es-me-räl'dä), *n.* [Amer. Sp. use of Sp. *esmeralda*, emerald: see *emerald.*] A name applied by Spanish Americans to different fishes of the genus *Gobius.*

esmeraldaite (es-me-ral'da-īt), *n.* [*Esmeralda* (see def.) + *-ite*².] A hydrated ferric iron, $Fe_2O_3.4H_2O$, occurring in black masses with vitreous luster: from Esmeralda county, Nevada.

esocolitis (es″ō-kō-lī'tis), *n.* [NL., ⟨ Gr. ἔσω, within, + κόλον, colon, + *-itis*.] Same as *colitis.*

esofagus, *n.* A simplified spelling of *esophagus.*

Esophageal pouch. See ★*pouch.*

esophagectomy (ē-sof-a-gek'tō-mi), *n.* [Gr. οἰσοφάγος, esophagus, + ἐκτομή, excision.] Excision of the esophagus, in part or as a whole.

esophagism (ē-sof'a-jism), *n.* [*esophagus* + *-ism*.] Spasmodic narrowing of the esophagus.

esophagoblast (ē-sō-fag'ō-blast), *n.* [Gr. οἰσοφάγος, gullet, + βλαστός, germ.] A name given to each of three large ectodermal cells which, in certain annelids like *Thalassema*, give rise to the esophagus or gullet of the larva.

esophago-enterostomy (ē-sof″a-gō-en-te-ros'tō-mi), *n.* A surgical operation for establishing direct communication between the esophagus and the small intestine, shutting out the stomach which may or may not be wholly or partially excised.

esophagoplasty (ē-sō-fag'ō-plas-ti), *n.* [Gr. οἰσοφάγος, gullet, + πλαστός, ⟨ πλάσσειν, form.] Plastic surgery of the esophagus.

esophagoscope (ē-sō-fag'ō-skōp), *n.* [Gr. οἰσοφάγος, esophagus, + σκοπεῖν, view.] An instrument which enables an observer to obtain a view of the mucous membrane of the esophagus.

esophagoscopic, *a.* Relating to esophagoscopy.

esophagoscopy (ē-sof-a-gos'kō-pi), *n.* [Gr. οἰσοφάγος, esophagus, + *-σκοπία*, ⟨ σκοπεῖν, view.] Examination of the interior of the esophagus by means of the esophagoscope.

esophagospasm (ē-sof'a-gō-spazm), *n.* Same as *œsophagospasmus.*

esophagostomy (ē-sof-a-gos'tō-mi), *n.* [Gr. οἰσοφάγος, gullet, + στόμα, mouth.] The establishment of a permanent opening from the neck into the esophagus.

esophagotome (e-so-fag'o-tōm), *n.* A knife used for the performance of esophagotomy.

esophagus, *n.*—**Posterior esophagus,** in certain gasteropods, as *Triton*, a narrow tube connecting the crop with the stomach.

esophoria (es-o-fō'ri-ä), *n.* [NL., ⟨ Gr. ἔσω, within, + *-φορία*, ⟨ *-φορος*, ⟨ φέρειν, bear.] A condition, depending upon imbalance of the eye-muscles, in which there is a tendency to convergence of the visual axes less pronounced than in actual squint or esotropia.

esophoric (es-ō-for'ik), *a.* [⟨ *esophor-ia* + *-ic*.] Relating to or characterized by esophoria.

Esopus grit. See ★*grit*².

esotropia (es-o-trō'pi-ä), *n.* [NL., ⟨ Gr. ἔσω, within, + *-τροπος*, ⟨ τρέπειν, turn.] An exaggerated esophoria amounting to convergent squint.

espada (es-pä'dä), *n.* [Sp., a sword.] 1. A professional bull-fighter whose duty is to kill the bull with the sword. See also *matador.*—2. The swordfish.

espagnolette (es-pän-yo-let'), *n.* [F., ⟨ *espagnol*, Spanish, + *-ette*.] A fastening for a double casement-window or light double door. A round rod reaching from top to bottom of the casement is fixed to the outer valve or fold. When both folds are shut the rod is turned upon itself, and hooks at the top and bottom take hold of fixed pins in the head and sill of the frame.

esparcet, *n.*—**False** or **wild esparcet,** *Astragalus bisulcatus*, a common leguminous plant of the western

False or Wild Esparcet (*Astragalus bisulcatus*).
One fourth natural size.

United States, congeneric with the principal loco-weeds, yet not only innocuous, but of growing importance as a forage-plant and capable of being made to grow densely like clover and alfalfa, so as to be cut as hay.

espec. An abbreviation of *especially.*

Esperanto (es-pe-rän'tō), *n.* [Name transferred to the language from the pseudonym of its inventor, Dr. *Esperanto*, whose real name is Samenhof or Zamenhof, of Warsaw. The pseudonym *Esperanto* is a word of the artificial language so called, meaning 'hoper' or 'hoping person,' being a noun (in *-o*) from the participial adjective (in *-a*) *esperanta*, hoping, present participle (in *-anta*) of the verb (in *-i*) *esperi*, to hope, ⟨ F. *espérer*, ⟨ L. *sperare*, hope: see *esperance.*] The name of a recent 'universal language' constructed, like Volapük, by arbitrary reduction and manipulation of words and forms taken from existing European languages, and the adoption of a simple and regular inflection. The general aspect of the language as printed is that of a shrunken composite of Latin, Spanish, and French, with a Polynesian spelling.

esphera (es-fā'rä), *n.* [Pg., a sphere: see *sphere.*] A gold coin of Portugal, struck under Emanuel I. (1495–1521) for the colonies.

espinillo (es-pē-nēl'yō), *n.* [Sp. *espinillo*, a dim. of *espino*, thorn-tree, ⟨ *espina*, thorn: see *spine.*] In Spanish countries, a small thorn-bearing tree. In Uruguay and Argentina especially *Acacia Caavenia*, a shrub or small tree with numerous heads of yellow flowers closely resembling the widely spread *A. Farnesiana*, but having long conspicuous white stipulary spines. Like many other trees of the mimosa family, its legumes are rich in tannin. They are known commercially as *quirinca-pods* (which see). It shares with *A. Farnesiana* the name *aroma*, from the aromatic fragrance of its flowers.

espino (es-pē′nō), *n.* [Sp. *espino*, a thorn-bush or thorn-tree, < *espina*, a thorn: see *spine*.] 1. Same as ★*espinillo*.—2. A name applied in Spain to several species of hawthorn (*Crataegus Oxyacantha*, etc.) and of buckthorn (*Rhamnus*), and in tropical America to thorny mimosas (*Acacia macracantha* and others) and species of *Fagara*, including the prickly-ash (*Fagara Clava-Herculis*).

esponja (es-pōn′hä), *n.* [Sp., sponge: see *sponge*.] In Porto Rico and Spanish America, the sponge-gourd. See *Luffa*.

espundia (es-pōn′di-ä), *n.* [Sp., an ulcer in horses.] The Bolivian name for a skin-disease, said to be a lupus, peculiar to the lower eastern valleys and lowlands of western South America. It is not contagious, but may become mortal through neglect and excesses. Many attribute it to the sting of an insect.

Espy's dew-point method, rule, theory of storms. See *altitude of a* ★*cloud*, ★*rule*[1], ★*storm*.

essence, *n.*, 7. Within the last few years knowledge of the true chemical nature of the essences or essential oils, which occur in great variety in the vegetable kingdom, and to which the odors, tastes, and medicinal effects of many plants are due, has been greatly increased. Instead of single substances, these essences are found to consist of hydrocarbons, alcohols, aldehydes, and esters, often of special character and variously mixed with one another; and among the notable achievements of modern organic chemistry have been not only the successful study of these materials of natural origin, but also, in a number of cases, their artificial reproduction.—**Essence de Boulogne,** a trade-name for a solid bleaching material made by passing chlorin gas over crystallized carbonate of soda. Also known as *chlorozone*.—**Essence of ananas.** Same as *ethyl butyrate* (which see, under *butyrate*).—**Essence of beef,** the juice of beef, prepared in various ways for invalids.—**Essence of cajeput.** (*a*) An alcoholic solution of oil of cajeput. (*b*) The French designation for oil of cajeput.—**Essence of girofle.** Same as *oil of cloves*.—**Essence of miaouli,** the essential oil of the leaves of *Melaleuca viridiflora*, from New Caledonia. It is a mixture consisting of terebenthene, eucalyptol, and unidentified terpene hydrocarbons, and is said to be analogous to oil of cajeput.—**Essence of orange,** a colorless dextrorotatory oil obtained from the peel of sweet oranges. It contains terpenes and other substances and has its rotatory power largely affected by changes of temperature.—**Vinegar essence,** vinegar of extra strength, containing as much as 12 or 14 per cent. of acetic acid: sometimes made by removing a part of the water of ordinary vinegar by evaporation. Also known as *double vinegar*.

Essenize (e-sē′nīz), *v. t.*; pret. and pp. *Essenized*, ppr. *Essenizing*. [*Essene* + *-ize*.] To teach, or incline toward, the doctrines and practices of the Essenes.

essential, *a.* 5. In *geol.*, noting those minerals of any species of rock which establish its character and which must be mentioned in its definition: contrasted with ★*accessory*. *Geikie*, Text-book of Geol., p. 89.—**Essential graphs.** See ★*graph*.—**Essential singular point.** See ★*point*[1].

Essex (es′eks), *n.* A breed of black hogs, of small size, named from Essex, England, where the breed had its origin: valued chiefly for rapid growth and early maturity.—**Essex lion.** See ★*lion*.

essexite (es′ek-sīt), *n.* [*Essex* county, Massachusetts, + *-ite*[2].] In *petrog.*, a phanerocrystalline rock intermediate in composition between diorite, gabbro, and nephelite-syenite. It contains labradorite and some orthoclase, occasionally nephelite, together with pyroxene, barkevikitic hornblende, olivin, and biotite. *Sears*, 1891.

essexitic (es-ek-sit′ik), *a.* [*essexite* + *-ic*.] In *petrog.*, having the chemical or mineral characters of essexite.

essoinee (e-soi-nē′), *n.* [A.F. *essoignié*, pp. of *essoignier*: see *essoin*, *v.*] In *law*, a person whose excuse for absence from court is allowed.

essoin-roll (e-soin′rōl), *n.* In *law*, a list of the essoins and the date to which the court is adjourned.

est., estab. Abbreviations of *established*.

establish, *v. t.* 8. In *systematic biol.*, to give technical publication to; fix by publication in the nomenclatorial sense. See ★*publication*, 5.—**To establish a suit.** See ★*suit*.

estadia (es-tä-dē′ä), *n.* [Sp. *estadía*, < *estar*, be, < L. *stare*, stand.] In *Sp. law*, the period during which the charterer of a vessel, or the party who is bound to receive the cargo, must pay demurrage by reason of his delay in carrying out his contract.

estanco (es-tän′kō), *n.* [Sp., a monopoly, a monopoly store.] A place or store where articles included in the government monopolies are sold. [Philippine Is.]

estate, *n.*—**Customary estate,** in *Eng. law*, an estate which originated and existed according to the custom of the manor in which it was held.—**Dominant estate.** Same as *dominant tenement* (which see, under *dominant*).—**Estate by dower,** the estate in real property which a widow takes by dower. See *dower*[2], 2.—**Fast estate,** a term sometimes used for *real estate*.—**Real estate.** See *real*[1].—**To enlarge an estate.** See ★*enlarge*.

ester, *n.* **Acetoacetic ester.** See ★*acetoacetic*.—**Ester number,** in *chem.*, the quantity of a neutral fat or oil required to saponify a fixed quantity of an alkali. If there is no free fatty acid present, the ester number is the same as the *saponification* ★*equivalent*. In the case of a natural fat which contains both neutral fat and free fatty acid, the ester number is the difference between the total saponification equivalent and the saponification equivalent of the free fatty acid. Also known as *ether value*.—**Lauric ester,** an ester of lauric acid. Sometimes the term is used, specifically, for the ethyl ester, $CH_3(CH_2)_{10}COOC_2H_5$, prepared by the action of ethyl alcohol and hydrochloric acid on lauric acid. It melts at 10°C. and boils at 269°C.—**Ortho ester.** See ★*orthoester*.—**Orthocarbonic ester,** a colorless liquid, $C(OC_2H_5)_4$, prepared by the action of sodium ethylate on trinitrochloromethane (chloropicrin). It has an aromatic odor and boils at 158–159° C.

esterification (es-tèr-i-fi-kā′shon), *n.* In *organic chem.*, the preparation of esters (ethereal salts) from alcohols and acids or certain of their derivatives. If the free alcohol and acid are employed, water is also formed, the reaction being represented thus: $ROH + HOCOR' \rightarrow ROCOR' + H_2O$.

The acid esters of mono-, di-, tri-, and tetra-methyl succinic acids have been prepared and their *esterification* constants and electric conductivities determined.
Rep. Brit. Ass'n. Advancement of Sci., 1902, p. 586.

esterify (es-ter′i-fī), *v. t.*; pret. and pp. *esterified*, ppr. *esterifying*. [*ester* + *-ify*.] To form an ester from. *Jour. Phys. Chem.*, May, 1905, p. 427.

Esth. An abbreviation of *Esther*. See Century Cyclopedia of Names.

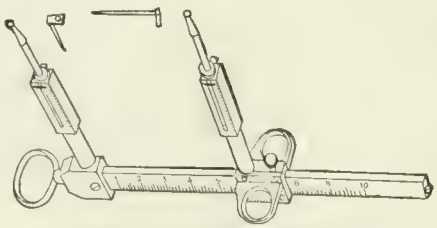
esthesioblast, æsthesioblast (es-thē′si-ō-blast), *n.* [Gr. αἴσθησις, sensation, + βλαστός, germ.] In *neurol.*, a sensory cell in the integument of an animal, which serves to collect sensations from the external world.

esthesiogenic, *a.* 2. Producing or conditioning sensation or perception: as, an *esthesiogenic* agent, *esthesiogenic* factors.

esthesiogenous (es-thē-si-oj′e-nus), *a.* Esthesiogenic.

esthesiomania, æsthesiomania (es-thē″si-ō-mā′ni-ä), *n.* [NL., < Gr. αἴσθησις, feeling, + μανία, madness: see *mania*.] A moral sense so perverted, or simple eccentricity so extreme, as to constitute the borderland or even a mild degree of insanity.

esthesiometer, *n.* The instrument is made in a great variety of forms, all based, however, upon the simple com-

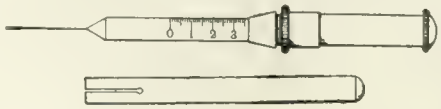


Griesbach's Dynamometrical Æsthesiometer.

pass pattern. In certain recent instruments the points are attached to rods which press against spiral springs inclosed in the metal tubes which form the legs of the compasses, and a scale is marked upon the front surfaces of the tubes. It is thus possible to read off the amount of pressure exerted in any given application of the points to the cutaneous surface; and the esthesiometer may be used not only to measure the limen of dual impression, equivalences of tactile extent, etc., but also to test the pressure-sensitivity, the depth of sleep, etc. See the extract.

One of the latest departures of the experimental psychologist consists in prodding people with a pointed instrument when they are asleep to find out how much excitation is required before they begin to move, and how much it takes to wake them up. . . . The instrument employed is called a Griesbach *esthesiometer*, . . . and may be used with either a sharp or blunt point. It measures the stimulus necessary to induce subconscious reaction, and that applied at the waking-point.
Nature, June 5, 1902, p. 137.

Hair-esthesiometer, in *psychophys.*, an instrument for the determination of the stimulus limen of



Hair-esthesiometer.

punctual pressure. The hair-esthesiometer, devised by M. von Frey, consists of a hair (human or horse-hair) set in a metal handle, and adjustable in length by a set-screw. When the length of hair has been found to whose stimulation a pressure-spot first responds, the pressure constant of the hair is determined by means of a balance, and the limen is expressed in terms of gram-millimeters. *E. B. Titchener*, Exper. Psychol., II. i. 16.

esthesiometric, æsthesiometric (es-thē-si-ō-met′rik), *a.* In *psychol.*, pertaining to the esthesiometer or to its use: as, the *esthesiometric* compasses (the esthesiometer), the *esthesiometric* method.

esthetic, *a.* 5. In *pathol.*, having sensation: as, "a patch of *æsthetic* skin." *Philos. Trans. Roy. Soc.* (London), ser. B, 1898, p. 64.

estheticist, æstheticist (es-thet′i-sist), *n.* Same as *esthetician*.

estheticokinetic, æstheticokinetic (es-thet″i-kō-ki-net′ik), *a.* In *physiol.*, relating to sensation and motion; both sensory and motor.

esthetology, æsthetology (es-thē-tol′ō-ji), *n.* [Gr. αἰσθητός (see *esthetic*) + *-λογία*, < λέγειν, speak.] The science of esthetics, particularly in reference to the forms of art in different types of culture. *J. W. Powell*, in 18th An. Rep. Bur. Amer. Ethnol., p. xxvi.

Esthonycidæ (es-thō-nis′i-dē), *n. pl.* [NL. prop. *Esthonychidæ*, < *Esthonyx*, the type genus, + *-idæ*.] A family of *Tillodontia*, comprising animals of moderate size, whose remains occur in the Wasatch, Lower Eocene, of the western United States. Like the other tillodonts, these animals resembled the rodents, ungulates, and carnivores, having incisor teeth like rodents, and molars suggesting those of ungulates. *Cope*, 1883.

estimator, *n.* 3. A weighing-scale adapted to the estimating of the quantity of material in a gross (or other number) of articles by weighing a single article. A drop-forging or other article is placed on the scale-pan, and the sliding weight on the beam is moved until it balances the article, when it indicates, by the marks on the beam, the total weight of the desired number of the same kind of article.

estivation, *n.*—**Indeterminate estivation,** estivation in which the parts do not come into contact in the bud; open estivation.

estivator, æstivator (es′ti-vā-tor), *n.* An animal which becomes and remains dormant during the summer.

estivo-autumnal, æstivo-autumnal (es″ti-vō-â-tum′nal), *a.* Relating to both summer and autumn; specifically, designating a grave form of malarial fever occurring in the late summer and the autumn. *Encyc. Brit.*, XXX. 484.

Estlander's operation. See ★*operation*.

Estonioceras (es-tō-ni-os′e-ras), *n.* [NL., irreg. < *Estonia*, *Esthonia*, a province of Russia, + Gr. κέρας, horn.] The typical genus of the *Estonioceratidæ*.

Estonioceratidæ (es-tō-ni-os-e-rat′i-dē), *n. pl.* [NL. *Estonioceras* (*-at-*) + *-idæ*.] A family of Lower Silurian tetrabranchiate cephalopods having coiled or curved shells with biangular section in youth and triangular section in later stages.

estragol (es′tra-gōl), *n.* [*estrag*(*on*) + *-ol*.] A colorless liquid, $CH_3OC_6H_4CH_2CH:CH_2$, contained in oil of estragon from *Artemisia Dracunculus* L. It boils at 215–216° C. and is used for flavoring pickles. Also called *paramethoxyallylbenzene*.

estramazone (es-tram′a-zōn), *n.* Same as *stramazone*.

Being eager to punish him, I made an *estramazone*.
Scott, The Monastery, xxvii.

Estrangelo (es-trän′ge-lō), *n.* [Also *estranghelo*; Syriac *estrangelo*, 'gospel character.'] An ancient form of the Syriac alphabet.

The brush of the Chinese determined the direction downwards and from right to left, as for painting. The ancient Syriac *estranghelo* was also written in the same way, but from left to right. *Deniker*, Races of Man, p. 142.

estrapado (es-tra-pä′dō), *n.* Same as *strappado*.

estremadurite (es-tre-ma-dō′rīt), *n.* [*Estremadura* (see def.) + *-ite*[2].] Phosphorite or massive apatite, mineral calcium phosphate, as found in Estremadura, Spain.

estriate (ē-strī′āt), *a.* [NL. *estriatus*, < L. *e-*, out, + *striatus*, striped.] Not striate; not possessing striæ: said of the surface of many insect sclerites. *Annals and Mag. Nat. Hist.*, June, 1903, p. 606.

estropajo (es-trō-pä′hō), *n.* [Sp., a dish-cloth, < *estropajear*, clean with a dry brush or rubber.] In Porto Rico and Spanish America, the sponge-gourd. See *Luffa*.

Estuarine series. See ★*series*.

esurience, esuriency (ē-sū′ri-ens, -en-si), *n.* The state or quality of being esurient. *Coleridge*.

No pretext beyond the fact of *esurience* and the sense of ability is suggested for the villany of Subtle, Dol, and Face. *Swinburne*, Ben Jonson, i. 40.

e. t. An abbreviation (*a*) of *electric telegraph*; (*b*) [*cap.*] of *English translation*.

eta, *n.* 2. In *elect.*, a symbol for *coefficient of magnetic hysteresis*. See *magnetic ★hysteresis*.

et al. An abbreviation (*b*) of the Latin *et alibi*, 'and elsewhere.'

eta-palm, *n.* Same as *ita-palm*.

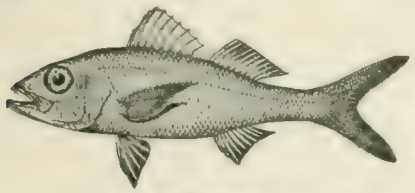
Etcheminian (ech-e-min'i-ạn), *n.* [*Etchemin*, a river of Canada, also name of a tribe of Indians.] In *geol.*, a subdivision of the rocks of the Canadian Atlantic, regarded by some American geologists as Precambrian and by others as correlated with the Lower Cambrian. It has a thickness greater than 1,200 feet, and is underlain by the Huronian and overlain by the Cambrian beds with *Protolenus*. Its characteristic fauna consists of *Hyolithidæ*, *Entomostraca*, small phyllocarids, and horny brachiopods, and it is claimed that the *Olenellus* of Lower Cambrian fauna has been found in it.

etching, *n.* 4. In *photog.*, a plate, as of copper, coated with a substance sensitive to light, which after exposure and development is subjected to the dissolving action of a chemical, such as nitric acid, which attacks the bare metal. **Typographic etching.** See the extract.

The invention of Palmer's process called at first Glyphography, about the year 1844; this was afterwards perfected, and used to a considerable extent under the name of Dawson's *Typographic Etching*.
Encyc. Brit., XXIX. 411.

Zinc etching, in *photog.*, any one of several reproduction processes in which a zinc plate is etched after having been subjected to photographic treatment.

Etelis (et'e-lis), *n.* [NL., < Gr. ἐτελής, an un-



Etelis oculatus.
(From Bulletin 47, U. S. Nat. Museum.)

identified fish.] A genus of brilliantly colored fishes of the family *Lutianidæ*, allied to the snappers, but more elongate and swifter in movement. The color is bright crimson. *E. oculatus* occurs in the West Indies and is known there as *cachucho*; *E. evurus* is found in Hawaii.

ethane (eth'ān), *n.* [*eth(er)* + *-ane*.] A colorless, odorless gas, CH_3CH_3, found in illuminating gas and in crude petroleum, and prepared by the action of hydrogen on ethylene, acetylene, or ethyl iodide, and by the action of water on zinc ethyl. It boils at −93° C. Also called *methylmethane*, *dimethyl*, and *ethyl hydrid*.

ethelism (eth'el-izm), *n.* [Gr. ἐθέλ-ειν, be willing, + *-ism*.] A form of voluntarism. [Rare.]

ethenic (ē-then'ik), *a.* [*ethene* + *-ic*.] Of or pertaining to ethene or ethylene.

ethenoid (eth'e-noid), *a.* [*ethene* + *-oid*.] In *organic chem.*, having two atoms of carbon in the molecule doubly linked, as in ethylene, $\begin{matrix}H\\H\end{matrix}>C{:}C<\begin{matrix}H\\H\end{matrix}$.

ethenyl (eth'e-nil), *n.* [*ethene* + *-yl*.] A trivalent radical, $CH_3C\equiv$.

ether[1], *n.*—**Aran's ether.** Same as *★ethylidene chlorid*. **Compound spirit of ether.** See *★spirit*. **Ether extract.** Same as *ethereal extract* (which see, under *ethereal*). **Ether value.** Same as *★ester number*. **Fruit-ether,** the trade-name of certain esters possessing fruity aromas, some of which occur in fruits. They are chiefly compounds of ethyl, butyl, and amyl alcohols with acetic, propionic, butyric, and valeric acids, for example, isoamyl-propionate, $C_5H_{11}OCOC_2H_5$, has an odor of pineapple, and isoamylacetate, $C_5H_{11}OCOCH_3$, that of pears. They are largely used for the manufacture of fruit-syrups, essences, etc.—**Hydrobromic ether,** ethyl bromide, C_2H_5Br. **Hydrocyanic ether,** a colorless ethereal fluid, C_2H_5CN, miscible with water, alcohol, and ether: because of its extremely poisonous nature not used in medicine.—**Quiescent ether,** ether the position of which in space is unaffected by the movement of bodies through it. In the theory of light, the luminiferous ether is supposed either to be carried along by bodies moving through space or to remain stationary and undisturbed by the motion of bodies. The ether of the latter hypothesis is called the *quiescent ether*.—**Salicylic naphthyl ether.** Same as *★betol*. **Spirit of vitriolic ether,** the pharmaceutical name for ordinary ether. Also called *sulphuric ether*. The correct chemical term is *diethyl ether*. **Sulphur ether.** Same as *thioether*.—**Wigger's ether.** Same as *★ethylidene chlorid*.

Ethereal sulphates. Same as *conjugate ★sulphates*.

etherene (ē'thēr-ēn), *n.* [*ether* + *-ene*.] A little-used name for ethylene. Other synonyms are *ætherin*, *æthylene*, *etherin*, *ethene*, and *elayle*.

etherion (ē-thē'ri-on), *n.* [NL., < Gr. αἰθέριον, neut. of αἰθέριος, of the ether: see *ethereal*.] A supposed new element announced by C. F. Brush in 1898, and described by him as a gas of density only one-thousandth that of hydrogen and having a much greater conducting power for heat, as present in the earth's atmosphere, and as perhaps extending throughout interstellar space. Sir W. Crookes has shown that etherion is probably nothing more than highly rarefied vapor of water.

etheromania (ē-thēr-ō-mā'ni-ạ), *n.* [Gr. αἰθήρ, ether (air), + μανία, madness.] Addiction to the use of ether as an intoxicant.

etherous (ē'the-rus), *a.* [*ether* + *-ous*.] Of the nature of ether.

ethical, *a.* 2. In a special sense, relating to medical ethics or in accord with the code of rules which guides physicians in their relations to one another and to their patients.—**Ethical culture, dualism.** See *★culture*, *★dualism*.

ethician (e-thish'iạn), *n.* [*ethic* + *-ian*.] A student of ethics; a writer on ethics.

At a moment when *ethicians* . . . are coming to perceive the social bases of morality, one would not lay a straw in their way. Yet it is well to recognize that, after all is said, ethics is more than a mere wing of sociology.
E. A. Ross, in Amer. Jour. Sociol., May, 1903, p. 773.

ethicism (eth'i-sizm), *n.* [*ethic* + *-ism*.] Ethical quality or spirit; tendency to moralize.

The literature of those great men was . . . the Socinian graft of a Calvinist stock. Their faith . . . was Unitarian, but their art was Puritan. So far as it was imperfect— . . . it had its imperfections—it was marred by the intense *ethicism* that pervaded the New England mind for two hundred years, and that still characterizes it. . . . They . . . pointed the moral in all they did.
W. D. Howells, in Harper's Mag., Nov., 1895, p. 867.

ethico-political (eth″i-kō-pō-lit'i-kạl), *a.* Relating to both ethics and politics: as, the *ethico-political* system of Confucius.

ethidene (eth'i-dēn), *n.* [*eth(er)* + *-id* + *-ene*.] Same as *★ethylidene*.

Ethiopian. I. *a.* 2. In *anthrop.*, relating to the negroid race which inhabits Africa (Blumenbach).—**3.** In *zoögeog.*, pertaining or belonging to the region constituted by the whole of Africa and Arabia south of the tropic of Cancer, together with Madagascar, Mauritius, Bourbon, Rodriguez, and the Seychelles.

II. *n.* **3.** In *anthrop.*, one of the Ethiopian race.

ethmoid. I. *a.*—**Ethmoid crest, fossa.** See *★crest*, *★fossa*[1].

II. *n.*—**Lateral ethmoid** in *ichth.*, the prefrontal, a bone lateral to the ethmoid. *Starks*, Synonymy of the Fish Skeleton, p. 509.

ethmoiditis (eth-moi-dī'tis), *n.* [*ethmoid* + *-itis*.] Inflammation of the mucous membrane which lines the cavities in the ethmoid bone.

ethmolysian (eth-mō-lis'i-ạn), *a.* [Gr. ἠθμός, a strainer, + λύσις, opening, + *-an*.] In echinoids, having the pores of the water-vascular system and the plate in which they open extending backward until they separate the two posterolateral genital plates. Compare *★ethmophract*.

ethmophract (eth'mō-frakt), *a.* [Gr. ἠθμός, a strainer, + φρακτός, < φράσσειν, inclose.] In echinoids, having the pores of the water-vascular aperture situated only in the right anterior corner of the apical system. Compare *★ethmolysian*.

ethmophysal (eth-mō-fī'sạl), *n.* [Gr. ἠθμός, a strainer, + φῦσα, a bellows, + *-al*[1].] In *ichth.*, the nasal, a small lateral bone above the olfactory organ. *Starks*, Synonymy of the Fish Skeleton, p. 520.

ethmosphenoidal (eth″mō-sfē-noi'dạl), *a.* [*ethmo(id)* + *sphenoid* + *-al*[1].] Relating to the ethmoid and sphenoid bones: as, the *ethmo-sphenoidal* suture.

Ethnic psychology, psychopathology, race, society. See *★psychology*, etc.

ethnicist (eth'ni-sist), *n.* [*ethnic* + *-ist*.] Same as *ethnologist*.

ethnicize (eth'ni-sīz), *v. i.*; pret and pp. *ethnicized*, ppr. *ethnicizing*. [*ethnic* + *-ize*.] To tend toward or favor ethnic or pagan ideas or practices.

There were two errors which the new-born Christianity had to guard against, . . . a relapse into Judaism on the one side, and against a mixture with paganism and speculations borrowed from it, and a mythologizing tendency, on the other. Accordingly the earliest heresies, of which we have any trustworthy accounts, appear either as judaizing or as *ethnicizing* (hellenizing) tendencies.
K. R. Hagenbach (trans.), Hist. of Doctrines (revised by [Henry B. Smith, 1861), I. 54.

[In an earlier edition (1847), quoted in *N. E. D.*, the word is *ethnizing*.]

ethnicopsychological (eth″ni-kō-si-kō-loj'i-kạl), *a.* Relating to ethnic psychology.

ethnize (eth'nīz), *v. i.*; pret. and pp. *ethnized*, ppr. *ethnizing*. [Gr. ἔθνος, nation, + *-ize*.] Same as *★ethnicize*.

ethnobotanical (eth″nō-bō-tan'i-kạl), *a.* Relating to the uses of plants among aborigines or primitive races.

In May, 1899, Dr. Walter Hough was detailed to carry on *ethno-botanical* researches in Mexico, in connection with certain explorations by the Division of Botany.
Smithsonian Rep., 1899, p. 65.

ethnobotany (eth-nō-bot'ạ-ni), *n.* [Gr. ἔθνος, people, + E. *botany*.] Botany in its relations to the economic uses of plants by different races, especially by aborigines or primitive races.

Collections of interest in ethnology, *ethnobotany*, and archæology.
Smithsonian Rep., 1899, p. 18.

ethnocentric (eth-nō-sen'trik), *a.* [Gr. ἔθνος, people, + κέντρον, center, + *-ic*.] Characterized by the idea that the tribal unit to which the self belongs is the center of the universe. *W. J. McGee*, in 19th An. Rep. Bur. Amer. Ethnol., p. 831.

ethnoconchology (eth″nō-kong-kol'ō-ji), *n.* [Gr. ἔθνος, people, + E. *conchology*.] The study of the use of shells by various peoples.

ethnodicy (eth-nod'i-si), *n.* [Gr. ἔθνος, people, + δίκη, justice.] The science of comparative jurisprudence, including the study of the forms of law found in primitive society.

ethnoflora (eth-nō-flō'rạ), *n.* [NL., < Gr. ἔθνος, people, + NL. *flora*.] The plants, taken collectively, used by the aborigines of any locality. See *★ethnobotany*.

The months of July to November, inclusive, were spent . . . in researches among the Zuñi Indians, the special objects being a comparative study of the peoples of the Southwest and a collection of the "*ethnoflora*" of Zuñi.
Smithsonian Rep., 1903, p. 36.

ethnog. An abbreviation (*a*) of *ethnographical*; (*b*) of *ethnography*.

ethnogamic (eth-nō-gam'ik), *a.* [*ethnogam-y* + *-ic*.] Pertaining to or characterized by ethnogamy.

ethnogamy (eth-nog'ạ-mi), *n.* [Gr. ἔθνος, people, + γάμος, marriage.] A form of marriage confined to the consanguineal group, with absence of captive or purchase ceremonies: a form of endogamy without any vestige of intertribal marriages. *W. J. McGee*, in 17th An. Rep. Bur. Amer. Ethnol., I. 284.

Ethnogenic association, sociology. See *★association*, *★sociology*.

ethnogeographer (eth″nō-jē-og'rạ-fèr), *n.* One who studies the geographical distribution of races, or who is versed in that subject.

ethnogeographic (eth″nō-jē-ō-graf'ik), *a.* Of or pertaining to ethnogeography.

The features which distinguish one *ethnogeographic* province from another are chiefly . . . meteorological, and they permit . . . a much closer division of human groups than the general continental areas.
Brinton, Basis of Social Relations, p. 198.

ethnogeographical (eth″nō-jē-ō-graf'i-kạl), *a.* Same as *★ethnogeographic*.

ethnogeographically (eth″nō-jē-ō-graf'i-kạl-i), *adv.* As regards ethnogeography; in accordance with the methods and results of ethnogeography. *Encyc. Brit.*, XXX. 487.

ethnogeography (eth″nō-jē-og'rạ-fi), *n.* [Gr. ἔθνος, people, + γεωγραφία, geography.] The science or description of the distribution of races and peoples over the surface of the earth. *Brinton*, Basis of Social Relations.

Ethnographic parallels, the occurrence of similar customs, arts, and beliefs among peoples in nearly the same stage of culture in widely separated regions.

ethnol. An abbreviation (*a*) of *ethnological*; (*b*) of *ethnology*.

ethnologize (eth-nol'ō-jīz), *v. i.*; pret. and pp. *ethnologized*, ppr. *ethnologizing*. [*ethnolog-y* + *-ize*.] To discuss from an ethnological point of view.

ethnomaniac (eth-nō-mā'ni-ak), *n.* [Gr. ἔθνος, people, + μανιακός, < μανία, mania.] A rabid advocate of racial autonomy; an extreme nationalist. *Stand. Dict.*

ethnometry (eth-nom'e-tri), *n.* [Gr. ἔθνος, a people, a nation, + *-μετρία*, < μέτρον, a measure.] The measurement of the value of a people in the scale of civilization.

Dumont considers that the increase of population is the best criterion of the customs, manners, and habits of a people, that it is, in short, a veritable *ethnometry*.
G. S. Hall, Adolescence, II. 725.

ethnopsychic (eth-nop-sī'kik), *a.* [Gr. ἔθνος, people, + ψυχή, mind.] Pertaining to the collective mind of a nation, race, people, or analogous human group.

The *ethnopsychic* relationship between these [initiatory] rites and those indicating the new birth of the soul, with a background to both of the resurrection of spring following the death of autumn, . . . is unmistakable.
G. S. Hall, Adolescence, II. 407.

ethnos (eth'nos), *n.* [Gr. *ἔθνος*, a company, band, tribe, people, nation, pl. *ἔθνη*, L. *gentes*, 'the nations,' the gentiles, the (other) peoples, the heathen.] The tribe or nation, in an anthropologic aspect.

Note that I say ethnic mind. For let it be said here, as well as repeated later, that there is no such thing as progress or culture in the isolated individual, but only in the group, in society, in the *ethnos*. Only by taking and giving, borrowing and lending, can life either improve or continue.
Brinton, Basis of Social Relations, introd., p. xv.

ethnotechnics (eth-nō-tek'niks), *n.* [Gr. *ἔθνος*, people, + E. *technics*.] The science of comparative technology, including the study of the technology of primitive man.

ethnotechnography (eth'nō-tek-nog'ra-fi), *n.* [Gr. *ἔθνος*, people, + *τέχνη*, art, + *-γραφία*, < *γράφειν*, write.] The study of the technology of different peoples.

ethnozoölogy (eth-nō-zō-ol'ō-ji), *n.* [Gr. *ἔθνος*, people, + E. *zoölogy*.] The study of the fauna of any region in its relation to the human population. *Jour. Anthrop. Inst.*, 1901, p. 45.

ethochroi, *n. pl.* See ★*æthochroi*.

ethological, *a.* **2.** Relating to the study of human character.—**3.** Relating to the study of customs.—**4.** Relating to œcology.

To these genera, each of which embraces species presenting a considerable range of *ethological* peculiarities while differing but little in morphological characters, we must also add Leptogenys.
Biol. Bulletin, May, 1904, p. 251.

ethology, *n.* **3.** Same as *œcology*. [Rare.]

ethophysical (eth-ō-fiz'i-kal), *a.* [*eth(ic)* + *physical*.] Having both ethological and physical characters.

ethoxycaffein (eth″ok-si-ka-fē'in), *n.* [*eth(er)* + *oxy(gen)* + *caffein*.] A colorless, beautifully crystalline compound, $C_8H_9N_4O_2.OC_2H_5$, slightly soluble in water and alcohol, made by boiling 3 parts monobrom caffein with 2 parts potassium hydrate in 10 parts alcohol. It is sedative in nervous headache.

ethoxyl (eth-ok'sil), *n.* [*eth(er)* + *ox(ygen)* + *-yl*.] In *organic chem.*, the univalent organic radical, $-OC_2H_5$.

Ethyl bromide. See ★*bromide*. —**Ethyl chlorid**, a colorless very volatile liquid, C_2H_5Cl, prepared by heating alcohol with hydrochloric acid. It burns with a green flame, boils at 12.5° C., and is used in medicine as an anesthetic and in chemistry as an alkylating agent.—**Ethyl green.** See *green*1.—**Ethyl hydrid.** Same as ★*ethane*. —**Ethyl phenacetin**, a yellow, oily compound, $C_6H_4(OC_2H_5)NC_2H_5CH_3CO$, almost insoluble in water but readily soluble in alcohol and ether, obtained by the action of ethyl iodide on phenacetin-sodium. It is hypnotic and analgesic.—**Ethyl violet.** See ★*violet*1.

ethyldiacetic (eth″il-dī-a-set'ik), *a.* [*ethyl* + *diacetic*.] Noting an acid.—**Ethyldiacetic acid.** Same as ★*diacetic acid*.

Ethylene chlorid, a colorless liquid, $CH_2Cl.CH_2Cl$, prepared by the action of chlorin on ethylene. It boils at 83.5° C. Also called 1,2-*didelorethane* and very rarely *elaylchlorid*. —**Ethylene hydriodide.** Same as *iodide of ethyl*.—**Ethylene series**, the series of hydrocarbons, of the general formula C_nH_{2n}, homologous with ethylene.

ethylenimin (eth-il-en'i-min), *n.* [*ethylene* + *im(ide)* + *-in*2.] A basic substance found in semen; the so-called spermin, C_2H_5N.

ethylidene (e-thil'i-dēn), *n.* [*ethyl* + *-id* + *-ene*.] A bivalent organic radical, $CH_3CH <$. Sometimes called *ethidene*.—**Ethylidene chlorid**, a colorless ethereal liquid, $C_2H_4Cl_2$, made by the chlorination of ethyl chlorid: employed as an anesthetic.

ethylidene-diamine (e-thil″i-dēn-dī-am'in), *n.* A non-poisonous ptomaïne, $C_2H_8N_2$.

ethylsulphuric (eth″il-sul-fū'rik), *a.* Noting the following acid.—**Ethylsulphuric acid**, a colorless syrup, $C_2H_5OSO_2OH$, formed by the action of sulphuric acid on alcohol. It readily yields salts and is important as an intermediate compound in the production of ether and ethylene from sulphuric acid and alcohol.

etiolation, *n.*—**False etiolation**, a condition characterized by the absence of chlorophyl, often observed in wheat and other grasses, due to too low temperature.

etiophyl (ē'ti-ō-fil), *n.* [Gr. *αἰτία*, cause, + *φύλλον*, leaf.] The yellow principle obtained from etiolated parts of plants, as buds of the skunk-cabbage, essentially different from chlorophyl. See the extract under ★*etioplast*.

etioplast (ē'ti-ō-plast), *n.* [Gr. *αἰτία*, cause, + *πλαστός*, formed.] A plastid found combined with etiophyl.

For this principle I propose the name etiophyl, and for the associated plastid, which seems to be a distinct body, I propose a corresponding name, *etioplast*.
H. Kraemer, in Proc. Amer. Philos. Soc., April 8, 1904, [p. 264.

Eton coat, Eton jacket. See ★*coat*2.

étrenne (ā-tren'), *n.* [F. *étrenne*, OF. *estrenne*, < L. *strena*, a New-Year's present, prop. an omen; a Sabine word.] A present; properly, a New-Year's present *Dickens*.

Etropus (ēt'rō-pus), *n.* [NL., < Gr. *ἦτρον*, abdomen, + *πούς* (*ποδ-*), foot.] A genus of small

Etropus crossotus.
From Bulletin 47, U. S. Nat. Museum.)

fragile-bodied flounders having the mouth very small, found on both coasts of tropical America. *E. crossotus* is the common species abundant on sandy shores.

Etruria ware. See ★*ware*2.

ettringite (et'ring-īt), *n.* [G. *Ettring-en* + *-ite*2.] A hydrous sulphate of aluminium and calcium, occurring in colorless acicular crystals: found in cavities in lava at Ettringen and elsewhere.

-etum. [L. *-ētum*, also *-tum*, neut. of *-ē-tu-s*, *-tu-s*, orig. adj. and participial suffix: see *-ed*2.] A suffix added in Latin to names of trees and other plants, to designate a plantation, grove, or garden of the plant specified: as, *pinetum*, *quercetum*, *arboretum*, etc., a forest of pines, oaks, trees, etc.; *rosetum*, a bed of roses; *vinetum*, a vineyard, etc. Hence, in modern scientific nomenclature and English use, the suffix is added to the genus or family name of a plant to form a collective expression for the living individuals of one or more species. Thus, it is used to denote: (*a*) An exhibitional collection in which many species are represented, as the *pinetum*, *quercetum*, etc., of a botanical garden; also attachable to a more general term, as in *arboretum*. (*b*) A treatise on a particular group of plants, as Gordon's *Pinetum*. (*c*) In *phytogeog.*, a natural association in which one species or more than one of the same genus predominates, as *ericetum*, *coryletum*, etc. See ★*characetum*.

E. U. An abbreviation of *Evangelical Union*.

euæsthesia, euesthesia (ū-es-thē'si-ä), *n.* [NL. *euæsthesia*, < Gr. *εὖ*, well (*εὐ-*, good, true), + *αἴσθησις*, perception.] A normal state of the senses.

euangiotic (ū-an-ji-ot'ik), *a.* [Gr. *εὖ*, well, + *ἀγγεῖον*, vessel, + *-otic*.] Having the retinal disk provided with blood-vessels: opposed to ★*anangiotic*.

Euascales (ū-as-kā'lēz), *n. pl.* [NL., < Gr. *εὖ*, well (*εὐ-*, good, true), + *ἀσκός*, a sac, ascus, + *-ales*.] A group including all the fungi and lichens which produce true asci.

Euasceæ (ū-as'ē-ē), *n. pl.* [NL., < Gr. *εὖ*, well (*εὐ-*, good, true), + *ἀσκός*, a sac, ascus, + *-eæ*.] Same as ★*Euascales*.

Euasteriæ (ū-as-tē'ri-ē), *n. pl.* [NL., < Gr. *εὖ*, well, + *ἀστήρ*, a star.] A subclass of the *Asteroidea* or starfishes, characterized by having the pairs of ambulacral ossicles placed opposite each other and inclined upward like the rafters of a roof. The position of the madreporite is generally on the dorsal surface.

Eubacteria (ū-bak-tē'ri-ä), *n. pl.* [NL., < Gr. *εὖ*, well, + *βακτήριον*, rod (see *bacterium*).] An order of *Schizomycetes*, including, according to Migula, four families, the *Coccaceæ*, *Bacteriaceæ*, *Spirillaceæ*, and *Chlamydobacteriaceæ*.

Eubasidieæ (ū-ba-sid-i-ē'ē), *n. pl.* Same as ★*Eubasidii*.

Eubasidii (ū-ba-sid'i-ī), *n. pl.* [NL., < Gr. *εὖ*, well, + NL. *basidium*.] A division of the *Basidiomycetes*, including all the orders having true basidia. Compare ★*Hemibasidii*.

Eubœic (ū-bē'ik), *a.* Same as *Eubœan*.

eucaine (ū'kā-in), *n.* [Gr. *εὖ*, well, + (*co*)*caine*.] A colorless crystalline compound, $CH_3N < \begin{matrix} C(CH_3)_2CH_2 \\ C(CH_3)_2CH_2 \end{matrix} > C < \begin{matrix} COOC_6H_5 \\ COOCH_3 \end{matrix}$, prepared from acetonamine. It is used by oculists as an anesthetic in place of cocaine. Also called *methyltetramethyl-n-methyl-p-benzoylpiperidine-γ-carboxylate*.

eucalypsinthe (ū-ka-lip'sinth), *n.* [*Eucalyp*(*tus*) + (*ab*)*sinthe*.] A liquor distilled from the leaves of *Eucalyptus Globulus*: analogous to absinthe.

eucalyptene (ū-ka-lip'tēn), *n.* [*Eucalyptus* + *-ene*.] A colorless dextrorotatory terpene, $C_{10}H_{16}$, found in the essential oil of *Eucalyptus Globulus* and of *E. amygdalina*. It is a dextro-terebinthine.

eucalyptic (ū-ka-lip'tik), *a.* [*Eucalyptus* + *-ic*.] Belonging or relating to the plant genus *Eucalyptus*.

eucalyptol, *n.* This substance is apparently identical with cineol, $C_{10}H_{18}O$; it occurs in many species of *Eucalyptus* besides *E. Globulus*.

Eucalyptus oil. See ★*oil*.

Eucharidæ (ū-kar'i-dē), *n. pl.* [NL., < *Eucharis* + *-idæ*.] A family of lobate ctenophorans, having large lobes with complex lobular canals, body covered with elongate touch-papillæ, and a main tentacular filament present as well as accessory filaments. The typical genus is *Eucharis*.

eucharistial (ū-kā-ris'ti-al), *n.* [ML. *eucharistialis*, prop. neut. of *eucharistialis*, adj., < LL. *eucharistia*, eucharist.] A vessel in which the eucharist is reserved.

eucharistize (ū-kā-ris'tīz), *v. t.*; pret. and pp. *eucharistized*, ppr. *eucharistizing*. [*eucharist* + *-ize*.] To bless; consecrate.

Placing the bread and wine upon the Lord's Table . . . as a devout offering to God of His creatures of bread and wine that He may accept them at our hands . . . to be by Him *eucharistized* to the higher sphere and purpose of the new creation.
Bk. Com. Prayer (1661), quoted in *J. H. Blunt*, Annot. [Bk. Com. Prayer, p. 174.

Euchlæna (ū-klē'nä), *n.* [NL. (Schrader, 1832), in allusion to the situation of the seeds; < Gr. *εὖ*, well, + *χλαῖνα*, cloak, covering.] A genus of grasses, consisting of a single species, *E. Mexicana*, the teosinte (which see).

In Guatemala the *euchlaena*, nearly akin to maize, was called the maize of the gods.
F. Ratzel (trans.), Hist. of Mankind, II. 176.

euchlorhydria (ū-klōr-hī'dri-ä), *n.* [NL., < Gr. *εὖ*, well, + E. *chlor*(*in*) + *hydr*(*ogen*).] The presence of a normal amount of hydrochloric acid in the gastric juice.

euchre, *n.*—**Call-ace euchre**, a variety of euchre for from four to six players, each playing for himself. The pack varies according to the number of players: all cards below the 9-spot are omitted for four; the 8's are put in for five; and the 7's for six. Sometimes the joker is added. A trump is turned up by the dealer, and each player in turn can order up or pass. If it is turned down, each player in turn can name a new suit. The maker of the trump, whether he has ordered it up or taken it up, then has the privilege of calling upon the holder of the best card of any suit which is not trumps to be his partner, but the partner thus called upon must not disclose himself. When the hand is played the partner will be revealed. If the partners win 3 or 4 tricks, each scores a point. If they win all 5 tricks they score 2 if four play and 3 if five or six play. If the maker of the trump plays alone, either through not having called any suit or by discovering that he holds the best card in play of the called suit, he scores 1 for winning 3 or 4 tricks. If he wins all the tricks he scores as many points as there are players, including himself. All euchres count 2 points to the adversaries of the maker of the trump and his partner.—**Domino euchre**, a game resembling euchre, played with dominoes instead of cards.—**Drive euchre.** Same as *progressive euchre*. See *progressive* ★*games*.—**Railroad euchre**, a variety of euchre in which if any player says he will play alone, one of his adversaries can play alone against him, and either or both of the lone players can ask for his partner's best card, giving one from his own hand in exchange for it. If a lone hand euchres a lone hand it counts 4.—**Set-back euchre**, a variety of euchre in which the partners are set back 2 points if they are euchred instead of allowing their adversaries to score 2. The revoke penalty is settled in the same way.—**Seven-handed euchre**, a variety of euchre in which seven persons play with a full pack of 52 cards. Seven cards are dealt to each player, 2—3—2 at a time, and the remaining four are left on the table to form the widow. No trump is turned. Each player in turn, beginning on the dealer's left, bids a certain number of points, usually 5 or more, to make the trump. There are no second bids. The highest bidder takes the widow and selects from it what cards he pleases, discarding as many in their place. He then chooses his partners, giving them a marker to distinguish them. If he has bid 5 only, he can take two partners. A bid of 6 or 7 entitles him to three partners, but a bid of 10 must be played without partners. A bid of 20 must be played without seeing or exchanging with the widow and also without partners. The bidder always leads for the first trick. If he loses, failing to make what he bid, each of his adversaries scores that amount, or sets him back, as agreed.

euchroic (ū-krō'ik), *a.* [Gr. *εὖ*, well, + *χροά*, color.] Noting an acid, a colorless compound, $(HOCO)_2C_6(\begin{matrix}CO\\CO\end{matrix}>NH)_2.2H_2O$, prepared, together with paramide, by heating ammonium mellitate. It crystallizes in quadratic prisms which melt and decompose above 250° C.

euchylia (ū-kil'i-ä), *n.* [NL., < Gr. *εὖ*, well, + *χυλός*, juice (see *chyle*).] A healthy state of the chyle.

Eucinostomus (ū-si-nos'tō-mus), *n.* [NL., < Gr. *εὐκίνητος*, easily moved, + *στόμα*, mouth.] A genus of small silvery fishes of the tropics, of the family of *Gerridæ*, distinguished by

the very large size of the interhemal bone at the base of the second anal spine. *E. gula* is the commonest species.

Euciroa (ū-si-rō'ä), *n.* [NL., said to be (irreg.) < Gr. εὖ, well, + κεῖρα, a cord, a bandage.] The typical genus of the *Eucirodæ*.

Euciroïdæ (ū-si-rō'i-dē), *n. pl.* [NL., < *Euciroa* + *-idæ*.] A family of anomalodesmaceous pelecypod *Mollusca*. They possess subequivalve shells with a strong tubercle in the right valve before the resilium, and the dorsal margins are modified so as to overlap and under lie each other. Species are rare and occur only in the Tertiary and recent periods.

Euclea, *n.* 2. In *bot.*, a genus of plants of the family *Diospyraceæ*. They are trees or shrubs with evergreen, coriaceous leaves, alternate, opposite, or rarely in whorls of three, and small flowers in usually axillary cymes. There are about 25 species, natives of tropical and southern Africa, and Arabia, of which *E. racemosa* is the type. Several species are used in wood-working, especially *E. Pseudebenus*, the *Orange River ebony*. The fruit of this species is eaten by the aborigines, under the name *embolo*, and that of *E. undulata* under the name *amarre*.

Euclidean number, motion, transformation. See ★*number*, etc.

Euclid's postulate. See ★*postulate*.

eucnemia (ūk-nē'mi-ä), *n.* [NL., < Gr. εὖ, well, + κνήμη, tibia.] In *anthrop.*, the normal condition of the shin-bone; the absence of platycnemia. *Amer. Anthropologist*, Jan.–March, 1901, p. 32.

eucone (ū'kōn), *a.* [Gr. εὖ, well, + κῶνος, cone.] Possessing a well-developed crystalline lens or cone: said of the eyes of certain insects, as the *Hymenoptera* and *Lepidoptera*, many *Coleoptera*, *Neuroptera*, etc.: opposed to ★*acone* and ★*pseudocone*.

eucrasite (ū'kra-sīt), *n.* [Gr. εὐκρασία, proper mixture (< εὐκρατος, well mixed), + *-ite*².] A complex thorium silicate allied to thorite.

Eucratea (ū-kra-tē'ä), *n.* [NL., said to be < Gr. εὖ, well, + κρατεῖν, mighty (< κράτος, might), (otherwise perhaps < Gr. εὐκρατος, temperate, of similar elements)] The typical and only genus of the family *Eucrateidæ*. *Lamouroux*, 1812.

Eucrateidæ (ū-kra-te'i-dē), *n. pl.* [NL., < *Eucratea* + *-idæ*.] A family of chilostomatous bryozoans. They are characterized by branching, erect, and free or recumbent zooaria with pyriform, uniserial or biserial zooecia having a subterminal, usually oblique aperture. The family has lived from Cretaceous time to the present.

Eucrustacea (ū-krus-tā'shia), *n. pl.* [NL., < Gr. εὖ, well, + L. *Crustacea*.] A division or subclass of the crustaceans which do not have the body divided into median and lateral lobes, and have two pairs of antennæ and the maxillæ or mandibles not pediform.

Eucryphia (ū-krif'i-ä), *n.* [NL. (Cavanilles, 1797), < Gr. εὖ, well, + κρυφός, hidden. The opening flower is capped by the calyptriform calyx and the fruiting carpels are backed with a cork-like covering.] A genus of dicotyledonous plants, the type and only genus of the family *Eucryphiaceæ*. The species are ornamental evergreen trees or shrubs with opposite simple or pinnate leaves and large white flowers, solitary in the upper axils. Only 4 species are known, 2 in Chile and 2 in New South Wales and Tasmania. The wood of the Chilean species is very durable and is used for various purposes. See *muermo*.

Eucryphiaceæ (ū-krif-i-ā'sē-ē), *n. pl.* [NL. (Gay, 1846), < *Eucryphia* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Hypericales*, containing the single genus *Eucryphia*. See *muermo* and ★*Eucryphia*.

eucryphiaceous (ū-krif-i-ā'shius), *a.* Belonging to the plant-family *Eucryphiaceæ*.

Eucyclogobius (ū-sik-lo-go'bi-us), *n.* [NL., < Gr. εὖ, well, + κύκλος, circle, + NL. *gobius*.] A genus of small gobies having small smooth scales: found in the streams of California. *E. newberryi* is the common species.

eudemonic, eudæmonic (ū-de-mon'ik), *a.* [Gr. εὐδαιμονικός, of happiness, < εὐδαιμονία, happiness: see ★*eudemony*.] Relating or contributing to happiness; considered as relating or contributing to happiness. *N. E. D.*

eudemonize, eudæmonize (ū-dē'mon-īz), *v. t.*; pret. and pp. *eude-, eudæmonized*, ppr. *eude-, eudæmonizing*. [Gr. εὐδαιμονίζειν, call or account happy, < εὐδαίμων, happy: see *eudemon*.] To consider or esteem happy. Also *eudæmonize*.

But happiness, as Aristotle understands it, is something measured more by the estimate of the judicious spectator than by the sentiment of the man in whose bosom it resides. No person is entitled to be called happy, whom the intelligent and reflective observer does not macarise or (*eudæmonize*), or whose condition he would not desire more or less to make his own.

Grote, Fragments on Ethical Subjects, V.

eudemony (ū-dem'ō-ni), *n.* [Gr. εὐδαιμονία, < εὐδαίμων, happy: see *eudemon*.] Happiness as understood by Aristotle, namely, as consisting, not in pleasure except as a sign of perfected activity, but in the activity which befits a human being, that is, in virtuous activity, of which the highest and best kind is that which is self-controlled through reason, the virtuous activity of the soul in a completed life.

eudermol (ū-der'mol), *n.* [Gr. εὖ, well, + δέρμα, skin, + *-ol*.] A trade-name for nicotine salicylate. It is a colorless crystalline compound which is soluble in water, alcohol and oils, and contains 34 per cent. of nicotine. Being non-irritating and odorless it can be used in ointment of from 0.1 to 0.2 per cent. strength in the treatment of parasitic skin-diseases.

eudiagnostic (ū-di-ag-nos'tik), *a.* [Gr. εὖ, well, + διαγνωστικός, able to distinguish: see *diagnostic*.] In *petrog.*, easily distinguished, that is, without the aid of a magnifying-glass: applied by Zirkel (1893) to the texture of rocks in which the mineral constituents can be recognized by the unaided eye.

eudidymite (ū-did'i-mīt), *n.* [Gr. εὖ, well, + δίδυμος, twin, + *-ite*².] A silicate of beryllium and sodium, $HNaBeSi_2O_6$, occurring in white tabular monoclinic crystals.

eudiometer, *n.* **Bunsen's eudiometer,** a glass tube of uniform bore, closed at one end and having at that end two platinum electrodes, with spark-gap, sealed into the glass. The tube is graduated in millimeters.

eudiometrically (ū-di-ō-met'ri-kal-i), *adv.* By means of the eudiometer; in a eudiometric method.

eudoxiform (ū-dok'si-fôrm), *a.* [*Eudoxia* + L. *forma*, form.] Resembling or having the structure of the *Eudoxidæ*: composed of a sterile and a fertile medusoid without special nectocalyx. Compare ★*ersæiform*.

eudoxin (ū-dok'sin), *n.* [Appar. < Gr. εὔδοξος, of good repute, + *-in*².] A bismuth salt of nosophen (tetra-iodo-phenolphthalein) containing 52.9 per cent. of iodine. It is an internal astringent and stomachic.

eudoxome (ū-dok'sōm), *n.* [Gr. εὔδοξος, of good repute, + *-ome*.] In hydromedusans, one of the two main forms of cormidium, consisting typically of a hydrophyllium, a gastrozoöid with a tentacle, and one or more medusoid gonophores. Compare ★*ersæome*.

Eudrilidæ (ū-dril'i-dē), *n. pl.* [NL., < *Eudrilus* + *-idæ*.] A family of terricolous *Oligochæta*. It consists of worms of variable size having paired nephridia, setæ in couples and sigmoid in shape, spermiducal glands present, and the male and female generative openings, in some genera, unpaired. It contains about 20 genera, all of which except *Eudrilus*, which is almost cosmopolitan in range, are restricted to tropical Africa.

Eudrilus (ū-drī'lus), *n.* [NL. (Perrier, 1871).] The typical genus of the family *Eudrilidæ*.

euectics (ū-ek'tiks), *n.* Same as *evectics*.

eufemism, eufemistic. Simplified spellings of *euphemism, euphemistic*.

eufonic, eufony. Simplified spellings of *euphonic, euphony*.

eugallol (ū-gal'ol), *n.* [*eu-* + (*pyro*)*gallol*.] A thick, syrupy, brownish-yellow compound, $C_6H_3(OH)_2O.C_2H_3O$, readily soluble in water; acetyl pyrogallol. It is employed in a 33-per-cent. acetone solution, and when painted on the skin leaves a firm, elastic film: used in the treatment of skin-diseases.

Eugaster (ū-gas'tèr), *n.* [NL., < Gr. εὖ, well, + γαστήρ, belly.] A genus of ophiurans or brittle-stars from the North American Devonian, possessing a small disk and long arms with a double series of alternating ambulacral plates, and on either side a series of spinous adambulacral plates.

Eugeniacrinus (ū-jē-ni-ak'ri-nus), *n.* [NL., < *Eugenia*, a woman's name, + Gr. κρίνον, lily (see *crinoid*).] A Mesozoic genus of crinoids possessing a small saucer-shaped calyx and concealed and closely united basal plates which are overlapped by radial plates extended upward so as to form conspicuous projections.

eugenic[1], *a.* **II.** *n.* The science which deals with the means of cultivating and improving the innate good qualities of man. Also *eugenics*.

eugenism (ū'je-nizm), *n.* [Gr. εὐγενής, well-born, + *-ism*.] The aggregate of the most favorable conditions for healthy and happy existence. *Galton*.

eugenoform (ū-jen'ō-fôrm), *n.* [*eugen*(*ol*) + *form*(*aldehyde*).] A colorless, crystalline compound soluble in water obtained by the action of formaldehyde upon eugenol-sodium, said to liberate formaldehyde in the intestinal fluids: an intestinal antiseptic.

eugenol (ū'je-nol), *n.* [Gr. εὐ, well-born, + *-ol*.] A colorless oily compound, $HO'C_6H_3(OC'H_3)CH_2CH{:}CH_2$, contained in oil of cloves, oil of bay, oil of cinnamon-leaves, oil of allspice, oil of cassia, oil of pimento, and in certain other essential oils. It boils at 247.5° C. and has a spicy odor. Also called 1-*propenyl-phenol*(3,4)-*methyl ether*.

eugenol-acetamide (ū-je-nol-a-set'a-mid), *n.* A crystalline compound of eugenol and acetamide. It is used as a local antiseptic and dusting-powder.

eugenol-iodide (ū-je-nol-ī'o-did), *n.* A yellowish odorless antiseptic compound, $C_{10}H_{11}IO_2$, obtained by the action of iodine on eugenol-sodium. Also called *iodo-eugenol*.

eugenol-sodium (ū-je-nol-so'di-um), *n.* A crystalline compound, $C_{10}H_{11}NaO_2$, obtained by dissolving eugenol in solution of sodium hydroxid. Also known as *sodium eugenolate* or *sodium eugenate*.

eugeogenous (ū-jē-oj'e-nus), *a.* [Gr. εὖ, well, + γῆ, earth, + *-γενής*, -producing. See *geogenous*.] In *geol.*, disintegrating readily; yielding plentiful detritus and producing good soil: said of rocks. *Thurmann*.

Both authors apply to Yorkshire Thurmann's recognition of *eugeogenous* and dysogeogenous rocks. The former class of rocks yield a plentiful detritus, and the overlying soils are cool and moist. The dysogeogenous rocks or limestones of this area yield a less abundant detritus, and are in Yorkshire much fissured and broken, so that the overlying soil is comparatively dry.

Geog. Jour. (R. G. S.), Aug., 1903, p. 151.

Eugerion (ū-je'ri-on), *n.* [NL., < Gr. εὐγηρία, a green old age?.] A genus of hemipterous insects with large, membranous, reticulated fore and hind wings, prolonged lancet-like mouth-parts, and filiform antennæ. It occurs in the Permian formation.

eugetic (ū-jet'ik), *a.* [*eug*(*enol*) + *-et-* + *-ic*.] Noting an acid, a colorless compound, $HO'C_6H(OCH_3)(CO_2H)CH_2CH{:}CH_2$, formed by the action of sodium and carbon dioxid on eugenol. It crystallizes in long, thin prisms and melts at 124° C. Also called 3-*allylphenol*-(5,6)-*methylic acid*.

Euglena phase, a stage in the development of some sporozoans in which they exhibit euglenoid movements made possible by the thin, flexible covering present at this time.

euglenoid (ū-glē'noid), *a.* [*Euglena* + *-oid*.] Resembling *Euglena*.

euglobulin (ū-glob'ū-lin), *n.* [*eu-* + *globulin*.] One of the supposed components of serum globulin which is insoluble in water. See also ★*pseudoglobulin*.

Euglypha (ū-glī'fa), *n.* The typical genus of the family *Euglyphidæ*. *Dujardin*, 1841.

Euglyphidæ (ū-glif'i-dē), *n. pl.* [*Euglypha* + *-idæ*.] A family of mostly fresh-water rhizopods which have a shell formed of regular plates of chitin or of silica, often bearing spines, and with the pseudopodia sharp-pointed and often branching but not anastomosing. It contains the genera *Euglypha*, *Trinema*, *Cyphoderia*, *Campascus*, and *Nadinella*.

eugranitic (ū-gra-nit'ik), *a.* [Gr. εὖ, well, + E. *granitic*.] In *petrog.*, distinctly granular or granitic in structure. *Lossen*.

eugraphic (ū-graf'ik), *a.* [Gr. εὐγράφος, well painted, < εὖ, well, + γράφειν, write, paint.] Pertaining to or characterized by graphic resemblance.

Eugraphic confusions are such as arise from the mistaking and transplacing of forms which appear alike.

H. H. Bawden, in Psychol. Rev. Mon. Sup., III., 1899.

euhyostylic (ū-hī-o-stil'ik), *a.* [*eu-* + *hyostyl-y* + *-ic*.] Relating to or having the character of euhyostyly.

euhyostyly (ū-hī-os'ti-li), *n.* [*eu-* + *hyostyly*.] That condition of the second visceral arch, found in most rays, in which the hyomandibular forms the sole support of the jaw, the ceratohyal serving merely to support the gills: correlative with ★*hyostyly*, and ★*methyostyly*.

Euichthydina (ū-ik-thi-di'na), *n. pl.* [NL., < Gr. εὖ, well, + *Ichthydium* + *-ina*².] A section or suborder of *Gastrotricha* which contains forms having two pedal appendages. It includes the genera *Ichthydium*, *Chætonotus*, *Chætura* and *Lepidoderma*. Compare ★*Apodina*.

euisopodous (ū-i-sop'ō-dus), *a.* Having the characters of or resembling the *Eusopoda*.

eukinesia (ū-ki-ne-si-ä), *n.* [NL., < Gr. εὐκινησία, easiness of motion, < εὐκίνητος, easily

moved, < εὖ, easily, + κινεῖν, move.] Normal power of movement.

eukrite, *n.* Same as *eucrite.*

euktolite (ūk'tọ-lit), *n.* [Gr. εἰκτός, desired, + λίθος, stone.] See ★*renanzite.*

Eulamellibranchiata (ū-lą-mel-i-brang-ki-a'tą), *n. pl.* [NL., < *eu-* + *Lamellibranchiata.*] An order of mollusks of the class *Pelecypoda.* They have the mantle-edges united at one or more points, the branchiæ with vascular interfilamentary junctions, the genital glands with independent external openings, and usually two adductor muscles. It includes a number of large and important families, among them being the *Unionidæ, Cyprinidæ,* and *Cyrenidæ.*

Euleptorhamphus (ū-lep-tọ-ram'fus), *n.* [NL., < Gr. εὖ, well, + λεπτός, fine, small, + ῥαμφος, beak.] A genus of halfbeaks, or *Hemiramphidæ,* found in the open seas of the tropics: distinguished by the ribbon-shaped body. *E. longirostris* is the common species.

Eulerian polyhedron. See ★*polyhedron.*

Euler's diagrams. See ★*diagram.*

Euler's line or **straight.** See ★*straight*[1].

Euloma (ū-lō'mą), *n.* [Gr. εὖ, well, + λῶμα, a fringe.] A genus of trilobites of the family *Proëtidæ:* characteristic of the lowest Silurian of Europe.

eumenid (ū'me-nid), *a.* and *n.* **I.** *a.* Of or belonging to the hymenopterous family *Eumenidæ.*

II. *n.* A member of the hymenopterous family *Eumenidæ.*

Eumicrotremus (ū-mik-rot'rē-mus), *n.* [NL., < Gr. εὖ, well, + μικρός, small, + τρῆμα, hole.] A genus of lump-fishes having the body nearly spherical and covered with prickles: found in the North Atlantic.

eumitosis (ū-mi-to'sis), *n.* [NL., < *eu-* + *mitosis.*] Typical mitosis or indirect cell-division, in which the chromosomes are divided longitudinally instead of transversely.

eumitotic (ū-mi-tot'ik), *a.* [*eumitosis* (*-ot-*) + *-ic.*] Of or pertaining to eumitosis.

Eumycetes (ū-mī-sē'tēz), *n. pl.* [NL., < Gr. εὖ, well, + μύκητες, plural of μύκης, fungus (see *Mycetes*).] A name used by recent systematists to include all the so-called true fungi, as the *Phycomycetes, Ascomycetes,* and *Basidiomycetes.* The *Myxomycetes* and *Schizophyta* are excluded.

eumycetic (ū-mī-set'ik), *a.* Of or pertaining to the *Eumycetes.*

Eunema (ū-nē'mą), *n.* [NL., < Gr. εὖ, well, + νῆμα, a thread.] A genus of Paleozoic rhipidoglossal gastropod mollusks having an elongate pyramidal spire with two or more keels and transverse striæ on the whorls.

eunicean (ū-nis'ē-an), *a.* [*Eunice* + *-an.*] Pertaining to or resembling the genus *Eunice.*

euniciform (ū-nis'i-fôrm), *a.* [*Eunice* + L. *forma,* form.] Formed like a eunicoid worm.

eunicoid (ū'ni-koid), *a.* [*Eunice* + *-oid.*] Resembling or pertaining to the *Eunicidæ.*

eunol (ū'nōl), *n.* [*eu*(*calyptol*) + *n*(*aphth*)*ol.*] A compound, existing in an *α*- and *β*-modification, made from eucalyptol and *α*- and *β*-naphthol: used as an antiseptic in surgery and dermatology.

eunuch-flute (ū'nuk-flōt), *n.* An old musical instrument consisting of a slightly flaring wooden tube having a mouth-hole in the side near the smaller end, into which the player hummed or sang. The smaller end was closed by a very thin membrane, which was thrown into vibration by the player's tone and imparted to it a peculiar bleating and tremulous character. The instrument was made in several sizes so as to provide for part-music. It is still sometimes made as a toy.

Euomphalidæ (ū-om-fal'i-dē), *n. pl.* [NL., < *Euomphalus,* the typical genus, + *-idæ.*] A family of rhipidoglossal gastropods having depressed conical or discoidal, spirally coiled, and umbilicated shells, and often calcareous opercula. As at present construed, the family extends from the Cambrian to the Tertiary formations.

euonymous (ū-on'i-mus), *a.* [Gr. εὐώνυμος, well-named, < εὖ, well, + ὄνομα, name.] Well or fittingly named.

euonymus-oil (ū-on'i-mus-oil), *n.* Oil extracted from the seeds of the spindle-tree, *Euonymus Europæus,* of central Europe.

Euorthoptera (ū-ôr-thop'tẹ-rą), *n. pl.* [NL., < Gr. εὖ, well, + ὀρθός, straight, + πτερόν, wing.] The *Dermaptera,* or earwigs, considered as a suborder of *Orthoptera.*

euosmite (ū-os'mīt), *n.* [Gr. εὔοσμος, sweet-smelling, < εὖ, well, + ὀσμή, ὀδμή, smell, odor (see *osmium*), + *-ite*[2].] A fossil resin, of a brownish-yellow color, found with lignite at Baiershof in the Fichtelgebirge, Germany.

eupepticity (ū-pep-tis'i-ti), *n.* Good digestion, or the state of feeling resulting from it. *Carlyle.*

euphemist (ū'fē-mist), *n.* [*euphem*(*y*) + *-ist.*] One given to the use of euphemisms.

euphonicon (ū-fon'i-kon), *n.* [NL.: see *euphonic.*] A variety of harmonichord.

euphonon (ū-fo'non), *n.* [NL., < Gr. εὔφωνος, well-sounding: see *euphony.*] A variety of harmonichord.

euphorbic (ū-fôr'bik), *a.* [*Euphorbia* + *-ic.*] Derived from *Euphorbia.*—**Euphorbic acid,** an amorphous acid contained in the gum-resin euphorbium from *Euphorbia resinifera.*

euphorbine (ū-fôr'bin), *n.* [*Euphorbia* + *-ine*[2].] A non-volatile poisonous compound, said to be present in the milky juice of *Euphorbia myrtifolia.*

euphorbone (ū-fôr'bōn), *n.* [*Euphorbia* + *-one.*] A colorless, neutral, dextrorotatory, crystalline compound, $C_{15}H_{24}O$, contained in the gum-resin euphorbium from *Euphorbia resinifera.* It melts at 116° C.

euphorin (ū'for-in), *n.* [Gr. εὔφορος, easy to bear or bearing well, < εὖ, well, + φέρειν, bear.] A trade-name of phenyl urethane, recommended for medical use as an antipyretic and analgesic.

euphorious (ū-fō'ri-us), *a.* [Erroneously for **euphorous,* < Gr. εὔφορος, bearing well, enduring easily or patiently, < εὖ, well, + φέρειν, bear.] Cheerful or patient in life.

> The conviction is borne in upon the soul . . . that man is a favored . . . being, . . . that real evil can not befall the good man, living or dead; and that he can afford to be glad and *euphorious* that he is alive.
>
> *G. S. Hall,* Adolescence, II. 547.

eupittone (ū-pit'ōn), *n.* [Gr. εὖ, well, + πίττα, pitch, + *-one.*] Same as *eupittonic acid.* See ★*eupittonic.*

eupittonic (ū-pi-ton'ik), *a.* [*eupittone* + *-ic.*] Noting an acid, an orange-yellow compound, $(CH_3O)_6C_{19}H_8O_3$, formed by the oxidation of wood-tar oil containing pyrogallol and methyl pyrogallol ethers. It crystallizes in long hair-like needles, melts at 200° C., and is dibasic. Also called *pittacal.*

eupnœic (ūp-nē'ik), *a.* [*eupnœa* + *-ic.*] Relating to or characterized by eupnœa; breathing normally.

Eupomotis (ū-pō-mō'tis), *n.* [NL., < Gr. εὖ-, well, + πῶμα, lid, + οἶς (ὠτ-), ear.] A genus of sunfishes (*Centrarchidæ*) distinguished by the blunt pharyngeal teeth. *E. gibbosus,* the commonest of the sunfishes, is abundant throughout the northeastern United States.

eupraxy (ū'prak-si), *n.* [Gr. εὐπραξία, well-doing, < εὖ, well, + πράσσειν, do: see *practic, practice, praxis.*] Well-doing; right conduct; morality in behavior.

Eupterotidæ (ūp-tẹ-rot'i-dē), *n. pl.* [NL., < *Eupterota* + *-idæ.*] A family of moths allied to the *Lasiocampidæ,* but differing from them in possessing a frenulum. The European processionary moth, *Cnethocampa processionea,* is a striking example. The family is widely distributed, and the larvæ of many are gregarious.

Eupuccinia (ū-puk-sin'i-ą), *n. pl.* [NL., < Gr. εὖ-, true, + *Puccinia.*] A group of species of *Puccinia* which produce spermogonia, æcidia, uredospores, and teleutospores, the last germinating only after a resting period. The group is subdivided into the *Autoeupuccinia* and the *Hetereupuccinia. Schrœter.*

eupyrene (ū'pī-rēn), *a.* [Gr. εὖ, well, + πυρήν, stone of a fruit (nucleus).] Containing a well-developed nuclear portion: applied to the normal spermatozoön: opposed to ★*oligopyrene* and ★*apyrene. Meves,* 1902.

eupyrin (ū-pī'rin), *n.* [Gr. εὖ, well, + πῦρ, fire, + *-in*[2].] A pale greenish-yellow crystalline compound having a vanilla odor, made from paraphenetidin and vanilla. It is antipyretic.

euquinine (ū-kwin'ēn), *n.* [*eu-* + *quinine.*] The pharmaceutical name for ethyl quinine-carboxylate, $C_{20}H_{23}O_2N_2COOC_2H_5$, prepared from quinine ethyl chlorcarbonate. It is tasteless, but otherwise resembles quinine in chemical and medicinal properties.

Eur. An abbreviation of *Europe* or of *European.*

Eurafric (ū-raf'rik), *a.* Same as ★*Eurafrican.*

> That *Eurafric* region which has been the birthplace of many nations. *Smithsonian Rep.,* 1899, p. 480.

Eurafrica (ū-raf'ri-ką), *n.* [*Eur*(*ope*) + *Africa.*] Europe and Africa considered as one continent or ethnic area.

Eurafrican (ū-raf'ri-kan), *a.* and *n.* **I.** *a.* Of, pertaining to, or including, in whole or in part, both Europe and Africa: as, a former *Eurafrican* continent; a *Eurafrican* race.

II. *n.* An individual belonging to the Eurafrican division of mankind, which, according to certain writers, includes the peoples of southern Europe and northern Africa.

Euramphæa (ū-ram-fē'ą), *n.* [NL., < Gr. εὖ, well, + ῥαμφος, beak.] The typical genus of the family *Euramphæidæ. Gegenbaur,* 1856.

Euramphæidæ (ū-ram-fē'i-dē), *n. pl.* [NL., < *Euramphæa* + *-idæ.*] A family of lobate ctenophorans having two wing-like projections at the aboral pole in which the subtentacular costæ and meridional vessels are produced. The typical genus is *Euramphæa.*

Euraryan (ū-rär'yan), *a.* and *n.* [*Eur*(*ope*) + *Aryan.*] **I.** *a.* Relating to the European Aryan.

II. *n.* A European Aryan.

euresol (ū'rē-sōl), *n.* [*eu-* + *res*(*orcin*) + *-ol.*] A viscid yellow mass, resorcin monoacetate. It is used as a substitute for resorcin in skin-diseases.

eurhodine (ū'rọ-din), *n.* [Gr. εὖ, well, + ῥόδον, rose, + *-ine*[2].] The name of a class of organic compounds containing the complex

$$R_2NC_6H_3 < \begin{matrix} N.C.CH \\ \| \\ N.C.C_6H_4 \end{matrix} > CH.$$

They are prepared from amino-orthodiamines and quinones. They are feeble bases with a yellowish-green fluorescence. The salts are scarlet and have no technical application.

eurhodol (ū'rọ-dōl), *n.* [*eurhod*(*ine*) + *-ol.*] The name of a class of organic compounds containing the complex

$$HOC_6H_3 < \begin{matrix} N.C.CH \\ | \quad \| \\ N.C.C_6H_4 \end{matrix} > CH,$$

formed by the action of hydrochloric acid on the eurhodines, which they resemble in color and fluorescence.

eurhythmic (ū-rith'mik), *a.* [*eurhythm-y, eurythmy* + *-ic.*] Harmonious: said especially of architecture in which the proportion is agreeable.

eurhythmy. See *eurythmy.*

euristic (ū-ris'tik), *a.* Same as *heuristic.*

eurobin (ū'rọ-bin), *n.* [*eu-* + (*ara*)*roba* + *-in*[2].] Chrysarobin triacetate. It is insoluble in water, and is used as a substitute for chrysarobin.

Europasian subregion, in *zoögeog.,* a division of the Holarctic region comprising Europe north of the Alps and Asia north of the Himalayas. It is roughly the same as the Eurasiatic region of Heilprin and the Palearctic region of other writers.

European, *a.*—**The European concert.** See ★*concert.*

europhen (ū'rọ-fen), *n.* A trade-name of diisobutyl orthocresol iodide, recommended for medical use as an antiseptic and a substitute for iodoform.

europium (ū-rō'pi-um), *n.* [NL., < L. *Europa,* Europe.] A supposed new element announced by Demarçay in 1901, obtained in very small quantity as oxid, sulphate, etc., from samarskite and monazite. Its compounds have been further examined by Urbain and Lacombe. It is characterized by a special spark-spectrum, and also by a phosphorescent spectrum, and appears to be intermediate between samarium and gadolinium, with an atomic weight of about 151.79.

eurybathic (ū-ri-bath'ik), *a.* [Gr. εὐρύς, wide, + βάθος, depth.] Having a wide or great range as to depth; able to live in both deep and shallow water. *Encyc. Brit.,* XXXIII. 936.

eurybenthic (ū-ri-ben'thik), *a.* [Gr. εὐρύς, wide, + βένθος, depth (see ★*benthos*), + *-ic.*] Enduring great differences of depth; found at different depths in the ocean.

Eurycampyli (ū-ri-kam'pi-lī), *n. pl.* [NL., < Gr. εὐρύς, broad, + καμπύλος, curved.] A suborder of the ammonoid cephalopods or goniatites having broad and entire septal lobes and saddles. In the earlier or Paleozoic forms the shells are for the most part laterally compressed, but they become rotund or coronate in later phases, and the simpler form of the suture is lost by subdivision.

eurycephalic, *a.* **2.** Having a broad but dolichocephalic skull; belonging to a subdivision of the oöidocephalic crania as classified by Aitken Meigs.

eurycephalous (ū'ri-sef'ą-lus), *a.* Same as *eurycephalic.*

eurygnathism (ū-rig'na-thizm), *n.* [*eurygnath*(*ous*) + *-ism.*] The condition of being eurygnathous.

> Combining this feature with *eurygnathism,* that is, lateral projection of the cheek-bones, Geoffroy Saint-Hilaire found that the Caucasic face is oval with vertical jaws;

the Mongolic broad (eurygnathous); the Negro prognathous; the Hottentot both pro- and eurygnathous.
Keane, Ethnology, p. 181.

eurygnathous (ū-rig'na-thus), *a.* [Gr. *εὐρύς*, broad, + *γνάθος*, jaw.] In *anthrop.*, having wide cheek-bones and upper jaws, like the Mongoloid race. *Geoffroy Saint-Hilaire.*

euryhaline (ū-ri'ha-lin), *a.* [Prop. **euryaline*, < Gr. *εὐρύς*, wide, + *ἅλς*, salt.] Having a wide range or capacity as to saltness; able to endure great changes in the salinity of water.

All Baltic marine animals can live in water of varying saltness, and are therefore said to be *euryhaline*.
Voyage of H. M. S. Challenger, xxix.

Eurynotus (ū-ri-no'tus), *n.* [NL., < Gr. *εὐρύς* broad, + *νῶτος*, back.] A genus of extinct ganoid fishes having a deeply fusiform trunk, large pectoral fins, and the dorsal fin extended to the tail. It occurs in the Carboniferous rocks of Great Britain and Europe.

euryon (ū'ri-on), *n.* [Gr. *εὐρύς*, wide.] In *craniom.*, the points on the lateral faces of the skull at which the greatest width is found. *Von Török.*

eurypauropodid (ū-ri-pâ-rop'ǫ-did), *n.* and *a.* **I.** *n.* A member of the myriapodous family *Eurypauropodidæ*.

II. *a.* Of or belonging to the myriapodous family *Eurypauropodidæ*.

euryprognathous (ū-ri-prog'nạ-thus), *a.* [Gr. *εὐρύς*, wide, + *πρό*, before, + *γνάθος*, jaw.] In *anthrop.*, having wide cheek-bones and upper jaws, combined with prognathism. *Geoffroy Saint-Hilaire.*

Craniological studies which had already been cultivated by Morton, and on which Geoffroy Saint-Hilaire based his four fundamental types: orthognathous, eurygnathous, prognathous, and *euryprognathous*.
Keane, Ethnology, p. 166.

eurypterid (ū-rip'tẹ-rid), *n.* and *a.* **I.** *n.* A merostome crustacean of the family *Eurypteridæ*.

II. *a.* Having the characters of or pertaining to *Eurypterus* or the *Eurypteridæ*.

eurypteroid (ū-rip'tẹ-roid), *a.* Having the characters of *Eurypterus*. *A. S. Packard*, Textbook of Entom., p. 6.

Eurypterus beds. Same as *Bertie* ★*dolomite*.

eurythermal (ū-ri-thėr'mal), *a.* [Gr. *εὐρύς*, wide, + *θέρμη*, heat, + *-al*[1].] Capable of enduring great differences of temperature; found in localities which differ widely in temperature: contrasted with ★*stenothermal*.

Some members of the epiplankton are, however, extraordinarily *eurythermal* and eurybathic; for example, Calanus finmarchicus ranges from 76° N. to 52° S. (excepting perhaps for 10° each side of the equator), and is apparently indifferent to depth.
Encyc. Brit., XXXIII. 936.

eurythermic (ū-ri-thėr'mik), *a.* Same as ★*eurythermal*.

Two species proved to be purely epiplanktonic, both in the warm and cold areas, twelve were *eurythermic* and eurybathic, ranging from the surface to 700 fathoms in both areas. *Nature*, Nov. 5, 1903, p. 23.

euryzygous (ū-riz'i-gus), *a.* [Gr. *εὐρύς*, wide, + *ζυγόν*, yoke.] With wide zygomatic arches. *Sergi.*

Eusarcus (ū-sär'kus), *n.* [NL., < Gr. *εὔσαρκος*, fleshy, < Gr. *εὖ*, well, + *σάρξ* (*σαρκ-*), flesh.] A genus of merostomatous *Crustacea*, of the family *Eurypteridæ*. It is characterized by having the first six abdominal segments greatly expanded and those following abruptly contracted. It occurs in the upper Silurian rocks of western New York.

Eusiphonacea (ū-sī-fǫ-nā'sẹ-ä), *n. pl.* [NL., < Gr. *εὖ*, well, + *σίφων*, a pipe, + *-acea*.] A superfamily of anomalodesmaceous *Pelecypoda*. It is characterized by the formation of a calcareous tube which may include one or both of the valves and is usually furnished with a perforated anterior disk. The division includes only two genera, *Clavagella* and *Aspergillum*, both of them fossil and recent.

Eusiphonia (ū-sī-fō'ni-ä), *n. pl.* [NL., < Gr. *εὖ*, well, + *σίφων*, pipe.] A section of the subfamily of anomalodesmaceous *Pelecypoda* characterized by long siphons and the position of the lithodesma at the anterior end of the internal resilium.

eusitia (ū-si'sia), *n.* [NL., < Gr. *εὖ*, well, + *σῖτος*, food.] A normal appetite for food.

eusplanchnia (ū-splangk'ni-ä), *n.* [NL., < Gr. *εὖ*, well, + *σπλάγχνα*, bowels.] A normal state of the internal organs.

Eustachian fossa. See ★*fossa*[1].

eustatic (ū-stat'ik), *a.* [Gr. *εὖ*, well, + *στατός*, < *ἵστασθαι*, stand.] Well established; not subject to subsidence or elevation; in equilibrium: descriptive of land-areas.

eustomachous (ū-stom'ạ-kus), *a.* Same as *eupeptic*. *Syd. Soc. Lex.*

Eusuchia (ū-sū'ki-ä), *n. pl.* [NL., < Gr. *εὖ*, well, + *σοῦχος*, a local Egyptian name of the crocodile.] In Huxley's classification of the reptiles, a division or order of the *Crocodilia* characterized by the unpaired and terminal nostril, which is internally prolonged and floored by a secondary palate. This group includes the modern crocodiles and the later fossil forms.

eutaxic (ū-tak'sik), *a.* [Gr. *εὖ*, well, + *τάξις*, order.] Same as ★*quincubital*. *P. C. Mitchell*, 1899.

eutaxite (ū-tak'sīt), *n.* [Irreg. < *eutax-y* + *-ite*[2].] In *petrog.*, a name first applied by Fritsch and Reiss (1868) to phonolitic rocks of Teneriffe, but subsequently used for any lava possessing eutaxitic texture.

eutaxy, *n.* **2.** In *ornith.*, the condition of a bird's wing when the fifth secondary is present.

Eutectic alloy, eutectic point or **temperature.** See ★*alloy*, ★*point*[1].

eutectoid (ū-tek'toid), *a.* and *n.* [*eutect(ic)* + *-oid*.] **I.** *a.* Exhibiting eutectic character.

II. *n.* A substance which behaves as a eutectic.

eutexia (ū-tek'si-ä), *n.* [Gr. *εὐτηξία*, < *εὐτηκτος*, easily melted: see *eutectic*.] The property of fusing at low temperatures. See *eutectic*.

euthanasian (ū-tha-nā'si-an), *a.* [*euthanasia* + *-an*.] Relating to or marked by euthanasia.

eutheca (ū-thē'ka), *n.* [Gr. *εὖ*, well, + *θήκη*, case: see *theca*.] In corals, the true theca as distinguished from a pseudotheca, the former having true centers of calcification. Compare ★*pseudotheca*. *Philos. Trans. Roy. Soc.* (London), ser. B, 1896, p. 141.

euthecate (ū-thē'kāt), *a.* [*eutheca* + *-ate*[1].] Characterized by the possession of a eutheca: as, the *euthecate* corals. *Annals and Mag. Nat. Hist.*, Jan., 1904, p. 24.

eutherian (ū-thē'ri-an), *a.* [*Eutheria* + *-an*.] Pertaining to or having characters found in the *Eutheria*, or placental mammals.

Much depends upon future investigations in regard to the structure of the *Eutherian* ovum.
Encyc. Brit., XXX. 505.

euthycomi (ū-thik'ǫ-mī), *n. pl.* [NL., < Gr. *εὐθύς*, straight, + *κόμη*, hair.] Individuals or types of man with straight hair, like the Mongols; a subdivision of the Lissotriches. *Haeckel.*

euthytropic (ū-thi-trop'ik), *a.* [Gr. *εὐθύς*, straight, + *τρόπος*, direction.] A descriptive term suggested by J. Milne for those earthquake shocks whose vibrations are in the same direction as the line of transmission of the shock itself. Also *euthutropic*. *Nature*, 1881, p. 126.

eutocia (ū-tō'si-ä), *n.* [Gr. *εὐτοκία*, < *εὔτοκος*, bringing forth easily, < *εὖ*, well, + *τεκεῖν*, bring forth.] Normal childbirth.

Eutracheata (ū-trā-kẹ-ā'tä), *n. pl.* [NL., < Gr. *εὖ*, well, + *τραχεῖα*, trachea.] A group of *Arthropoda* including the insects and myriapods as distinguished from the tracheate *Arachnida* and the *Prototracheata*.

Eutuberaceæ (ū-tū-bẹ-rā'sẹ-ē), *n. pl.* [NL., < *eu-* + *Tuberaceæ*.] Same as *Tuberaceæ*.

euxenium (ūk-sē'ni-um), *n.* [NL., < Gr. *εὔξενος*, hospitable: see *euxenite*.] A supposed new element (or rather either of two, distinguished as euxenium I and II) announced by Hofmann and Prandtl in 1901 as present in the Norwegian mineral euxenite: said to resemble zirconium, but to differ from it in certain reactions. Its existence is very doubtful.

E. V. An abbreviation of *Engineer Volunteers*.

evacuator, *n.* **2.** In *surg.*, an instrument for removing fluid or solid particles from a cavity, as the detritus from the bladder after lithotrity.

evaginate (ẹ-vaj'i-nāt), *a.* [L. *evaginatus*, pp. of *evaginare*, unsheath, < *e*, out, + *vaginare*, sheath: see *vaginate*.] Pushed out or everted; turned inside out.

evagination, *n.*—**Potential evagination**, in *embryol.*, an arrangement of the cells, or of their nuclei, of such a nature as to indicate the point at which a future evagination will be formed.

evanescent, *a.* **5.** In *math.*, infinitesimal.

evang. An abbreviation of *evangelical* and *evangelist*.

Evangelical prophet. See ★*prophet*.

evaniid (e-vā'ni-id), *n.* and *a.* **I.** *n.* An insect of the family *Evaniidæ*.

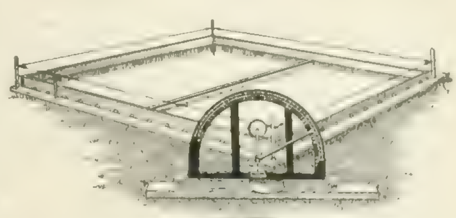
II. *a.* Of or belonging to the hymenopterous family *Evaniidæ*.

evans (ev'anz), *n.* A provincial corruption of *avens*.

evans-root (ev'anz-röt), *n.* [See ★*evans*.] The water-avens, *Geum rivale*.

evaporation, *n.* **Heat of evaporation.** Same as ★*heat of vaporization*. **Multiple-effect evaporation**, a process by which the latent heat of vapor given off from one evaporating-vessel is utilized by applying it to raise the temperature of the liquid in another vessel, and so on, the vapor in each case being carried through coils of pipe surrounded by the liquid to be heated. Such an arrangement is much used in sugar-refining.

evaporation-tank (ẹ-vap-ǫ-rā'shǫn-tangk), *n.* A vessel or tank holding a large quantity of water fully exposed to the sun and the wea-



Symons's Standard Evaporation-tank.

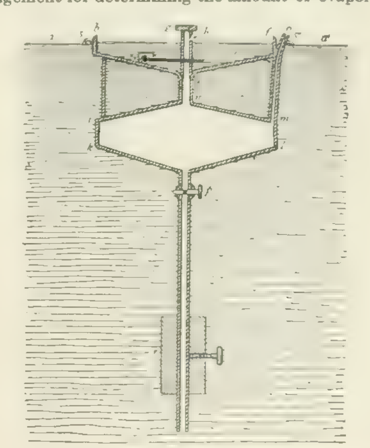
A tank 6 feet square [illegible] kept filled to mark near the top [illegible] water, [illegible] feet deep. At [illegible] corner is the float and a [illegible] scale with an index-finger, which shows the height of water in the tank.

ther. It is used for measuring the evaporation from a representative natural surface of water.

Evaporative capacity, the capacity of a boiler or evaporator to convert water into steam. Evaporative capacity is usually stated in pounds of water per hour. —**Evaporative efficiency**, the ratio of the amount of water evaporated by a boiler per pound of coal burned, to the amount which it is theoretically possible to evaporate with the same pound of coal.

evaporator, *n.* **2.** A device for evaporating water into steam. The necessary heat is derived from live steam or from the waste gases given off by a furnace used primarily for some other purpose. Such evaporators are used on shipboard to make steam from salt water, this steam being then condensed to furnish fresh water for the boilers or for culinary purposes. **3.** A device, used in connection with gasolene-engines, to transform the liquid hydrocarbon into a gas or vapor by heat or by fine subdivision in a current of air. *Hiscox*, Horseless Vehicles, p. 179.—**Lillie evaporator**, in *sugar-manuf.*, an arrangement for rapidly evaporating cane-juice in which, under progressively reduced pressure, the juice is sent through a series of tubes surrounded by steam.—**Multiple-effect evaporator**, a series of evaporators the first of which is heated by live steam from a boiler, the second by steam generated in the first, the third by steam generated in the second, and so on. There are usually three or four evaporators in the series, and as the heat range is lowered it is usually necessary to lower the pressure on the surface from which evaporation occurs.

evaporometer, *n.*—**Stelling's evaporometer**, an arrangement for determining the amount of evaporation



Stelling's Evaporometer.

a, *a'*, natural surface of the pond, river, or ocean; *b*, *c*, *d*, *e*, *f*, evaporation-pan; *t*, thermometer; [illegible] air to support the water in the pan at the proper height; *s*, *s'*, rim to prevent insplashing from waves; *r*, weight to keep the metal framework upright; *o*, vent-pipe to allow the air in the float to expand and contract.

under natural conditions from a surface of water representing the surface of a river or lake. It consists essentially of an evaporation-pan supported within another pan and floating on the surface of the water. The amount of evaporation is measured either by weight or by volume.

eve[1], *n.* **St. John's eve**, midsummer eve. See *midsummer*.

eve-eel (ēv'ēl), *n.* A common name of the conger-eel. [Eng.]

eve-jar (ēv'jär), *n.* Same as *eve-churr*.

Even or odd. (*b*) A way of betting or of settling who shall pay for something, as by calling the number of a bill (odd or even) or the number of matches held in the hand, even or odd. In the Spanish game of rondeau the players bet that the number of balls left on the table will be odd or even.

evener, *n.* **4.** An acid liquor used in coloring skins to obtain a uniform shade. *Flemming,* Practical Tanning, p. 73.

evening-snow (ēv'ning-snō'), *n.* In California, a delicate herb, *Linanthus dichotomus,* related to *Gilia.* It opens its white flowers about four o'clock in the afternoon, closing them again in the morning. It is so abundant on open slopes as to whiten the ground. The flowers are salver-shaped, an inch wide, and oppressively scented.

Everglade State, the State of Florida.

evergreen. **I.** *a.*—**Evergreen beech.** See ★*beech*1.

II. *n.* **Broad-leafed evergreen,** an evergreen tree or shrub with broad leaves, chiefly dicotyledonous, such as *Magnolia grandiflora,* as distinguished from coniferous trees with needle-shaped leaves. **Bunch-evergreen,** the ground-pine *Lycopodium obscurum.* **Christmas evergreen,** *Selaginella rupestris,* a plant of wide distribution, often used for Christmas decoration. See *Selaginella.*—**Coral-evergreen,** the common club-moss or running pine, *Lycopodium clavatum.* See *Lycopodium.*—**Swamp-evergreen,** the shining club-moss *Lycopodium lucidulum.* See ★*club-moss.*—**Trailing evergreen.** Same as *swamp-*★*evergreen.*

everlasting. **I.** *a.*—**Everlasting grass,** the sainfoin.

II. *n.* **Alpine everlasting,** *Antennaria alpina,* a low floccose-woolly plant of northern North America, extending entirely across the continent and ranging from Colorado and California to the arctic circle. **Clammy everlasting,** *Gnaphalium decurrens,* a rather tall glandular-viscid American plant, having the narrow sessile leaves decurrent on the stem, whence it is called *winged cudweed.* Also called *balsam-weed* and *sweet balsam.* **Early everlasting.** Same as *mouse-ear everlasting* (which see, under *mouse-ear*). -**Large-flowered everlasting,** *Anaphalis margaritacea,* a widely diffused North American plant, also occurring in northern Asia and adventive in Europe; it is closely related to *Antennaria* and *Gnaphalium,* but has larger heads. **Life-everlasting.** Same as *everlasting,* applied to the same species, but particularly to *Gnaphalium. G. obtusifolium* is called *fragrant* or *sweet life-everlasting* on account of the balsamic odor emitted after the flowers have fallen. -**Moor everlasting.** Same as *mountain* ★*everlasting.*—**Mountain everlasting,** *Antennaria dioica,* a low floccose-woolly plant with relatively large heads, the flowers of which are sometimes pink: found in nearly all parts of North America, and also in Europe and Asia, especially in mountainous regions.—**Mouse-ear everlasting.** See *mouse-ear.*—**Pearly everlasting.** (*a*) The mouse-ear everlasting (which see, under *mouse-ear*). (*b*) Same as *large-flowered* ★*everlasting.*—**Plantain-leaf everlasting,** the mouse-ear everlasting. **Rose-flowered everlasting,** the Swan River everlasting, *Sacrarpha Manglesii.*

Evermannia (ev-ėr-man'i-ą), *n.* [NL., named for B. W. *Evermann,* an American ichthyologist.] A genus of small gobies distinguished by the naked body and elongate form: found on the Pacific coast of Mexico. *E. zosterura* is the common species.

everniin (e-vėr'ni-in), *n.* [*Evernia* + *-in*2.] A yellowish tasteless amorphous compound, $C_6H_{14}O_7$, found in certain of the lichens of the genus *Evernia.*

Eversible sacs or glands. See *defensive* ★*glands.*

evertebrate (ē-vėr'tē-brāt), *v. t.*; pret. and pp. *evertebrated,* ppr. *evertebrating.* [L. *e-,* out, + *vertebra,* vertebra, + *-ate*2.] To deprive of backbone; hence, to render useless and ineffective.

evertor (ē-vėr'tor), *n.* That which everts or rotates outward, as a muscle. *Lancet,* July 4, 1903, p. 56.

Eve's apple, in Ceylon, a name applied by the English to the fruit of *Excatamia dichotoma* (*Tabernæmontana dichotoma* of Roxburgh), a small dichotomously branched tree belonging to the dogbane family. It has a milky latex, dark-green, coriaceous leaves, and fragrant white, salver-shaped flowers with yellow throat. The fruit consists of two distinct carpels, broadly ovoid when ripe, and orange yellow without. They contain numerous seeds surrounded by crimson pulp.—**Eve's cup,** the trumpet-leaf or huntsman's-horn, *Sarracenia flava.*—**Eve's darning-needle.** Same as *Adam's needle and thread, Yucca filamentosa.*—**Eve's plant,** the Spanish bayonet, *Yucca aloifolia.* See *bayonet.*

evidence, *n.*—**Self-regarding evidence,** in *law,* evidence for or against a party derived from statements made by or from the conduct of himself or his representatives. When in favor of the party it is called *self-serving evidence,* and is generally inadmissible; when against him it is called *self-disserving evidence,* and is always admissible as an admission in a civil case, or as a confession in a criminal case. **Self-serving evidence.** See *self-regarding* ★*evidence.*

evisceration, *n.* **2.** In *ophthalmol.,* removal of the internal parts of the eyeball, the sclerotic coat being left. *Buck,* Med. Handbook, I. 557.

evisceroneurotomy (ē-vis"ę-rō-nū-rot'ō-mi), *n.* Evisceration of the eye with division of the optic nerve. *Buck,* Med. Handbook, I. 557.

evocative (ev'o-ką-tiv), *a.* [*evocate* + *-ive.*] Tending or fitted to evoke or call forth.

evolute, *n.* **II.** *a.* Evolved; developed: as, an *evolute* curve.

evolutility (ev"ō-lū-til'i-ti), *n.* [*evolut(ion)* + *il* + *-ity.*] The capability possessed by all living things of undergoing changes in form, size, or structure, as the result of the nutritive processes.

evolutine (ev'ō-lu-tin), *a.* [*evolut(ion)* + *-ine*1.] Of or pertaining to evolutility.

The *evolutine* cycle of tissues deprived of their intimate relations with nerves. *Nature,* Feb. 5, 1903, p. 336.

evolution, *n.* **Compound evolution,** evolution in which the rate and course of progress in one aggregate or group is affected by the proximity and influence of another aggregate.—**Determinate evolution,** the doctrine or opinion that the modification of species according to the principle of natural selection is guided into certain predetermined lines by a natural necessity, or by the adaptive acts of the organisms themselves. *Eimer.*—**Doctrine of evolution.** (*a*) In *embryol.,* in individual development or ontogeny, the doctrine or opinion that the generation of a living being from an egg consists in the unfolding, or evolution, or manifestation to sense, of the organization or specific constitution which is latent or potential in the egg: contrasted with or opposed to the doctrine that development is epigenesis, or new formation. The embryological doctrine of evolution has undergone many changes. In the seventeenth and eighteenth centuries most of its advocates regarded the germ as a complete and perfect miniature of the visible organism, so delicate and transparent and minute that it transcends our means of observation and eludes our senses, and is made known to us by the mind's eye. Development was held to be the distention of this miniature, and its manifestation to sense, by the intussusception of nutritive material, without any change in the volume or in the organization of the essential living substance which exists, in its completeness, at all stages of development. Most of the present advocates of this view believe that while the germ has a fixed and definite architecture which controls and directs each step in the process of development, this architecture is different from and much simpler than that of the developed organism. Some hold that it is not the individual organism as such that is preformed in and unfolded from a germ, but only its character as a member of a species; while its individuality as a particular organism is induced by the mechanical conditions under which it develops. Others hold that it is not the material equivalent of the completed organism, but only its latent potency, or the capacity for generating it, that resides in the germ. Others, again, hold that while the germ is neither the perfect organism in miniature, nor its material equivalent, the germ is like the perfect organism in so far as it is from the first organized into definite regions which are set apart for the construction of specific parts or regions of the body of the future organism. In general, any view of individual development which attributes predominant or supreme importance to the properties of the germ and subordinate importance, or no importance, to the conditions under which development takes place, is in so far evolutionary. Evolutionary views of individual development are usually, but not always, associated with evolutionary conceptions of ancestral development. (*b*) In ancestral development or phylogeny, the doctrine or opinion that the specific constitution or architecture which a germ-cell is held to possess at the beginning of its development, and to which the organization of the being that is generated from it is attributed, preexisted in the germ-cells of preceding generations. In the extreme form in which it was held by the embryologists of the seventeenth and eighteenth centuries it is the doctrine that since individual development is and always has been the unfolding of preexisting structure, each successive organism has existed, as such, from the beginning, in the germ-cells of its first ancestor, and in those of all successive ancestors, so that it is not the actual modern organism, but only its visibility or perceptibility by sense that is new. The modifications of this doctrine by more modern embryologists, who have sought to make it consistent with the progress of biological science, are too subtile and refined for concise statement. (*c*) In *biol.,* the doctrine or opinion, accepted as an established truth by all recent biologists, that all living beings have come into existence, in course of nature, by uninterrupted descent, without break of continuity, from a few ancient and simple forms of life, or from one. **Mechanico-physical theory of evolution,** the doctrine or opinion, advocated by Nageli, that the origin of species is due to a principle of improvement which brings about increasing complexity and greater division of labor, because the continual advance of an organism of its own accord is a property of living organic substance.—**Spontaneous evolution.** See *spontaneous.*—**Squadron of evolution** (*naval*), a squadron formed for exercise in naval evolutions, fleet tactics, and drill. **Tidal evolution.** See ★*tidal.*

evolutionary, *a.*—**Evolutionary ethics,** as most commonly and usefully understood, that view of ethics which was inaugurated by Herbert Spencer, was improved by Leslie Stephen, and is supported by most of the recent writers, as Hoffding, Wundt, Paulsen, Alexander, Simmel, and others, but is opposed by the followers of Green and other idealists and also by Duhring. The term has also been applied to the doctrine that conscience is educable, and has also been extended by some so as to include perfectionism.

evolv, *v.* A simplified spelling of *evolve.*

evolve, *v. t.* **4.** In *chem., geol.,* etc., to give off or make manifest by separation from a mixture or a compound: most commonly used of a gas or vapor: as hydrochloric-acid gas *evolved* from a mixture of common salt and sulphuric acid.—**5†.** In *math.,* to extract (roots).

Evoxymetopon (e-vok"si-me-tō'pon), *n.* [NL., < Gr. *εὐ-,* well, + *ὀξύς,* sharp, + *μέτωπον,* brow.] A genus of cutlass-fishes of the family *Trichiuridæ,* found in the West Indies.

exact, *v.* **4.** In *Eng. law,* to call (a party) in court to answer. When the party could not be found, he was exacted, usually five times at five successive county courts before being outlawed.

Exact differential. See ★*differential.*

exaction, *n.* **3.** (*b*) The calling of a party to answer. See ★*exact,* *v.,* 4.

exaggerational (eg-zaj-ę-rā'shon-al), *a.* [*exaggeration* + *-al.*1] Pertaining to or characterized by exaggeration; hyperbolical.

exalgin (ek-sal'jin), *n.* [Irreg. < Gr. *ἐξ,* out, + *ἄλγος,* pain, + *-in*2.] The trade-name of methylacetanilide, recommended for medical use as an analgesic.

ex all (eks ál). Sold without any of the rights or privileges that usually appertain to stocks or bonds, as, for example, the right to receive the maturing dividend (see *ex div.*), which is reserved to the sellers, or the right to participate in future issues. See ★*ex right.* [Eng.]

exaltado (ek-säl-tä'dō), *n.* [Sp., 'exalted.'] In modern Spanish history, a member of a political party about 1820–22, which was extremely democratic in sentiment.

exaltation, *n.* **6.** An abnormal mental condition marked by an overweening sense of self-importance (amounting even to delusions of grandeur), an optimistic contentedness with one's surroundings or condition, and a state almost of rapture or ecstasy.

examin, *v.* A simplified spelling of *examine.*

examinationist (eg-zam-i-na'shon-ist), *n.* [*examination* + *-ist.*] One who believes in or is an advocate of the system of basing appointments on fitness as ascertained by competitive examination.

exanthalose (eks-an'tha-lōs), *n.* [Gr. *ἐξ,* out, + *ἄνθος,* flower, + *al*3 + *-ose.*] A white efflorescence, perhaps $Na_2SO_4 + 2H_2O$, derived from Glauber's salt.

exanthema, *n.* **3.** In *bot.,* same as *die-back.*

exappendiculate (eks-ap-en-dik'ū-lāt), *a.* [L. *ex,* out, + *appendicula,* appendage, + *-ate*1.] Destitute of appendages.

exarteritis (eks-ār-tę-rī'tis), *n.* [NL., < Gr. *ἐξ,* out, + *ἀρτηρία,* artery, + *-itis.*] Inflammation of the outer layer of the wall of an artery.

exarthrosis (eks-ār-thrō'sis), *n.* [Gr. *ἐξ,* out, + *ἄρθρον,* joint, + *-osis.*] Dislocation of a joint.

Exc. An abbreviation of *excellency.*

excalate (eks'ką-lāt), *v. t.*; pret. and pp. *excalated,* ppr. *excalating.* [*ex-* + (*inter*)*calate.*] To drop out; remove from a series: the opposite of *intercalate.*

There remains the assumption that vertebræ have been *excalated* in front of the pelvis. . . . Six vertebræ must have been *excalated.*
Philos. Trans. Roy. Soc. (London), ser. B, p. 342.

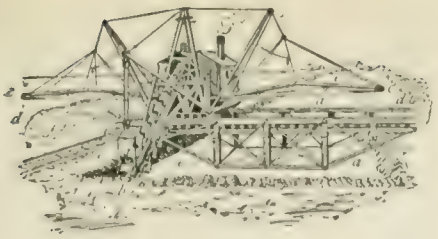
excalation (eks-ką-lā'shon), *n.* [*excalate* + *-ion.*] **1.** The omission, dropping out, absence, or removal (of something) from a connected series: the opposite of *intercalation.*

Hence the supposition of *excalation* of vertebræ in front of the girdle [of *Mustelus vulg.*] leads also to the necessary corollary that a vast amount of both inter- and *ex-calation* must go on at another spot.
Philos. Trans. Roy. Soc. (London), 1900, ser. B, p. 343.

Specifically—**2.** The absence, in a race of organisms, of any element in a series of homologous parts, such as a limb or a pair of limbs in an arthropod, or of a vertebra in the spinal column of a vertebrate, considered as evidence that the part in question has been lost or suppressed. *Nature,* Dec. 21, 1898, p. 171.

excavating-pump (eks'ką-vā-ting-pump), *n.* **1.** A pump used to keep down water in excavations and trenches.—**2.** A pump used for excavating or removing soft materials or emptying cesspools.

excavator, *n.* (*c*) A modified form of dredging-machine used in digging irrigation canals. It consists of a chain-and-bucket conveyer mounted on a trolley that moves on rails laid on a traveling crane. Tracks are laid on each side of the canal, and upon these the crane moves. The conveyer, supported by a derrick, cuts into the soil, both below and above the water, and lifts it to chutes that discharge it on the banks at each side. Since the conveyer



Excavator.

a, crane, traveling on tracks (outboard track not shown); *b*, bucket-wheel; *c*, spoil-chutes to spoil-banks; *d*, spoil-banks; *e*, excavated canal.

travels on the crane transversely to the length of the canal all the soil can be excavated and the crane advanced on the tracks as fast as the canal is dredged out.

excelsin (ek-sel′sin), *n.* [L. *excelsus*, high, + *-in*.[2]] A crystalline globulin contained in the Brazil nut.

excelsior, *n.* **2.** A printing-type, now known as 3-point—about 24 lines to the inch. It is too small for letters, but is used for characters of music, piece fractions, and border decorations. See *type*, 8.—**Excelsior machine,** in *wood-working*, a machine for planing wood into excelsior. It is a simple form of vertical planer, using reciprocating cutters driven at a high speed.

exception, *n.*—**Declinatory exception,** in the civil law of Louisiana, a dilatory exception which denies the jurisdiction of the court before which the matter is brought.—**Peremptory exception,** in the civil law of Louisiana, one intended to cause the dismissal of the action.

excernent (ek-sêr′nent), *a.* [L. *excernens* (*-ent-*), ppr. of *excernere*, separate: see *excern*.] Same as *excretory*.

excess, *n.*—**Excess fare.** See ★*fare*1.—**Principle of motor excess,** in *psychophys.*, the principle that "pleasure and pain can be agents of accommodation and development only if the one, pleasure, carry with it the phenomenon of motor excess [heightened nervous energy], and the other, pain, the reverse,—probably some form of inhibition or of antagonistic contraction." *J. M. Baldwin*, Mental Develop., p. 189.

excessory (ex-ses′ō-ri), *a.* [*excess* + *-ory*.] Of the nature of excess; produced as a residual or by-product. *J. E. Cairnes*, Leading Prin. of Polit. Econ., p. 128.

exchange, *v. i.* **2.** To go, by exchange with another officer, from one regiment or branch of service to another.

exchange, *n.* **12.** A mutual transfer of two officers in different regiments or branches of the service.

Transfers and *exchanges* under this paragraph will be immediately reported to the War Dep't.
U. S. Army Regulations.

13. In *chess*, the advantage of having a rook against the opponent's knight or bishop.—**Post-exchange,** a store at a military post under the management of the military authorities: also called a *canteen*.—**To gain, win, lose the exchange,** in *chess*, to win or lose a rook for a knight or bishop.

Excipula (ek-sip′ū-lä), *n.* [NL. (Fries, 1825), ⟨ L. *excipulum*, a vessel, NL., an exciple: see *exciple*.] A genus of *Fungi Imperfecti*, type of the family *Excipulaceæ*, having black membranous or leathery, somewhat cup-shaped pycnidia, with a simple opening. The spores are elongate, hyaline, and one-celled. The species occur on dead stems of plants.

Excipulaceæ (ek-sip-ū-lā′sē-ē), *n. pl.* [NL., ⟨ *Excipula* + *-aceæ*.] A family of *Fungi Imperfecti* of the order *Sphæropsidales*, having more or less cup-shaped black pycnidia either smooth or bearing bristles. Named from the genus *Excipula*.

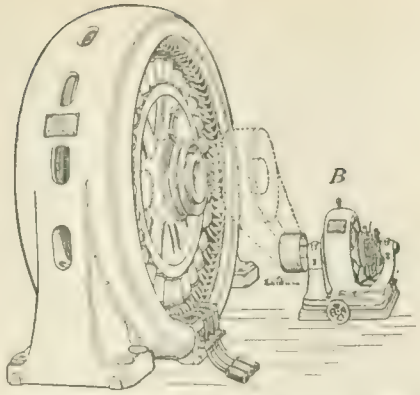
excisor (ek-sī′zor), *n.* One who or that which excises.

excitation, *n.*—**Law of polar excitation.** See the extract.

Pflüger stated his *law of polar excitation* as follows ("Untersuchungen," S. 456): "A given stretch of a nerve is irritated by the development of catelectrotonus and the disappearance of anelectrotonus, but not through the disappearance of catelectrotonus or the development of anelectrotonus." *Buck*, Med. Handbook, III. 770.

excite, *v. t.* **5.** In electric machinery, to send current through the magnetic field coils, and so produce the magnetism required for the operation of the machine.

exciter, *n.* **3.** In *elect.*, the dynamo-electric machine, battery, or other apparatus, which supplies current to energize the magnetic fields of other electric machines.—**Belted exciter,** an exciter driven by a belt from the machine which it excites.—**Compensating exciter,** an exciter directly connected and in synchronism with the alternater, and traversed by the current of the alternater, for the purpose of compensating for the armature reaction of the alternater. See *compensated* ★*alternater*.—**Hertzian exciter,** an apparatus for the production of electrical oscillations or Hertzian waves; a Hertzian oscillator.



Alternator with Belt-driven Exciter. *A*, alternator; *B*, exciter.

excitor (ek-sī′tor), *n.* Same as *exciter*; specifically, a nerve, stimulation of which excites to greater action in the part supplied.

excitosecretory (ek-sī″tō-sē-krē′tō-ri), *a.* Causing increased secretion.

excl., exclam. Abbreviations of *exclamation*.

Exclusive inheritance. See ★*inheritance*.

Ex. Com. An abbreviation of *executive committee*.

excrementive (eks-krē-men-tiv), *a.* [*excrement* + *-ive*.] Pertaining to or forming excrement.

excretin (eks′krē-tin), *n.* [L. *excretus* (see *excrete*) + *-in*[2].] A crystalline body of the composition $C_{20}H_{36}O$, which has been especially obtained from the feces of herbivorous animals. It is supposed to be closely related to cholesterin.

excretionary (eks-krē′shon-ä-ri), *a.* [*excretion* + *-ary*.] Of or pertaining to excretion; of the nature of an excretion: as, *excretionary* matter. *Huxley*.

excretolic (eks-krē-tol′ik), *a.* [*excrete* + *-ol* + *-ic*.] Derived as an oil from excretions.—**Excretolic acid,** an oily substance of fecal odor, obtained from human excrement. Its composition is unknown.

excretophore (eks-krē′tō-fōr), *n.* [L. *excreta*, excreta, + Gr. *-φορος*, ⟨ *φέρειν*, bear.] A cell which serves to carry excreted matter away from the body.

The *excretophores* of leeches . . . undergo a similar process. *A. Mathews*, Biol. Lectures, 1899, p. 165.

Excretory tubule, one of the group of urinary tubules which open into the pelvis of the kidney.

excurvation (eks-kêr-vā′shon), *n.* [L. *ex*, out, + *curvatio*(*n-*), curvation.] An outward curving or bending.

excusator, *n.* **2.** (*a*) In *Eng. law*, one who makes an accusation. (*b*) In *old Ger. law*, a defendant; one who wholly denies the plaintiff's cause of action. *Bouvier*, Law Dict.

ex. doc. An abbreviation of *executive document*.

executancy (eg-zek′ū-tan-si), *n.* [*executan*(*t*) + *-cy*.] In *music*, the function or action of an executant or performer; execution.

Execution paree, in *French law*, a right by which a creditor, without preliminary legal process, may seize and cause the goods of his debtor to be sold for payment of the debt. It involves an act upon the part of the debtor amounting to a confession of judgment, and is similar to a warrant of attorney.—**Stay of execution,** in *law*, an act or order which postpones the operation of an execution for a certain time, or which makes it dependent upon the happening of some event.

Executive mansion, the building in Washington, D. C., occupied by the president of the United States: popularly known as the 'White House.'

Executor of his own wrong, in *law*, same as *executor de son tort*.—**Executor to the tenor,** in *law*, a person charged in a will with a duty or duties which pertain to the office of executor, as the appointment of a particular person to discharge a particular debt.—**General executor,** in *law*, an executor appointed to administer the entire estate without limitation of time, place, or subject-matter.—**Instituted executor,** in *law*, an executor nominated and appointed in the will of the testator without conditions, and whose right to act is superior to that of substituted executors, when there are such. See *substituted* ★*executor*.—**Rightful executor,** in *law*, an executor legally nominated and appointed in the will of the testator, as distinguished from one appointed by the court by reason of the refusal or inability of the rightful executor to act. The distinction is of importance, as the rightful executor, deriving his authority from the will, may perform most of his duties prior to probate and grant of letters testamentary. He cannot, however, bring an action as executor prior to such time.—**Special executor,** in *law*, one appointed to administer a part of an estate, or the whole estate, for a limited time, or in a particular place.—**Substituted executor,** in *law*, an executor, nominated and appointed in the will of the testator, who is to act upon condition that another so appointed refuses the appointment. For example, A, by will, makes B his executor, but if B will not act, then he appoints C, and if C will not act, then D, etc. B is the instituted executor. C is said to be substituted in the first degree, D in the second degree, etc.

execx. A contraction of *executrix*.

exegete, *n.* **2.** In *Gr. antiq.*: (*a*) A leader; guide; teacher; expounder. (*b*) In Athens, an interpreter of religious law and regulator of ceremonies. The office was confined to the aristocracy.

Exelissa (eks-ē-lis′ä), *n.* [NL., said to be (irreg.) ⟨ Gr. *ἐξελίσσειν*, unroll, ⟨ *ἐξ*, out, + *ἑλίσσειν*, roll.] A genus of platypodous gastropod *Mollusca*, with small turreted shells, having continuous transverse ribs, spiral striæ, and contracted aperture without canal and with continuous peristome. It is of Jurassic age.

exenteritis (ek-sen-te-rī′tis), *n.* [Gr. *ἐξ*, out, + *ἐντερον*, intestine, + *-itis*.] Inflammation of the peritoneum covering the intestines.

exercize, *n.* and *v.* A simplified spelling of exercise.

exhale, *v. i.* **2.** To pass through in the form of drops; ooze: noting especially bleeding from a surface in the absence of any wound.

exhaust, *n.* **3.** A pump, fan, or other device for removing air from a building, enclosure, or receptacle, by lowering the pressure in the egress-pipe or flue.—**Exhaust mill.** See ★*tumbling-mill*.—**Point of exhaust,** that point in the stroke or in the cycle of processes in an engine-cylinder at which the valve opens to release from the cylinder the contents which have done their work of driving. It should, theoretically, be just at the point when the crank and piston are at the dead center. In high-speed engines, to compensate for the inertia of the material, the release may take place just before the end of the stroke. See *release*, 5.

exhaust-gas (eg-zâst′gas), *n.* The products of combustion due to the firing of the charge in the cylinder of an internal-combustion engine.

exhaust-head (eg-zâst′hed), *n.* A device for diminishing the noise from the exhaust-pipe of a high-pressure engine, and for entrapping any water or oil which would otherwise be ejected with the outgoing steam. These heads are usually conical in form, so that the steam shall expand in volume and diminish in velocity as it reaches its vent. Helical and radial baffle-plates separate out water and oil, and convey the latter to convenient separators, and the dry steam issues in a steady stream over a large area, instead of in a succession of puffs with attendant noise.

exhaustion, *n.*—**Nervous exhaustion.** Same as *neurasthenia*.

exhaustion-method (eg-zâs′tyon-meth″od), *n.* In *psychol.*, a method for the determination of the elementary qualities of olfactory sensation. The nose is exhausted, by continued smelling, for a given odor: then another odor is presented. The assumption which underlies the method is that if the second odor is qualitatively different from the first it will be sensed, despite the exhaustion of the organ for the first odor; while if the second odor belongs to the same qualitative group as the first, it will not be sensed at all, or will be sensed weakly and imperfectly. *E. B. Titchener*, Exper. Psychol., I. i. 76.

exhaustion-time (eg-zâs′tyon-tīm), *n.* In *psychophys.*, the average time required to exhaust the olfactory organ for a given odor. See ★*exhaustion-method*.

exhaust-jacket (eg-zâst′jak″et), *n.* A chamber in or around any part of an engine within which exhausted products from the cylinder are circulated to utilize heat which would otherwise be wasted. *Encyc. Brit.*, XXVIII. 190.

exhaust-lap (eg-zâst′lap), *n.* The amount by which the edges of the working face of the slide-valve of a steam-engine project over the inner edges of the ports when the valve stands in its central position, symmetrical with the ports. Such an overlap on the exhaust edges of the valve prevents the steam from escaping prematurely from the expanding volume on the working side, and closes the delivery-port to the exhaust-passage before the piston reaches the end of its traverse, so as to imprison some steam behind the piston, whose compression acts as a cushion to bring the reciprocating masses to rest.

exhaust-lead (eg-zâst′lēd), *n.* The amount by which the exhaust-port of an engine is opened, or release occurs, before the end of the pressure-stroke.

exhaust-line (eg-zâst′līn), *n.* The line on an indicator-diagram from a steam or other engine which is traced by the pencil or point of the instrument when the pressure in the cylinder is that existing when the exhaust-valve is open and the engine-piston is making its return stroke with the driving steam in that end of the cylinder which is not connected with the indicator.

exhaust-mill (eg-zâst′mil), *n.* **1.** A mill having hollow journals or an opening at one end to which an air-pipe with an exhaust-fan is fitted

for the purpose of drawing dust or moisture out of the mill when it is in operation. **2.** Same as ★*tumbling-mill*.

exhaust-opener (eg-zâst'ōp'nėr), *n.* In *cotton-manuf.*, a machine in which an exhaust-fan is employed for opening cotton as it comes from the bale. *Taggart*, Cotton Spinning, I. 66.

exhib. An abbreviation of the Latin *exhibeatur*, 'let it be given.' [Used in *med.* prescriptions.]

exhibitionism (ek-si-bish'ọn-ism), *n.* [*exhibition* + *-ism.*] A form of sexual perversion characterized by exposure of the person to others, without any attempt at concealment or any evidence of shame.

From time to time the Alienist and Neurologist is consulted by cases of *exhibitionism* which are as much a surprise to the unfortunate victims as to the astonished public and startled courts.
Alien. and Neurol., Aug., 1904, p. 347.

exhibitionist (ek-si-bish'ọn-ist), *n.* A degenerate who obeys a morbid impulse to expose the person.

ex hypothesi (eks hī-poth'e-sī). [NL.] 'From the hypothesis'; according to the hypothesis; hypothetically; supposedly; assumed to be.

exilarch (ek'si-lärk), *n.* [L. *exul*, an exile, + Gr. *ἀρχός*, chief. The word translates Aram. *rēsh galuta* 'chief of the captives.'] The chief of the Babylonian Jews after the destruction of the temple and until the tenth century A. D. The exilarch exercised great authority not only over the Jews of Babylonia, but in all other countries, levying taxes and exercising other similar powers.

exile-tree (ek'sīl-trē), *n.* The quashy-quasher, *Thevetia Thevetia*. See *Thevetia*.

existence, *n.* **5.** In *logic*, presence in the universe, system, or total collection of individual objects considered. A class is said to exist when an individual of the class occurs in the universe considered; a relation is said to exist when a set of individuals in the universe is in that relation. Consequently such relations as incompossibility, refuting the existence of, and the like, although they are in a sense relations (better called pseudorelations), do not possess existence. On the other hand the relation of adjectives to corresponding abstract nouns, and other similar relations, refer at once to two different universes, the one of actually existing things, the other of possible symbols, and may thus be admitted to possess existence relatively to a second universe.—**Existence theorem.** See ★*theorem*.

existential, *a.* **3.** Pertaining to external and accidental characters.

exit, *n.* **4.** In *phonetics*, an off-glide or vanish.

A somewhat less gentle *exit* of the isolated vowel. . . .
Scripture, Exper. Phonetics, p. 430.

Exit wound. See ★*wound*.—**Pupil of exit.** Same as *interfusion* ★*disk*.

exite (ex'īt), *n.* [Gr. *ἔξω*, outside, + *-ite*[2]. Cf. *endite*.] A process on the outer border of the leaf-like abdominal appendage of a phyllopod crustacean. *A. E. Shipley*, Zoöl. of Invertebrates, p. 260.

exit-pupil (ek'sit-pū"pil), *n.* In a lens system, the optical image of the entrance-pupil, which is formed by the whole system of lenses. It is also the image of the stop, formed by that portion of the lens system which lies between the stop and the image space. In instruments designed for visual use the eye of the observer should coincide in position with the exit-pupil. See *interfusion* ★*disk*.

exitus, *n.* **2.** Termination of a disease: usually an unfavorable ending: as, lethal *exitus*.—**3.** The external opening of a canal; meatus.

ex-librism (eks-lī'brizm), *n.* [*ex-libr(is)* + *-ism.*] The collecting and study of book-plates.

ex-librist (eks-lī'brist), *n.* [*ex-libr(is)* + *-ist.*] A collector of ex libris or book-plates.

If, on the one hand, the more enthusiastic "*ex-librists*" (for such a word has actually been coined) have made the somewhat ridiculous claim of "science" for "ex-librisme," the bitter animadversion, on the other, of a certain class of intolerant bibliophiles upon the "vandalism" of removing book-plates from old books has at times been rather extravagant. *Encyc. Brit.*, XXVI. 305.

exmeridian (eks-mē-rid'i-ạn), *a.* [L. *ex*, out, + E. *meridian.*] Not in the meridian: denoting observations or objects. See ★*extrameridian*. [Rare.]

Exoascaceæ (ek"sō-as-kā'sē-ē), *n. pl.* [NL., ⟨ *Exoascus* + *-aceæ.*] A family of parasitic ascomycetous fungi, named from the genus *Exoascus*, having the asci borne free on the host and forming no distinct membrane beneath. See ★*Exoascus*.

Exoascales (ek"sō-as-kā'lēz), *n. pl.* [NL., ⟨ *Exoascus* + *-ales.*] An order of ascomycetous fungi, having the asci borne free and separate on the surface of the host. It contains two families, *Ascocorticiaceæ* and *Exoascaceæ*.

exoascous (ek-sō-as'kus), *a.* [Gr. *ἔξω*, outside, + *ἀσκός*, a bag (see *ascus*).] Having the asci free, as in the order *Exoascales*. *Encyc. Brit.*, XXVIII. 558.

Exoascus (ek-sō-as'kus), *n.* [NL. (Fuckel, 1860), ⟨ Gr. *ἔξω*, outside, + *ἀσκός*, bag (see *ascus*).] A genus of parasitic fungi, typical of the family *Exoascaceæ*: so named because the asci are produced in a thin layer on the surface of the host. The mycelium is perennial, and the asci are 4- or 8-spored. The species occur mostly on fruits, causing enlargements and other deformities. *E. Pruni* is a common species, attacking plums and producing plum-pockets.

Exoascus Pruni.
Plums affected by this fungus are devoid of stones and bear the fungus spores on their surfaces. *a*, branch, one fourth natural size; *b*, cross section of an affected plum, two thirds natural size; *c*, young asci; *d*, mature ascus (enlarged). (Drawn from Engler and Prantl's "Pflanzenfamilien.")

Exobasidiacæ (ek"sō-bā-sid-i-ā'sē-ē), *n. pl.* [NL., ⟨ *Exobasidium* + *-aceæ.*] A family of parasitic basidiomycetous fungi, named from the genus *Exobasidium* and having the same general characters.

Exobasidiales (ek"sō-bā-sid-i-ā'lēz), *n. pl.* NL., ⟨ *Exobasidium* + *-ales.*] An order of parasitic basidiomycetous fungi, containing the single family *Exobasidiaceæ*.

Exobasidium (ek"sō-bā-sid'i-um), *n.* [NL. (Woronin, 1867), ⟨ Gr. *ἔξω*, outside, + NL. *basidium.*] A genus of parasitic basidiomycetous fungi, having 4-spored basidia breaking through the epidermis of the host and forming a thin whitish coating. The species attack ericaceous plants chiefly, producing gall-like formations. *E. Azaleæ* occurs frequently on *Azalea*: the fleshy galls formed are called *may-apples*. See *honeysuckle-apple*.

exocannibalism (ek-sō-kan'i-bal-izm), *n.* [Gr. *ἔξω*, outside, + E. *cannibalism.*] The custom of eating the flesh of strangers. *Deniker*, Races of Man, p. 148.

exocardia (ek-sō-kär'di-ạ) *n.* [NL., ⟨ Gr. *ἔξω*, outside, + *καρδία*, heart.] Displacement of the heart.

Exoccipital fissure. Same as ★*ape-fissure*.

exocephalous (ek-sō-sef'a-lus), *a.* [Gr. *ἔξω*, outside, + *κεφαλή*, head.] Pertaining to or having the characteristics of the *Exocephala*.

exocerite (ek-sos'e-rīt), *n.* [Gr. *ἔξω*, outside, + *κέρας*, horn, + *-ite*[2].] In crustaceans, a scale-like structure borne by the second joint of an antenna.

exochorion (ek-sō-kō'ri-on), *n.*; pl. *exochoria* (-ạ). [Gr. *ἔξω*, outside, + *χόριον*, chorion.] **1.** In *embryol.*, the outer or ectodermal layer of the chorion in the mammalian embryo.—**2.** The outer layer of the chorion of an insect's egg. *A. S. Packard*, Text-book of Entom., p. 520.

exoclinal (ek-sō-klī'nạl), *a.* [*exoclin(e)* + *-al.*] In *geol.*, pertaining to or of the nature of an *exocline*.

exocline (ek'sō-klīn), *n.* An inverted fan-fold, or a fan-structure of synclinal type. *Lapworth*, in Geol. Mag., VI. 62.

exocœle (ek'sō-sēl), *n.* [Gr. *ἔξω*, outside, + *κοῖλος*, hollow.] The portion of the cœlenteron or gut-cavity of a hexactinian polyp which lies between different pairs of mesenteries; the intermesenterial space: opposed to ★*entocœle*.

The two first pairs appeared within the dorsal *exocœles*, the moieties of each pair arising at the same time and remaining equal; the two next pairs were within the middle *exocœles*; and finally appeared the pairs within the ventral *exocœles*. *Biol. Bulletin*, July, 1904, p. 84.

exocœlic (ek-sō-sē'lik), *a.* In actinians, of or pertaining to an exocœle: as, the *exocœlic* tentacles. Compare ★*entocœlic*. *Trans. Linnean Soc. London*, Zoöl., Oct., 1902, p. 302.

exocœloma (ek"sō-sē-lō'mạ̈), *n.*; pl. *exocœlomata* (-ma-tạ̈). [Gr. *ἔξω*, outside, + *κοίλωμα*, a hollow, cavity: see *cœloma*.] In *embryol.*, that portion of the cœloma, or true body-cavity, which lies in the extra-embryonic region of the vertebrate embryo.

exoderm (ek'sō-dėrm), *n.* [Gr. *ἔξω*, outside, + *δέρμα*, skin.] **1.** Same as *epidermis*.—**2.** Same as *ectoderm*.—**3.** The external crust of the body of an insect. *N. E. D.*

exodermis (ek-sō-dėr'mis), *n.* [NL., ⟨ Gr. *ἔξω*, outside, + *δέρμα*, skin.] The outermost cortical layer of the root corresponding to the hypoderma of the stem. See *hypoderma*.

exogamy, *n.* **2.** In *bot.*, the tendency of closely allied gametes to avoid pairing.

exogastric (ek-sō-gas'trik), *a.* [Gr. *ἔξω*, without, + *γαστήρ*, the belly.] In the tetrabranchiate cephalopods, having the ventral sinus on the arched external side of the shell, as in the *Nautilus*: contrasted with ★*endogastric* (which see).

exogastrula (ek-sō-gas'trọ̈-lạ̈), *n.*; pl. *exogastrulæ* (-lē). [NL., ⟨Gr. *ἔξω*, outside, + NL. *gastrula.*] An abnormal kind of gastrula, produced by a bulging out (instead of an invagination) of the vegetative pole of the blastula.

exogenesis (ek-sō-jen'e-sis), *n.* [NL., ⟨ Gr. *ἔξω*, outside, + *γένεσις*, origin.] Origin from without: said of a disease arising from external causes. *Jour. Trop. Med.*, July 15, 1903, p. 227.

exogenic (ek-sō-jen'ik), *a.* [As *exogen* + *-ic.*] Originating outside of the body; exogenetic.

exogenous, *a.* **3.** In *geol.*, applied by Von Humboldt to extrusive, volcanic rocks, in contrast to *endogenous* rocks. See ★*endogenous*, 3.

exogeny (ek-soj'e-ni), *n.* [Gr. *ἔξω*, outside, + *-γενεια*, ⟨ *-γένης*, -born.] **1.** Same as *exogamy*.—**2.** In sporozoans, sporulation taking place after the cyst has left the host, as in *Gregarinida* and *Coccidiidea* generally. See ★*endogeny*.

exogynous (ek-soj'i-nus), *a.* [Gr. *ἔξω*, outside, + *γυνή*, female (style), + *-ous.*] Having the style or styles exserted.

exohysteropexy (ek-sō-his'tẹ-rō-pek-si), *n.* [Gr. *ἔξω*, outside, + *ὑστέρα*, uterus, + *πῆξις*, fastening.] In *surg.*, operative fixation of the uterus beneath the fascia of the anterior abdominal wall outside of the peritoneal cavity.

exolemma (ek-sō-lem'ạ̈), *n.*; pl. *exolemmata* (-ạ-tạ̈). [NL., ⟨ Gr. *ἔξω*, outside, + *λέμμα*, scale.] In *histol.*, a very delicate tubular sheath surrounding the endolemma, which in turn incloses the axial fiber in the tail of certain spermatozoa, like those of *Helix pomatia*.

exometritis (ek"sō-mē-trī'tis), *n.* [NL., ⟨ Gr. *ἔξω*, outside, + *μήτρα*, uterus, + *-itis.*] Inflammation of the peritoneal covering of the uterus.

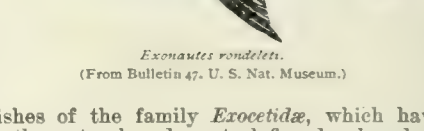
exomorphic (ek-sō-môr'fik), *a.* [*exomorph(ism)* + *-ic.*] In *petrog.*, belonging to or having the characters of exomorphism. *Amer. Jour. Sci.*, April, 1903, p. 280.

exomorphism (ek-sō-môr'fizm), *n.* [Gr. *ἔξω*, outside, + *μορφή*, form, + *-ism.*] In *petrog.*, that variety of contact-metamorphism which is developed, in the surrounding walls, by an intruded mass of eruptive rock. The commoner changes produced in the metamorphosed rock are induration and cementation in some cases, recrystallization (the conversion of carbonates into silicates) in others, etc.: contrasted with ★*endomorphism*, or the effects, chiefly those of chilling, produced upon the border of the eruptive itself.

exomphalous (ek-som'fạ-lus), *a.* [Gr. *ἐξόμφαλος*, having a prominent navel, ⟨ *ἐξ*, out, + *ὀμφαλός*, navel.] Relating to or having an umbilical hernia or projecting navel. *N. E. D.*

Exon[2] (ek'son), *n.* [NL. *Exonia*, Exeter.] A native or inhabitant of Exeter, England.

Exonautes (ek-sō-nâ'tez), *n.* [NL., ⟨ Gr. *ἔξω*, outside, + *ναύτης*, sailor.] A genus of flying-


Exonautes rondeleti.
(From Bulletin 47, U. S. Nat. Museum.)

fishes of the family *Exocetidæ*, which have both pectoral and ventral fins developed as wings and the anal fin as long as the dorsal. *E. rondeleti* is a common species of the Atlantic.

exophoria (ek-sō-fō'ri-ạ̈), *n.* [Gr. *ἔξω*, outside, + *-φορια*, ⟨ *-φορος*, ⟨ *φέρειν*, bear.] A condition depending upon imbalance of the ocular muscles in which there is a tendency to divergence of the visual axes, not amounting to actual divergent strabismus. *Med. Record*, April 18, 1903, p. 607.

exophoric (ek-sō-fō'rik), *a.* Relating to or characterized by exophoria.

exoplutonic (ek"sō-plọ̈-ton'ik), *a.* [Gr. *ἔξω*, outside, + E. *plutonic.*] In *geol.*, formed or made up of originally plastic rock-material

that has been extruded, intruded, or protruded from deep-seated subcrustal sources. **Exoplutonic hypothesis**, the assumed exoplutonic origin of certain rocks.

exoplutonism (ek-sō-plō'tō-nizm), *n.* The process of forming or exposing rock-formations by exoplutonic activity.

exopod (ex'ō-pod), *n.* [Gr. ἔξω, outside, + πους (ποδ-), foot.] An exopodite.

Exopterygota (ek″sop-ter-i-gō'tă), *n. pl.* [NL., < Gr. ἔξω, outside, + πτερυγωτός, winged.] A superorder of insects characterized by having all stages of wing development entirely external. It includes the *Orthoptera*, *Odonata*, *Hemiptera*, and related orders.

exopterygote (ek-sop-ter'i-gōt), *a.* and *n.* [Gr. ἔξω, outside, + πτερυγωτός, winged.] **I.** *a.* Pertaining to or having the characters of the *Exopterygota*; having the wings developed outside of the body.

II. *n.* A member of the *Exopterygota*.

exopterygotic (ek″sop-ter-i-got'ik), *a.* Same as ★*exopterygote*.

exopterygotism (ek″sop-ter'i-gō-tizm), *n.* The development of wings outside the body, as with the *Exopterygota*. *Encyc. Brit.*, XXIX. 503.

exopterygotous (ek″sop-ter-i-gō'tus), *a.* Same as ★*exopterygote*.

exorbital (ek-sôr'bi-tal), *a.* [L. *ex*, out, + *orbita*, orbit, + *-al*.] External to or beyond the orbit: as, *exorbital* protrusion of the eyeball.

exorcistic (ek-sôr-sis'tik), *a.* [*exorcist* + *-ic*.] Of or pertaining to an exorcist, or exorcism: used or practised by exorcists: as *exorcistic* adjurations.

exorcize, *v. t.* Another spelling of *exorcise*.

exosepsis (ek-sō-sep'sis), *n.* [NL., < Gr. ἔξω, outside, + σῆψις, putrefaction: see *sepsis*.] Sepsis excited by a poison introduced from without, as opposed to ★*endosepsis* or ★*autotoxemia*.

exoseptum (ek-sō-sep'tum), *n.*; pl. *exosepta* (-tă). [NL., < Gr. ἔξω, outside, + L. *septum*, *sæptum*, partition.] One of the calcareous septa which make their appearance in an exocœle of a coral polyp. *Biol. Bulletin*, July, 1904, p. 82.

exosporangial (ek″sō-spō-ran'ji-al), *a.* Having the sporogenic organs without an integument of hyphæ, as in fungi of the family *Mucoraceæ*.

Antithetical to these are the remaining, or *exosporangial*, Zygomycetes, as they were termed by Brefeld.
Lafar (trans.), Technical Mycology, II. 66.

exostosis, *n.*—**Ivory exostosis**, a bony tumor of extreme density.

exostra (ek-sos'trä), *n.*; pl. *exostræ* (-trē). [L., < Gr. ἐξώστρα, < ἐξώθειν, thrust out, < ἐξ, out, + ὠθεῖν, thrust.] In *Gr. antiq.*: (*a*) A theatrical machine, representing a movable chamber, which was wheeled out through one of the stage-entrances. (*b*) A bridge used in attacking a fortified town.

exotentacle (ek-sō-ten'ta-kl), *n.* [Gr. ἔξω, outside, + NL. *tentaculum*, tentacle.] In actinians, a tentacle arising from an exocœle.

It is worthy of note in this connection that the *exotentacles* in *Siderastrea radians* have been found to appear throughout in advance of the entotentacles, being the only zoantharian in which this relationship is known to occur.
Biol. Bulletin, July, 1904, p. 88.

exotherm (ek'sō-thèrm), *n.* [Gr. ἔξω, without, + θέρμη, heat.] In *chem.*, a compound substance in the formation of which from its constituents heat is evolved, and in its decomposition, energy (frequently heat) is absorbed.

exothyropexy (ek″sō-thī'rō-pek-si), *n.* [Gr. ἔξω, outside, + θύρα, door (see *thyroid*), + πῆξις, fastening.] Dissection of the thyroid gland from its bed and fixation of it on the surface: an operation for the relief of goiter, by inducing atrophy of the thyroid gland without its entire destruction.

exotospore (ek-sō'tō-spōr), *n.* [Gr. ἐξωτ(ικός), foreign (see *exotic*), + σπορά, seed (spore).] One of the minute bodies (sporozoites) which form a stage in the development of malarial parasites, introduced into the body by the bite of a mosquito (*Anopheles*). Each is slender, almost filamentous in shape, sharply pointed at each end, and thicker in the middle where the nucleus is lodged. *Lankester.*

Exotospores. (From Lankester's "Zoology.")

exotropia (ek-sō-trō'pi-ä), *n.* [NL., < Gr. ἔξω, outside, + -τροπια, < -τροπος, < τρέπειν, turn.] An exaggerated exophoria amounting to actual divergent strabismus or walleye.

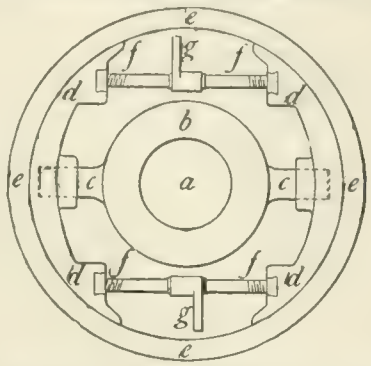
exotropic (ek-sō-trop'ik), *a.* [Gr. ἔξω, out, + -τροπος, < τρέπειν, turn: see *tropic*.] In *bot.*, tending to grow away: said of lateral roots with relation to the main root or to that next higher in order than themselves.

exotropism (ek-sot'rō-pizm), *n.* [*exotrop-ic* + *-ism*.] In *bot.*, the property of being exotropic.

exp. An abbreviation (*a*) of *ex parte*; (*b*) of *expired*; (*c*) of *export*; (*d*) of *express*.

expand, *v.* **I.** *trans.*—**Expanded metal.** See ★*metal*.

II. *intrans.* **Expanding brake.** See ★*brake*. **Expanding clutch**, a friction-clutch in which the contact is obtained by expanding or forcing radially outward



Expanding Clutch.

a, shaft; *b*, hub keyed or otherwise fastened to *a*; *c*, *c*, arms or spider fitting loosely in the pads or drum segments *d*, *d*, so that the latter may move radially outward; *e*, *e*, *e*, *e*, the internal ring surface or drum against which *d*, *d*, *d*, *d*, press and to which is attached the part to be driven from *a* when the clutch is engaged; *f*, *f*, right- and left-hand screws by which *d*, *d*, *d*, *d*, are separated or brought together; *g*, *g*, arms by which *f*, *f*, are turned through the angles necessary by means of an external lever (not shown).

a part which bears against the inner cylindrical surface of a rim. The expanding is usually done by pushing a cone between the parts it is desired to force outward, or by wedging apart the segments of a cylinder which is split at one or more points to allow this action.—**Expanding cultivator, hanger, pulley.** See ★*cultivator*, etc.

expander, *n.* **2.** A tool used to secure a tube in a plate or sheet so that the joint shall be steam- or water-tight under pressure. The tube is inserted in the hole, which it fits closely but so as to slide or be driven into place. Then within the tube is inserted the expander, having rollers which can be forced out radially against the inside of the tube while they are revolved in place. This pressure rolling-action enlarges the tube and forces its outer surface against the walls of the hole. The end of the tube is usually also headed over.

expansion, *n.* **7.** In *ship-building*, a drawing in which a curved or warped surface, as a ship's outside plating or a longitudinal, is laid out or expanded on a plane surface by conventional methods to show approximately the true relations and dimensions of the parts.—**Adiabatic expansion**, the increase in volume of a gas when no heat is added to it from without to do the mechanical work of overcoming the external resistance, so that the gas has less intrinsic energy than when expansion began. The gas will be at a lower temperature at the end of the expansion than when it began, and hence the pressure will be less for a given increase of volume than in isothermal expansion.—**Expansion by stages**, the process of expansion used in compound engines in which the gas or vapor is introduced successively into cylinders of greater and greater size as the pressure decreases. The process is called *two-stage expansion*, *three-stage expansion*, etc., according to the number of stages.—**Initial expansion**, the expansion of water into steam which occurs in a boiler when the valve is opened to supply steam to the engine-cylinder. It is an amount sufficient to fill the cylinder and its clearance-volume up to the point at which cut-off takes place.—**Irreversible expansion**, an expansion which takes place in such a manner that, by reversing the operation, compression will not be obtained; so, the expansion of steam through a nozle is a case of irreversible expansion.—**Isothermal expansion**, the increase or volume of a gas when the pressure varies inversely as the volume, and the temperature is kept constant during all such changes. The gas follows the law of Mariotte or Boyle.

The ideal motor for using compressed air is one which will supply heat to the air as it is required in expanding. This is called *Isothermal Expansion*, and is often attained, and sometimes exceeded, in practice by supplying heat artificially. *Encyc. Brit.*, XXXI. 899.

Maclaurin expansion. Same as *Maclaurin's theorem* (which see, under *theorem*).

expansion-box (eks-pan'shon-boks), *n.* A reservoir placed in a gas-line close to an engine to assist in maintaining a steady flow of gas through the pipe and to check pulsations in the pipe-line which supplies other apparatus.

expansion-cock (eks-pan'shon-kok), *n.* A valve or cock for regulating the flow of a gas so as to provide for a given amount of expansion when it has passed the valve. Such expansion-cocks are used for regulating the expansion of ammonia in a refrigerating-system.

expansion-coupling (eks-pan'shon-kup″ling), *n.* An expansion-joint; a device for connecting two lengths of pipe so that they are free to expand and contract as the temperature changes.

expansion-fabric (eks-pan'shon-fab″rik), *n.* In *petrog.*, the arrangement of microscopic crystals in a layer about a phenocryst in a porphyritic rock, indicating that they have been crowded back into the solution by the expansion of the phenocryst in crystallizing. *Pirsson*, 1899.

expansionism (eks-pan'shon-izm), *n.* [*expansion* + *-ism*.] A policy of (territorial) expansion.

expansionist (eks-pan'shon-ist), *n.* One who favors expansion, as of the currency, or the extension of national territory; one who advocates the annexation of outlying territory.

expansion-plate (eks-pan'shon-plāt), *n* Same as ★*hook-plate*.

expansion-rate (eks-pan'shon-rāt), *n.* The change of volume of an expanding substance divided by the time required for the change. If dv is the change of volume occurring in a short interval of time dt, then $\frac{dv}{dt}$ is the *expansion-rate*.

expansion-ratio (eks-pan'shon-rā″shiō), *n.* The ratio of the volume of a gas or vapor, such as steam in a thermal engine, after expansion to the volume before expansion began.

expansion-roller (eks-pan'shon-rō″lèr), *n.* A roller placed under one end of a truss of a bridge, boiler, or roof (the other end of which is fastened) to allow the structure to expand or contract freely with changes of temperature: also used under long pipe-lines for the same purpose.

expansion-shaft (eks-pan'shon-shâft), *n.* A shaft in the valve-gearing of certain forms of engines which is regulated by the governor so as to determine the point of cut-off and the degree of expansive working of the steam in the cylinder.

expansion-slide (eks-pan'shon-slīd), *n.* A slide or valve on the back of the main valve of an engine, for cutting off the steam earlier and more sharply than is done by the main slide-valve, and causing a greater degree of expansive working of the steam than would be secured by the main valve.

expansion-tank (eks-pan'shon-tangk), *n.* In a hot-water heating-system, a sheet-metal vessel placed at the highest point in the pipe-system and open at the top to the atmosphere. It is kept partly filled with water to unite the flow and return water, and, at the same time, to give the whole mass of water in all the pipes room to expand under the influence of heat. It is fitted with a glass water-gage and supply- and overflow-pipes.

expansion-trap (eks-pan'shon-trap), *n.* A device for separating water of condensation from steam which uses the unequal expansion of metals by heat as a means of opening or closing the inlet-valve. A rod immersed in the water is cooled and shortened or deflected, opening the valve and allowing the accumulated water to flow out; when the water has been discharged and steam replaces it, the rod expands or bends in the other direction and closes the valve. A tube may be used instead of a rod, or a compound rod or tube made of two metals.

expansion-trunk (eks-pan'shon-trungk), *n.* In *ship-building*, a trunk at the top of each tank-compartment of a vessel which carries oil or other liquids in bulk. In such vessels, in order to avoid the shocks on the bulkheads and deck and the loss of stability due to the motion of a liquid with a free surface, the large compartments must be completely filled. The trunk extending above the compartment is of comparatively small area and is partly filled with the liquid, the level of which rises or falls in it with change of volume of the liquid due to changes of temperature. The trunk thus acts as a feeder to the tank-compartment.

expansion-valve, *n.* **2.** Same as ★*expansion-cock*.

expansometer (eks-pan-som'e-tèr), *n.* An instrument for the determination of coefficients of expansions; a ★dilatometer (which see).

expectation, *n.*—**Curtate expectation of life**, a simplified formula of life-expectancy which deals only with complete years, and is computed to be about six months less than the actual expectancy in any individual case. **Error of expectation.** See ★*error*.

expectoration, *n.*—**Prune-juice expectoration**, matter of a dark purplish color, due to admixture of blood, expectorated in certain cases of cancer or destructive inflammation of the lungs.

expectorator (eks-pek'tō-rā-tor), *n.* One who expectorates.

expense (eks-pens'), *v. t.*; pret. and pp. *expensed*, ppr. *expensing*. To charge or debit

with an item of incurred expense to be collected from the proper party and accounted for by the chargee: used chiefly in dealings between express or railway companies or their agencies.

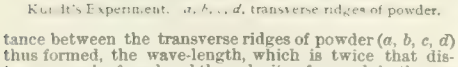
expensilation (eks-pen-si-lā'shon), *n.* [NL. *expensilatio(n-)*, in LL. prop. two words, *expensi latio(n-)*, a setting down of expense: *expensi*, gen. of *expensum*, expense; *latio(n-)*, bearing, setting. Cf. *acceptilation*.] In *Rom. law*, the merging of an existing indebtedness into a new and more formal contract or obligation.

expenthesis (eks-pen'the-sis), *n.* [Appar. an arbitrary fusion of *exp(ansion)* + Gr. *ἐνθεσις*, insertion.] The lengthening of a word by the use of affixes. Compare *epenthesis*. *S. S. Haldeman*, Analyt. Orthog.

experiment, *n.*—**Aristotelian experiment,** an experiment in which a bead held between the tips of the first and second fingers is felt as one if the fingers are parallel, but as two if they are crossed. **Blank experiment,** in *psychophys.*, an experiment, irregularly introduced in a regular series of observations, to test the bias of the observer. Also termed, under different circumstances, *catch experiment*, *puzzle experiment*, *test experiment*.

Go to all psychological books, to see if they contain any reference to mental measurement, and the metric methods, and the *blank experiment*, and so forth.
Amer. Jour. Psychol., XIV. 86.

Cornu's experiments. See *velocity of* ★*light*.—**Experiment area,** a forest area of known size upon which successive measurements or other detailed studies are made for the determination of the growth and behavior of the stand, or upon which experiments are conducted to ascertain the effect of methods of treatment upon the forest. See ★*valuation area*.—**Experiment station.** An establishment in which experiments are systematically carried on in a particular line of research or activity. See ★*agricultural experiment station*.—**Fechner's cloud experiment,** in *psychophys.*, an experiment for demonstrating the sensible equality of just noticeable differences of sensation at various points of the brightness scale. Two clouds are found, in a clouded sky, which present to the naked eye a barely discernible difference of brightness. The difference remains just perceptible when the clouds are viewed through gray glasses of various shades of darkness. *E. B. Titchener*, Exper. Psychol., II. i. 29.—**Fechner's paradoxical experiment,** in *psychophys.*, an experiment which shows that, under certain conditions, the removal of a part of the stimulus received by the total visual apparatus increases the intensity of sensation. "Look at a uniformly illuminated surface. Now bring before one eye a darkened glass: the binocular field is darkened. Close the eye behind the dark glass: the field becomes noticeably brighter. The explanation is probably that, in the first part of the experiment, the monocular fields are not too different to blend to an average result; whereas, in the second part, the bright field wholly suppresses the dark." *E. C. Sanford*, Exper. Psychol., p. 169.—**Fechner's shadow experiment,** in *psychophys.*, an experiment for demonstrating the sensible equality of just noticeable differences of sensation at various points of the brightness scale. A Rumford photometer is so arranged that one of the two shadows on the screen is barely different from the background of the screen itself. The shadow remains just perceptible when viewed through gray glasses of various shades of darkness. *E. B. Titchener*, Exper. Psychol., II. i. 31.—**Fick's inspiration experiment,** in *psychophys.*, an experiment which indicates the relation of the field of smell to the field of breathing: devised by A. Fick in 1864. "Introduce an olfactory stimulus — *e. g.*, the pointed end of a paper funnel held over some scented object — into the posterior half of the nostril, and you smell nothing at all; shift the stimulus to the anterior half of the nostril, and you get an intensive smell sensation. *E. B. Titchener*, Exper. Psychol., I. ii. 118.—**Inclining experiment,** in *naval arch.*, the inclining of a vessel by known weights moved across the deck for known distances, thus giving the ship an angular inclination which is measured by suitable instruments. The draft of the vessel, and, from it, the displacement and position of the metacenter, being known, the position of the center of gravity of the ship and its contained weights can be determined from the data obtained by the experiment.—**Kundt's experiment,** in *acoustics*, an experiment in which a system of standing sound-waves is produced in a horizontal glass tube by means of the longitudinal vibrations of a rod attached to a plunger in one end of the tube, and the length of the waves is indicated by the gathering of a light powder placed in the tube, at the loops. By measuring the dis-

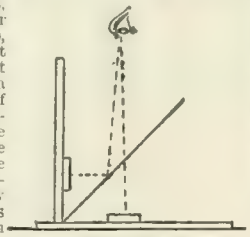


Kundt's Experiment. *a, b, c, d*, transverse ridges of powder.

tance between the transverse ridges of powder (*a, b, c, d*) thus formed, the wave-length, which is twice that distance, may be found and the velocity of sound in the gas within the tube may be computed.—**Mariotte's experiment,** a method of determining the blind spot in the eye: demonstrated by Mariotte to Charles II. in 1668. A black spot on a white ground, or the reverse, is placed on the wall; then if one stands a little to the left of it and looks straight ahead at the wall with the right eye, the left being closed, and slowly steps backward, at a certain time the image of the spot will disappear when the rays from it impinge upon the blind spot in the retina.—**Melde's experiment,** in *acoustics*, an experiment in which one end of a flexible cord is attached to the vibrating prong of a tuning-fork and the cord is stretched by the application of

Melde's Experiment.

weight to the free end. At certain degrees of tension, depending upon the frequency of the fork and the weight and length of the cord, the latter vibrates in parts showing well-defined loops and nodes. **Meyer's experiment,** in *psychophys.*, an experiment in visual contrast. A strip of gray paper is laid upon a colored background, and the whole is covered with white tissue-paper. The elimination of contours by the tissue-paper enhances the contrast effect. The experiment was described by H. Meyer in 1855. **Michelson's experiments.** See *velocity of* ★*light*. **Ragona-Scinà's experiment,** in *psychophys.*, an experiment in visual contrast. Two white cards, carrying black figures (for example concentric circles), are set together at a right angle. Between them, at an angle of 45°, is placed a sheet of colored glass. If one looks down at the horizontal card through the glass, the one black figure appears tinged with the antagonistic color. The experiment was described by Scinà in 1859.—**Wundt's mirror experiment,** in *psychophys.*, an experiment, described by Wundt in 1862, for the demonstration and analysis of the perception of transparency (reflection in a mirror, the seeing of an object through or behind another object). The apparatus employed is of the same type as that used in Ragona-Scinà's contrast experiment.


Ragona-Scinà's Experiment

experimental, *a.* **3.** Of the nature of an experiment; characterized by experimentation; tentative: as, the *experimental* stage in the production of an invention, when it is being tested or examined to discover its uses and its behavior under commercial conditions or usage; an *experimental* scale, a limited or small scale. **Experimental geology, pathology.** See ★*geology*, ★*pathology*.

experimentalism (eks-per-i-men'tal-izm), *n.* **1.** That philosophy which regards observation of fact as affording the only assurance of positive truth, as distinguished from mere mathematical truth; the philosophy which was naturally developed out of the prosecution of the experimental sciences; the school of English philosophy of Locke, Berkeley, Hartley, the Mills, and others, together with Hume.—**2.** Experimental research in some branch of science.

expertise (eks-per-tēz'), *n.* [F., in OF. *espertise*, < *expert*, *espert*, expert.] An examination by experts; a survey by a board of skilled examiners of any obscure or doubtful case in order to establish a foundation upon which the court may base an intelligent and definite judgment.

expiation, *n.*—**Fast of expiation.** See ★*fast*[3].

expirate (ek'spi-rāt), *a.* [L. *exspiratus*, breathed out, pp. of *expirare*, breathe out: see *expire*.] In *phonol.*, that is the result of or is accompanied by expiration or outbreathing.

Ordinary speech is generally *expirate* in European languages. *Yale Psychol. Studies*, 1902, p. 103.

expiration, *n.*—**Expiration group,** in *phonol.*, a sequence of sounds limited by pauses. *Yale Psychol. Studies*, 1901, p. 75.—**Expiration interval,** in *phonol.*, the period of a sequence of sounds limited by pauses; the duration of an expiration group.

expiree (ek-spī-rē'), *n.* [*expire* + *-ee*[1].] One whose term has expired; specifically, a convict whose term of imprisonment or transportation has expired. [Australia.]

explemental (eks-plē-men'tal), *a.* [*explement* + *-al*[1].] Of the nature of an explement; specifically, designating: (*a*) two arcs which together complete the circle; (*b*) an arc which with a given arc completes the circle; (*c*) two sects which together complete the straight; (*d*) a sect which with a given sect completes the straight.

explicit (eks'pli-sit), *n.* [*explicit*[2], *v.*] The concluding words of a book or section of a book. See the quotation under ★*incipit*.

exploder, *n.* **3.** *Milit.*, a device for exploding gunpowder or a high explosive; a primer. —**Mowbray's exploder,** an apparatus for use in blasting which fires the charge by means of static electricity. It is put up, for convenient transport, in a wooden case shaped like a small barrel and furnished with a handle by which it may be carried. Hence it is sometimes called the *powder-keg exploder*.

exploit, *v. t.* **4.** To work (as a mine, etc.); to turn to industrial use.

explorer, *n.*—**Linear explorer,** a device for indicating or recording the linear oscillations of a moving railway-car or other vehicle.

exploring-coil (eks-plōr'ing-koil), *n.* In *elect.*, a coil of wire which is connected to a measuring-instrument and is used to investigate magnetic fields, etc., by observing the electromotive force induced in the coil or its change of resistance when placed in the field.

exploring-needle (eks-plōr'ing-nē"dl), *n.* A sharp-pointed needle with a longitudinal groove which is thrust into a tumor and, on withdrawal, may engage in the groove sufficient pus or other soft contents of the swelling to permit of a diagnosis.

exploring-tambour (eks-plōr'ing-tam'bör), *n.* An apparatus used to record the respiratory movements of the chest.

explosion, *n.*—**Detonative explosion,** an explosion produced, not by the application of flame or a heated body, but by shock, usually from the discharge of a small primer charge of fulminating mercury. **Wave of explosion.** See ★*wave*[1].

explosion-bomb (eks-plō'zhon-bom), *n.* In *thermochem.*, a form of calorimeter used for the determination of heats of combustion. It consists of a steel vessel within which are placed a small amount of the substance to be oxidized and oxygen enough to insure complete combustion. Ignition is secured by sending a strong electric current through an iron wire. The heat evolved is measured by the rise in temperature of a water-bath in which the bomb is submerged.

explosion-chamber (eks-plō'zhon-chām"bèr), *n.* A chamber at the end of the cylinder of an internal-combustion engine where the charge is compressed and ignited; the clearance-space of an internal-combustion engine.

explosion-engine (eks-plō'zhon-en"jin), *n.* A form of internal-combustion engine in which the mixture of fuel and air is drawn into the cylinder in such proportions that, when ignited, combination with the oxygen takes place so rapidly and concussively as to produce a report. The modern engines which compress the mixture before igniting it are not explosive in this sense, but are practically silent.

explosion-lake (eks-plō'zhon-lāk), *n.* A lake which occupies a volcanic crater or caldera.

explosion-motor (eks-plō'zhon-mō"tor), *n.* Same as ★*explosion-engine*.

explosion-pipette (eks-plō'zhon-pi-pet"), *n.* A pipette of stout glass, of some suitable shape, having two platinum electrodes so sealed in that an electric spark may be made to cross the gap between them and thus ignite an explosive mixture of gases contained in the pipette. *M. W. Travers*, Exper. Study of Gases, p. 136.

explosive. **I.** *a.*—**Explosive speech.** See ★*speech*.

II. *n.* **1.** The principal classes of explosive substances are: (*a*) gunpowder; (*b*) nitroglycerin and its compounds, the most important being dynamite; (*c*) guncotton and similar nitro-substitution compounds; (*d*) picric acid and the picrates; (*e*) fulminates; (*f*) Sprengel safety-mixtures; (*g*) nitrate mixtures other than gunpowder, and chlorate mixtures. There are many varieties of each class.—**Amino explosive.** See ★*amino*.—**Explosive D,** a high explosive consisting largely of picric acid: used in the United States land service as a bursting-charge for shell.—**Favier explosives,** explosive agents patented by Favier in Belgium, consisting chiefly of a mixture of alkaline nitrates and nitronaphthalene. Poudre Favier No. 1 contains ammonium nitrate and dinitronaphthalene; No. 2, ammonium nitrate, sodium nitrate, and dinitronaphthalene; and No. 3, sodium nitrate and mononitronaphthalene. These explosives are not readily fired by accidental shock, require heavy detonators to explode them, and, in the case of those containing ammonium nitrate, are very liable to injury by absorption of moisture in storage.—**Parone's explosive,** an explosive agent which consists of two parts of potassium chlorate and one of carbon disulphid.—**Phonic explosives,** consonants uttered with vocal-chord action, as *b, d, g*.—**Sprengel explosives,** a class of explosive materials proposed by D. H. Sprengel in 1873, which involve the principle of mixing just before use a combustible with an oxidizing substance, neither of these being explosive in the separate state. Some of the mixtures proposed were open to serious objection, as, for instance, petroleum or carbon disulphid mixed with liquid nitrogen tetroxid, but some useful mixtures have been devised, notably that known as *rend-rock* or *racka-rock* (which see).

Exponent of a ratio, the number of times the consequent is contained in the antecedent.—**Exponent of irregularity of a permutation,** the number of cycles in it.

exponentially (eks-pō-nen'shal-i), *adv.* By exponentials.

exponentiation (eks-pō-nen-si-ā'shon), *n.* [*exponent* + *-i-* + *-ation*.] The act of affecting with an exponent or index.

Moreover *exponentiation* unavoidably introduces ordinal notions, since a^b is not in general equal to b^a.
A. W. B. Russell, Prin. of Math., p. 120.

Export duty. See ★*duty*.

exposit (eks-poz'it), *v. t.* [L. *expositus*, pp. of *exponere*, set forth: see *expound*, *exposition*.] To expound; explain or interpret.

exposition, *n.* **7.** In *music*: (*a*) The act, process, or result of presenting or enunciating the themes or subjects of a composition. (*b*) Specifically, the opening section of a fugue or a sonata, in which the subject or subjects are first set forth: often called the *exposition section*.—**8.** That sort of setting forth of a pur-

pose or general idea which consists in showing how the purpose or idea will apply to particular cases.

exposure, *n.* **7.** In *meteor.*, the method of placing any instrument so that it shall correctly measure a given meteorological element. A barometer should be so placed as to indicate the pressure prevailing in the free air at a given level. If the wind is blowing the instrument, or the house in which it is placed, becomes an obstacle to the wind, by which the pressure is increased on the windward and diminished on the leeward side; similarly, in a wind, an open chimney in a closed room causes a lowering of the pressure, while a window opened on the windward side causes an increase. In general, a barometer, whether mercurial or aneroid, should be so placed that the wind-effect may be annulled or measured and allowed for. The latter is accomplished by the ★anemobarometer (which see). In order that a thermometer shall indicate truly the temperature of the air, it must receive heat from the air by convection and conduction, but all radiation from other objects should be cut off except from those having the same temperature as the air. When a thermometer is hung in the open air in the shade, it is usually exposed to radiant heat from the soil, buildings, and clouds, and to reflections of the rays of the sun; it also radiates its own heat to cold objects and to the sky. Its temperature represents a balance between its momentary gain and loss of heat, and has little to do with the temperature of the adjacent air unless the wind is blowing strongly enough. When held in the shadow of a wall or tree, its temperature is usually somewhat lower than when it is moved a few inches farther on into the full sunshine, although the temperature of the air is the same in both places. A common method of exposure is to place the thermometer within a screen or so-called thermometer-shelter made of light slats overlapping each other so as to cut out direct sunlight but allow the free entrance of the wind. This method fails if the wind fails to keep the interior surfaces of the shelter at the true air-temperature, for, in general, the temperature of these surfaces lags behind the temperature of the air. By rapidly whirling a thermometer or by creating a rapid current past it, the convection may be increased to such an extent as to bring the thermometer to the temperature of the air within a very small limit. Numerous methods of effecting this have been devised and employed.

8. In *forestry*, see ★*aspect*, 9.—**Sod-exposure,** the location of a thermometer-shelter, or the exposure of a thermometer, over a large expanse of grass-covered soil rather than over the tinned surface of a roof or the hot sandy or rocky surface of a plain.

express, *v. t.* **9.** In *math.*, to give or represent by means of a figure, graph, symbol, or function. **To express y in terms of x,** to give explicitly fx for $y = fx$.

express. I. *a.*—**Express warranty.** See ★*warranty.*

II. *n.* **Limited express,** an express train having accommodations for a limited number of passengers. Very fast trains are thus limited, in order that the speed may be maintained. As originally used, the limit applied only to the number of cars. See *limited train.*—**Local express,** in *railroading*, a train scheduled to run a certain distance (for example, over one division) as an express and then to run as a local train, making all stops. [U. S.] **Pony express,** rapid transit by relays of ponies: the system in use in the United States for the conveyance of the mails across the western prairies before through railway-communication was established in 1869.

express-buggy (eks-pres′bug″i), *n.* A buggy of which the body is made in imitation of that of an express-wagon.

expression, *n.*—**Method of expression:** (*a*) In *psychol.*, a method for the study of mental processes by means of their concomitant physiological phenomena; specifically, a method for the study of affective processes by means of such physiological phenomena. The method covers the use of instruments such as the automatograph, plethysmograph, sphygmograph, dynamograph, and pneumograph, which record changes of muscular innervation, voluntary or involuntary. Opposed to it, in the psychology of the affective processes, is the method of impression, in which stimuli are presented to the observer in pairs or series, and their affective value is noted by introspection. The method of expression itself involves introspection, since this alone can guarantee the nature of the experience which the recorded physiological changes serve to 'express.' (*b*) In *obstet.*: (1) *Credé's method*, compression of the flaccid uterus by the hand externally applied in order to express the placenta after the birth of the child. (2) *Kristeller's method*, pressure and friction of the uterus made by the hand on the abdominal wall, in order to hasten the birth of the child.

expressionism (eks-presh′on-izm), *n.* [*expression* + *-ism.*] The methods or style of the expressionists.

expressionist (eks-presh′on-ist), *n.* [*expression* + *-ist.*] An artist who aims chiefly to give expression to the emotions or passions.

expressive, *a.*—**Expressive method,** in *psychol.*, same as *method of* ★*expression.*

express-pump (eks-pres′pump), *n.* A high-speed pump; one that makes a high number of strokes per minute.

express-wagon, *n.* **2.** A wagon with a body framed to show parallel and upright ribs outside of the panel.

exquisit, *a.* and *n.* A simplified spelling of *exquisite.*

exr. A contraction of *executor.*

exradio (eks-rā′di-ō), *n.* [NL. *exradio* (*exradion-*?) (preferably **exradium*), from the phrase *ex radio*, 'from radium': see *ex* and ★*radium.*] The name proposed by Sir William Ramsay for the radioactive, gaseous product produced by radium salts, which was first observed in 1900 by Dorn and afterward more carefully investigated by Rutherford, who called it the *radium emanation.* The name *exradio* has never received any general recognition from workers in this branch of science and its use has been abandoned by Ramsay in his recent writings which have dealt with the action of radium emanation on water and on copper salts in aqueous solutions.

Finding the name 'radium emanation' somewhat long and clumsy, Sir William Ramsay has recently suggested '*ex-radio*' as an equivalent. This name is certainly brief and is also suggestive of its origin.

Rutherford, Philos. Trans. Roy. Soc. Lond., 1904, p. 172.

exradius (eks-rā′di-us), *n.* [*ex-* + *radius.*] The radius of an escribed circle.

ex right (eks rīt). Sold without the right, usually accorded to stockholders, of having new issues first offered to them for subscription: used in stock or bond transactions.

exrupeal (eks-rū′pē-al), *n.* [L. *ex*, out, + *rupes*, rock, + *-al*[1].] In *ichth.*, the pterotic, the most lateral of the posterior bones of the cranium. *Starks*, Synonymy of the Fish Skeleton, p. 510.

exrx. An abbreviation of *executrix.*

exsanguination (ek-sang-gwi-nā′shon), *n.* [*exsanguine* + *-ation.*] Loss of blood; bloodlessness.

exsert (eks-sèrt′), *v. t.* [L. *exserere*, pp. *exsertus*, thrust out: see *exserted.*] To protrude or thrust out.

ex ship (eks ship). In *com.*, same as ★*ex steamer.*

ex steamer (eks stē′mèr). In *com.*, free of all expense as far as the steamer: said of commodities sold to be exported.

ex store (eks stôr). In *com.*, without free delivery after leaving the store or warehouse: said of goods for export.

exstulpate (ek′stul-pāt), *v. t.*; pret. and pp. *exstulpated*, ppr. *exstulpating.* [NL. **exstulpare*, representing G. *ausstülpen*, turn inside out, < *ex*, out, + **stulpare*, < G. *stülpen*, turn inside out.] In *zoöl.*, to extrude or push out, as an eversible papilla or other process.

exstulpation (ek-stul-pā′shon), *n.* [*exstulpate* + *-ation.*] In *zoöl.*, the act of extruding or pushing out, as an eversible papilla, or any other process.

ext. An abbreviation (*a*) in *law*, of *extended;* (*b*) of *external, externally;* (*c*) of *extinct;* (*d*) of *extra;* (*e*) of *extract.*

exta (ek′stä), *n. pl.* [L.] In *Rom. antiq.*, the internal organs from which the haruspices drew their auguries.

extasis, *n.* See *ecstasis.*

extemporaneous, *a.* **2.** In *phar.*, noting a preparation which is compounded at the time it is ordered, in distinction from a ready-made, or officinal preparation.

extensimeter (eks-ten-sim′e-tèr), *n.* Same as *extensometer.*

extension, *n.*—**Calculus of extension.** See ★*calculus.*—**Compressive extension,** a term used by T. M. Reade for the tendency of rocks, affected by increase of temperature under circumstances which prevent lateral expansion, to secure relief by flowage and anticlinal folding. *T. M. Reade*, Origin of Mountain Ranges, p. 327.—**Extension of phase,** in *statistical mech.*, a name given by J. W. Gibbs to the value of the integral

$$\int \ldots \int dp_1 \ldots dp_n\, dq_1 \ldots dq_n,$$

in which $p_1 \ldots p_n$ are the generalized momenta and $q_1 \ldots q_n$ the generalized coördinates of a system of n degrees of freedom.

extensionally (eks-ten′shon-al-i), *adv.* From the point of view of logical extension; with reference to the number of the contained individual objects: opposed to ★*intensionally.* See *extension*, 5.

A class may be defined either *extensionally*, by an enumeration of its terms, or intensionally, by the concept which denotes its terms. *Nature*, Sept. 3, 1903, p. 411.

extension-bolt (eks-ten′shon-bōlt), *n.* A long bolt for a door, controlled by a thumb-piece in a mortised plate; a long flush bolt.

extensionist (eks-ten′shon-ist), *n.* One who favors extension or expansion of any kind; an expansionist.

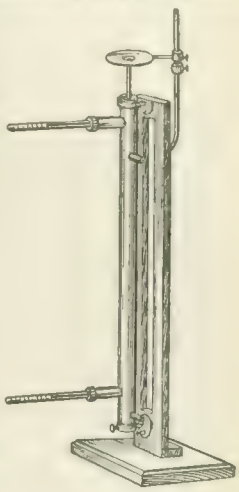
extension-ladder (eks-ten′shon-lad″èr), *n.* See *aërial* ★*truck.*

extension-lens (eks-ten′shon-lenz), *n.* A lens which can be substituted for one of the lenses in a photographic objective to increase the focal length of the combination and consequently the size of the image. *Nature*, July 17, 1902, p. 280.

extension-spring (eks-ten′shon-spring), *n.* A spiral spring designed to resist a pull or a strain in line with its length. It is made by winding wire in a tight coil, each turn of the spiral resting on the next. In use, the estimated pull must not exceed a point at which the spiral will be deformed. It is used to sustain a suspended weight or to resist any pulling strain.

extensive, *a.* **5.** In *agri.*, noting that method of farming or husbandry in which relatively small crops or returns of any kind are taken from large areas with a minimum of labor and expense. This method is profitable where land is very cheap on account of being poor or thinly settled. Opposed to ★*intensive* (which see). Also called *low farming.*—**Extensive feeling, fusion, idea.** See ★*feeling*, etc.

extensometer, *n.* In the instrument devised by Lavelle, a metal rod is surrounded by a steam jacket whose temperature is indicated by two thermometers. The lower end of the rod rests at the bottom of the jacket, while the upper end passes through a movable metal cap which acts as a support for a spherometer (not shown in cut), by means of which the expansion of the rod is accurately measured.



Extensometer.

extent, *n.* **6†.** The length and the breadth (of power, greatness, duty, or the like).

Duke. You are great in all that's good.
King. You shew the bounty
Of your opinion. My *extent* in all things
Is but to bid you welcome.
Shirley, The Royal Master, i. 1.

Illusions of extent. See ★*illusion*, 2.

Exterior polygon. See ★*polygon.*

exteriority, *n.* **3.** Exteriorization; externalization; the mental reference of sense-processes to objects in the external world. [Rare.] *N. E. D.*

exteriorize, *v. t.* **2.** To transport to some place outside of and away from the source: said of the transfer of radioactivity from the radioactive substance itself to the walls of the containing vessel. *Sci. Amer. Sup.*, Feb. 20, 1903, p. 23523.

extern, *n.* **3.** A young physician, or advanced medical student, who is a member of the medical staff in a hospital but attends only during the day, sleeping outside; also, one who cares for patients in the out-patient department or in their homes.

External association, lobe, point, segments. See ★*association*, etc.

externalist (eks-tèr′nal-ist), *n.* [*external* + *-ist.*] A partizan of the theory of the external origin of certain forms of skin-disease. *Encyc. Brit.*, XXXI. 568.

externalistic (eks-tèr-na-lis′tik), *a.* Of or pertaining to externalism; regardful of what is merely external and not essential.

externalization, *n.* **2.** That process by which a phenomenon of sensation is referred to a point in the space surrounding the body: in contradistinction to *localization*, by which the phenomenon is referred to some part of the body.

externe, *n.* See ★*extern*, 3.

externolateral (eks-tèr-nō-lat′e-ral), *a.* On the outer side.

externum (eks-tèr′num), *n.*; pl. *externa* (-nä). [NL., neut. of L. *externus*, external.] In *ichth.*, the pterygoid, a small bone connecting the palatine with the quadrate. *Starks*, Synonymy of the Fish Skeleton, p. 514.

extinction, *n.*—**Curve of extinction.** See ★*curve.*—**Extinction angle,** the angle which the extinction-direction (see *extinction*, 3) in a section of a crystal makes with some definite crystallographic line, usually either a crystallographic axis or the intersection-line of two prominent faces.

extinctive (eks-tingk′tiv), *a.* Tending to extinguish, suppress, or destroy.

extinguished (eks-ting′gwisht), *p. a.* Quenched; put out; destroyed. Specifically: (*a*) In *phar.*, rendered indistinguishable through fine subdivision: noting the condition produced by triturating mercury with lard until the metallic globules are no longer visible. (*b*) In the petrographical investigation of rocks and minerals with a polarizing microscope, noting the complete darkening of a transparent section or a bire-

fracting mineral when its axes of elasticity coincide with the planes of the crossed Nicol prisms. *Geikie*, Text-book of Geol., p. 125.

extispicium (eks-ti-spish'i-um), *n.* [L.] Same as ★*extispicy*.

extispicy (eks-stis'pi-si), *n.* [L. *extispicium*, < *exta*, entrails, + *specere*, inspect.] In *Rom. antiq.*, divination by inspection of entrails.

extra, *n.* **3.** In *cricket*, a score or run not made from the bat, as a bye or a wide: usually in plural.

extra, *adv.* Used in trade to denote a size somewhat larger than that mentioned: as, *extra* elephant folio; *extra* foolscap octavo.

extra-articular (eks″trä-är-tik'ū-lär), *a.* Outside of, or not in relation with, a joint.

extrabranchial (eks-trä-brang'ki-al), *a.* and *n.* **I.** *a.* Lying outside of or external to the branchial arches; forming the external support of the branchial septa.

Each main *extra-branchial* bar is seen to be behind the corresponding cleft, or aperture.
Trans. Zool. Soc. London, 1883, II. 419.

II. *n.* A term applied by W. K. Parker to certain cartilages which take part in the formation of supports for the divisions between the gill-chambers in tadpoles, lampreys, and sharks. In lampreys the extrabranchials are the vertical bars of the branchial basket; in sharks they are the cartilaginous bands external to the rays of the branchial septa.

The last *extra-branchial* sends off no cervicorn process, except from the transverse bars.
Trans. Zool. Soc. London, 1883, II. 420.

extrabronchial (eks-trä-brong'ki-al), *a.* Outside of, or independent of, the bronchial tubes.

extracalycinal (eks″trä-ka-lis'i-nal), *a.* Outside of the calyx; specifically, in corals, denoting growths not taking place within the calyx: as, *extracalycinal* gemmation, which takes place either from the sides of the polyp or in the cœnenchyma.

Polyps with a well-defined edge-zone send out their buds in the edge-zone, the buds being then said to be *extracalycinal*.
Philos. Trans. Roy. Soc. (London), ser. B, 1896, p. 147.

extracanonical (eks-trä-ka-non'i-kal), *a.* Being outside of the canon of Scripture: referring usually to books not included in the present canon or list of sacred books, but contemporaneous with them.

Extracapsular fracture. See ★*fracture*.

extracapsulum (eks-trä-kap'sū-lum), *n.*; pl. *extracapsula* (-lä). [NL., < *extra*, outside, + *capsula*, capsule.] The outer, jelly-like, pseudopodia-emitting portion of the sarcode body of the *Radiolaria*, which is differentiated from the inner system or capsule of tough, slimy protoplasm.

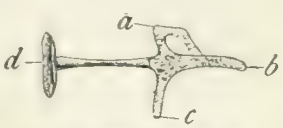
extracarpal (eks-trä-kär'pal), *a.* Lying just without the region of the wrist or carpus.

extraciliary (eks-trä-sil'i-ä-ri), *a.* Derived from the outer layer of the ciliary body of the cerebellum.

extracivical (eks-trä-siv'i-kal), *a.* That exceeds or oversteps the province, duties, or privileges of a citizen.

extracivically (eks-trä-siv'i-kal-i), *adv.* Beyond the proper sphere of citizenship.

extracolumella (eks″trä-kol-ū-mel'ä), *n.* A three-rayed cartilaginous extension of the bony columella. The direct branch is the extrastapedial, the superior branch the suprastapedial, the inferior branch the infrastapedial.



Columella bone of *Columba livia*, showing extracolumella.
a, suprastapedial, *b*, extrastapedial, *c*, infrastapedial, *d*, stapes. (From Parker and Haswell's "Zoology.")

extraconscious (eks-trä-kon'shus), *a.* Outside of, apart from, or beyond consciousness; extramental. *Science*, Feb. 1, 1901, p. 184.

extraconstellated (eks″trä-kon-stel'ä-ted), *p. a.* Not included within the boundaries of any constellation, as a star. Formerly there was a number of vacancies on the celestial sphere between certain constellations, but the boundaries of the latter have now been so modified that such vacancies no longer exist.

extracorporeal (eks″trä-kôr-pō'rē-al), *a.* Situated, existing, or occurring outside of the body: specifically applied to stages of a parasite occurring elsewhere than in a host.

extracorpuscular (eks″trä-kôr-pus'kū-lär), *a.* Situated or occurring outside of the blood-corpuscles.

extra-cover (eks'trä-kuv″ėr), *n.* In *cricket*: (*a*) A fielder who plays between cover-point and mid-off, but farther from the batsman's wicket than either; an extra cover-point. (*b*) His position in the field.

extract, *n.* **8.** Shoddy or loose wool fiber, obtained by tearing apart old cloth, from which the cotton or other vegetable fiber has been removed by means of acids and heat.—**Adrenal extract.** See ★*adrenal*.—**Chestnut extract**, an extract of tannin prepared from the wood and bark of the *Castanea vesca*, a variety of chestnut-tree. It is largely employed in the dyeing of logwood blacks upon silk and silk-and-cotton mixed goods.—**Extract of columbo**, an extract prepared from the root of African columbo, *Jateorrhiza palmata*, a bitter tonic, said to be free from tannic acid.—**Extract style.** See ★*style* 1.—**Hemlock-bark extract**, a material prepared on a large scale for tanners' use, by digesting the bark of the hemlock-spruce with hot water and evaporating the clear liquid to dryness or to the consistence of a soft paste.—**Pituitary extract.** See ★*pituitary*.—**Suprarenal extract.** Same as ★*adrenal extract*.—**Tanning extracts.** See ★*tanning*.—**Thyroid extract.** See ★*thyroid*.

extracted (eks-trak'ted), *p. a.* **1.** Produced by extraction. Specifically—**2.** Brought about by extraction, or the production of segregated descendants by Mendelian hybrids.

By pairing such hybrids with *extracted* albinos we should, in the Mendelian view, produce equal numbers of albinos and dark-eyed hybrids.
A. B. Darbishire, in Biometrika, Jan., 1905, p. 25.

Extracted honey, hybrid, recessive. See ★*honey*, etc.

extraction, *n.* **4.** The production of segregated descendants by Mendelian hybrids. *Bateson*.

extractor, *n.* (*g*) A kitchen press for extracting the juices of meats in making meat extracts, beef-tea, etc. (*h*) A machine with rollers through which skins are wrung to remove the surplus water after they have been soaked. *Flemming*, Practical Tanning, p. 2.—**Caldwell's extractor**, a simple form of apparatus used for extracting fat from milk, etc. It consists of a double-walled glass tube, the inner tube having perforations and containing the mass to be extracted. The small tube at the lower end is attached to a flask containing the boiling liquid used for extracting, while a return condenser is connected with the upper end.—**Soxhlet extractor.** See *Soxhlet's extraction* ★*apparatus*.

extract-wool (eks'trakt-wūl), *n.* Wool which has been freed from vegetable impurities by some chemical process.

extracystic (eks-trä-sis'tik), *a.* Situated outside of a cyst or a bladder. *Buck*, Med. Handbook, V. 401.

extradition (eks-tra-dish'on), *v. t.* Same as *extradite* (which see).

extradural (eks-trä-dū'ral), *a.* Situated outside of the dura mater.

extra-embryonic (eks″trä-em-bri-on'ik), *a.* Not forming a part of the embryo proper; specifically, noting that portion of the vertebrate embryo which lies outside of the umbilical stalk.

extrafascicular (eks'trä-fa-sik'ū-lär), *a.* Lying outside the vascular bundles.

In certain cases the structure was further complicated by the appearance of *extrafascicular* zones exterior to the whole stellar system. *Encyc. Brit.*, XXXI. 419.

extragenital (eks-trä-jen'i-tal), *a.* Originating or located elsewhere than in or on the genital organs.

extraglacial (eks-trä-glā'shial), *a.* Situated or occurring outside of the region occupied by a glacier. *J. Geikie*, The Great Ice Age, p. 644.

extragovernmental (eks″trä-guv-ėrn-men'tal), *a.* Being beyond the province, powers, or proper sphere of government.

extra-illustrate (eks-trä-i-lus'trāt), *v. t.* To add illustrations to (a book) after it is printed, by pasting or binding them in.

extra-illustration (eks-trä-il-us-trā'shon), *n.* Illustrations of a book after its completion, by binding in cuts or engravings.

extrajural (eks-trä-jö'ral), *a.* Same as *extra-judicial*.

extralateral (eks-trä-lat'e-ral), *a.* Situated or extending beyond the sides; specifically, noting the right of a mine-owner to the extension of a lode or vein from his claim beyond the side-lines, but within the vertical planes through the end-lines.

extralegal (eks-trä-lē'gal), *a.* Being beyond or outside of the domain of law: sometimes used in the sense of *illegal*.

extramarginal (eks-trä-mär'ji-nal), *a.* In *mental pathol.*, below the limen of consciousness; infraconscious. See the extract.

Those [disturbances] that are sub-dominant bring about *marginal* or sub-conscious psychical states, and finally those impulses or irritations which are infra-dominant act, in the psychical sphere, below the threshold of consciousness and bring about infra-conscious or *extra-marginal* psychical activities.
Buck, Med. Handbook, III. 260.

extramatrical (eks-trä-mat'ri-kal), *a.* [L. *extra*, outside, + *matrix*, matrix (the host plant), + *-al*[1].] In *bot.*, lying outside of the host plant: applied to that part of a fungus or parasitic growth which is so situated. See ★*intramatrical*.

extramental (eks-trä-men'tal), *a.* Apart from, outside of, or beyond the mind; independent of mental apprehension.

The rejection, not merely of things-in-themselves, but of *extra-mental* realities in general would imprison us within our own consciousness and make the latter coextensive with the universe.
C. A. Strong, Why the Mind has a Body, p. 214.

extrameridian (eks″trä-mē-rid'i-an), *a.* In *astron.*, not made on the meridian, as an observation; used out of the meridian, as equatorials, almucantars, etc.

extrameridional (eks-trä-mē-rid'i-ō-nal), *a.* Same as ★*extrameridian* (which see).

extrametrical (eks-trä-met'ri-kal), *a.* In *pros.*, same as *hypermetric* (which see).

extrametropolitan (eks″trä-met-rō-pol'i-tan), *a.* Beyond the limits or jurisdiction of the metropolis.

extramorainic (eks″trä-mō-rā'nik), *a.* Situated outside of or beyond the terminal moraine of a glacier: usually applied to sedimentary deposits near a moraine but not produced by the ice-sheet. *Geikie*, Text-book of Geol., p. 1339.

extranatural (eks-trä-nat'ū-ral), *a.* Outside the operation of natural laws: as, *extranatural* agencies. *Huxley*.

extrane (eks'trān), *a.* Not belonging or proper to a thing; foreign; extraneous; specifically, in *psychol.*, beyond the range of the hypnotic rapport. [Rare].

extraneous, *a.* **2.** In *music*, not belonging to a standard scale or key; chromatic.—**Extraneous body.** Same as *foreign body* (see *foreign*, 4).—**Extraneous root.** See ★*root* 1.

extra-Neptunian (eks-trä-nep-tū'ni-an), *a.* Beyond the planet Neptune; referring to objects, especially hypothetical planets, more distant than Neptune from the sun.

extra-orbital (eks-trä-ôr'bi-tal), *a.* Situated outside of the orbit (in any sense of that word).

Extraordinary index of refraction, tithe, wave. See ★*index*, ★*tithe* 1, ★*wave* 1.

extra-ovate (eks″trä-ō'vāt), *a.* and *n.* **I.** *a.* Situated outside of the ovum or egg.

II. *n.* A part of the contents of an egg extruded through a rupture in the membrane. In certain circumstances extra-ovates are capable of development.

It often happens that the *extra-ovate* receives its nucleus later, obtaining in that case a still smaller fragment, but, nevertheless, the outcome is a perfectly normal embryo. *J. Loeb*, Biol. Lectures, 1893, p. 52.

extra-ovular (eks-trä-ō'vū-lär), *a.* Outside the egg: opposed to ★*intra-ovular*.

extraparental (eks'trä-pa-ren'tal), *a.* Taking place outside the body of the parent, as the development of the majority of invertebrates.

extrapatriarchal (eks'trä-pā-tri-är'kal), *a.* Being beyond the limits of the patriarchal form of family.

extrapelvic (eks-trä-pel'vik), *a.* Being outside of, or unconnected with, the pelvis.

extraperineal (eks″trä-per-i-nē'al), *a.* Being outside of, or away from, the perineum.

extraperiosteal (eks″trä-per-i-os'tē-al), *a.* Being outside of, or independent of, the periosteum.

extraphysiological (eks″trä-fiz″i-ō-loj'i-kal), *a.* Not in accord with, or not subject to, physiological laws; non-physiological.

extraplacental (eks″trä-plä-sen'tal), *a.* Independent of the placenta.

extraplanetary (eks-trä-plan'e-tä-ri), *a.* Same as ★*ultra-planetary*.

Extrapolar region. See ★*region*.

extrapolate (eks-trap'ō-lāt), *v. t.*; pret. and pp. *extrapolated*, ppr. *extrapolating*. [*extra-* + (*inter*)*polate*.] In *math.* and *astron.*, to determine (a value or quantity) by carrying out an empirical formula beyond the limits of the data from which the formula has been deduced. The results are usually more or less doubtful. See *interpolate*.

extrapulmonary (eks-trä-pul'mō-nä-ri), *a.* Being outside of, or independent of, the lungs.—**Extrapulmonary gill.** See ★*gill* 1.

extra-red (eks-trä-red'), *a.* and *n.* **I.** *a.* Having a wave-length greater than that of the red rays of the spectrum; belonging to the infra-red portion of the spectrum.

II. *n.* The invisible portion of the spectrum which lies outside of the region occupied by the red rays and of greater wave-length.

extrasacerdotal (eks″trä-sas-ėr-dō′tal), *a.* Being outside the priestly order.

extraspectral (eks-trä-spek′tral), *a.* Beyond the boundaries of the visible spectrum: said of lines or bands lying in the infra-red or ultra-violet regions.

extrastapedial (eks-trä-stā-pē′di-al), *n.* In *ornith.*, the direct, external cartilaginous extension of the columella auris.

extratelluric (eks-trä-te-lū′rik), *a.* Not found among the constituents of the earth: as, *extratelluric* matters. *J. N. Lockyer.*

extraterrene (eks″trä-te-rēn′), *a.* Extraterrestrial.

extratheistic (eks″trä-thē-is′tik), *a.* Being outside of, or independent of, theism or theistic inquiry.

extrathermodynamic (eks″trä-thėr-mō-dī-nam′ik), *a.* Being beyond heat-energy or not due to the transformation of heat into other forms of energy, as the losses of heat by an engine which are not directly due to the work done by the engine.

extratribal (eks-trä-trī′bal), *a.* Relating to individuals or social groups outside of the tribe.

extratubal (eks-trä-tū′bal), *a.* Situated outside of a tube.

extratympanic (eks″trä-tim-pan′ik), *a.* Being outside of the tympanum or drum of the ear.

extravaginal (eks″tra-vaj′i-nal), *a.* Being outside of, or unconnected with, the vagina.

extravasate, *a.* **II.** *n.* The fluid which has been extravasated.

extravasated (eks-trav′a-sā-ted), *a.* **1.** See *extravasate.*—**2.** In *geol.*, poured forth from a subterranean source in a molten state: used in description of certain eruptive rocks.

extravasation, *n.* **2.** In *geol.*, the protrusion of molten lava, either primarily from interior reservoirs, or locally from the interior of an uncongealed flow, through cracks in its hardened crust.

extraventricular (eks″trä-ven-trik′ū-lär), *a.* Not contained in a ventricle either of the heart or of the brain.

extra-violet (eks-trä-vī′ō-let), *a.* and *n.* **I.** *a.* Of shorter wave-length than the violet-rays of the spectrum; ultra-violet.

II. *n.* All that portion of the spectrum which is of shorter wave-length than the extreme violet-rays.

extravisceral (eks″trä-vis′e-ral), *a.* In *embryol.*, not situated within the visceral arch.

extrazodiacal (eks″trä-zō-dī′a-kal), *a.* In *astron.*, situated outside the zodiac.

extreme, *n.* **Length and breadth extreme,** in *shipbuilding*, the greatest length and breadth of a vessel measured to the extreme outward portion of the hull, whether above or below water.

Extrinsic association. Same as *external* ★*association.* **Extrinsic variation.** See ★*variation.*

extro-. [A prefix: see *extra-*. Compare *intro-* and *intra-*.] A prefix occurring in a few words formed in antithesis to words in *intro-*.

extropical (eks-trop′i-kal), *a.* [*ex-* + *tropic* + *-al*[1].] Pertaining to the regions outside the tropics.

extroversate (eks-trō-vėr′sāt), *v. t.*; pret. and pp. *extroversated*, ppr. *extroversating.* [*extro-* + L. *versare*, turn: see *versant.*] To turn outward.

> The rather low, very powerful mandible is remarkable for the angular aspect of its symphysis, and of its posterior angles, which are prominent, often *extroversated*, and which extend on either side in a kind of voluminous heel.
> *Smithsonian Rep.*, 1895, p. 510.

extrovert (eks-trō-vėrt′), *v. t.* [extro- + L. *vertere*, turn.] To turn from within outward. See the extract.

> The orifice admitted the thumb with ease, and the bladder mucous membrane was *extroverted* through it.
> *Therapeutic Gazette*, Feb. 15, 1903, p. 131.

extrusive (eks-trö′siv), *a.* and *n.* [L. *extrusus*, pp. of *extrudere*, extrude, + *-ive.*] **I.** *a.* Capable of being extruded or thrust out; that tends or serves to extrude or thrust out or forth; specifically, in *petrog.*, erupted or extruded: applied to igneous rocks. Same as ★*effusive.*

II. *n.* That which is extruded; specifically, in *petrog.*, same as ★*effusive* (which see): contrasted with *intrusive.*

extubate (eks-tū′bāt), *v. t.*; pret. and pp. *extubated*, ppr. *extubating.* [L. *ex*, out, + *tubus*, tube, + *-ate*[2].] To remove the tube from (the larynx) after intubation (which see).

extubation (eks-tū-bā′shon), *n.* Extraction or expulsion of the laryngeal tube used in intubation.

Exuberant granulation. See ★*granulation.*

exudate, *v. t.* **II.** *intrans.* In *bot.*, to yield an exudate.

> Abundantly provided with sessile *exudating* glands.
> *U. S. Nat. Herb.*, VIII. 298.

Exudation vein. See ★*vein.* **Plastic exudation,** an exudation which tends to become organized.

Exurgat money. See ★*money.*

ex-votive (eks-vō′tiv), *a.* [L. *ex voto*, from a vow, + *-ive.*] A needless substitute for *votive.*

ex warehouse (eks wār′hous). In *com.*, same as ★*ex store.*

exx. A contraction of *executrix.*

ey, *n.* and *v.* A simplified spelling of *eye.*

eye[1], *n.*, **9.** (*q*) In *petrog.*, same as ★*auge*[2]. (*r*) That one of the three scars or spots at the stem end of a cocoanut at which the embryo is located. (*s*) In *painting*, the peculiar form assumed by a break in a fold of drapery; notably in the works of Dürer and the early German masters. (*t*) An opening in a heddle through which thread or yarn is drawn. (*u*) Same as ★*eye-box.*

13. In some echinoids, a minute pigmented nodule, probably without visual functions, situated at the end of an ambulacrum.—**14.** In *photog.*, the spectral range of wave-lengths to which a photographic plate or film is sensitive

> If the spectral colours of red, orange, yellow, green, blue, and violet are thrown upon an ordinary photographic plate, . . . it is at once seen that the emulsion is not sensitive to the entire range of the spectrum, and that the different colours which affect it do not do so equally with one another. This selective capacity may be called the "*eye*" of the plate.
> *Jour. Roy. Micros. Soc.*, Dec., 1904, p. 712.

Appendages of the eye. See ★*appendages.*—**Cephalic eye,** a visual organ found in the head of lamellibranchs during the larval stage, and in adult gastropods. *Philos. Trans. Roy. Soc.* (London), 1903, ser. B. p. 311.—**Dorsal eye.** (*a*) See *dorsal eye*, under *dorsal.* (*b*) In chitons, one of the numerous pigmented spots scattered either irregularly or symmetrically over the outer surface of the exposed area of the shell. Same as ★*shell-eye.*—**Elliott eye** (*naut.*), an eye worked over a thimble in a hawser or cable end.—**Eye-agate.** See ★*agate*[2].—**Eye formula,** a formula which expresses the arrangement of the simple eyes in the different groups of *Arachnida.*—**Eye of the storm,** the clear and calm region sometimes found in the center of a completely developed cyclone of extensive area, especially at sea.—**Eye of the wind,** the precise point from which the wind is blowing.—**Hare's eye.** Same as *lagophthalmia.*—**Larval eye,** in gastropods, a pigmented visual organ situated immediately behind the velum.—**Marginal eye,** in triclad and polyclad turbellarians, one of the eyes situated along the margin of the body. See ★*brain-eye.*—**Pallial eye,** one of the numerous ocelli or pigmented spots, sensitive to the action of light, which are developed on different parts of the mantle of bivalve mollusks.—**Parapineal eye,** a rudimentary eye-like body, developed from the epiphysis of the brain of some vertebrates in addition to the more frequently found pineal eye.—**Pseudocone eye,** an insect eye in which the crystalline lens or cone is wanting, its place being taken by four cells filled with a transparent fluid and a smaller nucleated protoplasmic portion.—**Selenium eye,** a device provided with a selenium resistance and two slides for eyelids, and sensitive to light.—**Tentacular eye,** in polyclad turbellarians, one of the eyes situated upon the tentacles. See ★*brain-eye.*—**Thermoscopic eye,** an eye-like organ in certain cephalopods which has been regarded as an organ for perceiving differences in temperature.—**Unpaired eye,** a single eye, lying in the median line, occurring among invertebrates.—**Watery eye,** epiphora.

eye-animalcule (ī′an-i-mal″kūl) *n.* A euglena-like, usually green, organism, having a colored eye-spot.

eye-area (ī′ā″rē-ä), *n.* In *decorative art*, the eye-device, which includes the eye, the eye-lashes, and often the cheek-fold. *Haddon*, Evolution in Art. p. 36.

eye-balm (ī′bäm), *n.* The goldenseal, *Hydrastis Canadensis*, used for affections of the eyes.

eye-band (ī′band), *n.* A boat's mast-band fitted with one or more eyes or rings for holding ropes or blocks.

eye-bender (ī′ben″dėr), *n.* A machine for forming loops or eyes on the ends of bars, rods, screw-bolts, etc., by bending the end of the bar round a forming-tool; an eye-bolt machine. It is made in various forms, from that of a small hand-power machine to large and powerful machines for bending the ends of rods and bars into crooks, loops, and angles.

eye-block (ī′blok), *n.* In *marine hardware*, any form of metal block having a metal ring or eye at the top.

eye-bolt, *n.*—**Nut eye-bolt,** an eye-bolt in which the bolt is plain except at the end where it has a thread and nut.—**Rivet eye-bolt,** an eye-bolt in which the bolt is a plain rivet and is fastened in place in a rivet-hole and the end upset as in ordinary riveting.—**Screw eye-bolt,** an eye-bolt in which the bolt is a wood screw.—**Shoulder eye-bolt,** any kind of eye-bolt having a shoulder under the eye for obtaining a firmer hold when screwed or riveted in place.

eye-box (ī′boks), *n.* A box built in a leach and reaching from bottom to top: used to ascertain the depth of liquor contained in the leach. *Modern Amer. Tanning*, p. 67.

eyebright, *n.* Several plants which are either reputed remedies for diseases of the eye, or, more frequently, have bright flowers, usually with a central spot suggesting the pupil of the eye: (*a*) Any plant of the genus *Euphrasia.* (*b*) The sundew, *Drosera rotundifolia.* (*c*) The Indian-pipe, *Monotropa uniflora.* (*d*) The pimpernel or poor-man's weather-glass, *Anagallis arvensis.* (*e*) The germander speedwell, *Veronica Chamædrys:* also called *angel's-eye*, *bird's-eye*, and *god's-eye.* (*f*) The bluet or innocence, *Houstonia cærulea.* (*g*) The officinal lobelia or emetic-weed, *Eupatorium inflatum.* **Red eyebright,** *Odontites Odontites*, a plant of the figwort family related to *Euphrasia*, native of Europe and Asia and naturalized in Maine and Nova Scotia. **Spotted eyebright,** *Eupatorium maculatum*, a handsome American species, with pink or purple flowers, found from New York to Kentucky, and westward to Minnesota and New Mexico; also, in British Columbia: so called from the bright flowers and spotted stems. Also called *spotted joe-pye weed* and *spotted boneset.*

Spotted Eyebright (*Eupatorium maculatum*).
Two fifths natural size.
(From Britton and Brown's "Illustrated Flora of the Northern States and Canada.")

eyebrow, *n.* **4.** In *arch.*, a molding over a window; a window-cap: in American usage, a light dormer without vertical sides set in a roof.

eye-cap (ī′kap), *n.* A tuft of scales, sometimes present on the basal joint of the antenna of microlepidopterous insects, which serves as a cap for the eye. *Proc. Zool. Soc. London*, 1897, p. 142.

eye-cup (ī′kup), *n.* A cup or glass the rim of which is curved to correspond to the contour of the orbit: used in the application of lotions to the conjunctiva.

eye-dot (ī′dot), *n.* In various invertebrates, one of the pigmented spots of supposed visual function, sometimes covered by a lens; an eye-speck. Such spots are found in a variety of situations on the body.

eye-end (ī′end), *n.* That end of a telescope to which the eye is applied.

eye-fly (ī′flī), *n.* A minute fly, possibly a *Hippelates*, which in East India in summer-time swarms into the eyes of human beings and domestic animals. *Kirby and Spence*, Entomology, II. 130.

eye-ground (ī′ground), *n.* The fundus of the eye, or the back part of the interior of the eyeball which can be seen on ophthalmoscopical examination. *Jour. Exper. Med.*, Oct. 25, 1900, p. 196.

eyelet (ī′let), *v. t.* [*eyelet, n.*] To furnish or fasten with an eyelet.

eyelet-machine (ī′let-ma-shēn″), *n.* In *sewing-machine work*, an overseaming machine fitted with a rotary feed. This feed-mechanism causes the fabric to move in a circle under the needle, and (since the needle has a reciprocating sidewise motion between stitches) the combined motions of feed and needle-bar produce a series of radial stitches placed round a center, this center being the opening of an eyelet. The opening may be cut in the fabric and the radial stitches placed round it, to bind the edge of the eyelet. The stitching can also be locked or purled into place on the fabric. A counting stop-motion is used on some machines, the machine automatically stopping when the required number of stitches has been made. Eyelet-machines are also used to cover and sew into place metal eyelets and reinforcing-rings, to do many forms of decorative stitching.

eyelet-raiser (ī′let-rā″zėr), *n.* In *laundry-work*, a hand-tool which resembles a punch, used for raising and forming the eyelet-holes in shirt-fronts.

eyelet-set (ī′let-set), *n.* A hand-punch for inserting an eyelet and fixing it in place.

eyelet-stitch (ī′let-stich), *n.* In *sewing-machine work*, the method of placing the stitches in

radial lines round an eyelet-hole or over a metal reinforcing ring or eyelet. See ★*eyelet-machine*.

eye-line, *n.* **2.** In some primitive forms of trilobites, one of two raised lines which extend outward from near the forward end of the glabella to the eyes.

eye-minded (ī′mīn″ded), *a.* In *psychol.*, having a marked tendency to carry on mental operations (remembering, thinking, imagining, dreaming, etc.) in terms of visual images; of a visual, as opposed to an auditory or motor, type of mental constitution. A person is called *eye-minded*, in a narrower sense, when his memory is chiefly or exclusively visual, and, in a still narrower sense, when his verbal memory is thus visual in type.

The individual may be *eye-minded* or ear-minded or motor-minded.

E. B. Titchener, Outline of Psychol., p. 293.

eye-mindedness (ī′mīn″ded-nes), *n.* In *psychol.*, a type of mental constitution characterized by the predominance of visual processes as vehicles of the complex mental functions (thought, memory, etc.)

eye-panel (ī′pan″el), *n.* A panel-shaped decorative element which has developed through conventionalization from the representation of an eye. *Haddon*, Evolution in Art, p. 23.

eye-pedicel (ī′ped″i-sel), *n.* A stalk or pedicel bearing an eye, as in various crustaceans. Also ★*eye-peduncle*.

eye-peduncle (ī′pē-dung″kl), *n.* Same as ★*eye-pedicel*.

eyepiece, *n.* **2.** In *entom.*, the eye-covering in the pupæ of lepidopterous insects. *A. S. Packard*, Text-book of Entom., p. 631.—**Achromatic eyepiece,** any eyepiece in which chromatic aberration is approximately eliminated.—**Comet eyepiece,** a telescopic eyepiece, of low power and large field, especially adapted for use in the observation of comets and similar objects.—**Compensating eyepiece,** an ocular used with apochromatic objectives, and so constructed as to compensate for errors of aberration not entirely eliminated in the objective itself.—**Compound eyepiece,** an ocular system which consists of two or more lenses.—**Continental eyepiece,** an ocular the mounting of which consists of a tube of uniform diameter.—**Deep eyepiece,** an eyepiece which magnifies the real image ten or more diameters.—**Goniometer-eyepiece,** an eyepiece designed for making angular measurements, especially of the angles of crystals in the microscope field. **High eyepiece,** an eyepiece of considerable magnifying power. **Index eyepiece,** an eyepiece provided with one or more adjustable points in the plane of the real image for locating and making rough measurements of the position of objects in the field.—**Kellner's eyepiece,** an ocular lens system of the Ramsden type in which the eye-lens is made achromatic and the field-lens is placed in the front focal plane of the former. Also called *orthoscopic ocular*.—**Monocentric eyepiece,** an ocular lens system for telescopes, designed by Steinheil. See the extract.

The Steinheil *monocentric eyepiece* is a triple glass, achromatic, and composed of two flint menisci of different thicknesses capping a double convex crown on both sides. *Todd*, Stars and Telescopes, p. 341.

Nelson's eyepiece, a microscopic ocular provided with a micrometer-screw and cross-hairs.—**Orthoscopic eyepiece,** an eyepiece in which the field-lens is in the focus of the achromatic eye-lens. See *Kellner's* ★*eyepiece*.—**Parfocal eyepieces,** a set of eyepieces so constructed as to be interchangeable without readjustment of the focus of the microscope.—**Periscopic eyepiece,** a positive ocular lens system which consists of a triple eye-lens and double convex field-lens.—**Polarizing eyepiece.** See *solar eyepiece* under *solar*[1].—**Prismatic eyepiece,** (*a*) A spectroscopic eyepiece. (*b*) An eyepiece with right-angled reflection-prism attached to the eye-lens, so that the observer looks in at the side, perpendicularly to the axis of the instrument.—**Projection-eyepiece,** a lens system which corresponds to the eyepiece of an ordinary microscope, but is used in conjunction with the objective in the projection of microscopic objects upon the screen.—**Searching eyepiece,** in *micros.*, an eyepiece of low power and large field, adapted to the ready finding of object, under the microscope rather than to the detailed observation of them when found.—**Solid eyepiece,** a negative ocular consisting of a single solid cylinder of glass with curved end-faces, the face of lesser curvature serving as field-lens, that of greater curvature as eye-lens: designed by Tolles.—**Spectral eyepiece.** Same as *spectroscopic* ★*eyepiece*.—**Spectroscopic eyepiece,** an attachment to a telescope or microscope which consists of a more or less complete spectroscope with slit, dispersion-prisms, scale for wave-lengths, and the necessary lenses: applied in place of the ordinary eyepiece and used to produce a spectrum of the real images.—**Stauroscopic eyepiece,** a form of polarizing eyepiece with quartz plate, used in the examination of minerals.—**Working eyepiece,** any eyepiece used for observing the details of a microscopic object, as distinguished from a *searching* ★*eyepiece*, which is employed in finding the object in a field of high power.

eye-plate (ī′plāt), *n.* A chitinous sclerite in which the eyes of *Acarina*, of the family *Hydrachnidæ*, are placed. *Annals and Mag. Nat. Hist.*, Nov., 1903, p. 505.

eye-purple (ī′pêr″pl), *n.* Same as *rhodopsin*.

eye-ring (ī′ring), *n.* In *optics*, the exit-pupil of a lens system; a circular space within which the eye of the user of an optical instrument must be placed in order to utilize fully the field of view. *P. Drude*, Theory of Optics, p. 77.

eye-root (ī′röt), *n.* Same as ★*eye-balm*.

eye-shield (ī′shēld), *n.* A covering for the eyes designed to protect them from injury, as by flying particles, by mud and dust in riding in automobiles, etc.

eye-strain (ī′strān), *n.* Weakness resulting from excessive use of the eyes, from use of the eyes in a bad light, or from use of them without correcting glasses when muscular imbalance, astigmatism, or other form of ametropia is present. Headache, dyspepsia, and various other reflex disorders are, at times, due to it.

eye-structure (ī′struk″tūr), *n.* See ★*structure*.

eye-tube (ī′tūb), *n.* The tube of the eyepiece in a telescope or other optical instrument.

eye-tubercle (ī′tū″bêr-kl), *n.* One of paired prominences on the exterior of the valves of the *Ostracoda* which indicate the position of the lateral eyes.

eye-tumulus (ī′tū″mū-lus), *n.* The raised portion of the cephalothorax of certain spiders which contains the eyes. *Proc. Zool. Soc. London*, 1896, p. 742.

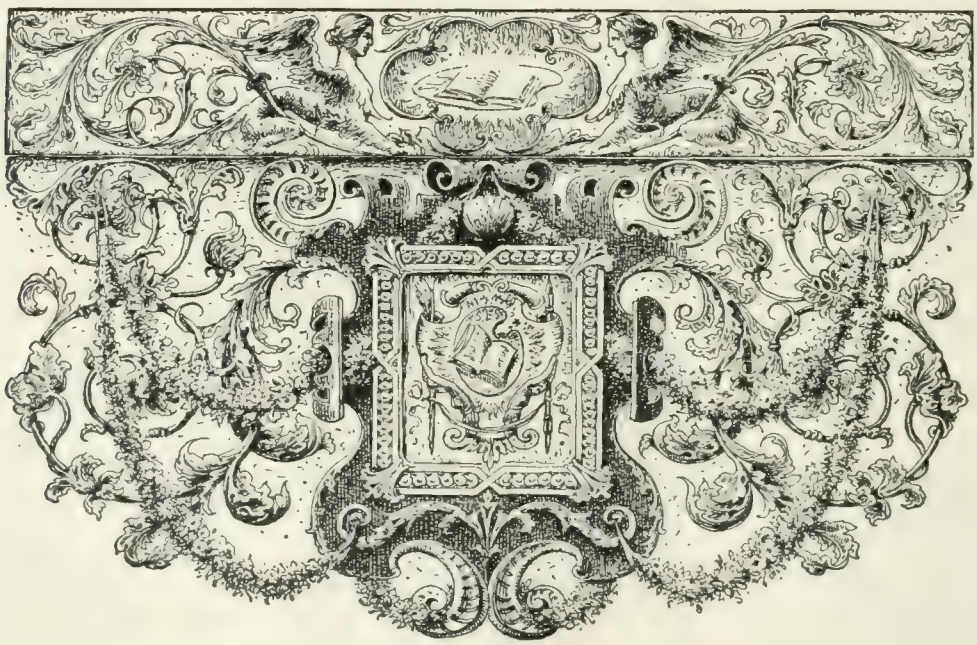
eye-wattle (ī′wot″l), *n.* A fleshy excrescence lying near or about the eye of a bird.

eye-wire (ī′wīr), *n.* Wire drawn with a concave side, for making the loops to hold the lenses in eye-glasses or spectacles.

eye-worm (ī′wêrm), *n.* A nematoid worm, *Filaria lentis*, found in the human capsula lentis; also, *F. loa*, which occurs in the conjunctiva of negroes on the Kongo.

Ez., Ezr. Abbreviations of *Ezra*.

Ezek. An abbreviation of *Ezekiel*.



5. An abbreviation (*d*) (2) in a ship's log-book, of *furlong;* (*e*) In *elect.*, of *farad;* (*f*) of *farthing;* (*g*) of *fathom;* (*h*) of *field of vision;* (*i*) of *florin;* (*j*) of *folio;* (*k*) of *foot;* (*l*) in *music*, of *forte* (loud).—7. [*l. c.*] In *elect.:* (*a*) A symbol occasionally used for *magnetomotive force*, in ampere-turns. See *magnetic* ★*circuit.* (*b*) A symbol of *magnetic reluctance.* —8. A symbol of focal distance: F′, *first focal distance;* F″, *second focal distance.* **F system,** A system of rating the diaphragms or stops for lenses in which the designations indicate the ratio between the diameter of the opening and the focal length of the lens.— **The three F's.** See *three.*

fa (fä), *v. i.* [*fa. n.*] To sound the fourth note of the scale in solmization: as, do, re, me, *fa*, sol (or soh), etc. [Nonce-word.]

Pet. I will carry no crochets: I'll re you,
I'll *fa* you; do you note me?
First Mus. An you re us and *fa* us, you note us.
Shak., R. and J., iv. 5.

fabaceous, *a.* 2. Belonging to the plant family *Fabaceæ.*

Fabian, *a.* 2. Designating a variety or school of socialism more flexible and opportunist than the socialism of Marx and the International, and laying emphasis on municipal experiments in public ownership. See ★*Fabian Society.*—**Fabian Society,** a prominent socialistic society founded in London about 1884.

In municipal politics, again, especially in London, the *Fabian Society*, founded in 1884 by a group of young literary men, had exercised some influence; but, if we compare the "Fabian Essays" of 1889 with the later utterances of their writers, it becomes clear that these Socialists have become for the most part hearty Radical politicians. *Encyc. Brit.*, XXXII. 668.

II. *n.* A member of the Fabian Society.

fabianine (fā′bi-an-in), *n.* [*Fabiana* + *-ine*[2].] A coloring-compound contained in the violet flowers of pichi, *Fabiana imbricata:* said to be identical with crocin.

Fabianism (fā′bi-an-izm), *n.* The socialism advocated by the ★Fabian Society (which see).

Fabianist (fā′bi-an-ist), *n.* A member of the ★Fabian Society (which see).

fabianol (fā′bi-an-ōl), *n.* [*Fabiana* + *-ol.*] The odoriferous constituent of the volatile oil of the dried leafy twigs of *Fabiana imbricata.* It imparts its characteristic odor to the drug pichi.

fabiculture (fab′i-kul-tūr), *n.* [L. *faba*, bean, + *cultura*, culture.] The cultivation of beans or other leguminous plants.

fabric, *n.* 5. In *petrog.*, the pattern of a rock produced by the shape and arrangement of the crystalline or non-crystalline parts: distinguished from the granularity or size of the parts, and the crystallinity or degree of crystallization. (See *quantitative classification of igneous rocks*, under ★*rock*[1].)

fabricative (fab′ri-kā-tiv), *a.* [*fabricate* + *-ive.*] Possessing power to fabricate or make. *Margaret Fuller.*

fabula (fab′ū-lą), *n.* [L. See *fable.*] In *old law:* (*a*) A covenant or contract. (*b*) Among the Lombards, etc., a marriage contract; a will.

façade, *n.* 2. In *organ-building*, same as ★*prospect*, 12.

face[1], *n.*, 15. (*c*) See the extract.

The demands were for a rise of 15 per cent. in wages, an eight hours' shift from bank to bank, the payment of wages twice a month, and other concessions. On 18th May the Coal Association at Essen agreed to an eight hours' day "at the *face*," with certain exceptions.
Encyc. Brit., XXXIII. 26.

21. In *geom.*, the angle of two consecutive edges of an angloid.—22. In *arch.*, the outer and generally vertical surface of any part of a building, whether a single stone or course of stones, or a whole side, front, or rear. When a wall is not concealed within by plastering and woodwork it may even be spoken of as having an outer and an inner face. Before a stone is put in place each one of its surfaces may be called a face, but when placed in the wall it has two beds, two joints (vertical), a face, and a back. For a face of a building in the sense of front, see *façade.* 23. In turpentine orcharding, the surface of wood exposed on the side of the trunk of the pine to cause the resin to flow. There may be two or three faces to a tree. A crop consists of about 10,500 faces.—24. In *fort.*, the outer side of a bastion or lunette: in contradistinction to the inner side or flank.—25. In *mech.:* (*a*) A smooth or polished surface. (*b*) The side of a slide-valve which slides on the seat; the seat or surface on which a slide-valve travels. (*c*) The contact-surface of a valve which lifts from its seat to open the passage through.—**Dry face,** in *turpentine-making*, that portion of the face of a bled tree which has become unproductive. **Heavy face,** a term descriptive of a bold-faced printing-type like this:

THIS IS TITLE TYPE ON 6-POINT BODY. Often called *fat-face.* **To lose face,** to lose one's credit, reputation, good name, or self-respect; be or feel humiliated in regard to one's standing in the eyes of others. **To save one's face,** to act in such a way as to preserve one's credit, standing in the eyes of others, or one's self-respect.—**A slap in the face,** a sudden rebuff or insult.

face[1], *v. t.* 6. In post-office usage, to arrange (letters) with their faces in one direction: as, to *face* the stamped and paid letters.—7. To give a false face or surface to; cause to imitate something else, fraudulently; specifically, to color (tea or coffee) so as to give a false impression of superior quality.

Paddy husks and many kinds of leaves *faced* with China clay, soapstone, catechu, and black lead also found their way abundantly into tea. On the European side, exhausted leaves were again dried, impregnated with catechu and gum, and *faced* up to do duty as fresh tea.
Encyc. Brit., XXIII. 101.

8. In *hort.*, to place a layer of apples (usually with the stem ends uppermost or outermost) next the head of (the barrel), so that the fruit will have a uniform and attractive appearance when the barrel is opened.

face-bedded (fās′bed″ed), *a.* In *masonry*, noting a stone or course in which the plane of stratification of the stone is placed parallel with the face of the masonry, and not perpendicular to the face and horizontal, as is now usual.

face-bone (fās′bōn), *n.* The malar bone.

face-chuck (fās-chuk), *n.* Same as *face-plate*[3].

face-cog (fās′kog), *n.* A cog or tooth which protrudes from the face of a wheel instead of projecting radially from the rim; a pin; one of the teeth of a pin-gear.

face-cutter (fās′kut″ėr), *n.* See ★*milling-cutter*, 2.

Faced card. (*b*) A card which is found face upward in the pack: distinguished from one which is faced after it has left the dealer's hand and which is called an *exposed card.*

face-gear (fās′gēr), *n.* A wheel having teeth or pins on the face, which is at right angles to the shaft, instead of on the rim, parallel to it.

face-harden (fās′här″dn), *v. t.* To make hard on the surface; harden a thin layer on the face of (a piece of metal); subject to a face-hardening process.

face-hardening (fās′här″dn-ing), *n.* The process of hardening the face or outside surface of a piece of metal by the addition of carbon or some other hardening element. Usually the plate to be hardened is placed in a kind of oven with carbon in some form in contact with the surface it is desired to harden. This is then subjected to a high heat for a length of time depending on the depth to which the hardening is to penetrate. By this treatment cementation takes place and the plate is given a very hard surface.

face-joint (fās′joint), *n.* A joint (in the sense of a division between stones or bricks) which shows on the finished side of the wall, and is treated carefully with a view to the appearance of the masonry.

face-milling (fās′mil″ing), *n.* The operation of machining metal pieces with a mill having teeth on its face rather than on its periphery, as in the usual form of mill.

face-mite (fās′mīt), *n.* A small mite, *Demodex folliculorum*, of worm-like form, living in the hair-follicles and sebaceous glands, especially of the face: supposed to be an occasional cause of comedones and blackheads in human beings.

Face-mite (*Demodex folliculorum*).
a, mite, greatly enlarged; *b*, mites in sebaceous gland.

face-plate, *n.* 4. The cover of a journal-box on a railroad-car.—5. The outer plate, or web, which joins the rim and the hub of a car-wheel. **Face-plate coupling.** See ★*coupling.*

facer, *n.* 4. A post-office employee whose business is to arrange letters with their faces in one direction.

face-symbol (fās′sim″bol), *n.* In *crystal.*, the symbol by which a crystal face or plane is designated.

facet[1], *n.* 5. In the embryo of *Pentastomum*, the circular thickening left on the detached integument at the site of the dorsal cone after the separation of the embryo from the integument. Also *facette.* Compare ★*cervical cross.*

facetiation (fa-sē-shi-ā′shon), *n.* [**facetiate* (< *faceti-ous* + *-ate*[2]) + *-ion.*] The making of fun; the subjection of a matter to facetious treatment.

After some lumbering *facetiation* about "those countless volumes of contemporary biography wherein successful men of business are frequently invited to insert their lives and portraits," he goes on to assure us that "Emerson's Representative Men were of a different stripe from these" men.
W. D. Howells, in N. A. Rev., April, 1901, p. 627.

face-wall (fās′wâl), *n.* A wall built to sustain the face of an excavation: opposed to a *retaining wall*, which sustains material which has been placed behind it

face-work (fās′wėrk), *n.* In *masonry*, that part of a wall, or the like, which forms the exterior, especially of the side exposed to view. It is generally composed of better material and is more carefully laid up. Thus, in a brick wall, the face-work may be of what are called face-brick and laid with thinner joints.

Facial chorea. Same as ★*tic non-douloureux.*—**Facial neuralgia.** See ★*neuralgia.*—**Facial spasm,** intermittent contraction of the muscles supplied by the facial nerve.

faciend (fā′shi-end), *n.* [L. *faciendum*, neut. fut. part. of *facere*, make, do: see *fact.*] Any magnitude or symbol which is operated upon: thus, a multiplicand is a *faciend.*

facies, *n.* 5. Specifically—(*a*) In *geol.*, the entirety of the lithologic and paleontologic characteristics resulting from the external conditions which determine the existence of any particular fauna or flora for a given region. These characteristics are defined by physical conditions, such as climate, altitude, or bathymetry, and the geological or chemical nature of the medium. (*b*) In *phytogeog.*, the physiognomy or characteristic appearance of a vegetation, depending upon the one or several species which predominate in it; or, the characteristic growth itself. A plant formation has one facies when there is one controlling species, and several when there are several such. See ★*character-plant.* (*c*) In *petrog.*, the different modifications of one mass of igneous rocks, distinguished by their texture, or by their mineral or chemical composition: as, granitic and porphyritic *facies* of a dike; a gabbro *facies* of a diorite mass.—**Adenoid facies,** a dull, stupid expression, with habitually open mouth, characteristic of children with extensive adenoid growths in the nasopharynx.—**Facies abdominalis,** a pinched, drawn face, expressive of severe pain and anxiety, seen in sufferers from disease of the abdominal viscera, usually with peritonitis.—**Facies cadaverica.** Same as *facies Hippocratica* (see *Hippocratic face*).—**Facies ovarica,** a pale, drawn face, with thin and compressed lips, characteristic of a woman suffering with disease of the ovaries.—**Facies uterina,** a facies similar to the ovarian, observed in sufferers from disease of the uterus.

facies-suite (fā´shi-ēz-swēt), *n.* A series of modifications of one rock-mass in which the parts vary in composition or in texture, or both. It is distinguished from a rock-suite, which consists of rocks forming distinct geological bodies, erupted at different times, but genetically related to one another (consanguineous). *Brogger*, 1894.

facilitative (fą-sil´i-tā-tiv), *a.* [*facilitate* + *-ive*.] That serves to facilitate.

facing-head (fā´sing-hed), *n.* In *machine-shop practice*, an attachment or supplementary tool for a boring-machine used in facing or finishing cylindrical work.

facing-lathe (fā´sing-lāᴛʜ), *n.* A metal-working lathe having a head-stock and tool-carriage only. There is no tail-stock and the carriage, mounted on the bed, can be placed directly in front of the work on the chuck. It is used in facing or finishing flat surfaces or parts of the work. A similar lathe for finishing wood surfaces is called a *face-lathe*.

facing-machine, *n.* 2. In *marble-working*, a machine for holding flooring-tiles in position while they are being faced or rubbed down to a true surface on a rubbing-bed. It consists of a group of vertical, weighted, and pointed rods supported in a frame suspended over the bed. The point of the rod is centered on the back of the tile and holds it in place, while leaving it free to revolve as the bed turns under it. See *rubbing-bed*.
3. A chucking-machine, particularly equipped for facing or finishing the ends of axles, bolts, screws, and studs.

facing-slip (fā´sing-slip), *n.* In *postal service*, a slip of paper accompanying each package of letters, showing the destination of the package, the point of departure, the date, and the name of clerk sending it.

facing-tool (fā´sing-töl), *n.* In *machine-shop practice*, a cutting-tool in a boring-mill or an end-mill or other cutter in a milling-machine, used to face or finish the exterior surface of a piece of work.

faciobrachial (fā″si-ǭ-brā´ki-al), *a.* [L. *facies*, face, + *brachium*, arm, + *-al*1.] Relating to both the face and the arm.

faciocervical (fā″si-ǭ-sėr´vi-kal), *a.* [L. *facies*, face, + *cervix* (*cervic-*), neck, + *-al*1.] Relating to both the face and the neck.

faciolingual (fā″si-ǭ-ling´gwal), *a.* [L. *facies*, face, + *lingua*, tongue, + *-al*1.] Relating to both the face and the tongue: said of a form of paralysis.

factor, *n.*—**Association factor.** See ★*association*.—**Domestic factor,** one who resides in the same country as his principal. See *foreign* ★*factor*.—**Factor group** of G in respect of H, the group defined by the division of the operations of G into sets in respect of the self-conjugate subgroup H.—**Factor of safety,** as commonly used, the ratio of the ultimate strength or breaking stress of a piece of material to the load to be actually applied; the ratio by which the load required to break a piece or structure is greater than the maximum load to be applied; the ratio of the breaking stress to the working stress; in a stricter and more recent use, the ratio of the elastic limit of the material to the working load. The last is better than the older and more common definition of the term, because the real measure of the strength of a piece of material, which is to be repeatedly strained, is its elastic limit, not its ultimate strength, and the factor of safety should hence be based upon the elastic limit.—**Foreign factor,** one who resides in a different country from his principal. The importance of the distinction between a *domestic* and a *foreign factor* lies in their transactions with third parties. In the absence of an agreement to the contrary, a domestic factor is presumed to bind his principal, and in case credit is given a purchaser is responsible to both the factor and his principal; while foreign factors are held personally liable upon contracts made for their principals, and if credit is given or taken, it is upon the exclusive responsibility of the factor.—**Form factor.** (*a*) The ratio, expressed decimally, between the volume of a tree, or portion of a tree, and that of a cylinder of the same height and diameter. The volume of this cylinder multiplied by the form factor gives the actual volume of the tree, or portion of the tree. Three kinds of form factors are distinguished, according to the portion of the tree to which they refer: a *tree form factor* is used for determining the actual volume of the whole tree; a *stem form factor* for determining the volume of the stem; and a *timber form factor* for determining the merchantable contents of stem, crown, or both. A form factor is called *absolute* when the diameter of the tree is measured at any convenient height, the form factor referring only to that portion of the tree above the point at which the diameter is measured; *normal*, when the diameter is measured at a height in constant proportion to the total height of the tree; and *artificial*, when the breast-high diameter is measured. Also called *factor of shape*. (*b*) In *elect.*, in alternating current-waves, a constant which characterizes the shape of the wave: usually defined as the ratio of the effective value of the wave to the effective value of a sine wave of equal mean value. *Trans. Amer. Inst. Elect. Engin.*, 1897, p. 310.—**Imbalancing factor.** (*a*) A force which tends to disturb the balance of one or more elements of a mechanism. (*b*) Specifically, in an engine, the ratio of the difference between the maximum and mean turning moments to the mean turning moment. This factor determines the weight of the fly-wheel necessary to make the engine run steadily, the function of the fly-wheel being the storing up of energy at the time of the maximum turning moment, or when it is greater than the mean, and the giving up of that energy when the turning moment is less than the mean.—**Impedance factor,** in *elect.*, the ratio of the impedance of a conductor or circuit to its ohmic resistance. *Houston*, Dict. Elect. **Inductance factor,** in *elect.*, the ratio of the wattless or reactive current to the total current, in an alternating-current circuit.—**Lag factor,** in *elect.*, a term formerly used for *power factor*. See *power* ★*factor*. **Load factor,** in electric-distribution systems, the ratio of the average load on the system to the maximum load during the day. **Power factor,** in *elect.*, the ratio, in an alternating-current electric circuit, of the true power divided by the apparent power (see *apparent power*), or the watts divided by the volt-amperes. **Spherical reduction-factor,** in *photom.*, a numerical factor by means of which the mean spherical intensity of a source of light may be computed from the intensity of the light emitted in a single given direction. **Unbalancing factor,** the greatest percentage of excess or deficiency of power, over or under the mean power, that occurs in one revolution of an engine; the percentage of fluctuation in the tangential pressure on the crank-pin above or below the mean pressure during a revolution.

factorage, *n.* 3. The aggregate of all constituent factors.

Factorial periodicity, that of a function where $F(x + w) = CFx$. Here C is a constant. *Forsyth*.

factorization (fak-tǫ-rī-zā´shǫn), *n.* [*factorize* + *-ation*.] In *math.*, the resolution into factors.

factorize, *v. t.* 2. To resolve into factors.

faculary (fak´ū-lą-ri), *a.* [*facula* + *-ary*2.] Pertaining to *faculæ*.—**Faculary flames,** in *astron.*, brilliant masses of vapors, principally calcium, overlying the faculæ of the sun's surface and shown by photographs taken with the spectroheliograph. *H. Deslandres.* See ★*faculid*.

faculid (fak´ų-lid), *n.* [Also (as F.) *faculide*; < *facula* + *-id*2.] In *astron.*, same as ★*faculary flames* (which see). See the extract.

> The images of the atmospheric vapors have also received widely different names. Hale calls the brilliant parts of these images "bright spots," supposing them to be emitted by the vapors confounded with the highly incandescent portions. Since 1903 he gives them the name of flocculi, referring to their form. In turn, I have always considered them as emitted by the vapors of the atmosphere, and have called them faculary flames. I propose the word *faculide*, which is shorter.
> *H. Deslandres* (trans.), Sci. Amer. Sup., Oct. 15, 1904, [p. 24,070.

faculous (fak´ų-lus), *a.* [*facula* + *-ous*.] 1. Abounding in faculæ: applied to regions of the solar surface where they are numerous.—2. Of the nature of faculæ.

> He considers that the latter may be the portions of the umbra left uncovered by "*faculous* veils," which, extending from the penumbra, not unfrequently lighten up certian regions of nuclear gloom, leaving others more profoundly dark by contrast.
> *A. M. Clerke*, Problems in Astrophysics, p. 77.

facultate (fak´ul-tāt), *v. t.*; pret. and pp. *facultated*, ppr. *facultating*. To give power or authority to; invest with faculty; empower. *Baring-Gould.*

Facultative aërobia, anaërobe, anaërobia, regeneration. See ★*aërobia*, etc.

Facultatively aërobic, anaërobic. See ★*aërobic*, ★*anaërobic*.

facultize (fak´ul-tīz), *v. t.*; pret. and pp. *facultized*, ppr. *facultizing*. [*facult-y* + *-ize*.] To endow with practical ability.

faculty, *n.* 7. In *alg.*, the product of a series of factors in arithmetical progression, $a(a + b) \ldots (a + (m - 1)b)$.

> Such a product was called by Kramp a *faculty*, and he introduced for it the notation $a^{m/b}$, calling a the base, m the exponent, and b the difference of the *faculty*.
> *G. Chrystal*, Algebra, II. 374.

Faculty psychology. See ★*psychology*.—**Faculty theory of mind.** Same as *faculty* ★*psychology*.

Fadang. (*Cycas circinalis*.)
A, carpophyl with two half-developed fruits and two aborted fruits; *B*, mature fruit shown in cross-section, one half natural size.

fadang (fä´-däng), *n.* [Chamorro name.] A name in Guam of *Cycas circinalis*, the nuts of which, though poisonous, are used by the natives as a food-staple in times of scarcity. To remove the poisonous principle the kernels are soaked in water, which is repeatedly changed. They are then dried and stored. When required for food they are ground into meal on a stone slab, mixed with water, and baked in the form of thin cakes. Also called *federico*. See *Cycas*, 1.

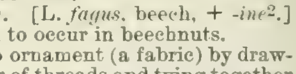
fadda (fäd´dą), *n.* [Ar. *fadda*, silver, a para.] The Egyptian para, equal to one fortieth of a piaster.

faddism (fad´izm), *n.* [*fad* + *-ism*.] A disposition to take up with fads; a fondness for fads.

faddy (fad´i), *a.* [*fad* + *-y*1.] Fond of or given to the pursuit of fads.

fado (fä´dǫ), *n.* [Pg., fate: see *fate*.] 1. A Portuguese form of folk-song. See the extract.

> The nearest we can get to the original signification of the word is to call the "*fado*" the laborer's song of fate; which is more than we can do with the present form, for the Portuguese indiscriminately call "*fados*" what we designate as serenades, ballads, jigs, and sailor's hornpipes. *Jour. Amer. Folk-lore*, July Sept., 1902, p. 165.

2. A Portuguese dance common among the lower classes, or the music for it. The characteristic pattern of the music is 

fæcula, *n.* See *fecula*.

Faentine (fā-en´tin), *a.* Of or pertaining to Faenza, a city in the province of Ravenna, Italy: as, *Faentine* majolica.

faeton, *n.* A simplified spelling of *phaeton*.

Fagaceæ (fa-gā´sē-ē), *n. pl.* [NL. (Alexander Braun, 1864), < *Fagus* + *-aceæ*.] A family of dicotyledonous archichlamydeous (apetalous) trees or shrubs of the order *Fagales*, typified by the genus *Fagus*; the beech family. It includes also the oak and chestnut, and is characterized by monœcious flowers, the staminate often in catkins, the pistillate with an urn-shaped or oblong perianth and a 3–7-celled ovary, the fruit a 1-seeded nut or acorn. There are 5 genera and about 375 species widely distributed. See *beech, Castanea, chestnut, Fagus, oak, Quercus*.

fagaceous (fą-gā´shius), a. Belonging to the family *Fagaceæ*; pertaining to or resembling the beech.

Fagales (fą-gā´lēz), *n. pl.* [NL. (Engler, 1886), < *Fagus* + *-ales*.] An order of dicotyledonous archichlamydeous plants including the families *Fagaceæ* and *Betulaceæ*, or the beech and birch families. It is therefore the same as the *Cupuliferæ* of many authors.

Fagara silk. See ★*silk*.

fagine (fā´jin), *n.* [L. *fagus*, beech, + *-ine*2.] An alkaloid said to occur in beechnuts.

fagot, *v. t.* 3. To ornament (a fabric) by drawing out a number of threads and tying together in the middle a series of the cross-threads. See *fagoting*.

fagot-drain (fag´ǫt-drān), *n.* A drain made by placing fascines, fagots, or brush in the bottom of a trench and covering the same with stones or earth.

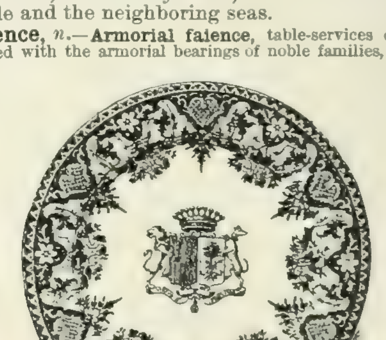
fagot-iron (fag´ǫt-ī″ėrn), *n.* Iron made by welding together a bundle or pile of flat bars, or bars of special shape or selected material: applied to weld-iron.

fagottino (fa-gǫt-tē´nō), *n.* [It., dim. of *fagotto*: see *fagotto*.] A small bassoon, usually with a pitch a fifth above that of the ordinary bassoon.

Fah. An abbreviation of *Fahrenheit*.

fahaka (fą-hä´ką), *n.* [NL. *fahaka*, intended to represent Ar. *faqqāqa*.] The swell-fish or ball-fish, *Tetraodon fahaka*, found in the lower Nile and the neighboring seas.

faience, *n.*—**Armorial faience,** table-services decorated with the armorial bearings of noble families, religious houses, etc. These form a distinctive class of faience produced at Rouen, Lille, Nevers, Paris, and Bordeaux. *M. L. Solon*, French Faience, Glossary.—**Faience à la corne** [F.], a variety of tin-enameled pottery in which the principal decorative motif is a cornucopia of many-colored flowers. This pattern was first used on old Rouen faience, and was imitated later elsewhere in France and in other countries.—**Faience à niellure** [F.], a name sometimes given to Henri II. ware, from the resemblance


Armorial Faience in Rouen Style.
In the Pennsylvania Museum, Philadelphia.

Faience of Rouen.—Plate, Rouen, France.
(In the Pennsylvania Museum, Philadelphia.)

of the inlaid clay decorations to niello-work. See *faience d'Oiron*, under *faience*. **Faience au réverbère** [F.], a term applied to decorated pottery which has been fired in a muffle or reverberatory kiln. See *reverberatory furnace* under *furnace*. Also called *reverberatory*.—**Greenpoint faience.** See *American* ★*pottery* (*b*).—**Grueby faience.** See *American* ★*pottery* (*b*). **Lambeth faience**, an art pottery made at Lambeth, England, on the principles of the old Italian majolica, with underglaze painted decorations. **Palissy faience.** See *Palissy ware*, under *ware*2.—**Saint-Porchaire faience,** pottery made of clay from Saint-Porchaire, near Oiron, France: same as *Henri II. ware*, *faience d'Oiron*, and ★*faience à niellure* (which see).—**Stanniferous faience,** pottery coated with a tin glaze or enamel, such as majolica, delf, and the earthenware of the old French potters. See also *stanniferous* ★*enamel*, and *stanniferous ware*, under *ware*2.

faïencerie (fa-yoṅ-se-rē′), *n.* [F., < *faïence*, faience.] A pottery in which stanniferous faience is made: applied particularly to the old French manufactories.

faïencier (fa-yoṅ-syā′), *n.* [F.] **1.** A dealer in crockery.—**2.** A maker of faience; specifically, a potter who makes stanniferous faience in the style of the old French tin-enameled wares.

fail-spot (fāl′spot), *n.* In *forestry*, a place where natural or artificial reproduction has failed. [Colloq.]

Failure of issue, lack of living children at the time of death: but the death of a child, capable of inheriting, prior to the death of the father will not deprive the latter of his right of courtesy; and there is no failure of issue if a child is born within the period of gestation after the death of the father.

faint, *a.* **8.** Oppressive: applied to the atmosphere. *Hawthorne.*

faints-back (fānts′bak), *n.* In the distillation of whisky, the receiver in which the faints, or weak spirit, is collected, to be afterward redistilled: same as ★*faints-cask.* See *faint, n.*, 2.

faints-cask (fānts′kask), *n.* See ★*faints-back.*

Fair catch. See ★*catch*1. **Fair hit** or **fair ball,** in *base-ball*, a ball hit within the limits of the foul-lines.—**Fair-play men,** a name given by settlers in Pennsylvania, in a tract between the Lycoming and Pine creeks, about the year 1769, to three men elected annually, in rotation, to whom authority was given to determine all questions of boundaries at a time when the land was still unsurveyed because it was doubtful whether it had ever been ceded by the Indians. Their decision was final, and was reinforced by the common consent of the community.
Fair pleader. See ★*pleader.*

fairies'-arrow (fãr″iz-ar′ō), *n.* Same as *elf-bolt.*

fairish (fãr′ish), *a.* [*fair*1 + *-ish*1.] Pretty fair; passably good, etc.: as, a *fairish* crop.

fair-lead (fãr′lēd), *n.* Same as *fair-leader.*

fair-stitch (fãr′stich), *n.* A sort of machine-sewing stitch in which the visible portion of the thread between the stitches on the face, or fair side of the work, appears to be raised or rounded instead of lying flat, as in ordinary plain or flat sewing. It is done by creasing the stitched material to cause the exposed portion of the thread to be forced up into a rounded form.—**Fair-stitch machine,** in *shoe-manuf.*, a sewing-machine for sewing harnesses and boots and shoes, having an attachment for forming a fair-stitch.

fair-trader (fãr′trā″dėr), *n.* One who advocates or favors the fiscal system known as fair trade (which see, under *trade*).

fair-water (fãr′wâ″tėr), *n.* In *ship-building*, a cover or filling-piece fitted in front or rear of any projection or abrupt break in the surface of the under-water parts of a vessel's hull, to permit the water to flow past smoothly and without eddying.

fairy-bells (fãr′i-belz), *n.* The purple foxglove, *Digitalis purpurea.*

fairy-creeper (fãr′i-krē″pėr), *n.* The climbing fumitory, *Adlumia fungosa.*

fairy-smoke (fãr′i-smōk), *n.* The Indian-pipe, *Monotropa uniflora.*

fairy-stone, *n.* **2.** In Scotland, the name of a clay concretion also called *clay-dog* or *clay-stone.* See *clay-stone* and *concretion*, 3.—**3.** A popular designation of a stone arrow-head, from the superstitious belief that it is of supernatural origin.—**4.** A fanciful name sometimes given to twin crystals of staurolite.

fairy-tale (fãr′i-tāl″), *n.* **1.** A tale or story about fairies.—**2.** A story as unreal and as incredible in its statements as fairies or tales about them.

faith-curist (fāth′kū″rist), *n.* One who believes in the efficacy of faith and prayer by themselves as therapeutic agencies; a believer in faith-cure.

faith-mark (fāth′märk), *n.* A fundamental and characteristic doctrine of a religious faith.

faith-philosophy (fāth′fi-los″ọ-fi), *n.* A form of the philosophy of common sense which is distinguished by insisting that we ought to repose upon our natural tendency to view the origin of the universe and of high moral aspirations anthropomorphically. Common-sense philosophy proper, on the other hand, instead of saying that we ought to yield to certain dispositions to believe says that it is impossible not to believe certain doctrines upon sufficient consideration, and if the propositions are not too definitely enunciated.

faith-state (fāth′stāt), *n.* In *psychol.*, an emotive state, characterized by the sense of communion with God and nature, which plays a prominent part in the psychological process of conversion. See the extracts.

> That state of confidence, trust, union with all things, following upon the achievement of moral unity, which we have found, more or less tersely expressed, in every conversion considered, is the *Faith-state.*
> *J. H. Leuba*, in Amer. Jour. Psychol., VII. 345.

> The resultant outcome of them is in any case what Kant calls a 'sthenic' affection, an excitement of the cheerful, expansive, 'dynamogenic' order which, like any tonic, freshens our vital powers. . . . We have seen how this emotion overcomes temperamental melancholy and imparts endurance to the Subject, or a zest, or a meaning, or an enchantment and glory to the common objects of life. The name of '*faith-state*,' by which Professor Leuba designates it, is a good one.
> *W. James*, Var. of Religious Exper., p. 505.

faitour's-grass (fā′tọrs-gras), *n.* The leafy spurge, *Euphorbia Esula:* so called because used by faitours or quacksalvers. See *leafy spurge*, under *spurge*2.

fake1, *n.*—**Flemish fake** (*naut.*), a number of turns of rope that are concentric, or have a common center, and lie flat on the deck instead of riding over each other.

falanstery, *n.* A simplified spelling of *phalanstery.*

falanx, *n.* A simplified spelling of *phalanx.*

falarica (fa-lar′i-kạ̈), *n.* [L., < *fala*, a kind of tower or scaffold from which missiles were thrown in sieges.] A missile bearing burning tow and pitch, used in antiquity and in the middle ages. It was thrown by a catapult or by hand.

Falcate orange-tip. See ★*orange-tip.*

falcial (fal′sịal), *a.* [L. *falx* (*falc-*), sickle, + *-i-al.*] Of or relating to the falx cerebri.

falcidia (fäl-thē′dẹ-ạ̈), *n.* [Sp., < LL. *Falcidia* (sc. *pars*), the fourth part of an inheritance, as secured by the *lex Falcidia*, 'the law of (Publius) Falcidius,' a Roman tribune who proposed the law (about 40 B. C.) assuring to the heir at least one fourth part of the whole inheritance.] In *Sp. law*, one fourth of an inheritance. It legally belongs to the heir. To protect it the heir has the right to reduce legacies to three fourth parts of the succession.

Falciform body, in gregarines, one of the 6 to 8 sickle-shaped, nucleate bodies into which a pseudonavicella divides, each becoming a young gregarine.—**Falciform lobe, process.** See *lobe*, ★*process.*

falcon, *n.*—**Laughing falcon,** a large South American hawk, *Herpetotheres cachinnans*, which belongs to the accipitrine division of the birds of prey.

Falconiformes (fal-kon-i-fôr′mēz), *n. pl.* [NL., < L. *falco*, a falcon, + *forma*, form.] An order which contains the diurnal birds of prey: divided by Pycraft into three suborders, *Accipitres*, birds of prey proper, *Serpentarii*, the secretary-bird, and *Cathartæ*, the American vultures. The term seems to have been first employed in an ordinal sense by Seebohm, 1890, in the "Classification of Birds."

falcula, *n.* **3.** Same as *falx cerebri.*

Falerian (fa-lē′ri-ạn), *a.* [L. **Falerianus*, < *Falerii.*] Belonging or relating to Falerii, an ancient city of Etruria, on the site of the modern Cività Castellana.

fall1, *v. i.* **14.** In *Scots law*, to lose; forfeit; be deprived of: as, to *fall* from a right or estate.—**To fall calm,** to cease to blow, as the wind; become calm. **To fall down.** (*d*) To show unexpected weakness; fail unexpectedly or completely. [Slang.] **To fall on** or **upon.** (*c*) In *geom.*, to come precisely upon; rest upon; be congruent to.

> Let the triangle ABC be applied to the triangle DEF, so that the point A may *fall on* the point D.
> *Ass'n for Improvement of Geom. Teaching*, Plane [Geom., p. 25.

To fall within, in *geom.*, to come within; rest inside of.

> In the same way it may be proved that the line BA does not *fall within* the angle LEG.
> *Ass'n for Improvement of Geom. Teaching*, Plane [Geom., p. 19.

fall1, *n.* **23.** An apron, attached to the front edge of a carriage-seat, suspended between the point of attachment and the bottom of the carriage-body.—**24.** The capture or surrender (of a besieged city or fortress): as, the *fall* of Port Arthur.

fallage (fâl′āj), *n.* [*fall*1 + *-age.*] **1.** The felling or cutting down of timber-trees.—**2.** Fallen branches collectively.

fall-apparatus (fâl′ap-ạ-rā″tus), *n.* [G. *fall-apparat.*] In *psychophys.*: (*a*) An instrument devised by Hipp for the control of his chronoscope. An ivory ball drops from a variable height upon a metal plate, breaking and making electrical contacts as it falls. The electrical circuit includes the chronoscope, which thus registers the time of fall. (*b*) An instrument devised by Hering for the comparison of the binocular and monocular perceptions of depth. The eyes look through openings in a screen at a fixed black bead about 12 inches away. White beads are dropped by the experimenter at various distances, nearer and farther, from the black bead.

fall-chronometer (fâl′krọ-nom″e-tėr), *n.* [G. *fallchronometer.*] In *psychophys.*, a gravity-chronometer. The instrument consists ordinarily of a heavy screen of metal, falling practically without friction between vertical metal guides, and making and breaking electrical contacts as it drops. It may be used to mark off a known and constant time-interval, thus serving in place of hammer or pendulum as a control of the Hipp or other chronoscope; or, as a tachistoscope, to expose visual stimuli for a brief and accurately measurable period. *E. B. Titchener*, Exper. Psychol., I. ii. 201.

faller, *n.* **3.** In *lumbering*, one who fells trees.

faller-motion (fâ′lėr-mō″shọn), *n.* The action of the faller-wires on a spinning-mule during the process of winding the yarn into cops. *Nasmith*, Cotton Spinning, p. 369.

faller-rod (fâ′lėr-rod), *n.* Same as ★*faller-shaft.*

faller-shaft (fâ′lėr-shaft), *n.* A rod which runs lengthwise of the spindle-carriage of the spinning-mule and to which the arms of the faller-wire are attached. *Nasmith*, Cotton Spinning, p. 297.

fall-fish, *n.*—**Red fall-fish,** a small minnow, *Notropis rubricroceus*, found about waterfalls in tributaries of the Tennessee and Savannah rivers.

fall-flower (fâl′flou″ėr), *n.* The white-wreath aster, *Aster multiflorus:* so called from the lateness of its flowering. See *white-wreath* ★*aster.*

falling-ax (fâ′ling-aks), *n.* An ax with a long helve and a long, narrow bit, designed especially for felling trees.

falling-wedge (fâ′ling-wej), *n.* A wedge that is driven into the kerf of a tree that is being cut down to cause it to fall in the desired direction.

fall-line (fâl′līn), *n.* In *phys. geog.*, a line drawn through a number of rivers at points where they have falls or rapids due to a common cause; specifically, a line of this character in the eastern United States, near the inner border of the Atlantic coastal plain, passing through Trenton, Philadelphia, Baltimore, Richmond, etc.

fallow2, *n.*, **2.** In loose practice, the soil is merely neglected or plowed only once or twice for one or more seasons, for the sake of 'resting' it. This is often done in alternate years. In more scientific farming, except in situations where 'extensive' methods are justified (see ★*extensive*, 5), a fallow may be either 'uncropped' or 'cropped,' but the ground is always cultivated. The technique of fallowing is very closely worked out in Great Britain, and less so in the United States, where conditions are more various and methods less settled; but the difference is partly of terms. See phrases below, and compare *rotation of crops*, under *rotation*; see also phrases under ★*crop.*—**Bare fallow,** a fallow without crops; usually, in a specific sense, an uncropped fallow of a year's duration with thorough cultivation. In British practice, cultivation is begun in the autumn after the removal of grain, and is continued in the succeeding spring and summer; or sometimes it is not begun till winter, the larger part in any case falling in summer. As many as nine plowings and cross-plowings are sometimes given, besides numerous harrowings, etc. The object is the destruction of weeds and insect pests and the mechanical and chemical amelioration of the soil. Bare fallows have now largely given way to cropped fallows, though they are still approved by British authorities for stiff clays. For bare-fallowing to conserve moisture see *dry* ★*farming.*—**Cropped fallow,** in Great Britain, a fallow in which the ground is occupied, at least in summer, by a manured and closely cultivated crop which serves the purpose of

cleaning and mechanical improvement, at the same time yielding feed, which is returned to the soil through the manure products: a green fallow. **Dead fallow.** Same as *bare* ★*fallow*.

In any case a saving upon the old *dead* or bare fallow.
J. Wrightson, Fallow and Fodder Crops, p. 31.

Double-cropped fallow, a variation of root fallow in which a fodder crop is sown in the autumn and cut in the spring in time for the root crop. The practice of this kind of fallowing is called *catch-cropping*. See *catch* ★*crop*.—**Half, rag, or ragged fallow,** a fallow in which a fodder crop is sown in autumn and cut late in the spring, the land being then fallowed during the summer and put in wheat in the autumn. [Great Britain.] **Naked fallow.** Same as *bare* ★*fallow*2. **Root fallow,** in Great Britain, a cropped fallow in which, after winter fallowing, a root crop (see ★*crop*) is grown.—**Summer fallow,** a bare fallow: so called because the summer crop is omitted and because the tillage takes place chiefly at that season. **Winter fallow,** a fallowing in which the soil is thoroughly cultivated during the period when not occupied by the summer crop: in Great Britain it forms part of a root fallow.

fall-phonometer (fâl′fo-nom′e-tẽr), *n.* [G. *fallphonometer*.] In *psychophys.*, a gravity-phonometer: an instrument consisting of uprights with mechanical releases which allow balls to drop from variable heights upon plates of metal, slate, etc. Given constancy of the weight of the balls and homogeneity of materials of balls and plates, the intensity of the sound produced by the impact of the ball on the plate is proportional to the height of the fall. The fall-phonometer thus furnishes a series of sound-stimuli which are intensively graded in terms of some arbitrary unit.

fall-poison (fâl′poi″zn), *n.* Same as *fly-poison*, 2.

fall-tube (fâl′tūb), *n.* A glass tube about 800 millimeters long through which, in a mercury-pump, the mercury falls to create a vacuum.
M. W. Travers, Exper. Study of Gases, p. 8.

fallway (fâl′wā), *n.* A hoist-shaft or an opening through which freight is hoisted: so called from the custom of using a block and fall to do the hoisting.

fall-wind (fâl′wind), *n.* A wind that descends rapidly from the upper regions of the atmosphere. Such are the foehn, the bora, the mistral, the chinook, etc.

faloos, *n.* See ★*falus*.

false, *a.* **10.** Additional; assistant; subsidiary; supplementary; temporary; used to supplement or temporarily displace something: as, the *false* work or supports for a bridge which is under construction.—**False banana.** Same as ★*banana*, 2.—**False bow.** Same as ★*ice-prow*.—**False cirrus.** See ★*cloud*1.—**False grain, morning,** etc. See ★*grain*1, etc.—**False music.** See *musica ficta*, under *musica*.

falsef, *v. t.*—**To false a doom.** See ★*doom*.

false-card (fâls′kärd), *v. i.* To play a card with a view to deceiving one's adversary as to the true holding in the suit, as to win with the ace when holding the king also.

The dealer *false-cards* so that the adversaries will not know that he holds the queen. *Elwell*, Bridge, p. 82.

falsework (fâls′wẽrk), *n.* See *false work*, under *false*.

falsidical (fâl-sid′i-kạl), *a.* [L. *falsidicus*, < *falsus*, false, + *dicere*, speak, + -*al*1.] Expressing falsehood; falsifying: opposed to *veridical*.

falúa (fä-lö′ä), *n.* [Sp.: see *felucca*.] A boat, used in the Philippine Islands, resembling in general a felucca, but with a square sail, usually of matting.

Falunian (fä-lū′ni-an), *n.* In *geol.*, the Upper Miocene strata in France which are characterized by the faluns. See *faluns*.

falus (fạ-lös′), *n.* [Also *faloos*, *floose*, *fluce*; Hind. *falūs*, *fulūs*, a small copper coin, Pers. *fulūs*, small copper coins, < Ar. *falūs*, *filūs*, *fulūs*, money, cash.] In North Africa, Arabia, India, and neighboring countries, a small copper coin of various values ranging from one fourth to one tenth of a cent.

F. A. M. An abbreviation of *Free and Accepted Masons*.

fam. An abbreviation (*a*) of *familiar*; (*b*) of *family*.

fame-flower (fām′flou″ẽr), *n.* See *Talinum*.

Famennian group. See ★*group*1.

fa mi (fä′mē′). [See *fa* and *mi*.] In *music*, an old name for a half-step or semitone.

familial (fạ-mil′yạl), *a.* [L. *familia*, family, + -*al*1.] **1.** Occurring in members of the same family, though not necessarily hereditary: said of certain diseases, especially of the nervous system.

It it necessary to distinguish acute forms following exhaustion or infectious diseases in persons without hereditary or constitutional defect, the subacute and chronic forms or habit-neurasthenias frequently without heredity, and the chronic constitutional type, said to be to a large extent *familial*.
Amer. Jour. Psychol., July–Oct., 1903, p. 364.

2. As in a family; family-like.

The essentially *familial* character which this people [the Chinese] has retained.
Tarde (trans.), Laws of Imitation, p. 252.

family. I. *n.*, **6.** In petrography the term is used by Rosenbusch to embrace igneous rocks which are alike in composition and texture: as, the *family* of syenitic rocks, the *family* of essexite; the *family* of phonolitic rocks. In the quantitative system of classification (1902) it is suggested that the term be applied to a group of igneous rocks which are developed from the same parent magma by processes of differentiation—that is, any group of consanguineous rocks. **Man of family,** a man of birth; a person of noble or gentle descent: to be distinguished from *family man*, a man with a family. **Monosyllabic family of languages,** a group of languages so designated which is spoken in southeastern Asia, including as its principal members Chinese, Cochin-Chinese or Annamese, Siamese, and Burmese.

II. *a.*—**Family arrangement,** an agreement for the disposition of property between members of the same family, in which the relationship of the parties is a sufficient consideration for the agreement.

famin, *n.* A simplified spelling of *famine*.

fan, *n.*, **1.** (*a*) The fan has been used by various peoples to guard sacred mysteries. In the older ritual of the Roman and Greek churches, a fan was carried by a deacon of the mass, at the gospel side of the altar.

9. In *projective geom.*, one of the flat pencils which are determined by the sides of a polygram.—**Electric fan** or **fan motor.** See ★*motor*.—**Fan engine.** See ★*engine*.—**Plenum fan,** a fan which is used to force air into a room or hall, thus creating a current of air: the reverse of *vacuum* ★*fan*.—**Vacuum fan,** a fan which is used to exhaust the air from a room or hall, thus producing a current of air: the reverse of *plenum* ★*fan*.

fan1, *v.* **I.** *trans.* **6.** To "cool with a club"; club, as policemen sometimes club refractory prisoners. [Slang.]

II. *intrans.* **3.** To strike at something (as a base-ball) without hitting it; fan the air. [Slang.]—**To fan out.** (*b*) to pass muster; come out of an examination, test, or contest successfully: probably from def. 4. (*c*) To strike out, as in base-ball. [Slang.]

fan2 (fan), *n.* [Said by some to be short for *fanatic*, but this implies a popular pronunciation fan′a-tic. Others associate the word with *fan*1, which has various slang uses.] One who is very enthusiastic on the subject of athletic sports, especially base-ball; one who haunts base-ball grounds and base-ball games; a base-ball 'fiend.' [Slang.]

Cranks and '*fans*' of all degrees
Are there to howl and scream.
Kansas City Daily Times, April 23, 1903.

fanam, *n.*—**Canteroy fanam,** a coin of southern India weighing 5.87 grains.

fan-bath (fan′bȧth), *n.* A method of reducing the heat of fever in which rapid evaporation is produced by fanning the patient's wet body.

fanchonnette (fan-sho-net′), *n.* [F. dim. of *Fanchon*, a pet form of *Françoise*, Frances, a feminine name.] A small pastry covered with meringue.

fan-crest, *n.* **2.** In *ornith.*, a large longitudinal crest which opens and closes somewhat like a fan. The crests of the hoopoe and cockatoo are examples.

Fancy dress. See ★*dress*.

fandangle (fan-dang′gl), *n.* [*fan*(*dango*) + *dangle*.] A fancy or fantastic trinket or ornament.

fan-drill (fan′dril), *n.* Movements and evolutions performed in concert by a company of girls or ladies armed with fans.

fan-duster (fan′dus″tẽr), *n.* In *paper-making*, a revolving wire-cloth cage inclosed in a casing, used to shake the dust out of stock.

fanega (fä-nā′gä), *n.* [Sometimes *faneague*; < Sp. *fanega*, *hanega* = Pg. Cat. *fanega*, < Ar. *fanīqa*, a large sack (Freytag).] **1.** A Spanish and Spanish-American dry measure containing about 1½ United States bushels.—**2.** A Spanish and Spanish-American land-measure containing about 1⅝ acres.

fanfare, *n.* **3.** In *bookbinding*, an erratic or eccentric style of decoration which purposely avoids regular or geometrical design.

fanfest (fan′fest), *n.* [*fan*2 + G. *fest* (as in *schützenfest*, etc.), festival.] A gathering of 'fans,' that is, ' base-ball enthusiasts. [Slang.]

There was a regular *fanfest* over the rumors of difficulties among the Giants. *N. Y. Eve. Amer.*, July 27, 1904.

fan-flower (fan′flou″ẽr), *n.* An Australian shrub, *Lobelia cuneiformis*, so called from the flattened, fan-like appearance of its flowers. See *Scævola*.

fan-forge (fan′fōrj), *n.* A forge in which a centrifugal fan instead of a bellows furnishes the blast.

fang, *v. t.*—**To fang a pump,** to prime it. [Local, Eng.]

fang, *n.* **6.** A valve in a pump: the water-seal of a pump. **To lose the fang,** to break the seal or allow the water to run out of a pump, so that it will not draw without priming.

fang-bolt (fang′bōlt), *n.* A bolt used for attaching ironwork to wood. In some cases the head of such a bolt has fangs or teeth for biting into the timber, and in other cases the fangs are on washers.

fangle2 (fang′gl), *n.* [Prob. orig. connected with *fangle*1.] A large, irregular bundle of straw tied together at intervals, and serving as a torch.

fango (fän′gō), *n.* [It. Sp. *fango* = Pr. OF. *fanc*, mud.] Mud in its therapeutic uses.

Measurements which were made of the ionising power and of the rate of decay of the emanation of "*fango*" or mud from the hot springs of Battaglia, would indicate that its activity is due solely to the presence of radium.
Nature, Sept. 8, 1904, p. 458.

fanguito (fän-gē′tō), *n.* [Sp., dim. of *fango*, mud.] A killifish, *Pœcilia vittata*, found in fresh water in Cuba.

fanning (fan′ing), *n.* In *machine-sewing*, a variety of free embroidery stitching on ornamental fabrics used for decorative purposes. Also called *flossing*.

Fan-shaped structure. See ★*structure*.

Fantail axle. See ★*axle*.

fantaisie (fon-tā-zē′), *n.* [F.: see *fantasy*.] Same as *spun silk* (which see, under *silk*).

fantasm, *n.* A simplified spelling of *phantasm*.

fantasmagoria, *n.* A simplified spelling of *phantasmagoria*.

Fantasy pearl. See ★*pearl*.

fantigue (fan-tēg′), *n.* [Also *fanteague*, *fanteag*, *fanteeg*, *fantaig*, *fantag*; prob. a dial. mixture of *fantastic* and *fatigue*.] A state of worriment or anxiety. [Prov. Eng.]

fantod (fan′tod), *n.* [Also *fanted*; origin obscure. Cf. ★*fantigue*.] The fidgets: as, to give one the *fantods*. *Mark Twain*. [Slang.]

fantom, *n.* and *a.* A simplified spelling of *phantom*.

fan-work (fan′wẽrk), *n.* Same as *fan-tracery*.

Far point. See ★*point*1.

far3 (fär), *n.* [L. *far*, spelt: see *farina*.] A type of spelt now out of notice.

Triticum Zea, *Far*, is one of the class of spelt-wheats. It is distinguished by the distance of its spikelets from one another. *Low*, Pract. Agr., p. 325.

far. An abbreviation (*a*) of *farriery*; (*b*) of *farthing*.

faracurd (far′ạ-kẽrd), *n.* [A trade-name prob. < It. *fare*, *far*, make, L. *facere*, + E. *a curd*?] A preparation of skim-milk in the form of a dry powder: used by bakers and confectioners.

Faraday effect. See ★*effect*.

Faraday's dark space or **Faraday's space.** See *dark* ★*space*.—**Faraday's electric bag, tubes.** See ★*bag*1, ★*tube*.

faradimeter (far-ạ-dim′e-tẽr), *n.* Same as ★*farad-meter*.

The current is from a secondary coil of about 5000 turns of fine wire and the dose is carefully measured by my *faradimeter* which I exhibited before the British Electro-Therapeutic Society in 1902.
S. Sloan, in Lancet, May 30, 1903, p. 1519.

faradization, *n.*—**Galvanic faradization,** the stimulation of a nerve by combined galvanic and faradic currents.

farad-meter (far′ad-mē″tẽr), *n.* In *elect.*, an instrument for determining, in farads, the electrostatic capacity of a condenser.

faradocutaneous (far″ạ-dō-kū-tā′nē-us), *a.* Relating to the skin and a faradic current.—**Faradocutaneous sensibility,** sensibility of the skin to stimulation by a faradic current. *Alien. and Neurol.*, Feb., 1903, p. 40.

faradometer (far-ạ-dom′e-tẽr), *n.* Same as ★*farad-meter*.

Farang (fä′rang), *n.* [Hind. Pers. *farang*: see *Frank*1, 2.] A Frank; a Feringhee or European; a non-Asiatic foreigner.

They [the Siamese of Lakawn] have seen less of the *Farang* than many of their countrymen in Upper Siam.
Geog. Jour. (R. G. S.), XI. 489.

farcy-button (fär′si-but″n), *n.* A small tumor (enlarged lymphatic gland) occurring in a horse suffering from farcy. Also called *farcy-bud*.

farcy-pipe (fär′si-pīp), *n.* A hard, cordy swelling of the subcutaneous lymphatics in farcy.

fare1, *n.*—**Excess fare,** on railways, steamboats, etc., the payment made by a passenger for traveling beyond the place specified on his ticket, or in a higher class than that for which the ticket was issued.

farewel. A simplified spelling of *farewell*.

Farfugium (fär-fū′ji-um), *n.* [NL. (Lindley, 1857), < L. *farfugium*, the plant called colts-

foot, *Tussilago Farfara.*] An untenable name for *Erythrochæte*, a genus of plants of the family *Asteraceæ*. See ★*Erythrochæte*.

farinatome (fa-rin′a-tōm), *n.* [L. *farina*, meal, + Gr. *-τομος*, ⟨ *τεμνειν*, *ταμειν*, cut.] An apparatus used in the study of seeds to make cross-sections of many grains (of cereals) at once. The object in cutting is to determine whether the seeds are horny or starchy.

farinha (fä-rēn′yä), *n.* [Pg.: see *farina.*] In Guiana and the West Indies, cassava meal.

farinivorous (far-i-niv′ō-rus), *a.* Feeding upon farinaceous products: said of a meal-worm or a grain-weevil.

Farm lateral. See ★*lateral.* **Poor farm.** See *poor-farm.* **Sewage-farm,** a farm of a type found near many British towns in which the public sewage is utilized for irrigation. Such farms are devoted chiefly to market-gardening and to growing forage-crops. *Muir*, Agriculture, p. 124, note.

farmacy, *n.* A simplified spelling of *pharmacy.*

farm-boiler (färm′boi″lèr), *n.* A large portable furnace and boiler for cooking food for cattle, pigs, etc. The boiler is usually so arranged that it can be tipped up and its contents discharged without disturbing the fire or furnace. Also called *feed-boiler.*

Farmers' Alliance, institute, itch. See ★*alliance*, etc.

farmer's-ruin (fär′mèrz-rö″in), *n.* The corn-sperry, *Spergula arvensis*: so called from its effect on crops.

Farmer's theorem. See ★*theorem.*

farming, *n.* **4.** The commercial production of any plant (even horticultural) or animal which has an economic value: as, fruit-*farming*, perfumery-*farming* (growing flowers for extraction of perfumery-oils), ostrich-*farming* (for feathers), cat-*farming* (for fur), etc.—**All-grain farming.** See *grain-*★*farming.* **Arid farming.** Same as *dry* ★*farming.* **Cottage farming,** farming with an acre or two of ground without working animals; spade husbandry. [Great Britain.]—**Dairy-farming,** farming which is occupied with the production of milk and milk products, including the growing of feeds, the management of milch-cattle, and the manufacture of butter and cheese, at least when this is conducted on the farm; dairying. **Dry farming,** the practice of ordinary agriculture dependent upon rain, when carried on in an arid or semi-arid country, in distinction from the form of agriculture by irrigation. The fundamental principle of dry farming, as a method, is that pulverizing the soil makes it receptive of water and at the same time prevents evaporation. By constantly stirring the soil for a year without crop (see *bare* ★*fallow*) enough moisture may, in some cases, be stored to secure a crop for one or more succeeding years. By such methods good crops can be grown where the rainfall does not exceed 12 inches per annum. Dry farming is coming into practice in the drier regions of the western United States where irrigation is not available.—**Grain-farming,** farming which is occupied with the production of cereals. Exclusive grain-farming (sometimes called *all-grain farming*) impoverishes the soil, because no return is made for the plant-food taken away. **Grass-farming,** that system of farming (usually of the "low" type) which rests upon the production of grass for pasture or hay. *F. Storer*, Agriculture, III. 326.—**Intensive farming,** that method of husbandry in which, by liberal application of labor and expense, the maximum returns are obtained from small areas. Such a method is profitable in situations where land is valuable on account either of fertility and dense population or of adaptation to a special crop: opposed to ★*extensive agriculture.* Also called *high farming.* **High farming,** same as *intensive* ★*farming.* **Stock-farming, truck-farming.** See ★*stock-farming*, ★*truck-farming.*

farming-shelter (fär′ming-shel″tèr), *n.* A shed or wind-break intended to shelter cultivators at work upon their fields: used especially in connection with the Red Indians of North America.

farolito (fä-rō-lē′tō), *n.* [Sp. *farolito*, dim. of *farol*, lantern.] In Porto Rico the balloon-vine, *Cardiospermum Halicacabum*, so called from the fancied resembance of its inflated fruit to a miniature paper lantern.

farouche (fä-rösh′), *a.* [F.; origin obscure.] Distant or repellent in manner; unsociable; shy. *Mrs. Gaskell.*

Farre's line. See ★*line*[1].

Farrington group, series. See ★*group*[1], ★*series.*

farrisite (far′i-sīt), *n.* [*Farris*, a lake in Norway, + *-ite*[2].] In *petrog.*, a name given by Brögger (1898) to a compact chocolate-brown rock composed of 35 per cent. of a melilite-like mineral, 33 per cent. of barkevikite, 25 per cent. of diopside, and a little lepidomelane, altered olivin, and iron oxid. It occurs in a narrow dike cutting augite-syenite.

farsang (fär′sang), *n.* [Pers.: see *parasang.*] A Persian itinerary measure equal to about four miles.

farynx, *n.* A simplified spelling of *pharynx.*

F. A. S. An abbreviation (*a*) of *Fellow of the Antiquarian Society*; (*b*) of *Fellow of the Society of Arts*; (*c*) of *free alongside ship.*

fasc. An abbreviation of *fasciculus.*

fascia, *n.*—**Dentate fascia,** a strip of gray matter beneath the corpus fimbriatum in the brain. **Fascia propria,** a layer of tissue covering the neck of a femoral hernia, derived from the cribriform fascia or from the femoral sheath.—**Fascia recta,** the sheath of a rectus muscle, particularly of the rectus abdominis.—**Fascia semilunaris.** See *semilunar fascia.* **Fascia superficialis.** See *superficial fascia*, under *fascia*, 7.—**Tenon's fascia.** Same as *Tenon's capsule.*

fasciated, *a.* **3.** In *zoöl.*, marked with vertical or transverse bands of color. [Rare.]

fascicle, *n.*—**Trineural fascicle** or **fasciculus,** a small collection of nerve-fibers in the upper part of the spinal cord connecting the glossopharyngeal and vagus nerves.

Fasciculated bladder. See ★*bladder.*

fasciculus, *n.*—**Fasciculi innominati,** two bundles of nerve-fibers within the medulla oblongata, continuous with the fasciculi teretes.—**Fasciculus acusticus,** one of a number of white stria which cross transversely the floor of the fourth ventricle of the brain.—**Fasciculus arciformis.** Same as *arciform fibers.* **Fasciculus cuneatus,** the lateral column of the spinal cord.—**Fasciculus of Goll,** nerve-fibers which ascend along the posterior median fissure of the spinal cord to the cerebellum. **Solitary fasciculus.** Same as *solitary funiculus.* **Trineural fasciculus.** See ★*fascicle.*

Fascigeridæ (fas-i-jer′i-dē), *n. pl.* [NL., ⟨ *Fasciger*, typical genus, + *-idæ.*] A family of repent or erect *Bryozoa* having the zoœcial apertures arranged in bundles or fascicles.

fasciotomy (fas-i-ot′ō-mi), *n.* [L. *fascia*, a band, + Gr. *-τομια*, ⟨ *τεμνειν*, cut.] In *surg.*, operation for the division of a fascia.

Fascipora (fa-sip′ō-rä), *n.* [NL., ⟨ L. *fascis*, a bundle, + Gr. *πόρος*, a pore.] The typical genus of the *Fasciporidæ.*

Fasciporidæ (fas-i-por′i-dē), *n. pl.* [NL., ⟨ *Fascipora*, a pore, + *-idæ.*] A family of cyclostomatous *Bryozoa* of the Cretaceous formation, growing in clustered zoœcia opening radially and without accessory pores.

fase, *n.* A simplified spelling of *phase*[1].

F. A. S. E. An abbreviation of *Fellow of the Antiquarian Society of Edinburgh.*

fashion-art (fash′on-ärt), *n.* The art which follows new or exotic models, in distinction from *custom-art*, which follows the traditional models of clan, tribe, or nation. *Tarde* (trans.), Laws of Imitation, p. 357.

fashion-imitation (fash′on-im-i-tā″shon), *n.* The imitation of new examples or models, especially of those of foreign origin, in distinction from *custom-imitation*, which consists in following the traditional usages of family, clan, or nation.

> All resemblances of social origin in society are the direct or indirect fruit of the various forms of imitation, custom-imitation or *fashion-imitation*, etc.
>
> *Tarde* (trans.), Laws of Imitation, p. 14.

fashion-morality (fash′on-mō-ral″i-ti), *n.* Morality built up from new or exotic ideas and examples, in distinction from *custom-morality*, the traditional morality of family, clan, or nation.

> Hence the individualistic character of *fashion-morality*, analogous to that of fashion-art.
>
> *Tarde* (trans.), Laws of Imitation, p. 357.

F. A. S. L. An abbreviation of *Fellow of the Anthropological Society of London.*

Fassanian (fa-sā′ni-an), *a.* [It. *Fassa*, a district in Tyrol, giving name to the Fassa valley and the Fassanian Alps.] In *geol.*, noting a group of strata which constitutes the lowest member of the Upper Trias in the Mediterranean province.

fast[1]. **I.** *a.* **8.** Favorable to high speed: said of the condition of a race-track or road, and also, in *cricket*, of the wicket or playing-ground when it is hard and dry, so that the ball travels fast.—**Fast acid-blue, acid-magenta, acid-ponceau, acid-red, acid-violet.** See ★*acid-blue*, etc. **Fast acid-fuchsin.** Same as *fast* ★*acid-magenta.* **Fast acid-scarlet.** Same as ★*acid-ponceau.*—**Fast black, Bordeaux, marine blue,** etc. See ★*black*, etc.—**New fast green.** See ★*green.*

II. *n.* **4.** In *arch.*, a fastening, usually a simple button or bolt to keep a door or window shut: often used in combination, as *door-fast*, *shutter-fast*, etc.

fast[3], *n.*—**Jewish fasts.** The principal Jewish fast-days are those mentioned in the Bible. The most solemn fast is the *Great Day of Atonement* or *Fast of Expiation*, on the tenth day of the month Tishri (which see), prescribed by Moses. It is a holy day, "the Sabbath of Sabbaths." Next in order are: (*a*) *The fast of the fourth month*, on the seventeenth day of Tammuz, which is the fourth month of the Jewish ecclesiastical year; on that day, the rabbis declare, Moses destroyed the tablets; on the same day the daily sacrifices ceased, and Apostemus burned the law and placed an idol in the sanctuary. (*b*) *The fast of the fifth month*, on the ninth day of Ab, the fifth month of the Jewish ecclesiastical year; on that day, the Talmud relates, it was decreed that the children of Israel should not enter the Promised Land: the destruction of the first and second temples occurred on the same day. (*c*) *The fast of the tenth month*, on the tenth day of Tebeth, the reason for this fast being the siege of Jerusalem by Nebuchadnezzar. (*d*) *The fast of Esther*, on the thirteenth day of the month Adar, which is the eve of Purim (which see). Besides the above there are numerous other fasts, general, local, and private. For instance, in some localities the Jews fast on the twentieth day of Sivan (about the middle of June), on account of the calamities inflicted upon them in 1648 by the Cossacks under Chmielnicki. The Jews of Frankfort on the Main fast on the nineteenth day of Adar, on account of the atrocities committed upon them at the time of their expulsion from that place in 1614. The orthodox Jews observe no less than twenty-five regular fast-days, besides a score or so of other self-imposed and private fasts, including *Jahrzeit*, a fast on the anniversary of the death of parents, and *the fast of bad dreams*, which takes place in order that God may be invoked to ward off the threatening evil. The very pious Jews fast every Friday, so that they may better enjoy the Sabbath feast in the evening, which is considered a meritorious meal.

fast-fur (fäst′fur), *a.* In Newfoundland, noting the young of the harp-seal when in such condition that the coat of soft, woolly fur in which it is clothed when born does not readily pull out. This coat is shed when the seals are a few weeks old, leaving them clad in the short, close hair common among hair-seals.

fastidium (fas-tid′i-um), *n.* [L.: see *fastidious.*] Slight nausea with repugnance to food.

fastigiation (fas-tij-i-ā′shon), *n.* [*fastigiate* + *-ion.*] The condition of being, or tendency to be, fastigiate; applied to trees.

fastigium, *n.* **4.** A period of continuous fever in an acute disease, when the temperature has ceased to ascend but has not yet begun to fall. —**5.** A projection in the roof of the fourth ventricle of the brain.

fat[1]. **I.** *a.* **9.** In *painting*, rich; full of color.

> Put in with an infinity of small '*fat*' touches, the effect being completed by sharp flashes of white and vermilion.
>
> *C. J. Holmes*, in Burlington Mag., I. 83.

Fat acid. Same as *sebacic acid*, $(CH_2)_8(CO_2H)_2$. Also called *ipomic acid.*

II. *n.* **4.** A local Australian term for fat or marketable cattle.—**Bayberry fat.** Same as *bay-oil.* **Becuiba fat.** Same as *becuiba-tallow* (which see, under *tallow*).—**Fat embolism.** See ★*embolism.*—**Natural fats,** solid substances of a fatty nature obtained from animal or vegetable sources.—**Nun fat,** a fat-like or waxy substance produced by the insect *Coccus adipifera.*—**Otoba fat.** Same as *otoba-butter.*—**Pichurim-bean fat.** See ★*bean*[1].—**Pichurim fat.** Same as *Pichurim* ★*camphor.*—**Vateria fat,** solid fat from the seeds of *Vateria Indica.* Also known as *piny tallow* or *Malabar tallow.* *T. E. Thorpe*, Dict. Applied Chem., III. 937.—**Wakefield fat.** Same as *Yorkshire* ★*grease.*

fat[1], *v. t.* **2.** In *leather-manuf.*, to smear over with a heavy oil. *Flemming*, Practical Tanning, p. 166.

fat-body (fat′bod″i), *n.* One of the masses consisting of connective tissue and fat-globules found in the bodies of arthropods, amphibians, and other low forms.

fat-face (fat′fās), *n.* In *printing*, same as *heavy* ★*face.*

fath. An abbreviation of *fathom.*

father, *n.*—**Father of lies,** Satan.—**Father of the Faithful.** (*a*) Abraham. (*b*) The Sultan of Turkey.—**Father Time,** time personified as an old man. See *time*[1], 1.

father-right (fä′ȝhèr-rīt), *n.* Supremacy of the father in the family that traces descent in the male line: distinguished from supremacy of the uncles or brothers of a wife and mother in the family that traces descent in the female line. It is a broader and less technical term than the Latin *patria potestas.* *L. Gumplowicz* (trans.), Outlines of Sociol., p. 53.

father-rule (fä′ȝhèr-röl), *n.* Supreme authority of the father in the family. In the evolution of the family, father-rule has generally appeared later than the so-called mother-rule, which was in reality the authority of the male relatives of the mother. *L. Gumplowicz* (trans.), Outlines of Sociol., p. 112.

fathom, *n.*—**Nautical fathom,** in the United Kingdom, the fathom used for the measurement of cables, which is one thousandth part of a nautical mile, or about 1½ per cent. longer than the ordinary fathom of six feet.

fatiguability (fā-tēg′a-bil-i-ti), *n.* Inability to resist fatigue; lack of staying power.

fatigue, *n.*—**Coefficient of fatigue,** in *phys.*, a numerical constant denoting the extent to which a given substance exhibits the phenomenon of elastic fatigue.—**Curve of fatigue.** See ★*curve.*—**Elastic fatigue.** See ★*after-strain.*—**Error of fatigue.** See ★*error.* **Fatigue fever,** an elevation of temperature observed after an unusual amount of muscular exertion: caused by the presence in the system of toxic matters resulting from the disintegration of tissue.—**Magnetic fatigue,** the loss of permeability with age exhibited by some specimens of iron and steel.

fatihah (fä′ti-hä), *n.* [Ar. *fātiḥa*, *fātḥa*, opening, beginning, ⟨ *fataḥa*, he opened.] The first chapter (sura) of the Koran. It consists of seven verses (lines), and contains a doxology ('Te Deum laudamus') and a prayer. It is greatly reverenced by Mohammedans, who use it much as Roman Catholics use the paternoster.

> "Gabriel! why stay'st thou here?" the Prophet said,
> "Since at this hour the *Fatihah* should be read."
>
> *Edwin Arnold*, Pearls of the Faith, Ali and the Jew, st. 4.

fat-liquor (fat'lik″or), *n.* A mixture of oils and alkali for oiling hides or skins to make them soft. *Flemming*, Practical Tanning, p. 127.

fat-liquor (fat'lik″or), *v. t.* To anoint or coat with fat-liquor. *Flemming*, Practical Tanning, p. 22.

fat-necrosis (fat'nek-rō″sis), *n.* A degenerative alteration of fatty tissue, shown by the presence of firm opaque white areas.

fat-pork (fat'pôrk), *n.* [From the appearance of the pulp of the fruit.] The edible fruit of the monkey-apple, *Clusia flava*, or the tree itself. [West Indies.]

fatten, *v. t.* **3.** In *poker*, to add chips to (a jack-pot which was not opened on the previous deal).—**4.** In *skat*, to discard valuable cards on (a partner's tricks).

fattend, *pp.* A simplified spelling of *fattened.*

fat-tree (fat'trē), *n.* In *phytogeog.*, one of a class of trees of temperate zones, consisting chiefly of soft-wooded species such as conifers, birches, and lime-trees, in which, at the beginning of winter, all the starch of the cortex and wood is converted into fat, to be reconverted into starch in the spring. Compare ★*starch-tree.* *A. F. W. Schimper* (trans.), Plant-Geog., p. 436.

Fatty casts. See ★*cast*1.—**Fatty oils.** See *oil*, 1.—**Fatty series,** the class of carbon compounds which have a chain-like structure, as distinguished from those which have a cyclic structure. Also called *aliphatic series.*—**Fatty tumor.** See ★*tumor.*

fau (fou), *n.* [Samoan, Marquesan, etc., *fau.*] **1.** A name in Polynesia of several nettle-like plants which yield fiber used in making fishing-lines and nets: as, *fau-songā*, *Pipturus argenteus* (Samoa).—**2.** A Polynesian name for *Pariti tiliaceum*, a tree belonging to the mallow family, with tough bark yielding cordage and very light wood used by the natives for making outriggers of canoes and for kindling fire by friction. Also *hau.* See ★*balibago, corkwood,* and *mahoe*, 1.

fauces, *n. pl.* **5.** In ancient Roman building, a passage in a house, especially that leading from the first vestibule to the atrium or first court. It is disputed whether the term is ever used for inner passages. *Vitruvius* (trans.), Architecture, vi. 4.

faucet, *n.*—**Rabbit-ear faucet,** a compression-faucet in which the valve is closed by pressing together two upright blades or ears.

faucet-filter (fâ'set-fil″tėr), *n.* Same as *filter-faucet.*

fault, *n.*—**Bedding fault,** in *geol.*, a fault whose plane of displacement coincides with the bedding-planes of the strata.—**Dip-fault,** a fault which crosses the strike of the faulted strata: the opposite of *strike-fault.*—**Distributive fault,** a fault in which the displacement is not confined to a single plane, but is distributed among a series of parallel planes at short distances from one another. *Chamberlin and Salisbury*, Geol., I. 494.—**Gravity fault,** an inclined fault the upper side of which has slipped down on the under side, because, being the portion with the smaller base and therefore with the less support, gravity is conceived to have pulled it down, when, under tension, the strata drew apart; a normal fault. *Geikie*, Text-book of Geol., p. 702.—**Normal fault.** Same as *gravity* ★*fault.* The great majority of faults in nature are normal faults.—**Overthrust fault.** See *reverse fault.*—**Rhine-Ticino fault,** a great line of disturbance of strata, antedating the Triassic period and separating the Eastern from the Western Alps. The line extends from the upper Rhine valley, on the northeast, to the valley of the Ticino, on the southwest.

faultage (fâlt'āj), *n.* [*fault* + *-age.*] In *geol.*, faults collectively considered.

My geological surveys go to prove that all that portion of Iceland has subsided, there being well-marked lines of *faultage* going down to the bases of the mountains.
Geog. Jour. (R. G. S.), XIII. 272.

fault-breccia (fâlt'brech″iäą), *n.* A breccia formed by the crushing of rock along a fault. Sometimes called *fault-conglomerate.*

fault-bundle (fâlt'bun″dl), *n.* In *geol.*, a group of faults.

Varied arrangements in *fault-bundles* and fault-polygons. *Geog. Jour.* (R. G. S.), XVI. 464.

fault-conglomerate (fâlt'kon-glom″e-rāt), *n.* Same as ★*fault-breccia.*

fault-fissure (fâlt'fish″ūr), *n.* The fissure produced by a fault, even though it is afterward filled by a deposit of minerals. Veins in fault-fissures are especially valued by miners because they are generally believed to be persistent to relatively great depths. *Geikie*, Text-book of Geol. (4th ed.), p. 372.

faulting, *n.*—**Block-faulting,** a process resulting in a series of intersecting faults which serve to break up the surface of the earth into polygonal blocks, which are afterward modified by erosion. See *fault-block.*

fault-plane (fâlt'plān), *n.* The plane or approximate plane along which faulting has occurred. It is not, usually, a simple plane, but is rather a zone of some width throughout which there is shattering and movement.

Inclined *fault-planes* with downthrow towards one trough may be parallel with reverse *fault-planes* upon which a portion of an arch has moved backward over an adjacent trough. *Geog. Jour.* (R. G. S.), XVI. 466.

fault-scarp (fâlt'skärp), *n.* The upthrow side of a fault left standing as a line of cliffs. The tendency of erosion is to destroy such inequalities, so that a fault-scarp is rarely well preserved. *Chamberlin and Salisbury*, Geol., I. 491.

fault-vein (fâlt'vān), *n.* A mineral vein deposited in a fault-fissure.

fault-vent (fâlt'vent), *n.* In *geol.*, a volcanic vent located on a fault.

During the geological periods when the *fault-vent* continued intermittently active, the form of the sill-complex was capable of being re-moulded periodically in harmony with the localised crust-stresses.
Nature, Sept. 3, 1903, p. 413.

fauna, *n.*—**Euloma-Niobe fauna,** an assemblage of extinct organisms, characterized by the trilobites *Euloma* and *Niobe*, at the base of the Lower Silurian system which extends from Swedish Lapland to Languedoc in France. It bears a transitional character between the Cambrian and Silurian faunas.—**Prenuncial faunas.** See *doctrine of* ★*colonies* and ★*prenuncial.*

faunally (fâ'nal-i), *adv.* As regards the fauna or zoölogical remains (of some formation or area).

Faunally the same species characterize the lower and upper members of the Portage.
Science, Feb. 5, 1904, p. 235.

faunistically (fâ-nis'ti-kal-i), *adv.* As regards the fauna; faunally.

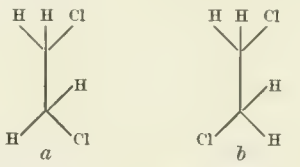
faunule (fân'ūl), *n.* [NL., *faunula*, dim. of *fauna*, fauna.] A little fauna; a subdivision or subordinate association of the species of a fauna: used especially of local congeries of fossils in the successive beds of a given formation.

Favier powders. Same as *Favier* ★*explosives.*

faviform (fav'i-fôrm), *n.* [L. *favus*, honeycomb, + *forma*, form.] Resembling a honeycomb in appearance.

favord, *a.* A simplified spelling of *favored.*

favored, *a.* **3.** In *organic chem.*, noting that configuration of the atoms or radicals in a compound in which the atoms which have an attraction for each other are brought as close together as possible. Thus of the two configurations for ethylene chlorid,



b is said to be a *favored* configuration because in it the chlorin and hydrogen atoms are nearer together than in *a.*

favorit, *n.* and *a.* A simplified spelling of *favorite.*

favositoid (fav-ō-sī'toid), *a.* [*Favosites* + *-oid.*] Pertaining to or having characters of the genus *Favosites.*

Tangential sections very near the surface of the reticulation show minute points projecting into the openings of the mesh suggesting the septa of a *favositoid* coral or certain of the hydrocorallines.
Amer. Jour. Sci., Aug., 1904, p. 136.

favous (fā'vus), *a.* [NL. **favosus*, < L. *favus*, honeycomb.] **1.** Resembling a honeycomb.—**2.** Of or relating to favus.

favrile (fav'ril), *a.* and *n.* [Formed (by L. C. Tiffany, the producer of the glass, in 1894), with a differentiation of form intended to make the word distinctive in trade, from the normal type **fabrile*, < L. *fabrilis*, of or pertaining to an artisan, < *faber*, an artisan, a smith: see *fabric.*] **I.** *a.* Artistic in a distinctive and concentrated way, namely, characterized by rich colors, enameling, and iridescence, with decorative effect: applied to glass so produced. See the etymology.

II. *n.* A highly decorative colored, enameled, and iridescent glass, usually in vase-forms.

fawn2, *n.* **3.** The color of the fawn; a light yellowish brown.

fawn-colored (fân'kul″ord), *a.* Of a light yellowish-brown color.

fawn-lily (fân-lil'i), *n.* A dog-tooth violet, *Erythronium giganteum*, of the Coast Range of California and Oregon. This and other western species are much finer plants than the eastern, *E. Americanum.* The name was proposed by John Burroughs and alludes to the two leaves, which resemble fawns' ears, and the lily-like flower. Also called (with other species) *chamise-lily.*

faxiness (fak'si-nes), *n.* [Dial. var. of *foxiness*2.] In *veg. pathol.*, a disease of flax, of unknown origin, which turns the tops of the plants red and renders them unfit for retting.

faya (fä'yä), *n.* [Chamorro name.] In the Marianne Islands, *Tristiropsis obtusangula*, a tree belonging to the *Sapindaceæ*, with bipinnate leaves having usually three pairs of pinnæ, each with 4 to 6 leaflets, and with ellipsoidal, obtusely 3-angled fruit covered on the surface with minute dust-like hairs, and containing a bony putamen. On the island of Guam the wood is used in the construction of small boats.

Fayal lace. See ★*lace.*

fayberry (fā'ber'i), *n.* Same as *feaberry.*

F. B. An abbreviation (*a*) of *Fenian Brotherhood*; (*b*) of *Free Baptist.*

F. B. O. U. An abbreviation of *Fellow of the British Ornithologists' Union.*

F. B. S. An abbreviation of *Fellow of the Botanical Society.*

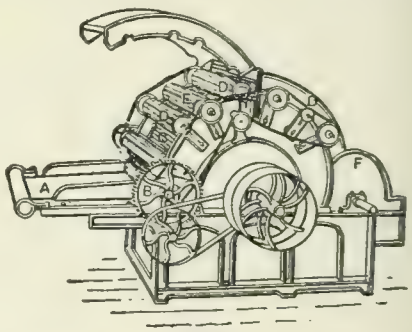
F. C. An abbreviation (*b*) in *freemasonry*, of *Fellow-craft*; (*c*) [*l. c.*] of the Latin *fidei commissum*, bequeathed in trust.

F. C. P. An abbreviation of *Fellow of the College of Preceptors.*

fcp., fcap. Abbreviations of *foolscap.*

F. C. S. An abbreviation (*a*) of *Fellow of the Cambridge Philosophical Society*; (*b*) of *Fellow of the Chemical Society* (London); (*c*) [*l. c.*] in *marine underwriting*, of *free of capture and seizure.*

fearnaught, *n.* **2.** A machine with a main cylinder, workers, and strippers with steel hooks,



Fearnaught.

A, feed-table; B, feed-rollers; C, main cylinder; D, workers; E, strippers; F, doffer. (From Vickerman's "Woollen Spinning.")

or teeth, for teasing or opening wool preparatory to carding.

feasance (fē'sans), *n.* [Also *fesaunce*; < AF. *fesance, fesaunce* (F. *faisance*), < *fesant*, ppr. of *faire*, do: see *fact.* Cf. *malfeasance, nonfeasance.*] Performance; doing or performing an act or thing; the act or fact of omitting to do or perform an act or thing.

Feast of ingathering. See *Jewish* ★*festivals.*—**Feast of lights.** See ★*Hanukah.*—**Feast of Unleavened Bread, Feast of Weeks.** See *Jewish* ★*festivals.*

feast-rite (fēst'rīt), *n.* A rite relating to the celebration of a feast.

feather, *n.*, **3.** (*b*) In *archery*, a piece cut from one side of a feather, trimmed to the desired size and shape, and glued upon an arrow near the nock to improve its flight. Sometimes other material is used. Ordinarily an arrow has three feathers set at equal distances on its circumference: see *cock-feather.*—**Balloon** or **parabolic feather,** a feather trimmed to a round shape toward the nock of the arrow.

feather, *v.* **I.** *trans.* **7.** To drop (melted metallic tin) into cold water, which has the effect of spreading it out with a feathery appearance.

II. *intrans.* **4.** To make a quivering movement of the tail: said of dogs.—**To feather out,** specifically, said of plants that throw out many adventitious shoots after they are pruned or headed back.

feather-beds (feтн'ėr-bedz), *n.* A plant of the genus *Chara*, so called from the thick and soft mat which these plants form at the bottom of pools in which they grow.

feather-board (feтн'ėr-bôrd), *n.* A board with a tapered section thinner at one side than at the other; a clapboard. [Great Britain.]

Feathered antimony, tin. See ★*antimony,* ★*tin.*

Feather-edge machine, in *shoe-manuf.*, a hand-power machine for skiving off or cutting a feather-edge on the shanks of shoe-soles.

feather-fern (feтн'ėr-fėrn), *n.* An ornamental branching herb of the saxifrage family, *Astilbe Japonica.* See *Spiræa*, 2, (*b*), and ★*Astilbe.*

feather-follicle (feтн'ėr-fol'i-kl), *n.* The little pit in which the base of a feather rests: formed by the sinking of the feather-papilla.

Featherfoot spider. See ★*spider.*

feather-germ (feтн′ėr-jėrm), *n.* The papilla from which a feather is developed. In the embryo it lies on the surface of the skin, but in older birds at the base of each feather, within the feather-follicle.

feather-grass, *n.* **3.** See ★*chloris,* 4.—**4.** One of several American species of *Stipa,* including the crested feather-grass, *S. coronata,* of Arizona and California, and the slender feather-grass, *S. tenacissima,* of Texas and New Mexico; also *S. comata,* one of the needle-grasses, and *S. viridula,* the featherbunch-grass.—**5.** A weed, *Leptochloa mucronata,* of cultivated grounds southward in the United States and in Mexico and Cuba. Its panicle is composed of many slender spreading branches. See *slender-grass.*—**6.** The velvet-grass, *Holcus lanatus.*

feathering, *n.* **6.** In *violin-playing,* a very light and delicate use of the bow.—**Double feathering,** an arrangement of cusps by which smaller ones are used to subdivide the curve inclosed by the larger ones. See cut under *cusp,* Fig. 3.

feather-key (feтн′ėr-kē), *n.* In *mach.,* a key fastened to a wheel which slides along a shaft but also turns with the shaft, the key sliding along an axial groove, spline, or slot. The key may be on the shaft, and the groove or slot be cut in the wheel.

feather-papilla (feтн′ėr-pa-pil″ä), *n.* The minute conical elevation which marks the place of development of a feather. It subsequently sinks below the level of the skin and lies at the bottom of the feather-follicle.

feather-pulp (feтн′ėr-pulp), *n.* The assemblage of cells by which a growing feather is nourished, forming a soft, pulpy mass within the base of a young feather.

feather-sedge (feтн′ėr-sej), *n.* A beard-grass, *Andropogon saccharoides,* so called from its plume-like panicle. It occupies 'sedge-grass prairies' inland in the southwestern United States and serves the purpose of grazing. Sometimes called *cotton-grass.*

Feather-sedge (*Andropogon saccharoides*).

a, plant, one fourth natural size; *b,* perfect spiklet; *c,* sterile spiklet, enlarged. (From U. S. D. A.)

feather-stitch (feтн′ėr-stich), *v. t.* To ornament with feather-stitching.

feather-stroke (feтн′ėr-strōk), *n.* In *Eng. billiards,* a delicate touch by which the cue-ball is pushed from balk past the first object-ball and into pocket, moving the object-ball only slightly. Also called *quill-stroke.* It has long been abolished among experts. *W. Broadfoot,* Billiards, p. 370.

Feather-tongue spline. See ★*spline.*

feather-tract (fēтн′ėr-trakt), *n.* Same as *pteryla.*

feather-tree (feтн′ėr-trē), *n.* **1.** The smoke-tree, *Cotinus Cotinus.*—**2.** The valley-mahogany, *Cercocarpus parvifolius:* so called in California on account of the feathery styles of the fruit.

feather-wedge (feтн′ėr-wej), *n.* Same as *fox-wedge.*

feather-weed (feтн′ėr-wēd), *n.* **1.** One of the red algæ of the genus *Ptilota.*—**2.** The common everlasting, *Gnaphalium obtusifolium.*

feature, *v. t.* **2.** To make a feature or special attraction of; display or mention prominently; give prominence to: as, A B is *featured* at the Academy as Othello. [Chiefly in newspaper and theatrical use.]

feazings, *n.* See ★*feezings.*

febricity (fe-bris′i-ti), *n.* [Erroneously formed (as if from a L. adj. ★*febricus*) from L. *febricitare,* have a fever, < *febris,* a fever: see *fever.*] A state of fever or feverishness. *Browning.*

febril, *a.* A simplified spelling of *febrile.*

Febrile urine. See ★*urine.*

Febronian, *a.* **II.** *n.* One who holds the Febronian doctrine, which maintains the primacy of the body of the episcopate over the Pope.

fec. An abbreviation of the Latin *fecit,* (he) did it or made it.

Fechnerian (fech-nē′ri-an), *a.* Relating to G. T. Fechner (1801–87), a German psychophysicist: as, *Fechnerian* psychophysics, the *Fechnerian* method of average error.

Fechner's cloud, paradoxical, shadow experiment. See ★*experiment.*—**Fechner's colors, formulas.** See ★*color,* ★*formula.*

fecht (fecht), *v.* and *n.* The Scotch form of *fight.*

federal, *a.*—**Federal architecture,** in the United States, the architecture of the time since the adoption of the Constitution, as distinguished from that of the period before, which is often called *colonial* or *old colonial.*—**Federal forest.** See *national* ★*forest.*

federalistic (fed″ė-ral-ist′ik), *a.* **1.** Pertaining to federalism.—**2.** [*cap.*] Pertaining to the Federalist party in the United States.

federate, *v.* **II.** *intrans.* To unite in forming a league or federation.

Always as the Federative work goes on, it perfects itself, and Patriot genius adds contribution after contribution. Thus, at Lyons, . . . we behold as many as fifty or some say sixty thousand, met to *federate;* and a multitude looking on, which it would be difficult to number. *Carlyle,* French Rev., II. i. 8.

Federation of labor, a national or other inclusive organization of trade-unions or other organizations of wage-earners; especially in the United States, the American Federation of Labor.

The *Federation of Labour* goes more wisely to work, dealing with particular grievances of particular trades, and pressing for redress of flagrant grievances. Appeal is made to the State mainly when the Federation has failed; action through the State is the second resource, not the first. *Encyc. Brit.,* XXXII. 671.

Social Democratic Federation, an important socialist society founded in London, in 1881, by H. M. Hyndman, William Morris, and other socialistic reformers, under the name of the 'Social Federation.' Two years later the present name was adopted. It is the largest of the socialist societies in the United Kingdom. Its theories and its teachings are largely those of Karl Marx.

federico (fā-dā-rē′kō), *n.* [Spanish name.] See ★*fadang.*

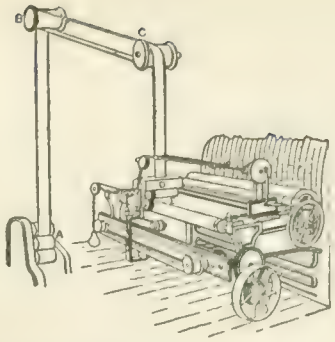
federovite (fed′ė-rō-vīt), *n.* [Named for E. *Federov,* a Russian mineralogist.] A variety of pyroxene related to ægirite.

fee[1], *n.* **6†.** In *hunting,* certain portions of the dead animal which were distributed among the huntsmen according to definite regulations.

fee[2], *n.*—**Fee and life-rent,** in *Scots law,* two estates in land, the former importing absolute ownership and the latter a life-estate. The two estates might coexist in different persons at the same time, and from the loose way in which the expressions were used by conveyancers, difficulties of construction arose, and the term *life-rent* came often to import a fee: for example, an estate "to husband and wife in conjunct fee and liferent and children of the marriage in fee" meant that the surviving husband or wife took the fee; and following this construction, an estate to a father in life-rent and to his heirs in fee gave the fee to the father. Accordingly, it came to be held that the technical meaning of *life-rent* was fee in all cases where the expression would, in its ordinary meaning, indicate that the fee was left over to those who would naturally take it by inheritance. This construction yielded to the ordinary meaning of the expression when accompanied by words or conditions clearly indicating such intent.

feed, *v. t.* **6.** In *founding,* to supply extra metal to (a thick, heavy casting) while it is setting. This is done by having a shrink-head or riser over the thick portion of the casting and keeping communication open between this and the metal in the mold by working a feeding-rod up and down until the metal sets. The object of doing this is to prevent the formation of shrinkage-holes in the casting by the contraction of the metal as it cools, this process beginning from outside and leaving interior holes unless the latter are filled.

feed, *n.*—**Blamire's feed,** a lattice-apron device for automatically conveying cotton, wool, and like fibers from one carding-machine to another, the fibers being delivered at right angles to the direction in which they are received.—**Continuous feed.** See *intermittent* ★*feed.*—**Cut feed,** in *stock-raising,* animal food or fodder, particularly hay, which has been cut into small pieces by running it through a cutter.—**Intermittent feed,** the feed given to a tool, or to the work, by means of a pawl and ratchet or a similar device: distinguished from the *continuous feed* obtained by the use of a constantly rotating screw.—**Piano feed,** a form of feeding-device, arranged in sections resembling piano-keys, for equably delivering cotton into a scutching-machine. *Nasmith,* Cotton Spinning, p. 80.—**Rough feed.** See ★*roughage,* 2.—**Scotch feed,** a self-acting feed used in wool-carding for reducing the carded wool into a flat ribbon about five inches wide and half an inch thick, and delivering it to a succeeding carding-machine.—**Silent feed,** a mechanism for moving a tool to the work or the work to a tool, in any machine-tool or woodworking machine in which the intermittent effect of a ratchet and dog is replaced by a friction apparatus, so that there is no audible click when the feed-motion acts. The most usual forms embody the idea of a cam or toggle, which slips when pulled in one direction, but which nips upon a suitable surface when motion occurs in the opposite direction, and in this second position drives the feed-gear.—**Star-feed,** a device for feeding a tool to its work by means of a screw on a lathe-carriage or boring-bar. As the work or the bar revolves, a projecting arm of a rimless wheel on the end of the screw strikes an adjusted pin, which compels a partial revolution of the wheel and feed-screw. The projecting arms are of such a shape as to suggest a star of four, five, six, or more points.



Scotch Feed.

A, calender or drawing rolls; B, C, carrying pulleys for the ribbon sliver; D, carrier for spreading the sliver; E, teasel apron. (From Vickerman's "Woollen Spinning.")

feed-bag (fēd′bag), *n.* Same as *nose-bag* (which see).

feed-bed (fēd′bed), *n.* **1.** A place where animals feed.—**2.** A level surface forming a table along which material is fed to a machine.

feed-board (fēd′bōrd), *n.* The table attached to a printing- or folding-machine which upholds the pile of paper that is fed into the machine sheet by sheet. See *laying-on* ★*table.*

feed-boiler (fēd′boi″lėr), *n.* Same as ★*farm-boiler.*

feed-box (fēd′boks), *n.* **1.** A box which contains a set of feed-gears or other apparatus for feeding a machine.—**2.** A box in which oats or other feed for horses or cattle is kept.

feed-cloth (fēd′klôth), *n.* Same as ★*feed-sheet.*

feed-cock (fēd′kok), *n.* The valve or cock by which the supply of feed-water for a boiler is controlled.

feed-cone (fēd′kōn), *n.* A cone-pulley, or a cone of gears, used to change the rate of feed on a machine, in order to adjust it to the cutting speed which is best for the material or for the tool.

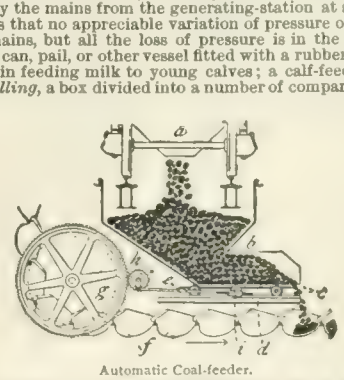
feed-cup (fēd′kup), *n.* An oil-cup; specifically, an oil-cup which holds a supply sufficient to last for some time, and from which the oil is fed at a uniform rate.

feed-cutter (fēd′kut″ėr), *n.* A machine for cutting hay, clover, ensilage and the like. Such machines are made in many forms.

feed-door (fēd′dōr), *n.* The opening or door-frame through which fuel is supplied to a stove, furnace, gas-retort, etc. In heating-furnaces and boilers it may be at the side, just above the fire-pot; in a magazine-stove or cook-stove, at the top and closed by a lid; in a gas-retort, at one end, serving also as the discharging door; and in a blast-furnace, water-gas plant, or coke-oven, at the top.

feed-engine (fēd′en″jin), *n.* A feed-pump.

feeder, *n.,* **6.** (*d*) (2) A part of a machine, such as a finger or arm, for pushing along the material to be operated upon. (*g*) (2) In *elect.,* a conductor which leads from the generating-station to a point in the distribution-system, for the supply of electric current. In low-pressure electric distribution-systems, in which an appreciable loss of pressure occurs between generator and consumer, a system of mains is provided, from which the current is supplied to customers, and a system of feeders which supply the mains from the generating-station at so many points that no appreciable variation of pressure occurs in the mains, but all the loss of pressure is in the feeders. (*h*) A can, pail, or other vessel fitted with a rubber nipple, used in feeding milk to young calves; a calf-feeder. (*i*) In *milling,* a box divided into a number of compartments,

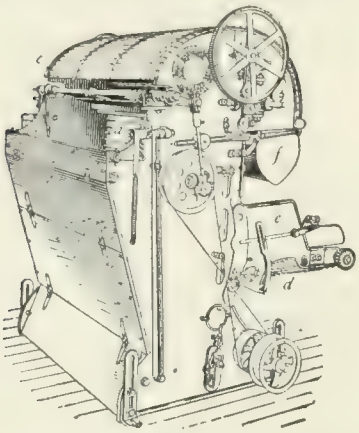


Automatic Coal-feeder.

a, hopper-car on railroad-track discharging coal to feeder; *b,* hopper of feeder; *c,* delivery; *d,* reciprocating gate; *e,* short track on which gate travels; *f,* bucket-conveyer traveling on track (not shown); *g,* wheel operating and guiding conveyer, also geared to control small gear; *h,* small gear that by its rotation causes gate through the crank and connecting-rod alternately to open and close; *i,* screw for adjusting movement of gate to deliver exact load to each bucket. Arrows show direction of travel of conveyer and rotation of gear.

each provided with an adjustable gate. It is used and combined with blending-machines for distributing the different flours or meals in exact proportions and at the same speed to the blender. It is sometimes united with a dividing- and distributing-machine for the purpose of feeding several bolting-machines or other machines, and is then called a *divider and feeder*. (*j*) In *transportation*, any automatic machine which feeds or supplies loose material in bulk to a conveyer or elevator. It may feed the load to a belt conveyer in a continuous stream, or intermittently to a bucket conveyer, filling one bucket at a time; it may form the delivery end of a conveyer, supplying coal to crusher-rolls or to another conveyer. It is made in many forms. See cut on previous page.

9. The player who tosses the ball to the batsman (in rounders and similar games); hence, the name of a particular game resembling rounders. *N. E. D.* — **Automatic feeder,** a mechanical device used in mining, to secure a uniform and definite supply of ore for treatment. — **Bramwell feeder,** in *textile, manuf.*, a mechanical device for feeding automatically raw material, as wool or cotton, to a machine: invented by W. C. Bramwell in 1876.



Bramwell Feeder.

a, elevating toothed apron; *b*, box or case; *c*, oscillating comb; *d*, feed-latticе; *e*, feed-table; *f*, weighing-scale.

feeder-bar (fē′dėr-bär), *n.* An oscillating bar, in a cotton-machine, by which the supply of cotton to the machine is controlled. Also called *feeler-bar*. *Taggart*, Cotton Spinning, II. 21.

feeder-head (fē′dėr-hed), *n.* Same as *feed-head*.

feed-gage (fēd′gāj), *n.* A small guide-post, attached to a printing- or folding-machine, against which the feeder of the sheets places each sheet of paper, for the purpose of securing uniform and exact margins: oftener called, in printing, the *feed-guide*.

feed-gate (fēd′gāt), *n.* **1.** The gate or opening through which material is fed to a machine, as that which admits water to a turbine. — **2.** The opening into a mold, through which the molten metal is poured.

feed-gear (fēd′gēr), *n.* The mechanism by which either the material operated upon or the tool is fed forward.

feed-grinder (fēd′grīn″dėr), *n.* A power grinding-mill for reducing corn, wheat, oats, etc., to coarse meal suitable for feeding to cattle. It uses steel burs in place of stones, and is often fitted with an automatic feeding-device and elevator for lifting the grain to a sack-filler.

feed-guide (fēd′gīd), *n.* See ★*feed-gage*.

feed-hopper (fēd′hop″ėr), *n.* A hopper into which material is poured at intervals and from which it is regularly fed to a machine.

feeding, *n.* — **Feeding standard,** in *stock-raising*, the experimentally established amounts of the different nutritive substances required by animals under specified conditions. Feeding standards widely adopted give the amounts required per day (per 1,000 pounds of live weight) of protein, carbohydrates, and fat, together with the fuel-value of the ration, for oxen at rest, at work, etc. — **Forced feeding,** the introduction of food into the stomach through a tube in cases of attempted suicide by starvation.

feeding-cake (fē′ding-kāk), *n.* The solid cake left from the expression of colza, cotton-seed, and other oils, used as food for cattle. *Groves and Thorp*, Chem. Technol., II. 26.

feeding-dish (fē′ding-dish), *n.* A circular plate or dish which forms the feeding-mechanism of the Hübner continuous cotton-combing machine.

feeding-groove (fē′ding-gröv), *n.* A longitudinal groove on the ligula of a honey-bee worker by the use of which one bee feeds another.

feeding-machine (fē′ding-ma-shēn″), *n.* An apparatus attached to a printing- or folding-machine, for the automatic delivery of single sheets to the machine.

feeding-rod (fē′ding-rod), *n.* A wrought-iron rod about ¼ to ⅝ of an inch in diameter, used by foundrymen to feed heavy castings, by keeping open a passage for fluid metal during the shrinking process.

feeding-stuff (fē′ding-stuf), *n.* The various kinds of food for cattle. [Local Eng.]

This great change in country dairying . . . has necessitated the extensive purchase of *feeding-stuffs* for the production of milk, especially in winter time.
Encyc. Brit., XXVII. 363.

feed-pawl (fēd′pâl), *n.* A pawl or finger which imparts motion to a ratchet-wheel to feed a machine, or which receives such motion from the feeding-mechanism.

feed-peg (fēd′peg), *n.* A device, connected with a star-wheel, which gives an intermittent rotary motion to one of the feed-rolls of a Heilmann cotton-combing machine, for projecting the cotton forward through nippers. *Thornley*, Cotton Combing Machines, p. 39.

feed-regulator (fēd′reg″ū-lā-tor), *n.* A device for regulating the amount of feed-water to be supplied to a steam-boiler. Such a device is particularly necessary on coil, water-tube, or flash boilers on account of the small reserve-supply of water they contain.

feed-rod (fēd′rod), *n.* **1.** A rod or shaft which actuates a feed-motion. — **2.** Same as ★*feeding-rod*.

feed-sheet (fēd′shēt), *n.* A movable apron or table which feeds material into a machine, as the feed-apron of a wool-carding engine. Also called *feed-cloth*.

feed-table (fēd′tā″bl), *n.* In *textile-manuf.*, a movable, flexible table, usually constructed of narrow slats of wood, for carrying or feeding material into a machine.

feed-tank (fēd′tangk), *n.* **1.** A reservoir or vessel in which the water to be supplied or fed to a steam-boiler is contained. The water may be hot or cold: when hot the tank is usually closed to prevent loss by evaporation. — **2.** A reservoir or vessel designed to hold liquid fuel, such as kerosene or gasolene, which is to be fed to a burner. — **3.** A reservoir or tank containing reagents, or raw materials, which are to be fed to a vessel in which some chemical or manufacturing process is conducted.

feed-trough, *n.* **2.** A long, narrow trough, about 18 inches wide, 4 inches deep, and 1,500 feet long, placed between the rails of a railway-track and partly filled with water. A scoop suspended from the tender of the locomotive of a moving train and dipping into the trough causes the water to rise along the slope of the scoop and pass into the water-tank of the tender.

feed-wheel (fēd′hwēl), *n.* A hand-wheel for operating the feeding-mechanism of a machine.

feed-wire (fēd′wīr), *n.* Same as *feeder*, 6 (*g*).

feel[1], *v. t.* — **To feel the blade,** in *fencing*, to be aware of the otherwise imperceptible preparations of the opponent for attack through the contact between the foils or swords.

feeler, *n.* **6.** A thickness-gage. — **7.** A thin piece of metal for determining the space or play left in a bearing or for determining the distance between the two plates in a riveted joint.

feeler-bar (fē′lėr-bär), *n.* Same as ★*feeder-bar*.

feeling, *n.* — **Common feeling.** See ★*common*. — **Discordant feeling,** in Wundt's psychology, a total feeling, derived from the oscillatory feeling, in which the affective oscillations follow each other very quickly, and the successive feelings themselves are strongly opposed: instances are tickling, doubt, the feeling of tonal dissonance, etc. — **Extensive feeling,** in *psychol.*, a feeling which arises from the spatial and temporal arrangement of the sense-elements of a perception or idea. — **Intensive feeling,** in Wundt's psychology, a feeling, or affective process, which depends upon the relation of the qualitative attributes of the sensational elements in perceptions or ideas.

The expressions "*intensive*" and "extensive" do not refer to the character of the feelings themselves, for they are in reality always *intensive*, but to the conditions for the rise of these feelings.
W. Wundt (trans.), Outlines of Psychol., p. 164.

Law of feeling, in *psychol.*, the doctrine that, in many cases, association of ideas depends, not upon the contiguity or resemblance of the ideas themselves, but upon a permanent or transient state of the feelings.

The writers who have pointed out this influence (often efficacious though latent) have conceived this superior law, which might be called the *law of feeling*, in two different ways, some as absolute and universal, others as partial and local.
T. Ribot (trans.), Psychol. of Emotions, p. 173.

Oscillatory feeling, in Wundt's psychology, a total feeling in which opposing feelings, or affective processes, alternate with each other in rapid succession. — **Partial feeling,** in Wundt's psychology, a feeling, or affective process, which enters as a component into a total feeling.

Every composite feeling may, accordingly, be divided (1) into a total feeling made up of all its components, and (2) into single *partial feelings* which go to make up the total feeling. These *partial feelings* are in turn of different grades, according as they are simple sense-feelings (*partial feelings* of the first order), or feelings which are themselves composite (*partial feelings* of the second or higher orders).
W. Wundt (trans.), Outlines of Psychol., p. 159.

Total feeling, in Wundt's psychology, the affective experience which results from the simultaneous presence of separate affective processes in consciousness; the resultant of a number of partial feelings.

feeling-effect (fē′ling-e-fekt″), *n.* In *psychol.*, the affective, as distinguished from the sensory, result of the application of a stimulus.

Likeness may mean "likeness of *feeling-effect*," as in the former case it means likeness of direct sense-effect. Green and blue would then be like, because they put us in like moods, of restfulness or quiet.
E. B. Titchener, Exper. Psychol., I. ii. 54.

feeling-tone (fē′ling-tōn), *n.* In *psychol.*, affective experience, as referred to the intellectual experience which it accompanies and colors; more especially, simple affection, as referred to the sensation which it thus accompanies, and of which, in some psychological systems, it is even regarded as an attribute; affective tone.

Perhaps the most efficient agent in determining the manner in which delusions are formed is the *feeling-tone* of pleasantness and unpleasantness.
J. W. Slaughter, in Amer. Jour. Psychol., XI. 307.

feezings (fēz′ingz), *n. pl.* [*feeze*[3].] *Naut.*, the unlaid end of a rope.

Fehling's reagent, test. See ★*reagent*, ★*test*[1].

fei (fā′ē), *n.* [Tahitian *fei*, the vernacular name of the plant and its fruit.] The wild banana of Polynesia and New Caledonia, *Musa Fehi*. It is distinguished from cultivated bananas and plantains in having erect fruit-spathes, bearing numerous crowded, angular, orange-colored fruits containing a few seeds. The fruit is prepared in various ways for food: sometimes beaten to a consistency of paste and made into puddings together with cocoanut-custard and other ingredients. In Samoa, where it is called *soaa*, the natives prepare from the sap a dark-purple dye with which they stain their bark-cloth, and which they sometimes use for ink. The species has been introduced into the Hawaiian Islands and is found growing in some of the higher ravines of the island of Oahu.

feint, *n.* **3.** *pl.* See *faint*, *n.*, 2.

fei-tsui (fā-tswē′), *n.* [Chin. *fei-ts'ui*: *fei*, *fé*, the blue-green kingfisher; *ts'ui*, the feathers of this bird, used in ornamental feather-work.] A beautifully variegated green variety of jadeite much prized, on account of its coloration, by the Chinese. The prevailing shade is a bright emerald- or cabbage-green.

fel (fel), *n.* [L., gall: see *gall*[1].] Gall; bile. — **Fel bovis,** the pharmacopœial name for ox-gall.

feldsparic (feld-spär′ik), *a.* [*feldspar* + *-ic*.] Same as *feldspathic*. *N. E. D.*

feldspathization (feld-spath-ī-zā′shon), *n.* [*feldspath(ic)* + *-ize* + *-ation*.] In *petrog.*, the development of feldspar in rocks through contact-metamorphism. *Fournet*.

feldspathize (feld′spath-īz), *v. t.*; pret. and pp. *feldspathized*, ppr. *feldspathizing*. [*feldspath* + *-ize*.] To change to feldspar: a term employed in geology to describe this metamorphic process. *Geikie*, Text-book of Geol., p. 780.

feldspathoid (feld′spath-oid), *n.* [*feldspath* + *-oid*.] Feldspar or some other species (nephelite, sodalite, leucite, and the scapolites) which plays a similar part in the composition of rocks.

Félibre (fā-lēbr′), *n.* [F. *Félibre*, mod. Pr. *felibre*, a particular use, in connection with *Felibrige*, of *felibre*, a parishioner, usually identified with Sp. *feligrés*, a parishioner, of unknown origin but conjectured by some to be reduced from L. *filius gregis*, 'son of the flock,' or *filius ecclesiæ*, 'son of the church.' A literary fancy has made *félibre* mean 'bookmaker,' as if from Pr. *faire* (< L. *facere*), make, + *libre* (< L. *liber*), book.] A member of the literary society known as ★*Félibrige* (which see).

Felibrian (fe-lib′ri-an), *a.* [F. *félibrien*, < *Félibre*: see ★*Félibre*.] Relating or pertaining to the Félibres or the Provençal literature, etc., produced by them: as, *Felibrian* studies.

The two *Félibrien* societies maintained in Paris by the children of the South of France.
T. A. Janvier, A Feast Day on the Rhone, i.

Félibrige (fā-lē-brēzh′), *n.* [F. *Félibrige*, Pr. *Felibrige*, a name adopted by the society mentioned: see ★*Félibre*.] A society constituted in Provence, in 1854, for the maintenance and purification of the Romance dialects of the south of France, represented by the Provençal, and for the promotion of Provençal literature and art.

felic (fel'ik), *a.* [*fel(dspar)* + *-ic.*] In *petrog.*, in the quantitative system of classification (1902), a term used to signify that a rock, or group of rocks or minerals, has the properties of or contains feldspar. See *quantitative system of igneous* ★*rocks.*

Felichthys (fel-ik'this), *n.* [NL., < L. *felis*, cat, + Gr. *ἰχθύς*, fish.] The generic name of a large sea-catfish, known as *gaff-topsail cat*, from the elevated dorsal fin. The common species is *F. felis.*

fellaheen (fe-lä'hēn), *n. pl.* See *fellah.*

felleous (fel'ē-us), *a.* [L. *felleus*, < *fel* (*fell-*), gall.] Relating to the bile; bilious.

fellmongery (fel'mung-gẽr-i), *n.* [*fellmonger* + *(er)y.*] The business of a fellmonger or his establishment.

Woollen mills, tanneries and *fellmongeries.*
Nature, Aug. 28, 1902, p. 413.

Fell sandstone. See ★*sandstone.*

Felly cut-off and doweling machine, a saw-table with two circular saws used to cut off the ends of felly-blanks, at the right length and proper bevel, and to make the dowel-seats. **Felly-planing machine,** a wood-planer for planing strips and blanks for fellies, shafts, carriage-bows, etc. It planes several at once. A more complicated machine is allied to a molding machine and employs one, two, or four cutter-heads placed vertically or horizontally to dress two or four sides of bent fellies.

Felly-rounding machine, a machine for rounding and finishing the inner curve of bent and planed fellies. It is essentially a molding-machine having one horizontal cutter-head.—**Felly-truing machine,** a sander used in finishing fellies. See ★*sander.*

felly-holder (fel'i-hōl″dẽr), *n.* A felly-plate and a T-head bolt which together form a clamp over the joint in a felly and prevent the wood from splitting.

felon-grass (fel'ọn-gras), *n.* Either of two plants reputed to cure felons: (*a*) The mastertwort, *Imperatoria Ostruthium.* (*b*) The black hellebore, *Helleborus niger.*

felon-herb (fel'ọn-ẽrb), *n.* Either of two plants reputed to cure felons: (*a*) The common mugwort, *Artemisia vulgaris.* (*b*) The mouse-ear hawkweed, *Hieracium Pilosella.* See *mouse-ear*, 1.

felonice (fē-lon'i-sē), *adv.* [Law L., adv. from **felonicus*, adj., < *felo(n-)*, felon.] In *Eng. law*, feloniously: a term formerly required to be used in all indictments for felony.

felon-weed (fel'ọn-wēd), *n.* The common Old World or tansy ragwort, *Senecio Jacobæa*, adventive in the United States: so called from its use as a remedy for felons.

felsi-. [G. *fels*, rock, + *i*, a letter used to signify that the character is microscopic. Cf. ★*felso-.*] In *petrog.*, in the quantitative system of classification (1902), a prefix placed before the name of a rock to signify that its texture is microfelsitic, microscopically aphanitic, and homogeneous, but not that of isotropic glass: as, *felsimonzonose.*

felsitic, *a.* **2.** Having an aphanitic texture: applied to the ground-masses of those porphyries which are so fine-grained as to be aphanitic, and to those glassy ones that do not have a vitreous luster.

felsitoid (fel'sit-oid), *a.* [*felsite* + *-oid.*] In *petrog.*, having a felsitic appearance, with an exceedingly compact aphanitic texture: applied to metamorphic rocks. Such rocks occur in beds or bed-like masses, sometimes in districts of contact-metamorphism. They embrace hallefinta, adinole, and porphyroid. *Geikie.*

felso-. [G. *fels*, rock, + *o*, a letter used to signify that the character is megascopic.] In *petrog.*, in the quantitative system of classification (1902), a prefix placed before the name of a rock to signify that its texture is megascopically felsitic, megascopically aphanitic, but not glassy: as, *felsomonzonose.* It is used in a similar manner in petrography generally and may be prefixed to the name of any aphanitic rock: as, *felsorhyolite, felsotiparite*, etc.

felsöbanyite (fel-sō-ban'yīt), *n.* [Hung. *Felsö Bánya*, 'upper mine': *felsö*, upper, *bánya*, mine.] A hydrated aluminium sulphate, occurring in snow-white crystalline masses, found at Kapnik Bánya, near Felsö Bánya, Hungary.

felt[1], *n.* **Fire felt,** a fire-proof material made up in sheets to be placed in walls and floors to increase their fire-resisting qualities.—**Foundation felt,** a coarse felt, made in sheets of varying thickness, to be placed between the feet of a machine and its foundation, to decrease the amount of vibration transmitted to the foundation from the machine.—**Microlitic felt,** in *petrog.*, the groundmass of some lavas, trachytes and andesites, which are composed of microscopic prisms or fibers of feldspar.

felter (felt'ẽr), *n.* [*felt*[1] + *er*[1].] One who follows the occupation of feltmaking.

feltrum (fel'trum), *n.* [ML., felt, packing: see *felt*[1] and cf. *fenter*[1].] In medieval armor, woolen wadding used to protect parts of the body.

felwort, *n.* The common felwort is *Gentiana Amarella*, also called *autumn gentian.* The name is also applied to species of *Swertia*, a genus closely related to *Gentiana.*

femaleness (fē'māl-nes), *n.* The quality of being female.

Numerous facts point to the conclusion that maleness and *femaleness* may be regarded as expressing metabolic alternatives open to the germ-cell in its development, and that the bias in one direction or the other is largely due to environmental stimuli. *Encyc. Brit.*, XXXII. 210.

feme, *n.* **Feme sole trader,** a married woman who, by the custom of London, and either by common law or by statutory authority in many of the United States, is entitled to carry on business on her own account and responsibility.

femic (fem'ik), *a.* [*fe(rro)m(agnesian)* + *-ic.*] Having the characters of, or belonging to, the second group of standard minerals, including non-aluminous ferromagnesian and calcic silicates, silicotitanates, and non-silicate and non-aluminous minerals. Used in the quantitative classification of igneous rocks. See ★*rock*[1].

feminin, *a.* and *n.* A simplified spelling of *feminine.*

feminism, *n.* **2.** The presence of specifically feminine characteristics in the male.

feminist (fem'i-nist), *n.* [F. *féministe*, < L. *femina*, woman, + *-ista*, E. *-ist.*] **1.** An advocate of the claims of women as the equals of men in the realms of literature and art as well as in the sociological world. *Athenæum*, Nov. 26, 1904, p. 730.—**2.** One who devotes himself to the study of woman, especially from the physiological and medical points of view. *G. S. Hall*, Adolescence, I. xiv.

femorohumeral (fem″ō-rō-hū'me-ral), *a.* Relating to both the femur and the humerus.

femoropopliteal (fem″ō-rō-pop-li-tē'al), *a.* Of or pertaining to both the femur and the popliteus.—**Femoropopliteal neuralgia.** Same as *sciatica.*

femorotibial, *a.* **2.** Relating to the femur and tibia.—**Femorotibial index.** See ★*index.*

femur, *n.*—**Pilastered femur,** a thigh-bone on which the linea aspera is greatly enlarged and prominent.

fence, *n.*—**Cockatoo, dead-wood, dog-leg fence.** See ★*cockatoo*, etc. **Panel fence.** Same as *snake fence.* See *fence.*—**Stump fence,** a fence composed of uprooted stumps of trees laid horizontally, the roots of contiguous stumps interlacing.—**To mend one's fences,** to guard one's own political interests at home. [Political slang, U. S.]

fence-arbor (fens'är″bọr), *n.* A piece which connects the spindle and the tumblers in a combination-lock. See *lock*[1].

Modern combination locks are so constructed that by means of independent bearings, which are operated through the revolution of the spindle, and by use of a balanced *fence-arbour*, . . . it is impossible for any one manipulating the spindle or the dial to form any idea of the position of the tumblers on the inside, because the moment the spindle is revolved, the *fence-arbour* is lifted away from the tumblers, and there is no possibility of feeling their motion. *Encyc. Brit.*, XXXII. 360.

fence-row (fens'rō), *n.* A fence with the line of shrubs and other vegetation which frequently grows up under its protection.

Along *fence-rows* in partial shade.
N. L. Britton, Manual of Flora of Northern States, p. 952.

fence-season (fens'sē″zn), *n.* Same as *close-time.*

fence-shop (fens'shop), *n.* A shop where stolen goods are sold. See *fence*, n., 7.

fenchene (fengk'ēn), *n.* [*fench(yl)* + *-ene.*] An oil, $C_{10}H_{16}$, of the terpene series resembling camphene. It is prepared by boiling fenchyl chlorid, $C_{10}H_{17}Cl$, with aniline.

fenchone (fengk'ōn), *n.* [*fench(yl)* + *-one.*] A ketone, $C_{10}H_{16}O$, isomeric with camphor, which it resembles in general chemical properties. The dextro-form occurs in fennel-oil, the levo-form in thuja-oil.

fenchyl (fengk'il), *n.* [G. **fenchyl*, < *fenchel*, fennel, + *-yl.*] In *chem.*, the levo-form of ★*fenchone* (which see).

fencing-stick (fen'sing-stik), *n.* A stick, usually made of hickory, with a basketwork guard for the hand, used in fencing.

fender, *n.*, **1.** (*b*) *Naut.*: (2) A projection extending longitudinally along the side of a vessel a short distance above the water-line to protect it from damage when going alongside other vessels or landing at wharves. The fender may be formed of rectangular pieces of timber firmly secured to the side, or of plates of U-shaped cross-section riveted to the outside plating. Tugboats usually have an upper fender at the level of the deck and a lower fender just above the water-line. Ferry-boats and river-steamers have a heavy fender extending all around the vessel at the level of the main deck. (*f*) A removable wire net or scoop placed at the front of an electric car to catch or push aside an object or person overtaken by the car or falling in front of it.

fender-bar (fen'dẽr-bär), *n.* *Naut.*, a long fore-and-aft fender of wood hung over a ship's side just above the water-line amidships to prevent chafing against a dock.

fender-boom (fen'dẽr-böm), *n.* See *shear* ★*boom.*

fender-guard (fen'dẽr-gärd), *n.* See ★*fender-rail.*

fender-rail (fen'dẽr-rāl), *n.* A rail on the exterior of a street-car designed to act as a fender in protecting the side-panels against injury from the wheels of passing vehicles. It is armed with a strip of iron called the fender-guard.

fender-skid (fen'dẽr-skid), *n.* In *lumbering*, a skid placed on the lower side of a skidding-trail, on a slope, to hold the log on the trail while being skidded.

fendillate (fen'di-lāt), *v.t.*; pret. and pp. *fendillated*, ppr. *fendillating.* [F. *fendiller* (dim. of *fendre*), < L. *findere*, split: see *fent* and *fission* + *-ate*[2].] To split or crack slightly in many places.

fendillation (fen-di-lā'shọn), *n.* The condition of being fendillated.

fenessi, *n.* See ★*finessi.*

fenestella, *n.* **4.** [*cap.*] A genus of pyrenomycetous fungi having the perithecia arranged in more or less definite groups beneath the surface of the bark of the host. The name refers to the spores, which have both longitudinal and transverse septa, giving their surface a resemblance to small windows.

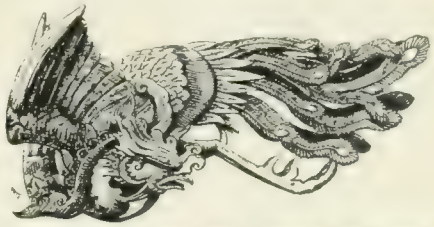
fenestra, *n.* **3.** In *surg.*, an opening in a splint or immovable dressing to permit of inspection of the part or to relieve pressure.—**Mandibular fenestra,** the mandibular foramen.

fenestrate, *a.* **3.** In *mycol.*, same as ★*dictyoid.*

fenestrated, *a.* **3.** In surgical instruments, having large openings.

The entire covering of the mastoid should be chiseled away with . . . a bone gouge, aided at some steps by a *fenestrated*, sharp, hollow curette, and with bone-cutting forceps. *Phil. Med. Jour.*, Jan. 31, 1903, p. 223.

fêng-hwang (fung'-hwäng'), *n.* See *fung-hwang.* In Chinese art it is used as the emblem of the empress.



Fung-hwang, or 'Chinese Phenix': wood-carving of about 16[illegible], from the Imperial Palace of Peking, China. In the Pennsylvania Museum, Philadelphia.

fennel, *n.*—**Azorean fennel,** the sweet fennel, *Fæniculum dulce.*—**Indian fennel,** a variety of the common fennel, *Fæniculum Fæniculum*, cultivated in India and used in curries and for medicinal purposes.—**Prairie-fennel,** a plant of either of the umbelliferous genera *Lomatium* or *Musineon*, abundant in

Prairie-fennel (*Lomatium montanum*). One-third natural size; fruit natural size.

the western United States from Montana to Washington: suspected of being poisonous to stock. There seems to be some proof of this in the case of *Lomatium nudi-*

Prairie-fennel (*Musineon Hookeri*).
One third natural size; fruit twice natural size.

caule, but *L. montanum* and *Musineon Hookeri* are innocuous and bid fair to become useful forage-plants.

fenomenal, fenomenon, etc. Simplified spellings of *phenomenal*, etc.

fense, *n.* and *v.* A simplified spelling of *fence*.

fent, *n.*—**To spring a fent,** to test the color-strength of a dye by dipping in it a piece of the material to be colored.

fên-ting (fun′ting′), *n.* See ★*fun-ting*.

Fenzlia (fenz′li-ä), *n.* [NL. (Lindley, 1833), named in honor of Eduard *Fenzl* (1808–79), an Austrian botanist.] A former generic name of a plant of the family *Polemoniaceæ*, now referred to *Linanthus* under the specific name *L. dianthiflorus* (*Fenzlia dianthiflora* of Lindley). It is an old garden annual from southern California, dwarf and tufted, bearing a profusion of lilac, purple, or sometimes white flowers resembling pinks. The white-flowered form is sometimes catalogued as *Fenzlia alba*. See ★*ground-pink*.

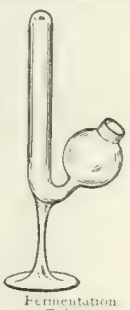
ferding (fêr′ding), *n.* [LG. *ferding* or Sw. *fjerding*, a fourth part, = E. *farthing*.] A silver coin struck at Riga and Revel in the sixteenth century and belonging to the currency of the Order of Livonia. It was equal to the fourth of a thaler.

Fermatian demonstration. See ★*demonstration*.

Fermat's law. See ★*law*[1].

ferment, *n.*, **2.** Familiar examples of the action of ferments are the conversion of starch to dextrose, of albumins to peptones, and of fats to fatty acids and glycerin, by the diastatic, proteolytic, and lipolytic ferments of the digestive juices. Besides the common *digestive ferments* which are secreted by the digestive glands, there are numerous others which exercise their specific functions within the cells, and which, in contradistinction to the former, are designated as *tissue-* or *intracellular ferments*. The number of these is very large, and it appears that many metabolic processes, which were formerly attributed to a special vital activity on the part of cells, are referable to their action. In the liver-cell not less than a dozen different ferments of this character have been demonstrated. The great majority of known ferments are hydrolytic. These effect the cleavage of those substances against which their special activity is directed, in the presence of water, the components of which take part in the reaction. In addition there are the so-called *oxydases*, which can effect oxidations, and there is evidence to show that reducing ferments, *reductases*, likewise occur. Until quite recently it was held that ferment action was in all cases destructive. Research has shown, however, that certain ferments are capable of a reversible action, and are hence constructive as well as destructive. Lipase, for example, will not only cause the decomposition of ethyl butyrate to ethyl alcohol and butyric acid, but it will also construct this substance from the corresponding radicals. Maltase will similarly invert maltose to dextrose and reconstruct the maltose molecule from dextrose. Whether or not all hydrolytic ferments exert a reversible action is not known, but it is quite possible. All ferments have a certain optimum temperature at which their activity is most extensive. This varies somewhat with the different members of the group, but is about that of the body. Boiling destroys the ferments, but in the dry state they may be heated to a higher temperature without losing their activity. The effect of cold is similar to that of heat. Quite important also is the reaction of the medium. Certain ferments do best with a feebly acid reaction; with others an alkaline reaction is necessary; while still others can act in acid as well as in alkaline and neutral media, but exhibit certain preferences. Generally speaking, the action of the different ferments is specific, that is, a given ferment will act only upon a certain substance in a manner comparable to the relation existing between a lock and its key. Or it might also be said that a given ferment is specifically tuned to the substance upon which it can act. Upon this behavior the classification and nomenclature of the ferments are based. In the latter the suffix *-ase* is used in connection with the name of the substance against which the specific action of the ferment is directed. A ferment which causes the cleavage of proteins (albumins) is thus termed a *protease*; one which decomposes fats, a *lipase*; and similarly *amylase*, *maltase*, *lactase*, *urease*, *nuclease*, *aldehydase*, etc. Of the chemical nature of the ferments very little that is definite is known. As a class, they are usually regarded as being of albuminous character; but it is possible that the reactions which suggest this view are referable merely to contaminating albuminous substances. Colloidal solutions of various metals, such as platinum, palladium, iridium, osmium, etc., have properties which are very similar to those of the ferments, for which reason they are sometimes spoken of as *metallic ferments* or *inorganic ferments*. Bredig and Von Bernek have shown that a gramatomic weight (193 grams) of colloidal platinum, diffused in 70,000,000 liters of distilled water, is still capable of producing an effect upon more than a million times its amount of hydrogen peroxid. It could further be proved that the reaction which occurs is monomolecular, a fact which indicates that the platinum itself does not enter into the reaction. Such colloidal solutions will invert cane-sugar exactly like the organic ferments of an animal or a vegetable organism. As in the case of the latter, also, the action of the inorganic ferments can be destroyed by such substances as hydrocyanic acid, mercuric chlorid, hydrogen sulphid, etc. The mode of action of the ferments is still a matter of speculation. Formerly they were sharply differentiated from the so-called organized ferments or ferment organisms, which occur widely distributed in nature and comprise the important group of bacteria, blastomycetes, and molds. During the life-processes of these organisms chemical changes result in the various media in which they have found lodgment, which are perfectly analogous to those of the ferments proper, but which are apparently dependent upon the life of the organism and cease when this has been destroyed. Recent research has shown, however, that the resulting chemical changes are, after all, not strictly dependent upon the life of the cell, and are referable also to unorganized ferments which, in contradistinction to the common digestive ferments, are not secreted to the outside, but remain intracellular. Their action can be demonstrated after the death of the cell, if the cell-body is entirely broken up, as by repeated thawing and freezing, by high pressure, etc. Familiar examples of the action of organized ferments are the alcoholic fermentation produced by yeast, the acid fermentation caused by the mycoderma aceti, etc.—**Conform ferment,** a bacteriolytic ferment which will cause the destruction of those bacteria only which produce it.—**Glycolytic ferment,** a ferment assumed by Lépine to exist in the blood and to cause the decomposition of glucose into water and carbon dioxid. Also *glucolytic*.—**Heteroform ferment,** a bacteriolytic ferment which will cause the destruction not only of the bacteria which produce it but of others as well.—**Hydrolytic ferment,** a ferment which causes the cleavage of a more complex substance into simpler bodies in the presence of water, which is at the same time decomposed. The action of all the digestive ferments is hydrolytic. See ★*ferment*, 2.—**Lactic ferment,** a ferment which will decompose lactose (milk-sugar) into lactic acid and carbon dioxid.—**Sucroclastic ferment,** a ferment which causes the cleavage of disaccharides to simpler sugars with 6 atoms of carbon.

fermentation, *n.*—**Fermentation test,** a test for sugar in the urine, in which yeast is added to the suspected fluid. If sugar is present, fermentation will occur.—**Fermentation theory of disease,** the theory (now superseded by the germ theory) that certain diseases (the so-called zymotic diseases) are due to a process analogous to fermentation induced in the tissues by the presence of a minute quantity of the specific virus derived from one sick of the same disease.—**Fermentation tube,** a delicate glass apparatus designed to detect gases set free by fermentation. The bubbles of gas rise in the vertical tube, which is frequently graduated to measure the gas.—**Mucic or mucous fermentation,** a special kind of fermentative change sometimes observed in solutions of cane-sugar, in which neither common alcohol nor acetic acid is produced, but in which the sugar yields carbon-dioxid gas, mannitol, and a mucilaginous or gummy substance. Access of air and the presence of nitrogenous matter are necessary, and the solution must be neutral or slightly alkaline. *Jour. Soc. Chem. Industry*, VIII. 811.—**Ropy fermentation,** a so-called disease of wine and beer which renders the fermenting liquid viscid. It is believed to be caused by the occasional presence of an abnormal ferment-organism.—**Tobacco fermentation,** a peculiar form of fermentation which occurs during the process of curing tobacco. Oxidizing ferments probably play an important part.



Fermentation Tube.

ferment-cell (fêr′ment-sel), *n.* In *histol.*, a cell which secretes a ferment.

fermenting-square (fêr-men′ting-skwãr), *n.* A shallow vat for fermentations.

fermentiscible (fêr-men-tis′i-bl), *a.* [Irreg. ⟨ *ferment* + L. *-isc-ere*, inceptive formative, + *ibl.*] Capable of undergoing fermentation.

The molecular disturbance thereby produced is imparted to the *fermentiscible* substance, sugar, and breaks it up into simpler bodies, alcohol and carbon dioxide.
Science, N. S., Jan. 2, 1903, p. 15.

fermentum (fêr-men′tum), *n.* [NL. use of L. *fermentum*, ferment.] In the mediæval church, a portion of the eucharist reserved from a previous consecration, which was brought to a priest about to celebrate mass. The particle thus used was called *fermentum*, the leaven, and was often sent by the Pope or a bishop, as a token of Christian communion, to priests in neighboring churches.

fern[1], *n.*—**Baby fern,** the black maidenhair or maidenhair spleenwort, *Asplenium Trichomanes*.—**Beaver-meadow fern,** *Dryopteris thelypteris*, with reference to its habitat. **Bird's-foot fern,** *Pellæa ornithopus*, of western North America, referring to the characteristic shape of the pinnæ. **Bird's-nest fern,** *Neottopteris Nidus*, widely distributed through the eastern tropics. See *bird's-nest*, 1 (*c*) and ★*ekaha*.—**Black fern,** an Australasian tree-fern, *Cyathea medullaris*, the pith of which was formerly eaten. See *Cyathea*.—**Blue fern,** *Pellæa atropurpurea*, a common North American fern, usually called *cliff-brake*.—**Bog fern,** *Woodwardia Virginica*, a lowland plant of the eastern United States and Canada. See *Woodwardia*. **Boston fern,** a luxuriant cultivated form (*Nephrolepis exaltata* var. *Bostoniensis*) of the common sword-fern. See *sword-fern*.—**Boulder-fern,** *Dennstædtia punctilobula*. See ★*Dennstædtia* and *hay-scented* ★*fern*.—**Braid fern,** in Australia, *Platyzoma microphyllum*.—**Brittle-fern,** *Filix fragilis*, (*Cystopteris fragilis*), a nearly cosmopolitan fern. See *Cystopteris*.—**Caterpillar-fern,** *Phyllitis Scolopendrium* (*Scolopendrium vulgare*), known commonly as the *hart's tongue* (which see).—**Chain fern.** See *chain-fern*.—**Cloak fern,** any fern of the genus *Notholæna*, certain species of which have the margins of the frond inflexed, serving as a partial "cloak" or covering to the sporangia. See *Notholæna*.—**Coffee-fern,** *Pellæa andromedæfolia*, of Arizona and California, so called in allusion to the resemblance of the revolute-margined leaf-segments to kernels of coffee. **Coral-fern,** *Gleichenia circinata*, an Australasian fern.—**Cotton-fern,** *Notholæna Newberryi*, a fern of southern California, covered on its under surface by a webby tomentum of entangled soft, whitish hairs, suggesting cotton.—**Crape-fern,** *Leptopteris superba*, of New Zealand.—**Creeping-fern.** Same as *climbing-fern* (which see).—**Deer-fern,** an evergreen fern, *Struthiopteris Spicant* (*Lomaria Spicant*), so called in the northwestern United States and Canada.—**Eagle-fern,** the common brake, *Pteridium aquilinum*. See *Pteris*. **Elk-horn fern.** Same as *stag-horn fern* (which see, under *stag-horn*). *Alcicornium* (*Platycerium*), to which it belongs, is a genus of coarse epiphytic tropical ferns.—**Floating-fern,** the pod-fern, *Ceratopteris thalictroides*. See ★*Ceratopteris* and *pod-fern*.—**Fragrant fern,** *Dryopteris fragrans*, a boreal species common to both hemispheres.—**Grass-fern,** any one of several species of *Vittaria*; in the United States, *V. lineata*, occurring in Florida. See ★*Vittaria*—**Grass-leaved fern,** same as *grass-*★*fern*; especially *Vittaria lineata*, a variable eastern tropical species.—**Hay-scented fern,** *Dennstædtia punctilobula*. See *Dicksonia* and ★*Dennstædtia*.—**Horse-shoe fern,** in New Zealand, *Marattia fraxinea*.—**Interrupted fern,** *Osmunda Claytoniana*. The sporangia are borne usually in two or three pairs of much reduced pinnæ near the middle of the otherwise foliose frond, hence the

Bird's-foot fern (*Pellæa ornithopus*).
a, plant, one fourth natural size; *b*, pinna, slightly enlarged.

Coffee-fern (*Pellæa andromedæfolia*).
a, entire plant, one fourth natural size; *b*, segment, three fourths natural size.

Interrupted Fern (*Osmunda Claytoniana*).
(From Britton and Brown's "Illustrated Flora of the Northern States and Canada.") Two-thirds natural size

vernacular name. It is a native of the eastern United States and Canada. **King fern,** the royal fern, *Osmunda regalis.* See *Osmunda.* **Ostrich fern.** See *ostrich-fern* and ★*Matteuccia.* **Parasol-fern.** Same as *coral-*★*fern.* **Pod fern.** See *pod-fern.* **Prickly-fern,** in Australia, *Alsophila australis,* a tree-fern 25 to 30 feet high. **Resurrection-fern,** in the southern United States, *Polypodium polypodioides,* which contracts during drouth but revives in moist seasons; hence the name. See *polypody.* **Ribbon fern.** (*a*) *Pteris serrulata,* a native of China, widely spread throughout tropical and warm temperate regions. (*b*) In Australia, *Ophioderma pendula.* **Snake-fern.** (*a*) See *snake-fern.* (*b*) The royal fern, *Osmunda regalis,* which grows in low, wet situations and is thus associated popularly with snakes. See *Osmunda.* **Spider-fern.** Same as *ribbon-*★*fern.* **Strawberry-fern,** *Hemionitis palmata,* so called in Jamaica. **Sword-fern.** (*a*) Any species of the genus *Nephrolepis,* especially *N. exaltata,* which is, in one or another form, by far the most commonly cultivated fern in the United States. See *Boston* ★*fern,* and *Nephrolepis.* (*b*) In Australia, *Gramnitis australis,* a small species with simple leaves. **Umbrella-fern.** Same as *eagle-*★*fern.*—**Water-fern.** (*a*) and (*b*) See *water-fern.* (*c*) Same as *floating-*★*fern.* See ★*Ceratopteris.* **Windsor fern.** Same as *creeping-*★*fern.*

fern-ball (fêrn′bâl), *n.* An artificial ball consisting of the creeping rhizomes of certain Japanese ferns, commonly of *Davallia bullata,* closely bound together with absorbent vegetable fiber. Growth is induced by drenching in water and hanging in a warm shaded situation.

fern-bird (fêrn′bêrd), *n.* A small passerine bird of New Zealand, which belongs to the genus *Sphenœacus* and is usually placed with the warblers of the Old World.

fern-bush (fêrn′bŭsh), *n.* Same as *sweet-fern* (which see cut).

fern-chafer (fêrn′chā″fêr), *n.* A British collectors' name for a European scarabæid beetle, *Rhizotrogus solstitialis.*

fern-cycad (fêrn′sī′kad), *n.* Any plant belonging to the *Cycadofilices.* See ★*Cycadofilices.*

These plants, therefore, whilst retaining the outward form of ferns, are in reality transitional types. For convenience, these plants, which include the genera Heterangium, Lyginodendron, Medullosa, and many others, have been placed in a special group, the Cycadofilices or *Fern-Cycads.* *Nature,* June 4, 1903, p. 113.

fern-tree (fêrn′trē), *n.* In Australia, a tree-fern (which see).

fernwort (fêrn′wêrt), *n.* Any plant belonging to the *Pteridophyta,* or ferns and fern allies.

In recent years tardy justice has been given to the *fernworts* (Pteridophyta). *Science,* May 22, 1903, p. 830.

Ferranti effect. See ★*effect.*

ferrarenite (fe-rar′en-īt), *n.* [L. *ferrum,* iron, + *arena,* sand, + *-ite*[2].] In *petrog.,* a sandstone composed of iron ores. *Grabau,* 1904.

ferrated (fer′ā-ted), *p. a.* [L. *ferratus,* covered with iron, + *-ed*[2].] Charged with iron as a constituent, as a substance of organic origin intended for medical use.

ferratin (fer′ạ-tin), *n.* [*ferrate* + *-in*[2].] An iron-containing nucleoproteid which occurs in the liver. It was discovered by Schmiedeberg. See ★*phosphocarnic acid.*

ferratogen (fe-rat′ō-jen), *n.* [*ferrate* + *-gen.*] A nuclein compound of iron containing 1 per cent. of that metal: said not to be affected by the gastric juice but absorbed in the intestine.

Ferrel's gradient formula, law, theory of cyclones, theory of the circulation of the atmosphere. See ★*gradient,* ★*law,* ★*cyclone,* ★*circulation.*

ferret[1], *n.* **Black-footed ferret,** *Putorius nigripes,* a member of the weasel family, which inhabits the plains of Nebraska and Kansas, where it feeds largely on prairie-dogs. It is of a yellowish-brown color, with the tip of the tail and the legs black.

ferric, *a.* **2.** In *elect.,* containing iron.—**Ferric hydroxid,** in *chem.,* a substance, $Fe_2(HO)_6$, which occurs as a constituent of brown hematite ore of iron and of common iron rust; artificially prepared it is a useful coagulant for clarifying water, and serves as a brownish or buff colored dye. Improperly called *ferric hydrate.* **Ferric inductances,** inductances with an iron core.—**Ferric nitrosulphate,** in *chem.,* a basic ferric salt, made by treating ferrous sulphate with nitric acid; it has been used in tanning.—**Ferric oxid,** in *chem.,* Fe_2O_3, the red oxid of iron, which occurs in nature as specular iron ore and red hematite, and as a constituent of brown hematite ore and of iron rust; artificially prepared it is used as a polishing-powder (colcothar) and a cheap pigment.—**Ferric sulphate,** in *chem.,* a substance, $Fe_2(SO_4)_3$, used, alone or as a constituent of iron alum, in certain processes of tanning and dyeing.

ferricyanhydric (fer″i-sī-an-hī′drik), *a.* Same as *hydroferrocyanic.*

Ferrier's albumin process. See ★*process.*

ferrilutite (fer-i-lū′tīt), *n.* [L. *ferrum,* iron, + *lutum,* mud, + *-ite*[2].] In *petrog.,* a ferruginous mud rock. *Grabau,* 1904.

ferrin (fer′in), *n.* [L. *ferrum,* iron, + *-in*[2].] A brown iron-containing pigment found in the so-called livers of various invertebrates.

ferrirudite (fer-i-rō′dīt), *n.* [L. *ferrum,* iron, + *rudus,* rubble, + *-ite*[2].] In *petrog.,* a conglomerate or breccia of iron ore or distinctly iron-bearing minerals. *Grabau,* 1904.

ferrite, *n.* **2.** In *chem.*: (*a*) A compound of ferric oxid (Fe_2O_3) with a more basic metallic oxid, as calcium ferrite ($CaFe_2O_4$), from the union of ferric oxid with lime (CaO). The mineral franklinite consists essentially of zinc ferrite, and magnetite or magnetic iron ore (Fe_3O_4) may be viewed as iron ferrite (FeO. Fe_2O_3). (*b*) Pure iron as separated out (from iron carbides) in the cooling of steel.

ferritization (fer″i-ti-zā′shọn), *n.* [*ferrite* + *-ize* + *-ation.*] In *petrog.,* alteration of other minerals into ferrite.

ferro-alloy (fer′ō-ạ-loi″), *n.* An alloy of iron; a chemical mixture of some metal with iron.

ferro-aluminium (fer″ō-al-ū-min′i-um), *n.* In *metal.,* an alloy of iron and aluminium, used in modifying the character of steel, and in the production of mitis-castings of wrought-iron.

ferroboron (fer-ō-bō′ron), *n.* In *metal.,* a compound of iron with boron, iron boride, intended for use in ascertaining the modifying effect of boron upon steel.

ferrobronze (fer′ō-bronz), *n.* In *metal.,* bronze or gun-metal alloyed with a small proportion of iron.

ferrochrome (fer′ō-krōm), *n.* See ★*ferrochromium.*

ferrochromium (fer-ō-krō′mi-um), *n.* An alloy of iron and chromium, the proportions of the latter element varying from over 20 per cent. in poor ferrochromium to more than 63 per cent. in rich ferrochromium. The percentage of carbon in the alloy is sometimes as high as 10. Ferrochromium is prepared in crucibles and requires a large consumption of fuel. When the required proportion of chromium is not above 40 per cent., it is prepared in a blast-furnace from chrome iron-ore. Ferrochromium is used chiefly in the production of *chrome-steel* (which see, under ★*steel*1). It is also made by electric smelting, and by the Goldschmidt process (see ★*aluminothermics*).

ferrocobaltin (fer-ō-kō′bâl-tin), *n.* Same as ★*ferrocobaltite.*

ferrocobaltite (fer-ō-kō′bâl-tīt), *n.* The mineral cobaltite, when containing a more than usually large proportion of iron.

ferroconcrete (fer-ō-kon′krēt), *n.* Reinforced concrete; steel-concrete. See ★*concrete.*

ferrocyanhydric (fer″ō-sī-an-hī′drik), *a.* Same as *hydroferrocyanic.*

ferrodolomite (fer-ō-dol′ō-mīt), *n.* In *mineral.,* a carbonate intermediate between dolomite and siderite, containing variable amounts of iron. *Van Hise,* 1904.

ferroferric (fer-ō-fer′ik), *a.* In *chem.,* same as *ferrosoferric.* *Jour. Soc. Chem. Industry,* XIV. 157.

ferrogallic (fer-ō-gal′ik), *a.* **1.** In *photog.,* noting a printing process in which paper sensitized with a solution containing gelatin, ferric chlorid, ferric sulphate, and tartaric acid, and dried in the dark, is, after exposure beneath a negative or a tracing, developed by immersion in a solution of gallic acid. The print shows black lines on a white ground. Gallic acid may be dusted on the sensitized paper before exposure. The print is then developed by washing in water.

2. Noting paper sensitized as above described: largely used by architects and engineers.

ferroglass (fer′ō-glâs), *n.* [L. *ferrum,* iron, + E. *glass.*] Same as ★*wire-glass.*

ferrolite (fer′ō-līt), *n.* [L. *ferrum,* iron, + Gr. λίθος, stone.] In *petrog.,* a rock composed of iron ores. *Wadsworth,* 1892.

ferromagnesian (fer″ō-mag-nē′si-ạn), *a.* [L. *ferrum,* iron, + E. *magnesium* + *-an.*] Containing both iron and magnesium: applied to minerals and also to rocks. The common ferro-magnesian rock-making minerals are pyroxenes, amphiboles, micas, and olivin.

ferrometer (fe-rom′e-tẹr), *n.* [L. *ferrum,* iron, + Gr. μέτρον, a measure.] An instrument devised for the determination of the quantity of iron in the blood.

ferromolybdenum (fer″ō-mo-lib-dē′num), *n.* A chemical mixture of iron and molybdenum, prepared by melting pure metallic molybdenum and adding to it the required percentage of metallic iron: used principally in making steel for gun-forgings.

ferronatrite (fer-ō-nā′trīt), *n.* [L. *ferrum,* iron, + NL. *natrum,* niter, + *-ite*[2].] A hydrated sulphate of sodium and ferric iron, occurring in whitish spherical forms: found in Chile.

ferronickel (fer-ō-nik′el), *n.* An alloy of nickel and iron.

ferropallidite (fer-ō-pal′i-dīt), *n.* A white granular ferrous sulphate, $FeSO_4.H_2O$, which occurs with roemerite in Chile.

ferroproteid (fer-ō-prō′tẹ-id), *n.* An albumin in combination with an iron-containing radical—for example, hemoglobin.

ferropyrin (fer-ō-pī′rin), *n.* [L. *ferrum,* iron, + Gr. πυρ(ετός), fever, + *-in*[2].] A trade-name for an orange-colored powder prepared from antipyrin and ferric chlorid, containing 64 per cent. of the former and 12 per cent. of the latter. It is soluble in water and alcohol and is stated to have remarkable styptic properties without caustic effects.

ferrosilicon (fer-ō-sil′i-kon), *n.* In *metal.,* a compound of iron with silicon (iron silicide), rich in the latter element, for use in steel-making.

ferrosomatose (fer-ō-sō′mạ-tōs), *n.* A brown tasteless powder which consists of a mixture of 2 per cent. of an organic compound of iron with somatose, easily soluble in water: hematinic and non-styptic.

ferrotitanium (fer″ō-ti-tā′ni-um), *n.* In *metal.,* an alloy of iron and titanium used to some extent in steel-making.

ferrotungsten (fer-ō-tung′sten), *n.* In *metal.,* an alloy of iron and tungsten, rich in the latter metal, used in the manufacture of tungsten steel for cutting-tools.

Ferrous oxalate, in *chem.,* oxalate of iron with ferrous (apparently dyad) valence, FeC_2O_4. It occurs in the mineral humboldtite in lignite deposits, and is used in solution by photographers.—**Ferrous oxid,** in *chem.,* a compound of iron with oxygen, FeO, in which the iron has apparently dyad valence.—**Ferrous sulphate,** in *chem.,* sulphate of iron (with ferrous valence), $FeSO_4$, or in the crystallized condition $FeSO_4.7H_2O$, a salt extensively used in the arts for many purposes: same as *green vitriol* or *copperas.* See *copperas.*

ferro-vanadium (fer″ō-vạ-nā′di-um), *n.* A chemical mixture of iron and vanadium, used somewhat in the manufacture of steel.

ferrugination (fe-rō-ji-nā′shọn), *n.* The process whereby, in the alteration of iron-bearing rocks, the residue becomes permeated and stained with compounds of iron, chiefly the hydroxid limonite.

ferrule-hook (fer′il-hůk), *n.* A ferrule and hook combined, used as an end-trimming for a swingletree.

ferrule-ring (fer′il-ring), *n.* A combined ferrule and ring for the end of a neck-yoke.

ferrum (fer′um), *n.* The Latin name for iron, from which the chemical symbol for the metal, Fe, is derived: used by German pharmaceutical chemists, in price-lists, etc., and in the names for iron compounds, as *ferrum citricum,* citrate of iron.

ferry, *n.*—**Aërial ferry,** a transporter bridge or ferry-bridge; a device for transferring traffic across a navigable stream or waterway by means of a platform suspended from a traveler or trolley running on a track on a bridge-span, elevated by end-towers sufficiently high to prevent interference with navigation. The traveler, which is operated by motors controlled from the platform or car, travels back and forth across the bridge-span, and thus conveys the suspended platform at the level of the roadway or approaches back and forth from one approach or landing to the other.

fertil, *a.* A simplified spelling of *fertile.*

Fertile worker. See ★*worker.*

fertilization, *n.*—**Artificial fertilization.** (*a*) The bringing about of fertilization by artificial means, such as placing the ripe ova and male cells of a fish in contact, or placing the pollen of a flower upon the stigma. (*b*) The artificial initiation of the process of development in an unfertilized egg by something else than a male cell. In 1899 Loeb found that after the unfertilized eggs of the sea-urchin have been immersed in a dilute solution of magnesium chlorid in sea-water they undergo normal or nearly normal development when they are transferred to pure sea-water. This has been held to be proof that fertiliza-

tion is a chemical process; but more recent experiments have shown that a similar effect may be produced by cane-sugar, urea, sulphuric acid, strychnine, and even, in the silkworm, by gently brushing the eggs. The eggs in which the experiments are most successful are those that occasionally develop without fertilization under normal conditions, and as there is no physical or chemical similarity between the objects that have been used with success, it seems probable that they do no more than to disturb the stability of the egg and permit its organic mechanism for development to work, and that the effect may be no more like that produced by the male cell than a jar which opens the valve of a steam-engine is like the engineer.—**Asymmetrical fertilization,** the appearance, in the second generation and in later generations, of the descendants of a cross between two varieties of individuals that differ among themselves with respect to a parental characteristic: considered as evidence of the resolution of compound gametes into unit-characters.

In general terms we can declare that the result of the cross — the "*asymmetrical fertilization*," to speak strictly — is the production of a diversity of gametes.
Proc. Roy. Soc. (London), 1903, II. 79.

fertilizer-sower (fêr′ti-lī-zêr-sō″êr), *n.* A horse-power machine for sowing chemical fertilizers in drills or broadcast; an attachment to a seed-sower, either a broadcast or drill machine.—**Hand fertilizer-sower,** a small machine, resembling a hand broadcast sowing-machine, used to scatter ashes or other fertilizer or to spread sand upon icy sidewalks or roadways. See *sowing-machine.*

fertilizing-pouch (fêr′ti-lī-zing-pouch), *n.* The spermatotheca or receptaculum seminis of the queen-bee.

ferulic (fe-rö′lik), *a.* [*Ferula* + *-ic.*] Derived from *Ferula Narthex* or asafetida.—**Ferulic acid,** metamethoxy-parahydroxycinnamic acid, $C_{10}H_{10}O_4$, a crystalline substance which occurs in asafetida and can be made artificially from vanillin.

F. E. S. An abbreviation (*a*) of *Fellow of the Entomological Society;* (*b*) of *Fellow of the Ethnological Society.*

fescue, *n.* -**California fescue,** *Festuca aristulata,* a Pacific species forming large and handsome tussocks along streams, etc.: rather harsh and coarse for forage.—**Creeping fescue.** Same as *red* ★*fescue.*—**Hard fescue,** *Festuca ovina duriuscula,* a variety of the sheep's-fescue, which thrives on dry sandy soils and resists summer drought. It is of value for pasture, in cooler and mountainous regions and, if sown thickly and exclusively, makes a good lawn.—**King's fescue,** a native bunch-grass, *Festuca confinis,* valuable for forage on dry slopes in the northern Rocky Mountain region.—**Meadow fescue.** See *tall* ★*fescue.* -**Rat's-tail fescue,** a slender weedy species, *F. Myuros,* with a close narrow panicle to which the name refers. It is a European species now well spread over North America.—**Red fescue,** *Festuca rubra,* a species of many forms with somewhat the range of the sheep s-fescue, and differing from that species in having creeping rhizomes by which it forms a compact turf. In Europe it is rated with the best forage plants: in Germany it is highly esteemed for dry sandy meadows. It is a good sand-binder and is useful also for shady lawns. A variety (*glaucodea*) called *Tennessee fescue* is the best pasture-grass in mountain valleys of North Carolina and East Tennessee. —**Reed-fescue.** See *tall* ★*fescue.* —**Sheep's fescue.** See *sheep's-fescue.*—**Slender fescue,** a native species, *F. octoflora,* with thin erect culms and a narrow raceme or panicle, found in dry sandy places, etc., in the United States.—**Tall fescue,** a European species, *Festuca elatior,* widely cultivated and thoroughly naturalized in North America, of great value for meadow and pasture on moist soils rich in humus. A form 2 or 3 feet high with a narrow panicle is the ordinary *meadow-fescue.* A more robust variety (*arundinacea*) is called *reed-fescue* and is very hardy and productive.—**Various-leafed fescue,** a slender European species of creeping habit, *Festuca heterophylla,* related to the red fescue and of like use in similar localities.

fest[3] (fest), *n.* [G., a feast, a festival: see *feast.*] In German usage, a gathering of many persons to participate in or enjoy some festal performance, as singing, shooting, gymnastic exercises, etc.: as, a *sängerfest, schützenfest, turnfest,* etc. *Forest and Stream.*

festilogy (fes-til′ō-ji), *n.* [L. *festum,* festival, + Gr. *-λογια,* < *λέγειν,* speak.] A treatise on ecclesiastical festivals. Sometimes spelled *festology.*

festinate (fes′ti-nāt), *v. i.*; pret. and pp. *festinated,* ppr. *festinating.* To quicken the steps involuntarily when walking, as in paralysis agitans. *Buck,* Med. Handbook, VI. 486.

Festival of Lights. See ★*Hanukah.*—**Jewish festivals.** The Jewish festivals or holy days may be divided into two categories, Biblical and post-Biblical. The former are: (*a*) The Sabbath (which see). (*b*) Rosh hodesh, the first (day) of the Jewish lunar month (Num. x. 10). (*c*) Pesah, the Passover, also called *Chag ha-mazoth,* the Feast of Unleavened Bread (see ★*matsoth*). (*d*) Shabuoth, or *Chag ha-Shabuoth,* the Feast of Weeks, also called *Yom ha-bikurim,* or Day of the First-fruit (Num. xxviii. 26). (*e*) Sukkoth, meaning 'booths,' or 'tabernacles,' also called *Chag ha-'Asiph* (Ex. xxiii. 15, 16), the Feast of Ingathering (see *Feast of Tabernacles*). (*f*) Yom Teruah (Num. xxix. 1), the 'day of blowing the trumpet,' now known as *Rosh ha-shanah* or first of the Jewish year, when the shofar (ram's horn) is used. (*g*) Yom ha-kippurim, the Day of Atonement, which is not properly a day of feasting, but the most solemn fast-day in the year. The post-Biblical Jewish authorities have added an extra day to the principal festivals; thus the Feast of the Passover has now eight instead of seven days; the Feast of Weeks has two instead of one; the Feast of Tabernacles has (including *Shemini 'Atsereth* and *Simhath Torah*) nine instead of eight; and Rosh ha-shanah has two instead of one. There are several minor festivals and holidays in the Jewish calendar, but these, with the exception of ★*Hanukah* (which see), as well as the above-named additional days, are disregarded by many reformed congregations.

festivous (fes′ti-vus), *a.* [*festive* + *-ous.*] Festive: as, a *festivous* occasion.

festology (fes-tol′ō-ji), *n.* Same as ★*festilogy.*

festoon, *n.* **5.** A British collectors' name for a European limacodid moth, *Apoda testudo,* yellow-brown in color with narrow brown stripes arranged like a festoon.

festoon-pine (fes-tön′pīn), *n.* Same as *Christmas* ★*evergreen.*

Fetal circulation, the course of the blood-current in the fetus. It differs in some important respects from that in the adult, owing to the fact that the aëration of the blood occurs in the placenta instead of in the lungs. There is a communication between the two sides of the heart, and the entire mass of blood in the body is of a mixed venous and arterial character, except that in the umbilical vein, which passes from the placenta to the liver, which more nearly resembles the arterial blood in the adult.—**Fetal envelops,** the membranes which cover the fetus in the womb; the chorion, amnion, and allantois.—**Fetal inclusion,** a double monstrosity in which one fetus is inclosed in the other; intrafetation.—**Fetal membranes.** Same as ★*fetal envelops.*

fether, fethery. Simplified spellings of *feather, feathery.*

Fetid limestone. See ★*limestone.*

fetidity (fē-tid′i-ti), *n.* [*fetid* + *-ity.*] Fetid nature or smell.

fetid-shrub (fē′tid-shrub), *n.* The papaw, *Asimina triloba.*

fetish-drum (fē′tish-drum), *n.* A drum used in connection with fetishistic rites.

fetish-house (fē′tish-hous), *n.* The house or hut in which a fetish is kept. *E. B. Tylor.*

fetishic (fē-tish′ik), *a.* [*fetish* + *-ic.*] Pertaining to or having the character of a fetish. *F. Ratzel* (trans.), Hist. of Mankind, I. 43.

fetish-priest (fē′tish-prēst), *n.* A person who, with the assistance of a fetish, exercises magical powers and performs religious functions: a term used to designate the shaman of Africa. *F. Ratzel* (trans.), Hist. of Mankind, II. 367.

fetticus (fet′i-kus), *n.* [Origin not known.] The leaves of the corn-salad, used as a salad.

fettler (fet′lêr), *n.* One who fixes or prepares. Specifically—(*a*) One who cleans castings in a foundry, chipping off rough spots, fins, etc., and brushing off the sand. (*b*) One who prepares the hearth of a puddling-furnace. (*c*) One who shaves and smooths green pottery to remove the seams made in molding. (*d*) In *textile-manuf.,* one who cleans up machinery, or serves as a helper in a menial capacity.

fettling, *n.* **2.** The repairing or preparation of a machine or part of a machine.—**3.** The process of cleaning castings after they leave the foundry sand, including the chipping off of runners, fins, and scabs, filing rough spots, cleaning sand from the surfaces, and cleaning out cores.—**4.** The repairing of the hearth of a puddling-furnace by the use of iron ore rich in oxygen.—**5.** In *ceram.,* the process of evening the glaze on the surface of biscuit-ware before it is fired in the glost-kiln. After the ware has been dipped in the liquid glaze and allowed to dry, the excess of dry glaze is scraped out of the hollows and perforations. The surface is then retouched with a brush in spots which are thin or bare.

feu et lieu (fē ā lyē). [F., L. *focus et locus,* 'hearth and place.'] In *old French Canadian law,* hearth and home, meaning actual settlement by a tenant on the land. *Bouvier* Law Dict.

feu-holding (fū′hōl″ding), *n.* In *Scots law,* a tenure in which the tenant pays feu duty to his superior. See *feu.*

feuillemorte, *n.* **2.** Same as *feuillet,* 2.

fever[1], *n.*—**Acclimation fever,** an ephemeral fever which attacks a new-comer in the tropics. It has no definite character, but may be of gastric, malarial, or thermal origin, or may be a mild yellow fever in places where that disease is endemic. It has no real relation to the process of acclimation.—**Aden fever.** Same as *dengue.*—**Adenonervous fever.** Same as *bubo plague* (which see, under *plague*).—**African Coast fever,** a very severe piroplasmosis of cattle in Africa, similar to Texas fever, and transmitted by the brown tick (*Rhipicephalus appendiculatus*) and the black-pitted tick (*R. sinus*). Also called *Rhodesian redwater, Rhodesian tick-fever, coast tick-fever, East Coast fever.* **African fever.** (*b*) Pernicious malarial fever. **Algid fever.** See ★*algid.*—**Assam fever.** Same as ★*kala-azar.*—**Autumnal fever,** an indefinite term denoting any fever which occurs in the autumn, usually malarial or typhoid fever.—**Ballast fever.** See ★*ballast.*—**Biduotertian fever.** See ★*biduotertian.*—**Black fever.** (*b*) Same as ★*kala-azar.*—**Black-water fever,** malarial hemoglobinuria.—**Bladder fever.** See ★*bladder.*—**Boohoo fever,** a disease of Hawaii and other Pacific islands, of which the chief symptoms are gastro-intestinal disorder and extreme depression of spirits.—**Broken-wing fever.** Same as *dengue.* **Bucket fever,** an old term for *dengue.* **Bulama fever,** yellow fever.—**Digestive fever,** a slight rise in the temperature of the body during the process of digestion.—**Dumdum fever,** a disease occurring in India, which resembles, and perhaps is identical with, kala-azar. It is marked by enlargement of the liver and spleen and by the presence of protozoan parasites in blood drawn from the spleen.—**East Coast fever.** Same as *African Coast* ★*fever.* **Elephantoid fever.** See ★*elephantoid.*—**Fracture fever,** a slight elevation of the body temperature coming within a few hours of the occurrence of a fracture.—**Garrick fever.** Same as *Siddons* ★*fever.*—**Giraffe fever.** Same as *dengue. Sci. Amer.,* April 9, 1904, p. 287. **Hemoglobinuric fever.** Same as *black-water* ★*fever* and *hemoglobinuria. Jour. Trop. Med.,* June 1, 1903, p. 183.—**Lazaret fever.** Same as *typhus fever.*—**Malarial fever of cattle.** Same as *Texas* ★*fever.* Also known as *piroplasmosis bovis.*—**Malta fever,** a disease marked by long continuance of the fever at a nearly constant level, prostration, pains in the joints, headache, and diarrhea. It prevails along the shores of the Mediterranean and in other subtropical and tropical regions, and is associated with the presence in the body of a special microbe, *Micrococcus melitensis.* Also called *rock-fever, Mediterranean fever, Naples fever.*—**Mediterranean fever.** Same as *Malta* ★*fever.* **Naples fever.** Same as *Malta* ★*fever.* **Neapolitan fever.** Same as *Malta* ★*fever.*—**Paratyphoid fever,** a continued fever resembling typhoid in its general symptoms, but not responding to the specific tests for that disease: its causation is not yet definitely ascertained.—**Rhodesian fever,** a cattle-disease in Africa, resembling in its symptoms and mode of transmission (by a tick) Texas fever. *Athenæum,* May 21, 1904, p. 659.—**Rocky Mountain spotted fever.** See ★*tick-fever.*—**Siddons fever,** a low fever believed to be due to the aggregation of large numbers of persons in poorly ventilated rooms: so called because it once prevailed in Edinburgh while Mrs. Siddons was playing there.—**Southern fever.** Same as *Texas fever* of cattle, an anemia caused by *Piroplasma bigeminum.*—**Spotted fever.** (*c*) See ★*tick-fever.*—**Stiff-necked fever.** Same as *dengue.*—**Subcontinuous fever,** remittent malarial fever.—**Texas fever.** See *Texas.*—**Trypanosoma fever,** a fever in man (sleeping-sickness?) or in animals (surra, dourine) due to the presence in the blood of one of the species of *Trypanosoma. Nature,* Dec. 3, 1903, p. 108.—**Undulant fever.** Same as *Malta* ★*fever.*—**Urinary fever.** Same as *urethral fever* (which see, under *fever*[1]).—**Walking typhoid fever,** a form of typhoid fever in which the constitutional symptoms are not very severe at first, and the patient is not confined to his bed, but moves about during the greater part or the whole of the course of the disease.

fever-bush, *n.*—**California fever-bush.** Same as ★*quinine-bush.* See ★*bear-brush* and *tassel-tree.*

feverd, *pp.* and *a.* A simplified spelling of *fevered.*

fever-fly (fē′vèr-flī), *n.* A name given in England to a fly, *Dilophus febrilis,* which occasionally multiplies excessively. In past years the coincidental prevalence of fever during the swarming of this fly gave rise to the popular name. The larva eats the roots of the hop-plant.

fever-gum (fē′vèr-gum), *n.* The blue-gum, *Eucalyptus globulus.* See *fever-tree,* 1.

feverwood (fē′vèr-wùd), *n.* Same as *fever-bush,* 1.

fezant, *n.* A simplified spelling of *pheasant.*

ff. An abreviation (*a*) of the Latin *fecerunt,* they did it or made it; (*b*) of *folios;* (*c*) of *fortissimo;* (*d*) of *following* (plural).

F. F. A. An abbreviation of *Fellow of the Faculty of Actuaries.*

Ffestiniog flags. See ★*flag*[4].

fff. In *music,* an abbreviation of *fortissimo:* more usually *ff.*

F. F. P. S. An abbreviation of *Fellow of the Faculty of Physicians and Surgeons.*

f. g. a. An abbreviation of *free of general average.*

F. G. S. An abbreviation of *Fellow of the Geological Society.*

f. h. p. An abbreviation of *friction horse-power.*

F. H. S. An abbreviation of *Fellow of the Horticultural Society.*

F. I. A. An abbreviation of *Fellow of the Institute of Actuaries.*

Fianchetto di donna opening. See ★*opening.*

fiat, *n.*—**Joint fiat,** in *law,* a fiat which formerly issued against two or more trading partners. *Bouvier,* Law Dict.

fiber[1], *n.*—**Ansulate fibers,** a decussating system of fibers which exists in the brain of reptiles and amphibians and is regarded as corresponding to Meynert's commissure in mammals.—**Association fibers,** in *neurol.,* fibers which connect different regions of the same cerebral hemisphere: opposed to *commissural fibers,* which connect the two hemispheres.—**Bahama fiber,** the fiber of *Agave rigida,* from plants cultivated in the Bahamas. See *henequen.*—**Bamboo fiber.** See ★*bamboo.*—**Bast-fibers.** See *bast*[1], 2.—**Bolo-bolo fiber,** the bast-fiber obtained from *Clappertonia ficifolia,* a West African plant of the linden family.—**Chambered fibers,** in *bot.,* fibers which have become septate so as to appear multicellular, such as occur in the secondary wood of dicotyledons.—**Cosmos fiber,** any mixed waste of vegetable fibers, as flax, jute, hemp, nettle, etc.—**Gaboon fiber,** a stiff variety of the African bast or piassava: used for stiff brushes.—**Hard fiber,** a trade-name for paper which has been passed through a warm solution of zinc chlorid, and afterward over heated rolls, cooled, and thoroughly washed with pure water. It is strong and tough, and is not injured by water.—**Indurated fiber.** Same as *hard* ★*fiber.*—**Interzonal fibers,** a bundle of delicate achromatic fibers constituting the central spindle during karyokinetic cell-division. This spindle is

enveloped by the ★mantle-fibers (which see, and also cut at ★*dispireme*). **Leaf-fiber machine**, a machine for extracting the fiber from fleshy-leaved plants, as the agave. **Manila fiber.** Same as *manila*, 2. **Mauritius fiber.** Same as *Mauritius* ★*hemp.* **Mexican fiber.** Same as *Tampico* ★*fiber.* **Mexicana fiber**, the fiber of the *Agave heteracantha*, or istle, found in Mexico, Texas, and California, used for the manufacture of cheap brushes. **Moriche fiber**, a fiber obtained from the young leaves of the ita-palm, *Mauritia flexuosa.* It is prepared in the same manner as raffia, by stripping off the outer skin of the unexpanded leaves and drying in the sun. It is then twisted into strings and made into cords and hammocks. See *Mauritia* and *ita palm.* **Motor fiber**, one of the fibers in a mixed nerve which convey motor or centrifugal impulses only. **Odontogenic fibers**, a term suggested by Mummery for the "layer of connective tissue surrounding the pulp and entering into the substance of the matrix." The term is suggested because of their great similarity to the osteogenic fibers of bone. **Oloná fiber**, a fiber prepared from the bast of *Touchardia latifolia*, a nettle-like plant growing in the Hawaiian Islands, called *olona* by the natives. It is remarkable for its strength and durability, and is used chiefly for making fish-nets, some of which are more than 100 fathoms long. **Opuhe fiber**, a bast-fiber derived from the stems of *Urera Sandwicensis*, a Hawaiian plant belonging to the nettle family. It is highly esteemed by the natives, who use it for the same purposes as the olona. **Palma fiber.** Same as *palma* ★*istle.* **Palmyra fiber**, a fiber obtained from the base of the leaf-stalks of the palmyra palm, *Borassus flabellifer.* It is harsh and wiry, and has become of importance commercially since 1891, replacing to a great extent the West African bast-fiber, derived from *Raphia vinifera* in the manufacture of stiff brushes. See *palmyra*, 1. **Pontine fibers**, the nerve-fibers present in the pons Varolii. **Postcommissural fibers**, fibers of the postcommissure situated just posterior to the peduncle of the epiphysis. The fibers pass through the optic thalami and, according to Meynert, diverge into the white substance of the cerebral hemispheres. In lower vertebrates the fibers pass ventrally through the thalami and join the basal tract. Smith applies the term to uncrossed fibers derived from the hippocampus which "collect upon the dorsal aspect of the ventral [pre]commissure and incline backward and downward to enter the thalamic region." *Trans. Linnean Soc. London*, June, 1897, p. 54. **Postretinal fiber**, any one of a series of nerve-fibers arising from the facets of the compound eye of an insect and passing into the ganglionic or outer lobe of the optic ganglion of the brain.

Precommissural fibers, fibers of the precommissure in the lamina terminalis. In each hemicerebrum the bundle of fibers divides. One division, passing outwardly and anteriorly, is designated as the *pars olfactoria*; the other division, passing posteriorly, is the *pars temporalis.* Smith uses the term in another sense, referring it to fibers originating in the hippocampus which, in their course, are divided by the ventral commissure (precommissure of other writers). Those proceeding downward and forward in front of the ventral commissure are termed precommissural fibers.—**Prussak's fibers**, fibers which extend from the short process of the malleus to the notch of Rivini.

Quartz fiber, a fiber obtained by fusing quartz in the oxyhydrogen flame and drawing it out while soft into a filament. Fibers thus produced are sometimes so fine as to be invisible to the unaided eye. They are, however, of great tensile strength, and have elastic properties which adapt them for use in the suspension of the moving parts of galvanometers and of other physical instruments of extreme delicacy.—**Reissner's fiber**, a rod-like structure or fiber lying within the lumen of the central canal of the spinal cord and brain of lower vertebrates. It extends the length of the cord into the brain as far as the diencephalon and connects with the torus longitudinalis. The theory has been advanced that the structure is the result of secretion, but Sargent maintains that it is of a nervous character.—**Scattered fillet fibers**, fibers which lie internal to the chief fillet or lemniscus and which, according to Bechterew, include the central continuation of the vagus and trigeminal nerves. **Short association fibers**, fibers in the cerebrum which serve to connect adjacent convolutions, passing around below the gray matter at the bottom of the fissures. Also *fibræ propriæ.*—**Sisal fiber.** Same as *sisal hemp.* See *henequen.*—**Spiral fiber**, the spiral chitinous thickening of the endotracheal membrane in the tracheæ of insects.—**Tampico fiber**, the coarse, stiff fiber obtained from four or five species of plants which grow on the high, arid table-lands of northern Mexico, and which is exported from the port of Tampico. It is used as a substitute for bristles in the manufacture of brushes and is also in demand for the cheaper grades of twine and the medium grades of cordage. The most important of the plants yielding this fiber are *Agave lophantha*, *A. Lechuguilla*, *Samuela Carnerosana*, and *Yucca Treculeana.* See ★*lechuguilla*, ★*palma pita*, and ★*palma samandoca.* For the three most important commercial grades of this fiber, see *Jaumave*, *palma*, and *Tula istle*, under ★*istle.*—**Tibisiri fiber**, in British Guiana, same as *moriche* ★*fiber.*—**Tomes's fibers** or **fibrils**, processes given off from the odontoblasts, in the dentinal canals. **Weismann's fibers**, intrafused muscle fibers, or fibers within the muscle spindle. **Yucatan fiber.** Same as *henequen.*

fiber-faced (fī′bėr-fāst), *a.* 1. Covered or faced with a compressed composition made from wood-pulp or other materials and called fiber. There are many kinds of fiber, most of them having names to define the use for which they are intended. 2. Said of paper that plainly shows fibers on its surface, as that made for United States bank-notes and some forms of bond-paper.

fibra, *n.* **Fibræ propriæ.** Same as *short association* ★*fibers.*

fibrification (fī″bri-fi-kā′shon), *n.* The formation of fibers or fibrous structures.

> I have not detected any other *fibrification* of the cells except this.
> *H. Burmeister* (trans.), in C. L. Nitzsch, Pterylography, [p. 9.

fibril, *n.* 3. In *histol.*, a delicate fiber, such as, according to one theory, is found in the protoplasm of cells. **Side fibril of Golgi**, a delicate branch passing off at right angles from the neuraxone near its junction with the body of a ganglion-cell.—**Tomes's fibrils.** See *Tomes's* ★*fibers.*

fibrilia (fī-bril′i-ä), *n.* [NL., < L. *fibra*, fiber.] Any fine vegetable fiber that can be substituted for cotton in the manufacture of fabrics.

fibrillate, *v.* **II.** *intrans.* To form fibrils, as coagulating blood.

fibrillation, *n.* (*b*) The formation of fibrils.

Fibrin antipeptone. See ★*antipeptone.* **Myosin fibrin**, an insoluble form of myosin; one of the coagulated albumins.

fibrin-factor (fī′brin-fak″tor), *n.* A substance which is concerned in the formation of fibrin; specifically, a substance which will give rise to the formation of fibrin, such as fibrinogen.

fibrin-globulin (fī′brin-glob″ū-lin), *n.* Same as ★*fibrinoglobulin.*

fibrinocellular (fī″bri-nō-sel′ū-lär), *a.* Composed of fibrin with an admixture of desquamated cells.

fibrinogenetic (fī″bri-nō-jē-net′ik), *a.* Same as *fibrinogenic.*

fibrinoglobulin (fī″bri-nō-glob′ū-lin), *n.* A globulin which is derived from fibrinogen during the process of coagulation, that is, during the transformation of fibrinogen into fibrin.

fibrinopurulent (fī″bri-nō-pū′rö-lent), *a.* In *pathol.*, noting the type of certain exudates, of inflammatory character, which show a tendency to clot and which contain pus.

fibrinose (fī′bri-nōs), *n.* An albumose derived from fibrin.

fibrinosis (fī-bri-nō′sis), *n.* [NL., < *fibrin* + *-osis.*] In *pathol.*, a condition in which there is an excessive tendency to coagulation of the blood.

Fibrinous bronchitis. See ★*bronchitis.*—**Fibrinous croup**, true croup. **Fibrinous pleurisy.** See ★*pleurisy.*—**Fibrinous pneumonia.** Same as *croupous pneumonia* (which see, under *pneumonia*).

fibrinuria (fī-bri-nū′ri-ä), *n.* [NL., < *fibrin* + Gr. οὖρον, urine.] The passage of fibrin in urine: sometimes associated with *chyluria.*

fibro-adenoma (fī″brō-ad-e-nō′mä), *n.*; pl. *fibro-adenomata* (-ma-tä). A glandular tumor containing much fibrous tissue.

fibro-adipose (fī-brō-ad′i-pōs), *a.* Composed of fibrous and fatty tissue.

fibro-angioma (fī″brō-an-ji-ō′mä), *n.*; pl. *fibro-angiomata* (-ma-tä). An angioma with a large admixture of fibrous tissue.

fibrobronchitis (fī″brō-brong-kī′tis), *n.* A croupous inflammation of the mucous membrane of the bronchial tubes.

fibrocarcinoma (fī″brō-kär-si-nō′mä), *n.*; pl. *fibrocarcinomata* (-ma-tä). A carcinomatous tumor which contains much fibrous tissue.

fibrocaseous (fī-brō-kā′sē-us), *a.* Containing fibrous tissue with cheesy matter.

Fibrocellular tumor. Same as *fibroma.*

fibrochondritis (fī″brō-kon-drī′tis), *n.* [NL., < L. *fibra*, fiber, + Gr. χόνδρος, cartilage, + *-itis.*] Inflammation of a fibrocartilage.

fibrocrystalline (fī-brō-kris′ta-lin), *a.* Crystallized in fibrous form, as many calcareous organic structures, such as the skeletons of the corals.

fibrocyst (fī′brō-sist), *n.* [L. *fibra*, fiber, + Gr. κύστις, bladder (cyst).] A fibroid tumor which is undergoing cystic degeneration.

fibrocystoma (fī″brō-sis-tō′mä), *n.*; pl. *fibrocystomata* (-ma-tä). [NL., as *fibrocyst* + *-oma.*] A fibroma which contains cysts.

fibro-elastic (fī″brō-ē-las′tik), *a.* Containing white fibrous and elastic tissue.

fibroglioma (fī″brō-gli-ō′mä), *n.*; pl. *fibrogliomata* (-ma-tä). [NL., < L. *fibra*, fiber, + NL. *glioma.*] A mixed fibroma and glioma.

fibrolamellar (fī-brō-lam′e-lär), *a.* In *mineral.*, a structure produced by the separating of a fibrous mineral or mineral aggregate into thin lamellæ. *Geikie*, Text-book of Geol., p. 105.

fibrolipoma (fī″brō-li-pō′mä), *n.*; pl. *fibrolipomata* (-ma-tä). [NL., < L. *fibra*, fiber, + Gr. λίπος, fat, + *-oma.*] A mixed fatty and fibroid tumor.

fibrolitic (fī-brō-lit′ik), *a.* [*fibrolite* + *-ic.*] Pertaining to, resembling, or characterized by the presence of fibrolite (sillimanite): applied to certain metamorphic rocks, such as gneiss or schist.

Fibroma molluscum, a soft connective-tissue tumor of the skin.

fibromatosis (fī-brō-ma-tō′sis), *n.* [NL., < *fibroma*(*t-*) + *-osis.*] The development of fibroid tumors.

fibromembranous (fī-brō-mem′brā-nus), *a.* [L. *fibra*, fiber, + *membrana*, membrane, + *-ous.*] Composed of a membrane containing much fibrous tissue.

fibromyitis (fī″brō-mī-ī′tis), *n.* [NL., < L. *fibra*, fiber, + Gr. μῦς (μυ-), muscle, + *-itis.*] Inflammation of a muscle with hyperplasia of the fibrous tissue.

fibromyxoma (fī″brō-mik-sō′mä), *n.*; pl. *fibromyxomata* (-ma-tä). A tumor composed of fibrous and mucous elements.

fibromyxosarcoma (fī″brō-mik″sō-sär-kō′mä), *n.*; pl. *fibromyxosarcomata* (-ma-tä). A myxosarcoma containing much fibrous tissue.

fibroneuroma (fī″brō-nū-rō′mä), *n.*; pl. *fibroneuromata* (-ma-tä). A fibrous tumor involving nerve structures.

fibronucleated (fī-brō-nū′klē-ā-ted), *a.* Composed of fibers and having elongated nuclei in the interstices.

fibropapilloma (fī″brō-pap-i-lō′mä), *n.*; pl. *fibropapillomata* (-ma-tä). A tumor which contains the elements of both fibroma and papilloma.

fibroplate (fī′brō-plāt), *n.* An interarticular fibrocartilage.

fibropurulent (fī-brō-pū′rö-lent), *a.* Marked by pus with an admixture of fibrin in flakes.

fibrose (fī′brōs), *v. t.*; pret. and pp. *fibrosed*, ppr. *fibrosing.* [*fibrose*, *a.*] To form fibrous tissue, as in cirrhosis or in cicatrization. *Buck*, Med. Handbook, V. 561.

fibrospongian (fī-brō-spon′ji-an), *a.* and *n.* **I.** *a.* Pertaining to or possessing the characters of the *Fibrospongiæ.*

II. *n.* One of the *Fibrospongiæ.*

fibrotic (fī-brot′ik), *a.* [*fibrosis* (*-ot-*) + *-ic.*] Relating to fibrosis. *Buck*, Med. Handbook, II. 99.

Fibrous oak-apple. See ★*oak-apple.*—**Fibrous slab**, a building material, invented in the nineteenth century, used for the internal finishing of surfaces to replace plaster or boarding. Compare *staff* 2.

F. I. C. An abbreviation of *Fellow of the Institute of Chemistry.*

ficelle (fē-sel′), *a.* [F. *ficelle*, packthread.] Resembling packthread or string (in color): as, *ficelle* lace.

ficiform (fis′i-fôrm), *a.* [L. *ficus*, a fig, + *forma*, form.] Fig-shaped; elongate ovoid, rapidly tapering to one extremity.

fickle-midge (fik′l-mij), *n.* An American chironomid fly, *Sciara inconstans*, the larvæ of which breed in rich hothouse earth and sometimes damage planted seeds and the roots of plants.

Fick's law of diffusion, inspiration experiment. See *law of* ★*diffusion* (*a*), ★*experiment.*

ficoid, *a.* **II**†. *n.* A plant of the family *Aizoaceæ*, formerly called *Ficoideæ* (which see). *Lindley.*

fid, *n.*—**Hand-fid**, a pointed pin of hardwood, from 14 to 20 inches long, used to open the strands of a rope in splicing. A somewhat longer metallic pin of this sort is called a *marlinespike.* [Naut.]

fiddle, *n.* 4. In *ceram.*, a rack in which pieces of ware that have been dipped in liquid glaze are placed to drain.—5. A piece of wood by which the guy-ropes of a tennis-net are stretched to keep them taut.—**Corn-stalk fiddle.** See ★*corn-stalk.*

fiddle-back (fid′l-bak), *n.* An Australian scarabæid beetle, *Schizorrhina australasiæ.* [Australia.]

fiddle-beetle (fid′l-bē″tl), *n.* A large carabid beetle, *Damaster blaptoides*, which occurs in Japan and other oriental regions, and which, by the widening of its elytra, is somewhat fiddle-shaped.

fiddle-grass (fid′l-gràs), *n.* The great hairy willow-herb, *Epilobium hirsutum.*

fiddle-head, *n.* 2. *pl.* The crozier-like uncoiling young fronds of the cinnamon-fern, *Osmunda cinnamomea*: so named from their fancied resemblance to the carved head of a violin.

fiddle-headed (fid′l-hed-ed), *a.* Having handles that are fiddle-shaped: as, *fiddle-headed* serving spoons; *fiddle-headed* forks.

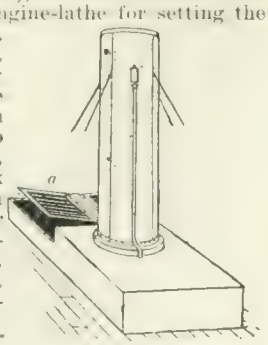
fiddler, *n.* 5. A fish, *Trygonorhina fasciata*, a member of the family *Rhinobatidæ.* [Australia.]

fiddle-rack (fid′l-rak), *n.* *Naut.* Same as *fiddle*, *n.*, 2.

fiddler-fish (fid′lėr-fish), *n.* A fish, *Rhinobatus percellus*, of the family *Rhinobatidæ.*

fiddle-slide (fid'l-slīd), *n.* A slide in the compound-rest of an engine-lathe for setting the tool to turn a taper.

fiddley (fid'li), *n.* [Also *fiddly*, *fidley*; prob. a nautical use of **fiddly*, adj. from *fiddle*, in allusion to the grating.] *Naut.*, the iron framework or cover forming a hatch on deck over the engine- or fire-room of a steamer. *Jour. Brit. Inst. Electr. Engin.*, 1899–1900, p. 574.



a, fiddley.

fiddling-stone (fid'ling-stōn), *n.* A small whetstone. *Modern Amer. Tanning*, p. 175.

fideicommiss (fid″ē-ī-ko-mis'), *n.* In *civil law*, same as ★*fideicommissum*.

fideicommissary (fid″ē-ī-kom'i-sā-ri), *n.*; pl. *fideicommissaries* (-riz). In *civil law*, the beneficiary of a fideicommissum.

fideicommissor (fid″ē-ī-kō-mis'ōr), *n.* In *civil law*, the one by whom a fideicommissum was made.

fideicommissum (fid″ē-ī-kō-mis'um), *n.* [L. *fidei commissum*, a thing given in trust.] In *civil law*, a trust. It originated in a devise by which property was left to one who was to use it for the benefit of, or give it to, another who was incapable of taking it by the will. It is said to be the origin of the trusts and uses of the common law.

fidejussory (fī-dē-jus'ō-ri), *a.* Of or pertaining to a fidejussion.

fideos (fē-dā'ōs), *n.* [Sp. *fideos*, vermicelli.] In Porto Rico, a species of dodder, *Cuscuta Americana*, which in places covers masses of vegetation with its yellow, thread-like, twining stems.

Fid-hook.

fid-hook (fid'hůk), *n.* A slender, flat hook used to keep another hook from slipping on a chain.

fidibus (fid'i-bus), *n.* [G., origin unknown. The form is like that of L. *fidibus*, dat. and abl. pl. of *fides*, a lyre, or of *fides*, faith.] A spill or lighter; a kindler; a match.

fidley, *n.* See ★*fiddley*.

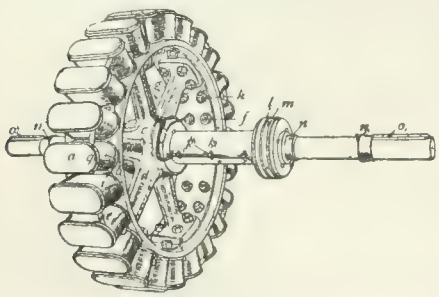
fiducial, *a.* **4.** Relating to or characterized by the belief in supernatural powers.

The ceremonies of the folk, like those of other primitive peoples, are primarily *fiducial*, and involve representation, or even personation, of the deified potencies forming the tribal pantheon.

J. W. Powell, Smithsonian Rep., 1900, p. 62.

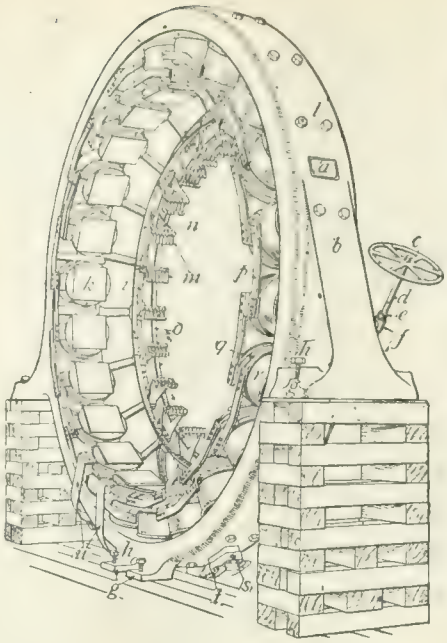
Fiducial points, in *thermom.*, the melting-point of ice, called the *ice-point*, and the boiling-point of water under a barometric pressure of 760 millimeters, called the *steam-point*.

field, *n.* **13.** Specifically, in electric machines, that part of the structure in which the magnetic flux is excited. The electrical or mechanical power is produced by rotation of the armature in the magnetic field or of the magnetic field in the armature. See cuts under ★*armature*.— **15.** In *math.*, same as ★*domain*, 8. **Angle of field.** See ★*angle*[3]. **Corporal of the field.** See ★*corporal*[2]. **Curvature of field.** See ★*curvature*. **Field boiler.** See ★*boiler*. **Field of attention**, in *psychol.*, the range of consciousness that is characterized by clearness of the perceptual or ideational processes of the moment; the range of perceptions or ideas that represent the object of attention.— **Field of audition**, in *psychol.*, the range of space over which sounds of a certain intensity and quality are audible or within which they are localized. The phrase is used loosely, but always on the analogy of the *field of vision*.— **Field of consciousness.** See ★*consciousness*.— **Field of force**, the space throughout which the attractive or repellent action of a mass or system is manifested. A field of force may be regarded as a system of equipotential surfaces and lines of force, by means of which the distribution of potentials and intensities is indicated.— **Field of inattention**, in *psychol.*, the range of consciousness that is characterized by obscurity of the perceptual or ideational processes of the moment; the background of consciousness; the contents of consciousness apart from those conscious processes that represent the object of attention.— **Field of smell**, in *psychol.*, the range of space from which we receive olfactory stimuli that are effective for sensation. *E. B. Titchener*, Exper. Psychol., I. i. 75.— **Field of a lens, of touch.** See ★*lens*, ★*touch*.— **Flatness of field.** See ★*flatness*.— **Galois field.** Same as *Galois* ★*domain*.— **Magnetic field, motor field.** See *magnetic* ★*circuit*, ★*motor*. **Multipolar field**, the magnetic field of a motor or generator having more than two poles.— **Old field growth.** See *volunteer* ★*growth*. **Point field**, in *projective geom.*, the ∞^2 points on a plane.— **Polyphase field**, in an electric generator or motor, a magnetic field produced by polyphase currents. **Relative field.** Same as ★*association area*. **Rotary field**, in *elect.*, a magnetic field in which the lines of force have a motion of rotation. The term is usually applied to fields produced by means of polyphase currents in fixed coils; but the fields of certain dynamos and motors with revolving field-magnets are sometimes called rotary fields. — **Shifting field**, in *elect.*, a magnetic or electrostatic field the lines of which change position with respect to the medium within which they are formed.— **Straight field**, in *projective geom.*, the ∞^2 straights on a plane. **Stray field**, in *elect.*, that portion of the electrostatic or electromagnetic field of any apparatus or machine which is not utilized in its operation.— **Strength of field**, the force upon a unit mass, unit pole, or unit charge situated at the point where the intensity of the field of force is to be measured. Strength of field is likewise expressed in terms of the number of lines of force per unit of area of field.— **Zero field**, in *phys.*, a field of force, such as an electrostatic or magnetic field, the intensity of which is zero.



Revolving Field.

a, pole-piece; *b*, field-ring; *c*, hub of spider; *d*, spokes of spider; *e*, field connections; *f*, pole-piece bolt; *g*, field-leads; *h*, nut for pole-piece bolt; *i*, field-winding; *k*, shaft; *l*, field-ring lamination; *m*, field-ring; *n*, oil-deflector; *o*, key; *p*, field-lead fastener; *q*, field-[illegible]



Stationary Field.

a, name-plate; *b*, magnet-frame; *c*, hand-wheel; *d*, hand-wheel shaft; *e*, hand-wheel shaft-collar; *f*, fulcrum-pin; *g*, foot; *h*, holding-down bolt; *i*, brush-holder yoke; *k*, pole-face; *l*, pole-piece bolts; *m*, brushes; *n*, stud-support; *o*, bus-ring; *p*, series-connection bars; *q*, series windings; *r*, shunt windings; *s*, connection-board; *t*, terminal; *u*, field-leads.

field, *v. t.* **2.** In *chem. industries*, to induce oxidation or other change by exposing to the air and solar heat. A term not in general use.

field-coil (fēld'koil), *n.* In *elect.*, a coil of wire around the field-magnet of a generator, motor, or other electrical machine, or one which serves to produce by means of the current flowing in it the magnetic field of any electrical device.

field-company (fēld'kum″pa-ni), *n.* A company of engineers in the British army, equipped as pioneers and pontoniers for field service.

field-cornetcy (fēld'kôr″net-si), *n.* The office or rank of field-cornet. [South Africa.]

field-cress (fēld'kres), *n.* Same as *cow-cress*.

field-derrick (fēld'der″ik), *n.* An oil-well derrick. See ★*derrick*, 2.

field-distortion (fēld'dis-tôr″shon), *n.* The twisting, bending or displacement in any way of the lines of an electrostatic or magnetic field or of any field of force.

field-geologist (fēld″jē-ol'ō-jist), *n.* A geologist who works in the field, as distinguished from one who is confined to a laboratory or library.

field-geology (fēld″jē-ol'ō-ji), *n.* Geological work in the open air or in nature, as contrasted with investigation pursued in the laboratory.

field-glass, *n.* **Prismatic field-glass.** See *prismatic* ★*binocular*.

field-gun, *n.*— **Ehrhardt field-gun**, a field-gun designed for long recoil (about four feet) on its carriage. The carriage is so constructed that after two or three rounds it takes a nearly fixed position and hence permits very rapid firing.

field-hockey (fēld'hok″i), *n.* An outdoor game played by two opposing teams or sides who endeavor to drive the ball toward and into the opponents' goal with clubs curved at one end. Also *shinny*, *shinty*, and *bandy*.

fieldman (fēld'man), *n.*; pl. *fieldmen* (-men). A man employed in the field, as a member of a field-party; also, a traveling representative of an enterprise or an undertaking: distinguished from one employed indoors.

The *fieldmen* of the Geological Survey have been the pioneer surveyors of the natural features of the vast regions which constitute half the continent.

Sci. Amer. Sup., Jan. 31, 1903, p. 22,647.

field-music (fēld'mū″zik), *n.* A military band of any size accompanying a body of soldiers.

field-pine (fēld'pīn), *n.* A small heath-like herb, *Hudsonia ericoides*, of the rock-rose family, found near the Atlantic coast from Nova Scotia to Virginia.

Field-pine (*Hudsonia ericoides*). About one half natural size. From Britton and Brown's "Illustrated Flora of the Northern States and Canada."

field-pole (fēld'pōl), *n.* In *elect.*, the magnetic pole of the field of a generator or motor.

field-rheostat (fēld'rē″ō-stat), *n.* A rheostat or adjustable resistance used for the control and regulation of the magnetic field of an electric generator or motor.

field-roller (fēld'rō″lėr), *n.* A land-roll (which see).

field-salad (fēld'sal″ad), *n.* Same as *corn-salad*.

field-spool (fēld'spōl), *n.* A spool or bobbin on the field-magnet of an electric generator, motor, or other device, upon which the field-coil is wound.

field-trash (fēld'trash), *n.* In the British West Indies, the tops and leaves of the sugar-cane, which are removed in the field and generally serve for feeding stock or for manure. See *cane-trash*, 1.

The refuse, or macerated rind of the cane (which is called cane-trash in contradistinction to *field-trash*), . . . serves for fuel to boil the liquor.

B. Edwards, Hist. British Colonies in W. I., II. 262.

field-troop (fēld'tröp), *n.* A company of pioneers and sappers of the British Royal Engineers.

field-wormwood (fēld'wėrm″wůd), *n.* See ★*wormwood*.

fiend-fly (fēnd'flī), *n.* Any one of many species of tree-hoppers of the family *Membracidæ*; so named on account of their strange forms and sinister appearance. For similar reasons they are also called *brownie-bugs*.

fierse, *a.* Another spelling of *fierce*.

fiery, *a.* **4.** In *cricket*, causing the ball to bound high after pitching: said of wicket or bowler.

fiery-hunter (fīr″i-hun'tėr), *n.* An American carabid beetle, *Calosoma calidum*, dark in color, with reddish or copper-colored pits on the elytra. In Canada this beetle is called ★*copperspot* (which see, with cut).

fiest[2] (fēst), *a.* [Also *feest*, < D. *vies*, nauseous, disgusting, also disgusted (*ik ben vies van hem*, I am sick of him).] Disgusted (with): sick and tired (of). [Local (orig. New York?), U. S.]

fife, *n.* 2. In *organ-building*, a piccolo stop.

fifteen, *n.* **Half fifteen.** See ★*half*.

fifth. I. *a.* **Fifth quarter.** See ★*quarter*1.
II. *n.* **Circle of fifths.** See *circle of keys*, under *circle*.

fig2, *n.* 9. In *soap-making*, same as *figging*. **Barbary fig**, the Indian fig or prickly-pear, *Opuntia Opuntia*. — **Blue fig**, an Australian tree, *Elæocarpus grandis*, bearing globular blue fruits which resemble plums and are eaten by children and aboriginals. It yields a soft, easily worked wood and a bark rich in tannin. Called also *calhun* and *Brisbane quandong*. **Cape fig.** Same as *Hottentot fig* (which see, under *fig*2). **Clustered fig**, in Australia, a large tree, *Ficus glomerata*, native to India, Malaysia, and Australia, the fruit of which is of a light red color when ripe and hangs in clusters along the trunk and highest branches. It is eaten by the aborigines. Its wood is soft, coarse, light, and not durable. **Fig wax, wine.** See ★*wax*2, ★*wine*. **Goat-fig.** Same as *caprifig*. **Golden fig**, *Ficus aurea*, a tree of southern Florida, the Keys, and the Bahama Islands. At first it is parasitic on the trunks of other trees, but later sends down aerial roots which coalesce on reaching the ground and produce large trunks from 3 to 4 feet in diameter, the growth of additional roots from the branches serving to propagate the trees over large areas after the manner of the banian. See *banian*2 (with cut). **Gular fig**, in India, same as *clustered* ★*fig*. **Horse-fig**, *Mesembryanthemum edule*. Also called *sour fig*. **Indian fig.** (*b*) The fruit of the saguaro, *Cereus giganteus*. **Moreton Bay fig**, *Ficus macrophylla*, a handsome evergreen tree, much used as an ornamental tree in streets and gardens in Australia, especially in Sydney and Adelaide. Its fruits are not edible. **Mulberry-fig**, the sycamore-fig. See *sycamore*, 1. **Poplar-leaf fig**, *Ficus laccifera*. See *fig*2, 1. **Prickly fig.** Same as *blueberry-*★*ash*. **Purple fig**, in the United States, a cultivated form of *Ficus Carica*; in Australia, *Ficus scabra*, a large tree yielding a brittle, spongy, useless wood, and small, black, edible fruits. —**Ribbed fig**, in Queensland, *Ficus pleurocarpa*. It yields a light, soft, elastic wood.—**Rough-leaved fig**, same as the Australian *purple* ★*fig*.—**Rusty fig**, the *Port Jackson fig*, *Ficus rubiginosa*. It yields soft, brittle, spongy wood sometimes used for packing-cases. **Sour fig.** Same as *horse-*★*fig*. **Thorny fig**, *Mesembryanthemum spinosum*, a plant of the Cape region of Africa, the flowering branches of which harden into sharp spines, which protect it from herbivorous animals: in sharp contrast with the purple-flowered *M. floribundum*, which yields excellent pasturage and is so succulent that cattle feeding upon it require little water. **Umbar fig**, in India, same as *clustered* ★*fig*.—**White fig.** Same as *rough-leaved* ★*fig*. **Wild fig.** (*b*) Either the poplar-leaf or the golden fig.—**Willow fig**, the East Indian benjamin-tree, *Ficus Benjamina*. It is a medium-sized tree, often epiphytic, and yields a mottled, gray wood.

Golden Fig (*Ficus aurea*).
a, branch bearing fruit and leaves, one fourth natural size; *b*, fruit, three fourths natural size.

fig. An abbreviation (*b*) of *figurative* or of *figuratively*.

fig-bar (fig'bär), *n.* A device attached to a panning-machine to work semi-soft dough. The dough is pressed from a box by means of fine corrugated rollers and falls upon the apron of the panning-machine in long strips, where it is cut to any desired length. The box is built with three compartments, so that three different doughs or two doughs and a jelly can be run at the same time.

fig-eater, *n.* 3. A local Australian name of a small passerine bird of the genus *Zosterops*. Also termed *grape-eater*.

fighting-top (fī'ting-top'), *n.* In a man-of-war, a platform, generally circular in shape, on or near the top of a mast, and provided with rapid-fire guns of small caliber and with accommodations for riflemen. It is generally reached by a ladder inside the hollow steel mast. Also called *military top*.

fig-insect (fig'in"sekt), *n.* Any insect of the chalcidoid family *Agaonidæ*, which inhabits figs, or any one of the numerous parasites of the insects of this family; specifically, *Blastophaga grossorum*, which fertilizes the Smyrna fig of commerce. See ★*Blastophaga*, with cut.

fig-marigold (fig'mar"i-gōld), *n.* See *marigold* and *Mesembryanthemum*.

fig-moth (fig-môth), *n.* A cosmopolitan phycitid moth, *Ephestia cautella*, whose larva lives in dried figs, nuts, cacao-beans, flaxseed meal, dried currants, and other stored products. Also called *dried-currant moth*.

fig-paste (fig'pāst), *n.* 1. A confection of figs; a national sweetmeat of Turkey and Greece. —2. A pink or white confection consisting of squares of a semi-transparent sweetish paste dusted with fine white sugar.

Fig-tree disease. See ★*disease*.

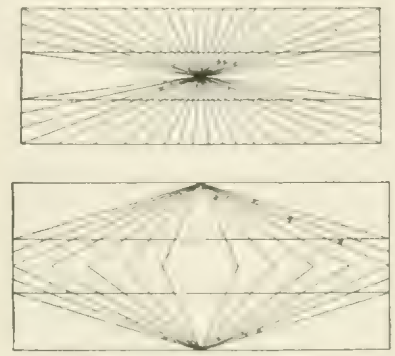
figuline, *n.* II. *a.* Of or pertaining to a potter or pottery: as, *figuline* ware. See *figulines rustiques*, under *figuline*.

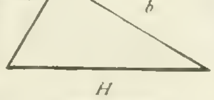
figurative, *a.* 5. In *geom.*, at infinity.

> On each straight is one and only one point 'at infinity,' or *figurative* point.
> *Merriman and Woodward*, Higher Mathematics, p. 73.

Figurative point, straight. See ★*point*1, ★*straight*1.

figure, *n.* 18. In ornamental woodwork, the grain of the wood, especially such grain when of unusual richness and when used with special care as a part of the design.—19. *pl.* The highest division of the lowest grade in the classical course in a Jesuit school. [Eng.] **Accompaniment, achromatic figure.** See ★*accompaniment*, ★*achromatic*.—**Hering's and Wundt's figures**, in *psychol.*, figures embodying a variable optical illusion of direction. The horizontal lines of the figures are really parallel, but appear curved. The figures were published by E. Hering in 1861 and by W. Wundt in 1898.—**Láska's figure**, a simple geometrical diagram which consists of two or more straight lines of equal length, *a* and *b*, making different angles with the horizontal base-line *H*. It serves to illustrate certain illusions of extent and perspective.—**Lichtenberg's figures**, patterns upon a powder-strewn insulating surface which are produced by electrostatic action, as when the spark or brush from a positively charged conductor is received upon an ebonite surface covered with powdered sulphur or red lead: so called from G. C. Lichtenberg, who in 1778 described such figures and the method of obtaining them. **Müller-Lyer figure**, in *psychol.*, a figure embodying a variable optical illusion of extent. Two vertical or horizontal lines of the same length are supplied with oblique end-pieces, converging in the one case and diverging in the other. The line with the diverging end-pieces appears the longer. This illusion, also termed the arrow-head and feather illusion, was published by F. Müller-Lyer in 1889.—**Münsterberg's figure**, in *psychol.*, a figure embodying a variable optical illusion of direction. Two vertical rows of black and white chess-board squares are laid edge to edge so that there is some overlapping of black by white and conversely. The line of junction appears not vertical, but oblique. The illusion was described by H. Münsterberg in 1897.—**Plane figure**, a figure all the points of which are in the same plane.—**Poggendorff's figure**, in *psychol.*, a figure which embodies a variable optical illusion of direction. Two vertical parallel lines are crossed obliquely (except over the interspace, which is left blank) by a third line: the two parts of this third line, on either side of the verticals, appear not to lie in the same straight line. Attention was called to the illusion by J. C. Poggendorff in 1860.—**Primal figure**, in *projective geom.*, a range, a flat pencil, or an axial pencil.—**Rousseau's figure**, a diagram for the approximate graphical determination of the mean spherical intensity of a source of light where the distribution of the light about a vertical axis is symmetrical. It is a curve with Cartesian coordinates in which the abscissæ are the intensities of light measured at varying angles with the horizontal plane through the source, and the ordinates are the sines of the corresponding angles. The curve P'A B C P is the Rousseau's figure for the source of light at P, for which the polar curve P A B C P indicates the vertical distribution of light intensities. The mean spherical intensity is measured by one half the area included by the Rousseau figure. **Schroeder's figure, Schroeder's stair figure**, in *psychol.*, a figure which embodies an optical illusion of reversible perspective. The figure may be seen, by change of fixation, either as a flight of stairs, or as the under side of such a flight (or a piece of overhanging masonry). The illusion was published by H. Schroeder in 1858. **Vertex of a solid figure**, a point of a figure where three or more of its faces intersect. **Zollner's figure**, in *psychol.*, a figure which embodies a variable optical illusion of direction. The parallel verticals of the figure appear to converge and diverge under the influence of the oblique cross-pieces. The illusion was described by F. Zollner in 1860. Also *Zollner's lines*.

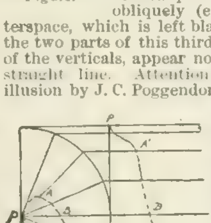

Hering's and Wundt's Figures.

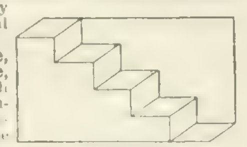

Láska's Figure.

Müller-Lyer Figure.

Münsterberg's Figure.

Poggendorff's Figure.


Rousseau's Figure.


Schroeder's Stair Figure.

Zollner's Figure.

figure-painting (fig'ūr-pān"ting), *n.* Painting which is concerned especially with the dramatic or decorative use of the human figure.

figure-skating (fig'ūr-skā"ting), *n.* Fancy skating in which figures of various kinds are described on the ice by the skater.

figurette (fig-ū-ret'), *n.* A small figure. See *figurine*.

figure-weaving (fig'ūr-wē"ving), *n.* The weaving of fancy designs.

figuring, *n.* 3. The adding of figures, as to a drawing. In architectural and engineering work the drawings, however accurately made to scale, are covered with the dimensions in Arabic figures. Figuring includes also the dotted lines and the little arrow-heads which mark the dimensions figured.

fig-wasp (fig'wosp), *n.* The agaonid insect, *Blastophaga grossorum*. See ★*fig-insect*.

> The introduction into California, by the United States Department of Agriculture, of the blastophaga or *fig wasp* has fairly passed the experimental stages, as is well proved by the largely increased production of Smyrna figs at Fresno, in that State, where a colony of this useful insect has been established.
> *Yearbook U. S. Dept. Agr.*, 1901, p. 673.

fig-worm (fig'wėrm), *n.* The larva of the ★fig-moth (which see).

F. I. Inst. An abbreviation of *Fellow of the Imperial Institute*.

F. I. J. An abbreviation of *Fellow of the Institute of Journalists*.

fil3, *v.* and *n.* A simplified spelling of *fill*.

filament, *n.* 6. In *geometrical topics*, a movable object which at any one instant, or indivisible determination of time, is at every part of a line. During a lapse of time a filament is restricted to being in some surface, which it is said to generate.—7. A long thread-like bacterial growth.—**Linin filament**, in *cytol.*, a delicate thread or network of linin spread through the cell-nucleus.—**Seminal filament**, a spermatozoon.

filander3, *n.* and *v.* A simplified spelling of *philander*.

filanthropic, filanthropist, etc. Simplified spellings of *philanthropic*, etc.

Filar hypothesis, the doctrine or opinion that the separate threads seen in some protoplasm are the essential structures of all protoplasm.

Filaree (*Erodium cicutarium*).
One fourth natural size.

filaree (fil-a-

re'), *n.* [A reduction of *alfilerilla.*] In California, either of two species of stork's-bill, *Erodium cicutarium* and *E. moschatum*: alfilerilla. **Musky filaree,** *Erodium moschatum*, the coarser of the species named above. Its foliage has a musky odor, especially when wilted. Also called *musk-clover* and sometimes *green-stemmed filaree.*—**Red-stemmed filaree.** Same as *alfilerilla.*

Filarial periodicity. See ★*periodicity.*

filariasis (fi-lā-ri-ā'sis), *n.* [NL., < *Filaria* + *-asis.*] Presence of *Filaria* in the blood-vessels and lymph-vessels: the underlying cause of elephantiasis.

In certain tropical countries a disease known as *filariasis*, which somewhat resembles certain forms of leprosy, is transferred among human beings by certain mosquitoes. *L. O. Howard*, in Yearbook U. S. Dept. Agr., 1901, p. 190.

filariosis (fi-lā-ri-ō'sis), *n.* [NL., < *Filaria* + *-osis.*] Same as ★*filariasis.*

filarious (fi-lā'ri-us), *a.* Same as *filarial.*

filasse (fi-lās'), *n.* [F. *filasse*, bast, harl, tow, < F. *fil*, < L. *filum*, thread.] Vegetable fiber prepared for the processes of manufacture.

filator (fi-lā'tor), *n.* [NL. *filator*, < *filare*, spin a thread: see *file*[3], *v.*] The spinning apparatus of a silkworm, situated in the tubular spinneret.

filbert, *n.*—**Black-knot of the filbert.** See ★*black-knot.*—**West Indian filbert,** the seeds of the simtapod or match-box bean, *Lens phaseoloides.* See ★*gogo.*

filbert-gall (fil'bèrt-gâl), *n.* A gall which resembles a filbert. **Grape-vine filbert-gall,** one of a bunch of woolly greenish galls, resembling a bunch of filberts, found on the stem of the grape and inhabited by a cecidomyiid larva. The gall was named *Vitis coryloides* by Walsh and Riley, and the insect which makes it is probably a *Diplosis.*

filbert-mildew (fil'bèrt-mil''dū), *n.* The fungous disease, due to *Phyllactinia suffulta*, which attacks the leaves of filberts.

filch, *n.* **3.** One who filches or is given to filching; a filcher.

fild[2], *pp.* A simplified spelling of *filled.*

file[1], *n.*—**Lateral file,** a small steel file set in a metallic frame and adjustable laterally or otherwise, used by dentists in spacing teeth.—**Molar file,** a small file formerly used by dentists in filing molar teeth: now superseded by the carborundum wheel.—**Separating file,** a file formerly used by dentists for separating teeth: now superseded by thin carborundum disks.

file[3], *n.* **11.** An individual soldier.

But the poor *file* who has to carry it, as well as his gun and various other accoutrements; how does it appeal to him? *Med. Record*, Feb. 7, 1903, p. 227.

Blank file, in a two-rank formation, a file consisting only of a soldier in the front rank.—**Open file,** in *chess*, a file on which there are neither pieces nor pawns. A player may obtain possession or command of such an open file ('take the open file') by playing his queen or rook on any of its squares.—**Right by file,** a movement, in drill, in which a column in single file is formed from a column of twos or squads.

File-cutters' disease. See ★*disease.*

filer[3] (fī'lèr), *n.* [*file*[2] + *-er*[1].] One who defiles something.

[The Chinese] eate their meate with two sticks of Ivory, Ebony, or the like: not touching their meat with their hands, and therefore no great *filers* of linnen.
P. Heylyn, ΜΙΚΡΟΚΟΣΜΟΣ, ed. 1633, p. 680.

file-stripper (fīl'strip''èr), *n.* One who draw-files or finishes the blanks for files, either by hand or in a machine, preparatory to cutting the teeth.

Filet lace. See ★*lace.*

filharmonic, *a.* A simplified spelling of *philharmonic.*

filiation, *n.* **5.** An individual or group of individuals derived from one source or parent.

filibranch (fil'i-brangk), *a.* and *n.* [NL. *filibranchius*, < L. *filum*, thread, + *branchiæ*, gills.] **I.** *a.* Having long gills formed of tubular filaments, as certain bivalve mollusks; filibranchiate.

II. *n.* A bivalve mollusk of the order *Filibranchiata.*

Filibranchia (fil-i-brang'ki-ä), *n. pl.* [NL.] Same as ★*Filibranchiata.*

Filibranchiata (fil-i-brang-ki-ā'tä), *n. pl.* [NL.] An order of bivalve mollusks. They have the gills in the form of long filaments that hang down into the mantle cavity, are bent back upon themselves in the form of a V, and may or may not be connected by interfilamentary ciliated junctions. The order includes the families *Anomiidæ*, *Arcadæ*, *Trigoniidæ*, and *Mytilidæ.*

filibranchiate (fil-i-brang'ki-āt), *a.* [NL. *filibranchiatus*, < L. *filum*, a thread, + *branchiæ*, gills: see *branchiate.*] Having, as some pelecypod mollusks, the plates of the gills narrow, strap-like, and much elongated. *Phil. Trans. Roy. Soc.* (London), ser. B, 1903, p. 178.

filicauline (fil-i-kâ'lin), *a.* [L. *filum*, thread, + *caulis*, stem, + *-ine*[1].] Having a thread-like stem.

filicic (fi-lis'ik), *a.* [L. *filix* (*filic-*), fern, + *-ic.*] Derived from or pertaining to ferns.—**Filicic acid,** a crystalline compound, $C_{14}H_{16}O_5$, contained in the rhizome of the common male fern, *Dryopteris Filix-mas.* To it the extract chiefly owes its therapeutic value as an anthelmintic.

filicide[1] (fil'i-sīd), *n.* [L. *filius*, son, or *filia*, daughter, + *-cida*, < *cædere*, kill.] One who kills his or her son or daughter.

filicide[2] (fil'i-sīd), *n.* [L. *filius*, son, or *filia*, daughter, + *-cidium*, < *cædere*, kill.] The killing of one's son or one's daughter.

filicin (fil'i-sin), *n.* [L. *filix* (*filic-*), fern, + *-in*[2].] One of the active vermifuge principles found in the rhizome of the male fern.

filicinean (fil-i-sin'ē-an), *a.* Belonging or related to the *Filicineæ* or *Filicales*; fern-like.

filicineous (fil-i-sin'ē-us), *a.* Same as ★*filicinean.*

filicologist (fil-i-kol'ō-jist), *n.* [*filicolog-y* + *-ist.*] One versed in filicology; one engaged in the study of ferns.

Filicornia (fil-i-kôr'ni-ä), *n. pl.* [NL., < L. *filum*, thread, + *cornu*, horn.] A superfamily of beetles corresponding to the *Adephaga* or *Caraboidea*, having the antennæ filiform and all the tarsi 5-jointed.

filiform, *a.* **II.** *n.* In *surg.*, a very slender hair-like bougie. *Buck*, Med. Handbook, II. 745.

filigree (fil'i-grē), *v. t.* [*filigree*, *n.*] To ornament with filigree-work.

filing-block (fī'ling-blok), *n.* Same as *filing-board.*

filing-gap (fī'ling-gap), *n.* In *elect.*, the space between the terminals of a coherer in which the filings or other conducting particles upon which its action depends are placed.

filing-machine (fī'ling-ma-shēn''), *n.* A power-machine for filing metals, resembling in general plan a scroll-saw in which the vertical reciprocating saw is replaced by a file. The work to be filed is placed upon a table and is fed to the file by hand. Files of any shape or size can be used in the machine, and by tilting the table the work can be fed to the file at any angle. Filing-machines for sharpening cotton-gin saws employ horizontal reciprocating files with an automatic feed-motion which presents one tooth of the saw at a time to the file and controls the number of strokes of the file upon each saw-tooth.

filio-pietistic (fil''i-ō-pī-e-tis'tik), *a.* [Irreg. adj. from *filial piety.*] Relating or pertaining to filial piety. [Rare.]

He has set . . . in its true light the theocracy which the Puritans founded and maintained in Massachusetts. As long as that theocracy lasted men dared not speak the truth about it; since it decayed, orators and historians, indulging in what Mr. Adams calls "*filio-pietistic* cant," have praised the Puritans for those qualities which they have condemned in other bigots.
Harvard Graduates' Magazine, March, 1894, p. 439.

Filipendula (fil-i-pen'dū-lä), *n.* [NL. (Adanson, 1763, adopted from Tournefort, 1700), < L. *filum*, thread, + *pendulus*, hanging. The allusion is to the tubers, connected by the root-stocks as if upon threads.] A genus of plants of the family *Rosaceæ.* They are perennial herbs, which have flowers similar to those of *Spiræa*, but with about 10 pistils ripening into dry, one-seeded, indehiscent fruits. There are about 9 species, natives of the north temperate zone. Some are familiar garden plants, as *Filipendula Filipendula* (*Spiræa Filipendula* of Linnæus), the meadow-sweet, and *F. Ulmaria*, the queen-of-the-meadows, both white-flowered, and *F. rubra* (*Ulmaria rubra* of Hill), the queen-of-the-prairie, with pink flowers. See *queen-of-the-prairie* and *queen-of-the-meadows.*

Filipina (fil-i-pē'nä), *n.*; pl. *Filipinas* (-äz). [Sp., fem. of *Filipino*, Filipino.] A native woman of the Philippine Islands.

Filipino (fil-i-pē'nō), *n.* [Sp., < NL. *Philippinus*, adj. (NL. *Insulæ Philippinæ*, Sp. *Islas Filipinas*, Philippine Islands), < *Philippus*, Sp. *Filipo*, *Felipe*, Philip.] A native of the Philippine Islands; in a restricted sense, a native of more or less pure Spanish descent. Also incorrectly *Philippino.*

filippic, *n.* A simplified spelling of *philippic.*

Filippi's gland. See ★*gland.*

filippo (fi-lip'ō), *n.* [It.] The silver testone of Milan issued under Philip III. of Spain, and continued by his successors.

filipuncture (fil-i-pungk'tūr), *n.* [L. *filum*, wire, + *punctura*, puncture.] Introduction of fine wire into an aneurism with the design of inducing coagulation of blood within the sac.

filistatid (fi-lis'ta-tid), *n.* A spider of the family *Filistatidæ.*

filitannic (fil-i-tan'ik), *a.* [L. *fili*(*x*), fern, + *tannic.*] Noting an acid, a glucoside tannin obtained from the rhizome of the male fern.

filite (fī'lit), *n.* [L. *filum*, thread, + *-ite*[2].] An explosive, a variety of smokeless powder, largely produced at the Italian government powder-works, the same in composition as ballistite, but formed into slender cords instead of into cubical grains. See *ballistite.*

Filix (fil'iks), *n.* [NL. (Adanson, 1763), < L. *filix*, a fern.] A genus of polypodiaceous ferns, the equivalent of *Cystopteris* (Bernhardi, 1806). The type of the genus is *F. bulbifera*, the common bladder-fern of the United States and Canada. See *Cystopteris* and *bladder-fern.*—**Filix-mas,** the male fern, *Dryopteris Filix-mas.*

fill[1], *v. t.* **10.** In *poker*, to draw cards which improve the hand: usually restricted to filling four-card flushes or straights. *Amer. Hoyle*, Poker, p. 162.—**11.** To execute: as, to *fill* an order for goods.—**12.** To make up: as, to *fill* a prescription. **Filled soap.** See ★*soap.*

fill[1], *n.* **3.** In *engin.*: (*a*) An embankment of earth or rock made as a road-bed: the opposite of *cut.* (*b*) The vertical height of the top of an embankment above the natural surface at any point.—**4.** Deposition alternating with or in contrast to scouring out. The contrasting terms are *scour* and *fill*, *cut* and *fill.* *Rep. Brit. Ass'n for Advancement of Sci.*, 1900, p. 733.

filler[1], *n.* **5.** A machine for filling bottles, cans, or bags with liquids or dry materials. —**6.** In *hort.*, a tree that is planted in an orchard temporarily, to be removed when the trees of the regular planting and of more enduring character are well grown and occupy the land. [*Colloq.*]—**7.** In the manufacture of plastic materials, a solid substance, such as wood fiber or mineral powders, used to give greater consistence to a viscid constituent, such as collodion or a fused resin.—**8.** In *engin.*: (*a*) A longitudinal timber or other material placed between two parallel members, as a timber placed between two steel I-beams to stiffen them and to enable them to act as one beam. (*b*) A hollow cylindrical pipe or spool through which a bolt is passed to fasten together two parallel beams or struts. The bolt in conjunction with the filler prevents the two beams or struts from spreading apart and from moving too close together.

The floor framing consists of six sills, the four centre ones being six-inch "I" beams with wood *fillers* extending the entire length of car.
Elect. Rev., Sept. 11, 1904, p. 450.

filler[3] (fi-lār'), *n.* [Hung. *fillér.*] A current subsidary coin of Hungary, the hundredth part of a krona, equivalent to two tenths of a United States cent.

filler-vase (fil'èr-vās), *n.* In Mycenæan pottery, a narrow vase having a funnel-shaped bottom with a hole: used apparently to transfer liquids to narrow-necked receptacles.

Filler-vase.
(From "Annual of the British School at Athens.")

fillet, *n.*, **5.** (*k*) The rounded corner of a groove in a roll, or of a pattern for molding, etc.—**11.** A loop-shaped instrument or bandage by means of which, when passed over a projecting part of the fetus, traction is made in cases of tedious or obstructed labor.—**Fillet decussation,** a crossing of nerve-fibers over the median line in the medulla oblongata. These fibers lie above or dorsad to the decussation of the pyramids and form a bundle of longitudinally coursing fibers known as the fillet (lemniscus). See *fillet*, 9.—**Fillet-flock.** See the extract.

In its course towards the cerebrum, the fillet is said to receive accessions of fibers from the nuclei of the sensory cranial nerves, from little clumps of nerve cells scattered in its course—the '*fillet flock*' of Roller.
Ferrier and Turner, in Philos. Trans. Roy. Soc. (London), [1894, ser. B, p. 760.

Lateral fillet-tract, a tract which leaves the lateral fillet at the level of the motor nucleus of the fifth nerve, lying between the nucleus and the superior olivary body on the mesial side of the motor root. The tract may be traced to the distal end of the inferior olive, and gradually diminishing in size may be followed distinctly as far as the sixth thoracic segment. *Ferrier and Turner*, in Philos. Trans. Roy. Soc. (London), 1894, ser. B, p. 742.—**Scattered fillet fibers.** See ★*fiber*[1].

fillet, *v. t.* **2.** In *cooking*: (*a*) To form into or dress as a fillet, as a piece of beef. (*b*) To cut fillets from, as from a chicken or a fish.

filleting, *n.* **4.** Mortar or plaster used to fill up a close joint where one surface meets another. Thus, at the beginning of a slated roof at the eaves mortar is used to close the cracks between the wall and the first rows of slate. Filleting in this sense is a poor substitute for flashing.

fillet-strap (fil'et-strap), *n.* In a harness, a strap which passes over a horse's rump and

extends down to the shaft, to which it is connected by a loop.

filling, *n.* 7. In *wooden ship-building*, a piece of timber placed between the frames to fill up the spaces and give greater strength. When placed in the bottom, between the floor-timbers, such pieces are called *filling-timbers*.

filling-case (fil′ing-kās), *n.* In *cotton-carding*, a cylindrical can in which the sliver from a doubler is collected.

filling-timber (fil′ing-tim″bėr), *n.* In *ship-building*, see ★*filling*, 7.

film, *n.* **Surface film**, the outer or boundary layer at the free surface of a body of liquid. The surface film behaves in many respects like a stretched membrane, and by its action upon the inclosed liquid produces the so-called capillary effects.

filmogen (fil′mō-jen), *n.* [Irreg. < *film* + *-o-* + *-gen*, -producing.] A solution of soluble nitrate of cellulose in acetone with addition of a small amount of castor-oil. It resembles flexible collodion, liquor adhæsivus.

film-tension (film′ten″shon), *n.* The adhesive power of a thin film of any material; the force required to separate two plates having between them a thin film of a given material.

filobacterium (fī″lō-bak-tē′ri-um), *n.*; pl. *filobacteria* (-ä). [NL., < L. *filum*, thread, + NL. *bacterium*, bacterium.] A bacterium having a filamentous or thread-like form.

filo-floss (fil-ō-flos′), *n.* Same as *filoselle*.

filologer, filological, etc. Simplified spellings of *philologer*, etc.

filomel, *n.* A simplified spelling of *philomel*.

filopena, *n.* A simplified spelling of *philopena*.

filosity (fi-los′i-ti), *n.* [*filose* + *-ity*.] The character of producing many threads or shoots: applied to the habit of the potato of producing, under certain conditions, many thin, slender shoots.

filosofer, filosofic, etc. Simplified spellings of *philosopher*, etc.

fils (fēs), *n.* [F., < OF. *fils*, *fis*, *fiz*, < L. *filius*, son: see *filial*.] Son: used in French as *junior* is used in English, *père* (father) being used for *senior*: as, 'Dumas *fils*,' 'Dumas the younger' or 'junior.'

filter[1], *n.*—**Berkefeld filter**, a filter for sterilizing liquids. It consists of a hollow cylinder made from infusorial earth, the silicious skeletons of *Diatomaceæ*, inserted in a metallic case. Water and other liquids pass rapidly through the filtering medium while germs, animalculæ, or suspended matters remain on the surface. The cylinder can be easily removed for cleansing.—**Bichromate ray filter.** Same as ★*bichromate cell*.—**Dumont filter**, a vessel containing coarsely granular animal charcoal or bone-black through which, in sugar-refining, colored syrup is slowly percolated and thereby becomes decolorized.—**Gooch filter** or **crucible**, in *chem. analysis*, a platinum crucible the bottom of which is perforated with fine holes and covered with a layer of asbestos in short fibers. The liquid to be filtered is poured into the crucible, and the solid matter left upon the felted asbestos may be washed free of all soluble substances, dried at any required temperature, and weighed in the same vessel, the weight of the crucible and asbestos in the dry state having been determined in advance.—**Intermittent filter**, an arrangement, usually consisting of a bed of sand, employed for the purification of sewage, the liquid sewage being allowed to percolate for some hours and then to drain off, so that the interstices between the sand grains may become filled with air before the sewage is again turned on: in this way aërobic microbia multiply and oxidation of the decomposing organic matter aids largely in rendering it harmless. Sometimes called an *aërated filter*.—**Kitasato filter**, a filter resembling in construction the Pasteur filter, but of small size, used in laboratory work for the filtration of small quantities of fluid.—**Leaf filter**, a contrivance used in sugar-refining, consisting of a series of rectangular bags of cotton cloth, each stretched over a wooden frame, the frames being placed parallel to each other, in the same trough. The syrup is run into this trough and filters into the bags, running off from each through a hole in the bottom of the frame. The suspended solid impurities are thus left on the outside of the bags, which are the more easily cleaned from time to time by washing.—**Lovering's filter.** Same as *leaf* ★*filter*.—**Pasteur-Chamberland filter**, a filter designed to render water germ-free. It consists of an unglazed porcelain tube or candle which serves as the filtering material, incased in a suitable jacket, the whole being connected with the water-supply. The candle may also be inserted in foul water and the filtering process be effected by a suction-pump. The candle is easily removed from the jacket for cleansing by friction with a brush and is sterilized by heating in a bake-oven.—**Peyron's filter**, a cylindrical vessel, with an air-tight closed top, used by sugar-refiners for the continuous filtration of syrup through animal charcoal in order to remove color. Hydrostatic pressure may be employed to increase the rapidity of flow of the liquid.—**Taylor's filter**, in *sugar-refining*, a long bag of closely woven cotton cloth through which syrup is filtered in order to remove suspended impurities. Also known as a *bag-filter*.

filtering-plate (fil′tėr-ing-plāt), *n.* A perforated glass or porcelain plate with beveled edge, inserted in a funnel or in a bottomless crucible for filtering purposes.

filtering-tube (fil′tėr-ing-tūb), *n.* A laboratory device of glass for filtering through glass wool or asbestos.

filter-plate (fil′tėr-plāt), *n.* A plate or screen made of two perforated metal plates with the filtering material between them: used for filtering a liquid.

filter-press (fil′tėr-pres), *v. t.* To filter by means of a filter-press. This mode of extracting a liquid from mixture with a solid is largely applied in a number of chemical industries, notably in sugar-making. *S. P. Sadtler*, Handbook of Indust. Chem., p. 133.

filtration, *n.*—**Electrochemical filtration**, in *phys. chem.*, a term formerly used to denote electric osmose, or cataphoresis.

filum, *n.* 3. A hair-like process on the radius of the down-feathers in some birds.

fimicolous (fi-mik′ō-lus), *a.* [L. *fimus*, dung, + *colere*, inhabit, + *-ous*.] Living in dung.

fin[1], *n.*, 3. (*g*) The thin sheet of metal squeezed out between the collars of the rolls in a roll-train.

fin. An abbreviation of the Latin *ad finem*, at or to the end.

Fin. An abbreviation (*a*) of *Finland*; (*b*) of *Finnish*.

finca (fēn′kä), *n.* [Sp., < *fincar*, also *hincar*, OSp. *ficar*, fix, attach: see *fitch*[3], *fichu*.] Fixed property; real estate.

finch[1], *n.*—**Cutthroat finch**, a bird-fanciers' name for one of the small African weaver-birds, *Amadina fasciata*: given on account of the red mark around the throat of the male.

find, *v. i.* 2. To discover scent or game: said of dogs in the field.

fin de siècle (faṅ′dė syek′l). [F.] The end of the century: used attributively of anything that exhibits certain characteristics supposed to mark the closing years of the nineteenth century, regarded as a period of emancipation from the traditional social and moral order.

> All these *fin-de-siècle* cases have . . . a common feature, . . . a contempt for traditional views of custom or morality. Such is the notion underlying the word. . . . It means a practical emancipation from traditional discipline which theoretically is still in force, . . . the end of an established order which for thousands of years has satisfied logic, fettered depravity, and in every art matured something of beauty.
> *Max Nordau* (trans.), Degeneracy, p. 5.

finding, *n.*—**Special finding**, in *law*, same as *special verdict*.

finding-circles (fīn′ding-sėr″klz), *n. pl.* Circles attached to the mounting of an equatorial, and so placed as to be readily seen from the floor, which show the declination and hour-angle to which the telescope is directed; also, circles on the tube of a transit instrument which show by the aid of an attached level, the altitude of the object to be observed.

fine[1], *n.*—**Fine for alienation**, in *feudal law*, money paid by a vassal to his superior for the privilege of transferring his feudatory.—**Fine for endowment**, in *old Eng. law*, a fine required to be paid to the lord by the widow of a vassal as a condition of receiving dower in her husband's lands.—**Fresh fine**, in *old Eng. law*, a fine levied within a year. See *to levy a fine*, under *levy*.—**Joint fine**, in *old Eng. law*, a fine or amercement that might be imposed upon an entire community.

fine[2], *a.*—**Fine blue.** See ★*blue*.

fine[2], *v. t.* 4. In *ship-building*, to reduce the lateral dimensions of a vessel below the water-line.

fine[2], *adv.*—**To sail fine** (*naut.*), to sail close to the wind; sail so as to keep the luff or forward leach of the sail trembling.

fine-hair (fīn′hãr), *v. t.* In *leather-manuf.*, to remove (from a skin) the fine hair or down which is sometimes left after the coarser hair has been removed. *C. T. Davis*, Leather, p. 381.

fineness, *n.*—**Coefficient of fineness.** See ★*coefficient*.

fines (fīnz), *n. pl.* [Pl. of *fine*[2], *a.*, 13, used as noun.] In *metal.*, ore which is pulverized or in too small particles to be smelted in the ordinary way.

finesse, *n.* 4. In the *fine arts*, subtlety and delicacy in color or form.

> Subtlety of the modelling, as seen particularly in the face of the Christ and the *finesse* of the drawing of the hands.
> *R. Fry*, in Burlington Mag., III. 93.

finessi (fi-nes′ē), *n.* [Swahili *fenessi*, *mfenessi*, *mfinessi*, jackfruit.] In West Africa and Zanzibar, the name for *Artocarpus integrifolia*. See *breadfruit* and *jack-tree*.

finetop, *n.*—**Alkali finetop.** Same as ★*alkali-grass*, 2.

finger, *n.* 5. In a mechanical piano-player, a lever that strikes or depresses a key. See ★*piano-player*.—6. A projecting pin or rod, straight, or slightly curved; specifically, a projecting curved wire which carries an electric current into the clearance-volume of an internal-combustion motor, so that at the proper time a spark may pass between its tip and another terminal and fire the charge of explosive mixture. See *internal-combustion engine*, under *engine*.—7. In *flax manuf.*, a small lot of fiber that has been treated at one operation in the scutching process.—**Dead fingers.** See ★*dead*.—**Hammer finger**, a condition of permanent flexion of the middle joint of a finger, analogous to the deformity called hammer-toe.—**Hippocratic fingers**, a condition in which the finger-tips are clubbed with curved nails, seen in various chronic affections, especially of the heart and lungs.—**Morse finger.** Same as *telegraphers' cramp*.—**Peeled fingers**, the rhizomes of the male fern from which the leaf-bases and chaff have been removed.—**To give one the finger**, to give scanty recognition or encouragement; to act coldly or disappointingly toward one who had been led to expect assistance or friendship.

finger-berry (fing′gėr-ber″i), *n.* The American or high-bush blackberry, *Rubus nigrobaccus*.

finger-fish (fing′gėr-fish), *n.* A starfish.

finger-gage (fing′gėr-gāj), *n.* An automatic device in a sheet-metal press, for holding the sheet-metal in position while it is being cut and allowing it to advance again a fixed distance and serving also as a gage in guiding the work to the press.

finger-grass, *n.* 2. *Syntherisma serotina*, a native American grass with shorter, broader, and more hairy leaves than the common finger-grass: found from Delaware to Florida and westward to Mississippi. Other species, as, *S. filiformis* and *S. villosa*, are also called *finger-grass*.—3. Any species of the genus *Chloris*, which consists of handsome and sometimes useful grasses with radiating spikes like those of the crab-grass and crowfoot-grass, rendered specially attractive by the long awns of the flowers. Several are in ornamental cultivation, as the Australian *C. truncata*, called *windmill-grass*, *bearded crowfoot*, and *star-grass*; *C. verticillata*, of Kansas, Texas, etc., also called *windmill-grass*; and *C. elegans* of the southwestern United States, called *feather crowfoot*. In the Bahamas the name is applied to *C. Swartziana*.

Fingergrass [illegible]
a, plant, three-fourths natural size, the panicle unexpanded: when expanded the branches are spread at right angles to the axis; *b*, spikelet, broken open to show the parts (enlarged). (U. S. D. A.)

finger-lake (fing′gėr-lāk″), *n.* In *geog.*, one of a group of lakes which diverge somewhat like the fingers of an open hand: such a group occurs in central New York.

finger-leaf (fing′gėr-lēf), *n.* The fivefinger, *Potentilla Canadensis*.

finger-machine (fing′gėr-ma-shēn″), *n.* A piece of gymnasium apparatus intended to exercise the muscles of the hand and forearm. It consists of small parallel bars which are held separate by weights and far enough apart to be grasped with the fingers extended, and then drawn together by an effort of the muscles of the hand and forearm.

finger-parted (fing′gėr-pär″ted), *a.* In *bot.*, digitately parted.

finger-print (fing′gėr-print), *n.* An impression made, as with ink or some other pigment, with the tip of a finger, so that its markings are recorded. These markings are individual in character and are permanent throughout life. They are used for purposes of identification according to a system devised by Francis Galton.

> In June 1897 a resolution of the governor-general in council directed the adoption of the *finger-print* system throughout India, and its gradual substitution for the previously existing anthropometric system has since been carried out. Its use is not confined to the police department, but extends to all branches of public business.
> *Encyc. Brit.*, XXV. 469.

finger-stone (fing′gėr-stōn″), *n.* A popular local name for belemnite.

finger-tip, *n.* 2. In *archery*, a tip of leather or other material worn upon a drawing-finger to protect it from the friction of the bowstring. Tips are of two kinds: *screw-tips*, adjustable to any degree of tightness by a screw-bolt and nut; and *knuckle tip*, shaped so as to stick to the fingers when the arrow is loosed. See *drawing-glove*.—3. *pl.* On the coast of southern California, a plant of the stonecrop family, *Stylophyllum edule*, with tufted cylindrical leaves the size of a

lead-pencil. The Indians used the leaves as a salad. *Parsons and Buck*, Wild Flowers of California, p. 142.

finish, *n.* 5. In *building*, all those parts of the work which are not essential to the structure but are intended to give elegance of appearance or neatness within, or such smoothness of surface as makes it easily cleaned. Thus the interior finish includes the woodwork of door-trims, dados, and the like, the marble-work when put to similar uses, and mantelpieces, etc. **Brush finish**, a finish for the surface of brass which is obtained by buffing it to a dull or 'old' brass finish. a finish for the surface of brass that makes the metal appear dull and old. **Cabinet finish.** See ★*cabinet.* **Dead finish**, anything, such as an impenetrable thicket, an impassable place, or the like, which brings a traveler to a dead stop; also, the stop itself. [Australia.] — **Grease finish**, a dull mat finish on either gold or silver, generally produced by rubbing the metal with finely ground pumice mixed in oil. **Stone finish**, a dull mat finish slightly coarser than the grease finish, produced by rubbing down silver, gold, or other metal with flat smooth surfaces of pumice-stone.

finishing-rolls (fin'ish-ing-rōlz), *n. pl.* The rolls or a train of rolls in which a bar of metal is finished.

finishing-school (fin'ish-ing-sköl), *n.* A school where the education of young ladies (chiefly) is 'finished.'

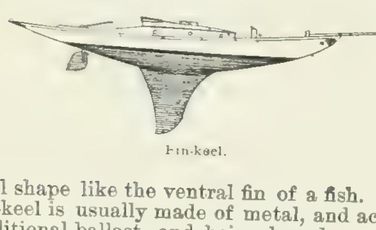
finishing-tool, *n.* 2. In *glass-manuf.*, an instrument, resembling a pair of forceps, used to shape the necks of bottles, lamp-chimneys, etc. Also called *borcellas, ponteglo*, and *procellas.* See *procellas.*

Finite in its kind, having an end or boundary. A thing that can be limited by another of the same nature is said to be *finite in its kind.* For example, body is said to be finite because we always conceive a larger. So thought is limited by another thought. — **Finite number, point.** See ★*number*, ★*point*1.

finitesimal, *a.* [*finite* + *-esimal*, as in *infinitesimal.*] In *math.*, distinguished by a finite ordinal.

finitude, *n.* — **The axiom of finitude**, in the terminology of Russell, the false assumption that a kind of quantity such that, given any one of the kind, there is a greater of the same kind, can have no finite limit. The class of fractions whose denominators exceed their numerators is an obvious instance of the falsity of the principle. Russell appears to call it an axiom derisively. — **Relative finitude**, the being in a finite ratio to another magnitude.

fin-keel (fin'kēl), *n.* A projection downward from the bottom of a sail-boat or yacht, in general shape like the ventral fin of a fish. The fin-keel is usually made of metal, and acts as additional ballast, and being low down gives increased stability.



Fin-keel.

Finn. An abbreviation of *Finnish.*

Finno-Slav (fin-ō-släv'), *n.* A person of mixed Finnish and Slavic descent. *Keane*, Ethnol., p. 200.

Finno-Slavonic (fin″ō-sla-von'ik), *a.* Of mixed Finnish and Slavic descent; of or pertaining to the Finno-Slavs.

Finno-Tatar (fin-ọ-tä'tär), *a.* 1. Of or pertaining to the group of languages usually called Ural-Altaic, or to the people who speak them. See *Altaic.* — 2. In a somewhat more limited sense, relating to or including those peoples which comprise the western branch of the Ural-Altaic group, especially the Finns and Turks.

Finno-Turki (fin-ọ-tėr'kẹ), *n.* The group of peoples which speak Finnic and Turkish languages. Also called *Ural-Altaic.* See *Altaic.*

Finno-Turkish (fin-ọ-tėr'kish), *a.* Of or pertaining to the Finns and Turks: same as *Ural-Altaic.* See *Altaic.*

Finno-Ugrian (fin-ọ-ū'gri-ạn), *a.* Of or pertaining to that group of peoples which speak either Finnic or Ugrian languages.

Finno-Ugric (fin-ọ-ū'grik), *a.* Same as ★*Finno-Ugrian.*

Finnsko (fin'skō), *n.* [Norw. *Finnsko*, < *Finn*, Finn, + *sko*, shoe.] In Norway, a boot made of the skin of the legs of the reindeer buck steeped in a decoction of birch bark or tanned in tar-water. It is worn with the hair outside.

These *finnsko* . . . are a pre-eminently warm covering for the feet, and are very suitable for use on ski or snow-shoes. *Nansen* (trans.), First Crossing of Greenland, I. 48.

Fin. Sec. An abbreviation of *Financial Secretary.*

Finsen lamp, light treatment, ray or **light.** See ★*lamp*1, ★*light*1, ★*ray*1.

Finsen's apparatus. See ★*apparatus.*

finta (fen'tä), *n.* [Sp. Pg.] Originally, in Spain and Portugal, a land-tax or contribution to a common expense or tribute to the king, levied on every subject in time of special emergency. The Sephardim (Spanish Jews) still apply the term to their fixed contributions for the synagogue.

fiord-valley (fyôrd'val″i), *n.* A narrow, nearly parallel-walled valley occupied by an arm of the sea. *J. Geikie*, The Great Ice Age, p. 46.

fiorino (fe-ō-re'nō), *n.* [It.: see *florin.*] A Tuscan gold coin equal to about 27 United States cents: so called from the fact that it bore the fleur-de-lis, the arms of Florence.

fir, *n.* **Algerian fir**, a tall pyramidal species, *Abies Numidica*, native on high mountains in Algiers. It is hardy in France and England, and is attractive in ornamental cultivation. — **Alpine fir**, *Abies lasiocarpa*, a tall tree, 80–175 feet high and 2–5 feet in diameter, which occupies high mountain slopes and summits from Arizona to Alaska and eastward to Colorado and Idaho. It has dense foliage, small dark-purple cones, and light, soft wood of little value except for fuel. Also called *balsam-fir, subalpine fir*, and *Oregon balsam-tree.* — **Amabilis fir.** Same as *lovely* ★*fir.* — **Balsam-fir.** (*a*) *Abies balsamea.* See *Abies, fir*, and *balsam-tree.* (*b*) The she-balsam or Fraser fir, *Abies Fraseri*, of the more southern Appalachian Mountains. (*c*) Same as *alpine* ★*fir.* — **Balsam of fir.** Same as *Canada balsam.* — **Bristle-cone fir**, *Abies venusta*, a large tree, 100–150 feet high and sometimes 3 feet in diameter, distinguished by the long awns of the bracts of its cones, which give them a bristly appearance. It is a rare tree, restricted to a small area of southern California on the slopes of the Santa Lucia Mountains in Monterey county. The under surface of the leaves is silvery white, for which reason it shares with several other firs the name of *silver fir.* — **Cephalonian fir**, *Abies Cephalonica*, a fir with large cones, a native of the highlands of Cephalonia and Greece. Also called *Greek fir.* — **Crimean fir**, *Abies Nordmanniana*, a native of the Crimea and western Caucasus, which has long cones the bracts of which are tipped with a conspicuous sharp point. Also called the *Nordmann fir* and *Nordmann's silver fir.* It is common in the parks of Europe. **Double fir, double fir-balsam**, the she-balsam or Fraser fir, *Abies Fraseri.* — **Douglas fir**, the Douglas spruce. — **Douglas fir blight.** See ★*blight.* — **Fraser fir**, *Abies Fraseri*, a small tree of the more southern Appalachian region, from southwestern Virginia to western North Carolina and eastern Tennessee. It has dense foliage and small cones with a rough surface, thus differing markedly from the more northern balsam-fir which it replaces. Also called *balsam-fir* and *she-balsam.* **Grand, great California**, or **silver fir**, the Oregon white fir, *Abies grandis.* — **Greek fir.** Same as *Cephalonian* ★*fir.* — **Indian fir**, the mast-tree, *Polyalthia longifolia.* See *mast-tree*, 2, and ★*asoka*, 2. — **Lovely fir**, *Abies amabilis*, one of the largest and most beautiful of western American trees, often attaining a height of 250 feet and a diameter of 6 feet. When growing in open situations it is clothed to near the ground with branches which sweep down in graceful curves and which are covered with reddish-brown or purple branchlets. The wood is light but hard and fine-grained, and is valuable for the interior finish of buildings. The tree occupies high mountain slopes and benches in the Cascade and Coast ranges from British Columbia to Oregon; it has been introduced into parks in western Europe. Also called *amabilis fir, red fir, red silver fir*, and *white fir.* — **Lowland fir.** Same as *grand* ★*fir.* — **Magnificent fir.** Same as *Shasta* ★*fir.* — **Mexican fir.** Same as *sacred* ★*fir.* — **Noble fir**, *Abies nobilis*, a very large tree, sometimes attaining a height of 250 feet and a diameter of 8 feet, forming extensive forests in the Cascade range and Siskiyou Mountains at from 2,500 to 5,000 feet elevation. It has densely set short leaves and large oblong cones, the bracts broad with fimbriate margins and strong midribs produced into conspicuous tips. The wood is light but strong and rather fine-grained, and is used under the name of larch for the interior finish of buildings. Also called *red fir.* — **Nordmann's silver fir.** Same as *Crimean* ★*fir.* **Oregon white fir.** Same as *grand* ★*fir.* — **Parasol fir.** See *parasol-fir.* — **Pitch fir**, *Abies Pichta*, a small tree of northeastern Russia and Siberia, extending to Kamchatka. Also called *Siberian fir.* — **Plum-fir**, *Nageia Andina.* See *Podocarpus*, 2. — **Red fir.** (*a*) Same as *noble* ★*fir.* (*b*) Same as *Shasta* ★*fir.* (*c*) The Douglas spruce, *Pseudotsuga mucronata.* — **Red silver fir.** Same as *lovely* ★*fir.* — **Sacred fir**, *Abies religiosa*, a native of Mexico and Guatemala, forming forests in the highlands to 9,000 feet altitude. It is a large tree, sometimes 150 feet high, the leaves silvery white beneath, and bears oblong-oval purple cones with cuspidate bracts. It was discovered by Humboldt and introduced into Europe by Hartweg in 1838, and is much planted in the more southern countries. The specific name as well as the common name alludes to the practice in Mexico of decorating churches with the branches of this tree. Also called *Mexican fir.* **Scotch fir.** Same as *Scotch pine* (which see, under *pine*1). — **Shasta fir**, *Abies magnifica*, a large tree, sometimes attaining a height of 200 feet and a diameter of 10 feet, a native of the Cascade range and Sierra Nevada Mountains, common on Mount Shasta, reaching a maximum elevation of 10,000 feet. It has large oblong-cylindrical cones with smooth surfaces and short curving leaves. The wood is light and soft, not strong but durable, making coarse lumber. It is considerably planted in Europe and to some extent in the eastern United States as an ornamental tree. Also called *red fir.* **She-balsam fir.** See *balsam-*★*fir* (*b*). **Siberian fir.** Same as *pitch* ★*fir.* **Silver fir**, the name given to most firs which have the under surface of their leaves silvery white or glaucous: (*a*) *Abies Picea.* See *silver fir*, under *silver.* (*b*) Same as *Algerian* ★*fir.* (*c*) Same as *bristle-cone* ★*fir.* (*d*) Same as *grand* ★*fir.* (*e*) Same as *Fraser* ★*fir.* (*f*) Same as *white* ★*fir.* (*g*) Same as *Shasta* ★*fir.* (*h*) *Abies amabilis*, distinguished as *red silver fir.* (*i*) *Abies Pichta*, sometimes called *Siberian silver fir.* (*j*) The king-pine, *Abies Webbiana*, often called *Webb's silver fir.* See *king-pine*, under *pine*1. **Silver-fir leaf-disease.** See ★*disease.* **Spruce-fir**, the Norway spruce, *Picea Abies* (which see, under *spruce*3). **Subalpine fir.** Same as *alpine* ★*fir.* **Umbrella fir.** Same as *umbrella pine.* See *Sciadopitys.* **White fir.** (*a*) *Abies concolor*, a large tree of the Rocky Mountains, extending westward to California, north to Oregon, and south to Mexico, attaining its maximum height of 250 feet in the Sierras. It is the only fir of the arid regions and Great Basin. The wood is light, soft, and coarse-grained, but is somewhat used for lumber. (*b*) Same as *grand* ★*fir.* (*c*) Same as *lovely* ★*fir.*

Fraser Fir *Abies Fraseri.*
(From Sargent's "Manual of the Trees of North America.")

fir. An abbreviation of *firkin.*

fire, *n.* **Automatic fire.** Same as *spontaneous combustion* (which see, under *combustion*). **Electrical fire**, a term used by Benjamin Franklin as synonymous with *electric fluid* and frequently in the sense in which *electric charge* is used by modern writers.

There is no more *electrical fire* in a bottle after charging than before.
Franklin, New Experiments and Observations on Electricity, p. 35.

Greek fire. (*b*) A solution of phosphorus in carbon disulphid. When this is exposed to the air at ordinary temperature the solvent soon evaporates, and in a very short time the phosphorus, which is left behind in a finely divided condition, bursts into flame. It has been proposed to use this solution in war in setting fire to ships, houses, etc., but it is not very effective, since the oxid of phosphorus formed in combustion coats over the wood or other less inflammable material, protecting it from the oxygen of the air, and so from the fire. — **Red fire**, a pyrotechnic mixture of readily combustible materials, one ingredient of which is strontium nitrate or chlorate, which causes the whole to burn with a vivid red light: much used for theatrical and out-of-door exhibitions, and in signaling. *Thorpe*, Dict. Applied Chem., III. 341.

fire, *v. i.* 7. In *geol.*, to break out in flames or incandescent gases: said of volcanoes.

fire-altar (fīr'âl″tạr), *n.* An altar upon which burnt sacrifices were offered, as distinguished from one used for incense only. In some cases the fire-altar was built up of the remains of former burnt sacrifices: the most remarkable known instance of this was at Pergamon in Asia Minor.

firearm, *n.* — **Automatic firearm.** See ★*automatic.*

fire-bag (fīr'bag), *n.* A bag containing fire-making implements such as are used by Indians.

fire-bean (fīr'bēn), *n.* The scarlet runner, *Phaseolus multiflorus.*

fire-bird, *n.* 2. The vermilion flycatcher, *Pyrocephalus rubineus*, one of the South American fire-crowned flycatchers, represented in the southwestern United States by the subspecies *P. rubineus mexicanus.* The full rounded crest and under parts of the male are of a brilliant scarlet, whence the name.

fire-blende (fīr'blend), *n.* Same as *pyrostilpnite.*

fire-blight (fīr'blīt), *n.* 1. See *pear-blight*, under *blight.* — 2. A disease of flax and hops.

fire-bolt (fīr'bōlt), *n.* A bolt of fire or flame; a discharge of lightning such as sets fire to inflammable terrestrial objects; any severe flash which appears to strike downward to the earth's surface.

fire-boss (fīr'bos), *n.* A mine official who examines the mine for gas and inspects safety-lamps taken into the mine. *Jour. Franklin Inst.*, Aug., 1903, p. 106.

fire-bowl (fīr'bōl), *n.* A large bowl-shaped utensil made by Japanese and Chinese potters for holding fire. See ★*hibachi* and ★*koro*2.

fire-box, *n.* — **Belpaire fire-box**, a locomotive fire-box the flat crown-sheet of which is stayed to the parallel boiler-shell, thus avoiding the necessity for using crown-bars.

fire-brat (fīr-brat), *n.* A thysanurous insect, *Thermobia furnorum*, of the family *Lepismatidæ*; found in bake-houses, and supposed to be fond of heat.

fire-bug, *n.* 2. Same as *cabbage-bug.*

fireburn-bush (fīr'bėrn-bůsh), *n.* A West Indian shrub, *Triopteris Jamaicensis*, belonging to the family *Malpighiaceæ*: so called from the use of its leaves in the treatment of burns.

fire-cracker, *n.* — **Floral fire-cracker, vegetable fire-cracker**, the crimson satin-flower, *Brevoortia Ida-Maia.* See ★*Brevoortia*, 2.

fire-crome (fīr'krōm), *n.* A long pole with a hook at one end, used in pulling down buildings at a fire in order to save adjoining property.

fire-cure (fīr'kūr), *v. t.* To cure (tobacco) by means of open fires. After the tobacco has yellowed for a few days, hanging on scaffolds or in the barn, slow wood fires are kindled on the floor of the barn and maintained for four or five days. This method is used with 'dark export' tobacco, and imparts to it a creosotic flavor demanded by the export trade. See *export* ★*tobacco*.

Tobaccos that have been *fire-cured*, as the plug tobaccos, contain in most cases neither oxidase, peroxidase, nor catalase. *U. S. Dept. Agr.*, Rep. 65, p. 34.

fire-door, *n.* 2. A fire-proof door in a wall or partition, designed to retard or prevent the spread of fire into or through a building. It is made of iron, or of wood covered with sheet-iron, and sometimes closes automatically, moving into place when the heat of a fire melts a fusible link.

fire-drill (fīr'dril″), *n.* 1. A primitive instrument used in producing fire by friction, consisting of a pointed stick pressed into a hole in a piece of dry wood and rapidly twirled between the hands: later the twirling was done by means of a thong or bow.—2. The exercises and training given to a company of firemen, the crew of a ship, etc., to accustom them to the duties proper to each in case of fire, or the disciplinary drill given to school-children in school to insure calmness among them, and prevention of panic, in case of fire occurring in the school-buildings.

fire-drilling (fīr'dril″ing), *n.* The process of obtaining fire by means of the fire-drill.

fire-finch, *n.* 2. A name applied to various weaver birds (*Ploceidæ*) of the genus *Pyromelana*, on account of the brilliant red shown by the males in breeding plumage.

fire-fish (fīr'fish), *n.* A name of species of fishes of the genus *Pterois* found in the East Indies.

fire-flame (fīr'flām), *n.* A fish, *Cepola rubescens*, of the family *Cepolidæ*; found in European waters.

fire-grass (fīr'gràs), *n.* The parsley-piert, *Alchemilla arvensis*.

fire-lane (fīr'lān), *n.* Same as ★*fire-line*, 1.

fire-line (fīr'līn), *n.* 1. In *forestry*, a strip kept clear of inflammable material as a protection against the spread of forest fire.—2. *pl.* The 'lines' or cordon established by the police around the scene of a fire, and at a safe distance from it, thus setting up a danger-line within which no one is allowed who is not connected with fighting the flames or salving the property.

fire-on-the-mountain (fīr″on-thẹ-moun'tān), *n.* A euphorbiaceous annual plant of the warmer regions of America, *Poinsettia heterophylla*, having bright red floral bracts which in this species are toothed. Also called *Mexican fire-plant*.

fire-painting (fīr'pān″ting), *n.* The action of the fire in bringing out certain iridescent effects in metallic luster-glazes by special treatment in the kiln. See the extract.

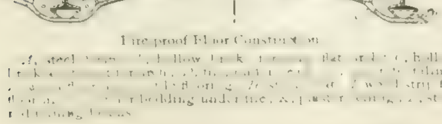
The biscuit ware is entirely covered with a glaze of a solid tint which, when exposed to the usual degree of heat in firing, would come from the kiln in a single lustreless color or valueless tone. By subjecting it to a peculiar firing, in a kiln especially designed for the purpose, a wonderful iridescence and variety of coloring is produced. So appropriately has this ware been named that if the finished product should be afterwards placed in an ordinary glost furnace, it will entirely lose its beautiful appearance, but if returned to the special kiln once more the *Fire-Painting* will again be restored in all its prismatic brilliancy. By this process Fire-Painted ware may be produced successfully in all colors and lustres.
E. A. Barber, Pottery and Porcelain of the U. S., p. 494.

fire-patrol (fīr'pā-trōl″), *n.* A salvage corps maintained by the insurance companies, and working with the fire-department of a city. Their business is to prevent looting at fires, and to protect goods or household stuff from damage by water with the tarpaulins, rubber sheets, etc., with which they are provided. They are also charged with the safe-keeping of the property until the insurance losses have been adjusted and paid. See *salvage corps*, under *salvage*. [Chiefly U. S.]

fire-pink (fīr'pink), *n.* See *pink*².

fire-plant (fīr'plant), *n.* Same as ★*fire-on-the-mountain*.

fireproofing, *n.* 2. Any building material used to retard or prevent the destruction of a building by heat or flame. Such materials used in



Fire-proof Floor Construction.

A, steel beam; *B*, hollow brick; ... flat arch; *C*, hollow brick ... [illegible] ... strip for [illegible] ... bedding under the ... [illegible]

portions of an otherwise non-fireproof building merely hinder the spread of a fire and tend to render the building slow-burning. Among them are stone, marble, terra-cotta, brick, artificial stone, corrugated iron, and sheet-metals for exterior walls, and slate, tiles, and sheet-metals for roofing. For interior walls, floors, and stairs, slate, marble, plain and ornamental brick, plasters, cements, reinforced concrete and mosaic, wire lathing, metallic window-frames, sashes, doors, shutters, and trim, and wire glass are extensively used. For floors between steel beams, reinforced concrete, hollow brick and hollow tile, plaster, and cements are used not only to build flat arches, but also to inclose and protect the beams and columns, piping and electric wiring. Woven wire, grille-work, and expanded metals are also used for inclosing stair- and elevator-wells. With these materials a steel-frame building can be made fire-resistant to a high degree and safe against serious injury from the burning of the furniture and ordinary contents.

fire-resisting (fīr'rē-zis″ting), *a.* Fitted to resist the effects of fire: as, *fire-resisting* materials. [Suggested by the International Fire-prevention Congress as a substitute for *fire-proof*.] *Engineering* (London), July 24, 1903, p. 127.

fire-risk (fīr'risk), *n.* 1. The risk of loss by fire.—2. The obligation to make good loss or damage by fire undertaken by a fire-insurance company. Hence—3. The property on which this risk is taken: as, a good *fire-risk*.

fire-stick, *n.* 3. *pl.* A pair of sticks used for lifting coals out of the fire, or for rearranging the burning fagots.

In the same plate are included a pair of wooden *fire-sticks* or tongs [of the Tulare Indians.]
Smithsonian Rep. (Nat. Mus.), 1900, p. 180.

fire-stop (fīr'stop), *n.* Same as *fire-bridge*.

fire-syringe (fīr'sir″inj), *n.* 1. An instrument used by certain peoples of the East Indies to produce fire. It consists of a hollow cylinder of wood, bone, or metal, open at one end, and having a close-fitting piston by means of which the air in the cylinder can be suddenly compressed and thus a piece of tow or similar material at the bottom of the cylinder ignited.

The most interesting objects . . . from an ethnological point of view were a set of the *fire-syringes* (generally manufactured from bone or horn) which are still used in some up-country villages for the production of fire.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 418.

2. A device consisting of a cylinder and piston attached to a tinder-box. The tinder may be ignited by the heat generated in the compression of the air in the cylinder.

firetail, *n.* 3. An Australian name of two small weaver-birds, *Ægintha temporalis*, and *Zonægynthus bellus*.

fire-test (fīr'test), *n.* 1. The determination of the temperature at which kerosene or other hydrocarbon oil used for illumination on being gradually heated first gives off enough vapor to catch fire from a momentarily applied match or electric spark. Same as *flash-test*.—2. The subjecting of pottery or porcelain to various degrees of heat in a kiln to ascertain its relative hardness or fire-resisting properties.

Indeed, *fire-tests* made by Prof. Isaac Broome, to whom I submitted specimens, show that the Tucker porcelain will stand a higher degree of heat than the Sèvres ware.
E. A. Barber, Pottery and Porcelain of the U. S., p. 127.

fire-thorn (fīr'thôrn), *n.* The pyracanth or evergreen thorn, *Cotoneaster Pyracantha*.

fire-top (fīr'top), *n.* The great willow-herb or fireweed, *Chamænerion angustifolium*.

fire-walk (fīr'wâk), *n.* A ceremony of the Fijians in which a number of barefooted men walk over hot stones which fill a large circular pit.

Among these notable accounts is one by Col. Gudgeon, British resident at Raratonga, describing the experiment by a man from Raiatea, and also a like account of the Fiji fire ceremony from Dr. T. M. Hocken, whose article is also quoted in Mr. Lang's paper on the "*Fire Walk*," in the Proceedings of the Society for Psychical Research, February, 1900. This extraordinary rite is also described by Mr. Fraser in the Golden Bough, and by others.
Sci. Amer. Sup., Feb. 14, 1903, p. 22677.

fire-walking (fīr'wâ king), *n.* Same as ★*fire-walk*. *Athenæum*, Feb. 13, 1904, p. 217.

fireweed, *n.* (*e*) The jimson-weed, *Datura Stramonium*; also, occasionally, *D. Tatula*. (*f*) The wild lettuce, *Lactuca Canadensis*. (*g*) The golden ragwort, *Senecio aureus*.

fire-well (fīr'wel), *n.* An emanation of inflammable gas from a natural vent.

In the second class of gas-springs we may group the emanations of carburetted hydrogen, which, when they take fire, are known as *Fire-wells*. *Encyc. Brit.*, X. 251.

fire-worm, *n.* 2. Same as *blackhead* ★*cranberry-worm*.

firing, *n.* 7. Same as ★*scorching*, 3: applied especially to tobacco and corn.

During very rainy seasons, and in some kinds of unfavourable soil, the plant is subject to a malady called *firing*.
Tatham, Cult. and Com. of Tobacco, p. 22.

firing-head (fīr'ing-hed), *n.* A box or head containing a percussion-cap and a firing-pin, fitted to an oil-well torpedo. After the torpedo is in place at the bottom of the well a small weight called a go-devil is dropped on the firing-head, which explodes the torpedo.

firing-pin (fīr'ing-pin), *n.* That part of the breech mechanism of a small arm or cannon which explodes the primer of the cartridge.

firm, *n.* **Long firm**, a swindler or a pack of swindlers who, pretending to be in business in some particular line or lines order goods, usually from a distance, to be sent to their pretended place of business, dispose of the goods at once for whatever they will bring, and disappear, leaving the bill unpaid, to repeat the swindle in some other place. [Colloq., Great Britain.]

fir-moss (fėr'môs), *n.* The fir club-moss, *Lycopodium Selago*. See ★*club-moss*.

fir-rape (fėr'rap), *n.* 1. The pine-sap, *Hypopitys Hypopithys*.—2. The beech-drops, *Leptamnium Virginianum*.

First aid, hand, officer, etc. See ★*aid*¹, etc.

firstness, *n.* 2. In the phenomenology of C. S. Peirce, the mode of being of that which is whatever it is regardless of anything else. This is true only of qualities of feeling, such as red or scarlet, and of such qualities of a similar nature as we suppose things to possess. Thus, although hardness consists in resistance to being scratched by a second thing, yet our ordinary common-sense conception is that a hard body possesses in itself a quality which it retains although it never comes into contact with another, and that this quality, which it possesses regardless of anything else and would possess though all the rest of the universe never existed, is the cause of the difficulty of scratching it. The mode of being of such an internal quality is *firstness*. That which has firstness can have no parts, because the being of an object which has parts consists in the being of the parts, which are none of them the whole. Any analysis of the constituents of a quality is a description of something found to be true of whatever possesses that quality. But a quality of feeling, as it is in its mode of being as a quality, has no parts.

fiscalization (fis″ka-li-zā'shon), *n.* [Sp. *fiscalizacion* = Pg. *fiscalisação*: as *fiscalize* + *-ation*.] The fiscal treatment of a matter.

It was also resolved, in view of the fact that they were interested in the development and *fiscalization* of the trade, to maintain the traditional regimen decreed in the royal letter of January 23, 1612.
Geog. Jour. (R. G. S.), XI. 188.

fiscalize (fis'ka-līz), *v. t.*; pret. and pp. *fiscalized*, ppr. *fiscalizing*. [Sp. Pg. *fiscalisar*: as *fiscal* + *-ize*.] To examine, manage, or regulate (a matter of business) in respect to its fiscal or revenue features.

fisetic (fi-set'ik), *a.* [G. **fisetisch*, < *fiset(holz)*, young fustic.] Of or pertaining to fustic.—**Fisetic acid**, an incorrect name for fisetin.

fish¹, *n.*, 6. (*b*) The Southern Fish, Piscis Australis or Austrinus. **Atka fish**, a fish of the genus *Pleurogrammus*, found about the island of Atka.—**Electric fish**, any of the fishes which have the power to give electric shocks, as several species of rays, the electric eel, and the electric catfish.—**Four-eyed fish**. (*a*) A common name of fishes of the genus *Anableps*, found in the fresh waters of South America. Their eyes are completely divided by a horizontal partition into an upper and a lower portion; the lower part is popularly supposed to be for use in the water, the other in the air. See *Anableps*, with cut. (*b*) A name sometimes applied to fishes having ocellated spots of color resembling auxiliary eyes.—**Indian fish**. (*a*) A name, in Jamaica, of *Pomacanthus paru*, of the family *Chætodontidæ*. (*b*) *Chænobryttus gulosus*, one of the sunfishes found in fresh waters of the eastern United States.—**Isinglass-fish**, any fish, as the sturgeon, from which isinglass is made.—**Jugular fish**, a fish in which the ventral fins are inserted in advance of the pectoral fins.—**San Pedro fish**, the opah, *Lampris luna*.—**Silver-bar fish**, a common name applied to a member of the family *Chirocentridæ*, *Chirocentrus dorab*, a large fish of the Indian Ocean.—**Struck fish**, a fish salted and then smoked.

fish-block (fish'blok), *n.* The hoisting-block used in fishing an anchor.

fished (fisht), *a.* Filled with fish.

When it [the net] was hove up alongside it was seen to be well *fished*.
Rep. Mass. Com. Fisheries and Game, 1904, p. 33.

fisher-fish (fish'ėr-fish), *n.* One of the remoras (*Echeneididæ*), said to be used by the Chinese to catch other fish and turtles. The remora has a powerful sucking-disk on top of its head, and clings tightly to any object. A line is said to be fastened to the tail of the remora, for the purpose of pulling it and its captures to the shore.

fishery, *n.* 4. The exercise of the right to fish; a fishing venture or season.

Only thirty-six pearl *fisheries* took place [in Ceylon] during the nineteenth century.
Nature, March 17, 1904, p. 465.

Bank fisheries. See ★*bank*¹.—**Bureau of Fisheries**. See ★*bureau*.—**Pelagic fishery**. See ★*pelagic*.

fish-eye (fish'ī), *n.* 1. A moonstone cut in the form of the eye of a fish and having a peculiar, soft, milky reflection.—2. An icthyophthalmite. See *apophyllite*.

fish-fly (fish′flī), *n.* A member of the genus *Chauliodes*, of the neuropterous family *Sialidæ*; specifically, the comb-horned fish-fly, *Chauliodes pectinicornis*.

Comb-horned Fish-fly (*Chauliodes pectinicornis*).

fish-front (fish′-frunt), *n.* A strengthening slab placed on the front of a made mast; a piece of wood or iron used to strengthen a weak or broken spar.

fishing, *n.* **Fishing bill,** in *law*, a bill for discovery in equity, improperly drawn upon loose, vague and insufficient allegations. It may be dismissed upon that ground. **Gorge-fishing,** fishing with a gorge-bait, that is, one which is intended to be swallowed by the fish.

fishing-cat (fish′ing-kat), *n.* A small spotted species of cat, *Felis viverrina*, found in Bengal: so named from its habit of catching fish.

fishing-crib (fish′ing-krib), *n.* *Naut.*, a compartment in which the engine for fishing the anchor is placed.

fishing-rod (fish′ing-rod), *n.* A long, slender, tapering rod, frequently jointed and elaborately made, to which is attached the line and hook used in angling.

fish-kid (fish′kid), *n.* Same as *kid*[3], 2.

fish-leaves (fish′lēvz), *n.* The common pondweed, *Potamogeton natans*. See *pondweed* (with cut).

fish-mold (fish′mōld), *n.* A fungus which grows on fishes.

fish-mouth (fish′mouth), *n.* The snake-head or turtle-head, *Chelone glabra*.

Fish-mouth nebula. See ★*nebula*.

fish-pass (fish′pȧs), *n.* An artificial channel designed to enable fish to pass from one body of water to another or over river obstructions such as falls or dams. *Nature*, Aug. 18, 1904, p. 364.

fish-pendant (fish′pen″dȧnt), *n.* *Naut.*, the rope to which the fish-hook is secured.

fish-poison, *n.* Also two species of *Cracca*, *C. purpurea* and *C. toxicaria*, used to stupefy fish. See *Tephrosia* and ★*ahuhu*.—**Brazilian fish-poison,** *Serjania lethalis* (called *timbó* by the natives) and *Paullinia pinnata*. See *Serjania* and ★*barbasco*.—**California fish-poison.** In California a number of plants are used by the Indians for stupefying fish. The two principal ones are *Chlorogalum pomeridianum*, belonging to the *Melanthiaceæ*, with a bulbous saponaceous root, also called amole, or soaproot; and *Piscaria setigera* (*Croton setigerus* of Hooker), belonging to the *Euphorbiaceæ*, of which the crushed leaves are used.—**Ceylon fish-poison,** *Hydnocarpus venenata*, a tree belonging to the family *Flacourtiaceæ*, the narcotic fruits of which are used to poison fish, but which sometimes render them unfit for food: also found in Malabar and Travancore. Called by the Cingalese *makulu*.—**East Indian fish-poison,** *Walsura piscidia*, a small tree of Ceylon, Travancore and Malabar, belonging to the *Meliaceæ*. It has a bright yellow fruit with a single seed surrounded by an edible aril. The bark is used as a fish intoxicant, which does not render the fish unfit for food.—**Guam fish-poison,** the fruit of a tree, *Barringtonia speciosa*. See ★*botong* and ★*putiu*.—**Malayan fish-poison,** a poison derived from *Deguelia elliptica*, a handsome leguminous climber called *tuba* by the Malayans. See ★*tuba*[2].—**Mexican fish-poison.** (*a*) Several species of *Sebastiana* of the spurge family, especially *S. bilocularis* and *S. Palmeri*. (*b*) Two leguminous plants, *Ichthyomethia Piscipula* and *Cracca toxicaria*. (*c*) *Paullinia pteropoda*, of the soapberry family.—**Philippine fish-poison,** a poison derived from several Philippine plants, called *tuba* by the natives (see ★*tuba*[2]). Among them are the widely spread physic-nut, *Jatropha Curcas*, and *Croton Tiglium* (see *Croton*, 1), of the spurge family, and *Cocculus Cocculus*. (See *Cocculus*).—**Polynesian fish-poison,** *Barringtonia speciosa* and *Deguelia trifoliata*, the latter a creeping leguminous strand-plant, the pounded leaves of which are used. See ★*botong* and *Malayan* ★*fish-poison*.—**South Sea Island fish-poison,** *Lepidium piscidium*, a cruciferous plant indigenous to islands of the southern Pacific Ocean.—**West Indian fish-poison.** *Jaquinia armillaris*. See ★*barbasco*.

fish-pole (fish′pōl), *n.* A slender pole to which a line is attached for fishing; specifically, a pole of natural growth and in one piece, as distinguished from an artificial jointed rod. See *rod*[1], 1 (*e*).

fish-powder (fish′pou″dėr), *n.* Dried fish pulverized: a food for use on arctic or other long voyages, where space and keeping qualities have to be considered. *Geog. Jour.* (R. G. S.), XIII. 140.

Fish-skin grain. See ★*grain*[1].

fish-tail, *a.* **Fish-tail wind,** a wind which blows toward or from a target and causes a rifle-ball to strike either too high or low, respectively, so that the shot-holes are contained within an area whose outline suggests the shape of a fish's tail. The broad end of the tail is above the bull's-eye when the wind blows toward the target, but below it when the wind blows toward the marksman.

fish-well (fish′wel), *n.* An inclosure in a fishing-vessel, extending from the bottom to the deck, and designed to contain live fish. The floor of the well is a grating which freely admits the sea-water.

fissicœle, fissicœl (fis′i-sēl″), *n.* [L. *fissus*, split (see *fissile*), + Gr. κοῖλος, hollow.] A cavity in the embryo formed by the splitting of a mass of cells. Same as *schizocœle*.

Fissidentaceæ (fis″i-den-tā′sē-ē), *n. pl.* [NL., ⟨ *Fissidens* (*-dent-*) + *-aceæ*.] A family of acrocarpous mosses of the order *Bryales*, typified by the great genus *Fissidens*, and containing only two other genera. It is characterized by two-ranked leaves winged on the back and formed of a single layer of similar cells, and by having the teeth of the peristome united at the base and usually split into two thread-shaped divisions. They are handsome erect mosses growing in moist, shady places throughout the world. There are 579 species, all but 9 of which belong to the genus *Fissidens*.

fissigemmation (fis″i-je-mā′shon), *n.* [L. *fissus*, split, + *gemma*, bud: see *gemmation*.] In *biol.*, reproduction by means of buds that become detached; gemmation.

fissil[2], *a.* A simplified spelling of *fissile*.

fission-algæ (fish′on-al″jē), *n. pl.* Same as *Schizophyceæ*.

fission-plants (fish′on-plantz), *n. pl.* Plants multiplying by simple division: usually restricted to the *Schizophyta*.

fissiparation (fis″i-pa-rā′shon), *n.* [*fissiparous* + *-ation*.] Same as *fissiparism*. See *fission*, 2.

fissiparously (fi-sip′a-rus-li), *adv.* In a fissiparous manner.

fissirostrate (fis-i-ros′trāt), *a.* Having a deeply cleft beak; fissirostral.

fissura, *n.*—**Fissura flocculi,** a fissure which bounds the attachment of the flocculus to the cerebellum in mammals. Also known as the *paraflocular sulcus*.—**Fissura præclivalis,** a fissure present in the cerebellum of mammals. It has a transverse direction and separates the anterior lobe from the remainder. In animals below man it is also called *fissura prima*.—**Fissura prima,** the deepest fissure which crosses the mesal plane of the cerebellum. It separates the cephalic lobe or lobus anticus from the rest of the cerebellum, and is the most constant fissure in the mammalian series (Smith). It is also known as *fissura præclivalis*, *sulcus furcalis*, and *sulcus primarius cerebelli*.—**Fissura rhinalis,** a fissure, on the ventral surface of the mammalian brain, extending from the olfactory bulb or lobe to the Sylvian fissure at the temporal lobe. From this point to the caudal surface of the cerebrum, where it terminates, it is called the *postrhinal fissure*. In the human brain it is not represented.—**Fissura secunda,** a fissure in the cerebellum which passes in a transverse direction, more or less parallel with the fissura prima. The fissura prima separates the lobus anticus from the lobus centralis. The fissura secunda separates the lobus centralis from the lobus posticus.

fissure, *n.*—**Adoccipital fissure.** See ★*adoccipital*.—**Amygdaline fissure,** a fissure of the brain near the extremity of the temporal lobe.—**Ansate fissure** or **sulcus,** in *anat.*, one of the minor fissures lying on the superior aspect of the anterior half of the brain.—**Anterotemporal fissure,** a fissure just caudad to and more or less parallel with the fissure of Sylvius. Synonymous with the *superior temporal sulcus*, or the *parallel fissure* in apes. *Proc. Zool. Soc. London*, 1901, I. 128.—**Callosal fissure,** the interval between the dorsal surface of the corpus callosum and the cerebral cortex above.—**Craniofacial fissure.** See ★*craniofacial*.—**Ectorhinal fissure,** in *anat.*, the furrow which separates the rhinencephalon from the rest of the hemisphere.—**Exoccipital fissure.** Same as ★*ape-fissure*.—**Ilioischiadic fissure,** in *ornith.*, the space or cleft between the ilium and ischium. In the ostrich and most of its allies, this remains open throughout life; in the vast majority of birds, the distal portions of the ilium and ischium unite, converting the proximal portion of the fissure into the obturator foramen. Also called the *obturator fissure*.—**Inferofrontal fissure,** a fissure which lies between the middle and the inferior frontal convolutions of the brain. Also known as the *subfrontal fissure*.—**Intercerebral fissure,** the large fissure which separates the two hemispheres of the brain.—**Intraparietal fissure,** a fissure which arches through the parietal lobe of the brain in men and apes. It arises in the antero-inferior angle of the lobe, usually between the Sylvian and central fissures, and in rare cases is continued into the sylvian fissure. Also known as the *parietal fissure*.—**Longitudinal fissure.** (*a*) The deep cleft which separates the two hemispheres of the brain superiorly. (*b*) A longitudinal depression on the under surface of the liver. **Obturator fissure.** Same as *ilioischiadic* ★*fissure*. **Occipital fissure.** Same as *parieto-occipital fissure*.—**Parietal fissure.** Same as *intraparietal* ★*fissure*.—**Postclival fissure,** a fissure of the cerebellum behind the clivus or inclined upper surface of the vermis.—**Postgracile fissure,** a fissure of the cerebellum between the slender and the inferior semilunar lobes.—**Postseptal fissure,** a fissure of the brain in the posterior portion of the occipital lobe.—**Preclival fissure.** Same as ★*fissura præclivalis*.—**Pregracile fissure,** a fissure of the cerebellum between the slender and biventer lobes.—**Rivinian fissure.** Same as *notch of Rivini*.—**Simian fissure,** a fissure found in the brains of monkeys on the lateral surface of the cerebrum between the occipital and parietal lobes. Caudad of the fissure the brain substance is so folded as to form an operculum under which portions of other fissures may be found. Also known as *ape-fissure* or *affenspalte*. See ★*ape-fissure*.—**Subfrontal fissure.** Same as *inferofrontal* ★*fissure*.—**Supercentral fissure,** a fissure nearly parallel to and above the fissure of Rolando.—**Suprasylvian fissure,** a fissure which lies above and arches more or less completely over the end of the Sylvian fissure. It is well developed in the brains of carnivores.

fissure-eruption (fish′ūr-ē-rup″shon), *n.* An outbreak of lava through a fissure in the earth's crust without the production of a volcanic cone. The name was suggested by Sir A. Geikie to describe the great lava fields of the Snake river region of Idaho, where there are vast surface flows of basalt unaccompanied by volcanoes. *Geikie*, Text-book of Geol. (4th ed.), p. 264.

fissuring (fish′ūr-ing), *n.* The production of fissures through strata.

fist[1], *n.* **3.** In *printing*, the index sign ☞, included by type-founders among the marks of reference.

fist[3], **fiste** (fīst), *n.* Same as *fise*[2] and *fise-dog*.

fistula, *n.* **5.** A tube or pipe which normally connects some internal part or organ of an animal with the surrounding air or water, as the trachea of an insect or the blow-hole of a whale.

> Like cetaceous animals and Whales, the Lamprey hath a *fistula* spout or pipe at the back part of the head.
> *Sir T. Browne*, Pseud. Epidemica, iii. 19.

Amphibolic fistula. See ★*amphibolic*.—**Biliary fistula.** See ★*biliary*. **Black** or **purging fistula.** Same as *purging-cassia*. See *Cassia*.—**Branchial fistula,** a congenital opening in the neck communicating with the pharynx, due to non-closure of a branchial cleft.—**Coccygeal fistula,** an opening near the coccyx leading down to a dermoid cyst of that region.—**Fecal fistula,** an opening in the abdominal wall communicating with the intestine.—**Gastric fistula,** a communication formed between the stomach and the external surface of the abdomen.—**Thiry-Vella fistula,** an artificial opening made into the intestine of an animal for the purpose of collecting the intestinal secretions.—**Urinary fistula,** an abnormal opening into any portion of the urinary apparatus.—**Vesical fistula,** an abnormal opening into the urinary bladder: variously called *vesico-intestinal*, *vesico-uterine*, or *vesicovaginal*, according as it affords a communication between the bladder and intestine, uterus, or vagina.

fistula-needle (fis′tū-la-nē″dl), *n.* A blunt-pointed, flexible probe with an eye near its extremity, used for passing a ligature or seton through a fistulous tract.

Fistulata (fis-tū-lā′tä), *n. pl.* [NL.: see *fistulate*.] In Wachsmuth and Springer's classification of the *Crinoidea*, an order containing forms in which the arms are free above the radials and the posterior side of the tegmen is extended into an elongate sac or ventral tube. The ambulacra are tegminal and roofed over by covering pieces. *Cyathocrinus*, *Poteriocrinus*, and *Lecythocrinus* are examples of the order. Most of the genera are Paleozoic: none survive after the Trias.

fistulation (fis-tū-lā′shon), *n.* The production of a fistula. *N. E. D.*

fistulatome (fis′tū-la-tōm), *n.* [L. *fistula* + Gr. *-τομος*, ⟨ ταμεῖν, cut.] An instrument resembling a probe-pointed bistoury: used for laying open a fistulous tract.

fistule, *n.* **2.** A sponge of the genus *Fistula*.

Fistulipora (fis-tū-lip′ō-rä), *n.* [NL., ⟨ L. *fistula*, pipe, + Gr. πόρος, pore.] The typical genus of the family *Fistuliporidæ*.

Fistuliporidæ (fis-tū-li-por′i-dē), *n. pl.* [NL., ⟨ *Fistulipora* + *-idæ*.] A family of Paleozoic tabulate corals growing in incrusting, massive, or branching form, with very fine tubular corallites, having horizontal tabulæ and no septa.

fistulization (fis″tū-lī-zā′shon), *n.* [*fistula* + *-ize* + *-ation*.] Same as ★*fistulation*.

fit[1], *n.* **8.** In *optics*, a periodic phase through which Newton, in his emission theory of light, assumed the luminous corpuscles to pass, and which enabled them to be alternately reflected or transmitted at the surface of a refracting medium. This assumption formed the basis of the so-called *theory of fits*.—**Nine-day fits.** Same as *trismus neonatorum*.

f. i. t. An abbreviation of *free in truck*. [Eng.]

fitcher (fich′ėr), *v. t.* and *i.* [Appar. ⟨ F. *ficher*, stick.] In *mining*, to stick; to cause to stick; to operate a drill without giving it a rotary motion, thus forming a wedge-shaped cavity in which the drill will stick.

fitchew, *n.* **2.** The fur of the polecat, formerly known as the fitchew, later shortened to *fitch*. See *fitch*[2], 2.

fitting, *n.* **3.** Specifically, any small casting or other metal part of a machine or apparatus used to fit together or assemble other parts, as a coupling or elbow used to join lengths of pipe.

Fittonia (fi-tō′ni-ä), *n.* [NL. (Coemans, 1865), named in honor of the sisters Elizabeth and Sarah M. *Fitton*, Irish writers on popular botany (1817).] A genus of plants of the family *Acanthaceæ*. They are trailing herbs, with inconspicuous flowers borne in bracted terminal spikes. The three species, all natives of Peru, are grown in greenhouses for the delicate and showy red or white venation

of the heart-shaped leaves. *F. Verschaffeltii* and *F. argyroneura*, the former with red, the latter with white veins, are frequent in good collections.

five, *n.* **High five.** See ★*cinch*, 4.

five-corners (fīv'kôr-nêrz), *n.* The fruit of a small Australian tree, *Styphelia triflora*, belonging to the family *Epacridaceæ*; also the tree itself. The fruits are about the size of a pea and have a sweetish pulp with a large stone. They form part of the food of the aborigines. [Australia.]

fivefinger, *n.* **5.** The Virginia creeper, *Parthenocissus quinquefolia*.—**Dwarf fivefinger,** *Potentilla pumila*, a low perennial herb of the eastern United States, closely related to the common fivefinger, *P. Canadensis*, but much smaller and having more deeply toothed leaflets.

fivefingers (fīv'fing"gèrs), *n.* The American ginseng, *Panax quinquefolius*.

five-or-nine (fīv'ôr-nīn'), *n.* The game of Pope Joan or matrimony without the lay-out, the eldest hand beginning with the 5 or 9 of any suit.

five-sisters (fīv-sis'tèrs), *n.* The whorled loosestrife, *Lysimachia quadrifolia*, the whorls of which consist as often of five as of four leaves. It is a delicate and graceful plant with yellow flowers dark-streaked or spotted on filiform peduncles in the axils of the leaves. It grows in shady places throughout eastern North America. See *loosestrife*, with cut.

fivesprig-tree (fīv'sprig-trē), *n.* A West Indian tree, *Quararibea turbinata*, of the silk-cotton family; so called from its whorls of five branches. The leaves and flowers, when dried, possess a strong odor of fenugreek.

five-throw (fīv'thrō), *a.* Having five different cranks or cams, so that five separate motions can be received or imparted.

fix, *n.* **2.** In *naut. surv.*, the operation of determining ('fixing') the position of an unknown point by the three-point problem, which involves the measurement, at the point, of the two angles between lines running to three known visible points.

There is nothing in a nautical survey which requires more attention than the "*fix*"; a knowledge of the principles involved is essential in order to select properly situated objects. The method of fixing by two angles between three fixed points is generally known as the "two-circle method," but there are really three circles involved. The "station-pointer" is the instrument used for plotting fixes.
Encyc. Brit., XXXIII. 97.

fixate, *v. t.* **3.** In *psychological* and *physiological optics*, to direct the eyes upon; bring within the area of clearest vision.

The tendency to *fixate* the lower end of an oblique line drawn in perspective.
E. B. Titchener, Exper. Psychol., I. ii. 312.

fixation, *n.* **6.** Attachment; adhesion: as, various parasites have organs for *fixation*.— **7.** In *psychological* and *physiological optics*, the act or process of directing the eyes upon some object, and of maintaining this direction during the time required for observation; the bringing of a retinal image into and holding it upon the area of direct vision.—**Fixation-circle, -cross, -mark, -point,** in *psychological* and *physiological optics*, a small object or a spot of light which the observer is required to fixate, and which thus serves to maintain his eye or eyes in a constant position during an experiment: used in perimetry, in tachistoscopic observations, etc. **Inner fixation-point,** in *psychol.*, the element or aspect of an idea which is most clearly and distinctly perceived as the idea runs its course: an expression borrowed from the physiology of vision, and contrasted with outer fixation-point. *W. Wundt* (trans.), Outlines of Psychol., p. 155.—**Line of fixation,** in *psychological* and *physiological optics*, a line in the field of regard along which the fixation-point of the eyes moves as convergence is changed from a far to a near object, or conversely. *W. Wundt* (trans.), Outlines of Psychol., p. 135.—**Monocular fixation-point,** the point of regard or center of the area of direct vision of the single eye. **Outer fixation-point.** Same as *fixation-point*. See ★*fixation-circle*.

fixative, *n.* **2.** In perfumery, a substance used to detain from too speedy evaporation a highly volatile ingredient of agreeable odor. The substance so used may itself be inodorous or may contribute to the blended odor of the mixed perfume.—**3.** Same as ★*amboceptor*.

fixator (fik'sā-tor), *n.* Same as ★*amboceptor*.

Fixed cheek. See ★*cheek*.

Fizeau-Cornu method. See ★*method*.

Fizeau's experiment, method. See *velocity of* ★*light*.

Fl. An abbreviation (*b*) of *Flanders*; (*c*) of *Flemish*; (*d*) of *Florida*.

Fla. An abbreviation of *Florida*.

flab (flab), *n.* [Var. of *flap*.] In *bot.*, the cap of any large mushroom. Also *flap*.

flabellifoliate (flā-bel-i-fō'li-āt), *a.* [L. *flabellum*, fan, + *folium*, leaf (see *foliate*).] Having fan-shaped or fan-like leaves, either such as those of the fan-palms or such as fold like a fan, as do those of *Oxalis*.

Flacian (flā'shian), *a.* and *n.* **I.** *a.* Of or pertaining to the works or doctrines of Flacius Illyricus, an eminent Lutheran reformer 1520–1575.

II. *n.* A follower of Flacius Illyricus. See ★*Flacianism*.

Flacianism (flā'shian-izm), *n.* The doctrine of Flacius Illyricus, who as a strict Lutheran opposed the teachings of Melanchthon in the adiaphoristic and synergistic controversies.

Flacourtiaceæ (fla-kōr-ti-ā'sē-ē), *n. pl.* [NL. (Lindley, 1830), < *Flacourtia* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Hypericales*, typified by the genus *Flacourtia*, formerly included in the *Bixaceæ*, but more closely related to the *Violaceæ*. It includes 79 genera and about 300 species, chiefly woody plants of the tropics. See *Samydaceæ*.

flag², *n.* **7.** A trade-name for the outer or distal portion of bristle, which is thinner and lighter than the basal portion.

The *flag* is much thinner and more flexible, and is used for paint brushes. *Sci. Am. Sup.*, 1903, p. 22,611.

Absence flag, a small, square, blue flag hoisted at the starboard spreader of a yacht to signify that the owner is not on board. **Flag day.** See ★*day*1.—**Foul-weather flag,** a storm signal. —**Rattlesnake flag,** a flag of the American Revolution, a coiled rattlesnake on a yellow field. **Spanish flag,** a name of certain fishes which are alternately banded with bright red and golden or white. *Gonioplectrus hispanus* of the West Indies, a small bass-like fish, is specially known by this name, as is also the crimson-banded rockfish of the California coast, *Sebastodes rubrivinctus*.—**Zionist flag,** the flag of the Zionists, which has two horizontal blue stripes upon a white ground. These colors are considered sacred. The prayer-scarf, *tallith* (which see), has the same colors. In the center of the flag is the cabalistic *Magen-David*, 'David's shield,' which consists of two intertwined triangles, supposed to be the emblem of protection.

Absence Flag.

flag³, *n.* **Crimson flag,** *Schizostylis coccinea*, an iridaceous plant of South Africa related to *Gladiolus*, with long tubular crimson flowers. It is a favorite in flower-gardens.—**False sweet-flag,** the yellow flag, *Iris Pseudacorus*. **Narrow flag,** the slender blue flag, *Iris prismatica*, of eastern North America, with long, narrow leaves.

Poison flag, a name commonly applied to species of *Iris*, especially *I. versicolor* and *I. prismatica*, to distinguish them from the sweet-flag. **Rattlesnake-flag,** the rattlesnake-master, *Eryngium yuccifolium*, which possesses a flag-like aspect. See cut under *rattlesnake-master*. —**White flag.** (*a*) See def. (*b*) *Iris Florentina*, with bluish-white flowers. See *Iris* and *orris-root*.

flag⁴, *n.*—**Arbroath flags,** a local name of beds of gray flagstones in Forfarshire, Scotland, belonging to the Old Red Sandstone.—**Bannisdale flags,** a division of the Upper Silurian in Westmoreland, England, regarded as essentially equivalent to the Middle Ludlow formation of Shropshire, including the Aymestry limestone. The strata attain a thickness of more than 5,000 feet and carry many fossils.—**Bellvale flags,** a subdivision of the Devonian system in New Jersey and southeastern New York. It is regarded by New Jersey geologists as equivalent to a part of the Hamilton group. It attains, in New Jersey, a thickness of 1,800 feet or more and is underlain by the Monroe shales and overlain by the Skunnemunk conglomerate. Fossils are rare and they are those of the Hamilton group. —**Brathay flags** [*Brathay*, a small stream in Westmoreland], the lowest division of the Coniston flags of the Upper Silurian in Westmoreland and Cumberland, England; regarded as the equivalent of the Wenlock strata of Shropshire. They attain a thickness of 1,000 feet and contain many fossils, chiefly graptolites.—**Coniston flags,** in *Eng. geol.*, a name applied to several divisions of the Silurian rocks. The Coniston flags in Westmoreland and Cumberland attain a thickness of about 3,000 feet and underlie the Coniston grits. They are regarded by Geikie as equivalent to the Lower Ludlow group or Upper Silurian. The Coniston limestone in the same region is of Lower Silurian age and equivalent in part to the Bala limestone (which see). —**Ffestiniog flags** [*Ffestiniog* in Wales], a division of the Lingula flags (Upper Cambrian) of Wales, having a thickness of about 2,000 feet and carrying trilobites, brachiopods, and other fossils. They constitute, in Geikie's classification, the middle subdivision of the Lingula flags and lie between the Dolgelly slates above and the Maentwrog flags below.—**Gardeau flags,** a term introduced by the New York geologists for a division of the Portage group of the Upper Devonian lying above the Cashaqua shales and below the Portage sandstones. They attain a thickness of several hundred feet along the Genesee river and the Gardeau Reservation, from which they take name.—**Lingula flags,** a division of the Cambrian system which lies at the bottom of the upper or Olenus series in Wales and takes its name from the vast numbers of the brachiopod *Lingula* or *Lingulella davisi* which occur in some of the layers.

flag-dues (flag'dūz), *n. pl.* *Naut.*, a charge or tax made against a vessel in some harbors for displaying flags: an excuse for extorting a fee additional to the regular harbor-dues.

Flagellar agglutinin. See ★*agglutinin*.

flagellation, *n.* **2.** In *biol.*, the formation or development of flagella.

flagellum, *n.* **5.** In sporozoans, a vibratile male gamete in *Halteridium*, a blood-parasite found in birds.

flageolet, *n.* **2.** In *organ-building*, a stop, usually of 2-feet tone, giving high fluty tones.

flag-lily (flag'lil"i), *n.* The common blue flag, *Iris versicolor*.

flag-list (flag'list), *n.* The list of admirals or flag officers of a navy.

flag-pay (flag'pā), *n.* In the British navy, the pay of a flag-officer while flying his flag or commanding a fleet or squadron.

flag-rank (flag'rangk), *n.* In the navy, the rank of officers above the grade of captain, including commodores and the various grades of admirals.

flag-reed (flag'rēd), *n.* In Australia, the common reed, *Trichoon Phragmites*. See *reed*1, with cut.

flag-wire (flag'wīr), *n.* A rod pivoted at the ends so as to be free to rotate about its own axis and to serve as a hinge for any body supported by it; hence, in machinery, a part or member thus mounted and used to convert reciprocating into rotatory motion.

flail-joint (flāl'joint), *n.* A hinge-joint with abnormal mobility in opposite directions.

flair, *n.* **3.** Scent; the critical sense in art and literature. [Rare.]

No better proof could be given of Vasari's genuine *flair* and intuition as a critic of art than this passage.
C. Phillips, in Portfolio, N. S., XXXVII. 95.

flakage (flā'kāj), *n.* [*flake* + *-age*.] The flakes, chips, or splinters which fall during the process of fashioning (flint-) arrow-heads and other implements by *flaking* (which see). *Amer. Anthropologist*, Jan.–March, 1902, p. 120.

flake¹, *n.*—**Icy flake,** the peculiar white cracks or fractures, usually along the cleavage-planes, produced in the diamond during the cutting process when the necessary care to prevent overheating has not been taken. The dullness is greater or less according to the amount of the fracture.

flake-hurdle (flāk'hèr'dl), *n.* Same as *flake*2, 1.

flake-knife (flāk'nīf), *n.* In *archæol.*, a chip or flake of flint or of some other brittle stone used as a knife.

flaker, *n.* **2.** An implement of bone, antler, or similar material, used for shaping implements from brittle stones like flint, jasper, and chert. The stone was first roughly shaped with a small hammer and then placed on a pad in the hand. By means of the flaker small chips were broken off.

flaking, *n.* **2.** The occurrence of streaks or spots of white, or lighter color, in organisms that are not usually white. *Bateson and Saunders*, Rep. Evol. Com. Roy. Soc., 1902, I. 47.

flaking-rolls (flā'king-rōlz), *n. pl.* In *milling*, a roller-mill adapted to making flaked cereals or prepared breakfast foods in which the grains of wheat, oats, etc., are in the form of thin flakes; a flaking roller-mill.

flambage (floṅ-bäzh'), *n.* [F., < *flambe*, flame.] A cauterizing, sterilizing, or singeing process in which the thing to be operated upon is passed rapidly through a flame or over red-hot plates.

flame, *n.* **Ciliary flame,** in *Platyhelmintha*, a bundle of vibratile cilia, situated, typically, in the interior of a cell (the flame-cell) terminating one of the capillary branches of the water-vascular or excretory system.

flame, *v. t.* **5.** To hold in or pass through a flame, as an instrument, in order to sterilize it.

flame-arc (flām'ärc), *n.* See *electric* ★*arc*.

flame-band (flām'band), *n.* In *spectroscopy*, a bright band in the spectrum, due to the radiation from a flame.

flame-box (flām'boks), *n.* A fire-box which is intended to serve as a combustion-chamber, as in a deep fire-box on a locomotive-boiler.

flame-carbon (flām'kär"bon), *n.* See *electric* ★*arc*.

flame-carpet (flām'kär"pet), *n.* See ★*carpet*, 4.

flame-flue (flām'flö), *n.* The flue which leads directly away from the fire-box of a flue-boiler, and is supposed to be filled with flame: as distinguished from the smoke-flue which returns the gases to the front end of the boiler, after combustion has been completed.

flame-gage (flām'gāj), *n.* A device for measuring the height of standard flames used in photometry. It consists of a translucent screen, with a vertical scale, upon which an enlarged image of the tip of the flame is thrown by means of a lens of short focus.

flamenco (flä-men′kō), *n.* [Sp. *flamenco*, flamingo. The fish is so named in allusion to its red color.] The Mexican name of a species of snapper, *Lutianus guttatus*, a common food-fish of the Panama region.

flame-opal (flām′ō pal), *n.* An opal in which the colors are distributed more or less regularly in bands or streaks.

flame-plate (flām′plāt), *n.* A plate, such as the crown-sheet, which, in a fire-box or furnace, is exposed to the flame or burning gases from the fire.

flame-reaction (flām′rē-ak″shon), *n.* Same as *flame-test* (which see, under ★*test*[1]).

flame-shoulder (flām′shōl″dėr), *n.* A British collectors' name for a European noctuid moth, *Agrotis plecta*, a small dark species with a flame-colored stripe on the shoulder of each fore-wing.

flame-test (flām′test), *n.* See ★*test*[1].

flame-tight (flām′tīt), *a.* Proof against the passage or escape of flame, as the safety-lamp used by miners.

flanch (flänch), *v.* Same as *flange*.

flanch-chuck (flänch′chuk), *n.* A chuck having the shape of a flange or face-plate, with points or teeth for carrying the work instead of slots to which the work is bolted. Also called *flange-chuck*.

flanch-mill (flänch′mil), *n.* A small hand-mill used principally for grinding coffee. As ordinarily made the grinders are of iron and can be set to grind to the desired size.

flange, *n.*—**Blind flange.** Same as *blank flange*. In England, also called a *no-thoroughfare*.

flange-chuck (flanj′chuk), *n.* Same as ★*flanch-chuck*.

flange-coupling (flanj′kup″ling), *n.* See ★*coupling*.

flange-iron (flanj′ī″èrn), *n.* Any iron bar or beam having a projecting rib or flange, as an angle-iron, T-iron, etc.

flange-pulley (flanj′půl″i), *n.* A pulley having a flange around one or both edges. Such flanges are usually to keep the belt from slipping off the side of the pulley.

flanger (flan′jèr), *n.* **1.** A flanging-machine. —**2.** Same as *snow-flange*.—**3.** In *mech.* and *ship-building:* (*a*) A mechanic skilled in flanging metal plates. Also called *flange-turner*. (*b*) Same as *flanging-machine*.

flange-steel (flanj′stēl), *n.* Steel having so low a percentage of carbon or other hardening constituents as to be sufficiently ductile to be bent at right angles in the process of flanging (see *flange, v. t.* and *flanging-machine*), without cracking or local overstrain.

flange-tile (flanj′tīl), *n.* A tile having a flange along one or more edges.

flange-turner (flanj′tèr″nèr), *n.* Same as ★*flanger*, 3 (*a*).

flanging-clamp (flan′jing-klamp), *n.* In *forging*, a large and massive beam-clamp for holding large work while it is being hammered to form a flange on its edge. It consists of two horizontal beams. The upper one is adjustable by means of screws; the lower one is rigid and is designed to hold formers over which the hot metal is bent to make the flange.

flanging-hammer (flan′jing-ham″èr), *n.* **1.** A hand-hammer used for turning a flange on the end of copper-pipe, etc.—**2.** A machine for turning up the edges or forming flanges on the edge of metal plates for boilers, pipes, tanks, etc.

flank, *n.*—**Flank en potence** (*milit.*), a flank which is either advanced or refused and perpendicular to the rest of the line.

flanky (flang′ki), *a.* [*flank* + -*y*[1].] In *leather-manuf.*, loose and coarse: as, a *flanky* skin. *Flemming*, Practical Tanning, p. 116.

flannel, *n.*—**Welsh flannel,** flannel made from the wool of Welsh sheep.

flannel-flower, *n.* **3.** An Australian plant, *Actinotus Helianthi*, of the parsley family. It bears white flowers in simple umbels surrounded by a many-leaved involucre, which is longer than the flowers and looks as if it were cut out of white flannel.

flannel-leaf (flan′el-lēf), *n.* The mullen, *Verbascum Thapsus*.

flannellet, *n.* **2.** A cotton fabric woven and finished in imitation of wool flannel.

flannel-moth (flan′el-môth), *n.* Any moth of the family *Megalopygidæ*. Especially the crinkled flannel-moth, *Lagoa crispata*, whitish in color, with its wings furnished with long curly hairs, resembling flannel. Its larvæ feed on apple, oak, elm, and raspberry.

flannel-plant (flan′el-plant), *n.* Same as ★*flannel-leaf*.

flap, *n.* **10.** In *mycol.*, same as ★*flab*.—**11.** In *phonetics*, a flapping motion of the tongue or uvula or the sound produced by it, as in vocalizing the letters *l* or *r*.

The most distinct glide-consonants are the *flaps*, of which the Norwegian 'thick' *l* is an example.
H. Sweet, Eng. Sounds, p. 12.

flapmingo (flap′ming-gō), *n.* [An alteration of *flamingo*. Compare ★*flamenco*.] One of the file-fishes, *Monacanthus ciliatus*, found in the West Indies and northward to Florida.

flapper, *n.* **6.** *pl.* Hinged channeled irons attached to the top of the low portion of the door of a landau. When up, they support the door-glass frame: when the glass is lowered, they fall flat upon the door-bar.—**7.** In crustaceans, the tail, or the telson together with the appendages of the last abdominal segment.

flap-rein (flap′rān), *n.* A strap extending from the bridle-bit to the flap of a saddle for training a horse to hold his head in a desired position.

flare-spot (flär′spot), *n.* In *photog.*, same as *ghost*, 8.

Thus obtained a flatter field and freedom from "*flare-spot*" [in portrait objective]. *Encyc. Brit.*, XXXI. 693.

flare-up, *n.* **3.** *Naut.*, a distinguishing light exhibited as a signal by a pilot vessel, or a signal flare to a vessel which is overtaking another vessel, used as a warning to the ship coming up from astern.

flaser (flä′zèr), *n.* [G. dial. *flaser*, dial. form of *flader*, a streak, vein.] In German mining language, a streak or vein.

The word has been transferred to English use in connection with 'structure,' as *flaser* structure, a structure in dynamically metamorphosed granitoid rocks which consists of rounded and uncrushed areas in the midst of fine-grained and drawn-out materials, thus imitating flow-lines.
Kemp, Handbook of Rocks, p. 157.

flaser-gabbro (flä′zèr-gab″rō), *n.* Dynamically metamorphosed gabbro which has the flaser structure.

flash[1], *v.* **I.** *intrans.*—**To flash back,** to strike back: said of a flame of the Bunsen type in which, owing to undue admixture of air, ignition at the base of the burner occurs by the transmission of flame through the tube.—**To flash over,** in *elect.*, to pass, as a spark, from one commutator-bar to another.

II. *trans.* **7.** In *photog.*, to cover with an exceedingly thin layer, as of metal in a plating-bath.

The so-formed negative is sprung from the wax, cleaned and polished, and *flashed* over with a very thin layer of nickel in a nickel bath. *Nature*, Jan. 29, 1903, p. 301.

flash[1], *n.* **9.** In *elect.*, an accidental electric arc of short duration and great intensity.

flash-board (flash′bōrd), *n.* Same as *flashing-board*.

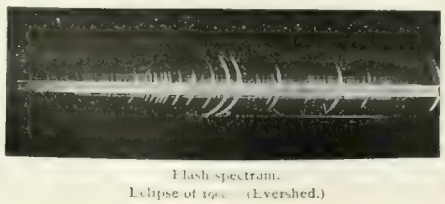
flash-boiler (flash′boi″lèr), *n.* A type of boiler, first perfected for steam motor-cars, in which the steam is instantly made by bringing small masses of hot water upon very hot surfaces. Such surfaces are usually tubes, heated by the fire on the outside, while the hot water is forced through them. A boiler of small bulk will make a large amount of steam per hour, the steam being usually superheated, which favors economy. The boiler has no store of reserve energy, but for this reason is safer. *Semiflash boilers* are those in which there is some water, at all times, in process of heating before flashing into steam. In the true flash-boiler there should be no liquid water except the last discharge of the feed-pump undergoing instant transformation into steam.

flasher[1], *n.* **6.** A device for automatically lighting and extinguishing incandescent lamps or groups of lamps: used especially in the operation of electric advertising-signs.

flashing[1], *n.* **4.** In *elect.*, on commutators of direct-current dynamo-electric machines, the carrying of a spark from one brush to another, when it appears as a flash encircling the commutator-surface.

flash-lamp (flash′lamp), *n.* In *photog.*, a lamp for producing a flash-light. Powdered magnesium or aluminium is blown into an alcohol or gas flame.

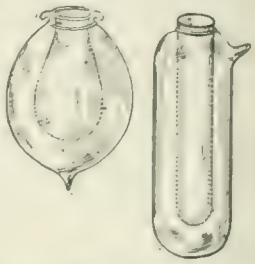
flash-spectrum (flash′spek″trum), *n.* The spectrum of bright lines or luminous arcs seen



Flash spectrum.
Eclipse of 1905. (Evershed.)

or photographed during a total eclipse of the sun at the beginning and end of the total obscuration. It lasts for a few seconds only.

flask, *n.*, **2.** (*b*) In *stereotyping*, a molding-frame, with a screw at each corner, fitting closely to the form around which it is placed. **Bologna flask,** a flask of heavy unannealed glass. It flies to pieces when any hard angular body is dropped into it.—**Dewar's flask, Dewar's liquid-air flask,** a flask, or one glass flask within another, having a complete double wall within whose intervening space is a very perfect vacuum. The glass surfaces of the vacuous space are often silvered, the conductivity for heat being thus reduced to a minimum and liquid air can be preserved in the flask for hours or even for days, while it is kept cold by its own evaporation.—**Erlenmeyer's flask,** a conical glass vessel with a flat bottom, used especially when liquids are to be decanted from precipitates.—**Fernbach's antitoxin flask.** See ★*antitoxin*.—**Giles's flask,** a graduated flask used in volumetric analysis. (See the cut.) The extra 100 cubic centimeters is used in standardizing the solution. **Liter flask,** in *chem.*, a glass flask, usually furnished with a ground-glass stopper, having a mark on the neck indicating the capacity up to that level of a liter at a particular temperature, commonly 15° C. It is much used in connection with volumetric analysis, for preparing solutions of determinate strength.—**Miquel flask,** a culture-flask used in the bacteriological study of water.—**Soyka's bacteria flask,** a culture-flask with parallel sides, one of which may be ruled in squares for counting.



Dewar's Flask.

Giles's Flask.

Soyka's Bacteria Flask.

flask-shell (flask′shell), *n.* A mollusk with a flask-shaped shell; in Great Britain, a boring mollusk, *Gastrochæna modiolina*.

flat[1], **I.** *a.* **11.** In *cotton-shipping*, not compressed; not hard packed. Cotton which is to be shipped any great distance, by rail or ship, is usually compressed in very powerful presses to reduce the bulk as much as possible. Cotton which has not been through such a press is said to be *flat*.

12. In *printing*, said of the proof or print of a plate or engraving in relief which has received the flat impression of the press without the overlay used to develop light, shade, and perspective.—**13.** In *golf*, said of the lie of a club, when the head is at a very obtuse angle to the shaft.—**14.** Not distinguished by a characteristic termination: as, a *flat* adjective (a noun that occupies an adjectival position before another noun and becomes an adjective without inflection or modification of form: as, a *stone* wall; *garden* flowers); a *flat* adverb (see ★*adverb*).

II. *n.*, **4.** (*g*) Something that is flat and shallow, as a basket or hamper for carrying produce to market, a shallow two-wheeled hand-cart, etc.

8. In *ship-building:* (*b*) A platform, deck, or floor which is of restricted area and does not form an important part of the vessel's structure.

It is evident, moreover, that the greatest loss of longitudinal stability must result from the flooding of compartments near the bow and stern, unless the buoyancy of the water-line area at the tops of these compartments is preserved by watertight *flats* or platforms.
White, Manual of Naval Arch., p. 120.

14. A narrow bar of iron or wood, covered with card-clothing, surmounting the main cylinder of a cotton-carding machine.—**15.** In *hort.*, a shallow box, usually 2 to 4 inches deep, used by gardeners to start seeds and cuttings, and also to serve as a tray on which to carry pots.—**Alkali flat.** See ★*alkali*.—**Heel of the flat,** that part of a top flat of a cotton-carding machine which is nearest to the main cylinder.—**Mahogany flat,** the bedbug, *Cimex lectularius*. [Local, southern U. S.]—**Stationary flat,** in *cotton-manuf.*, a small piece of wood faced with flannel, which rests on the top drafting-rollers of a drawing-frame, to clear the rollers of loose cotton and impurities.

flat[1], *v. t.* **6.** In *leather-manuf.*, to shave or smooth on the flesh side. *C. T. Davis*, Manuf. of Leather, p. 403.

flat[1], *adv.*—**Flat aback.**—See ★*aback*.

flatfoot (flat′fůt), *n.* **1.** In *pathol.*, a condition in which the arch of the foot is broken down, the sole touching the ground throughout its entire area.—**2.** A condition in heavy draft-horses (usually of the fore feet), in which the heel is

low, the ground-surface broad, the sole flat or slightly convex, and the wall more acutely slanted than is normal.

flat-hammer (flat'ham"ėr), *n.* The hammer first used by the gold-beater in flattening out a pile of quartiers or pieces of gold ribbon.

flathead, *n.* **4.** *Notothenia corniceps*, a fish of the family *Trachinidæ* found in Australian waters. Also called *Maori chief*.

flatman (flat'man), *n.* One who navigated a flat-boat: used especially in early river navigation in the Ohio and Mississippi valleys.

Flatness of field, in *photog.*, the property in an objective of bringing the rays to a focus on a plane surface, as that of the sensitive plate. While this is theoretically impossible, many lenses are now made which approximate flatness of field very closely. See ★*curvature of field*.

flat-square (flat'skwãr), *a.* Having rectangular cross-sections: said of a file.

flattening (flat'ning), *n.* In *vegetable teratol.*, the abnormal assumption by normally cylindrical stems, branches, or other organs of a compressed or flattened condition. It occurs in *Coccolobus, Bauhinia, Ruscus, Phyllanthus*, etc., in the spadices of araceous plants, and the petioles of aquatic plants. This phenomenon is to be distinguished from *fasciation* (which see). *Masters.*

flatter-dock (flat'ėr-dok), *n.* **1.** Same as *candock*, 2.—**2.** Same as ★*batter-dock*, 2.

flattie (flat'i), *n.* [*flat*[1] + dim. *-ie*. Cf. *sharpie, sharpy*.] A flat-bottomed boat.

Flat-ware presser, a workman in a pottery who makes flat-ware, such as plates, saucers, etc., in a mold or on the jigger. See *jigger*[1], 2 (*d*).

flat-waste (flat'wāst), *n.* In *cotton-manuf.*, the impurities and short fibers of cotton which gather on the flats or upper carding-surfaces of a carding-machine; also, the loose fibers which gather on the clearing-flats that rest on the top drawing-rollers of a drawing-frame.

flatwoods (flat'wụdz), *n. pl.* **1.** A local name in Ohio for valleys formerly occupied by rivers but now flats and covered with woods.—**2.** In Alabama, especially in the Coosa valley, a type of land consisting of an impervious clay derived from the Cambrian shales, supporting a dense growth of dwarf oaks, pines, etc.

flat-works (flat'wėrks), *n.* An ore deposit lying parallel with the inclosing rocks but of later origin than the walls. *Geikie*, Text-book of Geol., p. 819.

flautino, *n.* **4.** In *organ-building*, a two-foot stop giving fluty tones.

flautone, *n.* **2.** In *organ-building*, a stop pitched an octave lower than the ordinary flute-stop.

flavazol (flav-az'ōl), *n.* [L. *flavus*, yellow, + *az(o)* + *-ol*.] A mordant coal-tar color, similar to, if not identical with, *gambine* ★ *yellow*.

flavenol (flav'en-ōl), *n.* [L. *flavus*, yellow, + *-en* + *-ol*.] A colorless crystalline compound, $C_{16}H_{13}ON$. Also called *2',4'-hydroxyphenylmethylquinoline*. It melts at 238° C.

flavin, *n.* **2.** A bright yellow crystalline compound, $C_{13}H_{12}ON_2$. Also called *2.2'-diaminobenzophenone*. It melts at 135° C. **Diamond flavin,** a mordant coal-tar color of the monoazo type, derived from benzidine and salicylic acid. It dyes chromium-mordanted wool orange-yellow in an acid bath.

flavinduline (fla-vin'dū-lin), *n.* [As *flav(in)* + *induline*.] A basic coal-tar color of the azonium-chlorid type. It dyes tannin-mordanted cotton yellow.

flavocastaneous (flā"vō-kas-tā'nē-us), *a.* [L. *flavus*, yellow, + *castanea*, chestnut, + *-ous*.] Of a yellowish-chestnut color. *Annals and Mag. Nat. Hist.*, June, 1903, p. 615.

flavocobaltic (flā-vō-kō'bâl-tik), *a.* [L. *flavus*, yellow, + E. *cobalt* + *-ic*.] Noting a class of amino-nitro cobaltic salts. The chlorid has the formula $Co_2Cl_2(NO_2)_4(NH_3)_{10}$.

flavohyaline (flā-vō-hī'a-lin), *a.* [L. *flavus*, yellow, + Gr. ὕαλος, glass.] Yellowish and transparent, as the wings of certain insects. *Annals and Mag. Nat. Hist.*, April, 1904, p. 290.

flavol (flav'ōl), *n.* [L. *flavus*, yellow, + *-ol*.] A bright yellow crystalline compound, $C_{14}H_{10}O_2$. Also called *dihydroxyanthracene*.

flavoline (flav'ō-lin), *n.* [*flavol* + *-ine*[2].] A crystalline compound, $C_{16}H_{13}N$, prepared synthetically from quinoline. It melts at 65° C.

flavone (flav'ōn), *n.* [L. *flavus*, yellow, + *-one*.] A group of naturally occurring yellow coloring-matters, some members of which are used as dyes. The parent substance is called phenylpheno-γ-pyrone, $C_{15}H_{10}O_2$.

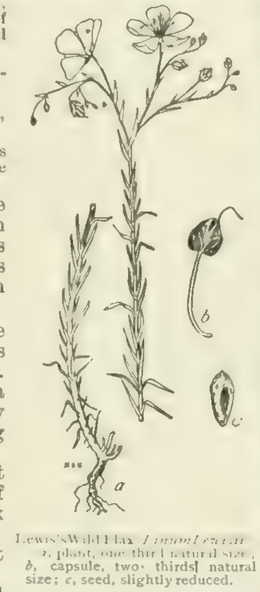
flavopallid (flā-vō-pal'id), *a.* [L. *flavus*, yellow, + *pallidus*, pale.] Pale with a yellow tinge. [Rare.]

flavophenin (flā-vō-fē'nin), *n.* [L. *flavus*, yellow, + E. *phen(yl)* + *-in*[2].] A direct coal-tar color.

flavotestaceous (flā"vō-tes-tā'shius), *a.* [L. *flavus*, yellow, + *testaceus*, of a shell.] Dusky yellow. *Annals and Mag. Nat. Hist.*, June, 1903, p. 611.

flavovirescent (flā"vō-vī-res'ent), *a.* [L. *flavus*, yellow, + *virescens*, virescent.] Virescent with a yellow tinge. [Rare.]

flax, *n.* **Blue flax.** See *Lewis's wild* ★*flax*. **Cathartic flax.** Same as *purging-flax*. **Cotton flax,** flax which has been prepared to resemble cotton, usually by chemical means, as with hydroxid and carbonate of sodium and sulphuric acid. **Courtrai flax,** a fine quality of flax produced in Belgium, whence it is exported to other countries.—**Dutch flax,** the false flax, *Camelina sativa*.—**Dwarf flax.** Same as *purging-flax*. **East Indian flax,** *Reinwardtia trigyna*, a small shrub of northern India, closely related to and resembling flax. **Evergreen flax,** *Linum arboreum*, a large shrubby evergreen species native to Crete. **False flax.** (*a*) *Camelina sativa*, also *C. microcarpa*, so called from its resemblance to flax and because it often grows in fields of flax as a weed. (*b*) The field-cress or mithridate mustard, *Lepidium campestre*.—**Lewis's wild flax,** *Linum Lewisii*, a large blue-flowered species very abundant on the western prairies and plains of North America, extending to Alaska: long confounded with the similar Old World species, *L. perenne*. Its stems yield a strong, fine fiber, utilized by the aborigines for cordage, etc., and the plant has been recommended for experiment as a source of commercial fiber. In California it is called *blue flax*, other local species having flowers of some different color.—**Mountain flax.** See ★*mountain-flax*. **Native flax.** (*a*) In Australia, *Linum marginale*, a congener of the common flax. Though a smaller plant it yields fiber of excellent quality which is used by the aborigines for making fishing-nets and cordage. (*b*) In New Zealand, *L. monogynum*; also the New Zealand flax, *Phormium tenax*. See *Phormium*.—**Perennial flax,** *Linum perenne*, the large blue-flowered wild species of Europe and Asia, differing from the American *L. Lewisii*, which is still included in it by some botanists, in having heterogonous flowers.—**Rocky Mountain flax.** Same as *Lewis's wild* ★*flax*.—**Wild flax.** (*a*) *Linum Virginianum*, the common small yellow-flowered species of the eastern United States. Also called *slender yellow flax*. (*b*) Same as *Lewis's wild* ★*flax*. (*c*) Same as *toad-flax*. (*d*) Same as *false* ★*flax* (*a*). (*e*) The garden tickseed or calliopsis, *Coreopsis tinctoria*.—**Yellow flax,** any yellow-flowered species of *Linum*: usually with a further qualifying adjective: as, the *slender yellow flax*, *L. Virginianum*; the *stiff yellow flax*, *L. medium*; the *Florida yellow flax*, *L. Floridanum* of the southern United States; the *ridged yellow flax*, *L. striatum*; the *grooved yellow flax*, *L. sulcatum*. *L. rigidum*, the *large-flowered yellow flax*, is a species of the western United States.



Lewis's Wild Flax (*Linum Lewisii*). *a*, plant, one third natural size; *b*, capsule, two-thirds natural size; *c*, seed, slightly reduced.

flax-blade (flaks'blād), *n.* In New Zealand, a leaf of the New Zealand flax. See *Phormium*.

flax-dodder (flaks'dod"ėr), *n.* See ★*dodder*[1].

flax-drop (flaks'drop), *n.* The flax-dodder, *Cuscuta Epilinum*.

flax-lily (flaks'lil"i), *n.* **1.** Same as *flax-bush*.—**2.** A variety of *Dianella lævis*, an Australian fiber-plant belonging to the lily family. It yields a strong, silky fiber and was formerly much used by the aborigines for making baskets.—**3.** In Tasmania, *Dianella Tasmanica*. Called also *broad-leaved flax-lily*.

flax-plant (flaks'plant), *n.* Same as *flax-bush*.

flax-ripple (flaks'rip"l), *n.* Same as *ripple*[1].

flax-star (flaks'stär), *n.* A plant, *Asterolinon Linum-stellatum*, of the primrose family, a native of the Mediterranean region, bearing greenish star-shaped flowers.

flax-tail (flaks'tāl), *n.* The common cattail or reed-mace, *Typha latifolia*.

flax-vine (flaks-vīn), *n.* The flax-dodder, *Cuscuta Epilinum*.

flaxwort (flaks'wėrt), *n.* Any plant of the flax family, especially of the genus *Linum*.

flea[1], *n.*—**Cat and dog flea.** See *Pulex*, 1.

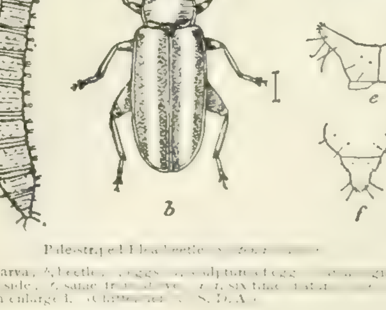
fleabane, *n.*—**African fleabane,** *Tarchonanthus camphoratus*, an aromatic shrub or small tree of South Africa, but also found in Abyssinia and Somaliland, belonging to the aster family, with leaves silvery tomentose beneath and large pyramidal clusters of yellowish-white diœcious flowers. It has beautifully variegated yellow wood, used in making musical instruments. It is cultivated as an ornamental plant. See *wild sage* (*c*), under *sage*[2].—**Bitter fleabane,** the blue fleabane, *Erigeron acris*, a plant with blue or purple flowers and acrid juice, found in northern latitudes and at high altitudes in Europe, Asia, and North America.—**Canada** or **Canadian-fleabane,** the horse-weed, *Leptilon Canadense*.—**Daisy-fleabane,** any plant of the genus *Erigeron*, but more especially *E. ramosus*, *E. annuus*, and *E. Philadelphicus*. The *western daisy-fleabane* is *E. Bellidiastrum*, a small species cinereous-pubescent throughout, with purplish flowers, found on the plains of Nebraska, Kansas, and Texas.—**Dwarf fleabane,** the low or purple horseweed, *Leptilon divaricatum* of the Mississippi valley and Texas, a small hairy plant, rarely a foot high, with larger heads than the Canada fleabane and purplish rays.—**Early fleabane,** *Erigeron vernus*, a low plant with spatulate root-leaves and rather large white- or pink-rayed heads, found in moist soil from Virginia to Florida and Louisiana. It flowers in early spring.—**Marsh-fleabane,** any of the American species of *Pluchea*. *P. camphorata* is the salt-marsh fleabane. *P. fœtida*, *P. petiolata*, and several other species grow in inland swamps, especially in Florida. See *Pluchea*.—**Philadelphia fleabane,** *Erigeron Philadelphicus*, the most widely distributed and one of the most beautiful of American fleabanes, having soft pubescent stems and

Philadelphia Fleabane (*Erigeron Philadelphicus*).
Two-fifths natural size. (From Britton and Brown's "Illustrated Flora of the Northern States and Canada.")

leaves and large terminal heads, with rose-purple rays. Also called *sweet scabious* and *skevish*.—**Running fleabane,** *Erigeron flagellaris*, a small delicate plant running by decumbent rooting stems, the small oblong leaves mostly near the ground, and the large single heads with white or pink rays borne on long slender peduncles. It is confined chiefly to the Great Plains from South Dakota to New Mexico.—**Salt-marsh fleabane.** See *marsh-*★*fleabane*.—**Spicy fleabane,** the salt-marsh fleabane.—**Spreading fleabane,** *Erigeron divergens*, a diffusely branching species, ranging over the entire western United States from Montana to Washington, and south to Texas and Mexico. It is a hairy plant with large heads, the narrow violet or purple rays separated considerably from one another.—**Three-nerved fleabane,** *Erigeron subtrinervis* of the Plains and Great Basin, having lanceolate three-nerved leaves and large solitary terminal heads with very numerous, long, and showy blue or pink rays.

fleabane-mullet (flē'bān-mul"et), *n.* The common European fleabane, *Pulicaria dysenterica*.

flea-beetle, *n.*—**Banded flea-beetle,** *Systena tæniata*, a species which is found commonly on beans and peas.—**Convex flea-beetle,** *Psylliodes convexior*, a beetle which occurs on the sugar-beet and on rhubarb and other garden vegetables.—**Cucumber flea-beetle.** Same as *potato* ★*flea-beetle*.—**Egg-plant flea-beetle,** *Epitrix fuscula*, a beetle which occurs on the egg-plant, cabbage, potato, and other plants.—**Elm flea-beetle,** the imported elm leaf-beetle. See ★*leaf-beetle*.—**Elongate flea-beetle,** *Systena elongata*, a species which lives on weeds, but sometimes eats the leaves of the cotton-plant.—**Horse-radish flea-beetle,** *Phyllotreta armoraciæ*, which feeds on the leaves of cruciferous weeds and vegetables.—**Pale-**



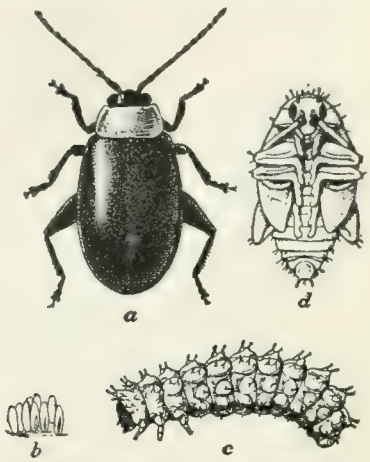
Pale-striped Flea-beetle (*Systena blanda*).
a, larva; *b*, beetle; *c*, eggs; *d*, sculpture of egg; *e*, anal segment, from side; *f*, same from above; *a*, *b*, six times natural size; *c*, *d*, *e*, *f*, much enlarged. (Chittenden, U. S. D. A.)

striped flea-beetle, an American chrysomelid beetle, *Systena blanda*, which injures the foliage of tomatoes and

potatoes.— **Potato flea-beetle,** a small American chrysomelid beetle, *Epitrix cucumeris*, which eats small round holes in potato-leaves. Also called *cucumber flea-beetle*. See *flea-beetle*. **Red-headed flea-beetle,** *Systena frontalis*, a species noted for the damage which it inflicts upon sugar-beets. — **Red-legged flea-beetle,** *Crepidodera rufipes*, a species which injures the buds and tender foliage of fruit-trees.

Potato Flea-beetle (*Epitrix cucumeris*).
Much enlarged. (Chittenden, U. S. D. A.)

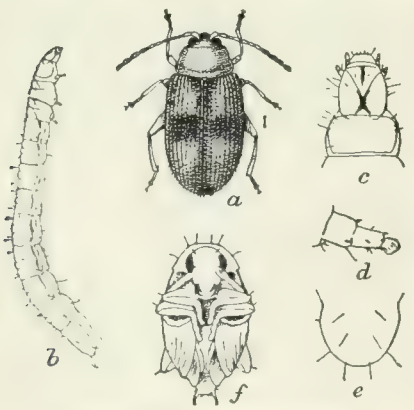
Spinach flea-beetle, an American chrysomelid beetle, *Disonycha xanthomelæna*, black in color, with a yellowish prothorax and abdomen, and of wide distribution. It feeds on spinach and the sugar-beet.—



Spinach Flea-beetle (*Disonycha xanthomelæna*).

a, beetle; *b*, egg-mass showing mode of escape of larva at right; *c*, full-grown larva; *d*, pupa. *a*, *c*, and *d*, five times natural size; *b*, more enlarged. (Chittenden, U. S. D. A.)

Strawberry flea-beetle, *Haltica ignita*, a widely distributed metallic-colored species which lives both as larva and as adult on the leaves of the strawberry and certain other plants, more frequently perhaps on the evening primrose.— **Sweet-potato flea-beetle,** *Chætocnema confinis*, a bronze-colored species which frequently destroys the leaves of young sweet-potato plants.— **Tobacco flea-beetle,** *Epitrix parvula*, a reddish-brown species



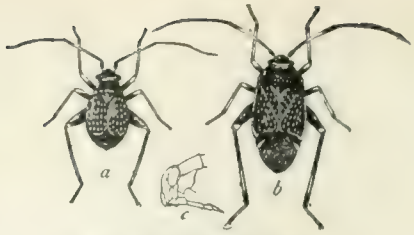
Tobacco Flea-beetle (*Epitrix parvula*).

a, beetle; *b*, larva; *c*, *d*, *e*, larval details; *f*, pupa. All much enlarged. (Chittenden, U. S. D. A.)

which punctures the leaves of young tobacco-plants.— **Violaceous flea-beetle,** *Crepidodera helxines*, a coppery, violet, or greenish-black species, often injurious to the foliage of the cherry.— **Wavy-striped flea-beetle,** *Phyllotreta vittata*, a species black in color, with a yellow wavy stripe down each wing-cover. Its larvæ mine the leaves of cruciferous vegetables, on which the adult beetles feed. — **Western flea-beetle,** *Phyllotreta pusilla*, a dark polished olive-green species which damages cabbage, turnips, and sugar-beets in the western United States.

Western Flea-beetle (*Phyllotreta pusilla*).
Much enlarged. (Riley, U. S. D. A.)

flea-bug (flē′bug), *n.* Any small capsid bug of the genus *Halticus* or its near allies.— **Potato flea-bug,** an American capsid bug, *Halticus Uhleri*, which feeds on the leaves of the potato and other garden crops.



Potato Flea-bug (*Halticus Uhleri*).

a, brachypterous female; *b*, full-winged female; *c*, head of male in outline. *a*, *b*, much enlarged; *c*, more enlarged. (Chittenden, U. S. D. A.)

flea-dock (flē′dok), *n.* Same as ★*batter-dock*, 1.

flea-mint (flē′mint), *n.* The pennyroyal, *Mentha Pulegium*.

flea-weevil (flē′wē″vil), *n.* A beetle of the family *Curculionidæ*. **Apple-leaf flea-weevil,** an American curculionid beetle, *Orchestes pallicornis*.

flebotomy, *n.* A simplified spelling of *phlebotomy*.

flèche, *n.* **4.** In a chart, a barb attached to an arrow to indicate the force of the wind which blows in the direction of the arrow. Ordinarily six flèches are used to represent six different grades of wind from calm to hurricane; but in British charts sometimes twelve are used.— **5.** One of the points on a backgammon-board.

Flechsig's myelination method. See ★*myelination*. — **Flechsig treatment.** See ★*treatment*.

flection, *n.* **6.** In *geom.*, same as *flexure*, 1.

Flectional adverb. See ★*adverb*.

fleece, *n.* **6.** In *anat.*, white fibers, resembling wool, encircling the corpus dentatum in the cerebellum. Also called *fleece of Stilling*.— **Fallen fleece,** the fleece of a diseased animal.

fleet[1], *v. t.*— **To fleet the messenger** (*naut.*), to shift the eyes of the messenger, an endless rope used for heaving in a cable by a capstan. [Obsolete.]

Fleet in being, a fleet which, though it may be so inferior to the fleet of the enemy as to be unable to engage in open fight with him, is yet unconquered and able to hamper his offensive movements.

A *fleet in being*, therefore, is one the existence and maintenance of which, although inferior, on or near the scene of operations, is a perpetual menace to the various more or less exposed interests of the enemy, who cannot tell when a blow may fall, and who is therefore compelled to restrict his operations, otherwise possible, until that fleet can be destroyed or neutralized. It corresponds very closely to "a position on the flank and rear" of an enemy, where the presence of a smaller force, as every military student knows, harasses, and may even paralyze offensive movements. When such a force is extremely mobile, as a fleet of armoured cruisers may be, its power of mischief is very great; potentially, it is forever on the flank and rear, threatening the lines of communications. It is indeed as a threat to communications that the *fleet in being* is chiefly formidable.
A. T. Mahan, War with Spain, p. 76.

The fleet, the navy, especially the Royal Navy: as, admiral of *the fleet*.

fleet[5] (flēt), *a.* Skimmed; skim: applied to skim-milk or to cheese made from it: as, *fleet* milk, *fleet* cheese. [Eng.]

flegm, *n.* A simplified spelling of *phlegm*.

Fleischman's hygroma. See ★*hygroma*.

Fleitmann's test. See ★*test*[1].

Flem. An abbreviation of *Flemish*.

Flemingia (fle-min′ji-ä), *n.* [NL. (Roxburgh, 1803), named in honor of John *Fleming* (died in 1815), a British physician who wrote on Indian botany.] A genus of dicotyledonous plants of the family *Acanthaceæ*. See *Thunbergia*.

flemingin (fle-min′jin), *n.* [*Flemingia* + *-in*[2].] An orange-red crystalline powder, $C_{12}H_{12}O_3$, obtained from *Moghania congesta* (*Flemingia congesta* of Roxburgh), and used as a dye. Its commercial name is *waras* (*wurus*) or *wars*.

Flemish accounts (*naut.*), abbreviated or deficient records. — **Flemish architecture, fake.** See ★*architecture*, ★*fake*[1]. — **Flemish loop.** Same as *Flemish eye* (which see, under *eye*[1]).

flemish[2] (flem′ish), *v. i.* [Origin uncertain.] To make a quivering movement of the tail: said of a dog; to feather.

flesh, *n.*— **To go the way of all flesh,** to meet the fate of all living beings; to die.

flesh, *v.* **II.** *intrans.* To become more fleshy, as one who has been ill and is convalescent: used with *up*.

fleshen (flesh′n), *a.* [*flesh*, *n.*, + *-en*[2].] Of flesh; composed of flesh: as, *fleshen* hearts.

The contest between my *fleshen* and servile nature and the Law's spirituality of origin.
F. W. Farrar, St. Paul, II. 235 (trans. of Rom. vii. 14).

flesher, *n.* **5.** Same as ★*flesh-split*: commonly applied to sheepskin.

When unsplit it is called a roan; when split in two, the upper half is called a skiver, the under or fleshy half a *flesher*. *W. Matthews*, Modern Bookbinding, p. 37.

Spring flesher, a long, thin, pliable knife with a handle at each end: in distinction from the ordinary stiff flesher.

flesh-glove (flesh′gluv), *n.* A glove of somewhat rough material specially made for the same purpose as a flesh-brush.

fleshing (flesh′ing), *n.* **1.** In *leather-manuf.*, the process of shaving or scraping the loose flesh from hides or skins. *Sadtler*, Handbook of Indust. Chem., p. 325.— **2.** The distribution or the condition of the flesh of an animal.

This bull presents a well-nigh invulnerable body of beef; the holes the critics pick in it are few. He has ample scale and width, and the evenness of his *fleshing* is quite out of the usual.
13th Bien. Rep. Kan. State Board Agr., 1902-04, p. 228.

Green fleshing, the process of removing the flesh from a hide or skin while it is green, or before it has undergone any of the tanning processes. *C. T. Davis*, Manuf. of Leather, p. 379.

fleshing-beam (flesh′ing-bēm), *n.* A beam for working out the flesh side of a hide or skin.

fleshing-machine (flesh′ing-ma-shēn″), *n.* A machine which fleshes hides or skins by means of a roller fitted with knives. *C. T. Davis*, Manuf. of Leather, p. 148.

flesh-split (flesh′split), *n.* In split leather, that part of the hide or skin which is nearest the flesh, as distinguished from the ★*grain-split*. Also called *flesher*. *C. T. Davis*, Manuf. of Leather, p. 429.

Fletcherism (flech′ėr-izm), *n.* [Horace *Fletcher* (b. 1849).] The taking of food only when hungry, with extremely thorough mastication, continued until the bolus of food is entirely liquefied.

fleurdelised (flėr-dė-lēd′), *p. a.* **1.** Adorned or ornamented with fleurs-de-lis.— **2†.** Branded with a fleur-de-lis (as a criminal).

fleured (flėrd), *p. a.* Decorated with conventional flowers.

fleuron, *n.* **2.** In *arch.*, a floral ornament; specifically, the large conventional flower usually placed in the center of the abacus of a Corinthian capital or classic ceiling-caisson; also, the floreated termination of a Gothic finial.

flew[4] (flö), *n.* [Prob. from **flew*[2], *v.*, = **flue*[3], *v.*, contained in verbal noun *flewing*, *fluing*.] A layer or fold of cloth as it comes from the loom. *R. Marsden*, Cotton Weaving, p. 480.

flew[5], *n.* See ★*flue*[8].

flewing (flö′ing), *n.* [Prop. **fluing*, prob. < *flue* (spelled also *flew*), waste downy matter, etc.: see *flue*[3].] The process of examining cloth for blemishes in weaving by folding it upon the front of the loom as it is unrolled from the cloth-beam. *R. Marsden*, Cotton Weaving, p. 479.

flex[1] (fleks), *n.* [L. *flexus*, *pp.*: see *flex*[1], *v.*] A point of contrary flexure or a point of inflexion.

The ordinary singularities of a plane curve would thus be the node, the cusp, the link, and the *flex*.
Cayley, Collected Math. Papers, V. 521.

Flexibilia (flek-si-bil′i-ä), *n. pl.* [NL., neut. pl. of L. *flexibilis*, flexible.] An order of the *Crinoidea* in which the tegmen is composed of numerous small loosely joined movable pieces. All species are Paleozoic and are stemmed except *Marsupites* and *Uintacrinus*, from the Cretaceous formation, which are without columns.

flexibilitas cerea (flek-si-bil′i-tas sē′rē-ä). [NL., 'flexibility of wax.'] A form of muscular rigidity in catalepsy in which one can bend the limbs of the patient with a little force, the member retaining the position in which it was last placed.

flexil, *a.* A simplified spelling of *flexile*.

flexile, *a.* **2.** In *bacteriol.*, applied to filamentous forms of bacteria which are twisted and curved, although retaining their rigidity.

flexing (flek′sing), *n.* A bending; in *geol.*, a bending or crumpling of layers or strata.

flexuosity (flek-sū-os′i-ti), *n.* [*flexuous* + *-ity*.] The quality of being flexuous or full of bends and curves.

The cerebrum exhibits a decidedly superior degree of fissural complexity with notable *flexuosity* of the gyres; particularly of the pre-frontal, parieto-occipital, and parieto-temporal areas.
Amer. Anthropologist, Oct.-Dec., 1903, p. 617.

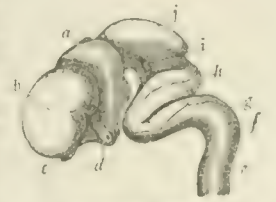
flexural (flek′sū-ral), *a.* [*flexure* + *-al*[1].] Of or pertaining to flexure or the bending of an elastic solid; producing or tending to produce flexure: as, a *flexural* stress.— **Flexural couple.** See ★*couple*.— **Flexural strength,** the strength of an

elastic solid as measured by its resistance to forces tending to bend it.

The transverse or *flexural* strength of the slates was selected for experiment because of the ease and accuracy with which the tests can be made.

U. S. Geol. Surv., 1897-98, p. 258.

flexure, *n.* **4.** In *geol.*, the folding or bending of strata under compression. **Basicranial flexure,** a bend in the embryo at the upper end of the medulla oblongata. **Cerebral flexure,** one of the bends or flexures in the embryonic brain. **Cervical flexure,** a bend or flexure in the neural tube of the vertebrate embryo at the junction of the brain and the spinal cord. **Compound flexure,** in *geol.*, a flexure or fold which contains other secondary flexures or complexes subordinate to the major system. **Cranial flexure,** the bending or flexure of the embryonic vertebrate brain around the anterior end of the notochord. **Curve of flexure.** See ★*curve*. **Elasticity of flexure.** See ★*elasticity*. **Mesencephalic flexure,** a bend or flexure in the neural tube of the vertebrate embryo at the level of the midbrain, or mesencephalon. See cut. **Reversed flexure,** in *geol.*, an overturned fold.—**Symmetrical flexure,** in *geol.*, a fold with equal dips on each side of its axis.—**Unsymmetrical flexure,** in *geol.*, a fold in strata with steeper dips on one side of the axis than on the other.



flexure-fault (flek'shŭr-fâlt), *n.* In *geol.*, a fault situated within some portion of a fold and genetically connected with the development of it. Flexure-faults usually occur on the steeper limb of an asymmetrical fold. Overthrust faults are one type of them. *Dana*, Manual of Geol., p. 109.

flexus (flek'sus), *n.* [L., a bending, a winding: see *flexuous*.] A bend or bending. **Hallux flexus,** a deformity marked by flexion of one joint of the great toe with extension of the other. Also called *hammer-toe*.

flick[1], *v.* **II.** *intrans.* **1.** In *cricket:* (*a*) To move the wrist or forearm quickly at the moment of delivering the ball: said of the bowler. [Colloq.] (*b*) To rise quickly from the pitch; bump: said of the ball. *Hutchinson*, Cricket, p. 110.—**2.** To flutter; flit, as a bird. *R. F. Burton.*

flick[1], *n.* **2.** In *cricket*, a quick turn of the bowler's wrist or forearm at the moment of delivering the ball.

flicker[1], *n.* **2.** Specifically, in *psychol.*, an unstable visual perception, occasioned by the intermittence or intensive fluctuation of stimuli.

For the determination then of the reflecting power, for example of a vermilion disc, it was only necessary to select from the series a gray disc which when combined with it in equal parts gave no perceptible *flicker*.

O. N. Rood, in Amer. Jour. Sci., Sept., 1893, p. 173.

Flicker method, the method of *flicker photometry* (which see, under ★*photometry*).

The brightnesses of these colors were determined by Rood's *flicker-method*.

Amer. Jour. Psychol., XIII. 139.

Flicker photometer. See ★*photometer*.

flicker-tail (flik'ėr-tāl), *n.* **1.** The gopher. [Western U. S.]—**2.** An epithet popularly applied to the State of North Dakota, in allusion to the gopher, which is very common in that State. *Encyc. Brit.*, XXXI. 256.

flier, *n.* **8.** One of the fresh-water sunfishes, *Centrarchus macropterus*, found in the southern United States.—**9.** An apparatus attached to a printing-machine, usually a gang of parallel rods worked by a rocking shaft, which seizes each sheet as it is printed and conveys it to the delivery-table.—**10.** One of the two lowermost leaves of a tobacco-plant.

Flyers, the first two bottom leaves, which are overripe and very trashy.

Yearbook U. S. Dept. Agr., 1899, p. 435.

Blue-pigeon flier. See ★*blue-pigeon*.

flier-frame (flī'ėr-frām), *n.* Same as *throstle*, 2.

flier-yarn (flī'ėr-yärn), *n.* Yarn that is spun on the throstle or fly-frame.

flight[1], *n.* **5.** In *archery:* (*c*) The course of an arrow through the air. (*d*) The distance traversed by an arrow.—**10.** In *mach.*: (*c*) A wing or scraper, pushed or pulled through the trough of a conveyer by a chain, to drag the load through it. (*d*) A flat bucket or vane on the periphery of a wheel-pump or on the chain which it drives. In practice this vane is made to traverse a pipe or box which prevents the water from flowing back, and as such pumps are used for only very low lifts, a fair percentage of the water is carried up.

11. Same as *flyboat*.—**12.** In *angling*, the set of spinning-baits attached by the trace to the reel-line in a spinning-tackle.—**13.** A primary, flight-feather, or remex: a term commonly used by pigeon fanciers.—**14.** The distance a bird may or does fly; the height at which it flies: in these senses, largely figurative.—**15.** A group of three or more locks situated in such close proximity along a canal that the level of water between any two adjacent locks of the series may economically be raised and lowered to produce a lift: in distinction from locks arranged in isolated pairs with considerable distance between the different pairs. A greater number of lifts, and hence a greater aggregate height of lift, can be accomplished by a given number of locks if arranged in a flight than if the same number are arranged in isolated pairs.—**Flight of colors.** See ★*color*.—**Flight of ideas,** the mental state in which ideas follow one another in rapid succession, the patient being unable to keep his mind fixed on any one subject.—**Nuptial flight,** the flight of the queen bee during which she unites sexually with the males or drones. The queen bee leaves the hive soon after her escape from the brood-cell, and, meeting the males in the air, is fertilized, probably by a number of males, and returns to the hive with her spermatic receptacle filled with male cells, which may retain their vitality and their fertilizing power for the rest of her life. See *normal* ★*parthenogenesis*.

flight[1] (flit), *v.* [*flight*[1], *n.*] **I.** *intrans.* To take flight; fly: an English sporting use.

II. *trans.* To shoot (wildfowl) in their flight to or from their feeding-grounds.

flight-conveyer (flit-kon-vā"ėr), *n.* See ★*conveyer*, 4.

flight-muscle (flit'mus"l), *n.* One of the muscles used in flight; a wing muscle.

flight-shooting, *n.* **2.** In *archery*, distance-shooting with flight-arrows.

flimflam (flim'flam), *v. t.*; pret. and pp. *flimflammed*, ppr. *flimflamming*. [*flimflam*, *n.*] To cheat out of (money), as in making or receiving change or the like. [Slang.]

flimsy, *n.* **3.** A manifold copy of a report or despatch made on flimsy; reporters' 'copy'; a duplicate or a triplicate writing made on flimsy.

flindosa, flindosy (flin-dō'zä, -zi), *n.* [Australian corruption of *Flindersia*.] The rasp-pod or crow's-ash, *Flindersia australis*. See *Flindersia* and *rasp-pod*.

fling, *n.* **6.** A sudden or rapid throwing; a whipping action; a sidewise motion with respect to the principal direction of motion: as, the *fling* of a connecting-rod.

flinkite (fling'kīt), *n.* [Named for Prof. Gustav *Flink*, a Swedish mineralogist.] A basic manganese arseniate occurring in greenish-brown orthorhombic crystals: found in Sweden.

flint, *n.* **4.** Sheepskin dried in the sun. *Modern Amer. Tanning*, p. 175.—**5.** An abbreviation of *flint-glass*.—**Flint age.** See ★*age*.—**Flint corn.** See ★*corn*1.

flint-brick (flint'brik), *n.* A hard brick made of pulverized flint; fire-brick. *Stand. Dict.*

flint-core (flint'kōr), *n.* Same as *core*[1], 2 (*k*).

flint-dried (flint'drīd), *a.* In *leather-manuf.*, dried in the sun. *Modern Amer. Tanning*, p. 32.

flint-flake (flint'flāk), *n.* In *archæol.*, one of the fragments of flint from which, in prehistoric times, implements were made, or one of the chips broken off in shaping implements.

flint-flaker (flint'flā"kėr), *n.* Same as ★*flaker*, 2.

flint-knappery (flint'nap"ėr-i), *n.* In *archæol.*, a place where flint was knapped or chipped.

flint-paper (flint'pā"pėr), *n.* Paper coated with glue and finely crushed quartz or flint, used like sandpaper for polishing.

flioma (flē-ō'mä), *n.* *Sebastodes pinniger*, one of the rockfishes of the family *Scorpænidæ*: found on the Pacific coast of the United States.

flipflap, *n.* **5.** A kind of tea-cake. [U. S.]

flip-glass (flip'glâs), *n.* A small glass goblet from which flip, or toddy, was drunk; also, a large glass tumbler in which flip was mixed and heated. See *flip*[2] and *flip-dog*.

flipper, *n.* **5.** In a sawmill, a steam-operated device for flipping, upsetting, or throwing over a log, cant, or piece of timber from a set of live rolls to other rolls, or for throwing a log out of the log-slide to the log-deck preparatory to rolling it down the sloping deck to the log-loader.

flirt, *v.* **I.** *trans.* **6.** To throw over; discard; jilt. [Slang, western U. S.]

I did n't wonder at folks thinking that preacher done flirted me. *Varnum*, Sanctified Town, p. 72.

II. *intrans.* **4.** In *archery*, to fly unsteadily: said of an arrow.

flitch, *n.* **4.** A strap; a doubling-plate; a fishing-bar; a metal or wooden plate bolted to a beam or girder at a joint or other weak spot, to strengthen it and keep it straight when exposed to endwise thrust.

flitch (flich), *v. t.* [*flitch*, *n.*] To cut into flitches: as, to *flitch* hogs; to *flitch* halibut.

flitch-plate (flich'plāt), *n.* A strap or plate of rolled metal used to connect two or more pieces of a flitch-beam.

float, *v. t.*—**Floated and set fair.** See *bath floated and set fair*, under *bath*.

float, *n.* **12.** A timber drag used for dressing off roads, especially race-courses.—**15.** In stereotyping by the plaster process, the iron plate (about half an inch thick) which upholds the baked plaster mold in its dipping-pan. The plate and the pan float in a bath of the much heavier medium of melted type-metal.—**16.** In *geol.* and *mining*, loose pieces of ore which have become detached from the parent mass in place and have traveled a greater or less distance. They indicate the presence of a vein and guide the prospector in his discoveries.

In the South claim, beside the marbles supposed to underlie the surface croppings, chrome iron ore is found as "*float*" all over the surface, and at one point a deposit of 75 or 100 tons crops above the surface. *U. S. Geol. Surv.*, 1897-98, p. 241.

17. *pl.* Commercial fertilizers consisting of low-grade phosphates ground to an impalpable powder. They are used with special advantage in connection with green manures and in composts to render the phosphoric acid more available.—**Erdmann's float,** in *chem.*, a hollow cylinder of glass, about two inches long and sealed at both ends, of rather smaller diameter than the burette in which it is placed and floating with uniform immersion in the liquid to be measured. It has a transverse mark at about the middle of its length. The graduation of the burette is read off at the level corresponding to the mark upon the float. This little appliance permits a reading to be made without error, due to the meniscus surface of the liquid.

float-boat (flōt'bōt), *n.* An old name for a ship's long-boat: so called because in some circumstances it was not hoisted on board, but towed astern; a raft for transporting cargo and passengers.

float-carbureter (flōt'kär"bū-ret-ėr), *n.* See ★*carbureter*.

float-chamber (flōt'chām"bėr), *n.* The chamber surrounding a float, as in certain forms of float-traps, float-valves, etc.

float-cut (flōt'kut), *a.* Single-cut; cut in one direction only: used in connection with files, to distinguish from double-cut.

floater, *n.* **5.** A dead human body found floating in the water. [U. S.]—**6.** In Mississippi and Tennessee, a representative in the State legislature who may be elected indifferently from either of two or more counties.—**7.** A vat in which hides are tanned. *C. T. Davis*, Manuf. of Leather, p. 403.—**8.** A cask, buoy, or other hermetically sealed vessel containing messages or records and left to drift on the ocean surface in the hope that it will be found by others. See ★*drifter*. *Geog. Jour.* (R. G. S.), XII. 527.—**9.** A floating island. [Louisiana.]

Occasionally some of the land is torn away and becomes an island. Such islands are known as flottants or *floaters*, by the Creoles, and are among the most picturesque sights of these Louisiana lakes, sailing upon them, borne hither and thither by the winds or currents.

Sci. Amer. Sup., May 30, 1903, p. 22,911.

10. On the stock-exchange, a certificate, bond or other paper, especially one not officially funded or listed, that is accepted as a recognized security.

On the Stock Exchange, where slang abounds, '*floaters* is a term which would puzzle outsiders. *Floaters* are exchequer bills and similar unfunded stock.

Temple Bar Mag., Feb., 1871, p. 320.

float-feed (flōt'fēd), *n.* A device in which the flow or feed of a liquid is controlled by the rise and fall of a float: specifically, a device for carburetting an air-current in motor-cars, or in internal-combustion engines, in which the rising of the level of the liquid gasoline raises a valve to close the flow from the inlet, and a lowering of the level opens the flow again. Much used in modern motor-cars. *The Automobile*, May 2, 1903, p. 478.

float-gage (flōt'gāj), *n.* Same as *floating gage.*

floating, *n.* **8.** The process of fattening oysters and scallops by placing them in fresh or brackish water, thus causing the tissues to become distended. See *float, n.,* 1 (*c*), and *float, v. t.,* 3. Also known as *fattening, laying out,* and *plumping.*

Floating battery. (*b*) Same as *De la Rive's* ★*ring.* **Floating fly.** Same as ★*dry-fly.* **Floating plate.** Same as ★*float,* 15.— **Floating policy.** See ★*policy*[2].

float-key (flōt'kē), *n.* A sliding key; a feather; a spline; a key which can move axially in a groove or keyway.

float-quartz (flōt'kwârts), *n.* See *float-mineral.*

float-stage (flōt'stāj), *n.* A raft; a construction of timber, or of barrels and timber; a floating stage; a buoyant platform held to a vessel's side by painters, or by fore-and-aft guys, and on which footing is obtained by men at work upon the outside of the ship.

float-trap (flōt'trap), *n.* A device for automatically discharging, by the aid of the steam-pressure, the water of condensation from a tank or pipe-line. The valve is operated by the rising or falling of a float attached to it.

float-valve (flōt'valv), *n.* A valve to which is attached a float for regulating the flow of a liquid. As the level of the liquid changes, the float rises or falls, thus closing or opening the valve.

flob (flob), *v.* [Also *flub;* imitative: cf. *flop.*] **I.** *intrans.* **1.** To flop; bang.—**2.** To puff; swell. Compare ★*flub.*

II. *trans.* To puff; cause to swell. [Prov. Eng. in all uses.]

flocculate (flok'ū-lāt), *v. i.* [*floccul(us)* + *-ate*[2]] To form visible loose, light masses, or flocculi, as of clay in soil-water or of nitrogenous substances in milk. The addition of lime or salt causes soil-water to flocculate; ammonia prevents the flocculation or breaks it up. A sheet of uniform stratus cloud often flocculates with numerous cirro-cumulus or alto-cumulus clouds arranged in rank and file.

flocculency (flok'ū-len-si), *n.* Same as *flocculence.*

flocculous (flok'ū-lus), *a.* [*floccul(us)* + *-ous.*] Resembling or of the nature of flocculi; flocculose.

flocculus, *n.* **5.** in *astron.,* a name given by Hale to cloudy wisps, bright or dark, with which the sun's surface appears to be covered when photographed with the spectroheliograph by the light of some special wave-length, as, for instance, through a line in the spectrum due to some special element such as calcium, hydrogen, or iron.—**Fissure of the flocculus.** See ★*fissura flocculi. Astrophysical Jour.,* Jan., 1904, p. 42.

flock-duster (flok'dus″tèr), *n.* A duster adapted to shredding and dusting wool flock. Also *flock-opener.*

flocking (flok'ing), *n.* **1.** The act of removing flocks from a fabric. See *flocking-machine.*— **2.** A collection of damaged or broken cotton fibers from the combing-needles of a cotton-combing machine. It is liable to be formed when the needles are imperfectly adjusted.

flock-opener (flok'ōp″nèr), *n.* Same as ★*flock-duster.*

flocoon (flo-kön'), *n.* [F. *flocon,* < *floc,* < L. *floccus,* flock: see *flock*[2].] The filamentous, waxy secretion of certain plant-lice, especially of those of the subfamilies *Chermesinæ* and *Pemphigínæ.*

floetz, *n.* See *fletz.*

flog, *v. t.* —**To flog the clock,** to move the hands forward surreptitiously and thus shorten the time one has to be on duty. [Slang.]

flogger, *n.* **3.** In *bridge,* a separate score-sheet or -book in which the winnings and losings on each rubber are entered. Also called wash-book.

flood, *n.*—**Main flood.** (*a*) High water. (*b*) A large, broad body of water; main tide. (*c*) The main ocean; main sea. *N. E. D.*

flood, *v. t.* **2.** See ★*splash,* 4.

flood-arch (flud'ärch), *n.* One of the arched openings in a bridge or viaduct over a valley or lowland through which flood-water may pass during high water: used in distinction from a channel arch, which spans the channel and through which water continuously or usually flows.

flood-board (flud'bōrd), *n.* One of several boards or timbers placed horizontally one on another between suitable supports or piers, usually on the top of a permanent dam, wall, dike, or bulkhead, to confine flood-waters temporarily.

flood-dam (flud'dam), *n.* See ★*splash-dam.*

flood-ground (flud'ground), *n.* The portion of a river valley which becomes submerged in times of flood: a flood-plain or river-flat. *Dana,* Manual of Geol. (4th ed.), p. 193.

flood-hatch (flud'hach), *n.* A sluice or gate, usually rectangular and of timber, sliding in vertical grooves or ways in a bulkhead or dam impounding water, for the purpose of closing a flood-opening: a flood-gate: to be opened by raising during floods, to prevent the water above the dam from reaching an undesirable height.

flooding, *n.* **3.** A method of applying water for irrigation by permitting it to spread over nearly level ground, with or without restraining checks or small dikes built of earth. In *wild flooding* the water is turned upon the field and guided by a hoe or shovel, without the previous construction of checks. In the check or block system the land is graded to a certain extent and the water controlled by checks or dikes.

flooding-dam (flud'ing-dam), *n.* Another name for ★*flood-dam. Dialect Notes,* II. vi.

flood-loam (flud'lōm), *n.* A fine silt deposited on the flood-plain of a river in time of overflow. *Science,* June 21, 1901, p. 988.

floodometer (flu-dom'e-tèr), *n.* A gage or instrument for indicating the height of water in a stream subject to floods.

flood-pipe (flud'pīp), *n.* A pipe by means of which some place is flooded.—**Magazine flood-pipe** (*naval*), one of a set of pipes leading from a sea-valve to a magazine by means of which sea-water is admitted to flood the ammunition-rooms when the magazine flood-cock is opened.

flood-plain (flud'plān), *n.* A nearly level alluvial plain formed by deposition of land waste by graded or aggrading streams during times of flood.

Sweeping up from the sandy shores of the sea across marshes, *flood-plains* and well-watered forests.
Pop. Sci. Mo., March, 1902, p. 387.

flood-plane (flud'plān), *n.* The highest level to which water rises during a time of flood. Such levels are often recorded by flood-marks, or bench-marks cut into stone walls, wooden posts, or buildings.

floor, *n.,* **5.** (*b*) In *wood ship-building,* same as *floor-timber.* (*c*) In *iron ship-building,* the bottom part of a frame, consisting of the floor-plate, frame-bar, and the reverse frame-bar.— **10.** A unit formerly used in the measurement of excavation and embankment. Its magnitude was different in different localities, but was generally equivalent to a prism of earthwork 18, though sometimes 20, feet square, and 1 foot in depth.

flooring-machine (flōr'ing-ma-shēn″), *n.* In *wood-working,* a machine for planing and finishing flooring, ceiling, siding, and casing. It is essentially a planer and matcher.

flooring-plate (flōr'ing-plāt), *n.* One of the plates which underlie the ambulacral grooves in the class *Edrioasteroidea.* They are mostly arranged in double series, and resemble the ambulacral ossicles of the *Asteroidea.*

floor-light (flōr'līt), *n.* A piece of glass, or a frame with many pieces of glass, let into a floor to allow of the transmission of light from above.

floor-plan (flōr'plan), *n.* In *arch.,* a drawing which shows the plan of one story, especially with reference to those parts which are in connection with the floor rising out of it. Thus the dotted lines indicating patterns of the ceiling and all indications of objects several feet above the floor have no necessary place in a floor-plan.

floor-plate (flōr'plāt), *n.* **1.** A foot-plate; a plate, usually of iron or steel but sometimes built up of boards, used as a floor around engines and boilers. The use of such plates permits of easy access to pipes placed beneath them, as they are usually held in place only by their own weight.
2. A massive plate usually of cast iron, with slots on its upper face, forming part of the floor of a machine-shop, so that work can be bolted to it.

floor-push (flōr'push), *n.* An electric push-button inserted in the floor of a room and operated with the foot.

floor-rest (flōr'rest), *n.* A heavy standard which rests on the floor and supports the tool-rest for a hand-lathe. It is used by pattern-makers for turning large pieces, such as fly-wheels, etc., the bed of the lathe being cut away to permit such large work to swing.

floorway (flōr'wā), *n.* In bridges, that part of the construction which is immediately concerned with the floor, as the pavement, stringers, and floor-beams, and in railroad-bridges also the ties, rails, and guard-rails: used in distinction to the trusses or arches, whose function it is to support the floorway.

The floor of the bridge, which is supported upon the crown of the arches and upon steel bents extending from the arches to the *floorway,* provides for a driveway 23.5 feet in width, and two footways for foot passengers 8.8 feet in width, making a total width of *floorway* of 41.3 feet.
Sci. Amer. Sup., May 23, 1903, p. 22894.

floose (flōs), *n.* See ★*falus.*

Floral zone. See ★*zone.*

floran (flō'ran), *n.* [Of undetermined (Cornish?) origin.] In *mining,* tin ore which is of fine grain or which has been very finely stamped.

floreate, floriate (flō'rē-, flō'ri-āt), *v.*; pret. and pp. *floreated, floriated,* ppr. *floreating, floriating.* **I.** *intrans.* To flower out; blossom. *Baring-Gould.*

II. *trans.* To decorate with flower-patterns.

floreation, floriation (flō'rē-, flō'ri-ā'shon), *n.* Decoration with flower-patterns.

Florentine, *n.* **4.** [*l. c.*] Same as ★*fanchonnette.* —**Florentine school of painting.** See ★*painting.* **Florentine school of sculpture.** See ★*sculpture.*— **Florentine twill,** *n.* Same as ★*cassimere-twill.*

flore pleno (flō'rē plē'nō), [L., abl. of *flos plenus,* 'full flower.'] With the flower full: used in *hort.* with reference to flowers which have the petals (or in composites the rays) multiplied so as to fill the whole disk; double-flowered; double.

florescence, *n.* **2.** A flowering or blossoming out; growth; development; maturity.

The age of greatest [artistic] *florescence* all over the area.
Encyc. Brit., XXXI. 59.

florette (flō-ret'), *n.* [F., dim. of *fleur.* OF. *flor,* flower.] A French coin of the time of Charles VI., equal to 20 deniers: so called from the three fleurs-de-lis crowned on the obverse.

floretum (flō-rē'tum), *n.*; pl. *floreta* (-tä). [NL., < L. *flos* (*flor-*), flower, + *-etum.*] A botanical garden limited in its scope to the scientific cultivation of flowers.

Florida bean, caper-tree, etc. See ★*bean*[1], etc.—**Florida clover.** See *Richardsonia.*

floridean (flō-rid'ē-an), *a.* Of or belonging to the *Florideæ.*—**Floridean pit.** See ★*pit*[1].

Floridian series, in *Amer. geol.,* a series of Pliocene Tertiary beds extending through the Atlantic States. They abound in marine fossils, and have been divided into a number of subordinate groups.

florid-song (flor'id-sóng), *n.* Figurate or contrapuntal music, as distinguished from *plain-song.*

florigraphic (flō-ri-graf'ik), *a.* [L. *flos* (*flor-*), flower, + Gr. γράφειν, write.] Of or pertaining to flower-writing or literature in regard to flowers. *G. S. Hall,* Adolescence, II. 209.

florin, *n.* **5.** A Polish silver coin of the value of about 12 United States cents.—**Double florin,** an English silver coin of the value of four shillings, authorized in 1887.

floristic (flō-ris'tik), *a.* [*flora* + *-istic.*] Having in view, or otherwise related to, a flora: opposed to *œcological.* See ★*phytogeography.*

floristically (flō-ris'ti-kal-i), *adv.* In a floristic view. *F. E. Clements.*

floristics (flō-ris'tiks), *n. pl.* Same as *floristic* ★*phytogeography.*

The species, considered primarily with reference to numbers, would be represented by distribution or *floristics. Pound and Clements,* Phytogeog. of Neb., p. 15.

florula (flor'ū-lä), *n.*; pl. *florulæ* (-lē). [NL., dim. of *flora,* flora.] A little flora, as of a limited area or, in fossil plants, of a particular locality: either the plant content or the systematic exhibit.

florule (flor'ūl), *n.* [NL. *florula.*] Same as ★*florula. Amer. Jour. Sci.,* Dec., 1903, p. 417.

flory-boat (flō'ri-bōt), *n.* [Origin of *flory-* unknown.] A small boat employed in carrying passengers between a vessel and the shore.

floscelle (flo-sel'), *n.* [L. *floscellus,* dim. of *flos,* flower.] In certain of the echinoids or sea-urchins, an arrangement of the ambulacral rosette around the peristome in which the ambulacra are depressed and the intervening areas projected into lip-shaped ridges.

floscule (flos'kūl), *n.* **2.** Any rotifer of the family *Flosculariidæ.*

flosculus (flos'kū-lus), *n.*; pl. *flosculi* (-lī). [L. *flosculus,* a little flower: see *floscule.*] A tubular organ with a central style at the anus of certain homopterous insects of the family *Fulgoridæ. Kirby and Spence.*

floss[3], *n.* **4.** The loose silk which envelops the cocoon-pod of the silkworm.

floss-silk, *n.* **2.** Loose or broken filaments of silk from the cocoons.—**3.** A soft, coarse yarn made from silk and used in making shawls, bands, and ordinary silk fabrics.

flotation, *n.* **3.** The act of launching, or 'floating,' a new enterprise, a loan, a new issue of stocks or bonds, or the like.—**Center of flotation.** See ★*center*[1].—**Curve of flotation.** See ★*curve.*—**Surface of flotation,** in *naval arch.*, in the theory of the unresisted rolling of a vessel, the surface formed by the envelop of the load-water planes of a vessel.

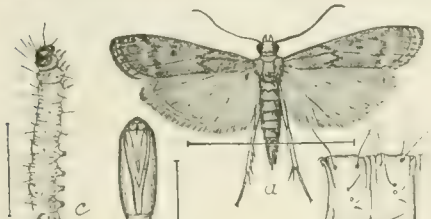
flounce[2], *n.* **2.** In *saddlery,* a covering for a pistol-holster, either of leather or bearskin.

flounder[2], *n.*—**Arctic flounder,** a small flounder, *Liopsetta glacialis,* found in arctic seas.—**Eel-back flounder,** a species of flounder, *Liopsetta putnami,* found along the New England coast; the female is nearly scaleless.—**Four-spotted flounder,** a species of flounder, *Paralichthys oblongus,* found along the Atlantic coast from Cape Cod to Cape Hatteras.—**Peacock flounder,** a large species of flounder, *Platophrys lunatus,* found in the West Indies; it is remarkable for the curved streaks of blue scattered over the body.—**Pole flounder,** the deep-sea flounder, *Glyptocephalus cynoglossus,* of the North Atlantic.—**Southern flounder,** *Paralichthys lethostigma,* a flounder found on the South Atlantic coast of the United States.—**Starry flounder,** a large, coarse flounder, *Platichthys stellatus,* with black spots; found in the North Pacific.—**Summer flounder,** the common large flounder, *Paralichthys dentatus,* found from New York southward along the Atlantic coast. See cut at *Paralichthys.*—**Winter flounder,** the small rough-scaled flounder, *Pseudopleuronectes americanus,* common along the New England coast.

flour, *n.*—**Clear flour,** a trade-name for the third of the three grades into which wheat flour is commercially divided. See *patent* ★*flour* and *straight* ★*flour.*—**Flour of rocks.** See ★*rock-flour.*—**Graham flour,** unbolted wheat flour or wheat meal, retaining the bran, used in making brown bread (which see, under *bread*[1]).—**Patent flour,** flour made from wheat by roller-milling instead of by grinding between millstones; the first of the three grades into which flour is commercially divided.—**Roller-process flour,** flour made by the roller process (which see, under ★*process*).—**Standard flour,** as defined by the United States Department of Agriculture, flour prepared from standard wheat, and containing not more than 13.5 per cent. of moisture, not less than 8.5 per cent. of protein, and not less than .4 per cent. of ash.—**Straight flour,** a trade-name for the second of the three grades into which wheat flour is commercially divided. See *patent* ★*flour* and *clear* ★*flour.*

flour-beetle, *n.* **2.** Any one of several beetles of the genus *Tribolium,* as *T. ferrugineum* and *T. confusum.*—**Broad-horned flour-beetle,** a cosmopolitan beetle, *Echocerus cornutus,* limited in its distribution in the United States to the sea-coast towns, and found in ground cereals of various sorts.—**Confused flour-beetle,** a cosmopolitan beetle, *Tribolium confusum,* occurring in grain of all kinds, usually following the attacks of the true grain-weevils. Its principal damage is done to flour.—**Depressed flour-beetle,** a cosmopolitan beetle, *Palorus subdepressus.*—**Rust-red flour-beetle,** the most abundant of the flour-beetles, *Tribolium ferrugineum,* occurring in various stored cereal products in most parts of the world.—**Slender-horned flour-beetle,** *Echocerus maxillosus.*—**Small-eyed flour-beetle,** the smallest of the tenebrionid flour-beetles, *Palorus ratzeburgi.*

flour-moth (flour′môth), *n.* Any one of several small moths whose larvæ feed on flour, as the Indian-meal moth, *Plodia interpunctella,* or the meal snout-moth, *Pyralis farinalis.*—**Mediterranean flour-moth,** a cosmopolitan phycitid moth,



Mediterranean flour moth (*Ephestia kuehniella*).
a, moth; *c*, larva; *d*, pupa, enlarged; *e*, two joints of larva, more enlarged. (Chittenden, U. S. D. A.)

Ephestia kuehniella, which does great damage in flour-mills. The larvæ form cylindrical silken tubes in which they feed. The infested flour becomes felted together and lumpy, and clogs the milling machinery.

flour-weevil (flour′wē″vl), *n.* Any one of the flour-beetles.

flour-worm (flour′wėrm), *n.* The larva of any one of the flour-moths or flour-beetles.

flow[1], *v. i.* **9.** In the *differential calculus,* to enlarge (or diminish) continuously, that is, by infinitesimal increments (+ or −).

flow[1], *n.* **9.** A quicksand. [Scotch.]—**Ebb-and-flow structure.** See ★*ebb.*—**Flow of marble,** in *geol.*, the gradual bending or deformation of marble, either minutely when in blocks at the surface or in mass and more extensively when buried beneath a heavy load of overlying strata: due to the plasticity developed under strain. *Nature,* July 9, 1903, p. 231.—**Tube of flow.** See ★*tube.*

flowage, *n.* **2.** In *mech.*, gradual internal motion or deformation, without fracture, of a viscous solid such as asphalt.—**Zone of flowage,** in *geol.*, the deepest of the three zones into which the earth's crust is conceived to be divided with regard to the deformation of rocks. In the zone of flowage the rocks are confined on all sides, yet loaded beyond their resistance as determined at the surface. Earth-movements therefore develop a viscous flow in these solids. The upper limit of the zone of flowage varies in depth, according to the nature of the rock, from 500 meters for soft shales to 10,000 meters for firm granites. The correlative zones are the *zone of fracture* and the *mixed zone of fracture and flowage.* The terms were suggested by C. R. van Hise.

flow-blue (flō′blō), *n.* In *ceram.*, blue color which spreads or flows more or less through the glaze which is placed upon it. Also called *flown blue.*

flow-dike (flō′dīk), *n.* A shallow artificial channel to convey running water: generally employed in drainage. [Obsolete.]

Flower of chivalry. See ★*chivalry.*—**Flowers of arsenic, of ocher.** See ★*arsenic,* ★*ocher.*

flower-basket (flou′ėr-bȧs″ket), *n.* **1.** A basket in which flowers are held.—**2.** A hexactinellid sponge, *Euplectella aspergillum.* Also called *Venus's flower-basket.*

flower-beetle (flou′ėr-bē″tl), *n.* Any one of many beetles which habitually frequent or feed upon flowers. A number of scarabæid beetles of the tribe *Cetoniinæ* have this habit, as the hermit flower-beetle, *Osmoderma eremicola,* the rough flower-beetle, *O. scabra,* the bumble flower-beetle *Euphoria inda,* and the sad flower-beetle, *Euphoria melancholica.* Many of the *Malachiidæ* and *Cleridæ* are also flower-beetles, and certain species of the firefly family, *Lampyridæ,* particularly of the subfamily *Telephorinæ,* which contains the so-called soldier-beetles, feed on pollen and are called flower-beetles.—**California flower-beetle,** a western United States scarabæid beetle, *Hoplia callipyge,* which feeds on flowers.

flowerer, *n.* **2.** A person employed to paint flowers on pottery. [Eng.]

This last was usually done by women '*flowerers,*' who scratched a rough floral pattern into the body of the ware and rubbed a little zaffre or powdered cobalt glass over the incisions, a kind of ceramic tattooing which was largely practised at Bursdem about 1750.
R. L. Hobson, in Burlington Mag., IV. 148.

flowering, *n.* **3.** The spawning of pelagic fishes, which sometimes cover large areas of the surface of the sea with their spawn.—**4.** The appearance of the surface of lakes and other large bodies of fresh water due to the occurrence of considerable quantities of algæ, usually blue-green forms.

flower-midge (flou′ėr-mij), *n.* A midge that infests flowers.—**Clover flower-midge** an American cecidomyiid fly, *Dasyneura trifolii,* which breeds in the flowers of red clover. Formerly called *clover seed-midge.*

flower-of-Jove (flou′ėr-ọv-jōv′), *n.* The rose-campion, *Lychnis Flos-Jovis.* Also *Jupiter's-flower.*

flower-of-the-gods (flou′ėr-ọv-ŦHē-godz′), *n.* See ★*Disa,* with cut.

flower-show (flou′ėr-shō), *n.* A public exhibition of flowers and flowering plants.

flow-gate (flō′gāt), *n.* A long gate at the side of a foundry-mold from which the molten metal flows into the mold at several points.

flow-glaze (flō′glāz), *n.* A glaze on pottery or porcelain which flows down the sides of the vessel, usually in streaks of different colors.

flow-line (flō′līn), *n.* In igneous rocks, one of a number of streaks or bands of different color, or parallel arrangement of crystals, which indicate the direction of differential flow or planes of movement along which the molten magma spread or flowed during its eruption just before its solidification. See *fluidal structure.*

flow-structure (flō′struk″tūr), *n.* Same as *fluidal structure.*

flox, *n.* A simplified spelling of *phlox.*

F. L. S. An abbreviation of *Fellow of the Linnæan Society.*

fluatation (flō-ā-tā′shọn), *n.* A trade-name for treatment with so-called 'fluate' solution. See ★*fluate,* 2.

fluate, *n.* **2.** A trade-name for a solution of a silico fluoride (salt of hydrofluosilicic acid) proposed for use by brushing over the surface of building-stone in order to close the pores and protect the stone from disintegration.

fluate (flō′āt), *v. t.*; pret. and pp. *fluated,* ppr. *fluating.* To treat with the so-called 'fluate' solution. See ★*fluate,* 2.

fluavil (flō′ạ-vil), *n.* [Appar. ⟨ L. *flu-ere,* flow, + F. *av(al)* down, +-*il.*] That portion of crude gutta-percha which is dissolved by boiling absolute alcohol and which remains in solution after alban has separated out on cooling.

flub (flub), *v.* [Var. of ★*flob.*] To bang; flop. [Prov. Eng.]

flub (flub), *n.* [*flub, v.*] Same as *foozle,* 2.

fluce (flōs), *n.* See ★*falus.*

Fluctuation structure. Same as *fluidal structure.*

flue[8], **flew**[5] (flō), *n.* [Also *flewe*; ME. *flew, flow*; related to MD. *vluwe,* a fishing-net, D. *flouw,* a snipe-net, F. *flu,* a net (Boiste). Origin obscure.] A fishing-net, stationary or used as a drag-net.

flue-chamber (flō′chām″bėr), *n.* A chamber or enlarged section in an exhaust-flue, formed to secure a thorough mixture of the fuel-gas with oxygen, or else to diminish the velocity of flow of the gas, so that dust or solid matter carried with it may have time to settle and be precipitated out.

flue-cure (flō′kūr), *v. t.* In the tobacco industry, to cure (tobacco) in a close barn by artificial heat distributed by flues of stone, brick, or iron. Flue-curing is practised upon 'bright-yellow' tobaccos. See ★*tobacco.*

flue-dust (flō′dust), *n.* The dust which collects in the flue of a metallurgical furnace, and which contains some very fine particles of metal, usually in the form of oxids.

flue-gas (flō′gas), *n.* Any mixture of gases from the flues of smelting-works or other chemical factories.

flue-heater (flō′hē″tėr), *n.* **1.** A device for heating a flue or air-shaft to promote the circulation of air.—**2.** A heater for feed-water or other material placed in the channels or passages carrying hot gases from a furnace.

fluellen, *n.*—**Sharp-pointed fluellin,** *Kickxia Elatine,* a plant of the figwort family having hairy stems and sharp-pointed triangular hastate leaves, native of Asia, but naturalized in Europe and in North America from Canada to North Carolina.

flue-net (flō′net), *n.* Same as ★*flue*[8]. *Habakkuk,* i. 15 (margin).

fluent, *a.* **4.** In fluxions, enlarging (or diminishing) continuously, that is, by infinitesimal increments (+ or −).

flue-pipe (flō′pīp), *n.* In *organ-building.* See *pipe*[1], 2.

flue-register (flō′rej″is-tėr), *n.* In *organ-building,* same as *flue-stop.*

flue-scraper (flō′skrā″pėr), *n.* A device for cleaning the small flues of a multitubular boiler. It consists of pieces of sheet-metal twisted into a helix of the diameter of the inside of the flue, or of brushes of wire or scraping-edges, and fastened to a rod long enough to reach through the flue from end to end. Modern scrapers are often revolving devices, driven by a motor and pushed through the tube while in motion.

flue-sheet (flō′shēt), *n.* The plate into which the flue or flues of a boiler are fastened. In some cases it is also the tube-sheet.

flue-way (flō′wā), *n.* The opening through a furnace or ventilating flue; a furnace or ventilating flue.

fluffing-wheel (fluf′ing-hwēl), *n.* In *leather-manuf.*, a wheel for smoothing or brushing the flesh side of sheepskins. *C. T. Davis,* Manuf. of Leather, p. 511.

fluffment (fluf′mẹnt), *n.* [*fluff* + *-ment.*] **1.** Light, loose talk or material. [Cumberland, Eng.]—**2.** Fuss or fussiness in either dress or manner. *A. E. Barr,* in The Century, XXXIX. 817.

fluid. **I.** *a.*—**Fluid measure.** Same as *apothecaries' measure* (which see, under *measure*).

II. *n.*—**Cephalorachidian fluid.** Same as *cerebrospinal fluid.*—**Coley's fluid,** a serum containing the toxins of the erysipelas streptococcus and of *Bacillus prodigiosus,* employed in the treatment of sarcoma and other malignant growths.—**Flux of a fluid,** in *phys.*, the flow in cubic centimeters per second through any imaginary surface in a fluid mass; the surface integral of fluid velocity over such a surface.—**Pasteur's fluid,** a nutrient solution used for the cultivation of bacteria and other micro-organisms, supposed to contain all the elements of protoplasm.

fluidally (flō′i-dạl-i), *adv.* In the manner of a fluid.

fluidiform (flō-id′i-fôrm), *a.* [L. *fluidus,* fluid, + *forma,* form.] Of fluid form; gaseous; ethereal; intangible.

fluidism, *n.* **2.** Same as *humoralism.*

fluke[1], *n.* **6.** A result of accident or lucky chance rather than of skill.—**7.** A failure, as of a yacht-race for lack of wind.—**Mushroom fluke,** the circular iron flange or umbrella shape at the end of a mushroom anchor shank or stem. A mushroom anchor has no stock.

fluke[1], *v. t.* **2.** In *shooting,* to hit by a chance shot.

Fluking kangaroos at 300 or 400 yards is not exhilarating sport, as anyone might understand if he tried catapulting grasshoppers at 50.
F. G. Aflalo, in Smithsonian Rep., 1901, p. 695.

fluke[2], *n.* **Bronchial fluke.** Same as *lung* ★*fluke.* — **Indian liver-fluke.** *Opisthorchis noverca* (Braun, 1903), a trematode worm found in the liver of man and dogs in India. It is from 9 to 12 millimeters long. — **Lung fluke,** *Distomum ringeri.*

fluky, *a.* 3. Uncertain; shifty: said of the wind. Also *flooky.*

flume, *n.* 4. An inclined trough in which water runs, used in transporting logs or timbers. **Rating flume,** a conduit or long box usually rectangular in section forming part of an irrigating canal or ditch and arranged for the purpose of showing the quantity of water flowing through the canal or ditch. The flume is rated by suitable measurements, that is the relation of height of water to quantity in the flume is ascertained and indicated by marks on the sides. *H. M. Wilson,* Irrigation Engineering, p. 93.

flume, *v.* I. *trans.* 2. In *lumbering,* to transport, as logs or timbers, by a flume.

II. *intrans.* 1. To conduct a channel or canal, by a flume, along an artificial temporary construction in situations where an earth or masonry channel cannot readily be secured by excavation and embankment.— 2. To build a flume or artificial channel and its supporting construction.

The original scheme was to develop the Coquitlam by *fluming* along the steep hillside a distance of about seven miles. *Elect. World and Engin.,* May 16, 1903, p. 837.

fluming, *n.* 2. An artificial channel and its supporting construction, generally of timber: used to conduct a stream or canal in situations where an earth or masonry channel cannot readily be secured.

flunky, *n.* 4. A cabin waiter on a passenger-vessel.

fluo-aluminate (flö″ọ-a-lū′mi-nāt), *n.* In *chem.,* a compound of aluminium fluoride with the fluoride of a more electropositive metal, as the mineral cryolite, sodium and aluminium fluoride.

fluocalcium (flö-ọ-kal′si-um), *n.* In *chem.,* same as ★*calcium fluoride.*

fluoniobate (flö-ọ-nī′ọ-bāt), *n.* [*fluo(ride)* + *niob(ium)* + *-ate*[1].] In *chem.,* a compound of niobium fluoride with a fluoride of a more electropositive metal: also called *niobifluoride* or *niobiofluoride.*

fluoradelite (flö-ọ-rad′e-līt), *n.* Same as ★*tilasite.*

fluoramide (flö-ọ-ram′id), *n.* In *chem.,* an explosive liquid of oily consistency said to have been obtained by electrolysis of a solution of ammonium fluoride. The name implies the presence of hydrogen as a constituent. The substance has also been called nitrogen fluoride, on the assumption that it consists of nitrogen and fluorin only. Its existence is doubtful.

fluoran (flö′ọ-ran), *n.* [*fluor(ide)* + *-an.*] A crystalline compound, $C_{20}H_{12}O_3$, formed together with phenolphthalein, of which it is the anhydrid.

fluoranthene (flö-ọ-ran′thēn), *n.* [*fluor(ide)* + Gr. ἄνθος, flower, + *-ene.*] A solid hydrocarbon, $C_{15}H_{10}$, found in coal-tar, in American petroleum, and in the organic distillate obtained in the preparation of mercury from its ores in Idria, whence its other name, *idryl.* It melts at 110° C. *Sadtler,* Handbook of Indust. Chem., p. 394.

fluorapatite (flö-ọ-rap′ạ-tīt), *n.* See ★*chlorapatite.*

fluorate (flö′ọ-rāt), *n.* [*fluor(ide)* + *-ate*[1].] In *chem.,* same as *fluate:* the correct modern term is *fluoride.*

fluorene (flö′ọ-rēn), *n.* [*fluor(ide)* + *-ene.*] A solid hydrocarbon, $C_{13}H_{10}$, contained in portions of coal-tar boiling at 300–400° C. If not quite pure it has a violet fluorescence. Also called *orthodiphenylenemethane* or *2.2′-methylenebiphenyl.* It melts at 113° C.

Fluorescence absorption. See ★*absorption.*

Fluorescent screen, a screen usually of some material pervious to X-rays, one side of which is coated with calcium tungstate, calcium sulphid, barium platino-cyanide, or other substance which fluoresces under the action of these rays or under other influences. When used in X-ray examinations shadows appear on the screen. Similar screens are used in the spinthariscope, and in experimentation on luminescence. See also ★*fluoroscope.*

fluorescer (flö-ọ-res′ėr), *n.* A fluorescent substance. *Nature,* March 31, 1904, p. 523.

fluorescin (flö-ọ-res′in), *n.* [*fluoresce* + *-in*[2].] A colorless crystalline compound, $C_{20}H_{14}O_5$, prepared by the action of zinc dust and sodium hydroxid on fluorescein. It melts at 126° C.

fluor-herderite (flö-ọr-hėr′dėr-īt), *n.* See ★*herderite.*

fluoridation (flö″ọ-ri-dā′shọn), *n.* In *geol.,* the process whereby fluorin combines with bases, and more especially with calcium, to yield fluorides. *Van Hise,* U. S. Geol. Surv., Monographs, XLVII. ii. 204.

fluoride, *n.*— **Silicon fluoride,** in *chem.,* a gaseous substance obtained by heating a mixture of fluor-spar and concentrated sulphuric acid with silica or any silicate. It is a colorless gas of irritant odor and high density, decomposed by water with formation of a jelly-like mass of silica or a silicic acid.

fluorin, *n.* After several abortive or doubtfully successful attempts by various chemists to isolate the element fluorin this result was finally attained by Moissan in 1886. He submitted to electrolysis anhydrous hydrofluoric acid in which a little potassium-hydrogen fluoride had been dissolved, using a specially constructed apparatus of platinum alloyed with iridium. Fluorin so obtained is a gas of pale greenish-yellow color, with a strongly irritant and penetrating odor, liquefiable at about −185° C. under atmospheric pressure, and intensely active in its chemical relations to other substances. It combines even in darkness with hydrogen with violent detonation; silicon, boron, arsenic, antimony, sulphur, and iodine take fire spontaneously in the gas, and it decomposes water with liberation of oxygen in the form of ozone. With oxygen itself fluorin will not combine.

fluorindine (flö-ọ-rin′din), *n.* [*fluor(ide)* + *indigo* + *-ine*[2].] A weakly basic dye, $C_{30}H_{20}N_4$, very fluorescent in alcoholic solution.

fluoroform (flö′ọ-rọ-fôrm), *n.* [*fluor(ide)* + *form(ic).*] A colorless gas, CHF_3, which liquefies at 20° C., under the pressure of 40 atmospheres. It is an analogue of chloroform and iodoform and is formed from these substances by the action of silver fluoride. Also called *trifluor methane.*

fluoroformol (flö″ọ-rọ-fôr′mōl), *n.* [*fluoroform* + *-ol.*] The trade-name for fluoroform (CHF_3) in dilute solution in water: recommended for medical use as an internally administered antiseptic in pulmonary phthisis. Also called *fluoryl.*

fluorography (flö-ọ-rog′rạ-fi), *n.* [*fluor(ide)* + Gr. -γραφία, < γράφειν, write.] The process of etching on a surface of glass by means of hydrofluoric acid.

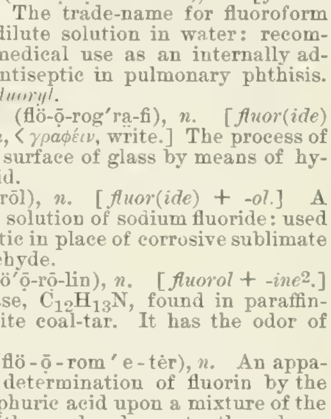
fluorol (flö′ọ-rōl), *n.* [*fluor(ide)* + *-ol.*] A two per cent. solution of sodium fluoride: used as an antiseptic in place of corrosive sublimate and formaldehyde.

fluoroline (flö′ọ-rō-lin), *n.* [*fluorol* + *-ine*[2].] A volatile base, $C_{12}H_{13}N$, found in paraffin-oil from lignite coal-tar. It has the odor of quinoline.

fluorometer (flö-ọ-rom′e-tėr), *n.* An apparatus for the determination of fluorin by the action of sulphuric acid upon a mixture of the substance with powdered quartz, the volume of the silicon tetrafluoride evolved being measured.—**Dennis fluorometer,** an apparatus used in conjunction with X-rays in locating foreign substances in the body, or determining the nature of fractures or dislocations.

fluorophore (flö′ọ-rọ-fōr), *n.* [*fluor(escence)* + Gr. -φορος, < φέρειν, bear.] An atomic group the presence of which in the molecule of a compound is supposed to cause the exhibition of fluorescence. Such groupings are the ring structures in pyrone, acridine, anthracene, etc. *Nature,* Nov. 5, 1903, p. 15.

fluoroscope (flö′ọ-rọ-skōp), *n.* [*fluor(escence)* + Gr. σκοπεῖν, view.] An apparatus designed for observing the effect of the Röntgen rays by means of their action on a fluorescent substance. It consists essentially of a tube or box closed at one end by a screen coated with a fluorescent substance, as tungstate of calcium. When an object, as the hand, placed before a vacuum-tube is observed through the fluoroscope, the shadows of its parts that are not transparent to the X-rays are seen on the fluorescent screen.


Fluoroscope.

fluoroscopic (flö″ọ-rọ-skop′ik), *a.* Of or pertaining to the fluoroscope or to fluoroscopy.

fluoroscopy (flö-ọ-ros′kọ-pi), *n.* The art of using the fluoroscope or of examining by means of a fluorescent screen, the shadows of bodies exposed to X-rays.

fluorotype (flö′ọ-rọ-tīp), *n.* [*fluor(ide)* + Gr. τύπος, type.] In *photog.,* a photographic process in which sodium fluoride is used in sensitizing the paper.

fluoryl (flö′ọ-ril), *n.* [*fluor(ide)* + *-yl.*] Same as ★*fluoroformol.*

fluosilicate, *n.* 1. (*b*) In *chem.,* a compound of silicon fluoride with a fluoride of a more electropositive element, as $Na_2SiF_6 = 2NaF + SiF_4$; also called *silicofluoride.*

fluotantalate (flö-ọ-tan′tạ-lāt), *n.* [*fluo(ride)* + *tantalum* + *-ite*[2].] In *chem.,* a compound of tantalum fluoride with a fluoride of a more electropositive metal: also called *tantalofluoride.*

fluotitanate (flö-ọ-tī′tan-āt), *n.* [*fluo(ride)* + *titanium* + *-ate*[1].] In *chem.,* a compound of titanium fluoride with a fluoride of a more electropositive metal: also called *titanifluoride* or *titanofluoride.*

Fluotitanic acid, in *chem.,* a compound of titanium fluoride with hydrogen fluoride (hydrofluoric acid), $H_2TiF_6 = 2HF + TiF_4$; also called *hydrogen titanifluoride* or *titanofluoride.* It may be viewed as derived from metatitanic acid (H_2TiO_3) by replacement of oxygen by fluorin.

fluozirconate (flö-ọ-zėr′kọ-nāt), *n.* [*fluo(ride)* + *zircon(ium)* + *-ate*[1].] In *chem.,* a compound of zirconium fluoride with a fluoride of a more electropositive metal: also called *zirconifluoride* or *zirconofluoride.*

flurish, *v.* and *n.* A simplified spelling of *flourish.*

flurry, *n.* 6. The scum that forms on top of a dye-vat, as an indigo-blue vat.

flush[1], *n.* 5. In *tea-growing,* a fresh growth of shoots with leaves fit for picking. After the removal of the pekoe tip (see ★*pekoe*) and the younger leaves a new flush is secured from axillary buds by stimulative culture or by removing the greater part of the plant's foliage.

flush[2], *v. i.* 3. To put out a new growth, as plants which have been partially deprived of their foliage: especially applied to tea-plants.

The trees *flush* three times a year . . . of these three flushes the first gives the best leaf, and brings the highest prices. *Kew Bulletin,* 1896, p. 15.

flush[9], *n.*— **Four flush,** in *poker,* four cards of the same suit; a bobtail.— **Monkey flush,** in *poker,* a flush of three cards only.

flush-board (flush′bōrd), *n.* Same as ★*flash-board.*

flush-gate (flush′gāt), *n.* A gate, sluice, or valve placed in a dam, reservoir-wall, or pipe-system, to be opened when desired to flush out the reservoir, the channel below the reservoir, or the pipe-system.

Next to the waste gates comes the *flush gate,* which is 16 ft. wide, and has its top edge at the same elevation when in normal position as the top of the main dam. *Elect. World and Engin.,* Feb. 13, 1904, p. 307.

flushing-tower (flush′ing-tou″ėr), *n.* A post- or after-condenser; a condenser, in the form of a vertical box, used in the manufacture of sulphuric acid to condense the acid which is not condensed in the first condenser.

flush-joint (flush′joint), *n.* In *masonry,* a joint between stones or bricks which has been filled with cement or mortar so as to be flush with their faces.

Flustrella (flus-trel′ạ̈), *n.* [NL.] The typical genus of the family *Flustrellidæ.* *Gray,* 1848.

Flustrellidæ (flus-trel′i-dē), *n. pl.* [NL., < *Flustrella* + *-idæ.*] A family of ctenostomatous gymnolæmatous *Polyzoa,* having the zoœcia immersed in a gelatinous crust, the orifice bilabiate, and larvæ with a bivalve shell. *Flustrella* is the typical genus.

flute[1], *n.,* 1. and 2. The variety of names applied both to flutes proper and to fluty stops in the organ is very great. Thus the older direct flutes are also called *straight, à-bec,* or *beaked:* these were made in different sizes, with different fundamental tones, and were then distinguished as *discant, alto, tenor,* and *bass flutes.* The *transverse flute* is also called *traverse flute, flûte douce, flauto traverso, flute traversière, German flute, cross-flute,* etc. In the modern orchestra, besides the standard flute in C, the smaller size, called the *octave* or *piccolo flute,* is used; but in military bands several varieties are found, as the *terz* or *tierce flute,* and the *fourth* or *quart flute,* the fundamental tones of which are E♭ and F respectively. The old *flute d'armour* was an alto flute, its fundamental tone being A. Organ-stops of a fluty tone are of two kinds, with stopped or with open pipes and belonging properly to the stopped diapason and the open diapason classes respectively (see *diapason*). Unfortunately, most of the names used for these stops either have no fixed and recognized meaning or are purely fanciful.— **Corno flute.** See ★*corno-flute.*— **Double flute,** a direct flute with two tubes and (usually) a common mouthpiece.— **Onion flute,** a toy musical instrument of a sort represented by the kazoo.— **Swiss flute.** (*a*) An old name for the transverse flute. (*b*) In *organ-building,* a flue-stop with open metal pipes of narrow measure and penetrating tone.

flûte-douce (flüt′dös), *n.* [F.] An old name for the transverse flute, and for an organ-stop imitating it.

flute-organ (flöt′ôr″gan), *n.* A barrel-organ fitted with a set of pipes of flute-like tone.

flute-pipe (flöt′pīp), *n.* In *organ-building:* (*a*) Same as ★*flue-pipe.* (*b*) Specifically, a pipe in any one of the many flute-stops.

fluter, *n.* 3. In *laundry-work,* a hand- or power-machine, consisting essentially of a pair of

corrugated rolls, used in forming flutings in fabrics and clothing.

flute-tool (flōt'tōl), *n.* Same as *flute-bit.*

fluting, *n.* **Magnesium fluting,** a group of lines in the spectrum of magnesium which present the appearance of the fluting of a column.

Fluvial formation, a deposit of river sediment along the lower course of a stream formed through inability of the stream to carry away its overload; an accumulation of the sediments of a river within its own valley. **Fluvial period.** See ★*period.*

fluvioglacial (flō vi-o-gla'shial), *a.* [L. *fluvius,* a river, + *glacies,* ice, + *-al*[1].] Pertaining to the combined action of rivers and glaciers. *Science,* June 21, 1901, p. 988. **Fluvioglacial theory,** in *geol.,* a theory which involves the action of glacial ice, of flowing water, and sometimes also of wind, and which is advanced to explain certain superficial deposits which have no connection with the underlying rock. The loess of China is an example.

fluviograph (flō'vi-ō-graf), *n.* [L. *fluvius,* a river, + Gr. *γράφειν,* write.] An instrument devised by W. M. Fuller for measuring and recording automatically the rise and fall of a river. The record is made at an observation station by the aid of an electric attachment.

fluviolacustrine (flō vi-o-la-kus'trin), *a.* [L. *fluvius,* river, + *lacustris,* of a lake, + *-ine*[1].] In *geol.,* noting those sediments which are partly the result of flowing waters and partly of lakes; such, for instance, as deltas formed in lakes and passing into beach gravels and sands. *Geikie,* Text-book of Geol., p. 1202.

fluviology (flō-vi-ol'ō-ji), *n.* The science of rivers and streams, in their physical forms and actions.

One of the elementary principles of the modern science of *fluviology* is that a vigorous stream will in time grade its channel consonant to its baselevel, whether that baselevel be another stream or static water.
Amer. Geol., Jan., 1904, p. 43.

Fluviomarine series, a name given by Edward Forbes to a series of Oligocene thin-bedded sediments in the Hampshire basin and on the Isle of Wight, England, which are partly of marine, partly of brackish, and partly of fresh-water origin. *Geikie,* Text-book of Geol., p. 1149.

fluviometer (flō-vi-om'e-tèr), *n.* [L. *fluvius,* a river, + *metrum,* a measure.] An apparatus for determining the height of water in a river; a river-gage.

flux, *n.,* 8. (*b*) Continuous motion.—9. In *enameling,* a colorless vitreous base, composed of silica mixed with minium or red lead and potash or carbonate of soda. See ★*fondant*[2]. 2. —10. In *bot.,* the slimy exudation from wounds in the bark of various trees.—**Baumé's quick flux.** Same as ★*powder of fusion.*—**Celiac flux.** See ★*celiac.*—**Flux density.** See ★*density.*—**Flux of a fluid.** See ★*fluid.* **Gold flux.** Same as *aventurin,* 1.—**Light flux,** in *photom.,* the whole beam of light from a source; specifically, the quantity of luminous energy given off by a source of light divided by the time in which it is given. The unit of flux is called the *lumen.* This is the beam, from a unit light source, contained within a unit solid angle (the angle which subtends a square meter at a radius of 1 meter).—**Magnetic flux.** See *magnetic* ★*circuit.*—**Mainz flux,** a colorless glass, rich in lead, used for the manufacture of imitation diamonds or other imitation gems, the colors being added to this magma.—**Salivary flux,** salivation. **Sebaceous flux.** Same as *seborrhœa.* **Unit of magnetic flux.** See ★*unit.*

flux-root (fluks'rōt), *n.* The pleurisy-root, *Asclepias tuberosa,* the root of which is used in dysentery.

flux-turn (fluks'tèrn), *n.* In *elect.,* the mean magnetic flux through one turn of a coil multiplied by the number of turns.

fly[1], *v. i.*—**To fly up into the wind,** to come up into the wind; act as though the helm was to leeward; have the vessel's head point into the wind.

fly[1], *n.,* 3. (*c*) Same as *swift*[1], *n.,* 2. (*f*) *Naut.,* in a screw-log, a hollow copper cylinder about 10 inches long, having a number of blades or fins twisted to a helix of uniform pitch which cause the log to make a revolution in traveling a certain distance through still water.

10. *Naut.,* an old-fashioned name for the compass-card. **Fly rollway.** See ★*rollway.*

fly[2], *n.* **Ant-decapitating fly,** a phorid fly, *Apocephalus persimilis,* which lays its egg on the neck of the black carpenter-ant, *Camponotus pennsylvanicus.* The larva penetrates the head of the ant which eventually becomes separated from the body.—**Big-eyed fly,** any syrphid fly of the family *Pipunculidæ* so called from the very large eyes. **Black fly.** (*b*) Same as *collier* ★*plant louse.* **Circular-seamed fly,** a book name for any dipterous insect of the suborder *Cyclorrhapha* (which see). **Floating fly.** Same as ★*dragfly.* **Golden-eyed lace-winged fly,** any neuropterous insect of the family *Chrysopidæ.* See cut under *Chrysops.*—**Grass-stem fly,** any one of very many species of the dipterous family *Oscinidæ,* whose larvæ live in the stems of graminous plants.—**Green-bottle fly,** any green sarcophagid fly of the genus *Lucilia* or some closely allied genus. Also *green-bottle.*—**Hippelates fly,** any oscinid fly of the genus *Hippelates.* They are very small flies which swarm about the eyes of human beings and domestic animals and are supposed to transmit the disease known as pink-eye.—**Humpbacked fly,** any true fly of the family *Phoridæ* (which see). **Long-legged fly,** any dipterous insect of the family *Dolichopodidæ.* **Midge-like fly,** any nematocerous dipterous insect of the families *Tipulidæ, Blepharoceridæ, Bibionidæ, Cecidomyidæ, Chironomidæ, Mycetophilidæ,* or *Cecidomyidæ.* **Moth like fly,** any member of the dipterous family *Psychodidæ.* **Palmer fly.** See *palmer*[2], 3. **Salt-water fly,** any fly of the family *Ephydridæ* whose larvæ breed in salt, brackish, or alkaline water.—**Screw-worm fly,** an American sarcophagid or fleshfly, *Chrysomyia macellaria,* which lays its eggs on sores and wounds in domestic animals and human beings, its larvæ developing in the same places and greatly aggravating the injury. It will also oviposit in the nostrils of human beings, the larvæ developing in the posterior nares and fauces.

Small-headed fly, any member of the dipterous family *Acroceridæ* (which see). **Spear-winged fly,** any true fly of the family *Lonchopteridæ* (which see). **Stem-eyed fly,** an American fly of the family *Diopsidæ, Sphyracephala brevicornis,* which has a horn-like process on either side of the head, on the tip of which the eye is situated. It is commonly found on the leaves of skunk-cabbage.—**Tangle-veined fly,** any dipterous insect of the family *Nemestrinidæ* (which see).—**Thick-head fly,** any dipterous insect of the family *Conopidæ.* See *Conopidæ* and cut under *Conops.* **Tobacco white fly,** a European insect of the homopterous family *Aleurodidæ, Aleyrodes tabaci,* occurring on tobacco-leaves. **White fly.** (*c*) Any homopterous insect of the family *Aleyrodidæ* (see *Aleurodidæ*), specifically, the white fly of the orange, *Aleyrodes citri.* **Yellow-fever fly,** an undetermined fungus-gnat of the family *Mycetophilidæ,* and probably of the genus *Sciara,* which occurs abundantly at times in the southern United States. Its simultaneous swarming with yellow-fever outbreaks gave rise to the popular name, but the fly has no connection with the fever.

fly-amanita (flī'am-a-nī"tä), *n.* See ★*Amanita* and *fly-agaric.*

fly-ball (flī'bâl), *a.* Having balls or weights which fly outward from the action of centrifugal force as they are revolved.

flyblow, *n.* II. *a.* Of the nature of flyblow; flyblown. *Mrs. Browning.*

fly-by-night (flī'bī-nīt), *n.* A jib set like a studding-sail; a squaresail set on some sloops when running before the wind.

flycatcher, *n.*—**Great-crested flycatcher,** *Myiarchus crinitus,* a large species of the eastern United States.—**Paradise flycatcher,** an East Indian bird of the genus *Terpsiphone.* See *Terpsiphone.*

fly-eater (flī'ē"tèr), *n.* A small Australian flycatcher of the genus *Gerygone.*

fly-finish (flī'fin"ish), *v. t.* In *pianoforte-making,* to assemble the parts of the action.

fly-flick (flī'flik), *n.* A flat wire brush with a straight handle like that of a broom, used for killing flies.

fly-frame, *n.,* 2. (*b*) A frame for transferring plate-glass to the grinding-bench.

fly-fungus (flī'fung"gus), *n.* Same as *fly-agaric.* See ★*Amanita.*

Flying dragon, handicap, horse, etc. See ★*dragon,* etc.—**Flying kites,** the loftiest sails in a ship, the skysails, moon rakers, sky-scrapers, and star-gazers, all of these, except the skysail, being to a certain extent legendary sails claimed to have been carried on lofty ships in former times.—**Flying party.** Same as *flying column* (which see, under *column*).—**To set flying,** to hoist (a sail) from the deck to its position aloft, as, for instance, a maintopmast staysail on a schooner, or a club or sprit topsail.

flying-fish, *n.* 2. A small constellation of the southern hemisphere, Piscis Volans. Sometimes simply Volans.—**Sharp-nosed flying-fish,** a small flying-fish, *Fodiator acutus,* found on both coasts of tropical America.

flying-homer (flī'ing-hō"mèr), *n.* A homing-pigeon raised for flying and not for its markings or other points.

flying-machine, *n.* Remarkably successful results have been attained both with dirigible balloons and with "heavier-than-air" machines. See ★*air-ship,* and ★*aeroplane.*

flying-rings (flī"ing-ringz'), *n. pl.* Apparatus in gymnasiums consisting of wooden or iron rings covered with leather and attached to ropes suspended in pairs from beams or in a series.

fly-mold (flī'mōld), *n.* The fungus, *Empusa muscæ,* which is parasitic on the house-fly.

fly-mushroom (flī'mush"röm), *n.* Same as *fly-agaric.* See ★*Amanita.*

fly-off (flī'ôf), *n.* That portion of the rainfall or precipitation upon the earth's surface which is evaporated and returned to the atmosphere: distinguished from the *run-off,* or that portion of the rainfall which flows away from the surface to form rivers. *J. W. Powell.*

fly-pulley (flī'pūl"i), *n.* A pulley which is free to move endwise on the shaft.

fly-table (flī'tā"bl), *n.* 1. A table with flaps or folding leaves.—2. The table on which printed sheets are laid in order when they have been delivered by the fly. See cut of stop-cylinder machine under *printing-machine.*

fly-tick (flī'tik), *n.* A larval mite, *Trombidium muscarum,* commonly found attached to the house-fly.

fly-title (flī'tī"tl), *n.* The abbreviated title of a book on a fly-leaf before the full title-page.

fly-trap, *n.* 2. In *bot.*: (*b*) The pitcher-plant, *Sarracenia purpurea;* also the trumpet leaf, *S. flava,* the leaves of which entrap flies and other insects.

fly-weight (flī'wāt), *a.* Having weights which fly out as they are revolved.—**Fly-weight governor.** See ★*governor.*

fly-wheel, *n.*—**Segmental fly-wheel,** a fly-wheel made of sectors fastened together. This is frequently done on account of the difficulty of casting large wheels in one piece. **Fly-wheel effect.** See ★*effect.*

fm. A contraction of *fathom.*

F. M. An abbreviation (*b*) of *Foreign Mission.*

fo. An abbreviation of *folio.*

F. O. An abbreviation (*b*) of *Foreign Office.*

foal, *n.* To be in foal, to be pregnant, as a mare.

foam-flower (fōm'flou"èr), *n.* The false mitrewort, *Tiarella cordifolia;* so named from the light effect and white color of its flower-clusters. See *coolwort.*

foaming (fō'ming), *a.* Specifically, noting a class of sectional boilers in which each unit discharges the steam-gas formed in it into a chamber above the level of any water which may accumulate in the latter. The disengagement of steam from the water is therefore more tumultuous, by reason of the small area of cross-section, than in the other type called 'drowned,' where the ends of the generating-units are below the water level, and steam only frees itself from water at the larger disengagement area of the larger vessel or drum.

Focal disease. See ★*disease.*—**Focal idea, focal sensation,** in *psychol.,* a sensation or idea given in the state of maximal clearness, as the direct object of attention: opposed to *marginal* idea or sensation. *Amer. Jour. Psychol.,* XII. p. 252.—**Focal interval,** the distance between the foci of the two refracting surfaces of the segment of a sphere, as the cornea. See ★*interval of Sturm.* **Focal plane, point, radii.** See ★*plane*[1], etc.

focimeter, *n.*—**Abbe's focimeter,** an instrument devised by Abbe (of Jena) for the determination of the focal length of lenses or lens-systems from measurements of their magnifying power.

focimetric (fō"si-me'trik), *a.* [*focimetr(y)-ic.*] Of or pertaining to focimetry or the focimeter.

focimetry (fō-sim'e-tri), *n.* [*focimeter* + *-y*[3].] The art of measuring the focal lengths of mirrors, lenses, or optical systems.

focoid (fō'koid), *n.* [*focus* + *-oid.*] One of the two circular points at infinity, or points where every circle in a given plane meets the straight at infinity or figurative straight of that plane.

focometric, *a.* Same as ★*focimetric.*

focometry (fō-kom'e-tri), *n.* Same as ★*focimetry.*

focus, *n.* 5. In *pathol.,* a center of morbid action; one of the primary or principal lesions. *Jour. Exper. Med.,* Nov. 29, 1901, p. 45.—**Actinic focus,** the focus to which the shorter and, chemically, most active rays are gathered by a lens or optical system. The actinic focus, on account of the greater refrangibility of the chemically active rays, lies nearer to the lens than the so-called optical focus.—**Chemical focus,** in *photog.,* that point to which light rays inducing chemical changes, particularly in silver salts, are brought by the refractive power of a lens or objective.—**Depth of focus,** in *optics,* that property of a lens system which gives, simultaneously, well defined images of near and distant objects.—**Equivalent focus,** the focus of the single lens which is equivalent to a given lens system.

focus-adjuster (fō'kus-a-jus"tèr), *n.* An arrangement fitted to a lens, by means of which the focus can be adjusted to different lengths for different purposes. *Woodbury,* Encyc. Dict. of Photog., p. 210.

focusing-screen (fō'kus-ing-skrēn), *n.* In *photog.,* the material used in a camera upon which the image formed by the lens is seen. It is usually of very finely ground glass. Glass coated with a semi-opaque substance, as starch, paste, may be used. Glass may be made mat by the use of fluorides.

fodder, *n.*—**To pull fodder,** to strip the leaves from standing corn. Each leaf (termed a *hand*) is tied with a twisted leaf and hung on a broken stalk to cure. On gathering, a day or two later, three or four hands are tied into a 'bundle.' The expensive practice of pulling fodder,

formerly universal in the southern United States, is giving way to the process of shredding the stover, forming a kind of 'corn hay.'

foddering (fod'ér-ing), *n.* The act of supplying fodder to cattle: feeding out fodder.

Foehn sickness. See ★*sickness.*

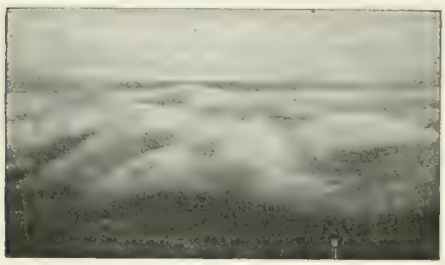
fog[1], *n.* **Barometric fog,** a fog produced by the condensation of aqueous vapor in the atmosphere due to the cooling consequent on the expansion of the air when the barometric pressure diminishes, as when a wave of low pressure passes over a station, or when air is drawn horizontally into an area of low pressure. **Chemical fog,** in *photog.,* a defect in gelatin negatives giving a veiled appearance. It is due to the emulsion used. *Nature,* Aug. 21, 1902, p. 389. **Cosmic fog.** See ★*cosmic.* **Dry fog.** (*a*) A light fog whose particles do not wet objects, but are themselves slowly evaporating owing to the warmth of the sun or of the ground and the dryness of the air; a fog from which all the heavier particles of water have dropped away, leaving their own latent heat of condensation in the air to evaporate the remaining fog-particles. Apparently the air between the drops in a foggy atmosphere is not necessarily saturated with moisture. (*b*) An atmospheric haze due to the presence of fine solid matter, such as dust or fine soot from soft coal fires or ashes from forest and prairie fires. These carbon particles collect about themselves special atmospheres of aqueous vapor and other gases. The spectrum of the transmitted light shows only the red and ultra-red waves. As the upper layers of the dry fog cool off by radiation and the little atmospheres of vapor become water, the dry fog changes to a drizzling mist and often to steady rain. Prairie fires and the resultant dry fog are mentioned by Marco Polo in his travels in India.—**Electric fog,** fog produced by an electric discharge from an electrical machine; also, a foggy state of the atmosphere, accompanied by electric phenomena, such as ball-lightning, St. Elmo's fire, and rapid changes from positive to negative electricity, or vice versa.—**Radiation fog,** fog formed by cooling due to radiation of heat from the lower layer of the atmosphere downward to the cold ground or upward to the clear, cold sky.—**Red fog.** (*b*) A cloud of wind-borne dust frequently noted off the northern part of the western coast of Africa.—**Woolly fog,** a layer of fog that rolls slowly over the low-lying slopes of a mountain in the night-time. [Alaska.]

fog[2], *n.*—**Yorkshire fog,** the velvet-grass, *Holcus lanatus.* See *Holcus.* [Eng.]

fog-bank, *n.* **3.** A term applied to a mist of condensing vapor of any liquid, not necessarily water, consisting in reality of an immense number of minute drops of the liquid in a state of suspension.

When sulphur or other nuclei are put into the globe containing benzol vapour the result is peculiar. Instead of distributing themselves homogeneously throughout the receiver they usually collect in a heavy band near the bottom. This is invisible until revealed by the first exhaustion, when a heavy sluggish *fog-bank* is seen, only a few centimetres high. *Nature,* Oct. 8, 1903, p. 549.

fog-billow (fog'bil″ō), *n.* Fog the upper surface of which is thrown into waves, breakers, and billows by the action of a gentle wind.



Fog-billows. (McAdie.)

fog-buoy (fog'boi), *n.* A buoy placed over or near a shoal, and provided with either a bell or an automatic whistle.

fog-chamber (fog'chām″bér), *n.* In *physics,* a closed vessel containing dust-free air saturated with some vapor and used in the study of nucleation and the phenomena of condensation.

fog-drip (fog'drip), *n.* The drops of water which fall to the ground after being formed by the running together of the particles of fog collecting on solid bodies, especially vegetation.

fogger[3] (fog'ér), *n.* A man who, in foggy or snowy weather, places detonators on a railroad-track to apprise the engine-driver of the position of a signal or switch. [Eng.]

foggie (fog'i), *n.* [Also *fogie;* prob. connected with *fog*[2].] A bumblebee. [Prov. Eng. and Scotch.]

fogging (fog'ing), *n.* Fog-signaling on railways by means of detonators attached to the rails, etc.

But if, as sometimes happens, a fog continues for several days, great difficulty is experienced in obtaining sufficient men to carry on this important duty without undue prolongation of their hours of work. When this happens, signalmen, shunters, porters, yardsmen, and even clerks may have to be called on to take a turn at "*fogging.*"
Encyc. Brit., XXXII. 148.

fog-limit (fog'lim″it), *n.* In *physics,* the difference between the outside atmospheric pressure and the pressure within a closed vessel containing dust-free air saturated with moisture at which condensation of the moisture begins.

A particular *fog-limit* and hence a particular size of nucleus is reached for each case until the *fog-limit* vanishes. *C. Barus,* in Science, Feb. 17, 1905, p. 275.

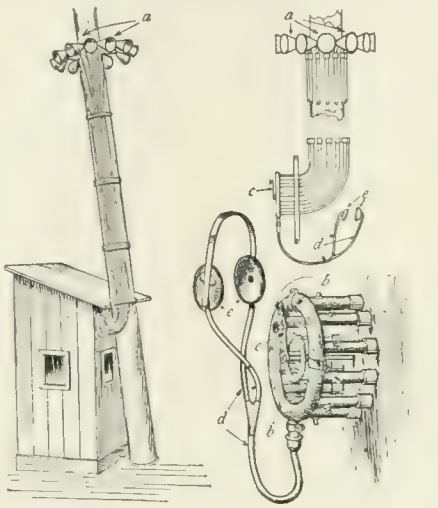
fogman (fog'man), *n.* A man engaged in signaling moving railway-trains during fogs.

Many attempts have been made to design a mechanical apparatus for conveying to a driver the requisite information as to the state of the signals during a fog, and for enabling the *fogmen* to be dispensed with.
Encyc. Brit., XXXII. 148.

fogo (fō'gō), *n.* [A variation of *hogo,* perhaps suggested by *foh* or *fie.*] A bad smell; a stink; a stench. [Scotch and north of Ireland.]

fog-scale (fog'skāl), *n.* Any arbitrary system of recording the intensity of fog. Symons's proposed scale requires the establishment of a set of five screens at a uniform distance of 20 yards from the observer, illumined by lamps from behind by night but by white screens and sunlight by day. Screen number 1 has narrow alternate white and black stripes and number 5 has broad stripes. The others are intermediate. The scale of 1, 2, 3, 4, 5, indicates that the stripes on number 1, etc., have become invisible owing to the diffuse light of the fog.

fog-signal, *n.*—**Edem fog-signal,** an apparatus for use on vessels at sea in thick weather, by which the direction of sound-waves approaching the ship can be determined. A series of twelve trumpet-shaped collectors



Edem Fog-signal.

a, a, sound-collecting cones; *b, b,* terminals of conductors from *a, a; c, c,* contact-arm to receiver-wires from conductors; *d, d,* receiver-wires connected electrically to *c, c; e, e,* telephone-receiver apparatus or ear-pieces.

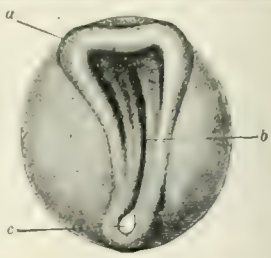
is fastened to a mast, each directed toward a different point on the horizon. From each collector an acoustic tube leads to a central receiving apparatus from which two ear-tubes lead to the operator's head. The collectors convey sound to the operator, but when any one is coupled to the ear-tube, the others are cut off. By testing around the circle the direction of any signal is easily and certainly determined.

fog-tin (fog'tin), *n.* A tin piece for holding detonators or torpedoes on a railway-track: so called because used by British railroads during fogs, to notify the engineer of the location of a signal.

fog-trumpet (fog'trum″pet), *n.* A trumpet used as a signal during fogs.

foil[2], *v.* **II.** *intrans.* In *hunting,* of an animal, to retrace its own track for the purpose of baffling the hounds; 'run the foil.' See *foil*[2], *n.*

fold[1], *n.* **7.** In *geol.,* a bend in strata varying from a monoclinal or a simple change in the inclination of the beds with a dip still in the same direction as before, through anticlinals and synclinals, which have respectively opposing and converging dips on each side of a central axis, to overturned, collapsed, and fan-shaped folds, with very irregular dips. Folds are believed to be due to the compressive strains in the earth's crust. Compare *monoclinal, anticlinal, synclinal, isocline,* ★*dome, basin,* 9, etc.—**8.** In the *Brachiopoda,* a term applied with distinctive value to the median elevation of the shell, which is more or less pronounced in all except atrematous genera. Usually the fold extends along the longitudinal axis of the dorsal valve, accompanied by a corresponding sinus on the ventral valve, but in ontogeny this relation is sometimes found to be reversed in early stages, or it may manifest itself in either form only in the final stage of growth.—**Arnold's fold,** a sickle-shaped fold of mucous membrane in the lacrymal sac.—**Carinate fold.** Same as *isoclinic* ★*fold.*—**Conjunctival fold,** the line where the conjunctiva is reflected from the eyeball upon the eyelid.—**Douglas's fold, ligament,** or **line,** a crescentic line which marks the lower edge of the sheath of the posterior portion of the rectus abdominis muscle.—**Epigastric fold,** a duplicature of the peritoneum covering the epigastric vessels.—**Gastro-ileal folds,** a valve-like structure which separates the intestine from the chylific stomach in locusts.—**Imaginal fold.** Same as *imaginal disk.*—**Isoclinic fold,** in *geol.,* a fold whose sides have the same dip, usually a succession of closed synclinals and anticlinals of the most uniform type. The attitude, whether vertical, overturned, or recumbent, is not essential. Also called *carinate fold.*—**Lime fold,** in *tanning,* a streak or mark in a skin from the action of lime in one of the folds. [Rare.]—**Marshall's fold,** a duplicature of the pericardium inclosing traces of the left superior vena cava, a vessel concerned in the fetal circulation.—**Medullary fold,** in *embryol.,* a fold of ectoderm which bounds the medullary plate on each side during the first stages in the development of the central nervous system. Also called *neural fold.* **Opercular fold,** in embryo fishes, a fold of skin growing back over the branchial region to form the operculum.



Medullary Fold.

A Frog Embryo at the time of the appearance of the neural or medullary folds, seen from the dorsal surface. Magnified about 15 times. *a,* neural or medullary fold: the reference line points to the junction of the anterior and the left lateral folds; *b,* neural groove; *c,* yolk-plug, greatly reduced in size, but still visible through the blastopore. (From Marshall's "Vertebrate Embryology.")

folder, *n.* **4.** An attachment to a sewing-machine for bending and folding the fabric previous to sewing. It is made in a great variety of forms to produce the different plaits, folds, and bands used in garment-making and in decorative sewing.—**5.** In *sheet-metal work,* a hand-power machine for folding over the edges of sheet-metal plates to form a lock, turning the edges of small tinware and roofing-plates, etc.; a tin-folding machine.

folding, *n.*—**Intermittent folding,** in *geol.,* folding renewed at intervals, with periods of quiet between.

folding-machine, *n.* **3.** A machine, or a hand-tool, for turning over and folding under the edges of vamps or other parts of a shoe; a vamp-folding machine.—**Straight-edge folding-machine,** a hand-power machine for folding leather or fabrics; an edge-folding machine. It folds only in a straight line. Other machines follow the shape of the vamp or other part of a shoe.

foliary (fō'li-ā-ri), *a.* Same as *foliar.*

foliate, *v. t.* **3.** In *arch.:* (*a*) To adorn by means of foliation. See *foliation,* 7. (*b*) To divide, as an arch, into smaller arches or foils. See *foil*[1], 7.

foliate, *a.* **4.** Arranged in foliations: said of a pattern: divided into foliations: said of a bounding line or outline.

foliobranch (fō'li-ō-brangk), *a.* Same as ★*foliobranchiate.*

foliobranchiate (fō-li-ō-brang'ki-āt), *a.* [L. *folium,* a leaf, + *branchiæ,* gills, + *-ate*[1].] Having the leaflets of the gills expanded and plate-like: a form characteristic of archaic types of pelecypod mollusks like *Nucula* and *Yoldia.* Also *foliobranch.*

foliolose (fō'li-ō-lōs), *a.* [NL. **foliolosus,* < *foliolum,* foliole.] Bearing folioles or leaflets, especially an abundance of them.

folk-craft (fōk'kraft), *n.* Popular or democratic art and skill in social self-control.

Suggestion, education, and publicity the choice instruments of the new *folk-craft* that is taking the place of the old state-craft. *E. Ross,* Social Control, p. 432.

folk-dance (fōk'dans), *n.* A popular dance, or the music for it, which originates in the same way as a folk-song and is similarly transmitted by tradition. Folk-dances and folk-songs are always historically intermingled.

folk-medicine (fōk'med'i-sin), *n.* The traditional medical maxims, remedies, and methods current among the people.

folk-state (fōk'stāt), *n.* A political state embracing only one homogeneous folk or people: in distinction from a composite nation formed by federation or conquest and comprising peoples of various bloods and languages that must be assimilated. *Gumplowicz* (trans.), Outlines of Sociol., p. 153.

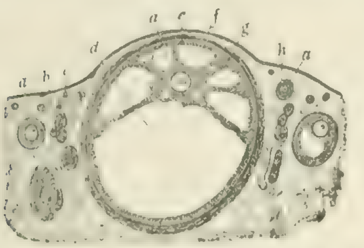
folk-tale (fōk'tāl), *n.* A folk-story.

folletage (fol'e-tāj), *n.* [F. *feuilletage,* puff-paste, the rolling of paste, < *feuilleter,* roll paste, turn over leaves, < *feuillet,* a leaf: see *feuilleton.*] A disease of the grape-vine in Cal-

ifornia due to a condition of the soil in combination with intense heat. Also called *sunstroke*.

follicle, *n.* **Agminate follicles.** Same as *Peyerian glands* (which see, under *gland*).—**Ciliary follicles.** Same as *Meibomian glands* (which see, under *gland*).—**Dental follicle**, the membranous bag which incloses the tooth before its eruption. See *dental sac*.—**Follicles of Lieberkühn.** Same as *Lieberkuhn's glands* (which see, under *gland*).—**Meibomian follicles.** Same as *Meibomian glands* (which see, under *gland*).—**Montgomery's follicles**, depressions in the mucous membrane of the uterus.—**Nabothian follicles**, little vesicles on the mucous membrane of the cervix uteri, caused by distention of the mucous glands.

follicle-cell (fol'i-kl-sel), *n.* In *histol.*, one of the cells which go to make up a follicle,



h, follicle-cells.

Section through part of the ovary of an old rabbit. The section is taken vertical to the surface of the ovary, and shows one fully formed Graafian follicle and others in various stages of development. Magnified.

a, ovum; *b*, nests of epithelial cells derived from the deeper layer of the germinal epithelium and giving rise to ova; *c*, cavity of Graafian follicle; *e*, outer layer of Graafian follicle or theca [illegible]; *f*, inner layer [illegible] follicle or [illegible]; *g*, outer layer of columnar epithelial cells, investing the ovary; *h*, follicle cells surrounding an ovum. (From Marshall's "Vertebrate Embryology.")

such as the follicle which incloses the egg in the ovary.

Follicular mange. Same as ★*demodectic acariasis*.

follow, *v.* **I.** *trans.* **To follow (its) innings**, in *cricket*, said of a side when, having completed its first innings, it immediately begins its second, in consequence of having made a certain number of runs (75 in a one day's match, 100 in a two days' match, and 150 in a three days' match) less than its opponents. Also *to follow on.*

II. *intrans.*—**Follow-on rule**, in *cricket*, the rule which requires that the side which bats first and leads by 150 runs in a three days' match, or by 100 runs in a two days' match, or by 75 runs in a one day's match, shall have the option of obliging the other side to go to the bat immediately for the second time. See *to* ★*follow (its) innings*.—**To follow through**, in *golf*, to allow the club, after striking the ball, to follow, without break or pause, on the line of the ball's flight until the swing ends.

follow, *n.* **2.** The difference in the external diameter of a spring, especially of a coiled or helical spring, when unloaded and when compressed by its working load. The torsion of the rod which forms the coil tends to increase the diameter as the spring closes.

follower, *n.* **4.** In *pile-driving*, a wooden block placed on top of a pile that is to be driven deeper than the weight of the pile-driver can fall. By the use of such a block the pile can be driven even after its head is under water. —**5.** A wheel which is driven by another wheel, either by a belt or by a tooth connection. —**6.** The smaller element of a compound piston, which is bolted to the larger to complete the structure. It is usually a plate, or it may be a ring. In old English designs using fibrous packing, the follower was called the *junk-ring*.

following, *p. a.* **3.** In *naval arch.*, said of the edge or end of a surface or blade, as a propeller blade, which is in the rear when moving through water: opposed to *leading*[1].

follow-rest (fol'ō-rest), *n.* Same as *rest*[1], 6 (*b*).

follow-shot (fol'ō-shot), *n.* In *billiards*, the reverse of the ★*draw-shot* (which see). Also *following*.

follow-through (fol'ō-thrö), *n.* In *golf*, the course described by the club in the swing after the ball is struck.

Fomalhaut (fō-mal-hât'), *n.* [Ar. *fumm*, mouth, + *al*, the, + *hūt*, a large fish (applied to a whale and to a cod).] The first-magnitude star situated in the mouth of the Southern Fish, Piscis Austrinus.

fond[4], *n.* **4.** A gravy from braized and spiced meats which serves as the foundation for sauces.

fonda (fon'dä), *n.* [Sp. *fonda*, also *honda*, = Pr. *fronda* = It. *fonda*, *fionda*, an inn, a purse, = OF. *fonde*, F. *fronde*, a sling, purse, < L. *funda*, a sling.] In Spain and Spanish-speaking countries, a hotel, inn, tavern or boarding-house.

fondamenta (fōn-dä-mān'tä), *n.* [Venetian *fondamenta* (< L. *fundamenta*, pl.), earlier plural of It. *fondamento*, foundation, < L. *fundamentum*, foundation.] A seaside quay; primarily, a landing-place: in Venice [cap.], specifically applied to the great quay which reaches from the Ducal Palace to the Public Garden in the Fondamenta degli Schiavone.

fondant[2] (foṅ-doṅ'), *n.* [F. *fondant*, ppr. of *fondre*, melt: see *found*[3], *v.*] **1.** A thick, smooth, creamy paste of sugar, used as a basis of French cream candies.—**2.** The base or flux, in enamel, which is colored throughout by metallic oxids while in a state of fusion.

fonetic, fonetist, etc. Simplified spellings of *phonetic*, etc.

fonic, *a.* A simplified spelling of *phonic*.

fonograf, fonografer, etc. Simplified spellings of *phonograph*, etc.

fonologic, fonologist, etc. Simplified spellings of *phonologic*, etc.

fonotype, fonotypic, etc. Simplified spellings of *phonotype*, etc.

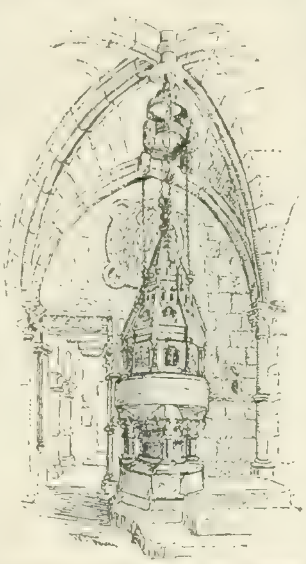
Fontainebleau schools of painting. See ★*painting*.

Fontana, spaces of. See ★*space*.

fontanal (fon-ta'nal), *a.* [L. *fontanalis*, var. of *fontinalis*, of a fountain: see **fontinal*.] Fountain-like. **Fontanal decussation.** Same as ★*fountain decussation*.

fontanelle, *n.* **Mandibular fontanelle**, a small, elliptical opening in the proximal half of the lower jaw of many birds.—**Supraorbital fontanelle**, a perforation in that part of the cranium which forms the upper portion of the orbit.

font-cover (font'kuv"ėr), *n.* In *church arch.*, a permanent and often decorative protection for the open top of a baptismal font. It frequently has the shape of a spire with pinnacles, or of a decorative cupola, or in some cases is richly sculptured. It may be hung with a pulley or windlass from a hinged arm overhead, so that it can be swung clear of the font after being lifted a few inches.



Font-cover, Baptistery of St. Francis's Church, Notting Hill, London.

fontein (fon-tīn'), *n.* [D.: see *fountain*.] A fountain or spring: common in South African Dutch place-names: as, Bloemfontein.

fontinal (fon'ti-nal), *a.* [L. *fontinalis*, < *fons*, a fountain, spring: see *fount*, *fountain*.] In *phytogeog.*, growing in or about springs: said of a plant formation.

The rupestrine flora exhibits four types: The *fontinal* or dripping rock, the soil-covered ledge, the bare rock and the cliff summit types. *Science*, Jan. 29, 1904, p. 170.

food[1], *n.*—**Respiratory food**, food which supplies heat to the body by oxidation, and is then excreted through the lungs in the form of carbon dioxid and water.

food-chopper (föd'chop"ėr), *n.* A domestic machine for cutting up raw or cooked meat, vegetables, crackers, etc.

food-groove (föd'gröv), *n.* In brachiopods, a ciliated groove leading along the arms of the lophophore to the mouth; in crinoids, a ciliated groove on the ventral surface of a brachial.

food-of-the-gods (föd'ov-ᴛʜē-godz"), *n.* An umbelliferous plant, *Ferula Narthex*, the principal source of asafetida. See *asafetida* and *ferula*, 3.

food-rope (föd'rōp), *n.* In ascidians, a viscid mass of food-particles held together by a slimy substance secreted by the endostyle and passed along, by the action of ciliated cells borne by the same structure, toward the oral aperture.

fool-hay (föl'hā), *n.* The old-witch grass, *Panicum capillare*, and the rough bent-grass, *Agrostis hiemalis*, grasses resembling each other in the long, slender branches of their panicles: neither of much agricultural value.

foolometer (föl-om'e-tėr), *n.* Something by which fools may be gaged or measured. *Sydney Smith.* [Humorous.]

fool-proof (föl'pröf), *a.* Proof even against the ignorant or meddlesome handling of fools; secure against accidents even in the hands of a stupid person: said of machinery. [Humorous.]

The standard of construction has been raised, and it is claimed that the new motor starters are as *fool-proof* as rheostats can be constructed.
Elect. World and Engin., Feb. 18, 1905, p. 371.

foot, *n.* **16.** *Naut.*: (*a*) The lower edge of a sail. (*b*) The part of a mast near the deck. —**17.** In *bot.*, one of various organs of attachment. (*a*) A petiole. (*b*) The stalk of a frond in ferns. (*c*) The claw or point of attachment of a petal. (*d*) The organ of attachment and temporary nutrition of the embryo. (*e*) The base of hair below the epidermis.—**Antennary feet.** See ★*antennary*.—**Circular foot**, a unit of surface equal to the area of a circle whose diameter is one foot. It is equal to 0.785398 + of a square foot, and is used in order to dispense with the fractional number 0.785 +.—**Cord foot.** See ★*cord*[1].—**Foot clue.** See ★*clue*.—**Foot lining**, a horizontal band of canvas on the bottom of a squaresail, designed to strengthen and take the chafe on that part of the sail.—**Foot of the perpendicular**, in *geom.*, the point where the perpendicular meets the straight line or plane to which it is at right angles. —**Mandibular foot**, the second trunk-appendage of the nauplius larva of *Crustacea*, so called because it develops into one of the mandibles of the adult.—**Morton's foot.** Same as *metatarsalgia*.—**Off their feet**, in *printing*, said of composed types that are not strictly vertical in a mass, and that receive undue impression on one side only of the face. Each printing-type, however small, rests at its base on two slight projections called feet. When one line or a larger mass of composed type is slightly tilted, the types are off their feet, and impression is unavoidably strong on one side and weak on the other; when they are truly vertical and rest squarely on both feet, they are *on their feet*. *De Vinne*, Mod. Book Composition, p. 260.—**Reel foot**, a pronounced degree of talipes equinovarus, so called because of the peculiar gait of bearers of such a deformity.—**Tabetic foot**, the distorted foot seen in some cases of tabes dorsalis.

footage (fůt'āj), *n.* In *mining*, a piece-work system of paying miners in which they are paid for each running foot of work done.

Foot-ball ear, deformity of the external ear following an effusion of blood from injury, as in foot-ball.

foot-boat (fůt'bōt), *n.* An old name for a small ferry-boat designed to carry foot-passengers only.

foot-bond (fůt'bond), *n.* An electric bond between the butted ends of two trolley-road rails. —**Hydraulic foot-bond**, an electric bond of this kind formed by a copper band or cable attached at each end to solid copper tapered plugs which are forced by a 'hydraulic' compressor into holes drilled in the foot of the two rails.

foot-brails (fůt'brālz), *n. pl.* See ★*brail*.

foot-brake (fůt'brāk), *n.* A brake which is applied or released by a lever or treadle operated by the foot.

foot-candle (fůt'kan"dl), *n.* A British unit of illumination equal to 12.2 luxes; the illumination produced by a British standard candle at a distance of one foot in a horizontal direction. See ★*candle-foot* and ★*illumination*, 1.

foot-clonus (fůt'klō"nus), *n.* Same as *ankle-clonus*.

foot-disk (fůt'disk), *n.* The lower attached end of the body of certain zoantharian polyps, as *Actinia*.

foot-drop (fůt'drop), *n.* Dropping of the anterior portion of the foot when the limb is raised from the ground, due to paralysis of the flexor muscles.

footeite (fůt'īt), *n.* [Named for A. E. *Foote* of Philadelphia (died 1895).] A hydrated oxid and chlorid of copper occurring in deep-blue monoclinic crystals: found in Arizona.

foot-fringe (fůt'frinj), *n.* In gastropods, the fringed or digitate margin of the epipodium.

foot-gland (fůt'gland), *n.* In certain bryozoans, a collection of granular cells at the bottom of the stalk arranged around a central space communicating with the exterior.

footing, *n.* **17.** In *archery*: (*a*) A piece of hard wood or other material placed at the forward end of an arrow to give weight and serve for the attachment of the head; foreshaft. (*b*) The position of an archer in shooting.

foot-lever (fůt'lev"ėr), *n.* A treadle; a lever for operating a machine or mechanism by the pressure of the foot.

footling[1], *n.* **3.** One of the strips of board which run longitudinally on top of the frames in the bottom of a boat.

foot-maker (fůt'mā"kėr), *n.* In *glass-manuf.*, a workman who makes the feet of dishes, goblets, etc. *Webb*, Indust. Democracy, II. 490.

footman, *n.* **Banded footman**, a small lithosiid moth, *Ozonadia unitasena*, with lead-colored fore wings crossed by a yellow band and with pink hind wings. It is rather common throughout the South Atlantic United States.—**Painted footman**, *Hypoprepia fucosa*, a species with red-and-yellow wings, occurring in the eastern United

States.—**Pale footman,** *Crambidia pallida*, a drab-colored species occurring in the northeastern United States.—**Striped footman,** *Hypoprepia miniata*, a species occurring in the eastern United States. It is scarlet in color, with three broad lead-colored longitudinal stripes on the fore wings.—**Two-colored footman,** *Lexis bicolor*, a species occurring in Canada and the northern United States. It is slate-colored, with the prothorax, tip of abdomen, and costa of the fore wing yellow.

foot-phenomenon (fůt′fẹ̄-nom″e-non), *n.* Same as *ankle-clonus*.

foot-power (fůt′pou″ėr), *n.* Power applied by the motion and pressure of the foot, as for driving a bicycle or machine.

foot-pump (fůt′pump), *n.* A portable pump intended to be operated by hand, and having a bracket or stirrup so that it can be held in place by the pressure of the foot.

foot-rill (fůt′ril), *n.* In *coal-mining*, an entrance to a mine formed by driving a level into a hillside; a dip-road used for bringing out coal.

foot-rot, *n.* **2.** A disease of the orange and other citrous trees, supposed to be due to *Fusarium Limonis*, but also affected by the use of fertilizers and methods of cultivation. Also called *gum-disease*.—**3.** Same as ★*bottom-rot*.

foot-scab (fůt′skab), *n.* Any acarine disease of the feet; in particular, the chorioptic scab of sheep. The minute parasites cause an intense itching, and there is a reddening of the skin, followed by scaling, and later by the formation of yellowish white crusts. The crusts thicken, cracks may form in the folds of the pasterns, and the legs may become quite unsightly.

foot-second (fůt′sek″und), *n.* **1.** A unit for measuring the flow of liquids, equal to a flow of one cubic foot per second.—**2.** A unit of velocity equal to one foot per second, used in stating the velocity of a projectile. Also called *second-foot*.

foot-slope (fůt′slōp), *n.* The lower slope of a mountain-range.

> Norcia, a town . . . 29 miles north-east of Terni, on the south-west *foot-slopes* of the Sibylline Mountains.
> *Encyc. Brit.*, XXXI. 249.

footstone (fůt′stōn), *n.* A stone placed at the foot of a grave, usually small as compared with the *headstone*.

foot-tone (fůt′tōn), *n.* In *organ-building*, a general term for the pitch of stops or pipes with reference to that of the keys used. See *stop*[1], 6, and *foot*, 12 (*c*) (2).

footy[2], *n.* **2.** A foot-soldier; an infantryman. [Slang.]

> And trampin' with the *Footies* ain't as pleasant as it looks . . .
> They scarcely ever sees a Boer, except in picture books.
> *A. B. Paterson*, in War's Brighter Side, p. 108.

foozle, *n.* **2.** In *golf*, a badly played stroke. [Scotch.]

foozle (fö′zl), *v. t.* or *i.*; pret. and pp. *foozled*, ppr. *foozling*. To bungle; make a mess of; do clumsily or bunglingly: as, to *foozle* a shot in golf.

F. O. R. An abbreviation of *free on rail*: compare *F. O. B.* [Eng.]

forage-plant (for′ā̤j-plant), *n.* A plant suitable for forage; a plant that is commonly eaten by cattle.

forage-poisoning (for′ā̤j-poi″zn-ing), *n.* A disease of animals, especially the horse, characterized by depression and paralysis of the nervous system, caused by eating damaged food or drinking stagnant water. Also called *leucoëncephalitis*, *spinal meningitis*, and *staggers*.

forage-press (for′ā̤j-pres), *n.* A baling-press; a press used to compress hay or straw into bales for shipping.

forager, *n.* **2.** A foraging ant, an ant of the tropical and subtropical genus *Eciton*.

foramen, *n.*—**Conjugate foramen,** an aperture between two apposed bones formed by a notch in each.—**Foramen centrale.** Same as *foramen of Sömmerring*.—**Foramen epiploicum.** Same as *foramen of Winslow*.—**Foramen incisivum,** the opening between the premaxillary and maxillary, in such a skull as that of a deer: so called because the opening is formed, as it were, by cutting into the premaxilla.—**Foramen interosseum,** in *ornith.*, the space between the distal ends of the coracoid and clavicle and the proximal end of the scapula through which passes the great tendon of the wing muscle. Also *foramen triosseum*.—**Foramen of Botal.** Same as *ductus Botalli*.—**Foramen of Magendie,** an opening in the pia over the fourth ventricle of the brain.—**Foramen of Morgagni.** Same as *foramen cæcum* (*c*).—**Foramen of Tarini,** the uterine opening of the Fallopian tube.—**Foramen supracoracoideum.** Same as *supracoracoid* ★*foramen*.—**Foramen suprapyriforme,** an opening above the pyramidalis muscle through which the gluteal vessels and superior gluteal nerve emerge from the pelvis.—**Foramen triosseum.** Same as ★*foramen interosseum*.—**Foramina of Morgagni,** the openings of Littré's glands in the spongy portion of the urethra.—**Ilio-ischiadic foramen,** in *ornith.*, the oblong space between the ilium and ischium; the ilio-ischiadic fissure closed posteriorly by the union of the ilium and ischium.—**Ischiatic foramen.** Same as *ilio-ischiadic* ★*foramen*.—**Orbitonasal foramen,** in *ornith.*, a perforation in the antorbital plate (prefrontal) for the passage of the orbitonasal nerve.—**Parietal foramen** (*c*) An opening in the parietal bone, or between the parietal bones of reptiles; the pineal foramen.—**Pneumatic foramen,** an opening, or perforation for the admission of air, found in various bones of many species of birds, very frequently in the humerus and almost always in the femur.—**Repugnatorial foramen.** Same as *repugnatorial pore*.—**Supracoracoid foramen,** in *ornith.*, a perforation through the distal half of the coracoid; also *foramen supracoracoideum*.—**Supratrochlear foramen,** a perforation in the olecranal fossa, immediately above the distal end of the humerus, occurring as an anomaly in man, but constant in some other animals. Also known as olecranon perforation.—**Trigeminal foramen,** the perforation for the exit of the trigeminal nerve.—**Vagus foramen,** the perforation for the exit of the vagus nerve.—**Visceral foramen,** the perforation or foramen in the hinge-plate of certain telotrematous brachiopods, *Athyris*, through which it has been supposed the posterior part of the intestine passed.

Foraminiferal limestone, sand. See ★*limestone*, ★*sand*[1].

foraminoöptic (fọ̄-ram″i-nọ̄-op′tik), *a.* In *craniom.*, relating to the foramen magnum and the optic foramen.—**Foraminoöptic line,** the distance between the basion and the optic foramen.

forbesite (fôrbz′īt), *n.* [Named for David *Forbes*, an English chemist.] A hydrated arseniate of nickel and cobalt, occurring in grayish-white fibrous crystalline masses: found in Atacama.

Forbidden fruit. (*d*) In Ceylon, a name applied by the English to the fruit of *Ervatamia dichotoma*. See ★*Eve's apple*.

force[1], *n.* **10.** This billiard-stroke is so named because the cue-ball is forced to run counter to its natural or forward tendency. There are three kinds of force—the horizontal or draw, the perpendicular or piqué, and the curved or massé. At pocket games there is also the forcing hazard, a difficult pocketing risked for the sake of gaining position, but not necessarily involving draw, piqué, or massé.—**Accelerative, addititious force.** See ★*accelerative*, ★*addititious*.—**Directive force,** a force, or couple, which causes a suspended body to tend to assume a certain position: as, the *directive force* of the earth's magnetic field upon a magnet, or the *directive force* of a bifilar suspension upon the needle of an electrometer.—**Equation of force.** See ★*equation*.—**Field of force.** See ★*field*.—**Fresh force,** in *old Eng. law*, a trespass or force recently done (within forty days).—**Resultant force.** See *resultant* ★*vector*.—**Retarding force.** See ★*accelerative force*.—**Tide-raising force,** the force due to the difference both in amount and direction, between the attractions of the moon and sun on the body of the earth and on the movable masses (oceans, etc.) upon its surface. In response to this force the tides rise and fall. On the line of centers, drawn through the center of the earth and that of the disturbing body, that is, at points on the earth's surface where the body is in the zenith or the nadir, the force simply diminishes gravity slightly. On the circle 90° distant (where the disturbing body is in the horizon) it increases gravity just half as much. At points 54° distant from the line of centers the intensity of gravity remains unchanged, but the force is exactly tangential (that is, horizontal), urging the waters toward the line of centers. The actual tides can not, however, be calculated from a mere knowledge of the tide-raising forces, since they depend largely upon other circumstances, as the extent, depth, and shore-outline of the oceans, the rate of the earth's rotation, the density and viscosity of water, the action of winds, currents, etc.—**Tractive force,** the effort exerted by a locomotive or a draft-animal to pull the train or the vehicle attached to it. The force must be sufficient to overcome the resistances to motion, which include frictions, rolling and sliding, wind and air resistances, resistances due to inertia of the masses to be moved and the external and variable resistances due to grades, curves, and the condition of the road-bed. In railway practice in good weather the tractive force is from one-fifth to one-fourth of the weight upon the driving-wheels.

force[1], *v. t.*—**Forced lubrication, mate, move, vibration.** See ★*lubrication*, etc.

force-de-cheval (fôrs″dė-shẹ-väl′), *n.* [F., 'power of horse.'] The French horse-power or unit of power, equal to 0.986337 English horse-power.

force majeure (fôrs mä-zhėr′). [F.] Superior force.

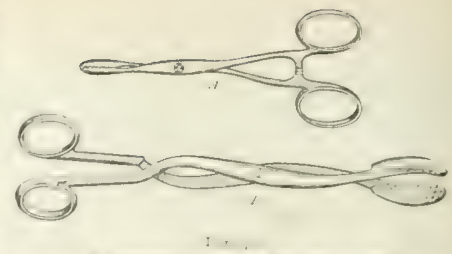
force-nozle (fōrs′noz″l), *n.* A blast-nozle; a nozle through which the exhaust-steam from a locomotive-engine passes to force the draft.

force-oiler (fōrs′oi″lėr), *n.* A device for feeding oil under pressure to bearings; a pressure feed-oiler.

force-pipe (fōrs′pīp), *n.* A pressure-pipe; the discharge-pipe from a pressure-pump.

force-power (fōrs′pou″ėr), *n.* The magnitude of a force.

forceps, *n.*—**Axis-traction forceps,** an obstetrical forceps with an attachment which enables traction to be made in the line of the pelvic axis.—**Bone forceps,** a forceps with sharp bills, used for cutting bone.—**Epilating forceps,** a forceps used for pulling out hairs.—**Fixation forceps,** a forceps used to hold the eye steady during an operation upon it.—**Hemostatic forceps,** a forceps used for the compression of an artery to control hemorrhage during a surgical operation.—**Ligature forceps.** (*b*) A forceps used to grasp and hold an artery while it is being ligated.—**Lion forceps,** a strong forceps with short serrated blades, used for grasping and crushing bone.—**Lithotomy forceps,** a forceps used for removing the stone from the bladder in the



operation of lithotomy.—**Major forceps,** a collection of nerve-fibers passing from the corpus callosum to the occipital lobes.—**Minor forceps,** a collection of nerve-fibers passing from the corpus callosum to the frontal lobe.—**Roller forceps,** a forceps having a roller at the extremity of each broadened or fenestrated blade, used to compress the granulations of the lids in trachoma.

forcherite (fōr′shẹr-īt), *n.* [Named for V. *Forcher*.] A variety of opal colored orange-yellow by orpiment: found in Styria.

forcing, *n.*, **1.** In horticultural use *forcing* denotes: (*a*) The rearing of plants outside of, or in advance of, their natural seasons, by means of artificial heat and under glass. (*b*) The process of compelling flowers to appear from bulbs and tuberous parts (as from rhizomes of lily-of-the-valley) by subjecting them directly to an unusually high degree of heat, as when the pots or boxes are placed on hot pipes in a more or less confined space.

forcing-hill (fōr′sing-hil), *n.* A hill of plants so prepared as to be forced beyond its season just where the plants grow. Usually the earth is heaped around a box, forming a hollow embankment when the box is removed; then over the area a pane of glass is laid. Sometimes the seeds are planted in the bottom of a depression and the pane is laid over the cavity on the surface of the ground. *L. H. Bailey.* See ★*hand-box*.

forcing-jet (fōr′sing-jet), *n.* The jet of steam which comes through the blast-nozle and goes up the stack of a locomotive, thus forcing or inducing the draft; also, the steam jet in an injector for feeding boilers.

forcing-machine (fōr′sing-mạ-shēn″), *n.* A machine for forcing one piece over another on which it fits tightly. Such machines are used for forcing gears, pulleys, propellers, etc., on or off their shafts, and are operated either by a screw or by hydraulic pressure.

forcing-press (fōr′sing-pres), *n.* A hydraulic press, of massive construction, for pressing locomotive wheels, armatures, motor-gears, etc., upon shafts or axles where a very tight fit is required. It has a hydraulic ram, in a vertical or horizontal position, and a resistance-head to hold the wheel or other object and sustain it against the powerful pressure of the ram. It is also used to force wheels from the axles or shafts. One type is called a *wheel-press*.

forcipiform (fôr-sip′i-fôrm), *a.* [L. *forceps* (*forcip-*), forceps, + *forma*, form.] Having the form of a forceps.—**Forcipiform pedicellaria,** in a starfish, one of the pedunculate pedicellariæ in which the two hooks cross each other and are attached to the end of the basal plate farthest from them.

Forcipiger (fôr-sip′i̤-jėr), *n.* [NL., < L. *forceps* (*forcip-*), forceps, + *gerere*, carry.] A genus of butterfly-fishes of the family of *Chætodontidæ*, having the snout very long with the short jaws at its end. *F. longirostris* is common in the South Seas.

forcipressure (fôr′si-presh-ụ̈r), *n.* [For **forcipipressure*, < L. *forceps*, forceps, + *pressura*, pressure.] Arrest of hemorrhage from the cut end of a blood-vessel by pressure made by a self-retaining forceps.

> Bleeding vessels in the dura may be caught with the hæmostatic forceps; if the bleeding be not checked by such *forcipressure*, a curved needle threaded with catgut may be carefully passed under the vessels and the ligature then tied. *Buck*, Med. Handbook, VII. 877.

forcipulate (fôr-sip′ụ̄-lạ̄t), *a.* [NL. *forcipulatus*, < **forcipulus*, dim. of *forceps*, forceps: see *forceps*.] Shaped like a forceps, as the pedicellariæ of echinoderms.

forcive (fōr′siv), *a.* and *n.* [*force*[1] + *-ive*.] **I.** *a.* Of or pertaining to 'force' as distinguished from 'energy.'

> To any one who has stood aloof from the polemic between the 'energetic' and the '*forcive*' view, it must seem proved that the former has rendered a permanent service to physics. *Science*, March 25, 1904, p. 510.

II. *n.* An imaginary distribution of pressure over a level surface of water, such as to replace the pressures due to a given series of waves distributed over the same area.

> By a suitable synthesis of a series of distributed *forcives* with their associated surface displacements, the solution was put in a form which lent itself towards the elucidation of several important problems.
> *Nature*, Feb. 16, 1905, p. 383.

Fordilla (fōr-dil'ä), *n.* [NL., named for S. W. *Ford*, a paleontologist.] A primitive Cambrian genus of bivalved shells believed to be a pelecypod mollusk.

fore[1] (fōr), *interj.* In *golf*, a warning cry ('look out, before!') uttered to attract the attention of a person who is liable to be struck by the ball.

Fore-and-aft motion, rig, road, tackle. See ★*motion*, *fore-and-aft sails*, ★*road*, ★*tackle*.

fore-and-after (fōr'and-àf"tėr), *n.* **1.** A vessel, such as a sloop or schooner, which carries fore-and-aft sails only.—**2.** A cocked hat having the peaks in front and behind, such as is worn for full dress in the navy.

fore-awning (fōr'â"ning), *n.* The forecastle awning; the awning which extends from the foremast forward.

forebay, *n.* **2.** A recess at the entrance of a canal or hydraulic device. Also called *bay*.—**3.** The sick-bay; also, an old name for the spar-deck galley on a merchant vessel.

fore-bowline (fōr'bō"lin), *n.* The bowline belonging to the bowline-brindle gear on the leech of the fore-course.

fore-cabin (fōr'kab"in), *n.* A cabin situated in the forward part of a vessel.

fore-caddie (fōr'kad"i), *n.* In *golf*, a person employed to go in advance of the players to watch where their balls alight. [Scotch.]

forecast, *n.* **3.** Specifically, in *meteor.*, a statement of the expected weather. Official daily weather forecasts were first published by Fitzroy in England in 1861. **Forecast district.** See ★*district*. **Long-range forecast**, in *meteor.*, a statement of the weather to be expected at some quite distant date, such as a week, a month, or a year. **Seasonal forecast**, in *meteor.*, a statement of the general average character of the weather during an approaching season, especially as to rainfall, temperature, or wind; the prediction of climatological averages rather than of detailed weather items. Seasonal forecasts of the monsoon rains have been officially published in India annually since 1885.

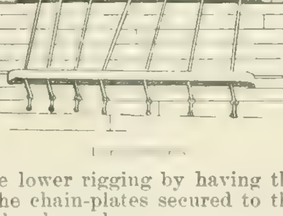
forecaster, *n.*—**Weather forecaster**, one who is skilled in meteorological science, and is regularly and officially engaged in forecasting the weather from the data supplied by meteorological observing stations.

forecastle-deck (fōr'kàs-l-dek), *n.* See ★*deck*, 2.

forecastle-head (fōr'kàs-l-hed), *n.* The forward part of the forecastle-deck, or topgallant forecastle near the knight-heads.

fore-chains (fōr'chānz), *n. pl.* Strong, narrow plates of iron bolted to the ship's timbers through the side, abreast the foremast. To the upper ends of these plates deadeyes are secured by an iron strap, and through these deadeyes are reeved the lanyards of the lower rigging. The ship's channels are also called chains, as *fore-chains*, *main-chains*, and *mizzen-chains*. On some vessels the upper ends of the chain-plates carry turnbuckles instead of deadeyes for setting up the lower rigging.

fore-channels (fōr'chan"elz), *n. pl.* Small horizontal platforms or projections on the outside of a narrow vessel, situated abreast of the respective masts and designed to give a greater spread to the lower rigging by having the upper part of the chain-plates secured to the outside rim of the channel.



Fore-channels.

fore-course (fōr'kōrs), *n.* The foresail of a square-rigged vessel, being that sail which is bent to the foreyard.

forefather's-cup (fōr'fä-ᴛʜėrz-kup), *n.* The pitcher-plant, *Sarracenia purpurea*.

forefeel (fōr'fēl), *n.* In *psychol.*, an anticipatory feeling or anticipatory tactual perception; a tactual image associatively aroused by the presentation of a visual, auditory, etc., stimulus.

The sight of ice yields a *forefeel* of its coldness, the smell of baked meats a foretaste of their savor.
Encyc. Brit., XXXII. 59.

forefeeling (fōr-fē'ling), *n.* A presentiment; a foreboding.

A strong *forefeeling* that much of my destined life in this world was yet to come. *Kinglake*, Eothen, p. 99.

fore-glow (fōr'glō), *n.* A glow seen in the east before sunrise, corresponding to the after-glow seen in the western sky after sunset.

foregon, *p. a.* A simplified spelling of *foregone*.

fore-guy (fōr'gī), *n.* A rope leading forward from the outboard end of the swinging or boat-boom, designed to steady the latter when it is swung out for use.

forehand, *a.* **3.** In *lawn-tennis*, noting a stroke made by a right-handed player when the ball is on the right side of his body, or by a left-handed player when it is on the left side.

fore-hatch (fōr'hach), *n.* The hatch next abaft the foremast on sailing-vessels, but generally forward of the foremast on steamers.

forehead-drop (for'ed-drop), *n.* In a harness, an ornamental strap which rests against a horse's forehead. The upper end is attached to the crown-piece of the bridle.

Foreign car, judgment, piracy. See ★*car*[1], etc.

foreign-hearted (for'ān-här"ted), *a.* Affected with foreign sympathies, ideas, or ideals in literature and art; foreign at heart.

The classical school in England could not find encouragement for the ideals they admired, and were forced to seek the realization of their hopes . . . in sunny Italy and other distant lands, . . . and when they returned they were *foreign-hearted*.
Patten, Development Eng. Thought, p. 351.

fore-intestine (fōr'in-tes"tin), *n.* The first of the three primary divisions of the alimentary canal of an insect; the divisions indicated in the embryo; the stomodæum of the embryo. It includes the mouth and pharynx, the pumping apparatus of haustellate orders, the esophagus, the crop, the sucking stomach, and the proventriculus. *A. S. Packard*, Text-book of Entom., p. 290.

fore-kidney (fōr'kid"ni), *n.* Same as *pronephron*.

foreland, *n.* **3.** The portion of the shore usually left outside of a protecting dike or embankment for the purpose of breaking the force of the waves.—**4.** In *phys. geog.*, low alluvial land added to the coast of the mainland by the action of the sea or of streams. *Geog. Jour.* (R. G. S.), IX. 538.—**Foreland grits.** See ★*grit*2.

fore-leech (fōr'lēch), *n.* The luff of a sail; that part of a fore-and-aft sail which is against the mast. Also written *fore-leach*. [Eng.]

forellenstein (fō-rel'en-stīn), *n.* [G. *forelle*, trout, + *stein*, stone.] A phanerocrystalline rock composed of lime-soda feldspar and olivin with a little pyroxene, the olivin sometimes changed to serpentine. The dark minerals appear as spots in the feldspar and suggest the spotting of trout.

forelope (fōr'lōp), *v. i.* To act as a fore-looper.

foremast-hand (fōr'mast-hand), *n.* A man shipped before the mast; a forecastleman.

foremast-officer (fōr'mast-of"i-sėr), *n.* An old designation of the boatswain, carpenter, and sailmaker on a merchantman.

fore-milk (fōr'milk), *n.* Same as *colostrum*, 1.

foren, forener. Simplified spellings of *foreign*, *foreigner*.

fore-note (fōr'nōt), *n.* In *music*, same as *appoggiatura* or ★*vorschlag*.

fore-orlop (fōr'ôr"lop), *n.* The forward part of the orlop-deck; the space forward of the hold on the orlop-deck.

forepale (fōr'pāl), *v. t.* and *i.*; pret. and pp. *forepaled*, ppr. *forepaling*. **1.** To fence off. Hence—**2.** In *mining*, to prevent the caving of an excavation by the use of shores or planks and braces so placed as to support the walls; shore; also, to drive the ends of the shoring-planks ahead of the end of the excavation, in very loose material, to hold it in place.

forepole (fōr'pōl), *v. t.* and *i.*; pret. and pp. *forepoled*, ppr. *forepoling*. Same as ★*forepale*.

fore-purpose (fōr'pėr"pos), *n.* Previous design; set purpose. *Southey*, Doctor, lii.

fore-rake (fōr'rāk), *n.* That part of a ship's head which projects beyond or overhangs the forward end of the keel.

fore-rigging (fōr'rig"ing), *n.* The shrouds, and their ratlines, of the fore lower mast.

fore-royal (fōr'roi"al), *n.* The sail next above the topgallantsail on the foremast.

foresail, *n.*—**Balloon-foresail**, a large sail of light canvas carried in place of the regular fore-staysail, that is, the first head-sail forward of the foremast.

fore-set (fōr'set), *a.* In *geol.*, noting certain beds of a delta-deposit formed chiefly from heavier sediments rolled down a stream along the bottom and dumped at the steeper slope. Fore-set beds are those of greatest inclination and variability in a delta, often characterized by cross-bedding; they are underlain by the *bottom-set* and overlain by the *top-set* beds. See ★*delta*. *Chamberlin and Salisbury*, Geol., I. 191.

Fore-sheet horse, traveler. See ★*horse*[1], ★*traveler*.

foreshift (fōr'shift), *v. t.* To move forward.

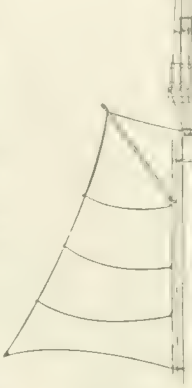
Appendages that are farther forward upon the body than their equivalents in allied but more primitive animals may be regarded as having been moved forward, or *foreshifted*, during ancestral history. *E. R. Lankester*, in Nat. Science, April, 1897, p. 265.

foreshore, *n.* **2.** The narrow level slope or berm constructed on the seaward side of a breakwater or dike, built to diminish and dissipate the force of waves before they strike the breakwater proper.

fore-shoulders (fōr'shōl"dėrz), *n. pl.* The projecting parts of a vessel's bows in the vicinity of the water-line.

fore-shrouds (fōr'shroudz), *n. pl.* The shrouds of the fore lower mast.

fore-spencer (fōr'spen"sėr), *n.* The fore-and-aft sail which sets on a small extra mast abaft the foremast. This sail has a gaff, but no boom, and is sometimes referred to as the *fore-trysail*.



Fore-spencer.

forest, *n.*, **1.** A forest judged by the character of the stand may be *timberland* or *woodland*. These constitute the two great classes of forest between which it is possible to draw a practical but not an absolute distinction. *Timberland* may be broadly defined as that kind of forest which contains in commercial quantity trees of sufficient size and of the required kind to furnish sawlogs, pulpwood, ties, poles, or wood for similar uses; *woodland* as forest which contains trees fit for fire-wood or fencing, but no trees, or very few, which are suitable for the uses enumerated above. A *timber tract* is a body of timberland, usually of large area. A *wood-lot* is a forest of small area in which the wood is used mainly for fuel, fencing, and other farm purposes. **4.** In *phytogeog.*, specifically, a closed woodland, that is, one in which the crowns of the trees touch.—**Absolute forest land** or **soil.** See ★*absolute*.—**Communal forest.** Same as *town* ★*forest*. **Composite forest**, a forest in which both seedlings and sprouts occur in considerable number.—**Cromer forest-bed.** See *forest-bed group*, under *forest*.—**Crown forest, federal forest.** See *national* ★*forest*. **Federal forest reserve.** See *national forest* ★*reserve*. **Forest army-worm, cover, engineer**, etc. See ★*army-worm*, etc.—**Forest floor**, the deposit of vegetable matter on the ground in a forest. *Litter* includes the upper but slightly decomposed portion of the forest floor; *humus* the lower portion, in which decomposition is well advanced.—**Forest influences**, the influences exerted by forests on rainfall, temperature, wind, evaporation, humidity, run-off, dust, water-supply, and other climatological matters. Forest influences are determined by means of observing-stations placed within and without the forest. In general, in comparison with equal areas of prairie, forests tend to cool the air, to add less moisture by evaporation, to retard the run-off, to diminish erosions and floods, to conserve the rainfall and snowfall without altering the average run-off, to produce less dust and injurious germs, to prevent the water-table within the forest from sinking lower down, and to keep the soil from freezing. Forests have no particular influence on the amount of rainfall.—**Forest service**, that branch of the government service, in the Department of Agriculture, which is charged with the administration of the national forest reserves, and with forest investigations and cooperative forest work throughout the United States. See ★*Bureau of Forestry*. **Fringing forest**, a luxuriant woodland growth, due, not to atmospheric precipitation, but to telluric water, as along streams and lakes. *A. F. W. Schimper* (trans.), Plant Geog., p. 177.—**Index forest**, that forest which in density, volume, and increment reaches the highest average which has been found in a given locality; a normal forest. Measurements of such a forest provide a standard for comparison with other forests of the same age and composition, grown under similar conditions.—**Keeper of the forest**, in *Eng. forest law*, the chief officer or warden of the forest.—**Light forest.** See ★*caatinga*.—**Monsoon forest**, a type of tropical woodland more or less leafless during the dry season, especially toward its close; tropophilous in character; usually lower than a rain forest; and rich in woody lianas and in herbaceous epiphytes but poor in woody epiphytes.—**National forest**, a forest which is the property of the nation, in the United States called *federal forest*. **National forest reserve.** See ★*reserve*. **Normal forest.** Same as *index* ★*forest*. **Park forest**, forest in which shade occurs only in isolated patches, under single trees or small groups of trees.—**Protection forest**, a forest whose chief value is to regulate stream-flow, prevent erosion, hold shifting sand, or exert any other indirect beneficial effect.—**Rain forest**, a type of evergreen (chiefly tropical) woodland, usually much over 30 meters high, and rich in thick-stemmed lianas and woody as well as herbaceous epiphytes, requiring heavy precipitation. *A. F. W. Schimper* (trans.), Plant Geog., p. 260.—**Reserve sprout forest**, a two-storied forest in which sprouts form the lower and seedlings the upper story. Also called *coppice with standards* [illegible]. **Savanna forest**, a type of tropical woodland more or less leafless during the dry season, rarely evergreen, xerophilous in character, usually [illegible] less than [illegible] high, park-like, and very poor in [illegible] woody lianas and epiphytes, but

rich in terrestrial herbs, especially grasses.—**Thorn forest**, a tropical type of woodland, like the savanna forest in foliage and average height, but more xerophilous, very rich in underwood and slender-stemmed lianas, poor in terrestrial herbs, especially grasses, usually without epiphytes, and abounding in thorny plants.—**Town forest**, a forest which is the property of a city, town, or village. Also called *communal forest*.

fore-stage (for′staj), *n.* The fighting-platform or forecastle which was built on the forward part of the upper deck of ancient vessels.

forestation (for-es-tā′shon), *n.* The planting or establishment of forests; afforestation.

Forestay tackle. See ★*tackle*.

fore-staysail (fôr′sta sal or -sl), *n.* The first headsail forward of the foremast, which sets on the forestay.

forester, *n.* **3.** (*a*) One who is versed in forestry. (*b*) One who practises forestry as a profession.—**7.** [*cap.*] A member of any one of several benevolent and fraternal societies. (*a*) A member of the *Ancient Order of Foresters*, founded in Yorkshire, England, in 1745, and introduced into the United States in 1832. It has 'courts' or lodges in 36 countries, a membership of over a million, and disburses per annum over $5,000,000. (*b*) A member of the *Independent Order of Foresters*, founded in Newark, New Jersey, in 1874, with 'courts' or lodges in many countries. (*c*) A member of the *Foresters of America*, originally part of the Ancient Order of Foresters, but separated from it in 1889.

8. A pony raised in the New Forest. [Local, Eng.]—**Langton's forester**, a common moth. *Alupia langtonii*, occurring in Canada, the northern United States, and California.

forest-grown (for′est-grōn), *a.* Grown in the forest from self-sown seed.

forestian (fo-res′ti-an), *a.* [ML. *foresta*, forest.] Of or pertaining to forests.—**Forestian epoch**, in *geol.*, a subdivision of the Pleistocene or glacial series in northern Europe. It comprises the *Lower Forestian*, or fourth interglacial epoch (Ancyclus beds of the Baltic area and Littorina clays of Scandinavia), lying between the Mecklenburgian or fourth glacial epoch and the Lower Turbarian or fifth glacial epoch; and the *Upper Forestian*, or fifth interglacial epoch, indicated by a buried forest between the deposits of the fifth and sixth glacial epochs.

fore-stomach (fōr′stum″ak), *n.* A dilatation of the esophagus just above the stomach.

forest-rat (for′est-rat), *n.* See ★*rat*[1].

forestry, *n.*—**Bureau of Forestry.** See ★*bureau*.

forest-survey (for′est-sèr-vā″), *n.* An inspection or survey of woodlands or forests to ascertain the kinds, qualities, and number of trees on a given area. It includes also the study and examination of the commercial value of the trees as lumber and the value of the land in relation to lumber-production.

forest-wind (for′est-wind), *n.* **1.** A wind in a forest.—**2.** In *forestry*, the wind which blows gently from an adjacent forest after it has been cooled by nocturnal radiation from the surface of the leaves.

fore-swifter (fōr′swift″tèr), *n.* The forward shroud of the fore-rigging.

fore-tacks (fōr′taks), *n. pl.* The tacks of the fore-course or foresail.

foretop, *n.* **4.** Same as *forelock*[2].

foretopgallantmast (fōr′top-gal″ant or -to-gal′ant-mâst), *n.* The mast next above the foretopmast.

foretopgallantsail (fōr′top-gal″ant or -to-gal′ant-sāl or -sl), *n.* The squaresail next above the topsail on the foremast of a square-rigged vessel.

foretopgallantyard (fōr′top-gal″ant or -to-gal′ant-yärd), *n.* The yard next above the topsail-yard on the foremast.

fore-topsail (fōr′top-sāl or -sl), *n.* The squaresail on the foremast next above the course or foresail.

fore-trysail (fōr′trī-sāl or -sl), *n.* Same as ★*fore-spencer*.

Forfars (for′fars), *n.* [Named from *Forfar* in Scotland.] Coarse, heavy, unbleached linen fabrics, made in Forfarshire, Scotland.

forfex, *n.* **2.** A pair of anal organs which open or shut transversely and cross each other, as in the male of *Raphidia*. *Kirby and Spence*.

forficiform (fôr-fis′i-fôrm), *a.* [L. *forfex* (*forfic-*), scissors, + *forma*, form.] Having the form of scissors.—**Forficiform pedicellariæ**, in asteroids, one of the pedunculate pedicellariæ in which the two hooks are attached to the end of the basal plate nearest to them.

forficulid (fôr-fik′ū-lid), *n.* and *a.* **I.** *n.* A member of the *Forficulidæ*.

II. *a.* Of or belonging to the *Forficulidæ* or earwig family.

forge[1], *n.*—**Double-blast forge**, a forge for blacksmiths' use having two tuyers or openings to admit the blast below the bed of fuel. The heat is less locally intense, and a larger mass may be uniformly heated for hammer treatment.

forge[3], *v. i.* [Prob. a particular use of *forge*[1], *v.*, **1**, in allusion to the clicking sound.] In *farriery*, to strike the heel of the front shoe with the toe of the hind shoe, producing a clicking sound.

forge-cinder (fōrj′sin″dèr), *n.* The slag from a forge or bloomery.

forge-hammer (fōrj′ham″èr), *n.* Any heavy hammer for forging large pieces which is worked by machinery; a steam-hammer or power-driven hammer.

forge-limber (fōrj′lim″bèr), *n.* The limber of a forge-wagon, as distinguished from the gun-carriage limber or the caisson-limber; part of a field-battery.

forget[2], **forgett** (fôr-get′), *n.* In *glove-making*, same as *fourchette*, **2.**

forge-test (fōrj′test), *n.* A bending test applied to wrought-iron and steel plates or bars. Specimens are bent both hot and cold, and also with and across the grain; the angles to which they are to be bent without fracture, and the radius about which they must be bent, depend in each case on the use for which they are intended and the thickness of the plate.

forget-me-not, *n.*—**White forget-me-not**, any species of several genera of the borage family (*Plagiobothrys*, *Oreocarya*, *Cryptanthe*, etc.), related to and somewhat resembling *Myosotis*, but bearing white flowers. These plants, forming many species, are natives of western North America and Mexico. Some or all are included under the names ★*nicetas* and ★*popcorn-flower* (which see).—**Wild forget-me-not**, the bluet or innocence, *Houstonia cærulea*.—**Yellow forget-me-not**, in California, any plant of the boraginaceous genus *Amsinckia*. They are very rough hairy herbs with yellow flowers shaped like those of the forget-me-not. *A. spectabilis*, common southward in the State, has the flowers half an inch wide. Called also *woolly-breeches*.

forging[2] (fōr′jing), *n.* [*forge*[3], *v.*, + *-ing*[1].] A defect in a horse's gait consisting in striking the heel of the front shoe with the toe of the hind shoe, which produces a clicking sound. It is not considered so serious a fault as overreaching or grabbing.

forgiv, *v.* A simplified spelling of *forgive*.

forhed, *n.* A simplified spelling of *forehead*.

fork, *n.*, **1.** (*c*) In *glass-manuf.*, an implement [with a long iron handle and two prongs, used for laying up bottles in tiers in the annealing-furnace.

8. In *mech.*: (*a*) A pair of teeth or pins standing out from a bar and inclosing a space within which runs the belt of a machine fitted with fast and loose pulleys. By moving the bar which carries the pins endwise the belt can be shifted. (*b*) A piece of steel fitting into the socket or chuck on a lathe, used for driving the piece to be turned. —**9.** A position, in a game of chess, where two pieces are attacked at the same time by a pawn.—**Electric fork**, in *acoustics*, a tuning-fork which is actuated by means of an electromagnet.—**Giant fork**, in *psychophys.*, a large tuning-fork, with a range of from 16 to 25 vibrations per second, used for determining the lower limit of tonal hearing.—**Self-interrupting fork.** Same as *electric* ★*fork*.—**Silver-fork deformity.** See ★*deformity*.

Giant Fork

fork, *v. t.* **4.** In *chess*, to attack (two hostile pieces) with a pawn.

forked-leaf (fôrkt′lēf), *n.* In the southern United States, the Turkey oak, *Quercus Catesbæi*: so called from the shape of the leaf.

fork-head, *n.* **2.** A rod-end which is split or divided to form an opening for the reception of the end of another rod, the two being then fastened by a pin or bolt.

fork-tined (fôrk′tīnd), *a.* Noting antlers that lack the large, more or less depressed brow-tine found in the wapiti and European red deer of the genus *Cervus*: contrasted with ★*brow-tined*. The South American swamp deer, *Blastocerus paludosus*, and the mule-deer, *Odocoileus macrotis*, have typical fork-tined antlers.

Forli pottery. See ★*pottery*.

form, *n.*, **2.** It is the combination of all the like faces possible on a crystal of given symmetry; that is, all the faces embraced by a given symbol. (See ★*symbol*[1], 7.) The forms of the isometric system (cube, octahedron, tetrahedron, pyritohedron, etc.) are closed forms. (See *form*, 2.) This is also true, in the other systems, of the various double pyramids (bipyramids), the bisphenoids, and also the rhombohedrons, scalenohedrons, and trapezohedrons. In these systems, however, most of the forms are open forms. They include the pinacoids, prisms, domes, etc. (See ★*pinacoid*, ★*prism*, ★*pyramid*, ★*sphenoid*, ★*pedion*.) In these cases it is obvious that two or more forms are required for a complete crystal. Two geometrically similar forms are said to be *complementary* when their combined faces correspond to all the faces of some form of a class of higher symmetry in the same system. Thus the faces of the two complementary tetrahedrons (tetrahedral class, isometric system) correspond to those of the octahedron (holosymmetric class). In such cases the complementary forms (which may be enantiomorphous) are often distinguished as *positive* and *negative*, *plus* and *minus*, or *direct* and *inverse*.

25. A flower-bud of the cotton-plant.

Forms appearing in May bloomed in 21 to 32 days.
U. S. Dept. Agr., The Cotton Plant, 1886, p. 263.

Biologic form. See ★*biologic*.—**Center of form.** See ★*center*[1]. **Form factor.** See ★*factor*. **Form genus.** See ★*genus*. **Forms of address.** Such forms are governed principally by social and official customs rather than by legal enactments. The external addresses of letters are generally more formal than the superscriptions with which they begin; but these latter, as well as the modes of address used in repetition in the body of a letter, and the forms of conclusion, vary considerably in proportion to the degree of intimacy between the writer and the person addressed, as well as to the character of the communication (official or social). Finer distinctions and greater elaborations of detail prevail in the social and official circles of the more conservative European monarchies. The forms here given are those most commonly used in the United States and Great Britain. Those which precede the colon are the most formal, and therefore most appropriate for use on the envelop of a letter. Those following the colon are adapted for internal superscription and for repetitions throughout the communication. The matter of abbreviation of such titles as *Right Honorable*, *Honorable*, *Reverend*, etc., is largely one of convenience or relative importance. Purely official addresses are frequently shortened to *Rt. Hon.*, *Hon.*, *Rev.*, etc., but the Department of State of the United States always spells out the term 'Honorable' in its official communications. An *Admiral* is addressed by the style of his rank and his ordinary name only: as, Vice-Admiral A. B.: Sir; except (in the British service) where the officer possesses hereditary or other special rank: as, Rear-Admiral the Earl of C., *or* Lord D.: My Lord; *or* The Hon. E. F.: Sir.—An *Ambassador from a Foreign Country to the United States* as His Excellency the Rt. Hon. Sir G. H. (titles): Excellency.—An *Ambassador of the United States* as His Excellency I. J.: Sir.—An *Apostolic Delegate* as His Excellency K. L. (*or* The Most Rev. K. L.), Delegate Apostolic: Your Excellency.—An *Archbishop* in the *Church of England* as His Grace (*or* The Most Rev.) the Lord Archbishop of C.: My Lord Archbishop, *or* Your Grace. In the *Roman Catholic Church* as The Most Rev. (*or* His Grace the Most Rev.) M. N., Archbishop of O., *or* The Most Rev. the Archbishop of O.: Your Grace, *or* Most Rev. Sir.—An *Archdeacon* as The Ven. P. Q., Archdeacon of R., *or* The Ven. the Archdeacon of R., *or* The Ven. the Archdeacon Jones: Ven. Sir, *or* Sir. —A *Baron* as The Rt. Hon. Lord S.: My Lord, *or* Your Lordship. Daughter as The Hon. (Christian and surname): Madam. (If married to a commoner, as The Hon. Mrs. B.). Son and his Wife as The Hon. T. U.: Sir; The Hon. Mrs. T. U.: Madam.—A *Baroness* as The Rt. Hon. Lady V., *or* The Lady V. (no Christian name): Your Ladyship, *or* Madam. Dowager as The Rt. Hon. Edith, (*or* The Dowager) Lady V.: Madam.—A *Baronet* as Sir W. X., Bart.: Sir. Wife as Lady X. (surname only, unless a Lady by birth, when the address of her specific rank is used): Your Ladyship, *or* Madam.—A *Bishop* or *Suffragan Bishop* in the *Church of England* as The Rt. Rev. the Lord Bishop of Y., *or* The Rt. Rev. the Bishop Suffragan of ———: My Lord, *or* My Lord Bishop, *or* Your Lordship, *or* Rt. Rev. Sir. In the *Roman Catholic Church* as The Rt. Rev. Z. A., Bishop of B., *or* The Rt. Rev. Bishop of B.: Right Reverend Sir. In the *Protestant Episcopal Church in the United States* as The Rt. Rev. Bishop ——— (using either surname or name of diocese).—A *Cabinet Officer* in the United States as The Honorable the Secretary of War: Sir.—A *Canon* as The Rev. Canon C.: Rev. Sir, *or* Sir.—A *Cardinal* as His Eminence D. E., Cardinal (*or* Cardinal Archbishop) of F., *or* His Eminence the Cardinal (*or* Cardinal Archbishop) of F., *or* His Eminence James, Cardinal F.: Your Eminence.—A *Clergyman* as The Rev. J. K. (if above commoner's rank, The Rev. Lord L., *or* The Rev. the Hon. J. K., *or* The Rev. and Hon. J. K.; if a Doctor in any faculty, as The Rev. Dr. J. K., or The Rev. J. K., D.D.): Rev. Sir, *or* Sir.—A *Countess* as the Rt. Hon. the Countess of Q., *or* The Rt. Hon. Lady Q.: Your Ladyship, *or* Madam. Dowager as The Rt. Hon. Bertha, (*or* The Dowager) Countess of Q., *or* The Rt. Hon. the Dowager Lady Q.: Madam.—A *Dean* of the *Church of England* as The Very Rev. the Dean of R.: Very Rev. Sir, *or* Mr. Dean, *or* Sir. In the *Roman Catholic Church* as The Rev. S. T.: Your Reverence, *or* Rev. and Dear Sir.—A *Duchess* as Her Grace the Duchess of U.: Your Grace, *or* Madam. Dowager as Her Grace Charlotte, (*or* The Dowager) Duchess of U.: Madam.—A *Duke* as His Grace (*or* The Most Noble) the Duke of V.: My Lord Duke, *or* Your Grace, *or* May it please Your Grace. Daughter as The Rt. Hon. the Lady (*or* The Lady *alone*) (Christian and surname): Your Ladyship, *or* Madam. (If married to one of inferior rank, The Rt. Hon. the Lady Beatrice [husband's surname]: Madam.) Eldest Son and his Wife, same as Marquis or Earl, Marchioness or Countess, according to the rank assumed. Younger Son and his Wife as The Rt. Hon. the Lord (*or* The Lord *alone*) W. X.: My Lord, *or* Your Lordship; The Rt. Hon. the Lady (*or* The Lady *alone*) W. X.: Madam, *or* Your Ladyship.—An *Earl* as The Rt. Hon. the Earl of Y.: My Lord, *or* Your Lordship. Daughter as The Rt. Hon. the Lady (*or* The Lady *alone*) (Christian and surname): Madam. (If married to one of inferior rank, The Rt. Hon. the Lady Isabel [husband's surname]: Madam.) Eldest Son and his Wife same as Viscount and Viscountess, or other assumed rank. Younger Son and his Wife as The Hon. Z. A.: Sir; The Hon. Mrs. Z. A.: Madam.—An *Emperor* as Your Imperial Majesty, *or* Sire.—A *General* as is an Admiral.—A *Governor of a Colony* as His Excellency Sir B. C., Governor of D.: Sir (*or*, if of more exalted rank, His Excellency the Earl of D., with the proper style of that rank), *or* His Excellency Governor E.: Your Excellency.—A *Governor of a State or Territory* (United States) as His Excellency the Governor of F.: Sir.—A *Judge of a State Court* as The Hon. G. H.: Sir.—A *Justice of the Peace* or *Magistrate* (in Great Britain) as K. L., Esq., J. P., *or* The Worshipful K. L. (if above commoner's rank, then accordingly): Your Worship.—A *Justice of the Supreme Court of the United States* as The Hon. I. J.: Mr. Justice.—The *King*

of England as The King's Most Excellent Majesty, *or* Your Majesty. May it please Your Majesty, *or* Sire. — A *King's Counsel* as M. N., Esq., K. C.: Sir. — A *Knight* as Sir O. P. (followed by the initials of his Order, or, in the case of a *Knight-Bachelor*, by Knt.): Sir. — A *Lieutenant-Governor of a State* (United States) as is a Judge of a State Court. The *Lord Chancellor of England* as The Rt. Hon. the Lord High Chancellor: My Lord, *or* Your Lordship. The *Lord Chief Justice of England* as The Rt. Hon. the Lord Chief Justice of England: My Lord, *or* Your Lordship. A *Lord Justice of Appeal* as The Rt. Hon. Lord Justice Q., *or* The Rt. Hon. Sir R. S.: My Lord, *or* Sir. The *Lord Lieutenant of Ireland* as His Excellency (or according to his rank of nobility) the Lord Lieutenant: Your Excellency, or according to rank. A *Lord Mayor* as The Rt. Hon. the Lord Mayor of T.: My Lord, *or* Your Lordship. Wife as The Rt. Hon. the Lady Mayoress, as a Baroness. A *Maid of Honour* as The Hon. I. V.: Madam. — A *Marchioness* as The Most Hon. the Marchioness of W.: Your Ladyship, *or* Madam. Dowager as The Most Hon. Alice (*or* The Dowager), Marchioness of W.: Madam. — A *Marquis* or *Marquess* as The Most Hon. the Marquis of X.: My Lord Marquis, *or* My Lord, *or* Your Lordship. Daughter as The Rt. Hon. the Lady (*or* The Lady *alone*) (Christian and surname): Madam. (If married to one of inferior rank, The Rt. Hon. the Lady Florence [husband's surname]: Madam). Eldest Son and his Wife according to the courtesy title assumed. Younger Son and his Wife as The Rt. Hon. the Lord Henry Y.: My Lord, *or* Your Lordship; The Rt. Hon. the Lady Henry Y.: Madam, *or* Your Ladyship. The *Master of the Rolls* as The Rt. Hon. (name or title), *or* The Rt. Hon. the Master of the Rolls: Sir, *or* Judge (on the Bench as My Lord, *or* Your Honour). A *Mayor* (Great Britain) (other than a Lord Mayor, which see, *supra*) as The Rt. Worshipful the Mayor of Z.: Sir. (United States) His Honor W. W., Mayor of A.: Sir. — A *Member of a Colonial Ministry*, etc., as The Hon. B. C.: Sir (unless of exalted rank, then accordingly). A *Member of Parliament* as M. P. (these initials following the ordinary designation of the Member): Sir (or according to rank). — A *Minister* (British Diplomatic Service) as D. E., Esq., (other titles according to rank) H. B. M. Minister (*or* Minister Resident): Sir (or according to rank). — A *Minister of the United States Abroad* as F. G., Esq.: Sir. — A *Minister to the United States*, name, with title (if any): Sir. A *Parish Priest* or *Rector* (*Roman Catholic Church*) as The Rev. N. O.: Your Reverence, *or* Rev. and Dear Sir. A *Peer* who is a Knight of the Garter, of the Thistle, or of St. Patrick, should have the initials K.G., K.T., or K.P. appended to his name. — The *Pope* as His Holiness Pius X: Your Holiness, *or* Holy Father. — The *President of the United States* as His Excellency the President of the United States: Sir. An *Ex-President* as is a Judge of a State Court. The *Prime Minister of England* according to his rank, with the addition, after his name, of Head of His Majesty's Government. A *Prince* as H. R. H. the Prince of W., K. G., etc., *or* H. R. H. Prince Alfred, *or* H. R. H. the Duke of R.: Your Royal Highness, *or* Sir. — A *Princess* as H. R. H. the Princess of W., etc., *or* H. R. H. Princess Alice, *or* H. R. H. the Duchess of S.: Your Royal Highness, *or* Madam. — A *Privy Councillor* as The Rt. Hon. T. U.: Sir. (If a Duke or Marquis, according to rank.) — The *Queen of England* as The Queen's Most Excellent Majesty: Your Majesty, *or* May it please Your Majesty, *or* Madam. — A *Representative in Congress* or in a *State Legislature* as is a Judge of a State Court. — The *Secretary of State* (United States) as The Honorable the Secretary of State: Sir. — A *Senator* (United States or State) as is a Judge of a State Court. — The *Speaker of the House of Commons* as The Rt. Hon. A. B.: Sir. — The *Speaker of the United States House of Representatives* or *of a State Assembly* as is a Judge of a State Court. A *Vicar-General* as The Very Rev. C. D.: Very Rev. and Dear Sir. — The *Vice-President of the United States* as The Honorable E. F., Vice-President of the United States: Sir. — A *Viceroy* as His Excellency, followed by the usual form of address for his particular rank irrespective of his position as Viceroy, and by Viceroy and Governor-general of India (or Viceroy and Lord Lieutenant of Ireland, as the case may be). — A *Viscount* as The Rt. Hon. the Lord Viscount (*or* The Viscount) G.: Your Lordship, *or* My Lord. Daughter as The Hon. (Christian and surname): Madam. (If married to a commoner, as The Hon. Mrs. H.) A Son and his Wife as The Hon. T. J.: Sir; The Hon. Mrs. I. J.: Madam. A *Viscountess* as The Rt. Hon. the Viscountess K.: Your Ladyship, *or* Madam. Dowager as The Rt. Hon. Felicia, (*or* The Dowager) Viscountess of K.: Madam. The wives of British Ambassadors, Archbishops, Bishops, Judges of Superior Courts, Lord Provosts, Mayors, and Members of Parliament, take no titles by virtue of their husbands' offices, but only such as are theirs by right of birth or marriage. The conclusion of a letter may generally consist of a repetition of the various terms used in the address and superscription, in the manner following, according to the class of communication: I have the honor to be, My Lord Duke, Your Grace's most obedient and humble servant; *or*, Very Reverend Sir, your obedient servant. — **Form species.** See ★*species*. — **Illusory form,** in *math.*, indeterminate form. — **Indeterminate form.** See *indeterminate*. — **Involution form,** in *bacteriol.*, an organism which has assumed a swollen, irregular outline which does not correspond with its typical shape. — **Setting-up form,** in *barrel-making*, a former or holder in which the staves are assembled to form a keg or barrel. It is adjustable to various sizes of barrels and is fitted with supports for the first or lowest truss-hoop. — **Synclinal forms.** See ★*synclinal*. — **Type form,** in *biol.*, the species or specimen which is accepted by the systematist as a type. — **Vibration form.** See ★*vibration*.

form, *v.* **I.** *trans.* **6.** In *elect.*, to change (the surface of the plates of a secondary or storage-cell) by repeated charge and discharge, so that they are in condition for use.

II. *intrans.* **3.** In *elect.*, to convert the active material of the positive plate of a storage-cell into lead monoxid or that of the negative plate into spongy lead, either by the action of the charging current or by direct chemical means.

formacoll (fôr'ma-kol), *n.* [*forma(ldehyde)* + Gr. κόλλα, glue.] Same as *formaldehyde* ★*gelatin*.

formal, *a.* **11.** Implicit; not active; latent; virtual.

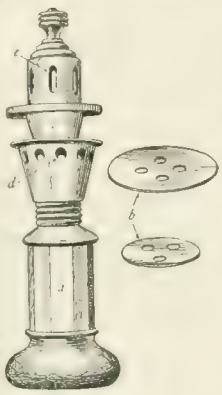
> Prejudice is *formal* scepticism.
>
> *A. Collier*, Clavis Universalis, x. 84.

Formal abduction. See ★*abduction*.

formal[2] (fôrm'al), *n.* A trade-name for formaldehyde.

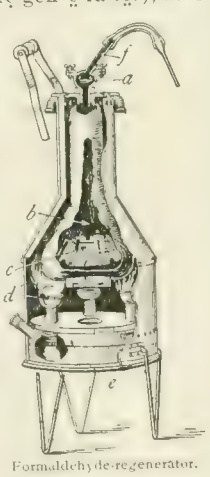
formaldehyde (fôr-mal'dē-hīd), *n.* [*form(ic)* + *aldehyde*.] A gas, CH_2O. It can be obtained in several ways, as, for example, by leading a mixture of vapor of methyl-alcohol, CH_4O, and air over a heated platinum spiral. The solution is called, commercially, *formalin*. It is a powerful disinfectant. The vapor, unlike sulphur dioxid, does not attack textiles, furniture, etc.; therefore it is largely used for the disinfection of rooms. Its solutions are extensively employed, as vapor and in solution, for the preservation of food and anatomical specimens, and for embalming. Also called *formic aldehyde*, *methyl aldehyde*, or *methanal*. — **Formaldehyde bisulphite,** a crystalline compound resulting from the action of formaldehyde upon sodium bisulphite. It is used as an antiseptic. **Formaldehyde gelatin, lamp.** See ★*gelatin*, ★*lamp*. — **Formaldehyde tannin-albuminate** or **tannalbuminate,** a compound of tannin-albumin and formaldehyde which is insoluble in the acid fluids of the stomach but is slowly split up into its three components in the lower intestines. It is an intestinal astringent and antiseptic. — **Formaldehyde urea,** a compound resulting from the interaction of formalin and urea.

formaldehyde-generator (fôr-mal'dē-hīd-gen'ē-rā-tor), *n.* An apparatus designed to bring a mixture of the vapor of methyl alcohol (wood-alcohol) and air in contact with heated spongy or finely divided platinum, whereby the alcohol is oxidized to formaldehyde: used in disinfection. Methyl alcohol is placed in the receptacle *a*, and drawn up therefrom by a wick which ends just below the platinized disks *b*, held in the cone-shaped bottom of *c*. The alcohol is lighted and allowed to burn until the disks have become heated. The flame is then blown out, but the vapor of the alcohol, mixed with air, drawn in at the holes *d*, in passing through the disks, is oxidized, and the formaldehyde produced escapes through the apertures *e*.



Formaldehyde-generator.

formaldehyde-regenerator (fôr-mal'dē-hīd-rē-gen'ē-rā-tor), *n.* An apparatus designed to liberate formaldehyde from its solution, or some combination thereof, and permit the escaping vapor to be conducted into and be diffused through a space to be disinfected. Many machines of this type have been devised. The formaldehyde solution (formalin), with calcium chlorid or glycerin or both, is poured through the orifice *a*, into the boiler *b*. The latter contains partitions *c*, which induce a circulation of the liquid and a rapid evolution of formaldehyde vapor when heat is applied to the sides of the boiler by the burners *d*, fed by alcohol from the lamp *e*. The formaldehyde vapor is conducted through the flexible hose and nozle *f*, clamped at *a*, through a keyhole of the door closing the room to be disinfected, thus diffusing the vapor without exposing the operator who superintends the action of the machine.



Formaldehyde-regenerator.

formalesque (fôr-mal-esk'), *a.* [*formal* + *-esque*]. In *landscape-gardening*, noting that style or spirit of treatment which is characterized by an essentially formal handling, being dominated by the architecture or the engineering, while still retaining some natural features; not admittedly and designedly formal, but still not unreservedly free and natural. *L. H. Bailey*.

formalin (fôr'ma-lin), *n.* [*formal(dehyde)* + *-in*[2].] A trade-name for aqueous or dilute methyl alcoholic solutions of formaldehyde, containing up to 40 per cent. of the latter.

formalina (fôr-ma-lī'nä), *n.* [NL.] An iodine derivative of formaldehyde. It has been used for inhalation in cases of consumption. Also called *igazol*.

formalin-gelatin (fôr'ma-lin-jel'a-tin), *n.* Same as *formaldehyde* ★*gelatin*.

formalinize (fôr'ma-lin-īze), *v. t.*; pret. and pp. *formalinized*, ppr. *formalinizing*. [*formalin* + *-ize*.] To add small amounts of formalin to, as to cultures of typhoid organisms for the purpose of killing them. The dead bacteria give the same reaction as the living culture when used in a Widal test.

formalith (fôr'ma-lith), *n.* [*forma(lin)* + Gr. λίθος, stone.] A trade-name for blocks of infusorial earth soaked in formalin and used for disinfecting.

formamidate (fôrm-am'i-dāt), *n.* [*formamide* + *-ate*[1].] A salt of formamide, $H.CONH_2$. — **Mercury formamidate,** a soluble salt with a neutral reaction. It does not coagulate albumen, and gives but little pain when injected.

formamide (fôrm-am'id), *n.* [*form(ate)* + *amide*.] A colorless liquid, $O{:}CH.NH_2$, prepared by heating ammonium formate.

formanilide (fôrm-an'i-lid), *n.* [*form(ic)* + *anil*[2] + *-ide*[1].] A colorless crystalline compound, $C_6H_5NH.COH$, obtained by digesting aniline with formic acid. It is antipyretic and analgesic.

formant (fôr'mant), *n.* [L. *formans* (*formant-*), ppr. of *formare*, form: see *form*, *v.*] In *phonol.*, the name given by Hermann to "the tone of constant pitch for each vowel,—independent of the tone on which it is sung." *Scripture*, Exper. Phonetics, p. 39.

> A vowel, according to him [Hermann], is a special acoustic phenomenon, depending on the intermittent production of a special partial, or '*formant*,' or 'characteristique.' The pitch of the '*formant*' may vary a little without altering the character of the vowel.
>
> *V. C. McKendrick*, in Nature, Dec. 26, 1901, p. 187.

format (fôr-mä'), *n.* [F. *format* = It. *formato* = G. *format*, shape and size of a book, < NL. **formatum*, neut. of L. *formatus*, formed, pp. of *formare*, form.] **1.** In *printing*, the shape and size of a book, as, for example, duodecimo, octavo, quarto, folio, etc. — **2.** In *painting*, *engraving*, etc., the relation between length and breadth of surface.

formation, *n.*, **4.** (*b*) In the classification of rock-masses as adopted by the United States Geological Survey for cartographic purposes, the cartographic unit, or usually the ultimate rock body separately named and mapped. — **5.** In *œcol.*, a plant society or association. See the extract and *plant* ★*formation*.

> Geologists, paleobotanists and a few botanists have several times called attention during the past few years to the persistent misuse by many ecologists of the word '*formation*,' when referring to plant societies or associations. Regardless of the sanction of a century . . . of usage for '*formation*' in the geological sense, they have proceeded . . . to transplant the word, via Germany, into English botanical literature.
>
> *Science*, March 18, 1904, p. 467.

Barringtonia formation. See ★*Barringtonia*. — **Bonaventure formation,** a name given by Logan to a heavy sheet of red conglomerates and sandstones which unconformably overlie the Devonian and Silurian limestones of Gaspé, Canada, and are regarded by him as wholly of early Carboniferous age. It is named from the island of Bonaventure, which is composed wholly of these rocks. Later writers have assigned the lower portion of these beds, which attain a thickness of several thousand feet, to the Upper Devonian; but they are all deposits of lacustrine or estuarine origin, and are now regarded as representing one of the Old Red lakes which were numerous in northern latitudes during Devonian and early Carboniferous times. — **Boone formation,** in *geol.*, a subdivision of the Carboniferous in Arkansas, regarded as equivalent to the Burlington and Lower Keokuk groups. It attains a thickness of 250 feet and is underlain by the Eureka shale and overlain by the Wyman sandstone. — **Burrum formation,** in *geol.*, the lower division of the Jurassic formation in Queensland, Australia. — **Cape May formation,** strata formed during a portion of the Pleistocene period in New Jersey. — **Climatic formation,** a plant formation the character of whose vegetation is governed by atmospheric precipitation. According to Schimper, the author of the distinction, climatic formations fall into three types — *woodland*, *grass-land*, and *desert*. Opposed to *edaphic* ★*formation*, and alternatively termed *district formation*. — **Closed formation,** a plant formation in which the ground is completely occupied, as in a meadow. — **Columbia formation,** in *geol.*, a subdivision of the Quaternary formation of the Atlantic coastal plain and the Mississippi valley, consisting of a series of subestuarine and submarine deltas and associated delta-deposits. It is characterized by wide-spread stratified deposits and associated terraces which are newer than the Lafayette formation. — **Cultural plant formation,** in *phytogeog.*, an aggregation, in a given region, of cultivated plants of one or of several species as determined, on the one hand, by their adaptations, and, on the other, by economic considerations. Weeds, as governed by conditions of cultivation, are here included. — **Dakota formation,** in *geol.*, a division of the Cretaceous system in the interior region of the United States. It lies at the base of the series, and is largely composed of lacustrine sandstones, with deposits of lignite and an abundance of dicotyledonous leaves. — **Decker Ferry formation,** in *geol.*, a division of the Upper Silurian rocks of Pennsylvania and New Jersey. It consists of the Decker Ferry shale and the Decker Ferry sandstone of the Pennsylvania Geological Survey, the Decker Ferry limestone of that survey being a different formation. It is regarded by New Jersey geologists as equivalent to the Cobleskill (coralline) limestone of New York. It attains

a thickness of 450 feet, and is underlain by the Bossardville limestone and overlain by the Rondout formation. Its lower part is characterized by *Chonetes jerseyensis*. **District formation.** Same as *climatic* ★*formation*. **Edaphic formation,** in *phytogeog.*, a plant formation the vegetation of which is chiefly determined by edaphic influences (see ★*edaphic*). **Heat of formation.** See ★*heat*.

Ignacio formation, in *geol.*, a stratum of quartzite near Silverton, Colorado, believed to be of Upper Cambrian age. *W. Cross*, Amer. Jour. Sci., Oct., 1904, p. 249. —**Kansan formation,** in *geol.*, glacial deposits forming the lowest member of the Pleistocene. **Layered formation,** a plant formation in which different vegetation forms succeed each other in strata. See ★*layer*, 1. **Livingstone formation,** in *geol.*, the uppermost member of the Cretaceous system in the Rocky Mountain region, largely composed of volcanic sands in which have been found some fresh-water and terrestrial *Mollusca*, and a large number of land plants. **Magothy formation,** in *geol.*, a series of sands and gravels in the Chesapeake Bay region overlying the Potomac formation, from which it is separated by a supposed plane of erosion. It is regarded as pertaining to Cretaceous time.—**Manasquan formation,** in *geol.*, one of the divisions of the Upper Cretaceous of the Atlantic border lying at the top of the series and composed largely of highly glauconitic sand.—**Maroon formation,** in *geol.*, a very thick series of mixed arenaceous and calcareous sediments, belonging to the Carboniferous period and occurring near Aspen, Colorado. **Matawan formation,** in *geol.*, a series of Upper Cretaceous sands and clays lying at the bottom of the formation, attaining a thickness of about 400 feet in New Jersey, but gradually thinning southward. The fossils are wholly marine.—**Monmouth formation,** in *geol.*, a division of the Upper Cretaceous series of the Atlantic coast of North America resting on the Matawan and overlain by the Rancocas division. It consists largely of glauconitic sands with many fossils.—**Montana formation,** in *geol.*, a division of the Cretaceous rocks in the interior of the United States, regarded as lying above the Colorado and below the Livingstone formation. It is composed of lacustrine and brackish water deposits with coal seams and an abundant terrestrial flora, and also carries occasional bands of marine deposits.—**Negaunee formation,** in *geol.*, the uppermost member of the Middle Marquette series in the Marquette iron range of Michigan. It consists largely of cherty iron carbonate and slate, and is penetrated by numerous dikes of trap. The alteration of the cherty iron carbonate under the influence of the meteoric waters has produced the iron ores, which have been very productive.—**Neosho formation,** in *geol.*, a formation of Permian age in Kansas, immediately overlying the uppermost coal-measures and consisting of limestone and shale with many marine fossils (*Pseudomonotis*, *Pleurophorus*).—**Open formation,** a plant formation in which the ground is incompletely covered, as in a desert.—**Pampas formation,** in *geol.*, a deposit of Quaternary age, similar to the loess, of both æolian and aqueous origin, occurring in the pampas region of South America, in which have been found fossil remains of gigantic sloths (*Megatherium* and *Mylodon*) and armadillos (*Panochthus* and *Glyptodon*). **Pamunkey formation,** in *geol.*, the Eocene deposits of Maryland, consisting of clays, greensand marls, sands, and limestones. They are divided, on lithic and biotic differences, as follows: at the base, the Aquia Creek stage with Piscataway and Pospotansa substages, and above, the Nanjemoy stage with Potapaco and Woodstock substages. The fauna has throughout a sublittoral expression and consists chiefly of mollusks with *Foraminifera*, *Bryozoa*, some corals, ostracodes, fish, and a few reptilian remains. *Darton*, 1891.—**Patagonian formation,** in *geol.*, a series of clays, sandstones, and limestones of Lower Miocene age in Argentina and Patagonia, which contain an abundant marine invertebrate fauna closely allied to that of the Miocene beds of Australia and New Zealand. It overlies the *Pyrotherium* beds and is overlain by the continental vertebrate-bearing beds of the Santa Cruz Miocene formations. **Patuxent formation,** in *geol.*, a series of variegated sands and clays typically developed in the basin of the Patuxent river, Maryland, and forming the basal member of the Potomac group. With a thickness of 60–100 feet they overlap the Algonkian crystallines and the Newark sandstones and shales, of all of which they constitute the redeposited residuals, and they are themselves overlain by the clays of the Arundel formation. The contained fossils are almost wholly restricted to plant remains and afford indecisive evidence as to the Upper Jurassic or Lower Cretaceous age of the formation. See *Potomac* ★*formation*.—**Pensauken formation,** in *geol.*, a series of clays, sands, gravel, and boulder beds of Mid-pleistocene age, typically developed in a broad shallow trough extending across New Jersey in a northeasterly direction from the head of Delaware Bay to Raritan Bay. These beds unconformably overlie the Precambrian crystallines, Triassic sandstones, and the Cretaceous and older Tertiary beds, and their materials are the products of disintegration of the older rocks at the north as well as of the country rocks of of the vicinity, all deposited from swiftly moving water carrying floating ice.—**Plant formation,** in *phytogeog.*, originally (Grisebach, 1838) an assemblage of plants, of one or of a plurality of species, which forms a distinct and complete feature of the landscape: in ecological plant geography (see ★*phytogeography*), an assemblage of plants occupying a congenial station, that is, inhabiting an area marked by a special sum of ecological conditions, and determined by their adaptations to life in such an environment, therefore considered biologically not taxonomically. The formation is the phytogeographical unit; but since the unit may be taken in a broader or narrower view, the application of the term has greatly varied and this has induced attempts to introduce a more precise terminology. Warming dropped 'formation' in favor of a term translated sometimes *association*, sometimes *society*, applying this to the units of his classification, which was based on water-content of the soil. Schimper subdivided formations into *climatic* and *edaphic*, the latter corresponding to Warming's 'associations,' and it is nearly with the latter equivalence that 'formation,' used without qualification, now seems to be applied. See ★*association*, 4, *plant association*, under ★*association*, and ★*region*, 8.—**Potomac formation,** in *geol.*, a series of clays, sands, and conglomerates lying at the base of the Cretaceous system along the inner edge of the middle Atlantic coastal plain region, and attaining its greatest development in Maryland. The deposits are almost wholly of fresh-water and estuarine origin, and portions contain an abundant flora of early Cretaceous expression, together with some brackish-water mollusks, fishes, plesiosaurs, and dinosaurs. The series has been divided into the lower Patuxent and Arundel stages which may be of late Jurassic age, and the upper Patapsco and Raritan stages which are of Lower Cretaceous age.—**Rancocas formation,** in *geol.*, a division of the Upper Cretaceous in New Jersey lying above the Monmouth and below the Manasquan divisions, and consisting chiefly of greensand marls carrying many fossils.

Raritan formation, in *geol.*, a subdivision of the Lower Cretaceous (Potomac group) of the Atlantic coast region extending from New Jersey into Maryland and attaining a thickness of 500 feet. It is underlain by the Patapsco formation and overlain by the Matawan formation, and is characterized in New Jersey by plant remains and a few brackish-water molluscan shells.—**Salt formation,** a series of related strata containing beds of rock salt or brine.—**Santa Cruz formation,** in *geol.*, a division of the Tertiary series, in southern South America lying above the Patagonian and remarkable for the profusion in number and variety of its mammalian remains which represent a fauna of austral type strongly contrasted with contemporary faunas of northern latitudes. It is regarded as of Miocene age. —**Soudan formation,** in *geol.*, a series of fragmental sediments, jaspers, and iron ores of the Archæan era, in the Vermilion iron range of Minnesota.—**Star formation,** in *geol.*, a division of the Carboniferous limestone in Australia. **Timber Creek formation,** in *geol.*, a series of sandstones and limestones at the base of the Upper Cretaceous in Texas.—**Trinity formation,** in *geol.*, the lower division of the Comanche series of the Texan Lower Cretaceous series, comprising the Travis Peak, Glenrose, and Paluxy beds. The formation consists of conglomerates, sands, and limestones, with abundant molluscan fossils. -**Tularosa formation,** in *geol.*, a series of sandy marls containing fresh-water shells of Pliocene age, overlying the Tertiary Otero marls in southeastern New Mexico.—**Tuscaloosa formation,** in *geol.*, a series of clays and sands, aggregating 1,000 feet in thickness, forming the basal member of the Cretaceous system in western Alabama and northeastern Mississippi, and probably equivalent in part to the Raritan of New Jersey and the Patapsco of Maryland. **Tuscan formation,** in *geol.*, a series of volcanic tuffs of Miocene age capping the Ione formation in the Sacramento valley of California.—**Waipara formation,** in *geol.*, a rock series in the Canterbury district of New Zealand believed to represent the Upper Cretaceous and possibly some of the older Tertiary formations. It consists of conglomerates which attain a thickness of 8,000 feet, sandstones, and shales, and contains numerous plant remains, fishes, and saurians.—**Washita formation,** in *geol.*, the highest division of the Lower Cretaceous deposits of Texas, resting on the Fredericksburg group, and subdivided into the Preston, Fort Worth, Denison, and Shoal Creek beds, in ascending order.—**Weber formation,** in *geol.*, a series of thin-bedded carbonaceous limestones and shales of the Carboniferous period, occurring near Aspen, Colorado.

formatol (fôr′mạ-tōl), *n.* [*form*(*aldehyde*) + *-ate*[1] + *-ol*.] A disinfecting and antiseptic dusting-powder containing formaldehyde.

formatore (fôr-mä-tō′re), *n.*; pl. *formatori* (-rē). [It., a former.] One who models in wax or plaster.

> When found, one side of the skull and some fragments of limb-bones were all that was exposed; but the skilful removal of the matrix by Mr. J. Hall, assistant *formatore* in the Museum, has revealed most of the skull, the upper surface of the pelvis, and the femur.
>
> *Proc. Zool. Soc. London*, 1899, p. 776.

formatory (fôr′mạ̄-tọ̄-ri), *a.* [NL. **formatorius*, < L. *formare*, form: see *form*, *v.*] Tending or serving to form. *Ruskin.*

formene (fôr′mēn), *n.* [*form* (*ic*) + *-ene*.] Same as *methane*.

former[2], *n.*, 2. (*b*) One of a number of appliances and machines used in bending and shaping sheet-metal into tubes, cylinders, boxes, and other forms. For making cylindrical blanks for round vessels and pipes, the machines employ long bending-rolls in groups of three, the sheet-metal being bent to the right diameter by the size and adjustment of the rolls. Small machines using two short rolls having irregular faces are used in forming blanks for pepper-boxes, candlesticks, and other small cylindrical vessels. Forming-machines for making square or triangular blanks for boxes and pipes are properly sheet-metal bending-machines. Wire-forming machines, used in making wire rings, handles, and bails, all use rolls or sections of cylinders round which the wire is bent to give it the proper shape.
3. The templet used for the cutting of gear-teeth; the guide used for giving desired motion to the cutter when forming or cutting irregularly shaped pieces in a profiling-machine. —**4.** In *elect.*, a frame upon which the coils of certain types of armatures and transformers are wound.—**Line-former,** two concentric strips of brass leads, used by job-printers to keep in proper position lines of type arranged for a curve.—**Molding-former,** an appliance for reproducing the exact form of any molding or irregular surface. It consists of a large number of thin metal strips inclosed in a frame. Placed over the molding, or horizontally against it, the outer ends conform to the surface on which they rest and reproduce its form. A binding-screw holds the strips in place when removed from the molding.—**Slip-roll former,** a former in which one of the rolls can be released from the machine for convenience in slipping the finished blanks off the end of the roll. —**Square-pan former,** a tinman's stake for bending the edges of tin-plate in making baking-pans, etc.

former-wound (fôr′mėr-wound), *a.* In *elect.*, wound upon a former or frame before being mounted: said of certain types of armature-coils.

Formic aldehyde. Same as *formaldehyde*. *Jour. Soc. Chem. Ind.*, XIV. 1070.

formicarious (fôr-mi-kā′ri-us), *a.* [NL. **formicarius*: see *formicarium*.] Belonging to or resembling an ants' nest or formicary. *Annals and Mag. Nat. Hist.*, Oct., 1903, p. 427.

formicary, *n.* **II.** *a.* Of or pertaining to ants or an ant-hill or community: as, *formicary* routine. *The Atlantic*, Feb., 1892, p. 180.

formicate (fôr′mi-kāt), *v. i.*; pret. and pp. *formicated*, ppr. *formicating*. [L. *formicare*, swarm as ants, < *formica*, an ant.] To swarm (in the manner of ants). *Lowell.*

formicide[2], *n.* [NL. **formicida* for **formicicida*, < *formica*, ant, + *cædere*, kill.] One who or that which kills ants; a substance destructive to ants.

> In the coffee regions the damage done by them is so serious that the Brazilian Government at one time offered a large premium for a successful *formicida* or ant exterminator.
>
> *Van Hise*, U. S. Geol. Surv. Monographs, XLVII. 456.

formicivorous (fôr-mi-siv′ọ̄-rus), *a.* [L. *formica*, ant, + *vorare*, devour.] Feeding on ants: a term applied to certain birds and mammals such as the flickers and ant-eaters.

formin (fôr′min), *n.* Same as ★*urotropin*.

forming-machine, *n.*, 2. (*b*) In *hat-making*, a felt-forming machine. It is the second machine used in the process of hat-making and follows the blowing-machine. It consists of an air-tight chamber having an air-inlet at the top and an air-outlet at the bottom. When ready for use a hollow cone or form of perforated metal is placed in the chamber in such a position that it covers the outlet, so that when an air-suction or exhaust is started all the air must be drawn through the perforations of the cone. When the chamber is closed and the exhaust started, a blast, bearing a cloud of loose hair from the blowing-machine, is turned on and the floating hair gathers in a film on the former, being pressed down by the air pressure and held in place by the suction through the perforations. When this film is sufficiently thick, the blast and exhaust are cut off, the chamber is opened, and the former is removed and plunged into water, when the film readily slips off in the shape of a felt cone the exact shape of the former and ready for the next process of working and matting together to form a felt hat-body. See *blowing-machine*.—**Lock-forming machine,** a machine for making the hook or lock on parallel edges of the blanks used in making the bodies of cans. It conveys each blank to the machine, clamps it, forms the hook, and releases and delivers the finished blank at a high speed.

forming-rolls (fôr′ming-rōls), *n.* The rolls used in a forming-machine; also, the machine itself.

forming-tool (fôr′ming-töl), *n.* In *machine-shop practice*, a shaped cutter used in a lathe to give a special shape or form to a piece of work.

form-maker (fôrm′mā″kėr), *n.* One who works at a brake, in a cracker factory, forming the dough into sheets to be run on the cutting-machine.

formoform (fôr′mo-fôrm), *n.* [*form*(*aldehyde*) + *form*(*ic*).] A dusting-powder consisting of starch, zinc oxid, thymol, and formaldehyde.

formol (fôr′mōl), *n.* Same as ★*formalin*.

formopyrin (fôr-mō-pī′rin), *n.* [*form*(*aldehyde*) + (*anti*)*pyrin*.] A white crystalline compound obtained by the action of formaldehyde on antipyrin. It is antipyretic and antiseptic.

formose (fôr′mōs), *n.* [*form*(*aldehyde*) + *-ose*.] A mixture of at least two substances formed by the polymerization of formaldehyde under the influence of calcium oxid. It contains a sugar, $C_6H_{12}O_6$.

form-quality (fôrm′kwol″i-ti), *n.* In *psychol.*, that which gives to a group of elementary mental processes a certain perceptual or ideational form, or indicates the specific group-arrangement: regarded by certain authors as a positive ideational content, appearing in consciousness together with such ideational complexes as are composed of separable elements, but referred by others to the laws of association and the selective activity of attention. The term was introduced by C. von Ehrenfels in 1890.

> In a very great variety of mental complexes, over and above the elements into which the complex falls, there remains, he insists, a mental factor which is a necessary and characteristic feature of the complex,—something which may remain unchanged even though all the elements be altered. This new factor, this 'positive ideational content,' is the *form-quality*.
>
> *Amer. Jour. Psychol.*, XIII. 276.

formula, *n.*—**Cippoletti's, D'Arcy's, Francis's,** etc., **formula,** various algebraic formulæ devised by the

authors whose names are given, to express the quantity of flow of water in terms of length, depth, etc., in a measuring-device.—**Constitutional** or **structural formula,** a formula expressing not only the kind and number of atoms in the molecules of any substance, but also their arrangement or order of attachment to each other. See *graphic formula.* **Descartes's formula,** in *optics,* the trigonometrical statement of the relation between the angles of incidence (i) and of refraction (r), viz.: $\frac{\sin i}{\sin r} = n$, where n is the index of refraction. This is known as *Snell's law,* but the statement of it in the above form is attributed to Descartes.—**Dimensional formula,** an algebraic expression indicating the manner in which the three fundamental quantities of any system of measurements—usually length, mass, and time—enter into any derived physical quantity. Thus the dimensional formula of a force is LMT^{-2}.—**Euler's formula.** (*a*) In *geom.,* $F + S = E + 2$. In any convex polyhedron the number of faces increased by the number of summits exceeds by two the number of edges.—**Fechner's formula, Fechner's fundamental formula,** in *psychophys.,* the formula $dS = c\frac{dR}{R}$, where S stands for intensity of sensation, R for stimulus, and c for a constant value.—**Fechner's measurement formula, Fechner's metric formula,** in *psychophys.,* the formula $S = k \log \frac{R}{r}$, where S is a sensation of given intensity, k is a constant value, R is the stimulus which evokes S, and r is the liminal value of this stimulus. If we make $r = 1$, the formula becomes $S = k \log R$.—**Ferrel's gradient formula.** See ★*gradient.*—**Formula of Avernarius,** an empirical formula for the electromotive force of a thermo-electric couple, proposed by M. P. Avernarius of Kiel (1863). It has the form

$$E_{(t_1 - t_2)} = b(t_1 - t_2) + c(t_1^2 - t_2^2),$$

where E is the electromotive force, t_1 and t_2 are temperatures of the junctions, and b and c are constants which depend upon the metals employed.—**Formula of Stefan.** See *Stefan's* ★*law.*—**Fourier-Bessel formula,** a formula expressing the algebraic sum of a series of sines and cosines of successive multiples of a unit angle. The coefficients and angles may be so adjusted that the sum total shall represent the observed variations of any natural phenomenon. It serves as an interpolation formula if the observed quantities are not governed by any known law, but as a serial development if the natural law is known.—**Fresnel's formula.** See *reflection* ★*equations.*—**Galton's formula,** a formula of natality (which see) devised by Francis Galton.

If we denote the paternal age by p, the maternal by m, and the degree of natality by n, the formula is

$$m + p + n = 91\tfrac{1}{4}$$
$$n = 91\tfrac{1}{4} - (m + p);$$

that is to say, the natality can with satisfactory reliability be estimated to be equal to the difference between the age of both parents taken together and the number 91¼.

Philos. Trans. Roy. Soc. (London), 1895, sect. B, p. 847.

Garrod's formula. See *muscle* ★*formula.*—**Green's formula,** an equation for the distribution of magnetism in a cylinder acted upon by a uniform external force parallel to its axis. It is

$$\lambda = \pi k X p a \frac{e^{\frac{px}{a}} - e^{-\frac{px}{a}}}{e^{\frac{pl}{a}} + e^{-\frac{pl}{a}}},$$

where λ is the linear density of free magnetism at a distance x from the middle of the cylinder, whose radius is a and length 2l, k is the coefficient of magnetization, X the magnetizing force, and p a constant.—**Heron's formula,**

$$\Delta = \sqrt{s(s-a)(s-b)(s-c)},$$

where $s = \frac{1}{2}(a + b + c)$, and Δ = area of any triangle.—**Holman's formula,** the equation,

$$\Sigma_0^t e = mt^n,$$

which expresses the relation between the electromotive force of a thermo-element and the temperature of the hot junction. In this formula e is the electromotive force for a difference of temperature of 1° C., and t the temperature to be measured, and m and n are constants.—**Hypsometric formula,** the formula $H = \frac{B}{S} \log \frac{B}{y}$, where B is the pressure (in centimeters of mercury) and S the density (referred to mercury) of the air at the earth's surface; H centimeters the height, and y the atmospheric pressure at the elevation H.—**Lambert's formula,** a formula for obtaining the mean wind direction from a table of observed directions, namely,

$$\tan \phi = \frac{E - W + (NE + SE - SW - NW)\cos 45^\circ}{N - S + (NE + NW - SE - SW)\cos 45^\circ},$$

where φ is the angle between the north and the mean wind direction measured round by east.—**Le Chatelier's formula.** See *Le Chatelier's* ★*law of radiation.*—**Moseley's formula,** in *naval arch.,* an expression for the dynamical stability or the work done in inclining a vessel to a given angle. It considers the immersed and the emerged wedges of equal volume formed by the load water planes in the upright and inclined positions and the distances of their centers of volume from the inclined water-plane. The product of the sum of these distances by the ratio of the volume of a wedge to the total volume of the under-water hull is diminished by the product of the versed sine of the angle of inclination and the distance between the center of gravity and the center of buoyancy in the upright position. The resultant quantity multiplied by the displacement or weight of the vessel is the work done in inclining the vessel to the given angle.—**Muscle formula,** a plan devised by A. H. Garrod for expressing by letters and symbols the presence or absence of certain leg-muscles used by him in classifying birds. The letters A B X Y represented respectively the femorocaudal, accessory femorocaudal, semitendinosus, and accessory semitendinosus, while + indicated the presence and – the absence of the ambiens. For example, A B X + shewed that the first three muscles and the ambiens were present.—**Nerve formula,** a method of noting the arrangement of the spinal nerves, especially in the lower vertebrates, such as fishes where some of the nerves of the pectoral and pelvic girdles have been fused, thus lessening their apparent number.—**Neumann's formula.** See *reflection* ★*equations.*—**Phalangeal formula,** a method of expressing the number of joints or phalanges in the digits of either the fore feet or hind feet, the enumeration being from the innermost digit outward.

The *phalangeal formula* is 2, 3, 4, 5, 4.

Osborn. The Reptilian Subclasses Diapsida and Synapsida.

Poisson's formula,

$$\frac{\partial^2 V}{\partial x^2} + \frac{\partial^2 V}{\partial y^2} + \frac{\partial^2 V}{\partial z^2} = \nabla^2 V = \Delta^2 V = 4\pi\rho,$$

where ρ is a function of x, y, z, the coördinates of a point in space, and V may denote temperature, or concentration of a solution, or electric and magnetic potential, or the Newtonian potential due to an attracting mass, etc.—**Stansfield's formula,** the equation $T\frac{dE}{dT} = aT + b$, which expresses the relation between the electromotive force of a thermo-element, used for the measurement of high temperatures, and the temperature. T is the absolute temperature of the hot junction, E the electromotive force when the cold junction is in boiling water, and a and b are constants.—**Structural formula.** See *graphic formula.*—**Van der Waal's formula.** See *Vander Waals* ★*equation.*

formulary, *n.* **3.** A collection of medical formulæ.

formulistic (fôr-mū-lis'tik), *a.* [*formula* + *-ist* + *-ic.*] Consisting of a formula; adhering or conforming to some recognized formula; taken from the recognized form or formula.

The sacred myths have a constant bearing upon *formulistic* prayers and observances.

Rep. Bur. Amer. Ethnol., 1897–98, p. 231.

fornix, *n.* **4.** In *topical geom.,* a part of a surface which, in conjunction with another similar part which inseparably accompanies it, increases the cyclosis of the surface by two. If cut away, it would leave two holes in the surface. Viewed from one side of the surface, it appears as a tubular bar (however much distorted or knotted) bridging the space from the edge of one hole to that of the other and leaving a transverse tunnel beneath formed by the twin fornix; while viewed from the other side it appears as a tunnel joining one hole to the other with a transverse bridge above formed by the twin fornix.—**Fornix longus,** a term sometimes used as a synonym for the arched portion of the fornix in the mammalian brain. Certain of the fibers are supposed to originate in the gyrus fornicatus.

fortescue (fôr'tes-kū), *n.* [Appar. from a surname *Fortescue,* whence by a popular adaptation the form *forty-skewer,* as alluding to the many sharp spines. But some consider *forty-skewer* to be the original.] A scorpænoid fish, *Pentaroge marmorata,* found in Australian waters.

Fortescue, or 40-skewer, a fish of New South Wales, Pentaroge marmorata, Cuv. and Val., family Scorpænidæ; called also the Scorpion, and the Cobbler. All its names allude to the thorny spines of its fins. The name *Fortescue* is an adaptation of Forty-skewer by the law of Hobson-Jobson. *E. E. Morris,* Austral English.

Fortification lines, the edge of a zigzag luminous figure sometimes observed subjectively during an attack of megrim.

Fortified milk. See ★*milk.*

fortoin (fôr'tō-in), *n.* [*for(maldehyde)* + *(co)toin*]. A yellow, tasteless crystalline compound obtained by the action of formaldehyde on cotoin. It is used as an intestinal astringent in diarrhea.

Fort Pierre group. See ★*group*[1].

fortress, *n.*—**The fortress.** Same as ★*Sebastopol.*

fortuitism, *n.* **2.** The doctrine that a tendency in the universe toward a certain direction of development may be accounted for by continual fortuitous changes, combined with an inherent possibility of an indefinite sum of change in the direction which development takes and an inherent impossibility of an indefinite sum of change in the opposite direction. The case is supposed to be analogous to that of a large number of gamblers playing against one another. Some of them are ruined from time to time and drop out of the game; and thus the average capital of those who remain tends to increase.

Fortuitous variation. See ★*variation.*

forty, *n.* **Half forty.** See ★*half.*

forty-legs (fôr'ti-legz), *n.* An Australian myriapod, *Cermatia* or *Scutigera smithii.*

forty-skewer (fôr'ti-skū'ér), *n.* Same as ★*fortescue.*

forty-spot (fôr'ti-spot), *n.* A shrike, *Pardalotus quadragintus,* one of the diamond-birds. [Australia.]

forward[1]. **I.** *a.* **Forward glance,** in *cricket,* a glance-stroke played forward; a stroke by which the ball is turned in its course, usually to the leg side, by playing forward with the surface of the bat held slantwise.—**Forward play,** in *cricket,* the act of stocking or stopping the bowling by stepping forward with the left foot and meeting the ball soon after it has pitched.

II. *n.* In *foot-ball, basket-ball,* and other games, a player in the front line of the team.

forward[1], *adv.* **4.** In *cricket,* in front of the batsman's wicket; said of a fielder's position.

forwarding-yard (fôr'wärd-ing-yärd), *n.* See ★*drill-yard.*

fosfate, fosfatic, etc. Simplified spellings of *phosphate,* etc.

fosforic, fosforus, etc. Simplified spellings of *phosphoric,* etc.

foss, *n.* A simplified spelling of *fosse.*

fossa[1], *n.* Amygdaloid fossa, the interval between the pillars of the fauces occupied by the tonsil.—**Crotaphite fossa.** See ★*crotaphite.*—**Douglas's fossa.** Same as *recto-vaginal pouch* (which see, under *pouch*).—**Epigastric fossa.** (*a*) The urachal fossa. (*b*) The pit of the stomach.—**Ethmoid fossa,** a groove on the cribriform plate of the ethmoid bone in which lies the olfactory lobe.—**Eustachian fossa,** a sulcus in the petrous portion of the temporal bone which lodges a part of the Eustachian tube.—**Fossa capitis femoris,** the depression on the head of the femur giving attachment to the ligamentum teres.—**Fossa cerebelli.** See *occipital fossa.*—**Fossa costalis,** depression on the body of a vertebra where it articulates with one of the ribs.—**Fossa intercondyloidea.** Same as *intercondyloid fossa.* See *intercondyloid.*—**Fossa of Rolando,** a groove which marks the division between the parietal and frontal lobes of the brain.—**Fossa sellæ.** Same as *pituitary fossa.*—**Harderian fossa,** the depression in advance of the orbit in which the Harderian gland is lodged. See *gland.*—**Hypogastric fossa,** a depression on the inner surface of the anterior abdominal wall between the hypogastric folds.—**Hypotrochanteric fossa,** a depression below the trochanter of the femur, well marked in the anthropoid apes and in certain of the lower races of man.—**Intercondyloid fossa.** See *intercondyloid.*—**Lacerate fossa,** an opening in the wall of the orbit of the eye, just above the alisphenoid; more or less irregular in shape, whence the name.—**Mastoid fossa,** a depression for the lateral sinus on the inner surface of the mastoid portion of the temporal bone.—**Mesencephalic fossa,** in *ornith.,* the depression in the cranium which contains the olfactory lobes and adjoining parts of the brain constituting the mesencephalon.—**Metencephalic fossa,** in *ornith.,* the depression in the floor of the cranium which contains the medulla.—**Olfactory fossa,** the depression on the interior of the cranium which contains the olfactory lobes.—**Patellar fossa.** (*a*) See *patellar.* (*b*) A depression in the hyaloid membrane of the eye on a level with the entrance of the optic nerve.—**Popliteal fossa,** the depression on the posterior face of the femur, near its distal end.—**Quadratojugal fossa,** the name given by Pycraft to the triangular space in the skull of a bird, bounded on the outside by the slender quadratojugal, on the inside by the palatine, and in front by the end of the maxillary. *Trans. Zool. Soc. London,* 1900, p. 185.—**Subtrochanteric fossa,** the deep pit on the posterior side of the proximal end of a bird's humerus. When the humerus is pneumatic the pneumatic foramina open in this fossa.—**Supraclavicular fossa.** (*a*) See *supraclavicular.* (*b*) The depression between the sternal and the clavicular origins of the sternomastoid muscle.—**Supracondyloid fossa,** a depression on the femur between the internal tuberosity and the internal supracondyloid tubercle.—**Sylvian fossa,** a depression on the under surface of the brain within the fissure of Sylvius containing the insula.—**Tonsillar fossa.** Same as *amygdaloid* ★*fossa.*—**Urachal fossa,** a depressed space on the inner surface of the anterior abdominal wall between the urachus and the hypogastric artery.

fossette, *n.* **3.** A hollow of considerable depth in the grinding-face of a tooth, more or less completely surrounded by enamel folds: typically shown in such a tooth as the molar of a rhinoceros. See cut under ★*tooth.*

fossiform (fos'i-fôrm), *a.* [L. *fossa,* ditch, + *forma,* form.] Having the form of a fossa or pit; pit-shaped.

Fossil oil, an early name for petroleum. *Dialect Notes,* II. vi.—**Fossil ore.** See *Clinton ore,* under *ore.*—**Fossil rain-marks,** scars made in the soft mud or sand by rain, which, before being obliterated, were covered by a layer of sediment that preserved them, the whole being subsequently compacted into rock.—**Fossil river-channel,** a former river channel buried beneath later formations.—**Fossil water,** water contained in rocks of sedimentary origin, especially that part of such water which is regarded as having been derived from the sea and incorporated in the muds at the time the sediments were laid down.

fossula, *n.* (*b*) In *anat.,* one of the numerous slight depressions on the surface of the brain.

fostite (fos'tit), *n.* [*(sul)phost(eat)ite.*] A trade-name for cupric sulphate converted into a dusting-powder, for application to plants as a fungicide, by being soaked up in solution by an inert mineral powder, such as soapstone, and dried. Also known as *cupric steatite* and *sulphosteatite.*

F. O. T. An abbreviation of *free on truck.* [Eng.]

Fothergilla (foᴛʜ-ėr-gil'ä), *n.* [NL. (Murray, 1774), named in honor of John *Fothergill* (1712–1780), an English physician and botanist.] A genus of shrubs of the family *Hamamelidaceæ.* It is distinguished from related genera by having apetalous flowers in terminal spikes, a bell-shaped and 5- to 7-lobed calyx, numerous stamens, and the fruit a 2-partitioned and 2-seeded capsule. There are three species of the southern Alleghany region, two of which, *F. Carolina* (*F. Gardeni* of Murray) and *F. major,* are planted for ornament. The former is sometimes known as *witch-alder.*

fotograf, fotografer, etc. Simplified spellings of *photograph*, etc.

fotometer, fotometric, etc. Simplified spellings of *photometer*, etc.

fototype, fototypic. Simplified spellings of *phototype*, *phototypic*.

Foucault prism. See ★*prism*.

Foucault's method. See ★*method* and *velocity of* ★*light*.

foujdar (fouj′där), *n.* [Also *fousdar*, *phousdar*; < Hind. Pers. *faujdār*, a military commander, < Pers. *fauj*, a regiment, + *dār*, one who holds.] Formerly, in Persia, a military officer; in India, under the Mogul government, an officer who had charge of the police and criminal matters. [Anglo-Indian.]

foujdari (fouj-dä′rē), *n.* [Hind. *faujdārī*, < *faujdār*; see *foujdar*.] In India, a local native court of justice.

Foul block, a block in which the rope has jammed.—**Foul chain.** Same as *foul hawse*. **Foul coast,** a coast which is lined with reefs and breakers. **Foul ground,** a harbor in which rocks, shoals, or wrecks endanger navigation. **Foul hand,** in *poker*, a hand containing more or fewer than five cards, any part of which has been lifted or looked at. **Foul tip,** in *base-ball*, a pitched ball just tipped by the batsman's club, so that its direction and speed are not appreciably altered. **Foul water** (*naut.*). (*a*) Water in which the bottom mud and sand rises to the surface. See *to make foul water*. (*b*) Water which shows unequal soundings. (*c*) Water resting on a bottom of rocks and shoals.—**Foul wind** (*naut.*), a head wind.

foul-lines (foul′līnz), *n. pl.* In *base-ball*, lines drawn from the outer corner of the home plate along the outer edge of first and third bases to the boundaries of the ground. See *foul*[1], *n.*, 2.

foundation, *n.* **9.** In *ship-building*, any part of a ship's structure which is built up or specially reinforced to support heavy weights, as engines and boilers, turrets, guns, boat-cranes, etc.

foundation-bolt (foun-dā′shọn-bōlt), *n.* A large and heavy bolt used to secure the base of steel columns to the foundation stones or to secure heavy machinery to a floor.

foundation-plate (foun-dā′shọn-plāt), *n.* **1.** A bed-plate for a steam-engine or heavy machine, usually of cast-iron.—**2.** An anvil or base-plate upon which ornaments are arranged in a stamping- or embossing-press.—**3.** A plate used in a foundation which is built up of plates and angles, as the engine foundations in a ship.

foundation-stop (foun-dā′shọn-stop), *n.* See *stop*[1], 6.

founder[3], *v. i.* **4.** In *golf*, to drive the ball into the ground by turning in the face of the club when striking.

founder-shaft (foun′dėr-shäft), *n.* In *mining*, the original shaft for a mine. [Eng.]

foundry-proof (foun′dri-prōf), *n.* The last proof of composed type, supposed to be nearly free from fault. The proof-reader of the printing-house reads it for the detection of unnoticed typographical blemishes. When the type is not electrotyped or stereotyped it is called the *press-proof*.

fountain, *n.* **8.** A fountain-shell or watering-pot shell; any shell of the genus *Aspergillum*.—**Fountain decussation,** a decussation of nerve-fibers of the crura cerebri beneath the posterior longitudinal fasciculus.

fountain-brush (foun′tạn-brush), *n.* A marking, painting, or stenciling brush having a reservoir in the handle for ink or paint. Pressure upon a button at the end of the handle releases enough ink to wet the brush. When the brush is worn out it can be removed from the handle and a fresh brush affixed.

fountain-dues (foun′tạn-dūz), *n. pl.* *Naut.*, the amount of money charged against a vessel for furnishing her with fresh water while in harbor and filling her water-tanks for sea.

fountain-pump (foun′tạn-pump), *n.* A pump for throwing a spray like a fountain, for use on a lawn or for spraying trees.

fountain-syringe (foun′tạn-sir″inj), *n.* A rubber bag terminating in a flexible tube, with appropriate tip for the administration of urethral, vaginal, or rectal injections.

fountain-tree (foun′tạn-trē), *n.* The deodar, *Cedrus Deodara*. See *deodar*.

Fouquieriaceæ (fō-ki-ā-ri-ā′sē-ē), *n. pl.* [NL. (Dumortier, 1829), < *Fouquieria* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Hypericales*, consisting of the the single genus *Fouquieria* (which see).

fouquieriaceous (fō-ki-ā-ri-ā′shius), *a.* Belonging to the plant family *Fouquieriaceæ*.

four, *n.* **7.** In *cricket*, a boundary; also, a ball hit by the batsman, which reaches the boundary, thus scoring four runs. See ★*fourer*. *Hutchinson*, Cricket, p. 314.—**Four up and three to play,** in *golf*, noting the score of a player when he has four holes to the good, and there remain only three holes to be played: he wins the match. **Long fours,** candles about eight inches long, weighing four to the pound. **Short fours,** candles from four to five inches long, weighing four to the pound.

fourchette, *n.* **5.** The combination in one hand of the cards immediately above and below the one led, such as queen and 10 over a jack.—**Imperfect fourchette,** the combination in one hand of the card immediately above and that next below the card led: as, queen, 9 on a jack led.

fourchite (fōr′shīt), *n.* [*Fourche* Mountain, Arkansas, + *-ite*[2].] An olivin-free monchiquite; a dark porphyry or non-porphyritic aphanite with hornblende or pyroxene in a more or less glassy ground-mass. It occurs in dikes.

four-coupled (fōr′kup″ld), *a.* Having four driving-wheels coupled or connected by side-rods, as the standard American passenger-engine which has two such drivers on each side.

four-course (fōr′kōrs), *n.* In *farming*, a course of crop-rotation which is completed in four years. See *rotation of crops*, under *rotation*.

four-cut (fōr′kut), *a.* Cut into four parts, as a piston-ring.

four-cycle (fōr′sī″kl), *n.* Same as *four-phase cycle* (which see, under *internal-combustion* ★*motor*).

four-cylinder (fōr′sil″in-dėr), *a.* Having four cylinders, either working together or each one working separately from the others.

Fourdrinier machine. See ★*paper-machine*.

fourer (fōr′ėr), *n.* [*four* + *-er*[1].] In *cricket*, a four; a ball hit by the batsman, which reaches the boundary, thus scoring four runs. *H. R. Lyttelton*, Cricket and Golf, p. 14.

four-horned (fōr′hôrnd), *a.* Having four horns, as the Quito sheep, or the four-horned antelope, *Tetraceros quadricornis*, of India.

Fourier-Bessel formula. See ★*formula*.

four-in-hand. **I.** *n.* **3.** A long scarf or neck-tie. One of the ends (which are broader than the center which surrounds the neck) is wound over the other, passed up between the neck and the tie, and then brought down in front through the loop thus formed.

II. *a.*—**Four-in-hand coach,** a heavy coach, with square boot and box, and fitted with roof-seats on the main body, a driver's seat on the box, and a footman's seat on the boot: a gentleman's drag, wrongly called a *tally-ho* (a name given to an individual coach introduced into New York by Colonel Kane, about the year 1876).—**Four-in-hand harness,** a set of harness for four horses—two leaders and two at the pole. The standard pattern is without breechings. The pole-team have pads: these may be omitted on the leaders. The bridles of the pole-team are fitted with rein-rings to support the lead-reins.

four-o'clock, *n.*—**Californian four-o'clock,** *Mirabilis Californica* of southern California, a species with numerous small flowers resembling diminutive azaleas. *Parsons and Buck*, Wild Flowers of California, p. 208.—**Four-o'clock family,** the plant family *Nyctaginaceæ*.

four-on (fōr′on), *a.* Said of an arrangement of pages for presswork by which four copies in quadruplicate can be printed together on the same sheet by the same operation. See ★*two-on*. *De Vinne*, Mod. Book Composition, p. 349.

four-phase (fōr′fāz), *a.* Having four phases or conditions; in gas-engines, four-cycle.

foursome, *a.* **II.** *n.* A golf match in which four persons engage, two playing against the other two.

foursquare, *a.* **II.** *n.* A figure with four equal sides.

fourteener (fōr′tēn″ėr), *n.* A line of poetry of fourteen syllables. *G. Saintsbury*.

fourth. **I.** *a.*—**Fourth state of matter.** See ★*matter*.

II. *n.*—**Fourth best,** in *whist* and *bridge*, the fourth card of any suit counting from the top: the modern substitute for the penultimate and antepenultimate.

four-toes (fōr′tōz), *n.* The plantain-leaf everlasting, *Antennaria plantaginifolia*. Also called *dog-toes* and *pussy-toes*.

Fovea canina. Same as *canine fossa* (which see, under *canine*).—**Fovea capitis femoris.** Same as ★*fossa capitis femoris*.—**Fovea ischiadica,** in *ornith.*, the most evident depression on the lower side of the pelvis, lying just in advance of the first true sacral vertebra.—**Fovea jugularis,** the depression at the root of the neck between the sternal origins of the sternomastoid muscles.—**Fovea lumbalis,** in *ornith.*, a small depression on the under side of the anterior part of the ilium.—**Fovea navicularis.** Same as *navicular fossa* (which see, under *navicular*).—**Fovea nuchæ,** the groove at the back of the neck just below the skull.—**Fovea pharyngis.** Same as *Rosenmüller's fossa*.—**Fovea pudendalis,** in *ornith.*, that depression on the under side of the pelvis of a bird which lies just back of the first sacral and is crossed by the transverse processes of the sacrals.—**Fovea triangularis.** Same as *ventricle of Arantius*.

foveation (fō-vē-ā′shọn), *n.* [*foveate* + *-ion*.] The formation or the presence of pits, noting this phenomenon in the pock-mark or vaccination-scar. *Biometrika*, Feb., 1903, p. 137.

foveiform (fō′vē-i-fôrm), *a.* Having the character of a pit, depression, or fovea.

foveolated (fō′vē-ọ-lā-ted), *a.* Same as *foveolate*.

foveolate-punctate (fō′vē-ọ-lat-pungk″tāt), *a.* In *entom.*, punctured with foveolæ, as the elytra of certain beetles.

fowl[1], *n.* **Hollow fowl,** "poultry, rabbits, etc.; any meat not sold by butchers." *Halliwell*.

fowl-mite (foul′mīt), *n.* See ★*chicken-mite*.

fowl-pock (foul′pok), *n.* Same as ★*hen-pox*.

fowl-tick (foul′tik), *n.* Either *Argas persicus* of South Africa, or *Argas miniatus* of America, giant mites which attack chickens.

Fowl-tick (*Argas miniatus*). Ventral view, highly magnified. (Marx, U. S. D. A.)

fox[1], *n.* **5.** A drain carried under another watercourse by means of a depressed culvert forming an inverted siphon. Commonly called a *dip-culvert* or a *dive-culvert*.—**6.** One of the northern constellations (Vulpecula), situated between the constellations of the Swan and the Dolphin.—**7.** [Tr. G. *fuchs*.] A freshman in a German university. [Not used in American colleges.]

A duel was going on between two Fuchse (Freshmen). . . . The two "foxes" fought out their time and were released, greatly to their own satisfaction.
J. M. Hart, German Universities, pp. 71, 72.

fox-chop (foks′chop), *n.* A cultivated form of the dog's-chop, *Mesembryanthemum caninum*.

fox-farming (foks′fär-ming), *n.* The industry of rearing the blue or arctic fox (*Vulpes lagopus*) for its valuable skin. Uninhabited islands of the Aleutian chain in Alaska are used for the purpose, the animals being allowed to run wild. The only care given them consists in supplying them with food, and they are trapped as in the wild state.

fox-feet (foks′fēt), *n.* The fir club-moss, *Lycopodium Selago*.

foxglove, *n.* **4.** The pitcher-plant, *Sarracenia purpurea*.—**5.** The trumpet-creeper, *Campsis radicans*.—**American foxglove,** *Dasistoma Pedicularia*, a large, much-branched, viscid-hairy herb of eastern North America, with broad twice-pinnatifid leaves and large yellow flowers resembling those of the foxglove in shape.—**Blue foxglove,** the throatwort, *Campanula Trachelium*. See *throatwort*, 1.—**False foxglove.** (*b*) Any species of *Dasistoma*, American plants with large yellow flowers, related to the foxglove. *D. flavum* is the *downy false foxglove*; *D. lævigatum*, the *entire-leaved foxglove*; *D. Pedicularia*, the *fern-leaved foxglove*; *D. Virginicum*, the *smooth foxglove*, and *D. grandiflorum*, the *western false foxglove*.—**Ladies'-** or **lady's-foxglove,** the mullen, *Verbascum Thapsus*. **Lousewort foxglove,** the American lousewort, *Pedicularis Canadensis*.—**Mullen foxglove.** (*b*) *Digitalis Thapsi*, native in Spain.—**West Indian foxglove,** the Spanish calalu, *Phytolacca octandra*.—**White foxglove,** the haskwort, *Campanula latifolia*. See *haskwort*.—**Yellow foxglove,** the downy false foxglove, *Dasistoma flavum*.

fox-grass (foks′grâs), *n.* See *salt-marsh* ★*grass*.

fox-head (foks′hed), *n.* **1.** The head of a fox.—**2.** A drinking-cup in the form of the head of a fox, suggested by the Grecian rhyton. Such cups were made by European potters in the latter part of the eighteenth century.

Fox Hills group. See ★*group*[1].

fox-key (foks′kē), *n.* A split key into the end of which is driven a thin wedge of steel to prevent it from working out.

fox-poison (foks′poi″zn), *n.* The spurge-laurel, *Daphne Laureola*.

foxtail, *n.*—**Alpine foxtail,** *Alopecurus alpinus*, an erect short-headed species which occurs in the arctic regions of both hemispheres. **Branching foxtail,** *Chætochloa composita*, a stout species with a bristly, branching panicle. It extends from the West Indies into southern Florida. The name has also been applied to one of the windmill-grasses, *Chloris verticillata*.—**Bristly foxtail,** *Chætochloa verticillata*, a species with rather short adhesive awns, a weed found sparingly in waste places. Sometimes also the Hungarian grass *C. Italica*.—**Floating foxtail,** the water-foxtail, *Alopecurus geniculatus*, a species widely diffused in Europe, Asia, and North America, affording excellent grazing in wet places.—**Large foxtail,** in California, the larger species of barley-grass, *Hordeum*, more properly called *squirreltail*. **Meadow-foxtail,** a pasture-grass, *Alopecurus pratensis*, native in Europe and introduced into North America. It is valuable in mixtures for pasture in moist ground on account of its earliness and other good qualities. Its heads, like those of other species of the genus, suggest a small timothy. See cut on following page.—**Mountain foxtail,** *Alopecurus occidentalis*, an erect species growing in mountain meadows of the Rocky Mountains, occasionally abundant and yielding a fine, long, bright-colored hay. The heads are thicker and shorter than those of the meadow-foxtail.—

Small foxtail, in California, the smaller species of *Hordeum.* See large ★*foxtail.* **Smooth foxtail,** *Chætochloa imberbis,* a species somewhat resembling the yellow foxtail, but easily distinguished by its longer bristles and by its rootstocks. It is widely diffused in several varieties, being found in the southeastern United States, the West Indies, and Mexico.—**Western foxtail.** Same as *mountain* ★*foxtail.* **Yellow foxtail,** *Chætochloa glauca,* a very common grass of mild latitudes, appearing as a weed in cultivated ground. Also known as *pigeon-grass* (which see). See cut at ★*Chætochloa.*

Meadow foxtail [illegible] plant, one-fourth [illegible] spikelet, [illegible] flowering glume; [illegible] stamens and pistil. *b, c,* and *d* slightly enlarged.

foxtail-pine (foks'tal-pin), *n.* **1.** See *foxtail-pine*, under *pine*[1].—**2.** *Pinus Balfouriana*, a small tree of the northwestern United States, resembling *P. aristata*, but having the scales destitute of prickles.—**3.** The loblolly-pine, *Pinus Tæda.*

foxy[1], *a.* **4.** In *painting*, marked by a disagreeable, hot quality of color.—**5.** Penetrating and well acquainted with the ways of the world; sharp; especially, having an air of knowingness: it then signifies a not very estimable character.

F. P. An abbreviation of *fire-plug.*

F. P. S. An abbreviation (*a*) of *Fellow of the Philological Society;* (*b*) of *Fellow of the Philosophical Society of Great Britain.*

Fr. An abbreviation (*b*) of *France;* (*c*) of *Friday.*

fractabling (frak'ta-bling), *n.* A coping, as of a fractable, but the term often extended to include the coping of any wall.

fractile (frak'til), *a.* [L. *fractus,* broken, + *-ile.*] That may be broken or cleft; pertaining to breakage or cleavage.

fraction, *n.*, **4.** In *math.:* (*c*) In *geom.*, any multiple of any submultiple of a magnitude.—**5.** In *chem.*, one of the parts into which a substance is separated in the process of fractional distillation. See *fractionation.*—**Continued fraction of the second order,** a fraction whose numerator and denominator are themselves continued fractions. See *continued fraction*, under *continued.* **Ordinal fraction,** a mark for an object interpolated in a natural series or row.

fraction (frak'shon), *v. t.* [*fraction, n.*] Same as *fractionate.*

> Although the gas contained so little silicon hydride, they succeeded in *fractioning* it.
> *Amer. Chem. Jour.*, March, 1903, p. 282.

Fractional crystallization, diffusion, equation, function, number. See ★*crystallization*, etc.

fractionate, *v. t.*—**Fractionating tube.** See ★*tube.*

fractionator (frak'shon-ā-tor), *n.* In *chem.*, an apparatus for fractional distillation.

fracto-cumulus (frak'tō-kū''mū-lus), *n.*; pl. *fracto-cumuli* (-lī). A ragged cumulus; an ill-defined cloud in the first stage of condensation and representing the tops of small, low atmospheric waves due to rapid winds near the surface of the ocean or land; scud. The fracto-cumulus is, relatively speaking, a low cloud, lying some distance below the flat base of the ordinary cumulus. See ★*cloud*[1], 1.

fracto-nimbus (frak'tō-nim''bus), *n.*; pl. *fracto-nimbi* (-bī). An ill-defined, ragged, or broken cloud from which rain falls or is threatening to fall. See ★*cloud*[1], 1.

fracto-stratus (frak'tō-strā''tus), *n.*; pl. *fracto-strati* (-tī). The edge of a stratus cloud which is disappearing through the evaporation of its moisture, leaving only ragged portions which soon disappear. See ★*cloud*[1], 1.

fracture, *n.* **4.** In *phonol.*, same as *breaking*, 2. *A. L. Mayhew*, Old Eng. Phonol., V. i. § 81.—**Barton's fracture,** fracture of the lower articular end of the radius. **Bennet's fracture,** a fracture of the first metacarpal bone.—**Complicated fracture,** a fracture associated with injury to other structures, such as an important nerve or a large blood-vessel. **Depressed fracture,** a fracture in which the broken part is sunken below the general surface of the bone: noting usually a common form of fracture of the skull.—**Extracapsular fracture,** fracture of a bone, such as the hip-bone, near the joint but outside of the capsular ligament.—**Fracture fever.** See ★*fever*[1].—**Hickory-stick fracture.** Same as *greenstick fracture.* **Incomplete fracture,** a fracture in which the bone is not broken entirely across: a greenstick fracture is of this nature.—**Intra-articular fracture,** a fracture involving the articular surface of the bone.—**Intracapsular fracture.** See *intracapsular.* **Linear fracture,** a fracture running lengthwise of the bone. **Multiple fracture,** fracture of several bones or of one bone in several places.—**Silver-fork fracture.** Same as *Colles's fracture.*—**Spontaneous fracture,** a fracture produced by a very slight force, such as simple muscular contraction, due to abnormal brittleness of the bone or to its partial destruction by a cancer or other lesion.—**Sprain fracture,** rupture of a tendon from its point of attachment to the bone, a splinter of the latter being torn away with the tendon.—**Willow fracture.** Same as *greenstick fracture.* **Zone of fracture,** a name suggested by C. R. Van Hise for the outer portion of the earth's crust, in which the deformation of rocks produces fractures and open cavities. As the depth increases and the load becomes greater, weak rocks, such as shales, can at 500 meters no longer maintain cavities, and the limit of resistance of even the firmest granites is reached at 10,000 meters, or the *zone of* ★*flowage* (which see). Between these limits lies the mixed zone of fracture and flowage, embracing rocks of variable resistance.

frænum, *n.* See *frenum.*

fragarianin (frā-gā'ri-a-nin), *n.* [*Fragaria* + *-in*[2].] A glucoside found in the roots of *Fragaria vesca.*

fraghan (frân), *n.* [Also *frawn*, representing, respectively, the spelling and the present pronunciation of Ir. *fraochan*, the plural of *fraochag*, a whortleberry, < *fraoch*, heath.] The whortleberry, *Vaccinium Myrtillus.*

fragil, *a.* A simplified spelling of *fragile.*

fragilin (fraj'il-in), *n.* [L. *fragilis* (see def.) + *-in*[2].] A compound crystallizing in red or reddish-yellow needles and found in *Sphærophorus fragilis.*

fragilitas (frā-jil'i-tas), *n.* [L.] Brittleness.—**Fragilitas crinium,** brittleness of the hair.—**Fragilitas ossium,** a condition in which the bones break very easily, sometimes as a result of simple muscular action.

fragm., frgm. Abbreviations (*a*) of *fragment;* (*b*) of *fragmentary.*

fragment (frag'ment), *v. i.* [*fragment, n.*] To break up into pieces: said of a cell-nucleus or nucleolus that breaks up amitotically into two or more pieces of unequal size.

fragmental, *a.* **2.** Same as *clastic.*

fragmented (frag'men-ted), *p. a.* Broken into fragments; specifically, in *biol.*, broken or separated into parts each of which forms a new individual. See *fragmentation.*

> A few streptococci and isolated filaments are found in the exudate of the catarrhal bronchitis and in the alveoli filled with *fragmented* leukocytes and organizing exudate.
> *Jour. Exper. Med.*, Oct. 25, 1900, p. 162.

Fragrant fern. See ★*fern.*

frail[2], *n.* **4.** A wooden carrier or crate used by glaziers to carry sheets of glass. [Eng.]

frailejon (frä-ē-lā-hōn'), *n.* [S. Amer. Sp., aug. of Sp. *fraile*, a friar: see *friar.* The name alludes to some fancied resemblance of the plant to a friar with his gown and cowl.] A general name for a growth of peculiar tall composite plants belonging to the paramos of the equatorial Andes. Their densely hairy ensiform leaves are as long as the arm and form rosettes, sometimes pressed to the ground, sometimes crowning a massive stem clad with dead leaf-bases.

fraising-machine (frā'zing-ma-shēn''), *n.* A profiling-, forming-, or routing-machine used in roughing out the carving or shapes on such articles as canes, umbrella-handles, and chair-legs.

fraktur (fräk-tör'), *n.* [G., < L. *fractura*, breaking: see *fracture.*] In *printing*, the form of pointed letter used in ordinary German books and newspapers. It differs from the older German black-letter in the greater stiffness and similarity of the shapes, and in the points or finials with which it bristles. Though black and forbidding, fraktur is a thin character. The small letters are about one fifth narrower than roman letters of same size of body. *DeVinne*, Mod. Book Composition, p. 253.

This is Fraktur Type.

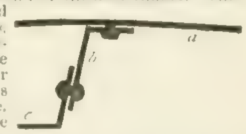
F. R. A. M. An abbreviation of *Fellow of the Royal Academy of Music.*

frambœsial (fram-bē'si-al), *a.* [*frambœsia* + *-al*[1].] Relating to or of the nature of frambœsia or yaws. *Lancet*, May 30. 1903.

frambœsiform (fram-bē'si-fôrm), *a.* Resembling frambœsia or yaws.

frame, *v. t.* **7.** In *ship-building*, to erect and adjust the frames of (a vessel) in place above the keel on the building-slip.

frame, *n.*, **5.** (*b*) In *ship-building*, one of the ribs or transverse members which extend up on each side of the keel and support the outside planking or plating. In a wooden vessel a frame is made up of curved pieces of timber. The lowest piece is the *floor-timber*, which extends across the keel. The next piece is the *first futtock*, the lower part of which laps on one side of the floor, and the upper part laps on the side of the *second futtock*, the lower end of the latter butting against the upper end of the floor-timber. The successive pieces are called *third, fourth,* etc., *futtocks*, and the last the *top-timber.* The various pieces are through-bolted to each other across the central joint, thus forming the complete frame. In iron and steel vessels the frames are of the most varied construction, owing to the ease with which the material can be worked into various forms.

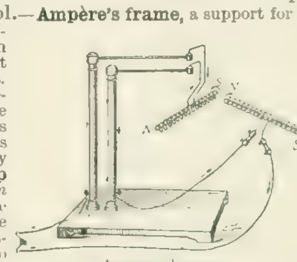


Cross-section of ordinary Frame.
[illegible]

The simplest is that consisting of a frame angle-bar, a reverse frame angle-bar, and a floor-plate. In the upper part of the frame the frame-bar and reverse frame-bar are riveted back to back, as shown in the section. This is called a *built frame.* In the lower part the two bars are spread apart and riveted to the floor-plate interposed between them. (See cut under *floor*, 5.) In modern steel vessels, particularly men-of-war, a single piece, as a channel-bar, bulb-angle, or Z-bar, takes the place of the frame-bar and reverse frame-bar. This is called a *solid frame.* In vessels with a double bottom the frame in the lower part becomes a part of the cellular bottom and is a more complex structure. (See cut under ★*bottom.*) The frame of a protected cruiser with double bottom is shown under *frame*, 5. In large merchant steamers with double bottoms a generally similar construction is adopted. The upper part of the frame is a piece separate from that in the bottom, and it is secured to the margin-plate by a bracket and gusset. (See cut under ★*bracket*[1].) Other forms of frames are used in vessels in various places. (See *deep* ★*frame*, ★*belt-frame*, ★*web-frame.*) The deep longitudinal members in the framework of the double bottom are sometimes called *longitudinal frames*, but more usually *longitudinals.* A *boss-frame* is one of the frames at the stern which are curved out around the stern-tube. The *transom-frame* is that at the stern-post in vessels having an overhanging stern. It has a very deep floor which is riveted to the upper interior part of the stern-post, and the radiating *stern-frames* abaft it, forming the contour of the stern, are secured to it at their heels.

6. (*g*) In *bee-keeping*, an open four-cornered box, readily removed from the hive, in which the bees construct their combs. (*h*) In *printing*, same as *composing-stand.*

10. In *bowling* or *tenpins*, a division of the game through which a player continues at one setting of the pins. Three balls usually constitute a frame.—**11.** In *pool:* (*a*) The triangle used to spot the balls in pyramidal form at pyramid, continuous, following, and fifteen-ball pool and their offshoots. (*b*) The leg or game played with such a set of balls at all except continuous pool.—**Ampère's frame,** a support for a couple of wire helices through which an electric current is made to pass. The coils then behave as if they were magnets. Wires bent in other forms may be similarly suspended.—**Deep frame,** in *iron ship-building*, one of the frames in the side of a cargo-vessel which has no lower deck or hold-beams. In such vessels the frames are about 50 per cent. deeper transversely than in a similar vessel with hold-beams or lower deck.—



Ampère's Frame.

Frame angle-bar, in *iron ship-building*, the outer bar of a frame to which the outside plating is riveted. See ★*frame*, 5(*b*). **In frame,** in *ship-building*, said of a vessel of which the frames are erected and regulated in place on the building-slip before the outside planking or plating is put on.—**Intermediate frame,** in *ship-building*, an extra frame for additional strength placed between two of the regularly spaced frames of a vessel.—**Square frame,** in *ship-building*, one of the frames which stand square across the central plane of the vessel, as distinguished from a cant-frame or cant. The greater part of the frames of all vessels are square frames, and in modern iron and steel vessels, in which the material used permits beveling without loss of material, nearly or quite all are square frames.

frame-angle (frām'ang''gl), *n.* Same as ★*frame angle-bar.*

frame-bar (frām'bär), *n.* Same as ★*frame angle-bar.*

frame-hive (frām'hīv), *n.* A beehive so constructed as to contain movable frames.

frame-lifter (frām'lif''tėr), *n.* A strip of lace, attached to the glass frame of a carriage, by which it is lifted out of its bed in the door or body.

frame-liner (frām'lī''nėr), *n.* See ★*liner*[2], 5.

frame-plate (frām'plāt), *n.* A rolled plate forming the web of the side-frame for a locomotive.

frame-slotter (frām'slot''ėr), *n.* A slotting-machine especially adapted for finishing the side-frames of locomotives.

Frame-slotting machine. See ★*slotting-machine.*

frame-work, *n.* **4.** Spinning done on a throstle- or ring-frame; also, knitting done on a stocking-frame.

framing-piece (fram'ing-pēs), *n.* A straight piece of wood placed at the center of a carriage head at right angles with the axle and extending from the front of the fifth wheel-plate to the horn-bar.

franceschino (frän-ches-ke'nō), *n.* [It., < *Francesco*, Francis.] A Tuscan silver coin of the value of 5 paoli.

francescone (frän-ches-kō'ne), *n.* [It., < *Francesco*, Francis.] The silver scudo of Francis of Lorraine, who died in 1737, equal to 10 paoli or 6⅔ lire.

franchise, *n.*—**Municipal franchise.** (*a*) A legislative grant or charter by which a municipality, as a city, town, village, etc., is organized and empowered to make laws or ordinances for its own government. (*b*) A privilege or grant extended by a municipal corporation to a private corporation or person, as the right to maintain a street-railway, to use streets for water- or gas-mains, etc.

francisc (fran-sisk'), *n.* [*francisca.*] Same as *francisca.*

Franckean (frank'ē-an), *a.* Of or pertaining to the work or opinions of A. H. Francke, one of the leaders in the Pietist movement in Germany at the beginning of the eighteenth century.

franckeite (frang'kā-īt), *n.* [Named after Carl and Ernest *Francke*, mining engineers.] A sulphid of antimony, tin, and lead, containing also small amounts of silver and germanium, found in the mining region of Las Animas, Bolivia.

Franco-Annamese (frang″kō-an-a-mēs'), *a.* and *n.* **I.** *a.* Pertaining to both France and Annam.

II. *n.* A person of mixed French and Annamese descent.

Franco-Canadian (frang″kō-ka-nā'di-an), *a.* and *n.* **I.** *a.* Pertaining to both France and Canada.

II. *n.* A person of mixed French and Canadian-Indian descent. [Rare.]

Francophil, Francophile (frang'kō-fil), *a.* and *n.* [NL. *Francus*, French, + Gr. φίλος, loving.] **I.** *a.* Very friendly to France or the French.

The *Francophil* attitude of Italy towards the end of the Franco-German war. *Encyc. Brit.*, XXIX. 634.

II. *n.* One who is very friendly to France or the French.

Francophobe (frang'kō-fōb), *n.* [NL. *Francus*, a Frenchman, + Gr. -φοβος, < φοβεῖν, fear.] One who is possessed with a morbid fear of the French. *N. E. D.*

Francophone (frang'kō-fōn), *n.* [NL. *Francus*, French, + Gr. φωνή, sound.] One who speaks the French language. *Deniker*, Races of Man, p. 508.

frangulic (frang'gū-lik), *a.* [*frangul-in* + *-ic.*] Of or pertaining to frangulin.—**Frangulic acid**, a brownish-yellow crystalline compound, $C_{14}H_8O_4$, isomeric with alizarin.

Frankfort agreement. See ★*agreement.*

frankfurter (frangk'fōr-tèr), *n.* [G. *Frankfurter wurst*, 'Frankfort sausage.'] A highly seasoned variety of German sausage.

frankincense, *n.* **1.** The principal trees yielding resinous exudations known as frankincense are: (*a*) *Boswellia Carterii* (see *Boswellia*); (*b*) the Norway spruce, *Abies Picea*; (*c*) the loblolly-pine, *Pinus Tæda* (see *frankincense*, 2); and (*d*) *Styrax punctata* (see *Styrax*).—**West African frankincense.** Same as ★*bumbo*2. See also *bumbo-tree.*

franking-machine (frang'king-ma-shēn″), *n.* A machine for cutting the ends of the bars for a window-sash in such a way as to give the joints the appearance of mitered joints.

Frankist (frang'kist), *n.* One of a semi-Christian sect of Jews founded by Jacob Frank (1712–91) in the province of Podolia, Poland. The Frankists are also called *Zoharites*, because they rejected the teachings of the Talmud and accepted for their guide the mystical doctrines of the cabala of the Zohar, or "book of splendor."

Franklinia (frangk-lin'i-ä), *n.* [NL. (Bartram, 1785), named in honor of Benjamin *Franklin* (1706–90), the American statesman and scientist.] A genus of plants of the family *Theaceæ*, closely related to *Lasianthus* and by some authors united with it. *F. Altamaha* (*Gordonia pubescens* of L'Héritier), the only species (discovered by the Bartrams on the Altamaha river in Georgia), is now known only in cultivation. It is a small tree, reaching a height of 20 feet, with lustrous but deciduous foliage and handsome white magnolia-like flowers opening from late summer till autumn. It is hardy as far north as Philadelphia.

Franklinist (frangk'lin-ist), *n.* An electrician who advocated the one-fluid theory of electricity originated by Benjamin Franklin.

The terms Franklinism, *Franklinist* and the Franklinian system occur in almost every page.
Priestley, Hist. of Electricity, I. 193.

frank-tenure (frangk'ten'ūr), *n.* In *feudal law*, a holding in frank-fee.

frappé, *a.* **Café frappé**, black coffee and cream, taken in equal quantities, mixed and sweetened, and frozen.

F. R. A. S. An abbreviation of *Fellow of the Royal Astronomical Society.*

frasco (frās'ko), *n.* [Sp., a flask: see *flask.*] A liquid measure used in some Spanish-American countries, equal to about 2½ United States quarts.

frase, *n.* and *v.* A simplified spelling of *phrase.*

fraseologic, fraseologist, etc. Simplified spellings of *phraseologic*, etc.

Fraser-Mortimer variation. See ★*variation.*

Fraser's attack. See ★*attack.*

frasil, *n.* See *frazil.*

Frasnian (fras'ni-an), *a* and *n.* [F. *Frasnes*, a town of Belgium.] **I.** *a.* In *geol.*, of or pertaining to the lower division or stage of the Upper Devonian in Belgium and northern France.

II. *n.* The Frasnian division.

frass (fräs), *n.* [G. *frass*, food for swine, nasty food (OHG. *fraz*, food), < OHG. *frezzen*, G. *fressen*, = AS. *fretan*, eat, devour: see *fret*1.] The excrement of a larval insect.

frate (frä'te), *n.* [It., < L. *frater*, brother: see *friar.*] An Italian friar or monk.

fraternalism (frā-tèr'nal-izm), *n.* [*fraternal* + *-ism.*] The character of being fraternal; specifically, the cultivation and safeguarding of that fraternity, or brotherhood of an entire people, demanded by the French revolutionists.

In a New Zealand aiming to realize a democratic *fraternalism*, conscience strikes its high noon.
E. A. Ross, Social Control, p. 53.

fraternity, *n.*—**Greek-letter fraternity**, in the United States, a (generally) secret society, formed among undergraduate collegians, chiefly for social purposes, and designated by two or more letters of the Greek alphabet. A fraternity usually consists of several 'branches or chapters' situated in the various colleges. Many have large and costly 'fraternity houses.' Membership does not terminate on graduation.

Fratricellians (frat-ri-sel'i-anz), *n. pl.* Same as *Fratricelli.*

frau (frou), *n.* [G., = D. *vrouw*, etc.: see *frow*1.] In German use, a woman; a married woman; a wife; lady; as a title, Madame; Mrs.: as, *Frau* Schultze.

fraud, *n.*—**Badge of fraud.** See ★*badge*1.—**Fraud order**, in *postal service*, an order from some postal authority to a local postmaster suspending the delivery of mail-matter to any party known or suspected of using the mails for illegal purposes.

fräulein (froi'lin), *n.* [G., < *frau*, woman, lady, + dim. *-lein.*] In German use, an unmarried woman; a young lady; as a title, Miss: as, *Fräulein* von Reuter.

frazzle (fraz'l), *v.*; pret. and pp. *frazzled*, ppr. *frazzling.* [Also *frazle*; orig. E. dial., a var. of *fasel*, E. dial. *fazle*, *fazzle*, *farzel*, *v.*, perhaps by association with *fray*2, *v.*] **I.** *intrans.* To ravel out, as the edge of a fabric; unravel; fray.

II. *trans.* To wear, as by hard usage, into shreds, rags, or tatters; fray out; tear to pieces. [Prov. Eng. and U. S.]

frazzle (fraz'l), *n.* [*frazzle*, *v.*] A shred; a tatter; a frayed rag; a frayed or worn-out condition: as, to be worn to a *frazzle.* [Prov. Eng. and U. S.]

F. R. C. I. An abbreviation of *Fellow of the Royal Colonial Institute.*

F. R. C. O. An abbreviation of *Fellow of the Royal College of Organists.*

F. R. C. P. An abbreviation (*a*) of *Fellow of the Royal College of Physicians*; (*b*) of *Fellow of the Royal College of Preceptors.*

F. R. C. P. E. An abbreviation of *Fellow of the Royal College of Physicians, Edinburgh.*

F. R. C. S. (E., I., or L.) An abbreviation of *Fellow of the Royal College of Surgeons* (*of Edinburgh, of Ireland*, or *of London*).

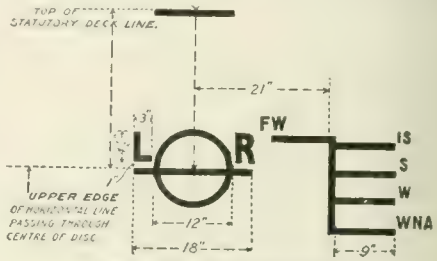
F. R. C. V. S. An abbreviation of *Fellow of the Royal College of Veterinary Surgeons.*

freckle, *n.*—**Cold freckle**, a spot similar to a freckle occurring on a portion of the skin not exposed directly to the light.

free, *a.* **19.** In *hort.*, abundantly blooming or fruiting; also, of profuse and rapid growth.—**Free association**, in *exper. psychol.*, an association freely effected by the observer, in an experiment upon the association of ideas—effected, that is, in terms of his mental constitution and existing stock of ideas, without restraint or suggestion from the side of the experimenter: opposed to ambiguous or partially constrained and to univocal or constrained associations. *E. B. Titchener*, Exper. Psychol., II. i. 192.—**Free cheeks, hit, idea,** etc. See ★*cheek*, etc.—**Free coinage**, a phrase denoting that the mint is open to any one who may bring bullion to be coined. The United States mint is now (1906) closed to the free coinage of silver. **Free Methodist Church.** See *Free Methodists*, under *Methodist.*—**Free of general and particular average**, in *marine underwriting*, a clause limiting liability to total loss. See *average.* **Free overside**, in *com.*, free of all charges down to the moment of discharge, said of merchandise bought for import: same as ★*ex ship.* **Free Quaker.** See *quaker.*

freeboard1 (frē'bōrd), *n.* [Also formerly *free-board*, fr. OF. *franc bordum*, 'free board,' free border.] A margin of ground, specified in some cases as two and a half feet in width, in other cases much more, claimed beyond or outside of a fence which incloses a place, as a park or forest. [The nautical use is later: see *free-board.*]

free-board2, *n.* The minimum free-board to which British merchant vessels may be loaded is indicated by a mark known as the Plimsoll mark. Lloyd's Register is empowered to assign the deepest water-line to which a vessel may be loaded. The lines must be permanently marked on the side of the vessel, as shown in the cut.



Free-board Marking for Steamers.

FW is the fresh-water free-board line to which the ship can be loaded in a fresh-water harbor. S is the corresponding summer load-line for the same displacement in salt water. W is the winter free-board line. WNA is the winter free-board line for voyages in the North Atlantic. I S is the line for summer voyages in the Indian Ocean. L R is Lloyd's Register. For sailing-vessels the FW and WNA lines only are marked.

freedom, *n.*—**Economic freedom**, the exercise of deliberate and free choice in economic activities, as in the sale or purchase of commodities or services, the production or consumption of wealth, or the selection of an occupation; absence of legal or customary restraints upon economic conduct.

freedomism (frē'dum-izm), *n.* [*freedom* + *-ism.*] The doctrine of the freedom of the will; libertarianism: opposed to *necessitarianism.* [Rare.]

It may be true that consciousness is an illusory guide, but this is nothing in favor of necessitarianism. . . . If it be illusory, argument on either side of the question is perfectly futile; for I have nothing but the testimony of consciousness to the cogency of the argument for necessitarianism. But if that authority be impeached, I am as much in the dark about that theory as I can possibly be about *freedomism.*
J. H. Hyslop, Elem. of Ethics, p. 214.

free-fooder (frē'fō″dèr), *n.* One who is opposed to the taxing of food-stuffs. [Nonce-word.]

That class of *free-fooders* which regards any legislative interference with the buying and selling of anything of the nature of food, however bad, as noxious economic heresy, and a restriction of the free play of competition.
Nature, Dec. 24, 1903, p. 179.

freeing-port (frē'ing-pōrt), *n.* In *ship-building*, a hole in the bulwarks close to the deck, with a flap-cover which opens outward to permit water that comes on the deck to run overboard freely. Also *freeing-scuttle.*

freeing-scuttle (frē'ing-skut″l), *n.* Same as ★*freeing-port.*

free-select (frē'sē-lekt″), *v. t.* To select and take up (undisposed-of crown lands) under the Australian land laws, and acquire title to the same by annual payments during a series of years. See ★*free-selection.* [Australia.]

free-selection (frē'sē-lek″shon), *n.* A system by which a settler in an Australian colony may select, take up, and acquire perfect title to a block of from 40 to 320 acres of crown lands at a fixed rate per acre (usually twenty shillings), and pay for the same at the rate of one shilling per acre per annum for twenty years. [Australia.]

free-selector (frē'sē-lek″tor), *n.* One who free-selects crown lands in Australia. See ★*free-selection.* [Australia.]

free-silver (frē'sil″vèr), *a.* Advocating the free and unlimited coinage of silver at an arbitrary standard rate: as, the *free-silver* party.

Free-stater (frē'stā″tèr), *n.* A native or inhabitant of the Orange Free State of South Africa, now a British colony with the title of 'Orange River Colony.'

free-wheel (frē'hwēl), *v. i.* **1.** To ride a bicycle with the wheel free from the control of the

pedals; coast.—2. To free the wheel of a bicycle from the control of the pedals.

freez, *v.* and *n.* A simplified spelling of *freeze.*

freeze[1], *v. t.* **To freeze out.** (*b*) In *poker,* to cause one to lose all his original stake in a game of freeze-out. See ★*freeze-out,* 2.

freeze-out (frēz′out), *n.* 1. The act of freezing out. See *to freeze out,* under *freeze*[1], *v. t.*—2. A variety of poker in which each player starts with an equal number of chips and no one is allowed to replenish his stock or to withdraw or loan any part of it. As soon as any player has lost his capital he is frozen out, and must retire from the game.

freezer, *n.* 2. A sheep whose mutton is intended to be frozen and exported. [Australia.]

freezing-tank (frē′zing-tangk), *n.* In *ice-making,* a large tank fitted with cold-brine circulating pipes and containing cold brine which is kept in constant circulation by means of a brine-agitator, in which distilled water is placed in cans to be frozen. It is usually fitted with a can-filler, an air-hoist, and a traveling crane for lifting the cans of ice and conveying them to the ice-dump, where the blocks are loosened and discharged, and, if too large, are sawed into convenient shapes for handling. A large tank may have a capacity of 100 tons of ice a day.

Frégier line. Same as *Frenier* ★*straight.*—**Frégier point, straight.** See ★*point*[1], ★*straight*[1].

freight, *n.* 4. Short for *freight-train.*—**Cost, freight, and insurance.** See ★*cost*[2].

freight-agent (frāt′a·jent), *n.* The person in the employ of a transportation company who has charge of the freight-carrying department of its business, either at the head office (the *general freight-agent*), or at some particular port or station.

freight-ton (frāt′tun), *n.* Forty cubic feet of cargo: frequently used as the basis of freight charges in ocean transportation of light bulky goods irrespective of their actual weight. See *ton*[1], 2 (*k*).

freight-tonnage (frāt′tun″āj), *n.* Stowage-space for cargo on a vessel measured in freight-tons of 40 cubic feet.

Freight tonnage is simply a measure of cubical capacity. Merchants and shipowners make considerable use of this measurement, although it has no legal authority.
White, Manual of Naval Arch., p. 72.

fremitus, *n.*—**Hydatid fremitus.** Same as *hydatid thrill* (which see, under *thrill*[1]).

Fremont cottonwood. See ★*cottonwood.*

French boston, cliff, curve, decimal candle, gall, gray. See ★*boston,* etc.—**French minute,** a centesimal minute. See *centesimal division.*—**French schools of painting, schools of sculpture, seal.** See ★*painting,* ★*sculpture,* ★*seal*[1].—**French second,** a centesimal second. See *centesimal division.*—**French weed.** (*b*) The penny-cress, *Thlaspi arvense*; said to be so called, on account of its offensive qualities, in parts of Canada of anti-Gallic sentiment. See *penny-cress* and ★*stinkweed,* 3.

French (french), *v.* **I.** *trans.* [*French, a.*] 1. To prepare according to the French mode.—2. To dress, as a chop, by partly freeing the bones.—3. In *metal.,* to carry out the last step in the refining of metallic antimony, by which 'bowl metal' is converted into 'star metal.'

II. *intrans.* [*l. c.*] In *bot.,* to appear distorted and unnatural, owing to some abnormal condition of the plant. See ★*frenching.*

French-fried (french′frīd), *a.* Said of potatoes which are cut into strips, triangular in section, and fried in hot fat.

frenching (fren′ching), *n.* The peculiar distorted and dwarfed condition of cotton, tobacco, corn, and other plants, due either to some fungus or to disturbed nutrition: often used synonymously for the mosaic disease. See *mosaic* ★*disease.*

Frenchism (french′izm), *n.* [*French* + *-ism.*] A custom, usage, or idiom peculiar to or characteristic of France or the French; a Gallicism.

frenologer, frenologic, etc. Simplified spelling of *phrenologer,* etc.

frenum, *n.*—**Frenum Morgagni,** a duplicature of tissue serving as a stay to the ileocæcal valve.

freq. An abbreviation (*b*) of *frequent.*

frequency, *n.,* 3. Specifically, the numerical measure of the rate of vibration of an oscillating body, or the rate at which the cycles of any periodic motion repeat themselves. In acoustics, frequency is synonymous with *pitch,* although the pitch of a sounding body is usually expressed in terms of the number of single vibrations per second, whereas frequency is given in double or complete vibrations. The frequency of vibration of bodies sending out waves capable of affecting the human ear lies between two fairly well-defined limits. The lower auditory limit, which corresponds in pitch to the lowest audible tone, is about 20 complete vibrations per second. The upper limit varies somewhat with the individual, but lies between 15,000 and 20,000 complete vibrations per second. The frequency of vibration to which light-waves are due is very much higher than that of sounding bodies. Since the frequency necessary to maintain a train of waves is directly proportional to the velocity of the wave-motion, and since ether-waves move with a velocity about one million times as great as that of waves in the air, the frequency of ether-waves would be a million times as great as sound-waves of the same wave-length. Sound-waves, however, have a wave-length about a million times that of light-waves, so that the frequency of light-waves is about a million million times as great as that of sound-waves. Light-waves, like sound-waves have a considerable range of frequency, but the limits of visibility, which correspond to the limits in wave length of the visible spectrum, lie closer together than the limits of audibility. The longest wave-length which produces an effect upon the eye is .76 μ, frequency 4×10^{14} vibrations per second; while the shortest wave-length to which the eye is sensitive is about .40 μ. These waves, which constitute the extreme violet of the system, have a frequency of 7.5×10^{14} vibrations per second. Ether-waves of frequency too great to affect the eye are also known to exist. These, which constitute the ultra-violet spectrum, are detected by means of their action upon the photographic plate or by their power of producing fluorescence. The shortest ether-waves known to exist have a wave-length of about .1 μ and a frequency of 30×10^{14} vibrations per second. Ether-waves the length of which is too great to affect the eye are also known to exist. These constitute the infrared spectrum and are detected by means of their thermal action. The longest waves known to be due to the vibrations set up in a body by virtue of its temperature have a wave-length about 60 μ and a frequency of 5×10^{12} vibrations per second. It is possible by electrical means to produce ether-waves similar in all respects to light-waves but of much lower frequency. The range of such ether-waves, thus far produced, lies between 1×10^{10} vibrations per second and 0. The terms *high frequency* and *low frequency* are purely relative, the former being applied to comparatively rapid and the other to comparatively slow rates of vibration. Thus a musical tone having a frequency of 10,000 vibrations per second is called a tone of high frequency, corresponding to high pitch, while one lying near the lower limits is said to be of low frequency. In the same way an electric generator producing an alternating current with a periodicity of 10 alternations per second is termed a low-frequency alternator, whereas the discharge from a Tesla coil giving 1,000 electric oscillations per second is called a high-frequency discharge.

4. In *elect.,* see ★*alternating.* **Convergence frequency.** See ★*convergence.*—**Frequency converter, curve.** See ★*converter,* 3, ★*curve.*—**Group frequency,** the frequency, with any statistical value, of the occurrence of a character in a group of organisms.—**High frequency,** a frequency greater than that commonly obtained or employed. Thus the rapid oscillatory discharge of a Tesla coil is said to be a discharge of *high frequency.* See ★*frequency,* 3.—**High-frequency wave.** See ★*wave*[1].—**Law of frequency.** See *probability curve,* under *probability,* 2, *Rule II.*—**Modal frequency,** the relative frequency in the population, considered of individuals, with the modal value of a character.

fresh, *a.* 13. Noting a cow that has recently given birth to a calf.

freshen, *v. t.* 4. In *surg.,* to denude (a part) of its tegument so as to form a raw surface which will readily unite with a similar surface when the two are brought into apposition.—**To freshen ballast,** to shift the ballast about.

Fresnel-Arago law. See ★*law*[1].—**Fresnel's biprism.** See ★*biprism.*

fret[1], *v. t.* 6. To form by fretting or corrosion.

> Let it stampe wrinkles in her brow of youth,
> With cadent Teares *fret* Channels in her cheekes.
> *Shak.,* Lear, i. 4.

fret[3], *n.*—**Curvilinear fret,** in *ornamentation,* a form developed in curved lines, as distinguished from straight lines and angles; curvilinear pattern. **Dovetail fret,** in *arch.,* a fret which has obtuse and acute angles, being made up of diagonal lines, which gives to each section or member a wedge shape, as of a dovetail.

freta, *n.* Plural of ★*fretum.*

fret-board (fret′bōrd), *n.* In musical instruments of the lute and zither classes, a strip of hard wood, provided with frets, against which some or all of the strings can be stopped so as to alter the pitch of their tones. In the violin and similar instruments frets are now unusual, and the analogous part is called the *finger-board.*

fretum (frē′tum), *n.*; pl. *freta* (-tä). [L. *fretum,* a strait, sound, channel.] In *embryol.,* a constriction in the embryonic heart between the ventricle and the bulbus arteriosus.

F. R. G. S. An abbreviation of *Fellow of the Royal Geographical Society.*

F. R. H. S. An abbreviation (*a*) of *Fellow of the Royal Historical Society;* (*b*) of *Fellow of the Royal Horticultural Society.*

Fri. An abbreviation of *Friday.*

friar, *n.*—**Reformed friar,** one of the members of a reformed branch of a monastic order; specifically (*cap.*), a member of the Observantines, a branch of the Franciscans dating from 1419.

friar's-cowl, *n.* 2. Same as *friar's-cap.*

frib (frib), *n.* [Imitative: cf. *fribble.*] A short, loose piece of a fleece of wool.

F. R. I. B. A. An abbreviation of *Fellow of the Royal Institute of British Architects.*

fricadillo (fri-ka-dil′ō), *n.* [Kitchen Sp. (?), < Sp. *fricando,* < F. *fricandeau*; see *fricandeau* and *fricandelle.*] A meat-ball or roll.

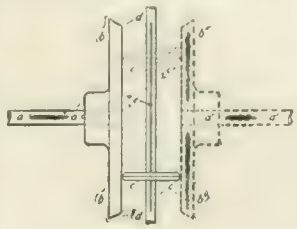
Friction draft-gear. See ★*draft-gear.*—**Kinetic friction,** the resistance which has to be overcome to maintain a sliding solid in uniform motion; sliding friction or slipping friction.—**Molecular magnetic friction.** See *magnetic* ★*hysteresis.*—**Moment of friction,** the product of the frictional force which resists rotation, as of a shaft in its bearing, into the distance between the axis of rotation and the surface at which the friction occurs. **Starting friction, static friction.** See *statical* ★*friction.*—**Statical friction.** Same as *friction of rest.* Also called *starting friction* and sometimes *static friction.*

friction-brake, *n.*—**Water friction-brake,** a testing device in which the friction of a thin layer of water contained between a revolving and a stationary disk is used to absorb the power generated by the engine. *Trans. Amer. Soc. Mech. Engrs.,* XXIV. 740.

friction-calender (frik′shon-kal″en-dèr), *n.* A machine, consisting of three or more steel and paper cylinders, operated in contact with one another and at different degrees of speed, for imparting a gloss to cotton, linen, and other fabrics in the process of finishing.

friction-composition (frik′shon-kom-pō-zish″on), *n.* A mixture of substances capable of being readily ignited by moderate friction, as on the heads of ordinary matches, in artillery friction-primers, etc.

friction-disk (frik′shon-disk), *n.* 1. A device consisting of a small wheel with a smooth periphery which bears against the face of a smooth disk. The wheel can be moved axially along its shaft, to which it is fastened with a feather, and hence the angular velocity of the transmission can be varied within certain limits. By this device the motion is turned through a right angle, as the driven shaft is parallel to the face of the driving disk. When it is desired to have a reversing motion, two disks are fastened to the driving-shaft, one on each side of the driven wheel, with which either can be brought into contact. The small wheel is usually faced with leather, paper-fiber or rubber, to secure adhesion to the friction-surface.



Friction-disk.

a a, driving-shaft; *bb,* friction-disk; *c c,* driven wheel; *d d,* driven shaft; *e,* feather or key-way; *c′c′,* alternate position; *d′d′,* when motion is to be reversed; *a′a′, b′b′,* second friction-disk, to free *c c, c′c′* from its work, or to be driven by *d d* in opposite directions to *a a,* and at variable speed, by *c c* or *c′c′.*

friction-drive (frik′shon-drīv), *n.* A device for transmitting motion which involves the use of a friction-clutch or friction-gears.

friction-hammer (frik′shon-ham″èr), *n.* A drop-hammer which is lifted by friction-rollers acting on either a board or a strap. When the nip of the rollers is released, the hammer falls and delivers its blow.

friction-head (frik′shon-hed), *n.* In *hydraul.,* the head lost in friction by an outflowing liquid. The friction-head is usually computed by the formula $4\mu \frac{L}{D} \cdot \frac{v^2}{2g}$, where D is the diameter of the efflux pipe, L its length, v the velocity of the outflowing liquid, μ the coefficient of skin-friction, and g the acceleration due to gravity. See *head,* 7.

friction-hoist (frik′shon-hoist), *n.* A light hoist driven by the friction of the smoothly turned or grooved surfaces of pulleys or disks. If the applied load is excessive some of the friction-surfaces slip and the danger of breaking is lessened.

friction-pulley (frik′shon-pul″i), *n.* A pulley which turns loosely on its shaft except when connected to it by a friction-clutch.

friction-ring (frik′shon-ring), *n.* A loose elastic metallic ring used in certain forms of friction-clutches or -brakes. It is divided at one point of its circumference, and either pressed outward against a female portion or clamped around a male central portion by means of a lever or cam.

friction-roller (frik′shon-rō″lèr), *n.* 1. A roller in a roller-bearing. (*a*) One of a number of small rollers which revolve in a bearing and the inner portion of whose periphery forms a bearing for a shaft. (*b*) One of a number of conical rollers which run between two conical surfaces to form a non-frictional thrust-bearing.

2. A roller of small diameter, used with others to form a wedged frictional contact between a wheel and its shaft. This takes the place of a key and is used on drawing- and printing-presses to momentarily connect the driving-wheel to the crank-shaft.

friction-socket (frik′shon-sok′et), *n.* In drilling, a fishing-tool used for taking hold of a tool lost in the hole. *Dialect Notes,* II. vi.

friction-sprocket (frik′shon-sprok″et), *n.* A chain-sprocket having a friction-clutch for connecting it to or disconnecting it from the shaft at the will of the operator.

friction-wrench (frik′shon-rench), *n.* A wrench which is so made that it will turn a round or cylindrical object by friction. This is sometimes done by having the wrench made with a taper, either inside or outside, according to whether it is to fit over or into the piece to be turned.

Friday, *n.*—**Good-Friday grass.** See ★*grass.*

Friedländer's bacillus. See ★*bacillus.*

Friedreich's disease. Same as *Friedreich's ataxia* (which see, under *ataxia*).

friend, *n.*—**Lady's friend,** an officer of the House of Commons, prior to the abolition of parliamentary divorces in 1857, whose duty it was, when a husband sued for divorce or prayed for the passage of an act to divorce him from his wife, to see that proper provision was made by the husband for the wife's support.

friendly, *a.* **II.** *n.*; pl. *friendlies* (-liz). One who is friendly or acts as a friend; specifically, a native of a naturally hostile country who is not only not hostile, but who acts as a friend to a traveler, explorer, or the like.

Fries. An abbreviation (*a*) of *Friesian*; (*b*) of *Friesic.*

Frieslander (frēz'lan-dėr), *n.* An inhabitant of Friesland.

friez, *n.*, *v. t.*, and *a.* A simplified spelling of *frieze.*

frieze[2], *n.*—**Irish frieze,** a heavy, shaggy woolen cloth made from long, strong wool, compactly fabricated and very durable: specially identified with Irish manufacture.

frieze-cutter (frēz'kut″ėr), *n.* A machine for cutting a molded surface along the edge of a board or strip.

frigate, *n.*—**Jackass frigate,** a vessel between a sloop of war and a frigate in character, which carried a whole tier of guns and had a light spar-deck over its battery. It also carried a couple of guns on the quarter-deck and one or more on the forecastle-deck.

fright, *n.*—**Precordial fright,** extreme anxiety, attended with a peculiar and distressing sensation over the region of the heart, probably due to a functional disorder of the sympathetic nervous system.

frigotherapy (frig″ō-ther'a-pi), *n.* [Irreg. < L. *frigus* (*frigor-*), cold, + Gr. θεραπεία, medical treatment.] Same as ★*cryomotherapeutics.*

frijolito (frē-hō-lē'tō), *n.* [Mex. Sp.] The proper form of *frigolito.*

fril, *v.* and *n.* A simplified spelling of *frill.*

frill[2], *n.* **4.** The shell of a kind of scallop.

fringe, *n.*—**Alleghany fringe,** the climbing fumitory, *Adlumia fungosa.* **American fringe,** the fringe-tree, *Chionanthus Virginica.* **Haversian fringes.** See *synovial folds,* under *synovial.* **Herschel's fringes,** interference fringes observed at the line of separation between the totally reflected and the ordinarily reflected light which emerges from a prism placed upon a plane glass or mirror.—**Interference fringe.** See *interference,* 5.—**Purple fringe,** the smoke-tree, *Cotinus Cotinus.* Also called *false* and *purple fringe-tree.* **Synovial fringes.** See *synovial folds,* under *synovial.* **White fringe.** Same as *American* ★*fringe.*—**Wood-fringe.** Same as *Alleghany* ★*fringe.*

fringe-bush (frinj'bůsh), *n.* Same as *fringe-tree.*

fringe-cup (frinj'kup), *n.* The two-leaved bishop's-cap or miterwort, *Mitella diphylla*: so called from the fringe-like petals rising out of a cup-shaped calyx.

fringe-flower (frinj'flou″ėr), *n.* Any plant of the genus *Schizanthus,* of Chilean origin, several species of which have been introduced into cultivation for the sake of their flowers. Though belonging to the *Solanaceæ,* the corolla limb is more or less two-lipped and laciniate. *Schizanthus pinnatus* has pinnatisect leaves, and flowers variable in color, the lower lip usually violet or lilac, the upper one paler, with a yellow blotch at its base and spotted with violet or purple. Also called *butterfly-flower.* See *Salpiglossideæ.*

fringe-loom (frinj'lōm), *n.* A loom so equipped as to form the weft into long loops beyond the selvage.

fringe-moss (frinj'môs), *n.* Any moss of the genus *Trichostomum.*

fringe-tree, *n.*—**False fringe-tree,** the smoke-tree, *Cotinus Cotinus.*

frison (fri-zôn'), *n.* [F.] A heavy woolen cloth with a long, thick nap, originally made in Friesland.

frit-fly (frit'flī), *n.* A European fly, *Oscinis frit,* whose larva seriously damages growing wheat and other small grains.

Fritillaria, *n.*, **1.** In California, *F. pluriflora* is the pink, *F. coccinea* the scarlet, and *F. liliacea* the white fritillary. *F. pudica,* on the eastern slopes of the Sierras, has solitary yellow flowers. The bulbs of *F. Camschatcensis* were once a staple article of food among the aborigines of Kamchatka. For other species see ★*mission-bells* and ★*stink-bells, Persian lily* (under *Persian*) and *toad-lily,* 2.

fritillary, *n.*—**Diana fritillary,** an American nymphalid butterfly, *Semnopsyche diana,* occurring in the hilly country of the southern United States, and in the larval state feeding on violets. It is remarkable for the great difference in color of the two sexes, the male having the wings brown broadly banded with orange, while the wings of the female are black bordered with metallic blue.—**Great spangled fritillary,** *Argynnis cybele,* an American species which occurs in Canada and the northeastern United States. Its larvæ feed on the leaves of the violet.—**Gulf fritillary,** *Agraulis vanillæ,* a species common in the southern United States and reaching as far north as southern New Jersey and Pennsylvania and west to California. Its larvæ feed on passion-flower plants.—**Meadow fritillary,** *Brenthis bellona,* a small American species occurring in Canada, Colorado, and the northern United States. Its larvæ feed on violet plants.—**Silver-bordered fritillary,** *Brenthis myrina,* a small American species occurring throughout Canada and the northern United States. Its larvæ feed on violet plants. **Variegated fritillary,** *Euptoieta claudia,* occurring east of the Rocky Mountains, more abundantly in the southern United States. Its larvæ feed on the passion-flower, portulaca, violet, mandrake, stonecrop, and tick-trefoil.

frizzing (friz'ing), *n.* **1.** The act of producing a curled appearance.—**2.** A curly finish given to a heavily napped fabric.

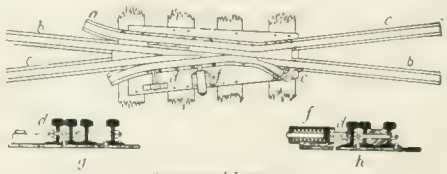
F. R. Met. S. An abbreviation of *Fellow of the Royal Meteorological Society.*

F. R. M. S. An abbreviation of *Fellow of the Royal Microscopical Society.*

Frobenius's method. See ★*method.*

frog[1], *n.* **2.** The presence of mucus on the vocal cords, causing hoarseness and an inclination to cough or hawk: usually called *frog in the throat.*—**3.** Aphthæ in children.—**Catholic frog,** a species of toad, *Notaden bennetti,* found in eastern Australia. Its popular name is derived from the dark cross on its back. Also called *Holy-Cross toad.* **Cohnheim's frog.** Same as *salt* ★*frog.* **Frog in the throat.** See ★*frog*[1], 2.—**Salt frog,** a frog from whose vessels the blood has been drained away, its place being taken by a saline solution: used for physiological experiments. Also called *Cohnheim's frog.*

frog[2], *n.* **3.** An attachment to the frame of a loom, against which an iron finger strikes, stopping the machine should the shuttle fail to make timely passage through the warp.—**4.** In *lumbering*: (*a*) The junction of the two branches of a flume. (*b*) A timber placed at the mouth of a slide to direct the discharge of the logs.—**Spring-rail frog,** a railroad frog in which one of the four rails which form it is free to slide sidewise



Spring-rail Frog.

a, guide-rail; *b*, main-line service-rail; *c*, siding-rail; *d*, spring-rail frog, closed and in normal position; *e*, pivot on which it turns; *f*, spring controlling spring-rail frog; *g*, elevation showing position of rails on a line drawn between first and second tie; *h*, elevation showing position of rails on a line drawn between second and third tie.

upon bearings laid upon the ties. In its normal position the free rail is pressed by a spring against the three fixed rails of the frog, closing the opening and making the line-rail practically continuous. When a car passes to or from the siding its wheels press the free rail to one side and open the frog, the spring closing it after the last wheel has passed. See *frog*[2], 2.—**Trolley frog,** a device for fastening together trolley wires at any point where the trolley wire branches, and properly guiding the trolley wheel along the trolley wire on the movement of the car over the track. *Houston,* Dict. Elect.

frog[3], *n.* **3.** In a carriage, an ornamental piece of wood covered with silk or worsted woven to match the carriage-fringe.—**4.** In a harness, a pear-shaped ornament of patent leather, finished at the narrow end with a ring.

frog-boot (frog'böt), *n.* A piece of heavy felt shaped to fit around the frog of a horse's foot and to fill the space between the frog and the shoe.

frog-cheese (frog'chēz), *n.* The contents of any immature puffball.

frog-eye (frog'ī), *n.* A disease which affects tobacco-leaves, producing numerous small white spots. It is attributed to a fungus, *Cercospora Nicotianæ.* See ★*leaf-blight.*

frog-eyed (frog'īd), *a.* Affected by the disease called frog-eye.

frog-face (frog'fās), *n.* A deformity, caused by the presence of an intranasal tumor, in which the face assumes a fancied resemblance to that of a frog. *Buck,* Med. Handbook, IV. 155.

frog-flower (frog'flou″ėr), *n.* Any plant of the genus *Ranunculus.*

frog-grass, *n.* **2.** The toad-rush (which see, under *rush*[1]).

frog-leaf (frog'lēf), *n.* The water-shield or water-target, *Brasenia Schreberi.*

frog-lily (frog'lil″i), *n.* The yellow pond-lily or spatter-dock, *Nymphæa advena.*

frog-motion (frog'mō″shon), *n.* A cam or other device which acts on a frog or catch.

frog-mug (frog'mug), *n.* An earthenware mug containing a frog modeled in the bottom or on the side, which, as the contents were drunk, suddenly appeared, to frighten the drinker.

frog-plant (frog'plant), *n.* The orpine or live-for-ever, *Sedum Telephium.*

frog's-bladder (frogz'blad″ėr), *n.* Same as ★*frog-plant.*

frog's-mouth (frogz'mouth), *n.* **1.** Same as ★*frog-plant.*—**2.** Same as *frogmouth.*

frogwort (frog'wėrt), *n.* The buttercup, *Ranunculus bulbosus.*

fromage (frō-mäzh'), *n.* [F. *fromage,* OF. *formage* = It. *formaggio,* < ML. *formaticum,* < L. *formare,* form, shape: see *form,* *v.*] Cheese.

fromenty, *n.* See *frumenty.*

frondigerous (fron-dij'e-rus), *a.* [L. *frons* (*frond-*), leaf, + *gerere,* bear.] In *bot.,* bearing fronds or leaves.

Frondist (fron'dist), *n.* A member or supporter of the Fronde.

frondivorous (fron-div'ō-rus), *a.* [L. *frons* (*frond-*), leaf, + *vorare,* devour.] Devouring or feeding on leaves. *Southey.*

front. **I.** *n.* **10.** In *theat. language*: (*a*) That part of a theater which, from the actor's point of view, lies in front of the curtain; the auditorium or audience part; hence, the audience itself: as, to be in the *front.* (*b*) Everybody engaged to work before the curtain.—**11.** *Milit.,* the entire system of defenses constructed along one side of the polygon inclosing the site to be fortified: as, a bastion or polygonal *front.*—**12.** The forehead-piece of a bridle, generally of leather with metal trimmings.—**13.** The exterior surface of a lock mortised into a door; the portion of a lock that is visible and through which the bolt passes; in a rim-lock, the end facing the door-frame.—**14.** In *entom.,* practically the forehead; the part of the face between the eyes and between the vertex and the clypeus.—**Armored front,** a false front used with a mortised lock as a temporary protection to the lock-front.—**Astragal front,** a lock-front having a molded (astragal) surface corresponding to the same type of door-molding.—**Dry front,** noting a microscopic objective which is separated by an air-gap from the object: in contradistinction to *immersion lens.*—**Front of operations,** the imaginary line connecting the front of the different columns or detachments of an army in active campaign.—**Swing front,** a device applied to a photographic camera which enables the objective to be placed at different angles to the axis of the camera.—**To change front.** See ★*change.*

II. *a.* **3.** In *phonol.,* modified in utterance by the configuration of the central portion of the front or upper side of the tongue.

> *Front* vowels are rounded by the lips only.
> *H. Sweet,* Eng. Sounds, p. 2.

Front matter, in *printing,* all the type-work before the text of a book. Title-page, dedication, table of contents, preface, etc., are rated as front matter.—**Front office.** See ★*office.*

front, *v. t.* **5.** In *phonol.,* to pronounce with the front of the tongue, or as a 'front' sound. See ★*front,* II. *a.* 3.

frontad (fron'tad), *a.* [*front* + *-ad*[3].] In an anterior direction. *Buck,* Med. Handbook, II. 252.

frontage, *n.* **3.** Land that lies along a river or creek. [Australia.]

Frontal apron. Same as ★*apron,* 6.—**Frontal area,** the surface of the skull extending from the orbits to the coronal suture. **Frontal index, moraine.** See ★*index,* ★*moraine.*—**Frontal point,** in *anthrop.,* the point where a line drawn inward from the higher outer part of the superciliary border of the frontal lobe intersects the mesial border of the cerebrum. *Cunningham.*—**Frontal protuberance.** Same as *frontal eminence.* **Frontal shield.** (*a*) See *frontal.* (*b*) See ★*shield.*

frontalis (fron-tā'lis), *n.* [NL.: see *frontal.*] The anterior fleshy portion of the occipito-frontalis muscle.

front-fall (frunt'fâl), *n.* The falling of the front of a house.

> One *front-fall* of this kind in Fleet Street maimed several persons. *Southey,* Doctor, ciii.

frontispiece (fron'tis-pēs), *v. t.*; pret. and pp. *frontispieced,* ppr. *frontispiecing.* [*frontispiece,* *n.*] **1.** To furnish with a frontispiece.—**2.** To use as a frontispiece: as, to *frontispiece* a map.

frontlet, *n.* **6.** The skin which covers the forehead of a mammal, particularly of a ruminant.

Frontonasal hinge, shield. See ★*hinge,* ★*shield.*

fronto-orbital (fron″tō-ôr'bi-tal), *a.* Relating to the region of the forehead and orbit.—**Fronto-orbital sulcus.** See ★*sulcus.*

Frontoparietal shield. See ★*shield.*

frontopontine (fron-tō-pon'tin), *a.* Relating to the frontal bone and the pons.—**Frontopontine tract.** See ★*tract*[1].

frontotemporal (fron-tō-tem'pō-ral), *a.* [L. *frons* (*front-*), forehead, + *tempora,* temples, + *-al*[1].] Relating to both frontal and temporal bones, or to the corresponding regions of the skull.

frontozygomatic (fron″to-zī-gō-mat'ik), *a.* [L. *frons* (*front-*), forehead, + E. *zygomatic.*]

Relating to the forehead and to the zygomatic arches. **Frontozygomatic index.** Same as *stephanozygomatic* ★*index*. *Topinard.*

frontward (frunt'wärd), *adv.* [*front* + *-ward.*] Toward the front: as, a "road that frontward leads," *S. Lanier.*

Men define a man,
The creature who stands *front-ward* to the stars,
The creature who looks inward to himself.
Mrs. Browning, Aurora Leigh, vii. 281.

frost, *n.* **6†.** A spiked sole put on shoes to enable one to walk on ice without slipping.

Great Rain and very Slippery; was fain to wear *Frosts*. *Judge Sewall* (Jan. 19, 1717), in A. M. Earle's Costume of Colonial Times, p. 111.

Degrees of frost, temperatures expressed in degrees below the freezing-point. On the Fahrenheit scale the reading of the thermometer subtracted from 32° gives the temperature in degrees of frost: thus twenty degrees of frost correspond to +12° F.; forty degrees of frost to −8° F. **Jack Frost,** a nursery personification of frost, especially in connection with the frost traceries on the window-pane.

frost-bow (frôst'bō), *n.* A halo of white light attending the sun in cold weather. The term is applied popularly and indiscriminately (1) to the white rainbow of 18 to 41° radius, produced by the action of minute globules of water (the colored rainbow due to large drops has a radius of 40° to 42° 30′); (2) to the white halos of 22° and especially of 46° radius, due to the action of ice-crystals.

frost-crack (frôst-krak), *n.* A wound in the trunk of a tree, caused by the splitting of the bark due to unequal shrinkage during a sudden frost.

Frosted heart. Same as ★*iced heart.*

frost-figure (frôst'fig″ūr), *n.* The formation of ice-needles or arborescent figures on window-panes or other surfaces by deposition of the frozen vapor of the atmosphere.

frost-flower (frôst'flou″ėr), *n.* **1.** Any plant of the genus *Aster*: so called on account of the lateness of its blooming. — **2.** One of the ice-crystals of a frost-plant. See ★*frost-plant.*

frost-hardy (frôst'här″di), *a.* Capable of enduring a frost that is injurious to other plants or animals.

frost-hole (frôst'hōl), *n.* A low-lying region, as in the Thuringian forests, in which frost is especially likely to occur; an ice-cave.

frost-itch (frôst'ich), *n.* Same as *pruritus hiemalis* (which see, under *pruritus*).

frost-lamp (frôst'lamp), *n.* A lamp burned beneath the oil-chamber of a lighthouse lamp during cold weather, to prevent the oil of the latter from congealing.

frost-mark (frôst'märk), *n.* In *geol.*, the peculiar ring-like or hummocky surface produced upon loose sediments by the action of frost upon their contained water.

frost-plant (frôst'plant), *n.* Any plant on the stems of which crystals of ice are formed during the first freezing weather of autumn. The best-known plant exhibiting this phenomenon is *Helianthemum Canadense*, but it has been observed in other species of that genus. (See *frostweed.*) The next most important frost-plant is the American dittany, *Cunila origanoides*. Crystals of great beauty and perfection have been observed on this plant near Mount Vernon, Virginia. Less marked frost phenomena have been observed in a number of other plants, as *Pluchea camphorata* and *P. fœtida*, the heliotrope, and some thistles.

frost-ridge (frôst'rij), *n.* A prominent ridge on the trunk of a tree, formed by the repeated opening and healing of a frost-crack.

frost-signal (frôst'sig″nal), *n.* A flag-signal indicating the approach of a frost that is likely to prove injurious to vegetation. It is a white flag with a black center. See *cold-wave signal*, under *signal.*

frostweed-aster (frôst'wēd-as″tėr), *n.* Same as *white heath-*★*aster.*

frowzled (frou'zld), *a.* Rumpled; tousled; disheveled; frowzy.

Frozen ball, in *billiards*, the cue-ball in fixed contact with one or more object-balls.

F. R. P. S. An abbreviation of *Fellow of the Royal Photographic Society.*

frs. An abbreviation of *francs.*

Frs. An abbreviation of *Friesian* or *Friesic.*

F. R. S. C. An abbreviation of *Fellow of the Royal Society of Canada.*

F. R. S. E. An abbreviation of *Fellow of the Royal Society of Edinburgh.*

F. R. S. L. An abbreviation (*a*) of *Fellow of the Royal Society of Literature*; (*b*) of *Fellow of the Royal Society* (London).

F. R. S. S. An abbreviation of *Fellow of the Royal Statistical Society.*

F. R. S. S. A. An abbreviation of *Fellow of the Royal Scottish Society of Arts.*

fruchtschiefer (frōcht'shē″fėr), *n.* [G. *frucht*, grain, + *schiefer*, schist.] In *petrog.*, a thinly laminated fine-grained schist containing numerous concretions resembling grains of wheat. It is one form of contact-metamorphism produced in clay slates and phyllites. The concretions appear to be incipient stages in the formation of crystals of andalusite or similar minerals.

fructicultural (fruk-ti-kul'tūr-al), *a.* [*fructiculture* (L. *fructus*, fruit, + *cultura*, culture) + *-al*¹.] Of or pertaining to fruit-culture.

fructiform (fruk'ti-fôrm), *a.* [L. *fructus*, fruit, + *forma*, form.] Of the nature of or having the form of fruit: as, *fructiform* productions.

fructivorous (fruk-tiv'ō-rus), *a.* [L. *fructus*, fruit, + *vorare*, eat.] That feeds on fruit; fruit-eating: as, a *fructivorous* bird.

fructosuria (fruk-to-su'ri-ą), *n.* [NL. *fructus*, fruit, + *-ose* + Gr. οὖρον, urine.] The presence of fruit-sugar in the urine when voided.

fructule (fruk'-tūl), *n.* [NL. *fructulus*, dim. of *fructus*, fruit.] One of the carpels or component fruits of a compound or aggregate fruit. [Rare.]

fruendal (frō-en'dal), *a.* [L. *fruendus*, to be enjoyed (< *frui*, enjoy), + *-al*¹.] Same as ★*fruendive.*

fruendive (frō-en'div), *a.* [L. *fruendus*, to be enjoyed, + *-ive.*] Reserved for the satisfaction of desires: as, *fruendive* wealth. *C. H. Chase*, Prin. of Econ., p. 15.

frugalism (frō'gal-izm), *n.* [*frugal* + *-ism.*] A conscious cultivation, defense, and advocacy of thrift and prudence by many persons or by a class; a kind of cult, distinguished from the personal habit of frugality.

frugalist (frō'gal-ist), *n.* [*frugal* + *-ist.*] One who accepts the puritan creed and practice of ★frugalism (which see).

Given the conditions of climate, drink, and disease, the thoughtful, cool-blooded, home loving *frugalist* was bound to outlive in the industrial masses the careless, roistering sensualist. *E. Ross*, Social Control, p. 34.

fruit, *n.* **Ballistic, catapult fruit.** See ★*ballistic*, ★*catapult.* — **Confluent fruit,** a compound fruit. — **Fruit fallen,** the produce of any possession detached therefrom and capable of being enjoyed by itself. Thus a next presentation, when a vacancy has occurred, is a fruit fallen from the advowson. *Wharton.*

fruit, *v.* **II.** *trans.* To bring into fruit under cultivation.

Trees of it, obtained under the name "Shiro Smomo," [*Sic*], were *fruited* by S——.
Yearbook U. S. Dept. Agr., 1901, p. 386.

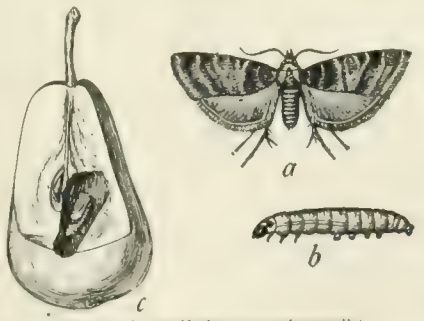
fruitarian (frō-tā'ri-ąn), *a.* and *n.* [*fruit* + *-arian.* The proper type would be *fructuarian.*] **I.** *a.* Of or pertaining to fruits; consisting solely of fruits and nuts, as a diet.

One of the chief objects of the series of experiments was to furnish data as to the value of nuts as food. Fruits contain little protein, and nuts are relied on in the *fruitarian* plan of eating to balance the ration.
Sci. Amer., Oct. 10, 1903, p. 255.

II. *n.* One who holds the theory that fruits and nuts constitute the only proper food for man.

fruit-beetle (frōt'bē″tl), *n.* A beetle which infests fruit. — **Apple fruit-beetle,** *Doticus pestilens*, an Australian beetle which damages the fruit of the apple, and which is liable to be introduced into the United States.

fruit-borer (frōt'bōr″ėr), *n.* An insect which bores into fruit. — **Pear fruit-borer,** a Japanese



Pear Fruit borer (*Nephopteryx rubrizonella*).

a, moth; *b*, larva; *c*, damaged pear with pupa. *a*, *b*, natural size; *c*, reduced.

phycitid moth, *Nephopteryx rubrizonella*, whose larvæ destroy nearly 50 per cent. of the pear crop of Japan.

fruit-bug (frōt'bug), *n.* An insect which infests fruit. — **Harlequin fruit-bug,** an Australian heteropterous insect, *Dindymus versicolor*, which sucks the sap of growing plants, and which when full-grown damages apples, causing them to spot and rot.

fruit-chafer (frōt'chā″fėr), *n.* Any one of numerous species of scarabæid beetles, especially of the cetonian group, which eat fruit, as the fig-eater, *Allorhina nitida*. — **Brown fruit-chafer,** an American cetoniid beetle, *Euphoria inda*, of modest colors and wide distribution, which feeds on ripe fruit and Indian corn. **Pear fruit-chafer.** Same as *brown* ★*fruit-chafer.*

fruiterer, *n.* **2.** Same as *fruiter.*

fruit-ether (frōt'ē″thėr), *n.* See ★*ether*¹.

fruit-fly, *n.* **Cherry fruit-fly,** a trypetid fly, *Trypeta cingulata*, which lays its eggs on cherries, in which its larvæ develop.

fruit-garden (frōt'gär″dn), *n.* A garden devoted to the growing of fruit.

fruit-maggot (frōt'mag″ōt), *n.* A maggot which infests fruit. — **Cherry fruit-maggot,** the larva of a trypetid fly, *Rhagoletis cingulata*, which infests the fruit of the cherry.

fruit-mill (frōt'mil), *n.* A fruit-press.

fruit-separator (frōt'sep-ą-rā-tor), *n.* A machine for sorting fruits according to size.

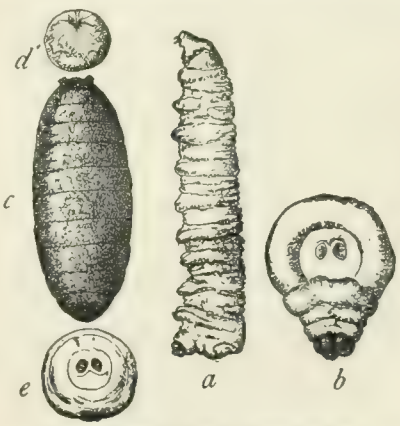
fruit-stall (frōt'stâl), *n.* A stall in a market or public place where fruit is sold.

Fruit-tree bark-beetle. See ★*bark-beetle.* **Fruit-tree leaf-roller.** See ★*leaf-roller.*

fruit-worm, *n.* — **Cranberry fruit-worm,** the larva of a phycitid moth, *Mineola vaccinii*, which lays its eggs on the young fruit of the cranberry: the larvæ enter the berries and eat out the seed-chambers, a single larva sometimes destroying four berries. — **Currant fruit-worm,** the larva of an American geometrid moth, *Tephroclystis interruptofasciata*. It feeds on both the fruit and the foliage of the currant, and pupates between folded leaves. — **Green-fruit worm,** the larva of any one of several American noctuid moths, notably of *Xylina antennata*, which feeds on the foliage and young fruit of the apple, pear, peach, and strawberry. — **Morelos orange fruit-worm,** the larva of a Central American trypetid fly, *Trypeta ludens*, which lays its eggs on young citrus

Morelos Orange Fruit worm, *Trypeta ludens*.
Adult fly. Female. Enlarged. From "Insect Life."

fruits, its larvæ feeding on the pulp. It is common in parts of Mexico, and derives its name from the Mexican state Morelos. Its accidental introduction into the



Morelos Orange Fruit worm (*Trypeta ludens*).

a, larva; *b*, anal segment; *c*, puparium; *d*, head; *e*, [illegible] segment. *a* and *e* enlarged; *b*, *d*, and *e* still more enlarged. From "Insect Life."

southern United States, and especially into California is greatly feared. — **Peach fruit-worm,** the larva of a Japanese tineid moth allied to *Grapholitha*. — **Raspberry fruit-worm,** an American dermestid beetle, *Byturus unicolor*, whose small white larva is often found on the inside of red raspberries after they are picked.

frunt, *n.*, *a.*, and *v.* A simplified spelling of *front.*

frustrate, *a.* **II.** *n.* A weak contraction of the ventricle of the heart, the impulse of which is imperceptible at the wrist, giving the impression of intermittent pulsations. *Buck*, Med. Handbook, IV. 599.

frustulation (frus-tū-lā'shon), *n.* [*frustule* + *-ation.*] A method of non-sexual reproduction in *Cnidaria*. It consists in the abstriction of small portions from lateral branches which bear no hydranths. These portions, except for the absence of cilia, resemble planulæ, becoming attached and giving rise to new colonies. *Allman.*

fruticetum (frō-ti-sē'tum), *n.*; pl. *fruticeta* (-tą). [NL., < L. *frutex* (*frutic-*), shrub, + *-etum.*] A collection of living shrubs, usually for scientific exhibition; a scientific shrubbery.

fry[1], *n.*—**Lamb's fries,** the testicles of the lamb, prepared for eating. Called also *mountain-oyster.*

fry[2], *n.* **3.** Any small edible fishes, as those of the family *Engraulidæ*, the anchovies, and certain fishes of the family *Clupeidæ*, as the sardines, and of the family *Atherinidæ*.—**4.** The roe of fishes, especially that of such fishes as are used for food.

Frying-pan brand, a large brand used by Australian cattle-stealers to cover and thus obliterate the brand of the owner of the stolen cattle.

f. s. An abbreviation of *foot-second.*

F. S. A. (*b*) An abbreviation of *Fellow of the Society of Arts.*

F. S. I. An abbreviation (*a*) of *Fellow of Sanitary Institute*; (*b*) of *Fellow of Surveyors' Institution*; (*c*) of *Free Sons of Israel.*

F. S. S. An abbreviation of *Fellow of the Statistical Society.*

F. S. Sc. A. An abbreviation of *Fellow of the Society of Science and Art* (London).

F. T. C. D. An abbreviation of *Fellow of Trinity College* (Dublin).

fth., fthm. Abbreviations of *fathom.*

fuang (Siamese pron. fē'ang), *n.* [Siamese *feua'ng* (Michell, 1892).] A current Siamese silver coin, one eighth of a tical, equivalent to 3½ United States cents.

fub[3] (fub), *n.* The lowest quality of wool taken from a fleece.

fuchi (fō'chē), *n.* [Jap.] The ring into which the base of the handle of a Japanese sword fits. The two principal parts of the hilt are the fuchi and kashira.

fuchsia, *n.*—**California fuchsia,** *Zauschneria Californica.* Called *balsamea* by the Spanish Californians, who use it as a vulnerary. See *Zauschneria.* **Native fuchsia,** in Australasia, any one of several species of native plants. (*a*) In Australia and Tasmania, species of the genus *Mazeutoxeron*, belonging to the rue family, especially *M. speciosum.* (*b*) In Queensland, a shrub of the family *Myoporaceæ*, *Pholidia maculata.* (*c*) In New Zealand, the kotukutuku, *Fuchsia excorticata.* See ★*kotukutuku*, ★*konini*, and ★*tookytook.*

fuchsia-tree (fū'shiä-trē), *n.* The kotukutuku, *Fuchsia excorticata.* See ★*kotukutuku.*

fuchsin, *n.*—**Acid fuchsin.** See ★*acid-fuchsin.*—**Fuchsin bodies,** minute rounded hyaline bodies, staining readily in fuchsin solution, found in certain malignant tumors.—**New fuchsin.** Same as *new* ★*magenta.*

fuchsinophil (fōk-sin'ō-fil), *a.* and *n.* [*fuchsin* + Gr. φίλος, loving.] **I.** *a.* Staining readily in the presence of fuchsin dye: said of certain cells or parts of cells.

II. *n.* A leucocyte which has a selective action for fuchsin stain.

fuchsinophilic (fōk-sin-ō-fil'ik), *a.* [*fuchsinophil* + *-ic.*] Same as ★*fuchsinophil.*

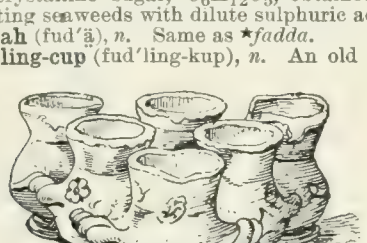
fuchsinophilous (fōk-si-nof'i-lus), *a.* Same as ★*fuchsinophil.*

fuchsone (fōk'sōn), *n.* [G. *fuchson.*] A name suggested for diphenylquinomethane, $(C_6H_5)_2C{:}C_6H_4O$. An important group of dyes is derived from this compound, and a system of nomenclature was based on the name.

fucose (fū'kōs), *n.* [L. *fucus*, seaweed, + *-ose.*] A crystalline sugar, $C_6H_{12}O_5$, obtained by heating seaweeds with dilute sulphuric acid.

fuddah (fud'ä), *n.* Same as ★*fadda.*

fuddling-cup (fud'ling-kup), *n.* An old English earthenware cup made of several receptacles molded together and communicating one with another. To empty one it was necessary to empty all.



Fuddling-cup

fudge, *v. i.* **2.** In *printing*, to make use of improper materials or methods to produce a needed result with greater speed.

fudge, *n.* **2.** In newspaper parlance, matter of supposed importance, as the latest sporting news or sensational stuff, which comes to hand too late to find a place in the plates before going to press, and is inserted in a special place by cutting the plates. See ★*fudge-box.*—**3.** In *printing*, an unworkmanlike practice.—**4.** A kind of home-made candy composed of milk, sugar, butter, and chocolate, boiled together, flavored with vanilla, and, when nearly cool, poured into a rectangular pan and cut into squares: more fully designated *chocolate-fudge.* When chopped walnuts form an ingredient it is known as *nut-fudge.* The name alludes to the hasty amateur manufacture.

fudge-box (fuj'boks), *n.* The space on the front page of a newspaper cut out, or arranged to be cut out, if need be, to receive the matter called 'fudge,' that has come in while the forms are going through the press.

fudge-mold (fuj'mōld), *n.* In *printing*, a mold constructed to cast a taper- or wedge-shaped linotype designed to form part or the whole of a circle.

fudge-slug (fuj'slug), *n.* In *printing*, a taper- or wedge-shaped slug designed to form part or the whole of a circle.

fudgy (fuj'i), *a.* [*fudge* + *-y*[1].] Awkward; bungling, or showing the results of bungling. [U. S.]

Fuel ratio, the amount of heating-capacity in a fuel as compared with another fuel taken as a standard. Every coal has a capacity to raise a certain number of pounds of water one degree Fahrenheit for each pound burned: the ratio, experimentally determined, of this heating-capacity or calorific power to that of a pound of pure carbon is the *fuel ratio* of that coal.—**Gaseous fuel,** fuel in a gaseous state, which of late years has come to be more and more extensively used. It is chiefly represented by the 'natural gas' of petroleum regions, the waste combustible gases escaping from iron-smelting furnaces, and 'generator' gas specially made from coal or other solid forms of fuel. Among the advantages attending the use of gaseous fuel are the absence of ash, the high temperature attainable by application of the 'regenerative' principle, the easy transference for short distances through pipes or flues, and the easy control of consumption. On the other hand, limitations are placed on the use of such fuel by its bulkiness, and the consequent restriction of storage and of transport to any great distance.—**Liquid fuel,** fuel in a liquid state, as crude petroleum or the more or less purified hydrocarbon oils derived from it. Great importance attaches to its use under certain conditions. Among the chief advantages are the freedom from ash, the very high heat-producing value, the capability of storage without any waste of space and in tanks of any shape, the ready transference through pipes, and the easy control of consumption. Use of such fuel has been adopted to a greater or less extent in war-ships, pleasure-craft such as naphtha-launches, and automobiles or motor-cars. For the last-named purpose alcohol has been to some extent substituted for petroleum products.—**Patent fuel,** a trade-name for coal-dust or coke-dust incorporated with pitch or other binding-material and molded into blocks or briquets.

fuel-oil (fū'el-oil), *n.* Oil which is used as fuel either in an internal-combustion engine or in a furnace. It is derived from crude petroleum by separating out the naphtha and kerosene by distillation, and by abstracting part of the lubricating-oil.

fuel-value (fū'el-val″ū), *n.* The amount of heat which may be furnished to the body by oxidation of any given article of diet.

By *fuel-value* is here meant the total energy which a given substance can yield the body; in other words, it is the heat of combustion of that part of the food which is capable of oxidation within the body.

Encyc. Brit., XXVII. 444.

fugal[2] (fū'gal), *n.* [(*centri*)*fugal.*] A local abbreviation for *centrifugal*: applied in Australia and elsewhere to centrifugal machines.

fugato, *n.* **II.** *a.* Of the nature of a fugue; to be rendered in fugue style, but not according to strict rules. See *fugato, n.*

fuggerite (fug'ėr-īt), *n.* [Prof. E. *Fugger* of Salzburg + *-ite*[2].] A tetragonal silicate closely allied to gehlenite in composition, but differing in physical characters: found in the monzonite of the Monzoni valley in the Tyrol.

fugitate (fū'ji-tāt), *v. t.*; pret. and pp. *fugitated*, ppr. *fugitating.* In *Scots law*, to sentence to outlawry for fugitation.

fugue, *n.*—**Single fugue,** a fugue with only one subject: opposed to *double fugue* (which see, under *fugue* (*a*)).

fuji (fō'jē), *n.* [Jap.] The Japanese wisteria, *Kraunhia Japonica.* See *Wisteria*, 1.

Fukurokujiu (fū-kō-rō'kō-jyō), *n.* [Sinico-Japanese: *fuku* (< Chin. *fu*), happiness, + *roku* (< Chin. *lao*), venerable, + *jiu* (< Chin. *sheu*, *shou*), long life.] The Japanese god of longevity (one of the seven gods of happiness), represented with an abnormal dome-shaped head and long beard, carrying a peach in his hand, and sometimes accompanied by a deer, another of his attributes.

ful, *a.*, *n.*, *adv.*, and *v.* A simplified spelling of *full.*

fulaari (fō-lä-ä'ri), *n.* [New Guinea.] One of several masked executive officers in each village of British New Guinea, who, in accordance with native custom, are charged with seeing that the taboo is observed when it has been placed by the taboo-chief on cocoanuts, areca-nuts, etc., when a failure of crops is threatened.

fulcral (ful'kral), *a.* Of or pertaining to a fulcrum; specifically, in *ichth.*, pertaining to the processes on the base of fin-spines and rays by which the fin is erected.

fulcrum, *n.* **7.** In rotifers, the short stem of the incus, one of the parts of the mastax or pharyngeal mill.—**8.** In the trilobites, the bend or the point of abrupt curvature of the thoracic pleura, which divides them into proximal and distal portions.

fulcrumage (ful'krum-āj), *n.* The turning about a point, as a fulcrum.

fulgorid (ful'gō-rid), *n.* and *a.* **I.** *n.* A member of the *Fulgoridæ.*

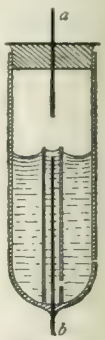
II. *a.* Of or belonging to the family *Fulgoridæ.*

fulgural (ful'gū-ral), *a.* [L. *fulguralis*, < *fulgur*, lightning.] Of or pertaining to lightning: as, *fulgural* superstition.—**Fulgural science,** divination by lightning.

fulgurant, *a.* **2.** In *pathol.*, with lightning-like rapidity: an epithet applied to the pains of locomotor ataxia, because of the suddenness of their appearance.

fulgurating (ful'gū-rā-ting), *p. a.* Darting or shooting in the manner of lightning; lancinating: as, *fulgurating* pains.

fulgurator (ful'gū-rā-tor), *n.* In *phys.*, a device used in the study of the spark-spectra of substances. It consists of a vertical glass tube with platinum wires, *a* and *b*, which afford a spark-gap. The terminal *b* is surrounded with a capillary tube to the top of which the liquid to be vaporized by the spark rises, covering the platinum wire. The spark passes between the surface of this liquid and the upper terminal.



Fulgurator

fulgurite, *n.* **2.** An explosive of the nitroglycerin class, used for blasting: similar to dynamite, but the nature of the dope has not been disclosed by the inventor.

full[1], *a.*—**Full house.** (*b*) In *poker*, same as *full*[1], *n.* 3.—**Full line.** (*b*) In *printing*, a line of composed types of letters only that fill the measure of the page or column. A line that consists partly of letters and partly of quadrats is known as a *break line.*—**Full up of,** full to satiety; 'sick and tired of': as, he was *full up of* the place. [Australia.]—**Keep full for stays!** an order to the wheelsman to keep a good full on the vessel so as to accelerate her speed a little before going in stays in order that she may come about quickly.—**Keep her full!** an order to keep the sails full of wind.

full[1], *n.* **4.** A ridge of gravel formed back of a beach by storm-waves. [Local, Eng.]

The wash of the waves, owing to percolation, piles up the pebbles thrown forward by the breaker, forming a bank, or ridge, or *Full*, and this is the action proper to the sea on a shore of shingle.

Geog. Jour. (R. G. S.), XI. 536.

To hold a good full, *naut.*, to steer so as to keep the sails well bellied out by the wind; to keep the vessel off sufficiently from the wind to fill her sails.

full[1], *adv.* **5.** In *organ-playing*, with all the stops drawn; with the whole power of the instrument: as, the piece was played *full.*

full-arc (fūl'ärk), *n.* An electric arc supplied with 9.5–10 amperes of current and consuming 450–480 watts.

full-blood, *n.* **2.** Relationship through both parents or through a complete series of ancestors: as, brothers or cousins of the *full-blood*, or *full-bloods* of a certain tribe or race.

Fullers' board. See ★*board.*—**Fullers' chalk.** Same as *fullers' earth.*—**Fullers' earth.** (*b*) In *geol.*, specifically, the middle subdivision of the Lower Oolites of the Jurassic system in Great Britain, constituting the Fullonian group or stage. It is underlain by the Bajocian series, with the Cheltenham beds at the top, and overlain by the Bathonian, the lowest member of which is the Great or Bath Oolite.—**Fullers' grease.** Same as *Yorkshire* ★*grease*, except that the term *fullers' grease*, when used in its strictly specific sense, applies only to the fatty acids recovered from the scouring of woolen cloth, excluding the grease from raw wool.—**Fullers' scale.** See ★*scale*[3].

full-fledged (fūl'flejd), *a.* Fully developed or matured; fully organized and ready for action or use: as, a *full-fledged* town.

full-jeweled (fūl'jō-eld), *a.* Said of a watch when each of the pivot-holes contains a jewel, made of a ruby, garnet, or some other gem.

fullonian (fū-lō'-nian), *n.* [L. *fullo*(*n-*), a fuller.] Same as ★*fullers' earth* (*b*).

full-pitch (fūl'pich), *n.* In *cricket*, a ball bowled so as to reach the batsman before it touches the ground; a full-toss.

full-rigged (fūl'rigd), *a.* Fully rigged; with all the sails set that properly belong to the class of vessel named or referred to: as, a *full-rigged* ship. See *ship.*

full-toss (fŭl′tos), *n.* In *cricket*, same as ★*full-pitch.*

fulminate, *n.*— **Mercuric fulminate,** a valuable explosive agent, made by the addition of alcohol to a warm solution of mercury in nitric acid. It forms small yellowish-white crystals, having the composition $HgC_2N_2O_2$, very readily exploded by slight heating, friction, or a blow. It is too violent in its effects and too expensive to be used as a principal or primary explosive, but it is largely used in detonators and percussion-caps to bring about the explosion of other materials, such as guncotton and dynamite. Also known as *fulminating mercury* or simply as *fulminate.*

fulminuric (ful-mi-nū′rik), *a.* Derived from fulminic and uric acids. **Fulminuric acid,** a colorless solid, $C_3H_3N_3O_3$, isomeric with cyanuric acid. It explodes at 145° C. Sometimes called *isocyanuric acid.*

fulsum, *a.* A simplified spelling of *fulsome.*

fulvo-hyaline (ful vō-hī′ą-lin), *a.* [L. *fulvus,* yellow, + Gr. *ὑάλινος,* of glass: see *hyaline.*] Transparent but dark yellowish in color.

fulvo-rufous (ful vō-rō′fus), *a.* [L. *fulvus,* yellow, + *rufus,* red.] Dark yellowish red.

fuma (fū′mą), *n.* [A back-formation from L. *fumare,* subject to smoke or vapor, < *fumus,* smoke, vapor: see *fume.*] A trade-name for the vapor of carbon disulphid when applied to plants as an insecticide.

fumagine (fū′mą-jin), *n.* [NL. **fumago* (*fumagin-*), < L. *fumus,* smoke, + *-ago* (*-agin-*), as in *imago,* image, with a sense suggested by *ærugo,* rust.] The black or brown coating upon the leaves and stems of plants formed by the mycelium of various fungi.

fumago (fū-mā′gō), *n.* [NL. (Persoon, 1818), < L. *fumus,* smoke, + *-ago* as in *imago,* image; used in NL. in a special sense: see *imago.*] A name which has been applied to the conidial condition of species of *Capnodium.*

fumarine (fū′mą-rin), *n.* [*Fumaria* + *-ine*[2].] A bitter alkaloid, $C_{21}H_{19}O_4N$, contained in *Fumaria officinalis.* It crystallizes in prisms and is optically active.

fumarole, *n.* Sainte-Claire Deville distinguishes the following: (*a*) *Dry fumaroles,* which are very hot and yield volatilized anhydrous (for example, ferric) chlorids. (*b*) *Acid fumaroles,* which yield sulphurous and hydrochloric fumes and steam. (*c*) *Alkaline fumaroles,* which yield sal ammoniac and steam at approximately 212° F. (*d*) *Cold fumaroles,* below 212° F., which yield steam, carbon dioxid, sulphureted hydrogen, etc. *Annales de Chimie et de Physique,* LII. 19.

fumarolic (fū-mą-rol′ik), *a.* Characterized by, pertaining to, or due to the action of fumaroles.

The placing of various ore deposits of many well-known districts in such classes as *fumarolic* solfataric, pneumatolytic, etc., without giving evidence for such a distribution, seemed to the speaker to be premature.
Science, April 3, 1903, p. 543.

fumatorium (fū-mą-tō′ri-um), *n.*; pl. *fumatoria* (-ą). [NL.: see ★*fumatory*[2], *fumitory*[2], *n.*] A fumatory; specifically, in recent use, an air-tight structure in which small trees or other plants are fumigated to destroy scale or other insects.

fumatory[2] (fū′mą-tō-ri), *n.* [NL. *fumatorium* (recent use), < L. *fumare,* pp. *fumatus,* smoke: see *fume, v.*] Same as *fumitory*[2] (which is a less correct form).

fumba (fōm′bă), *n.* [Also *mfumba;* < Swahili *fumba,* with noun-prefix *mfumba,* connected with *fumba,* close, shut.] A sleeping-bag of matting used by the natives in the lower Zambesi valley.

fumble, *n.* **2.** In *base-ball, foot-ball,* and other games, an act of fumbling.

The world's a well strung fidle, mans tongue the quill,
That fills the world with *fumble* for want of skill.
N. Ward, Simple Cobler, p. 87.

fume, *n.*— **Lead fume.** See ★*lead*[2].

fume, *v. i.*— **Fuming nitric acid,** an impure nitric acid containing other oxids of nitrogen; a reddish-yellow fluid giving off acrid fumes of the same color.— **Fuming oil of vitriol.** Same as *Nordhausen acid* or *fuming sulphuric acid* (which see, under *sulphuric acid*).

fumé (fū-mā′), *a.* [F., pp. of *fumer,* smoke.] **1.** Smoked: as, verre *fumé* ('smoked glass'). —**2.** Smoky; having a smoky tint: as, quartz *fumé.*—**3.** That has been subjected to the process of fuming, as oak, in order to obtain an antique appearance.

fume-chamber (fūm′chām″bèr), *n.* A box or chamber connected with a ventilating shaft or exhaust, used in laboratories to carry off offensive fumes.

fumerole (fū′me-rōl), *n.* See *fumarole.*

fumigant, *a.* **II.** *n.* A substance used in fumigation. *Jour. Soc. Chem. Industry,* XIII. 657.

fumigate, *v. t.* **4.** To darken the color of (wood) in imitation of the effect of age and smoke. The process is also known as *fuming.*

fumigatory, *a.* **II.** *n.* A room or apparatus used for fumigation. *Syd. Soc. Lex.*

fuming, *n.* **4.** The process of subjecting oak or other wood used in furniture to the fumes of ammonia, in order to give it an appearance of age.—**5.** In *photog.,* the process of exposing albuminized paper to the fumes of ammonia, which makes the paper print a trifle more quickly and gives it a purple tone.

fumitory[1], *n.*— **Bulbous fumitory.** (*a*) The hollow-root or moschatel, *Adoxa Moschatellina.* (*b*) The hollow-wort, *Capnoides cavum.*

fumivorous (fū-miv′ō-rus), *a.* [L. *fumus,* smoke, + *vorare,* devour.] Smoke-consuming.

It [crematory apparatus] . . . is *fumivorous,* [and] emits no smell. *Buck,* Med. Handbook, III. 361.

funa (fō′nä), *n.* [Jap. *funa.*] The Japanese name of the common goldfish, *Carassius auratus,* found in the rivers of Japan.

funambulism (fu-nam′bu-lizm), *n.* [L. *funambul-us,* a rope-walker, + *-ism.*] The art of tight-rope walking; rope-walking.

Funariaceæ (fū-nā-ri-ā′sē-ē), *n. pl.* [NL., < *Funaria* + *-aceæ.*] A family of mosses of the order *Bryales,* typified by the genus *Funaria.* They are characterized by the pear-shaped capsule provided with a neck and often raised on a long stalk. The family includes 12 genera, of which *Funaria* and *Physcomitrium* are the most important.

function, *n.*— **Automorphic function.** See ★*automorphic.* **Characteristic function,** in *thermodynamics,* a function of the generalized coordinates, the generalized forces, the temperature, energy, and entropy of a system in equilibrium, in terms of which all the properties of the system can be expressed.— **Chromatic function.** See ★*chromatic.*— **Compensation of functions.** See ★*compensation.* **Decreasing function,** a function which decreases when its independent variable is increased.— **Diaphoric function,** a function of the differences of specified arguments.— **Differential of a function.** See ★*differential.*— **Element of an analytic function.** See ★*element.*— **Empiric function,** a relation between two variable quantities, found by direct observation.— **Equipotential function,** a function by means of which equality of potential is specified.— **Fractional function,** a function in which the variable occurs in the denominator: as, a/x, or b/x^2.— **Function of position on a Riemann's surface,** a function of a function considered as having a value for every point of the Riemann's surface that is connected with the latter function.— **Galton's function.** See *ancestral* ★*inheritance.*— **G-function.** Same as *Green's* ★*function.*— **Graph of a function, graph of the function f(*x*).** See ★*graph.*— **Green's function.** (*a*) A potential function which at all points of a contour is equal to $\log 1/r$, where r is the radius vector of the point from a fixed origin. (*b*) A function differing from that just defined by $\log 1/r$. **Group of a function.** See ★*group.*— **Hyperbolic function.** (*c*) A function bearing a relation to a rectangular (equilateral) hyperbola similar to that of the ordinary circular functions of trigonometry to a circle. The hyperbolic functions are not so named on account of any analogy with what are termed *elliptic functions.* See the extract.

The elliptic integrals, and thence the elliptic functions, derive their name from the early attempts of mathematicians at the rectification of the ellipse. . . . To a certain extent this is a disadvantage; . . . because we employ the name *hyperbolic function* to denote cosh u, sinh u, etc., by analogy with which the elliptic functions would be merely the circular functions cos ϕ, sin ϕ, etc.
Greenhill, Elliptic Functions, p. 175.

Increasing function, a function which increases when its independent variable is increased.— **Infinity of a function.** See ★*infinity.*— **Inverse function** or **inverse of a function.** When $y = f(x)$, then x equals some function of y, say $x = \phi(y)$. These functions, f and ϕ, are then said to be *inverse functions* or *anti-functions* of one another. The sign of this inversion is minus one written as an index to the functional symbol: thus, $f = \phi^{-1}$ and $\phi = f^{-1}$, so that $x = f^{-1}(y)$ and $y = \phi^{-1}(x)$.— **Kleinian function,** an automorphic function which remains unchanged by the transformations of a Kleinian group.— **Like-branched functions,** functions of one and the same Riemann's surface. **Monodromy of a function.** See *monodromic function,* under *monodromic.*— **Octahedron function,** a sextic function whose fourth derivative is identically zero, the canonical form being $xy(x^4 - y^4)$.— **ζ-function,** a function denoted by ζu, pronounced *p u.*

$$\zeta u = \frac{1}{u^2} + \Sigma' \left[\frac{1}{(u - w)^2} - \frac{1}{w^2} \right],$$

where Σ′ denotes a sum extended over all values of w except the value $w = 0$.— **Singular point of a function.** See ★*point*[1].— **Tesseral function,** the function called by Heine and Todhunter *associated function of the first kind;* a function converted into a tesseral harmonic by the factor cos $\sigma\phi$ or sin $\sigma\phi$.— **Verb function,** an operator containing a purely symbolic letter β to denote the base of a given operation, so that when this verb function operates on a subject x, it produces the result obtained by writing x for β in the verb function: thus, using square brackets to inclose each separate operation, $[(c + \beta)^2]\, x = (c + x)^2$, whereas $[c + \beta]^2\, x = [c + \beta]\,(c + x) = c^2 + (c + x) = 2c + x$.— **Zero of a function.** See ★*zero.*

Functional adaptation, hypertrophy, memory, murmur, paralysis, psychology, selection. See ★*adaptation,* etc.

function-theory (fungk′shon-thē ō-ri), *n.* Same as *theory of functions* (which see, under *function*).

Fundal placenta. See ★*placenta.*

Fundamental body, a body which cannot rotate. The conception has been introduced by German thinkers in order to support the doctrine of Leibnitz that space and motion are purely relative, as against the doctrine of Newton that space is a thing. The difficulty in the Leibnitzian doctrine is that rotational velocity is not relative, unless some peculiar hypothesis is introduced to account for the phenomena. These hypotheses have usually consisted in supposing the existence of some motionless thing to which all motion is relative; but no good reason has ever been given for rejecting Newton's view that space itself is this motionless thing.— **Fundamental gneiss.** Same as ★*basement complex.* **Fundamental length,** plate or zone. See ★*length,* ★*plate.*

Funded content. See ★*content*[3].

fundicolar (fun-dik′ō-lär), *a.* [L. *fundus,* bottom, + *colere,* inhabit, + *-ar*[3].] Inhabiting or living upon the sea-bottom: as, *fundicolar* mollusks.

Professor Pelseneer enumerates a few Magellanic species separately, and divides the Antarctic species into littoral, of which there are three species; *fundicolar,* of which there are twenty-nine, and pelagic, of which there are five. *Science,* April 22, 1904, p. 658.

fundiform (fun′di-fôrm), *a.* [L. *funda,* a sling, + *forma,* form.] Having the form of a sling or a loop.

funeral-director (fū′ne-ral-di-rek′tor), *n.* An undertaker. [U. S.]

Fungi, *n. pl.* Recent investigations have added much to the knowledge of the life-histories and relationships of this large group of plants. The term, as commonly used to include the slime-molds and bacteria as well as the fungi proper, does not signify a natural group. The present tendency is to restrict its use to the *Eumycetes* (true fungi). The cytological studies of Harper and others confirm the opinion that the rusts (*Uredinales*) are most closely related to the *Basidiomycetes,* while the researches of Thaxter have shown the existence of what appears to be a new order, the *Myxobacterales,* showing characters of both *Myxomycetes* and bacteria. Various recent systematic arrangements of the fungi have been proposed, notably those of Brefeld, Schroter, Saccardo, and Engler and Prantl. These classifications differ chiefly in the terminology used, the relative rank given to different groups, and the position assigned to certain orders of more or less doubtful relationship. The sporological system of Saccardo, used in his "Sylloge Fungorum" as a basis for the division of the larger groups of the *Pyrenomycetes, Discomycetes,* and *Fungi Imperfecti,* is very convenient but artificial. The following arrangement is based upon that given in Engler's "Syllabus." The termination of the ordinal names is that at present adopted and has been used by Underwood. The lichens have been added to the classes of fungi to which they belong. Class I. *Myxomycetes:* orders *Acrasiales, Plasmodiophorales, Myxogastrales, Myxobacterales.* Class II. *Schizomycetes:* orders *Eubacterales, Thiobacterales.* *Eumycetes* (true fungi): Class III. *Archimycetes:* order *Chytridales.* Class IV. *Zygomycetes:* orders *Mucorales, Entomophthorales.* Class V. *Oomycetes:* orders *Saprolegniales, Peronosporales.* Class VI. *Ascomycetes:* orders *Protomycetales, Saccharomycetales, Exoascales, Aspergillales, Perisporiales, Hypocreales, Dothideales, Sphæriales, Laboulbenales, Tuberales, Hysteriales, Phacidiales, Pezizales, Helvellales.* Subclass *Ascolichenes:* orders *Parmeliales, Lecideales, Graphidales, Caliciales, Verrucariales.* *Fungi Imperfecti:* orders *Sphæropsidales, Melanconiales, Moniliales.* Class VII. *Basidiomycetes:* subclass *Hemibasidii:* order *Ustilaginales,* subclass *Protobasidii:* orders *Uredinales, Auriculariales, Tremellales, Dacrymycetales, Exobasidiales, Agaricales, Phallales, Hymenogastrales, Lycoperdales, Nidulariales, Scleroderm ales.* Subclass *Hymenolichenes.*

Fungic acid, the name given to a mixture of citric, malic, and phosphoric acids, which is found in certain species of mushrooms.

fungicidal (fun-ji-sī′dal), *a.* [*fungicide* + *-al*[1].] Relating to fungicides or to the killing of fungus or fungi; having the property of destroying fungous or fungoid growths.

fungivore (fun′ji-vōr), *n.* [F. **fungivore,* < L. *fungus,* fungus, + *vorare,* devour.] A trade-name for a crude preparation containing iron sulphate, used at one time in France as a fungicide application to plants, as, for example, to vines attacked by *Oïdium.*

fungose (fung′gōs), *a.* Same as *fungous.*

fungus, *n.*— **Algal fungus.** See ★*algal.* **Black fungus,** a name applied to any member of the *Pyrenomycetales.*— **Fairy-ring fungus,** the mushroom *Marasmius Oreades,* which forms circles or parts of circles in lawns and pastures, popularly termed fairy rings. See *fairy ring,* under *fairy.*— **Fungus cancer.** Same as *fungus hematodes.*— **Fungus cerebri,** protrusion of the brain-substance through a fracture of the skull. Also called *cerebral hernia.*— **Fungus-digesting plant.** See ★*plant*[1].— **Grasshopper-disease fungus,** a species of *Sporotrichum* which attacks grasshoppers and causes their death. This fungus has been distributed for the purpose of checking the ravages of grasshoppers in certain parts of the United States.— **Oak-root fungus.** Same as *oak-scalding* ★*disease.* **Pine-cone fungus,** the fungus *Æcidium strobilinum,* occurring on the scales of the cones of pine.— **Pine-leaf fungus,** the fungus *Herpotrichia nigra,* occurring on the leaves and branches of the pine and juniper. See ★*Herpotrichia.*— **Shot-hole fungus,** any fungus which attacks the leaves of certain trees, particularly cherries and plums, causing minute purple or brown spots, which later loosen and drop out. *Cylindrosporium Padi, Septoria cerasina,* and other forms are responsible for this disease.— **Sore-shin fungus,** a species of *Rhizoctonia* which attacks the weak seedlings of cotton-plants, producing an ulcer just at or below the surface of the ground and often destroying the plant. See ★*sore-shin.*

fungus-body (fung′gus-bod″i), *n.* The large compound structure of the higher fungi: dis-

tinguished from the simple filamentous thallus of the lower fungi. *De Bary.*

fungus-gall (fung'gus-gâl), *n.* A peculiar gall-like growth produced upon various plants by the irritation induced by fungi.

fungus-pit (fung'gus-pit), *n.* A pit in which mushrooms and other fungi are cultivated.

fungus-trap (fung'gus-trap), *n.* That part of the root of a plant which contains a fungus the ultimate fate of which is to be absorbed by the host plant. *Frank.*

funicle, *n.* **5.** The central connecting process in those colonies of graptolites which bear no thecæ.

funicular, *a.* **2.** In *anat.*: (*b*) Resembling a cord or rope: a term used in describing the arrangement of muscle- or nerve-fibers.—**Funicular action**, action exerted by means of a rope or cable; specifically, in *mech.*, the pull exerted at the ends of a stretched rope or cord when a transverse force is applied to its middle.—**Funicular curve.** Same as *catenary curve.*—**Funicular railway.** See ★*railway.*

Funiculus amnii, a cord which persists for a while after the closing of the amnion and chorion, in ruminants, forming a connecting band between them.

funk[2], *v.* **II.** *intrans.* To smoke offensively, as a fire or chimney, with puffs or gusts.

> But there my triumph's straw-fire flared and *funked.*
> *Browning*, Fra Lippo Lippi, l. 172.

funk[3], *v.* **II.** *trans.* To shrink from or dread; be afraid of; back out from. [Colloq.]

> He "*funked*" the cholera, as he said, and of course he got it. Having got it, he told me that he *funked* it no longer—and he got over it.
> *Geog. Jour.* (R. G. S.), XII. 198.

funk[3], *n.* **2.** One who funks, shrinks from, or avoids, or who is in a state of funk.

funnel, *n.*, **4.** (*c*) In the chambered cephalopods, the extension of the septum about the siphuncle.—**Buechner funnel**, a special form of funnel made of porcelain, having a perforated bottom on which the filter-paper is laid flat.—**Meyer's funnel**, a glass funnel with its lower rim turned inward and provided with a tubulus: used to place over liquids in the process of evaporation to condense and collect vapors.—**Septal funnel**, one of the narrow funnel-like depressions in the four gastric ridges of the scyphula of certain jellyfishes, as *Aurelia*; an infundibulum.

funnel-box (fun'el-boks), *n.* One of a series of square funnels used in metallurgical works for separating metal-bearing slimes according to fineness.

funnel-breast (fun'el-brest), *n.* Same as ★*funnel-chest.*

funnel-chest (fun'el-chest), *n.* A sinking in of the sternum, forming a conical depression of the anterior wall of the chest.

funnel-draft (fun'el-dråft), *n.* The draft or current of air and products of combustion from a marine boiler caused by the difference in the weight of hot gas inside the funnel or chimney when compared with that of an equal column of external air.

funnel-tube (fun'el-tūb), *n.* A small glass funnel prolonged at the bottom into a tube of considerable length, much used in chemical laboratories. The tube is passed gas-tight through the cork of a bottle or flask. Also called *tube-funnel.*—**Safety funnel-tube**, an ordinary funnel-tube with a double bend, with or without one or more bulbs. A liquid may be poured through it into a gas-generating flask without the risk of being driven out by sudden increase of gaseous tension. It also limits access of air to the contents of the glass, a liquid seal or valve being established by the part of the introduced liquid which lodges in the bend.

funnel-twister (fun'el-twis"tėr), *n.* A European rhynchitid beetle, *Rhynchites betulæ*, whose larvæ live in beech-leaves, which they roll into a funnel shape.

funori (fö-nō'ri), *n.* [Jap.] **1.** A seaweed, *Glœopeltis intricata*, from which the Japanese prepare a fine kind of glue.—**2.** The glue made from this seaweed. It is used for paste, starch, and sizing, the glazing and stiffening of textile fabrics, etc. *Nat. Geog. Mag.*, May, 1905, p. 208.

funt (fönt), *n.* [Russ. *funtŭ*, < G. *pfund* = E. *pound.*] The Russian pound, equal to nine tenths of an avoirdupois pound.

fun-ting (fun'ting'), *n.* [Also *fĕn-ting*; Chinese *fun* (*făn*), flour; *Ting Chau*, a place noted for its pottery.] A Chinese porcelain having a white paste, resembling in appearance soft paste but in reality hard.

furca, *n.* **3.** An inflected elastic anal organ ending in a fork, by which the animal is enabled to leap, as in *Podura*. *Kirby and Spence.*

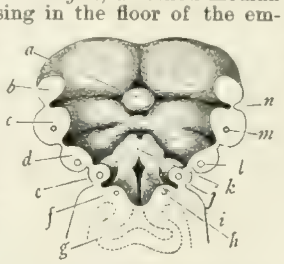
furcal (fėr'kal), *a.* [NL. **furcalis*, < L. *furca*, fork: see *fork.*] Of a fork: also, furcate or forked: as, the *furcal* processes of crustaceans.—**Furcal orifice**, a forked opening, as the sternal slit in certain *Porlidæ*.

furciferine (fėr-sif'e-rin), *a.* [*Furcifer* + *-ine*[2].] Relating to or characteristic of the deer of the genus *Furcifer*, frequently placed in the genus *Cariacus.*

furcilia (fėr-sil'i-ä), *n.* [NL., < L. *furca*, fork.] A late larval stage in schizopodous crustaceans, in which the paired, stalked eyes become more fully developed and the most anterior pairs of thoracic and abdominal feet begin to form in succession from before backward.

Furcimanus (fėr-sim'a-nus), *n.* [NL., < L. *furca*, fork, + *manus*, hand.] A genus of zoarcid fishes found in the deep waters of the North Pacific.

furcula, *n.* **3.** In *embryol.*, a forked median protuberance arising in the floor of the embryonic pharynx between the third and fourth pairs of visceral arches. It develops into the epiglottis of the adult.—**Furcula supra-analis**, a small forked sclerite just above the anus of a grasshopper.



k, furcula.

The floor of the pharynx of a human embryo, twenty-three days old, seen from above.

a, tuberculum impar; *b*, mandibular arch; *c*, hyoid arch; *d*, first branchial arch; *e*, second branchial arch; *f*, third branchial arch; *g*, lung; *h*, fifth aortic arch in the third branchial arch; *i*, glottis; *j*, fourth aortic arch in the second branchial arch; *k*, furcula; *l*, third aortic arch in the first branchial arch; *m*, second aortic arch in the hyoidean arch; *n*, membrane closing the hyomandibular cleft, which afterward becomes the tympanic membrane. (From Marshall's "Vertebrate Embryology.")

furculite (fėr'kū-līt), *n.* [L. *furcula*, a fork, + Gr. λίθος, stone.] A microlite which has a straight stem and forked extremities. *F. Rutley*, in Mineralogical Mag., IX. 266.

furevernic (fū-rē-vėr'nik), *a.* [*fur*(*furacea*) + *Evernia* (see def.) + *-ic.*] Derived from *Evernia furfuracea.*—**Furevernic acid**, an acid, incorrectly called *furevernacid*, said to occur, in traces, in *Evernia furfuracea.*

furfuracryluric (fėr"fėr-ak-ri-lū'rik), *a.* Noting an acid which appears in the urine after the ingestion of furfurol.

furfural (fėr'fėr-al), *n.* [L. *furfur*, bran, + *-al*[3].] See *furfurol.*

furfuraldehyde (fėr-fėr-al'dē-hīd), *n.* Same as *furfurol.*

furfurane (fėr'fėr-ān), *n.* [L. *furfur*, bran, + *-ane.*] A colorless liquid,

$$\begin{matrix} CH & : & CH \\ | & & \\ CH & : & CH \end{matrix} > O,$$

formed by the distillation of barium pyromucate with soda-lime: one of the products of the distillation of pine wood. It boils at 31.4–31.6° C., has a characteristic odor, and imparts an emerald-green color to a pine splinter moistened with hydrochloric acid. It is the parent substance of a class of compounds similar in structure to the pyridine and thiophene derivatives.

furfurine (fėr'fėr-in), *n.* [L. *furfur*, bran, + *-ine*[2].] A colorless crystalline basic compound, $C_{15}H_{12}N_2O_3$, formed by the action of a dilute potassium-hydroxid solution on furfuramide. It melts at 116° C.

furfurylamide (fėr'fėr-il-am"id), *n.* [*furfuryl* + *amide.*] Same as *furfuramide.*

furil (fū'ril), *n.* [*fur*(*oin*) + *-il.*] A yellow crystalline compound, prepared by the oxidation of furoin, melting at 162° C. It is the analogue of benzil, and has the formula $C_4H_3O.CO.CO.C_4H_3O$.

furilic (fū-ril'ik), *a.* [*furil* + *-ic.*] Of or pertaining to furil.—**Furilic acid**, a colorless, unstable, crystalline compound, $(C_4H_3O)_2COH.COOH$, prepared by the action of potassium hydroxid on finely divided furil.

furl (fėrl), *n.* [*furl*, *v.*] **1.** A roll of what is furled.—**2.** The manner of furling (a sail), or the appearance presented when furled: as, a vessel is judged by the *furl* of the sails.

furld, *pp.* A simplified spelling of *furled.*

furlo, *n.* and *v. t.* A simplified spelling of *furlough.*

furnace, *n.*—**Air crucible furnace**, a furnace with crucibles for melting brass.—**Batho's furnace**, a modification of the Siemens open-hearth furnace, from which it differs in shape, being either circular or elliptical, and in that the regenerators are placed outside of the furnace and are independent of it. The advantages of the separate regenerators are that in case of a break-out there is no risk of the metal getting into the regenerators and that it is impossible for a leakage of gas to take place between the gas and the air-regenerators and destroy the brickwork.—**Belgian-Silesian furnace**, a modification of the Belgian and Silesia zinc distillation furnaces: also known as the *Rhenish furnace*, on account of its general use in Rhenish Prussia. It usually has three rows of retorts and is either direct-fired or gas-fired. The retorts are elliptical in shape and, in the modern furnaces, their number exceeds 200. Also *Belgian furnace.* **Bicheroux's furnace**, a gas reheating-furnace (which see) in which the air for burning the gases is heated in a shallow flue under the bottom of the furnace, thus serving to cool the furnace bottom. **Black-ash furnace**, same as ★*ball-furnace.* **Blowpipe furnace**, a furnace fed by powdered fuel, oil, or gas, blown through a pipe with the air which serves for its combustion.—**Boliche furnace.** Same as *Spanish furnace.* **Cast-steel furnace.** See ★*cast-steel.*—**Coltness furnace**, an early form of blast-furnace which utilized the waste gases of iron-smelting.—**Crucible furnace**, a furnace in which the material to be heated is contained in a crucible of refractory material, and thus kept out of contact with the fuel. Such furnaces are much used in the manufacture of tool steel, in brass foundries, and in chemical laboratories and assaying establishments. **Decarbonizing-furnace**, a furnace for eliminating the carbon from a bath of fused metal, such as cast-iron or -steel, by oxidizing it, either by the character of the flame or by the constitution of the slag or the furnace-lining.—**Dental furnace**, a small furnace used in the manufacture of porcelain teeth.—**Desulphurizing-furnace**, an oxidizing furnace for sulphurets or sulphids, in which the sulphur is removed by roasting with an abundant supply of oxygen, going off as SO_2.—**Electric furnace**, an arrangement for utilizing the extraordinarily high temperature producible by the discharge of a powerful electric current between two carbon poles. These poles pass through the walls of a trough or inclosure constructed of the most infusible material available, and varied as to size and shape with the particular use intended. The temperature may be made to exceed any that can be produced by combustion, and with the advantage that air may be completely excluded. Important results of a scientific character have been obtained by means of the electric furnace, and it has opened up a new field of industrial use in the manufacture of metallic aluminum, calcium carbide, phosphorus, and other products.—**English silver-refinery furnace**, a reverberatory furnace with a movable bed known as a cupel or test and formerly made of bone ash, but now of a mixture of clay and limestone. The breast of the cupel is perforated with holes for the removal of the litharge, which flows into a pot below. The lead containing about 8 per cent. of silver is run out through a hole in the bottom of the cupel and again cupelled in the same furnace, but the cupel for this operation is provided with a concavity at the bottom for the reception of the cake of pure silver. See *cupellation.*—**Exeli's furnace**, a shaft-furnace adopted for the extraction of mercury from lump-ore. It is provided with three external fireplaces and is encased in sheet-iron to prevent the loss of mercury. The vapors escape into pipes and from these into condensing-chambers. The pipes were at first of cast-iron but these have been replaced by vertical pipes of glazed stoneware. The charging apparatus consists of a cup-and-cone with water-seal. The Exeli furnaces are largely used in India and Austria.—**German furnace**, a furnace for separating and regaining metal from cinder which has chemically absorbed it. It was first used in Germany.—**Gothic furnace**, the shaft- or blast-furnace for smelting iron from its ores: so called from a pointed arch placed over the embrasures when the base of the furnace up to the boshes was made of rubble masonry. The term is obsolete. **Heating-furnace.** Same as *reheating-furnace*, which see, under *furnace.*—**Herreshoff's furnace**, a rectangular water-jacketed furnace for copper-smelting. Its forehearth is detachable and mounted on wheels, and the slag is removed by means of a lip in front of the forehearth. The furnace is charged from the top which is covered by a hood connected with a lateral pipe for carrying away the waste gases.—**Injector-furnace**, a form of fire-clay furnace for chemical and assay laboratories in which a special blast-lamp is used to burn a mixture of illuminating-gas or petroleum-vapor with air, and the hot flame so produced is driven by bellows into an opening at the bottom of the furnace.—**Mactear furnace**, a mechanical furnace with a circular revolving hearth, for converting black salt into soda-ash by calcination in the Leblanc process for making carbonate of soda from common salt.—**Oxidizing-furnace**, a metallurgical or other furnace in which oxidations are effected, usually by heated air.—**Reflecting-arc furnace**, an electric furnace in which the radiation from an electric arc is reflected upon the substance to be heated.—**Rhenish furnace.** Same as *Belgian-Silesian* ★*furnace.*—**Rotary furnace.** (*a*) A furnace which can be rotated or rocked to pour the metal. (*b*) A furnace which is continually rotated or revolved to secure thorough mixture or chemical reaction under heat as respects the charge.—**Rotary melting-furnace.** See *rotary* ★*melting-furnace* (with cut).—**St. Bede chemical furnace**, a furnace designed for making salt-cake by the action of sulphuric acid on common salt, brought into use at the St. Bede chemical works in England.—**Salt-cake furnace**, the furnace in which (as the first step of the Leblanc process for making carbonate of soda from common salt) salt is heated with sulphuric acid, hydrochloric-acid gas being given off and sodium sulphate left behind as salt-cake. There are various types of furnace so used, but in each there are two parts, the decomposing-pan, in which the first stage of the reaction is carried out, and the roaster or drier, in which the reaction is completed. Also known as a *sulphate furnace.*—**Sefstroem's furnace**, a small but powerful blast-furnace for use in chemical and metallurgical laboratories. The cylindrical body or fireplace is surrounded by an outer cylinder which forms a reservoir for compressed air furnished by a bellows of good size.—**Siemens furnace**, the most important and successful form of furnace in which the regenerative principle is applied. It greatly economizes fuel, produces temperatures much higher than were formerly attainable, admits of exact regulation of temperature, and controls the action of oxygen or its removal in the hearth. It was brought into use in England in 1859 or 1860, and has proved of great value in steel-making, the manufacture of glass and porcelain, and various other industries. Gaseous fuel is used, and this and the air necessary for combustion are separately heated by passage on their way to the hearth through fire-brick chambers filled with loosely stacked fire-brick at a high temperature. The products of combustion are carried from the hearth on their way to the chimney through a second pair

of similar fire-brick chambers, which are thus heated up and become ready to serve the purpose of the first pair as these cool down, the gas- and air-currents being shifted over at proper intervals from the one pair of chambers to the other. A number of other inventors have proposed modifications in detail of the original Siemens furnace. **Stetefeldt furnace,** a shaft-furnace in which silver ores are chloridized and desulphurized by first pulverizing and mixing them with salt and then dropping them through a current of hot air. So called from its inventor. **Sulphate furnace.** Same as *salt-cake* ★*furnace*. **Wedding furnace,** a form of furnace used at the Royal Porcelain Manufactory at Berlin in 1861. It developed a very high temperature by the use of combustible gas along with a forced blast of air, the result being practically that of a blowpipe flame on a large scale. Furnaces of the same general character have been invented by Ekman, Fletcher, and others.

furnace-charger (fêr'nās-chär'jêr), *n.* An apparatus for weighing and feeding into a furnace the proper proportions of ore, fuel, etc.

furnace-gas (fêr'nās-gas), *n.* 1. The products of combustion from a furnace.—2. The gas given off by a blast-furnace. This is rich enough in unconsumed carbon to be useful as a fuel for internal-combustion engines, for the production of steam, and for preheating the blast.

furnace-oven (fêr'nās-uv″n), *n.* A baking-chamber built of brick, with a low arch: used in bakeries.

furnace-plate (fêr'nās-plāt), *n.* Iron or steel plate used to make the furnace or fire-box of a steam-boiler.

furnisher, *n.* 2. In *calico-printing*, the cloth-covered roller or the cylinder-brush which furnishes the color to the engraved roller on the cylinder printing-machine.

furniture, *n.*, 3. (*d*) In a harness, all of the metallic parts with the exception of the bits and rosettes.

furniture-bug (fêr'ni-tūr-bug), *n.* 1. The bed-bug.—2. Any one of several thysanurous insects of the family *Lepismatidæ*, commonly found on old furniture.—3. The silver-fish or slicker. See *silver-fish*, 6.

furoin (fū'rō-in), *n.* [*fur*(*furaldehyde*) + *-o-* + *-in*[2].] A colorless crystalline compound, $C_4H_3O.CO.CH.OH.C_4H_3O$, melting at 135° C. It is prepared by the action of potassium cyanide on furfuraldehyde in dilute aqueous-alcoholic solution, and corresponds to benzoin.

furonic (fū-ron'ik), *a.* [*fur*(*furpropi*)*on*(*ic*).] Noting an acid, a colorless crystalline compound, $C_7H_8O_3$, formed by the oxidation of furfurpropionic acid. It melts at 180° C.

furred, *a.* 3. Fitted with a kind of partition made with furring-strips, as an outer wall of masonry. The lath and plaster work are secured to the furring-strips and so are not exposed to the dampness of the wall.

Furriers' asthma. See ★*asthma*.

furrow, *n.*—**Ambulacral furrow, arm furrow.** Same as *ambulacral groove* (which see, under *ambulacral*).—**Dead furrow.** Same as *water-furrow*. [U. S.]

The plowing of a thoroughly tiled field should leave no *dead furrows* for surface-water to follow.
W. I. Chamberlain, Tile Drainage, p. 68.

Flat furrow, in *agri.*, a furrow so cut and so turned that the furrow-slice rests upon its face: opposed to *lap* ★*furrow*.—**Genital furrow,** an infolding of the integument just below the genital tubercle in the embryo: this becomes later the vulvar opening or the urethra.—**Gluteal furrow,** the crease between the nates.—**Interventricular furrow,** a longitudinal depression on the external surface of the heart, on either side, marking the course of the septum between the two ventricles.—**Jadelot's furrows,** various lines seen on the face in disease.—**Lap furrow,** in *agri.*, a furrow in which the slice is so shaped and so turned that one edge rests on the preceding slice and another supports the succeeding one: opposed to *flat* ★*furrow*.—**Lunoid furrow,** in *glaciol.*, a crescentic depression due to subglacial erosion. *Nature*, April 10, 1902, p. 541.—**Mayrian furrow,** one of the two oblique furrows which form a V-shaped figure on the mesonotum of male ants: not to be confounded with the parapsidal furrows.—**Meridian furrow,** a central furrow occurring in segmentation of the ovum.—**Nuchal furrow.** Same as ★*neck-furrow*.—**Open furrow,** any furrow not filled by a furrow-slice; either a water-furrow proper or a cross-furrow for drainage.—**Seed furrow,** the last plowing before the sowing. *Law*, Pract. Agr., p. 235.—**To strike the furrows,** in *agri.*, to mark off the center of a ridge; to feer. **Ungual furrows,** transverse grooves in the nails, formed at the root during a severe illness or other period of lowered nutrition.—**Vitelline furrow yolk-furrow,** a linear depression on the surface of the ovum marking the beginning of segmentation.—**Winter furrow,** in bare-fallowing, the autumnal plowing. *Loudon*, Encyc. Agr., p. 802.

furrow-pan (fur'ō-pan), *n.* In *plowing*, the bottom of the furrow compacted by the weight and action of the plow and horse; also the subsurface soil of a field so compacted.

furrow-wheel (fur'ō-hwēl), *n.* In a plow, a small wheel running in the furrow. In gang sulky-plows, two are used, placed one behind the other at an angle. Instead of running vertically they are inclined outward to reduce the friction.

fürst (fürst), *n.*; pl. *fürsten*. [G., prince, sovereign, MHG. *vürste*, OHG. *furisto* (D. *vorst*), a prince, lit. the first or chief person (L. *primus* or *princeps*), < *furist* = AS. *fyrst*, E. *first*, *a.*] A German or Austrian title of nobility of lower rank than *herzog*, or duke, and higher than *graf*, or count. The title is usually translated 'prince': as, *Fürst* Bismarck. The feminine is *fürstin*.

furtiv, *a.* A simplified spelling of *furtive*.

furunculoid (fu-rung'ku-loid), *a.* [L. *furunculus*, a boil, + *-oid*.] Resembling a boil in appearance or sensation.

furunculose (fū-rung'kū-lōs), *a.* Same as ★*furunculous*.

furunculous (fū-rung'kū-lus), *a.* Marked by successive eruptions of boils.

fur-worker (fêr'wêrk″êr), *n.* In *leather-manuf.*, a wheel for removing the oil from fur-skins. *Modern Amer. Tanning*, p. 204.

furz, *n.* A simplified spelling of *furze*.

furze[1], *n.*—**Native furze,** in Australia, an evergreen shrub, *Hakea ulicina*, of the family *Proteaceæ*.

furze[2] (fêrz), *v. i.*; pret. and pp. *furzed*, ppr. *furzing*. [For *fuzz*, *v.*] To become entangled, as silk fibers during the reeling from the cocoon.

These [weak cocoons] are separated from the other kinds, because in reeling they must be immersed in colder water in order to avoid any *furzing* or entangling in the operation.
Hannan, Textile Fibres of Commerce, p. 175.

furze-top (fêrz'top), *n.* A name of the red-top, *Agrostis alba*, and of the Rhode Island bent, *A. canina*.

fusain (fū-zan'), *n.* [F., the spindle-tree, also charcoal made from it, <ML. *fusago* (*fusagin-*), < L. *fusus*, a spindle.] A crayon of fine charcoal; also, a charcoal sketch.

fusarial (fū-zā'ri-al), *a.* [*Fusarium* + *-al*[1].] Of or pertaining to the fungus *Fusarium*.

A *fusarial* disease of tomatoes occurs in Florida and also in England.
U. S. Dept. Agr., Div. Veg. Physiol. and Pathol., [Bulletin 17, p. 35.

Fusarium (fū-zā'ri-um), *n.* [NL. (Link, 1809), L. *fusus*, a spindle.] A large genus of hyphomycetous fungi, having more or less effused sporodochia and bearing mostly spindle-shaped or sickle-shaped light or bright colored conidia on branched conidiophores. About 300 species have been described, many of which are probably not distinct. Some are known to be the conidial forms of hypocreaceous ascomycetes and cause serious plant diseases, as *F. vasinfectum*, the conidial stage of *Neocosmospora vasinfecta*, which causes the wilt-disease of cotton and cow-peas. See *wilt-disease*, under ★*disease*, and ★*wilt*.

fuscin, *n.* 2. A black pigment found in the choroid and the epithelial layer of the retina, adjoining the choroid of the eye.

fuscohyaline (fus-kō-hī'a-lin), *a.* [L. *fuscus*, dusky, + Gr. *ὑάλινος*, of glass: see *hyaline*.] Dusky but translucent, as the wings of certain insects. *Annals and Mag. Nat. Hist.*, April, 1903, p. 399.

fuscopiceous (fus-kō-pish'ius), *a.* [L. *fuscus*, dusky, + *piceus*, of pitch: see *piceous*.] Dusky black; dark gray. *Annals and Mag. Nat. Hist.*, June, 1903, p. 610.

fuscopunctate (fus-kō-pungk'tāt), *a.* [L. *fuscus*, dusky, + NL. *punctatus*, punctate.] Having dark punctures, as the elytra of a light-colored beetle. *Annals and Mag. Nat. Hist.*, May, 1901, p. 423.

fuscoviolaceous (fus″kō-vī-ō-lā'shius), *a.* [L. *fuscus*, dusky, + *violaceus*, of violet color: see *violaceous*.] Dusky violet in color. *Annals and Mag. Nat. Hist.*, Aug., 1903, p. 268.

fuse[2], *n.* 2. In *elect.*, a piece of conductor, inserted into an electric circuit, which is of less current-carrying capacity than the rest of the circuit, and therefore under excess of current melts and opens the circuit. Fuses are either exposed (that is, *open* fuses) or protected by an insulating-tube which frequently is filled with some granulated insulating material. These latter are called *inclosed* or *cartridge* fuses.—**Chemical fuse,** a fuse which is fired by chemical action between substances brought into contact: used in torpedoes or submarine mines.—**Detonating-fuse,** a fulminate-fuse used for detonating high explosives.

fuse-block (fūz'blok), *n.* In *elect.*, a block of porcelain or other refractory insulating material provided with terminals between which the fuse-wire of an electric circuit is connected. Fuse-blocks are commonly made in two parts, a base on which the fuse is mounted, and a cover to prevent the escape of the molten metal when the fuse is overheated.

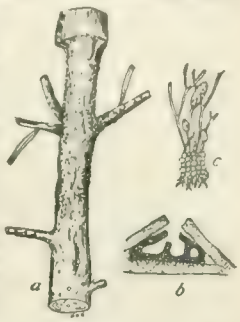
fuse-link (fūz'lingk), *n.* In *elect.*, a link, made of fuse-wire or cast from fusible metal, for insertion in a fuse-block.

fuse-lock (fūz'lok), *n.* A device for lighting the free end of a fuse by means of a friction-match which is set off by pulling a lanyard attached to a trigger.

fuse-wire (fūz'wir), *n.* In *elect.*, wire made of an easily fusible metal and used to protect circuits from excessive currents. When the current passes a certain value, depending on the size of the wire, the latter melts, thus breaking the circuit.

fusibility, *n.* **Scale of fusibility,** a series of six species proposed by Franz von Kobell, and now commonly used in designating the relative fusibility of minerals. The species are: (1) stibnite; (2) natrolite; (3) almandin garnet; (4) actinolite; (5) orthoclase; (6) bronzite.

Fusicoccum (fū-zi-kok'um), *n.* [NL. (Corda, 1829), <L. *fusus*, spindle, + Gr. κόκκος, berry.] A genus of sphæropsidaceous fungi in which the pycnidia form more or less irregular chambers in a black leathery pustular stroma. The spores are simple, hyaline, and usually spindle-shaped. The species occur chiefly on the branches of woody plants and some are regarded as the pycnidial condition of species of the pyrenomycetous genus *Diaporthe*. *F. Abietinum* causes a girdling of the silver fir by killing the bark on the small branches.



Fusicoccum Abietinum.
a, general appearance of an affected twig; *b*, cross section of a stroma; *c*, spore-bearing mycelium (enlarged). (Drawn from Engler and Prantl's "Pflanzenfamilien.")

Fusiform gyrus. See ★*gyrus*.

fusing (fū'zing), *n.* The technical name of a process to which the harder resins, amber and copal, are subjected preparatory to using them in making varnishes. More than mere liquefaction being required, a partial destructive distillation is brought about by the continued action of heat, and volatile products are given off, after which the residue becomes soluble in turpentine and some other solvents. *Sadtler*, Handbook of Indust. Chem., p. 109.

fusion, *n.* 6. In *modern psychol.*: (*a*) A mode of intimate connection of elementary mental processes, such that the connected elements are difficult of analysis, and the resulting complex approximates the simplicity of impression characteristic of the element itself. (*b*) The product of this connection; the blend or fused complex. The term has gained currency from its use in C. Stumpf's "Tonpsychologie" (1883, 1890). It is used with varying shades of meaning by different authors, and has not as yet received final definition.

By far the great majority of odours are not elementary at all, but compound,—mental complexes or *fusions* of the same sort as the note of a musical instrument, which is in reality a combination of a number of simple tones.
E. B. Titchener, Exper. Psychol. I. i. 70.

Aqueo-igneous fusion. Same as *hydrothermal* ★*fusion*.—**Degree of fusion,** the relative simplicity or complexity of a fusion of sensations. See the quotation.

Since the fusion [of tones] presents all grades, from obvious complexity to a simplicity that counterfeits the simplicity of sensation, we may speak of a scale of *fusion degrees*. That fusion is the most perfect, which is most unitary in perception; that fusion is the least perfect, whose components fall apart most readily in perception.
E. B. Titchener, Exper. Psychol., I. i. 171.

Diffuse fusion, in Wundt's psychology, a fusion such as is presented by a noise, or a complex of noise and tone, in which the tonal elements may be referred to a certain region of the tonal scale, but cannot be separately identified as tones of definite pitch: opposed to *distinct* ★*fusion*.—**Distinct fusion,** in Wundt's psychology, a fusion such as is presented by the clang or musical note, in which, while a single tone of definite pitch dominates the complex, the other modifying tones, though less in evidence, can also be identified by specially directed attention as tones of similarly definite pitch: opposed to *diffuse* ★*fusion*.—**Extensive fusion,** in Wundt's psychology, the fundamental form of simultaneous association which gives rise to the idea of space. A *fusion*, for Wundt, is an association characterized by the intimacy of connection of the elements and the novelty of the resultant. The idea of space is termed an *extensive fusion*, in order to mark the nature of the total process which results from the association of the intensive and qualitative elements. *Baldwin*, Dict. of Philos. and Psychol., I. 398.—**Heat of fusion.** See *fusion*. **Hydrothermal fusion,** fusion by heat in the presence of water or of water vapor; fusion by the combined action of heat and water. Also called *aqueo-igneous fusion*. **Intensive fusion,** in Wundt's psychology, a fusion of like sensational elements: opposed to *extensive* ★*fusion*.—**Powder of fusion.** See ★*powder*.—**Primary fusion,** in *embryol.*, union or fusion of undifferentiated structures, as in the formation of double monsters by the primary fusion of the axes of two embryos developing in the same egg.—**Secondary fusion,** union or fusion of embryonic structures at a relatively late stage, after they have been clearly differentiated.—**Tonal fusion,** in *psychol.*: (*a*) The mode of connection of simultaneous sensations of tone. (*b*) The perception set up by the concurrence of a number of simple tonal stimuli. See ★*fusion*, 6.

fusion-disk (fū'zhon-disk), *n.* Same as ★*disk-saw.*

fusion-point (fū'zhon-point), *n.* The temperature at which a solid substance melts.

Fusoma (fu-zō'mä), *n.* [NL. (Corda, 1837), < L. *fusus*, spindle, + *-oma.*] A genus of hyphomycetous fungi, having the hyphæ but slightly spreading and bearing spindle-shaped septate conidia. *F. paraseticum* is a parasite on pine seedlings.

fuss-budget (fus'buj"et), *n.* A nervous, fidgety person. [Dialect. U. S.] *Dialect Notes*, II. vi.

fusser (fus'ėr), *n.* 1. One who fusses or makes a fuss over or about something.—2. One who 'fusses' over girls; a particularly active beau. [College slang.]

fustee (fus-tē'), *n.* [Appar. a variation of *mustee*, *mestee.*] The offspring of a mestee and a white. [West Indian.]

Fustic substitute, a trade-name for a dyestuff consisting of quercitron extract to which stannate of soda or sulphate of zinc has been added. *Sadtler*, Handbook of Indust. Chem., p. 459.—**Old fustic**, a dyewood from *Morus tinctoria*, and also from *Maclura tinctoria* and *Broussonetia tinctoria*. See *fustic.*

fustin, *n.*—**Patent fustin**, a mordant acid coal-tar color of the monoazo type, prepared by combining diazotized aniline with fustic extract. It dyes wool yellow in an acid bath. An after-chroming renders the color faster. Also called *wool yellow.*

Fusulinidæ (fū"sū-lin'i-dē), *n. pl.* [NL., < *Fusulina* + *-idæ.*] A family of extinct *Foraminifera*, having fusiform or spherical calcareous tests composed of spirally enrolled whorls which are divided into chambers by vertical septa and into chamberlets by transverse partitions.

futil, *a.* A simplified spelling of *futile.*

futtah (fut'ä), *n.* [Maori *whata* = Samoan *fata* = Tongan *fata*, a raised platform or storehouse, = Hawaiian *haka*, a ladder, a hen-roost.] A storehouse for grain, etc., set on four posts so beveled as to afford no hold for rats that attempt to climb them. [New Zealand.]

futu (fö'tö), *n.* [Samoan and Tongan *futu*, Fiji *vutu.*] A name given in Samoa and Tonga to *Barringtonia speciosa*, a handsome littoral tree having 4-cornered pyramidal fruit the outer portion of which is used by the natives as a fish-intoxicant. In Fiji the fruits are also used by the natives as floats for fishing-nets and in playing a certain game. The tree is of wide distribution and is characteristic of the vegetation of the inner beach on many tropical shores. See ★*botong* (with cut), and ★*Barringtonia formation.* Also called *hutu.*

Future debt. See ★*debt.*

fuye (fö'yä), *n.* [Jap.] The Japanese flute.

Fuye.

fuz, *n.* and *v.* A simplified spelling of *fuzz.*

fuze, fuzion. Simplified spellings of *fuse, fusion.*

fuzzing (fuz'ing), *n.* In shuffling cards, the act of taking one from the top and one from the bottom simultaneously, with the finger and thumb of the right hand. Also called *milking* and *snowing.*

fuzzitype (fuz'i-tīp), *n.* [*fuzzy* + *-type.*] An intentionally blurred photograph. [Colloq.]

'*Fuzzitypes*' have no precise functions in illustrating geological phenomena.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 341.

fuzzy-guzzy (fuz'i-guz"i), *n.* The common everlasting, *Gnaphalium obtusifolium*, so called from its fuzzy appearance. Also called *feather-weed.*

fyce, *n.* Same as *fice.*

fylactery, *n.* A simplified spelling of *phylactery.*

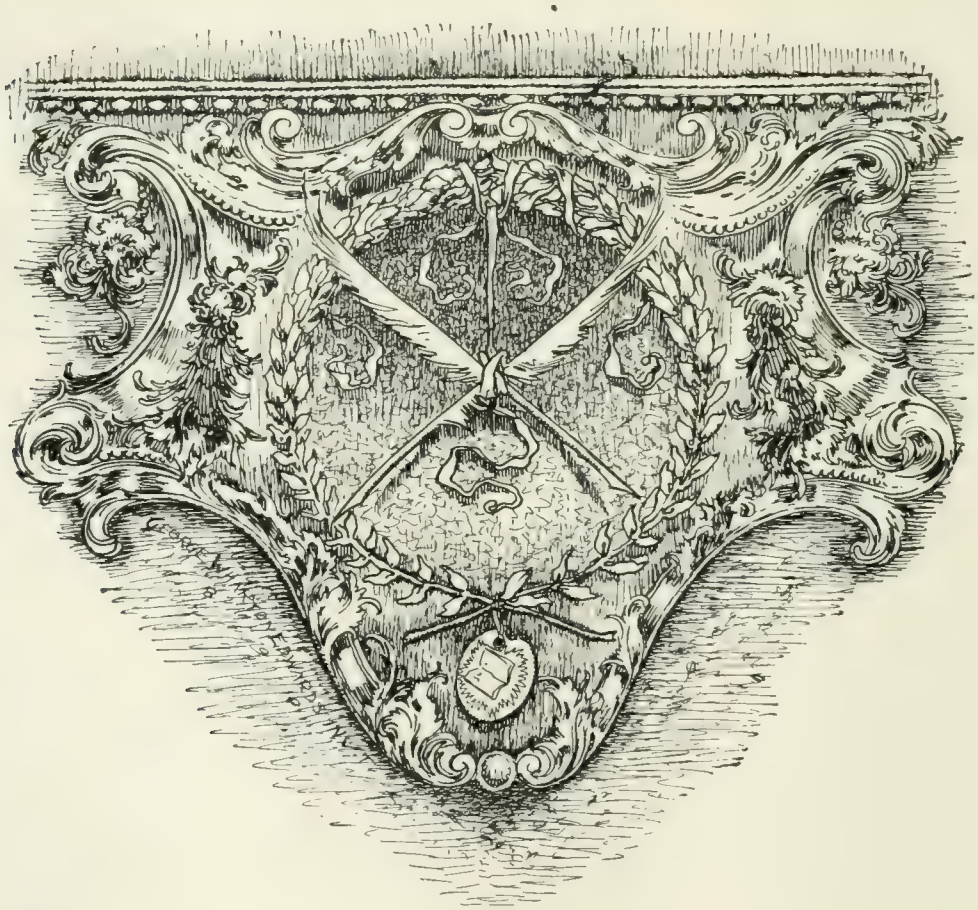
fyrk (fürk), *n.* [Sw. Dan.] A copper coin formerly current in Sweden and Denmark; 192 were equal to one rix-dollar.

fysic, fysical, fysician, etc. Simplified spellings of *physic*, etc.

fysiognomist, fysiognomy. Simplified spellings of *physiognomist, physiognomy.*

fysiologic, fysiologist, etc. Simplified spellings of *physiologic*, etc.

F. Z. S. An abbreviation of *Fellow of the Zoölogical Society.*



4. In *music:* (*d*) The *G* next above middle C has (at French pitch) about 388 vibrations per second. (*h*) The proper tone of the fourth or lowest string of the violin, which is therefore called the G-string. The violin or treble clef designates the degree of the staff assigned to the G next above middle C.—**6.** In *chem.*: (*b*) G α, β, γ, δ, ε, ζ, and η, symbols provisionally assigned by Crookes to chemical elements the presence of which in the oxids of the yttria group from gadolinite seemed to be indicated by special features in the phosphorescent spectrum.

7. In *elect.*, a symbol for *conductance*, the reciprocal of resistance. See *conductance.*—**8.** An abbreviation (*a*) [*l. c.*] of *genitive;* (*b*) of *German* and *Germany:* (*c*) [*l. c.*] of *gram;* (*d*) of *gulf;* (*e*) in a log-book, of *gloomy weather.*

Ga. 3. An abbreviation of *Gaelic.*

G. A. An abbreviation (*a*) of *General Assembly;* (*b*) [*l. c.*] of *general average.*

gab[6] (gäb), *n.* [Hind.] Same as *gaub.*

gabare (gä-bär′), *n.* [F., < Pr. *gabarra*, = Sp. It. *gabarra;* origin unknown.] *Naut.*, a store-vessel or lighter.

gabatta[1] (ga-bat′ä), *n.* See ★*mancala.*

gabbock (gab′ok), *n.* [Also *gabbok, gabbuck, gabback,* < Ir. *gobóg*, a dogfish, perhaps < *gob*, mouth.] A dogfish peculiar to St. George's Channel, between Wales and Ireland.

gabbro, *n.* It is proposed, in the field classification of igneous rocks in connection with the quantitative system of classification (1902), to use the term *gabbro* for all granular igneous rocks with dominant pyroxene and subordinate feldspar of any kind, with or without hornblende and mica. Such rocks would include the less feldspathic gabbros and norites, and some diorites. See ★*rock*[1].

gabbro-diorite (gab′rō-dī″ō-rīt), *n.* 1. A rock intermediate between gabbro and diorite, having both pyroxene and hornblende in nearly equal amounts.—2. A rock partly altered, or completely metamorphosed, in which the hornblende is secondary. Same as ★*metadiorite.*

gabbroid (gab′roid), *a.* [*gabbro* + *-oid.*] In *petrog.*, resembling or somewhat like gabbro; also suggested by Chamberlin and Salisbury (1904) as a general term applicable to any crystalline rock in which the ferromagnesian minerals predominate: thus, many diorites, gabbros, and dolerites, and all peridotites would be *gabbroids.*

gabgab (gäb′gäb), *n.* [Chamorro *gabgab*, Tagalog *dapdap.*] 1. On the island of Guam, the coral-tree, *Erythrina Indica*, the appearance of the bright scarlet blossoms of which announces the beginning of the rainy season. Its wood is soft and is used for making troughs. —2. The South Sea arrow-root. See ★*gaogao.*

gabi (gä′bē), *n.* [Philippine Sp., also *gaby, gabe* (spelled also *gave*), < Tagalog and Bisaya *gabi.*] A name given in the Philippines to the taro plant, *Caladium Colocasia*, the starchy rootstock of which is a food staple of the natives. Also called *dagmai.* See *taro*[1] and *Colocasia.*

gabilan (gä-bē-län′), *n.* [Sp., a hawk: see *gavilan.*] A name, in Mexico, of one of the large rays, *Rhinoptera steindachneri.*

gabing-ouak (gä-bing-ō-wäk′), *n.* [Tagalog *gabing-ouak*, crow's-taro, < *gabi*, taro, + *ouak*, crow.] A very acrid stemless aroid, *Typhonium divaricatum*, which grows in damp places. [Phillipine Is.]

Gabion trip, wrought-iron gabion hoops so intertwined as to form an entanglement.

gabionate (gā′bi-ọn-āt), *v. t.*; pret. and pp. *gabionated*, ppr. *gabionating.* [*gabion* + *-ate*[2].] To furnish or protect with gabions. *Urquhart*, tr. of Rabelais.

gable[1], *n.* 4. In *mech.*, the outer end or tip of the crank in a cranked axle or shaft. The finishing of this is termed *cutting the gable.*

gable[1] (gā′bl), *v. t.*; pret. and pp. *gabled*, ppr. *gabling.* To give to a roof a gable or gabled end.

gable-belfry (gā′bl-bel″fri), *n.* A small bell-tower or belfry, having a gabled roof; a bell-gable.

gable-wall (gā′bl-wâl), *n.* The wall which forms the gable-end of a house. In a simple square or rectangular house with doubled-pitched roof there are two side-walls and two gable-walls. Generally, but not always, a gable-wall rises into a pointed, triangular top.

gab-motion (gab′mō″shon), *n.* A reversing valve-gear for slow-running steam-engines, in which a gab-hook is used to attach the eccentric-rod to the valve-stem or wrist-plate. There will be two eccentrics, one set relatively to the engine-crank for forward motion, and the other nearly 180 degrees from it for backward motion. Each will have its own rod, and will carry its gab-hook near the end. The engine, when started by hand, will continue to turn in the direction determined by the engagement of one or the other hook with the pin which drives the valve-rod.

Gaboon rubber. See ★*rubber.*

gaboric (ga-bor′ik), *a.* Same as ★*jaboric.*—**Gaboric acid.** Same as ★*jaboric acid.*

gaboridine (ga-bor′i-dēn), *n.* Same as ★*jaboridine.*

gaborine (gab′ō-rin), *n.* Same as *jaborine.*

Gackenia (ga-kē′ni-ä), *n.* [NL. (Heister, 1763), named in honor of A. C. *Gackenholz* (died 1717), professor at Helmstadt.] A genus of dicotyledonous plants of the family *Brassicaceæ.* To this genus belong the stock-gillyflowers, the most important species being *G. incana* (*Cheiranthus incanus* of Linnæus) *G. annua* (*Cheiranthus annuus* of Linnæus), and *G. tristis* (*Cheiranthus tristis* of Linnæus). See *Matthiola.*

gad[1], *n.* 8. A measuring-rod for land; a measure of length varying, in different districts, from nine or ten to as many as twenty feet.—**9.** A division of an uninclosed pasture, said to have been usually 6½ feet wide in Lincolnshire.

gad[4] (gad), *n.* [Ir. *gad.*] A cord or rope made from the fibers of the osier. [Irish.]

gadabout, *n.* 2. A light square box-wagon, a substitute for the democrat.

gadenium (ga-dē′ni-um), *n.* [NL.] A name given to one of several alleged new chemical elements said to have been detected in rocks of glacial origin in Scotland. There is no good reason for believing in the existence of such a substance, and it is doubtful whether the original announcement was intended to be taken seriously.

gadfly, *n.* **American gadfly,** *Tabanus americanus.*—**Black gadfly,** *Tabanus atratus.*—**Black-striped gadfly,** *Tabanus nigrovittatus.*—**Mexican gadfly,** *Tabanus mexicanus.*

gadge (gaj), *n.* [A blunder due prob. to an imperfect memory of *ganch*, or a pseudo-archaism, *gagge*, old spelling of *gag*, erroneously supposed to have been pronounced *gadge* (gaj).] A spurious word, in the passage quoted, intended to denote some instrument of torture.

> Ah, they come! Fly you, save yourselves, you two!
> The dead back-weight of the beheading axe!
> The glowing trip-hook, thumbscrews and the *gadge!*
> *Browning*, A Soul's Tragedy, i.

gad-hook (gad′hůk), *n.* A long pole terminating in an iron hook, used by millers to clear their streams of floating logs and branches. Also *gad-crook. F. T. Elworthy*, Dialect of West Somerset. [Eng. Dial.]

gadimine (gad′i-min), *n.* [Origin not ascertained.] A non-poisonous ptomaïne, $C_7H_{18}O_7N$, formed during the putrefaction of herrings and of corpses.

gadolinia (gad-ō-lin′i-ä), *n.* [NL.: see *gadolinium.*] In *chem.*, oxid of gadolinium, one of the rare earths, found as a constituent of the mineral samarskite from North Carolina; also found in orthite.

gadolinic (gad-ō-lin′ik), *a.* In *chem.*: (*a*) Containing gadolinium as a chemical constituent: as, gadolinic nitrate or sulphate. (*b*) Relating to or derived from gadolinite.

gadolinium, *n.* It belongs to the same family as yttrium. Its oxid is white, and its salts are colorless: atomic weight about 156. It perhaps represents a mixture of more than a single element.

gadolinum (gad-ō-lī′num), *n.* In *chem.*, same as *gadolinium.*

gadroon, *n.* Same as *godroon.*

gaduin (gad′ū-in), *n.* [L. *gadus*, cod, + *-u-* + *-in*[2].] An organic substance obtained by De Jongh from brown cod-liver oil. It is possibly identical with the morrhuic acid, $C_9H_{13}NO_3$, described by Gautier and Mourgues.

gad-wand (gad′wond), *n.* A goad for oxen.

gæïdinic (jē″i-din′ik), *a.* [See ★*gaidic.*] Same as ★*gaidic.*

Gaelicist (gā′li-sist), *n.* [*Gaelic* + *-ist.*] A student of Gaelic; one who advocates the study and use of Gaelic.

> So far as the patriotic, the national, situation is concerned, we think that Dr. Hyde and the *Gaelicists* may be reassured. *Evening Mail*, Nov. 28, 1905.

gæsum (jē′sum), *n.* [LL. or ML. *gesum, gesus*, Gr. γαῖσον, γαῖσος, a spear; cf. AS. *gār*, a spear: see *gar*[1], *gore*[2].] A long, heavy javelin peculiar to the ancient Gauls.

gaf, *n.* and *v.* A simplified spelling of *gaff*[1].

gaff[1], *n.* **Fore-trysail gaff** (*naut.*), the gaff to which the head of the fore-trysail is bent.—**Standing gaff,** gaffs which are kept hoisted, or throated and peaked, and on which fore-and-aft sails are set by means of an outhaul, and furled by means of brails. These sails have no booms.

gaff[3] (gâf), *n.* [Of slang origin?] Short for *gaffer.*

gaff[4] (gâf), *n.* [Origin obscure.] Used in the following phrase.—**To blow the gaff.** See ★*blow*[1].

gaff-band (gaf′band), *n.* A split spring-band, designed to fit over a gaff, and held together by a screw-bolt which draws the ends together, binding it to the gaff.

gaffer[2], *n.* 3. A workman in a glass-factory; a finisher.

gaff-net (gaf′net), *n.* *Naut.*, an angler's net for landing fish: used in place of a gaff-hook.

gaff-sail (gaf′sal), *n.* *Naut.*, a fore-and-aft sail which sets upon a gaff: in distinction from a staysail or a squaresail, which set respectively upon a stay and a yard. See cut under *gaff*[1].

gaff-string (gaf′string, *n.* *Naut.*, an English term for a rope for making fast a portable post or staff to the side of a lighter.

Gaff-topsail clue-line. See ★*clue-line,* ★*halyards.*

gag[2] (gag), *n.* [A particular use of *gag*[1], *n.*] A common name of *Mycteroperca microlepis*, a large serranoid fish, attaining a length of two

Gag (*Mycteroperca microlepis*).
(From Bull. 47, U. S. Nat. Museum.)

or three feet: found on the southern Atlantic and Gulf coasts of the United States.

gag-chain (gag′chān), *n.* A short chain used in place of a gag-strap.

gage[1], *n.*—**In gage,** pledged; pawned.

gage[2], *v. t.* 4. To adjust the proper quantity of water to be used in mixing hydraulic cement.

gage[2], *n.* 5. A pipeful of tobacco. *N. E. D.*—**Auger-bit gage.** See *auger-bit.* **Birmingham gage,** a gage for wire and sheet metals, which was adopted in Birmingham, England. See *gage*, ★*wire,* and ★*B. W. G.*—**Boiler-plate gage,** a caliber-square adapted to measuring the thickness of sheet metals.—**Carpenter's gage,** a gage for scribing, used by carpenters to mark an incised line parallel to the edge of a board, or the like.—**Circumference gage,** a slide-rule and caliber gage graduated to give readings of the relative circumference and diameter of a rope or other cylindrical body, an internal and external gage.—**Closed-vacuum gage,** a mercurial barometer-gage for pressures below 1,000 millimeters. The upper limb of the U-tube is sealed and a trap inserted.—**Combination gage,** a gage which indicates two measurements, as pressure and vacuum, pressure and head of water, or pressure and temperature of steam.—**Compound gage.** Same as *combination gage*, ★*gage.*—**Cylindrical**

gage, a standard steel gage for measuring internal and external diameters. **Glass-cutter's gage**, an instrument for measuring and marking glass. It is essentially a scratch-gage having a diamond-point at the end. **Hook-gage**, a gage for measuring the height of water in a stream or reservoir in which the zero of the gage, or the point intended to coincide with the surface of the water, is the point of a sharp metal rod or heavy wire depending from the gage and bent in the form of a hook pointing upward and touching the water surface from beneath the surface. **McLeod gage**, an apparatus for measuring very small pressures by taking a known volume of the gas whose pressure is to be measured and compressing it into a very small tube; its volume and pressure after compression having been observed its original pressure can then be calculated by Mariotte's or Boyle's Law. **Railway-gage**, the distance between perpendiculars on the insides of the heads of the two rails of a track. *Standard gage* is 4 feet 8½ inches; anything less than this is *narrow gage*, anything broader is *broad gage*. The dimension was fixed for the United States by the wheels of the British locomotive imported from the Stephenson Works in 1829. The gage, in England, is probably due to the fact that the distance from center to center of wagon-wheels is five feet: the first rails were troughs or channels to receive these five-foot wheels. When the change was made to flanged wheels in place of flanged rails, the axle or center dimensions of the wheels were not changed, but the gage was made to conform to the dimension of the modified wheel-tread. Some railways in the United States have 4 feet 9 inches as their standard. The broad gage in England was seven feet; in the United States it was six feet. The narrow gage in Europe is one meter: in the United States three feet. See *gage*2, 2, (*a*).— **Thickness-gage**, a gage for testing the thickness of thin sheet-metals. It consists of a series of steel leaves bound together in a case that can be carried in the vest-pocket. The leaves range in thickness from four thousandths to twenty-five thousandths of an inch. Sometimes called a *feeler*.— **Weighing gage**, in *meteor.*, a recording gage that shows the weight of the rainfall or snowfall and the time, or the rate of fall by weight. **Wire-gage.** (*b*) A system of numbers corresponding to certain sizes for wire. A great many such systems are in use. Some of the more common are the Birmingham wire-gage (in America often called the *Stubs wire-gage*), the American or Brown and Sharpe wire-gage, and the new British Standard of 1884. The diameters corresponding to a few numbers of these gages are here given:

Number	Birmingham: inch.	Brown and Sharpe: inch.	New British: inch.
0	0.34	0.325	0.324
10	0.134	0.102	0.128
20	0.035	0.032	0.036
30	0.012	0.010	0.012
40		0.0031	0.0048

gage-brick (gāj'brik), *n.* See *gaged brick*, under *brick*2.

Gaged work. See ★*work*.

gage d'amour (gäzh dä-mör'), *n.* [F.] A pledge or token of love.

gage-field (gāj'fēld), *n.* The field covered by a photograph of a restricted area of the heavens, made with a given instrument, under constant conditions, for the purpose of gaging the abundance or density of the stars in that region.

> As a specimen of a photographic *gauge-field* on a small scale, we may take Prof. Pickering's catalogue, from the Harvard plates, of 947 stars within 1° of the north celestial pole. The region examined lies about 27° from the zone of the Milky Way, but is nearly reached by a faint extension from it.
> *A. M. Clerke*, in Smithsonian Rep., 1891, p. 107.

gage-plate (gāj'plāt), *n.* An adjustable stop fitted on shearing, punching, and cutting-off machines, as a guide for cutting or punching pieces to a uniform dimension.

gage-rod (gāj'rod), *n.* An iron or steel rod, from ¼ to ½ inch in diameter, the ends of which are tapered nearly to a point, used in measuring the internal diameter or bore of a piece which must be carefully fitted. Such a rod is also used to test the shape of flues of internally fired boilers when subjected to hydraulic pressure to ascertain if there is any tendency to flatten out or assume an oval form.

gage-tube (gāj'tūb), *n.* A tube used to connect a pressure- or other gage to the cylinder or vessel the pressure in which is to be observed.

gage-weir (gāj'wēr), *n.* A dam of which the whole, or a portion, consists of movable shutters or wickets, by opening or closing which at different stages of water the height of water above the dam can be regulated.

gaging, *n.* 4. Calcined gypsum added to plaster to regulate its rate of setting or hardening.

gaging-line (gā'jing-līn), *n.* A graduated line drawn on a gaging-rod or slide-rule which is used for measuring the contents of casks.

gag-strap (gag'strap), *n.* A short strap which passes under a horse's jaw. The ends are secured to rings or eyes in the top arms of the bit.

gaidic (gī'dik), *a.* [(*hypo*)*ge*(*ic*) + *-id* + *-ic.*] Derived from hypogeic acid.— **Gaidic acid**, a colorless crystalline compound, $C_{16}H_{30}O_2$, melting at 39° C. It belongs to the oleic series and is formed by the action of nitrous acid on hypogeic acid, with which it is isomeric. Also called *gaidinic acid*.

Gaidropsarinæ (gī-drop-sa-rī'nē), *n. pl.* [NL., < *Gaidropsarus* + *-inæ*.] A subfamily of gadoids or catfishes, including the bearded rocklings, typified by the genus *Gaidropsarus*.

Gaidropsarus (gī-drop'sa-rus), *n.* [NL. (Rafinesque).] A genus of fishes, including the three-bearded rocklings, of the family *Gadidæ*, found in the North Atlantic. The commonest European species is *G. mediterraneus*. The genus is commonly known as *Onos* or *Motella*, but the name *Gaidropsarus* is much older.

Gaillardia, *n.* 2. [*l. c.*] A plant of the genus *Gaillardia*. Of the cultivated species, *G. aristata* is a perennial and *G. pulchella* and *G. amblyodon* are annuals. *G. lanceolata* of pine-barrens in the southern United States has the book-name of *sweet gaillardia*, from the scent of its flowers. *Rayless gaillardia* is *G. suavis*, found from Kansas to Texas. Various species are called *blanket-flower* in the West.

gain1, *n.* **Law of greatest gain**, a phrase used to express the alleged universal tendency of human nature to try to secure a maximum amount of wealth, or satisfaction of wants, through a minimum expenditure of effort, or endurance of pain.

> The fundamental *law of* human nature, and therefore of political economy, is that all men will, under all circumstances, seek their *greatest gain*.
> *L. F. Ward*, Dynamic Sociol., I. 20.

Gainfahren marl. See ★*marl*1.

gaining-head (gā'ning-hed), *n.* The holder for revolving cutters on the end or head of a rapidly revolving shaft, by which rectangular channels or grooves are cut across the grain of timber. Such grooves or gains are cut by chisel-edged cutters which alternate with small segments of the edge of a circular saw, and which are all held in grooves or dovetailed channels in the tool-holder called the head. The saw-segments cut the fibers at the sides of the gain and the chisel-cutters remove the wood between to the desired depth.

gaining-saw (gā'ning-sâ), *n.* A saw for cutting square grooves or gains across the surface of timber: most frequently used in connection with or as part of a ★gaining-head (which see).

gainshire (gān'shėr), *n.* [Origin obscure; perhaps a dial. var. of **gancher*, < *ganch*, *v.*] The barb of a fishing-hook. *Halliwell.*

gain-wheel (gān'hwēl) *n.* A pinion-gear on a spinning-mule which causes a supplementary drawing of the roving, from the fact that the spindle-carriage gains, in its speed of outward traverse, upon the delivery-rollers.

gait1, *n.* **Ataxic gait.** See ★*ataxic*.— **Cerebellar gait.** See ★*cerebellar*.— **Paralytic gait**, a shuffling mode of progression in which the anterior portion of the foot drags along the ground at each step.— **Spastic gait**, progression by means of short steps, the ball of the foot first striking the ground and further progress being thereby momentarily arrested: observed in lateral spinal sclerosis.— **Steppage gait.** Same as *stepping* ★*gait*.— **Stepping gait**, a disorder of progression, often noted in multiple neuritis, in which the foot is raised far from the ground at each step. Also called *steppage gait*.

gait2 (gāt), *v. t.* [*gait*2, *n.*] To set up (gaits of grain) to dry. See *gait*2, 2.

gaiting-pole (gāt'ing-pōl), *n.* A short pole attached to a sulky in such a position as to keep the horse straight in the shafts. It has a wooden roller which plays against the body of the horse.

gaize (gāz), *n.* [F.] A fine-grained fragmental rock, of granular and porous texture and of silicious composition, distinguished by the fact that a considerable percentage of he silica is soluble in alkalis: found in the Cretaceous and Tertiary formations of France. *Geikie*, Text-book of Geol. (4th ed.), p. 166.

gala1, *n.* 2. Festal attire; one's best clothes: as, to be in *gala*. [Scotch.]

galach, *n.* See ★*galah*.

galactacrasia (ga-lak-ta-krā'zi-ä), *n.* [NL., < Gr. γάλα (γαλακτ-), milk, + κρᾶσις, mingling.] An abnormal condition of the milk of a nursing woman.

galactan (ga-lak'tan), *n.* [*galact*(*ose*) + *-an.*] A gummy substance, $C_6H_{10}O_5$ (γ-galactan), allied to manna, which is extracted from the seeds of legumes and is formed to a small extent during certain fermentations. It is oxidized to mucic acid by means of nitric acid and yields galactose on hydrolysis.

galactase (ga-lak'tās), *n.* [Gr. γάλα (γαλακτ-), milk, + *-ase.*] A proteolytic ferment, occurring in milk, and capable of digesting casein. It produces decomposition-products similar to those which normally occur in ripened cheese. It has been suggested that it may be responsible for many of the phenomena associated with cheese ripening which were formerly attributed to the action of bacteria.

Galactic acid, a yellow, syrupy, tetrabasic acid, $C_{14}H_{10}O_9$(?), formed by the gentle oxidation of lactose (milk-sugar). **Galactic plane**, the plane of the galactic circle (which see, under *galactic*).

> A most important and lucid paper by Professor Simon Newcomb has been published on the position of the *galactic* and other principal *planes* toward which the stars tend to crowd. He states the problem thus: "It is well known that the sky appears to us poorest in stars in the regions around the poles of the galaxy, and that it continually grows richer at a rate which is slow at first but more rapid afterwards, from the poles toward the galactic circle." Within the galactic girdle, the thickness of the stars in space is approximately constant, but in the Milky Way itself it is obvious that it consists of agglomerations of stars which have often fairly well defined boundaries; the stars here are much thicker than outside the girdle.
> *Knowledge*, Sept., 1904, p. 220.

galactin (ga-lak'tin), *n.* [Gr. γάλα (γαλακτ-), milk, + *-in*2.] An amorphous substance, $C_6H_{10}O_5$ (*a*-galactin), which is obtained from the seeds of certain legumes. It is strongly dextrorotatory and yields galactose and a non-crystallizing sugar upon hydrolysis with dilute acids. It is possibly identical with gelose.

galactite, *n.* 2. A glucoside, $C_9H_{18}O_7$, found in the yellow lupine. It is crystalline, optically inactive, and melts at 140–142° C. It yields galactose on hydrolysis.

galactoma (gal-ak-tō'mä), *n.*; pl. *galactomata* (-ma-tä). [NL., < Gr. γάλα (γαλακτ-), milk, + *-oma.*] Same as *galactocele*.

galactometastasis (ga-lak″tō-me-tas'ta-sis), *n.* [NL., < Gr. γάλα (γαλακτ-), milk, + μετάστασις, change: see *metastasis*.] Secretion of milk from some part other than the normal breasts.

galactonic (gal-ak-ton'ik), *a.* [Gr. γάλα (γαλακτ-), milk, + *-one* + *-ic.*] Derived from lactose.— **Galactonic acid**, a colorless acid, $C_6H_{12}O_7$, crystallizing in needles. It is prepared from lactose (milk-sugar) on oxidation by means of bromine, and is a racemic mixture. Also called *lactonic acid*.

galactopathy (gal-ak-top'a-thi), *n.* [Gr. γάλα (γαλακτ-), milk, + -πάθεια, < πάθος, disease.] Same as *milk-cure*.

galactophore (ga-lak'tō-fōr), *n.* [Gr. γάλα(κτ-), milk, + -φορος, < φέρειν, bear.] A galactophorous duct.

> Both the *galactophores*, or glands, and the supportive areolar tissue develop rapidly.
> *G. S. Hall*, Adolescence, I. 420.

galactoplania (ga-lak-tō-plā'ni-ä), *n.* [NL., < Gr. γάλα (γαλακτ-), milk, + πλάνη, wandering.] Same as ★*galactometastasis*.

galactopoiesis, galactopoësis (ga-lak″tō-poi-ē'sis, -pō-ē'sis), *n.* [NL., < Gr. γάλα (γαλακτ-), milk, + ποίησις, making.] The secretion of milk.

galactopyra (ga-lak-tō-pī'rä), *n.* [NL., < Gr. γάλα (γαλακτ-), milk, + πυρ(ετός), fever, < πῦρ, fire.] Same as *milk-fever*.

galactoscope (ga-lak'tō-skōp), *n.* [Gr. γάλα (γαλακτ-), milk, + σκοπεῖν, view.] A device for judging of the purity of milk.

galactoside (ga-lak'tō-sid), *n.* [*galactose* + *-ide*1.] A compound formed by the elimination of the elements of water from an alcohol and galactose. Methylgalactoside,

$$CH_3O.\overbrace{CH.CH.OH.CHOH.CH}^{O}.CHOH.CH_2OH,$$

from methyl alcohol and galactose, exists in two forms called α and β. The former is resolved into its constituents by the action of maltose or emulsin; the latter is unchanged.

galactosis (gal-ak-tō'sis), *n.* [NL., < Gr. γαλάκτωσις, < *γαλακτοῖν, make into milk, < γάλα (γαλακτ-), milk.] Elaboration of milk by the lacteal glands.

galactotherapy (ga-lak-tō-ther'a-pi), *n.* [Gr. γάλα (γαλακτ-), milk, + θεραπεία, medical treatment.] 1. Treatment of the nursing infant by means of remedies given to the mother or wet-nurse and excreted in part in the milk. 2. Same as *milk-cure*.

galactotoxicon (ga-lak-tō-tok'si-kon), *n.* [NL., < Gr. γάλα (γαλακτ-), milk, + τοξικόν, poison.] A poisonous substance which has been found in spoiled milk.

galactotoxin (ga-lak-tō-tok'sin), *n.* [Gr. γάλα (γαλακτ-), milk, + τοξ(ικόν), poison, + *-in*2 (see *toxin*).] A poisonous substance which has been found in spoiled milk.

galafate (gä-lä-fä'te), *n.* Same as ★*calafate*.

galag (gä'läg), *n.* [Also *galak*; Chamorro name.] In Guam, the bird's-nest fern, *Neottopteris Nidus*. See ★*ekaha*.— **Galag-guaka** (cattle-fern), a name in Guam of a simple-fronded fern, *Microsorium irioides*, which grows on the ground in the forest. Also *galak-guaka*.

galagala (gä-lä-gä'lä), *n.* [Tagalog *galagala*, pitch.] A name in the Philippine Islands of *Dammara Philippinensis*, a coniferous tree

yielding dammar-resin. Also called *dammar*. See *Dammara* and *Philippine* ★*dammar*.

galah[1], **galach** (gä'laĉh), *n.* [Heb. *galah*.] One whose hair is shaven, namely, a Roman Catholic priest. The term is now applied by Jews to all Gentile clergymen.

galah[2] (ga-lä'), *n.* [Aboriginal Australian name.] The Australian rose-breasted cockatoo, *Cacatua roseicapilla*.

A shrieking flight of *galahs*, on their final flight, before they settled to rest.
F. Adams, John Webb's End, p. 191, quoted in E. E. [Morris, Austral English.

galalith (gal'a-lith), *n.* [Gr. γάλα, milk, + λίθος, stone.] A trade-name for a plastic material, a substitute for horn or celluloid, made by heating the casein of skim-milk, to which various coloring-materials are added, with acetate of lead or other metallic salts, and hardening by a solution of formaldehyde. Out of this material combs, handles for knives and forks, chessmen, buttons, and many other articles have been made. *Sci. Amer.*, July 25, 1903, p. 59.

galamai-amo (gä-lä mī-ä'mō), *n.* [Tagalog *galamai-amo*, < **galamai*, fingers or toes, + *amo*, monkey.] A climbing epiphytal plant, *Schellera venulosa*, which belongs to the *Araceæ*. It has 5-foliate digitate leaves with an amplexicaul sheath at the base, the leaflets pointed at both the base and the apex, and the flowers are arranged in terminal umbelled panicles. The wood, when inclosed in a box, exhales a fragrant odor. The leaves in the form of an infusion are used as a remedy for skin-diseases and for bathing women after childbirth. Also called *lima-lima*.

galangal, *n.* **Edible galangal**, the rush-nut or grassnut, *Cyperus esculentus*. **Lank galangal**, *C. strigosus*, a common polymorphous American species ranging from Maine to Texas.

Lank Galangal (*Cyperus strigosus*).

a, entire plant; *b*, a spikelet; *c*, an achenium, showing style and stigmas. (From Britton and Brown's "Illus. Flora of the Northern States and Canada.")

galang-galang (ga-läng″ga-läng'), *n.* An aboriginal Australian name for any cicada.

galangin (ga-lang'gin), *n.* [*galanga* + -*in*[2].] A light-yellow crystalline compound, $C_{15}H_{10}O_5H_2O$, melting at 214–215° C. It occurs, together with camphorid and alpinin, in galangal-root. It is possibly *a*,1,3-trihydroxyflavone.

galant (gä-loṅ'), *a.* [F.: see *gallant*.] In *music*, applied to a method of instrumental composition in which the number of parts or voices in the harmony varies freely according to the tonal effect desired, without any consistent effort to treat every tone as belonging to an independent and continuous voice-part, as in the older contrapuntal style.

galanterie (gä-loṅ-te-rē'), *n.* [F.: see *gallantry*.] In *music*: (*a*) An embellishment or grace. (*b*) A style of composition or of performance in which embellishments abound. (*c*) In contrapuntal writing, a style which disregards strict rules. The term was most used in the eighteenth century, when the modern views of musical structure were superseding the older ones.

Galax, *n.* **2.** [*l. c.*] The plant *Galax aphylla*, known also as *galaxy* and *beetle-weed*. Because of its persistent shining leaves galax is gathered in large quantities and sold by florists for ornamental purposes.

Galaxy, *n.* **3.** [*l. c.*] Same as ★*galax*, 2: a play upon that name.

gale[2], *n.*, **1.** Gales are classified as moderate, fresh, strong, and whole gales. See *Beaufort* ★*scale*. **Straight-line gale**, a long-continued gale from the same direction; a derecho; a gale that is due to a vertical rather than to a horizontal circulation of the wind; a gale that blows straight out, or nearly straight out, from a region and not around it.—**Tail of a gale**, the strong wind at the end of a whole gale at sea. **Topgallant gale**, a gale in which the old fashioned English man-of-war can carry topgallantsails, such as force 7, a moderate gale, or force 8, a fresh gale, on the Beaufort scale; a gale of about forty or fifty miles an hour.

gale[2] (gāl), *v. i.* To sail away before the wind, or to outstrip another vessel in sailing: generally with *away*. [Obsolete.]

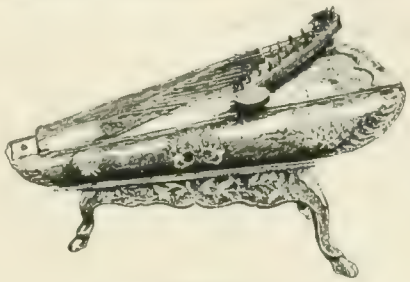
gale[3], *n.*—**Fern** or **fern-leaved gale**, the sweet-fern, *Comptonia peregrina*.

galeage (gāl'āj), *n.* [Also *galiage*; < *gale*[4] + -*age*.] Ground-rent paid for a grant of land. [Prov. Eng.]

galeatiform (gā-lē-at'i-fôrm), *a.* [Irreg. < NL. *galeatus*, helmeted, + L. *forma*, form.] Helmet-shaped: employed specifically in reference to brachiopods having the general aspect of *Gypidula galeata*.

galeeny (ga-lē'ni), *n.* [Also *galliney*, *galiny*, *galany*; < Sp. *gallina morisca*, the guinea-fowl, < L. *gallina*, a fowl.] A guinea-fowl. [Prov. Eng.]

galempong, galempung (ga-lem'pong), *n.*



Galempong.
In the Metropolitan Museum, New York.

[Javanese ?] A Javanese musical instrument of the zither class, with from ten to twenty-five strings.

Galena black. See ★*black*.

Galenical[2], *a.* **II.** *n.* Any preparation made from vegetable substances by simple physical means, as by infusion, decoction, and percolation, as opposed to chemical methods. *Sci. Amer. Sup.*, Jan. 24, 1903, p. 22631.

galenochemist (gā-lē'nō-kem″ist), *n.* One who manufactures and uses both galenical and chemical remedies. [Obsolete.]

galenoid (gā-lē'noid), *n.* [*galena* + -*oid*.] A trigonal trisoctahedron, a form whose faces often occur on modified crystals of galena.

Galen's bandage. See ★*bandage*.

galer (gā'lèr), *n.* [Also *galor*; < *gale*[4] + -*er*[2].] A collector of gale or manorial duty; also, an agent for the letting of mining licenses. [Prov. Eng. (Gloucestershire).]

galeriid (gal-ē-rī'id), *n.* and *a.* **I.** *n.* A member of the lepidopterous family *Galeriidæ*.

II. *a.* Of or belonging to the lepidopterous family *Galeriidæ*.

Galin-Paris-Chevé system. Same as *Chevé* ★*system*.

galipedine (ga-lip'e-din), *n.* [NL. *Galipe-a*, syn. of *Cusparia*, + -(*i*)*d* + -*ine*[2].] A crystalline alkaloid, $C_{19}H_{19}NO_3$, found in Cusparia (Angostura) bark. It melts at 110° C.

galipeine (ga-lip'ē-in), *n.* [*Galipe-a* + -*ine*[2].] An alkaloid, $C_{20}H_{21}NO_3$, found in Cusparia (Angostura) bark, *Galipea Cusparia*. It crystallizes in white needles, melting at 115.5° C.

galipine (gal'i-pin), *n.* [*Galip-ea* + -*ine*[2].] Same as ★*galipeine*.

gall[2], *n.* **6.** A long space without weft in a piece of cloth.

gall[3], *n.*—**Aleppo gall**, an oak-gall which comes from Persia and the East Indies by way of Aleppo. It contains from 55 to 60 per cent. of tannic acid and about 4 per cent. of gallic acid. It is valued in dyeing as a mordant for light and bright shades on cotton and silk because of the comparatively small amount of coloring-matter it contains.—**Artichoke-gall**, an oak-gall of European distribution occurring in *Quercus pedunculata* and *Q. sessiliflora* and resembling a small artichoke. It is made by the cynipid *Andricus pilosus*.—**Bullet gall**, an American cynipid gall resembling a bullet, attached to the smaller twigs of oaks in the northeastern United States and produced by the gall-fly *Holcaspis globulus*. **Eglantine gall.** Same as *bedegar*.—**French gall**, an oak-gall of inferior quality in the amount (from 20 to 30 per cent.) of tannic acid it contains.—**Indian galls**, the unripe pods of *Acacia scorpioides*. They are used for tanning.—**Multicellular gall**, a gall containing a number of cells each inhabited by a larva, as the pithy blackberry-gall which occurs on the stems of the blackberry, each gall containing many cells of the larva of the cynipid *Diastrophus nebulosus*.—**Seed-like blackberry-gall**, a very small gall occurring in belt-like clusters about the canes of the blackberry, and produced by the cynipid *Diastrophus cuscutæformis*.—**Turkish gall**, an oak-gall valued, in dyeing, for the tannin matter it contains. **White galls**, the unripe fruit of *Phyllanthus Emblica*. See *myrobalan* and *Phyllanthus*.

gall[4] (gâl), *n.* A small silver coin of Cambodia, worth about fourpence.

gallacetophenone (gal-a-sē-tō-fē'nōn), *n.* [*gall*(*ic*) + *acet*(*ic*) + *phen*(*yl*) + -*one*.] A pale yellow powder, $CH_3.CO.C_6H_2(OH)_3$, known commonly as *alizarin yellow C*: employed in dermatology.

gallactucon (ga-lak'tū-kon), *n.* [*gall*(*ic*)[2] + L. *lactuca*, lettuce, + -*on*.] A colorless, tasteless, non-poisonous crystalline compound, $C_{14}H_{24}O$, melting at 296° C. It is extracted from French lactucarium, derived from *Lactuca altissima*.

gallamine (gal'a-min), *a.* (*gall*(*ic*)[2] + *amine*.] Derived from gallic acid and ammonia.—**Gallamine blue.** See ★*blue*.

gallanil (gal'a-nil), *a.* [*gall*(*ic*)[2] + *anil*(*ine*).] Formed by the action of aniline and certain related compounds upon gallic acid. Also *gallanilic*.—**Gallanil green, indigo, violet.** See ★*green*[1], etc.

gallanilic (gal-a-nil'ik), *a.* Same as ★*gallanil*.

gallanilide (gal-an'i-lid), *n.* [*gall*(*ic*)[2] + *anil*(*ine*) + -*ide*.] A colorless crystalline compound, $C_6H_2(OH)_3.CO.NH.C_6H_5.2H_2O$, formed by the action of aniline on gallic acid. It melts at 207° C. and is used as a food-preservative. For this purpose it is superior to salicylic acid, because the toxic dose is much higher on account of its slight solubility. Also called 3,4,5-*trihydroxybenzanilide*.

gallanol (gal'a-nōl), *n.* [*gallan*(*ilide*) + -*ol*.] Same as ★*gallanilide*.

gallazin (gal-az'in or ga-laz'in), *n.* [*gall*(*ic*)[2] + *azin*.] A mordant coal-car color of the oxazin type, prepared by the action of one of the β-naphthol-sulphonic acids upon gallocyanine. It dyes chromium-mordanted wool an indigo blue shade.

gall-backed (gâl'bakt), *a.* Said of a horse whose back has been galled by an improperly fitting saddle.

gallberry (gâl'ber-i), *n.*; pl. *gallberries* (-iz). The inkberry, *Ilex glabra*, of the southern United States.

Gallberry (Ilex glabra), while frequent in land that is too heavy to meet the requirements of truck-farming, is occasionally common on high-grade soils.
Kearney, Contrib. National Herb., V. 479.

Gallberry land, a local name for a type of land near the Dismal Swamp which in its natural state bears a growth of gallberry. The soil is somewhat rich in organic matter, therefore black, and is underlain by clay. *Kearney*.

galled, *p. a.* **3.** Worn away by washing; hence, sterile: said of land.

gallery, *n.*, **5.** (*b*) By extension, any company or group of interested spectators, as at a golf-match: a forced use. (*c*) Specifically, in écarté, spectators who are betting on either player and are allowed to offer suggestions.—**11.** A veranda; a piazza. [Canadian-French.]—**12.** In a lamp-burner, the ring which supports the lamp-shade.—**Infiltration gallery**, an open trench or covered tunnel constructed in such a manner as to receive percolating ground or river waters.—**To play to the gallery**, to seek popular applause or good will.

gallery-deck (gal'e-ri-dek), *n.* See ★*deck*, 2.

galley-gun (gal'i-gun), *n.* *Naut.*, an old-fashioned culverin.

galley-packet (gal'i-pak″et), *n.* *Naut.*, the mythical navy despatch-vessel which brings naval news.

galley-pepper† (gal'i-pep″èr), *n.* *Naut.*, the ashes and soot which accidentally found their way into the food from the galley-range. [Naval slang.]

galley-press (gal'i-pres), *n.* **1.** A form of printing-press made to take proofs of composed types on brass or zinc galleys, by platen pressure. In the United States better known as a *proof-press*. [Eng.]—**2.** A galley-proof.

galley-slang (gal'i-slang), *n.* *Naut.*, the vernacular of the galley; the idioms of the cooking-quarters on a man-of-war.

galley-stoker (gal'i-stō″kèr), *n.* *Naut.*, a worthless member of the crew; a skulker.

galley-wasp (gal'i-wosp), *n.* [Also *galliwasp*; < *galley* + *wasp*. The name was prob. first applied to any large wasp that infested ships in West Indian ports. Compare *gallinipper*, a large mosquito, prop. **galley-nipper*.] **1.** In the British West Indies, any large bembecid wasp.

Then all, sitting on the sandy turf, defiant of *galliwasps* and jack-spaniards, and all the weapons of the insect host, partook of the equal banquet.
Kingsley, Westward Ho, xvii.

2. A West Indian lizard, *Celestus occiduus*.

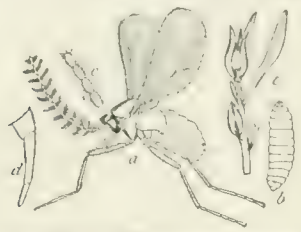
See *gallwasp*.—3. The common lizard fish, *Synodus fœtens*, of the Atlantic coast of the United States.

galley-west (gal'i-west), *adv.* A dialectal variation of *collywest, collywestow*. See ★*collywestow*.

gall-fig (gâl'fig), *n.* The fruit of the fig-tree which contains the gall-flowers. See ★*gall-flower*, 1.

gall-flower (gâl'flou̇-ėr), *n.* 1. A modified and infertile female flower of the fig-tree in which the fig-insect lives.—2. Same as ★*gallweed*.

gall-fly, *n.*—**Cranberry gall-fly,** a cecidomyiid fly, *Cecidomyia oxycoccana*, which causes a bunching of the tip-



Cranberry Gall-fly (*Cecidomyia oxycoccana*).

a, male; *b*, larva; *c*, leaves showing work of larva; *d*, ovipositor of female; *e*, internal structure of female. Enlarged.

leaves of the cranberry into a compact bulb-like mass in which are found several of the larvæ. The larva is known as the *tip-worm*.—**Parasitic gall-fly,** any member of the subfamily *Figitinæ* of the hymenopterous gall-fly family *Cynipidæ*.

gall-fungus (gâl'fung″gus), *n.* Any fungus which produces galls: particularly applied to the gall of cranberries and related plants, due to *Synchytrium Vaccinii*.

gall-gnat, *n.*—**Guest gall-gnat,** *Cecidomyia alboritata*, a species which breeds in large numbers between the leaves composing the so-called pine-cone willow-gall, which itself is made by another gall-gnat, *Cecidomyia strobiloides*.

gallhuminic (gal-hū-min'ik), *a.* Same as ★*melanogallic*.

Gallian[2] (gal'i-an), *a.* [For **Gallionian*, < L. *Gallio(n-)* + *-ian*.] Of or pertaining to Gallio, the Roman proconsul of Achaia in the time of Paul the apostle: as, *Gallian* indifference. See Acts xviii. 14–17.

Perhaps even the official mind would be stirred to desert its attitude of *Gallian* indifference.
Lancet, April 4, 1903, p. 983.

galliard[2] (gal'yard), *n.* [Cf. *galliard*[1].] A term used in northern England for a sandstone or grit of particularly close and uniform texture.

Gallicanist (gal'i-kan-ist), *n.* One who upholds Gallicanism. See *Gallicanism*.

gallicin (gal'i-sin), *n.* [*gallic*[2] + *-in*[2].] A derivative of gallic or tannic acid used as an antiseptic dusting-powder, or in solution in conjunctivitis.

Gallico-Anglian (gal″i-kō-ang'gli-an), *n.* An Englishman who favors France or the French.

gallied (gal'id), *p. a. Naut.*, worried; harassed. —**Gallied whale,** a whale in torment from a harpoon or the attack of a swordfish; a frenzied whale.

gallin (gal'in), *n.* [*gall-ic*[2] + *-in*[2].] Same as *gallein*.

gallinivorous (gal-i-niv'ō-rus), *a.* [L. *gallina*, hen, + *vorare*, eat.] That feeds on poultry: as, a *gallinivorous* animal.

gallinuline (ga-lin'ū-lin), *a.* [*gallinule* + *-ine*[1].] Pertaining to or resembling the gallinule.

gallipeine, *n.* Erroneous spelling of ★*galipeine*.

gallisin (gal'i-sin), *n.* [*gall(ic)*[2] + *iso(maltose)* + *-in*[2].] In *chem.*, a substance analogous to dextrine, obtained by fermenting with yeast a solution of commercial glucose or starch-sugar and adding to the residual liquid absolute alcohol in excess. Gallisin is precipitated as a white powder, of faintly sweetish taste, hygroscopic, dextrogyrate, incapable of fermentation, and yielding dextrose by prolonged heating with dilute sulphuric acid. Probably identical with *isomaltose*, $C_{12}H_{22}O_{11}$. *Sadtler*, Handbook of Indust. Chem., p. 178.

gallisization (gal″i-sī-zā'shon), *n.* Same as ★*gallization*.

gallium, *n.* The discovery of this chemical element was peculiarly interesting, as furnishing striking evidence of the soundness of the theoretical views, as to the relations of the elements, which led Mendelejeff in 1869 to predict the existence of such a substance and give a description of the properties it would be found to exhibit; his prediction required scarcely any correction when the element was actually discovered.

gallization (gal-ī-zā'shon), *n.* [*gallize* + *-ation*.] The preparation of grape-juice for fermentation by adding water and sugar, usually starch-sugar. See *gallize*. *Sadtler*, Handbook of Indust. Chem., p. 206.

gall-louse, *n.* **Grape-leaf gall-louse,** the above-ground form of the grape-vine *Phylloxera*. See *Phylloxera* and *gall-louse*. **Hickory gall-louse,** any one of several American species of the aphidid genus *Phylloxera*, which make galls on the hickory.

gall-maker, *n.*—**Blackberry gall-maker,** a cynipid gall-fly, *Diastrophus turcidus*, which makes a large oval gall on blackberry-stems.

Gallo-American (gal-ō-a-mer'i-kan), *a.* and *n.* **I.** *a.* French-American: as, a *Gallo-American* colony. *Jefferson*.

II. *n.* A native or descendant of a native of France who has settled in America, or has become an American (United States) citizen.

Gallo-Briton (gal-ō-brit'on), *n.* A Briton born in France or of partly French parentage; a Briton who is favorably disposed to France.

gallobromol (gal-ō-brō'mōl), *n.* [*gall(ic)*[2] + *brom(ine)* + *-ol*.] Dibromogallic acid. It is used as an antiseptic and astringent.

Gallo-Celtic (gal-ō-sel'tik), *a.* Belonging to the Celts of France. *N. E. D.*

gallocyanine, *n.*—**Brilliant gallocyanine.** Same as ★*chromocyanine*.

galloflavin (gal-ō-flav'in), *n.* [*gall(ic)*[2] + *flavin*.] A mordant coal-tar color prepared by the gentle oxidation of gallic acid. It dyes chromium-mordanted wool a yellow which is fast to light and soap.

galloformin (gal-ō-fôr'min), *n.* [*gall(ic)*[2] + *form(aldehyde)* + *-in*[2].] A condensation-product of gallic acid and hexamethylene tetramine, which readily decomposes with the formation of formaldehyde. It is used as an antiseptic.

gall-of-the-earth (gâl″uv-ŦHē-ėrth'), *n.* (*a*) Any plant of the genus *Nabalus*, especially *N. serpentarius*. See *Prenanthes*. (*b*) *Lactuca Floridana* of the eastern United States. (*c*) *Pterospora andromedea*, more properly called *pine-drops*.

Gallo-German (gal-ō-jėr'man), *a.* and *n.* **I.** *a.* Belonging to both France and Germany, or to both French and Germans.

II. *n.* 1. One of the French race born or resident in Germany.—2. A descendant of parents on one side French and on the other German.

Gallo-Grecians† (gal-ō-grē'shanz), *n. pl.* Same as ★*Gallo-Greeks*.

Gallo-Greeks† (gal-ō-grēks'), *n. pl.* [L. *Gallo-græci*.] The name of a Gallic people who settled in the larger 'Greece' of Asia Minor called from them *Gallogræcia* or *Galatia*. *Holland*, tr. of Pliny, I. 221. *N. E. D.*

gallol (gal'ōl), *n.* [*gall(ic)*[2] + *-ol*.] A colorless crystalline compound,

$$\overset{1}{O}(C_6H_2(\overset{2}{O}H)(\overset{3}{O}H))_2\overset{2}{C}H.C_6H_4.\overset{1}{C}H_2OH,$$

formed by the vigorous reduction of pyrogallolphthallic anhydrid (gallein). It rapidly darkens in air.

Galloman (gal'ō-man), *n.* [F. **Gallomane*.] A Gallomaniac.

Gallomaniac (gal-ō-mā'ni-ak), *n.* [L. *Gallus*, a Frenchman, + Gr. *μανία*, madness.] One who is very zealous for France and French interests and ways.

gallon[2] (gal'on), *n.* [Ir. *gallán-mor*, < *gallán*, branch, + *mor*, great.] The butter-bur or butterdock, *Petasites Petasites*.

gallonage (gal'on-āj), *n.* [*gallon* + *-age*.] Amount or capacity stated or reckoned in gallons: as, the *gallonage* of a tank, or the *gallonage* of an oil-well during the period named.

gallonitrate (gal-ō-nī'trāt), *n.* [*gallonitr(-ic)* + *-ate*[1].] A salt of gallonitric acid.

gallop, *v. t.*—**To gallop to a standstill,** to gallop to a halt; tire out thoroughly: as, *to gallop* several horses *to a standstill* (that is, to gallop, in competition with several horses, one after the other until they could gallop no more).

gallop, *n.*—**Gallop rhythm,** rapid succession of three heart-sounds followed by an interval of silence, resembling somewhat the canter of a horse.

galloper, *n.* 5. A mounted (or unmounted) despatch-bearer on a battle-field; an aide-de-camp.

Gallophile (gal'ō-fil), *n.* [L. *Gallus*, a Frenchman, + Gr. *φίλος*, loving.] One who is friendly to France.

Gallophobe (gal'ō-fob), *n.* [L. *Gallus*, a Frenchman, + Gr. *φοβεῖν*, fear.] One who hates or fears France.

Gallophobia (gal-ō-fō'bi-ä), *n.* [NL., < L. *Gallus*, a Frenchman, + Gr. *-φοβία* < *φοβεῖν*, fear.] Abhorrence or fear of France or French ways or institutions.

gallotannate (gal-ō-tan'āt), *n.* [*gallotann(ic)* + *-ate*[1].] A salt of gallotannic acid.

gallotannin (gal-ō-tan'in), *n.* Same as *tannic acid*.

Gallovidian (gal-ō-vid'i-an), *a.* and *n.* [NL., **Gallovidianus*, < *Gallovidia*, Galloway.] **I.** *a.* Of or pertaining to the region of southwestern Scotland known as Galloway and corresponding to the counties of Wigton and Kirkcudbright.

II. *n.* 1. A native or inhabitant of Galloway.—2. A Gallovidian horse. See *galloway*.

Galloway, *n.* 2. A breed of hornless cattle, of great antiquity, developed in the highlands of southwestern Scotland. The skin is dark, the hair usually black, and the body deep. They are hardy and docile.

gallows, *n.*, 2. Specifically, on the great sheep-raising stations of Australasia, a high wooden frame on which the carcasses of butchered cattle or sheep are suspended; a meat-gallows. *E. E. Morris*, Austral English.

gallows-tool (gal'ōz-töl), *n.* A clock-maker's rest on which work is held while it is filed. [Rare.]

gall-spot (gâl'spot), *n.* A sore spot produced by rubbing or chafing; a gall.

gall-tree (gäl'trē), *n.* In the West Indies, the bitter ash or quassia, *Picrasma excelsa*.

gallweed (gâl'wēd), *n.* Same as *five-flowered* ★*gentian*.

gall-weevil (gâl'wē″vil), *n.* A beetle whose larvæ produce galls.—**Cabbage gall-weevil,** an English gardeners' name for a European curculionid beetle, *Ceuthorhynchus sulcicollis*, whose larvæ make small galls or swellings on the roots and stalks of cabbage and upon turnips.—**Turnip gall-weevil.** Same as *cabbage* ★*gall-weevil*.

gallwort (gâl'wėrt), *n.* The common toad-flax, *Linaria Linaria*: so named from its bitterness. It is used as an unofficial remedy for dropsy, jaundice, and cutaneous eruptions.

Galoisian (ga-loi'si-an), *a.* Pertaining to or named for the French mathematician Evariste Galois (died 1832).—**Galoisian corpus, equation.** See ★*corpus*, ★*equation*.

galon[2] (ga-lōn'), *n.* [Sp.: see *gallon*.] A Spanish-American measure of capacity, equal, in Porto Rico, to 3.785 liters, or one United States gallon.

galop, *v. i.* To dance the galop. See *galop*, *n.*, 2.

galpon (gäl-pōn'), *n.* [S. Amer.] The building provided on a farm in Peru, Uruguay, and other South American countries, for the accommodation of the laborers, etc. *Proc. Zool. Soc. London*, 1894, p. 305.

Galtonia (gâl-tō'ni-ä), *n.* [NL. (Decaisne, 1880), named in honor of Francis *Galton*, who in 1853 published a "Narrative of an Explorer in Tropical South Africa."] A genus of plants of the family *Liliaceæ*, closely allied to the hyacinths, and formerly referred to the same genus. *Galtonia* differs from *Hyacinthus* chiefly in having more numerous and flattened seeds. There are two species, both South African. *G. candicans* (*Hyacinthus candicans* of Baker) is a fine hardy bulbous plant bearing an ascending raceme or spike of drooping white fragrant flowers. It is also sometimes grown under glass.

Galtonian (gâl-tō'ni-an), *a.* [After F. *Galton*.] Of or pertaining to Francis Galton, an English scientist, or to his theories regarding the question of inherited characters.

Galton's anticyclonic law. See ★*law*[1].—**Galton's curve.** Same as *Quételet's* ★*curve*.—**Galton's law of ancestral inheritance.** See *ancestral* ★*inheritance* (*a*). **Galton's method, weights.** See ★*method*, ★*weight*[1].

galty (gâl'ti), *a.* [Also *gaulty*; < *galt*[1] + *-y*[1].] Marked by the presence of galt: of the nature of galt or stiff blue marly clay: as, *galty* lands; a *galty* place.

galv. An abbreviation (*a*) of *galvanic*; (*b*) of *galvanism*.

Galvanic faradization. See ★*faradization*.

galvanistical (gal-va-nis'ti-kal), *a.* [*galvanist* + *-ical*.] Of or pertaining to galvanism; skilled in galvanism: as, a *galvanistical* philosopher.

galvanization, *n.* 2. Therapeutic application of the constant electric current by means of the active electrode passed slowly to and fro over the surface.

galvanochemical (gal″va-nō-kem'i-kal), *a.* Relating to the chemical action of the galvanic current.

This treatment of stricture depends for its success chiefly upon the action of the electricity, which causes *galvanochemical* absorption to take place—a process which is based upon the electrolytic properties of the tissues of the human body.
Buck, Med. Handbook, III. 765.

Galvanochemical change, chemical change brought about by the passage of an electric current, as in the fluids or tissues of the human body.

galvanofaradic (gal′va-nō-fa-rad′ik), *a.* Relating to both galvanic and faradic electricity.

galvanometer, *n.* **Oscillation galvanometer,** a form of receiver or detector for electric waves, as in wireless telegraphy, invented by Ewing. **String galvanometer,** an instrument consisting essentially of a silvered quartz thread stretched like a string in a strong magnetic field. When the current is passed through the thread the latter is deflected perpendicularly to the direction of the magnetic lines of force, and the amount of the deflection can be measured by means of a microscope with a micrometer eyepiece. Used instead of the capillary electrometer in physiological research.

galvanomotive (gal″va-nō-mō′tiv), *a.* Controlled as to motions by the action of the galvanic current: as, a *galvanomotive* needle. [Rare.]

galvanoplastically (gal″va-nō-plas′ti-kal-i), *adv.* By the galvanoplastic process. See *galvanoplastic.*

galvanoplastics (gal″va-nō-plas′tiks), *n.* Same as *galvanoplasty* or *electrotypy. Jour. Soc. Chem. Industry,* XII. 162.

galvanoplater (gal″va-nō-plā′tèr), *n.* One who makes stereotype or electrotype plates by electrodeposition of metals from a solution of a salt of the metal.

Serious poisonings, and even death, have in many instances resulted in this way [by absorption of potassium cyanid through slight abrasions] in photographers, *galvanoplaters,* or by the handling of plate-polishing powders containing potassium cyanid.
Buck, Med. Handbook, IV. 785.

galvanoscopy (gal-va-nos′kō-pi), *n.* [*galvanism* + Gr. *-σκοπία,* ⟨ *σκοπεῖν,* view.] **1.** Employment of galvanism for diagnostic purposes. — **2.** Determination of the direction of a galvanic current by the galvanoscope.

galvanotactic (gal-va-nō-tak′tik), *a.* [*galvanotanis.* (*-tact-*) + *-ic.*] Same as ★*electrotactic.*

galvanotaxis (gal′va-nō-tak′sis), *n.* [*galvanism* + Gr. *τάξις,* disposition.] Same as ★*electrotaxis.*

They [cases of unilateral directive stimulation] have been designated, according to the direction in which they occur in relation to the source of the stimulus, as positive or negative Chemotaxis, Phototaxis, Thermotaxis, *Galvanotaxis,* and so forth. *Encyc. Brit.,* XXXI. 715.

galvanotechnics (gal″va-nō-tek′niks), *n.* [*galvanism* + *technics.*] The art of the electrodeposition of metals.

galvanotherapeutics (gal-va-nō-ther-a-pū′tiks), *n.* Treatment of disease by means of galvanism. Also called *galvanotherapy.*

galvanotherapy (gal″va-nō-ther′a-pi), *n.* Same as ★*galvanotherapeutics.*

galvanotonus (gal-va-not′ō-nus), *n.* [*galvanism* + Gr. *τόνος,* tension.] Same as *electrotonus.*

galvanotropic (gal′va-nō-trōp′ik), *a.* [*galvanism* + Gr. *-τροπος,* a turning.] Same as ★*electrotropic.*

galways (gâl′wāz), *n.* Whiskers of a style peculiar to Galwaymen.

Mr S—— insists that it is a picture of a woman, notwithstanding that the Celtic face has an ample growth of scarlet *galways.* *Newspaper.*

galziekte (gäl′zēk-te), *n.* [D., 'gall-sickness.'] A disease of cattle in the Transvaal caused by a large species of trypanosome (*Trypanosoma theileri* Laveran, 1902) measuring 50 microns in length by 3.5 to 4 microns in diameter. The mode of transmission is unknown. Like other trypanosomes, this parasite lives in the blood.

Details are given of the mode of growth and multiplication of Tr. Theileri, the cause of the cattle disease known as *Galziekte.* *Nature,* Nov. 13, 1902, p. 46.

gam[2] (gam), *n.* [Origin obscure.] A tusk or large tooth. [Scotch.]

gam[3] (gam), *n.* [OF. *gambe,* besides *jambe,* leg: see *jamb.*] A leg. [Slang.]

gamasoid, *a.* and *n.* [NL. *Gamasoid-ea.*] **I.** *a.* Resembling a mite of the superfamily *Gamasoidea,* or belonging to this group.

II. *n.* One of the *Gamasoidea.*

gamba[2], *n.* **Gamba bass, gamba major, bass gamba, double gamba,** in *organ-building,* a 16-feet stop with the tone of a gamba.

gambade, *n.* **3.** The leap of a horse.

gambang (gäm′bäng), *n.* [Javanese and Malay *gambang.*] A Javanese musical instrument of the xylophone class, consisting of sixteen strips of resonant wood or metal fastened loosely on strings, and mounted on a concave wooden box or frame. The wooden form is called *gambang kayu,* the metal form *gambang gongso.*

gamba-work (gam′bä-wèrk), *n.* **1.** In *organ-building,* a collective name for the string stops, of which the gamba may be taken as a type. — **2.** A form of violin-piano.

gambeer (gam-bēr′), *v. t.* [Appar. from an unrecorded noun **gambeer,* ⟨ F. *gambier,* an iron hook.] To take fish with a gambeering-iron or mackerel-gaff; to gaff. See *gaff*[1].

gambeering-iron (gam-bēr′ing-ī″èrn), *n.* A mackerel-gaff (which see, under *gaff*[1]).

gambette (gam-bet′), *n.* In *organ-building,* a 4-feet stop with the tone of a gamba.

Gambia rubber. See ★*rubber.*

gambine (gam′bin), *n.* [*gamb(oge)* + *-ine*[2].] A name given to several mordant coal-tar colors of the nitroso type. They all dye chromium-mordanted wool brown and iron-mordanted wool green. — **Gambine B,** a mordant coal-tar color of the nitroso type, prepared by the action of nitrous acid upon dihydroxynaphthalene. Also called *daxine.* **Gambine R,** a mordant coal-tar color of the nitroso type, prepared by the action of nitrous acid upon α-naphthol. — **Gambine Y,** a mordant coal-tar color of the nitroso type, prepared by the action of nitrous acid upon β-naphthol. Also called *Alsace green J.* **Gambine yellow.** See ★*yellow.*

gambit, *n.* — **Cochrane gambit,** one of the chief lines of defense against the Salvio gambit, namely, 6 . . . P—B 6. See *gambit.* — **Double gambit,** an attack in the King's Bishop's opening, where white sacrifices two pawns. — **Gambit pawn.** See ★*pawn*[2]. — **Greco gambit,** an interesting though abandoned attack of the King's Knight's gambit. — **King's gambit declined,** a defense to the King's gambit wherein the second player tries to evade the attack by refraining from capturing the offered gambit pawn. **King's gambit refused.** Same as *King's* ★*gambit declined.* **King's Knight's gambit,** 1 P—K 4, P—K 4; 2 P—KB 4, PxP; 3 Kt—KB 3. — **King's Rook's Pawn's gambit,** white continuing 3 P—KR 4. Hardly ever played. — **Macdonnell's double gambit,** a continuation against an obsolete defense to the King's Bishop's opening, white sacrificing two pawns for the attack. — **Philidor's gambit,** 5 P—KR 4 in the King's Knight's gambit. **Salvio-Cochrane gambit,** a variation of the King's Knight's gambit, in which black plays 5 . . . P—B 6 instead of Kt—KB 3 or Kt—KR 3.

gambling-hell (gam′bling-hel), *n.* A gambling-house.

gambling-tray (gam′bling-trā), *n.* A large basketry tray used for tossing dice by North American Indians.

Tulare Gambling-tray in Use.

gamboge, *n.* — **American gamboge,** the gum-resin yielded by either of two shrubs or small trees of Guiana and Brazil, *Vismia baccifera* and *V. Guianensis.* **False gamboge.** Same as *Mysore* ★*gamboge.* — **Mexican gamboge,** the gum-resin yielded by *Vismia Mexicana.* **Mysore gamboge,** the gum-resin obtained from *Garcinia pictoria* of Southern India. Also called *false gamboge.*

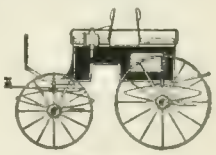
gambogiate (gam-bō′ji-āt), *n.* [*gamboge* + *-i-* + *-ate*[1].] A salt of gambogic acid. — **Gambogic acid,** A resinous substance which is the principal component of gamboge.

game[1], *n.,* **6.** Specifically — (*a*) A part of a rubber. The victors in two games out of three win the rubber. (*b*) One of the points to be scored in all-fours, as high, low, jack, and the game.

14. The number of players necessary, or required by the rules, for playing a game; a 'set.' — **15.** In *old archery,* a meeting or public competition of archers. — **All-in game,** English billiards without restrictions as to ★spot-stroke (which see). — **Around-the-table game,** in *Amer. billiards,* a game in which the successive holding of either red is restricted to thrice off its spot. — **Bergen game,** a game of dominoes in which two points are scored by the player who makes both ends of the line the same. — **Brace game,** a conspiracy between two players to cheat another; specifically, in *faro,* an understanding between the dealer and the case-keeper. — **Call game.** See ★*call* 1. — **Cattle and game disease.** See ★*disease.* **Consultation game.** See ★*consultation.* — **Doublet game,** in *French billiards,* a game in which carons and pockets count, but the latter only in case the holed object-ball has first been sent to cushion. — **Drawn game.** See ★*drawn.* — **Duck-wing game,** a variety of game-fowl, usually of handsome plumage, with a conspicuous bar across the wing suggestive of the mirror of a duck. The golden duck-wing has this bar of a rich yellow, while in the silver duck-wing it is white. — **Game at odds,** in *chess,* a game in which the superior player removes one of his pieces from the board before the game is started in order to equalize the contest. The most common odds are those of the queen, of queen against rook or any other minor piece, of a rook, of a knight, of a pawn and move, and of a pawn and two moves. A player may also permit his opponent to make a stated number of moves before beginning play, upon the condition, however, that none of the pieces so moved be permitted to pass the fourth row. Other odds are to effect a mate only with a marked piece or pawn, not to check except when mating, etc. — **Indian game,** a heavy-bodied, thinly feathered breed said to have originated in southern Asia or in some of the islands of the Malay Archipelago. **Long game,** in *golf,* full wooden shots from the tee and through the green. — **Long-handle game,** in *cricket,* aggressive or hitting play, as contrasted with defensive. *Hutchinson,* Cricket, p. 71. — **Open game,** a game of chess in which both sides play their king's pawns to their respective fourth squares. All other games, or rather openings, are called *close games.* — **Progressive games,** euchre, whist, bridge, and other four-hand partnership games which may be played progressively. The principle is the same in all. The winning lady at each table goes to the next table north, her partner going to the next table south; while the losing couple left behind separate, so that each of the two players shall get a new partner for the next round. The winners at the head table do not move. Prizes are given for the players who win the greatest number of rounds. — **Quarter game,** in *golf,* short approach-shots to a putting-green. — **Short game,** in *golf,* approaching, or that part of the game, in playing on to a putting-green, which does not involve the use of a wooden club.

Spanish game, a combination of the old French billiard game of allied pockets and caroms with a modified form of pin-pool. "This game is played in New Orleans, Mexico, Cuba, and California and in the South, and is played with two white balls and one red, and five pins placed similar to those in Pin Pool. The red ball is placed on the red-ball spot, and the first player strikes at it from within the balk semicircle. The game is made by winning hazards, carroms, and by knocking over the skittles or pins. It is usually played thirty-one points up." *Amer. Hoyle,* p. 491. — **Square game,** a game in which the cards are perfectly square, not having been trimmed for wedges, strippers, etc. — **To develop one's game.** See ★*develop.* — **Willing game,** a parlor game in which all members of the party save one unite in willing the performance of a certain action by this outstanding member. The latter is brought into the room, blindfolded, after the action to be performed has been agreed upon by the rest. Sometimes he is left free to act on his own initiative; sometimes two members of the party place their outstretched hands about his neck or waist. In this case, the game becomes a form of muscular suggestion or 'muscle-reading.' Otherwise, the success of the game depends upon the ability of the subject to pick up suggestions by ear as he moves about the room, or to guess at the action prescribed for him.

game-cart (gām′kärt), *n.* A light carriage originally used to carry dogs to the moors in hunting and to bring back the game: now used for driving.



Game-cart

game-hole (gām′hōl), *n.* The sixty-first or last hole in a cribbage-board.

gamester, *n.* **6.** *pl.* In *billiards,* contestants whose scores are exactly even.

gamesum, *a.* A simplified spelling of *gamesome.*

gametange (gam′e-tanj), *n.* [NL. *gametangium.*] Same as *gametangium.*

gamete, *n.* **2.** A general term for the mature germ-cells, either male (spermatozoön) or female (ovum), which unite to form the zygote.

The term "*gamete*" is now generally used as the equivalent of "germ-cell," whether male or female, and the term "zygote" is here used for brevity to denote the organism resulting from fertilisation.
W. Bateson, Mendel's Prin. of Heredity, p. 18.

game-tenant (gām′ten″ant), *n.* One who rents the right to shoot game on an estate; a shooting-tenant.

gametic (ga-met′ik), *a.* [*gamete* + *-ic.*] Of, pertaining to, or by means of gametes or germ-cells; gametal.

The term Mendelian Principles is used in its widest sense, to include not merely the simple Mendelian phenomena of Dominance or Segregation, but the much more fundamental doctrine of *gametic* purity.
Biometrika, Jan., 1904, p. 1.

Gametic variation. See ★*variation.*

gametically (ga-met′i-kal-i), *adv.* As regards gametes; as a gamete.

They show therefore that the albino cannot be said to be *gametically* pure in respect of its whiteness, but that in order to predict the character of its young a knowledge of its ancestry is necessary. *Biometrika,* Jan., 1904, p. 8.

gametocyst (ga-met′ō-sist), *n.* [Gr. *γαμέτης, γαμέτη* (see *gamete*) + *κύστις,* bladder (cyst).] A unicellular structure, found in the algæ and fungi, which produces only uninucleate gametes: distinguished from *gametangium.*

gametocyte (ga-met′ō-sīt), *n.* [Gr. *γαμέτης, γαμέτη* (see *gamete*) + *κύτος,* a hollow (a cell).] A gamete. *Proc. Roy. Soc.* (London), March 6, 1902, p. 78.

gametogenesis (gam″e-tō-jen′e-sis), *n.* [Gr. *γαμέτης, γαμέτη,* (see *gamete*), + *γένεσις,* origin, genesis.] In *biol.,* genesis or origin from gametes, that is, from a sperm- and an egg-cell. Also *gametogeny.*

The central phenomenon in Mendelian heredity is segregation. The characters in simplest cases are treated as units in *gameto-genesis.* In more complex cases there is resolution, sometimes also disintegration and imperfect segregation, leading to the formation of fresh units. The gametes bearing these units are produced in numerical

proportions which on an average are also definite, but as yet these proportions have only been determined in the simple cases. *Proc. Zool. Soc. London*, 1903, p. 95.

gametogenic (gam″e-tō-jen′ik), *a.* Relating to gametogenesis; producing gametes or reproductive cells.

gametogenous (gam-e-toj′e-nus), *a.* Pertaining to or of the nature of gametogenesis; producing gametes: as, a *gametogenous* monont among *Coccidia*. See ★*monont*.

The cytological changes in malignant growth resemble those exhibited by sporogenous or *gametogenous* tissues in plants and animals, in the occurrence of the form of nuclear division known as heterotype, as distinguished from the more usual homotype division.
Nature, Jan. 21, 1904, p. 286.

gametogeny (gam-e-toj′e-ni), *n.* Same as ★*gametogenesis*.

gametoid (gam′e-toid), *a.* and *n.* [*gamete* + *-oid*.] **I.** *a.* Relating to reproductive cells which do not become functional gametes: opposed to ★*gametogenic*. *Nature*, Jan. 21, 1904, p. 285.

II. *n.* A sexually active cell observed in the reproduction of certain low forms of animal life.

gamma, *n.* **4.** A proposed unit of magnetic intensity, equal to one hundred thousandth of a gilbert per second.

Gamma rays. See ★*ray*[1].

gammacism (gam′a-sizm), *n.* [Gr. γάμμα, gamma, + *-c-* + *-ism*.] Imperfect enunciation of g and other guttural sounds. *Buck*, Med. Handbook, VII. 435.

gamma-granule (gam′ä-gran-ūl), *n.* One of the basophilic granules observed in a certain form of leucocyte in cases of leucemia.

gamma-iron (gam′ä-ī″èrn), *n.* See ★*iron*.

gammarine (gam′a-rin), *a.* [*Gammarus* + *-ine*[1].] Resembling or characteristic of amphipod crustaceans of the genus *Gammarus*.

gammaroid (gam′a-roid), *a.* [*Gammarus* + *-oid*.] Resembling or pertaining to the genus *Gammarus*, or to the family *Gammaridæ*.

gammation, *n.* **2.** An element in the anatomical structure of the head of the Devonian fish *Palæospondylus*.

An important element having somewhat the form of an inverted "L" lies on each side, immediately behind the nasal capsules, and was probably related to the eye, which was situated above it. . . . In order to avoid as far as possible the introduction of hypothesis into description we propose to call it the '*gammation*' from its fancied resemblance to the Greek letter "Γ."
W. J. and *I. B. J. Sollas*, in Philos. Trans. Roy. Soc. [(London), 1904, ser. B, p. 274.

gammoning-fashion (gam′on-ing-fash″on), *n.* *Naut.*, a lashing, the turns of which are crossed in the style of gammoning.

gammoning-fish (gam′on-ing-fish), *n.* *Naut.*, formerly a batten of wood on the top of the bowsprit over which the turns forming the gammoning were passed.

gammoning-knee (gam′on-ing-nē), *n.* *Naut.*, a timber bolted to the stem below the bowsprit.

gamobium (ga-mō′bi-um), *n.*; pl. *gamobia* (-ä). [NL., < Gr. γάμος, marriage, + βίος, life.] The sexual or medusoid stage in the life of a hydroid jellyfish.

Gamobothridæ (gam-ō-both′ri-dē), *n. pl.* [NL.] A family of tapeworms of the order *Tetraphyllidea*. They have the four phyllidia united by their lateral margins to form a single discoid or globular mass. The family contains the genera *Lecanicephalum*, *Tylocephalum*, and *Discocephalum*, and members inhabit the spiral intestine of sharks.

gamodesmic (gam-ō-des′mik), *a.* [Gr. γάμος, marriage, + δεσμός, a band.] In *bot.*, having the component vascular elements of the stele fused together.

gamodesmy (gam-ō-des′mi), n. [*gamodesm-ic* + *-y*[3].] In *bot.*, the condition of being gamodesmic.

gamogenic (gam-ō-jen′ik), *a.* [Gr. γάμος, marriage, + γενής, producing.] Of or pertaining to origin from a germ-cell during its maturation and fertilization.—**Gamogenic variation.** See ★*variation*.

Gamolepis (gam-ol′ē-pis), *n.* [NL. (Lessing, 1832), < Gr. γάμος, marriage, + λεπίς, scale. The allusion is to the union of the involucral bracts.] A genus of plants of the family *Asteraceæ*, related to *Senecio*. There are about 12 species, all South African. One of them, *G. Tagetes*, is now somewhat grown as a garden annual. It bears a profusion of bright-yellow heads, particularly in sunny, exposed places, having somewhat the character of the dwarf marigold.

gamomachia (gam-ō-mak′i-ä), *n.* [NL., < Gr. γάμος, marriage, + μάχη, fight.] The hypothetical struggle for existence between the paternal and maternal constituents of the fertilized egg, and the destruction of one of them: assumed as an explanation of the resemblance of the offspring to one parent only, to the exclusion of the influence of the other.

gamomania (gam-ō-mā′ni-ä), *n.* [NL., < Gr. γάμος, marriage, + μανία, madness.] **1.** The condition of a pistil in which the ovaries are more or less completely united and the respective styles and stigmata remain free. *Syd. Soc. Lex.*—**2.** A form of insanity in which the sufferer often proposes marriage, despite impossible conditions. *Syd. Soc. Lex.*

gamophagia (gam-ō-fā′ji-ä), *n.* [NL., < Gr. γάμος, marriage, + *-φαγία*, φαγεῖν, eat.] The hypothetical destruction of one of the parental constituents of the fertilized egg by the other. See ★*gamomachia*.

gamostele (gam′ō-stēl), *n.* [Gr. γάμος, marriage, + στήλη, pillar.] In *bot.*, a polystele in which the vascular bundles are fused together in some portion of their length. See ★*stele*[4] and ★*polystele*.

gamostelic (gam-ō-stel′ik), *a.* [*gamostele* + *-ic*.] In *bot.*, having a gamostele.

gamostely (gam′ō-stē-li), *n.* [*gamostele* + *-y*[3].] In *bot.*, the condition of being gamostelic.

gamote (gä-mō′tä), *n.* [Mex. Sp. *camote*, < Nahuatl *camotli*, sweet potato.] In New Mexico, the parsnip-like root of an umbelliferous plant, *Phellopterus montanus*, which is used, when young, as an article of food by certain tribes of Indians.

gamotropic (gam-ō-trop′ik), *a.* [Gr. γάμος, marriage, + τροπικός, of or pertaining to a turn.] In *bot.*, executed for the advantage of the fertilizing process: said of certain changes in the position of flower-stalks made only once.

gamot-sa-buni (ga-mōt′sä-bō′nē), *n.* [Tagalog *gamot*, medicine; *sa*, for; *buni*, ringworm.] Same as ★*acapulco*. [Philippine Is.]

gamp[2] (gamp), *v. t.* [Vaguely imitative; cf. *champ*[1] and *gulp*.] To eat greedily; gulp down. *Scott.* [Scotch.]

gamphrel (gam′frel), *n.* Same as *gomerel* [Scotch.]

gamsigradite (gam-si-grā′dīt), *n.* [Servian *Gamsigrad* (see def.) + *-ite*[2].] A velvet-black variety of amphibole, containing manganese in considerable amount. The original specimen was obtained from Gamsigrad, Servia.

gamut-way (gam′ut-wā), *n.* In *old music*, the writing or noting by means of notes rather than in tablature. See *tablature*, 4 (*c*).

gandi (gän′dē), *n.* [African.] A name given in parts of Africa to the tsetse-fly, *Glossina morsitans*. *Geog. Jour.* (R. G. S.), IX. 56.

gandul (gän-dōl′), *n.* [Porto Rican.] The dall or pigeon-pea, *Cajan Cajan*. See *Cajan*.

gang, *v.* **II.** *trans.* To arrange in gangs; combine (several) into one set, to be operated together: as, to *gang* saws, plows, or the like. See *gang*, *n.*, 9.

The plows are usually *ganged*, two to one frame, and are drawn by three to five yoke of oxen.
Yearbook, U. S. Dept. Agr., 1900, p. 540.

gang, *n.* **12.** *Naut.*, a set of standing rigging.—**Gang drilling-machine.** See ★*drilling-machine*.

ganga[2] (gän′ gä), *n.* [Sp., = F. *gangue*: see *gangue*.] Something that can be acquired or obtained without labor. [Spanish America.]

gan-gan, *n.* Same as ★*gang-gang*.

gang-gang (gang′gang), *n.* [Native Australian name]. An Australian cockatoo, *Callocephalon galeatum*, of a gray color with a red crest. Also *gan-gan*.

gang-ladder (gang′ lad″ èr), *n.* A horsing-block.

gangliectomy (gang″gli-ek′tō-mi), *n.* [Gr. γάγγλιον, ganglion, + ἐκτομή, excision.] Excision of a ganglion.

That great operation on the nervous system, trigeminal *gangliectomy*, for which Spiller and Frazier now propose division of the sensory root within the cranium for tic doloureux.
C. H. Hughes, in Alien. and Neurol., Feb., 1903, p. 20.

gangliitis (gang-gli-ī′tis), *n.* [NL., < Gr. γάγγλιον, ganglion, + *-itis*.] Same as *ganglionitis* (*a*).

ganglioblast (gang′gli-ō-blāst), *n.* [Gr. γάγγλιον, ganglion, + βλαστός, germ.] An embryonic cell which gives rise to a ganglionic cell. *Baldwin*, Dict. of Philos. and Psychol., I. 404.

gangliocyte (gang′gli-ō-sīt), *n.* [Gr. γάγγλιον, ganglion, + κύτος, a hollow (a cell).] A ganglion cell or nerve-cell. *Baldwin*, Dict. of Philos. and Psychol., I. 405.

ganglioid (gang′gli-oid), *a.* [*gangli-on* + *-oid*.] Resembling a ganglion. *Syd. Soc. Lex.*

ganglioma (gang-gli-ō′mä), *n.*; pl. *gangliomata* (-ma-tä). [NL., < Gr. γάγγλιον, ganglion, + *-oma*.] A tumor of a lymphatic gland.

ganglion, *n.*—**Abdominal ganglion.** See ★*abdominal*. **Auditory ganglion.** Same as *acoustic tubercle* (which see, under *acoustic*). **Celiac ganglion.** Same as *semilunar ganglion* (*a*) (which see, under *ganglion*). **Central ganglia of the brain,** the optic thalami and corpora striata. **Compound ganglion,** an apparently double ganglion which results from compression of its central portion by the annular ligament of the wrist. See *ganglion*, 3 (*a*).—**Ganglia of Bidder,** two ganglia in the auricular groove of a frog's heart.—**Ganglion ectommammillare,** a small rounded eminence at the base of the brain, just in advance of the posterior perforated space. In many animals there are two of these prominences, one on either side of the median line. Also known as the *mammillary body*, or *corpus albicans*. **Ganglion habenulæ,** a collection of nerve-cells at the dorsimesal margin of the thalamus to which pass fibers from the pineal body. Also known as *habena*, *habenula*, and *trigonum habenulæ*. **Ganglion interpedunculare.** Same as ★*corpus interpedunculare*.—**Ganglion isthmi,** a small mass of gray matter lying between the crura of the mesencephalon. Also known as the *intercrural* or *interpeduncular ganglion*. **Ganglion of Auerbach,** a ganglionic nervous structure in the muscular coat of the intestine.—**Ganglion of Corti,** a plexus of nerve-fibers in the cochlea through which the cochlear nerves pass.—**Ganglion of Remak,** a ganglion in the wall of the auricle of the frog's heart.—**Ganglion of Scarpa.** Same as *facial ganglion*.—**Ganglion of the retina,** a layer of nerve-cells in the retina.—**Hypogastric ganglia,** two ganglia, one on either side of the cervix uteri, connected with the hypogastric and sacral plexuses.—**Intercrural ganglion.** Same as ★*ganglion isthmi*.—**Interpeduncular ganglion.** Same as ★*ganglion isthmi*.—**Meissner's ganglion,** ganglionic nervous tissue in the submucous coat of the intestine.—**Meynert's ganglion.** Same as *basal optic ganglion*.—**Pallial ganglion.** (*a*) In gastropods, one of the ganglia between the cerebral and pedal ganglia, connected with the former by the cerebropleural and with the latter by the pleuropedal connectives. (*b*) In cephalopods, same as *stellate* ★*ganglion* (*b*). **Sensory ganglia,** the nervous structures at the base of the brain which receive the nerves of special sense.—**Stellate ganglion.** (*a*) The first dorsal sympathetic nerve-ganglion. (*b*) In cephalopods, a large flat ganglion lying on the inner surface of the mouth, in front of the gill.—**Sublingual ganglion.** Same as *submaxillary ganglion*.—**Valentin's ganglion,** an occasional rounded swelling on the superior maxillary nerve.—**Walter's ganglion.** Same as *ganglion impar*.

ganglionervous (gang″gli-ō-nèr′vus), *a.* Relat- to the sympathetic nerve. *Buck*, Med. Handbook, I. 141.

ganglioplexus (gang″gli-ō-plek′sus), *n.* [NL.] A plexus of nerve-fibers in a ganglion. *Baldwin*, Dict. of Philos. and Psychol., I. 405.

gang-loom (gang′löm), *n.* A loom which has a number of independent shuttles, as one for narrow fabrics, such as ribbons.

gang-mill (gang′mil), *n.* A milling-cutter built up of several separate cutters, either to form a long parallel mill or, more often, a mill for a complex outline. The use of gang-mills has extended rapidly, since broad pieces of work (for which it would be impossible to make solid cutters to the required profiles) can be thereby machined at one traverse.

gang-plow, *n.*—**Vineyard gang-plow,** a plow which has a frame supported by two wheels and carries three or sometimes four light plows: designed for plowing in vineyards, hop-fields, and orange and other orchards.

gang-press (gang′pres), *n.* A press which employs a gang of dies or punches, all being alike. The perforating-press is a gang-press; also, a press having a series of dies, each different from the others and used to perform a series of operations upon the same blank, each operation serving to bring the object one step nearer to its finished form.

gangrene, *n.*—**Anemic gangrene,** gangrene which results from an obstruction to the blood-supply of the part. *Therapeutic Gazette*, XXVII. 50.—**Decubital gangrene.** Same as *bed-sore*.—**Disseminated cutaneous gangrene,** multiple gangrene of the skin, of neurotic origin.—**Multiple gangrene,** gangrene of several different parts. *Jour. Exper. Med.*, Oct. 1, 1900, p. 107.—**Senile gangrene,** spontaneous gangrene occurring in the aged, due to obstruction to the blood-supply.—**Spontaneous gangrene,** gangrene occurring without injury or other apparent exciting cause. *Jour. Exper. Med.*, Oct. 1, 1900, p. 97.—**Static gangrene,** moist gangrene arising from obstruction to the venous circulation.

gang-road (gang′rōd), *n.* A road which lies along the water-front of a town. [Eng.]

There is no quay room except the *gang-road* along there.
Evidence Hull Docks Commission, p. 52, *N. E. D.*

gang-spill (gang′spil), *n.* An anchor-windlass.

gang-trimmer (gang′trim″èr), *n.* A trimmer employing more than two saws, each saw being suspended upon a swing-frame and all being controlled by levers to enable the operator to use any number or group of saws, within the capacity of the machine, in trimming stock of different lengths. All machines are fitted with automatic feed-chains to bring the stock to the saws.

gangway, *n.* **4.** In *forestry*, the inclined plane up which logs are moved from the water into a sawmill. Also called *jack-ladder*, *log-jack*, *logway*, and *slip*.

gangwayman (gang′wā-man), *n.* A man placed in charge of a ship's gangway when in port.

ganocephalan (gan-ọ̄-sef′a-lan), *a.* and *n.* **I.** *a.* Having the characters of the *Ganocephala.*
II. *n.* One of the *Ganocephala.*

ganodentin (gan-ọ̄-den′tin), *n.* [Gr. γάνος, brightness, + E. *dentin.*] The structureless enamel which coats the teeth of the selachian fishes or sharks.

ganophyllite (ga-nof′i-līt), *n.* [Gr. γάνος, brightness, + φύλλον, leaf, + *-ite*[2]. The name alludes to the luster of the cleavage folia.] A silicate of manganese, aluminium, and alkalis occurring in brown monoclinic crystals, also in foliated masses: found in Sweden.

ganpi (gäm′pē), *n.* [Jap.] A shrub of the family *Daphnaceæ*, *Capura canescens* (*Wikstræmia canescens* of Meisner), native to India, Indo-China, China, and Japan. In Japan it is considered an important fiber-plant and is sometimes cultivated for its bark. This is used either alone or more generally mixed with the barks of the kozo and mitsumata for the manufacture of the tough, thin paper especially valuable in letter-press copying-books.

ganta (gän′tä), *n.* [Philippine Sp., < Bisaya *gantang.*] In the Philippine Islands, a dry measure containing rather less than three quarts; also, a liquid measure containing rather more than three quarts.

Ganymede, *n.* **3.** The third and largest satellite of the planet Jupiter.

gaogao (gou′gou), *n.* [Chamorro name.] In Guam and the Philippines, the starch derived from the tubers of *Tacca pinnatifida*, the arrowroot of the South Sea Islands. See *Tacca.*

gap-bed (gap′bed), *n.* A lathe-bed in which a recess is cut just in front of the head-stock to permit of turning work larger than will swing over the guides.

gap-bridge (gap′brij), *n.* The piece or bridge which closes the gap in a gap-lathe bed. See ★*gap-bed.*

gape-worm (gäp-wėrm), *n.* A nematoid worm, *Syngamus trachealis*, the cause of gapes in fowls.

gap-stick (gap′stik), *n.* A pole placed across the entrance of a sorting-jack to close it when not in use.

gar[3] (gär), *n.* [Also *garr, gaar*; a var. of *gor*, dial. form of *gore*[1].] **1.** Mud; ooze; dirt; slime. [Shetland and Orkney, and north of Scotland.]—**2.** Vegetable slime found adhering to ships' bottoms.

garage (gar′ạ̄j; F. pron. gä-räzh′), *n.* [F. *garage*, keeping under cover, a place for keeping (boats, wagons, automobiles) under cover, < *garer*, keep under cover, keep, guard, var. of OF. *garir*, keep: see *garret.*] A station in which motor-cars can be sheltered, stored, repaired, cleaned, and made ready for use; also, a place of private storage for a motor-car; a stable for motor-cars. [Recent.]

> The club's stewards will take charge of the competing vehicles at the gate of the *garage.*
> *Sci. Amer.*, March 28, 1903, p. 224.

garantee, garanty. Simplified spellings of *guarantee, guaranty.*

garbage-furnace (gär′bạ̄j-fer″nạ̄s), *n.* A destructor; a furnace specially constructed for burning refuse and garbage. When properly designed and managed, such a furnace should need no other fuel than the refuse to be destroyed.

garbage-grease (gär′bạ̄j-grēs), *n.* A tradename for mixed fatty material collected from kitchen sinks, the grease-traps of sewers, etc.

> It is not known that refineries in this country are as yet able to handle what is known as *garbage grease*, as the secret of the trade seems to be held abroad.
> *Census Bulletin* 190, June 16, 1902, p. 5.

garbanzo (gär-bän′thō), *n.* [Sp.: see ★*calavance.*] In Porto Rico and Spanish America generally, the chick-pea, *Cicer arietinum.* See *chick-pea* (with cut).

> Barley, beans, lentils, and *garbanzos* grow very well in the fields in the greatest part of the province [New California].
> *Humboldt*, quoted in Bulletin 2, U. S. Dept. Agr., Div. [Veg. Pathol., 1892, p. 30.

garblage (gär′blạ̄j), *n.* [*garble* + *-age.*] The office or functions of a garbler.

garbling, *n.* **4.** Rubbish found mixed with a cargo which has been stowed in bulk.

garboard (gär′bōrd), *n.* In *ship-building*, one of the planks or plates of the bottom next to the keel on each side; also (in the plural), the whole of the garboard-strakes on both sides, or the part of the bottom surface covered by the garboard-strakes.

> We have to go back to "Valkyrie II." to find a midship section that bears any similarity to the easy bilges and full *garboards* that distinguish "Shamrock III." so sharply from any of her immediate predecessors.
> *Sci. Amer.*, June 27, 1903, p. 480.

garboard-plate (gär′bord-plāt), *n.* In *iron ship-building*, one of the plates of the strake next the keel. See cuts under ★*keel*[1], 2.

gard, *v.* and *n.* A simplified spelling of *guard.*

Gardeau flags. See ★*flag*[4].

garde-du-corps (gärd-dü-kôr′), *n.* [F.] A body-guard; a member of a body-guard.

garde-meuble (gärd-mė′bl), *n.* [F., < *garder*, keep, + *meubles*, furniture, pl. of *meuble*, < L. *mobilis*, movable: see *mobile.*] A depository or museum in which valuable furniture, tapestries, and the like are kept.

garden. I. *n.*—**Formal garden,** a pleasure-ground laid out according to the principles of formal gardening. See *formal* ★*gardening.* **Garden husbandry.** (*b*) Farming carried on with as much care and neatness as gardening. **Rock garden,** a garden, particularly a division of a botanic garden, adapted to the growth of alpine plants, succulents, and other plants fond of dry and rocky situations; a scientific rockery.—**The Garden,** the school of Epicurus, who taught in a garden. *N. E. D.*—**Winter garden,** a conservatory or greenhouse so arranged as to serve as a place of resort, with space for tables and seats.
II. *a.* **2.** Common; ordinary: as, a *garden* hen; *garden* proceedings. [Slang.]—**Garden architecture.** See ★*architecture.*

garden-apple (gär′dn-ap″l), *n.* A name rarely used for the paradise-apple; a cultural or domestic form of the common apple (*Malus Malus*, var. *paradisiaca*) of very small stature. See ★*doucin* and ★*paradise*, 7.

garden-bed (gär′dn-bed), *n.* **1.** A bed of flowers or vegetables in a garden.—**2.** A name given to certain small areas covered by a number of low parallel, artificial ridges some six or eight inches high and from four to ten feet apart, found in certain parts of the eastern and central United States. Their significance is not known with certainty.

garden-chair (gär′dn-chãr), *n.* A chair for garden use; particularly, a kind of bath-chair (on wheels) for the use of ladies and invalids.

gardencraft (gär′dn-kråft″), *n.* The art of gardening, both from the utilitarian and from the esthetic point of view.

> To enjoy and appreciate the Italian *garden-craft* one must always bear in mind that it is independent of floriculture. *Edith Wharton*, Italian Villas, p. 5.

gardener's-delight (gär′dn-ėrz-dẹ̄-līt″), *n.* Same as ★*gardener's-eye.*

gardener's-eye (gär′dn-ėrz-ī), *n.* The mullen-pink or rose-campion, *Lychnis Coronaria.*

garden-fly (gär′dn-flī), *n.* Any one of several species of the dipterous family *Bibionidæ* which breed commonly in the soil of gardens.

garden-ground (gär′dn-ground), *n.* A plot of ground suitable for or used as a garden.

gardenin (gär′dn-in), *n.* [*Gardenia* + *-in*[2].] A neutral substance, $C_{14}H_{12}O_6$, extracted from dikamali, the resinous exudation of *Gardenia lucida.* It crystallizes in lustrous, deep-yellow needles which melt at 163–164° C.

gardening, *n.*—**Formal gardening,** landscape-gardening of the kind adopted by the Italians of the Renaissance and later by the French in the time of Louis XIV. It is characterized by straight avenues, artificial lakes and grass-plots of geometrical outline, and many terraces, pavilions, and other architectural adornments.

gardenize (gär′dn-īz), *v. t.*; pret. and pp. *gardenized*, ppr. *gardenizing.* [*garden* + *-ize.*] To give a garden-like appearance to; improve by introducing garden features: as, to *gardenize* a public square.

garden-nail (gär′dn-nāl), *n.* A kind of nail used to fasten the branches of trees, vines, etc., to walls; a wall-nail.

garden-plague (gär′dn-plāg), *n.* The goutwort or herb-gerard, *Ægopodium Podagraria.*

garden-plow (gär′dn-plou), *n.* A wheel-hoe.

gardenry (gär′dn-ri), *n.* [*garden* + *-ry.*] The office or work of a gardener; garden-work.

garden-seat (gär′dn-sēt), *n.* **1.** A seat or bench in a garden.—**2.** A name jocosely applied to one of the seats for the accommodation of outside passengers which are arranged in parallel rows across the roof of some British omnibuses, facing in the direction of the journey. See *knifeboard*, 2, for another arrangement.

garden-seated (gär′dn-sē″ted), *a.* Provided on top with ★garden-seats (which see): as, *garden-seated* omnibuses.

garden-truck (gär′dn-truk), *n.* The products of a vegetable-garden, particularly when grown for market.

garden-worm (gär′dn-wėrm), *n.* An earthworm.

gardevin, gardevine (gär′de-vin, -vīn), *n.* [F. *gardevin*, < *garder*, keep, + *vin*, wine.] **1.** A large bottle for holding wine or spirits.—**2.** A cellaret (which see).

gardian, *n.* A simplified spelling of *guardian.*

gare[5] (gär), *n.* [F., < *garer*, keep: see *garage.*] **1.** A dock, basin, or turnout on a river or canal.

> Commander Edwards, R. N., proceeded down the Canal, taking possession of the *gares* and dredgers, while Captain Fitzroy, R. N., occupied Ismailia after slight opposition.
> *Encyc. Brit.*, XXVII. 708.

2. A railway-station.

garfish, *n.* (*c*) In Australasia, (1) *Tylosurus ferox*, called in Sydney 'long Tom'; (2) *Hemiramphus intermedius*; (3) a river-fish, *H. regularis*, of the family *Hemiramphidæ.*

garg. An abbreviation of the Latin *gargarisma*, gargle.

Gargas marl. See ★*marl*[1].

gargoyled (gär′goild), *a.* Ornamented with gargoyles.

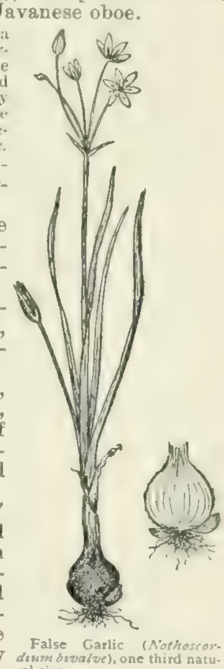
> Parvis and portal bloom like trellised bowers,
> And the vast minster seems a cross of flowers!
> But fiends and dragons on the *gargoyled* eaves
> Watch the dead Christ between the living thieves.
> *Longfellow*, in trans., Divine Comedy, I. Sonnet ii.

garial, *n.* Same as *gharrial* and *gavial.*

garigue, *n.* See ★*garrigue.*

garinding (ga-rin′ding), *n.* [Javanese and Malay *garinding.*] A Javanese oboe.

garlic, *n.*—**False garlic,** a liliaceous plant, *Nothoscordium bivalve*, found in the southern United States and Mexico. The genus is closely related to *Allium*, but is free from the alliaceous odor. Sometimes called *yellow false garlic.*


False Garlic (*Nothoscordium bivalve*), one third natural size.

garlic-mustard (gär′lik-mus″tạ̈rd), *n.* See *mustard.*

garlic-shrub, *n.* **2.** The guinea-hen weed, *Petiveria alliacea.* See *Petiveria.*

garlic-snail (gär′lik-snāl), *n.* *Helix alliaria*, a snail that emits a garlic-like odor.

garlic-tree (gär′lik-trē), *n.* In the West Indies, *Cratæva Tapia*, one of the trees known as *garlic pear.* See *pear*[1] and *Cratæva.*

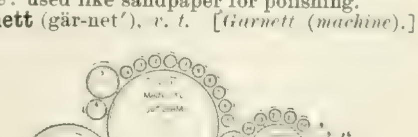
Garmannia (gar man′iạ̈), *n.* [NL., named for Samuel *Garman*, an American ichthyologist.] A genus of small gobies found in the Panama region, having the anterior half of the body naked and the posterior with large scales. The species is *G. paradoxa.*

garn (gärn), *n.* A dialectic form of *yarn.* [North. Eng.]

garnet[1], *n.*—**Alizarin garnet,** a mordant dyestuff related to anthraquinone, prepared by the reduction of *a*-nitro-alizarin. It produces bluish reds with metallic mordants. It is used chiefly in calico-printing and wool-dyeing.—**Carminaph garnet.** Same as *alpha-naphthylamine* ★*red.*

garnet-paper (gär′net-pā″pėr), *n.* Paper coated with finely crushed garnets held by glue: used like sandpaper for polishing.

garnett (gär-net′), *v. t.* [*Garnett* (*machine*).]



Garnett Machine
1, main cylinder; 2, doffer; 3, fancy; 4, fancy stripper; 5-14, workers; 15, licker-in; 16, tumbler; 17-19, metallic feed-rolls; 24, breast-workers; 25, 26, fluted feed-rolls.

To open and card woolen yarn waste, shoddy, etc., on a Garnett machine.

garnet-tackle (gär′net-tak″l), *n.* A purchase rigged on the mainstay and used for taking in and hoisting out cargo.

garnett-tooth (gär-net'töth), *n.* A form of saw-tooth cut in a steel band designed to be wound on the cylinders or rollers of a Garnett machine, used for carding thread-waste, shoddy, etc. *Nasmith*, Cotton Spinning, p. 132.

garnetz (gär'nets), *n.* [G. *garnetz*, < Russ. *garnetsŭ*.] A Russian dry measure equal to nearly three eighths of a United States peck. *C. Hering*, Conversion Tables, p. 55.

garnishry (gär'nish-ri), *n.* [*garnish* + *-ry*.] Ornaments; adornments; garnishing.

> Herdsmen's souls
> Of ancient times, whose eyes, calm as their flocks,
> Saw in the stars mere *garnishry* of heaven.
> *Browning*, Paracelsus, iii. 183.

garr, *n.* See ★*gar*³.

garrigue (gä-rēg'), *n.* [Southern F., < Pr. *garriga* = Cat. *garriga*, < Pr. *garrics*, OF. *jarris*, Cat. *garrig*, the holm-oak or ilex.] In the south of France, a tract of waste land covered with the holm-oak, *Quercus Ilex*, and the Aleppo pine, *Pinus hierosolymitana*, and other scrub growth, and having a calcareous soil.

> Often upon uncultivated lands, there called the *garrigues*, are seen long trains of ants forming two continuous lines hurrying in opposite directions, one going away from the nest, the other toward it.
> *Smithsonian Rep.*, 1896, p. 414.

garrison-hold (gar'i-sn-hōld), *n.* Possession of a place by garrisoning it.

garrison-town (gar'i-sn-toun), *n.* A town in which a garrison is maintained.

garrupa, *n.*—**Red garrupa**, *Sebastodes caurinus*, a scorpænoid fish found from Puget Sound to Sitka.

garter, *n.* **8.** *pl.* Leg-irons or shackles. [Sailors' slang.]

gartering (gär'tèr-ing), *n.* A narrow fabric, as webbing, from which garters are made.

garter-robes (gär'tèr-rōbz), *n.* The robes proper to be worn by Knights of the Garter.

garua (gä-rō'ä), *n.* [Peruvian Sp.] The heavy fog along the coast of Peru on which plants depend for their moisture. It prevails from May to October up to a height of a hundred feet.

Garzonidæ (gär-zon'i-dē), *n. pl.* [*Garzonia*, the type genus, + *-idæ*.] A family of extinct marsupial mammals, of small size, which have no conspicuous diastema in the tooth series, and two or three of the premolars with double roots. *Ameghino*, 1891.

gas, *n.* **6.** Specifically, nitrous-oxid gas when used to produce anæsthesia, most commonly by dentists.—**Clayton gas**, a mixture of sulphurous acid and other sulphur-oxid gases employed in disinfecting a ship's hold and clearing it of rats.—**Dowson gas**, combustible gas made by continuously passing steam mixed with air through red-hot anthracite or coke, the ignition of which is maintained by the supply of air: a kind of water-gas, which has been much used in gas-engines. *W. L. Dibdin*, Public Lighting, p. 323.—**Gas equation, spectrum.** See ★*equation*, ★*spectrum*.—**Generator gas**, a mixture of gases intended for use as fuel, made from small coal, lignite, peat, sawdust, or other cheap forms of solid fuel, either by partial combustion with limited supply of air (in this case consisting essentially of carbon monoxid and nitrogen), or by such combustion with admission of steam, in which case the mixture, known as water-gas, consists essentially of carbon monoxid, carbon dioxid, hydrogen, and nitrogen. See *gaseous* ★*fuel*.—**Ground gases**, gases of all kinds contained within the earth, as distinguished from the atmosphere outside its surface. *Van Hise*, U. S. Geol. Surv. Monographs, XLVII. 58.—**Hydrocarbon gas**, the mixed gases generated by the action of steam, or of steam and air, on substances which contain carbon and hydrogen, such as tar, oils, shale, etc. It contains large quantities of carbon monoxid, together with hydrogen and a number of the lower members of various hydrocarbon series.—**Ideal gas**, in *thermodynamics*, a gas which exactly conforms to Boyle's law, that is, which neither absorbs nor gives up heat during free expansion, and the internal energy of which is a function of the temperature alone. Also called a *perfect gas*. These conditions are not rigorously fulfilled in the case of any actual known gas.—**Irrespirable gas**, any gas the inhalation of which gives rise to laryngeal spasm.—**Mond gas**, generator gas prepared by one of the many special arrangements proposed for this purpose. *Nature*, Feb. 12, 1903, p. 354.—**Naphtha gas**, illuminating-gas made from or carbureted by naphtha, usually petroleum naphtha.—**Pan gas**, in the manufacture of carbonate of soda by the Leblanc process, the gas (mainly hydrochloric acid) given off from the cast-iron pans in which the first action of sulphuric acid on common salt is brought about. This gas is carried to condensers, in which it is absorbed by water, furnishing the liquid hydrochloric acid of commerce.—**Pintsch gas**, an oil-gas obtained by introducing the vapors from heated mineral oil (shale-oil or petroleum) into a retort containing loosely stacked fire-brick and kept at a cherry-red heat. The gases produced are cooled and passed through a washer containing water to separate tar, and are compressed into steel cylinders for transportation. The mixture contains a large proportion of unsaturated hydrocarbons, and hence has high illuminating power. It has been much used for lighting floating buoys, lighthouses, and especially railroad-cars. Several other arrangements for making oil-gas have been patented.—**Pit gas**, a miners' name for gaseous methane (CH_4), as it occurs in bituminous coal-mines. Same as *fire-damp*.—**Power gas**, gas used as a fuel for the generation of power; particularly, gas used as a fuel in internal-combustion engines.—**Producer gas**, a gas generated in a producer by blowing a jet of steam through an incandescent bed of coals; a fuel-gas or one rich in carbonic oxid. One pound of water-gas contains about 2,200 B. T. U., and is of about the following composition: CO 27, H_2 12, CH_4 2, C_2H_4 1, CO_2 3, N 55.—**Roaster gas**, in the manufacture of carbonate of soda by the Leblanc process, the gaseous hydrochloric acid which is given off from the brickwork roasters in which is carried out the second stage of the decomposition of common salt by sulphuric acid: distinguished from *pan* ★*gas*, which is given off at a lower temperature in the first stage of the decomposition in pans, usually of cast-iron.

gas, *v. t.* **3.** To treat with a gas or expose to the action of a gas, as is done with slaked lime in the manufacture of bleaching-powder. *G. Lunge*, Sulphuric Acid, III. 456.—**4.** To overcome or poison by means of the inhalation of gas.

gas-analysis (gas'a-nal″i-sis), *n.* In *chem.*, the analysis of substances in the gaseous state, in which quantitative determinations are chiefly made by volume, with the necessary attention to conditions of pressure and temperature.

gas-bacillus (gas'ba-sil″us), *n.* A species of *Bacillus* (*B. aërogenes capsulatus*) found by Welch in the blood-vessels of a patient with thoracic aneurism. It forms gas in culture-media.

gas-bath (gas'bȧth), *n.* In *chem.*, a bath for the application of regulated temperature, either by an atmosphere of heated gas or by gas-burners.

gas-blast (gas'blȧst), *n.* A gas fire which is forced by an air-blast.

gas-bottle (gas'bot″l), *n.* **1.** A retort.—**2.** A cylindrical vessel of iron or steel for holding gases under pressure. Carbon dioxid, nitrous oxid, ammonia, chlorin, and other gases are sold in such containers. A needle-valve controls the release of the gas.

gas-box (gas'boks), *n.* The passage or chamber, in an internal-combustion engine, between the mixing-chamber and the admission-port.

gas-burette (gas'bū-ret″), *n.* In *chem.*, a graduated glass vessel in which gases may be measured before or after treatment with chemical reagents in the course of analysis.

gas-calorimeter (gas'kal-ō-rim″e-tèr), *n.* An apparatus for finding the heat-value of a known quantity of gas; an apparatus for measuring the amount of heat a quantity of gas gives off when burned. See ★*calorimeter*.

gas-cap (gas'kap), *n.* In *elect.*, the cover of the inner globe of an inclosed arc-lamp, which protects the carbons from rapid combustion by reducing the access of air.

gas-cavity (gas'kav″i-ti), *n.* Same as *gas-pore*.

gas-chamber (gas'chām″bèr), *n.* A device used in microscopy for studying organisms under the influence of gases.

gas-coke (gas'kōk), *n.* Same as *gas-carbon*.

Gascon, *n.* **3.** [*l. c.*] The common saurel or horse-mackerel, *Trachurus trachurus*.

gas-conductor (gas'kon-duk″tor), *n.* Any pipe for conducting gases or vapors: used specifically for the pipe leading from the mouth of a blast-furnace to the stoves.

Gasconism (gas'kon-izm), *n.* [*Gascon* + *-ism*.] A peculiarity of speech, manner, or character of the Gascons; a spirit of boastfulness or bravado.

gas-cyst (gas'sist), *n.* A cyst containing gas, the product usually of a certain species of bacillus. *Jour. Exper. Med.*, Oct. 25, 1900, p. 139.

gas-detector (gas'dē-tek″tor), *n.* An apparatus intended to give warning of the presence of fire-damp or dangerous gases in a mine.

gas-distributer (gas'dis-trib″ū-tèr), *n.* A piece of apparatus used in chemical laboratories, consisting of a central hollow block of brass with several stop-cocks, one for the admission of common illuminating-gas employed for heating purposes, and two, three, or more by which this gas may be carried off to as many different lamps or burners.

gas-fired (gas'fīrd), *a.* Heated by combustion of gaseous fuel: as, a *gas-fired* boiler, a *gas-fired* furnace, etc. *Groves and Thorp*, Chem. Technol., I. 539.

gas-firing (gas'fīr″ing), *n.* A method of firing a furnace in which a gas or a liquid that has been vaporized is used as a fuel.

gas-fitter, *n.*—**Gas-fitter's tongs**, pipe-tongs.

gas-fitting (gas'fit″ing), *n.* **1.** The occupation of a gas-fitter.—**2.** *pl.* The gas-fixtures and other appliances required in equipping a building for the use of illuminating-gas; also, the fittings for gas-pipes.

gas-forge (gas'forj), *n.* A small steel frame inclosing fire-brick, of various shapes, and arranged with either a hearth on which the flames play or a narrow slot through which the flames pass in a thin sheet. It is used in annealing rods, forging cutlery, brazing small sheets of metal, and heating lathe-tools preparatory to hardening them.

gas-furnace, *n.* **1.** The name is now applied to many different types of forges, ovens, and furnaces heated by natural gas, water-gas, or generator gas, and used in assaying, annealing, brazing, carbonizing, enameling, forging, japanning, melting, soldering, tempering, or welding metals, and also in warming buildings. Gas-furnaces are named from the work for which they are used: as the *annealing gas-furnace*, the *brazing gas-furnace*, etc. They consist commonly of a steel frame or box, lined with fire-brick or other refractory material, and one or more gas-burners which deliver the gas, mixed with air, under the pressure of an air-blast.

gas-generator (gas'gen-ē-rā-tor), *n.* **1.** A gas-producer; a gas-retort; an apparatus for manufacturing gas either by distillation, as in a retort, or by separation, as in a producer, or by a chemical process, as in making hydrogen by mixing zinc and sulphuric acid, thus forming zinc sulphate and liberating hydrogen gas. See ★*gas-producer*, 1.—**2.** An apparatus used in chemical laboratories to furnish a particular gas by the action of some liquid reagent upon a solid, so arranged that when the gas is no longer required its outflow may be cut off by a stop-cock, and its tension then serves to force the liquid out of contact with the solid material, thus arresting the generation of gas until it is again needed.—**Babo's gas-generator**, a simple instrument for intermittently generating gases, as carbon dioxid, hydrogen sulphid, etc. By inclining the apparatus, acid or other liquid contained in one bulb is allowed to flow into another bulb containing the chemical on which it is to act. When gas is no longer needed, the instrument is returned to its normal position.—**Kipp's gas-generator**, a piece of apparatus used in chemical laboratories to furnish carbon dioxid, sulphureted hydrogen, or other gas in limited quantity when needed, without waste of material when the gas is not being drawn off. It consists of three glass globes placed vertically one over another, and having a funnel-tube which runs from the uppermost to the lowest of the three. The solid material to be acted upon is placed in the middle globe, the dilute acid to act upon it in the uppermost one, and the lowest serves to collect the spent liquor to be from time to time removed.

gas-grate (gas'grāt), *n.* A gas-stove burner having branches, or bars like those of a grate, with many small burners. It is used in water-heaters, cake-griddles, etc.

gas-harmonicon (gas'här-mon″i-kon), *n.* Same as *pyrophone*.

gashgabbit (gash'gab″it), *a.* Having a projecting chin. [Scotland.]

gas-holder, *n.* **2.** A vessel of metal or glass, used in chemical laboratories for the collection and storage of gases.—**Mitscherlich's gas-holder**, a glass vessel closed at top and bottom with appropriate stoppers. The mouthpiece carries an exit-tube and a funnel-tube which reaches to the bottom. When filled with water, the upper stop-cocks remaining closed, the tubulus at the bottom may be opened without the water running out. Gas when introduced displaces the water. When the gas is collected the lower tube is closed and pressure is exerted on the interior by pouring water into the funnel-tube. The gas may then be drawn as desired.

gasket (gas'ket), *v. t.* [*gasket*, *n.*] To fasten with gaskets, as a sail to a yard.

gas-kiln (gas'kil), *n.* An oven or kiln which uses gas as a fuel.

gaskin (gas'kin), *n.* [Also *gasken*, *gascoign*, *gascoigne*, ult. 'of Gascony,' < OF. *Gascoigne*: see *Gascon*.] **1.** The sweet cherry, *Prunus avium*.—**2.** The common gooseberry. [Prov. Eng.]—**3.** The hinder part of a horse's thigh, extending from the stifle to the bend of the hock.

gas-lamp, *n.*—**Incandescent gas-lamp**, any form of gas- or gasolene-burner combined with a mantle from the incandescence of which light is obtained.

gas-log (gas'log), *n.* A device resembling a piece (or several pieces) of fire-wood, used in a fireplace in which gas is burned.

gas-microscope (gas'mī″krō-skōp), *n.* Same as *oxyhydrogen microscope*.

gasmobile (gas'mō-bil), *n.* A trade-name of a form of motor-car in which gasolene is used as a source of motive power in an internal-combustion motor.

gas-motor (gas'mō″tor), *n.* A motor or engine in which the piston is moved by the gas or vapor from an ammonia liquor.

gasogenous (ga-soj'e-nus), *a.* [*gas*+*-o-*+*-genous*.] Of or pertaining to a gas, or to the

vapor phase of a substance: as, a *gasogenous* molecule.

There are liquidogenous and *gasogenous* molecules, which co-exist in proportions depending upon the temperature. *Engineering*, July 24, 1903, p. 109.

gasolene, *n.* Its principal hydrocarbon constituents are hexane and heptane, C_6H_{14} and C_7H_{16}, in varying proportions. It boils between 149° and 194° F. and gives off a vapor under atmospheric tension at all temperatures. The vapor of gasolene is 3.05 times as heavy as air. The volatile elements distil off on storage, unless the containing-vessels are very tight. Its calorific power is about 18,000 B. T. U. It is much used in the internal-combustion motors of motor-cars and motor-boats. **Gasolene engine.** Same as ★*gasolene motor.* **Gasolene forge,** a special type of gasolene torch having two flames.—**Gasolene furnace,** a small furnace, usually portable, which burns gasolene. It is used in melting solder, lead, etc., heating rivets and core-ovens, and for other purposes. It is made with vapor-burners and on the general principle of the gasolene torch.—**Gasolene motor,** an internal-combustion motor which uses a mixture of gasolene vapor and air as a source of motive power. See cuts at *internal-combustion* ★*engine.*

gasolier (gas′ō-lēr), *n.* A chandelier in which gas is used.

gasometer, *n.*—**Bunsen's gasometer,** a graduated glass vessel for collecting, storing, and delivering gases. Mercury or water may be used to fill the vessel before the gas is introduced.

gasometrical (gas-ō-met′ri-kal), *a.* Same as *gasometric.*

gas-oxygen (gas′ok′si-jen), *a.* Producing heat by the combustion of a mixture of illuminating-gas and oxygen: as, a *gas-oxygen flame,* a *gas-oxygen blowpipe.* Also known as *oxy-gas* and *oxy-coal-gas.*

The soapstone can be melted in a *gas-oxygen* jet, and very fine fibres are easily drawn out from the clear bead thus obtained. *Nature,* June 9, 1904, p. 132.

gaspereau (gas-pe-rō′), *n.* [Canadian F.; cf. *Gaspereau* (lakes), *Gaspereaux* (village), local names in Canada.] **1.** The common alewife, *Pomolobus pseudoharengus.* [Maine and Canada.]—**2.** A name given in New Brunswick and parts of Canada to the herring, *Clupea vernalis.*

gaspergou (gas-pêr-gö′), *n.* [Origin not ascertained.] The fresh-water drum, *Aplodinotus grunniens.* [Canada.]

Gaspé series. See ★*series.*

gas-pillar (gas′pil″ăr), *n.* The short upright part of a gas-burner to which the burner is fixed.

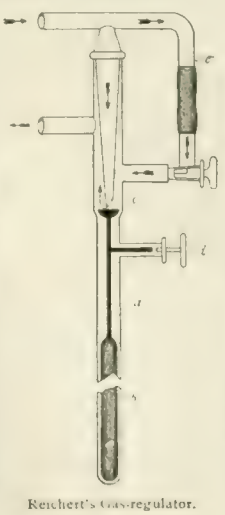
gas-pocket (gas′pok″et), *n.* A quantity of gas collected in a crevice or hollow. Such collections are likely to occur in the crevices in the charge of a blast-furnace, and, if composed of elements in the right proportions, will explode when ignited by the flames.

gas-producer (gas′prō-dū″sèr), *n.* **1.** A furnace in which combustible gas is produced, to be used as fuel in another furnace. Usually the gas is made by distilling carbonic oxid, which is done by heating anthracite or bituminous coal in a grate with the fuel-bed so thick that the upper or freshly charged layers are in an atmosphere of carbonic-acid gas from the lower combustion. When the carbon of these upper layers becomes hot enough for chemical reaction, it unites with CO_2, decomposing it into two parts of carbonic oxid or CO. If steam is blown into the ash-pit of such a producer, the H_2O is decomposed, the hydrogen being mechanically mixed with the carbon monoxid, and the oxygen combining with carbon, to be again broken up, as before, by reaction with more carbon. See *producer* ★*gas.*
2. Same as ★*gas-generator,* 2.

gas-pump (gas′pump), *n.* **1.** A pump used for compressing gas.—**2.** A pump for raising water, or for any other service, the motive power of which is an internal-combustion engine.

gas-radiator (gas′rā″di-ā-tor), *n.* A gas-heater formed of vertical sheet-metal pipes arranged in the form of a steam-radiator.

gas-regulator, *n.*—**Reichert's gas-regulator,** an apparatus for regulating the flow of gas: used in connection with an oven whose temperature is to be kept constant, such as an incubator, a drying-oven, etc.; a form of thermostat. The instrument consists of a glass tube, *a*, of narrow bore, blown into a bulb, *b*, at one end and having one or more lateral tubes sealed to it near the other end. Mercury fills the bulb and part of the stem. When expanded by heat it partly closes the orifice, *c*, through which the gas passes. The extent to which this can occur is controlled by the side adjusting-screw, *d*. A by-pass, *e*, supplies enough gas, at all times, to keep a small flame at the burner, under the oven.



Reichert's Gas-regulator.

gas-ring (gas′ring), *n.* A work-bench gasolene heating-burner in which the jets of flame are arranged in a circle; a ring burner.

gas-scale (gas′skāl), *n.* The scale of a gas-thermometer. *Nature,* April 24, 1902, p. 604.

Gassendist (ga-sen′dist), *n.* [*Gassendi* + *-ist.*] A follower or supporter of Gassendi, a French metaphysician (1592–1655) who defended Epicureanism.

gasser (gas′èr), *n.* **1.** One who is engaged in gassing lace, cotton, yarn, etc., in order to remove the hairy filaments. See *gassing* and *gassing-frame.*—**2.** One who 'gasses,' or talks in an idle and empty manner. [Slang.]

Gasserian artery. See ★*artery.*

gassing, *n.* **3.** The fumigating of fruit-trees by means of hydrocyanic-acid gas, to destroy insects. [Colloq.]

Scale insect enemies of citrus trees are controlled in two ways: either by spraying the infested plants with some liquid insecticide or by subjecting them to the fumes of hydrocyanic-acid gas, commonly designated as "*gassing.*" *Yearbook U. S. Dept. Agr.,* 1900, p. 254.

4. The evolution of gas from the plates of a storage or secondary cell.

Gassiot's wheel. See ★*wheel.*

gas-spurt (gas′spèrt), *n.* A small raised heap occurring on the surfaces of some strata. It is conjectured to be due to the escape of gas from decomposing organic matter in the original sand or mud before complete solidification. *Geikie,* Text-book of Geol. (4th ed.), p. 645.

gaster[2] (gas′tèr), *n.* **2.** In certain hymenopterous insects, such as ants (*Formicidæ*), the abdomen exclusive of the stem, or pedicel.

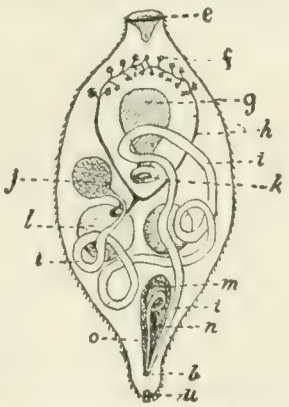
gasterasthenia (gas″tèr-as-thē′ni-ä), *n.* [NL., < Gr. γαστήρ, stomach, + ἀσθένεια, weakness.] Muscular or functional weakness of the stomach.

gasterocomid (gas-te-rok′ō-mid), *n.* A member of the family *Gasterocomidæ.*

Gasteropelecus (gas″te-rō-pel′e-kus), *n.* [NL., < Gr. γαστήρ, belly, + πέλεκυς, a two-edged ax.] A generic name of certain carcinoid fishes of South America, notably *G. maculatus.*

Gasterostomatidæ (gas-te-ros-tō-mat′i-dē), *n. pl.* [NL., < ✱*Gasterostoma*(*t-*), assumed form of *Gasterostomum,* + *-idæ.*] A family of malacotylean trematodes, having the anterior sucker only, the mouth on the ventral surface but not in the sucker, and the genital opening terminal. They are parasitic in the alimentary canal of fishes, and the cercaria is known as *Bucephalus. Gasterostomum* is the typical genus.

Gasterostomum (gas-te-ros′tō-mum), *n.* [NL., < Gr. γαστηρ, stomach, + στόμα, mouth.] The typical genus of the family *Gasterostomatidæ. G. fimbriatum* is parasitic in the perch *Perca fluviatilis.* Its eggs give rise to larvæ which make their way into the liver or gonad of *Unio* or *Anodonta,* destroying by their growth the reproductive gland. In the sporocysts formed in the mollusk arise the cercariæ known as *Bucephalus* (which see). *G. armatum* is parasitic in *Cottus scorpio.* *Von Siebold.*



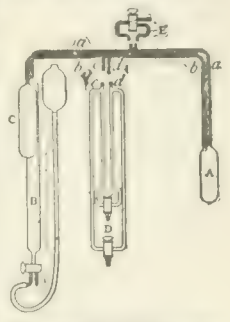
Gasterostomum armatum, from the intestine of *Cottus scorpio.* Ventral view (partly after Molin, partly after Levinsen).

b, genital pore; *e*, anterior sucker; *f*, vitellarium; *g*, simple sac-like intestine; *h*, the left vitelline duct, which unites with its fellow, and opens by a median duct into the gonoduct; *i*, uterus; *j*, germarium; *k*, mouth, which has a position unique among the *Trematoda*, nearly in the middle of the ventral surface; *l*, the right testis; *m*, seminal vesicle; *n*, cirrus sac; *o*, cirrus or penis; *u*, excretory pore. (From Lankester's "Zoology.")

gasterotrichan (gas-te-rot′ri-kan), *a.* and *n.* Same as ★*gastrotrichan.*

gasterotrichous (gas-te-rot′ri-kus), *a.* Same as *gastrotrichous.*

gas-thermometer (gas′thèr-mom″e-tèr), *n.* A thermometer in which the variation of volume or tension of a fixed quantity of dry gas indicates the temperature of the latter. Hydrogen, oxygen, nitrogen, and carbonic-acid gas-thermometers have been employed. The hydrogen gas-thermometer is considered as the normal, but all are reduced to the ideal gas-thermometer by theoretical formulas. **Compensated constant-pressure gas-thermometer,** a gas-thermometer by means of which the volume of gas at different temperatures is determined under constant pressure; specifically, that devised by Callendar in 1887. "The instrument consists of two parts—E, a burette connected by the capillary tube *a* with the thermometer-bulb A; and a bulb, C, also sealed to a capillary tube, *b*, which is of the same dimensions as, and is bent similarly to, *a*. The two parts of the instrument are connected, at *c* and *d*, to the two limbs of the differential manometer D. The readings are taken by measuring the volume of the gas, introduced through E, in the burette after adjusting the mercury till the pressure in the two parts of the apparatus, as indicated by the differential manometer, is equal." *M. W. Travers,* Exper. Study of Gases, p. 151.



Compensated constant-pressure gas-thermometer. (From Travers's Study of Gases.)

gas-thread (gas′thred), *n.* A standard form of thread used on iron and brass tubes. It is finer than the standard bolt-thread and has a taper of 1 in 32 to the axis of the tube.

gas-tip (gas′tip), *n.* A perforated top or cap of lava or metal fixed to a gas-burner, through which the gas escapes as it burns, the shape of the opening in the tip governing the shape of the flame.

gastliness, *n.* A simplified spelling of *ghastliness.*

gastly, *a.* and *adv.* A simplified spelling of *ghastly.*

Gastornithidæ (gas-tôr-nith′i-de), *n. pl.* [NL., < *Gastornis* (*-ornith-*) + *-idæ.*] A family of extinct gigantic birds, indicated by bones from the Eocene of France: sometimes considered as forming an order, the *Gastornithes.* The members of the group are believed to be more or less nearly related to the ducks and geese.

gastradenitis (gas″tra-de-nī′tis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + ἀδήν, gland, + *-itis.*] Inflammation of the glands of the stomach, especially when caused by acute poisoning with arsenic or phosphorus.

gastræal, gastreal (gas-trē′al), *a.* [*gastræa* + *-al*[1].] Relating or pertaining to the gastræa stage of the embryo.

The comparative embryology of this [cœlom] cavity shows that originally in the most archaic vertebrates it was formed by the outgrowth of diverticula from the primitive *gastræal* cavity. *Encyc. Brit.,* XXV. 397.

gastralium (gas-trā′li-um), *n.*; pl. *gastralia* (-ä). [NL., < *gastralis,* gastral.] Same as ★*autogastralium.*

gastrectasia (gas-trek-tā′si-ä), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + ἔκτασις, extension.] Dilatation of the stomach. Also called *gastrectasis.*

gastrectasis (gas-trek′ta-sis), *n.* [NL.] Same as ★*gastrectasia.*

gastreum, *n.* Same as *gastræum.*

gastric, *a.*—**Gastric mill,** the thickened and calcified armature of the chitinous lining of the cardiac division of the stomach in certain *Crustacea.* In the crawfish, and in most of the higher *Crustacea,* it consists of a complex chitinous framework which carries a median and two lateral projections furnished with muscles for converging them upon the food and completing its mastication. *Parker and Haswell,* Zoology, I. 547.—**Gastric neurasthenia, pouch, tetany.** See ★*neurasthenia,* etc.

gastricolous (gas-trik′ō-lus), *a.* [Gr. γαστήρ (γαστρ-), stomach, + L. *colere,* dwell in.] Inhabiting the stomach: said of parasites.

gastriloquial (gas-tri-lō′kwi-al), *a.* [*gastriloquy* + *-al*[1].] Of or pertaining to ventriloquism; ventriloquial.

gastritic (gas-trit′ik), *a.* [*gastrit-is* + *-ic.*] Relating to or affected with gastritis.

gastritis, *n.*—**Arthritic gastritis,** gout of the stomach.—**Atrophic gastritis,** inflammation of the stomach causing atrophy of the secreting glands.—**Catarrhal gastritis.** Same as *gastric* ★*catarrh.* **Follicular gastritis,** inflammation affecting especially the glands of the stomach.—**Glandular gastritis.** Same as *follicular* ★*gastritis.*—**Hypertrophic gastritis,** inflammation of the stomach leading to permanent thickening of the mucous membrane.—**Mycotic gastritis,** inflammation of the stomach caused by the presence of a fungus.—**Phlegmonous gastritis,** an acute and severe form of inflammation involving chiefly the submucous coat of the stomach: often accompanied by the formation of abscesses.

gastro-adenitis (gas″trō-ad-e-nī′tis), *n.* Same as ★*gastradenitis.*

gastro-anastomosis (gas-trō-a-nas-tō-mō'sis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + ἀναστόμωσις, anastomosis.] The establishment of a communication between two portions of the stomach which are separated by a constriction, as in hour-glass stomach.

gastro-arthritis (gas-trō-är-thrī'tis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + ἀρθρῖτις, gout.] Gout of the stomach.

Gastrocampyli (gas-trō-kam'pi-lī), *n. pl.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + καμπύλος, curved.] In Hyatt's classification, that division or suborder of the ammonoid cephalopods in which the siphuncle is situated on the dorsal or concave curvature of the whorls, the shells laterally compressed, involute, and frequently ornamented with spinous processes, the septal sutures not being greatly unlike those of the simpler forms of the goniatites. The division includes only the old genus *Clymenia* and family *Clymenidæ*, both of which have now been considerably subdivided.

gastrocentrous (gas-trō-sen'trus), *a.* [Gr. γαστήρ, belly, + κέντρον, center.] Having vertebral centra formed by the growth of the pair of ossifications, known as interventralia, which are developed on the inferior face of the notochord.

The vertebræ of the Reptilia and those of all other Amniota are *gastrocentrous*.
H. Gadow, Amphibia and Reptiles, p. 282.

Gastrocnemial ridge. See ★*ridge*.

gastrocœle (gas'trō-sēl), *n.* [Gr. γαστήρ (γαστρ-), stomach, + κοῖλος, hollow.] In *embryol.*, the cavity of the archenteron in the gastrula; the primitive digestive cavity of the young embryo.

gastrocolostomy (gas″trō-ko-los'tō-mi), *n.* [Gr. γαστήρ (γαστρ-), stomach, + κόλον, colon, + στόμα, mouth.] Establishment by operation of a communication between the colon and the stomach.

gastrodialysis (gas″trō-dī-al'i-sis), *n.* [Gr. γαστήρ (γαστρ-), stomach, + διάλυσις, separation.] Sloughing of the mucous membrane of the stomach.

gastrodiaphane (gas-trō-dī'a-fān), *n.* [Gr. γαστήρ (γαστρ-), stomach, + διαφανής, transparent: see *diaphanous*.] An instrument carrying an electric light, used in ★gastrodiaphany (which see).

gastrodiaphany (gas″trō-dī-af'a-ni), *n.* [As *gastrodiaphane* + -*y*[3].] Examination of the stomach by means of transillumination. A tube to which an electric light is attached (called a gastrodiaphane) is passed into the stomach, and the abdominal wall is then inspected in a dark room. *Nature*, Aug. 4, 1904, p. 316.

gastrodidymus (gas-trō-did'i-mus), *n.*; pl. *gastrodidymi* (-mī). [NL., < Gr. γαστήρ (γαστρ-), stomach, + δίδυμος, twin.] In *teratol.*, a double monster joined in the abdominal region.

gastrodisc (gas'trō-disk), *n.* [Gr. γαστήρ (γαστρ-), stomach, + δίσκος, a disk.] The endoderm of the vertebrate embryo in the discogastrula stage, that is, when both the ectoderm and the underlying endoderm are spread out on the yolk in the form of a disk.

gastroduodenostomy (gas″trō-dū″ō-dē-nos'tō-mi), *n.* [Gr. γαστήρ (γαστρ-), stomach, + NL. *duodenum* + Gr. στόμα, mouth.] Establishment by operation of a communication between the stomach and the duodenum elsewhere than at the pylorus. *Lancet*, Aug. 29, 1903, p. 591.

gastro-enteralgia (gas″trō-en-te-ral'ji-ä), *n.* [Gr. γαστήρ (γαστρ-), stomach, + ἔντερον, intestine, + ἄλγος, pain.] Pain in both stomach and intestines.

gastro-enterocolitis (gas″trō-en″te-rō-kō-lī'tis), *n.* [Gr. γαστήρ (γαστρ-), stomach, + ἔντερον, intestine, + κόλον, colon, + -*itis*.] Inflammation of both large and small intestines and of the stomach.

gastro-enterostomy (gas″trō-en-te-ros'tō-mi), *n.* [Gr. γαστήρ (γαστρ-), stomach, + ἔντερον, intestine, + στόμα, mouth.] The establishment of a communication between the stomach and some portion of the intestine which is more or less distant from the pylorus.

Eight cases were operated on for hemorrhage; in one an ulcer was excised and the patient died on the eighth day; in one an ulcer on the posterior surface was excised and a *gastroenterostomy* performed, the patient recovering; in six *gastroenterostomy* alone was performed and all recovered. *Med. Record*, Feb. 28, 1903, p. 343.

Gastro-epiploic arteries, two arteries in the wall of the stomach, the right a branch of the hepatic artery, the left a branch of the splenic: their terminal branches anastomose.—**Gastro-epiploic glands.** See ★*gland*.

gastrogastrostomy (gas″trō-gas-tros'tō-mi), *n.* [Gr. γαστήρ (γαστρ-), stomach, + γαστήρ (γαστρ-), stomach, + στόμα, mouth.] Same as ★*gastro-anastomosis*.

gastrogenital (gas-trō-jen'i-tal), *a.* [Gr. γαστήρ (γαστρ-), stomach, + NL. *genitalis*, genital.] Having the reproductive organs on the radial canals, as in the *Leptomedusæ*. *Proc. Zool. Soc. London*, 1903, II. 173.

gastrograph (gas'trō-graf), *n.* [Gr. γαστήρ (γαστρ-), stomach, + γράφειν, write.] A device for recording the movements of the stomach during digestion.

gastrohepatitis (gas″trō-hep-a-tī'tis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + ἧπαρ (ἡπατ-), liver, + -*itis*.] Simultaneous inflammation of both stomach and liver.

gastrohyperneuria (gas″trō-hī-pėr-nū'ri-ä), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + ὑπέρ, over, + νεῦρον, nerve.] Increased activity of the stomach due to disorder of the nerve-supply.

gastrohyponeuria (gas″trō-hī-pō-nū'ri-ä), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + ὑπό, under, + νεῦρον, nerve.] Diminished activity of the stomach due to disorder of the nerve-supply.

gastrohysteropexy (gas″trō-his-tē-rop'ek-si), *n.* [Gr. γαστήρ (γαστρ-), stomach, + ὑστέρα, uterus, + πῆξις, fastening.] Operative fixation of the fundus of the uterus to the anterior abdominal wall, in order to correct a displacement of that organ.

gastro-ileal (gas'trō-il'ē-al), *a.* [Gr. γαστήρ (γαστρ-), stomach, + NL. *ileum* + -*al*.] Of or pertaining to both the stomach and the ileum. **Gastro-ileal folds.** See ★*fold*[1].

gastrojejunostomy (gas″trō-jē-jū-nos'tō-mi), *n.* [Gr. γαστήρ (γαστρ-), stomach, + NL. *jejunum* + Gr. στόμα, mouth.] Establishment of communication between the stomach and some portion of the jejunum.

The stomach was enormously dilated and contained a large quantity of fluid. Anterior *gastrojejunostomy* was the operation selected. *Lancet*, Aug. 29, 1903, p. 591.

Gastrolepidotidæ (gas″trō-lep-i-dot'i-dē), *n. pl.* [NL., < **Gastrolepidotus*, < Gr. γαστήρ, belly, + λεπιδωτός, scaled, scaly: see ★*Lepidotus*.] A family of stegocephalian amphibians having fully ossified vertebræ and basioccipitals, a ventral armor of elongated bony scutes, and teeth with infolded layers of dentin. The genera (*Anthracosaurus*, *Loxomma*, etc.) are of Carboniferous and Permian age.

gastrolienal (gas″trō-lī-ē'nal), *a.* [Gr. γαστήρ (γαστρ-), stomach, + L. *lien*, spleen, + -*al*[1].] Same as *gastrosplenic*.

gastrolithiasis (gas″trō-li-thī'a-sis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + λίθος, stone, + -*iasis*.] The formation of gastroliths and the morbid symptoms occasioned by their presence.

gastrolobin (gas-trō-lō'bin), *n.* [*Gastrolobium* + -*in*[2].] A dark-colored glucoside contained in the leaves and young shoots of *Gastrolobium bilobum*.

gastrologer (gas-trol'ō-jėr), *n.* [*gastrolog-y* + -*er*[2].] One who is versed in gastrology.

gastrological (gas-trō-loj'i-kal), *a.* Of or pertaining to the stomach or to the proper supply of its demands or needs.

gastrologist (gas-trol'ō-jist), *n.* [*gastrolog-y* + -*ist*.] 1. One who is versed in gastrology, or skilled in catering to the demands of the stomach.—2. A physician who devotes special attention to the diagnosis and treatment of diseases of the stomach.

gastrology, *n.* 2. The art of cookery or of catering to the demands of the stomach.—3. The scientific study of diseases of the stomach and of their treatment.

gastrolysis (gas-trol'i-sis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + λύσις, loosening.] The act or process of freeing the stomach from abnormal adhesions to adjacent parts.

gastromelus (gas-trom'e-lus), *n.*; pl. *gastromeli* (-lī). [NL., < Gr. γαστήρ (γαστρ-), stomach, + μέλος, limb.] In *teratol.*, a monster which has one or several supernumerary limbs growing from the anterior abdominal wall; a form of epigastrius.

gastromenia (gas-trō-mē'ni-ä), *n.* [Gr. γαστήρ (γαστρ-), stomach, + μῆνες, menses.] Vicarious menstruation from the mucous membrane of the stomach.

gastrometrotomy (gas″trō-mē-trot'ō-mi), *n.* [Gr. γαστήρ (γαστρ-), stomach, + μήτρα, womb, + τομή, section.] Same as *Cæsarean section*.

Gastromycetes (gas-trō-mī-se'tēz), *n. pl.* An incorrect form of *Gasteromycetes*.

gastromycosis (gas-trō-mī-kō'sis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + μύκης, fungus, + -*osis*.] Same as *mycotic* ★*gastritis*.

gastronomous (gas-tron'ō-mus), *a.* Devoted to gastronomy. *N. E. D.*

gastro-œsophageal, *a.* See *gastro-esophageal*.

gastropancreatic (gas'trō-pan-krē-at'ik), *a.* Relating to both the stomach and the pancreas. **Gastropancreatic ligament**, a fold of peritoneum which extends from the pancreas to the pyloric extremity of the stomach.

gastroperiodynia (gas-trō-per-i-ō-din'i-ä), *n.* [Gr. γαστήρ (γαστρ-), stomach, + περίοδος, period, + ὀδύνη, pain.] Intermittent paroxysmal pain at the pit of the stomach.

gastropexy (gas'trō-pek-si), *n.* [Gr. γαστήρ (γαστρ-), stomach, + πῆξις, fastening.] Operative fixation of the stomach to the abdominal wall.

gastrophile (gas'trō-fil), *n.* [Gr. γαστήρ (γαστρ-), stomach, + φίλος, loving.] One who loves good eating and plenty of it.

gastrophilism (gas-trof'i-lizm), *n.* [*gastrophile* + -*ism*.] The love of good eating.

gastrophilist (gas-trof'i-list), *n.* [*gastrophile* + -*ist*.] Same as ★*gastrophile*.

gastrophilite (gas-trof'i-lit), *a.* [*gastrophile* + -*ite*[2].] Fond of gratifying the demands of the stomach.

Gastrophrenic ligament, a fold of peritoneum which extends from the cardiac extremity of the stomach to the diaphragm.

gastrophthisis (gas-trof'thi-sis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + φθίσις, wasting: see *phthisis*.] A cachectic state with emaciation consequent upon disease of the stomach.

gastroplasty (gas'trō-plas-ti), *n.* [Gr. γαστήρ (γαστρ-), stomach, + πλαστός, formed, + -*y*[3].] In *surg.*, an operation designed to restore the normal shape of a dilated or hour-glass stomach or to supply some defect in that organ.

gastroplegia (gas-trō-plē'ji-ä), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + πληγή, stroke.] Paralysis of the walls of the stomach.

gastroplication (gas″trō-plī-kā'shon), *n.* [Gr. γαστήρ (γαστρ-), stomach, + E. *plication*.] In *surg.*, an operation for reducing the capacity of a dilated or sagging stomach by plaiting the wall and retaining the plaits by sutures. *Lancet*, July 18, 1903, p. 149.

gastropodous, *a.* See *gasteropodous*.

gastropore, *n.* 2. In the cœnosteum of the hydrocorallines like *Millepora*, one of the larger, sometimes tabulated tubes of the skeleton which lodge the nutritive polyps.

Gastropsetta (gas-trop-set'ä), *n.* [NL., < Gr. γαστήρ, belly, + ψῆττα, a flounder.] A genus of deep-sea flounders found in the Gulf Stream.

gastroptosis (gas-trop-tō'sis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + πτῶσις, falling.] Downward displacement of the stomach.

gastroschisis (gas-tros'ki-sis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + σχισις, fissure.] Congenital fissure of the abdominal wall.

gastroscope (gas'trō-skōp), *n.* [Gr. γαστήρ (γαστρ-), stomach, + σκοπεῖν, view.] A hollow tube provided with reflecting mirrors and an electric light, which is passed through the esophagus into the stomach in order to enable the operator to inspect the interior of that organ.

gastroscopy, *n.* 2. Inspection of the mucous membrane of the stomach by means of a gastroscope.

gastrosis (gas-trō'sis), *n.* [NL., < Gr. γαστήρ, stomach, + -*osis*.] Any disease of the stomach.

gastrosoph (gas'trō-sof), *n.* [Gr. γαστήρ, stomach, + σοφός, wise.] An epicure; a gourmet.

gastrosophy (gas-tros'ō-fi), *n.* [Gr. γαστήρ (γαστρ-), stomach, + σοφία, wisdom.] The science of good eating.

Coffee-house, what magnificent associations of ideas do you not excite! By you for generations has rolled the never-ceasing flow of wealth. . . . Yet, with the insouciance of a sublime philosophy, your cooks and waiters have never turned away from their works of *gastrosophy* to think of the neighbouring millions.
Blackwood's Mag., XV. 642

gastrostenosis (gas'trō-stē-nō'sis), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + στένωσις, narrowing.] Contraction of the stomach.

gastrosuccorrhœa (gas·trō·suk·ō·rē′ä), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + L. *succus*, juice, + Gr. ῥοία, flowing.] Abnormally abundant secretion of gastric juice.

gastrotheca, *n.* [NL.] See *gasterotheca.*

gastrothoracic (gas·trō·thō·ras′ik), *a.* [Gr. γαστήρ (γαστρ-), stomach, + θώραξ, thorax.] Relating to the thorax and the stomach or abdomen.

gastrotoxin (gas·trō·tok′sin), *n.* [Gr. γαστήρ (γαστρ-), stomach, + E. *toxin.*] A cytotoxin produced by immunization with cells from the mucous membrane of the stomach.

gastrotrichan (gas·trot′ri·kan), *a.* and *n.* [*Gastrotricha* + *-an.*] **I.** *a.* Of or pertaining to the *Gastrotricha.*

II. *n.* A member of the *Gastrotricha.*

gastrotrocha (gas·trot′rō·kä), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + τροχός, a wheel, circle.] The larva of a polychætous annelid having two rings of cilia, with incomplete rings on the ventral surface.

gastrotrochal (gas·trot′rō·kal), *a.* [*gastrotrocha* + *-al*[1].] Of or pertaining to a gastrotrocha.

gastrotympanites (gas″trō·tim·pa·nī′tēz), *n.* [NL., < Gr. γαστήρ (γαστρ-), stomach, + τυμπανίτης, tympanites.] Gaseous distention of the stomach.

gastrozoöid (gas·trō·zō′oid), *n.* [Gr. γαστήρ (γαστρ-), stomach, + ζῷον, animal, + *-oid.*] A nutritive member of a colony of *Hydrozoa,* which is provided with a mouth and stomach-sac: typically present in the sea-ginger, *Millepora alcicornis,* and correlated with *dactylozoöid.* See ★*gonodendron,* with cut.

gastrulate (gas′trō·lāt), *v. i.*; pret. and pp. *gastrulated,* ppr. *gastrulating.* [*gastrula* + *-ate*[2].] To undergo gastrulation; become a gastrula.

gastrulated (gas′trō·lā·ted), *p. a.* [*gastrulate* + *-ed*[2].] Having assumed the gastrula stage, especially when the gastrula is formed by invagination or embole.

gas-tube (gas′tūb), *n.* An instrument for the analysis of gases, particularly illuminating-gas. It has a bulb which contains from 50 to 90 per cent. of the volume of the gas, and the volume of any portion absorbed by the use of a solvent is indicated on the graduated portion.

gas-turbine (gas′tėr″bin), *n.* See ★*turbine.*

gasu-basu (gä′sö·bä′sö), *n.* [E. Indian.] An East Indian plant which possesses local anesthetic properties.

gas-valve (gas′valv), *n.* Any valve for shutting-off or regulating the flow of gas.

gas-volumeter (gas′vol″ū·mē·tėr), *n.* Same as *volumeter. G. Lunge,* Sulphuric Acid, I. 185.

gas-worker (gas′wėr″kėr), *n.* One who is employed in any capacity in the manufacture of gas.

gat[3] (gat), *n.* [A dial. variant of *gate*[1]; cf. E. Fries. and D. *gat,* a hole.] **1.** An opening or passage in a sand-bank; a way from the cliffs to the sea. [Prov. Eng.] *Eng. Dial. Dict.*— **2.** *Naut.,* a channel among shoals.

gata (gä′tä), *n.* [Sp. prop. fem. of *gato,* cat: see *cat.*] A large spotted shark, *Ginglymostoma cirratum* of the West Indies.

gate[1], *n.*—**Bear-trap gate,** a mechanical device for controlling the flow of water, its general outline being similar to the bear-trap of the pioneer hunters and trappers. —**By-pass gate,** a gate or valve placed in an auxiliary by-pass pipe extending around some feature in the main pipe-line, as around a meter or valve.—**Flashing-board gate,** a device by which flashing-boards are held or controlled.

gate[1], *v. t.* **3.** To place (a warp) in a loom ready for weaving.—**4.** To put (a machine, as a loom) in order to do its work properly.

gateado (gä·tä·ä′dō), *n.* [S. Amer. Sp., appar. < Sp. *gateado,* resembling a cat, cat-like, < *gato,* cat.] A tree of the sumac family, *Astronium graveolens,* native to Colombia and Venezuela. It abounds in a glutinous sap which has a nauseating terebinthine odor. Gateado yields a hard, durable, dark-colored cabinet-wood and a bark rich in tannin. Also called *tibigaro.*

gâteau (gä·tō′), *n.* [F., a cake: see *wastel.*] A cake. **Gâteau St. Honoré** or **de Princesse Louise,** a form of puff-paste or sponge-cake filled with Bavarian cream.

gate-box (gāt′boks), *n.* In steam- and water-fittings, a tubular casting, usually larger at the lower end, designed to fit over a buried water-pipe for convenience in reaching a gate or valve in the pipe by means of a long key; a valve-box.

gate-catch (gāt′kach), *n.* A four-pointed metal protuberance on the handle of a riding-crop, used for opening hunting-gates.

gate-faucet (gāt′fâ″set), *n.* A faucet having a gate or valve for stopping the flow of the liquid.

gate-keeper, *n.* **2.** An English collectors' name for an Old World agapetid butterfly, *Satyrus megæra,* a species which occurs throughout Europe and western Asia. Also called the *wall-brown.*

gate-motion (gāt′mō″shon), *n.* A mechanism by which skeins of yarn are easily removed from the swift or fly of a reeling-machine.

gate-night (gāt′nīt), *n.* The night before Hallowe'en, when gates, and other things, are carried off in sport by children. *Dialect Notes,* II. vi. [Local, U. S.]

gate-net (gāt′net), *n.* A poacher's net set in a gateway, for catching hares or rabbits.

gate-nut (gāt′nut), *n.* The nut on the gate or slider of a gate-valve.

gate-penny (gāt′pen′i), *n.* A tribute paid by customary tenants for leave to pass through one or more of their lord's gates.

gate-tender (gāt′ten″dėr), *n.* A gateman.

gate-wheel (gāt′hwēl), *n.* **1.** A wheel in a railroad signal-tower or signal-cabin by which the gates protecting a highway or street which cross over the railroad are operated. *Jour. Brit. Inst. Elect. Engin.,* 1902–03, p. 620.—**2.** A wheel either directly attached to, or geared to, the spindle of a large gate-valve, or to a hydraulic gate, by which the valve or the gate may be opened and closed.

gatha (gä′tä), *n.* [Avestan *gātha* = Skt. *gāthā,* hymn, verse, meter.] One of five metrical sections of the Avesta.

gather, *v. i.* **4.** In *mech.,* to fit into; fit together: used in speaking of the teeth of gears.—**5.** *Naut.,* to overtake another vessel: a vessel is said to *gather on* another when it is overtaking it.

gather-dam (gaᴛʜ′ėr·dam), *n.* A dam erected for the purpose of collecting water; an impounding reservoir.

gathered (gaᴛʜ′ėrd), *p. a.* Suppurating; marked by the formation of pus.

gatherer, *n.* **7.** One of the median, permanent incisors of a horse used to gather or nip off grass in feeding. The four median milk-incisors, two above and two below, are shed by a colt at the age of two or two and one half years and replaced by the permanent incisors. Also called *nipper.*

gathering, *n.* **6.** In *agri.,* plowing back and forth around the crown of an existing ridge of land, thus turning all the furrow-slices inward and increasing the height of the ridge. [Great Britain.]

gathering-cry (gaᴛʜ′ėr·ing·krī), *n.* A slogan; a summons to war.

gathering-hair (gaᴛʜ′ėr·ing·hâr), *n.* One of the soft, flattened, hooked hairs on the tongue of a bee or wasp. *A. S. Packard,* Text-book of Entom., p. 45.

gathering-lime (gaᴛʜ′ėr·ing·līm), *n.* In *tanning,* lime-liquor which is used repeatedly, new lime being added for each lot of skins. *Modern Amer. Tanning,* p. 42.

gathering-machine (gaᴛʜ′ėr·ing·ma·shēn″), *n.* In *bookbinding,* a device for bringing together the signatures which make up a book. It is divided into compartments from which the signatures are taken by means of automatic fingers.

Among late inventions [in bookbinding] are a casting-in machine, for putting the body of a book into its cover, and a *gathering machine.*
Census Bulletin 216 (June 28, 1892), p. 65.

gathering-table (gaᴛʜ′ėr·ing·tā″bl), *n.* In *bookbinding,* a circular revolving gathering-board (which see).

gating (gā′ting), *n.* The college punishment of confining a student within the college gates. See *gate*[1], *v.*, 2. [Eng.]

Drysdale sent out his scout to order his punishment as he might have ordered a waistcoat, . . . and then dismissed punishment and *gating* from his mind.
T. Hughes, Tom Brown at Oxford, I. 197.

gato (gä′tō), *n.* [Sp., a cat: see *cat.*] A small shark, *Mustelus lunulatus,* of the family *Galeidæ:* found on the west coast of Mexico. **Gato bonaci,** *Mustelus fasciatus,* a serranoid fish belonging to the West Indian fauna.

gatter (gat′ėr), *n.* [Origin obscure.] Beer, ale, or other drink. [Slang, Eng.]

Gaudarian (gow·dā′ri·an), *a.* and *n.* [Skt. *Gauḍa,* a district of central Bengal, + *-arian.*] In *geol.,* a division of the Triassic rocks in southern Asia. It constitutes the upper member of the Brahmanian or lowest stage of the Triassic.

Gaudete (gâ·dē′tē), *n.* The third Sunday in Advent: so named from the first word of the introit of the mass of that day, *Gaudete,* "Rejoice ye."

gaultherase (gâl′the·rās), *n.* [*gaulther(in)* + *-ase.*] A glucosidolytic ferment found in wintergreen. It causes the formation of oil of wintergreen from gaultherin.

gaultherilene (gâl·thē′ri·lēn), *n.* [*gaulther(-in)* + *-il* + *-ene.*] A trade-name for a colorless crystalline hydrocarbon contained in oil of wintergreen. It melts at 65.5° C., and may be identical with triacontane, $C_{30}H_{62}$.

gaultherin (gâl′the·rin), *n.* [*Gaultheria* + *-in*[2].] A crystalline glucoside, $C_{14}H_{18}O_8.H_2O$, contained in the bark of *Betula lenta.* It is levorotatory and decomposes at about 120° C.

gauntree, *n.* **3.** A form of traveling crane in which two horizontal girders carry the hoisting-crab which is free to travel along them. The girders are supported at their ends by a braced vertical frame which is borne on wheels at its feet, the wheels running upon a proper track. The traverse of the gauntree as a whole along the rails, and the traverse of the crab at right angles thereto, enable it to command any point in a long rectangular area. See *gauntree* ★*crane.*

Gaurian (gou′ri·an), *a.* [Hind. *Gaur,* Beng. *Gauḍ,* E. *Gaur* or *Gour,* a former city and district of Bengal, < Skt. *Gauḍa,* a district of central Bengal, said to mean 'Sugar-land,' < *gauṛa,* of sugar.] Of or pertaining to Gaur, a former city and district of Bengal; hence, of Bengal and its language. Used only in an extended sense to designate the Bengali, Oriya (Uriya), Hindi, Panjabi, Sindhi, Marathi, and Gujarati languages of India, derived from or cognate with the ancient Sanskrit, to which they bear a relation analogous to that which the Romance languages bear to Latin.

The above examples from English and Assamese show that reversions may take place from inflection to agglutination, which in fact is a general tendency amongst the *Gaurian* (Neo-Sanskritic) tongues of India, and also to a less extent in Italian and other Neo-Latin tongues.
Keane, Ethnology, p. 210.

gaussage (gous′āj), *n.* The numerical value of magnetic flux density or induction expressed in gausses.

gaussivity (gou·siv′i·ti), *n.* The intensity of magnetizing force expressed in gilberts per square centimeter or in gausses.

So μ is the inductivity, and H [= intensity of magnetizing force] the *gaussivity,* C being the line integral of H.
Encyc. Brit., XXXIII. 214.

Gauss's equation, integral. See ★*equation,* ★*integral.*

gauteite (gâ′tē·īt), *n.* [*Gauté,* Bohemia, + *-ite*[2].] In *petrog.,* a fine-grained to aphanitic rock composed of orthoclase and lime-soda feldspars in about equal portions and subordinate amounts of ferromagnesian constituents. It is intermediate in composition between trachyte and andesite: similar to andesite-trachyte, trachydolerite, etc. *Hibsch,* 1897.

gauz, *n.* and *a.* A simplified spelling of *gauze.*

gauze. I. *n.* **3.** In *surg.,* cheese-cloth, impregnated with antiseptic material (such as boric acid, corrosive sublimate, or iodoform), or simply sterilized, employed in dressing wounds.

Cheese cloth is almost universally used at the present for a wound dressing and is known to the profession as *gauze.*
Buck, Med. Handbook, I. 568.

Antiseptic gauze. Same as ★*gauze,* 3.—**Millers' gauze,** bolting-cloth.

II. *a.*—**Gauze silk.** See ★*silk.*

gauze-weaving (gâz′wē″ving), *n.* A form of weaving in which the warp-threads alone intersect and are bound in position by the weft-threads. Sometimes called *leno-weaving.*

gauze-wing (gâz′wing), *n.* Any insect of the old order *Neuroptera* (which see).

gave[2] (gä′vā), *n.* See ★*gabi.*

gavel[1] (gav′el), *v. t.*; pret. and pp. *gaveled, gavelled,* ppr. *gaveling, gavelling.* To partition and distribute (or redistribute) equally (the lands of one deceased) according to the practice of gavelkind. See *gavel*[1], *n.*, and *gavelkind.*

gavialoid (gā·vi·al′oid), *a.* [*gavial* + *-oid.*] Resembling or having the character of a gavial: as, a greatly elongated *gavialoid* rostrum.

gawpy (gâ′pi), *n.* [*gawp* + *-y.*] One who idly stares in silly, open-mouthed wonder; a gaping, staring simpleton.

"They are a terrible set of fellows," he [Carlyle] said, "those open-mouthed wondering *gawpies,* who lodge you for the sake of looking at you: that is horrible."
Carlyle, in Froude, Life of Carlyle, I. 261.

gayatrī (gä′ya·trē″), *n.* [Skt. *gāyatrī,* a meter (esp. that one specified).] A certain verse of

the Rig-Veda (III. lxii. 10) which every Brahman is supposed to repeat mentally in his morning and evening devotions: it is regarded as very sacred. The verse is, in short, 'Let us consider the light of the sun.'

gaye (gä'yā), *n.* [Also *gayé, gadyé, gayi;* native name.] A name applied in Guam to certain sea-beans, especially to *Stizolobium giganteum*, a woody climber with slender glabrous branches, trifoliate leaves, and pale-greenish flowers. The hard brown orbicular seeds are sometimes called *oxeye beans* or, in Spanish, *ojo-de-venado* (buckeye).

Gay-Lussac tower. See ★*tower*[1].

gayong (gä-yong' or gä'yong), *n.* [Bisaya *gayóng*, Tagalog *gáyong*, an oar: cf. Ilocan *gayáng*, a lance.] In the Philippine Islands, an oar used in the native boats.

gay-wings (gā'wingz), *n.* The fringed milkwort, *Polygala paucifolia:* so called from the pair of large, usually pink-purple petals of the aërial flowers.

gaze, *n.*—**At gaze.** (*c*) By sight: said of a dog in hunting.

gazebo, *n.* **2.** Any structure or part of a building which affords or commands an extensive prospect or outlook, as a turret or lantern on the roof of a house, a balcony, a projecting window, or the like.

gazel[1], *n.* **Grant's gazel,** *Gazella granti*, a species common in East Africa, with longer and finer horns than any other member of the genus. It is replaced in Masailand by Thomson's gazelle.—**Soemmering's gazelle,** *G. soemmeringii*, of Somaliland. It is characterized by long ears and massive horns.—**Speke's gazelle,** *G. spekei*, a small, long-haired species, with the skin of the nose very flabby.—**Waller's gazelle.** See ★*gerenuk.*

gazet, *n.* and *v. t.* A simplified spelling of *gazette.*

gazetteer (gaz-e-tēr'), *v. t.* [*gazetteer, n.*] To describe in gazetteers: as, to *gazetteer* a country, city, or locality. *Chambers's Encyc.*

gazzettino (gäd-ze-tē'nō), *n.* [It., dim. of *gazzetta*, a small coin: see *gazette.*] A small Venetian coin struck under the Doge Leonardo Loredano (1501–21).

G. B. An abbreviation of *Great Britain.*

G. B. and I. An abbreviation of *Great Britain and Ireland.*

G. C. An abbreviation (*a*) of *Grand Chancellor;* (*b*) of *Grand Chapter;* (*c*) of *Grand Conductor.*

g. c. f. An abbreviation of *greatest common factor.*

G. C. H. An abbreviation (*a*) of *Grand Cross of the Hanoverian Guelphic Order* or *Grand Cross of Hanover;* (*b*) of *Knight of the Grand Cross of Hanover.*

G. C. I. E. An abbreviation (*a*) of *Grand Cross of the Indian Empire;* (*b*) of *Knight Grand Commander of the Indian Empire.*

G. C. L. H. An abbreviation of *Grand Cross of the Legion of Honor.*

g. c. m. An abbreviation of *greatest common measure.*

g. cm[2]. An abbreviation of *gram-centimeter square:* the c. g. s. unit of moment of inertia.

G. C. M. G. An abbreviation (*a*) of *Grand Cross of St. Michael and St. George;* (*b*) of *Knight of the Grand Cross of St. Michael and St. George.*

G. C. S. I. An abbreviation (*a*) of *Grand Commander of the Star of India;* (*b*) of *Knight Grand Commander of the Star of India.*

G. C. V. O. An abbreviation of *Grand Cross of Royal Victorian Order.*

G. C. Z. or **C. Z.** In *astron.*, abbreviations of *Gould's Cordova Zones*, a series of star-catalogues: sometimes referred to as Z. C. (*Zonæ Cordobenses*).

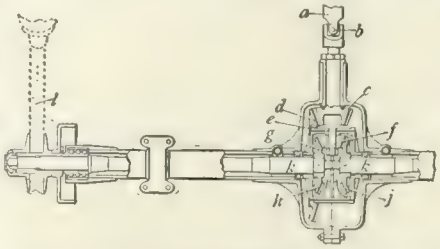
Gd. In *chem.*, a symbol for *gadolinium.*

G. D. An abbreviation (*a*) of *Grand Duchess;* (*b*) *Grand Duke;* (*c*) of *gravimetric density.*

G. E. An abbreviation of *Grand Encampment.*

geanticline (jē-an'ti-klīn), *n.* [Gr. γῆ, earth, + E. *anticline.*] In *geol.*, an anticlinal or arching fold which involves a great thickness of strata and affects a large area; a broad dome formed by the warping of the earth's crust. *Chamberlin and Salisbury*, Geol., I. 481.

gear, *n.* **5.** The diameter of an imaginary wheel whose circumference is equal to the distance traversed by a safety-bicycle during a single revolution of the pedals: as, a 72-inch *gear.* [Colloq.] **Anchor-tripping gear.** Same as *anchor-tripper.*—**Change-speed gear.** See ★*change-speed.*—**Compensating-gear,** a combination of spur- or bevel-gears or both used on motor-vehicles, by which the inequality in length of the paths traversed by the driving-wheels on curves is compensated for, without the slipping of the tires on the ground. One gear, either spur or bevel, is on that part of the axle to which one of the wheels is attached, and another on the other half, the axle being discontinuous: if the two wheels were fastened to a continuous axle slipping would occur. Between these two gears, and meshing with both, is a third gear. The driving force is applied, through the teeth of this third gear, equally on both sides of its axis in straight running, and both wheels move through equal paths. If one wheel seeks to go through a longer or shorter



Compensating-gear

a, shaft-drive from motor in front of vehicle; *b*, universal joint to give flexibility of alinement; *c*, driving bevel-gear on motor-shaft extension; *d*, bevel-gear driven by *c*; *e*, hollow casing bolted to *d*, turning with it and carrying stud *f*; *f*, stud forming axis for compensating-pinion *g*; *g*, compensating pinion carried around bodily by *f*, as *e* revolves with *d*, and driving *a* and *j* without rolling on either when the driving-wheels run over equal distances in one revolution; *h*, *j*, compensating bevel-gears, turning solidly locked with *g*, except when rolling must occur because the axle-end on one side must move forward more or less than the circumference of either wheel in one revolution, by reason of the rolling of the wheels round a curve; *k*, *k'*, axle of driving-wheels, not continuous, but forming two halves meeting between *h* and *j*; *l*, one of the driving-wheels fast on the half-axle *k*; the other wheel is similarly fast on *k'*.

path than the other, the inequality is taken up by a rolling of the third gear upon the toothed surfaces of the other two, and compensated for. If either wheel is of less diameter than the other by reason of wear or the deflation of the pneumatic tire, the compensating effect is continuous, while the propelling effect is equal on each wheel.—**Full gear,** such an arrangement of the valve-gear mechanism as will give the longest period for the admission of steam.—**Half-speed gear,** such an arrangement of the controlling mechanism or of the driving mechanism as will permit a machine to run at about half its full speed.—**Herring-bone gear.** See *spiral* ★*gear* (*b*).—**Joy's gear,** an engine valve-gear for cut-off and reversing in which no eccentric (or only one) is used. The motion for operating the valve is derived from a link, one end of which is attached to the connecting-rod. This link moves a secondary or intermediate link carrying, at one end, a block to which is attached the valve-rod and which slides up and down a slot. This slot is hung on a pin and, by turning it about that pin, the motion of the valve-rod can be varied to give different cut-offs and to make the engine run in either direction. The principal use of this gear has been on marine engines, a few pumping-engines, and fewer locomotives.—**Sliding gear,** a gear which is free to slide axially along a shaft and can hence be engaged or disengaged at will. Such gears, arranged in pairs, are frequently used for changing the speed of automobiles.—**Spiral gear.** (*a*) A toothed wheel in which the axis of each tooth is not a straight line, either parallel to the axis of the wheel, as in spur-gearing, or inclined to and intersecting the axis, as in bevel-gear, but is a helical line, inclined to the axis and not intersecting it. The surfaces of the teeth are made up of helical elements (incorrectly called spirals). Such spiral gears in pairs run very smoothly and quietly, since any one tooth is in contact with its fellow on the other wheel for a considerable angle before passing the line joining the axes, and also after passing it. The two shafts may make any angle with each other up to a right angle. (*b*) A toothed wheel in which the axial lines of any one tooth are made up of two helical lines of equal pitch, one right-handed and one left-handed, which meet at the center of the face or breadth of the toothed surface. Such gears are called *herring-bone gears,* from the V-shape which each tooth receives. In this latter form they can only be used when the shafts are parallel.—**Throw-out gear,** a device for disengaging one piece of mechanism from another; a disengaging gear; specifically, the combination of levers and rods by which, in some forms of marine engine with a single eccentric, the motion of the valve from that eccentric can be reversed and the engine run backward.—**Train of gears,** a set of gear-wheels having at least three gears. See *train of* ★*gearing.* **Trip-valve gear.** See ★*valve-gear.*—**Variable-speed gear,** a gear in which the ratio of the number of turns can be varied within a wide range of speeds.

gear-block (gēr'blok), *n.* A block or pulley used in rigging the running-gear of a vessel.

gear-case (gēr'kās), *n.* A cover or casing placed around gears to keep out dirt and grit, and also to protect the workmen from being caught by the gears and injured.

gearing, *n.*—**Humpage gearing,** a compound bevel-gear drive for effecting a change of angular velocity or of speed of rotation.—**Train of gearing,** a transmission mechanism of toothed wheels in which each wheel is related to that which precedes it and follows it, as a follower and a driver respectively. If the gears are in the same plane, it is a *simple train;* if the driven wheels are not drivers, but are on the shaft of a second wheel which is the driver of the next shaft in the train, it is a *compound train.* Trains of gearing may be used to increase power and reduce speeds, as in cranes, crabs, winches, and motor-cars; or they may increase speed and reduce power, as in clocks and watches. Reversing motions or disengagement devices may be introduced into trains. A transmission from a factory engine to the individual tools is a train of mechanism, but, as gears are seldom used, it is not properly a train of gearing.

gear-plate (gēr'plāt), *n.* In engines, a wrist-plate; a motion-plate.

gear-pump (gēr'pump), *n.* A pump made by using a pair of gears surrounded by a case which just touches the tips of the teeth. The liquid is carried forward in the spaces between the teeth and outside casing. The pump works backward or forward equally well.

gear-train (gēr'trān), *n.* A set of three or more gears used for transmitting motion. See *train of* ★*gearing.*

gear-work (gēr'wèrk), *n.* A gear-train; a set of gears for transmitting power.

gedda (ged'ä), *n.* A term applied to certain gums. See ★*geddic.*

geddic (ged'ik), *a.* [*gedda* + *-ic.*] Derived from the gedda gums.—**Geddic acid,** an acid derived from Arabian gedda gums, which consist of a mixture of the calcium, magnesium, and potassium salts of this acid.

Gedinnian (je-din'i-an), *a.* [F. *Gedinne*, a district in Belgium.] In *geol.*, a subdivision of the Devonian system in Belgium, northern France, and the Rhineland. It forms the base of the Devonian system and lies uncomformably upon Cambrian rocks. In the Eifel it includes the Taunus and Hundsrück beds with a conglomerate at the bottom.

geebung (jē'bung), *n.* [Also *geebong, gibong, jibbong;* native Australian name.] The fruit of several Australian proteaceous trees of the genus *Linkia*, particularly *L. falcata;* also, the trees themselves. It is tasteless, and seldom eaten by any but children.

gee-throw (jē'thrō), *n.* In *lumbering*, a heavy wooden lever with a curved iron point, used to break out logging-sleds.

gegenschein (gā'gen-shīn), *n.* [G., < *gegen*, opposite, + *schein*, shining.] The large, faintly luminous patch on the ecliptic opposite to the sun, supposed to be a part of the zodiacal light. Its explanation is still uncertain, though it is generally believed to be due to reflection from minute meteoric particles at a distance greater than the length of the earth's shadow. See ★*counter-glow.*

gegg (geg), *n.* The Scotch pronunciation of *gag*, *n.*, 6.

gehydrophilous (jē-hī-drof'i-lus), *a.* Resembling or having the characters of the *Gehydrophila.*

geic (gē'ik), *a.* [Gr. γῆ, the earth, + *-ic.*] Pertaining to the earth.—**Geic acid.** Same as *humic acid.*

geikielite (gē'kē-līt), *n.* [Named for Sir Archibald *Geikie*, a Scottish geologist.] Magnesium titanate ($MgTiO_3$), found in the form of nearly black rolled pebbles in the gem-mines of Rakwana, Ceylon.

geira (gā'rä), *n.* [Pg.] A Portuguese and Brazilian land-measure, equal to 1.44 acres.

geisha (gā'shä), *n.* [Jap. *gei-sha*, < *gei*, polite accomplishments (< Chin., *i*, (orig. *ki*, an art, a profession) + *sha* (< Chin. *ché*), one who.] One of a class of accomplished and specially trained young Japanese women (commonly called singing- or dancing-girls by foreigners) who are employed at banquets, and on social, convivial, and other occasions, to entertain the company with Japanese dancing, music, etc.

geison (gī'son), *n.*; pl. *geisa* (-sä). [Gr. γεῖσον, often γείσσον.] The Greek name for the cornice of a building: used in treatises on Greek architecture.

A special peculiarity of the horizontal *geisa* lies in the fact that their mutules are of different size, varying between six and four guttae in front.
C. Smith, in Jour. Hellenic Studies, XVI. 338.

geisotherm (jē-ī'sō-thèrm), *n.* [Gr. γῆ, the earth, + E. *isotherm.*] An imaginary surface supposed to pass through all points within the earth's crust which have the same temperature.

geisothermal (jē-ī-sō-thèr'mal), *a.* and *n.* [As *geisotherm* + *-al*[1].] **I.** *a.* Same as *isogeothermal.*

II. *n.* A geisothermal surface; a geisotherm.

Geissler's mercury air-pump, tubes, vacuum. See ★*air-pump, tube,* ★*vacuum.*

geissospermine (gī-sō-spèr'min), *n.* [*Geissospermum* + *-ine*[2].] A crystalline alkaloid, $C_{19}H_{24}O_2N_2 + H_2O$ or $C_{23}H_{28}O_4N_2$, contained in pereira bark. It is levorotatory, and melts or decomposes at 189° C.

geite (jē'īt), *n.* [Gr. γῆ, earth, + *-ite*[2].] A name proposed by John Milne for the matter which constitutes the nucleus of the earth. *Nature*, April 9, 1903, p. 539.

gel (jel), *n.* [Appar. detached from *hydrogel* and similar recent formations, where the second element is made to represent the crude stem of L. *gelare*, freeze, congeal: see *congeal.*] A gelatinous or albuminous protoplasmic substance, especially the protoplasm of nerve-cells.

If, however, the colloidal particles become fused, and thus lose their condition of fine suspension, the colloid becomes relatively solid, or passes into the "*gel*" phase.
Biol. Bulletin, June, 1904, p. 4.

gelasin (jel'a-sin), *n.* [*gel(atin)* + *-ase* + *-in*[2].] A variety of agar-agar. *Buck*, Med. Handbook, I. 138.

gelatification (je-lat i-fi-ka'shon), *n.* [*gelatify* (*-fic-*) (< *gelatin*) + *-fy*) + *-ation*.] Conversion into gelatin; the process of transforming a substance into a jelly-like state.

gelatin, *n.* **Chromatized gelatin.** See *chromatize.* **Fluid gelatin,** aluminium oleate, a soft white putty-like substance of great tenacity, insoluble in water. It is used as a thickener for lubricating-oils. **Formaldehyde gelatin,** a pale-brown coarse odorless powder obtained by treating a solution of gelatin with a small but definite amount of formalin and evaporating to dryness. It is said to liberate formaldehyde when applied to denuded surfaces. Also called *formacoll.*—**Gelatin emulsion.** See ★*emulsion.* **Gelatin of Piorkowsky,** a nutrient medium suggested for the cultivation of the typhoid bacillus. It contains 5 grams of peptone and 33 grams of gelatin to the liter of normal urine of 1020 specific gravity.—**Gelatin paper, relief.** See ★*paper,* ★*relief.*—**Glycerin gelatin,** a culture medium for bacteria: nutrient gelatin with a certain amount of glycerin added.—**Nutrient gelatin,** a bacteriological culture medium composed of nutrient bouillon and an amount of gelatin sufficient to solidify the medium.—**Wort gelatin,** nutrient gelatin prepared with beer-wort.

gelatinase (je-lat'i-nās), *n.* [*gelatin* + *-ase.*] A ferment which liquefies gelatin but which does not digest coagulated egg-albumin or fibrin in either acid, neutral, or alkaline solutions. It occurs widely distributed among bacteria, yeasts, molds, and in various phanerogams. According to recent research trypsin is not a unity, and a gelatinase has been demonstrated as one of its possible components.

gelatiniferous (jel″a-tin-if'e-rus), *a.* [*gelatin* + L. *ferre,* bear, + *-ous.*] Producing or yielding gelatin.

gelatinize, *v. t.* **2.** To coat with gelatin: as, *gelatinized* paper.

gelatinobromide, gelatinochlorid emulsion. See ★*emulsion.*

gelatinography (jel″a-ti-nog'ra-fi), *n.* [*gelatin* + Gr. γραφειν, < γραφειν, write.] In *photog.*, a rapid process for making newspaper blocks.

gelatinotype (jel-a-tin'ō-tīp), *n.* [*gelatin* + Gr. τυπος, type.] In *photog.*, a photomechanical process in which a gelatin film in semi-relief, properly backed, is used in printing instead of wood or metal.

gelation (jē-lā'shon), *n.* [L. *gelatio(n-),* freezing, < *gelare,* freeze.] The assumption of the solid state by cooling below common atmospheric temperature; freezing.

I do not doubt but that wonderful phenomena of congelation, regelation, degelation, and *gelation* pure without preposition, take place whenever a schoolboy makes a snowball; and that miraculously rapid changes in the structure and temperature of the particles accompany the experiment of producing a star with it on an old gentleman's back. *Ruskin*, Deucalion, I. 44.

gelatose (jel'a-tōs), *n.* [*gelat(in)* + *-ose.*] An albumose derived from gelatin. Also called *glutose* or *glutinose.*

gelechiid (jē-lē'ki-id), *n.* and *a.* **I.** *n.* One of the *Gelechiidæ.*

II. *a.* Of or belonging to the lepidopterous family *Gelechiidæ.*

gelignite (jel'ig-nīt), *n.* [*ge(latin)* + L. *lignum,* wood, + *-ite*[2].] A trade-name for an explosive of the dynamite class, consisting of 65 parts of gelatin (96 per cent. nitroglycerin and 4 per cent. nitrocotton) and 35 parts of dope (75 per cent. sodium nitrate, 1 per cent. sodium carbonate, and 24 per cent. wood-pulp).

gelinotte (jel-i-not'), *n.* [F. *gelinotte,* dim. of *geline,* a hen, < L. *gallina,* a hen: see *gallinaceous.*] The hazel-hen, *Tetrastes bonasia,* a species of grouse common in the pine-forests and birch woods of the mountain districts of Europe and central and northern Asia.

gelogenic (jel-ō-jen'ik), *a.* [Irreg. < Gr. γέλως, laughter, + *-γενής,* -producing, + *-ic.*] Productive or provocative of laughter. *G. S. Hall,* Adolescence, II. 95.

gelong (ge-lông'), *n.* [Tibetan *gelóng.*] In Tibet, a monk.

gelsemic (jel-sem'ik), *a.* [*gelsem(ium)* + *-ic.*] Derived from yellow jasmine.—**Gelsemic acid,** a colorless crystalline compound, $C_{15}H_{16}O_9$, obtained from the roots of *Gelsemium sempervirens.* It forms fluorescent solutions and is possibly identical with esculin.

gelseminine (jel-sem'i-nin), *n.* [*gelsemine* + *-ine*[2].] An amorphous, very poisonous alkaloid, $C_{24}H_{28}O_4N_2$ or $C_{22}H_{26}O_3N_2$. It is found with gelsemine in *Gelsemium sempervirens.*

gem, *n.* **5.** The name given by English type-founders to a body of type that is intermediate between brilliant and diamond.—**6.** A cake made with flour or corn meal, sometimes sweetened, and usually baked in a sheet of small, shallow pans.—**Island gems,** a large and clearly defined class of engraved gems, first noted in excavations in the islands of the Ægean sea. They have since been found in great numbers elsewhere in Greece and Crete. The island gems are extremely archaic, but vigorous in style. In the representation of animals they are often especially interesting.

gem, *v. t.* **4.** To exploit in searching for gems; search for gems in: as, the right to *gem* a river or a tract of land. *N. E. D.*

Gemarist (ge-mä'rist), *n.* [*Gemara* + *-ist.*] One who is learned in the Gemara (which see).

gem-fruit (jem'fröt), *n.* The coolwort, *Tiarella cordifolia.*

gemination, *n.* **4.** In *astron.*, the frequent apparent doubling of the canals of Mars. It is still debated whether the phenomenon represents a real fact on the planet's surface or is merely optical or visual.—**5.** In *anat.*, the union or fusion of two contiguous teeth caused by the uniting of two tooth-pulps.—**Dissimilated gemination,** a gemination, actual or assumed, of a consonant, followed by a dissimilation of the second consonant to a mute of the same class, as L. *numerus,* > **num'rus,* > **num-nrus,* > **num-bru-,* > F. *nombre,* > E. *number*; AS. *spind,* > **spinul,* > E. *spindle,* etc.

geminid (jem'i-nid), *n.* [*Gemin-i* + *-id*[2].] A member of the meteoric swarm which usually gives a shower about December 8 from a radiant in the constellation Gemini.—**Geminid variable,** a variable star which in its behavior resembles ζ Geminorum. Its period ranges from 7 hours to 13 days, its change of luster is continuous, and the maxima recur punctually.

geminipolar (jem″i-ni-pō'lar), *a.* [L. *geminus,* twin, + *polus,* pole: see *polar.*] Having two like poles, side by side: said of certain nerve-cells.

gemma, *n.* **3.** In *biol.*, one of the hypothetical units of living matter: similar to *biogen, idioblast,* ★*pangen,* ★*plasome,* etc.—**4.** A knob-like protuberance or nodule.

gemmate (jem'āt), *v. i.*; pret. and pp. *gemmated,* ppr. *gemmating.* [L. *gemmare,* put forth buds, < *gemma,* a bud: see *gem, n.*] To put forth buds or to propagate by buds, as a polyp.

gemmated (jem'ā-ted), *a.* [*gemmate* + *-ed*[2].] Set with gems; bedecked with precious stones.

gemmation, *n.,* **1.** (*b*) The arrangement or phyllotaxy of leaf-buds.—**Calycinal gemmation.** See ★*calycinal.*—**Cœnenchymal gemmation,** in the *Anthozoa,* the reproduction of new corallites by budding from the cœnenchymal tissue between the old corallites.—**Costal gemmation.** Same as *cœnenchymal* ★*gemmation.* **Extracalycinal gemmation.** See ★*extracalycinal.* **Septal gemmation,** in the asexual reproduction of the corals, the development of a new corallite from one of the septa which becomes enlarged and produced so as to inclose a new calycinal disk.—**Stolonal gemmation.** Same as *basal gemmation* (which see, under *gemmation*). **Tabular gemmation,** in the *Anthozoa,* a mode of calycinal gemmation observed in certain tabulate corals in which the tabulæ are produced upward to form pockets from which the new corallites are developed.

gemmative (jem'a-tiv), *a.* [*gemmate* + *-ive.*] Relating to reproduction by gemmation.

gemmer (jem'ėr), *n.* One who searches or digs for gems.

gemmipore (jem'i-pōr), *n.* [NL. *Gemmipora.*] A madreporarian coral of the genus *Gemmipora.*

The *gemmipores* resemble these in general form, and in their fringe of short tentacles, but the disk is not striated. *Dana*, Zooph., p. 47.

gemmology (jem-ol'ō-ji), *n.* [L. *gemma,* gem, + Gr. *-λογία,* < λέγειν, speak.] The science of gems.

gemmular (jem'ū-lär), *a.* [*gemmule* + *-ar*[3].] Of or relating to gemmules.

That while still in this *gemmular* condition, these cell seeds have for one another a mutual affinity, which leads to their being collected from all parts of the system by the reproductive glands of the organism.
Smithsonian Rep., 1890, p. 433.

gemmule, *n.* **3.** In *biol.*, one of the hypothetical living units conceived by Darwin as the bearers of the hereditary attributes of animals and plants.

gemmuled (jem'ūld), *a.* [*gemmule* + *-ed*[2].] Bearing or ornamented by small protuberances or nodules.

The remainder [of the whorls in Gasteropoda] . . . being uniformly adorned by two keeled spiral rows of close-set and conspicuously noduled gemmæ, . . . below the two *gemmuled* carinæ is a strong spiral plain keel.
Proc. Zool. Soc. London, 1901, II. 372.

gem-pan (jem'pan), *n.* A connected series of small shallow pans, usually circular, in which the cakes called gems are baked.

Gempylidæ (jem-pil'i-dē), *n. pl.* [NL., < *Gempylus* + *-idæ.*] A family of mackerel-like fishes, elongate and having very strong teeth, containing species known as the *escolars* and *snake-mackerels.*

gempyloid (jem'pi-loid), *a.* Pertaining to or resembling the *Gempylidæ.*

Gempylus (jem'pi-lus), *n.* [NL. (Cuvier), formation not clear: cf. *Gemylus* (1865), *Gempylodes* (1864), genera of *Coleoptera.*] A genus of snake-mackerels, elongate mackerel-like fishes with strong teeth found in the open seas. The commonest species is *G. serpens.*

gem-salt (jem'sält), *n.* Rock-salt, the mineral halite.

Gen. An abbreviation (*c*) of *Geneva* or *Genevan.*

gen. An abbreviation (*c*) of *gender;* (*d*) of *genera;* (*e*) of *generally;* (*f*) of *generic;* (*g*) of *genus.*

gender[2] (gen'dėr), *n.* [Jav. and Malayan *gender.*] A Javanese musical instrument of the xylophone class. It consists of a graduated series of eleven strips of metal strung together by two cords tied about them at their nodal points, and each provided beneath with a piece of bamboo for a resonator.

geneal. An abbreviation of *genealogy.*

Genealogical individual. See ★*individual.*

geneclexis (jen-e-klek'sis), *n.* [NL., < Gr. γένος, kind (nature), + ἐκλεξις, selection.] Unconscious, automatic natural selection, in distinction from *teleclexis,* an intentional or artificial selection brought about by man. *L. F. Ward,* Pure Sociol., p. 361.

genepistasis (jen-e-pis'tā-sis), *n.* [NL., < Gr. γεν-, produce, + ἐπίστασις, cessation: see *epistasis.*] Cessation of development in the history of a species or race. [Rare.]

Once a condition of stable equilibrium has been reached . . . we may have . . . *Genepistasis,* resulting in the fixity or stability of an organic species, under stable conditions. *J. A. Ryder,* Biol. Lectures, 1895, p. 50.

genepistasy (jen-e-pis'tā-si), *n.* Same as ★*genepistasis.*

genepistatic (jen-ep-i-stat'ik), *a.* Of or pertaining to genepistasis.

generalization, *n.* **4.** In *pathol.*, the involvement of the entire system in a morbid process which was at first local.

generalizational (gen″e-ral-ī-zā'shon-al), *a.* Of the nature of a generalization; used in generalization.—**Generalizational demonstration.** See ★*demonstration.*

generalize, *v. i.* **3.** In *painting,* to render large and typical characteristics rather than details.

generate, *v. t.* **5.** To produce; evolve; as electricity, force, friction, gas, heat, light, velocity, etc.

The two distinct and independent electromotive forces *generated* by such a machine are used to supply two distinct and independent currents to two distinct and independent circuits.
Franklin and Williamson, Alternating Currents, viii.

The steam *generated* from the sea-water, if used for drinking, . . . is condensed and filtered.
R. H. Thurston, Manual of the Steam Engine, II. 141.

6. In *music,* of a tone fundamental to a chord, to suggest or fix (the remaining tones of the harmony).

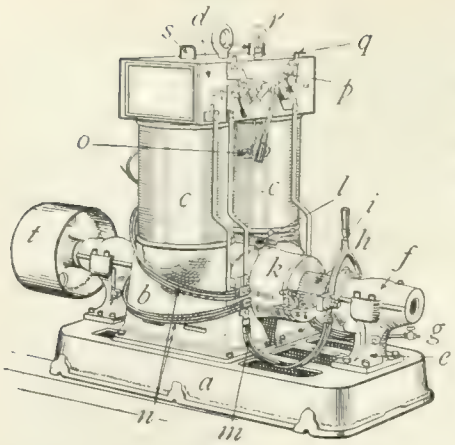
generation, *n.* **10.** The individuals of a given mineral species which have been formed at the same time and under similar conditions, as in the solidification of an igneous rock, or the deposits in a mineral vein. *Amer. Geol.*, June, 1904, p. 338.

generational (jen-e-rā'shon-al), *a.* [*generation* + *-al*[1].] Of or pertaining to generation.

It is stated that 'these generating elements define the group completely,' whereas the generating elements with a complete set of *generational* relations are necessary for the definition of the group; also as alternative for 'equations' should be given '*generational* relations.'
Science, June 5, 1903, p. 905.

Generative rupture. See ★*rupture.*

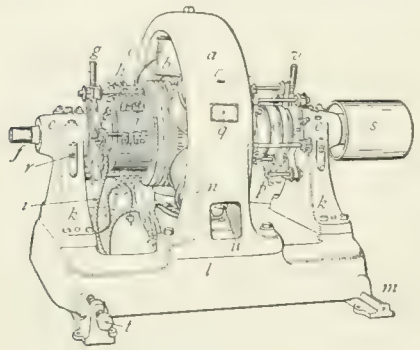
generator, *n.*—**Asynchronous generator,** in *elect.*, an alternating-current dynamo in which speed and frequency of alternation are not in fixed relation to each other.—**Bipolar generator,** in *elect.*, a dynamo having two pole-pieces between which the armature revolves. The essential features of a bipolar generator for direct currents are shown in the figure. See cut on next page.—**Closed-coil generator,** a generator the successive coils in the armature of which are connected in series. The dynamos of Gramme and Siemens are examples of closed-coil generators.—**Differential generator,** an electric machine with a differentially compounded field winding. See *electric* ★*motor.* **Double-current generator,** a dynamo-electric machine built to supply direct as well as alternating (usually polyphase) currents. It consists of a magnetic field in which revolves an armature which is connected to collector-rings for the alternating and to a commutator for the direct current. See cut on next page. **Generator gas.** See ★*gas.*—**Induction generator,** in *elect.*, any alternating-current generator having an alternating field and two sets of windings (primary and secondary) which rotate with



Bipolar Generator

a, base; *b*, pole-piece; *c*, protective coping; *d*, field yoke; *e*, pillow-block; *f*, bearing-cap; *g*, pet-cock; *h*, brush-holder stud and handle; *i*, commutator; *k*, armature; *l*, wire screen; *m*, armature-lead; *n*, series field-lead; *o*, shunt field-lead; *p*, load-switch; *q*, terminal; *r*, pilot-lamp; *s*, pole-piece bolts; *t*, driving-pulley.

respect to one another. **Monocyclic generator,** an alternating-current machine producing polyphase electro-



Double-current Generator.

a, magnet-frame; *b*, pole-piece; *c*, armature; *d*, commutator; *e*, bearing; *f*, shaft; *g*, direct-current brush-adjusting handle; *h*, direct-current brushes; *i*, direct-current leads; *k*, pillow-block; *l*, base; *m*, belt-tightener track; *n*, field-leads; *o*, collector-ring; *p*, alternating-current brush; *q*, name-plate; *r*, oil-gage; *s*, pulley; *t*, belt tightener bolt; *u*, keeper bolt; *v*, alternating current brush-adjusting handle.

motive forces with a single-phase flow of energy. The currents from such generators are particularly adapted to the starting and operation of induction motors.—**Motor-generator,** in *elect.*, a combination of two machines consisting of a motor and generator mounted on a common shaft. The usual arrangement consists of an alternating-current motor, thus driving a direct-current generator. —**Open-coil generator,** a generator the ends of the armature windings of which are not joined, each to the following, but are connected separately to the commutator-bars or collector-rings.—**Polyphase generator,** in *elect.*, a machine which produces two or more alternating currents that differ in phase.—**Pulsating-current generator,** in *elect.*, a generator producing direct currents that vary periodically in intensity. The open-coil arc-lighting dynamos of Thomson and of Brush are examples of pulsating-current generators.—**Single-phase generator,** in *elect.*, an alternating-current machine which produces only one current, or produces currents all of which are in the same phase.—**Three-phase generator.** See *tri-phase* ★*generator*.—**Tri-phase generator,** in *elect.*, an alternating-current dynamo from which, by suitable connections with the armature, three currents, in separate circuits and differing from one another in phase by 60°, are produced.

generator-unit (jen′ẹ-rā-tọr-ū″nit), *n.* A part of a plant for generating electric power (as a single engine and the dynamos supplied by it) which is designed to be operated as a unit, and which can be thus operated without reference to the remainder of the plant or can be stopped without influencing the operation of the remainder.

Generic image. See ★*image*.—**Generic whole,** the whole of a logical genus.

Genesee shale. See ★*shale*[2].

Genesial cycle. See ★*cycle*[1].

genesic (je-nes′ik), *a.* [Irreg. ‹ *genes(is)* + *-ic*. The normal adjective from *genesis* is *genetic*.] Pertaining to genesis or reproduction; genetic.

Attention should be directed [to] . . . the evidences of awakening *genesic* tendency.
Med. Record, July 11, 1903, p. 66.

genesis, *n.*—**Social genesis,** a division of social science treating of the natural origin and development of society. *L. F. Ward*, Outlines of Sociol., p. 190.

genethliacally (jen-eth-lī′a-kal-i), *adv.* Astrologically; by horoscopy.

He was not only a bold adventurous practitioner in physic, but also an adept who read the stars, and expounded the fortunes of mankind, *genethliacally*, as he called it, or otherwise. *Scott*, Kenilworth, xi.

genethlialogic (jẹ-neth li-ạ-loj′ik), *a.* Of or pertaining to genethlialogy, or the casting of nativities.

genethlialogical (jẹ-neth″li-ạ-loj′i-kạl), *a.* Same as ★*genethlialogic*.

Genetic aggregation. See ★*aggregation*. **Genetic method.** (*a*) That method of philosophical inquiry which endeavors to avoid assumptions antecedent to the examination of facts, and so far as it is unable to free itself from first principles regards them as subject to modification in the light of experience, proceeding, as far as possible, by the method of taking up verifiable hypotheses suggested by observation and of thoroughly testing them experimentally.—**Genetic pit, progress, psychology, selection.** See ★*pit*[1], ★*progress*, ★*psychology*, ★*selection*.

-genetic. An element in recent adjectives which correspond to nouns in *-genesis* (see *genesis*) and *-geny* (see *-geny*), as *biogenetic, phylogenetic*, etc. See *genetic*.

genetics (jẹ-net′iks), *n.* That portion of evolutionary science which deals with natural development uncomplicated by human purpose or artificial process. *L. F. Ward*, Outlines of Sociol., p. 180.

genetopathy (jen-e-top′ạ-thi), *n.* [Irreg. ‹ Gr. γένεσις (γενετι-), reproduction, + πάθος, suffering.] Disease connected with the reproductive functions.

The source of this as of all the other *genetopathies* may be congenital or even hereditary, but very often its origin is in the nervous system.
G. S. Hall, Adolescence, I. 498.

genetophobia (jen″e-tọ-fō′bi-ạ), *n.* [Irreg. ‹ Gr. γένεσις (γενετι-), origin, + -φοβία, ‹ φοβεῖν, fear.] A morbid fear of, or aversion to, the study of origins.

This *genetophobia* pervades . . . much of the best ancient and contemporary philosophical and theological thought. *G. S. Hall*, Adolescence, II. 41.

Genial apophysis, the group of four genial tubercles.

genicular (jẹ-nik′ū-lạr), *a.* [*geniculum* + *-ar*[3].] In *bot.*, growing on or at a node; occurring in the tissue of the node: as, *genicular* cells.

geniculum (jẹ-nik′ū-lum), *n.*; pl. *genicula* (-lạ). [NL., ‹ L. *geniculum*, a little knee, a joint of a stem, dim. of *genu*, knee.] **1.** In *bot.*, a node or joint of a stem.—**2.** In *anat.*, a sharp bend in any small organ, such as that in the facial nerve where it passes through the temporal bone.

geniolatry (jẹ-ni-ol′ạ-tri), *n.* [L. *genius*, a genius, + Gr. λατρεία, worship.] The worship of genii.

genion (jẹ-nī′on), *n.*; pl. *genia* (-ạ). [NL., ‹ Gr. γένειον, the chin, ‹ γένυς, chin: see *genial*[2].] In *craniom.*, the point of the spina mentalis interna. *Von Török*.

genioplasty, *n.* **2.** Operative restoration of a portion of the cheek which is lacking.

genip (jen′ip), *n.* Same as *genip-tree*.

genistein (jẹ-nis′tẹ-in), *n.* [*Genista* + *-in*[2].] A crystalline coloring-matter, $C_{14}H_{10}O_5$, obtained from the flowers of *Genista tinctoria* (dyer's-broom): trihydroxyphenylketocoumarin,

$$(\overset{3,5}{HO})_2C_6H_2 < \begin{matrix} \overset{1}{O} \\ \overset{2}{CO} \end{matrix} > \overset{4}{C}H.C_6H_4.\overset{1}{O}H.$$

genit. An abbreviation of *genitive*.

Genital band, in *Gephyrea*, one of the ridges or bands of cells attached to the interior of the body-wall which give rise to the ova and spermatozoa.

Stretching across the ventral aspect of the cœlom, at the point where the ventral retractors are attached to the body-wall, is a band of cells with relatively large nuclei. These cells constitute the *genital band* and are derived from the peritoneal epithelium.
Proc. Zool. Soc. London, 1903, I. 37.

genitivally (jen-i-tī′val-i), *adv.* As regards the genitive case; with reference to the genitive.

genitive, *a.* **2.** Connected with or relating to generation.

These powers are at their best at the time of strongest *genitive* impulses and greatest conceptive power.
G. S. Hall, Adolescence, I. 490.

genitocœle (jen′i-tọ-sēl), *n.* [*genit(al)* + Gr. κοῖλος, hollow.] In *zoöl.*, a brood-cavity, or storage-chamber for eggs.

genitospinal (jen″i-tọ-spī′nạl), *n.* Noting a nerve-center in the spinal cord which controls the organs of generation and also in part the bladder and lower bowel.

genizah (ge-nē′zä), *n.*; pl. *genizoth* (ge-nē′zōt). [Aram., ‹ *ganaz*, set aside, hide, save.] Among Jews, a sacred object, such as a defective scroll of the law, which has been rendered unfit for liturgical use. Such objects are preserved because, although damaged, they still possess a certain sacredness from the fact that the name of Jehovah is contained in them. Some genizoth in the Holy Land and Egypt, especially those of Cairo, have furnished valuable matter to archæological and theological students.

genizara (hä-nē′thä-rä), *n.* [Cuban Sp. use of Sp. *genízaro*, fem. of *genízaro*, a janizary.] A small labroid fish, *Cleptreus parræ*. [Cuba.]

Gen'l. An abbreviation of *General* (as a title).

genoholotype (jen-ọ-hol′ọ-tīp), *n.* [Irreg. ‹ Gr. γένος, kind, genus, + ὅλος, whole, + τύπος, type.] The one species on which a genus is founded, or a series of species on which a genus is founded one of which is stated by the author to be the 'type.' *Schuchert and Buckman*, in Science, June 9, 1905, p. 900.

genolectotype (jen-ọ-lek′tọ-tīp), *n.* [Irreg. ‹ Gr. γένος, kind, genus, + λεκτός, chosen, + τύπος, type.] One of a series of species selected to be the type of a genus subsequent to the description of that genus. *Schuchert and Buckman*, in Science, June 9, 1905, p. 901.

Genosiris (jen-o-sī′ris), *n.* [NL. (Labillardière, 1804), incorrectly formed ‹ Gr. γένος, kind, genus, + *Iris*, a genus of plants.] A genus of monocotyledonous plants. See *Patersonia*.

genosyntype (jen-ọ-sin′tīp), *n.* [Irreg. ‹ Gr. γένος, kind, genus, + σύν, with, + τύπος, type.] One of a series of species upon which a genus is founded, no one species being the genoholotype, or species on which the genus is based. *Schuchert and Buckman*, in Science, June 9, 1905, p. 901.

genotype (jen′ọ-tīp), *n.* [Irreg. ‹ Gr. γένος, kind, genus, + τύπος, type.] The type specimen or original description or illustration of a genus. See *type specimen*, under *type*.

Eight species have at various times been referred to *Romingeria*, mostly upon very insufficient grounds; hence the original conception of the genus has become obscured and is without much present significance. If the original description and figure of Billings be taken as a starting-point, the subsequent vicissitudes of this *genotype* will be appreciated.
Amer. Jour. Sci., July, 1903, p. 1.

genson (jen′sọn), *n.* [A dial. form of *gentian*.] The horse-gentian, or feverroot, *Triosteum perfoliatum*.

gentian, *n.*—**American gentian,** in *phar.*, *Gentiana Saponaria*, the soapwort-gentian, used as a substitute for the officinal gentian, probably including other species. Also (improperly) the American columbo, *Frasera Carolinensis*.—**Autumn gentian,** *Gentiana Amarella*, a low Old World species, used medicinally.—**Barrel-gentian,** the closed gentian, *G. Andrewsii*, so called from the barrel-shaped flowers. The soapwort-gentian, *G. Saponaria*, has been called *barrel-flowered gentian* for the same reason.—**Bastard gentian.** (*a*) *Gentiana acuta*. See *northern* ★*gentian*. (*b*) The pineweed or orange-grass, *Sarothra gentianoides*.—**Blind gentian,** the closed gentian, *Gentiana Andrewsii*.—**Blue gentian,** in *phar.*, same as *American* ★*gentian* (excluding *Frasera*); also the five-flowered gentian, and generally any blue-flowered gentian.—**Bottle gentian,** the closed gentian, *Gentiana Andrewsii*.—**Elliott's gentian,** a blue-flowered species, *Gentiana Elliottii*, of the southeastern United States of the same general type as the soapwort-gentian.—**Five-flowered gentian,** the ague-weed, *Gentiana quinquefolia* of eastern North America, also called *stiff gentian* and *gall-weed*. It is an attractive plant with rather slender tubular flowers in clusters of about five. Its root is said to be much used in domestic practice.—**Gentian aniline water.** See *gentian* ★*violet*.—**Gentian blue, violet.** See ★*blue*, etc.—**Larger fringed gentian,** the ordinary fringed gentian, *Gentiana crinita*. Compare *smaller fringed* ★*gentian*.—**Marsh gentian.** (*a*) *Gentiana Pneumonanthe* of moist grounds in Europe. See *harvest-bells*. (*b*) The soapwort-gentian. (*c*) Same as *striped* ★*gentian*.—**Northern gentian,** *Gentiana acuta*, a plant of wide distribution in the northern regions of both hemispheres and in the mountains as far south as Mexico. It is a small blue-flowered species, often with purple stems and foliage, and is closely related to, and by some identified with, the autumn gentian or common European felwort.—**One-flowered gentian,** a pine-land species, *Gentiana Porphyrio*, of the lower Atlantic coast, bearing a single funnel-shaped flower of blue mixed with some green and yellow.—**Smaller fringed gentian,** *Gentiana detonsa*, resembling the fringed gentian, but smaller: native both in Europe and in northern North America.—**Snake gentian,** the rattlesnake-root, *Nabalus serpentarius*.—**Soapwort-gentian.**

Five-flowered Gentian (*Gentiana quinquefolia*).

a, plant, one fourth natural size; *b*, corolla, expanded to show the stamens and pistil, about natural size. (From Britton and Brown's "Illustrated Flora of the Northern States and Canada.")

See *gentian*. This and the closed gentian, striped gentian, and other related species differ greatly in habit from the officinal gentian, being lower, more slender, and less erect plants with oblong leaves narrowed at the base and bearing their club-shaped flowers at or near the summit of the stem, while their nearly closed flowers separate them widely from the fringed gentians and the five-flowered gentian. In the Southern mountains the species of this group are called *Samson's snakeroot*. See *American* ★*gentian*. **Southern gentian,** the soapwort-gentian, *Gentiana Saponaria*. See *American* ★*gentian*. **Stiff gentian.** Same as *wild-down'ed* ★*gentian*. **Striped gentian,** *Gentiana villosa*, of the eastern United States, especially southward: a plant of the habit and property of the soapwort-gentian (see above), but with flowers more open, and greenish-white striped within. **White gentian,** the laserwort or herb frankincense, *Laserpitium latifolium*. See *Laserpitium*. Also same as *horse-gentian* (which see, under *gentian*). These are gentians only medicinally.—**Yellow gentian.** (*a*) The officinal species, *Gentiana lutea*. See *gentian* and *yellow*. The root possesses in a high degree the medicinal property of a bitter tonic. (*b*) The American columbo, *Frasera Carolinensis*.

Gentianales (jen-shia-nā'lēz), *n. pl.* [NL. (Lindley, 1833), ⟨*Gentiana* + *-ales*.] An order of dicotyledonous, chiefly sympetalous plants characterized by regular flowers, mostly 5-merous, the stamens borne on the base of the corolla and as many as its lobes, and 2 distinct ovaries. It embraces 7 families, of which the *Gentianaceæ*, *Oleaceæ*, *Apocynaceæ*, and *Asclepiadaceæ* are the most important.

gentianic (jen-shi-an'ik), *a.* Pertaining to or derived from gentianin.—**Gentianic acid,** an incorrect name for ★*gentianin*.

gentianin (jen'shia-nin), *n.* The pale-yellow crystalline coloring-matter of the root of *Gentiana lutea*. It is used as a tonic, melts at 267° C., and is dihydroxymethoxyxanthone, $HO.C_6H_3\langle{}^{O}_{CO}\rangle C_6H_2OH.OCH_3$. Also called *gentisin* and *gentianic acid*.

gentianose (jen'shia-nōs), *n.* [*gentian* + *-ose*.] A colorless, dextrorotatory compound, $C_{18}H_{32}O_{16}$, crystallizing in plates which melt at 210° C. It is found in the root of *Gentiana lutea*. It ferments directly and yields a mixture of gentiobiose and l-fructose when hydrolyzed. It is a hexotriose.

gentiobiase (jen″ti-ō-bī'ās), *n.* [*gentiobi(ose)* + *-ase*.] A ferment which inverts gentiobiose to the corresponding disaccharides.

gentiobiose (jen″ti-ō-bī'ōs), *n.* [*genti(an)* + *(hex)obiose*.] A hexobiose derived from dextrose.

gentiogenin (jen-ti-oj'e-nin), *n.* [*genti(an)* + *-gen* + *-in*[2].] An amorphous cleavage-product, $C_{14}H_{16}O_5$, of the glucoside gentiopicrin, obtained from the root of *Gentiana lutea*.

gentiol (jen'ti-ōl), *n.* [*genti(an)* + *-ol*.] An amorphous compound, $C_{30}H_{45}(OH)_3$, obtained from the flowers of *Gentiana verna*. It melts at 215°–219° C.

gentisate (jen'ti-sāt), *n.* [*gentis-ic* + *-ate*[1].] A salt of gentisic acid.

gentisein (jen-tis'ē-in), *n.* [*gent(ian)* + Gr. ἴσος, equal (?), + *-e-* + *-in*[2].] A straw-colored compound, $HO^4C_6H_3\langle{}^{O}_{CO}\rangle C_6H_2(^{1\cdot3}OH)_2$, which crystallizes in needles and melts at 315° C. It is a dye and is also called 1, 3, 7, tribydroxyxanthone.

gentisic acid. Same as ★*gentianic acid*.

gentisin (jen'ti-sin), *n.* Same as ★*gentianin*.

gentleman's-cane (jen'tl-manz-kān), *n.* The prince's-feather, *Polygonum orientale*.

Genu arcuatum, eversum, excurvatum, or **extrorsum.** Same as ★*genu varum*.—**Genu introrsum** or **inversum.** Same as ★*genu valgum*.—**Genu recurvatum,** hyperextension of the knee, forming a projecting angle backward. **Genu valgum,** knock-knee.—**Genu varum,** outward bending of the legs; bow legs.

genual, *a.* **2.** Pertaining to or resembling a genu (in any sense).—**Genual sulcus.** See ★*sulcus*.

genuin, *a.* A simplified spelling of *genuine*.

genus, *n.*—**Form genus,** a genus or group consisting of form species. -**Proximate genus,** in *logic*, the next higher genus; the genus next above a given species. **Summum genus,** same as *highest genus*; a genus that is not included in any other genus.

Genyatremus (jen-i-at'rē-mus), *n.* [NL., ⟨Gr. γένυς, chin (see *chin*), + *a-* priv. + τρῆμα, hole.] A genus of fishes of the family *Hæmulidæ*, commonly known as the grunts. They are similar to fishes of the genus *Anisotremus*, but have a curved tail. *G. luteus* is found in the West Indies.

Genyonemus (jen″i-ō-nē'mus), *n.* [NL., ⟨Gr. γένυς, chin, + νῆμα, thread.] A genus of small cyanoid fishes known as kingfishes, found on the coast of California, where *G. lineatus* is valued as food.

Genyophrynidæ (jen″i-ō-frin'i-dē), *n. pl.* [NL. *Genyophryne*, the type genus, + *-idæ*.] A family of tailless *Amphibia* which contains species with dilated sacral vertebræ and very small teeth on the front portion of the under jaw. The few species are found in the Australian region.

Genyornis (jen-i-ôr'nis), *n.* [NL., ⟨Gr. γένυς, chin, + ὄρνις, bird.] A genus of large struthious birds, apparently related to the emu, known from remains in the Pleistocene deposits about Lake Callabonna, Australia. The type of the genus is *G. newtoni*.

genyplasty (jen'i-plas-ti), *n.* [Gr. γένυς, chin, + πλαστός, formed, + *-y*[3].] See ★*genioplasty*.

geobiologic (jē″ō-bī-ō-loj'ik), *a.* Of or pertaining to geobiology.

A forest soil, such as we find in western North Carolina, is an expression, therefore, not only of the physico-geographic, geographic, and geophysic forces which have been brought to bear in its formation, but also of the *geobiologic* forces which have been at play.
Bot. Gazette, Oct., 1903, p. 256.

geobios (jē-ō-bī'os), *n.* [Gr. γῆ (γεω-), earth, land, + βίος, life.] The animals and plants of the land, considered collectively and in contrast with the animals and plants of the water.

The term halibios seems to be suitable to designate the totality of the marine fauna and flora, as contrasted with limnobios, or the organic world of fresh water, and with *geobios* or the totality of the land-dwelling or terrestrial plant and animal world.
Haeckel (trans.), Planktonic Studies, p. 578.

geobotanic (jē″ō-bō-tan'ik), *a.* [Gr. γῆ (γεω-), earth, + E. *botanic*.] Same as *geobotanical*. *Pop. Sci. Mo.*, May, 1904, p. 71.

geobotanist (jē-ō-bot'a-nist), *n.* [*geobotan(y)* + *-ist*.] A student of geobotany.

The most thorough investigations have been given to the chernozem soils by Russian *geo-botanists*.
U. S. Dept. Agr., Bur. Plant Industry, Bulletin 3, p. 18.

geobotany (jē-ō-bot'a-ni), *n.* [Gr. γῆ (γεω-), earth, + E. *botany*.] Geographical botany or phytogeography, including its œcological aspect.

The geology and *geo-botany* of Asia.
Pop. Sci. Mo., May, 1904, p. 68.

geocarpy (jē'ō-kär-pi), *n.* [Gr. γῆ (γεω-), earth, ground, + καρπός, fruit, + *-y*[3].] The habit of certain plants of burying their fruit in the ground for protection. The peanut is the most familiar example. *Jour. Roy. Micros. Soc.*, Aug., 1904, p. 427.

geocentric. **I.** *a.*—**Geocentric system,** the ancient theory of the solar system which placed the earth at its center.—**Geocentric zenith.** See ★*zenith*.

II. *n.* An adherent of the theory that the earth is the center of the universe.

geocentricism (jē-ō-sen'tri-sizm), *n.* [*geocentric* + *-ism*.] The geocentric theory.

We have moreover, in approaching these questions to clear our minds entirely of *geocentricism*, theological and philosophical as well as physical, of our notions of this earth as the center of the universe and the grand scene of providential action.
Goldwin Smith, in The Forum, July, 1896, p. 608.

geochemical (jē-ō-kem'i-kal), *a.* [Gr. γῆ (γεω-), earth, + E. *chemical*.] Presenting both geological and chemical relations. *Jour. Soc. Chem. Industry*, VII. 338.

geochemism (jē-ō-kem'ism), *n.* [Gr. γῆ (γεω-), earth, + *chemism*.] Chemical energy as the cause of changes in, and as determining the condition of, the materials of which the earth's crust is composed.

All of these processes are the work of gravity, heat, light, electricity and magnetism, and combined they produce a set of chemical changes which, as a mode of motion, we call chemism, which must be distinguished from affinity, for affinity means choice, while chemism means energy, and valency expresses numerical proportions. Heat produces expansion, gravity produces contraction in the materials of the rocky crust, and, conjoined, they produce chemism. This *geochemism* is the fundamental energy. *J. W. Powell*, Truth and Error, p. 59.

geochemistry (jē-ō-kem'is-tri), *n.* [Gr. γῆ (γεω-), earth, + E. *chemistry*.] The chemical study of the earth, that is, the science of its chemical composition and of the chemical causes and effects of terrestrial processes.

The problems of geophysics and *geochemistry* involve the applications of pure physics and pure chemistry from the minutest parts of the earth to the mass of the earth as a whole. *Rep. Carnegie Inst.*, 1902, p. 27.

geochrone (jē'ō-krōn), *n.* [Gr. γῆ (γεω-), earth, + χρόνος, time.] A name proposed for the standard time unit used in measuring geologic time and comparing different eras.

The time ratio adopted by Prof. James D. Dana for the Paleozoic, Mesozoic, and Cenozoic periods is, 12, 3, and 1, respectively. Prof. Henry S. Williams applies the term geochronology, giving the standard time unit used the name *geochrone*. The *geochrone* used by him in obtaining a standard scale of geochronology is the period represented by the Eocene. His time scale gives 15 for the Paleozoic, 3 for the Mesozoic, and 1 for the Cenozoic, including the Quaternary and the Recent.
Smithsonian Rep., 1893, p. 331.

geochronology (jē″ō-krō-nol'ō-ji), *n.* Geologic chronology; the application of time measures to geologic succession. *Smithsonian Rep.*, 1893, p. 331.

geochrony (jē-ok'rō-ni), *n.* [Gr. γῆ (γεω-), earth, + χρόνος, time.] The chronological classification of the earth's history.

geocratic (jē-ō-krat'ik), *a.* [Gr. γῆ (γεω-), land, κρατεῖν, predominate, + *-ic*.] Relating to times or conditions in which land predominates or continents enlarge.

Hydrocratic and *geocratic* movements alternated during Jurassic times, with a decided balance in favour of the former, and a recession of the coast-line towards the north. *Geog. Jour.* (R. G. S.), XI. 133.

geod. An abbreviation of *geodesy*.

geodal (jē'ō-dal), *a.* Characteristic of or pertaining to a geode or formed by the same processes which give rise to geodes.

Geodesic geometry. See ★*geometry*.

geodetic, *a.*—**Geodetic latitude.** See ★*latitude*.—**Geodetic leveling.** See ★*leveling*.

II. *n.* A geodetic line.

geodetician! (jē″ō-de-tish'ian), *n.* [*geodetic* + *-ian*.] One who is skilled in geodesy; a geodesist.

He estimates that to complete the undertaking the co-operation of five *geodeticians* for four complete years will be necessary. *Geog. Jour.* (R. G. S.), XVI. 356.

geodic (jē-od'ik), *a.* [*geode* + *-ic*.] Of, pertaining to, resembling, containing, or that has contained a geode: as, *geodic* cavities; *geodic* masses.

"Man, like this star, is *geodic*." "Passing wonderful! I have been straining after the stars, how much there is in the stones! *Geodic* Androids!"
S. Judd, Margaret, II. iii.

geodist (jē'ō-dist), *n.* [*geode* + *-ist*.] A student or investigator of geodes.

Fairburn's experiments . . . illustrate this tetrahedral collapse for short tubes; and . . . it is considered probable by some *geodists*. *Geog. Jour.* (R. G. S.), XIII. 239.

geodromican (jē-ō-drom'i-kan), *a.* and *n.* **I.** *a.* Of or belonging to the heteropterous series *Geodromica*.

II. *n.* One of the *Geodromica*.

geoduck (jē'ō-duk), *n.* Same as ★*goeduck*.

geodynamic (jē″ō-dī-nam'ik), *a.* [Gr. γῆ (γεω-), earth, + E. *dynamics*.] **1.** Relating to the dynamics of the earth, or the forces manifested in the formation and subsequent history of the earth.—**2.** Specifically, of the solid earth as distinguished from the ocean and atmosphere.—**Geodynamic observatory,** an observatory established for the recording and investigation of the phenomena proper to the solid earth, specifically the phenomena of seismology and vulcanology.

Cavaliere de Rossi, of Rome, has established a "*geodynamic" observatory* in a cave 700 metres above the sea at Rocca di Papa, on the external slope of an extinct volcano. *G. H. Darwin*, The Tides, p. 127.

geodynamical (jē-ō-dī-nam'i-kal), *a.* Same as ★*geodynamic*.

geodynamics (jē-ō-dī-nam'iks), *n.* The study of the dynamics and physics of the processes and phenomena attending the gradual evolution of the earth and the changes that are still going on.

geo-ethnic (jē-ō-eth'nik), *n.* [*geo(graphic)* + *ethnic*]. Of or pertaining to the geographical relations of tribes and peoples.

geoform (jē-ō-fôrm), *n.* Same as ★*creoform*.

Geoglossaceæ (jē″ō-glo-sā'sē-ē), *n. pl.* [NL., ⟨*Geoglossum* + *-aceæ*.] A family of fleshy ascomycetous fungi named from the genus *Geoglossum*. The ascomata are club-shaped or capitate and bear asci opening by a terminal pore. See *Geoglossum*.

geoglyphic (jē-ō-glif'ik), *a.* [Gr. γῆ (γεω-), earth, + γλυφή, a carving, + *-ic*.] In *geol.*, noting those characters marked on the rocks from which may be read former conditions of the earth and its life, as a fossil bird-track or rain-print. *Dana*, Manual of Geol., p. 95.

geognosist (jē-og'nō-sist), *n.* [*geognos-y* + *-ist*.] One versed in geognosy; a geognost.

Leopold von Buch, the first *geognosist* of the century, and hardly less famous than Humboldt.
Pop. Sci. Mo., May, 1904, p. 85.

geografer, geografic, geografy. Simplified spellings of *geographer, geographic, geography*.

geogram (jē'ō-gram), *n.* [Gr. γῆ (γεω-), earth, + γραμμα, a writing.] In *geol.*, a special

name suggested for those continuous sections of sedimentary strata which furnish a time-scale for the geologic past.

Further, the meteorologist had his chronometer whereas the geologist must construct his time-scale from the records on what might, for purposes of comparison, be referred to as the "*geograms*," or strips of the geological sediments. *Nature*, March 16, 1905, p. 477.

Geographic œcology. See ★*œcology*.

Geographical biology. Same as ★*biogeography*. **Geographical climatology, latitude, tongue, variation.** See ★*climatology*, ★*latitude*, ★*tongue*, ★*variation*. **International geographical mile.** See ★*mile*.

geographize, *v.* **II.** *intrans.* To study geography; carry on more or less systematic observations and researches in geography.

geography, *n.* **3.** The main features of a locality as regards its geographical position and general character; the knowledge derived from geographical research. **Applied geography,** geography considered in relation to commerce and trade: commercial geography.

The term "*applied geography*" has been employed to designate commercial geography, the fact being that every aspect of scientific geography may be applied to practical purposes, including the purposes of trade.
Encyc. Brit., XXVIII. 628.

Astronomical geography, that branch of geography which treats of the astronomical relations of the earth's surface, such as latitudes and longitudes, and the consequent peculiarities of day and night, climates, and seasons in different regions.—**Commercial geography,** the geographical study of the production, distribution, and exchange of commodities.—**Mathematical geography,** those departments of geographical science which need mathematics, and are concerned with the determination of the position of the earth in the solar system, its form, size, motions, etc., the determination of the position of places on the surface of the earth by means of latitude and longitude, the charting of those positions, the delineation of surface features, etc.—**Organic geography,** the science which treats of the responses of organisms to their environment; biography.

Thus defined, geography has two chief divisions. Everything about the earth or any inorganic part of it, considered as an element of the environment by which the organic inhabitants are conditioned, belongs under physical geography or physiography. Every item in which the organic inhabitants of the earth—plant, animal, or man—show a response to the elements of environment, belongs under *organic geography*. Geography proper involves a consideration of relations in which the things that belong under its two divisions are involved.
Amer. Geol., March, 1904, p. 168.

Plant geography. Same as *phytogeography*.

geoid, *n.* **2.** See *geode*.

geoidal (jē′oid-al), *a.* [*geoid* + *-al*.] Relating or pertaining to a geoid.

geoisotherm (jē-ō-ī′sō-thèrm), *n.* [Gr. γῆ (γεω-), earth, + E. *isotherm*.] An imaginary surface passing through all points within the crust of the earth which have the same temperature.

geologic, *a.* **2.** Interested in geology or given to geologizing: as, *geologic* tourists.

geologize, *v.* **II.** *trans.* To study or investigate geologically: as, to *geologize* a district.

geology, *n.* **1.** It is usually subdivided into (*a*) *Geognosy*, or the description of the materials of the earth (sometimes called *lithologic* or *petrographic geology*); (*b*) *dynamic geology*; (*c*) *structural, geotectonic*, or *architectonic geology*; (*d*) *physiographic geology*; (*e*) *paleontologic geology*; (*f*) *historical* or *stratigraphic geology*; (*g*) *cosmic geology*. It is also customary to subdivide it according to its applications, as *economic geology*, or the treatment of its relations to the useful rocks and minerals and mining or quarrying; *practical* or *applied geology*, etc.

2. The geological conditions or features of a place: as, the *geology* of a district.

Æolian geology, the study of geological phenomena due to the winds.—**Anthropic geology,** that branch of the science which is specially concerned with the effects produced by the presence of man on the earth.—**Areal geology,** that branch of the science under which the local formations in a particular area are described and discussed.

Under "*Areal geology*" will be discussed the stratigraphy, igneous rocks, and structure; and under "Economic geology" will be treated the character and occurrence of ore and present mining activity.
Contrib. to Econ. Geol., U. S. Geol. Surv., 1902, p. 32.

Biotic or **biologic geology,** geology considered with reference to biologic phenomena; paleontology.—**Diastrophic geology.** See ★*diastrophic*.—**Economic geology,** that branch of geology which treats of the origin, occurrence, and applications of the useful ores and nonmetallic minerals and rocks.—**Experimental geology,** that method of geological investigation which seeks to reproduce natural phenomena by artificial or experimental processes.—**Formational geology,** that branch of geology under which is included the study of the successive geological formations: practically synonymous with stratigraphic geology.

geomagnetic (jē″ō-mag-net′ik), *a.* [Gr. γῆ (γεω-), the earth, + E. *magnetic*.] Of or pertaining to terrestrial magnetism. *Nature*, April 21, 1904, p. 581.

geomagnetist (jē-ō-mag′ne-tist), *n.* A specialist in the magnetic phenomena of the earth.

The *geomagnetist* Paulins.
Sci. Amer. Sup., Sept. 19, 1903, 23176.

geometer, *n.*—**Chain-dotted geometer,** an American geometrid moth, *Cuadra catenaria*, having snow-white wings marked with zigzag lines and dots of black. Its larvæ feed on a variety of shrubs and trees. **Chickweed-geometer,** an American geometrid moth, *Haematopsis grataria*, reddish yellow in color with pink transverse bands on the wings. It occurs from Maine to Texas, and its larvæ feed on the chickweed. **First-born geometer,** an American geometrid moth, *Brephos infans*, having a blackish brown form with pinkish-white markings on the fore wings and the hind wings marked with orange. It is found in the northeastern United States and in Canada, extending to Labrador. Its larvæ probably feed on birch or poplar. It is the most primitive geometrid found in the North American fauna: hence the book-name.—**Notched-wing geometer,** an American geometrid moth, *Ennomos magnarius*, one of the largest

Notched wing Geometer (*Ennomos magnarius*).
(From Comstock's "Manual.")

species in the North American fauna. Its larvæ feed on the maple, birch, and chestnut. The moth is ocher-yellow in color with brown spots.—**Raspberry geometer,** an American geometrid moth, *Synchlora aërata*, of a delicate pale-green color, whose larva feeds on the fruit and foliage of the raspberry, covering itself with bits of vegetable matter.

Geometric decoration, tracery, zenith. See ★*decoration*, ★*tracery*, ★*zenith*.

geometrical, *a.*—**At a geometrical ratio.** See ★*ratio*. **Geometrical ratio, solution.** See ★*ratio*, ★*solution*.

geometricize (gē-ō-met′ri-sīz), *v. i.*; pret. and pp. *geometricized*, ppr. *geometricizing*. To apply the principles of geometry; become geometrical. *H. C. Butler*, Architecture and Other Arts, p. 31.

geometrid, *n.*—**Green geometrid,** any member of the geometrid subfamily *Geometrinæ*, nearly all of whose species are bright green in color. *Comstock*.

geometrideous (jē-om-e-trid′ē-us), *a.* Same as *geometrid*, *a*.

geometrize, *v.* **II.** *trans.* To form geometrically or according to geometrical principles.

geometroid (jē-om′e-troid), *a.* and *n.* **I.** *a.* Of or belonging to the superfamily *Geometroidea*.

II. *n.* One of the ★*Geometroidea* (which see).

Geometroidea (jē-om-e-troi′de-ä), *n. pl.* [NL., ⟨ *geometer* + *oidea*.] The geometrid moths considered as a group of superfamily rank.

geometry, *n.* The oldest classification of geometry is (*a*), that in which it is divided according to the method of logical procedure, namely into *synthetic* and *analytic*, the method of geometrical analysis having been invented or taught by Plato. In modern times this classification intertwines with another, namely (*b*), that which is based on the mental instrument or equipment used, giving: (1) *pure* or *synthetic geometry*; (2) *rational*; (3) *descriptive*; (4) *projective*; (5) *algebraic, algorithmic, analytical, Cartesian*, or *coordinate*; (6) *differential, infinitesimal, natural*, or *intrinsic*; (7) *enumerative* or *denumerative*. Some of these are subdivided on the same principle, as: (1) (*a*) *geometry of the ruler* or *straight-edge*; (β) *of the ruler and sect-carrier*; (γ) *of the ruler and unitsect-carrier*; (δ) *of the compasses*; (ε) *of the ruler and compasses*; (ζ) *of linkages*. Further divisions are: (*c*) By dimensionality: (1) *geometry on the straight* or *on the line*; (2) *two-dimensional geometry*; (*a*) *plane geometry*; (β) *spherics*; (γ) *pseudo-spherics*; (3) *tri-dimensional geometry*: (*a*) *geometry of planes*; (β) *solid geometry*; (γ) *spherics*; (4) *four-dimensional geometry*: (*a*) *geometry of straights*; (β) *of hyperspace*; (5) *n-dimensional geometry*. (*d*) By elements: (1) *point geometry*; (2) *straight* or *line*; (3) *plane*; (4) *point, straight*, and *plane*; (5) *straightest* or *geodesic*; (6) *geometry of the sphere*; (7) *of other elements*. (*e*) By subject-matter: (1) *pure descriptive, pure projective*, or *pure positional geometry*, or *geometry of position*; (2) *topologic geometry*; (3) *metric geometry*; (4) *geometry of curves*; (5) *of surfaces*; (6) *of solids*; (7) of *hyper-solids*; (8) *of numbers*; (9) *of motion* or *kinematic*. (*f*) By assumptions made, omitted, or denied: (1) *Euclidean geometry*; (2) *non-Euclidean*; (*a*) *meta-geometry*, or *pan-geometry*; (*b*) *finite geometry*; (3) *semi-Euclidean*; (4) *non-Legendrian*; (5) *Archimedean*; (6) *non-Archimedean*; (7) *non-Arguesian*; (8) *non-Pascalian*. (*g*) By the kind of space or universe of the geometry: (1) *Euclidean* or *parabolic geometry*; (2) *Bolyaian, Lobachevskian, Bolyai-Lobachevskian, absolute*, or *hyperbolic*; (3) *Riemannian, spherical*, or *double elliptic*; (4) *Killing's, single elliptic*, or *simple elliptic*; (5) *Clifford's* or *Clifford-Kleinian*. (*h*) By the complexity or difficulty of the part treated: (1) *elementary geometry*; (2) *higher*. (*i*) By the period of its development: (1) *ancient* or *the antique geometry*; (2) *modern*; (3) *recent, of the triangle*, or *the Lemoine-Brocard*.—**Absolute geometry,** the non-Euclidean geometry of John Bolyai, containing Euclid's geometry as a special case.—**Bolyai** or **Bolyaian geometry,** the geometry of Bolyaian space.—**Characteristic geometry,** that geometry of a surface in which the geodesic line plays the rôle taken by the straight line in the ordinary geometry.—**Differential geometry,** infinitesimal geometry; applications of the differential and integral calculus to curves and surfaces.—**Geodesic geometry,** geometry in which for straight on the plane, straightest on the surface is substituted. **Geometry on a point,** the dual of pure projective geometry on a plane, obtained by interchanging point with plane.—**Kinematic geometry,** geometry which treats of the properties of curves and surfaces regarded as functions of the spacial and angular velocities of lines which move in accordance with fixed laws. **Lemoine-Brocard geometry,** the geometry of the triangle, inaugurated by Lemoine in 1873, and by Brocard in 1875.

Lobachevskian geometry, the geometry of a Lobachevskian space or universe.—**Non-Euclidean geometry,** a geometry in which Euclid's postulate with regard to parallel straight lines is not assumed. See ★*non-Euclidean*.—**Rational geometry,** geometry founded and developed without the use of irrational numbers, and without ratio: in it four magnitudes by definition form a proportion if the product of two equals the product of the other two.—**Riemannian geometry,** the geometry in which Euclid's tacit assumption that the straight line is infinite is denied.—**Straight geometry.** Same as *line geometry*. **Symbolic geometry,** geometry developed by the use of a symbolic language or calculus of symbols.

geomorphic (jē′ō-môr-fik), *a.* [Gr. γῆ, the earth, + μορφή, form.] Of or relating to the figure of the earth or to the study of land-forms.

I doubt if any careful *geomorphic* geologist familiar with all the phenomena involved would seriously consider an estimate that made it much more than one half at the most; so that it would apparently not be straining the evidence to take 40,000 years as a rude measure of the time since the beginning of the retreat [of the Wisconsin ice-sheet] from the outermost moraine of the Wisconsin stage.
T. C. Chamberlin, in Jour. of Geol., Oct.-Nov., 1899, p. 680.

geomorphist (jē′ō-môr-fist), *n.* [Gr. γῆ, the earth, + μορφή, form, + *-ist*.] Same as ★*geomorphogenist*.

The climatologist who studies the physical conditions of the atmosphere for their own sake . . . the *geomorphist* who is satisfied with the study of land forms as a finality . . . these specialists may all be eminent in their own lines, but they fall short of being geographers.
Amer. Geol., March, 1904, p. 174.

geomorphogenic (jē″ō-môr-fō-jen′ik), *a.* Of or pertaining to geomorphogeny or the study of the development of land forms.

geomorphogenist (jē″ō-môr-foj′e-nist), *n.* A specialist in the investigation of the development of earth-forms; a physiographer.

The survey reports have not, as a rule, been prepared by persons whose training and interests were primarily geographical, and very few of the *geomorphogenists* have carried their new science forward into a geographical relation; they have usually stopped with the physical aspects of the subject, and left the organic aspects with scanty consideration. *Amer. Geol.*, March, 1904, p. 159.

geomorphogeny (jē″ō-môr-foj′e-ni), *n.* [Gr. γῆ, the earth, + μορφή, form, + *-γενεια*, ⟨ *-γενής*, -produced.] In *geol.*, the study of the origin of the surface features of the earth.

The French geologist Élie de Beaumont, whose theory of *geomorphogeny* was stated at length in his 'Notice sur les systèmes de montagnes' (3 vols.: Paris, 1852). This famous theory was based on a correlation of the mountain chains by means of their orientation.
Geog. Jour. (R. G. S.), XIII. 235.

geomorphological (jē″ō-môr-fō-loj′i-kal), *a.* Of or relating to geomorphology. See ★*geomorphology*. *Geog. Jour.* (R. G. S.), IX. 666.

geomorphology (jē″ō-môr-fol′ō-ji), *n.* [Gr. γῆ, the earth, + E. *morphology*.] The morphology of the earth; the study of the form of the earth's surface features and of their origin.

The first volume of Suess' great work on *Geomorphology* was published in 1885, and at once took the leading place as the greatest contribution ever offered by geology to geography. *Geog. Jour.* (R. G. S.), XI. 440.

geomorphy, *n.* **2.** The science of land forms.

The survey reports of our various states and territories contain a great fund of geographical matter, and some of the members of these surveys have carried the physical geography of the lands so far forward as to develop it into a new science, to which a name, *geomorphy* or geomorphogeny, has been given. *Science*, Jan. 22, 1904, p. 123.

geonomic, *n.* **2.** Pertaining to the earth: contrasted with *astronomical* or pertaining to the heavenly bodies.

geonomical (jē-ō-nom′i-kal), *a.* Same as *geonomic*. *Smithsonian Rep.*, 1903, p. 375.

Geophagus (jē-of′a-gus), *n.* [NL., ⟨ Gr. γῆ, earth, + φαγεῖν, eat.] A genus of cichlid fishes found in the rivers of Brazil.

geophilous, *a.* **2.** In *bot.* (*a*) Terrestrial; growing or rooting in the ground. (*b*) In *phytogeog.*, growing on the ground or on decaying vegetable matter: applied by Pound and Clements to a class of fungi. (*c*) Fruiting underground.

Geophysical laboratory, an institution devoted to the observation and study of the physical relations of the earth, especially its meteorology, tides, magnetism, gravitation, temperature, earthquakes, and volcanoes.

geophysicist (jē-ō-fiz′i-sist), *n.* [*geophysics* + *-ist*.] A student of geophysics; one who

studies the relations between the features of the earth and the laws of physics. *Amer. Jour. Sci.*, Dec., 1903, p. 402.

geophysiognomy (je'o-fiz-i og'no-mi), *n.* The physical features of the face of the earth.

geophyte (je'o-fīt), *n.* **1.** A plant which produces underground buds that do not develop there. *Areschoug.*—**2.** A terrestrial plant.

geopolar (jē-ō-pō'lăr), *a.* [Gr. γῆ, the earth, + E. *polar.*] Related to the pole of the earth: opposed to *heliopolar*, which refers to the pole of the sun's rotation.

In discussing the direction of the variation, two systems of coordinates are used. First, the 'geopolar,' given by the hour-angle and latitude of the point where the direction at any hour cuts the Earth's surface; and second, the 'heliopolar,' in terms of the angle with the Sun's direction (heliopolar distance), and the angle which the plane through the direction at any hour and the Sun makes with the equator. *Science*, Feb. 7, 1902, p. 223.

geopolitical (jē"ō-pō-lit'i-kal), *a.* [Gr. γῆ, earth, + E. *political.*] Relating to politics as affected by geographical relations.

The border-nations . . . the Hebrews, Phenicians, Hellenes. . . . Had Geography not aided them by *geopolitical* advantages of situation, they would at once have been swallowed up by the empires. Had they not developed intellect, their *geo-political* situation could not have availed them very long.

Emil Reich, in Contemporary Rev., April, 1905, p. 505.

geopony (jē-op'o-ni), *n.* [Gr. γεωπονία, ⟨ γεωπόνος, a tiller of the earth: see *geoponic.*] Agriculture; geoponics; farming.

georetic (jē-ō-ret'ik), *a.* [Gr. γῆ, earth, + ῥητίνη, resin, + *-ic.*] Noting a colorless crystalline waxy acid, $C_{12}H_{22}O_4$, obtained from lignite from the neighborhood of Weissenfels in Saxony.

Georgian architecture. See ★*architecture.*

georgical (jôr'ji-kal), *a.* Same as *georgic.*

georgino (jôr-jē'nō), *n.* [It.] A silver Genoese coin of the eighteenth century bearing the device of St. George on horseback.

georyssid (jē-o-ris'id), *n.* and *a.* **I.** *n.* A member of the coleopterous family *Georyssidæ.*

II. *a.* Of or belonging to the family *Georyssidæ.*

Geoscolecidæ (jē-ō-skō-les'i-dē), *n. pl.* [NL., ⟨ *Geoscolex (-lec-)* + *-idæ.*] A family of terricolous annelids, mainly tropical. There are eight setæ in a segment; the clitellum is usually saddle-shaped and is often furnished with modified setæ; the nephridia are paired with rarely more than one pair in a segment; the male pores are generally within the clitellum; and the spermathecæ are without diverticula. The typical genus is *Geoscolex.*

Geoscolex (jē-ō-skō'leks), *n.* [NL., ⟨ Gr. γῆ, earth, + σκώληξ, a worm.] The typical genus of the family *Geoscolecidæ.* *Leuckart.*

geosote (jē'ō-sōt), *n.* The valeric acid ester of guaiacol, $C_6H_4 < {O.CH_3 \atop O.C_5H_9O}$, an oily liquid used internally in tuberculosis. *Buck*, Med. Handbook, IV. 425.

geosphere (jē'ō-sfēr), *n.* [Gr. γῆ, earth, + σφαῖρα, sphere.] **1.** The atmosphere of the earth as distinguished from that of other planets.—**2.** One of the concentric, spheroidal shells of which the earth may be conceived to consist. Four are usually postulated, from without inward, the atmosphere, the hydrosphere, the lithosphere, and the centrosphere or baryosphere. The sphere capable of supporting life and embracing portions of the outer three is called the *biosphere.*

When we regard our globe with the mind's eye, it appears to be formed of concentric spheres, very like, still very unlike, the successive coats of an onion. Within is situated the vast nucleus or centrosphere; surrounding this is what may be called the tektosphere [τηκτός, molten], a shell of materials in a state bordering on fusion, upon which rests and creeps the lithosphere. Then follow hydrosphere and atmosphere, with the included biosphere. To the interaction of these six *geospheres* through energy derived from internal and external sources, may be referred all the existing superficial phenomena of the planet.

Sir John Murray, in Geog. Jour. (R. G. S.), XIV. 435.

geosynclinal, *n.* **II.** *a.* Having the characters of a geosyncline.

geosyncline (jē-ō-sin'klīn), *n.* [As *geosynclin(al).*] In *geol.*, a considerable tract in which the strata are bent into a great trough with many minor undulations on the flanks. *Dana*, Manual of Geol., p. 106.

geotactic (jē-ō-tak'tik), *a.* [*geotaxis (-tact-)* + *-ic.*] Of or pertaining to the locomotion of organisms or of cells in relation to the direction of the earth; exhibiting geotaxis.

geotaxis (jē-ō-tak'sis), *n.* [NL., ⟨ Gr. γῆ, earth, + τάξις, disposition.] The orientation or locomotion of cells or of organisms in relation to the direction of the earth (or to gravity). For example, "cockroaches seem to be stimulated by gravity when this acts perpendicularly to their ventral surface, so that they tend to move off from a horizontal surface and do not come to rest until they are on a more or less nearly vertical one." *C. B. Davenport*, Exper. Morphol., p. 118.

geotherm (je'o-therm), *n.* Same as ★*geothermal*, II.

geothermal (je-o-ther'mal), *a.* and *n.* **I.** *a.* Geothermic.

II. *n.* A line connecting places having the same temperature at a given depth below the earth's surface.

Geothermic degree. See ★*degree.*

geothermometric (jē"ō-ther-mō-met'rik), *a.* [Gr. γῆ, earth, + E. *thermometric.*] Pertaining to the measurement and distribution of earth-temperature.

geotropically (jē-ō-trop'i-kal-i), *adv.* In a geotropic manner or direction.

geotropism, *n.*—**Negative geotropism,** growth away from the earth, the normal condition in stems. Compare *heliotropism.*—**Positive geotropism,** growth toward the center of the earth, the normal condition in roots. It is nearly the same as negative heliotropism. See *heliotropism.*

Gephyroceras (jef-i-ros'e-ras), *n.* [Gr. γεφύρα, bridge, + κέρας, horn.] A genus of ammonoid cephalopods or goniatites, with compressed whorls and but slightly progressed sutures: characteristic of the later Devonian faunas.

Gerablattina (ger"a-bla-tī'nä), *n.* [NL., ⟨ Gr. γῆρας, old age, + NL. *Blattina*, a genus of cockroaches.] A genus of Paleozoic cockroaches.

geranial[2] (jē-rā'ni-al), *n.* [*geranium* + *-al*[3].] A colorless, oily aldehyde, $(CH_3)_2C:CH.CH_2.CH_2.C(CH_3):CH.CHO$, one of the chief constituents of lemon-grass oil and of the oil of citrus fruits. It is formed by the oxidation of geraniol and is employed to adulterate rose-oil. It is used in the preparation of ionone, the artificial oil of violets. Also called *citral* and *2,6-dimethyl-2,6-octadienal-8.*

Geraniales (jē-rā-ni-a'lēz), *n. pl.* [NL. (Lindley, 1833), ⟨ *Geranium* + *-ales.*] A large order of dicotyledonous, chiefly choripetalous, plants, characterized by flowers with distinct petals and sepals, the stamens usually as many as the sepals and opposite them, and a superior compound ovary. The order embraces 20 families, of which the most important are the *Geraniaceæ*, *Oxalidaceæ*, *Linaceæ*, *Rutaceæ*, *Balsameaceæ*, and *Euphorbiaceæ.*

geranic (jē-ran'ik), *a.* [*geran-ial* + *-ic.*] Derived from geranial.—**Geranic acid,** a colorless, liquid acid, $C_{10}H_{16}O_2$, formed by the oxidation of geranial.

geraniene (jē-rā'ni-ēn), *n.* [*gerani-ol* + *-ene.*] A colorless liquid, $C_{10}H_{16}$, prepared by the dehydration of geraniol. It boils at 162–164° C. and has an odor of fresh carrot.

geraniin (jē-rā'ni-in), *n.* [*Geranium* + *-in*[2].] An amorphous bitter principle of undetermined composition contained in the rhizome of *Geranium maculatum.* Also *geranin.*

geranine (jer'a-nin), *n.* [*geran-ium* + *-ine*[2].] A direct coal-tar color. It dyes unmordanted cotton red in a salt bath.

geraniol (jē-rā'ni-ōl), *n.* [*gerani-um* + *-ol.*] A colorless liquid, $(CH_3)_2.C:CH.CH_2.CH_2C(CH_3):CH.CH_2OH$, with an odor of roses. It is isomeric with borneol camphor, and is found in German and Turkish oil of roses, in geranium oils, and in various citronella and eucalyptus oils. It boils at 115–120° C. under 15 mm. pressure, is the alcohol of geranial, and is also called *rhodinol* and *2,6-dimethyl-2,6-octadienol-8.*

geranium, *n.* **5.** An impure magenta which contains phosphene.—**Geranium-oil.** See ★*oil.*—**Ivy-leaved geranium,** *Pelargonium peltatum*, an old-fashioned window and conservatory plant with three-lobed ivy-like leaves, mostly pinkish or purplish flowers, and a decumbent or trailing habit of growth. It is much used for hanging-baskets and lawn-vases. The cultivated forms are mostly much varied by domestication and perhaps by hybridization.—**Rock geranium,** a plant of the genus *Heuchera*; alum-root. The species are rock-loving plants with geranium-like leaves and with an astringent root like that of *Geranium maculatum.* See *alum-root* and *Heuchera*, with cut.—**Spotted geranium,** the spotted crane's-bill, *Geranium maculatum*: the name refers, as does also the specific name, to the spotted or blotched mature leaves. **Wild geranium,** any uncultivated species of *Geranium* or crane's-bill. In the eastern United States most often the spotted geranium, *G. maculatum.* Very widely diffused and common is the rather weedy *G. Carolinianum*, Carolina crane's-bill, with inconspicuous whitish flowers. Another wild geranium is *G. viscosissimum*, ranging from Saskatchewan to California, wrongly suspected of poisoning stock.

geranyl-acetate (jer'a-nil-as"e-tāt), *n.* [*geran(ium)* + *-yl.*] A liquid, $C_{10}H_{17}C_2H_3O_2$, derived from geraniol by the action of acetic anhydrid and also obtained from certain eucalyptus oils. It boils at 242–245° C.

geratic (ge-rat'ik), *a.* [Gr. γῆρας (later stem γηρατ-), age, + *-ic.*] Relating to old age; decadent.

gerenuk (ge-re-nōk'), *n.* [E. African.] The native name, adopted as a book-name, for Waller's gazelle, *Lithocranius walleri*, an excessively long-necked species found in East Africa.

Gergonne point of a triangle. See ★*triangle.*

German variation. See ★*variation.*

German chest, furnace. See ★*chest*, ★*furnace.*—**German horizontal plane, Protestant, sesame-oil, standard candle.** See ★*plane*, ★*Protestant*, etc.

germander, *n.* **American germander,** *Teucrium Canadense.* See *Teucrium* (with cut). **Garlic germander,** the water-germander, *Teucrium Scordium.* Called also *Englishtreacle.* See *Teucrium.* **Germander chickweed, speedwell.** See ★*chickweed*, *speedwell.* **Madeira germander,** *Teucrium fruticans*, native in Madeira. Called also *Madeira balsam.* See *Teucrium.* **Poly germander.** Same as *poly.* **Tree-germander,** *Teucrium fruticans.* See *tree-germander* and *Teucrium.* **Wall germander,** *Teucrium Chamædrys.* See *germander* and *Teucrium.* **Wild germander.** (*a*) The wall germander. (*b*) Same as *wood* ★*germander.* **Wood germander,** *Teucrium Scorodonia*, also known as *wood-sage* (which see, under *sage*[2]). See also *Teucrium.*

Germania[1] (jer-mā'ni-ä), *n.* [L.] Germany personified.

germania[2] (her-mä-ne'ä), *n.* [Sp. *germanía*, *hermanía*, lit. 'fraternity,' ⟨ *germano*, *hermano*, brother: see *german*[1].] Gipsy-language; thieves' cant; jargon; gibberish.

germanium, *n.* The discovery of this chemical element in 1885 constituted the third verification of Mendelejeff's prediction that elements, unknown when his periodic law was pointed out, would later be discovered having approximately certain atomic weights and certain properties which he indicated. Germanium has been found in argyrodite from Saxony and also in minerals from Bolivia.

Germanize, *v.* **II.** *intrans.* To become German in habits, feelings, sympathies, tastes, etc.

Germanomania (jèr"ma-nō-mā'ni-ä), *n.* [L. *Germanus*, German, + Gr. μανία, madness.] A mania or marked predilection for things German; a pronounced fondness for Germans and German ways.

Germanomaniac (jèr"ma-nō-mā'ni-ak), *n.* One who carries to excess his fondness for German things and ways.

Germanophilist (jèr-ma-nof'il-ist), *n.* [L. *Germanus*, German, + Gr. φίλος, loving, + *-ist.*] One, not a German, who is friendly to Germany and the Germans, their institutions, aims, ways, etc.

Whether you believe in Diez as an oracle, as some *Germanophilists* do, or doubt him, . . . everyone dealing with Romance etymologies, must at least see what he says. *The Reader*, June 11, 1864, p. 744.

Germanophobe (jèr'ma-nō-fōb), *n.* [L. *Germanus*, German, + Gr. *-φόβος*, ⟨ φοβεῖν, fear.] One who fears, distrusts, or dislikes Germany and the Germans.

"About this time," as the old almanacs used to say, "look out for storms." These will be raised by the extreme *Germanophobes* of England over the news given in "The Standard" of London on Monday and reported by our London correspondent in his cable dispatches of the same day. *N. Y. Tribune*, April 15, 1903.

Germanophobia (jèr"ma-nō-fō'bi-ä), *n.* [NL., ⟨ L. *Germanus*, German, + Gr. *-φοβία*, ⟨ φοβεῖν, fear.] Morbid dread or distrust of Germany and her policy; unreasonable dislike of German ways or things.

Germanophobic (jèr"ma-nō-fō'bik), *a.* Of, pertaining to, or characteristic of Germanophobists or Germanophobia.

Germanophobist (jèr ma-nō-fō'bist), *n.* One who hates or distrusts Germany.

germantown (jèr'man-toun), *n.* [*Germantown*, a suburb of Philadelphia.] A carryall with a standing top, first built at Germantown, Pennsylvania, in 1816: the first vehicle of the class known as a *rockaway.*

germ-ball (jèrm'bâl), *n.* In trematodes, as a larval *Distomum*, one of the more or less spherical masses of cells of different sizes out of which a redia is formed, the latter in its turn containing a new generation of germ-balls. See *cercaria* and *redia.*

germ-band (jèrm'band), *n.* See ★*band*[2].

germ-case (jèrm'kās), *n.* A case or sac inclosing germs or reproductive cells.

germ-cell, *n.* **3.** In *biol.*, a reproductive cell; an ovum or spermatozoön: opposed to *body cell*, or *somatic cell.*

germigene (jèr'mi-jēn), *n.* [L. *germen*, a germ, + Gr. *-γενής*, -producing.] A germarium, especially of cestode and trematode worms. *Syd. Soc. Lex.*

germigenous (jèr-mij'e-nus), *a.* [L. *germen*, germ, + Gr. *-γενής*, -producing, + *-ous.*] Producing germs: as, a *germigenous* gland.

germin, *v.* See *germine*, *v.*

germinability (jėr″mi-na-bil′i-ti), *n.* Capacity of germinating; viability.

The experiments were too limited in number to warrant any conclusion concerning the difference, if any, in the *germinability* of the heavy and light seed, either as to the time the sprouts appeared or the number produced.
Yearbook, U. S. Dept. Agr., 1896, p. 322.

germinable (jėr′mi-na-bl), *a.* Capable of germinating or proliferating; viable.

It being taken for granted that the selection shall be made only from sound, pure, and *germinable* stock.
Yearbook, U. S. Dept. Agr., 1896, p. 306.

Germinal area, a part of a germ-cell supposed to be set apart, before development begins, for the formation of a specific part of the future organism. See ★*germinal localization*.— **Germinal cell.** See ★*cell*. —**Germinal continuity.** (*a*) The established fact that since a germ-cell arises by a process of division which multiplies but does not interrupt the continuity of the preëxisting cell, and since the new organism arises in the same way, there is not and has not been any break in the continuity of the organic world. (*b*) The doctrine that the fertilized egg, when it begins its development, soon divides into a somatic portion (destined to produce the cells of the body, which are supposed to be out of the line of descent to later generations and unable to produce germ-cells) and a germinal portion which gives rise to cells, some of which, sooner or later, give rise to the sexual cells in the body of the organism which arises from the egg, so that inheritance is always from germ-cell to germ-cell, without the intervention of somatic cells. See ★*somatic cell*, ★*germ-cell*. (*c*) The doctrine that the line of connection between the fertilized egg and the germ-cells of the organism that is produced from the egg is not through the continuity of cells, but through continuity of the hereditary substance or germ-plasm which is transmitted from the egg along certain lines of somatic cells, or germinal paths, to the place or places where the reproductive organs or germ-cells of the new organism are to be formed. According to this opinion the somatic cells are, as such, out of line of descent to future generations, and the germ-plasm which some of them are supposed to contain and transmit is of the nature of a foreign body. See *substance of* ★*heredity*, ★*germ-plasm*.— **Germinal groove.** See ★*groove*.—**Germinal layer.** Same as *germ-layer*; one of the three layers, ectoderm, mesoderm, or entoderm, from which the embryo develops.— **Germinal localization**, the supposed localization in an egg, either after or before fertilization, of the regions that are to give rise to the parts of the body of the organism that is to arise from the egg.

On one view it is supposed that the germ-cell has an architectural organization predetermined before development begins, and that development is in part a "histogenetic sundering' of the pre-existing *germinal localization*.
Encyc. Brit., XXXII. 212.

Germinal matter, actively living matter. Same as *protoplasm*. Beale, 1861.— **Germinal path**, the series of cells which intervenes between the fertilized egg and the germ-cells of the organism that arises from the egg. See ★*germinal continuity*.— **Germinal selection.** See ★*selection*.

germinater (jėr′mi-nā-tėr), *n.* That which causes or induces germination; specifically, an appliance for testing the vitality of seeds. See ★*germinating-chamber*.

germinating-chamber (jėr′mi-nā-ting-chām″-bėr), *n.* A box devised to furnish, artificially, conditions of temperature, moisture, and light which are favorable to the germination of seeds for the purpose of testing their vitality by samples. A 'standard germinating-chamber,' adopted by the American experiment stations and the United States Department of Agriculture is made with double copper walls forming a water-jacket, a side door, trays for the seeds, etc.

germiparity (jėr-mi-par′i-ti), *n.* [*germipar-ous* + *-ity*.] Reproduction by means of germs or germ-cells.

germiparous (jer-mip′a-rus), *a.* [Irreg. < L. *germ*(*en*), a germ, + *parere*, bring forth, bear. The formation would prop. mean 'producing germs.'] 1. Bearing or producing germs.—2. Reproducing by means of germ-cells or germs.

germ-mass (jėrm′mas), *n.* A mass or aggregation of cells which will develop into the whole or some portion of the embryo.

Germo (jėr′mō), *n.* [NL., < F. *germon*, a popular name of the dolphin and the albacore.] A genus of scombroid fishes, including the long-finned albacore, *Germo alalunga*, widely distributed in the open seas in warm regions, a large fish with remarkably long ribbon-shaped pectoral fin.

germogen (jėr′mō-jen), *n.* [L. *germ*(*en*), germ, + Gr. *-γενής*, producing.] A syncytium or nucleated mass of protoplasm from which the reproductive or germ-cells arise. The germogen is clearly seen in the ovaries of insects.

germ-plasm (jėrm′plazm), *n.* Same as *germ-plasma*.— **Accessory germ-plasm**, the germ-plasm to which, according to Weismann, the formation of new organisms by budding is due. In order to account for the origin from a bud (which at first is part of the body of the organism which produces it) of a new organism which may come, in time, to exhibit the characteristics of the species, to produce germ-cells, and to propagate its kind, Weismann propounds a supplementary hypothesis according to which somatic cells that are predestined to produce new beings from buds receive germ-plasm from the egg in addition to their proper idioplasm. Since begonias and sea-anemones and many other plants and animals may produce new and perfect representatives of their species from any part of their bodies, it has seemed to many naturalists that this subsidiary hypothesis is, in effect, the abandonment by Weismann of the whole doctrine of germ-plasm (see below), which is based upon the opinion that germ-cells and body-cells are fundamentally and completely different.— **Blastogenic germ-plasm**, the germ-plasm by means of which a new organism is held, by Weismann, to be produced from a bud. **Doctrine of germ-plasm**, the theory of Weismann concerning the intimate structure of germ-plasm (or ancestral idioplasm, or the substance of inheritance), according to which it is regarded as made up of innumerable biophores, each of which is the bearer of one of the hereditary qualities of the species; these are joined in groups, or determinants, each of which is the bearer of the hereditary qualities of a cell; the determinants are again compounded into ids, which are the bearers of the hereditary qualities of an organism and are identified by Weismann with the chromatin granules or microsomata; the ids are again compounded into idants, each of which is the bearer of a number of possibilities of individual development. The idants are identified with the chromosomes or rods or loops of chromatin. The germ-plasm or ancestral idioplasm alone is supposed to contain all the biophores and determinants of the species, while each somatic cell contains those only that pertain to it and to the cells that it is destined to produce during the development and growth of the individual organism. Individual development is held to be accompanied by, and to consist in, the disintegration of an id by differential cell-division, until finally only one determinant remains to each cell, there breaking up into the biophores which give to the cell its inherited characteristics. While development is going on, the series of cells which are to give rise to new germ-cells is formed and endowed, in addition to its own idioplasm, with ancestral germ-plasm which it transports to the place where the new germ-cells are to arise. This attempt to account for inheritance by the hypothetic architecture of an ideal substance of inheritance has a conspicuous place in biologic literature and many disciples, although it rests, like many similar attempts, upon the uncritical acceptance of the notion of a substance, or thing in itself, as a bearer of qualities. We cannot account for the dog's head by saying that it is supported by a dog, nor can we hope to account for the origin of the dog piecemeal, because dogs have no piecemeal existence. See *substance of* ★*heredity* and ★*Weismannism*.— **Reserve germ-plasm.** See *accessory* ★*germ-plasm*.— **Sporogenic germ-plasm**, the germ-plasm to which the development of a new organism from a spore, as contrasted with an egg, is due, according to Weismann.

germ-polyp (jėrm′pol″ip), *n.* A polyp produced by budding.

germ-region (jėrm′rē″jon), *n.* A region of the fertilized egg definitely set apart for the construction of a specific part of the future organism.

But, from the standpoint of casual morphology, it must be asked what determines the arrangement of the different *germ-regions* in the ovum.
J. Loeb, Biol. Lectures, 1894, p. 49.

germ-sac (jėrm′sak), *n.* Same as ★*germ-case*.

germ-spot (jėrm′spot), *n.* The nucleolus of the germinal vesicle, or nucleus of the unfertilized egg; the germinal spot.

germ-stage (jėrm′stāj), *n.* A stage in the early development of an organism; the state of being a germ.

germ-tract (jėrm′trakt), *n.* The series of cells which constitute the direct line of descent or cell-lineage from the original egg through the developing germ-cells of the embryo to the mature germ-cell that will give rise to another organism. *Weismann.*

germ-yolk (jėrm′yōk), *n.* In *embryol.*, the portion of the yolk which is assimilated by the cells that go to form the ★germ-mass (which see): opposed to the *food-yolk*, which is absorbed by the older embryo or young animal. *Owen*, 1855.

geromarasmus (ger″ō-ma-raz′mus), *n.* [NL., < Gr. *γῆρας*, old age, + *μαρασμός*, wasting.] Atrophy of all the tissues due to old age.

geromorphism (ger-ō-môr′fizm), *n.* [Gr. *γῆρας*, old age, + *μορφή*, form, + *-ism*.] Presence in a young or middle-aged person of the characteristics of old age; premature senility.

Geronomite (je-ron′ō-mīt), *n.* [Sp. It. *geronomita* (ML. *Hieronymita*), < *Geronomo*, < LL. *Hieronymus*, Jerome.] A member of the monastic community which took St. Jerome as their patron saint.

gerontarchical (ger-on-tär′ki-kal), *a.* [**gerontarchy* (< Gr. *γέρων* (*γεροντ-*), an old man, + *ἀρχή*, rule) + *-ical*.] Of or pertaining to government by old men; establishing or setting up government by old men. See *gerontocracy*.

gerontastic (ger-on-tas′tik), *a.* [*gerontast-y* + *-ic*.] In *paleon.*, having the properties of or belonging to senile age in the development of a colony.

gerontasty (ger-on-tas′ti), *n.* [Gr. *γέρων* (*γεροντ-*), an old man, + *ἄστυ*, a city.] In *paleon.*, a senile colony (as of corals or graptolites).

gerontatrophy (ger-on-tat′rō-fi), *n.* [Gr. *γέρων* (*γεροντ-*), an old man, + *ἀτροφία*, atrophy.] Same as ★*geromarasmus*.

gerontic (ge-ron′tik), *a.* [Gr. *γεροντικός*, < *γέρων* (*γέροντ-*), an old man.] Having the characters of old age or senility: specially applied to one of the stages in the growth and decline of the individual, bearing characteristics peculiar to itself, but reproducing in part those of the infantile stage.

There are in some groups, especially among parasites, adaptive stages of a retrogressive nature that are not in any sense *gerontic*. *A. Hyatt*, Biol. Lectures, 1889, p. 135.

gerontine (ge-ron′tin), *n.* [Gr. *γέρων* (*γεροντ-*), an old man, + *-ine*[2].] A colorless, crystalline base, $C_5H_{14}N_2$, obtained from the liver and kidneys, especially from those of old dogs. It is isomeric with cadaverine, which it resembles.

gerontism (ge-ron′tizm), *n.* [*geront*(*ic*) + *-ism*.] Senility or old age considered as a stage in the normal life-history of organisms.

Gerontism, or old age, is marked in its earlier stages in gastropod shells by the disappearance of features characterizing the adult. *Amer. Nat.*, Dec., 1902, p. 937.

gerousia (ge-rö′si-ä), *n.* [Gr. *γερουσία*, < *γέρων* (*γεροντ-*) an old man; connected with *γῆρας*, old age.] In *Gr. antiq.*, a council of old men; a senate: especially applied to the senate of Sparta, which was composed of 28 members, to which the two kings were added. Its functions were similar to those of the Athenian boule. See *boule*[2].

gerundial, *a.*— **Gerundial infinitive**, an infinitive which has the nature of a gerund or verbal noun.

Gervillia (jėr-vil′i-ä), *n.* [NL., < *Gerville*, a commune in France.] A genus of prionodesmaceous pelecypods allied to *Perna* and bearing a multivincular ligament and elongated shell: very generally distributed through rocks of Mesozoic age and continuing into the lower Tertiary.

gess, *v.* and *n.* A simplified spelling of *guess*.

gest, *n.* and *v.* A simplified spelling of *guest*.

gestate (jes′tāt), *v. t.*; pret. and pp. *gestated*, ppr. *gestating*. [L. *gestare* (pp. *gestatus*): see *gestation*.] To carry in the womb during the natural period of fetal development; hence, figuratively, to form and gradually mature (some project) in the mind, to be brought forth in due time.

gestation, *n.*— **Abdominal gestation.** See ★*abdominal*.— **Ectopic gestation.** Same as *extra-uterine pregnancy* (which see, under *pregnancy*). —**Mural gestation** or **pregnancy**, a condition in which the ovum has been arrested and its development is taking place in the part of the Fallopian tube which passes through the wall of the uterus.— **Tubal gestation.** Same as *tubal pregnancy*.

gestative (jes′tā-tiv), *a.* [NL. **gestativus*, < L. *gestare*, gestate.] Of or pertaining to gestation: as, the *gestative* process.

gesticulant (jes-tik′ū-lant), *a.* [L. *gesticulans*, ppr. of *gesticulari*, gesticulate.] Gesticulating. *Ruskin.*

gesticulative (jes-tik′ū-lā-tiv), *a.* [*gesticulate* + *-ive*.] Characterized by or accompanied with gesticulations.

Diodorus Siculus says that they [the Gauls] . . . drank with such violent eagerness as either to stupefy themselves to sleep or enrage themselves to madness. He also calls them "extravagantly avaricious" and testifies to their disorderly and *gesticulative* fits of rage.
Farrar, St. Paul, I. 474, note.

gesundheit (ge-sönt′hīt), *n.* [G., < *gesund*, sound in health, + *-heit*, E. *-hood*.] Health. —**Zur gesundheit**, 'to your health,' a good wish addressed by Germans to one who has just sneezed.

get[1], *v.* I. *trans.*— **To get a pair of spectacles**, in *cricket*, to fail to score in both innings of a match.— **To get it**, to 'catch it'; come in for: as, he *got it* when he was caught. [Colloq.]

II. *intrans.* **To get about.** (*a*) To become known; leak out. (*b*) To be about again as after an illness or period of confinement to the house.— **To get away with**, to succeed in carrying off; make away with.— **To get back**, to return.— **To get clear**, to regain one's freedom; become free from entanglements; be absolved.— **To get forward**, to make progress; advance.— **To get left**, to be disappointed; fail. [Slang.]— **To get loose**, to become disentangled; succeed in freeing one's self.— **To get on.** (*c*) In *racing*, to stake money on (a horse).— **To get on to**, to become aware of; 'catch on'; understand. [Slang.]— **To get out.** (*c*) In *racing*, to escape loss by backing the horse against which one had already bet.— **To get up.** (*d*) In *cricket*, of the ball or the bowler, to rise off the pitch higher than usual; to bump.

get[1], *n.* 3. In *coal-mining*, the output of a mine during a stated season or period.—4. Gain; wages; specifically, a blacksmith's wages under the Crowley system. [Prov.]

get[4] (get), *n.* [Aram. *get*.] A bill of divorce among the Jews. Like the ketuba, or marriage contract, this document is drawn up in the Aramaic language, uniformly worded and carefully written by a proper scribe. The orthodox form must contain twelve full and equal lines (neither more nor less) to agree with the nu-

merical value, in Hebrew of the letters G T. After certain preliminary ceremonies and questionings by the rabbi, particularly as to whether both parties agree to the divorce, the husband hands the get to his wife in the presence of ten witnesses. In the get is contained the date, the names and surnames of husband and wife and of their fathers, and also the name of the city, and its location (whether near a river or sea). After the first lines containing the date, it runs: . . . "I, N, son of N, of the city of N, situated on the river N, set thee free, my wife N, daughter of N, of the city of N, et cetera. Thou art set free and art at liberty to marry any man whom thou mayst choose. This document from me is a letter of divorcement and liberty according to the law of Moses and Israel."

geta (gä'tä), *n.* [Jap.] Wooden clogs worn out of doors by the Japanese.

getatability (get-at'ą bil'i-ti), *n.* The quality of being getatable or attainable; accessibility. [Colloq.]

getatable (get-at'ą-bl), *a.* Accessible; that may be reached or attained; attainable. [Colloq.]

gey, *a.* See *gay*[1], 7.

geyser, *n.* 2. A gas-burning apparatus attached to a bath for the purpose of heating water for the bath.

The victim in this case, a young man, was asphyxiated in his bath by the CO-containing fumes escaping from a badly constructed and unventilated "*geyser.*"
Nature, June 2, 1904, p. 119.

geyserine (gī'sèr-in), *a.* [*geyser* + *-ine*[1].] Of or pertaining to geysers; originating through the agency of heated waters, as geyserite. *Smithsonian Rep.*, 1899, p. 359.

Geyserite terrace. See ★ *terrace*[1].

g. gr. An abbreviation of *great gross.*

ghaffir (ghä-fēr'), *n.* [Ar. *ghafīr* or *ḥafīr.*] A native Egyptian policeman. [Anglo-Egyptian.]

gharial, *n.* See *gharrial.*

ghazi (gä'zē″), *n.* [Ar. *ghāzī.*] Among Mohammedans, a warrior, especially one who has been victorious over infidels; a popular 'hero.'

ghee, *n.* 2. The solid fat obtained from the seeds of *Madhuca butyracea*, a tree found in northern India. It is used as a food, and also for an ointment, and in making soap and candles.

gherkin, *n.* **Bur gherkin,** the small, oval, spiny fruit of *Cucumis Anguria*, an annual cucurbitaceous vine distributed from the southern United States to the West Indies and Central and South America. It is used as a substitute for the common cucumber, especially in pickles. Called also *West Indian gherkin, Jamaica cucumber*, and *gooseberry-gourd.*—**West Indian gherkin.** Same as *bur* ★*gherkin.*

ghoom (göm), *v. i.* To search for big game by wandering alone after dark in a haunt of the animal. [India.]

Then Capt. G. tells about "*ghooming*" for bears. "*Ghooming*" (expressive word!) is, it appears, wandering around alone in the dark, and must be a queerish sport. However, after a night spent in this fashion, (and a bear slain,) you read how the Captain trailed back to his camp and fell asleep.
N. Y. Times, Sat. Rev., Aug. 12, 1905, p. 527.

ghost, *n.* **9.** One who does literary, legal, or artistic work for another, who gets all the credit; one who 'devils' for another.—**10.** A false line in a diffraction-spectrum caused by certain periodic irregularities in the ruling of the grating which produces the spectrum. Ghosts usually occur in pairs accompanying a conspicuous line on each side of it and near it. See *grating.*

11. A red blood-corpuscle from which the red coloring-matter or hemoglobin has escaped.

Whether this increase of permeability persists when the corpuscles have been reduced to *ghosts* by the escape of the hæmoglobin I am unable to say.
Jour. Exper. Med., March 17, 1902, p. 267.

Ghost ophthalmoscope. See ★*ophthalmoscope.*

ghost-candle (gōst'kan″dl), *n.* A candle which is kept burning in a death-chamber for the purpose of frightening away ghosts.

ghost-dance (gōst'dàns), *n.* A ceremonial of a number of North American tribes, of recent origin, and developed from the Messianic doctrines of Indian prophets who prophesied the return of the dead and the extinction of the whites. These religious ideas and the related rites originated in Utah and spread as far east as the Mississippi river. They were most potent about the year 1890.

ghost-demon (gōst'dē″mọn), *n.* In folk-lore, a ghost that has become a demon.

We may trace up from the psychology of the lower races the familiar ancient and modern European tales of baleful *ghost-demons.*
E. B. Tylor, Primitive Culture, II. 113.

ghost-flower (gōst'flou'èr), *n.* The Indian-pipe: so called with reference to the whiteness of the whole plant. Also called *corpse-plant* and *ice-plant.* See *Monotropa.*

ghost-food (gōst'föd), *n.* Food offered to the ghosts of the dead.

ghost-god (gōst'god), *n.* A ghost-demon that is worshiped as a god.

ghosthood (gōst'hùd), *n.* The state of being a ghost.

ghosty (gōs'ti), *a.* [*ghost* + *-y*[1].] Like or of the nature of a ghost: as, a *ghosty* story; a *ghosty* moon.

ghoulishly (gö'lish-li), *adv.* In a ghoulish manner; with ghoulish eagerness.

giallolino (jäl-lō-lē'nō), *n.* [It., later *giallorino*, < *giallo*, yellow.] A yellow pigment the nature of which is doubtful; perhaps a light yellow ocher or possibly a sulphid of antimony. Naples yellow, which is assumed by some to be the same as giallolino, is a mixture of white lead and chrome yellow.

giant, *n.* **4.** In *gold-mining*, a large nozle used to direct the powerful streams employed in hydraulic work. See cut under *hydraulic.*—**Waltzing giant,** a whirling column of sand gliding along over the ground; a sand-whirl.

giantism, *n.* **2.** Abnormal growth or development, especially as regards height.

Lancaster shows how many organisms slide down the phyletic scale and react to an ever less complex environment. . . . In *giantism* the human skeleton may revert to a state that suggests that of the gorilla.
G. S. Hall, Adolescence, I. 337.

giantize (jī'ąn-tīz), *v. i.* and *t.*; pret. and pp. *giantized*, ppr. *giantizing.* [*giant* + *-ize.*] To play the giant; make as big as a giant.

gib[1], *n.* **4.** (*b*) The wedge or adjusting-shoe by which wear is taken up at a sliding contact, such as a cross-head moving on guides.—**6.** A prism.—**7.** The hooked mandible of the male salmon or trout which is formed during the breeding-season.

gibbed (jibd), *a.* [*gib*[1] + *-ed*[2].] In *mech.*, provided with gibs; having lips, or hooks, which hold a piece in place, while permitting it to slide. The gibs are usually so arranged as to provide for taking up wear in the bearings.

gibber[4] (gib'èr), *n.* [Native Australian.] A big stone or boulder; an overhanging rock. [Australia.]

gibber[5] (jib'èr), *n.* A balky horse; a jibber.

Gibbera (jib'ę-rą), *n.* [NL. (Fries, 1825), < L. *gibber*, humpbacked.] A genus of pyrenomycetous fungi of the family *Cucurbitariaceæ*, having black perithecia seated upon a stroma and beset with stiff bristles. The spores are brown and uniseptate. *G. Vaccinii* is parasitic upon twigs of the cowberry, *Vaccinium Vitis-Idæa.*

Gibberella (jib-ę-rel'ą), *n.* [NL. (Saccardo 1877), < *Gibberą* + dim. *-ella.*] A genus of pyrenomycetous fungi of the family *Hypocreaceæ*, having somewhat dark-colored fleshy perithecia seated either on a stroma or on the surface of the host. The spores are hyaline or yellowish and 2- or more-celled. *G. pulicaris* is common on branches of various trees.

gibber-gunyah (jib″èr-gun'yą), *n.* [Native Australian.] A rock-shelter or aboriginal cave-dwelling. [Australia.]

gibbet[1], *n.*—**Halifax gibbet,** an instrument resembling the guillotine, and taking its name from Halifax, England, for use in beheading criminals.—**The year of the three gibbets,** the year 1777, in allusion to the three (gibbet-like) 7's.

Gibbonsia (gi-bon'si-ą), *n.* [NL., named after Dr. Wm. P. *Gibbons*, a California naturalist.] A genus of small blennies found among the seaweed-covered rocks along the coast of California. *G. elegans* is the common species.

Gibb's vector method. See ★*vector.*

gib-plate (jib'plāt), *n.* A plate or strap which holds in place the piece to which it is fastened and yet leaves it free to move in a prescribed direction.

Gid bladder-worm. See ★*bladder-worm.*

gidjee (gid'jē), *n.* A colonial form of ★*gidya.*

gidya (gid'yą), *n.* [Austral. aboriginal name.] The Victorian myall, *Acacia homalophylla.* Also called *gidjee.* See *myall.*

Gien pottery. See ★*pottery.*

gift, *n.*—**Indian gift,** a gift that may be reclaimed; a gift 'with a string.'—**Onerous gift,** in *law*, a gift conditioned upon the performance of something by the donee.

gig[1], *n.* **3.** (*e*) In machine-shop practice, a portable appliance for holding a piece of metal upon a machine and presenting it, successively, in two or more positions, to the cutting-tools: also used to assist in guiding the tools to the work. It is made in many forms and is used upon a great variety of machines. It is commonly employed in making standard parts of machines, tools, or motors.—**5.** In policy, a special combination of three numbers. See *policy*[2], 3.

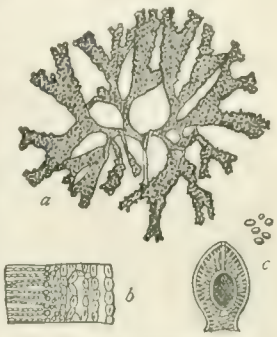
gigantize (jī-gan'tīz), *v. t.*; pret. and pp. *gigantized*, ppr. *gigantizing.* [Gr. γίγας (γιγαντ-), giant, + *-ize.*] To cause to appear of giant proportions.

gigantoblast (jī-gan'tọ-blāst), *n.* [Gr. γίγας (γιγαντ-), giant, + βλαστός, germ.] A specially large nucleated red blood-corpuscle of the megaloblastic type.

gigantocyte (jī-gan'tọ-sīt), *n.* [Gr. γίγας (γιγαντ-), giant, + κύτος, a hollow (a cell).] A non-nucleated red blood-corpuscle of large size.

Gigantotermes (jī-gan-tọ-tèr'mēz), *n.* [NL., < Gr. γίγας (γιγαντ-), a giant, + NL. *termes*, a white ant.] An extinct genus of white ants from the Jurassic lithographic slates of Bavaria.

Gigartina (jig-ärti'ną), *n.* [NL. (Stackhouse, 1809), < Gr. γίγαρτον, a grape-stone.] A red sea-weed, related to *Chondrus* or Irish moss. It occurs commonly on both the Atlantic and Pacific coasts and is abundant in the temperate and colder waters of Europe. It is used with other algæ for the manufacture of agar-agar.



Gigartina mamillosa.
a, plant, one third natural size; *b*, cross-section of a small portion of fertile frond, enlarged; *c*, vertical section of a cluster of spores from the same, highly magnified.

gig-back (gig'bak), *n.* A quick-return motion; specifically, a mechanism for returning a saw-mill-carriage after the cut has been made, the return travel being at a higher speed than the cutting.

gig-bit (gig'bit), *n.* A straight cheek-bit with rein-rings at the ends of the mouthpiece and side-loops for the reins when using it as a curb.

gig-flock (gig'flok), *n.* The short fibers which are torn from the fabric during the process of gigging, or napping.

gigglement (gig'l-mẹnt), *n.* [*giggle* + *-ment.*] Giggling.

gigglesome (gig'l-sum), *a.* [*giggle* + *-some.*] Inclined to giggle.

Gigli saw. See ★*saw.*

gigliato (jēl-yä'tō), *n.* [It., < *giglio*, < L. *lilium*, lily.] **1.** A silver coin of Sicily, of the Knights of St. John of Jerusalem at Rhodes, and of the kings of Cyprus of the Lusignan line. It is named from the terminal embellishment of a cross on the reverse.—**2.** A Tuscan gold coin, the sequin, also called the *ruspo.*

gil, *n.* and *v.* A simplified spelling of *gill.*

Gila (hē'lą), *n.* [NL., < *Gila* (river).] A genus of cyprinoid fishes or chubs, found in the Gila river in Arizona, known as *hardtails.* The flesh is very dry and flat in flavor; the bones of the tail are long and slender, with a large caudal fin. *G. elegans* is the common species.—**Gila trout,** a name sometimes applied to *Gila elegans*, a cyprinoid fish found in the Gila river: unlike and unrelated to the trout.

gilbert (gil'bèrt), *n.* [Named for William *Gilbert* (1540–1603).] A proposed unit of magnetomotive force having the value $\frac{10}{4\pi} = .7958$ ampere-turn.

gilbertage (gil'bèr-tāj), *n.* A name proposed for the magnetomotive force, in gilberts, of a magnetic circuit: suggested by the term voltage for electromotive force. [Rare.]

Gilbertia (gil-bèr'ti-ą), *n.* A genus of serranoid fishes of the South Pacific Ocean.

Gilbertidia (gil-bèr-tid'i-ą), *n.* [NL., named from Dr. Charles H. *Gilbert.*] A genus of small soft-bodied sculpins, extremely degenerate in structure, found in the deep waters of the channels of southern Alaska. *G. sigolutes* is the known species.

gil-cup, *n.* See ★*gill-cup.*

gild[1], *v. t.* **7.** To electroplate by depositing a layer of gold from an electric bath.—**8.** To eat the alloy out of (a low-grade gold) by means of an acid, leaving the fine gold on the surface.

gild[2], *n.* **3.** (*a*) In *phytogeog.*, one of several groups of plants which depend for their existence on other plants. The gilds (*G. genossenschaften*), according to Schimper, are four in number:

lianes, epiphytes, saprophytes, and parasites. See *epiphyte*, 1. ★*liana*, *parasite*, 2 (*c*), and *saprophyte*. (*b*) A group of species which, owing to their like adaptations under fit conditions, invade a new region together and in mass. *Pound and Clements.*

gilding, *n.* Chemical **gilding,** gilding by immersion in a solution of a chemical compound of gold, without using an electric current.

gilding-metal (gil′ding-met′al), *n.* Rolled sheet-brass from which cartridge-shells are drawn.

gildo (gil′dō), *n.* [ML. (also *congildo*), < AS. *gegylda*, < *gyld*, a gild.] In Anglo-Saxon law, a member of a gild.

gilfish (gil′fish), *n.* The male salmon during the breeding-season.

gil-guy, *n.* **To make a gil-guy,** to perform an unseamanlike piece of work.

Gilia, *n.* 2. [*l. c.*] Any plant of the genus *Gilia*. For species known by other names see ★*bird's-eye*, 1 (*d*), ★*skunkweed*, and *standing-cypress*. —**Blue gilia,** the Californian *Gilia Chamissonis* and the related *G. capitata* and *G. achilleæfolia*. *G. Chamissonis* forms masses of bright deep blue in the fields near San Francisco; *G. capitata* (from which the former is not always distinguished) is a similar, more delicate plant known in cultivation, as is also *G. achilleæfolia*, a species with the leaves dissected like milfoil. All three have the flowers in heads, those of the last-named larger and less compact.— **Fringed gilia.** See ★*ground-pink*.— **Scarlet gilia,** *Gilia aggregata*, a species diffused from Nebraska to the Sierra Nevada of California and south to Texas and Mexico. It is a viscid plant, a biennial with stems 2 to 4 feet high, the leaves pinnately divided, the flowers in small clusters, standing out horizontally, the delicate corolla tubular with spreading border, 1 to 1½ inches long, predominantly scarlet.— **Tricolored gilia.** Same as ★*bird's-eye*, 1 (*d*).

Blue Gilia (*Gilia Chamissonis*).

a, plant, one fourth natural size; *b*, flower, natural size; *c*, fruiting calyx, natural size; *d*, seed, enlarged.

gilingan (gē-ling′gän), *n.* [Tagalog *gilingan* (*gilinggan*), < *giling*, grind in a mill.] In the Philippine Islands, a hand-mill for husking rice.

The grain is separated from the straw by thrashing, or by use of wind whenever possible, and is finally separated from the husk by pounding two or three times in a wooden mortar, called a "lusong," or by making use of a sort of handmill, called *guilingan*.
Gaz. Philippine Is., 1902, p. 71.

gill¹, *n.*—**Extrapulmonary gill,** in some snails, as *Ancylus*, a gill-like organ situated within the pulmonary sac and thought to be used for aqueous respiration.— **Pericardial gill,** in nudibranch mollusks, one of the folds on the dorsal wall of the pedicardium.—**Rectal gills,** a remarkable arrangement of tracheal gills in the rectum of the nymph of the dragon-fly. The rectum is lined with six double longitudinal ridges of either very delicate papillæ or lamellæ, both papillæ and lamellæ being provided with very numerous tracheal branches.— **Tracheal gills.** They are tubular or leaf-like expansions of the body integument, richly supplied with tracheal branches and with a very delicate integument through which the oxygenation of the blood or tracheal air is effected. These gills are common among the aquatic larvæ of certain groups of insects.

gill⁴, *n.* 3. An English penny or quarter bit. [British Guiana.]

gill⁶ (gil), *n.* [Compare *gillie*.] A fellow or 'cove': as, a queer *gill*. [Slang.]

gill-ale (jil′āl), *n.* [Compare *gill⁵* and *ale-hoof*.] The ground-ivy, *Glecoma hederacea*.

gill-basket (gil′bȧs″ket), *n.* A basket-like framework of cartilage which surrounds the branchial region in the cyclostomes or lampreys.

gill-books (gil′bȧks), *n. pl.* The lamellate branchiæ of the king-crab. They are borne on appendages two to six of the abdomen and are protected by the enlarged first pair, which are united in the middle line.

gill-cup (gil′ kup), *n.* A buttercup: usually in the plural. Also *gil-cup*, *gilt-cup*, and *gilty-cup*.

Gillellus (gi-lel′ us), *n.* [NL., named from T. N. *Gill*, an American ichthyologist.] A genus of small fishes of the family *Dactyloscopidæ*, found among the reefs of Florida.

gillenin (gi-lē′nin), *n.* [*Gillen* + *-in²*.] A substance said to be the active principle of American ipecac, *Porteranthus trifoliatus* (*Gillenia trifoliata* of Mœnch), and other species of *Porteranthus*. It is emetic.

gill-filter (gil′fil″tẽr), *n.* In *ichth.*, one of the slender appendages attached to the inner sides of the gill-arches and serving to separate food from the water and to keep various small substances from the gills. *Nature*, Nov. 19, 1903, p. 64.

gill-fissure (gil′fish″ ūr), *n.* Same as *gill-opening*.

gill-footed (gil′fût″ed), *a.* Branchiopodous.

gill-fringe (gil′frinj), *n.* The branchial membrane or gill-filaments of fishes, on the outside of the gill-arches, and covered by the operculum.

gill-head (gil′hed), *n.* A machine for preparing flax for spinning. The stricks are combed out into slivers, which are then combined and combed into rovings.

gillingite (gil′ing-īt), *n.* [*Gillinge* (see def.) + *-ite²*.] A hydrous ferric silicate, occuring in black masses with earthy fracture, from the Gillinge mine, Södermanland, Sweden.

gilling-thread (gil′ing-thred), *n.* A two or more ply twisted linen or cotton thread, used for making gilling nets.

gill-intestine (gil′in-tes″tin), *n.* The anterior, respiratory portion of the alimentary tract in primitive vertebrates, as opposed to the stomach-intestine, or digestive region. *Haeckel*, 1879.

gill-lamella (gil′lạ-mel″ạ), *n.* A flat, plate-shaped respiratory organ, as distinguished from a gill-filament; a gill-leaf or gill-leaflet.

gill-leaf (gil′lēf), *n.* Same as ★*gill-lamella*.

gill-leaflet (gil′lēf″let), *n.* Same as ★*gill-lamella*.

The ctenidium is made up of two rows of gill-plates or *gill-leaflets*, attached to a ctenidial axis. *Philos. Trans. Roy. Soc.* (London), 1903, ser. B, p. 189.

gill-pore (gil′pōr), *n.* In *Balanoglossus*, a minute opening which places the cavity of a gill-pouch in communication with the exterior.

This [gill-pouch] in its turn opens to the exterior by a minute *gill-pore*. *Encyc. Brit.*, XXVI. 85.

gill-pouch (gil′pouch), *n.* In *Balanoglossus*, one of a series of pouch-like cavities arranged in two longitudinal rows posterior to the collar, each communicating with the alimentary canal through a gill-slit and with the exterior through a gill-pore.

In most species of Balanoglossus each gill-slit may be said to open into its own atrial chamber or *gill-pouch*.
Encyc. Brit., XXVI. 85.

gill-run (gil′run), *n.* Same as *gill⁵*, 2.

gill-sheet (gil′shēt), *n.* The layer or sheet formed by the slivers of flax in a gilling-machine.

gill-spreader (gil′spred″ẽr), *n.* Same as *gilling-machine*.

gill-teeth (gil′tēth), *n.* The spikes or teeth which project from the fallers in a gilling-machine.

gill-tuft (gil′tuft), *n.* A group of gill-filaments or of arborescent branchiæ, as in certain annelids.

gillyflower, *n.*—**Dame's-gillyflower.** Same as *dame's-violet*.—**Mock gillyflower,** the soapwort or bouncing-bet, *Saponaria officinalis*.—**Night-scented gillyflower.** Same as *dame's-violet*.—**Turkey gillyflower,** the African marigold, *Tagetes erecta*. See *marigold*, 1.

gilly-gaupus (gil″i-gâ′pus), *n.* A tall, awkward, foolish person. [Scotch.]

gilsonite (gil′son-īt), *n.* [From S. H. *Gilson* of Salt Lake City.] A very pure form of asphaltum obtained in considerable quantity in the Uinta valley, near Fort Duchesne, Utah.

gilt, *n.* and *v.* A simplified spelling of *guilt*.

gilt¹, *n.* 3. In *archery*, the innermost circle of the target; the gold.

gilt-cup (gilt′kup), *n.* Same as ★*gill-cup*.

gilty, *a.* A simplified spelling of *guilty*.

gimbal-joint (gim′bạl-joint), *n.* A method of suspension which permits of motion about two axes in the same plane, at right angles to each other; a gimbal.

gimbal-ring (gim′bạl-ring), *n.* A rynd; the piece on which the upper millstone rests and in the center of which is the cockeye, which rests on the spindle.

gimel (gim′ẹl), *n.* [Heb. *gimel*: see *gamma*.] The third letter of the Hebrew alphabet (ג), corresponding to the English *g* in *go*. Its numerical value is 3.

gimlet, *v. t.*—**To gimlet the anchor,** to turn the anchor around when it is hanging from the cat-head or hawse-pipe.

gimlet-bit (gim′let-bit), *n.* An auger-bit in which the cutting edges are drawn into the wood to be bored by a gimlet-point which pierces in advance of the paring-edges.

gimlet-wood (gim′let-wȧd), *n.* The fluted gum or gimlet-gum, *Eucalyptus salubris*, so called from the twisted, fluted structure of the stem.

gimp¹, *n.* 3. In *angling*, a line in which fine wire is woven, or which is bound or wound with wire to increase its strength.— **Gimp lace.** See ★*lace*.

gimp¹, *v. t.* 2. To weave or bind wire into a fabric or cord to stiffen it.

gin-cut (jin′kut), *a.* Noting cotton that has been damaged or cut by the saw-gin.

ginfuku (gin-fō′kō), *n.* [Jap., < *gin*, silver, + *fuku*, belly.] One of the gymnodont fishes of Japan, *Spheroides sceleratus*.

ginger¹. I. *n.*—**Amada ginger.** Same as *mango ginger* (which see, under *ginger*). **Broad-leaved ginger,** *Zinziber Zerumbet*. See ★*awapuhi*, 1.— **Chinese ginger,** the rhizomes of *Languas zingiberina* (*Alpinia zingiberina* of Baker), which when boiled and preserved in syrup, or candied, form a well-known sweetmeat.— **Egyptian ginger,** *Caladium Colocasia*. See *taro*1.— **Native ginger,** in Queensland, *Languas cærulea* (*Hellenia cærulea* of Robert Brown), so named because the whole plant, as well as the rhizome, has the scent and pungency of ginger.— **Wild ginger.** (*b*) Any American species of *Asarum*. (*c*) In the West Indies, any one of several species belonging to the genera *Costus* and *Alpinia* (*Renealmia* of many authors).

II. *a.*—**Ginger brandy,** a cordial made of brandy strongly impregnated with ginger.

ginger¹ (jin′jẽr), *v. t.* [*ginger*, *n.*] To put some 'ginger' into (a person); shake up; revive.

gingerbread, *n.* II. *a.* Having a fanciful shape, such as is often given to gingerbread; showy but unsubstantial or inartistic: (see *gingerbread-work*); as, *gingerbread* fittings on a yacht.

ginger-grass, *n.*—**Oil of ginger-grass.** See ★*oil*.

ginger-leaf (jin′jẽr-lēf), *n.* Same as *turkey* ★*mullen*.

gingerline (jin′jẽr-līn), *a.* and *n.* [Also *gingelline*, *gingeline*, ★*gingioline*; altered (by assimilation to *ginger*), from It. *giuggiolino*, of same meaning, another use of *giuggiolino*, an East Indian plant, gingili, < Hindi and Marathi *jinjāli*, Ar. *juljūlan*, Sp. *aljonjoli*, etc.: see *gingili* and ★*aljonjoli*.] I. *a.* Of a reddish-yellow color; ginger-colored. [Seventeenth century.]

II. *n.* The color itself; also a cloth of this color. It was among the stuffs supplied to the North American Indians "for breeches and jackets" by the traders. *A. M. Earle*, Costume of Colonial Times, p. 114.

gingerol (jin′jẽr-ōl), *n.* [*ginger* + *-ol*.] A colorless liquid, C_5H_8O(?), with the characteristic pungent taste of *Zinziber Zingiber*, from the root of which it is extracted.

ginger-plant (jin′jẽr-plant), *n.* The tansy, *Tanacetum vulgare*.

ginger-roll (jin′jẽr-rōl), *n.* A whalemen's term for the folds under the throat and belly of the humpback, finback, and sulphur-bottom whales.

ginger-root (jin′jẽr-rōt), *n.* The coltsfoot, *Tussilago Farfara*.

gingery (jin′jẽr-i), *a.* Ginger-like in properties or appearance: hence, hot; pungent in taste; spicy.

gingivolabial (jin-jī-vō-lā′bi-ạl), *a.* [L. *gingiva*, gum, + *labium*, lip, + *-al*.] Relating to both gums and lips. *Buck*, Med. Handbook, VI. 124.

gingkoic (ging-kō′ik), *a.* [*gingko* + *-ic*.] Derived from gingko.—**Gingkoic acid,** a colorless, crystalline compound, $C_{24}H_{48}O_2$, melting at 35° C. It occurs in the fruit of *Ginkgo biloba*.

gingko-nut (ging′kō-nut), *n.* A nut or fruit of the gingko-tree, *Ginkgo biloba*.

ginglymoarthrodia (jing″- or ging″li-mō-ärthrō′di-ạ), *n.*; pl. *ginglymoarthrodiæ* (-ē). [NL., < *ginglymus* + *arthrodia*.] An articulation which has both a sliding and a hinge motion.

Ginkgoaceæ (ging-gō-ā′sē-ē), *n. pl.* [NL. (Engler, 1897), < *Ginkgo* + *-aceæ*.] A family of gymnospermous plants constituting the order *Ginkgoales* and typified by the genus *Ginkgo*: the maidenhair-tree family. It is very anomalous and archaic in most of its characters, and is remarkable in having reproduction effected through the medium of motile spermatozoids, as in the *Cycadaceæ*. *Ginkgo* is the only living genus, but a number of extinct genera, as *Jeanpaulia*, *Czekanowskia*, *Rhipidopsis*, and *Whittleseya*, carry it back to the Paleozoic and connect it with the *Cordaitaceæ*.

ginkgoaceous (ging-gō-ā′shius), *a.* Belonging to the plant family *Ginkgoaceæ*.

Ginkgoales (ging-gō-ā′lēz), *n. pl.* [NL. (Engler, 1897), < *Ginkgo* + *-ales*.] An order

of gymnospermous plants containing the family ★*Ginkgoaceæ* only (which see). See also *Ginkgo*, *Jeanpaulia*, *Whittleseya*, and ★*Cordaitales*.

gin-mill[2] (jin′mil), *n.* A cotton-gin.

ginner[2] (jin′ėr), *n.* One who gins cotton or clears it from the seed.

The crop, according to the *ginners*, is 9,996,300 bales, and, according to the canvassing agents, 9,954,106 bales, of an average gross weight of 500 pounds.
N. Y. Tribune, Jan. 6, 1903.

ginnery (jin′e-ri), *n.* [*gin*[3] + *-ery*.] An establishment for the ginning of cotton.

The location of the steam-plant for both *ginnery* and oil-mill at the latter place removes a potent source of danger from the *ginnery*.
L. L. Lamborn, Cottonseed Products, p. 31.

ginny-carriage, *n.* 2. A low two-wheeled basket-phaeton, hung on coil-springs.

gin-pole (jin′pōl), *n.* A pole, secured by guy-ropes, to the top of which tackle for lifting heavy weights is fastened.

gin-pulley (jin′pŭl″i), *n.* The sheave or wheel of a gin-block; also, the block itself.

gin-race (jin′rās), *n.* The circular track made by a gin-horse.

gin-roller (jin′rō″lėr), *n.* One of the rollers between which cotton is drawn when it is ginned.

gin-saw (jin′sâ), *n.* One of a set of circular saws used in a cotton-gin.

ginseng, *n.* Several plants not botanically related to the ginseng have been so named as possessing similar medical properties, as, in Georgia, the sunflower-like composite *Tetragonotheca helianthoides*. **American ginseng**, *Panax quinquefolius* (see *ginseng*), native in the wooded country from Maine through Canada to Minnesota, Iowa, and Missouri, and southward, but in the South Atlantic and Gulf states only in the mountains. In many parts of this area it is nearly extinct. The root has long been exported (mostly to China) from Canada and the United States, the export from the latter from 1858 to 1896 exceeding a total value of $20,000,000, the amount decreasing, but the price rising during the period. In recent times it

American Ginseng (*Panax quinque folius*).
One fourth natural size.

has been successfully cultivated in the United States. It requires partial shade, which may be afforded either by trees or by lath sheds. The seeds will not germinate till the second season, and not at all if they once become dry. The roots most in demand are large and heavy, with the fewest possible branches except when, by forking, the human form is imitated. According to Korean authority the American ginseng is inert as compared with the Chinese. In China it is graded below the Korean, apparently about with the 'native.' It is little esteemed in medicine in America. **Blue ginseng**, the blue cohosh, *Caulophyllum thalictroides*. **Horse-ginseng**, the horse-gentian, *Triosteum perfoliatum*. **Japanese ginseng**, that produced in Japan: graded lowest in China, and regarded as comparatively inert. It is said to be frequently adulterated with the root of *Campanula glauca*, etc. **Korean ginseng**, that produced in Korea, chiefly under cultivation: it is graded next to the Manchurian and is similar in its properties. The cultivated root is said to be smaller than the san-sam or wild ginseng.—**Native ginseng**, in China, a third grade grown near the borders of Korea, said to be used mainly to adulterate the Korean ginseng.—**White ginseng**. Same as *horse-*★*ginseng*.—**Yellow ginseng**. Same as *blue* ★*ginseng*, referring probably to the color of the root.

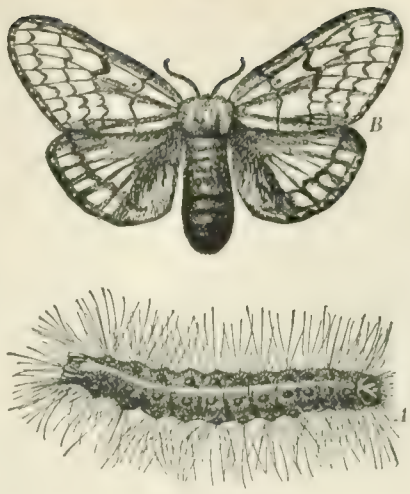
Giottesc (jot-tēs′), *a.* [*Giotto* di Bondone (1276–1337).] Of or pertaining to Giotto, or resembling his work.

Giottesc frescoes of the Franciscan legends.
N. and Q., 10th ser., I. 220.

gipsy-combs (jip′si-kōmz), *n.* The wild teazel, *Dipsacus sylvestris*.

gipsy-flower (jip′si-flou″ėr), *n.* The hound's-tongue, *Cynoglossum officinale*.

gipsy-moth, *n.* Its larva is very destructive to the foliage of orchard, shade, and forest trees. A naturalist,



Gipsy-moth (*Porthetria dispar*).
A, larva; *B*, female moth. Slightly reduced. (After Ratzeburg.)

experimenting with this insect at Medford, Mass., in 1869, accidentally allowed it to escape, and it has become thoroughly established in the country around Boston, where it has done much damage.

gipsy-rose (jip′si-rōz), *n.* Same as *Egyptian rose* (which see under *rose*[1]).

gipsy-weed (jip′si-wēd), *n.* 1. Same as *bugleweed*.—2. The speedwell, *Veronica officinalis*.

giraffe, *n.* 5. Same as ★*giraffe-fever*. *Buck*, Med. Handbook, III. 400.

Giraffe camel, giraffe-necked camel. See ★*camel*.

giraffe-fever (ji-raf′fē″vėr), *n.* Same as *dengue*.

giraffesque (ji-raf-esk′), *a.* [*giraffe* + *-esque*.] Giraffe-like in coloration or height.

Protective coloration in large animals is illustrated by the Somali giraffe (well shown by one of Lord Delamere's photographs of a *giraffesque* thicket).
Nature, April 14, 1904, p. 555.

giraffine (ji-raf′in), *a.* and *n.* **I.** *a.* Resembling a giraffe; giraffe-like.

Professor Ray Lankester has diagnosed it [the Okapi] as a *giraffine* animal. *Pop. Sci. Mo.*, March, 1902, p. 429.

II. *n.* A giraffe-like animal. [Rare.]

It [the Okapi] is a *giraffine*, horned in the male.
Rep. Brit. Ass'n Advancement of Sci., 1902, p. 625.

gird[1], *n.* 2. Twist, used for binding together the fibers of yarn in the process of spinning. *C. Vickerman*, Woollen Spinning, p. 296.

girder[1], *n.*—**Equivalent girder**, in *naval arch.*, a hypothetical girder whose flanges are equal to the decks and bottom of a ship and whose web is equal to the sides and other vertical parts: used in calculating the longitudinal strength of a vessel. *White*, Manual of Naval Arch., p. 348.—**Half-lattice girder.** See ★*lattice-girder*.—**Open-web girder**, a built girder in which the web is composed of a framework like a truss with struts and ties. See *web*, 5 (*d*).—**Sandwich girder**, a girder built up with an iron web-plate between wooden beams, the whole being bolted together.—**Skeleton girder**, a latticed girder; a girder having an open, braced, or latticed web.—**Z-girder**, a girder of which the cross-section resembles the capital letter Z; either a single rolled section having a web and one flange on each side, or a built-up section made of a web-plate and an angle on one side at the top and an angle on the other side at the bottom.

girderage (gėr′dėr-āj), *n.* [*girder* + *-age*.] A group or system of girders; girders collectively; the total number of girders used.

girder-beam (gėr′dėr-bēm), *n.* Same as *girder*[1], 2. Also called *girth-beam*.

girder-rail (gėr′dėr-rāl), *n.* A railway-rail having a deep web, flat base, and wide and shallow top, adapted to wheels with small flanges. It is used in electric railroads where the rails must be laid in a paved street or asphalted or macadamized road.

Girder rail
a, tread; *b*, web; *c*, base.

girdle[1], *n.* 10. A ring made round the trunk of a tree by the removal of the bark either purposely or accidentally.—11. In earthworms, the cingulum or clitellum.—**Neptune's girdle**, in *med.*, a form of wet-pack applied to the upper part of the abdomen.—**Pin and girdle.** See ★*pin*[1].

girdle-pain (gėr′dl′pain), *n.* A painful girdle-sensation.

girdle-sensation (gėr′dl-sen-sā″shon), *n.* A feeling of constriction as if a belt were drawn closely round the body: a symptom common in certain diseases of the spinal cord.

girdle-worm (gėr′dl-wėrm), *n.* Same as ★*cranberry-girdler*.

Girella (ji-rel′ä), *n.* [NL., for **Gyrella* (?), < L. *gyrus*, gyre, + *-ella*.] A genus of perch-like fishes of the family *Kyphosidæ*, found on both shores of the Pacific. The species are herbivorous, feeding on plants by means of their movable incisors. *G. nigricans* is the greenish of the coast of California.

Girellinæ (jir-e-lī′nē), *n. pl.* [NL., < *Girella* + *-inæ*.] A subfamily of fishes typified by the genus *Girella*.

girl, *n.*—**One's best girl**, one's sweetheart. [Colloq., U. S.] **Hired girl**, a domestic maid-servant. **Second girl**, a domestic servant whose duties are chiefly housework and waiting at table, the cook being considered 'first girl.' [Colloq., U. S.]—**Summer girl**, one of the young ladies who congregate at the summer resorts. [Colloq., U. S.]

girling (gėr′ling), *n.* Same as *gilling*[2].

girn[2] (gėrn), *n.* [A metathesis of *grin*[2].] A trap or snare for catching animals, birds, etc.: also used figuratively. [Scotch.]

girn[2] (gėrn), *v. t.* [*girn*[2], *n.*] To entrap or ensnare by, or as if by, a girn. [Scotch.]

giro (jē′rō). *n.* [It., < L. *gyrus*: see *gyre*.] A round; a turn; a short tour.

Our days here are passed quite deliciously. We see a few beautiful pictures or other objects of interest, . . . and afterwards we have a *giro* in our gondola, enjoying the air and the sight of marvellous Venice.
George Eliot, in Cross, Life of George Eliot, III. 329.

girofle (zhē-rō′fl), *n.* [F.: see *gillyflower*.] The French for *clove*[4]. **Essence of girofle**, oil of cloves.

giroflée (zhē-rō-flā′), *n.* [F. *giroflée*, gillyflower.] 1. The clove-pink, a species of *Dianthus*.

Out of the rich red soil underneath the trees are springing violets and narcissus and *giroflés*.
The Outlook, Sept. 2, 1899, p. 65.

2. A basic coal-tar color of the azonium-chlorid type. It dyes tannin-mordanted cotton a reddish violet. Also called *methylene-violet* and *fuchsia*.

girouette (jir-ō-et′), *n.* [F. *girouette*, earlier *gyrouette*, *gyrouet*, prob. < It. *giro* (< L. *gyrus*), a turning, + *-ouette* as in *pirouette*, a top.] A weathercock; hence, one who is given to frequent change, as in opinions, purpose, etc.; an inconstant person.

girt[1] (gėrt), *n.* A beam; a small girder; a crosspiece in a frame. [Colloq.]

girt[2] (gėrt), *v. t.* [*girt*[2], *n.*] 1. To measure or have a girth of: as, the tree *girts* eight feet.—2. To measure by a girding-line.

girth, *n.* **Combination girth**, a harness girth fitted with loops and buckles at each end: a substitute for the two girths.—**Fitzwilliam girth**, a riding-saddle girth composed of one broad piece of web, with two buckles at each end.

girth, *v. t.* 2. To encircle or surround with a measuring-line, as in measuring moldings, etc.

girth-beam (gėrth′bēm), *n.* A girder.

girth-stretcher (gėrth′strech″ėr), *n.* A device for stretching saddle-girths.

girth-web (gėrth′web), *n.* The strong webbing of which girths are made.

girt-line, *n.* 2. A boundary or bounding line.—**Hammock girt-lines** (*naut.*), lines on which scrubbed hammocks are stopped up to dry.

girt-wheel (gėrt′hwēl), *n.* The narrow drum under a hand-press which winds and unwinds the leather bands which move alternately in and out the bed of the press which upholds the form of type.

gisement[1] (jīz′ment), *n.* Same as ★*gistment* or *agistage* (which see).

gisement[2] (zhēz-mon′), *n.* [F., < *giser*, lie.] The way in which a thing lies; position; bearing.

gisernet, *n.* See *guisarme*.

Gisortia (ji-sôr′ti-ä), *n.* [NL., < (?) F. *Gisors*, a town in France.] A genus of platypodous gastropods from the Eocene Tertiary rocks, belonging to the family *Ovulidæ* and characterized by large, thick shells with short convolute spire.

Gissocrinus (ji-sok′ri-nus), *n.* [NL., < Gr. γείσσον, γείσον, eaves, cornice, + κρινον, lily (see *crinoid*).] A Paleozoic genus of fistulate crinoids belonging to the family *Cyathocrinidæ*. They have a short calyx with a long, laterally folded ventral sac and regularly bifurcating arms.

gist[3] (jist), *v. t.* An aphetic form of *agist* (which see).

gistment† (gist′ment), *n.* An aphetic form of *agistment*.

gitana (hē-tä′nä), *n.* [Sp., fem. of *gitano*.] A Gipsy woman.

gitano (hē-tä′nō), *n.* [Sp., < L. **Ægyptanus*, equiv. to *Ægyptianus*, Egyptian, whence ult. E. *Gipsy*.] In Spain, a Gipsy (man).

githagism (gith′a-jizm), *n.* A disease supposed to be caused by eating the seeds of the corn-cockle, *Lychnis* (*Agrostemma*) *Githago*.

These seeds contain a poisonous sapotoxine-like substance, and are regarded in Europe as the cause of the chronic poisoning or disease of man and animals which is known as *githagism*.
Yearbook U. S. Dept. Agr., 1900, p. 307.

Gitocrangon (git-ō-kran'gon), *n.* [NL., < Gr. γείτων, a neighbor, + κραγγών, a shrimp or prawn.] A problematical fossil described as a genus of decapod crustaceans from the Upper Devonian rocks of Thuringia.

Giton (gī'ton), *n.* [NL., < Gr. γείτων, a neighbor, neighboring; prob. (like γεῖος, adj., indigenous) < γῆ, earth, land.] A genus of fresh-water eel-like fishes found in the waters of Brazil. They belong to the family *Gymnotidæ*.

giulio (jō'lyō), *n.* [It., < L. *Julius*.] A papal silver coin, one tenth of a scudo: apparently so called from Pope Julius II.

giustina (jōs-tē'nä), *n.* [It., < L. *Justina*.] A Venetian silver coin of the value of 11 lire. —**Giustina maggiore,** a Venetian silver coin equal to 160 soldi: first struck in 1571, and named from St. Giustina, on whose name-day (Oct. 7) the battle of Lepanto was fought in that year.—**Giustina minore,** a Venetian silver coin also imitated by Cesare d'Este, Duke of Modena (1597–1628).

giv, *n.* and *v.* A simplified spelling of *give*.

give[1], *v.* **I.** *trans.*—**Give way together!** (*naut.*), an order for all the oarsmen in a boat to pull in unison. **To give it hot,** to chastise severely. [Slang.] **To give time,** to extend the time, as for the paymentof a debt or the fulfilment of a contract.—**To give umbrage,** to offend.

II. *intrans.*—**To give and take,** to be as ready to give as to receive; even up by fair exchange, as of courtesies, hard knocks, etc.; give tit for tat.—**To give best,** to give in; give up the contest; acknowledge superiority. [Australia.]

give-ale (giv'āl), *n.* [*give* (AS. *gifu*), gift, + *ale*.] A memorial festival formerly observed annually in some parts of Kent, England, the cost being defrayed from funds which had been bequeathed for the purpose.

The *giveales* . . . were the legacies of individuals, and . . . entirely gratuitous; though some of them might be in addition to a common *giveale* before established in the parish . . . . "I will that my heires shall have five yards of land lying in Longfield, and five yards in Pettefield, upon condition that they make a yearly *geveail* on Trinity Sunday of 5 bushels of wheat, and 1 seame of barley. . . ."
Archæologia, XII. 13, 14.

give-and-take (giv'and-tak'), *n.* and *a.* **I.** *n.* The practice of giving and taking on equal or fair terms; a mutual making of concessions or allowances; exchange, as of ideas, civilities, repartee, jests, banter, etc.; a giving of tit-for-tat.

II. *a.* Characterized by a spirit of giving and taking on fair terms, as in evening up advantages and disadvantages; marked by mutual concession: as, a give-and-take policy. —**Give-and-take plate,** in *horse-racing*, a prize for a race in which the horses carry weight according to their height, those above a certain standard carrying more than those below that standard.

give-away (giv'a-wā''), *n.* **1.** An inadvertent or unconscious betrayal of one's self or one's secrets. [Slang, U. S.]—**2.** A game of drafts or checkers in which the players endeavor to give away their men, the moves being such as to force the adversary to take them; the losing game of checkers.

Givetian (ji-vē'shian), *a.* In *geol.*, noting a subdivision of the Devonian system in Belgium and the north of France, named from Givet. It constitutes the upper part of the Middle Devonian, and is equivalent to the *Stringocephalus* limestone of the Eifel, and the Torquay and Plymouth limestones of Devonshire.

gizzard-fish (giz'ärd-fish), *n.* A whitefish, *Coregonus clupeiformis*, found in the Great Lakes.

G. L. An abbreviation of *Grand Lodge*.

glabellad (glā-bel'ad), *adv.* [*glabella* + *-ad*[3].] Toward the glabella.

glabello-inial (glā-bel''ō-in'i-al), *a.* In *anthrop.*, pertaining to both the glabella and the inion: as, the *glabello-inial* length, the distance between the glabella and the inion.

glabello-occipital (glā-bel''ō-ok-sip'i-tal), *a.* In *anthrop.*, pertaining to both the glabella and the occiput; as, the *glabello-occipital* length, the maximum length of the head measured from the glabella to the occiput.

glabreity (glā-brē'i-ti), *n.* See *glabrity*.

glabrescent (glā-bres'ent), *a.* [*glabr-ous* + *-escent*.] In *bot.*, becoming glabrous, as organs that are hairy in the bud or young state and glabrous with age.

glacial, *a.* **3.** Of or relating to a glacier or an ice-sheet.—**4.** In *chem.*, assuming the solid state as a result of concentration: used chiefly of certain acids (as acetic, sulphuric, and phosphoric acids) which are commonly seen as liquids but solidify at low temperatures when concentrated by removal of water. In the case of phosphoric acid, water is not only removed by evaporation but is also evolved by the chemical decomposition of orthophosphoric acid, which is thus converted into metaphosphoric acid, the epithet *glacial* being applied to the latter.—**Croll's glacial theory,** an attempt by Croll to account for the existence of a glacial period by the known changes in the eccentricity of the earth's orbit. The maxima occur once in 100,000 to 200,000 years. At such periods there is an increased difference in the relative lengths of winter and summer. At the extreme the winters are 33 days longer than the summers and the sun's distance from the earth is 99,300,000 miles. It is argued that the extreme cold of such long winters might not be neutralized by the summer temperatures sufficiently to melt away the accumulated snow and ice.—**Glacial boundary,** the line which separates the intraglacial from the extraglacial field.—**Glacial climate, deposit, erosion.** See ★*climate*, etc.—**Glacial humor,** vitreous humor.—**Glacial hypothesis, glacial theory,** in *geol.*, the theory which accounts for the distribution of drifts and erratic boulders and for the scoring of the underlying rock-surface by the former extension of glaciers and ice-sheets: opposed to the ★*iceberg theory*.—**Glacial lake.** See ★*lake*[1].—**Glacial meal,** rock-flour formed by the grinding action of a glacier or coming from a glacier.—**Glacial mill.** Same as *moulin*.—**Glacial period.** Same as *glacial epoch* (which see, under *glacial*). —**Glacial planing,** the reduction of a rocky mass to a comparatively smooth surface by glacial erosion.—**Glacial scoring,** the scratching and grooving of a rock-surface by glacial erosion.—**Glacial scratches,** lines scored upon a rock-surface by sand and gravel which are dragged over it by a glacier. See *striation*, 2.—**Glacial terrace.** See ★*terrace*[1].—**Glacial theory.** See ★*glacial hypothesis*.

glacialism (glā'shial-izm), *n.* [*glacial* + *-ism*.] The scientific theory of the occurrence and action of glaciers.

glacialized (glā'shial-īzd), *a.* Having been affected by glaciers.

glaciate, *v. t.* **4.** To act upon by a glacier.

glacic (glā'sik), *a.* [L. *glacies*, ice, + *-ic*.] Same as *glacial*.

glacier, *n.* **2.** A vessel for holding ice and cooling wine.—**Alpine glacier,** a glacier of the type now characteristic of the Alps; a glacier which is fed by snow and névé gathered in an amphitheater and moving down a valley; a valley glacier.—**Cliff glacier,** a glacier which occupies a relatively small depression in the side of a mountain or in the escarpment of a plateau and rarely descends much below the snow-line. *Chamberlin and Salisbury*, Geol., I. 242.—**Continental glacier,** a sheet of ice which covers a large part of a continent, such as that which now covers Greenland, or that which covered northeastern North America in the glacial period; an ice-sheet.—**Dead glacier,** a stagnant glacier; a fossil glacier. *J. Geikie*, The Great Ice Age, p. 705.—**Fossil glacier,** in *geol.*, a term which has been applied by Toll and other Russian geologists to the remains of the Pleistocene ice-sheet on the coastal plains of northern Siberia. These ice-beds lie under a thin layer of soil which bears a vegetation, rest upon a ground moraine, and may be interbedded with frozen clays. From the frozen soil above this old ice carcasses of the mammoth and the hairy rhinoceros have been obtained, retaining flesh, skin, and hair. Also called *stone-ice*, *rock-ice*, and *dead-ice*.—**Hanging glacier,** a glacier of small size on so steep a slope that the ice breaks off and falls from its lower end. *Geikie*, Text-book of Geol., p. 540.—**Laurentide glacier,** a glacier originating in the Laurentian highland of Canada.—**Malaspina glacier,** a piedmont glacier in Alaska, between Mount St. Elias and the sea, extending over an area of 1,500 square miles; hence, any piedmont glacier.—**Piedmont glacier,** the lower outspreading part of a large glacier on low land, fed by alpine glaciers from neighboring mountain valleys. The Malaspina glacier of Alaska, near Mount St. Elias, is of this type.—**Plateau glacier,** a glacier or ice-sheet which covers a plateau, is fed by the snowfall on its own surface (not from higher névé reservoirs), and is usually bordered or fringed by one or more descending valley glaciers. *Geikie*, Text-book of Geol., p. 536.—**Recemented glacier,** a glacier formed of recompacted ice which has fallen down a cliff (as at the mouth of a hanging valley) from a higher glacier. Also called *regenerated glacier*.—**Reconstructed glacier,** a glacier formed by regelation of the snow and ice of avalanches. *Dana*, Manual of Geol., p. 242.—**Regenerated glacier.** Same as *recemented* ★*glacier*.—**Tidal glacier.** Same as *tide-water* ★*glacier*.—**Tide-water glacier,** a glacier which reaches down to tide-water and is capable of producing icebergs. —**Valley glacier,** a glacier which occupies a valley and is fed from a névé reservoir, in distinction from a plateau or a piedmont glacier; an alpine glacier.

glacier-bed (glā'shiêr-bed), *n.* The surface over which a glacier moves. *J. Geikie*, The Great Ice Age, p. 64.

glacier-burst (glā'shiêr-bêrst), *n.* The sudden release of a reservoir of water which has been impounded within or by a glacier. The melting of the ice may set free vast and destructive floods. *Nature*, Sept. 29, 1904, p. 541.

glacier-face (glā'shiêr-fās), *n.* The ice-cliff at the front or lower end of a tide-water glacier.

Nothing but *glacier-face* lined the coast, and the ice flowed down in curving lines as far as the eye could reach. *Geog. Jour.* (R. G. S.), XI. 122.

glacier-grain (glā'shiêr-grān), *n.* **1.** The granular texture of glacier-ice.—**2.** One of the grains of ice in a glacier. *J. Geikie*, The Great Ice Age, p. 32.

glacier-ice (glā'shiêr-īs), *n.* The ice of a glacier. It is peculiar in having a granular crystalline structure unlike that of pond-ice.

glacierist (glā'shiêr-ist), *n.* [*glacier* + *-ist*.] One who is specially versed in the knowledge of glaciers.

glacier-lake (glā'shiêr-lāk), *n.* A lake formed between the margin of a glacier and an encircling rim of land. A glacier-lake may be produced by the advance of an ice-front against the course of natural drainage.

The former occurrence of a number of *glacier-lakes* or "extra-morainic" lakes, such as are produced whenever a glacier or ice-sheet advances against or across the general slope of a country and impounds the natural drainage.
Nature, Aug. 28, 1902, p. 424.

glacier-milk (glā'shiêr-milk), *n.* The whitish water of a stream which issues from a glacier and is colored by suspended silt or rock-flour.

glacier-mill (glā'shiêr-mil), *n.* Same as *moulin*. *J. Geikie*, The Great Ice Age, p. 310.

glacier-silt (glā'shiêr-silt), *n.* Extremely fine rock-waste or rock-flour ground by a glacier from its bed, washed out by a glacial stream, and deposited in quiet water beyond.

glacification (glas''i-fi-kā'shon), *n.* [L. *glacies*, ice, + *-fication*.] **1.** The process of changing water or snow into ice.—**2.** The formation of glaciers. *Tyndall*.

glaciofluvial (glā-shiō-flō'vi-al), *a.* [L. *glacies*, ice, + *fluvius*, river: see *fluvial*.] Of or relating to processes or deposits which involve the action of glacial streams or of streams heading glaciers. *Amer. Geol.*, May, 1903, p. 285.

glaciofluviatile (glā-shiō-flō'vi-a-til), *a.* Same as ★*glaciofluvial*.

glaciomarine (glā-shiō-ma-rēn'), *a.* [L. *glacies*, ice, + *marinus*, of the sea.] Of or relating to processes or deposits which involve the joint action of glaciers and the sea, or the action of glaciers in the sea.

glaciometer (glā-shi-om'e-têr), *n.* [L. *glacies*, ice, + Gr. μέτρον, meter.] Any device or object which serves to measure the movement of a glacier.

glade[1], *n.*—**Cedar glades.** See ★*cedar brakes*.

gladiolar (glā-dī'ō-lär), *a.* [*gladiolus* + *-ar*[3].] Relating to the gladiolus, or the portion of the breast-bone lying between the manubrium and the xiphoid cartilage. [Rare.]

gladkaite (glad'ka-īt), *n.* An eruptive rock forming dikes in the Gladkaia-Sopka ridge of dunite at the head-waters of the Travianta river, in the northern Urals. It consists of plagioclase (oligoclase-albite) in largest amount, together with biotite, muscovite, hornblende, epidote, magnetite, and apatite. *Duparc and Pearce*, cited in Nature, June 22, 1905, p. 192.

Gladstonianism (glad-stō'ni-an-izm), *n.* The policy or policies of W. E. Gladstone (1809–98), a Liberal statesman of Great Britain.

gladsum, *a.* A simplified spelling of *gladsome*.

glady (glā'di), *a.* [*glade* + *-y*[1].] Having glades; abounding in glades.

glairigenous (glär-ij'e-nus), *a.* [*glair* + *-i-* + *-genous*.] Giving rise to glairin or mucus.

glam[2], *n.* **2.** A clamp used in the old method of castrating horses.

glamourous (glam'o-rus), *a.* Full of glamour or alluring charm.

glance, *n.* **6.** In *railroading*, an incline or shoot made of timber, erected on a mountain-side and designed to cause snow which slides down the mountain to glance or turn aside from the track. [Northwestern U. S.]—**7.** In *cricket*, a stroke by which, instead of being hit, the ball is allowed to strike the bat and to be deflected from it, usually to the leg side; a glide.—**Northern glance.** A sailors' name for the aurora borealis.

glance, *v. t.* **4.** In *metal-working*, to polish very highly; burnish; planish.—**5.** In *cricket*, to allow (the ball) to meet the bat and to be deflected from it, usually to the leg side.

glance-cobalt (glans'kō''bâlt), *n.* Same as *cobalt-glance* or *cobaltite*.

glance-fish (glans'fish), *n.* A common name of *Lampris luna*, a cosmopolitan fish found in open waters of the Atlantic and Pacific; the opah.

glance-pitch (glans'pich), *n.* A lustrous bituminous mineral allied to asphaltum and bitumen.

glancer (glan'sêr), *n.* Same as ★*fender-skid*.

glance-stroke (glans'strōk), *n.* In *cricket*, a stroke by which the ball is turned in its course, usually to the leg side, by playing it with the surface of the bat held slantwise. See ★*glance*, *n.*, 7.

gland, *n.*, **4.** (*c*) The sliding member of an engine stuffing-box, by which the packing is compressed against the rod by endwise pressure from the bolts or nut.—**5.** In *founding:* (*a*) A clamp; a hooked bar used for clamping together the parts of a molder's flask. (*b*) A plate through which the ends of a binding-band or clevis pass; a clip. **Accessory glands of the vasa deferentia,** in *entom.*, certain glands, differing greatly in shape and number with the different orders of insects, whose secretions mix with the semen or form spermatophores. In many insects there is only a single pair; in others there are many; in some they are branched.—**Adhesive glands,** in *entom.*, certain glands, occurring in bees and ants, connected with the poison-glands and corresponding to the tubular glands of the *Orthoptera* which secrete the glue with which the eggs are fastened together.—**Adrenal gland.** Same as *adrenal, n.*—**Albumin glands,** glandular developments in the ventral body-wall in the generative segments of some earthworms. They probably secrete the albuminous matter found in the cocoon. Also called *capsulogenous glands.* **Alkaline glands,** in *entom.*, those glands which in the aculeate *Hymenoptera*, as the bees, secrete a feebly alkaline substance which, with the acid product of other glands, makes the poison of the sting. **Alluring glands,** in *entom.*, scent-glands, occurring in the males of certain insects, the odor from which is supposed to attract or excite the females. They are more abundant in the *Lepidoptera*, but have also been found in certain *Trichoptera* and *Orthoptera.* The androconia may be alluring, and alluring glands may occur in various parts of the abdomen or in the front or hind legs. In the *Lepidoptera* they are usually connected with tufts or pencils of hair, concealed or unconcealed, which serve to distribute the odor.—**Anal glands.** (*a*) and (*b*). See *anal.* (*c*) In *entom.*, paired or single glands situated near the rectum and usually connected with it. The secretion of these glands is frequently fetid in odor, and they then function as repugnatorial organs.—**Antennal gland,** the gland upon the basal joint of the second antenna in most *Crustacea.* It seems to be wanting only in the *Isopoda.*

Antennary gland, in *Arthropoda*, the green-gland, an organ at the base of each antenna by which the function of renal excretion is performed.—**Blandin's glands.** Same as *Nuhn's* ★*glands.* **Bulbocavernous glands.** Same as *Cooperian glands* (which see, under *Cooperian*).

Byssus gland, the gland, situated in or on the foot, which secretes the silky byssus by means of which *Mytilus*, *Lima*, *Pinna*, and other lamellibranchs are anchored to foreign bodies.—**Caudal gland,** a gland situated near the base of the tail; in mammals, same as *perineal* ★*gland.*—**Cervical glands.** (*a*) The lymphatic glands in the neck. (*b*) In *Uncinaria*, a pair of pear-shaped bodies of unknown function, which lie one on each side of the pharynx and probably open externally near the mouth.—**Conglobate gland.** (*b*) In *entom.*, a gland, the function of which is not known, connected with the male genitalia of the cockroach and opening separately from the ejaculatory duct.—**Corrosive glands,** in *entom.*, certain anal glands possessed by the adults of some beetles, particularly certain *Carabidæ*, from which a corrosive fluid is expelled as a means of defense. *Brachinus*, *Agonum*, *Pherosophus*, *Galerita*, *Helluo*, *Paussus*, *Ozæna*, *Cerapterus*, *Staphylinus*, *Stenus*, *Ocypus*, *Lacon*, and other genera possess these glands, and *Mormolyce phyllodes*, a species of Java, is said to secrete a fluid so corrosive that it paralyzes the fingers for twenty-four hours.—**Coxal glands.** (*a*) In *Peripatus*, a series of pairs of glands lying in the lateral compartments of the body-cavity, their ducts opening on the lower surfaces of the legs. They vary in the two sexes and in different species. (*b*) Eversible repugnatorial glands situated in the coxa of certain of the lower insects, as the *Symphyla* and *Synaptera.* See *defensive* ★*glands.*—**Defensive glands,** certain eversible glands often found among the *Insecta*, which are also called repugnatorial glands. They are situated in many different parts of the body and are usually simple evaginable hypodermic pouches which when everted give forth a disagreeable odor which is supposed to be protective. See *repugnatorial pores*, under *repugnatorial.*—**Dermal glands,** the skin-glands of insects. The function of some of them is unknown; others secrete hairs, spines, wax, honey-dew, or other substances.

Byssus of a lamellibranch with its Cavity and Duct

a, diagrammatic transverse section through the foot, *b*, main stem, *c*, terminal threads attaching the byssus to a foreign object. The fibers of the byssus are formed in the cavities of the byssus gland, whence they issue through the duct to the exterior.

(From Lang's "Comparative Anatomy.")

Eversible glands. See *defensive* ★*glands.* **Fetid glands,** certain glands, occurring in several groups of insects in varying parts of the body, which secrete a liquid having a disagreeable odor. See *defensive* ★*glands.* **Filippi's gland,** a paired gland in the labium of silkworms the secretion of which enters the common duct where the silken fluid is formed.—**Frontal gland.** Same as ★*head-gland.*—**Gastro-epiploic glands,** lymphatic glands in the great omentum near the greater curvature of the stomach.—**Gland of Dufour,** the alkaline glandular organ of the poison-apparatus of bees and other aculeate *Hymenoptera*, and of some *Ichneumonida* and *Tenthredinidæ.* **Gland of Leiblein,** in some gastropods, as *Murex*, a glandular structure situated near the middle of the length of the esophagus and communicating with the latter.—**Glands of Asellius.** Same as *pancreas Aselli.*—**Glands of Duverney,** vulvovaginal glands.—**Granular gland.** Same as ★*granule-gland.*—**Harderian gland,** a gland which lies in advance of the orbit of the eye and whose function is to lubricate the eyelids and, particularly, the nictitating membrane when this is present.—**Hemolymph glands,** glandular structures intermediate between the spleen and the lymphatic glands, believed to be concerned in hematopoiesis. **Hibernating gland,** a gland, possessed by the hedgehog, in which fat is stored for consumption during the winter sleep.—**Humeral gland,** a gland opening on the upper surface of the antebrachial, or humeral membrane, of the bats of the genus *Saccopteryx.* It is characteristic of the males, being rudimentary or absent in the females.—**Krohn's gland,** in the *Phalangidæ*, a gland which opens on the dorsal side of the cephalothorax. **Mery's glands.** Same as *glands of Bartholin* (which see, under *gland*).—**Muciparous glands.** Same as *mucous glands* (which see, under *gland*). **Multicellular gland,** a gland in which the excretory cells discharge their excretion into a common duct, where it accumulates before it escapes.—**Mushroom gland,** in *entom.*, the combined accessory glands of the vasa deferentia of the cockroach. See *mushroom-shaped gland*, under *gland.* **Nabothian glands,** small mucous follicles in the mucous membrane which lines the neck of the womb.—**Nephridial gland,** in some gastropods, a differentiated part of the kidney consisting of canals with ciliated epithelium and of connective tissue, muscles, and blood-lacunæ.—**Nuhn's glands,** two glands near the tip of the tongue the ducts of which open on the inferior surface. Also called *Blandin's glands.* **Odoriferous glands.** (*b*) In *entom.*, various hypodermal glands, giving forth an odor, which occur in many insects and in different parts of the body.—**Optic gland,** in cephalopods, an organ, of unknown function, consisting of a large soft body which lies in immediate contact with the eye. Also called the *white-body.*—**Oral gland,** any one of the salivary glands which lie about the mouth.

The classification of the mammalian *oral glands*, their occurrence and structure in the different animals.
Science, June 28, 1901, p. 1025.

Ovoid gland, in echinoderms. Same as ★*axial organ.*—**Parapodial gland,** in polychætous annelids, one of the collections of gland-cells found on the lobes of the parapodia.—**Pedal gland,** in gastropods, one of the mucus-secreting glands of the foot.—**Pedipalpal gland,** in many *Arachnoidea*, certain glands in the second pair of appendages. They are regarded as poison-glands in some genera, in others as salivary glands, and in others as spinning-glands; but little is known about their function.—**Pericardial gland,** in most mollusks, a glandular differentiation of the endothelial wall of the pericardium, having perhaps an excretory function. Also known as *Keber's organ.*—**Perineal gland,** a gland opening in the perineum. It is from such a gland, lying just beneath the tail of various species of civet cats, that the civet of commerce is obtained. See *civet*1, 1.—**Rectal glands.** (*b*) In gephyreans, the glands near the anal opening.—**Repugnatorial glands.** Same as *defensive* ★*glands.* **Serous gland,** a salivary gland which produces a thin serous secretion.—**Setiparous glands,** in annelids, glands which produce the setæ, or which may be modified into spinning-glands or other structures.—**Skene's glands,** two minute tubular glands in the floor of the female urethra.—**Spermiducal gland,** in earthworms, a glandular appendage attached to and opening into the vas deferens or sometimes opening independently to the exterior. Also known as *prostate.*—**Splenolymph glands,** the more common variety of hemolymph glands, of rounded form, found in many parts of the body.—**Unicellular gland,** a gland which consists of a single cell, or one in which the ducts through which the excretion escapes are parts of the bodies of the excretory cells: contrasted with a gland in which the excretory cells pour their excretion into a common duct.—**Uterine** or **utricular glands,** follicles of the mucous membrane of the uterus.—**Venomous glands,** in *entom.*, same as *poison-gland.* See cut under *Hymenoptera.*—**Vitelline gland,** in platyhelminths, one of the glands which supply egg-cells with the nutritive yolk necessary for their nourishment; a vitellarium.

gland-cell (gland′sel), *n.* A secreting cell.

On either side of the animal, and lying partly in the longitudinal muscle-layer, partly in the gelatinous connective tissue within the body of the animal, is a well-marked layer of *gland-cells.*
Proc. Zool. Soc. London, 1901, II. 93.

Glanders bacillus. See ★*bacillus.*

gland-packer (gland′pak′ėr), *n.* A workman who packs the gland-box of an engine or machine. See *gland*, 4.

glandula, *n.*—**Glandulæ concatenatæ,** a chain of lymphatic glands situated in the deeper structures of the neck and extending from the skull to the clavicle. *Jour. Trop. Med.*, July 1, 1903, p. 208.

Glandular cancer. Same as *adenocarcinoma* and *adenosarcoma.*—**Glandular epithelium.** See ★*epithelium.*—**Glandular organ,** in echinoderms. Same as ★*axial organ.*

glanduliform (glan′dū-li-fôrm), *a.* Like a gland in appearance or function. *Syd. Soc. Lex.*

glanduligerous (glan-dū-lij′e-rus), *n.* [NL. *glandula*, gland, + L. *gerere*, bear.] Gland-bearing; glandular: as, the *glanduligerous* edge of the mantle of a mollusk.

glanz-gold (glänts′golt), *n.* [G.] A cheap style of ceramic gilding; it comes from the kiln in a bright state and requires no further treatment.

glare-worm† (glär′wėrm), *n.* Same as *glow-worm.*

glass. I. *n.*, **1.** In *petrog.*, glass is the natural product of the rapid cooling of igneous magmas, and in large masses is known as *obsidian*, *pitchstone*, and *pumice*. It may be colorless or of various colors, as white, yellow, orange, red, green, and black. It forms the ground-mass of many volcanic rocks, being sometimes recognizable by the unaided eye, but often only microscopically. *Glass base* is the name given to it when it forms the matrix for microscopic crystals in the ground-mass of a rock.—**Appert glass.** See the extract.

"*Appert glass*, which, by reason of its composition and method of manufacture, can be made into vessels of any symmetrical shape possessing unusual strength and resisting perfectly the action of acids, electricity and climatic changes.
Electrochem. Industry, April, 1904, p. 165.

Blown glass, glass which is shaped by the blowing process.—**Chipped glass,** a variety of rough sheet-glass used for partitions or screens. The sheets are first depolished by subjecting them to the sand-blast. The ground side is then covered with a coating of the best grade of liquid glue. When dry the sheets are placed on edge in frames in the chipping-room, where the temperature is raised to the proper degree by coils of steam-pipe beneath. As the glue is cracked by the heat it curls up in small pieces, drawing with it surface chips from the glass, to which it firmly adheres, leaving a beautiful pattern of fern-like tracery. About thirty-six hours are required to complete the peeling process.—**Continuating glasses,** in *photog.*, glasses tinged with red or yellow, which possess the power of continuing the darkening of the photograph after it has been removed from the camera and placed under them. This action was discovered by A. E. Becquerel. **Copper glass.** Same as *Alexandria blue* (which see, under *blue*).—**Corrugated glass,** unpolished plate-glass with a corrugated pattern, for use in floors, roofs, and partitions. See *figured rolled* ★*glass.* **Fichtel glass,** a large drinking-glass painted with enamel colors, first produced in the Fichtel Mountains in Upper Franconia, Bavaria; specifically, a drinking-glass bearing a representation of one of the peaks of this range, the Ochsenkopf, surmounted by the head of an ox, a characteristic decoration in the seventeenth and eighteenth centuries.—**Figured rolled glass,** unpolished plate-glass, formed by casting on a casting-table the surface of which is engraved with an ornamental pattern which is impressed upon the surface of the glass. Figured glass is used for roofs, floors, and partitions. See *plate-glass.*—**Half-crystal glass,** glass which contains lime instead of lead.—**Hard glass,** glass which can be rendered plastic only by a comparatively high temperature. Such glass is often mechanically hard also at ordinary temperatures.—**High glass,** a barometer the standing of which is above 30 inches, the normal standing of the barometer at sea-level.—**Jena glass,** glass made in Jena, Germany; specifically, certain varieties especially adapted to the manufacture of scientific apparatus, such as lenses, thermometers, etc., and of chemical ware.

La Bastie glass. See *tempered, toughened,* or *hardened glass*, under *glass.*—**Lead glass.** Same as *flint-glass.* **Lime glass,** glass containing lime; crown- or window-glass.—**Low glass,** a barometer when its standing is less than 30 inches.—**Moniconostereoscopic glasses,** in *photog.*, a pair of glasses so mounted that a single picture viewed through them has a stereoscopic effect. The glasses have one surface plane and the other concave, with a curvature such as would be formed by a straight line which moves parallel to itself, guided by a parabolic curve. The glasses are so set that the straight line, which forms the cylindroparabolic surface, shall be vertical when the glasses are held before the eyes.—**Onyx glass,** glass made to imitate onyx in coloring.—**Quartz glass,** a variety of glass which contains quartz. *Amer. Jour. Sci.*, Dec., 1903, p. 469.—**Sandwich glass,** glassware made at Sandwich, Massachusetts, where the first pressed glass was produced in 1827. Tea-cups, plates, salt-cellars, and other articles, with historical and political devices, such as busts of eminent Americans, representations of famous ships, forts, and monuments, etc., were extensively manufactured for twenty years or more.—**Siemens's toughened glass.** See *tempered, toughened,* or *hardened glass*, under *glass.*—**Singing glass,** a thin glass vessel having resonating qualities.—**Slag glass,** glass which contains slag from an iron-furnace.—**Soft glass,** glass which is readily fused, or which becomes plastic at a comparatively low temperature. Such glass is often mechanically soft also at ordinary temperatures.—**Spread glass.** Same as *broad glass* or *cylinder-glass* (which see, under *broad*).—**Stiegel glass,** glassware made by Baron Henry William Stiegel, at Manheim, Lancaster Co., Pennsylvania, between 1768 and 1774; supposed to be the first flint-glass made in America. This glass is very characteristic, having been blown in iron molds with surface patterns; it is exceedingly sonorous when struck, and was made in several colors, white or transparent, deep blue and purple.—

White glass, brilliant clear glass which contains no lead, as distinguished from flint or crystal glass.

II. *a.* Glass sand, silk, wool. See ★*sand*1 ★*silk*, *wool.*

Glass-blowers' cramp or **mouth.** See ★*mouth.*

glass-cloth, *n.* **3.** An abrasive cloth made by sifting finely powdered glass on cloth covered with glue. *Stand. Dict.*

Glass-cutter's gage. See ★*gage*[2].

glass-eel (glâs'ēl), *n.* A young conger-eel. The young do not resemble the adults: they are elongate, thin, and have very small heads.

glassen (glâs'n), *v. t.* [*glass* + *-en*[1] (3).] To coat or cover (pottery or the like) with glaze; glaze.

glass-mold (glâs'mōld), *n.* **1.** A hinged mold in which glass is blown into form. Intaglio designs are usually cut in it which are reproduced in relief on the molded object. See cut at ★*blowing-mold*.— **2.** A mold in which glass is pressed to imitate cut-glass.

glasspox (glâs'poks), *n.* Chickenpox in which the vesicles are for the most part cone-shaped and glittering.

glass-printing (glâs'prin″ting), *n.* In *photog.*, the art of printing on glass by the transfer process. *Stand. Dict.*

glass-wave (glâs'wāv), *n.* A sound-wave in glass.

When standing sound-waves are produced in a glass tube two distinct systems of waves are sometimes observed, the air-waves within the tube, and waves which traverse the walls of the tube. The latter are called *glass-waves*. *M. W. Travers*, Exper. Study of Gases, p. 275.

glass-wing (glâs'wing), *n.* A butterfly which has transparent wings or wings that are transparent in spots.—**Little glass-wing,** an American hesperiid butterfly, *Euphyes cerna*, brown in color, with a row of white or translucent spots on the fore wing. It occurs from New York to Kansas and southward along the Alleghanies.

glass-work, *n.* **3.** In *card-games*, cheating with the aid of a glass or reflector, usually concealed in some article on the table, by means of which the sharper can read the cards he deals to his adversary.

glasswort, *n.* About 6 species of glasswort (*Salicornia*) are now said to be found in North America, inhabiting mainly the salt-marshes of the coast, but sometimes (the same or different species) growing on saline ground inland. *S. herbacea*, the *slender* or *jointed glasswort* or marsh-samphire (also called *pickle-plant*), together with *S. Bigelovii*, turns a vivid red in autumn, becoming very showy on the Atlantic coast, while *S. ambigua*, the *woody glasswort* (also called *pickle-weed*), presents a diversity of brilliant color in the Pacific salt-marshes.—**White glasswort,** the common sea-blite, *Dondia maritima*. See *blite*[2].

Glassy humor of the eye. Same as *vitreous body of the eye*.

glastum (glâs'tum), *n.* [L. *glastum*, < OCelt. **glaston*, whence W. and Bret. *glas*, green, OIr. glass, Ir. *glas*, green, pale, Gael. *glas*, gray.] A plant otherwise known as *woad* (*Isatis tinctoria*).

glaucine, *a.* **II.** *n.* A colorless bitter alkaloid contained in the leaves of the horn-poppy, *Glaucium Glaucium*. It forms crystalline nacreous scales when deposited from water.

glaucochroite (glâ-kō-krō'īt), *n.* [Gr. γλαυκός, bluish green or gray, + χροά, color, + *-ite*[2].] A silicate of calcium and manganese occurring in bluish-green prismatic crystals at Franklin Furnace, New Jersey. It is analogous in formula to the species of the chrysolite group.

glaucodymium (glâ-kō-dim'i-um), *n.* [NL., < Gr. γλαυκός, bluish green or gray, + NL. (*di*)*dymium*.] In *chem.*, a supposed new element announced by Chronstschoff in 1897 as present in salts of didymium as previously known. No confirmation of its existence has since then been published.

glaucomatic (glâ-kō-mat'ik), *a.* [*glaucoma*(*t-*) + *-ic*.] Pertaining to or characteristic of glaucoma.

Glauconiidæ (glâ-kō-nī'i-dē), *n. pl.* [NL. *Glauconia*, the type genus, + *-idæ*.] A family of harmless snakes with teeth in the short and stout lower jaw only. The pelvic girdle is more complete than in any other existing snakes; the ilium, ischium and pubis may be made out; and there is a vestigial femur. There are about 30 species, which inhabit parts of western Asia, Africa, and South America.

glauconitization (glâ″kō-nit-ī-zā'shon), *n.* The process of introducing glauconite into a rock. This may be by precipitation in spaces of the rock or by actual replacement of other constituents. *Geikie*, Text-book of Geol. (4th ed.), p. 177.

Glauconome, *n.* **4.** A genus of Paleozoic cryptostomatous bryozoans, now regarded as synonymous with *Pinnatopora*.

glaucosuria (glâ-kō-sū'ri-ä), *n.* [Gr. γλαυκός, bluish green, + οὖρον, urine.] Same as ★*indicanuria*.

glaury (glâ'ri), *a.* [*glaur* + *-y*[1].] Muddy; soiled with glaur: as, *glaury* boots. [Scotch.]

glaze, *n.* **4.** Stock evaporated to a thin paste by boiling, and applied to meats to give them a polished surface.—**5.** A surface coating or sheet of ice. [Local, U. S.]—**Coral glaze,** a coral-red glaze found on Chinese porcelain.—**Crystalline glaze,** a glaze which shows crystalline effects, produced by special treatment in the kiln.—**Flashed glaze,** a dexterous manipulation of glazes perfected by the Chinese, such as blues splashed over with spots of red and lilac, at first sight appearing to be the result of accident, but really the result of careful manipulation. *W. P. Jervis*, Encyc. Ceram., p. 213.—**Flint glaze,** in *ceram.*, a glaze of which powdered flint is the principal ingredient.—**Fluid glaze,** in *ceram.*, a glazing composition, prepared in liquid form, in which the ware is dipped or which is applied to the surface of the ware with a brush, as distinguished from *dry glaze* (such as powdered galena) or *vapor-glaze* (salt).—**Fritted glaze,** a glaze which contains ingredients which have been melted into a glass and ground before being applied to the ware. Compare *raw* ★*glaze*.—**Galena glaze.** Same as *lead-glaze*. See also ★*dusting*.—**Kaolinic glaze,** a glaze for porcelain, of which kaolin is the principal ingredient.—**Lang yao glaze,** Chinese sang-de-bœuf ('ox-blood') glaze, said to have been invented by Lang T'ing-tso, superintendent of the Imperial Porcelain Works at Kingteh-Tsin, early in the reign of K'ang-hsi (1662–1722).—**Liver glaze,** a variety of sang-de-bœuf glaze, of a dull, dark, or purplish-red color, usually without the iridescence which characterizes the true ox-blood glaze; a glaze or enamel having the color of liver.—**Raw glaze,** a glaze composed of raw materials which are melted into a glass for the first time when fired on the ware in the glost-kiln. Compare *fritted* ★*glaze*.—**Silicious glaze,** a glaze produced by fusing an alkali, such as potash or soda, with sand; a coating of glass.—**Slow-flowing glaze,** in *ceram.*, a thick viscous enamel or glaze which trickles in heavy drops down the outer surface of the vessel, during the firing, as in some of the old Japanese pottery and the recent stoneware reproductions of the Dedham (Massachusetts) pottery.—**Stanniferous glaze,** an opaque glaze of a white color containing oxid of tin: same as *stanniferous* ★*enamel*. See ★*tin-glazed*.—**Tea-dust glaze,** a variety of soufflé glaze of a greenish tone seen on Oriental porcelain, produced by blowing a green enamel through gauze upon a yellowish-brown ground. See *soufflé decoration*, under *soufflé*.

glaze-kiln (glāz'kil), *n.* Same as ★*glost-kiln*.

Glaziers' salt. See ★*salt*[1].

glaziery (glā'zhēr-i), *n.* The work of a glazier; glass-work.

glazing, *n.* **7.** In *leather-manuf.*, the process of rolling leather with a glass roller in order to give it a bright finish; also, less commonly, the light application with a sponge of a solution which when dry gives to the leather its final luster. *C. T. Davis*, Manuf. of Leather, p. 612.

glazing-roll (glā'zing-rōl), *n.* One of the two smooth rolls between which leather is passed under pressure to give it a high gloss and uniform thickness. *C. T. Davis*, Manuf. of Leather, p. 615.

glebal (glē'bal), *a.* In *bot.*, of or pertaining to the gleba. See *Gleba*, 3.

gled-wing (gled'wing), *n.* An artificial fly. Also called *redwing*. *N. E. D.*

gleicheniaceous (glī-ke-ni-ā'shius), *a.* Of or pertaining to the *Gleicheniaceæ*, a family of ferns.

glendoveer (glen-dō-vēr'), *n.* [An arbitrary alteration by Southey of a French-spelled term in Sonnerat's "Voyage aux Indes" (1782), *grandouver*, which is appar. an imperfect transcription (simulating F. *grand*, great) of the Sanskrit *gandharvá* (Hind. *gandharb*), one of a class of minor deities, demons, or 'jinn' of whose origin and functions the usual contradictory accounts are given.] In Southey's poem, "The Curse of Kehama" (1810), one of a race of beautiful sprites.

Glenoid notch. See ★*notch*.

glen-pepper (glen'pep″ēr), *n.* [Also *glenn pepper*; < *glen* + *pepper*.] A wild cress, *Lepidium campestre*, also called *poor-man's-pepper*, and more properly *field-cress*.

glen-weed (glen'wēd), *n.* Same as ★*glen-pepper*.

glia (glī'ä), *n.* [NL., < Gr. γλία, glue.] The glia-cells collectively of the central nervous system in vertebrates; neuroglia.

gliabacteria (glī″ä-bak-tē'ri-ä), *n. pl.* [Gr. γλία, glue, + *bacteria*, pl. of *bacterium*.] In *bacteriol.*, the members of the family *Bacteriaceæ* which form gelatinous zoöglœa. *Billroth*.

glia-cell (glī'ä-sel), *n.* One of the stellate sustentacular cells found in the central nervous system; a component element of the neuroglia.

gliacoccus (glī-ä-kok'us), *n.*; pl. *gliacocci*(*-sī*). [Gr. γλία, glue, + κόκκος, berry (spore).] In *bacteriol.*, any member of the family *Coccaceæ* which forms gelatinous zoöglœa. Incorrectly spelled *gliacoccos*. *Billroth*.

glial (glī'al), *a.* [*glia* + *-al*[1].] Of or pertaining to the glia or neuroglia. *Buck*, Med. Handbook, II. 263.

glia-tissue (glī'ä-tish″ō), *n.* A reticulum of fine fibers which forms the framework of the glia or neuroglia. *Jour. Exper. Med.*, Nov. 29, 1901, p. 72.

glidder, *a.* **II.** *n.* A loose, rolling stone on a hillside. [Local, Eng.]

glide, *v.* **II.** *trans.* In *cricket*, to glance; allow the ball to meet the bat and be deflected from it, usually to the leg side.

glide, *n.* **4.** In *phonetics*, a fleeting sound produced in passing from one position of the organs of speech to another, as in pronouncing the sound-combination *ki* in the word 'kind': designated the *off-glide* of the first letter (*k*) and the *on-glide* of the second (*i*). *H. Sweet*, Eng. Sounds, § 23.—**5.** In *cricket*, a glance; a stroke by which, instead of being hit, the ball is allowed to strike the bat and to be deflected from it, usually to the leg side.—**Glide consonant,** a consonant formed without any fixed configuration of the organs of speech.—**Glide vowel,** a vowel which cannot form a syllable by itself; a diphthongic vowel. *H. Sweet*, Eng. Sounds, § 22.

glideless (glīd'les), *a.* [*glide* + *-less*.] In *phonetics*, passing from one position of the organs of speech to another without producing a glide or transition sound, as in the case of *nd* in *and*. *H. Sweet*.

glideness (glīd'nes), *n.* In *phonetics*, gliding quality.

Glideness and syllabicness generally go together. *H. Sweet*, Eng. Sounds, § 23.

glide-plane (glīd'plān), *n.* Same as *gliding-plane*.

glider[1], *n.* **2.** In *aëronaut.*, a gliding-machine.

Photographs of the paths of *gliders* taken by Mr. Williams some time ago with magnesium light distinctly showed the two oscillations, and in several cases the final overturning in a manner perfectly consistent with theory. *Nature*, March 16, 1905, p. 464.

glide-wort (glīd'wērt), *n.* The hemp-nettle, *Galeopsis Tetrahit*.

gliding-machine (glī'ding-ma-shēn″), *n.* A machine for gliding through the air from a higher to a lower level, propelled by the force of gravity, like a flying-squirrel.

On account of the internal irregularities which all winds possessed, it was a great deal more difficult to control any *gliding machine* on the ground than when the operator was in the air, and . . . this was especially true of the machines that had been provided with the automatic regulating devices. *Sci. Amer. Sup.*, Jan. 22, 1898, p. 18390.

glimmerous (glim'ēr-us), *a.* [*glimmer* + *-ous*.] Glimmering.

Thou mirror of Purity, when shall the elfin-lamp of my *glimmerous* understanding, purified from . . . gross desires, shine like the constellation of thy intellectual powers! *Burns*, Letter to W. Nicol, Feb. 20, 1793, in Prose Works, VI. 56.

glimps, *v.* and *n.* A simplified spelling of *glimpse*.

glinkite (glingk'īt), *n.* [Named after *Glinka*, a Russian general.] A pale-green variety of chrysolite, or olivin, occurring in talcose schist in the Urals.

gliomatosis (glī″ō-ma-tō'sis), *n.* [NL., < *glioma*(*t-*) + *-osis*.] A morbid condition marked by a tendency to the formation of gliomatous tumors.

gliomyoma (glī″ō-mī-ō'mä), *n.*; pl. *gliomyomata* (-ma-tä). [NL., < *glio*(*ma*) + *myoma*.] A tumor having the characters of both a glioma and a myoma.

gliomyxoma (glī″ō-mik-sō'mä), *n.*; pl. *gliomyxomata* (-ma-tä). [NL., < Gr. γλία, glue, + μύξα, mucus, + *-oma*.] A glioma which has undergone partial myxomatous degeneration.

gliosis (glī-ō'sis), *n.* [NL., < Gr. γλία, glue, + *-osis*.] Circumscribed hypertrophy of glia-tissue or neuroglia which causes partial destruction of the brain-substance.

glischrin (glis'krin), *n.* [Gr. γλίσχρος, glutinous, + *-in*[2].] A mucinous substance produced in urine by *Bacterium glischrogenes*.

glissade, *n.* **3.** In *music*, same as *glissando*.

glissaune (gli-sân'), *n.* [Of Ir. origin; not traced.] The coalfish, *Gadus virens*, one of the cods common in the Baltic and other northern seas, reaching a weight of 20 pounds.

On the Irish coast the fishermen catch large numbers of medium-sized coal-fish, called, locally, "*glissaunes*," by trailing flies, the lines being attached to long bamboo poles projecting from the stern of sailing boats. *Encyc. Brit.*, XXXII. 486.

glistener (glis'n-ēr), *n.* A gold coin. *Moore*, Fudge Family, vi. 45. *N. E. D.* [Slang.]

glitter[2] (glit'ēr), *n.* A talus slope. [Local, Eng.]

Such slopes [of talus] are known as *glitters* in Northumberland, [and] glyders in North Wales. *Sir J. Lubbock*, Scenery of England, vi.

glittery (glit'ėr-i), *a.* [*glitter* + *-y*[1].] Full of glitter; glittering.

gloat (glōt), *n.* A local English name for a variety of eel, of medium size and dark color.

global (glō'bal), *a.* [*globe* + *-al*[1].] 1. Spherical; globe-shaped: as, the *global* earth.—2. Relating to the round world; world-wide.

With the faculties and tastes of a historian, M. de Vogue directs his thoughts by preference to man. . . . His ambition, to use a word of his own, is to be '*global*.'
T. Child, in Harper's Mag., Sept., 1892, pp. 492, 493.

globate, *a.* **II.** *n.* A globular sponge-spicule such as occurs in the tetractinellid genera *Geodites* and *Geodia*.

globe, *n.* 7. In *golf*, the ball.—**Counterpoise globe.** See ★*counterpoise*.—**Dioptric globe.** Same as ★*holophane*.—**Epidermic globes.** Same as *epithelial pearls* (which see, under *pearl*).—**Ferdinand's globes,** a crude thermometer described by Ferdinand II. of Florence about 1650, consisting of closed empty glass globes resting in equilibrium in the midst of a tall glass of water. The globes descend when the water is warmed and rise when it cools. Compare *Cartesian devil*, under *Cartesian*.—**Globe aspect.** See ★*aspect*.—**Spiral globe,** a globe for inclosing an artificial light, made of spiral or twisted glass. *W. L. Dibdin*, Public Lighting, p. 409.

globe-animalcule (glob'an-i-mal kul), *n.* Same as *globe-animal*.

globe-artichoke (glōb'är″ti-chōk), *n.* The common garden-artichoke, *Cynara Scolymus*, so called from its globular heads.

globe-berry (glōb'ber″i), *n.* The yew, *Taxus baccata*.

globe-flower, *n.*—**American globe-flower.** Same as *spreading globe-flower* (which see, under *spread*, *v. i.*).

globostellate (glo-bọ-stel'at), *a.* and *n.* [L. *globus*, ball, + *stellatus*, starred: see *stellate*.] **I.** *a.* Having rays departing from a globular center, as in certain tetractinellid sponge-spicules.

II. *n.* A globostellate sponge-spicule.

Globular projection. See ★*projection*.—**Globular texture,** in *petrog.*, a texture produced in aphanitic and glassy rocks by the presence of globules or spherulites.

globularetin (glob″ū-lạ-rē'tin), *n.* [*globular(in)* + *-et-* + *-in*[2].] A compound, C_7H_6O, produced by the action of dilute acids on globularin.

Globulariaceæ (glob-ū-lā-ri-ā'sē-ē), *n. pl.* [NL. (Link, 1829), < *Globularia* + *-aceæ*.] A small family of dicotyledonous sympetalous plants of the order *Polemoniales*, typified by the genus *Globularia* (which see). It is characterized by flowers with 5-lobed calyx and corolla, four or only two stamens, and two 1-seeded carpels. There are three genera and about 20 species, natives of Europe, the Canary Islands, the Azores, and Sokotra perennial herbs with obovate entire, often radical leaves, and flowers in dense heads, usually globular.

globularin (glob'ū-lär-in), *n.* [*Globularia* + *-in*[2].] An amorphous bitter glucoside, $C_{15}H_{20}O_8$, contained in the leaves of *Globularia Alypum*.

globule, *n.*—**Morgagni's globules,** glassy droplets seen between a cataractous lens and its capsule. Also called *Morgagni's spheres*.

globulicidal (glob″ū-li-sī'dal), *a.* [L. *globulus*, globule, + *-cida*, < *cædere*, kill, + *-al*[1].] Destructive to the corpuscles of the blood, especially the red corpuscles: noting the ability of the blood-serum of one animal to destroy the red blood-corpuscles of another animal.

These extensive deposits of pigment which were found in nearly all parts of the general circulation seem, without doubt, to be referable to a greatly increased *globulicidal* action of the plasma.
Jour. Exper. Med., Feb. 5, 1902, p. 145.

globuliferous (glob-ū-lif'ẹ-rus), *n.* [L. *globulus*, globule, + *ferre*, bear.] Bearing or containing globules; in *geol.*, containing concretions or segregations which consist of mica or of feldspar and mica: called *spherophyric* by J. D. Dana: equivalent to the more common terms *spheroidal* or *orbicular*, used of spheroidal aggregates in granitoid rock.

globuliform (glob'ū-li-fôrm), *a.* [L. *globulus*, globule, + *forma*, form.] Having a globular form: shaped like a globule.

globuligenic (glob″ū-li-jen'ik), *a.* [L. *globulus*, globule, + *-genus*, -producing, + *-ic*.] Producing blood-corpuscles. *W. D. Halliburton*, Chem. Physiol. and Pathol., p. 265.

globulimeter (glob-ū-lim'e-tėr), *n.* [L. *globulus*, a globule, + Gr. μέτρον, measure.] A device for determining the number of globules in a definite amount of blood.

globulinose (glob'ū-li-nōs), *n.* [*globulin* + *-ose*.] Same as ★*globulose*.

globulist (glob'ū-list), *n.* [*globule* + *-ist*.] A homeopathist: so called from the homeopathic practice of administering remedies in the form of globules. *Dunglison*.

globulose, *a.* **II.** *n.* An albumose derived from a globulin.

globulus (glob'ū-lus), *n.*; pl. *globuli* (-lī). [NL. use of L. *globulus*, a little ball: see *globule*.] In polyzoans, a zoœcium or an internode.

globulysis (glo-bū'li-sis), *n.* [L. *globu(lus)*, globule, + Gr. λύσις, dissolution.] The dissolution of blood-corpuscles by hemolysins. *Buck*, Med. Handbook, VIII. 467.

Globus pallidus, the inner portion of the nucleus lenticularis, a mass of light-colored gray matter at the base of the brain.

Glochiceras (glo-kis'e-ras), *n.* [NL., < Gr. γλωχίν, a point, + κέρας, horn.] A genus of ammonoid cephalopods or ammonites with smooth discoid shells having a relatively simple suture and bearing long lateral lappets at the aperture. It is of Jurassic age.

glochideous (glọ-kid'ẹ-us), *n.* Same as *glochidiate*.

glochidian (glo-kid'i-an), *a.* [*glochidi(um)* + *-an*.] Relating to or characteristic of a glochidium.

glochinate (glok'i-nāt), *a.* [Gr. γλωχίν, var. of γλωχίς, a point, + *-ate*[1].] Same as *glochidiate*.

glockenspiel (glok'en-shpēl″), *n.* [G., < *glocke*, bell (see *clock*[2]), + *spiel*, play.] 1. A musical instrument consisting of a series of small bells or metal rods or tubes, mounted in a frame and struck by hammers; sometimes the latter are manipulated from a keyboard. In the form used in military bands, sometimes improperly called a *lyre*, from the shape of the frame.—2. In *organ-building*, a stop consisting of a set of bells, bars, or tubes sounded by hammers.

glockenthaler (glok'ẹn-tä″lėr), *n.* [G., < *glocke*, bell, + *thaler*, dollar.] A silver coin of Brunswick having on one side a bell.

glockerite (glok'ėr-īt), *n.* [Named after E. F. *Glocker*, a mineralogist.] A hydrated ferric sulphate occurring in from yellow to brown and black stalactitic forms. It results from the alteration of iron pyrites.

glœospore (glē'ọ-spōr), *n.* [Gr. γλοιός, sticky substance, + σπορά, seed.] In *phytogeog.*, a plant the dissemination of whose seeds is assisted by a viscid infloresence or by glandular hairs on the containing fruit. *F. E. Clements*.

Glœosporium (glē-ọ-spō'ri-um), *n.* [NL. (Desmazières and Montagne, 1849), < Gr. γλοιός, sticky substance, + σπορά, seed.] A large genus of the *Fungi Imperfecti* of the order *Melanconiales*. The spore-bearing hyphæ form a dense mass beneath the surface of the host, breaking forth at maturity and forming pustules. The spores are simple and hyaline or light-colored. Over 200 species have been described, many of which cause the serious disease of cultivated plants called anthracnose. Some have been shown to be the conidial forms of pyrenomycetous fungi. See ★*anthracnose*.

glome[2], *n.* 3. One of the branches or rounded portions of the frog of a horse's foot, on either side of the cleft.—**Glome of the heel,** that part of the wall of a horse's hoof where it curves around the heel to form the bar, the prominence of the heel.

glomeroporphyritic (glom ẹ-rọ-pōr-fi-rit'ik), *a.* [*glomerous* + *porphyritic*.] In *petrog.*, noting a texture in igneous rocks in which a porphyritic appearance is produced by the aggregation of numerous small crystals of one mineral, as pyroxene or feldspar. *Judd*, 1886.

glomerular (glọ-mer'ū-lär), *a.* [*glomerulus* + *-ar*[3].] Of or pertaining to a glomerulus, especially to a glomerulus of the kidney.

When acted upon by venom the vessels show irregular bulging of the walls, by ricin a localized dilatation or congestion of the vessels, which give rise to a *glomerular* appearance. *Science*, July 3, 1903, p. 7.

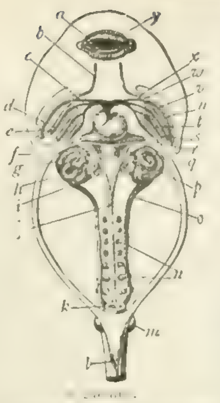
Glomerular nephritis. Same as *glomerulonephritis*.

glomerulitis (glọ-mer-ū-lī'tis), *n.* [NL., < *glomerulus* + *-itis*.] Same as *glomerulonephritis*. *Jour. Exper. Med.*, Feb. 5, 1902, p. 166.

glomus (glō'mus), *n.*; pl. *glomera* (glom'ẹ-rä). [L. *glomus* (*glomer-*), a ball or clue of yarn, thread, etc.: see *glome*[2].] 1. A coil of choroid plexus extending into either lateral ventricle of the brain.—2. A coil of blood-vessels projecting into the body-cavity, or cœloma, in the region of the pronephros in the embryos of the lower vertebrates. (See cut in next column.)

gloom-stove (glōm'stōv), *n.* A stove or oven in which formerly gunpowder was dried after granulation by cautiously regulated radiation from surfaces of heated iron: a process now replaced by the use of steam-pipes. Also, by ellipsis, *gloom*.

gloria, *n.* 5. A fabric with a silk warp and a wool or cotton weft, so woven as to throw the silk on the face: used for umbrellas and women's dress-goods.



Glomus.

Diagrammatic figure of a tadpole dissected from the ventral surface to show the glomus, the heart and branchial vessels, and the head kidneys and commencing Wolffian bodies. The alimentary canal, from the œsophagus to the rectum, has been removed.

a, lower lip; *b*, lingual artery; *c*, truncus arteriosus; *d*, pericardial cavity; *e*, ventricle; *f*, œsophagus; *g*, first nephrostome; *h*, glomus; *i*, third nephrostome; *j*, aorta; *k*, cloaca; *l*, aperture of rectal spout; *m*, commencing hind limb; *n*, Wolffian or mesonephric tubules; *o*, segmental duct; *p*, head kidney; *q*, spout-like aperture of opercular cavity; *r*, sinus venosus; *s*, *u*, afferent branchial vessels of first and third branchial arches; *t*, *v*, efferent branchial vessels of first and third branchial arches; *w*, communication between the afferent and efferent vessels of the first branchial arch, by further elaboration of which the carotid gland will be formed; *x*, dilatation at the base of the lingual artery; *y*, upper lip. (From Marshall "Vertebrate Embryology.")

gloriette (glō-ri-et'), *n.* [Also *gloriet*; < F. *gloriette*, Sp. *glorieta*; appar. based on L. *gloria*, glory.] In *arch.*: (*a*) a small pavilion in a park. (*b*) An elaborately ornamented apartment in a mediæval castle or château.

glory, *n.*—**Diffraction glory.** See ★*diffraction*.—**Glory of angels,** the ranks of attendant spirits, arranged in concentric circles, by which in medieval Christian art the glorification of the Trinity, Christ, or the Virgin is accompanied. According to the scheme of St. Dionysius, the glory consists of three hierarchies and each hierarchy of three orders. These are from inner circle to outer as follows: first hierarchy, cherubim, seraphim, thrones; second hierarchy, dominions, princedoms, powers; third hierarchy, virtues, archangels and angels. The cherubim and seraphim are often represented simply as heads with two, four or six wings. The glory is rarely shown complete. *Jameson*, Sacred and Legendary Art, p. 46.—**Glory of the snow.** See ★*Chionodoxa*.

glory-bush (glō'ri-bůsh), *n.* *Tibouchina laxa*, a thorny shrub of Peru and Ecuador growing to the height of two meters: so named in English greenhouses, from its profusion of handsome flowers. See *Tibouchina*.

glory-flower (glō'ri-flou″ėr), *n.* [A translation of the NL. name *Clianthus*.] 1. Same as *glory-pea*. See *Clianthus*.—2. A plant of Chilean origin, *Eccremocarpus scaber*, with racemes of orange-colored flowers and twice-pinnate leaves, at the end of which there are branching tendrils by which it climbs. The corolla is tubular with a joint just a short distance above the calyx, after which it swells out on the under side and then constricts into a neck before reaching the small circular mouth, surrounded by five short, rounded lobes.

glory-hole, *n.* 3. A small furnace for reheating glass.—4. *Naut.*, the lazaret or lazaretto, a low space below the main-deck in the after part of a vessel where provisions and spare gear are stowed.

gloryless (glō'ri-les), *n.* [A translation of NL. *Adoxa*.] The moschatel or musk-root, *Adoxa Moschatellina*.

glory-tree (glō'ri-trē), *n.* A garden name for several species of ornamental, shrubby, or climbing verbenaceous plants of the genus *Clerodendrum*, especially *C. fragrans*.

glory-vine (glō'ri-vīn), *n.* Same as *glory-pea*. See *Clianthus*.

gloss[1], *n.* 3. In *leather-manuf.*, a preparation which gives leather its final polish or finish. *Modern Amer. Tanning*, p. 148.—**Egg-shell gloss,** in *painting*, a subdued gloss like that upon an egg-shell.

gloss. An abbreviation of *glossary*.

glossal (glos'ạl), *a.* [Gr. γλῶσσα, tongue, + *-al*[1].] Of or pertaining to the tongue.

glossarize (glos'ạ-rīz), *v. t.*; pret. and pp. *glossarized*, ppr. *glossarizing*. [*glossar-y* + *-ize*.] To enter and explain in a glossary.

All the words occurring in the formulas thus far translated have been *glossarized*.
Smithsonian Rep., 1890, p. 51.

glossatorial (glos-ạ-tō'ri-ạl), *a.* [*glossator* + *-ial*.] Pertaining to, of the nature of, or consisting of glosses: as, *glossatorial* literature.

glossing, *n.* 2. In *leather-manuf.*, the rubbing of virtually finished leather with a solution which gives it a final luster. *C. T. Davis*, Manuf. of Leather, pp. 612, 614.

gloss-kiln (glos'kil), *n.* Same as ★*glost-kiln*.

Glossodus (glos'ọ-dus), *n.* [NL., < Gr. γλῶσσα, tongue, + ὀδούς, tooth.] A genus of Carboniferous selachian fishes known only from their teeth.

glossodynia (glos-ọ-dī'ni-ä), *n.* [NL., < Gr. γλῶσσα, tongue, + ὀδύνη, pain.] Same as *glossalgia*.

glossohyal, *n.* 2. In *ichth.*, the bone of the tongue. It lies between the superior hypohyals and is of the basibranchial series of bones. The 'glossohyal' of Geoffroy is the 'branchiostegal' of Parker. *Starks*, Synonymy of the Fish Skeleton, p. 517.

glossoid (glos'oid), *a.* [Gr. γλωσσοειδής, < γλῶσσα, tongue, + εἶδος, form.] Tongue-like; resembling a tongue in form.

glossolabial (glos-ō-lā'bi-al), *a.* [Gr. γλῶσσα, tongue, + L. *labium*, lip, + *-al*.] Relating to both the tongue and the lips.

glossolabiolaryngeal (glos″ō-lā″bi-ō-lā-rin'-jē-al), *a.* [Gr. γλῶσσα, tongue, + L. *labium*, lip, + Gr. λάρυγξ (λαρυγγ-), larynx, + *-e-al*.] Relating to the tongue, lips, and larynx. **Glossolabiolaryngeal paralysis.** Same as *chronic bulbar paralysis* (which see, under *bulbar*).

glossolabiopharyngeal (glos″ō-lā″bi-ō-fā-rin'-jē-al), *a.* [Gr. γλῶσσα, tongue, + L. *labium*, lip, + Gr. φάρυγξ (φαρυγγ-), pharynx, + *-e-al*.] Relating to the tongue, lips, and pharynx.—**Glossolabiopharyngeal paralysis.** Same as *chronic bulbar paralysis* (which see, under *bulbar*).

glossolalist (glos'ō-lā-list), *n.* [Gr. γλῶσσα, tongue, + λαλεῖν, speak, + *-ist*.] One who has the faculty or gift of speaking with tongues; one who is supposed to be miraculously endowed with the gift of tongues.

glossology, *n.* 3. The scientific study of the tongue and its diseases.

glossopalatine (glos-ō-pal'ạ-tin), *a.* [Gr. γλῶσσα, tongue, + L. *palatum*, palate, + *-ine*[1].] Same as *palatoglossal*.

glossopathy (glo-sop'ạ-thi), *n.* [Gr. γλῶσσα, tongue, + πάθος, disease.] Any disease of the tongue.

glossopetræ (glos-ō-pet'rē), *n. pl.* [NL., < Gr. γλῶσσα, tongue, + πέτρα, rock.] Certain fossil sharks' teeth: a word used by early writers on geology and fossils.

glossophytia (glos-ō-fit'i-ä), *n.* [NL., < Gr. γλῶσσα, tongue, + φυτόν, a growth, a plant.] Same as *black-tongue*.

glossophyton (glo-sof'i-ton), *n.*; pl. *glossophyta* (-tạ). [NL., < Gr. γλῶσσα, tongue, + φυτόν, a growth, a plant.] A fungus found in certain cases of black-tongue.

glossosteresis (glo-sos-tẹ-rē'sis), *n.* [NL., < Gr. γλῶσσα, tongue, + στέρησις, deprivation, < στερεῖν, deprive.] Exsection of the tongue.

glossware (glos'wãr), *n.* Same as ★*glostware*.

glost (glost), *n.* [A dial. form of *gloss*[1].] In *ceram.*, glaze applied to pottery or porcelain biscuit.

glost-kiln (glost'kil), *n.* In *ceram.*, a kiln in which biscuit ware is glazed. Also called *gloss-kiln* and *glaze-kiln*.

glost-oven (glost'uv″en), *n.* Same as ★*glost-kiln*.

glost-placer (glost'plā″sėr), *n.* In *ceram.*, the operative who applies the glost.

glostware (glost'wãr), *n.* Glazed ware; baked pottery which has been covered with a glazing preparation and is fired a second time. Also called *glossware*.

The business was started in a small way by Isaac W. Knowles and Isaac A. Harvey, who made yellow ware in a single kiln, which was used alternately for bisque and *glost-ware*.
E. A. Barber, Pottery and Porcelain of The U. S., p. 201.

glottagra (glo-tag'rä), *n.* [NL., < Gr. γλῶττα, tongue, + ἄγρα, a catching. Cf. *podagra*.] Same as *glossalgia*.

glottalgia (glo-tal'ji-ä), *n.* [NL., < Gr. γλῶττα, tongue, + ἄλγος, pain.] Same as *glossalgia*.

Glottic race. See ★*race*[3].

glove, *n.* **To go for the gloves**, in *racing* to bet recklessly. *N. E. D.*

glove-grain (gluv'grān), *n.* A trade-name for light leather made from grain split. *Modern Amer. Tanning*, p. 114.

Glover's scale. See ★*scale*[1].

glove-tighten (gluv'tī″tn), *n.* A glove-tightener: an eighteenth-century device for holding up the long gloves worn by women. Glove-tightens were made of plaited horsehair, ribbons, etc., and fastened the glove above the elbow. Also called *glove-band* and *glove-top*. *A. M. Earle*, Costume of Colonial Times, p. 118.

glow-beetle (glō'bē″tl), *n.* A European beetle, *Meligethes aëneus*.

glow-discharge (glō'dis-chärj), *n.* A discharge between the terminals of an electrical machine under conditions such that the dielectric is rendered luminous although no sparks appear. The term is sometimes used to designate the luminous discharge in vacuum-tubes as well as the discharge in air.

glower[2] (glō'ėr), *n.* In *elect.*, the light-giving body of a Nernst lamp. See *Nernst* ★*lamp*.

glowfly (glō'flī), *n.* The firefly.

glow-light (glō'līt), *n.* In *elect.*, an incandescent lamp: a glow-lamp.

glow-lighting (glō'lī″ting), *n.* The use of glow-lamps for lighting purposes.

glucase (glö'kās), *n.* [*gluc-ose* + *-ase*.] A form of diastase developed by steeping maize for two or three days in cold water.

glucemia, glucæmia (glö-sē'mi-ä), *n.* Same as *glucohemia*.

glucide (glö'sīd), *n.* [Gr. γλυκύς, sweet, + *-ide*[1].] Same as *saccharin*.

glucin (glö'sin), *n.* [Gr. γλυκύς, sweet, + *-in*[2].] The sodium salt of amido-triazin-sulphonic acid. It is used like saccharin as a sweetening agent in diabetes.

glucinic (glö-sin'ik), *a.* [*glucin* + *-ic*.] Of or derived from glucinum.

glucite (glö'sīt), *n.* [Gr. γλυκύς, sweet, + *-ite*[2].] Same as *sorbite*.

glucoalbumin (glö″kō-al-bū'min), *n.* One of a class of albumins which are characterized by the presence of a carbohydrate complex, in the molecule, in especially large amount. See *albumin*.

glucoalbumose (glö″kō-al'bū-mōs), *n.* One of the primary albumoses (products of proteolytic digestion) which contains the entire carbohydrate group of the original albuminous molecule.

glucobiose (glö-kō-bī'ōs), *n.* [*gluco(se)* + *biose*.] A biose consisting of two glucose molecules.

glucocyamidin (glö″kō-sī-am'i-din), *n.* [Also *glycocyamidin*; < *glucocyam(in)* + *-id* + *-in*[2].] A carbonic-acid derivative, $C_3H_5ON_3$, belonging to the guanidin group. It is formed from glucocyamin through loss of water.

glucocyamin (glö-kō-sī'a-min), *n.* [Also *glycocyamin*; < Gr. γλυκύς, sweet, + *cyam(ide)* + *-in*[2].] A carbonic-acid derivative belonging to the guanidin group. It is formed through the union of cyanamide and glycocoll. $C_3H_7N_3O_2$. Through loss of water it becomes glucocyamidin.

glucolignose (glö-kō-lig'nōs), *n.* [*gluco(se)* + *lignose*.] A compound, $C_{30}H_{46}O_{21}$, obtained by the successive treatment of fir-wood with dilute acetic acid, water, alcohol and ether. Dilute acids hydrolyze it to glucose and lignose.

glucolysis, glucolytic, etc. See ★*glycolysis*, etc.

gluconic (glö-kon'ik), *a.* [*gluc(ose)* + *-on* + *-ic*.] Derived from glucose.—**Gluconic acid**, a colorless syrupy compound, $CH_2OH(CHOH)_4COOH$, obtained by the oxidation of starch, glucose, cane-sugar, maltose, and similar substances, with chlorin or bromine water and silver oxid. Also called *dextronic acid*.

glucoproteid (glö-kō-prō'tẹ-id), *n.* [Also *glycoproteid*; < Gr. γλυκύς, sweet, + E. *proteid*.] An albumin in which a carbohydrate group is present in especially large amount, as the mucins and mucoids. On decomposition the carbohydrate group is, in most cases, obtained in the form of glucosamine.

glucosamin (glö-kō-sam'in), *n.* [Also *glycosamin*; < Gr. γλυκύς, sweet, + E. *amin(e)*.] A colorless compound, $CHO.CH(NH_2)(CHOH)_3CH_2OH$, crystallizing in needles. It is formed, together with acetic acid, by the hydrolysis of cartilage or chitin by means of dilute mineral acids. It is dextrorotatory and closely allied to glucose.

glucosan (glö'kō-san″), *n.* [*glucose* + *-an*.] A colorless compound formed by heating glucose at 170° C., and also by heating esculin, from horse-chestnut bark, at 230° C. It has a very slightly sweet taste, is not fermentable, and is reconverted into glucose by the action of dilute acids.

glucosazone (glö-kōs-az'ōn), *n.* [*glucose* + *az(ote)* + *-one*.] The osazone of glucose, $CH_2OH(CHOH)_3.C(N_2HC_6H_5).CHN_2HC_6H_5$. It is prepared by warming d-glucose, l-fructose, or d-mannose with phenylhydrazin and acetic acid. It melts at 206° C. The compound is more correctly called *phenyl glucosazone*.

glucose, *n.*—**Dried glucose**, one of several trade-names for a material sold as food for cattle, obtained by grinding and bolting maize and pressing the residue after the addition of water and salt.

glucosidal (glö-kō-sī'dal), *a.* [*glucoside* + *-al*[1].] Relating to or containing a glucoside.

glucosidic (glö-kō-sid'ik), *a.* [*glucoside* + *-ic*.] Of or pertaining to a glucoside.

glucosidolytic (glö″kō-sid-ō-lit'ik), *a.* [*glucoside* + Gr. λυτός, < λύειν, dissolve.] Causing the cleavage of glucosides: noting a class of ferments. Also *glycosidolytic*.

The *glucosidolytic* enzyme of Sorghum vulgare therefore performs the same functions as the enzyme emulsin which occurs in sweet almonds.
Philos. Trans. Roy. Soc. (London), 1902, ser. A, p. 409.

glucosone (glö'kō-sōn), *n.* [*glucose* + *-one*.] A non-fermentable syrup having the composition $C_6H_{10}O_6$, formed by the action of concentrated hydrochloric acid on glucosazone.

glucosuria, *n.*—**Digestive glucosuria**, glucosuria following the ingestion of unusually large amounts of sugar or starchy food, irrespective of the existence of diabetes.

glucosuric (glö-kō-sū'rik), *a.* Relating to or affected with glucosuria. **Glucosuric acid**, an organic acid which was isolated by J. Marshall from an alkapton urine: probably identical with homogentisinic acid.

glucovanillic (glö″kō-vạ-nil'ik), *a.* [*gluco(se)* + *vanill(in)* + *-ic*.] Pertaining to glucose and vanillin.—**Glucovanillic acid**, a colorless compound, $CHO(CH.OH)_4.CH_2O.C_6H_3(OCH_3)CO_2H + H_2O$, prepared by the oxidation of coniferin by means of potassium permanganate. It forms prismatic crystals which, when dehydrated, melt at 210–212° C. It is converted by emulsin into glucose and vanillic acid, and is also called *p-glucoxy-m-methoxybenzoic acid*.

glucovanillin (glö″kō-vạ-nil'in), *n.* [*gluco(se)* + *vanilla* + *-in*[2].] A colorless compound, $CHO(CH.OH)_4.CH_2O.C_6H_3(OCH_3)COH + 2H_2O$, prepared by the oxidation of coniferin by means of chromic acid. It is levorotatory, crystallizes in needles, and melts at 192° C. Emulsin resolves it into vanillin and glucose. It is the aldehyde of glucovanillic acid, and is termed *p-glucoxy-m-methoxybenzaldehyde*.

glucuron (glö-kū'ron), *n.* [Gr. γλυκύς, sweet, + οὖρον, urine, + *-on*, *-one*.] The anhydrid of glucuronic acid, having the formula $C_6H_8O_6$.

glucuronate (glö-kū'rō-nāt), *n.* [*glucuron-ic* + *-ate*[1].] A salt of glucuronic acid.

glucuronic (glö-kū-ron'ik), *a.* Same as ★*glycuronic*.

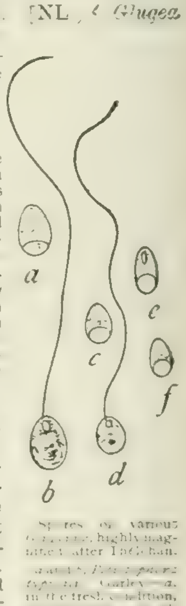
glue, *n.* 2. [Short for *glue-stock*.] A very low grade of hide, practically worthless for tanning, but used in the manufacture of glue: commonly called *glue-stock*. *Flemming*, Practical Tanning, p. 265.—**Dutch** or **Flanders glue.** Same as *Cologne glue*.—**Hide glue**, glue made from the trimmings of hides, as distinguished from glue of inferior value made from bones.—**Isinglass glue**, a pure glue made from fish-sounds.—**Parchment glue**, a fine glue prepared by carefully boiling with water scraps of parchment or similarly cleansed animal skins.—**Patent glue**, a trade-name for a superior kind of glue of dark color, made from bones.—**Russian glue**, a trade-name for a variety of carpenters' glue to which mineral matter, such as lead or calcium carbonate, zinc oxid, or barium sulphate has been added to the extent of 5 or 6 per cent.: it is of whitish appearance in consequence.—**Size glue**, a trade-name for glue of superior quality, carefully prepared from scraps of animal skin. See *size*[2], 1.

glue-plant (glö'plånt), *n.* One of the red algæ, *Gracilaria*, occasionally used for food and also in the manufacture of agar-agar.

glue-pot, *n.* 2. A part of a road so bad that the wheels of a carriage would stick in it. [Australia.]

Glugea (glö-jē'ä), *n.* [NL.] The typical genus of the family *Glugeidæ*. *G. bombycis* is very destructive to silkworms, causing the disease known in France as *la pébrine*. *Thélohan*, 1891.

Glugeidæ (glö-jē'i-dē), *n. pl.* [NL., < *Glugea* + *-idæ*.] A family of sporozoans, of the order *Myxosporidia*, having the spores minute and pear-shaped, with one polar capsule which is only visible after treatment with reagents. More than two spores are formed in each pansporoblast. The family consists of cell-parasites found mostly in arthropods and fishes. The typical genus is *Glugea*; others are *Gurleya*, *Thelohania*, and *Pleistophora*.



Spores of various [illegible], highly magnified (after Thélohan). [illegible] in the fresh condition, b, after treatment with [illegible] water, causing extrusion of the filament; [illegible] Henneguya [illegible], fresh, d, treated with ether; e, [illegible] depressa Thélohan, fresh; f, G. acuta, Thélohan. (From Lankester's "Zoology.")

glume, *n.* **Empty glume, flowerless glume.** See *flowering* ★*glume*.—**Flowering glume**, in *bot.*, one of the glumes (bracts) in the spikelets of grasses which subtend florets, as opposed to the *flowerless* or *empty* glumes (usually a pair) at the base of the spikelet.

glump (glump), *n.* 1. A sullen, sulky fellow.—2. *pl.* The sulks.

glut, *v. t.* 4. To choke or partially fill up, as an engine-cylinder or condenser-tube by a carbonaceous deposit from inferior oils used in lubrication. Animal oils, including tallow, suet, and lard, are found to produce both glutting and corrosion, the latter being due to the decomposition of the fats and the formation of fatty acids and the deposition of carbon. Mineral oils are free from these defects.

glut, *n.* 10. A block, usually of bronze, in one face of which is a recess to receive the upset end of the valve-

rod in a knuckle-joint. The glut is tightened by a wedge and screw, or by a key.

glutaconate (glō-tak'ō-nāt), *n.* [*glutacon(ic)* + *-ate*[1].] A salt of glutaconic acid.

The methylation and condensation of ethyl *glutaconate*. *Nature*, March 26, 1903, p. 504.

glutaconic (glō-ta-kon'ik), *a.* [*glut(en)* + *aconic.*] Noting a colorless compound, HOCO.CH_2.CH:CH.COOH, which crystallizes in prisms and melts at 152° C. It is isomeric with itaconic, citraconic, and mesaconic acids. Also called *pentenediacid* or *a-γ propylenedicarboxylic acid.*

glutamic (glō-tam'ik), *a.* [*glut(en)* + *am(ine)* + *-ic.*] Derived from gluten and amine.—**Glutamic acid,** a crystalline compound, HOCO.CH(NH_2).CH_2.CH_2COOH, extracted from pumpkin and vetch seeds and from beet-root juice. It is also produced by boiling vegetable proteids with dilute sulphuric acid. It is deposited in lustrous rhombohedra and melts at 140° C. Also called *a-aminoglutaric acid* and, incorrectly, *glutaminic acid.*

glutamine (glō-tam'in), *n.* [*glut(en)* + *amine.*] A colorless crystalline compound, H_2N.CO.CH(NH_2).CH_2.CH_2COOH, found, together with asparagin, widely distributed in the vegetable kingdom. It is deposited in slender needles. Also called *a-glutamamide* and, incorrectly, *glutamin.*

glutaminic (glō-ta-min'ik), *a.* [*glutamine* + *-ic.*] Of or pertaining to glutamine. **Glutaminic acid,** an incorrect term for ★*glutamic acid.*

glutaric (glō-tar'ik), *a.* [*glut(en)* + *-ar* + *-ic.*] Derived from gluten. **Glutaric acid,** a colorless compound, HO.COCH_2.CH_2.CH_2.COOH, which crystallizes in large, monoclinic prisms melting at 97.5° C., and boils at 302-304° C. It is found in the washings from sheep's wool and can be prepared artificially in a variety of ways. Also called *normal pyrotartaric acid* or *pentanediacid.*

glutazin (glō-taz'in), *n.* [*glut(en)* + *az(ote)* + *-in*[2].] A colorless compound, $C_5H_6O_2N_2$, which crystallizes in rectangular plates. It melts and decomposes at 300° C., and is probably 4-*imido*, 2-6, *diketohexahydropyridine.*

Gluteal aponeurosis, the combination of the femoral fascia over the nates. **Gluteal furrow.** See ★*furrow.*

gluten, *n.* **2.** A glue-like animal secretion: for example, the sticky material secreted by swallows in nest-building.—**Gluten feed,** a mixture of gluten-meal and corn bran: used as feed for cattle. **Gluten flour,** wheat flour from which a part of the starch has been removed, thus increasing the proportion of gluten. See *gluten.* **Gluten meal,** a by-product of the manufacture of glucose and starch from Indian corn. It consists largely of the germ of the grain, with more or less of the hulls and starch: valued as a feed, especially for milch cattle.

glutenin (glō'te-nin), *n.* [*gluten* + *-in*[2].] That portion of vegetable gluten which is insoluble in alcohol. Also termed *gluten-fibrin.* See *gluten.*

glutenoid (glō'te-noid), *a.* [*gluten* + *-oid.*] Similar to gluten.

gluteoperineal (glō″tē-ō-per-i-nē'al), *a.* Relating to the gluteal region and the perineum: noting a furrow on the external surface and a group of muscular fibers.

glutimic (glō-tim'ik), *a.* [*glut(en)* + *im(ine)* + *-ic.*] Derived from gluten and imine.—**Glutimic acid,** a compound, $C_5H_7O_3N$, formed, together with glutamic acid, by boiling albumen with a solution of barium hydroxid. It melts at 180° C.

glutin, *n.* **2.** Same as *gelatin.* It forms the chief part of carpenters' glue. Not to be confounded with gluten or any of its components.

glutinize (glō'ti-nīz), *v. t.*; pret. and pp. *glutinized,* ppr. *glutinizing.* [*gluten* (*-tin-*) + *-ize.*] To render glutinous or gluey.

glutinoid (glō'ti-noid), *n.* [*gluten* (*-tin-*) + *-oid.*] Same as ★*albuminoid.*

glutoform (glō'tō-fôrm), *n.* Same as ★*glutol.*

glutoid (glō'toid), *n.* [*glut(in)* + *-oid.*] Gelatin hardened with formaldehyde: used in making capsules. *Buck*, Med. Handbook, IV. 374.

glutokyrin (glō-tō-kī'rin), *n.* A peptone body obtained by Siegfried on hydrolysis of glutin.

glutol (glō'tōl), *n.* [*glut(en)* + *-ol.*] Same as *formaldehyde* ★*gelatin.*

glutose (glō'tōs), *n.* [*glut(en)* + *-ose.*] Same as ★*gelatose.*

glutter (glut'ėr), *n.* [Imitative.] A splutter. *N. E. D.*

glutton, *n.* **4.** In *pugilism,* one who takes a great deal of punishment before he is beaten. [Sporting slang.]

glycemia, glycæmia (gli-sē'mi-ä), *n.* [NL. *glycæmia,* < Gr. γλυκύς, sweet, + αἷμα, blood.] Same as *glucohemia.*

glyceral (glis'ē-ral), *n.* [Gr. γλυκερός, sweet, + *-al*[3].] One of certain compounds obtained by the action of glycerol on an aldehyde.

glycerin, *n.* **2†.** Formerly a general designation for compounds similar to glycerol in that they contain three hydroxyl groups.—**Glycerin agar,** a bacterial culture-medium, of the composition of ordinary nutrient agar, to which 6-8 per cent. of glycerin has been added: especially serviceable in growing the tubercle bacillus. **Glycerin jelly,** a mixture of gelatin and glycerin employed in the manufacture of soluble bougies, and used also as a mount for microscopical specimens.

glycerinate (glis'ē-ri-nāt), *v. t.*; pret. and pp. *glycerinated,* ppr. *glycerinating.* Same as *glycerize.*—**Glycerinated lymph** or **vaccine,** vaccine virus mixed with glycerin in order to destroy any bacteria with which the lymph may have been accidentally contaminated.

glycerination (glis″ē-ri-nā'shon), *n.* [*glycerin* + *-ation.*] Treatment or dilution with glycerol. Thus calf's lymph is mixed with glycerol, which, after a time, kills bacterial organisms that are often present in ordinary lymph.

glycerinize (glis'ē-rin-īz), *v. t.*; pret. and pp. *glycerinized,* ppr. *glycerinizing.* [*glycerin* + *-ize.*] To treat with glycerin; glycerinate; glycerize.

glycerinophosphoric (glis-ē-rī″nō-fos-for'ik), *a.* Same as ★*glycerophosphoric.*

glycerinum (gli-se-rī'num), *n.* [NL.] A pharmaceutical Latin name for glycerol.

glycerodegras (glis'ē-rō-de-grä″), *n.* [*glycerin* + *degras.*] A mixture of glycerin, fish-oil, and beef-tallow, applied to leather to soften the finished product. *C. T. Davis,* Manuf. of Leather, p. 239.

glyceroformol (glis″ē-rō-fôr'mōl), *n.* [*glycerin* + *form(aldehyde)* + *-ol.*] A substance formed by the action of formaldehyde upon glycerin: used as an antiseptic.

glycerogelatin (glis'ē-rō-jel'a-tin), *n.* A stiff jelly consisting of gelatin 1 part, water 6 parts, and glycerin 7 parts: used in microscopy as a mounting and embedding medium. Also *glycerin gelatin, glycerin jelly, glycerin gum.*

glycerolate (glis'ē-rō-lāt), *n.* [*glycerol* + *-ate*[1].] Same as *glycerite.*

glycerophosphate (glis″ē-rō-fos'fāt), *n.* A salt of glycerophosphoric acid with a base (iron, quinine, calcium, etc.): employed in medicine as a nerve tonic.

glycerophosphoric (glis″ē-rō-fos-for'ik), *a.* Noting an acid, $C_3H_9O_6P$, a decomposition-product of lecithin in which it is present in combination with choline, two of its hydroxyl groups being replaced by fatty-acid radicals.

glycerose (glis'ē-rōs), *n.* [*glycer(ol)* + *-ose.*] A substance formed by the oxidation of glycerol by dilute nitric acid or bromine. It was thought to be a triose, $C_3H_6O_3$, but is now known to be a mixture of glycerol aldehyde and glycerol ketone.

glycic (glis'ik), *a.* [Gr. γλυκύς, sweet, + *-ic.*] Derived from glycerol.—**Glycic acid.** Same as *glucic acid.*

glycid (glis'id), *n.* [*glyc(erol)* + *-id*[1].] A colorless liquid,

$$O \diagdown CH_2.CH.CH_2OH,$$

the anhydrid of glycerol, into which it is rapidly converted by the action of water. It boils at 160° C. Also called *hydroxypropyleneoxid.*

glycidic (gli-sid'ik), *a.* [*glycid* + *-ic.*] Derived from glycerol.—**Glycidic acid,** a colorless liquid,

$$\begin{array}{c} O \\ / \\ CH_2.CH.COOH, \end{array}$$

with an irritating odor. It rapidly attacks the mucous membrane and is slowly converted, by water, into glyceric acid. Also called *oxyacrylic acid.*—**Glycidic ester,** an ester of glycidic acid: usually applied, loosely, to the ethyl salt, and often written, incorrectly, *glycidic ether.*

Glycin blue, corinth, red. See ★*blue, n.*, etc.

Glycine (gli-sī'ne), *n.* [NL. (Linnæus, 1753; first used in his Genera Plantarum, 1737), < Gr. γλυκύς, sweet, + *-inē,* a form of *-ina*[1]. The name alludes to the substitution of Indian licorice, *Abrus Abrus* (called *Glycine Abrus* by Linnæus), for true licorice, *Glycyrrhiza glabra.*] **1.** A genus of plants of the family *Fabaceæ.* See *Apios.*—**2.** A name incorrectly applied to *Soia,* a genus of plants belonging to the family *Fabaceæ* and including the soy-bean. See ★*Soia.*

glycinin (glis'i-nin), *n.* [*Glycine* + *-in*[2].] A globulin found in the soy-bean.

glycium (glis'i-um), *n.* In *chem.,* same as *glucinum* or *beryllium.*

glycocholate (glī-kō-kol'āt), *n.* A salt of glycocholic acid.—**Sodium glycocholate,** the sodium salt of glycocholic acid. It is administered in cases of wasting diseases, as it materially aids the digestion of fats.

glycocholonic (glī-kō-kō-lon'ik), *a.* [*glycochol(ic)* + *-one* + *-ic.*] Derived from glycocholic acid.—**Glycocholonic acid,** a crystalline monobasic acid, $C_{26}H_{41}NO_5$, formed by the action of concentrated hydrochloric acid on glycocholic acid.

glycocyamidin, glycoproteid, etc. See ★*glucocyamidin,* etc.

glycoformal (glī-kō-fôr'mal), *n.* [*glyc(erol)* + *formal(dehyde).*] A mixture of formalin and glycerol: used, in the form of vapor, as a disinfecting agent.

glycogelatin (glī-kō-jel'a-tin), *n.* A jelly-like mixture of glycerin and gelatin, used in the manufacture of lozenges and pastils and also as a vehicle for exhibiting external remedies.

glycogenic, *a.* **2.** Derived from glycogen. **Glycogenic acid,** a syrupy compound, $C_6H_{12}O_7$, formed by the oxidation of glycogen with bromine and silver oxid. It is possibly identical with dextronic acid.

glycogeny (glī-koj'e-ni), *n.* [Gr. γλυκύς, sweet, + *-γενεια,* < *-γενής,* -born.] Same as *glycogenesis.*

glycol, *n.*—**Diethene glycol,** a compound, CH_2OH.CH_2.O.CH_2CH_2OH, formed by the union of ethylene oxid with glycol. It is a liquid which boils at 230°.

glycolaldehyde (glī-kol-al'dē-hīd), *n.* [Gr. γλυκύς, sweet, + E. *aldehyde.*] A syrupy compound, $HOCH_2$.CHO, obtained by the action of barium hydroxid on bromacetaldehyde. It readily gives rise to sugars. Also called *hydroxyacetaldehyde.*

glycolate (glī'kō-lāt), *n.* [*glycol(ic)* + *-ate*[1].] A salt of glycolic acid.

glycoleucyte (glī-kō-lū'sīt), *n.* [*glyco(gen)* + *leu(co)cyte.*] A large leucocyte, especially adapted to storing nutritive substances such as glycogen, found in the blood of certain worms (for example, *Sipunculus nudus*).

F. Ladreyt finds that there are two very distinct types of leucocytes in this worm [*Sipunculus nudus*]. There are minute plastids, with very active fine pseudopodia, and central or slightly excentric nucleus (amœbocytes or phagocytes), which have an important rôle in excretion and phagocytosis; and there are large elements, including numerous transparent spherules, without pseudopodia, with a lateral nucleus (vesicular leucocytes or "*glycoleucytes*"), which are especially devoted to storing nutritive substances, like glycogen.
Jour. Roy. Micros. Soc., April, 1904, p. 183.

Glycolic acid, a colorless compound, HO.CH_2.COOH, which crystallizes in plates or needles and melts at 80° C. Its potassium salt is contained in the grease of sheep's wool. Also called *hydroxyacetic acid.*

glycolid (glī'kō-lid), *n.* [*glycol* + *-id*[1].] A colorless compound,

$$O \left\langle \begin{array}{l} CH_2.CO \\ CO.CH_2 \end{array} \right\rangle O,$$

which crystallizes in large lustrous plates and melts at 86-87° C.: formed by treating glycolic acid in a current of carbon dioxid. It is a cyclic, double ester of glycolic acid. The name was formerly applied to an anhydrid of glycolic acid ($C_2H_2O_2$) which is now called *polyglycolid.*

glycoline (glī'kō-lin), *n.* [*glycol* + *-ine*[2].] A colorless compound, which crystallizes in rhombohedra or in lustrous plates and melts at 15° C. It is contained in commercial fusel-oil.

glycoluril (glī-kol'ū-ril), *n.* [*glycol* + *urea* + *-il.*] A colorless compound,

$$CO \left\langle \begin{array}{l} NHCHNH \\ | \quad\quad | \\ NHCHNH \end{array} \right\rangle CO.$$

which crystallizes in white needles: formed by the action of hydrochloric acid on a mixture of glyoxal and urea. Also called *acetylene urea.*

glycolyl (glī'kō-lil), *n.* [*glycol* + *-yl.*] A bivalent organic radical, CH_2CO.

glycolylurea (glī″kō-li-lū'rē-ä), *n.* See ★*hydantoin.*

glycolysis (glī-kol'i-sis), *n.* [Gr. γλυκύς, sweet, + λύσις, dissolution.] The destruction of sugar in the animal body. This (in part, at least) is supposedly effected through a ferment which in itself is inactive, but is activated by a substance formed in the pancreas which plays the rôle of a kinase. Also *glucolysis.*

In the liver and in the blood, their first action is to increase *glycolysis,* but this effect is diminished, or even arrested, by their prolonged action.
Nature, Jan. 21, 1904, p. 287.

glycolytic (glī-kō-lit'ik), *a.* [*glycolysis* (*-lyt-*) + *-ic.*] Of or relating to glycolysis; causing glycolysis.—**Glycolytic ferment.** See ★*ferment.*

glyconucleoproteid (glī″kō-nū-klē-ō-prō'tē-id), *n.* A nucleoproteid in which the carbohydrate group is prominently developed.

glycosecretory (glī″kō-sē-krē'tō-ri), *a.* [*glyco(gen)* + *secretory.*] Causing the secretion of glycogen: as, *glycosecretory* nerve-fibers.

glycosine (glī'kō-sin), *n.* [Gr. γλυκύς, sweet, + *-ose* + *-ine*[2].] A colorless compound,

$$\begin{array}{l} CHNH \\ \| \\ CHN \end{array} \gg C.C \ll \begin{array}{l} NHCH \\ | \\ N.CH \end{array},$$

crystallizing in needles

which sublime without melting. It is prepared by the interaction of ammonia and glyoxal. Also called *diglyoxaline*.

glycosolvol (glī′kō-sol-vōl), *n.* [*glyco(se)* + L. *solvere*, dissolve, + *-ol*.] A diabetic remedy of indefinite composition and action.

glycosometer (glī-kō-som′e-tẽr), *n.* [*glycose*, + Gr. *μετρον*, measure.] An apparatus for estimating the amount of sugar present in the urine.

glycuronic (glī-kū-ron′ik), *a.* [Gr. *γλυκύς*, sweet, + *οὖρον*, urine, + *-one* + *-ic*.] Derived from glucose.—**Glycuronic acid,** a syrupy compound, COH(CHOH)COOH, obtained by boiling euxanthic acid with dilute sulphuric acid. It is closely related to glucose; occurs in the blood; and compounds of it with camphor, chloral, phenol, etc., are found in the urine after the administration of these substances. Also *glucuronic acid*.

glycyphillin (glī-si-fil′in), *n.* [NL. *glycyphylla* + *-in*².] A crystalline sweet glucoside, $C_{21}H_{44}O_9$, extracted from the leaves of *Smilax glycyphylla*. It is deposited in lustrous prisms with 3½ or $4H_2O$ (depending on the solvent used), and melts at 175–180° C. When hydrolyzed it yields phloretin and isodulcitose, and is closely allied to phlorizin if not identical with it.

glycyrretin (glis-i-ret′in), *n.* [*glycyrrh(iza)* + *-et-* + *-in*².] A crystalline compound, $C_{32}H_{47}O_4N$, formed by the action of dilute acids on glycyrrhizic acid, which occurs, in the form of salts, in licorice-root. It melts at 200° C.

glycyrrhizic (glis-i-rī′zik), *a.* [*glycyrrhiza* + *-ic*.] Pertaining to or derived from licorice.—**Glycyrrhizic acid,** a colorless tribasic acid, $C_{44}H_{63}O_{18}N$, resembling albumen in appearance. It gelatinizes with cold water, has a sweet taste, and occurs, as the ammonium or calcium salt, in licorice-root.

glyf, *n.* A simplified spelling of *glyph*.

glykemia, glykæmia (glī-kē′mi-ä), *n.* See ★*glycemia, glycæmia*.

Glyoxalic acid, a colorless syrupy compound, HCO.COOH, found in the leaves and unripe fruits of many plants, including the gooseberry. It is prepared by the oxidation of alcohol, glycol, or glycerol, by means of nitric acid. With water it forms a crystalline derivative, $CH(OH)_2COOH$. The syrup and the solid are, therefore, the aldehyde and the dihydroxid respectively of oxalic acid. Also called *glyoxylic acid*.

glyoxaline (glī-ok′sa-lin), *n.* [*glyoxal* + *-ine*².] A colorless compound, $NH\langle\begin{matrix}CH:CH\\|\\CH:N\end{matrix}$, formed, together with glycosine, by the action of concentrated ammonia on glyoxal. It occurs in thick nacreous prisms which melt at 89° C., boil at 255° C., and have an alkaline reaction. It is also called *imidazol* or *methylene acetylenazin*. The name *glyoxaline* is also given to certain compounds which are derived from glyoxaline itself by replacement of its hydrogen atoms by radicals.

glyoxiline, glyoxyline (glī-ok′si-lin), *n.* [As *glyox(al)* + *-il*, *-yl*, + *-ine*².] An explosive consisting of guncotton treated with a solution of saltpeter, dried, and soaked with nitroglycerin. It closely resembles explosive gelatin, but its constituents are less intimately blended. Not to be confounded with the compound glyoxaline ($C_3H_4N_2$).

glyoxime (glī-ok′sim), *n.* [As *glyox(al)* + *-ime*.] A colorless compound, HON:CHCH:NOH, prepared by the action of hydroxylamine on glyoxal. It crystallizes in trimetric plates and melts at 178° C.

glyoxylic (glī-ok-sil′ik), *a.* Same as *glyoxalic*.—**Glyoxylic acid.** Same as ★*glyoxalic acid*.

glyph, *n.* **2.** A written or pictured character, sign, or symbol representing a word or an idea; an ideograph: as, the Mexican or Mayan *glyphs*.

Now, when a *glyph* is read as a word, the interesting phenomenon of which we have spoken is this: Words have different meanings, the same word may express different concepts, and the *glyph* may be read by speaking the word and attaching to it any meaning which the spoken word represents. In this early society words are mysterious things supposed to be properties or qualities of things, rather than signs of things. When such *glyphs* become signs of spoken words they are signs of sounds. They become signs of word-sounds, then signs of syllabic sounds, and ultimately signs of alphabetic sounds; and thus picture-writing is developed into alphabetic writing.
J. W. Powell, in Rep. Bur. Amer. Ethnol., 1898–99, p. [clxviii.

Glyphæa (glī-fē′ä), *n.* [NL., ⟨ Gr. *γλυφή*, an engraving, ⟨ *γλύφειν*, engrave: see *glyph*.] A genus of extinct macrurous crustaceans from the Jurassic and Cretaceous rocks.

glyphic, *a.* **2.** Of the nature of a glyph or ideograph: as, *glyphic* words.

The written languages produced in primitive time have distinct words as ideographs; they also have a distinct grammar for the arrangement of these *glyphic* words unlike that of highly developed written language.
J. W. Powell, in Rep. Bur. Amer. Ethnol., 1898–99, [p. clxix.

Glyphioceras (glif-i-os′e-ras), *n.* [NL., irreg. ⟨ Gr. *γλύφειν*, engrave, + *κέρας*, horn.] The typical genus of the family *Glyphioceratidæ*. As the type species of this genus, *G. sphæricus*, is the same as that specified by De Haan as typical of his genus *Goniatites*, *Glyphioceras* is a synonym of that term in its restricted meaning.

Glyphioceratidæ (glif″i-ō-se-rat′i-dē), *n. pl.* [NL., ⟨ *Glyphioceras* (*-at-*) + *-idæ*.] A family of ammonoid cephalopods or goniatites, in typical forms being rotund and involute with the lateral sutural lobes and saddles relatively simple. It is of Carboniferous age and is strictly synonymous with the division *Goniatitidæ*.

Glyptic period, in *geol.*, a division of the Human period based on the character of the paleolithic relics found in the caves of Perigord, France.

The Magdalenian period or *Glyptic* of Piette has been further divided by him into two great epochs, the Eburnean or time of the mammoth, going back into glacial times, when the men lived who carved the likeness of that animal on its tusks, and the Tarandean or reindeer epoch, when the climate had ameliorated, but when reindeer still lived in the south of France and were hunted by a more advanced type of mankind.
Geikie, Text-book of Geol. (4th ed.), II. vi. 1349, note.

glyptician (glip-tish′an), *n.* [*glyptic* + *-ian*.] A gem-cutter, gem-engraver, or lapidary.

Glyptocardia (glip-tō-kär′di-ä), *n.* [NL., ⟨ Gr. *γλυπτός*, carved, + *καρδία*, heart.] A synonym of ★*Buchiola* (which see).

Glyptocephalus (glip-tō-sef′a-lus), *n.* [NL., ⟨ Gr. *γλυπτός*, carved, + *κεφαλή*, head.] A genus of slender flounders, characterized by the great number of their vertebræ, found in deep waters of the North Atlantic and North Pacific oceans. *G. cynoglossus* is the Craig flounder of North Europe; *G. zachirus*, with long pectoral fins, is a species of the North Pacific: excellent for food.

Glyptocrinus (glip-tok′ri-nus), *n.* [NL., ⟨ Gr. *γλυπτός*, carved, + *κρίνον*, lily (see *crinoid*).] A genus of camerate crinoids of the family *Melocrinidæ*, with a deep obconical calyx ornamented by ridges and radiating striæ. It is of Lower Silurian age.

glyptodontoid (glip-tō-don′toid), *a.* [*glyptodon(t-)* + *-oid*.] Related to or having the characters of *Glyptodon*.

Glyptolepis (glip-tol′ē-pis), *n.* [NL., ⟨ Gr. *γλυπτός*, carved, + *λεπίς*, a scale.] A genus of extinct ganoid fishes from the Old Red Sandstone of Britain, commonly regarded as synonymous with *Holoptychius* (which see).

glyptologist (glip-tol′ō-jist), *n.* [*glyptolog-y* + *-ist*.] A student or collector of engraved gems.

glyptology (glip-tol′ō-ji), *n.* [Gr. *γλυπτός*, carved, engraved, + *-λογία*, ⟨ *λέγειν*, speak.] The study of engraved gems and other small sculpture. *N. Y. Sun*, Feb. 23, 1904.

Glyptopomus (glip-tō-pō′mus), *n.* [NL., ⟨ Gr. *γλυπτός*, carved, + *πῶμα*, a lid.] A genus of ganoid fishes from the Old Red Sandstone of Scotland. The scales and external bones are ornamented with irregular wrinkles.

Glyptoscorpius (glip-tō-skôr′pi-us), *n.* [NL., ⟨ Gr. *γλυπτός*, carved, + *σκορπίος*, a scorpion.] A genus of merostome *Crustacea* of the order *Eurypteridæ*, with decided arachnid affinities in the clawed limbs and the comb-like structures similar to the pectines of scorpions. It is found in the coal-measures of Scotland.

glyptothek (glüp″tō-tāk′), *n.* [G.] Same as *glyptotheca*.

gm. An abbreviation of *gram*.

G. M. B. An abbreviation of *Great Master of the Bath*.

G. M. I. E. An abbreviation of *Grand Master of the Indian Empire*.

G. M. K. P. An abbreviation of *Grand Master of the Knights of St. Patrick*.

G. M. M. G. An abbreviation of *Grand Master of St. Michael and St. George*.

G. M. P. An abbreviation of *Grand Master of St. Patrick*.

G. M. S. I. An abbreviation of *Grand Master of the Star of India*.

G. M. T. An abbreviation of *Greenwich meridian time*.

gnat¹, *n.*—**Potato-scab gnat,** a mycetophilid fly, *Epidapus scabiei*, which breeds in scabby potatoes and transmits the disease to healthy tubers.

gnathion (nath′i-on), *n.* [NL., dim. ⟨ Gr. *γνάθος*, jaw.] Same as *mental point* (which see). See also cut under *craniometry*.

gnathism (nath′izm), *n.* [Gr. *γνάθος*, jaw, + *-ism*.] The angle of projection of the upper jaw measured by the angle between the horizontal and one of the facial lines. See *prognathism*, *orthognathism*.

gnathobase (nath′ō-bās), *n.* [Gr. *γνάθος*, jaw, + *βάσις*, base.] The proximal or coxal extremity of the leg in many *Crustacea* when modified for the purpose of crushing food by the development of a series of short hard spines, as in *Limulus*.

gnathobasic (nath-ō-bā′sik), *a.* [*gnathobase* + *-ic*.] Pertaining to or of the nature of a gnathobase. *Annals and Mag. Nat. Hist.*, Feb., 1904, p. 155.

Gnathobdellidæ (nath-ob-del′i-dē), *n. pl.* [NL., ⟨ *Gnathobdella* + *-idæ*.] A family of fresh-water and land leeches. They have jaws; no protrusible proboscis; red blood; five rings to a complete segment; and botryoidal tissue. The family includes several important genera, among them *Nephelis*, *Hirudo*, *Aulostoma*, *Hæmopsis*, and *Hæmadipsa*. *Hirudo medicinalis* is the apothecary's leech. It is cultivated in special ponds and is not sexually mature until it is three years old. In the young stage it feeds upon the blood of insects, and then on that of frogs; but when it becomes mature a diet of warm blood is required. *Aulostoma*, often called the horse-leech, feeds upon worms and molluscs. *Hæmopsis vorax*, the horse-leech of Europe and North Africa, attaches itself to the inside of the throat of horses, cattle, and men. *Hæmadipsa*, the land-leech, is found in forests or damp districts in the tropics. See *Hirudinidæ* and *leech*².

gnathochilarium (nath″ō-ki-lā′ri-um), *n.*; pl. *gnathochilaria* (-ä). [NL., ⟨ Gr. *γνάθος*, jaw, + *χεῖλος*, lip, + *-arium*.] In myriapods, a plate-like under lip constituting the floor of the mouth and formed of the second pair of jaws, as in the *Diplopoda*.

gnathometer (na-thom′e-tẽr), *n.* [Gr. *γνάθος*, jaw, + *μέτρον*, measure.] An instrument used for measuring the angles of the lower jaw.

gnathonism (nā′thō-nizm), *n.* [L. *Gnatho(n-)*, name of a parasite in Plautus and Terence, ⟨ Gr. *Γνάθων*, a nickname ('one who is all jaw'), ⟨ *γνάθος*, jaw.] Sycophancy.

"Could the light of such a Gospel as we profess be eclipsed with the interposition of a single marriage?"
And yet Hacket must have lived to see the practical confutation of this shallow *Gnathonism* in the result of the marriage with the Papist Henrietta of France!
Coleridge, Notes on Hacket, in Lit. Remains, III. 187.

gnathophorous (nā-thof′ō-rus), *a.* [Gr. *γνάθος*, jaw, + *-φορος*, ⟨ *φέρειν*, bear.] Bearing jaws: noting the jaw-bearing sclerites of arthropods.

gnathopod, *n.* **2.** A gnathopodite.

Gnathostomata, *n.* **3.** A tribe of irregular echinoids having a central peristome surrounded by a perignathic girdle, the ambulacra all similar, and the jaws present but sometimes rudimentary. It includes both living and extinct genera.—**4.** A name given by Haeckel to a superclass of vertebrates containing the forms with true jaws, (normally) two pairs of limbs, and double nostrils. Same as *Gnathostomi* and synonomous with *Amphirhina*.

gnathostomate (nā-thos′tō-māt), *a.* [Gr. *γνάθος*, jaw, + *στόμα*, mouth, + *-ate*¹.] Having a masticatory apparatus, as in echinoids.

gnathostome (nath′ō-stōm), *n.* A member of the *Gnathostomata*, or vertebrates having true jaws.

The *gnathostomes* embrace the great majority of vertebrates. *J. T. Kingsley*, Vert. Zool., p. 225.

gnatoo (ngä′tö), *n.* [Tonga *gnatoo*, more prop. spelled **ngatu*, or, as now, *gatu* (pron. ngä′tö).] A paper-cloth (*kapa* or *tapa*) made from the bark of the paper-mulberry (*Broussonetia papyrifera*), and printed with a pattern.

gnaur, *n.* Same as *gnar*¹ and *knar*¹.

gneiss, *n.*—**Bojan gneiss,** a red gneiss found on the border of Bavaria and Bohemia. **Fundamental gneiss.** Same as ★*basement complex*.—**Hercynian gneiss.** See ★*Hercynian*, 2.—**Lewisian gneiss,** massive gneisses of the Hebrides and northern Scotland: named after the island of Lewis by Murchison in 1858. See *Lewisian* ★*group*.

gneissitic (nī-sit′ik), *a.* Same as *gneissic*.

gneissosity (nī-sos′i-ti), *n.* [*gneissose* + *-ity*.] In *petrog.*, the character or structure of gneiss.

Gnetales (nē-tā′lēz), *n. pl.* [NL. (Engler, 1887), ⟨ *Gnetum* + *-ales*.] An order of gymnospermous plants containing the family *Gnetaceæ* only (which see).

gnomish (nō′mish), *a.* [*gnome* + *-ish*¹.] Gnome-like: as, *gnomish* faces.

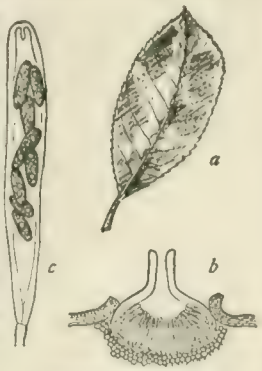
gnomist (nō′mist), *n.* [*gnome* + *-ist*.] A gnomic poet; a writer of proverbs and apothegms.

gnomium (nō′mi-um), *n.* [NL., alluding to the etymological meaning of the associated cobalt; ⟨ *gnome*².] In *chem.*, a supposed new metal having a high atomic weight, which Krüss announced in 1892 as associated with

nickel and cobalt, and the presence of which he believed to be the cause of the assignment of too high a value to the atomic weight of cobalt. It has been shown that the supposed discovery was an error.

gnomologist (nō-mol′ō-jist), *n.* [*gnomology* + *-ist.*] Same as *gnomonist.*

Gnomonia (nō-mō′ni-ä), *n.* [NL. (Cesati and de Notaris, 1863), ⟨ Gr. γνώμων, the index of a dial, a pillar, rod: see *gnomon.*] A genus of pyrenomycetous fungi, type of the family *Gnomoniaceæ*, having the perithecia embedded in the tissue of the host, with only the elongated necks projecting. The spores are elongate, hyaline, and 2- or 4-celled. About 60 species have been described, many of which are parasitic. *G. erythrostoma* attacks the leaves of the cherry, producing ★leaf-scorch (which see).



Gnomonia erythrostoma.

a, diseased leaf of cherry showing the habit of the fungus (reduced); *b*, section through a perithecium enlarged; *c*, an ascus containing eight spores (highly magnified).

Gnomoniaceæ (nō-mon-i-ā′sē-ē), *n.* [NL., ⟨ *Gnomonia* + *-aceæ.*] A family of pyrenomycetous fungi of the order *Sphæriales* named from the genus *Gnomonia*. They have membranous perithecia embedded in the tissue of the host and usually with an elongate projecting neck. The spores are hyaline. See ★*Gnomonia.*

Gnomonic net. See ★*net*[1].

gnomonological (nō″mō-nō-loj′i-kal), *a.* [*gnomonology* + *-ic-al*[1].] Pertaining to the art of dialing. *Bailey.*

gnoscopine (nos′kō-pin), *n.* [Appar. ⟨ Gr. (γι)γώσκειν, know, + ὀπίον, opium, + *-ine*[2].] A colorless alkaloid, $C_{22}H_{23}O_4N$, which crystallizes in lustrous prisms and melts at 228° C. It is contained in opium and is closely related to narcotine.

gnostid (nos′tid), *n.* and *a.* **I.** *n.* A member of the family *Gnostidæ.*

II. *a.* Of or belonging to the coleopterous family *Gnostidæ.*

go, *v. t.* **Going through the fleet** (*naut.*), a form of punishment at one time used in the navy in which the culprit received a portion of the flogging to which he had been sentenced alongside of each of the various vessels which made up the fleet. It was punishment of the most degrading character.—**Going to Boston,** a game of poker-dice with three dice only, the winner being the player with the highest number of pips up. Sometimes called *Yankee grab.* See ★*poker-dice.*—**Going witness.** See ★*witness.* **Let her go off** (*naut.*), an order to the man at the wheel to put the tiller to the weather side so that the vessel's head may pay off to leeward.—**To go free** (*naut.*), to sail so that the yards may be braced in and the sheets slacked. See *free, adv.*—**To go in.** (*b*) In *poker*, to put up the ante for drawing cards; to go into a jack-pot which is already opened. **To go large** (*naut.*), to sail with the wind well abaft the beam.—**To go over.** (*a*) (*c*) In *bridge*, to double the value of the trump. See ★*bridge.*

go, *n.* **8.** As much as is or can be fetched at one going or trip: as, to fetch a *go* of water from the well; hence, as much as is supplied at one time; a dram: as, a *go* of gin. [Colloq.] —**9.** A bargain; a compact; a thing fully agreed upon: as, "Well! is it a *go?*" [Colloq.]—**On the go,** restlessly or busily active: as, he's *on the go* all the time.

go[2] (gō), *n.* [Jap.] A Japanese measure of capacity equal to 11.01 cubic inches.

Go. An abbreviation of *Gothic.*

G. O. An abbreviation (*a*) of *General Order;* (*b*) [*l. c.*] of *great organ.*

goaf-burned (gōf′bêrnd), *a.* [*goaf,* 2, + *burned.*] Heated in the mow or goaf. *N. E. D.* [Obsolete or prov. Eng.]

goaf-horse (gōf′hôrs), *n.* [*goaf,* 2, + *horse.*] A horse ridden upon grain stored in a barn to compress it. *N. E. D.* [Obsolete or prov. Eng.]

goai (gō′ī), *n.* [A colonial form of Maori *kowhai* (see def.) = Hawaiian *ohai,* Mangarevan *koai,* Paumotan *kofai,* applied to different plants.] In the southern island of New Zealand, the timber of the native locust or yellow kowhai, *Sophora tetraptera,* a member of the bean family. The timber is red in color and very durable, and is used for fencing and for piles in bridges and wharves.

goal[1], *n.* **7.** In *astron.*, the point on the celestial sphere toward which the motion of a body is directed; thus, the earth's goal at any moment is a point on the ecliptic about 90 degrees west of the sun.

goal-cage (gōl′kāj), *n.* In *roller-polo,* the wire netting which stops the ball in the goal after its entrance.

goal-line (gōl′līn), *n.* In *foot-ball, hockey, lacrosse,* and similar games, a line at the end of the field which passes through the goals.

goal-striker (gōl′strī″kèr), *n.* In certain games, the player who stands nearest his opponent's goal and endeavors to strike the ball through it.

goanna (gō-an′ä), *n.* A popular variant of *guana* (an abbreviated form of *iguana*) in common use in Australia for any large lizard; specifically, the lace-lizard, *Varanus varius.* Also *gohanna.*

go-ashore (gō′ä-shōr″), *n.* [Said to be a fanciful perversion of the Maori name *kōhua.* This could be heard as **gowa,* which, understood as an incomplete phrase *go a-,* could be neatly completed, in a nautical fashion, as *go-ashore.*] A three-legged iron pot with two ears to which was attached a wire handle for suspension on a crane over a fire. [New Zealand.]—**Go-ashores** (*naut.*), a seaman's best suit of clothes.

goat[1], *n.*—**Cashmere goat,** a small, strongly built variety of the domesticated goat, *Capra hircus,* which has a thick undercoat of wool beneath the long outer hair. The wool is combed out in summer and used for making cashmere shawls and fine cloth. The variety is found most abundantly in Tibet.—**Nubian goat,** a long-legged, coarse-haired breed of goat, found in Nubia, Upper Egypt, and Abyssinia, which has the face strongly curved, the horns lying close to the neck, and the ears long and pendulous. **To ride the goat.** See ★*ride.*

goat-bush (gōt′bûsh), *n.* A prickly shrub, *Castela Nicholsoni,* of the quassia family, growing in the southwestern United States and northern Mexico. Also called *chaparro-amargoso,* on account of its bitter bark. See *amargoso-bark.*

goat-fig (gōt′fig), *n.* Same as *caprifig.*

goat-fish, *n.*—**Yellow goat-fish,** *Upeneus martinicus,* a fish of the family *Mullidæ,* found in West Indian waters and north to Key West.

goat-horn (gōt′hôrn), *n.* A form of lightning-arrester consisting of two metal rods, bent in the form of horns facing each other, one of which is connected with the ground and the other to the transmission-line which is to be protected.

goat-jug (gōt′jug), *n.* A cream-jug having a base modeled in the form of a recumbent goat and the figure of a bee modeled in relief. Jugs of this design were made in the eighteenth century at both Bow and Chelsea, England.

goatling (gōt′ling), *n.* A young goat; specifically, a goat between one and two years old.

[At] the half-yearly meeting of the British Goat Society . . . held yesterday . . . the newly coined word *'goatling'* was adopted, to distinguish goats above 12 months and under two years old. *Times* (London), Dec. 7, 1883.

goat-moth, *n.*—**Poplar goat-moth,** a North American cossid moth, *Cossus centerensis,* whose larva bores in the trunks of *Populus tremuloides.*

goat's-beard, *n.*—**Dwarf goat's-beard,** the dwarf dandelion, *Krigia Dandelion.*—**Virginia goat's-beard,** *Krigia Virginica,* a plant with a scape one to two feet high and handsome orange-yellow flowers, found throughout most of eastern North America. Also called *cynthia.*

Goatweed emperor. See ★*emperor.*

gob[1] (gob), *v. i.*; pret. and pp. *gobbed,* ppr. *gobbing.* To brag; boast. [Prov. Eng.]

gobble[1] (gob′l), *n.* In *golf,* a putt played with such force that it would be carried some distance past the hole if it did not go in, but which does go in.

gobbler[1], *n.* **2.** An automatic bucket the halves of which separate at the bottom when lowered and close when a strain is put upon the hoisting-chain, digging into the material to be loaded. When the strain is removed the weight of the load causes the bucket to open.

gobbo (gob′o), *n.* [Prob. W. African.] The okra or bandakai, *Abelmoschus esculentus.*

gobemouche (gōb-mōsh′), *n.* [F., ⟨ *gober,* gulp, + *mouche* (⟨ L. *musca*), fly.] A gaping simpleton who believes everything that he hears; a credulous person.

gobernadora (gō″ber-nä-dō′rä), *n.* [Span., fem. of *gobernador,* governor.] In Mexico, *Covillea tridentata,* the creosote-bush, an ill-smelling evergreen bush of the family *Zygophyllaceæ.* An infusion or tincture of the leaves is used as a remedy for gout and rheumatism.

gobernadorcillo (gō-ber-nä-dōr-thēl′yō), *n.* [Philippine Sp., dim. of *gobernador,* governor.] The governor or head-man of a village or small town in the Philippines.

Gobiesocinæ (gō″bi-ē-sō-sī′nē), *n. pl.* [NL., ⟨ *Gobiesox* (*-esoc-*) + *-inæ.*] A subfamily of fishes typified by the genus *Gobiesox.*

Gobioidei (gō-bī-ō-id′ī), *n. pl.* [NL., ⟨ *Gobius* + *-oidei.*] A name applied to the group of gobies as a whole.

Gobioidinæ (gō″bi-ō-i-dī′nē), *n. pl.* [NL., ⟨ *Gobioides* + *-inæ.*] A subfamily of gobies typified by the genus *Gobioides.*

Gobiomorus (gō″bi-ō-mō′rus), *n.* [NL., ⟨ L. *gobius,* goby, + Gr. μωρός, dull, stupid.] A genus of small fishes. The name originally covered species of different groups, but is properly restricted to the Portuguese man-of-war fish, *G. dormitor,* a small fish found in the tentacles of the Portuguese man-of-war. The genus is often called *Nomeus.*

Gobionellus (gō″bi-ō-nel′us), *n.* [NL., ⟨ L. *gobio*(*n-*), goby, + *-ellus.*] A genus of gobies

Gobionellus oceanicus.
(From Bull. 47, U. S. Nat. Museum.)

characterized by the elongate body and pointed caudal fin. *G. oceanicus* is the commonest American species.

Gobiosoma (gō″bi-ō-sō′mä), *n.* [NL., ⟨ L. *gobius,* goby, + Gr. σῶμα, body.] A genus of small gobies characterized by the naked body and blunt head. *G. bosci* is common along the Virginia and Carolina coasts.

goblinic (gob-lin′ik), *a.* [*goblin* + *-ic.*] Goblin-like; of the nature of a goblin; of or pertaining to a goblin.

gobo (gō′bō), *n.* [Jap. *go-bō.*] The common burdock, *Arctium Lappa.* It is much cultivated in Japan for its root, which is there a popular garden vegetable.

goborro (gō-bor′ō), *n.* [Aboriginal Australian name.] The Australian dwarf-box, *Eucalyptus microtheca.* See ★*coolibah.*

goburra (gō-bûr′ä), *n.* A variant of *kookaburra,* the aboriginal Australian name for the laughing-jackass, *Dacelo gigas.* Also *gobera.*

goby, *n.*—**Blind goby,** a small goby, *Typhlogobius californiensis,* without eyes in the adult stage, found on the coast of California.—**Crested goby,** a fish of the genus *Lophogobius,* characterized by a short body and a crested head, found in the waters of Cuba.—**Half-naked goby,** a fish of the genus *Garmannia,* found on the shores of Panama.—**Long-jawed goby,** a name given to fishes of the species *Gilichthys mirabilis,* a small goby found burrowing in the mud on the coast of California, remarkable for the backward extension of its upper jaw.—**Naked goby,** a fish of the genus *Gobiosoma,* found in the south Atlantic and Gulf coasts of the United States.

god[1], *n.*—**Little tin god** or **little tin god on wheels,** a slang name for a man who assumes an air of importance and authority ludicrously out of proportion to his actual position and attainments; a man who makes a fetish of himself.

Wherefore the *Little Tin Gods* harried their little tin souls,
Seeing he came not from Chatham, jingled no spurs at his heels,
Knowing that, nevertheless, was he first on the Government rolls
For the billet of "Railway Instructor to *Little Tin Gods on Wheels.*"
R. Kipling, Departmental Ditties, Public Waste, st. 5.

The dusk of the gods. See the ★*twilight of the gods.*—**The twilight of the gods.** See ★*twilight.*

Goddess of Liberty [L. *Libertas*], liberty personified by the Romans as a goddess: occasionally used as an emblem.

godfather (god′fä″ тнêr), *v. t.* [*godfather, n.*] To act as godfather to; be sponsor for. *Burke.*

godhed, *n.* A simplified spelling of *godhead.*

goditcha (gō-dī′chä), *n.* Same as ★*kurda-itcha,* 2.

godparent (god′pär-ent), *n.* A godfather or a godmother.

godron (gō-drôn′), *n.* [F.] Same as *godroon.*

godroonage (go-drön′äj), *n.* [*godroon* + *-age.*] In *decorated art,* godroons collectively.

godrooned (go-drönd), *p. a.* [*godroon* + *-ed*[2], after F. *godronné.*] Ornamented with godroons.

god-shelf (god′shelf), *n.* In Japan, a shelf in a household on which are placed the objects of household worship, forming a kind of domestic altar: the Japanese name is *kami-dana,* and among Buddhists *Butsu-dana.* See ★*Kami-dana.*

"Wanted a religion" is the title of a missionary's description of Japan. This, Gulick denies and cites the countless gods, pious pilgrimages to eighty-eight sacred places, the *god-shelves* in every home, the 71,831 Buddhist temples and 190,803 officially registered shrines.
Amer. Jour. Relig. Psychol. and Education, May, 1904, [p. 98.

goeduck (gō′ē-duk), *n.* [Also *geoduck;* from a native name.] A large edible clam, *Panopea*

generosa, of the northwest coast of the United States. With siphons extended it sometimes reaches a length of from 3 to 4 feet and weighs from 6 to 10 pounds. It lives buried deep in sand or clay near low-tide mark.

Goeduck (*Panopea generosa*).

In Alaskan waters is found a monster clam, the "*geoduck*," one of which would afford a meal for several persons; not so large, however, as the great tridacna and its species, which weighs, with its two valves, five hundred pounds, the animal alone weighing thirty.
Sci. Amer. Sup., April 11, 1903, p. 22,805.

goelism (gō′e-lizm), *n.* [Heb. *goel* (redeemer, avenger), + *-ism.*] The custom which recognizes an authorized 'avenger of blood' and makes blood-revenge obligatory.

goemin (gō′e-min), *n.* [F. *goém(on)* (< Bret. *gwemon*, seaweed) + *-in*[2].] A compound obtained from Irish moss, obtained by boiling carrageen.

gofer-iron (gō′fêr-ī″èrn), *n.* A double mold with long handles in which gofers, or waffles are baked; a gofering-iron. Also called *gofer-tongs.*

gofer-tongs (gō′fêr-tôngz), *n. pl.* Same as ★*gofer-iron.*

Goffered schist. See ★*schist.*

goffering-frame (gof′ėr-ing-frām), *n.* A frame with a series of small rods between which the fabric to be goffered or ruffled is worked.

goffering-machine (gof′ėr-ing-ma-shēn″), *n.* An apparatus for plaiting or ruffling textile fabrics.

goffering-tongs (gof′ėr-ing-tôngs), *n. pl.* An iron tool which is heated and used for goffering or ruffling fabrics.

goggle[1], *n.* **3.** *pl.* A parasitic disease of sheep, caused by the presence of a bladder-worm in the brain which causes dizziness, staggering gait, walking in a circle, spasms, and convulsions. Also called *staggers*, *gid*, and *turnsick.*—**4.** [*pl.*] The garden gooseberry, *Ribes Grossularia.*

Goggle-eyed scad. Same as *goggle-eyed jack.*

goggle-goy (gog′l-goi), *n.* The hellgrammite fly, *Corydalus cornutus.* [Local, New Eng.]

goggly (gog′li), *a.* Affected with the goggles: as, *goggly* sheep.

gogo (gō′gō), *n.* [Tagalog name.] In the Philippine Islands, a giant climber, *Lens phaseoloides*, of the mimosa family, usually growing near the sea, the stems of which are pounded and used as a detergent by the natives. See *sea-bean*, 1, *similar-pod*, *match-box* ★*bean*, and ★*bayogo*, with cut.

gohanna (gō-han′ä), *n.* See ★*goanna.*

gohei (gō-hā′), *n.* [Chino-Jap. *gō*, (Chin. *yü*), august, imperial; + *hei*, (Chin. *pi*), a present or presents.] In the Shinto shrines of Japan, a slender wand of unpainted and unvarnished wood, originally a branch of *Cleyera japonica*, from which hang two long strips of white Japanese paper, notched alternately on opposite sides, representing offerings of rough and fine white cloth. There is but one gohei to each deity worshiped at any particular temple. *M. Satow.*

Goidel (goi′del), *n.* [OIr. *Góidel*, pl. *Góidil*, a Gael: see *Gael*, and cf. *Gadhel.*] A member of the 'Gaelic' branch of the Celtic race, namely, the branch represented by the Irish and the Gaels of Scotland. See *Gadhels*, in The Century Cyclopedia of Names.

goidelic (goi-del′ik), *a.* and *n.* **I.** *a.* Of or pertaining to the Goidels.

II. *n.* The language of the Goidels: ancient Celtic of the branch represented by Old Irish, and by modern Irish and Gaelic.

going, *n.* **7.** In *stair-building*, the width of the stairway or length of a tread. [Local, Eng.]

going-train (gō′ing-trān), *n.* An operating train; that part of the gear-train in a timepiece which drives the hands.

goke[2] (gōk), *n.* [A var. of *colk*[1].] *Naut.*, the heart of a rope; the core in the center of a rope.

gola (gō′lä), *n.* [Also *golah*; < Hind. *golā*, a warehouse, esp. for grain, a curb, a pier, a ball, etc., a cannon-ball, etc., < *gol*, round.] A warehouse for storing grain, salt, etc. [Anglo-Indian.]

Golconda (gol-kon′dä), *n.* The name of a city of India noted in the sixteenth century for its great diamond-cutting industry; hence, allusively, a mine of wealth.

gold. **I.** *n.*—**Abyssinian gold.** Same as *talmi-gold.*—**Alluvial gold,** placer-gold. **Best gold,** the hit in the gold which is nearest the central point of the target. In archery competitions a prize is often given for the best gold.—**Burmese gold,** gold to which a yellow or red color has been imparted by treatment with acids and the subsequent application of rouge and other reddish colorations to the depressed parts of the ornamentation.—**Burnished gold,** in *ceram.*, porcelain gilding which has been brightly burnished by means of a bloodstone burnishing-tool.—**Chased gold,** in *ceram.*, gilding on porcelain glaze which has been brightened in places by means of a pointed agate burnishing-tool. The lines are formed by working the point to and fro over the dull gold and are widened by repetition. At Sèvres and some other French factories intricate patterns and elaborate pictures were drawn on the dull gold ground and executed in this manner, the result being a beautiful contrasting effect of bright and dead or mat gold, exhibiting the accuracy of a fine engraving. This process has also been employed to some extent in England and other European countries, but is particularly characteristic of fine French porcelains made about 1830.—**Diamine gold,** a direct cotton coal-tar color of the disazo type, derived from diamidonaphthalene. It dyes unmordanted cotton a golden yellow in an alkaline salt bath.—**Glass-brushed gold,** in *ceram.*, porcelain gilding which is rubbed with a brush of glass fibers to produce a semi-bright effect. This method is an improvement upon the gold-sanding process, and was quicker in its results. See *sanded* ★*gold.*—**Gold brick,** a brick-shaped mass of gilded metal of no intrinsic value, which plausible swindlers, of a certain class, sometimes pass off as genuine, at a tempting price, on unwary purchasers; hence, any similar swindle. Frequently used attributively: as, another *gold-brick* swindle. [Slang, U. S.]—**Jeweler's gold,** an alloy containing three parts of gold to one of copper: known as 18 *karat gold*, that is, gold of which 18 parts out of 24 are pure metal. No gold of a less purity is admitted into France.—**Lump gold,** gold found in placer-mining in the form of lumps or nuggets.—**Rusty gold,** free gold which does not easily amalgamate, the particles being coated, as is supposed, with oxid of iron.—**Sanded gold,** porcelain-gilding which has been rubbed with fine sand to produce a semi-bright effect.—**To measure golds,** in *archery*, to measure the distance from the center of each arrow in the gold, in order to determine the best gold.

II. *a.*—**Gold brown.** Same as *phenylene brown* (which see, under *brown*).—**Gold luster, penny.** See ★*luster*[2], etc.—**Gold reserve.** See *reserve.*

gold-balls (gōld′bâlz), *n. pl.* Buttercups; applied more especially to the creeping buttercup, *Ranunculus repens.*

gold-beetle (gōld′bē″tl), *n.* Any one of several leaf-beetles and tortoise-beetles, as *Chrysochus auratus* and *Coptocycla aurichalcea.*

gold-boat (gōld′bōt), *n.* A boat used in dredging for gold.

gold-bug (gōld′bug), *n.* **1.** A beetle of a golden color.

The *Gold Bug.* *Poe* (title).

2. An advocate of the single gold standard in finance; a 'gold man.' [Opprobrious and slang.]

gold-chain (gōld′chān), *n.* The wall-pepper, *Sedum acre.*

gold-cure (gōld′kūr), *n.* A secret method of treatment of the drink habit in which the chief remedy employed is said to be chlorid of gold.

gold-diggings (gōld′dig″ingz), *n. pl.* Any region where gold-bearing sands and gravel abound and where gold is being exploited by digging and washing: sometimes also applied to the mining of gold-bearing quartz.

gold-dropper (gōld′drop″èr), *n.* A sharper; one of a pair who, having dropped a gold coin, picks it up in the presence of a stranger, and pretending to have just found it, engages his attention while the confederate robs him.

Golden aster, any plant of the genus *Chrysopsis*, aster-like composites of North America with bright golden-yellow flowers. *C. Mariana*, the Maryland golden aster, is very abundant in the eastern United States and one of the handsomest wild flowers, blooming from July to September.—**Golden ball,** in *bot.*, the globe-flower, *Trollius Europeus*, applied also to the American or spreading globe-flower, *T. laxus.*—**Golden book,** the official list of the nobility of Venice.—**Golden calf, earth, grease, syrup, text, type.** See ★*calf*[1], etc.—**Golden cup, golden guineas,** the pilewort or lesser celandine, *Ficaria Ficaria.*

goldeneye, *n.* **4.** *Melithreptus lunulatus*, a small species of honey-eater. [Australia.]

goldenglow (gōl′dn-glō), *n.* The tall cone-flower, *Rudbeckia laciniata*, which has a profusion of yellow flowers, the conical disk being also yellow. It ranges from Canada to New Mexico.

golden-Jerusalem (gōl″dn-jē-rö′sa-lem), *n.* The common cone-flower, *Rudbeckia hirta.*

goldenknop, *n.* **2.** *pl.* Same as ★*goldknops.*

goldenlocks (gōl′dn-loks), *n.* **1.** The common polypody, *Polypodium vulgare.*—**2.** The golden cudweed, *Pterocaulon virgatum.*

goldenoak (gōl′dn-ōk), *n.* The smooth false foxglove, *Dasistoma Virginicum*, the leaves of which resemble those of the oak.

goldenrod, *n.*—**Alpine goldenrod,** *Solidago alpestris*, of alpine summits in Europe and of the White and Green Mountains in America. It belongs to the type of *S. Virgaurea*, but is dwarf with very few large heads and spatulate radical leaves. **Anise-scented goldenrod.** Same as *sweet* ★*goldenrod.* **Beach-goldenrod.** Same as *seaside*-★*goldenrod.*—**Blue-stemmed goldenrod,** *Solidago cæsia*, a low, partially prostrate or reclining species with usually bluish or purple stems, lanceolate, sharply serrate leaves, and bright-yellow heads mostly in clusters in the axils of the reduced upper leaves; common in eastern North America.—**Bog-goldenrod,** *Solidago uliginosa*, a stout thyrsiform species growing in bogs and swamps, chiefly in the region of the Great Lakes and extending east to Newfoundland and south to New Jersey: it blooms in July. **Boott's goldenrod,** *Solidago Boottii*, a slender and graceful species with few one-sided racemes and long lanceolate serrate leaves narrowed into winged petioles: found rather sparingly in dry woods from Virginia to Florida and Texas.—**Broad-leaved goldenrod.** Same as *zigzag* ★*goldenrod.* **Bushy goldenrod,** *Euthamia graminifolia* and *E. leptocephala*, the latter distinguished as *Western bushy goldenrod.* They resemble true goldenrods of the cymose type, but have the receptacle fimbrillate instead of alveolate, the rays more numerous than the disk-flowers, and linear entire leaves. They are also more or less fragrant, and hence are called *fragrant goldenrod*, at least the eastern United States species, which, however, is widely distributed, ranging from New Brunswick to Florida and west to Nebraska and the Northwest Territory. The other species is more slender, and is found from Missouri to Louisiana and Texas.—**Canada** or **Canadian goldenrod,** *Solidago Canadensis*, the most abundant, widely distributed, and typical of American goldenrods. It has large pyramidal panicles of recurved, one-sided racemes, and lanceolate, coarsely toothed, triple-nerved leaves. It sometimes attains a height of 8 feet, and often grows in dense masses, monopolizing the soil and becoming a noxious weed. The color of the flowers is a rather dull yellow, and the species is in many respects less ornamental than several other smaller and less abundant ones. It occurs from New Brunswick to British Columbia and south to Florida and Arizona. A common name in some districts is *yellow-weed.*—**Canary Islands goldenrod.** Same as *goldenrod-tree.* See also *tree-goldenrod.*—**Curtis's goldenrod,** *Solidago Curtisii*, a mountain species of the southeastern United States with abundant flowers in short clustered racemes in the axils of the upper leaves.—**Cut-leaved goldenrod,** *Solidago arguta*, a tall, slender, handsome species of the Adirondacks, where it ascends to an altitude of 2,700 feet, ranging to New England, Ontario, Ohio, and Virginia. It has recurved racemes and large ovate, coarsely and sharply serrate leaves.—**Double goldenrod.** Same as *Canada* or *Canadian* ★*goldenrod.*—**Drummond's goldenrod,** *Solidago Drummondii*, of the Mississippi valley, a pubescent plant with broad ovate leaves and short, rather loose, partially one-sided racemes or clusters of flowers in the axils of reduced upper leaves, or terminal, the rays large and conspicuous.—**Dwarf goldenrod.** (*a*) A dwarf form of the European goldenrod. (*b*) Same as *gray* ★*goldenrod.*—**Early goldenrod,** *Solidago juncea*, one of the most beautiful of goldenrods, very abundant throughout eastern North America. It bears a profusion of long and graceful recurved, one-sided racemes of flowers of the richest golden yellow, and as it blooms in most latitudes by the first of August and lasts through that month, it inaugurates the series of goldenrods which continues the display throughout the season. Also called *yellow-top.*—**Elliott's goldenrod,** *Solidago Elliottii*, a swamp species found near the coast from Massachusetts to Georgia, sometimes 3 feet high, bearing a long terminal recurved raceme and shorter axillary ones below. **Elm-leaved goldenrod,** *Solidago ulmifolia*, having the lower leaves broadly ovate and strongly nerved, suggesting those of the elm, and few short recurved mostly terminal racemes of deep-yellow flowers: widely distributed throughout the eastern United States.—**European goldenrod,** the common old-world goldenrod, *Solidago Virgaurea.* See *goldenrod* and *Solidago.*—**Field goldenrod.** Same as *gray* ★*goldenrod.*—**Flat-top goldenrod,** *Euthamia graminifolia.* See *bushy* ★*goldenrod* and *fragrant* ★*goldenrod.*—**Fragrant goldenrod,** any of the species of *Euthamia*, but especially *E. graminifolia* and *E. Carolniana.* The latter is distinguished as *slender fragrant goldenrod* on account of its very narrow leaves and slender habit. Its range is more southern than *E. graminifolia.* See *bushy* ★*goldenrod.*—**Gray goldenrod,** *Solidago nemoralis*, so called on account of its ashy-gray color. The flowers, however, are of the liveliest glittering yellow, and occur in dense, curving, one-sided racemes, often very compact and massive, rendering it one of the most showy and attractive goldenrods. It is short, rarely over a foot and a half high, whence it is called *dwarf goldenrod.* It is very abundant throughout the eastern United States, and ranges from Quebec to Arizona, preferring poor soil and open country. See cut under *Solidago.*—**Late goldenrod,** *Solidago serotina*, a late-flowering species which

Canada Goldenrod (*Solidago Canadensis*).
a, summit of stem and inflorescence; *b*, middle portion of stem; *c*, a ray flower; *d*, a disk flower, *c* and *d*, one sixth natural size; *e* and *a*, enlarged.

ranges from Newfoundland to British Columbia and south to Georgia and Texas. **Missouri goldenrod,** *Solidago Missouriensis*, a widely distributed species of the western prairies of North America, ranging from Tennessee to Washington and from Texas to Manitoba. It sometimes grows 3 feet high and has linear-lanceolate triple-nerved leaves and terminal panicles of second recurved branches. — **Noble goldenrod,** *Solidago speciosa*, a stout, tall species with broad ovate leaves, bearing a large terminal thyrse, ranging from Nova Scotia to North Carolina and west to Minnesota and Nebraska. **Northern goldenrod,** *Solidago multiradiata*, a small, somewhat aberrant species with spatulate leaves, mostly near the ground, and a small terminal corymbose cyme of large heads sometimes having as many as 15 rays. It is found far north from Labrador and Hudson Bay to British Columbia, and south in the Rocky Mountains to Colorado. — **Pale goldenrod.** Same as *white* ★*goldenrod*. **Pine-barren goldenrod,** *Solidago ustulata*, a tall hirsute species of the pine-barrens of New Jersey, extending southward to Florida and Louisiana. It has ovate or lanceolate leaves and an open terminal panicle of recurved second branches. — **Plume-goldenrod.** Same as *early* ★*goldenrod*. **Ragged goldenrod,** *Solidago squarrosa* and *S. petiolaris*, two anomalous species with elongate heads in which the conspicuous green recurved tips of the involucral bracts give them a squarrose or ragged appearance. The former ranges from New Brunswick and Ontario to Virginia and Ohio, and the latter from North Carolina to Florida and westward to Kansas and Texas. — **Rayless goldenrod,** *Chondrophora nudata*, a plant resembling the cymose type of goldenrod, but destitute of ray-flowers. It has a slender stem with linear-spatulate root-leaves much reduced above, and open corymbose cymes of yellow flowers. It occurs in the pine-barrens of New Jersey and thence south to Florida and west to Texas. The rabbit-brush, *Chrysothamnus nauseosus*, is called *fetid rayless goldenrod* (see *rabbit-brush*, with cut), and *C. Howardi* is distinguished as *Howard's rayless goldenrod*. The latter grows on the plains from Nebraska and Colorado to Utah and New Mexico. — **Riverbank goldenrod,** *Solidago Purshii*, a small species confined to rocky riverbanks, found from Newfoundland to Virginia. It has oblanceolate, obtuse, crenate root-leaves and linear stem-leaves, and a small loose terminal thyrse of large heads. — **Rock-goldenrod,** *Solidago rupestris*, a handsome species growing on rocky banks of streams from Pennsylvania to Indiana and Tennessee. It has a slender stem 2–3 feet high, leafless below, the leaves linear-lanceolate, triple-nerved, and distantly sharply toothed, and a terminal pyramidal thyrse of dense, recurved, one-sided branches, symmetrically disposed. **Rough-leaved goldenrod.** Same as *spreading* ★*goldenrod*. — **Salt-marsh goldenrod.** Same as *seaside* ★*goldenrod*. — **Seaside-goldenrod,** *Solidago sempervirens*, a stout, leafy species inhabiting sea-beaches and salt-marshes from New Brunswick to Florida, and found also in Bermuda. It has thick, fleshy, entire leaves densely crowded on the stem, and a large terminal leafy panicle of compact heads on short recurved branches. — **Sharp-toothed goldenrod.** Same as *early* ★*goldenrod*: so called from the sharply serrate leaves, which, however, is not a constant character, the leaves being sometimes entire. — **Showy goldenrod.** Same as *noble* ★*goldenrod*. — **Spreading goldenrod,** *Solidago patula*, remarkable for the widely spreading, second, recurved branches of the loose panicle. It is a stout, rigid plant, sometimes 6 feet high, with broad elliptical, sharply serrate leaves on long winged petioles, and often angled stems. It grows in swamps from Maine to Minnesota and south to Georgia and Texas. — **Stiff goldenrod,** *Solidago rigida*, a very stout, tall species with thick and rigid ovate or oblong, long-petioled leaves and dense terminal corymbose cymes of clustered heads on slightly second branches. It is found from Canada to Georgia and west to the Northwest Territory and Texas. — **Swamp-goldenrod,** *Solidago mollicta*, a rather large and showy plant growing in swamps from New Brunswick to Maryland and west to Wisconsin and Illinois. It has long, lanceolate, serrate leaves on margined petioles, and a terminal thyrsoid panicle of flowers on one-sided, much-recurved branches. The name is sometimes applied to the *bog-goldenrod*. — **Sweet goldenrod,** *Solidago odora*. The whole plant has a strong odor of anise, and is hence also called *anise-scented goldenrod*. It is a slender plant 2–4 feet high with lanceolate, punctate leaves and axillary and terminal spreading recurved racemes of bright-yellow flowers. For uses, etc., see *Solidago*. — **True goldenrod,** the sweet goldenrod. — **Wand-like goldenrod,** *Solidago stricta*, a native of pine-barrens from New Jersey to Florida and Louisiana. It has a wand-like stem bearing numerous very small appressed leaves, the principal leaves borne at or near the base, entire spatulate, and long-petioled. The flowers are arranged in a narrow terminal thyrsus. — **White goldenrod,** *Solidago bicolor*, the only species the flowers of which are not yellow, the rays at least, and to a less extent the disk-flowers, being nearly white or about cream-colored. It is a hirsute pubescent plant of the virgate type, very variable in size, usually about a foot high, the lower leaves spatulate, crenate-dentate, and petioled, the heads in clusters forming an interrupted thyrse. It grows in dry places from New Brunswick to Georgia and west to Minnesota and Missouri. Sometimes called *silver-rod*. **Willow-leaf goldenrod.** Same as *wand-like* ★*goldenrod*. — **Woodland goldenrod, wreath-goldenrod.** Same as *blue-stemmed* ★*goldenrod*. **Zigzag goldenrod,** *Solidago flexicaulis*, which has a zigzag or crooked slender stem, weak and more or less reclining, and very broad, thin, ovate, acuminate, and finely serrate leaves, the flowers disposed in short axillary racemose clusters forming a narrow, loose terminal thyrse. It grows in rich woods from New Brunswick to Georgia and west to Minnesota and Missouri. Also called *broad-leaved goldenrod*.

Rayless Goldenrod (*Chondrophora nudata*).
a, entire plant; *b*, head; *c*, 1 floret. (From Britton and Brown's "Illus. Flora of the Northern States and Canada.")

goldenrod-gall (gōl'dn-rod-gâl'), *n.* A gall or blight on the goldenrod caused by the maggot of a fly, *Trypeta solidaginis*, or of a tineid moth, *Gelechia gallæsolidaginis*.

goldenseal, *n.* 2. The false or wild spikenard, *Vagnera racemosa*.

golden-shower (gōl'dn-shou″ėr), *n.* The laburnum. **Golden-shower tree,** the purging cassia, *Cassia fistula*.

golden-slipper (gōl'dn-slip″ėr), *n.* The larger yellow lady's-slipper, *Cypripedium hirsutum*.

goldenstar (gōl'dn-stär), *n.* Same as ★*golden aster*.

goldenstars (gōl'dn-stärz), *n.* A Californian liliaceous plant, *Bloomeria crocea*, nearly related to *Hookera*. The yellow flowers, an inch across, are borne in umbels of 50 to 60 each, appearing in great profusion at the close of spring.

goldentop (gōl'dn-top), *n.* An ornamental grass, *Achyrodes aureum*, which grows in low tufts and bears elegant one-sided panicles. It has been introduced from the Mediterranean region into southern California, where it has become spontaneous.

goldentuft (gōl'dn-tuft), *n.* See *Pterocaulon*.

goldenwing (gōl'dn-wing), *n.* A shortened form of *golden-winged woodpecker;* the flicker.

gold-fever (gōld'fē″vėr), *n.* A feverish desire to search for gold.

The height of the Klondike *gold-fever* in 1897.
Geog. Jour. (R. G. S.), XIII. 305.

gold-field, *n.* 2. *pl.* In California, a plant of the composite genus *Bæria* and to some extent of the related genus *Lasthenia:* so named from the fact that these plants cover the ground with their yellow bloom. The species are low herbs, some of which endure saline or alkaline soil.

goldfinch, *n.* 6. In *angling*, the name of an artificial salmon-fly.

gold-founded (gōld'foun″ded), *p. a.* Founded in connection with the discovery or exploitation of gold: as, a *gold-founded* city or town.

I rode up the narrow street, serpentine in construction, as in all *gold-founded* townships.
Rolf Boldrewood, Miner's Right, ix.

gold-fringe (gōld'frinj), *n.* An English collectors' name for a pyralid moth common to Europe and the United States, *Hypsopygia costalis*, the adult of the clover hay-worm.

goldknops (gōld'nops), *n.* Either the tall buttercup, *Ranunculus acris*, or the creeping buttercup, *R. repens*. Also *goldenknops*.

gold-opal (gōld'ō″pal), *n.* An opal of which the flames are of a rich golden-yellow color; also, an opal which is without a play of color and is cut with facets, forming a brilliant red or yellow-red stone.

gold-print (gōld'print), *n.* A print in gold-leaf. Incorrectly applied to a print in gold ink or bronze, which lacks the full brilliancy of gold-leaf.

gold-printing (gōld'prin-ting), *n.* Printing in gold-leaf. The type or design, rolled over with a size or glair, is strongly impressed on the surface to be printed. On this surface gold-leaf or gold bronze is laid. When fairly dry the surplus leaf or bronze is rubbed off with a pad of cotton or fur. To bring out a proper metallic luster, the print should be pressed or burnished. In bookbinding, the gold-leaf is applied to a glairy surface, and is impressed with a hot stamp or finishing-tool.

gold-purple (gōld'pėr″pl), *n.* Same as *purple of Cassius*.

gold-rain (gōld'rān), *n.* A shower of small sparkling stars discharged from a rocket or pyrotechnic bomb.

gold-rush (gōld'rush), *n.* A feverish rush to some newly discovered gold-field with the hope of amassing wealth.

goldschmidtite (gōld-shmit-īt'), *n.* [Named after Professor V. *Goldschmidt* of Heidelberg.] A variety of the gold-silver telluride, sylvanite, rich in gold and occurring in complex crystals of peculiar habit: found at Cripple Creek, Colorado.

gold-shrub (gōld'shrub), *n.* Any one of several shrubs belonging to the genus *Palicourea* of the madder family, especially *P. speciosa:* so named from the golden color of the dried flower-clusters and the yellow-green color of the leaves.

gold-solder (gōld'sod″ėr or -sol″dėr), *n.* A solder suitable for gold or high-grade alloys. It consists of gold 12 parts, silver 2 parts, and copper 4 parts.

gold-spangle (gōld'spang″gl), *n.* A British collectors' name for a noctuid moth, *Plusia bractea*.

gold-spot (gōld'spot), *n.* A British collectors' name for a noctuid moth, *Plusia festucæ*.

gold-standard (gōld'stan-dard), *n.* Using gold alone as full legal tender. In the United States both gold and silver are legal tender (see *silver*); but since the demonetization of silver in 1873 the country has been on a gold basis, the purchasing power of the depreciated silver dollar having been maintained by the policy of the government which has preserved its parity with gold. The situation in other double-standard countries is similar. The gold standard prevails in Great Britain, Germany, Sweden, Norway, Denmark, Austria-Hungary, Turkey, Portugal, Brazil, Canada, Newfoundland, Egypt, Chile, Peru, Japan, Russia, Mexico, Bolivia, British India, and various other countries.

goldstone, *n.* 2. In *ceram.*, an aventurin glaze containing particles which have the appearance of specks of gold.

gold-swift (gōld'swift), *n.* A British collectors' name for a moth, *Hepialus hectus*.

goldtail, *n.* 2. A British collectors' name for a liparid moth, *Euproctis auriflua*, closely related to the brown-tail moth.

gold-wash (gōld'wosh), *n.* 1. A thin plating of gold. — 2. A stream where gold is obtained by washing: generally used in the plural.

gold-water (gōld'wâ-tėr), *n.* A liquid distilled from a mixture of spices, spirits of wine, and water, and mixed with pulverized gold-leaf. Also called *Dantzic brandy*.

gold-weed (gōld'wēd), *n.* The corn crowfoot, *Ranunculus arvensis*. Also called *horse-gold*.

gold-work (gōld'wėrk), *n.* An article made of or decorated with gold; goldsmiths' work; also, the stopping or filling of teeth with gold.

golem (gō'lem), *n.* [Heb.] In Jewish use, a shapeless mass; an unfinished vessel or a lifeless bulk; in modern Jewish parlance, a blockhead; a stupid. The Talmud, as well as modern Jewish folk-lore, tells of rabbis who constructed golems and endowed them with life.

goleta (gō-lā'tä), *n.* [Sp. *goleta* = It. *goletta* = F. *goualette*, *goëlette*, *goélette*; origin un-

Goleta.

known.] A Spanish two-masted vessel, rigged fore and aft, with high peak and low gunwales: formerly much used by pirates in the Gulf of Mexico.

golf, *n.* — **Amateur golf championship,** an event in which amateurs only may participate. — **Clock-golf,** a variety of golf in which metallic numerals, from 1 to 12 inclusive, are placed at equal distances in a circle, the object of the game being to putt the ball from each of these points into a hole placed anywhere within the circle. — **Open golf championship,** an event in which both professionals and amateurs may participate.

golf-ball (golf'bâl), *n.* A ball with which the game of golf is played. See *golf*.

golf-cart (golf'kärt), *n.* Same as *golf-gig*.

golf-croquet (golf'krō-kā'), *n.* A form of lawn game which combines the strokes of golf with the wickets of croquet.

golf-gig (golf'gig), *n.* A light carriage, without top, having a gig-body and side-bar gear.

golf-links (golf'lingkz), *n. pl.* The links or course over which golf is played.

Golgi method. See ★*method*.

Golgotha (gol'gō-thä), *n.* [LL. *Golgotha*, < Gr. Γολγοθᾶ, < Aram. *gogoltha*, Heb. *gulgōleth*, a skull.] 1. The Hebrew (Aramaic) name of the place of Christ's crucifixion, somewhere near Jerusalem. — 2. A graveyard or place of interment.

Presumptuous Churchmen, in most Parts of the Kingdom of Europe, have . . . burnt whole Towns, Male and

Female, Children and old Men, . . . dy'd the White Fields in Blood, turned them into a *Golgotha*.
Drummond of Hawthornden, Skiamachia, Works, p. 204.

goliardy (gō'li-är-di), *n.* The ribald jesting and satirical poetry of the goliards.

goliathize (gō-lī'ath-īz), *v. i.*; pret. and pp. *goliathized*, ppr. *goliathizing*. [*Goliath* + *-ize*.] To talk after the manner of Goliath, that is, vauntingly; boast.

Walter Map. The banquet, from whence there puffed out such an incense of unctuosity into the nostrils of our Gods of Church and State, that Lucullus or Apicius might have snuffed it in their Hades of heathenism— . . . As to the fish, they de-miracled the miraculous draught, and might have sunk a navy—
Herbert. There again, Goliasing and *Goliathsing*.
Tennyson, Becket, iii. 3.

goller (gol'ėr), *v. i.* [Also *gollar*, *guller*; vaguely imitative; compare *gaggle*, *gulp*, etc., *yell*, and '*holler*' for *hollow*.] **1.** To emit a gurgling sound. *Jamieson.*—**2.** To utter loud, thick sounds, as when choking with rage; to scold in a loud voice; bawl. [Scotch.]

golok (gō'lok), *n.* Same as ★*guloc*.

goluptious, galuptious (gō-lup'shus, gā-lup'shus), *a.* [A made word; a kind of fusion of *gl(orious)* and *(vol)uptuous*.] Delicious. [Slang.]

G. O. M. An abbreviation of *Grand Old Man*, a favorite epithet applied to William Ewart Gladstone, the British statesman, in his later years.

Goma brea. See ★*brea*.

Gomarian (gō-mā'ri-ąn), *n.* A Gomarist.

gomart (gō-märt'), *n.* [F. *gomart*, *gommart*, < *gomme*, gum.] The Jamaican birch, *Terebinthus Simaruba*. It yields a gum-resin known as *cachibou* (which see).

gomashta (gō-mash'tą), *n.* [Hind. *gumāshta*, < Pers. *gamāshta*, appointed.] In India, a native factor or agent.

gombay (gom'bą), *n.* [Supposed to be of African origin.] A festal performance among the negroes of Bermuda, usually held on Christmas eve: probably a survival, much modified, of an ancient African rite. Groups of masked men and boys go about the country from house to house, singing, dancing, and playing on musical instruments.

Gombei pottery. See ★*pottery*.

Gombroon ware. See ★*ware*[2].

Gomphoceras (gom-fos'ę-ras), *n.* [NL., < Gr. *γόμφος*, a nail, + *κέρας*, a horn.] A genus of extinct nautiloid cephalopods of Paleozoic age, characterized by curved shells swollen in later stages and contracted near the aperture.

gomphoceratite (gom-fō-ser'ą-tīt), *n.* [*gomphoceras* (*-cerat-*) + *-ite*[2].] In *paleon.*, a member of the ammonoid genus *Gomphoceras*.

Gonactinia (gon-ak-tin'i-ą), *n.* [NL., < Gr. *γόνος*, generation (?), + *ἀκτίς* (*ἀκτιν-*), a ray.] The typical genus of the family *Gonactinidæ*. *Sars.*

Gonactinidæ (gon-ak-tin'i-dē), *n. pl.* [NL., < *Gonactinia* + *-idæ*.] A family of *Zoantharia*, of the order *Proactiniæ*. They have a sulcus and a sulculus, eight Edwardsian macromesenteries, and eight micromesenteries. The sulcar and sulcular macromesenteries are sterile: the four remaining macromesenteries are fertile and form couples with four micromesenteries. The family contains the genus *Gonactinia*. *G. prolifera* reproduces itself asexually by strobilation.

gonadial (gō-nad'i-al), *a.* [*gonad* (NL. **gonadium*) + *al*[1].] Of or pertaining to a gonad, or reproductive organ, either male or female.

Many segmented worms in which important developmental processes occur, *e. g.*, formation of new gill slits, of *gonadial* sacs, or even of whole segments of the body, long after the power of reproduction has been acquired.
Encyc. Brit., XXVIII. 138.

gonadic (gō-nad'ik), *a.* [*gonad* + *-ic*.] Same as ★*gonadial*.

gonarthrotomy (gon-är-throt'ō-mi), *n.* [Gr. *γόνυ*, knee, + *ἄρθρον*, joint, + *-τομία*, < *ταμεῖν*, cut.] Operation on the knee-joint.

gondola, *n.* **7.** A coach of unusual size with a boat-shaped bottom and seats for eight or more persons.

Gondwana system. See ★*system*.

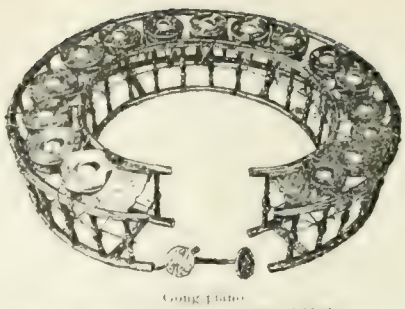
gonecium (gō-nē'si-um), *n.* Same as ★*gonœcium*.

gonecyst (gon'e-sist), *n.* [Gr. *γονή*, seed, + *κύστις*, bag (cyst).] Same as *seminal vesicle* (which see, under *vesicle*).

gonecystitis (gon″e-sis-tī'tis), *n.* [NL., as *gonecyst* + *-itis*.] Inflammation of the vesiculæ seminales.

gong-drum (gong'drum), *n.* A bass drum made unusually thin or shallow, like a very large tambourine, so as to economize space.

gong-piano (gong'pi-an″ō), *n.* A musical instrument, common in several countries in southeastern Asia, consisting of a graduated series of gongs set in a circular bamboo frame, within which the player sits.



Gong Piano.
In the Stearns Collection, University of Michigan.

goniac (gō'ni-ak), *a.* [*goni-on* + *-ac*.] In *anthrop.*, relating or pertaining to the gonion.

Goniac angle, in *craniom.*, same as ★*angle of mandibles*.

Goniatites, *n.* Originally (as introduced by de Haan) a genus of Paleozoic ammonoid cephalopods with closely coiled shells, simple septal sutures, and mostly broad lateral saddles and lobes. The genus was later subdivided into other genera of more restricted scope, so that the name, which originally had a value parallel to that of *Ammonites*, has now, like the latter, disappeared from classification.

gonid (gon'id), *n.* [NL. *gonidium*.] Same as *gonidium*.

gonidangium, *n.* **2.** Specifically, the asexual reproductive organ, borne upon the gametophyte, in distinction from the sporangium, which is borne upon the sporophyte.

gonidiferous (gō-ni-dif'ę-rus), *a.* [NL. *gonidium* + L. *-fer*, < *ferre*, bear.] Bearing gonidia.

gonidiophyl, gonidiophyll (gō-nid'i-ō-fil), *n.* [NL. *gonidium* + Gr. *φύλλον*, leaf.] Same as ★*sporophyl*, 2.

gonimoblast (gō-nim'ō-blāst), *n.* [Gr. *γόνιμος*, productive, + *βλαστός*, a germ.] The filament which arises from the fertilized cell of some of the red algæ. It bears the carpospores either directly or upon ★gonimolobes (which see).

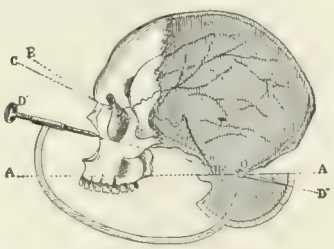
gonimolobe (gō-nim'ō-lōb), *n.* [Gr. *γόνιμος*, productive, + *λοβός*, a lobe.] The terminal lobe into which the gonimoblast of certain red algæ is divided. It penetrates the surrounding tissue of the plant, and from its terminal cells the carpospores are formed.

Gonioclymenia (gō″ni-ō-klī-mē'ni-ą), *n.* [NL., < Gr. *γωνία*, angle, + *Clymenia*, a genus of cephalopods.] A genus of Devonian ammonoid cephalopods or clymenias, with discoid shells and acute lateral lobes and saddles.

goniograph (gō'ni-ō-gräf), *n.* [Gr. *γωνία*, an angle, + *γράφειν*, write.] An instrument for describing angles.

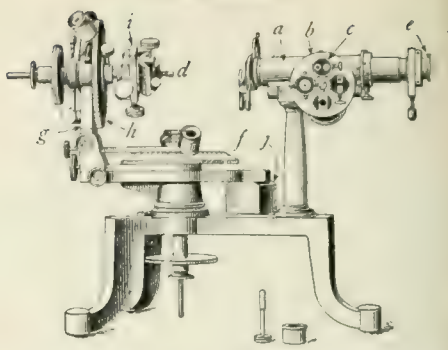
gonioid (gō'ni-oid), *a.* [Gr. *γωνιοειδής*, angular, < *γωνία*, angle, + *εἶδος*, form.] See ★*clinohedral*.

goniometer, *n.*—**Mandibular goniometer,** an instrument for measuring the angle formed by the lower rim of the body of the jaw and the ascending ramus. —**Occipital goniometer,** in *craniom.*, an instrument devised for measuring the angle between the level of the foramen magnum and the line drawn from the medial point of the posterior part of the foramen magnum and the projection of the lower rim of the orbit on the medial plane.—**Two-circle goniometer,** an instrument for measuring the angles of crystals, provided with two graduated circles, one of which is horizontal, the other vertical. To the latter the crystal-holder and the devices for centering and adjusting are attached. With this form of goniometer the position of a face of a crystal can be determined relative to a reference-face by two angles in planes at right angles to each other, in a manner analogous to the use of the latitude and longitude to fix the position of a point on the earth's surface. Also called a *theodolite-goniometer*.—**Three-circle goniometer,** a modification of the two-circle or theodolite-goniometer. It has a third graduated circle and is arranged so that each zone of faces can be adjusted by two of the circles and measured by the third without removing the crystal.



Broca's Occipital Goniometer.

A'OBA, plane of foramen magnum; *D'OD''*, plane passing through the opisthion and the lower rims of the orbits; *OC*, line passing through the opisthion and nasion; *KL*, line passing through basion and nasion. The instrument is in position for measuring the occipital angle. (From Schmidt's "Anthropologische Methoden.")



Two-circle Goniometer.

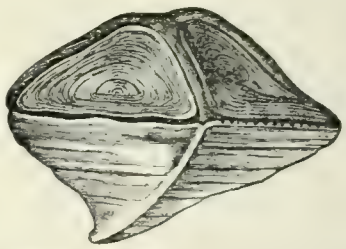
a, telescope; *b*, disk with four signals, any one of which (as *c*) can be brought by revolution into position. The signal illuminated by lamp at side is then, after reflection by small prism within tube, thrown upon a face of the crystal supported at *d*, and again reflected back to the observing eye-piece *e*; *f*, horizontal graduated circle; *g*, support, carrying vertical graduated circle *h*, with centering- and adjusting-apparatus *i*; *j*, balancing-weight.

goniometry, *n.* **2.** That branch of trigonometry which treats of circular functions in general, and of their relations.

goniopholidid (gō″ni-ō-fol'i-did), *n.* One of the *Goniopholididæ*.

Goniophora (gō-ni-of'ō-rą), *n.* [Gr. *γωνία*, angle, + *φορος*, < *φέρειν*, bear.] A genus of prionodesmaceous pelecypods having the form of *Modiola*, but sharply angulated on the crescence-line. It occurs in Silurian and Devonian rocks.

Goniophyllum (gō″ni-ō-fil'um), *n.* [NL., < Gr. *γωνία*, angle, + *φύλλον*, leaf.] A genus of extinct tetracorals, the corallum having the form of a four-sided pyramid and bearing an operculum composed of four plates. It is from the Silurian rocks.



Goniophyllum pyramidale, from the Silurian of Gotland: showing the operculum in place, twice the natural size. (From Nicholson and Lydekker's "Palæontology." After Lindstroem.)

Gonioplectrus (gō″ni-ō-plek'trus), *n.* [NL., < Gr. *γωνία*, angle, + *πλῆκτρον*, a striker, spear-point, spur.] A genus of small bass-like fishes of the family *Serranidæ*, found in the West Indies. *G. hispanus*, the known species, is called the *Spanish flag*, the body being banded alternately with red and golden stripes.

Goniopteris (gō-ni-op'tę-ris), *n.* [NL. (Presl, 1836), < Gr. *γωνία*, an angle, + *πτερίς*, a fern. The veinlets are connivent in successive angles.] A genus of mostly pinnate or bipinnatifid polypodiaceous ferns, closely allied to *Dryopteris*. It is distinguished, in typical species, by having the lowermost branches from adjacent veins connivent in pairs, the resulting veinlet excurrent within the arch of the next anterior pair, the sori punctiform, normally non-indusiate and medial on the branches. The genus is mainly tropical: its systematic limits are ill defined. Two species, *G. reptans* and *G. tetragona* occur in peninsular Florida.

goniosymphyseal (gō″ni-ō-sim-fiz'ē-al), *a.* [*gonion* + *symphysis* + *-al*[1].] In *craniom.*, relating to the gonia and the symphysis of the lower jaw. *Amer. Anthropologist*, Jan.–March, 1901, p. 39.

gonnardite (gon'är-dīt), *n.* [Named after M. *Gonnard*, a mineralogist, of Lyons, France.] A zeolitic mineral allied to mesolite. It forms white, fibrous masses which fill cavities in the basalt of the Puy-de-Dôme region.

gonoblastid (gon-ō-blas'tid), *n.* [Gr. *γόνος*, generation, + *βλαστός*, germ, + *-id*[2].] In cœlenterates, a gonophore.

gonocace (go-nok'ą-sē), *n.* [Gr. *γόνυ*, knee, + *κακή*, bad condition.] Chronic disease of the knee-joint.

gonochorism (gon-ō-kō'rizm), *n.* [Gr. *γόνος*, sex, + *χωρισμός*, separation.] The bisexual or diœcious condition. *Arnold Lang* (trans.), Comp. Anat., p. 24.

gonochorist (gon-ọ-kō'rist), *n.* An organism that exhibits gonochorism or the separation of the sexes. [Rare.]

gonochoristic (gon″ọ-kọ-ris'tik), *a.* Pertaining to or characterized by gonochorism; diœcious; with separate sexes.

gonococcal (gon-ọ-kok'ạl), *a.* [*gonococc-us* + *-al*[1].] Of or relating to gonococci.

gonococcic (gon-ọ-kok'sik), *a.* [*gonococc-us* + *-ic.*] Same as ★*gonococcal.*

gonococcoid (gon-ọ-kok'oid), *a.* [*gonococc-us* + *-oid.*] Resembling gonococci.

gonococcus, *n.* **2.** *pl.* Micrococci which occur in pairs, flattened at their points of contact; the cause of gonorrheal inflammation of the mucous and serous membranes.

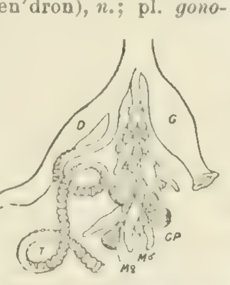
gonocœle (gon'ọ-sēl), *n.* [Gr. *γόνος*, seed, + *κοῖλος*, hollow.] The cavity of the gonad, or reproductive organ.

The *gonocœl* or cavity enclosed by the gonadial wall. *Jour. Roy. Micros. Soc.*, Oct., 1903, p. 594.

gonocyst (gon'ọ-sist), *n.* [Gr. *γόνος*, generation, + *κύστις*, bladder (cyst).] In certain polyzoans, a marsupial cavity, formed by the inflation of the surface of the zoarium, containing the developing embryos.

gonocyte (gon'ọ-sīt), *n.* [Gr. *γόνος*, generation, + *κύτος*, a hollow (a cell).] The primordial reproductive cell in the embryo, which later develops into the oöcyte or the spermatocyte.

gonodendron (gon-ọ-den'dron), *n.*; pl. *gonodendra* (-drạ). [NL., < Gr. *γόνος*, generation, + *δένδρον*, tree.] A branching blastostyle, as in *Physalia.*



Cormidium of Physalia, with a gonodendron (modified from Haeckel).
D, dactylozoöid; *G*, gastrozoöid; *GP*, gonopalpon or dactylozoöid on the gonodendron; *MG*, medusoid (ultimately freed); *MS*, male sporosac; *T*, tentacle (pal. pacles of dactylozoöid or palpon). (From Lankester's "Zoology.")

gonoduct, *n.* Same as *gonaduct.*

gonœcium (gọ-nē'ṣi-um), *n.*; pl. *gonœcia* (-ạ). [NL., < Gr. *γόνος*, generation, + *οἶκος*, house.] In polyzoans, a zoœcium transformed into a marsupial cavity. *Zittel* (trans.), Textbook of Palæon., I. 259.

gonogenic (gon-ọ-jen'ik), *a.* [Gr. *γόνος*, birth, + *-γενής*, -producing, + *-ic.*] Of or pertaining to origin from germ-cells. [Rare.]
Gonogenic variation. See ★*variation.*

gonomere (gon'ọ-mēr), *n.* [Gr. *γόνος*, generation, + *μέρος*, part.] Either the male or the female pronucleus considered as an autonomous and persisting portion of the cleavage nucleus and the nuclei of the cells which arise by division from the fertilized egg. *Amer. Nat.*, July, 1903, p. 503.

gononephrotome (gon-ọ-nef'rọ-tōm), *n.* [Gr. *γόνος*, seed, + *νεφρός*, a kidney, + *τομή*, a section.] In *embryol.*, that portion of the mesoderm which gives rise to the reproductive and excretory organs in the vertebrate embryo.

gonopalpon (gon-ọ-pal'pon), *n.*; pl. *gonopalpa* (-pạ). [Gr. *γόνος*, generation, + NL. *palpon.*] In siphonophorans, a palpon borne upon a gonostyle.

gonophorous (gō-nof'ō-rus), *a.* [*gonophore* + *-ous.*] Bearing or producing gonophores.

gonopore (gon'ọ-pōr), *n.* [Gr. *γόνος*, generation, + *πόρος*, passage.] The reproductive orifice of the female, in nemathelminths. *Parker and Haswell*, Zoology, I. 276.

gonosphere (gon'ọ-sfēr), *n.* [Gr. *γόνος*, generation, + *σφαῖρα*, a sphere.] Same as *oösphere.*

Gonostoma (gọ-nos'tọ-mạ), *n.* [NL. (Rafinesque), erroneously for *Goniostoma, < Gr. *γωνία*, angle, + *στόμα*, mouth.] A genus of small lantern-fishes of the family *Chauliodontidæ*, found in the deep seas. *G. denudatum* is the common species.

Gonostominæ (gon-os-tọ-mī'nē), *n. pl.* [NL., < *Gonostoma* + *-inæ.*] A subfamily of fishes typified by the genus *Gonostoma.*

gonostyle (gon'ọ-stīl), *n.* [Gr. *γόνος*, generation, + *στῦλος*, a pillar.] A blastostyle or reproductive zoöid of a hydroid or siphonophore colony.

gonotome (gon'ọ-tōm), *n.* [Gr. *γόνος*, generation, + *τομή*, section.] In *embryol.*, the portion of the segmented mesoderm which gives rise to the reproductive organs or gonads of the vertebrate embryo.

Whether we have metamerically repeated *gonotomes*, is as yet a disputed question. *J. S. Kingsley*, Vert. Zool., p. 103.

gonotoxin (gon-ọ-tok'sin), *n.* [Gr. *γόνος*, generation, + *τοξ(ικόν)*, poison, + *-in*[2].] A poisonous substance produced by the gonococcus.

gonozoöid, *n.* **2.** In *Hydromedusæ*, same as *medusoid* or *gonophore.*

gony, *n.*, **2.** (c) The name seems to have been applied originally to southern albatrosses of medium size, with white bodies and black wings, such as *Diomedea chlororhyncha.* It was thus used by 'deep-water' sailors about 1860, and its application to the black-footed albatross, *D. nigripes*, of the North Pacific is of later date.

gonyagra (gō-ni-ag'rạ), *n.* [NL., < Gr. *γόνυ*, knee, + *ἄγρα*, a catching. Cf. *podagra.*] Gout in the knee-joint.

gonytheca (gon-i-thē'kạ), *n.*; pl. *gonythecæ* (-sē). [NL., < Gr. *γόνυ*, knee, + *θήκη*, receptacle.] In *entom.*, the concavity at the apex of the femur which receives the base of the tibia.

good. I. *a.* **Good title.** See ★*title.* **To make good.** (g) In *poker*, to make a blind or a straddle equal the ante.
II. *n.* **Confusion of goods.** See ★*confusion.*—**Lawful goods,** in *international law*, goods which a neutral ship may carry in time of war, including contraband of war, which is carried at the neutral's risk.

good-daughter (gůd'dâ″tėr), *n.* A daughter-in-law. [Scotch.]

Goodea (gůd'ẹ-ạ), *n.* [NL., named after G. B. *Goode*, an American naturalist.] A genus of small viviparous fresh-water fishes, belonging to the family *Pœciliidæ*, found in the lakes of Mexico. *G. atripinnis* is the earliest known species.

Goodeinæ (gůd-ẹ-ī'nē), *n. pl.* [NL., < *Goodea* + *-inæ.*] A subfamily of fishes typified by the genus *Goodea.*

goodeniaceous (gů-dē-ni-ā'shius), *a.* In *bot.*, belonging to or having the characters of the *Goodeniaceæ.*

good-father (gůd'fä″ᴛʜėr), *n.* A father-in-law. [Scotch.]

good-fors (gůd'fộrz), *n. pl.* A local name for private notes, bills of exchange, drafts, etc., circulated as money, 'good for' an amount indicated, at the Cape of Good Hope, in the first quarter of the nineteenth century.

good-full (gůd'fůl), *a.* Of sails, a little more nearly full than in full-and-by; allowing the vessel to go off sufficiently from the wind to round out her sails.

goodletite (gůd'let-īt), *n.* A local name in Australia for the rock forming the matrix of the ruby.

good-like (gůd'līk), *a.* Of respectable or pleasing appearance: as, a couple of *good-like* men. [Prov. Eng.]

goodliking (gůd'lī'king), *n.* **1.** Kindly feeling; friendly relations.—**2.** Good-will; personal liking or approval. *Sydney Smith.*

good-mother (gůd'muᴛʜ″ėr), *n.* A mother-in-law. [Scotch.]

good-shoaling (gůd'shō ling), *n.* *Naut.*, soundings that change gradually; progressive depths of water.

goodsire (gůd'sīr), *n.* [Also (Sc.) *gudesire*; < *good* + *sire.* Cf. *belsire.*] A grandfather. *Scott.* [Scotch.]

goods-lift (gůdz'lift), *n.* A freight-elevator; a device for raising or lowering freight. [Eng.]

go-off (gō'ôf), *n.* **1.** Start; outset; beginning or attempt: usually preceded by *at* and *first*: as, at first *go-off* (at once, at the very outset).—**2.** In *banking*, the amount of loans falling due (and therefore 'going off' the amount in the books) in a certain period. *Lord Aldenham. N. E. D.*

goondie (gön'di), *n.* [Australian (Wiradhuri) *gúndai*, a shelter. Compare ★*gunyah.*] A native Australian hut; a gunyah. [Australian.]

There were a dozen "*goondies*" to be visited, and the inmates started to their work. *Rolf Boldrewood*, Colonial Reformer, xvii.

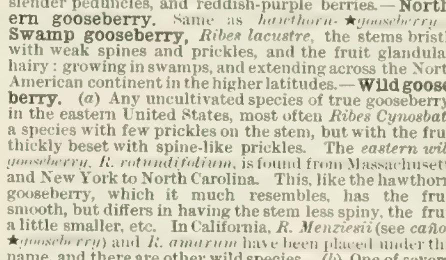
goorgoora (gör-gö'rạ), *n.* [Punjab *gurgura.*] In Afghanistan, a large evergreen shrub or small tree, *Reptonia buxifolia*, of the family *Sapotaceæ*, bearing insipid, globular, drupaceous, fleshy fruits which are much esteemed by the Afghans.

goose, *n.* **6.** In *keno*, the globe from which the numbered balls are withdrawn.—**Bay-goose,** the common or Canada goose, *Branta canadensis.* [Local, U. S.]—**Cape Barren goose,** *Cereopsis novæ-hollandiæ*, a species once common on the uplands of New South Wales, but now much reduced in numbers.—**Gray goose,** the common European species, *Anser cinereus.* Also known as the *graylag.*—**Gray-goose shaft,** an arrow: arrows were formerly feathered with the feathers of geese.—**Knobbed goose,** the male of the domesticated form of the Chinese goose, *Cygnopsis cygnoides*, which has an excrescence at the base of the bill, lacking in the wild bird.—**Pygmy goose,** any one of the goose-teals, or goslets, which belong to the genus *Nettapus.* **Road-goose,** a local English name for the brant, *Bernicla brenta.* Also called *clatter-goose* and *wilk-bob.*—**Shooting at the goose,** in *old archery*, a shooting-match in which the mark was the head of a living goose, the body being buried to the neck in the earth.

goose-barnacle (gös'bär na-kl), *n.* A stalked barnacle, as *Lepas anatifera*: in allusion to the fable that it gave origin to geese. See *barnacle*[1], 2.

gooseberry, *n.* **3.** The farkleberry, *Batodendron arboreum*: doubtless so called from its somewhat similar fruit. See *farkleberry.*—**Black-knot of the gooseberry.** See ★*black-knot.*—**Cañon gooseberry,** *Ribes Menziesii*, of the outer coast ranges of middle California, a species with flowers more fuchsia-like than those of the fuchsia-flowered gooseberry, but small and less showy. **Coromandel gooseberry,** the carambola, *Averrhoa Carambola.* Also called *country gooseberry.* **Country gooseberry,** in India: (a) The Otaheite gooseberry, *Phyllanthus distichus.* (b) The Coromandel ★gooseberry (which see).—**Drooping gooseberry,** *Ribes curvatum*, a recently described species growing on rocky ground in Georgia and Alabama, the name referring to the recurved branchlets.—**Dwarf cape gooseberry,** a species of ground-cherry, *Physalis pubescens*, lower than the cape gooseberry, *P. Peruviana*, grown in vegetable gardens under the name of *strawberry-tomato.* In cultivation it spreads over the ground two feet in all directions. It is found as a wild plant over a large part of the United States and in Mexico, and also grows in South America and India.—**Fuchsia-flowered gooseberry.** See *Ribes*2. **Gooseberry family,** the plant family *Grossulariaceæ*, typified by the genus *Ribes*, to which the gooseberry belongs. **Gooseberry span-worm.** See ★*span-worm.*—**Hawthorn-gooseberry,** *Ribes oxyacanthoides*, having leaves closely resembling those of the hawthorn, bristly and prickly stems, and smooth, globose fruit: found from Hudson Bay to Alaska.—**Hill gooseberry,** a shrub of the myrtle family, *Rhodomyrtus tomentosa*, native to India. It bears a fruit about the size of a cherry, dark purple, with a sweet and aromatic pulp. The fruit is eaten raw or made into jam, and also makes excellent jelly.—**Illinois gooseberry.** Same as *Missouri* ★*gooseberry.* **Malabar gooseberry,** *Melastoma Malabathricum*, an Indian shrub bearing an oval, truncate fruit having an edible pulp, which resembles the blackberry in flavor. See *Melastoma.* **Missouri gooseberry,** *Ribes Missouriense*, of the Mississippi valley and Texas, having white drooping flowers on slender peduncles, and reddish-purple berries.—**Northern gooseberry.** Same as *hawthorn-*★*gooseberry.*—**Swamp gooseberry,** *Ribes lacustre*, the stems bristly with weak spines and prickles, and the fruit glandular-hairy: growing in swamps, and extending across the North American continent in the higher latitudes.—**Wild gooseberry.** (a) Any uncultivated species of true gooseberry; in the eastern United States, most often *Ribes Cynosbati*, a species with few prickles on the stem, but with the fruit thickly beset with spine-like prickles. The *eastern wild gooseberry*, *R. rotundifolium*, is found from Massachusetts and New York to North Carolina. This, like the hawthorn-gooseberry, which it much resembles, has the fruit smooth, but differs in having the stem less spiny, the fruit a little smaller, etc. In California, *R. Menziesii* (see *cañon* ★*gooseberry*) and *R. amarum* have been placed under this name, and there are other wild species. (b) One of several species of *Polycodium.* See *squaw-huckleberry.*

gooseberry-borer (gös'ber-i-bōr″ėr), *n.* The larva of a cerambycid beetle, *Xylocrius agassizii*, occurring in the northwestern United States and British Columbia. Also called *black gooseberry-borer.*



Gooseberry-borer (*Xylocrius agassizii*).
a, beetle; *b*, pupa; *c*, larva, dorsal view: all about three times natural size. (Chittenden, U. S. D. A.)

gooseberry-gourd (gös'ber-i-gōrd″), *n.* The bur or West Indian gherkin, *Cucumis Anguria.* See *bur* ★*gherkin.*

gooseberry-louse (gös'ber-i-lous), *n.*; pl. *gooseberry-lice* (-līs). A red-bug or harvest-bug, a larval *Trombidium.* [Great Britain.]

gooseberry-midge (gös'ber-i-mij″), *n.* A cecidomyiid fly, *Cecidomyia grossulariæ*, which lays its eggs beneath the skin of young gooseberries in which its larvæ feed.

gooseberry-mildew (gös'ber-i-mil″dū), *n.* A fungus disease of gooseberries which attacks the foliage and young fruit: due to *Sphærotheca mors-uvæ.*

gooseberry-season (gös'ber-i-sē″zn), *n.* The season when gooseberries are ripe.—**Big-goose-**

berry season, the time of year when news is scarce, and the newspapers have plenty of space to devote to the chronicling of wonderful, fictitious, or trifling matters.

gooseberry-shrub (gös'ber-i-shrub), *n.* In the West Indies, same as *Barbados gooseberry, Pereskia Pereskia.* See *gooseberry.*

gooseberry-tomato (gös'ber-i-tō-mä'tō), *n.* The cape gooseberry, *Physalis Peruviana.* See *gooseberry.*

gooseberry-tree (gös'ber-i-trē), *n.* In the Bahamas, the cultivated Otaheite gooseberry, *Phyllanthus distichus.*—**Little gooseberry-tree,** in Queensland, a tree, *Buchanania Muelleri,* of the sumac family, bearing sweet, pulpy drupes about one-half of an inch long, somewhat resembling gooseberries.

goosebill, *n.* **2.** *Naut.,* an old-fashioned sail, in shape something like the bill of a goose or duck. It was used before the wind.

Goose-egg moth. See ★*moth*[1].

goose-file (gös'fīl), *n.* Single file; Indian file.

goosefoot, *n.*—**Maple-leaved goosefoot,** *Chenopodium hybridum,* which has leaves lobed as in the maple: native in both Europe and America.—**Nettle-leaved goosefoot,** *C. murale,* the leaves of which somewhat resemble those of the nettle. It is an Old World plant, thoroughly naturalized as a weed in waste places in the United States.

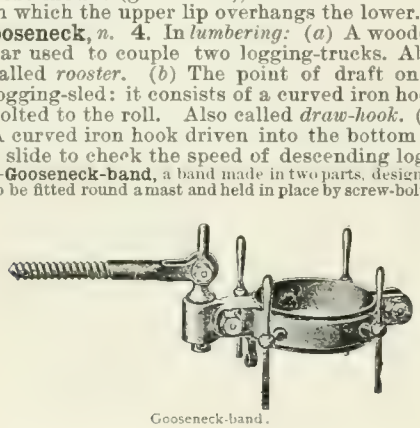
goose-grass, *n.* **5.** Same as ★*crowfoot-grass,* 2, and *wire-grass,* 2.—**6.** The Texas millet, *Panicum Texanum.* See ★*millet.*—**7.** The low spear-grass, *Poa annua.*—**8.** The sea spear-grass, *Puccinellia maritima.*

goose-grease (gös'grēs), *n.* The melted fat of the goose: much used in domestic medicine as an ointment.

gooseland (gös'land), *n.* In California, flat land in the Sacramento valley which is partly flooded by rain in winter and then becomes the feeding-ground of large flocks of wild geese from the north. In large portions of the gooselands the soil is strongly alkaline.

goose-mouth (gös'mouth), *n.* A horse's mouth in which the upper lip overhangs the lower.

gooseneck, *n.* **4.** In *lumbering:* (*a*) A wooden bar used to couple two logging-trucks. Also called *rooster.* (*b*) The point of draft on a logging-sled: it consists of a curved iron hook bolted to the roll. Also called *draw-hook.* (*c*) A curved iron hook driven into the bottom of a slide to check the speed of descending logs.—**Gooseneck-band,** a band made in two parts, designed to be fitted round a mast and held in place by screw-bolts:



Gooseneck-band.

used to support a screw- or socket-gooseneck for the boom. Sockets are also provided for belaying-pins.

goose-necked (gös'nekt), *p. a.* Shaped like or supplied with a gooseneck.

goose-pen (gös'pen), *n.* **1.** A pen or yard for geese.—**2.** In *forestry,* a large hole burned in a standing tree.

goose-rump (gös'rump), *n.* A horse's rump or hind quarters which drop suddenly to the tail, giving the animal a somewhat angular appearance from behind. Also *short-rump.*

goose-rumped (gös'rumpt), *p. a.* Noting a defect in the conformation of a horse in which the hind quarters have an excessive slant downward and backward from the croup, and the tail is set low.

goose-skin, *n.* **4.** The pitted surface exhibited by copal, caused by contact with the sand in which it is embedded.

goose-step, *n.* **2.** An exercise in military gymnastics in which the body is balanced on one foot while the other is swung forward and backward as if on the march, but without advancing, the object being to give the soldier an upright carriage in marching.—**3.** A marching step in which the feet are raised high above the ground, as when on review.

goose-teal (gös'tēl), *n.* See ★*teal*[1].

goosetongue, *n.* **2.** The lemon-balm, *Melissa officinalis.*

goose-wing (gös'wing), *n.* *Naut.*: (*a*) The clue of a squaresail that is kept hauled out by its sheet when the other clue is hauled up to the yard and furled. (*b*) A studdingsail.

goosy (gö'si), *a.* [*goose* + *-y*[1].] **1.** Goose-like, especially in stupidity; foolish; silly. *Carlyle.*—**2.** In a condition resembling that of the flesh of a plucked goose; hence, 'creepy': as, a *goosy* sensation.

G. O. P. An abbreviation of *Grand Old Party,* a rhetorical designation, by some Republicans, of the Republican party in the United States.

gopher-apple (gō'fèr-ap'l), *n.* Same as *gopher-root:* so called from the often edible fruit, which, however, is a drupe and not like an apple.

gopher-plant (gō'fèr-plant), *n.* The caper-spurge, *Euphorbia Lathyris.* See *spurge.* For the origin of the name see *mole-tree.*

gopher-plum (gō'fèr-plum), *n.* **1.** See *plum*[1].—**2.** Same as *cocoa-plum.* See *Chrysobalanus* and *plum*[1].

gor (gôr), *n.* [Origin unknown; cf. ★*gorb* and ★*gorbel.*] An unfledged bird.

gora (gō'rä), *n.* [Also *gorah, gorrah, goura, gurah;* from a S. African native name.] A

Gora.

Original in National Museum, Washington, D. C.

South African musical instrument, consisting of a bent piece of wood or bow with a single gut string attached, which is sounded by the player's breath directed through or against a quill that is fastened to one end of the bow. Sometimes a small gourd is attached to the bow as a resonator.

The *gorah* was formed by stretching a piece of the twisted entrails of a sheep along a thin hollow stick about three feet in length in the manner of a bow and string. At one end there was a piece of quill fixed into the stick, to which the mouth was applied, and the tones were produced by inspiration and respiration.

Encyc. Brit., XII. 311.

Several years ago, Mr. Henry Balfour published an important memoir on the musical bow, and in the current Journal of the Anthropological Institute (vol. xxxii. p. 156) he describes a superficially similar instrument, the *goura,* which Frobenius and Ankermann have confused with the musical bow proper. The *goura* is a bow-like instrument; one end of its string is fastened to a flattened quill, the other end of which is fastened to the bow, and the string is thrown into vibration through the medium of the quill, which is caused to oscillate by being blown upon. Those musical bows which have no resonator are held to the mouth when playing in order to increase the sound. *Nature,* Nov. 13, 1902, p. 37.

gorb (gôrb), *n.* [Connected with *gorbel* and other forms, *gorbet, gorbre, gorbin, gorbling,* based on the simple *gor,* in sense of 'an unfledged bird': see ★*gor.*] **1.** A greedy person; a glutton. [Prov. Scotch and Irish.]—**2.** An unfledged bird. [Scotch.]

gorbel (gôr'bel), *n.* [Also *gorbal:* see ★*gorb.*] An unfledged bird. [Scotch.]

Children . . . often take the bare *gorbals,* or unfledged young, of this bird [the yeldring or yellow hammer], and suspend them by a thread tied round the neck.

Jamieson, Scottish Dict. (s. v. *yeldring*).

Gordiichthys (gor-di-ik'this), *n.* [NL., < *Gordius,* a genus of hairworms or hair-eels, + Gr. ἰχθύς, fish.] A genus of small eels of the West Indies, of the family *Moringuidæ.* They are characterized by the extraordinary slenderness of the body and the great number of vertebræ. *G. irretitus* is the known species.

Gordon River group. See ★*group*[1].

gore-blood† (gōr'blud), *n.* Clotted blood; gore.

Thus they travelled from morning till night several days, through bushes and thorns, which made their arms and shoulders, which were naked, all of a *gore* blood.

Defoe, Captain Singleton, xviii.

gore-fish (gōr'fish), *n.* Same as *garfish.*

gorge, *n.* **12.** In *angling,* a bait intended to be swallowed by the fish to effect its capture: usually a minnow in which a double-barbed leaded fish-hook is embedded.—**13.** A fish-hook consisting of a straight or crescent-shaped piece of stone or bone sharpened at the ends and grooved or perforated in the center: used by primitive tribes.

I believe that, . . . starting with the crude fish-*gorge,* I can show, step by step, the complete sequence of the fish-hook, until it ends with the perfected hook of to-day.

B. Phillips, in Sport with Gun and Rod, p. 340.

Circle of the gorge. See ★*circle.*

gorge-bait (gôrj'bāt), *n.* Same as ★*gorge,* 12.

gorge-baiting (gôrj'bā'ting), *n.* In *angling,* fishing with a gorge.

gorge-circle (gôrj'sèr'kl), *n.* The smallest circle formed by a plane perpendicular to the axis cutting a hyperboloid of revolution; the circle generated by the shortest line from the generating line to the axis. See ★*circle of the gorge.*

gorge-line (gôrj'līn), *n.* The rear line of a fortification through which the entrance is made. Also *gorge.*

gorget, *n.* **6.** In *archæol.,* an object of stone or shell, flat, or convex on one side and concave on the other, and sometimes provided with perforations. Stone gorgets may have been used for a variety of purposes—as bracers, as supports for ornaments, as badges, etc.

gorgio (gôr'ji-ō), *n.* [G. *gadze, gatscho,* Sp. *gacho,* from a Romany word.] One who is not a Gipsy; an outsider. [Gipsy lingo.] *Borrow.*

gorgonin (gôr'gō-nin), *n.* [*Gorgonia* + *-in*[2].] A dark-brown, horn-like, albuminoid compound comprising the axial skeleton of the coral *Gorgonia Cavolinii.*

gorgon-plant (gôr'gon-plant), *n.* The prickly water-lily, *Euryale ferox.* See *Euryale,* 2, and *prickly water-lily,* under *water-lily.*

Gorgonzola cheese. See ★*cheese*[1].

gormandizer, *n.* **2.** A young, upright branch or sucker growing from the main stem or from an old branch of a cultivated tree: so called from the rapidity of its growth. See *sucker,* 5 (*b*). Also called *chupon.* [West Indies.]

goroon-shell (gō-rön'shel), *n.* [Appar. an error for ★*godroon-shell.*] A tritonoid shell, *Lampusia femoralis.*

gorse-kid (gôrs'kid), *n.* A bundle of gorse. *N. E. D.*

gosain (go-sīn'), *n.* [Also *gossein, goussain;* < Hind. *gusāīn.*] A Hindu priest, devotee, monk, or religious mendicant.

gosling, *n.* **3.** The American pasque-flower, *Pulsatilla hirsutissima:* so called from its dense, soft hairs.

gosling-grass (goz'ling-grás), *n.* Same as *goose-grass,* 1.

gosling-weed (goz'ling-wēd), *n.* Same as *goose-grass,* 1.

gosmore (gos'môr), *n.* [Origin obscure; possibly a perversion of *gossamer.*] A plant of the genus *Hypochœris,* especially *H. radicata,* now naturalized in New Jersey and California. See *cat's-ear* and *Hypochœris.*

gospodar (gos'pō-dăr), *n.* [Russ. *gospodarŭ,* Bulg. *gospodar,* etc.] Same as *hospodar.*

Gosseletia (goz-let'i-ä), *n.* [NL.] A genus of prionodesmaceous pelecypods, including triangular thick-shelled Devonian species belonging to the superfamily *Pteriacea.*

gossypein (go-sip'ē-in), *n.* [L. *gossyp(ium)* + *-e-* + *-in*[2].] A phenol-like substance contained, in small quantity, in cotton-seed oil and cotton-seed meal. Also called *gossypol.*

gossypol (gos'i-pōl), *n.* [*gossyp(ium)* + *-ol.*] Same as ★*gossypein.*

gossypose (gos'i-pōs), *n.* [*gossyp(ium)* + *-ose.*] Same as ★*raffinose.*

Goth, *n.* **3.** A 'barbarian' in matters of literature or art.

To call a man a *Goth* [in the eighteenth century] conveyed a vague sense of superiority on the part of him who uttered it, and a general sense of disreputability of him about whom it was uttered; and it was made the harder to endure and the more potent to crush because the man who applied it did not usually understand what was meant by it any more than did the man to whom it was applied. *Lounsbury,* Studies in Chaucer, III. 250.

Gothic. **I.** *a.* **5.** Belonging to or characteristic of 'Goths' or 'barbarians' in matters of literature or art.

The constant use of the words Goth and *Gothic* [by Warton] demands perhaps a word of explanation. In the literature of the eighteenth century these epithets played about the same rôle that the word Philistine, plays or has begun to play, in this. They expressed a general disapprobation without putting the one who employed them under the necessity of substantiating what he meant by any precise definition.

Lounsbury, Studies in Chaucer, III. 250.

Gothic armor, fully developed plate-armor made in the latter part of the fifteenth century: a collectors' term. This armor appears to have been made chiefly in Italy, the leading armorers being the Missaglia family in Milan. Fine suits were also manufactured at Nuremberg and elsewhere in Germany. It is the type usually represented in the works of the early Renaissance painters both in Italy and in Germany.

II. *n.*—**Churchwarden Gothic** a term ironically applied to additions made to English Gothic buildings during the eighteenth and early nineteenth centuries by local authorities having only imperfect knowledge of the style.

What he did in this way laid itself open to the derisive epithet applied to it of *Churchwarden Gothic.*

R. S. Clouston, in Burlington Mag., V. 495.

Gothicist (goth'i-sist), *n.* [*Gothic* + *-ist.*] One who favors or affects the Gothic style, especially in architecture.

Gothicity (go-this'i-ti), *n.* [*Gothic* + *-ity*.] Gothic style or quality; a distinctively Gothic character.

Gothique (gō-tēk'), *a.* [F.] An epithet applied to a style of bookbinding in which the design is blind-tooled or blind-stamped upon the cover in medieval or monastic style. See *tooling*.

göthite, *n.* Same as *goethite*.

Gothlandian (goth-lan'di-an), *a.* and *n.* In *geol.*, noting the uppermost division of the Silurian system of Murchison, taking its name from the island of Gothland. Quantivalent therewith is the name Ordovician, applied to the lower division of the Silurian system. *De Lapparent.*

gotten (got'n), *p. a.* Obtained or acquired: usually with a qualifying adverb: won: as, ill-*gotten* gains; new-*gotten* territory; *gotten* battles.

> Give me then health, Apollo; give
> Sound mind; on *gotten* goods to live
> Contented; and let song engage
> An honoured, not a base, old age.
> *Gladstone*, tr. of Horace, Odes, xxxi. 5.

Gouda cheese. See ★*cheese*[1].

gouger, *n.* 5. A snow-plow formerly used on railroads in the western United States. It consisted of a strongly built box-car which carried a plow at its head set low enough to run under a drift and throw it over. *Sci. Amer.*, Jan. 3, 1903, p. 8.

gouge-shell (gouj'shel), *n.* A gimlet-shaped shell, such as that of *Vermetus*; also, a kind of pinna.

goujat (gö-zhä'), *n.* [F.] A camp-follower; a soldier's servant; also, a blackguard.

> Boys, or rather fags, [employed to carry the men's weapons or harness on the march] were called in French *goujats*, and are a curious feature in the armies of the time. *J. W. Fortescue*, Hist. Brit. Army, I. ii. 1.

goulash, *n.* See ★*gulash*.

goundou (gön'dö), *n.* [W. African.] A disease which attacks the natives on the west coast of Africa. It is marked by the growth of a smooth rounded swelling on either side of the bridge of the nose. *Jour. Trop. Med.*, Feb. 16, 1903, p. 62.

goup, gowp (goup), *v. i.* [Perhaps imitative.] To throb violently or painfully, as a boil before it bursts or is lanced. [Scotch.]

goura, *n.* See ★*gora*.

gourd, *n.*, 1. (*c*) Same as *calabazilla*.—**Bonnet-gourd**, the fruit of species of *Luffa*. It is sometimes split lengthwise, turned inside out, and fashioned into a bonnet or cut into strips and used for trimming: whence the name. **Gourd family**, the plant family *Cucurbitaceæ*. **Missouri gourd.** Same as *calabazilla*. It extends east to the Missouri river.—**Scarlet-fruited gourd**, any one of several species of the genus *Coccinia*, especially *C. Indica*, a native of India and often cultivated. It is one of the commonest vegetables of the natives, the oblong scarlet fruit being eaten fresh when ripe and cooked in curries when green.—**Wild gourd.** (*a*) Same as *calabazilla*. (*b*) The bigroot of Oregon, *Micrampelis Oregona*.

gourdhead (gōrd'hed), *n.* Same as *big-mouthed* ★*buffalo*.

gourdworm, *n.* 2. One of the segments of a tapeworm: in allusion to its resemblance to the seed of a gourd; a cucurbitinus.

gout[1], *n.*—**Abarticular gout**, gouty inflammation of the stomach or other of the viscera, without involvement of the joints.—**Poor man's gout**, gout occurring in consequence of lead-poisoning, exposure, insufficient nourishment, or the abuse of malt liquors, in laborers or others to whom luxury is unknown.—**Tophaceous gout**, chronic gout accompanied by deposits of sodium urate in the joints.

gout-fly (gout'flī), *n.* Same as *corn-fly*.

goutte d'eau (göt dō). [F., 'drop of water.'] A limpid rolled pebble of topaz found in Brazil, Ceylon, and New South Wales.

goutte de suif (göt de swēf). [F., 'drop of tallow.'] Tallow-drop: noting a style of pottery decoration with enamel colors. See *Cluny* ★*enamel*.

gouty-stem (gou'ti-stem), *n.* In Queensland, the bottle-tree (which see). Both names refer to the shape of the trunk. The tissues of the stem abound in a clear, jelly-like, mucilaginous substance resembling tragacanth, which is used as food by the natives in times of extreme drought.

gouty-stool (gou'ti-stöl), *n.* In old English furniture, a stool designed by Hepplewhite for the use of persons afflicted with gout. It was fitted with mechanism for raising and lowering the foot.

Gov. An abbreviation (*b*) of *government*.

Governess car. See ★*car*[1].

governing-motion (guv'ėr-ning-mō"shon), *n.* The action on a spinning-mule of a certain mechanism for regulating the velocity of the spindles during the winding of the yarn on the cop. Also called *strapping-motion*. *Nasmith*, Cotton Spinning, p. 300.

government, *n.*—**Charter government.** See ★*charter*. **Constitutive government**, that phase of constitutional law and practice which relates to the manner in which officers of government are chosen.

> A modern government may have a written constitution which sets forth the plan of government. Other nations have a system of habitual practice, modified from time to time as circumstances seem to demand, which is observed as the common law of the government. I wish to use the term *constitutive government* for one of its departments coordinate with the others which I will set forth. I desire a term which will signify the manner in which the officers of the government in all its departments are selected, chosen, or appointed.
> *J. W. Powell*, An. Rep. Bur. Amer. Ethnol., [1898-99, p. lxxxv.

Government man†, an assigned servant; a convict. [Australia.]—**Government stroke**, a stroke that lacks vigor; a lazy way of doing work such as is supposed to characterize government employees. [Australia.]

> Like the poor the unemployed are always with us, but they have a penchant for public works in Melbourne, with a good daily pay and the *government stroke* combined. *Melbourne Argus*, Feb. 22, 1897.

governmentalism (guv-ėrn-men'tal-izm), *n.* [*governmental* + *-ism*.] The theory that the authority of the general government should not only be exercised to the full but extended.

governmentalist (guv-ėrn-men'tal-ist), *n.* [*governmental* + *-ist*.] One who favors governmentalism.

governmentally (guv-ėrn-men'tal-i), *adv.* As regards the government, its views, policy, or regulations; by the government.

government-house (guv'ėrn-ment-hous), *n.* 1. The building which contains the government offices.—2. The official residence of a governor.

governor, *n.*—**Differential governor**, a governor which runs at a constant speed and is so constructed that when the engine runs at an improper speed the difference in the speeds produces an action on the regulating-valve which tends to bring the engine back to a correct rate of motion.—**Emergency governor**, a device which serves to check the speed of an engine when the usual regulating mechanism fails.—**Fly-weight governor**, a device for regulating the speed of a steam- or gas-engine in which a pair of weights, which fly out by centrifugal force as they are revolved, control the amount of steam or gas admitted to the cylinder.—**Governor cut-off.** See ★*cut-off*.—**Inertia governor**, an engine governor in which the inertia of a weight revolving with the shaft is utilized to open or close the admission-valve or change the point of cut-off whenever the speed of the engine changes.—**Loaded governor**, a governor to which a weight is attached for the purpose of increasing the strength of its action, thus giving it a prompter control of the engine, making it more sensitive to variations of load, and securing a closer approach to isochronism in the engine.

governor-rod (guv'ėr-nor-rod), *n.* The rod by which the motion of the governor is communicated to the valve-gear of an engine.

Gov.-Gen. An abbreviation of *governor-general*.

gowan, *n.*—**Ling-gowan**, the mouse-ear hawkweed, *Hieracium Pilosella*: usually in the plural. **May-gowan.** Same as *ewe-gowan*.—**Milk-gowan**, the dandelion. **Water-gowan.** Same as *meadow-gowan* (which see, under *gowan*). **Witch-gowan.** Same as *milk-*★*gowan*.—**Yellow gowan.** (*a*) See *yellow*. (*b*) The dandelion.

gown, *n.*—**Cap and gown.** See ★*cap*[1].

gowp, *v. i.* See ★*goup*.

goy (gō'i), *n.*; pl. *goyim* (gō'yēm). [Heb.] In Jewish use, a nation. Used in the singular for any nation, Jewish as well as Gentile. Where the plural *goyim* is used, however (save in particular cases, for example Gen. xxv. 23), it specially refers to non-Jewish nations, the Gentiles. In Yiddish this distinction is not fully recognized, and *goy* is used, somewhat like 'heathen' in English use, to imply inferiority, and is often employed among the Jews themselves as a term of contempt implying ignorance or stupidity.

goyim, *n.* Plural of ★*goy*.

gozell (go'zel), *n.* [Also *gozelle*; dial. variant, beside *gazel*, *gazle*, etc., of *grozle*, *grozzle*, a gooseberry: see *groser*.] The garden gooseberry, *Ribes Grossularia*.

G. P. An abbreviation (*a*) of the Latin *Gloria Patri*, Glory be to the Father; (*b*) of *Graduate in Pharmacy*.

G. P. M. An abbreviation of *Grand Passed Master*.

Gr. An abbreviation (*b*) of *Greece*.

gr. An abbreviation (*d*) of *grammar*; (*e*) of *great*; (*f*) of *gross*.

G. R. An abbreviation (*a*) of *Georgius Rex* (King George); (*b*) of *Grand Recorder*.

grab[1], *v.* **II.** *intrans.* To strike the heel of the front foot with the toe of the hind foot: said of a horse.

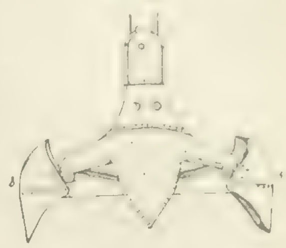
grab[1], *n.*, 3. (*c*) A form of dredger-bucket used for digging soft materials; a clam-shell bucket. (*d*) *pl.* Same as ★*skidding-tongs*. (*e*) In *forestry*, the stem of an alder, or other small tree, which is bent over and plugged into a hole bored in a boom-stick, or secured in some other way, to hold a boom or logs inshore. [U. S.] 4. A children's game at cards, in which, when two or more cards of equal value are on the table together, the player who is quickest to recognize and grab them adds them to his own hand. *N. E. D.*

grab-all (grab'âl), *n.* A catch-all; specifically, a kind of fishing-net with meshes not less than 2¼ inches in size, used in sea-fishing along the shores of Tasmania between sunrise and sunset.

> Put a *graball* down where you will in "bull rope" kelp, more silver trumpeter will get in than any other fish.
> *E. O. Cotton*, in Evidence before Roy. Com. on Fisheries of Tasmania, 1883, p. 82, quoted in E. E. Morris, Austral English.

grabbing (grab'ing), *n.* 1. The act of grasping or seizing.—2. A condition, seen principally in the horse, in which the hind foot strikes the heel of the fore foot in traveling.

grab-bucket (grab'buk"et), *n.* A bucket which can pick up its own load; a self-loading bucket; a gobbler or clam shell bucket.



Grab-bucket.

a, bucket; *b*, wings in open position, or when bucket drops upon material to be lifted. Dotted lines show position of wings when closed and forming bottom of bucket, inclosing load.

grab-crane (grab'krān), *n.* A portable crane or derrick with which a grab or crab is used for winding in the hoisting-rope, there being no winding-drum on the crane.

graben (grä'ben), *n.* [G. *graben*, a ditch.] In *geol.*, a trough-like area caused by the down-throw of a crustal fault-block.

> The main valley occupied by Georgetown is a depressed fault-block or *graben*. *Science*, Feb. 6, 1903, p. 227.

graben-block (grä'bn-blok), *n.* [G. *graben* + E. *block*, *n.*] A depressed segment of the earth's crust bounded on all sides by faults.

> The imagined intersecting faults of the "bysmalith" or of the submerged *graben-block* have been generally sought for in vain about those greatest of all granitic massifs.
> *R. A. Daly*, in Amer. Jour. Sci., April, 1903, p. 270.

grab-hook, *n.* 2. A hook having a narrow throat, adapted to grasp any link of a chain.

Grab-hook.

grab-iron, *n.* 2. A grappling-iron used for recovering broken boring or well-drilling tools from a well.

grab-link (grab'lingk), *n.* Same as ★*slip-grab*.

grab-machine (grab'ma-shēn"), *n.* A digger or dredger which uses a grab or clam-shell bucket.

grabouche (gra-bösh'), *n.* [Origin unknown.] A card-game in which each player starts with an ace and builds up in sequence until he gets rid of twenty cards originally dealt to him. When one can go no further, another takes it up.

grab-rod (grab'rod), *n.* In *ship-building*, a rod or bar, fastened to a bulkhead or in the end of a hatchway, which may be grasped in the hand to steady the body when the vessel is rolling; also, a horizontal rod fastened to the side of a war vessel a few feet above the water-line in the vicinity of the gangway-ladders, into which boat-hooks are hooked when holding a boat alongside the ladder.

grab-service (grab'sėr"vis), *n.* *Naut.*, vessels of two or more masts originally fitted out by the Bombay government to cruise against the pirates of the Malabar coast. *Admiral Smyth.*

grab-skipper (grab'skip"ėr), *n.* In *lumbering*, a short iron pry or hammer used to remove the skidding-tongs from a log.

grab-snow (grab'snō), *n.* *Naut.*, a two-masted vessel having a boom-mainsail and belonging to the Bombay marine. See ★*grab-service*. [Obsolete.] *N. E. D.*

grab-vessel (grab'ves"el), *n.* See ★*grab-service*.

grace, *n.* 19. A bow or courtesy.

> All take your places and make your *graces*,
> And let the dance begin.
> *Stedman*, Country Sleighing, st. 6.

Congruous grace, grace suited or adapted to the effect intended under the conditions in which it is bestowed. See ★*congruism*.

grace-wife (grās'wīf), *n.* A midwife. *Halliwell.* [Prov. Eng.]

gracilariid (gras-i-lā'ri-id), *n.* and *a.* **I.** *n.* A member of the family *Gracilariidæ*.

II. *a.* Of or belonging to the lepidopterous family *Gracilariidæ*.

graciosity (grā-si-os'i-ti), *n.* [In ME. *graciousete*, < OF. *graciousete*; later newly taken from L. *gratiositas*, < *gratiosus*, gracious.] The quality of being gracious; a gracious act. *Carlyle.*

grackle, *n.* **3.** In *angling*, the name of an artificial fly used in bass-fishing.—**Bronzed grackle,** *Quiscalus quiscula æneus*, a subspecies of the purple grackle, found in the northern and western United States, especially in the Mississippi valley. It is characterized by the bronze or brassy reflections of the plumage.

grad[1] (grad), *n.* [A modern technical application of AS. *grad*, a step, < L. *gradus*, a step: see *grade*.] In *petrog.*, in the quantitative system of classification (1902) (see ★*rock*[1]), a division of igneous rocks lower than the subrang.

A grad is based on the proportion of minerals of the subordinate group of standard minerals, when they are present in notable amount, that is, when they are more than one seventh as much as the preponderant group.

grad (grad), *n.* A graduate. [College slang.]

grad. An abbreviation of the Latin *gradatim*, by degrees.

gradate, *v. t.* **2.** In *chem.*, to bring (a solution) to a desired degree of concentration. [Rare.]

gradate (grā'dāt), *a.* [L. *gradatus* (parallel to NL. *graduatus*, whence E. *graduate*, *a.*), < L. *gradus*, step, grade: see *grade*, *n.*] Arranged serially according to size, as the whorls of a gastropod shell.

These [five whorls] being uniformly vitreous, shining, smooth, *gradate*. *Proc. Zool. Soc. London*, 1901, II. 417.

gradation, *n.* **7.** In *geol.*, the process of producing an even slope, by agencies of erosion and transportation, on which the supply and removal of rock-waste or detrital material are about balanced.—**Gradation plain.** See ★*plain*[1].

grade[1], *n.* **5.** In *trigon.*, in the centesimal system, the hundredth part of a right angle; also, the hundredth part of a quadrant.—**6.** A small difference between the brightness of two stars: substantially the same as a *step*: a term used by observers of variable stars. *Astrophysical Jour.*, Dec., 1903, p. 377.—**7.** In *philol.*, one of the positions or forms assumed by a vowel or root in a series of phonetic changes caused primarily by change of stress and other factors, as the vowels in English *sing*, *sang*, *sung*, *ride*, *rode*, *ridden*, etc., Latin *capio*, *cepi*, *-cipio*, etc., Greek √λειπ, √λιπ, √λοιπ, leave, √τεμ, √ταμ, √τομ, cut, etc.—**Grade of repose,** in railroad construction, properly, a grade upon which a train will remain at rest under ordinary conditions of wind or other pressure tending to set it in motion; more loosely, and inaccurately, an incline or slope in a track which is just sufficient to overcome the rolling friction of a train at rest and cause it to move downward.—**Grade resistance.** See ★*resistance*.—**Momentum grade,** in railroad construction, a grade on a road which employs locomotives of a given power for a given train resistance on a level track, and which the trains are unable to surmount unless assisted by the train momentum acquired by approaching the grade at full speed. See *pusher* ★*grade*, *train* ★*resistance*, and *grade* ★*resistance*.—**Percentile grades,** in the study of variations, the values obtained by measurements taken at different points in the scale of frequencies.—**Pusher grade,** in railroad construction, a grade too steep for a single engine hauling an ordinary train, and requiring the use of a pusher or assistant engine. It is used wherever the cost of construction and maintenance of longer and easier grades would be more expensive than the employment of pusher engines upon a shorter grade. See ★*pusher*, 4.—**Ruling grade,** in railroad construction, a grade on any given road or division which, by reason of its grade resistance and sometimes also of its curve resistance, sets the limit to the train service; the most difficult grade the locomotives with a fixed number of cars can overcome without the aid of a pusher. In order of grade resistance it is next to a pusher grade. See *grade* ★*resistance*, *curve* ★*resistance*, and *pusher* ★*grade*.—**To be at grade,** in *phys. geog.*, said of an eroding and transporting agency, such as a stream, when, by its own action in eroding or filling, it does not actively build up or wear down its course. See ★*regimen*.

grade[1], *v.* **I.** *trans.* **4.** In *phys. geog.*, to develop by eroding or filling (degrading or aggrading) into an even slope on which an eroding and transporting agent (such as a stream) will not actively build up or wear down its course.—**5.** In *philol.*, to alter or be altered by gradation or ablaut. *Skeat*, Prin. Eng. Etymol., p. 170.

II. *intrans.* To prove to be of a certain grade or quality.

In Nelson County [North Dakota] . . . some of it [the wheat] is frosted, that of others *grading* No. 1 hard and No. 2 Northern. . . . In Pierce County . . . they have had no frost and the wheat is *grading* nearly all No. 1 hard. *N. Y. Tribune*, Oct. 30, 1891, p. 7.

grade-bred (grād'bred), *a.* Noting cattle, sheep, or hogs bred by mating a pure-blooded animal with one of no pedigree. See *grade*[1], 4.

graded (grā'ded), *p. a.* **1.** Arranged in series of grades; existing in a series of grades: as, *graded* schools; *graded* forms.—**2.** Reduced to a (specified) grade; specifically, in *phys. geog.*, possessing such a slope or form that the agencies of erosion and transportation which act upon it are essentially occupied in carrying forward the detritus which they receive: said of stream-courses, hillsides, beaches, etc.—**Graded plain.** See ★*plain*[1].

grade-peg (grād'peg), *n.* A small stake or peg driven into the ground to serve as a point of reference for heights or elevations. *F. A. King*, Irrig. and Drainage, p. 476.

grade-post (grād'pōst), *n.* **1.** A stake set upon a right of way to indicate the grade to which the proposed road must be made to conform. —**2.** A guide-post placed beside a railway-track to indicate a change in the grade of the road.

gradient, *n.* **3.** In *math.*, a rational integral homogeneous and isobaric function. *Sylvester.* —**4.** In *geom.*, slope.

If from any point P on the curve, we draw the tangent-line, to the right, the *gradient* is the tangent of the angle which this line makes with the positive direction of the axis of x. *H. Lamb*, Calculus, p. 67.

Adiabatic gradient. See *vertical* ★*gradient*.—**Anticyclonal gradient.** See ★*anticyclonal*.—**Barometric gradient,** in *meteor.*, the rate of change of barometric pressure with distance; specifically, the rate of change of pressure along the earth's surface. According to international agreement, the gradient is expressed in millimeters, or in inches, per unit of horizontal distance, namely, one degree of the great circle, or 60 nautical miles. Unless the contrary is specified, the gradient is measured on the daily map perpendicular to the isobars at any point. —**Critical barometrical gradient,** the gradient that would be maintained under the influence of a steady wind or a steady system of winds.—**Cyclonal gradient,** the barometric gradient directed toward the center of a cyclone.—**Electric gradient,** the rate at which the electric potential varies. The great variations of horizontal gradient become explicable by the determination of the vertical gradient in the atmosphere. A spherical cumulus cloud of one kilometer radius, with its center three kilometers from the earth's surface, will, by its own charge, by induction cause a decrease of potential toward the earth's surface of about 11,000 volts per meter of altitude.—**Ferrel's gradient formula,** the analytical expression of the relation between barometric gradient and attending winds. This formula was first deduced and published by Ferrel in 1858.—**Gradient of refraction,** the rather sudden change in the vertical temperature gradient that occurs at considerable altitudes, such as 10,000 feet, in the atmosphere, corresponding to the abrupt change in gradients at the surface of a plateau.—**Hydraulic gradient,** the gradient of pressure between the free surface of a liquid in a reservoir and any orifice of efflux connected with the same.—**Initial gradient,** the very slight gradient of pressure at sea-level due to differences of density in the atmosphere or to general or local disturbances, tides, etc., in consequence of which a general movement of air is set up, producing the larger observed barometric gradients that are the result rather than the cause of the wind.—**Isopycnal gradient,** the gradient of density in different parts of a fluid mass; the difference between successive isopycnals divided by the distance between them.—**Neutral gradient of pressure.** See *vertical* ★*gradient*.—**Pressure gradient,** the rate of change of pressure in terms of that of any other quantity of which the pressure is a function; also, a line or curve which expresses such change.—**Temperature gradient,** the rate of change of temperature in terms of that of any other quantity of which the temperature is a function; also, a line or curve which expresses such change.—**Velocity gradient,** the rate of change of velocity in terms of that of any other quantity of which the velocity is a function; also, a line or curve which expresses such change.—**Vertical gradient,** the rate of variation of any atmospheric condition with altitude, above-ground. A change of temperature of one degree centigrade per 100 meters is called the *adiabatic gradient*. A corresponding vertical pressure gradient, maintaining neutral dynamic equilibrium in the atmosphere, is the *neutral gradient of pressure*.

Gradienter screw, the screw, with graduated head, which elevates or depresses the telescope of a gradienter and accurately measures the changes in the vertical angles.

gradometer (grā-dom'e-tèr), *n.* [L. *gradus*, step, + Gr. *μέτρον*, measure.] An instrument for measuring the amount of slope in any grade.

graduated (grad'ū-ā-ted), *p. a.* Specifically, in *ornith.*, having the tail moderately pointed, the tail-feathers regularly decreasing in length from the center pair outward.

graf, *n.* and *v. t.* A simplified spelling of *graff*.

graft[2], *n.*—**Animal graft,** a graft made with bone or other tissue removed from one of the lower animals.—**Autoplastic graft,** a graft made with skin or other tissue taken from another part of the subject's own body.—**Heteroplastic graft,** a graft made with skin or other tissue taken from another individual.—**Sponge graft,** a very small piece of aseptic sponge applied to a granulating surface to serve as a center for the formation of new epithelium.—**Thiersch's graft,** a graft made with a piece of skin of appreciable size to which a certain thickness of the subcutaneous tissue is attached.

graft[3] (gräft), *n.* [ME. **graft*, AS. **græft* (not recorded) = Icel. *gröftr* (gen. *graftar*), digging, < AS. *grafan*, Icel. *grafa*, dig: see *grave*[1], *v.*] **1.** The depth of a spade in digging; the amount of earth turned up in one turn of the spade. *Markham.*

The . . . relics . . . were discovered in 1827, . . . at a depth of about a 'spade-*graft*' beneath the surface. *Proc. Soc. of Antiquaries*, March 7, 1844, p. 30.

2. A narrow crescent-shaped spade, used in cutting drains. *Eng. Dial. Dict.*

graft[4] (gräft), *n.* [Prob. a generalized use of *graff*[3], digging. Compare the figurative use of *diggings* for a location or region where work is carried on.] **1.** Work; labor. [Prov. Eng.]

'Well, I've got some *graft* to do now.' Often heard in and about Sheffield.
S. O. Addy, Gloss. of Words Used in the Neighborhood [of Sheffield, 1888–90, Sup., p. 25.

The story ["The Autobiography of a Thief"] has been told in the thief's own words. But this feature is not without interest to the student of philology. For example, in Australia the slang word for work of every sort and kind, from that of the head of a State to that of a crossing-sweeper, is "*graft*." All sorts and conditions of people use the word in this connexion.
Athenæum, April 30, 1904, p. 560.

2. A job or a trade.

The roadster proper is distinguished from the tramp by having a '*graft*,' or in other words a visible means of support. *Pop. Sci. Jour.*, IV. 255 (1896). *N. E. D.*

graft[4] (gräft), *v. i.* [*graft*[4], *n.*] To work. [Prov. Eng.]

Graft, to work; "where are you *grafting?*" i. e., where do you live or work? *Hotten*, Slang. Dict. (1869), p. 146.

To *graft* . . . (2) to work, but the work in this case was stealing, i. e., picking pockets. Grafting is also used in the sense of helping another to steal.
Farmer, Americanisms—Old and New (1889), p. 273.

graft[5] (gräft), *n.* [An extension of *graft*[4], *n.*, 2. Compare the like development of *job*, 'a piece of work,' to *job*, 'a piece of corruption.'] **1.** Dishonest gain acquired by private or secret practices or corrupt agreement or connivance, especially in positions of trust, as by offering or accepting bribes (directly or in the veiled form of commissions, fees, gifts, or philanthropic contributions), or by promising or using, directly or indirectly, one's official influence or power to assist or protect wrongdoing, or by levying blackmail—all in a private way and often disguised so as to seem the customary and proper course of business. The word *graft*, with its derivates, came suddenly into extensive use in the political and journalistic language of the United States about 1901, as a new term more convenient in some respects than the equivalent terms bribery, corruption, dishonesty, blackmail, 'boodling,' all of which it connotes, and of which it is a succinct synonym. [Colloq. or slang.]

The World of *Graft*. *Josiah Flynt* (title of a book, [1901).

2. A business, process, place of concourse, or office, in or at which dishonest gain, by corruption or direct thieving, may be acquired. [Colloq. or slang.]

graft[5] (gräft), *v. i.* To engage in graft; live by graft. See ★*graft*[5], *n.*, and compare quotation from Farmer under ★*graft*[4], *v. i.* [Colloq. or slang.]

I'd like to see this town run by thieves once. Course they'd *graft*—couldn't help it, but not any more 'n the police do.
Josiah Flynt, in McClure's Mag., April, 1901, p. 572.

graftage (gräf'tāj), *n.* [*graft*[2] + *-age*.] The process and the operation of grafting, or the state or condition of being grafted: a comprehensive term comprising the act of grafting and all the questions of science, practice, and description that grow out of the operation. *L. H. Bailey.*

grafter[2] (gräf'tèr), *n.* [*graft*[5], *v.*, + *-er*[1].] One who 'grafts' (see ★*graft*[5], *v.*); one who takes or makes 'graft' or dishonest private gain, especially in positions of trust, and in ways peculiarly secret and corrupt.

When the purchasing agent of a corporation or a firm accepts a fee or a commission from the seller of goods to that corporation or firm he is a *grafter*.
Hartford Times, quoted in Boston Transcript, July 31, [1903.

grafting[1], *n.* **3.** Joining; splicing; specifically, splicing a rope by unlaying and relaying the strands of the ends to be joined, or, in knitting, adding one piece to another.—**4.** In *bee-culture*, the substitution of eggs or larvæ in queen-cells for the original occupants.—**Bark-grafting.** Same as *rind-grafting* (which see, under *grafting*).

grafting[2] (gräf'ting), *n.* [*graft*[5], *v.*, + *-ing*[1].] The practice of taking or making 'graft'; the practice of stealing money or its equivalent, especially in positions of trust, in ways not easily detected or punishable. *N. Y. Tribune*, Oct. 24, 1901.

Everybody who has studied public life has been appalled at its corruption. There is a general belief that every State Legislature and the national Legislature are

given to "*grafting*." It is felt that they are actuated by other than pure motives. Why should public life be so debauched? I have come to the conclusion that it is only a reflection of private life. There is "*grafting*" everywhere.

W. T. Jerome, quoted in Boston Transcript (from Hartford [Times), July 31, 1903.

grafting-saw (grăf′ting-sâ), *n.* A saw with a wide kerf and coarse teeth adapted for the sawing of green wood: used for cutting off shoots and making the groove for a graft.

Graham flour. See ★*flour*.

grahamite[2], *n.* 2. See ★*meteorite*.

Grahamize (grā′ăm-īz), *v. t.*; pret. and pp. *Grahamized*, ppr. *Grahamizing*. [*Graham* (see def.) + *-ize*.] To treat, that is, to open (letters) or cause (letters) to be opened while they are passing through the post-office, as Sir James Graham, a British Home Secretary, was supposed to have done with the letters of Mazzini and his friends. [Rare.]

To *grahamize*. On 14 June, 1840, Mr. T. Duncombe, M.P., presented a petition to the House of Commons from W. J. Linton, Giuseppe Mazzini, and others, complaining that their letters had been opened when passing through the Post Office. Sir James Graham, the then Home Secretary, acknowledged that he had given instructions for this being done, and incurred great obloquy in consequence; but it appeared subsequently that it had been done by the Foreign Secretary, Byron's "travelled thane, Athenian Aberdeen," at the instance of the Neapolitan Government and with the concurrence of the Cabinet.

N. and Q., 9th ser., May 18, 1901, p. 394.

Graian (grā′yan), *a.* [L. *Graius*, Greek, + *-an*.] Pertaining to the Graii, or Greeks.

grain[1], *n.* **15.** In the tobacco industry, a deposit of calcium oxalate, in scattered globules, often at the base of the hairs, formed upon tobacco-leaves in the process of curing and sweating.—**16.** The English name for the copper coin called *grano* at Malta.—**False grain**, in *sugar-manuf.*, a new crop of small crystals of sugar formed when fresh syrup is introduced into the crystallizing-pan in order to increase the size of crystals which have already formed. *Sadtler*, Handbook of Indust. Chem., p. 132. **Fish-skin grain**, in *leather*, a grain which resembles the skin of a fish. **Grain leaf-hopper.** See ★*leaf-hopper*. **Grains of paradise.** (*b*) See ★*amomum*. **Grains of rice**, in *ceram.* See *rice-grain decoration*, under *rice*[1]. **Jeweler's grain**, one fourth of a carat, or about four fifths of a troy grain; same as *diamond-grain* (which see, under *carat*, 4). *C. Hering*, Conversion Tables, p. 59.

grain[1], *v. t.*, **5.** (*b*) To scrape, as with a slicker, on the grain side. *C. T. Davis*, Manuf. of Leather, p. 380.

grain-beetle (grān′bē″tl), *n.* A beetle which breeds in stored grain. Among these beetles are the flat grain-beetle, *Læmophlœus pusillus*, the foreign grain-beetle, *Cathartus advena*, the merchant grain-beetle, *Silvanus mercator*, the red-necked grain-beetle, *Cathartus gemellatus*, and the saw-toothed grain-beetle, *Silvanus surinamensis*.

Red-necked Grain beetle (*Cathartus gemellatus*), enlarged. (Chittenden, U. S. D. A.)

grain-borer (grān′bor′ėr), *n.* An insect which bores into grain.—**Larger grain-borer**, a bostrychid beetle, *Dinoderus truncatus*, of uncertain origin, but probably Central American, which bores into stored grain and edible tubers and the boxes in which they may be stored.

Grained negative. See ★*negative*.

grainer[1], *n.* 5. In *salt-making*, a pan in which granulated salt is formed by rapid crystallization under the action of solar heat.

grain-gold (grān′gōld), *n.* **1.** Gold which develops a granular structure while being heated. —**2.** Gold-dust.

graining-paper (grā′ning-pā″pėr), *n.* A transfer-paper printed in color direct from the natural surface of woods and copying the grain of the wood. When wet, it is used as a transfer to print the grain of the wood upon any surface as a reproduction of natural graining. It is a substitute for artificial graining.

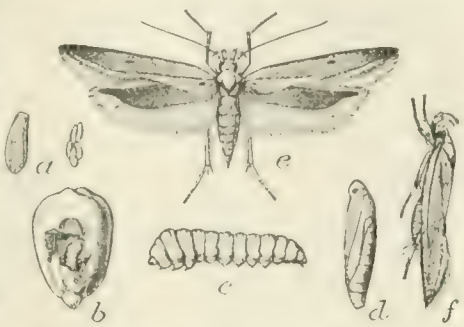
German Grain-louse (*Macrosiphum granarium*).

a, wingless grain; *b*, nymph of same; *c*, wingless parthenogenet; *d*, same, showing exit hole of parasite. All enlarged. (After Riley.)

grain-lac (grān′lak), *n.* Same as *seed-lac*, (which see, under *lac*[2]).

grain-louse (grān′lous), *n.*; pl. *grain-lice* (-līs). A plant-louse common to both North America and Europe, and which attacks growing grain and grasses as well as other plants. Among these here are the English grain-louse, *Macrosiphum granarium*, the European grain louse, *Siphocoryne avenæ*, and the German grain-louse, *Macrosiphum cerealis*. See cut in previous column.

grain-moth, *n.*—**Angoumois grain-moth**, a moth, *Sitotroga cerealella*, the larva of which infests stored grain. It is now a cosmopolitan species, but is supposed



Angoumois Grain-moth (*Sitotroga cerealella*).

a, egg and egg mass; *b*, larva in grain of corn; *c*, larva; *d*, pupa; *e*, *f*, moth. About two and a half times natural size. (Chittenden, U. S. D. A.)

to have been introduced originally into the United States from the province in France (Angoumois) from which its popular name is derived. Also called *fly-weevil*.

grain-process (grān′pros″es), *n.* In *photog.*, a process of photomechanical printing in which the proof is given a granulated appearance. See *grained* ★*negative*.

grain-sick (grān′sik), *n.* Impaction or overdistention of the rumen or first stomach of the ox due to eating excessive quantities of food. Also called *grain-sickness* and *plenalvia*.

grain-split (grān′split), *n.* In *leather-manuf.*, the outer split, which has the grain on it, as distinguished from the flesh-split. *C. T. Davis*, Manuf. of Leather, p. 188.

grain-tester (grān′tes″tėr), *n.* A small weighing-scale adapted to ascertaining the number of pounds in a bushel of any given kind of grain. A small quantity of the grain is weighed on the scales and the scale-weight indicates on the beam the exact weight of a bushel of that particular kind of grain.

grain-trier (grān′trī″ėr), *n.* A contrivance for sampling grain. See the extract.

Cereals and other large seeds are sampled with a *grain trier*. This consists of two hollow cylinders of metal, one inside of the other, about 1 meter long and 12 mm. in diameter. They are pointed at the bottom and provided with a handle at the upper end. A corresponding series of oblong openings extends at regular intervals along one side of both cylinders, which may be turned at will so as to open or close the holes. The sampler, with the holes open, is thrust into the top of a bag of grain for its entire length. When filled with seeds the inner cylinder is turned, so as to close the holes, and the sampler removed.

Yearbook U. S. Dept. Agr., 1894, p. 406.

grain-whisky (grān′hwis″ki), *n.* Whisky made principally from raw barley, with only a small proportion of malted barley to assist the change of starch into sugar. The bulk of the Irish whisky of commerce is grain-whisky. *Encyc. Brit.*, XXIV. 542.

grain-worm (grān′wėrm), *n.* The larva of a grain-beetle or of a grain-moth.

grallous (gral′us), *a.* Pertaining to or having the characters of the *Grallæ*, an order of wading birds; gralline.

gram[2], *n.*—**Gram-centigrade heat-unit.** See ★*heat-unit*.—**Gram atom.** See ★*gram-atom*.

gram[3], *n.* **Black gram**, a black-seeded variety of the green gram, *Phaseolus Wanno*. **Red gram**, the cowpea, *Vigna Sinensis*. See *Vigna* and *cowpea*, under *pea*[1]. **Turkish gram**, a dwarf East Indian bean, *Phaseolus aconitifolius*. Called *moth* in India. **White gram**, the soy-bean, *Soia hispida*. See *soy*, 2, and *sahiwa beans*, under *bean*[1].

gram[4] (gram), *n.* [Gr. γραμμή, a line, < γράφειν, draw, write: see *gram*[2].] In *kinematics*, the curve described by a point of a link-motion.

The point of a link-motion which describes any curve is called a graph, the curve being called a *gram*.

A. B. Kempe, How to Draw a Straight Line, p. 6.

grama (grä′mä), *n.* [See *grama-grass*.] A name for various grasses: always used with a qualifying word.—**Black grama.** (*a*) In New Mexico, *Hilaria mutica*, a perennial grass with running rootstocks which forms dense patches on hillsides. It makes excellent pasturage when abundant, and is gathered for hay by uprooting with a hoe. Also called *black bunch-grass*. (*b*) The bristly mesquit, *Bouteloua hirsuta*, and the woolly-foot, *B. eriopoda*. (*c*) One of the blow-out grasses, *Muhlenbergia pungens*. See ★*blow-out*. Also called *grama china*. **Blue grama**, the common grama-grass, *Bouteloua oligostachya*, which ranges from Wisconsin to California and from Texas and Mexico to Manitoba and Alberta. It is one of the best grazing-grasses, withstanding the trampling of stock and curing in the turf. In the eastern Rocky Mountain region it serves for pasture all winter. **Crowfoot grama.** Same as *blue* ★*grama*. **Grama china.** See *black* ★*grama* (*c*). **Jointed grama.** Same as ★*side-oats*. **Low grama.** See *six-weeks* ★*grama*.—**One-flowered grama**, a slender species, *Bouteloua uniflora*, of southwestern Texas. It bears numerous one-flowered spikes near together along the axis. **Side-oats grama.** Same as ★*side-oats*. **Six-weeks grama**, *Bouteloua polystachya*, a slender much-branched annual grass, which ranges from Utah to Texas and southern California. It occurs only in scattered tufts and is seldom more than 6 inches high. Also called *low grama*. **Tall grama.** Same as ★*side-oats*. **Texas grama.** Same as *red* ★*mesquit*. **White grama.** Same as *blue* ★*grama*. **Wire-grama.** (*a*) A much-branched straggling grass, *Muhlenbergia Porteri*, of dry mesas and table-lands in the southwestern United States and in Mexico. It is of good quality as feed, but will not bear trampling; in rich soil, however, it affords hay. (*b*) Same as *curly* ★*mesquit*. **Woolly-foot** or **woolly-jointed grama.** Same as ★*woolly-foot*.

gram-atom (gram′at″om), *n.* In *chem.*, a quantity of an element whose weight in grams is numerically equal to the atomic weight of the element.

One *gram-atom* of radium gives off per hour an amount of heat comparable with the heat produced by the combustion of a *gram-atom* of hydrogen.

Jour. Franklin Inst., Nov., 1903, p. 329.

gram-calory (gram′kal″ō-ri), *n.* The quantity of heat necessary to raise one gram of water from 0° to 1° C.; the thousandth of a greater calory.

gramenite (gram′e-nīt), *n.* Same as *graminite*.

gram-equivalent (gram′ē-kwiv″a-lent), *n.* That weight of an element or compound which is equivalent to one gram of hydrogen; that quantity of an element or compound whose weight in grams is numerically equal to its equivalent weight.

graminicolous (gram-i-nik′ō-lus), *a.* [L. *gramen* (*gramin-*), grass, + *colere*, inhabit.] Living upon grasses: said of fungi and other parasites.

graminiferous (gram-i-nif′ē-rus), *a.* [NL. **graminifer*, < L. *gramen* (*gramin-*), grass, + *ferre*, bear, + *-ous*.] Grass-producing; grass-bearing: as, the *graminiferous* plains of South America. *Mrs. Somerville*, Connect. Phys. Sci., xxvi.

graminin (gram′in-in), *n.* A carbohydrate, $(C_6H_{10}O_5)_6H_2O$, found in the roots of *Trisetum alpestre* and other plants. It melts at 209° C.

graminous (gram′i-nus), *a.* [L. *graminosus*, grassy, < *gramen* (*gramin-*), grass.] Grassy; covered with grass; also, erroneously, grass-like; gramineous.

gram-ion (gram′ī″on), *n.* In *phys. chem.*, a quantity of an ion whose weight in grams is numerically equal to the atomic weight of the ion, or, in the case of a complex ion, to the sum of the atomic weights of the atoms of the ion.

One *gram-ion* of chlorine signifies 35.45 grams of chlorine in the ionic condition ($\bar{Cl}$); a *gram-ion* of (SO_4) weighs 96 grams (96 being the sum of the atomic weights).

Arrhenius (trans.), Text-book of Electrochem., p. 9.

Gramma (gram′ä), *n.* [NL., < Gr. γραμμή, a line: see ★*gram*[4].] A genus of very small bass-like fishes, with the lateral line broken, belonging to the family *Serranidæ*: found in the coast waters of Cuba. *G. loreto* is the known species.

Grammaria (gra-mā′ri-ä), *n.* [NL. (Stimpson, 1854), < Gr. γραμμή, a line (?).] The typical genus of the family *Grammaridæ*.

Grammaridæ (gra-mar′i-dē), *n. pl.* [NL., < *Grammaria* + *-idæ*.] A family of sertularian hydroids in which the hydrocaulus consists of an axial tube which carries the hydrothecæ and is surrounded by and inseparably coalesced with peripheral tubes without hydrothecæ. The hydrothecæ are adnate to the axial tube. The typical genus is *Grammaria*.

Grammatophyllum (gram″a-tō-fil′um), *n.* [NL. (Blume, 1829), < Gr. γράμμα (γραμματ-), letter, + φύλλον, leaf. The allusion is appar. to the irregular spots and markings on the leaves of the perianth.] A genus of plants of the family *Orchidaceæ*. They are large epiphytes, with long leafy stems, narrow leaves, and basal, long-stalked, loose racemes of large yellow or green flowers, spotted and mottled with purple or brown. There are 4 species, natives of the Malay region, often cultivated by orchid-fanciers. *G. speciosum*, sometimes called the *queen of orchids*, is one of the largest and most showy plants of the family, its stems sometimes attaining a length of 12 feet in a single year, and the racemes reaching a length of 6 feet.

Gramme ring. See ★*ring*.

gram-meter (gram′mē-tẽr), *n.* A gravitational unit of work, the work required to lift one gram one meter vertically against the earth's attractive force. It is one thousandth of a kilogram-meter, or about 98,000 ergs.

Grammicolepididæ (gram″i-kō-le-pid′i-dē), *n. pl.* [NL., ⟨ *Grammicolepis* (*-id-*) + *-idæ*.] A family of deep-water fishes, allied to the pomfrets or *Bramidæ*: distinguished by large scales and other characters. A single genus, *Grammicolepis*, is known.

Grammicolepis (gram″i-kol′e-pis), *n.* [NL., ⟨ Gr. γραμμικός, linear (⟨ γραμμή, line), + λεπίς, scale.] The typical genus of the family *Grammicolepididæ*, containing a single species, *G. brachiusculus*, a very rare fish of the deep waters of Cuba.

Grammineæ (gra-mī′nē), *n. pl.* [NL., ⟨ *Gramma* + *-ineæ*.] A subfamily of the family *Serranidæ*, or bass-like fishes, typified by the genus *Gramma*.

Grammistes (gra-mis′tēz), *n.* [NL., ⟨ Gr. γραμμή, a line, + *-istes*.] A genus of bass-like fishes of the family *Serranidæ*, found in the South Seas. The species are dark brown in color, with stripes of golden yellow. *G. sexlineatus* is common in the mid-Pacific.

Grammistinæ (gram-is-tī′nē), *n. pl.* A subfamily of widely distributed serranoid fishes.

gram-molecular (gram″mō-lek′ū-lär), *a.* Pertaining to or containing a gram-molecule. *Physical Review*, March, 1904, p. 155.

gram-molecule (gram′mol″e-kūl), *n.* A weight of a substance such that the number of grams taken is equal to its molecular weight or to the sum of the combining weights of the elements of which it is made up. One gram-molecule of water, for example, is 18 grams ($H_2O = 1 + 1 + 16 = 18$).

Grammysia (gra-mis′i-ä), *n.* [NL., said to be (irreg.) ⟨ Gr. γράμμα, a letter, + μῦς, a muscle. If so the right form would be **Grammatomya*.] A genus of pronodesmaceous pelecypods, typical of the family *Grammysiidæ*, with large oval integropallial valves and very simple, wholly edentulous hinge. It is of Devonian age.

Gram-negative (gram′neg″ạ-tiv), *a.* Negative (that is, resistant) to Gram's stain. See ★*stain*.

Gram-positive (gram′poz″i-tiv), *a.* Positive (that is, receptive) to Gram's stain.

grampus, *n.*—**To blow the grampus.** See ★*blow*[1], *v. t.*

Gram's method, stain. See *Gram's* ★*method*, ★*stain*.

granadino (grä-nä-dē′nō), *n.* [Colonial Sp., ⟨ *Granada*, (New) Grenada.] A silver coin of Venezuela (the republic of New Grenada), of the value of 8 reals.

granary-beetle (gran′ạ-ri-bē″tl), *n.* Same as ★*grain-beetle* (which see).

granary-weevil (gran′ạ-ri-wē″vl), *n.* Same as *grain-weevil*.

granatine (gran′ạ-tin), *n.* [(*pome*)*granate* + *-ine*[2].] A colorless alkaloid found in the bark of pomegranate root.

granatoline (gran-ạ-tō′lin), *n.* [L. *granatus*, grained, + *-ol* + *-ine*[2].] An alkaloid, $C_8H_{14}OH.NH$, obtained by the oxidation of n-methylgranatoline. It crystallizes in prisms which melt at 134° C.

Granby token. See ★*token*.

grand. I. *a.* [In some of the following phrases *grand* is French, but often treated as the English word.]—**Grand feu** [F., 'great fire'], the highest temperature in the porcelain kiln, which by some is supposed to be about 4,717° F. Also called *sharp fire*, *fierce fire*, etc. **Grand guard,** the guard detailed for the outpost duty of an army in the field. A grand guard is usually furnished by each brigade.—**Grand jeu,** in the harmonium, a stop which makes the full power of the instrument available.—**Grand misère** (grän me-zär′), in *boston*, the loss of every trick, the hand being played as it was originally dealt, without discarding. *Amer. Hoyle*, p. 244.—**Grand misère ouverte,** in *boston*, the loss of every trick, the cards being exposed on the table: sometimes called a *spread*. **Grand ouvert,** in *skat*, a grand played with the cards exposed on the table but not liable to be called. See ★*skat*.—**Grand tourné,** in *skat*, if the card shown for a tourné is a jack, the player may change his bid to grand tourné, that is, to play without a trump. See ★*skat*.

II. *n.* 2. Any announcement to play without a trump suit, in such games as *skat*, *cayenne*, etc.—**Gucky grand,** in *skat*, a bid to play a grando after having taken in both the skat cards. See ★*skat*.

grandmaternal (grand′mạ-tẽr″nạl), *a.* Of, pertaining to, or befitting a grandmother. *Biometrika*, Nov., 1903, p. 99.

grandparental (grand′pạ-ren″tạl), *a.* Of, pertaining to, derived from, or befitting a grandparent or grandparents: as, a *grandparental* inheritance.

Cases in which the taint was *grandparental* or farther removed still. *Lancet*, April 18, 1903, p. 1081.

grandpa's-beard (grand′päz-bẽrd″), *n.* In Texas, a species of virgin's-bower, *Clematis Drummondii*: so named from the fruiting panicle made showy by the feathery tails of the fruit.

grandrills (gran′drilz), *n. pl.* [Orig. *grand drills*, appar. a factory name.] A kind of coarse corset-jean, or cotton-drilling.

granilite (gran′i-līt), *n.* [L. *granum*, grain, + Gr. λίθος, stone.] A name given by Kirwan to complex granitic rocks composed of more than three minerals. *Kirwan*, Elem. Min., I. 346. [Rare.]

granit, *n.* A simplified spelling of *granite*.

granite, *n.* In the quantitative system of classification (1902), it is proposed to apply the term *granite* for field purposes to all phanerocrystalline rocks composed of quartz and feldspar of any kind, with mica, hornblende, or other ferromagnesian mineral, if present in subordinate amounts. See ★*rock*[1].—**Alkali granite,** in *petrog.*, a granite rich in alkali feldspars, of which the dark constituent is also alkalic, as riebeckite, ægirite, etc. Similarly, certain syenites may be called *alkali syenite*. *Rosenbusch*.—**Binary granite.** (*a*) Granite consisting of the two minerals quartz and feldspar, mica and other common silicates being absent: in this nearly obsolete sense granite is almost synonymous with *haplite*. (*b*) A granite containing two micas: the *granite proper* of some authors.—**Concretionary granite,** orbicular granite.—**Paris granite.** Same as ★*semi-porcelain*.—**Prune-granite,** an orbicular granite in which nodules or lumpy aggregates of the dark minerals, chiefly biotite, form the characteristic feature. The fancied resemblance of these nodules to prunes arranged throughout the rock is the basis of the name. Sometimes also called *pudding-granite*.

A nodular granite from Ontario has been described. . . . This differs from other orbicular granites in that there is no pronounced radial or concentric structure. The same is true of the "pudding" or "*prune*" *granite* of Vermont. *Amer. Geol.*, Sept., 1904, p. 139.

White granite, in *ceram.*, a variety of hard white pottery of a bluish tint; a grade below semi-porcelain. It is more extensively produced in the United States than any other grade of crockery, being used principally for table and toilet services. Also called *stone china* and *ironstone china*.

granitization (gran″i-tī-zā′shọn), *n.* [*granite* + *-ize* + *-ation*.] In *geol.*, an extreme phase of metamorphism leading to the transformation of sediments into rock which resembles igneous granite.

granitize (gran′it-īz″), *v. t.*; pret. and pp. *granitized*, ppr. *granitizing*. [*granite* + *-ize*.] In *geol.*: (*a*) To impregnate (a rock) with granitic material or minerals. Certain fissile schists are supposed to have been filled with thin seams and layers of granite magma, intruded in a molten condition, producing gneiss-like rocks. Other rocks are in some cases impregnated with minerals derived from bodies of molten granite through processes of contact metamorphism. (*b*) To change into granite; convert into granite.

granitoidal (gran-i-toi′dạl), *a.* Same as *granitoid*.

granivore (gran′i-vōr), *n.* [NL. *granivorus*, grain-eating: see *granivorous*.] Any animal, but more particularly a bird, that feeds upon grain.

Our poultry are chiefly *granivores*. *Lancet*, Aug. 22, 1903 (advt.).

granjeno (grän-hä′nō), *n.* [Mex. Sp.] In the southwestern United States and in northern Mexico, a shrub, *Momisia pallida*, of the elm family, which bears small orange-colored or red berries having an acid pulp. The plant is suitable for hedges, and the fruit is edible, though not much esteemed by the natives.

grannom (gran′ọm), *n.* A British anglers' name for a caddis-fly, *Brachycentrus subnubilus*, or an imitation of it.

granny, *n.* **3.** A nurse or midwife. [Southern U. S.]

granny (gran′i), *v. t.*; pret. and pp. *grannied*, ppr. *grannying*. [*granny*, *n.*] To serve as a nurse or midwife.

She *grannied* yore mother when you was born. *R. McE. Stuart*, In Simpkinsville, p. 85.

granny-bush (gran′i-bụsh), *n.* Either of two shrubs, *Cordia Lima* of the borage family, or *Croton linearis* of the spurge family; both are covered with an ashy-gray tomentum. [Bahama Is.]

grano, *n.* **2.** A subsidiary coin of Naples and the two Sicilies, the hundredth part of a ducat, equal to eighty hundredths of a United States cent.

grano-alaskose (gran″ō′ạ-las′kōz), *n.* [L. *granum*, grain, + *-o-*, signifying megascopic, + *alask*(*ite*) + *-ose*.] In *petrog.*, in the quantitative system (see *rock*[1]), a granitic rock having quartz and alkalic feldspar in nearly equal proportions, the feldspars being nearly sodic and potassic.

granodiorite (gran-ō-dī′ō-rīt), *n.* [*gran*(*ite*) + *diorite*.] A phanerocrystalline rock intermediate in composition between granite and quartz-diorite: nearly the same as quartz-monzonite. The feldspars which it contains are orthoclase and lime-soda feldspar in nearly equal amounts; quartz and subordinate amounts of mica, hornblende, or other ferromagnesian minerals also are present. *Becker*.

granoliparose (gran-ō-lip′ạ-rōs), *n.* [*gran*, granular, + *-o-* + *liparose*.] In *petrog.*, in the quantitative system of classification (see ★*rock*[1]), an igneous rock belonging to the sodipotassic subrang of the peralkalic rang of the quardofelic order of persalane, Class I, having a megascopic granular texture. The term is applicable to certain kinds of granites.

granolite (gran′ō-līt), *n.* [L. *granum*, a grain, + Gr. λίθος, stone.] An evenly granular igneous rock, in distinction from a porphyritic rock. *Turner*, 1900.

granolithic (gran-ō-lith′ik), *a.* [L. *granum*, grain, + Gr. λίθος, stone, + *-ic*.] Made of crushed stone, sand, and cement: noting a special form of concrete. When pavements or buildings are so made they are usually covered with a coating of neat cement.

granoplasma (gran-ō-plaz′mạ), *n.* [NL., ⟨ L. *granum*, grain, + Gr. πλάσμα, anything formed.] Finely granular protoplasm.

granospherite (gran′ō-sfē-rīt), *n.* [L. *granum*, grain, + *spher*(*ule*) + *-ite*[2].] In *petrog.*, a spherulite composed of grains arranged radially or concentrically. *Vogelsang*, 1872.

granth (grunt), *n.* [Hind. *granth*, a knot, book, code, ⟨ Skt. *grantha*, a knot, composition, verse, book, text, ⟨ √*granth*, √*grath*, tie, connect, compose.] The Book, that is, the Scriptures, of the Sikhs, containing the hymns composed or compiled by their leaders from Nanak (1469–1538) onward.

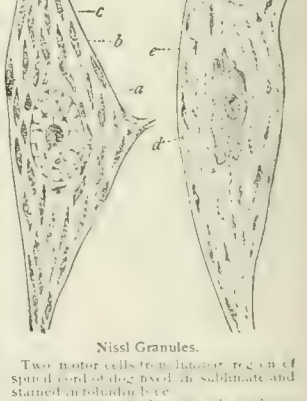
Granular gland. See ★*granule-gland*.—**Granular hypothesis,** the doctrine or opinion that the granules seen in protoplasm are the fundamental units of structure for all living things.

granularity, *n.* **2.** In *petrog.*, the magnitude of the grain of a rock: a factor in the texture.

Granulated steel. See ★*steel*[1].

granulation, *n.*—**Exuberant granulations,** large succulent granulations which rise above the level of the skin surrounding an ulcer: also called *proud flesh*.—**Granulation tumor.** Same as *granuloma*.

granule, *n.* **Altman's granules.** Same as *Altman's* ★*bioblasts*.—**Babes-Ernst granules,** small granules which occur in the bodies of diphtheria bacilli and are demonstrable by staining with a methylene-blue solution of the composition: 1 gram of the dye, 20 cubic centimeters of absolute alcohol, 50 cubic centimeters of glacial acetic acid, and water enough to make one liter. The preparations are then counterstained with Bismarck brown. The pseudo-diphtheria bacilli, when thus stained, show no granules.—**Central granule.** See ★*central*.—**Chromatic granules.** See ★*chromatic*.—**Granules of Nissl.** See *Nissl* ★*granules*.—**Kefir granules.** See ★*kefir*.—**Metachromic granules.** See ★*metachromic*.—**Neusser's perinuclear granules,** peculiar structures of granular appearance which are seen about the nuclei of the various leucocytes of the blood on staining with a certain dye (Neusser's modification of Ehrlich's triacid stain): regarded by some as artifacts.—**Nissl granules,** small, deeply staining bodies found by Nissl in the cytoplasm of nerve-cells. These bodies are said to consist of Nissl substance and are sometimes spindle-shaped, when they are called *Nissl spindles*. Also called *Nissl's bodies* and *tigroid*.—**Plastin granule.** See ★*plastin*.—**Solar granule,** one of the little bright spots, resembling rice-grains, with which the face of the sun appears to be covered when viewed telescopically.



Nissl Granules.

Two motor cells from human spinal cord of dog fixed in sublimate and stained in toluidin blue.

A, from the fresh dog; *a*, pale nucleus; *b*, dark Nissl spindles; *c*, bundles of nerve fibrils. B, from the fatigued dog; *d*, dark shriveled nucleus; *e*, pale spindles. (After Mann.)

granule-ball (gran′ūl-bäl), *n.* One of the roundish granules which fill the body of the pupa of an insect in its later stages of development, and which consist of leucocytes which have ab-

sorbed fragments of the tissue of the larval body.

granule-gland (gran'ūl gland), *n.* In various platyhelminths, one of the unicellular glands whose secretion, consisting of refringent granules, mixes with the spermatozoa. *Parker and Haswell*, Zoology, 1. 255.

granulitic[2] (gran-ū-lit'ik), *a.* [*granule* + *-ite*[2] + *-ic*.] In *petrog.*, having a granular texture made up of nearly equidimensional grains or crystals.

granulitize (gran'ū-li-tīz), *v. t.*; pret. and pp. *granulitized*, ppr. *granulitizing*. [*granulite* + *-ize*.] In *petrog.*, to make granular, as by crushing.

granulize (gran'ū-līz), *v. t.*; pret. and pp. *granulized*, ppr. *granulizing*. To convert into granules, as a fine powder into a coarser one by wetting, sieving, then drying and resieving, preparatory to making compressed tablets. The product is termed a *granulation*.

granulo-adipose (gran″ū-lō-ad'i-pōs), *a.* Containing or consisting of granules and fatty substance: said of certain cells or tissues: same as *granulo-fatty*.

granulo-crystalline (gran″ū-lō-kris'ta-lin or -lin), *a.* 1. Containing or consisting of granules and crystals: said of certain cells or tissues.—2. In *petrog.*, crystalline with nearly equidimensional grains.

granuloma, *n.* **Granuloma tropicum.** Same as *yaws*.

granulo-pulpy (gran″ū-lō-pul'pi), *a.* Consisting of or containing granules and pulp: said of certain tissues or cells.

grape[1], *n.*, 4. *pl.* (*b*) A specific affection of the heel of horses, accompanied by an offensive discharge and the formation of red, raw excrescences (grapes) on the surface. Also called *varrucose dermatitis*. (*c*) Tuberculosis of the serous membranes (pleura and peritoneum) in which conglomerate clusters of tubercles are found. Also called *pearly disease*.—**Arroyo grape**, the riverside grape, *Vitis vulpina*, so called in the western U. S.—**Ashy grape.** Same as *downy* ★*grape*. **Bear's-grape.** See *barberry*, 1. **Bitter-rot of grape.** See ★*bitter-rot*.—**Blue grape**, *Vitis bicolor*, a high-climbing vine of the eastern United States, having the leaves bluish-glaucous, especially on the under surface, and the berries bluish-black with a bloom.—**Chytridiose of grape.** See ★*chytridiose*.—**Downy grape**, *Vitis cinerea*, having downy or floccose pubescent leaves and young shoots, and small, pleasantly acid berries. It is found along streams from Nebraska to Texas, and also in Florida.—**Gippsland grape**, in Victoria, same as *native* ★*grape*. **Grape family**, the plant-family *Vitaceæ*.—**Grape seed-worm.** See ★*seed-worm*. **Leaf-blight of grape.** See ★*leaf-blight*.—**Macquarie Harbor grape**, in Tasmania, a climbing shrub of the buckwheat family, *Calacinum adpressum* (*Muehlenbeckia adpressa* of Meisner), which bears small pink flowers in panicled spikes, followed by currant-like subacid fruits which are used for tarts, puddings, and preserves. Also called *Macquarie Harbor vine* and, in Australia, *native ivy*.—**Native grape**, in Australia, an evergreen climber, *Cissus hypoglauca*, which bears black edible fruits the size of cherries. Called *Gippsland grape* in Victoria.—**Oil of grapes.** See ★*oil*.—**Oregon grape.** See *Berberis*.—**Peruvian wild grape**, *Chondrodendron tomentosum*, a climbing plant belonging to the moonseed family, with leaves 5-nerved at the base, and clusters of flowers which grow from the leaf-axils or from the old wood of the stem. The fruit resembles bunches of grapes, from which are derived the Spanish name *uva del monte* (used in Peru) and the Portuguese *pareira brava* (of the Brazilians), both of which signify 'wild grape.' The root of this plant is the true *radix pareiræ bravæ* used in medicine. See *pareira*.—**Port Jackson grape.** Same as *kangaroo-vine* or *kangaroo-grape*. It is a tall woody climber of eastern Australia which bears globular black berries.—**Possum-grape**, the frost grape, *Vitis cordifolia*.—**Rocky Mountain grape.** Same as *Oregon* ★*grape*.—**Salt-grape**, the saltwort, *Salsola Kali*.—**Scald of grape.** See ★*scald*, 1.—**Sea-grape.** (*c*) Same as *salt* ★*grape*. (*d*) See *sea-grape*, 2, 3.—**Small grape**, the summer grape, *Vitis æstivalis*.—**Sweet-scented grape**, the riverside grape, *V. vulpina*.—**Tail-grape.** See *tail-grape*.—**Winter grape**, a name sometimes given to the frost grape, the riverside grape, and the blue grape.

grape-cake (grāp'kāk), *n.* In *wine-manuf.*, the solid mass of grape-skins which remains after the juice is expressed; the marc.

grape-caterpillar (grāp'kat″ėr-pil-ėr), *n.* A caterpillar which feeds on the leaves of the grape-vine.—**Social grape-caterpillar**, the larva of an American pyromorphid moth, *Harrisina Americana*, which feeds gregariously on the leaves of the grape.

grape-curculio (grāp'kėr-kū″li-ō), *n.* A small curculionid beetle, *Craponius inæqualis*, which lays its eggs on young grape-berries in which its larvæ feed. Same as *grape-weevil* (*a*) (which see, under *weevil*).

grape-eater (grāp'ē″tėr), *n.* Same as ★*fig-eater*.

grape-essence (grāp'es″ens), *n.* An artificial fruit-essence composed of chloroform, various ethers, tartaric acid, and other components: used as a flavoring agent.

grape-fleck (grāp'flek), *n.* See ★*scald of grape*.

grape-fly (grāp'fli), *n.* One of the fruit-flies, *Drosophila ampelophila*, which breeds in grape pomace and also in preserved fruits and wine.

grape-fungus (grāp'fung gus), *n.* One of the molds, *Oidium Tuckeri*, which attack grape-vines. Also called *vine-mildew*. See *mildew*, 1, and *grape-mildew*.

grape-hopper (grāp'hop″ėr), *n.* The grape-vine leaf-hopper, *Erythroneura vitis*.

Grape-leaf blight, gall-louse. See ★*blight*, ★*gall-louse*.

grape-scale (grāp'skāl), *n.* A diaspine scale-insect, *Aspidiotus uva*, which feeds on grape-canes in the United States, Jamaica, and parts of Europe.

grape-slug (grāp'slug), *n.* The larva of the grape-vine saw-fly.

grape-stone, *n.* 2. Same as *botryolite*.

Grape-trellis cup. See ★*cup*.

grape-vine, *n.* 2. In *wrestling*, a lock in which the arm or leg is twined around that of the opponent.—**Grape-vine aphis**, *Siphonophora vitricola*, an aphis destructive to the leaves and young shoots of the grape-vine in the middle and southern United States.—**Grape-vine apple-gall, bark-louse, filbert-gall, leaf-roller, root-borer, root-worm, saw-fly.** See ★*apple-gall*, etc.—**Grape-vine grass.** See *vine*-★*mesquit*.—**Green grape-vine sphinx.** See ★*sphinx*.

grape-worm (grāp'wėrm), *n.* Same as *grape seed-worm* (which see, under ★*seed-worm*).

graph[1], *n.* 2. A curve as representing an equation or function.—3. A line drawn through a series of points whose position has been already determined.—4. A representation by points on or in a lattice. *Sylvester.*—5. The point of a link-motion which describes any curve. *Kempe.*—**Essential graphs**, a system of graphs for logical analysis of which the chief characteristic is that if two assertions are written at once on the sheet the effect is the assertion that one or the other is true.—**Graph of an equation**, the line obtained by making a diagrammatic representation of an equation with the aid of a system of coördinates; the geometric picture or map of an equation. **Graph of a function**, the line plotted when a function is considered as the ordinate of its argument as abscissa.—**Graph of the function f (x)**, the curve whose equation is $y = f(x)$.

graph[1] (gráf), *v.* **I.** *trans.* To draw a curve representing (a given equation or function).

II. *intrans.* To trace graphs.

graph[2] (gráf), *n.* [Detached from compounds ending in *-graph*.] Any apparatus for duplicating drawings or writings by printing from a gelatinous surface. [Colloq.]

graphic, *a.* 7. Concerned with or using graphs. **Graphic intergrowth, texture.** See ★*texture*.

Graphiola (gra-fī'ō-lą), *n.* [NL. (Poiteau, 1824), < Gr. γραφεία, writing, + dim. *-ola*. The leaves affected by it have the appearance of being written upon.] A genus of fungi of doubtful relationship, but usually referred to the *Ustilagnales*, having the spore-mass surrounded by a black outer and an inner thin peridium. The spores are produced upon lateral cells of the fertile hyphæ. The species are few and occur as parasites on palm-leaves. *G. Phœnicis* is a common species on *Phœnix dactylifera* in hothouses.

graphiological (graf″i-ō-loj'i-kąl), *a.* Relating or pertaining to graphiology.

graphite[1], *n.*—**Acheson graphite**, graphite artificially made from coke or other amorphous carbon, by the Acheson process, in an electric furnace in the presence of a small quantity of silicon.—**Artificial graphite**, graphite produced artificially, on an industrial scale, by heating intensely in an electric furnace coke or some other form of amorphous carbon along with a small proportion of silicon or silicon carbide, this addition apparently being necessary to bring about the crystallization of the carbon.—**Baraga graphite**, the graphitic or carbonaceous schist produced in Baraga county, in the northern peninsula of Michigan.—**Graphite black.** See ★*black*.

Graphitic acid, a bright yellow compound, $C_{11}H_4O_5$, obtained by the oxidation of Ceylon graphite with potassium chlorate and nitric acid. It crystallizes in lustrous needles which become incandescent and explode when heated. It is formed, in small quantity, by the electrolysis of mineral acids when the positive electrode is graphite.—**Graphitic carbon.** See ★*carbon*.

graphitite (graf'i-tīt), *n.* [*graphite* + *-ite*[2].] In *min.*, a name proposed for such specimens of graphite as do not intumesce on being moistened with concentrated nitric acid and then strongly heated. This peculiarity is probably explained by the small, compact character of the crystals and is hence not essential. It is very doubtful whether graphite and graphitite really represent, as has been supposed, two distinct forms of carbon.

graphitization (graf'i-tī-zā'shon), *n.* [*graphitize* + *-ation*.] 1. Conversion of amorphous carbon or of the diamond into graphite by exposure to a very high temperature. See *artificial* ★*graphite*. *Electrochem. Industry*, March, 1904, p. 108.—2. The operation of covering the surface of an object with graphite. See ★*graphitize*, 2.

graphitize (graf'i-tīz), *v. t.*; pret. and pp. *graphitized*, ppr. *graphitizing*. [*graphite* + *-ize*.] 1. To convert into graphite (either of the two other forms of carbon) by exposure to a very high temperature. Industrially the process is applied to amorphous carbon. See *artificial* ★*graphite*. *Electrochem. Industry*, June, 1904, p. 237.—2. To cover the surface of an object with graphite. This may be done by the direct application of graphite or, in the case of organic substances, by heating them in absence of air until the outer surface is converted into graphite, as is done with the filaments of incandescent lamps.

graphitoid, *a.* **II.** *n.* A form of graphite, occurring in certain schists, supposed to be peculiar in its readier combustibility. This, however, is probably due to the minute size and purity of the scales.

Graphium[2] (graf'i-um), *n.* [NL. (Corda, 1837), < Gr. γραφεῖον, a painter's brush or pencil.] A genus of hyphomycetous fungi having the fertile hyphæ closely united into an elongate stipe-like fascicle and bearing at the summit simple hyaline conidia. Over 60 species have been described, occurring mostly on decaying vegetable matter.

graphokinesthetic (graf″ō-kin-es-thet'ik), *a.* In *psychol.*, pertaining to the sensations aroused by the movements of writing. *Psychol. Rev. Mon. Sup.*, xiv. 26.

graphologic (graf-ō-loj'ik), *a.* [*graphology* + *-ic*.] Of or pertaining to graphology.

graphomania (graf-ō-mā'ni-ą), *n.* [Gr. γραφή, writing, + *μανία*, madness.] A morbid impulse to write or compose.

graphomaniac (graf-ō-mā'ni-ak), *n.* [*graphomania* + *-ac*.] One who is constantly writing, either letters to friends or to the newspapers, or stories and works of fiction, driven thereto either by an exaggerated idea of the importance of what he writes or by an insane impulse.

> We have just been considering, in madmen, the substantial character of genius under the appearance of insanity. There is, however, a variety of these, which permits the appearance of genius and the substantial character of the average man; and this variety forms the link between madmen of genius, the sane, and the insane properly so called. These are what I call semi-insane persons or mattoids. . . . The *graphomaniac*, representing the commonest variety, has true negative characteristics—that is to say, the features and cranial form are nearly always normal.
>
> *C. Lombroso* (trans.), Man of Genius, p. 209.

graphon (graf'on), *n.* [*graph(ite)* + *(carb)on*.] In *chem.*, a name given by Brodie to carbon in the form of graphite, which he assumed to represent a peculiar radical, capable of producing graphitic acid, while amorphous carbon and diamond do not yield a similar product.

graphostatical (graf-ō-stat'i-kąl), *a.* [*graph(ic)* + *statical*.] Pertaining to or using graphical statics.

> Great care was taken by experts in making the most correct mechanical and *graphostatical* calculations and investigations in order to settle the exact numerical value in length of the greatest permissible deflections at different parts, points, and cross-sections of the bridge.
>
> *Sci. Amer. Sup.*, June 4, 1904, p. 25758.

graphotone (graf'ō-tōn), *n.* [Gr. γράφειν, write, + E. *tone*.] A photo-engraved plate in high relief, usually of zinc but sometimes of copper, prepared for printing with type on a type-printing press; also the print taken from a plate so made.

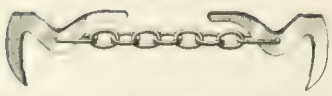
> The collotype process is worked universally, and is known by a variety of names; the Germans call it "Lichtdruck," the French "Phototypie," the Americans "Phototype," and we English have given it the titles of "Photo-print," "Heliotype," "Autotype," "Photochane," "Photo-mezzo-type," "*Graphotone*," etc.
>
> *Jour. Soc. Arts*, quoted in Sci. Amer. Sup., March 28, 1903, p. 22767.

graphotype, *n.* 2. A type-writer for embossing letters upon thin sheets of metal to form type for use in an addressing-machine.—3. A form of type-casting and -setting machine.

> The Goodson *graphotype* machine . . . depends upon electricity for its successful operation. It is composed of two parts: a small table about the size of a typewriter desk, containing an ordinary typewriter, a perforating machine, and a dial similar to a clock; and a caster and setter.
>
> *Census Bulletin* 216, June 28, 1902, p. 59.

grapnel-hook (grap'nel-hůk), *n.* Same as *grapnel*, 1.

grapple, *n.* 7. *pl.* (*a*) Small iron dogs, joined by a short chain, which are driven into logs near the end when skidding on mountains, so that several logs may be skidded by one



Grapples.

horse at the same time. Also called *chain-grapples*, *coupling-grab*. (*b*) See ★*skidding-tongs*.

grapple-hook (grap'l-hŭk), *n.* Same as *grapnel*, 1.

Grapta (grap'tä), *n.* [NL. (Kirby, 1837), < Gr. γραπτός, marked, painted, written, < γράφειν, mark, write. The reference is to the markings on the under side of the hind wings, which resemble letters or punctuation-marks.] A genus of butterflies of the family *Nymphalidæ*, well represented in the United States by the comma butterfly, *G. comma*, the semicolon butterfly, *G. interrogationis*, *G. j.-album*, and others. Synonymous with *Polygonia*, *Huebner*, 1816.

Graptolitoidea (grap″tō-li-toi'dē-ä), *n. pl.* [NL., < *graptolite* + Gr. εἶδος, form.] An organic division including the graptolites, an extinct group of *Hydrozoa*.

graptoloid (grap'tō-loid), *a.* [*graptol(ite)* + *-oid*.] Related to, characteristic of, or resembling the graptolites.

Graptoloidea (grap-tō-loi'dē-ä), *n. pl.* [NL. irreg. < **graptol(ithus)*, graptolite + Gr. εἶδος, form.] A suborder of the graptolites, comprising the graptolites proper, characterized by the symmetric structure of the rhabdosomes, the lack of differentiation of the thecæ, and the solid periderm. They appear at the end of Cambrian time, attain their first culmination in the middle Lower Silurian with axonolipous forms, and a second such period in the Upper Silurian with axonophorous forms. Their rapid development and variation at succeeding geological horizons and their wide horizontal distribution make them important index-fossils.

graptomancy (grap'tō-man-si), *n.* [Gr. γραπτός, written, + μαντεία, divination.] Divination by handwriting.

graptotheca (grap-tō-thē'kä), *n.*; pl. *graptothecæ* (-sē). [Gr. γραπτός, marked (see *graptolite*) + θήκη, a box.] One of the thecæ or zoöid receptacles of the graptolites.

grass, *n.* **7.** In *printing*, temporary employment. [Eng.] — **Aleppo grass.** Same as *Johnson* ★*grass*. — **Angola grass,** *Panicum spectabile*, a stout species somewhat resembling the barn-yard grass, introduced from Africa into the lowlands of Brazil. It is represented as a productive and nutritious fodder grass. — **Aparejo-grass,** *Sporobolus utilis*, a slender, wiry, much-branched species which grows in Mexico and adjacent parts of the United States, in swampy places along streams. The name refers to its use in stuffing the aparejo (which see). — **Arctic grass.** Same as *rescue-grass*. — **Arrow-grass.** (*a*) See *arrow-grass*. (*b*) The esparto, *Stipa tenacissima*. — **Artificial grass,** a leguminous plant grown for forage. [Great Britain.]

The term *artificial grasses* is usually applied to clovers and their allies. *Fream*, Complete Grazier, p. 930.

Austin grass. Same as *Texas* ★*millet*. — **Barcoo grass,** *Iseilema Mitchellii*, an excellent pasture grass of western and southern Australia, New South Wales, and Queensland: named from a river in the last-named colony. — **Bear-grass.** (*a*) See *bear-grass*. (*b*) See ★*bear-grass*, 2. (*c*) In the northwesern United States, *Xerophyllum tenax*. Its very slender and tough leaves, 2 or 3 feet long, were used by the Indians in making water-tight baskets. This is the bear-grass of Lewis and Clark. Also called *squaw-grass* and *squaw-lily*, and, in Idaho, *pine-lily*. See *Xerophyllum*. — **Bermuda grass.** See *grass*. This grass produces seed freely in warm countries, but in the United States only at the extreme south. By the use of imported seed it is found practicable to set aside the laborious method of propagating by cuttings, provided the seed is sown in the cool and moist season. See *St. Lucie's* ★*grass*. **Bhabur grass,** *Ischæmum angustifolium*, an Indian grass which possesses valuable technical qualities similar to those of esparto. It forms the chief raw material for paper-making in India, and is also used for ropes, strings, and mats. — **Blow-out grass.** See ★*blow-out*. — **Bluejoint-grass.** See *bluejoint-grass*. The common bluejoint-grass, *Calamagrostis Canadensis*, ranges across northern North America, extending south to North Carolina, New Mexico, and California. It inhabits moist meadows and, when abundant, is highly prized for hay. It succeeds well in cultivation. In the northern Rocky Mountains it is replaced by the subspecies *acuminata*, the mountain bluejoint-grass. The name (often simply *bluejoint*) extends to the other species of the genus, several of which, in Wyoming, etc., are also valuable for forage. Northern bluejoint, *C. Lanesdorffii* (also called *Langsdorff's reed-bent* and by stockmen *purple-top*), is highly prized where plentiful. The bluejoints are also called *reed-grass*. See *pine*-★*grass*. — **Bottom-grass.** (*a*) See *bottom-grass*. (*b*) Same as *Texas* ★*millet*. **Bull-grass.** (*a*) Same as *cuma-grass*. (*b*) The fresh-water cord-grass, *Spartina cynosuroides*. — **Candy-grass.** Same as ★*stink-grass*. — **Catch-fly grass,** a marsh-grass, *Homalocenchrus lenticularis*, which ranges along the coast from Virginia to Texas and up the Mississippi valley to Illinois. According to Pursh, this grass catches flies by means of its ciliate glumes in the same manner as *Dionæa*. — **Charleston lawn-grass.** See *St. Augustine* ★*grass*. — **Colorado grass.** Same as *Texas* ★*millet*. — **Crested dog's-tail grass.** Same as *dog's-tail grass* (*a*) (which see, under *grass*). See also *Cynosurus*. This is, at least in Europe, a standard grass in mixtures for permanent pasture, and is also sown alone for lawns, forming an even and compact sod and bearing shade. The ripened straw is one of the best used in the manufacture of Leghorn hats. — **Crop-grass,** the yard-grass or wire-grass, *Eleusine Indica*, perhaps a corruption of *crab-grass*. — **Cuba grass.** See *sorghum*, 2. — **Dennett grass,** one of the wild ryes, *Elymus striatus*, of some value as forage. It is diffused over the eastern half of the United States, growing along the borders of woods, etc. — **Dog-town grass,** the needle-grass, *Aristida fasciculata* (also *A. longiseta*). The name alludes to the presence of this grass in prairie-dog colonies. — **Duck-grass,** the false redtop, *Poa flava*. **Dutch grass.** (*a*) The couch-grass, *Agropyron repens*. (*b*) The wire-grass or yard-grass, *Eleusine Indica*. — **Egyptian grass.** Same as ★*crow-foot-grass*, 1. — **Elm-grass,** in Texas, the low panic-grass, *Panicum prostratum*, which affords forage in wooded bottom-lands. It is found in the tropics of both hemispheres and, in the United States, along the Gulf coast from Alabama westward. — **Evergreen grass.** See *oat-grass*, 2. — **Everlasting grass,** *Monachne punctata* (*Eriochloa punctata* of Hamilton), a tropical grass which extends, in low rich land and on prairies, into the southwestern United States. It is a smooth and somewhat succulent perennial, from 2 to 4 feet high, enduring drought well: a valuable pasture and hay grass. The Mexican everlasting grass, *Monachne aristata* (*Eriochloa aristata* of Vasey), has been tested in the southern United States, where it is found to yield two good crops of hay annually. — **Floating grass,** *Hydrochloa fluitans*, a slender aquatic grass of the Gulf States. In shallow water the summits emerge; in deeper water the upper leaves are floating. The tender herbage is eaten by stock. — **Fly-away grass,** one of the hair-grasses, *Agrostis hyematis*. The name alludes to the breaking off and blowing away of the ripe panicle. Also called *tickle-grass*. — **French grass.** (*b*) The sainfoin psoralea, *Psoralea Onobrychis*, an American plant somewhat resembling the sainfoin, found from Ontario to South Carolina and westward to Missouri. It has trifoliolate leaves, long racemes of purplish flowers, and transversely wrinkled pods. — **Gilbert's relief-grass.** Same as *southern* ★*canary-grass*. — **Good-Friday grass,** the wood-rush, *Juncoides campestre*. — **Grape-vine grass.** See *vine*-★*mesquit*. — **Grass saw-fly.** See ★*saw-fly*. — **Green grass,** the Kentucky blue-grass, *Poa pratensis*. [Pennsylvania, U. S.] — **Green valley-grass.** Same as *Johnson* ★*grass*. — **Guatemala grass.** Same as *teosinte*. — **Gumbo grass,** the Western wheat-grass. See ★*wheat-grass*. The name doubtless alludes to 'gumbo soil.' — **Hard-grass.** (*a*) See *hard-grass*. (*b*) See *St. Augustine* ★*grass*. — **Hassock-grass.** See *tufted* ★*hair-grass*. — **Horseshoe-grass.** See ★*side-oats*. — **Indian grass.** (*a*) A tall grass with yellow-brown nodding panicles, *Sorghastrum avenaceum*: diffused over the United States east of the Rocky Mountains, and also found in Ontario, Mexico, and South America. It is little valued eastward, but in the western United States (there called *bushy blue-stem*) it makes an excellent hay, especially by virtue of its abundant long root-leaves. Also called *reed-grass*. (*b*) A brown-sedge a foot or two high, *Andropogon scoparius*, valued for grazing in the mountains of the southern United States. In the West (where it is called *little blue-stem*) it is less valued than the former for hay. — **Japanese grass.** Same as *Japanese* ★*wheat-grass*. — **Johnson grass.** See *sorghum*, 2. — **Knot-root grass,** *Muhlenbergia Mexicana*, a species serving to bind the soil of river-banks by its rootstocks, and affording in low ground considerable hay, good if cut before the stems become woody. It is widely diffused northward and eastward in North America. — **Lace-grass,** *Eragrostis capillaris*, a species of no economic value which bears a large panicle with hair-like branches and pedicels. It is widely diffused in dry, sandy places east of the Mississippi. — **Lawn grass.** See ★*lawn-grass*. — **Lizard-tail grass,** a much-branched leafy annual, *Hackelochloa granularis*, which bears numerous slender spikes. It is found as a weed in all tropical countries, and extends into the warmer parts of the southern and southwestern United States. — **Louisiana grass,** the carpet-grass, *Paspalum compressum*. — **Means grass.** See *sorghum*, 2. — **Mission-grass.** See *St. Augustine* ★*grass*. — **Mitchell grass,** any one of several species of Australian grasses of the genus *Astrebla*, especially *A. elymoides* and *A. triticoides*. The flowering spikes resemble ears of wheat and are said to have highly fattening qualities. This grass is drought-resistant and is considered one of the most valuable for fodder. It is also used for food by the natives. — **Molasses-grass,** a sweet and highly nutritious grass, *Melinis minutiflora*, native in Brazil and occurring also on Ascension Island and in Natal and Madagascar. It is the most esteemed grass of central Brazil and is regarded as excellent for dairy-cows. It has been introduced for trial in the warmer and drier parts of the United States. — **Moss-grass,** a tufted grass, *Coleanthus subtilis*, found in wet places in the northern parts of the Old World and in northwestern North America, reaching into Washington and Oregon. It grows only from ¾ to 2½ inches high. — **Munro grass,** a panic-grass, *Panicum agrostoides*, common in wet ground throughout the eastern half of the United States. It is a rather stout grass with clustered stems and lateral as well as terminal panicles, somewhat resembling those of the redtop, *Agrostis alba*. It grows best on land too wet for mowing, but is valuable for pasture. Also called *panic-bent*. — **Palm-leafed grass,** a broad-leafed perennial grass, *Panicum plicatum*, 3 or 4 feet high, native in India. On account of its elegantly striate, usually plaited leaves, it is a favorite greenhouse ornamental plant. Also, the larger South American *P. sulcatum*, with palm-like leaves from 1 to 2 inches broad and from 16 to 20 inches long, cultivated in greenhouses and on lawns. **Pimento-grass.** See *St. Augustine* ★*grass*. — **Pine-grass,** one of the bluejoint-grasses, *Calamagrostis Suksdorfii*, common in the extreme northwestern United States in low pine woods and on moist mountain slopes. It presents the qualities of a good hay or pasture grass. — **Quivering grass.** Same as *Indian* ★*millet*. **Range-grass.** Same as *vine*-★*mesquit*. — **Rat-tail grass,** any of the American species of the genus *Manisuris*: so called from their slender cylindrical spikes. They are of little agricultural value, except perhaps *M. fasciculata*, of the lower Rio Grande in Texas, which is closely related to the mat-grass of Australia. See ★*mat-grass*. — **Redfield's grass.** See ★*Redfeldia*. — **River-grass.** Same as *Texas* ★*millet*. — **St. Augustine grass.** See *Stenotaphrum* and *saint*[1]. This grass, widely distributed in South America and on the Pacific islands, grows along the Atlantic coast from Florida to South Carolina. It quickly covers sandy yards with a dense, carpet-like growth, where the usual lawn-grasses will not grow. From its extensive use in Charleston for this purpose it has the name *Charleston lawn-grass*. Also called *mission-grass*, *shore-grass*, in Jamaica *pimento-grass*, and in Australia *buffalo-grass*. In South America its creeping stems are employed as a diuretic. — **St. Lucie's grass,** in Florida, a variety of the Bermuda grass, preferred to the ordinary plant for lawns as rooting less deeply and being less liable to invade neighboring fields. — **St. Mary's grass.** (*a*) Same as *Johnson* ★*grass*. (*b*) Same as *guinea-grass*. **Salem grass.** The velvet-grass. See *Holcus*. — **Salt-marsh grass,** *Spartina stricta* and *S. patens*. The latter is also called *salt-meadow grass* and *fox-grass*. Sometimes simply *marsh-grass*. — **Schrader's grass, Schrader's brome-grass.** Same as *rescue-grass*. — **Shore-grass.** Same as *St. Augustine* ★*grass*. — **Simpson's grass.** Same as *maiden*-★*cane*. — **Six-weeks grass,** in the southwestern United States, the low spear-grass, *Poa annua*; also, any low quick-growing annual grass, as the six-weeks grama. See ★*grama*. — **Slough grass.** See ★*slough-grass*. — **Spring grass.** Same as *vernal grass* (which see, under *vernal*). — **Spur-grass,** the bur-grass, *Cenchrus echinatus*. See *hedgehog-grass*. — **Squaw-grass.** Same as *bear*-★*grass* (*c*). — **Summer grass,** the low, annual spear-grass, *Poa annua*. **Sweet-scented grass.** Same as *vernal grass* (which see, under *vernal*). — **Syrian grass.** Same as *Johnson* ★*grass*. — **Three-awned** or **triple-awned grass,** any species of the genus *Aristidia*. See ★*needle-grass*, 1, and *poverty-grass*. — **To bring to grass.** See ★*bring*. — **Yellow grass.** Same as *bog-asphodel* (which see, under *asphodel*). — **Yellow-eyed grass.** See *yellow-eyed*.

grass, *v.* **I.** *trans.* **5.** In *printing*, to discharge (a workman). [Eng.]

II. *intrans.* **2.** In *printing*, to seek or give temporary employment. [Eng.]

grass-bug (gräs'bug), *n.* Any one of many species of leaf-hoppers which occur in pastures or meadows, *Diedrocephala mollipes*.

grass-cold (gräs'kōld), *n.* Inflammation of the lining-membrane of the nose of horses, an affection readily amenable to treatment. Also called *nasal catarrh* and *coryza*.

grass-comber (gräs'kō″mèr), *n.* A landsman who is making his first voyage at sea; a novice who enters naval service from rural life.

grass-crab (gräs'krab), *n.* A Jamaican and South American crab, *Pseudocorystes armatus*.

grassed (gräst), *a.* Said of a golf-club of which the face is slightly spooned or sloped backward.

grasserie (gräs'ē-ri), *n.* [F.] A disease of the silkworm of commerce. The diseased worms become restless, bloated, and yellow in color, and when punctured exude a pus full of granular polyhedral crystals. *U. S. Dept. Agr.*, Div. Entom., Bulletin 39, N. S., p. 31.

grass-fern (gräs'fèrn), *n.* See ★*fern*[1].

grassfinch, *n.* **3.** In Australia, any of the small finches of the genus *Poephila*.

grass-flower (gräs'flou″èr), *n.* **1.** A plant of the genus *Sisyrinchium*, especially *S. angustifolium*, with narrow grass-like leaves; blue-eyed grass. — **2.** The spring-beauty, *Claytonia Virginica*.

grass-hand, *n.* **2.** A newly engaged type-setter. [Printers' slang, Eng.]

grasshopper, *n.* **4.** A chaise of which the body is suspended by braces to the rear ends of wooden springs. — **5.** A mechanical arrangement for connecting the sucker-rods of several contiguous petroleum wells with a single steam-engine or other source of motive power. *Groves and Thorp*, Chem. Technol., II. 163. — **Cone-nosed grasshopper,** any one of the wingless locustids of the genus *Conocephalus*. — **Grasshopper-disease fungus.** See ★*fungus*. — **Meadow-grasshopper,** any one of the common field-inhabiting, long-horned grasshoppers of the family *Locustidæ*, as distinguished from the katydids, the cricket-like grasshoppers, and the shield-backed grasshoppers.

grasshopper-elevator (gräs'hop″èr-el″ē-vā-tor), *n.* See *derrick*-★*elevator*.

grasshopper-mouse (gräs'hop″èr-mous), *n.* Any one of several species of small mice of the genus *Onychomys*, common in the northwestern United States, especially *O. leucogaster*. The food of these mice consists largely of grasshoppers: hence the name.

grasshopper-spring (gräs'hop″èr-spring), *n.* See ★*spring*.

grass-house (gräs'hous), *n.* **1.** The cottage of a cotter or grass-man. — **2.** Same as ★*grass-hut*.

grass-hut (gräs'hut), *n.* A hut the roof and sides of which are made of thatch, bundles, or mats of grass, common in tropical regions.

grass-ill (gräs'il), *n.* An intestinal disease of lambs arising from the malassimilation of food at a time when they first make grass a part of their diet.

grassing, *n.* **2.** The act or practice of working for a second employer elsewhere, after working the regular time for one's principal employer: so called by trade-unions, which rule out the practice in order to increase the opportunities for men who are out of work. Also called *smooting* and *foxing*. *Webb*, Indust. Democracy, I. 439.

grass-land, *n.* **2.** In *phytogeog.*, land naturally covered with grass, viewed ecologically. Grass-land is regarded by Schimper as one of three great types of climatic formation. He subdivides it into *meadow*, hygrophilous or tropophilous grass-land; *steppe*, xerophilous, treeless grass-land, and *savanna*, xerophilous grass-land with isolated trees.

grass-lawn (grȧs'lȧn), *n.* A light, fine cotton or linen fabric of open texture for women's dresses.

grass-man (grȧs'man), *n.* **1.** A peasant living in a cottage. [Scotch.]—**2.** The person in charge of the common lands of the parish. [Scotch.]

grass-moth, *n.* **Knot-grass moth,** a British collectors' name for a European and Asiatic noctuid moth, *Apatela ramicis*, whose larvæ live on many low herbaceous plants.

grassnut, *n.* **2.** In California, one of the brodiæas, *Triteleia laxa*, common on adobe soils. It bears an umbel of 10 to 25 beautiful violet-purple flowers. The stem rises from a deep-seated edible corm, to which the name, usually in the plural, applies. Also called *Ithuriel's-spear* (which see).

grass-oil, *n.* Much has been learned of late years in regard to the chemical composition of the fragrant grass-oils which hold a prominent place in modern perfumery. The most important constituents are an alcohol, geraniol ($C_{10}H_{18}O$), in Indian grass-oil or palmarosa oil, from *Andropogon Schœnanthus*; an aldehyde, geranial or citral ($C_{10}H_{16}O$), in lemon-grass oil, from *Andropogon citratus*; and another aldehyde, citronellal ($C_{10}H_{18}O$), in citronella-oil, from *Andropogon Nardus*.

grass-pink (grȧs'pink), *n.* **1.** See under *pink*[2]. **2.** The *Deptford* pink, *Dianthus Armeria*.

grass-staggers (grȧs'stag″ėrz), *n.* **1.** See *stagger*.—**2.** A frequently fatal disease of sheep and cattle, due to impaction of food in the third stomach. Animals suffering from it are said to be *fardel-bound*. See *fardel-bound*.—**3.** Cerebro-spinal meningitis or forage-poisoning of horses. [Eng.]

grass-tree, *n.* **2.** In Australia, a tree of the lily family, *Kingia australis*, resembling species of *Xanthorrhœa*.—**3.** In Tasmania, either of two trees of the family *Epacridaceæ*, *Cystanthe dracophylla* and *C. pandanifolia*, the latter usually called *giant grass-tree*, and often raising its long, slender, naked stems, which bear one or several huge crowns of long waving leaves, far above the surrounding vegetation.—**4.** In New Zealand: (*a*) A tree of the family *Araliaceæ*, *Pseudopanax crassifolius*, with very variable leaves, those of the young plants being from one to three feet long and but half an inch wide. It is then usually called *umbrella-tree*, from the way in which the rib-like leaves stand out. (*b*) A name formerly given to the ti, *Tætsia australis*.

grass-walk (grȧs'wȧk), *n.* A garden-path covered with grass, instead of gravel.

The *grass-walk* with its semicircular end forms the whole extent of the Cetinale garden.
E. Wharton, Italian Villas, p. 66.

grass-weed (grȧs'wēd), *n.* Same as *grass-wrack*.

grass-work (grȧs'wėrk), *n.* In *mining*, any operation which is performed above ground.

grass-worker (grȧs'wėr″kėr), *n.* In *mining*, one who works above ground.

grass-worm, *n.*—**Northern grass-worm,** the larva of an American noctuid moth, *Drasteria erichtea*. It somewhat resembles a geometrid larva in its looping method of progression, and feeds by night on the leaves of grass and clover.

grate[2], *n.*—**Bodner's screw grate,** a valuable contrivance for economizing fuel and effecting the consumption of smoke in burning bituminous coal, especially under steam-boilers. Screws are used to keep the grate-bars in motion, regulating their distance apart, and rocking them in such a way as to prevent coking of the fuel and keep it free from ash and clinker. *Groves and Thorp*, Chem. Technol., I. 516.—**Inclined grate,** a grate in which the bars are inclined at a slight angle so that the fuel, when fed to the furnace, slides downward into the back or hottest part of the fire, giving up its more volatile gases first, then coking and sliding down the grate until consumed. **Sectional grate,** a grate in which the bars are arranged in groups or sections, for convenience in stoking and in making repairs.

grate-ring (grāt'ring), *n.* A circular casting which in the fire-box of a house-furnace forms the support for a round-, rocking-, dump-, or shaking-grate.

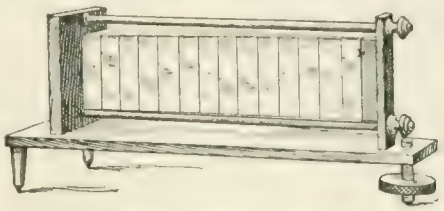
graticulate (grā-tik″ū-lāt), *v. t.*; pret. and pp. *graticulated*, ppr. *graticulating*. [See *graticulation*.] To divide (a drawing or design) into squares.

gratification, *n.* **4.** Any reward in money given to soldiers for good conduct in a battle or campaign; an allowance made to prisoners of war; a voluntary contribution made by soldiers to the widows of comrades.

gratin (gra-tan'), *n.* [F., ⟨ *gratter*, scrape, grate: see *grate*[2].] **1.** A browned crust.—**2.** Food served in a rich sauce and covered with browned crumbs.

gratinate (grat'i-nāt), *v. t.*; pret. and pp. *gratinated*, ppr. *gratinating*. [*gratin* + *-ate*[2].] To cook in a rich sauce and cover with a crust of browned crumbs.

grating[2], *n.* **Concave grating,** a diffraction grating the lines of which are ruled upon the surface of a concave mirror so that the spectra may be focused without the interposition of a lens. This important type of grating was introduced by Rowland in 1882, and is commonly known as the *Rowland concave grating*. **Diffraction grating.** See *diffraction*.—**Echelon diffraction**



Echelon Diffraction Grating.

grating, an apparatus devised by Michelson to replace the ruled grating in a spectroscope, particularly in that form known as the constant deviation spectroscope, where the collimator and the telescope remain stationary and the grating is rotated. The echelon consists of a series of plane-parallel glass plates, each 10 millimeters thick, overlapping in such a way as to form a series of steps, each 1 millimeter wide. The plates, fourteen or more in number, all optically worked and in perfect optical contact, are mounted in a frame. The parallel rays of a beam of transmitted light emerge, because of their retardation, in a condition to interfere.—**Nobert grating,** a diffraction grating ruled by Nobert.—**Rutherford grating,** in *optics*, a plane-diffraction grating ruled upon metal. The term is commonly used to designate gratings ruled by means of Rutherford's dividing-engine, as distinguished from those later produced with the engines devised by Rowland.—**Transmission grating,** a finely ruled piece of glass or other transparent material, such as celluloid, showing a spectrum by transmitted light, in contradistinction to a ruled metal surface which gives a spectrum by reflected light. *Astrophysical Jour.*, Sept., 1903, p. 101.

Gratiolet's radiations. See ★*radiation*.

gratiolin (grā-ti'ō-lin), *n.* [*Gratiola* + *-in*[2].] A bitter glucoside, $C_{40}H_{68}O_{14}$ (?), extracted from hedge-hyssop, *Gratiola officinalis*. It crystallizes in silky lustrous needles melting at 200° C.

grattage (gra-tȧzh'), *n.* [F., ⟨ *gratter*, grate: see *grate*[1].] The process of scraping out the interior of the uterus with a brush having short, stiff bristles: resorted to as a substitute for curettage.

gratuity, *n.* **2.** In the British service, money paid to soldiers on reënlistment and to good-conduct soldiers on discharge.

graupel (grou'pel), *n.* [G.] A form of soft hail or half-melted snow or sleet.

grave[2], *n.*—**Passage grave,** in *prehistoric archæol.*, a prehistoric grave in Europe, consisting of a dolmen or a stone burial chamber to which a covered passage leads.—**Stone grave,** in *prehistoric archæol.*, a grave the sides of which are lined with stones and which is covered with a slab, or slabs, of stone.

gravel, *n.*—**Buchanan gravels,** a subdivision of the Pleistocene deposits of Iowa. They are weathered gravels deposited during the melting and retreat of the Kansan ice, and are underlain by Kansan drift and overlain by Iowan drift or by loess.—**Cannon-shot gravel,** accumulations of glacial gravel, chiefly of rounded flints which occur in Norfolk and adjacent tracts in southeastern England.—**Plateau-gravel,** a glacial deposit resting on boulder-clay and accumulated in sheets over the plains and plateaus of northern Europe.

gravel-car (grav'el-kär), *n.* A tip-car or flat-car used to transport loose gravel. Such cars are sometimes fitted with a double mold-board plow, on a guide-rail, which, when the train is at rest, can be drawn, by means of a steel rope wound by the engine, over the cars, thus discharging the gravel on each side. See ★*car-unloader*.

gravel-weed (grav'el-wēd), *n.* **1.** The false gromwell, *Onosmodium Virginianum*.—**2.** The bush-honeysuckle, *Diervilla Diervilla*.

grave-wax (grāv'waks), *n.* Same as *adipocere*.

gravicembalo (grä-vi-chem'bä-lō), *n.* [An alteration simulating It. *grave*, grave, of *clavicembalo*, q. v.] A harpsichord.

gravied (grā'vid), *a.* [*gravy* + *-ed*[2].] Served in or with gravy.

gravific (gra-vif'ik), *a.* [L. *gravis*, heavy, + *-ficus*, ⟨ *facere*, make.] Weight-producing. *Edinburgh Rev.*, X. 147.

gravimeter, *n.* **3.** Specifically, a copper vessel of one cubic foot capacity, with a heavy plate-glass cover, used in determining the density of large-grained gunpowder inclusive of the vacant spaces between its grains. See *gravimetric density of gunpowder*, under *density*.

gravimetric, *a.*—**Dupont gravimetric balance,** a balance specially constructed for convenient use in determining the gravimetric density of fine-grained gunpowder.

gravimetry (grā-vim'e-tri), *n.* [L. *gravis*, heavy, + Gr. *-μετρία*, ⟨ *μέτρον*, a measure.] The measurement of weight or the determination of the specific gravity of bodies.

graviperceptive (grav″i-pėr-sep'tiv), *n.* [L. *gravis*, heavy, + ML. **perceptivus*, perceptive.] Perceiving the attraction of gravity: a term noting the awareness or sense of verticality in animals, a quality analogous to geotropism and geotaxis in plants. *Jour. Roy. Micros. Soc.*, Oct., 1904, p. 545.

gravisensitive (grav-i-sen'si-tiv), *n.* [L. *gravis*, heavy, + NL. *sensitivus*, sensitive.] Sensitive to the attraction of gravity; geotropic.

In a seedling, Phalaris canariensis, the apical part has only falling starch-grains, while lower down both forms occur, and correspondingly, we find that the seedling is *gravi-sensitive* throughout, but especially so at the apex.
Jour. Roy. Micros. Soc., Oct., 1904, p. 545.

gravitant (grav'i-tant), *a.* [NL. **gravitans*, ppr. of *gravitare*, gravitate: see *gravitate*.] Attractive: said of forces of the same type as that of gravity: opposed to *repulsive*.

gravitate, *v.* **II.** *trans.* To allow to fall or move downward under the action of gravitation; manipulate (as gravel, in diamond-mining) so that the heavier portions sink to the bottom.

Gravity chronoscope. See ★*chronoscope*.—**Gravity correction,** the correction of the observed reading of a mercurial barometer for the fact that for the same height of the mercurial column the variation in the force of gravity produces a variation in the pressure. The gravity correction reduces the observed height of the barometric column to what it would have been if the force of gravity had retained the standard value that it has at sea-level and latitude 45°. The aneroid barometer and the boiling-point hypsometer do not require correction for variation of gravity, but the table of vapor-tensions expressed in barometric heights does require such correction.—**Specific-gravity balance.** See ★*balance*. **Standard gravity,** the value of the acceleration of gravity at some selected latitude and level which is taken as a standard in comparing the measurements of gravity made on different parts of the earth's surface. The latitude taken is frequently 45° and the level that of the surface of the sea.

gravity-return (grav'i-ti-rē-tėrn″), *a.* In *mech.*, noting an arrangement of parts such that the force of gravity returns them to their normal relations after displacement: as, a *gravity-return* gun-carriage—one in which the upper part is on inclined guides and returns to the outward firing-position by gravity after recoil from firing the gun.

gravity-valve (grav'i-ti-valv), *n.* A valve which is closed against a pressure by the force of gravity. *Elect. World and Engin.*, Dec. 12, 1903, p. 979.

gravivolumeter (grav-i-vol'ū-mē-tėr), *n.* [L. *gravis*, heavy, + E. *volumeter*.] A simple piece of apparatus by means of which the quantity or weight of a specimen of a gas may be determined with a fair degree of accuracy by a measurement of its volume under fixed conditions of temperature and pressure.

gravure (gra-vūr'), *n.* [F. *gravure*, ⟨ *graver*, engrave: see *grave*[1], *v.*] **1.** Same as *photogravure*.—**2.** A print or plate produced by photogravure.

gray. **I.** *a.*—**Gray atrophy.** See ★*atrophy*.—**Gray matter** or **substance,** the cellular as distinguished from the fibrillar (white) portions of the central nervous system: same as *cinerea*.

II. *n.* **5.** Unbleached cotton fabric; a piece of cotton or worsted cloth, in the natural color of the raw material, as it comes from the loom, before it is dyed or finished.—**Alsace gray.** Same as *methylene* ★*gray*.—**Benzo fast gray,** a direct coal-tar color, of unpublished constitution, which dyes unmordanted cotton bluish-gray shades from a slightly alkaline salt bath.—**Chicago gray,** a direct coal-tar color prepared by combining diazotized Chicago orange with one of the amido-naphthol-sulphonic acids.—**Direct gray.** (*a*) A direct coal-tar color of the disazo type, derived from tolidine. It dyes unmordanted cotton gray in a salt bath. (*b*) Same as *methylene* ★*gray*.—**French gray** a dull gray mat finish of silver, first introduced by the French silversmiths. **Malta gray.** Same as *methylene* ★*gray*. **Methylene gray** a basic coal-tar color of unknown constitution, prepared by the oxidation of dimethyl paraphenylene-diamin, or by boiling nitroso-dimethyl-aniline-hydrochlorid with water or alcohol. It dyes tannin mordanted cotton gray, but also possesses

the property of dyeing unmordanted cotton. Also called *Alsace gray, direct gray, Malta gray, new* and *new fast gray*, and *notrisine*. **New** or **new fast gray.** Same as *methylene* ★*gray*. **Oxford gray,** a mixed black-and-white (black, white) woolen cloth. **Payne's gray.** (*a*) An oil-color consisting of carbon-black, ocher, and French blue. (*b*) A water-color consisting of carbon-black, lake, and indigo. **Pearl gray.** See *pearl-gray*.

gray-band (grā′band), *n.* A gray laminated quartzose sandstone of the Medina formation of western New York: used for flagstones.

graybeard-tree (gra′bērd-trē), *n.* The fringe-tree, *Chionanthus Virginica*. Also called *old-man's-beard*.

grayish (grā′ish), *a.* [*gray* + *-ish*[1].] Somewhat gray; tending to gray.

grayling, *n.* **4.** In Australia, *Prototroctes muræna*, of the family *Hoplochitonidæ*, a fish which remotely resembles the English grayling. Also called *cucumber-fish, cucumber-mullet, fresh-water herring*, and *Yarra herring*.— **5.** An American agapetid butterfly, *Cercyonis alope*, which occurs in several well-marked varieties. See below.—**Arctic grayling.** Same as *Alaskan grayling*.—**Blue-eyed grayling,** an American butterfly, *Cercyonis alope alope*, dark brown in color, with a yellowish band on the outer half of the fore wings and two black spots with bluish centers. Its larvæ feed on grass.—**Dull-eyed grayling,** an American butterfly, *Cercyonis alope nephele*, of northern distribution, resembling the blue-eyed grayling, but lacking the yellow band on the fore wings.—**Hybrid graylings,** intergradations between *Cercyonis alope alope* and *C. alope nephele*.—**Montana grayling,** a species of grayling, *Thymallus montanus*, found in the head waters of the Missouri river.

gray-nurse (grā-nėrs′), *n.* A species of small sand-shark, *Odontaspis littoralis*, of the family *Odontaspididæ*, widely distributed. [New South Wales.]

grayumo (grä-yō′mō), *n.* [A Porto Rican form (also *yagrumo*) of a native name, answering to Central Amer. *guarumo*, Mex. *guarumbo*, the *Cecropia*.] In Porto Rico, a name applied to several trees of palm-like aspect having a straight, slender trunk and a crown of large leaves, especially to *Didymopanax Morototoni*, of the ginseng family, and to *Cecropia peltata*, of the mulberry family. See ★*yagrumo*.

graziery (grā′zhėr-i), *n.* [*grazier* + *-y*[3].] The grazing business; the occupation of a grazier.

grease, *n.*—**Distilled grease,** a partially purified grease obtained by distilling with superheated steam 'Yorkshire grease' from wool and fatty materials which have been recovered from other sources.—**Engine-waste grease,** fatty or other lubricating material recovered (generally by the use of solvents) from cotton-waste or rags used to wipe the spindles, shafts, and other moving parts of machinery. Such material now consists so largely of mineral oils that in its recovered form it has little value for soap-making; but it is applied to making cart-axle grease and similar coarse lubricants.—**Foot grease.** (*b*) The sediment which is often deposited from an expressed fatty oil on standing. It consists mainly of impurities which have been in suspension, but necessarily retains along with these some of the oil.—**Fullers' grease.** See ★*fullers' grease*.—**Golden grease,** a bribe. [Slang. U. S.]—**Yorkshire grease,** a mixture of fatty acids recovered from the soap-liquors used in wool-scouring, with wool-grease from the raw material, and, sometimes, lubricating-oils from the spinning and weaving machinery: used in soap-making and for lubricating purposes.

grease-heels (grēs′hēlz), *n.* A specific affection of the heels of horses. Usually associated with the growth of a parasitic fungus, an offensive discharge from the numerous sebaceous glands, and the formation of red, raw excrescences (grapes) on the surface.

grease-mold (grēs′mōld), *n.* A fungus, *Phycomyces nitans*, which frequently occurs upon tallow and other grease. See *mold*[2] and *Phycomyces*.

grease-moth (grēs′môth), *n.* A European pyralid moth, *Aglossa pinguinalis*, which also occurs in India, South Africa, and Australia. Its larvæ live in silken tubes in barns, stables, and outhouses among accumulations of vegetable rubbish. Although long supposed to be a grease-feeder, this is now doubted. Also known to British collectors as the *tabby-moth*.

grease-nut (grēs′nut), *n.* Same as ★*cudgerie*, 2.

grease-paint (grēs′pānt), *n.* Tallow or some hard grease, melted and colored by stirring into it various pigments, used by actors in painting their faces. While hot it is run into conveniently formed molds, sticks variously colored being thus made to meet the needs of the make-up.

grease-pox (grēs′poks), *n.* Grease (see def. 3) produced in other animals or in man by inoculation from the horse.

grease-trap (grēs′trap), *n.* Same as *trap*[1], 4.

great, *a.*—**The great ice.** See ★*ice*.

greatwort (grāt′wėrt), *n.* See *Triumfetta*.

Greco-Asiatic (grē″kō-ā-shi-at′ik), *a.* Pertaining to the ancient Hellenic inhabitants of Asia, especially of the coast of Asia Minor.

Greco-Latin (grē″kō-lat′in), *a.* Of or pertaining to both the Greeks and the Latins, or to their languages, literatures, etc.; Greco-Roman.—**Greco-Latin square.** See ★*square*[1].

Grecomania (grē-kō-mā′ni-ā), *n.* [L. *Græcus*, Greek, + Gr. *μανία*, madness.] A furor or mania for everything that is Greek.

Grecomaniac (grē-kō-mā′ni-ak), *n.* One who has a mania for things Greek.

Greco-Phenician (grē″kō-fē-nish′an), *a.* Of or pertaining to both Greece and Phenicia: applied especially to Greek art developed under Phenician influences, as in northern Africa and Spain.

Grecophile (grē′kō-fil), *n.* [L. *Græcus*, Greek, + Gr. *φίλεῖν*, love.] One who is friendly to or is an admirer of Greece and the Greeks, their language, literature, etc.

grecostasis (grē-kos′ta-sis), *n.* [L. *Græcostasis*, < Roman Gr. *Γραικοστάσις*, < *Γραικός*, Greek, + *στάσις*, station.] In *Rom. archæol.*, a platform in the forum which was a post of honor for Greek and other foreign ambassadors.

Greek orders. See ★*order*.

green[1]. **I.** *a.*—**Green fish.** (*c*) A fish cured simply by drying without salt or smoke.—**Green manuring.** See ★*manuring*. **Green soiling.** See ★*soiling*.

II. *n.* **4.** In *golf*: (*a*) The whole links or golf-course. (*b*) The putting-green, or portion of the links, devoid of hazards, within twenty yards of a hole.—**Acid alizarin green,** a mordant-acid dyestuff derived from anthracene. It is rendered extremely fast when subjected to an after-chroming.—**Acid green.** See ★*acid-green*, 2.—**African green.** (*a*) Hydrated chromium sesquioxid, a green pigment: same as *emerald-green*. (*b*) A name sometimes given to *Schweinfurt green*.—**Alizarin green,** a name of several mordant coal-tar colors. One is an anthracene derivative and therefore one of the true alizarin colors; another belongs to the oxazin-group; while still another belongs to the xanthene-group and is the same as cerulein or anthracene green.—**Alsace green.** Same as *dark* ★*green*. **Aniline green.** Same as *aldehyde green* (which see, under *green*[1]).—**Azin green.** (*a*) A basic coal-tar color of the azonium type, designated as *azin green G B*. (*b*) An acid dyestuff made by sulphonating the foregoing and designated as *azin green S*.—**Benzal green.** Same as *benzaldehyde green* (which see, under *green*[1]).—**Benzo dark green,** a direct coal-tar color which dyes unmordanted cotton an olive-green from a salt bath. **Bindschedler's green,** one of the modern artificial dyeing materials made from coal-tar products. It belongs to the chinonimide class of such materials.—**Bitter-almond oil green,** a basic coal-tar color: same as *benzaldehyde green* (which see, under *green*[1]).—**Brilliant green,** a basic coal-tar color: same as *ethyl green* (which see, under *green*[1]).—**Capri green,** a basic coal-tar color: similar to *Capri* ★*blue*.—**Chloramine green,** a direct coal-tar color of the trisazo type, derived from benzidine and dichloraniline. It dyes unmordanted cotton green in a salt bath, and is exceptionally bright for a green of this class.—**Chrome emerald-green,** a pigment consisting of chromium oxyhydroxid.—**Columbia green,** a direct coal-tar color of the trisazo type, derived from benzidine and sulphanilic acid. It dyes unmordanted cotton bluish green from a salt bath. Also called *direct green C O*.—**Dark green,** a mordant coal-tar color of the nitroso type. It produces an olive-green color with an iron mordant and brown with a chromium mordant.—**Diamine green,** a direct coal-tar color of the trisazo type, derived from benzidine and paranitraniline. It dyes unmordanted cotton green in a neutral salt bath.—**Diamond green,** a mordant-acid coal-tar color of the disazo type, derived from amino-salicylic-acid-azo-a-naphthylamine. It dyes chromium-mordanted wool a dark bluish green in an acid bath, or may be dyed upon unmordanted wool and after-chromed.—**Diamond green B,** a basic coal-tar color: same as *benzaldehyde green* (which see, under *green*[1]).—**Diamond green G,** a basic coal-tar color: same as *ethyl green* (which see, under *green*[1]). **Diazin green,** a Janus coal-tar color of the monoazo type, prepared by combining diazotized safranine with dimethyl-aniline. It dyes tannin-mordanted cotton in a neutral bath and unmordanted cotton in an acid bath. Also called *Janus green*.—**Diphenyl green,** a direct coal-tar color of the trisazo type which dyes unmordanted cotton green in a salt bath.—**Direct green C O.** Same as *Columbia* ★*green*.—**Double green,** a basic coal-tar color: same as *methyl green* (which see, under *green*[1]).—**English green,** a green pigment: same as *chrome-green*.—**Fast green J,** a basic coal-tar color: same as *ethyl green* (which see, under *green*[1]).—**Gallanil green,** a mordant coal-tar color of the oxazin type, prepared by the nitration of gallanil indigo. It dyes chromium-mordanted wool green.—**Guinea green B,** an acid coal-tar color of the triphenyl-methane type which dyes wool and silk green from an acid bath.—**Guinea green B V,** a nitro-derivative of Guinea green B which dyes wool and silk green in an acid bath.—**Imperial green,** a basic coal-tar color: same as ★*malachite-green*, 3.—**Iodine green.** (*b*) A basic coal-tar color of the triphenyl-methane type. It is used to some extent in silk-dyeing. Also called *night green, pomona green*, and *light green*.—**Italian green,** a coal-tar color of the sulphid type, allied to cachou de Laval, obtained by heating a mixture of caustic soda, copper sulphate, sulphur, and paranitrophenol. It dyes unmordanted cotton a dark green in a salt bath, and is very fast.—**Janus green.** Same as *diazin* ★*green*.—**Keen green,** in *golf*, a putting-green which is very fast, that is, on which the ball runs freely. **Kirchberger green,** a form of copper arsenite used as a pigment: essentially the same as *Scheele's green*.—**Light green.** (*b*) Same as *iodine* ★*green*. (*c*) Same as *methyl green* (which see, under *green*[1]).—**Methylene green,** a basic coal-tar color of the thiazin type, prepared by the nitration of methylene blue. It dyes tannin-mordanted cotton green, and is used chiefly in calico-printing.—**Milling green,** an acid coal-tar color of unpublished composition which gives a very fast green upon wool.—**Naphthalene green,** an acid coal-tar color which dyes wool green in an acid bath.—**Neuwieder green,** a green pigment which consists of Schweinfurt green or the acetoarsenite of copper mixed with calcium or barium sulphate.—**New fast green,** a basic coal-tar color of the triphenyl-methane type which dyes tannin-mordanted cotton green. Also called *Victoria green*. **New green.** (*a*) Same as ★*malachite-green*, 3, and *benzaldehyde green*. (*b*) A basic coal-tar color of the diphenyl-naphthyl-methane type.—**Night green.** Same as *iodine* ★*green* (*b*). **Oxamine green,** a direct coal-tar color which dyes unmordanted cotton green in a salt bath.—**Russian green.** Same as *dark* ★*green*.—**Snake-skin green,** in *ceram.*, a peculiar tint of green glaze, with iridescent sheen, found on old Chinese porcelain.—**Through the green,** in *golf*, a term applied to all that part of the course, excepting hazards, between the tees and putting-greens.

green[1], *v. t.* **2.** In *oyster-culture*, to give (oysters) a green tinge about the gills by putting them in pits.

greenalite (grē′na-lit), *n.* [Erroneously formed from *green* + *-a-* + *-lite*.] In *petrog.*, metamorphosed rock composed largely of minute granules of green hydrous ferrous silicate. *Leith*, 1903.

The iron-bearing formation occurs in the Upper Huronian, and in what is known as the Biwabik division. This comprises a variety of rocks, including slates, cherts, and "*greenalite*." This last-named substance consists largely of minute granules of green ferrous silicate, without potash, and is named *greenalite* for convenience. *Nature*, Dec. 3, 1903, p. 116.

greenback, *n.* **6.** *Salmo stomias*, the trout of the Arkansas river.

green-bag (grēn′bag), *n.* A lawyer: so called from the green bag in which barristers carry their books and papers.

green-blind (grēn′blīnd), *a.* Color-blind as regards the green rays. *Stud. Yale Psychol. Lab.*, VIII. 1.

green-blindness (grēn′blīnd″nes), *n.* Inability to distinguish the color green: a form of partial color-blindness.

green-bottle (grēn′bot″l), *n.* Same as *green-bottle* ★*fly*.

green-brier, *n.*—**Bristly** or **fiddle-shaped green-brier,** *Smilax Bona-nox* of the eastern and southern United States: so named from its bristly stems and fiddle-shaped leaves. See ★*bamboo-brier* and ★*stretchberry*.

green-coat (grēn′kōt), *n.* One who wears a green coat, as a servant, a scholar at certain charity-schools in England, etc.

greener (grē′nėr), *n.* [*green*[1] + *-er*[1].] An unskilled or inexperienced person; specifically, a person without previous experience who takes the place of another who is on strike, or who takes employment simply to get experience. *Scribner's Mag.*, Sept., 1902, p. 304.

green-felt (grēn′felt), *n.* A dense, felt-like growth of the alga *Vaucheria*.

greenfish, *n.* **3.** *Girella nigricans*, a fish of the family *Kyphosidæ*, abundant in rocky places from Monterey bay, California, south to Cape San Lucas.—**Alaska greenfish,** *Hexagrammos octogrammus*, a food-fish of the coast of Alaska.

green-groin (grēn′groin), *n.* Gangrenous inflammation of the vermiform appendix and surrounding parts.

greenhead[1], *n.* **2.** Any one of several species of American gadflies which have green heads, as the common greenhead, *Tabanus costalis*, and the gray-striped greenhead, *Tabanus lineola*.

greenheart, *n.* **3.** In Jamaica, *Zizyphus Chloroxylon*, one of the trees called *cog-wood*.

greenhew (grēn′hū), *n.* [Also *green-hue*; < *green*[1], *a.*, + **hew*[1], *n.*, from *hew*[1], *v.*] **1.** In *Eng. forest law*, the green parts of trees or shrubs: same as *vert*[1], 1 (which see).—**2.** The right to cut the green parts of trees or shrubs for fodder; the payment for such right.

greenhide (grēn′hīd), *n.* A whip made of untanned hide; a rawhide. [Australia.]

Greenhouse bug. See ★*bug*[2].

green-jack (grēn′jak), *n.* A carangoid fish, *Caranx ruber*, which inhabits West Indian waters.

green-keeper (grēn′kē″pėr), *n.* The person who keeps the putting-greens of a golf-course in order. Also *greens-keeper*.

Greenlandman (grēn′land-man), *n.* A vessel engaged in whaling near Greenland.

green-leek (grēn′lēk), *n.* A small Australian parrakeet, *Polytelis barrabandi*.

greenling, *n.* **2.** Any fish belonging to the family *Hexagrammidæ*, carnivorous fishes living in kelp and about rocks in the North Pacific.

green-oyster (grēn'ois tẽr), *n.* The green seaweed *Ulva Lactuca*, found in frequent association with the oyster. [Australia.]

greenroom, *n.* **4.** An apartment for drying damp or 'green' pottery before it is burned.

greensand, *n.* **2.** [*cap.*] In geological classification, one of certain subdivisions of the Cretaceous system. In England the Lower Greensand overlies the Wealden formation and is characteristically developed on the Isle of Wight, where it includes the Atherfield clay, Hythe, Sandgate, and Folkestone beds in ascending order. The Upper Greensand is the sandy or chloritic facies of which the Gault is the clay equivalent (see *gault*). The Lower Greensand is generally equivalent on the Continent and elsewhere to the Aptian, the Upper Greensand to the Albian stage. **Cambridge Greensand,** in *geol.*, a bed of Cretaceous Greensand lying beneath the chalk at Cambridge, England, largely worked for phosphate of lime and phosphated fossils which are chiefly reptilian remains.

green-shaving (grēn'shā"ving), *n.* In *currying*, the process of shaving a hide or skin which is in a green or untanned state.

green-sighted (grēn'sī"ted), *a.* In *psychol. optics*, seeing as if through green glasses. If the eye is kept for some little time in a reddish illumination (in certain kinds of artificial light, or in a photographic dark room with a ruby window), it becomes adapted to red; on passing to a normal white-light illumination it is green-sighted, that is, it sees everything as if tinged with a certain amount of the complementary green. Since the light which in ordinary daylight leaks into the eye through the sclerotic is tinged with red, the organ is (within certain limits) permanently adapted to red, and in so far permanently green-sighted. *E. B. Titchener*, Exper. Psychol., I. i. 23.

greenstone, *n.* **3.** A name in New Zealand for several varieties of jade, specifically for pounamu or nephrite, found chiefly on the west coast of the Middle Island: formerly much used by the Maoris for weapons, implements, and ornaments.

green-tail (grēn'tāl), *n.* **1.** Same as ★*grannom.*—**2.** A diarrhea of deer: named from the profuse green-colored evacuations. It is often fatal, sometimes within twenty-four hours.

Greenwich stars. See ★*star*[1].

greenwood, *n.* **3.** Same as *green-broom.*

Greenwood bit. See ★*bit*[1].

greenyard (grēn'yärd), *n.* Formerly, in England, a village pound for the reception of stray animals; also, a grass-yard in which hounds may exercise.

gregale (grā-gä'lā), *n.* [It. **gregale*, Sp. *gregal*, It. also *greco*, the northeast wind, prop. the 'Greek' wind, < L. *Græcus*, It. *Greco*, Sp. *Griego*, Greek.] The cold northeast wind of the Mediterranean Sea. See *levanter*[1].

gregarinosis (greg"ą-ri-nō'sis), *n.* [NL., < *gregarina* + *-osis.*] A disease caused by the presence of parasitic gregarines.

gregarious, *a.* **2.** By Drude and subsequent writers gregarious plants are further determined as growing in patches among other vegetation, thus contrasting with *social* species, which dominate the whole ground.

grège (grāzh), *n.* [F., < It. *greggia;* origin unknown.] The raw silk of the domestic silkworm before the gum is removed: a trade or manufacturers' name which has been generally adopted.

Gregorian, *n.* **3.** In *music*, a melody written in one of the church modes; a piece of plain-song.

greillade (grāl-yäd'), *n.* [F.] Iron ore which has been sufficiently crushed for reduction in a Catalan forge.

grelifuge (grel'i-fūj), *a.* [F. **grélifuge*, < *grêle* (OF. *gresle*), hail, + *-fuge*, < L. *fugere*, flee.] Driving away or preventing hail.—**Grelifuge cannon,** the cannon from which vortex-rings are fired for the prevention or dissipation of hail-storms. Many thousands of these have been used in southern Europe. See ★*hail-cannon.* *Sci. Amer. Sup.*, Dec. 13, 1902, p. 22536.

grenadine, *n.* **2.** (*a*) In *cookery*, a larded fillet, especially one of veal or poultry, glazed with its own concentrated liquor. *Larousse.* (*b*) A sweet drink; a syrup: used for colds, etc. *Larousse.*

grenat, *n.*—**Carminnaph grenat.** Same as *alpha-naphthylamine* ★*red.*—**Soluble grenat,** isopurpurate of potassium or ammonium, produced by the interaction of picric acid and an alkaline cyanide: used as a brownish-red dye on wool and silk. **Syriam grenat,** the rich red or purple-red garnets found in Syriam Pegu, India.

grès, *n.* **2.** The gum of the fiber of the domestic silkworm.—**Grès bigarré,** in *geol.*, a subdivision of the Triassic system in the Vosges in Germany and France. It is correlated with the Upper Bunter sandstone, which is the lower division of the Trias. **Grès cérame** (F., 'potters'-earth stoneware'). See *grès de Flandres*, under *grès.*—**Grès des Vosges,** in *geol.*, a subdivision of the Triassic system in Germany and France, correlated with the Lower Bunter sandstone and overlain by the Grès bigarré. It is unfossiliferous, and is characterized by the crystalline condition of the quartz-grains.

Gressigrada (gre-sig'rā-dą), *n. pl.* [NL., < L. *gressus*, walking, + *gradi*, go, walk.] A division of *Pinnipedia* containing those forms in which the hind legs can be turned forward and used in walking. It includes the walruses, *Odobænidæ*, and eared seals, *Otariidæ*. Correlated with ★*Reptigrada.* *J. A. Allen*, Hist. North Amer. Pinnipeds, p. 3.

Gressyla (gres'i-lą), *n.* [NL.] A genus of anomalodesmaceous pelecypods with the right margin projecting over the left, ligament parivincular attached to an internal nymph-like callosity in the right valve: abundant in Jurassic rocks.

gribane (grē-bän'), *n.* [F.] A small two-masted vessel of Normandy.

grid, *n.* **4.** A name applied to a particular arrangement of members in which a number of narrow, parallel members lying in one plane are fastened at their ends to two heavier parallel members perpendicular to the others.

grid-bar (grid'bär), *n.* Part of a grating of parallel bars through which dirt and other extraneous matter pass in the scutching or picking of cotton.

gridiron, *n.* **3.** In *Amer. foot-ball*, a trivial term applied to the field of play, in allusion to the fact that it is crossed by transverse white lines every five yards. It is also sometimes called a *checker-board*, because recent rules provide for longitudinal lines as well.—**4.** A structure of planks erected above the stage of a theater to support the mechanism by which the drop-scenes, etc., are worked.—**Gridiron floor,** the staging of planks near the roof of a theater, and directly over the stage, where the dropscenes are manipulated; the gridiron.—**Gridiron manœuver.** See ★*manœuver.*

gridiron-tail (grid'ī-ẽrn-tāl"), *n.* A small iguanoid lizard, *Callisaurus ventralis*, from the desert regions of southern Utah: named from the dark bars on its tail.

grid-valve (grid'valv), *n.* Same as *gridiron valve.*

Griess's test. See ★*test*[1].

griev, *v.* A simplified spelling of *grieve.*

griffaun (gri-fän'), *n.* [Also *griffawn*, more correctly *graffane*, < Ir. *grafān*, < *grafaim*, I scrape: see *grave*[1], *v.*] An Anglo-Irish agricultural implement used for cutting turf to be dried and burned.

> The last pale whitey-brown section had been earthed over, and Larry was dealing a few superfluous final pats with the flat of his broad *griffawn*, . . . when Peg came halting out of doors and up to the field-dyke.
>
> *Jane Barlow*, Irish Idylls, p. 62.

griffe[1], *n.* **3.** The part of a Jacquard loom which raises the warp-threads. Also called *knife-box.* *R. Marsden*, Cotton Weaving, p. 191.

griffe-bar (grif'bar), *n.* A blade or knife of the griffe, or lifting-frame in a Jacquard loom, upon which the warp-thread hooks catch. *T. W. Fox*, Mechanism of Weaving, p. 87.

griffelschiefer (grif'el-shē"fẽr), *n. pl.* [G., < *griffel*, a pencil, + *schiefer*, slate.] Pencil-slate: used by German geologists to designate certain Lower Silurian slates of Thuringia in Germany which, being intersected by cleavage-planes in two directions, are broken for slate-pencils. They contain some radiolarians (*Sphæroidea*).

griffin-dog (grif'in-dog), *n.* A breed of large hunting-dogs. They combine the qualities of the setter and the pointer, and have a harsh coat which specially adapts them for work in thick covert. The color is a reddish gray. The breed, which is of modern origin, originated in Germany. Also *bassett-griffon.*

gri-gri[2], *n.* **2.** In West Africa, the sassy-bark: see *Erythrophleum.* The name is probably due to the fact that the tree enters into the fetish worship and ordeals of the natives.

grike (grīk), *n.* [A variant of *crike* (ME. *crike*), dial. form of *crick*[2].] **1.** A crevice; a chink; a widened joint in rock. [Prov. Eng.] *Nature*, Nov. 13, 1902, p. 33.—**2.** A ravine on the side of a hill. [Prov. Eng.]

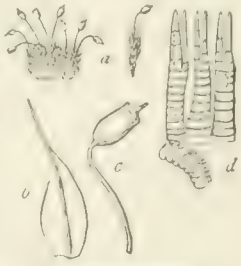
gril, *v.* A simplified spelling of *grill.*

grill[2], *n.* **2.** Faint and short white lines or cross-bars on some flat surfaces of engraving.—**3.** In *elect.*, the grid of a storage cell.

grill[2], *v. t.* **2.** To mark or stamp with a series of parallel lines like a grill; specifically, in *line-engraving*, to break up (a too flat surface) with short bars of faint white lines sometimes crossed at right angles, as may be seen in some forms of postage-stamps.

grilled (grild), *p. a.* **1.** Cross-barred; made in the form of a grill: specifically, said of the flat surface of an engraved plate which shows short bars or cross-bars of white lines.—**2.** Roasted on a gridiron.

Grimmia (grim'i-ą), *n.* [NL. (Friedrich Ehrhart, 1782), named for Johann Friedrich Karl *Grimm* (1737–1821), a German botanist.] A large genus of true mosses, type of the family *Grimmiaceæ.* It consists of more or less compactly tufted plants, rooting at the base with lanceolate, mostly entire leaves, spherical or ellipsoidal capsules, and a peristome of 16 teeth (rarely absent). There have been described 241 species, distributed over all the earth, mainly intemperate, frigid, or alpine regions, growing chiefly on rocks: 104 are found in America.



[illegible]

Grimmiaceæ (grim-i-ā'sē-ē), *n. pl.* [NL., < *Grimmia* + *-aceæ.*] A family of acrocarpous mosses of the order *Bryales*, typified by the genus *Grimmia*, and characterized chiefly by the fact that the teeth of the peristome are perforated or split up into several strands. It contains 7 genera, of which *Grimmia* and *Rhacomitrium* are the most important, widely distributed over the globe, but rare in the tropics. They are leafy, tufted mosses growing chiefly on rocks and stones, rarely on trees or on the ground.

Grimm's attack. See ★*attack.*

grimthorpe (grim'thôrp), *v. t.*; pret. and pp. *grimthorped*, ppr. *grimthorping.* To treat in the manner of Lord Grimthorpe, that is, to 'restore' (an old piece of architecture) with the effect of spoiling it, as Lord Grimthorpe is said to have done when he undertook to restore the west front of St. Albans Abbey in England.

> Why should any one who finds it stated that a book has been bowdlerized or grangerized, that a man has been boycotted, that a church has been *grimthorped*, or that a writer shows a Zolaizing tendency, be denied the explanation of these words because they have been formed from personal names?
>
> *J. Randall*, in N. and Q., March 18, 1893.

grind, *n.* **7.** *Naut.*, a kink, half-turn, or twist in a rope.

Grindelia, *n.* **2.** [*l.c.*] A plant of the genus *Grindelia.*—**3.** [*l.c.*] In *pharm.*, an official drug which consists of the leaves and flowering tops of *Grindelia robusta* and *G. squarrosa.* The name 'California gum-weed' has been used of the official grindelia in general, but only the former species is Californian, the latter being distributed only over the great interior region. *G. robusta* is somewhat preferred, and, though collected in large quantities in California, is said to be scarcer than *G. squarrosa.* The virtue of grindelia resides in the gum which exudes from the heads and upper leaves.

grinder, *n.*, **1.** (*f*) A cylinder covered with emery for sharpening the wire teeth in card-clothing.—**Grinders' lung.** See ★*lung.*

grinder-head (grīn'dẽr-hed), *n.* A bench grinding-machine which carries an arbor for two emery- or carborundum-wheels.

grinding, *n.*—**High grinding, low grinding.** Same as *high* and *low milling* (which see, under *milling*).

grinding-machine, *n.*—**Skin-grinding-machine,** a machine for reducing leather or skins to a uniform thickness: especially valuable for treating the skins used in covering the drawing-rolls of cotton-spinning machines.

grip[1], *n.* **10.** In *track athletics*, a piece of cork, shaped to fit the hollow of the hand, which a runner grips when running.

grip-block (grip'blok), *n.* A pulley-block attached to the grip or hoisting-tongs on a log-handling machine.

gripe[1], *n.*—**Watery gripes,** cholera infantum.

Griphopithecus (grif"ō-pi-thē'kus), *n.* [Gr. γρίφος, a riddle, + πίθηκος, an ape.] A genus of anthropoid mammals known by isolated molars from the Miocene Tertiary of Austria.

grip-knot (grip'not), *n.* A clamp; a contrivance for holding an article while it is being turned in a lathe.

gripment (grip'ment), *n.* [*grip*[2] + *-ment.*] Seizing; holding; gripping.

> Generally speaking, the harder the surfaces in contact, the lower the coefficient of friction, and the higher the pressure under which *gripment* takes place.
>
> *Jour. Franklin Inst.*, July, 1903, p. 51.

grip-pedal (grip'ped"al), *n.* In a bicycle, a pedal fitted with a spring or other device for holding the foot to the pedal. Also called *grip-treadle.*

gripping-rolls (grip'ing-rolz), *n. pl.* Feeding-rolls; a pair of rotating rolls between which a board or other piece of material is gripped and drawn or pushed along into a planing or other machine.

grisaille, *n.* **2.** A fancy fabric with a cotton warp and a wool weft for women's wear.

gris de perle (grē-de-pärl′). [F., 'pearl-gray.'] A peculiar shade of gray, sometimes seen in the glaze of Chinese porcelain; pearl-gray.

Grison liquid. See ★*liquid.*

grisonnite (grē′son-īt), *n.* [F., < *grison* (*grisonne*), gray, + *-ite*, E. *-ite*[2].] A name given to certain of the explosives of Favier. (See *Favier* ★*explosives.*) One of these consists of 95.5 parts ammonium nitrate with 4.5 parts trinitronaphthalene; another of 92 parts ammonium nitrate with 8 parts dinitronaphthalene.

grit[2], *n.*—**Altamaha grits,** a division of the older Miocene of Georgia.—**Berea grit.** Same as *Berea sandstone.*—**Calcareous grit,** a division of the Middle Oxford Oolites or Corallian.—**Cocktail grit.** See *Esopus* ★*grit.*—**Denbighshire grits,** a division of the Upper Silurian in North Wales, equivalent in part to the Wenlock group.—**Esopus grit** [*Esopus*, a village in Ulster county, New York], a subdivision of the Lower Devonian in eastern New York, New Jersey, and Pennsylvania. It attains a thickness of 400 feet, is underlain by the Oriskany limestone, and is overlain by the Schoharie grit. It was originally termed the Caudagalli or Cocktail grit, from the presence of a supposed organism which has been termed *Fucoides cauda-galli.* Otherwise it is nearly barren of fossils.—**Foreland grits,** a division commonly regarded as the lowest of the typical marine Devonian series in Devonshire.—**Glengariff grits,** a subdivision of the Old Red Sandstone in the south of Ireland, passing down into Upper Silurian strata and in some regions overlain by the Kiltorcan beds.—**Gryphite grit,** a name given to some of the strata of the Inferior Oolite in Britain on account of the prevalence of the bivalve *Gryphæa.* The term *Gryphite limestone* is applied to some of the strata of the same age.—**Hangman grits,** the uppermost division of the Lower Devonian in North Devon, lying between the Lynton group beneath and the Ilfracombe slates above.—**Harlech grit,** a division of the Lower Cambrian rocks in Wales.—**Moor grit,** a local name of the uppermost member of the Inferior Oolite in Yorkshire.—**Pennant grit,** the middle member of the Upper Carboniferous coal measures of England, separating the upper and lower coal-bearing series, and consisting of a succession of plant-bearing grits and sandstones 1,500–2,000 feet thick.—**Rensselaer grit,** a deposit of grit, regarded as of the age of the Oneida conglomerate, which overlies the Lower Silurian rocks in Rensselaer county, New York.—**Shawangunk grit,** a heavy deposit of grit and conglomerate which constitutes the upper part of the Shawangunk Mountains in eastern New York. It has commonly been regarded as of the age of the Oneida conglomerate of central New York, though present evidence indicates that it is of somewhat later date.—**Yorkshire grits,** certain grits which occur in the Coralline Oolite of the Middle Jurassic system in Yorkshire, England: employed as abrasives.

Gritti's amputation. See ★*amputation.*

grivenink (grē′vi-ningk), *n.* [Russ. *grivininkŭ*, < *grivna*, ten copecks.] A Russian coin; a ten-copeck piece.

grivna (grēv′nä), *n.* [Russ. *grivna.*] A Russian silver coin, equal to 10 copecks, and weighing 31.992 grains troy. Copper coins of this name were also struck.

grizzle[1], *n.* **4.** In *brickmaking*, a badly burned second-quality brick of a grayish color.

grizzle[2] (griz′l), *v. i.* [Also *grizzel, grizle, grisle;* origin obscure.] **1.** To laugh or grin; show the teeth like a dog; snarl.—**2.** To grumble; complain; whine; fret. [Prov. Eng. or Australian.]

grizzly, *n.* **3.** A machine used for breaking coal or other material to a moderately small size.

Next a set of *grizzlies* consisting of ⅞-inch round iron bars is passed, when finally comes a double screen of heavy galvanized iron wire with a 1-inch mesh.
Elect. Rev., Sept. 17, 1904, p. 455.

grizzly-king (griz′li-king), *n.* In *angling*, an artificial fly having a green body, a dark-gray hackle, a scarlet tail, and mottled wings.

grizzly-queen (griz′li-kwēn), *n.* In *angling*, an artificial fly.

G. R. jug. See ★*jug*[1].

gro. An abbreviation of *gross.*

groat, *n.*—**Borage groat,** a Scottish silver coin of 1467, of the value of 12 pence.—**Spurred groat,** a Scottish silver coin of the value of 16 pence.—**Tournay groat,** an Anglo-Gallic silver coin of the time of Henry VIII.: so called from being struck at Tournay in France.

groining, *n.*—**Fan groining.** Same as *fan* ★*vaulting.*

Grolier binding. Same as *Grolier design.*

Grolieresque (grō″li-ėr-esk′), *a.* In the style of binding or ornament used by Grolier, which was a pleasing combination of curved lines about a geometrical framework.

gromatics (grō-mat′iks), *n.* [LL. *gromaticus, grumaticus*, of land-surveying (*gromatica*, the art of land-surveying), < *groma, gruma*, a surveyor's measuring-rod, < Gr. γνώμων, the index of a dial, a carpenter's square, etc.: see *gnomon.*] The art of land-surveying, as the laying out of camps.

He [Frontinus] also left records of his varied experience and studies. We possess excerpts from a work on *gromatics.* *W. S. Teuffel* (trans.), Hist. Roman Lit., II. 147.

gromet-set (grom′et-set), *n.* A hand-tool for making gromets.

grondwet (grond′vet), *n.* [D., < *grond*, ground, + *wet*, law.] A fundamental law or constitution in lands settled by the Dutch or under Dutch influences.

Being the principal Dutch colony in the Malay Archipelago, Java was the first to benefit from the material change which resulted from the introduction of the *Grondwet* or Fundamental Law of 1848 in Holland.
Encyc. Brit., XXIX. 738.

Gronovius's dodder. See ★*dodder*[1].

groo-groo (grō′grō), *n.* Same as *gru-gru.*

groove, *n.*—**Dental groove,** a slight furrow along the edge of the jaw in mammals which marks the base of the ingrowing dental lamina.—**Genital groove,** in *embryol.*, a furrow or groove which in course of development becomes the rima pudendi or the urethra, according to the sex.—**Germinal groove,** in *embryol.*, a median longitudinal groove in the germ-band of insects which gives rise to the mesoderm throughout the greater portion of its length and, in the region of the mouth and anus, to the cell-masses that spread over the yolk to form the entoderm.—**Gothic groove,** in *mech.*, a groove having a Gothic arch section in a roll.—**Groove of Hatschek,** a peculiar sense-organ, supposed to have a gustatory function, which lies against the right side of the notochord in the wall of the buccal hood of the lancelet (*Branchiostoma* [*Amphioxus*] *lanceolatum*).—**Harrison's groove,** a sinking in of the chest-wall along the line of insertion of the diaphragm, noted occasionally in cases of extreme shortness of breath, especially in children.—**Lacrymal groove,** a depression in the bony wall of the orbit which lodges the lacrymal sac.—**Leakage groove,** a groove turned in an engine-piston to prevent steam from leaking past the piston. The steam forms eddies in such a groove instead of going right by it.—**Nasobuccal groove,** a groove which connects each nostril with the mouth, as in the sharks.—**Parapodial groove,** in certain gastropods, as the *Endodontidæ* and the *Zonitidæ*, a deep longitudinal furrow running along each side of the body a short distance above and parallel to the edge of the foot.—**Pedal groove.** Same as *parapodial* ★*groove.*—**Vertebral groove.** (*b*) The depression or gutter on either side of the spine.

groove-bit (grōv′bit), *n.* A boring instrument of which the shaft is grooved at one side so that the chips from the point may pass up the shaft and escape at the entrance to the hole.

groove-board (grōv′bōrd), *n.* In *organ-building*, that part of a wind-chest in which or on which are the grooves. Also called *channel-board.* See *groove*, 3 (*c*).

groover-head (grō′vėr-hed), *n.* A cutter made of one or of several pieces, used in a wood-planing or -sawing machine to make grooves in boards or lumber.

grooving, *n.* **2.** The forming of grooves in boilers at places where very rapid deterioration of the metal takes place, particularly at the laps of the riveted joints.

grooving-hook (grō′ving-hůk″), *n.* A hook-shaped tool for making a groove in wood.

grooving-machine (grō′ving-ma-shēn″), *n.* In sheet-metal work, a hand-power machine for forming a groove in the seam in tin and sheet-iron pipe. It consists of a bench-pedestal with a long horn for supporting the pipe or other hollow sheet-metal form, and a traveling roll which, by means of simple ratchet-gearing, can be made to travel over the joint or seam of the pipe as it rests on the horn. By the use of different rolls, grooves can be formed, seams pressed flat, and other work done in forming a joint in the pipe. The end of the horn can be released from its support to allow for the removal of the finished pipe.

grooving-plane (grō′ving-plān), *n.* **1.** A plane which has a narrow iron for cutting a groove.—**2.** A plane having an iron that reaches from side to side, so that the frame of the plane will not interfere when planing a groove; a rabbet-plane.

grooving-saw (grō′ving-sâ), *n.* A single circular saw used for the same purpose as the groover-head.

grooving-tool (grō′ving-tōl), *n.* Any tool used for cutting grooves; a gouge; specifically, a round-pointed tool used by wood-engravers.

groper[2] (grō′pėr), *n.* Same as *grouper.*—**Blue groper,** a large sea-fish of New South Wales and Tasmania, *Achœrodus gouldii*, of the family *Labridæ.* Often called *parrot-fish* in Australia and *bluehead* in Tasmania.

grorudite (grō′rō-dīt), *n.* [*Grorud*, near Christiania, Norway, + *-ite*[2].] *n.* In *petrog.*, a fine-grained green porphyry composed of alkali-feldspars rich in soda, with quartz and ægirite and occasionally hornblende and mica. *Brögger*, 1894.

grosbeak, *n.*—**Sociable grosbeak,** the sociable weaver-bird, *Philæterus socius*, many of which nest together, building a huge, dome-shaped structure of grass, resembling a haystack. See cut under *hive-nest.*

gross, I. *a.* **10.** Relatively large; specifically, visible to the naked eye; megascopic; not microscopic.

Operation was performed, and the kidney in its general contour and *gross* substance gave no satisfactory evidence of the cause of the trouble.
Med. Record, Feb. 14, 1903, p. 268.

The tumor presented the *gross* appearance of a sarcoma. . . . There was no *gross* disease, except in the prefrontal region. *Phil. Med. Jour.*, Jan. 31, 1903, p. 221.

Gross efficiency. See ★*efficiency of a source of light.*

II. *n.*—**Power in gross.** See *power*[1], 7 (*c*).

grossetto (grō-set′ō), *n.* [It., dim. of *grosso*, a coin, < *grosso*, big, thick: see *gross.*] A Venetian money of account, one twelfth of the grosso.

gross-flute (grōs′flōt), *n.* [G. *grosse flöte.*] In *organ-building*, an 8-feet flute-stop of large scale and rich tone.

grossone (grō-sō′ne), *n.* [It., < *grosso*, big, thick: see *gross.*] A silver coin of Venice and of other states of Italy, equal to 8 grossi.

grossulariaceous (gros″ū-lar-i-ā′shius), *a.* Belonging to or having the characters of the gooseberry family, *Grossulariaceæ.*

grossulin (gros′ū-lin), *n.* Same as *pectin.*

grote (grō′te), *n.* [LG.: see *groat.*] **1.** A current subsidiary coin of Bremen, one seventy-second of a reichsthaler, equal to one United States cent.—**2.** A Flemish coin, one twelfth of a shilling.

grothite (grōt′īt), *n.* [Named for Professor Paul *Groth*, a German mineralogist.] A light-brown variety of titanite containing a small amount of yttrium

grouch (grouch), *n.* [*grouch, v.*] A fit of sulkiness. [Colloq.]

grouch (grouch), *v. i.* [A variant of *grutch, grudge, v.*] To be sullen or morose.

grouchy (grou′chi), *a.* Sullen; morose; peevish; grouty. [Colloq.]

ground[1]. **I.** *n.*—**Blue ground.** See *blue.* The local name at the Kimberley diamond mines, South Africa, for the matrix of the gem. While embracing a number of rocks, it is in largest part a variety of peridotite, called *kimberlite.* Near the surface it has weathered yellow, the 'yellow ground' of the miners. Below this it is the typical blue. Even when hard in the depths of the mine, it softens on exposure and may be washed for the gems without crushing.—**Pitted ground,** in *ceram.* Same as ★*thimble-surface.*—**Tom Tiddler's ground.** Same as *king's* ★*land.*—**To take ground,** in *milit.*, to extend the front of a line.—**Yellow ground,** the uppermost portion, about 100 feet in thickness, of the diamond-bearing rock at the Kimberley mines, South Africa. Compare *blue* ★*ground.*

II. *a.*—**Ground note, stroke, tissue, tone.** See ★*note*[1], etc.

ground[1], *v. t.* **8.** To set (a color); to make (a color) fast. *C. T. Davis*, Manuf. of Leather, p. 399.—**To ground the bat.** See ★*bat*[1].

groundberry, *n.* **2.** In Australia, either of two species of dwarf shrubs of the family *Epacridaceæ, Staphelia humifusa* and *S. pinifolia.* Both bear small fruits with a viscid, sweetish, edible pulp.

ground-bread (ground′bred), *n.* Same as *sow-bread.*

ground-bridge (ground′brij), *n.* That portion of a corduroy road which crosses a stream or other body of water: a system of rough paving for a ford through a stream having a bad bottom, or through a quagmire or quicksand, formed by laying small logs or poles parallel and close together across the roadway and loading them down with stones.

ground-bundle (ground′bun″dl), *n.* In *neurol.*, a bundle of nerve-fibers adjacent to the central gray matter in the ventral portion of the spinal cord; the fasciculus ventralis proprius, which is continuous with the fasciculus longitudinalis medialis in the medulla oblongata.

ground-burnut (ground′bėr″nut), *n.* The land-caltrop. See *caltrop*, 3, and *Tribulus.*

ground-cable (ground′kā″bl), *n.* *Naut.*, the anchor-cable; a section of mooring-cable which is intended to lie on the bottom.

ground-cedar (ground′sē″där), *n.* **1.** The Christmas green, *Lycopodium complanatum.*—**2.** The false heather, *Hudsonia tomentosa.* Also called *poverty-plant.*

ground-cover (ground′kuv″ėr), *n.* In *forestry*, all the small plants growing in a forest, except young trees: such as ferns, mosses, grasses, and weeds.

ground-cured (ground′kūrd), *p. a.* Cured upon the ground, that is, without cutting; cured in the turf: said of several Western grasses, as the Buffalo grass (*Bulbilis*), blue and black grama (*Bouteloua*), which furnish winter grazing.

Live stock subsisted largely on the *ground-cured* range grasses, etc. *U. S. Mo. Weather Rev.*, Jan., 1902, p. 6.

ground-cypress (ground'sī'pres), *n.* See ★*cypress*[1].

ground-detector (ground'dē-tek'tor), *n.* In *elect.*, a device for indicating when the insulated conductors of an electric system become grounded. It consists of a wire running from the insulated lines to earth and having an incandescent lamp, or sometimes a voltmeter or galvanometer, in circuit. Current will flow in this wire only when the insulated system is connected with the earth at some other point. *Trans. Am. Inst. of Elect. Eng.*, Jan. July, 1902, p. 398.

ground-drummer (ground'drum″ėr), *n.* Same as *croaker*, 4 (*b*).

ground-elder (ground'el″dėr), *n.* See ★*elder*[2].

ground-feeding (ground'fē″ding), *a.* Feeding on the bottom of the water, as certain fishes: an anglers' term.

ground-festoon (ground'fes-tōn″), *n.* Same as ★*ground-cedar*, 1.

ground-fielding (ground'fēl″ding), *n.* In *cricket*, fielding or stopping the ball upon the ground, in contradistinction to catching it in the air.

ground-flea (ground'flē), *n.* Any one of many species of leaping thysanurous insects which inhabit rich earth.

ground-holly (ground'hol i), *n.* See ★*holly*[1].

ground-hornet (ground'hôr″net), *n.* Any hornet that nests in the ground, as *Vespa germanica*.

ground-house (ground'hous), *n.* A house with a peaked roof the eaves of which come down to the ground.

Macgregor describes and figures small *ground-houses*, with the gable-roof coming right down to the ground, at Neneba, on Mount Scratchley.
Geog. Jour. (R. G. S.), XVI. 422.

ground-itch (ground'ich), *n.* An inflammation of the skin of the feet which affects coolies who work in rice-fields in the East. *Buck*, Med. Handbook, VI. 221.

ground-joint (ground'joint), *n.* In *masonry*, the meeting of an upper and lower course of stone in a wall.

ground-laurel (ground'lâ″rel), *n.* The trailing arbutus, *Epigæa repens*.

ground-lemon (ground'lem″ọn), *n.* The wild mandrake or May-apple, *Podophyllum peltatum*. Also called *wild lemon*.

ground-lily (ground'lil″i), *n.* The nodding wake-robin, *Trillium cernuum*.

groundman (ground'man), *n.* In *cricket*, a man whose duty it is to keep a cricket-ground in condition for play. Also *groundsman*.

ground-mine (ground'mīn), *n.* See ★*mine*[2].

ground-mite (ground'mīt), *n.* Any acarid of the family *Trombidiidæ*.

ground-moraine (ground'mō-rān″), *n.* In *geol.*, a compact, unstratified deposit formed beneath glaciers; till; boulder-clay.

The first division of the former [moraines]—*ground-moraines*—take various forms, from nearly level plains to drumlins and regularly undulating country, with no level spaces, such as the Baltic lake plateau.
Geog. Jour. (R. G. S.), XIII. 299.

ground-moss (ground'môs), *n.* Same as ★*ground-cedar*, 2.

ground-needle (ground'nē″dl), *n.* Same as *musky* ★*alfilerilla*.

ground-parrot (ground'par″ọt), *n.* **1.** The flightless owl-parrot or kakapo, *Stringops habroptilus*, of New Zealand.—**2.** A small farmer in Australia, otherwise known as a *cockatoo*. See ★*cockatoo*, 2. [Australia.]

ground-pea, *n.* 2. Same as *groundnut*, 3.

ground-pine, *n.* 3. The pineweed or orange-grass, *Sarothra gentianoides*.—**4.** The American germander, *Teucrium Canadense*.

ground-pink (ground'pingk), *n.* An annual herb of southern California, *Linanthus dianthiflorus*, from 1 to 6 inches high, which carpets meadows and slopes with its bloom in March. The funnel-shaped corollas are nearly an inch broad, pink in color, and fringed. The plant is grown in gardens for edgings and rockwork under a former name, *Fenzlia*. The genus *Linanthus* was long included in *Gilia*, whence this species is sometimes called *fringed gilia*.

Ground-pink (*Linanthus dianthiflorus*).

ground-plasm (ground'plazm), *n.* The more generally distributed and fundamental portion of the protoplasm, either in the nucleus or the cytoplasm.

ground-provisions (ground'prō-vizh'ọnz), *n. pl.* In the West Indies, a collective name for all kinds of roots used as food.

They trust more to plantain-groves, corn and other vegetables than to what are called *ground-provisions*; such as yams, eddoes, potatoes, cassada and other esculent roots.
Bryan Edwards, A Hist. of the Brit. W. Indies, II. 162.

ground-raspberry (ground'raz″ber-i), *n.* The goldenseal, *Hydrastis Canadensis*.

ground-rattler (ground'rat″lėr), *n.* A small rattlesnake, *Sistrurus miliarius*, found along the Atlantic and Gulf coasts south of Fort Macon, Ga., up the Mississippi Valley, and west to Oklahoma. It is of a dark ashen-color, marked along the back with rounded brown blotches, and is one of several rattlesnakes to which the name *Massasauga* is given.

groundsel-bush (ground'sel-bush), *n.* Same as *groundsel-tree*.

ground-shield (ground'shēld), *n.* In *elect.*, a conducting-plate, between the primary and secondary windings of a transformer, which is connected to earth and serves to prevent the high-tension currents of the primary coil from entering the secondary circuit. *Trans. Amer. Inst. Elect. Engin.*, 1904, p. 681.

groundsman (groundz'man), *n.* Same as ★*groundman*.

ground-spearing (ground'spē″ring), *n.* A fish, *Trachinocephalus myops*, of the family *Synodontidæ*, common in the West Indies and Brazil.

ground-spider (ground'spī″dėr), *n.* Any ground-inhabiting spider, especially any member of the families *Lycosidæ* and *Attidæ*.

ground-substance (ground'sub″stans), *n.* **1.** In *histol.*, the structureless substance which lies between cells or in which cells are embedded.—**2.** The fundamental or basic substance of a cell or tissue.

ground-thermometer (ground'thėr-mom″e-tėr), *n.* See ★*soil-thermometer*.

ground-timbers (ground'tim″bėrz), *n. pl.* *Naut.*, the timbers of the lower course in the making up of the frame of a wooden vessel.

ground-vine (ground'vīn), *n.* The twin-flower, *Linnæa borealis*.

ground-wasp (ground'wosp), *n.* Same as ★*ground-hornet*.

ground-weave (ground'wēv), *n.* The foundation weave in the structure of figured fabrics.

ground-worm (ground'wėrm), *n.* An earthworm.

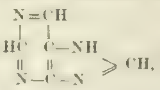
group[1], *n.*, **3.** (*b*) In the recommendations of the International Geological Congress this term is applied, in geological classification, to stratigraphic divisions of the highest order comprising several terrains. Its equivalent term in the time scale is *era*.

5. (*b*) In *combinatorial analysis*, one of the classes into which the objects are distributed when the order of the objects in a particular class is material. (*c*) In *group-theory*, a set of definite operations containing the operation compounded of any two of the set, and also the inverse of every operation of the set.—**6.** In *crystal.*, a class of crystals characterized by the same degree of symmetry. Each crystalline system embraces several such groups or classes. See ★*symmetry*, where the names commonly employed in designating the more important of these groups are given.—**7.** In *ethnol.*, a number of people united together by common habits and usages. *Brinton*, Basis of Social Relations, p. 33.—**Albirupean group.** See ★*albirupean*. **Alternating group.** (*b*) A group composed of all those substitutions which are equivalent to an even number of transpositions: as, for example, *abcd*, *acdb*, *adbc*, *cbda*, *dbac*, *bdca*, *dacb*, *bcad*, *cabd*, *bdde*, *cdab*, *deba*.—**Anor group** [*Anor*, a commune in France], a Lower Devonian formation in Belgium and northern France.—**Anticosti group**, a name given by the Canadian geologists to the Silurian strata which compose the island of Anticosti and range in age from Middle Silurian to the upper part of the marine Silurian represented in New York by the Niagaran formation. The rocks are soft calcareous shales and limestones, and abound in finely preserved invertebrate fossils.—**Applecross group**, a subordinate member of the Torridonian strata of northern Scotland.—**Aquia Creek group**, certain Eocene Tertiary deposits of the United States in the region traversed by the Potomac river. They are largely composed of greensand, some of them indurated, and abound in fossils.—**Arapahoe group**, a stratigraphic division of the Laramie group of formations developed in the vicinity of Denver, Colorado. The Arapahoe beds constitute, according to Cross and Eldridge, the lower division of the upper Laramie or Denver group and are mostly conglomerates. They attain a thickness of 800 feet.—**Arenig group**, the lowest division of the Lower Silurian rocks in Great Britain. These rocks consist of dark slates, shales, flags, and bands of sandstone which pass down conformably into the Tremadoc group of the Cambrian series. They are typically developed in Arenig Mountain, Wales, where they were originally described by Sedgwick, and composed part of his Cambrian system. The group is divided into two or three parts and a number of zones based on the predominance of certain species of graptolites.—**Ariyalur group**, in the Cretaceous series of India, the uppermost and most highly fossiliferous division.—**Arundel group**, one of the divisions of the so-called Potomac formation in the Atlantic coast States, regarded as appertaining to the Jurassic formation together with the Patuxent group. Its strata contain a considerable number of vertebrate remains having Jurassic affinities.

Aubrey group [*Aubrey Cañon*, the Colorado river], a heavy series of beds exposed in the Grand Cañon of the Colorado and belonging to the Carboniferous system. It is divided into an upper limestone division, estimated by Gilbert to have a thickness of 835 feet, and a lower sandstone series, 1,455 feet thick; below this is the Red Wall limestone, 970 feet thick, which in part contains fossils of Lower Carboniferous age.—**Aultbea group**, a subdivision of the Torridonian strata of northern Scotland.—**Auxochromous group.** See ★*auxochromous*. **Azoxy group.** See ★*azoxy*. **Baggy group** [*Baggy Point*, a cape on the northwest coast of Devonshire], a group of sandstones and shales in North Devon constituting a division of the Upper Devonian, lying below the Pilton shales and grits and above the Pickwell-Down grit. These rocks contain a fauna of marine invertebrates unlike those at a corresponding horizon in South Devon, but widely represented in other countries.—**Bahian group**, a divison of the rock series in Brazil, regarded as of Lower Cretaceous age.—**Bajocian group**, a division of the Jurassic system, recognized in Great Britain as equivalent to the Inferior Oolite, including the Northampton sands at the base and the Cheltenham beds of Yorkshire, and attaining in France and the Jura a thickness of 600 feet, in which the rocks are in considerable part coral-reef limestones, but contain an abundance of other fossils, especially ammonites.—**Bala group**, a name introduced by Sedgwick for a series of shales, grits, and sandstones occurring about Bala in Merionethshire and regarded as a part of the Cambrian system. Murchison subsequently interpreted these as equivalent to the sandstones of Caer Caradoc in Shropshire, and the formation is now generally known as the Caradoc or Bala group. In the Bala district there are more than 1,400 feet of strata separated by limestones. The formation abounds in fossils, and on the basis of some of these, especially the graptolites, has been divided into zones. In a general way the fauna shows relation with the later stages of the Lower Silurian of New York and presents even later affinities.—**Balatonian group** [*Balaton*, a lake in Hungary], a division of the pelagic Triassic rocks of the Mediterranean province as recognized by the Austrian geologists. It constitutes the lower division of the Anisian stage and is equivalent to the Lower Muschelkalk or Wellenkalk of the northern Alps and Germany.—**Bartonian group**, in the geology of France, Belgium, and southern Europe, deposits of Upper Eocene age regarded as equivalent in age to the Barton clay of the Hampshire basin in England.—**Bathonian group**, the name now generally adopted, in harmony with uniform terminology, for the Great or Bath Oölite group, which includes, in Great Britain, all the formations of Jurassic age which constitute the upper division of the Lower Oölites—namely, from the bottom, the Great or Bath Oölite, the Stonesfield slate, the Forest marble, the Bradford clay, and the Cornbrash. The term is also in use on the continent of Europe, especially in the geology of France and the Jura, where the succession of Jurassic deposits is similar.—**Bernician group**, a name given to the thick series of sandstones and conglomerates in Northumberland, England, which represent the Carboniferous deposits.—**Blanco group**, lacustrine beds of Pliocene age occurring at Blanco Cañon, Texas, and extending northward.—**Bosnian group**, a division of the Triassic rocks of the Mediterranean province regarded by the Austrian geologists as equivalent to the Upper Muschelkalk. It lies above the Balatonian and constitutes the uppermost member of the Lower Jurassic.—**Bridger group**, a subdivision of the Eocene formation, extending north of the Uintah Mountains in Wyoming. It is underlain by the Wahsatch beds and overlain by alluvium, and consists of lacustrine beds which are regarded by paleontologists as equivalent to the Parisian or Calcaire grossier. It has afforded large snakes, 20 feet long, tillodonts, *Quadrumana*, and creodonts, and is remarkable for the remains of *Dinoceratu* (*Dinoceras mirabile*).—**Burdiehouse group** [*Burdiehouse*, a hamlet in Midlothian], a division of the Carboniferous system of rocks as developed in central Scotland, consisting chiefly of sandstones and limestones, the former widely used for construction purposes.—**Burlington group**, a division of the Lower Carboniferous beds of the Mississippi valley, typically developed about Burlington, Iowa. It lies above the Choteau limestone and beneath the Warsaw shales and limestones. The formation abounds in fossils, especially crinoids.—**Calceola group.** See ★*calceola*. **Caloosahatchee group**, a division of the Pliocene Tertiary rocks of Florida, constituting the lower part of the Floridian series.—**Caradoc group.** See *Bala* ★*group*. **Carbonaceous group**, a division of the Carboniferous Limestone series in Northumberland, England, lying between the Fell sandstone beneath and the Redesdale limestone above, and having a thickness of from 800 to 2,500 feet.—**Catskill group**, a name introduced by the New York geologists for a division originally regarded as equivalent to the Old Red Sandstone formation of Great Britain, but subsequently construed as a distinct element in the succession of marine Devonian deposits, and more recently demonstrated to be a lacustrine or lagoon formation contemporaneous with marine deposits of late Devonian time—a conception implying their equivalence to the typical Old Red Sandstone and fortifying the original interpretation.—**Chari group**, a division of the Jurassic system corresponding to the Callovian and Oxfordian, and highly developed in the Cutch region of India.—**Chase group**, a division of the Permian formation in Kansas.—**Cherry Ridge group**, a division of the Catskill formation in eastern Pennsylvania.—**Chico group**, a subdivision of the Cretaceous formation of the Pacific border, extending from

Lower California northward beyond the Queen Charlotte Islands. It is regarded by Californian geologists as equivalent to the Upper Cretaceous and as forming an unbroken series with the Tertiary. It attains a thickness of nearly 4,000 feet. It is underlain near the coast by the Horsetown beds of the Shasta series, and farther east by Jura-Trias and Carboniferous deposits, and overlain in California and Oregon by the Tejon beds. Its fauna is characterized by the blending of Cretaceous with Tertiary types. **Chidra group,** a division of the Permian system in the Salt Range of India. **Colorado group,** a series of Cretaceous beds in the continental interior of America, lying above the Dakota and below the Fort Pierre group. It is divided into a lower (Fort Benton) division and an upper (Niobrara) division, which together attain a maximum thickness of about 3,000 feet.— **Croatan group,** an upper member of the Floridian series of marine Pliocene beds in the peninsula of Florida. **Cuchara group,** a division of the Lower Eocene Tertiary in Colorado. **Dagshai group** [*Dagshai* in India], a division of the Eocene Tertiary in the Simla district of India.— **Denver group,** the upper member of the so-called Laramie formation of the Denver basin in Colorado, regarded by some writers as of Lower Tertiary age, by others as belonging to the late Cretaceous. **Derived group,** in *math.*, the self-conjugate subgroup generated by the combinants of the *r* infinitesimal generating operations of any given continuous group, if the number of them that are linearly independent is less than *r*.— **De Soto group,** an upper division of the Floridian series of Pliocene Tertiary age in the South Atlantic States.— **Diabeg group,** the lowest member of the Torridonian series of Precambrian rocks in the north of Scotland, consisting of sandstones, shales, and limestones.— **Diestian group** [*Diest*, a place in Belgium], a division of the Lower Pliocene Tertiary in Holland and Belgium, equivalent to the Lenham beds of Great Britain.— **Dominant group.** See *subdominant* ★*group*. **Factor group.** See ★*factor*.— **Famennian group** [*Famenne* (*Famène*, Ritter), a district in the western part of Luxemburg, a province of Belgium], the uppermost division of the Devonian in Belgium and northern France, consisting of sandstones and shales, and divisible into the Condroz psammites above and the Famenne shales below. The beds carry many fossils closely allied to those of the Chemung beds of New York and Pennsylvania.— **Farrington group,** a division of the Upper Coal-measures in the Bristol coal-basin, England.— **Fort Pierre group,** a division of the Cretaceous system in the interior of the United States, lying below the Fox Hills group and above the Colorado formation. It consists largely of bituminous shales and clays carrying an abundance of molluscan fossils.— **Fox Hills group,** a division of the Cretaceous system in the interior region of the United States, lying below the Montana formation and above the Fort Pierre group. The rocks are chiefly sandstones with interbedded coal deposits.— **Gordon River group,** an upper division of the Lower Silurian system in Tasmania, consisting of limestones and conglomerates, and containing a considerable and varied fauna.— **Group method,** in *forestry*, a method of conservative lumbering in which groups of young trees which have sprung up in openings caused by logging, damage by insects, windfall, snow-break, or other agency, are taken as starting-points for the future forest, or if these are insufficient, small openings are purposely made. Reproduction by self-sown seed from the mature stand at the edges of these groups is secured by careful cuttings, which extend the groups until they join.— **Group mixture,** in *forestry*, a mixed forest in which trees of the same species occur in groups not large enough to be considered pure stands.—**Group of a function,** in *math.*, the group of substitutions on the variables, which leave the function unaltered.—**Group of substitutions.** See ★*substitution*.— **Group seed method,** in *forestry*, a method of conservative lumbering in which the forest is reproduced after a single cutting by leaving seed-trees of the kind desired in groups. —**Group selection, velocity.** See ★*selection*, ★*velocity*.— **Heisenstein group,** a subdivision of the Permian system in the Vosges Mountains, lying near the base of the series, underlain by the arkose and shale containing *Callipteris conferta*, and overlain by the tuffs and marls of Meisenbuckel.— **Helderberg group,** a term loosely applied, in New York geology, to formations of the Helderberg Mountains in eastern New York, embracing a lower (Lower Helderberg) and an upper (Upper Helderberg) division, the two being separated by the Oriskany sandstone. The term is no longer used in this sense, but is restricted to the lower division (Helderberg or Helderbergian), to which it was originally applied.— **Huerfano group,** a subdivision of the Tertiary system in southern Colorado. It is correlated with the beds of the Bridger basin of Middle Eocene age.— **Improperly discontinuous group,** in *math.*, a group such that its substitutions are generally finite but in certain special cases are infinitesimal.—**Integrable group,** in *math.* When G is a given continuous group, G_1 the derived group of G, G_2 that of G_1, and so on, if the series G, G_1, G_2, . . . terminates with the identical operation, G is an *integrable group*.— **Kaskaskia group,** a subdivision of the Subcarboniferous or Mississippian rocks in the Mississippi basin, forming the top of that series and underlain by the St. Louis group. It attains a thickness of 600 feet and contains beds of limestone full of fossil remains, as the Pentremital and Archimedes limestones.— **Keokuk group,** a subdivision of the Subcarboniferous or Mississippian series in the Mississippi basin. It follows the Burlington limestone and is overlain by the Warsaw shales and limestone, which are frequently united with it. It consists mostly of limestone, but also contains a well-known geode-bed, bearing geodes of large size with many minerals. Its fauna is noted for its coarse and large crinoids of massive construction and its hexactinellid sponges of the genera *Hydnoceras*, *Physospongia*, and *Phragmodictua*.— **Kinderhook group,** the lowest division of the Subcarboniferous or Mississippian group in the Mississippi basin. It is underlain by Devonian rocks and overlain by the Burlington limestone, and comprises various subdivisions, the most persistent of which are the lithographic limestone, the vermicular sandstone and shales, and the Choteau limestone. Its rocks are sandstones, shales, and limestones, and its fauna is marine.— **Kleinian group,** in *math.*, a group of linear substitutions, $x_1 = (ax + \beta) \div (\gamma x + \delta)$, where α, β, γ, δ are imaginaries, and $\alpha\delta - \beta\gamma = 1$.— **Lacian group,** the lower division of Juvavian stage in the pelagic Triassic series of the Mediterranean basin and of India.— **Lafayette group,** a division of the Tertiary rocks, now regarded as of Pliocene age in the Gulf region of the United States, lying above the Floridian series and regarded as equivalent to the Lagrange, the Orange sand, and the Appomattox groups of this region. **Lewisian group,** a group of gneisses and related metamorphic rocks belonging to the archean and occurring in northern Scotland and the Hebrides: named by Murchison (1858) from the island of Lewis.— **Little River group,** a series of strata in Nova Scotia referred to the Middle Devonian. **Lower Helderberg group,** a term introduced by the New York geologists and equivalent in present usage to the Helderberg group or Helderbergian. Its rocks are of earliest Devonian age. See *Helderberg* ★*group*. **Lynton group,** the middle division of the Lower Devonian rocks of North Devon, consisting of grits and calcareous slates, lying between the Foreland grits beneath and the Hangman grits above.— **Marion group,** an upper division of the Permian rocks in Kansas.— **Marshall group,** the lowest division of the Lower Carboniferous or Mississippian series in Michigan.— **Menevian group,** a name proposed by Salter and Hicks for a series of Middle Cambrian sandstones, shales, slates, flags, and grits which are seen near St. Davids (Menevia) in Wales, where they attain a thickness of about 600 feet and lie conformable to both Upper and Lower Cambrian. They abound in marine fossils.— **Midway group,** the lowest member of the Eocene Tertiary in the States of Alabama and Georgia, and extending westward into Arkansas and Texas.— **Monodromy group** of a linear equation or system of linear equations, a set of transformations, not depending on arbitrary variable parameters, arising for one particular fundamental set of solutions of the linear equation or system of linear equations.— **Nashville group,** a series of shale beds in eastern Tennessee, lying above the horizon of the Trenton limestone and regarded as equivalent to the Lorraine shales of New York or the Richmond beds of Indiana.— **Navesink group,** a subdivision of the Cretaceous rocks in New Jersey equivalent to the Lower Greensand, lying above the Raritan clays and below the Upper Greensand. —**Niobrara group,** a division of the Cretaceous system in the interior region of the United States. It is regarded as the upper subdivision of the Colorado formation, which lies below the Montana and above the Dakota formation, the latter constituting the base of the Cretaceous series. It consists largely of chalk and chalky marls, and contains an abundance of organic remains, the most conspicuous of which are the vertebrates, which are represented by several species of mosasaurs, pterodactyls, plesiosaurs, turtles, and the toothed birds *Hesperornis* and *Ichthyornis*.— **Non-integrable group,** in *math.* When G is a given continuous group, G_1 the derived group of G, G_2 that of G_1, and so on, if the series G, G_1, G_2, . . . terminates with a perfect group, G is a *non-integrable group*. —**Oil-creek group,** the lowest division of the Subcarboniferous or Mississippian series in northwestern Pennsylvania. It is regarded as the equivalent of the Pocono group of eastern Pennsylvania.— **Olenellus group,** the lowest division of the Cambrian system, characterized by the presence and culmination of the trilobite genus *Olenellus*.— **Olenidian group,** the uppermost division of the Cambrian system, characterized by the presence and culmination of the trilobite genus *Olenus*.— **Osage group,** a division of the Subcarboniferous or Mississippian rocks in the interior basin of the United States, embracing the Burlington, Keokuk, and Warsaw limestones, and lying above the Kinderhook and below the St. Louis groups.— **Panchet group,** the uppermost member of the middle Gondwana beds in the Triassic of India, consisting of about 1,800 feet of sandstones and red clays containing an abundant flora of ferns, cycads, and conifers, and some vertebrates. Traces of the Panchet fauna and flora have also been found in North Russian (Dwina beds) and in the Beaufort beds of Cape Colony, Africa. The Panchet beds overlie the Damuda beds of Lower Triassic age and are overlain by sandstones of Jurassic age.—**Paradoxidian group,** the Middle Cambrian formations of shales, sandstones, and limestones, characterized by the presence of various species of the trilobitic genus *Paradoxides*. The group underlies the Upper Cambrian or Olenidian series, and overlies the Lower Cambrian, Georgian, or Olenellus group. It is well developed in New Brunswick, Canada, and Newfoundland, where it constitutes the middle or Acadian division of the St. John group. It includes the Braintree argillites of eastern Massachusetts, and is represented in Europe by the Menevian of Great Britain and the Paradoxides shales of Scandinavia, Russia, Bohemia, and Spain. The contained fauna consists of numerous trilobites, with some brachiopods, worm-tubes (hyolithids), rare gastropods, echinoderms, and sponge-spicules. Also called *Paradoxidian series*.— **Patapsco group,** the basal member of the Cretaceous series of Maryland, consisting of party-colored clays and sands lying unconformably upon the Arundel beds, and overlain by the Raritan groups. The beds have furnished a considerable flora comprising ferns, cycads, conifers, monocotyledons, and some primitive dicotyledons.— **Perfect group,** in *math.*, one which coincides with its derived group.— **Pogonip group,** a series of limestone and shale beds, of Silurian age, in the Eureka district of Nevada. It is about 3,000 feet thick and contains faunas of mixed Cambrian and Silurian expression in its lower portions, and of Lower Silurian expression in successively higher zones.— **Potomac group.** See *Potomac* ★*formation*.— **Predominant group.** See *subdominant* ★*group*. —**Puerco group,** the basal member of the terrestrial Eocene Tertiary, developed in the San Juan basin of northwestern New Mexico, lying upon the marine and brackish-water Laramie beds of the Upper Cretaceous and beneath the Torrejon formation. This formation has furnished a large number of multituberculate mammals (*Polymastodon*, *Neoplagiaulax*, *Triisodon*, *Protochriacus*) and some condylarths and edentates.— **Purin group,** in *chem.*, a group consisting of an alloxan group, $C_4H_2O_4N_2$, joined to a urea radical, as shown in the diagram:

A group of this order enters into the structure of the purin bases and of uric acid. The group suggests the existence of a common mother-substance of the composition



which has been termed *purin*.—**Random group,** a division of the Precambrian rocks of Newfoundland, consisting of sandstones, shales, and conglomerates, and lying immediately below beds of Precambrian age believed to contain organic remains. See *Momable* ★*slates*. **Raritan group,** the uppermost division of the Potomac series or Lower Cretaceous of the coastal belt in the eastern United States, equivalent in part to the ★Albirupean group (which see). —**Rationality group,** in *math.*, a linear homogeneous group of transformations every operation of which corresponds to a rational transformation of the solution of a resolvent equation.— **Red Wall group,** a name given by Powell to the Lower Carboniferous beds in the Grand Cañon of the Colorado.— **Regular group,** in *math.*, a transitive group of the order *n*, on *n* letters.— **St. Louis group,** a division of the Lower Carboniferous or Mississippian series in the interior basin of the United States. See *St. Louis limestone*.— **Shenango group,** the uppermost division of the Subcarboniferous or Mississippian series in northwestern Pennsylvania. —**Sub-dominant group,** in *entom.*, in Kirby's system, those groups of insects which either never enter the tropics or those tropical insects whose range does not exceed 50° in the Old World or 43° in the New: in contradistinction to his *predominant groups* and *dominant groups*, in the first of which he includes groups extending from the arctic region, where vegetation ceases, to the equator, and in the second those which reach to the tropics but fall short of the polar circles.— **Symmetric group,** in *math.*, a group containing all the $n!$ substitutions on n elements. —**Theory of groups,** in *math.*, a branch of mathematics which expounds the properties of mathematical groups of operations or substitutions or transformations.— **Tonto group,** a series of sandstones of Cambrian age exposed in the Colorado cañon of Arizona, lying unconformably between the highly tilted Algonkian beds below and the massive Red Wall limestone of Lower Carboniferous age above. The series has a lower division, 300 feet thick, of red sandstones, containing *Scolithus*, and an upper division, 475 feet thick, of greenish shales and sandstones with impure limestones, containing *Obolella*, *Lingulella*, and *Ptychoparia*.— **Torbay group,** a series of green, purple, and red slates aggregating about 3,000 feet in thickness, and forming, according to Walcott, the second formation above the Precambrian series of Newfoundland. The only fossil reported is a supposed species of the calcareous alga *Oldhamia*.— **Torrejon group,** the upper member of the basal Eocene terrestrial series, typically developed in the vicinity of Torrejon, in the San Juan basin of northwestern New Mexico. It is intermediate in age between the Puerco formation below and the Wahsatch above. It contains a large mammalian fauna with multituberculates, creodonts, condylarths, amblypods, and some edentates, rodents, and primates.— **Torridonian group,** the upper member of the Precambrian series of Great Britain, consisting of red sandstones, shales, and conglomerates, aggregating from 8,000 to 10,000 feet in thickness in northern Scotland, lying unconformably upon the older Lewisian gneiss and, likewise unconformably, below the basal Cambrian beds. The sandstones and conglomerates have the appearance of being terrestrial deposits, are largely metamorphosed, and have furnished a few traces of animal life in the form of trails or tracks on the surfaces of the beds.— **Uintah group,** the uppermost subdivision of the Eocene Tertiary in the Rocky Mountain region, developed to the south of the Uintah Mountains in Utah. It includes three fossiliferous horizons: the upper or Uintah beds proper, the lower or *Telmatotherium* beds, and at the base an equivalent of the upper part of the Bridger group of the Fort Bridger basin. Its thickness is about 800 feet, and its rocks are chiefly fresh-water deposits with a great abundance of terrestrial mammalian remains. —**Wahsatch group,** the lower division of the Lower Eocene Tertiary in the Wahsatch Mountains of Utah, lying below the Wind River group and above the Torrejon group. These strata have also been named the *Coryphodon beds*. They carry an extensive series of mammalian remains, among which are *Phenacodus*, the primitive type of the equine stock, several species of *Coryphodon*, *Hyracotherium*, etc.—**Wichita group,** the lower division of the Permian beds in Texas, carrying a flora of ferns and *Walchia*, and a fauna of cephalopods, fish, amphibia, and reptiles.— **Wind River group,** a division of the Lower Eocene, in the vicinity of the Wind River of Wyoming, lying above the Wahsatch group and below the Bridger beds: also called the *Bathyopsis beds*. This division abounds in mammalian remains — the primitive horses, *Phenacodus* and *Proterohippus*, together with *Coryphodon*, *Hyracotherium*, *Bathyopsis*, and others. —**Woodstock group,** the uppermost division of the Eocene Tertiary beds in the region of Maryland and Virginia, bordering the Potomac river, and regarded as representing in part the middle division of the Eocene of the Gulf States.

groupage (grö′pāj), *n.* [*group* + *-age*.] Grouping; arrangement in groups. *B. Taylor.*

group-breaker (gröp′brā kėr), *n.* In *elect.*, a switch or circuit-breaker, in a power-station, so arranged as to break simultaneously a group of circuits.

grouper, *n.* 2. Any one of many different fishes in different countries. The name is applied to different species of serranoid fishes resembling or supposed to resemble the serranoid fishes properly so named. — **Black grouper.** (*a*) See *grouper*. (*b*) The black jewfish, *Garrupa nigrita*. (*c*) *Mycteroperca bonaci*.— **Mangrove grouper,** a large fish of the family *Serranidæ*, *Mycteroperca boulengeri*. [Gulf of California.]— **Poison grouper,** *Scorpæna plumieri*, a fish found from Florida to Brazil.— **Yellow grouper,** a name given in the Galapagos Islands to the large grouper *Mycteroperca olfax*.— **Yellow-finned grouper,** a large fish, *Mycteroperca venenosa*, of the family *Serranidæ*. [Florida.]

group-flashing (grōp'flash ing), *n.* The flashing of a light with varying periods between the flashes, as in lighthouses. The flashes of a group, two or three in number, are separated by very short intervals and each group is divided from the next group by a much longer period of darkness.

group-marriage (grop'mar ăj), *n.* A form of marriage in which a group of men are considered the husbands of a group of women. *Keane*, Man Past and Present, p. 153.

group-mind (grōp'mīnd), *n.* In *social psychol.*, the collective mind of a group, class, or society: the stock of beliefs, customs, attitudes, etc., common to the members of such a group.

Some have maintained that the promptings of the *group-mind* as felt by the individual belong in the unconscious or involuntary part of his nature, and partake of the character of mechanical necessity.
Brooks, Basis of Social Relations, p. 24.

group-type (grōp'tīp), *n.* The common mental and moral type, and the prevailing manner of a social group. *E. A. Ross*, in Amer. Jour. Sociol., VIII. 762.

group-wife (grōp'wīf), *n.* A woman who is one of a group considered to be the wives of a group of men. See ★*group-marriage*.

Dr. Howitt says, "the germ of individual marriage may be seen in the Dieri practice; for as I shall show later on, a woman becomes a Tippa-malku wife before she becomes a Pirauru or *group-wife*."
Nature, Jan. 5, 1905, p. 226.

group-will (grōp'wil), *n.* An agreement or concert of individual wills; the common purpose and determination of a social group. *E. A. Ross*, in Amer. Jour. Sociol., VIII. 762.

group-wise (grōp'wīz), *a.* Directed upon the group rather than the individual; pertaining to the interest of the group. *E. A. Ross*, Social Control, p. 28.

grous, *n.* Same as *grouse*.

grouseberry (grous'ber″i), *n.* The American wintergreen or checkerberry, *Gaultheria procumbens*. See *wintergreen*, 2.

grouse-locust (grous'lō'kust), *n.* A locust or grasshopper of the subfamily *Tettiginæ*. *J. B. Smith*, Econ. Entom., p. 92.

grove-snail (grov'snal), *n.* A snail, *Helix nemoralis*.

grow, *v. i.* 6. Of a crystal, to develop or enlarge by the addition of molecules arranged in accordance with the laws of molecular attraction.—**Growing pottery**, earthenware or crockery which exhibits the phenomenon of a crystalline growth on its surface, caused by the chemical action of some of its constituents.

growing-pains (grō-ing-pānz″), *n. pl.* Various indefinite pains about the joints, especially of the lower extremities, in children and adolescents.

growing-point (grō'ing-point), *n.* In *bot.*, the cone of growth at the tip of the stem, at which the apical cell is located and which is the seat of vegetative activity.

growth, *n.* **Apical growth.** See ★*apical*. **Basal growth.** See ★*basal*. **Cone of growth.** See ★*cone*. **Determinate growth**, growth which ends with a bud at the conclusion of the season.—**Line of growth**, in mollusks, especially bivalves, one of the concentric lines that mark the external surfaces of the shell and run parallel to the free margin. Each line represents a period of rest in the process of the formation of the shell.—**Old field growth.** See *volunteer*, ★*growth*. **Second growth**, forest growth which comes up naturally after cutting, fire, or other disturbing cause.—**Volume growth.** See ★*increment*, 6. **Volunteer growth**, in *forestry*, young trees which have sprung up in the open, as white pine in old fields, or cherry or aspen in burned tracts.

growth-line (grōth'līn), *n.* Any line which marks a stage of growth in an organism: as, the *growth-lines* of a plant or of a shell.

growth-ring (grōth'ring), *n.* A line of growth. See ★*growth*.

growthy (grō'thi), *a.* [*growth* + *-y*[1].] Somewhat overgrown; of rather more than the usual size. [Colloq.]

She was easily third and Mr. Clough's *growthy* imported Merlin heifer Dorcas had to stand seating down to fourth. *Rep. Kan. State Board Agr.*, 1901-02, p. 194.

grub, *n.* 4. In *cricket*, a ball bowled along the ground. Also called, in the slang of cricket, *sneaker* and *daisy-cutter*. **Jug-handle grub**, the chrysalis of any one of several large sphingid moths, as the tobacco sphinx, or the tomato-sphinx [Local, U. S.]. **White grub**, the larva of any scarab-eared beetle, especially of the *Melolonthini*, and the genus *Lachnosterna*. The white grubs of *Lachnosterna* and *Cyclocephala* or May beetles do great damage to grass land and to strawberry, potato, and other crops planted in old sod. Other well known forms belong to the genera *Alborhina* or June beetles, *Lemurus*, and *Cotalpa*.

White Grub of *Lachnosterna arcuata*.
a, beetle; *b*, pupa; *c*, mature larva. All natural size. (Chittenden, U. S. D. A.)

Grubbia (grub'i-ă), *n.* [NL. (Bergius, 1767), named in honor of Michael *Grubb*, director of the Swedish East India Company and a patron of science.] A genus of plants, constituting the family *Grubbiaceæ*. They are heather-like shrubs, with opposite, entire, linear or lanceolate, coriaceous leaves having revolute margins, and small flowers in clusters of three, the clusters borne singly in the axils of the leaves or congested in axillary cones. There are three species, all South African.

Grubbiaceæ (grub-i-ā'se-ē), *n. pl.* [NL. (Endlicher, 1838), < *Grubbia* + *-aceæ*.] A family of dicotyledonous apetalous plants of the order *Santalales*, containing the single genus ★*Grubbia* (which see).

grub-fungus (grub'fung gus), *n.* A fungus which attacks the grubs of buried insects and replaces the body of the larva with mycelium. The fruiting bodies of the fungus often develop from the head, giving a peculiar horned effect. The common American species is *Cordyceps Ravenelii*. *C. Sinensis* is used medicinally in China. See *Cordyceps*, with cut.

grub-prairie (grub'prā″ri), *n.* Land full of roots requiring to be grubbed out. See the extract. [Upper Mississippi region.]

In *grub-prairies* in the Northwestern states, the soil is full of the roots of trees and bushes, often of the jack-oak, hazel, etc., that have been killed back to the roots by annual fires.
F. B. Hough, Elements of Forestry, p. 52.

grub-screw (grub'skrō), *n.* A set-screw having no head but simply a slot for receiving the screw-driver by means of which it is turned. *Jour. Brit. Inst. of Elect. Engin.*, 1902-03, p. 384.

grubstake (grub'stāk), *v. t.*; pret. and pp. *grubstaked*, ppr. *grubstaking*. [*grub-stake*, *n.*] To fit out or supply with appliances, etc., for some operation or undertaking, on condition of sharing in the profits. See *grub-stake*, *n.* *Electrochem. Industry*, March, 1904, p. 103.

gruenerite, *n.* See ★*grünerite*.

gruff[1], *n.* 2. Crude or impure saltpeter, as imported from India.

Gru-gru worm. Same as *gru-gru*, 1.

grünauite (grü'nou-īt), *n.* [G. *Grünau* + *-ite*[2].] A complex metallic mineral containing sulphur, bismuth, nickel, etc.: perhaps only a mixture of the nickel sulphid polydymite with bismuthinite and other species: from Grünau, Germany.

grundy-swallow (grun'di-swol″ō), *n.* [A popular perversion of the original (AS. *grundeswelge*, properly *gundeswelge*) of *groundsel*[1], q. v.] The golden ragwort, *Senecio aureus*.

grünerite (grü'ner-īt), *n.* [Named after Herr *Grüner*, a German, who analyzed it.] An iron amphibole ($FeSiO_3$) occurring in brown fibrous forms.

grüneritization (grü″ner-ī-ti-zā'shon), *n.* [*grünerite* + *-ize* + *-ation*.] In *petrog.*, the alteration of the minerals in a rock to grünerite or iron metasilicate in the form of amphibole.

grünlingite (grün'ling-īt), *n.* [Named after Herr *Grünling*, a German mineralogist.] A compound of bismuth, tellurium, and sulphur, perhaps Bi_4TeS_3. It resembles tetradymite.

grunt, *n.* 3. Among the various fishes of the genus *Hæmulon* and family *Hæmulidæ*, so named, are the following: Black grunt, *Hæmulon bonariense*; bear-grunt, *H. sciurus*; French grunt, *H. flaviguttatum*; gray grunt, *H. macrostomum*; grunt blackfish, *H. bonariense* (see ★*blackfish*); Margaret grunt, *H. album*; open-mouthed grunt (same as *French* ★*grunt*), red-mouthed grunt, *Bathystoma rimator*; striped grunt, *Hæmulon macrostomum*; white grunt, *Bathystoma striatus* (see also *capitaine*); yellow grunt (same as *bear-*★*grunt*).

grunter, *n.*, 1. (*c*) A horse which has the habit of emitting a sound during expiration, when suddenly moved or startled.

Grusian (grō'zi-ăn), *a.* and *n.* [Russ. *Gruziya*, Georgia, + *-an*.] Same as *Georgian*[2].

gryllid (gril'id), *n.* and *a.* **I.** *n.* A member of the family *Gryllidæ*.

II. *a.* Of or belonging to the orthopterous family *Gryllidæ*.

gryochrome (grī'ō-krōm), *n.* [Said to be formed (by Nissl) from Gr. γρῦ, taken in the sense of 'the dirt under the nail,' + χρῶμα, color.] In *neurol.*, a nerve-cell in which the chromatic substance exists in the form of minute basophil granules which give the stained protoplasm a dusty appearance.

There is also a considerable number of cells in which the basophile substance is present as fine granules giving a blue dusty appearance to the cell body. These cells Nissl describes as *gryochromes*.
F. R. Bailey, in Jour. Exper. Med., Oct. 1, 1901, p. 579.

gryphosis (gri-fō'sis), *n.* An incorrect form of *grypose*.

Grypocera (gri-pos'e-rä), *n.* See ★*Netrocera*, 2.

Grypoceras (grip-os'e-ras), *n.* [Gr. γρυπός, curved, + κέρας, horn.] A genus of ammonoid cephalopods or ammonites from the Triassic rocks.

Grypotherium (grip-ō-thē'ri-um), *n.* [NL., < Gr. γρυπός, curved, + θηρίον, beast, in allusion to the claws.] A genus of extinct ground-sloths, related to and closely resembling *Mylodon* and *Megatherium*. Some members of the genus were contemporary with early man in southern South America, and one species, *G. listai*, remains of which were found in a cave in Patagonia, is supposed to have been kept in a state of domestication.

G. S. An abbreviation (*a*) of *Grand Scribe*; (*b*) of *Grand Secretary*; (*c*) of *Grand Sentinel*; (*d*) of *Grand Sentry*.

Gshelian (gshel'i-ăn), *n.* [Russ. *Gshel('sk)* a district in Russia, + *-ian*.] In *geol.*, one of the divisions of the Carboniferous system on the continent of Europe which constitutes the marine type of the uppermost part of the system. The term 'Stephanian' is applied to the lagoon type of the same period. The Gshelian is better known as the *Uralian* from the high development of the formation in the Ural Mountains.

G-string, *n.* 2. A narrow strip of cloth worn as a breech-clout. *J. Mooney*, Child life: in Cyc. of Indian Tribes.

G. T. An abbreviation (*a*) of *Good Templar*; (*b*) of *Grand Tiler*.

Gt. Br., Gt. Brit. Abbreviations of *Great Britain*.

gu. An abbreviation (*a*) of *gamma*; (*b*) of *gule*.

guaba (gwä'bä), *n.* [Porto Rican.] Same as ★*guava*, 2.

guacamaia (gwä-kä-mī'ä), *n.* [NL., < Central American and W. Ind. *guacamaya*, a parrot.] A large parrot-fish, *Scarus Callyodon guacamaia*. It is characterized by deep-blue teeth and is found in the West Indies.

guacamphol (gwä-kam'fōl), *n.* [*gua(iacol)* + *camph(or)* + *-ol*.] An ester of guaiacol and camphoric acid. It is suggested as a remedy for the night-sweats of phthisis; also as an intestinal antiseptic.

guacima (gwä'sē-mä), *n.* [Haytian name.] In Porto Rico, *Guazuma guazuma*, a handsome tree of the order *Sterculiaceæ*, which has elm-like leaves and axillary clusters of small yellowish-white flowers. The fruit is an oval hard nut having blunt projecting tubercles all over its surface. On the Pacific coast of Mexico the nuts are made into a drink called *orchata de guacima*, to which sugar and lemon are usually added. They contain mucilage and are sometimes administered as a remedy for gonorrhea. The inner bark is also used medicinally. It is mucilaginous and is adapted for poultices. It is quite tough and has been used for cordage. The tree is admirably adapted for avenues. It may be repeatedly trimmed and soon sends forth a luxuriant growth of small branches which form a dense head. The young branches and fruit are much relished by cattle. The wood, sometimes called *bastard cedar*, is used for tubs, furniture, and interior woodwork.

guacin (gwä'sin), *n.* [*guaco* + *-in*[2].] An amorphous bitter principle obtained from the leaves of guaco.

guaco, *n.* 3. Same as ★*huaco*.

guacocoa (gwä-kō-kō'ä), *n.* [Cuban.] A tree of the family *Daphnaceæ*, *Daphnopsis Guacacoa*, which yields a very strong, white bast-fiber.

guadalcazarite (gwä-däl-kaz'a-rīt), *n.* [*Guadalcazar*, in Mexico, + *-ite*[2].] Sulphid of mercury (metacinnabarite) containing a small amount of zinc.

guadil (gwä-del'), *n.* [Guanche name in the Canary Islands.] One of the shrubs which produce rhodium-wood, *Convolvulus floridus*. It is an ornamental shrub, from 4 to 6 feet high, the branches and linear leaves of which are covered with a white powder. The flowers are pure white, so that when the plant is in bloom it has the appearance of being covered with snowflakes.

guaethol (gwä-eth'ōl), *n.* [*gua(iacum)* + *eth(er)* + *-ol.*] Same as ★*guaiol.*

guaguanche (gwä-gwän'che), *n.* [Cuban.] A small barracuda, *Sphyræna guachancho*, found in the waters of Cuba.

guaiacal (gwī'a-kal), *n.* [*guaiac(um)* + *-al*[3].] A little used name for crotonaldehyde, $CH_3CH:CHCHO$, which is also called *2-butenal.*

guaiacene (gwī'a-sēn), *n.* [*guaiac(um)* + *-ene.*] Same as ★*guaiol*, the incorrect name for ★*tiglic aldehyde.*

guaiacetin (gwī-as'e-tin), *n.* [*guai(acum)* + *acet(ic)* + *-in*[2].] Pyrocatechin-monoacetic acid: used in medicine in about the same way as guaiacol.

guaiacol (gwī'a-kōl), *n.* Same as *guiacol.*

guaiacolate (gwī'a-kō-lāt), *n.* [*guaiacol* + *-ate*[1].] A salt of guaiacol.

guaiaconic (gwī-a-kon'ik), *a.* [*guaiacum* + *-one* + *-ic.*] Derived from guaiacum resin.—**Guaiaconic acid**, a resinous, levorotatory compound, $C_{35}H_{40}O_{10}$, which is obtained from guaiacum resin. It melts at 100° C., constitutes 70 per cent. of the crude guaiacum resin, and turns blue in the presence of oxidizing agents. Also called *α-resin.*

guaiacyl (gwī'a-sil), *n.* [*guaiac-um* + *-yl.*] A whitish amorphous compound, $(C_6H_3.O.CH_3)_2(O_2Ca)(HSO_3)_2$, the calcium salt of guaiacol sulphonic acid: used as a local anesthetic.

guaiakinol (gwī'a-kin-ōl), *n.* [*guaia(cum)* + *kina* + *-ol.*] A guaiacolate of quinine.

guaiamar (gwī'a-mär), *n.* [*guai(acol)* + L. *amarus*, bitter.] The glycerol ester of guaiacol: used in medicine in about the same way as guaiacol.

guaiaperol (gwī-ap'e-rōl, *n.* [*guaia(col)* + *(pi)per(idine)* + *-ol.*] A crystalline compound, $C_5H_{11}N.(C_7H_8O_2)_2$, obtained by the action of piperidine upon guaiacol: used in tuberculosis.

guaiaquin (gwī'a-kwin), *n.* [*guaia(col)* + *quin(ine).*] A yellowish solid of bitter taste consisting of quinine-guaiacol sulphonate, $C_6H_3O_2.CH_3.HSO_3.C_{20}H_{24}N_2O_2$: an odorless substitute for guaiacol.

guaiaquinol (gwī'a-kin-ōl), *n.* [*guaia(cum)* + *quina* + *-ol.*] Quinine bromguaiacolate. It is used in medicine.

guaiasanol (gwī'a-sa-nōl), *n.* [*guaia(cum)* + L. (?) *sanus*, sound, + *-ol.*] Diethyl-glycocoll-guaiacol hydrochlorid. It is soluble in water, and is used in the same way as guaiacol.

Guaiasanol . . was introduced by E. Einhorn and Hütz as a soluble form of guaiacol. It crystallizes in white prisms, having a faint odor and a saline, bitter taste.
Buck, Med. Handbook, IV. 425.

guaiene (gwī'ēn), *n.* [*guai(acum)* + *-ene.*] A pale blue fluorescent hydrocarbon, $C_{12}H_{12}$, prepared by the distillation of guaiacum resin with zinc dust. It sublimes and forms brilliant plates, which melt at 97–98° C.

guaiol (gwī'ōl), *n.* [*guai(acum)* + *-ol.*] **1.** Same as ★*tiglic aldehyde.*—**2.** Same as ★*champacol.*

guajica (gwä-hē'kä), *n.* [Cuban.] *Pœcilia vittata*, one of the killifishes inhabiting streams in Cuba.

guajilote[1] (gwä-hē-lō'tā), *n.* A variant of ★*cuajilote.*

guajilote[2] (guä-hē-lō'tā), *n.* A corruption of *cuajiote.*

guako (gwä'kō), *n.* [From one of the pueblo languages of New Mexico, prob. Tehua.] A vegetable dye used by the Pueblo Indians to paint their pottery black. It is probably obtained from the root and stalks of a species of *Artemisia.*

guama (gwä-mä'), *n.* [Porto Rican and Venezuelan.] A tree of the mimosa family, *Inga laurina*, extensively used in the West Indies and in Venezuela and Colombia as a coffee shade-tree. It bears broad, bean-like pods, with an edible, sweet, fluffy pulp.

guamacho (gwä-mä'chō), *n.* [Native name in Venezuela.] A tree, *Pereskia Guamacho* of the cactus family, 12 to 15 feet high, which bears yellow flowers and branches covered with long, straight spines. When planted in rows it forms impenetrable hedges. It yields quantities of a pale brown gum, which dissolves completely in water. [Venezuela.]

guamo (gwä-mō'), *n.* [Venezuelan.] Same as ★*guama.*

guamuchil (gwä-mö-chēl'), *n.* [Mexican *guamuchil*, *huamuchil*, *guamachil*, < Aztec *quamochitl.*] A tree, *Pithecolobium dulce*, which bears abruptly pinnate leaves and pods which contain a sweet edible aril surrounding the seeds. [Mexican.] See ★*kamachiles.*

guana[2], *n.* [Cuban.] **2.** The name in Cuba for the lace-like inner bark of the blue or mountain mahoe, *Pariti elatum*, a malvaceous tree 50 to 60 feet high. The fiber is obtainable in broad bands up to 12 or 15 inches wide. Formerly it was much used for tying up bundles of cigars; its place for this purpose, however, has been taken by specially woven silk bands. It is extensively used in the United States and Europe for making women's hats and millinery trimmings. Commercially known as *Cuba bast.*

guanacaste (gwä-nä-käs'tā), *n.* [Costa Rican.] Same as ★*guanacaztli.*

guanacaztli (gwä-nä-käs'tlē), *n.* [Mex. *guanacaztli*, < Nahuatl *quauhnacaztli*, 'ear-tree,' < *quauitl*, tree, + *nacaztli*, ear.] The ear-drop tree or ear-pad tree, *Enterolobium cyclocarpum*, a large, handsome tree of the mimosa family. It has wide-spreading symmetrical branches, twice-pinnate leaves, globular heads of flowers, and peculiar pods shaped like a human ear, the inner suture of the legume being very much contracted and the outer forming the periphery of a circle, so that the rounded top of the pod meets the rounded base. The pods contain a sweetish pulp surrounding the hard seeds and are eaten by cattle, by means of which the undigested seeds are dispersed without losing their vitality. At Colima, Mexico, the natives use the seeds in times of scarcity as a substitute for maize. The wood is used for troughs, canoes, and in house-building, and the pods and bark are rich in tannin and are used as a substitute for soap in washing. Also called *conacaste* and *guanacaste.*

Guanacaztli (*Enterolobium cyclocarpum*).
a, fruit, one fourth natural size; *b*, seed, three fourths natural size.

guanase (gwä'nās), *n.* [*guan(ine)* + *-ase.*] An autolytic ferment which causes the transformation of guanine to xanthin.

guanazole (gwä'na-zōl), *n.* [*guan(ine)* + *az(ote)* + *-ol.*] A colorless compound, $NH<\begin{matrix}NH-C(NH)\\|\\C(NH)NH\end{matrix}$ which crystallizes in monoclinic prisms, and melts at 206° C. It is a feeble base, gives a deep red color with ferric chlorid, and is also called *3, 5-diamino-1, 2, 4-triazin.*

guandee (gwän-dē'), *n.* Same as ★*gandul.*

guanidin (gwä'ni-din), *n.* [*guan(ine)* + *-id* + *-ine*[2].] A strong crystallizable base, CH_5N_3, which results on oxidation from guanine. In combination with ornithin, as arginin, it represents one of the most constant decomposition-products of the albuminous molecule.

guanimin (gwä'ni-min), *n.* [*guan(ine)* + *imine.*] A basic substance which is formed by the action of heat upon a guanidin salt of a fatty acid.

guano, *n.*—**Phospho-Peruvian guano**, a trade-name for a mixture of superphosphate of lime and Peruvian guano: used as a fertilizer.

guanobiliary (gwä''nō-bil'i-a-ri), *a.* [*guano* + *biliary.*] Noting a biliary acid, which probably belongs to the glycocholic-acid group, found in Peruvian guano.

guano-horn (gwä'nō-hôrn), *n.* A tin tube about 3 feet long and 2 inches in diameter, used in applying guano and similar fertilizers to plowed land. *U. S. Dept. Ag.*, Bulletin 33, 1896, p. 194.

guanoline (gwä'nō-lin), *n.* [*guano* + *-ol* + *-ine*[2].] A colorless compound, $HN:C(NH_2)NHCOOC_2H_5$, formed from guanidin and ethyl chlorcarbonate. It crystallizes with $\frac{1}{2}H_2O$ in trimetric laminæ, melting at 100° C. Also called *guanolene* and *ethyl guanadinecarboxylate.*

guanylic (gwä-nil'ik), *a.* [*guan(ine)* + *-yl* + *-ic.*] Noting a nucleinic acid, $C_{44}H_{66}N_{20}P_4O_{34}$, obtained from the pancreas.

guao (gwä'ō), *n.* [Cuban Sp., of native origin.] A West Indian tree of the cashew family, *Comocladia dentata.* Its edible fruit is known as *maiden-plum* (which see). In Mexico the name is applied to several plants with acrid juice which causes eruptions of the skin, especially to the poison-oak (*Rhus Toxicodendron*) and *Comocladia Engleriana*, which are also called *tetlatia.*

guaparanga (gwä-pä-räng'gä), *n.* [Braz.] See *Marleria.*

guapena (gwä-pā'nä), *n.* [W. Ind.?] Same as *ribbon-fish.*

guaperva (gwä-per'vä), *n.* [Pg. (Lacerda).] A trigger-fish of the genus *Balistes.*

guapinol (gwä-pē-nōl'), *n.* [Mex. Sp., < Nahuatl *quauitl*, tree, + *pinolli*, a kind of flour. There is a dry mealy pulp surrounding the seeds.] The courbaril, *Hymenæa Courbaril.* See *Hymenæa.*

guar (gwär), *n.* Same as *gouaree.*

guara[3] (gwä'rä), *n.* [Cuban Sp., from a native name.] In tropical America, several species of *Cupania*, trees of the family *Sapindaceæ*, having pinnate leaves and racemes or panicles of small flowers. In Porto Rico *C. Americana* furnishes a wood which, though soft, is susceptible of a high polish. Its fruit is a three-celled capsule which opens on ripening and displays its black seeds with yellow aril about their base. Guara blanca, or guara de costa, is *C. glabra*, a species common in the West Indies, and guara colorado, or guara macho, is *C. macrophylla*, a Cuban species. In Jamaica the timber of these trees is called *lobloll-wood.*

guarabu, *n.* **2.** A large tree of the family *Cæsalpiniaceæ*, *Peltogyne confertiflora*, which yields a useful wood and from the bark of which a fine red dye is obtained.

guaracha (gwä-rä'chä), *n.* [Mex. Sp., also *guarache*, *huaracho*, *huarache.*] **1.** A kind of sandal used by the Mexicans and the Indians of Mexico.—**2.** A graceful Spanish dance, or the music for it.

guaraguao (gwä-rä-gwä'ō), *n.* [Porto Rican.] In Porto Rico, a name of several trees of the genera *Trichilia* and *Samyda*, of the mahogany family. The most important is *S. Guidonia*, the hard, red wood of which resembles mahogany but is cross-grained and has larger pores. It is used in construction and for furniture. The tree has abruptly pinnate leaves and axillary clusters of white flowers followed by reddish-brown, capsular fruit. *T. spondioides*, known as *white bitter-wood* in Jamaica, furnishes timber for construction, and for making carts, boats, and farm implements. See *Trichilia* and *Samyda.*

guard, *n.*, **3.** (*g*) In *foot-ball*, *basket-ball*, and similar games, a player occupying a certain position. In foot-ball there are two guards, who play on either side of the center rush: in basket-ball the guard prevents the opposing forward from throwing goals.—**Guards** or **guardians of the pole**, the two stars β (Kochab) and γ in the constellation of Ursa minor.—**Main guard.** (*a*) *Milit.*: (1) See *guard.* (2) The guard from which all the other guards are detached. (3) A guard chosen from the troops of a garrison under which all drunkards, etc., are placed. (4) See *main*[2]. (*b*) In *fort.*, the keep of a castle; the lodging of the main guard.—**To give guard**, in *cricket*, of the umpire, to inform the batsman, when he holds his bat upright before the wickets, which of the three stumps the bat is covering.—**To run the guard.** See ★*run*[1].—**To take guard**, in *cricket*, of the batsman, to ask the umpire, as the bat is held upright before the wickets, which of the three stumps it is defending.

guarda-costa (gär''dä-kōs'tä), *n.* *Naut.*, a Spanish gunboat mostly employed against smugglers; a coast-guard vessel.

guard-bolt (gärd'bōlt), *n.* In a mowing-machine, the screw-bolt used to fasten the finger-guards in place. See *mowing-machine.*

guard-book, *n.* **2.** *Naval*, a book in which are entered the orders and official information received by the boarding-officer of the guard-ship of a fleet or squadron.

guard-detail (gärd'dē-tāl''), *n.* The squad detailed from a company for guard-duty.

Guardians of the pole. See ★*guard.*

guard-iron (gärd'ī'ern), *n.* **1.** *pl.* See *guard-irons.*—**2.** An iron strap placed along the outside edge of the wheel-guard of a paddle-steamer.—**3.** A guard or fender attached to the front end of an English locomotive.

guard-lamp (gärd'lamp), *n.* In *telephony*, an incandescent lamp in a central station so connected as to serve as a signal or indicator to prevent mistakes on the part of an operator. *Elect. World and Engin.*, Dec. 12, 1903, p. 966.

guard-leaf (gärd'lēf), *n.* A leaf that grows between the clusters of a blossom of a double hollyhock. *Stand. Dict.*

guard-lock (gärd'lok), *n.* **1.** A lock placed at the junction of an artificial canal with the sea or other natural body of water whose level is subject to an extent of fluctuation undesirable for the canal. When boats are required to enter or leave the canal while a difference of level prevails between the water in the canal and outside, a pair of locks is necessary; otherwise a single lock is sufficient.—**2.** Any lock used to guard a keyhole or to guard another lock, as in the locks of the boxes of a safe-deposit vault, where the key to the guard-lock may be held by the attendant of the vault and the key of the box by the renter, both keys being used to open the box. See *duplex* ★*lock.*

guardo (gär'dō), *n.* A receiving-ship or -vessel on which enlisted men are temporarily quartered until drafted to sea-going vessels. [Naval sailors' slang.]

guardo-move (gär'dō-möv), *n.* *Naut.*, a trick played upon a landsman on a receiving-ship.

guard-pile (gärd′pīl), *n.* A pile driven in a waterway near and in front of a dock, pier, abutment, or other structure, for the purpose of protecting the latter from injury by shipping or heavy floating bodies.

guard-pin (gärd′pin), *n.* In a small firearm, a pin used to fasten the trigger-guard.

guard-plate, *n.* **2.** A curved plate used to prevent a flexible disk-valve from opening or lifting beyond the distance limited by the plate.

guard-polyp (gärd′pol″ip), *n.* In some hydroid polyps, as *Plumularia*, a tentacle-like projection of the cœnosarc, bearing thread-cells, or adhesive globules, and surrounded by a hydrotheca. It has, probably, a nutritive function, serving to catch food. Also *nematophore*, *sarcotheca*, and *machopolyp*.

guard-rail, *n.* **2.** *Naut.*, a fore-and-aft timber bolted on the outside of the covering-board or plank-sheer on steam-vessels navigating harbors, lakes, and rivers, to act as a fender when lying alongside of other vessels, or when made fast to a dock. Sometimes a second guard-rail is carried along the sides just above the water, and is then called a *bilge guard-rail*.

guard-ring, *n.* **2.** In *elect.*, an annular metal plate which surrounds the attracted disk of an electrometer and is maintained at the same potential as the disk.

guard-strap (gärd′strap), *n.* A strip of sheet-iron arched above the top of a driving-wheel of a locomotive.

guard-wire (gärd′wīr), *n.* In electric railway construction, a wire stretched above the trolley-wire to prevent its coming in contact with other and still higher wires. *Jour. Brit. Inst. of Elect. Engin.*, 1901–02, p. 91.

Guareschi and Mosso's base. See ★*base*[2].

guarinite (gwä′ri-nīt), *n.* A calcium titanosilicate which occurs in yellow tabular crystals at Monte Somma, near Naples.

Guarnieri body. See ★*body* and ★*Cytoryctes*.

guarri (gwä′ri), *n.* [Hottentot name.] In South Africa, the fruits of any one of several shrubs belonging to the genus *Euclea* of the ebony family, especially of *E. undulata*, the edible red fruits of which are esteemed by the Hottentots. See ★*Euclea*[2].

guarumo (gwä-rō′mō), *n.* [Also *guarumbo;* from a native name.] In tropical America, several trees of palm-like aspect with slender trunks surmounted by a crest of large leaves, especially various species of *Cecropia*. In Mexico the name is applied to *C. peltata* and *C. Mexicana*.

guasa (gwä′sä), *n.* [Cuban.] The great jew-fish of the West Indies, *Promicrops itaiara*.

guaseta (gwä-sā′tä), *n.* [Cuban Sp.; dim. of *guasa*.] A small sea-bass, *Alphestes afer*, of the family *Serranidæ*. [Cuba.]

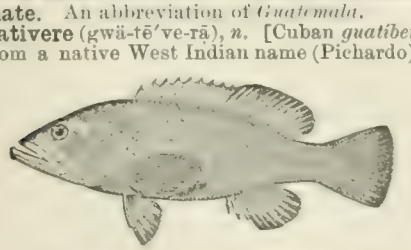
Guastalline (gwä′sta-lin), *n.* [It. *Guastalla*, name of the foundress.] A member of a female religious order founded in 1534 by Countess Guastalla, and known as *Angelicals* (which see).

Guastavino construction. A system of masonry construction extensively practised in the United States by a Spanish builder named Rafael Guastavino. The Guastavino arch is the timbrel arch composed of two or three layers of thin tiles laid in the most perfect cement. It is practically homogeneous like an egg shell and capable of resisting great pressure.

Guastavino Construction.

Guate. An abbreviation of *Guatemala*.

guativere (gwä-tē′ve-rā), *n.* [Cuban *guatibere*, from a native West Indian name (Pichardo).]



Guativere (*Cephalopholis fulvus*).
(from Bulletin 47, U. S. Nat. Museum.)

A name of several fishes of the West Indies; specifically, a serranoid fish, *Cephalopholis fulvus*, of a bright red, yellow, or brown color, with blue spots, ranging from Florida to Brazil. Also called *guativere amarilla*. **Black guativere.** Same as *nigger-fish*. **Red guativere,** *Cephalopholis fulvus ruber*, a serranoid fish found in West Indian waters. It is scarlet in color and inhabits shallow water.

guatucupa (gwä-tö-kö′pä), *n.* [Pg., from a native name.] The pork-fish of the West Indies, *Anisotremus virginicus*.

guava, *n.* **2.** In Porto Rico, *Inga vera*, a tree of the family *Mimosaceæ*, used as a shade-tree in coffee-plantations. See *Inga* and *caco-wood*. **2.** — **Cattley guava,** *Psidium Cattleianum*, a shrub or small tree, from 10 to 20 feet high, native to Brazil. It has leathery, glossy, evergreen leaves and round, claret-red, acid fruits an inch in diameter, with a strawberry-like fragrance and flavor. It is cultivated in California and Florida for its fruit, which makes fine jelly. Called also *strawberry-guava*, *purple guava*, and in Brazil *araça de Praia*. A dwarf variety, with larger, yellow, sweeter fruits, is called *yellow Cattley guava*, *yellow strawberry-guava* or *Chinese guava*. **Chinese guava,** the yellow Cattley guava. **French guava.** (*a*) The pear-shaped variety of the common guava. (*b*) In Barbados, the ringworm-shrub, *Herpetica alata*. **Hill-guava,** the hill-gooseberry, *Rhodomyrtus tomentosa*. See *hill* ★*gooseberry*. — **Mountain-guava.** See *spice* ★*guava*. — **Purple guava.** Same as *Cattley* ★*guava*. **Spice-guava,** a West Indian tree, *Psidium montanum*, bearing globose, aromatic berries about half an inch in diameter. Called *mountain-guava* in Jamaica. — **Strawberry-guava.** Same as *Cattley* ★*guava*.

guava-berry (gwä′vä-ber″i), *n.* In the West Indies, a small tree of the myrtle family, *Eugenia lineata*, which bears juicy red fruits of the size of cherries, which are eaten raw, preserved, or made into cordial.

Guavina (gwä-vē′nä), *n.* [Cuban.] **1.** A genus of gobioid fishes found in fresh waters of the West Indies and Brazil: typified by *G. guavina*, of the rivers of Cuba.— **2.** [*l. c.*] A name applied in Cuba to the elongate, flat-headed gobies. — **Guavina hoyera,** *Awaous banana*, a gobioid fish found in fresh waters on both coasts of tropical America. **Guavina mapo,** *Dormitator maculatus*, a gobioid fish found on both coasts of tropical America. — **Guavina tétard,** *Eleotris pisonis*, a gobioid fish found in streams in the West Indies and south to Rio Janeiro.

guaviyu (gwä-vē-yö′), *n.* [Braz.] In southern Brazil and northern Argentina, either of two trees belonging to the myrtle family, *Eugenia Guabiju* and *E. pungens*. Both yield edible fruits.

guaxima (guä-shē′mä), *n.* [Tupi *guaxima*, *guajima*.] The name in Brazil of a malvaceous plant, *Urena lobata*, yielding a useful fiber. See ★*aramina*, ★*Cæsar-weed* and *Urena*.

guayaba (gwä-yä′bä), *n.* [Sp.] Same as *guava*. Also *guayava*.

guayacan (gwä-yä-kän′), *n.* [S. Amer.?] **1.** The lignum-vitæ, *Guaiacum officinale* and *G. sanctum*.— **2.** In the southwestern United States and Mexico, a shrub or small tree, *Porlieria angustifolia*, closely related to the lignum-vitæ.— **3.** In Argentina, a large leguminous tree, *Cæsalpinia melanocarpa*, yielding a very hard, heavy wood which resembles lignum-vitæ except that it is of a reddish-black color. Its fruits are used for tanning and dyeing in the same manner as *divi-divi*.—**4.** In Panama, a bignoniaceous tree, *Tecoma Guayacan*.

guayava (gwä-yä′vä), *n.* Same as *guava*.

guayavi (gwä-yä′vē), *n.* [Native name.] In Argentina, a large tree of the borage family, *Patagonula Americana*. It yields a soft and easily worked useful wood.

guayavita (gwä-yä-vē′tä), *n.* [Sp. dimin. of *guayava*.] In Porto Rico, the bayberry, *Pimenta racemosa* (*Caryophyllus racemosus* of Miller), the leaves of which yield bay-oil, the source of bay-rum. See *bayberry*, 3, and *Pimenta*[2].

guayrote (gwī-rō′tā), *n.* [Porto Rican.] A tree of the family *Sabiaceæ*, *Meliosma obtusifolia*, native to Porto Rico. It is generally distributed throughout the island and is valued for its wood, which is much used locally. Called also *aguacatillo*.

guazu (gwä-sö′), *n.* [Guarani *guaçú*, 'deer.'] The marsh-deer of South America, *Odocoileus* or *Blastocerus campestris*.

guazuti (gwä-sö-tē′), *n.* [Guarani *guaçuti*, 'deer of the field.'] The pampas-deer of South America, *Odocoileus* or *Blastocerus campestris*.

gubat (gö′bät), *n.* [Tagalog.] A forest.

gubbin, *n.* **3.** *pl.* [*cap.*] The almost wild inhabitants of Dartmoor, England.

Gubbio pottery. See ★*pottery*.

Gubernacular cord. See ★*cord*[1]. — **Gubernacular sac.** Same as *gubernaculum*, 2.

gudgeon[1], *n.* **4.** *Eleotris coxii*, a gobioid fish of New South Wales.

gudok (gö-dōk′), *n.* [Russ. *gudóků*.] A simple form of viol, used in Russia, having three strings, two of which serve only as drones.

guelder-rose, *n.*— **Maple** or **maple-leaved guelder-rose,** the maple-leaved arrow-wood, *Viburnum acerifolium*.—**Virginian guelder-rose,** the ninebark, *Opulaster opulifolius*.

guembelite, *n.* See ★*gümbelite*.

guemul (gā-möl′), *n.* [Sp. *guemul*, from a S. Amer. native name.] A species of South American deer of medium size, usually placed in the genus *Furcifer*. There are two species, *F. chilensis* and *F. antisensis*, which range along the Andes from Peru to Patagonia. They are characterized by the antlers, which have a single fork, the front prong of which is the longer; by the presence of tusks in the upper jaw of both male and female; and by the unspotted coat of the fawn.

guenon (gwe-noṅ′), *n.* [F.] A French name, very generally adopted as a book-name, for the old-world monkeys of the genus *Cercopithecus*.

guerepo (ge-rā′pō), *n.* [Mex.] An atherinoid fish, *Chirostoma grandocule*, found in Lake Pátzcuaro, Mexico.

guéridon (gā-rē-doṅ′), *n.* [F., from the name of a character in a farce.] A small round table used for mounting vases or objects of art. Sometimes made in bronze or silver: usually with a single stem and tripod base.

Guernsey, *n.* **3.** [*cap.*] A breed of dairy cattle, named from the island of Guernsey in the English Channel. It is slightly larger than the Jersey, lacks the black markings about the face, and has the inside of the ear yellow.

guerre de course (gär de körs′). [F. 'war of roving' (privateering).] Commerce-destroying.

guest-ant (gest′ànt), *n.* An ant which lives as a guest in the colony of another species, as the European *Formicoxenus nitidulus*, which lives as a guest in the colonies of *Formica rufa*. *Cambridge Nat. Hist.*, VI. 159.

guest-bee (gest′bē), *n.* A bee which lives as a guest or inquiline in the nests of another bee: thus the bees of the genus *Psithyrus* are guests in the nests of bumble-bees.

guestling (gest′ling), *n.* [A perversion of *guesting*, with substitution of *-ling* for *-ing*[1].] Formerly an annual assembly of the representatives of the corporation of the Cinque Ports.

guest-wasp (gest′wosp), *n.* A wasp of the family *Masaridæ*: so named by Comstock because it is supposed that all of the species of this family are inquilines.

guevarism (gā-vär′izm), *n.* The euphuistic literary style which originated in imitation of that of the Spanish writer Antonio de Guevara (1490–1545).

> At the close of Berner's 'Golden Boke' is a passage applauding the "swete style" of "the sentences of this booke." . . . Most probably this "envoy" in praise of *Guevarism* was written by Sir Francis Bryan.
>
> *S. L. Lee*, in Athenæum, July 14, 1883, p. 50.

guevarist (gā-vär′ist), *n.* An imitator of the literary style of Antonio de Guevara.

guglia (gö′lyä), *n.* [It. *guglia*, orig. *aguglia*, a needle, an obelisk, etc., < ML. *acucula*, L. *acicula*, a needle: see *acicula*, *aiguille*, *aglet*.] In *Ital. arch.*, a decorative obelisk, or upright shaft, used as a monument.

Guiana chestnut. See ★*chestnut*.

Guiano-Brazilian (gē-ä″nō-bra-zil′ian), *n.* In *zoögeog.*, a subregion proposed by Sclater which includes the greater part of South America, east of the forests of the Andes, between the Isthmus of Panama and lat. 30° S., as well as Trinidad.

guib (gwib), *n.* [See *guiba*.] The harnessed antelope, *Tragelaphus pictus*.

Guichen shales. See ★*shale*[2].

guide, *n.*, **6.** (*e*) *pl.* In an engine, the rods on which, or the surfaces between which, the cross-head of the piston slides: usually called *cross-head guides*.

8. In *surg.*: (*a*) A filiform bougie passed through a stricture of the urethra or other canal, over which a tunneled sound of larger size is passed. See *tunneled*. (*b*) A sound, grooved in its convexity, which is passed through the urethra into the bladder and against which the point of the knife is directed in operations upon the prostatic urethra.

guide-blade (gīd′blād), *n.* A vane or blade, usually thin, placed in the path of a fluid to guide it in a certain direction. Such guide-blades are used in steam and water turbines properly to direct the current of steam or water against the moving blades.

guide-board (gīd′bōrd), *n.* A board containing directions to travelers, set up at points on the highway or in the woods where paths diverge.

guide-curve (gīd′kèrv), *n.* Same as ★*guide-blade*.

guide-fossil (gīd′fos′il), *n.* A fossil species regarded as specially characteristic of a given geological formation, horizon, or fauna; an index-fossil.

guide-iron (gīd'i″ėrn), *n.* A piece of iron rod which, having been bent to the contour of a curved pipe-pattern, is used as a guide by which the core-maker strickles up its core without the use of a core-box. *Lockwood.*

guide-lay (gīd'la), *n.* See ★*side-lay.*

guide-mill (gīd'mil), *n.* A rolling-mill in which the smaller sizes of iron or steel bars are rolled. It is fitted, in front of the passes, with guides, so that the billets or rods shall be presented correctly to the nip of the rolls.

guide-pin (gīd'pin), *n.* **1.** A pin that perforates or defines the position of paper in the process of printing, to guide the proper placing of the sheet for following impressions on that paper.—**2.** One of a set of pins used to hold the hub and felly of a wheel in a concentric position while they are being worked.

guide-plate (gīd'plāt), *n.* **1.** In *textile manuf.*, an iron plate, perforated with holes, for guiding several ends of sliver through the drawing-frame. *Nasmith*, Cotton Spinning, p. 173.—**2.** A plate which holds the axle-box of a locomotive in position longitudinally, while permitting it to slide up and down.

guide-pulley, *n.* **2.** In *oval-turning*, a pulley for driving the guide or model at the same speed as the blank which is being turned.

guide-ring (gīd'ring), *n.* In *angling*, a metal ring attached to a fishing-rod, through which the line runs.

guide-straight (gīd'strāt), *n.* In *projective geom.*, any straight of one ruled system on a ruled surface with reference to another ruled system (of which it is said to be a guide-straight).

guide-wheel (gīd'hwēl), *n.* A wheel which is provided for the purpose of guiding a moving structure, rather than of supporting its weight; a pilot-wheel.

The boats are furnished with a hinged device at both ends and provided with *guide-wheels* to roll on, and at each side of the outer rail, so that they are kept at a proper distance from the track.
Sci. Amer. Sup., April 18, 1903, p. 22214.

Guignardia (gwig-när'di-ä or gēn-yär'di-ä), *n.* [NL. (Viala and Ravaz, 1892), named for L. *Guignard*, a French botanist.] A genus of pyrenomycetous fungi of the family *Mycosphærellaceæ*. The perithecia are membranous and are embedded in the tissue of the host; the spores are ellipsoid or spindle-shaped and hyaline. The species are numerous, occurring chiefly on leaves. The pycnidial condition of some species is known to correspond to species of *Phoma* of the *Fungi Imperfecti*. *G. Bidwellii* causes one of the most destructive diseases of the grape, known as *black rot*. See *rot*, 2 (*b*), and *grape-rot*.

Guignardia Bidwellii.
a, portion of epidermis of a grape showing pustules with pycnidia of the *Phoma* stage of black rot and the spores escaping in gelatinous worm-like masses (enlarged); *b*, portion of a pycnidium showing free spores and the basidia upon which they were borne (highly magnified); *c*, section of a mature asci-containing perithecium showing numerous asci (highly magnified); *d*, two separate asci containing spores (highly magnified); *e*, separate ascospores (more highly magnified).

guild-tree (gild'-trē), *n.* The European barberry, *Berberis vulgaris*, naturalized in the United States.

Guillaume alloy. Same as ★*invar.*

guillotine, *n.* **4.** A machine for breaking iron by means of a falling weight.

guillotine-shears (gil'ō-tēn-shērz), *n.* A heavy type of shearing-machine: used principally for the cutting up of puddled bars and slabs ready for piling. The shears are similar to those of ordinary shearing-machines, but are parallel to the plane of machine framework instead of being set transversely. *Lockwood.*

Guilty ball. See ★*ball*[1].

guinara (gē-nä'rä), *n.* [Philippine Sp., from an undetermined native name.] In the Philippine Islands, a rather coarse stiff cloth made from the fibers of Manila hemp. *Gaz. Philippine Is.*, 1902, p. xxxiv.

guinea, *n.* **4.** An Italian. [Slang, eastern U. S.]—**Military guinea,** the English guinea of 1813. —**Third of a guinea,** an English gold coin, of the value of seven shillings, struck in the time of George III.

guinea-boat (gin'ē-bōt), *n.* A fast galley, propelled by oars, used in former times to smuggle gold across the English Channel.

guinea-fowl, *n.* **Guinea-fowl wood,** either one of two small trees of the family *Myrsinaceæ*, *Badula Barthesia* and *B. insularis*, natives of Mauritius: so called from the glandular punctate leaves and dotted flowers.

guinea-keet (gin'ē-kēt), *n.* A guinea-hen. [Southern U. S.]

guinea-pig, *n.* **4†.** A junior midshipman in the East India service.—**Abyssinian guinea-pig,** a fanciers' name for a rough-coated breed somewhat larger than the ordinary guinea-pig.—**Peruvian guinea-pig,** a modern breed with long, silky hair.

guinea-red (gin'ē-red), *n.* See ★*red*[1].

guinea-violet (gin'ē-vī″ō-let), *n.* See ★*violet*[1].

Guipure d'art, linen net upon which are worked raised patterns.—**Guipure de Flanders,** a pillow-lace of the guipure-lace order, ornamented with floral designs connected by bars and brides.

guisaro (gē-sä'rō), *n.* [Native name.] In Central America, a tree of the myrtle family, *Psidium molle*, related to the guava. It bears small, acid fruits having the flavor of strawberries.

guitar-fiddle (gi-tär'fid'l), *n.* An early form of viol, preceding the violin, the body of which was flat like that of a guitar. It had five strings, of which the two highest were usually tuned in unison.

guitar-fish (gi-tär'fish), *n.* A shark-like ray of the family *Rhinobatidæ*, inhabiting warm seas; specifically, *Rhinobatus productus*.

guitar-plant (gi-tär'plant), *n.* *Tricondylus tinctorius*, a small Tasmanian shrub of the family *Proteaceæ*, often cultivated for its ornamental foliage. The mealy dust which clothes the seeds yields a rose-colored dye when infused in water.

guitarro (gē-tär'rō), *n.* [Sp., < *guitarra*, a guitar.] The Spanish name of *Rhinobatus percellens* and of other species of guitar-fish.

guitar-violoncello (gi-tär'vē″ō-lon-chel'ō), *n.* Same as ★*arpeggione.*

gulash (gö'lash), *n.* [Also *goulash*, *goulasch*, etc., < Hung. *gulyas-hús*, lit. 'shepherd's meat'; *gulyas*, shepherd, herdsman (< *gulya*, herd); *hús*, flesh.] A Hungarian stew of beef, veal, potatoes, etc., highly seasoned.

guldan (gul'dän), *n.* [Pers. **guldān*, < *gul*, flower, rose, + *dān*, holding.] A Persian flower-vase, one form of which is provided with several tubes arranged around the central opening.

gulden, *n.*—**Gold-gulden,** a gold florin current in Germany and the Low Countries from the fifteenth to the eighteenth century.—**St. Andries gulden,** a gold coin of the count of Holland in the fifteenth century.—**St. Maartens gulden,** a gold piece struck by the bishops of Utrecht in the fifteenth century.

gulix (gū'liks), *n.* [Pl. of *Gulik* (sc. *linens*), so called from D. *Gulik*, G. *Jülich* (F. *Juliers*), a town in Prussia.] A linen fabric of fine texture used for shirts.

gull[2], *n.*—**Franklin's gull,** *Larus franklini*, a small species which has, in the breeding plumage, a hood of dull black encircling the head and upper neck, and the blue of the back darker than in Bonaparte's gull. It is about 14 inches long and 35 in spread of wing. Abundant in the central and western United States.

gulleter (gul'et-ėr), *n.* In *angling*, a tool for extracting a fish-hook from a fish's gullet.

gullet-tooth (gul'et-töth), *n.* In a circular saw having inserted teeth, a single tooth adapted to a gullet-saw blade. See *gullet-saw.*

gull-grass (gul'gras), *n.* The goose-grass, *Galium Aparine*.

gully[1], *n.* **3.** A catch-basin.

gully-drain (gul'i-drān), *n.* A pipe or drain which extends from a street drainage catch-basin, catch-pit, or gully.

gully-drainage (gul'i-drā″nāj), *n.* The drainage-water, sewage, or other refuse water passing through a gully.

gully-raker (gul'i-rā″kėr), *n.* **1.** A long whip.

As the day wore on, they overtook bullock-drays lurching along heavily, . . . the driver appealing occasionally to some bullock or other by name, following up his admonition by a sweeping cut of his "*gully-raker*," and a report like a musket-shot.
A. C. Grant, Bush-Life in Queensland, I. 40.

2. A cattle-thief. [Australian slang in both senses.]

gully-root (gul'i-röt), *n.* In the West Indies, the roots of the guinea-hen weed, *Petiveria alliacea*, which are used locally as medicine. See *Petiveria.*

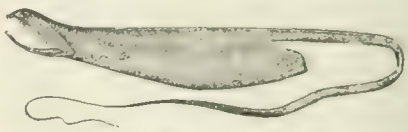
gully-squall (gul'i-skwâl), *n.* A violent wind of short duration, from the mountain ravines of tropical America, sometimes experienced in the Pacific Ocean.

guloc (gö'lok), *n.* Same as *machete.* Also *golok.*

gulonic (gū-lon'ik), *a.* [*gul(ose)* + *-one* + *-ic.*] Related to gulose. **Gulonic acid,** a colorless compound, $C_6H_{12}O_7$, isomeric with dextronic acid. It passes very rapidly into its anhydrid, $C_6H_{10}O_6$.

gulose (gū'lōs), *n.* [Formation not ascertained.] A colorless syrupy sugar, $C_6H_{12}O_6$, unfermentable by beer-yeast. It is produced by the reduction of gulonic acid.

gulper (gul'pėr), *n.* A deep-sea eel, *Saccopharynx ampullaceus*, and other species of the


Gulper (*Saccopharynx ampullaceus*).
(From Bulletin 47, U. S. Nat. Museum.)

family *Saccopharyngidæ*, remarkable for the extraordinary extension of the gape.

gulpin (gul'pin), *n.* [Perhaps orig. **gulp-in*, one who would 'gulp in' or swallow anything told him.] One who swallows without question whatever he hears; a simpleton or credulous person; among sailors a 'marine.'

gum[2], *n.*—**Alk gum.** Same as *Chian turpentine.* See *Chian.*—**Amrad gum,** a white, yellow, or brown substitute for gum arabic obtained from the Abyssinian highlands, probably derived from *Acacia scorpiodes.* It has a sweetish taste and a resinous smell.—**Animal gum,** a complex organic substance, obtained from mucin, which on decomposition yields a carbohydrate that is not fermentable but reduces metallic oxids. It was discovered by Landwehr. The supposed formula is $(C_6H_{10}O_5)_2$.—**Artificial gum.** Same as *dextrine.*—**Babul gum,** a crude gum arabic obtained from *Acacia scorpiodes.* Also called *Bengal gum* and *Gond babul.*—**Bauhinia retusa gum.** Same as *Bauhinia variegata* ★*gum.*—**Bauhinia variegata gum,** a gum which resembles Indian gum arabic but is not very adhesive.—**Beet-root gum,** a gum separated from the juice of the beet-root: it forms a jelly with water.—**Botany Bay gum.** (*b*) *Eucalyptus resinifera.* See *ironbark-tree.*—**Brittle gum,** the brittle, white gum exuded by *Acacia albida* of North Africa.—**Brown gum,** *Eucalyptus robusta.* **Buchanania latifolia gum,** a clear resinous gum which resembles gum arabic but is only slightly adhesive in solution.—**Cadie gum.** Same as *gamboge.*—**Cape gum,** an amber-brown gum from the *Acacia horrida* of Cape Colony.—**Desert gum,** *Eucalyptus eudesmodes* and *E. gracilis.*—**Fever-gum,** the blue-gum, *Eucalyptus Globulus.* See *fever-tree*, 1.—**Galam gum,** a brittle whitish resin obtained from acacia. It is used in the arts.—**Gum archipin,** a name applied in Mexico to several gum-resins derived from species of *Terebinthus.* See ★*cuajote*, 2.—**Gum asphaltum.** See ★*asphaltum.*—**Gum-bichromate process.** See ★*process.*—**Gum dammar.** Same as *dammar-resin.* —**Gum disease.** Same as ★*foot-rot*, 2.—**Gum myrrh.** See *myrrh*, 1.—**Irish-moss gum,** the characteristic gum from Irish moss, *Chondrus crispus.*—**Lactic fermentation gum.** Same as *dextran.* **Leio gum,** a roasted potato starch.—**Manila gum,** a resin of unknown botanical origin, resembling copal and dammar, soluble for the most part in alcohol and readily fusible: used in making insulating varnishes.—**Marsh-mallow gum,** a gum closely resembling tragacanth.—**Mountain gum,** *Eucalyptus tereticornis.*—**Mucic fermentation gum.** Same as *dextran.*—**Mule-gum,** a technological name for Ceara rubber on account of its deficiency in elasticity. See *india-rubber*, 1.—**Orange-gum,** a tree of the myrtle family, *Angophora lanceolata*, native of Australia.—**Peppermint-gum,** *Eucalyptus viminalis.* See *woolly-but* and *manna*, 4.—**Quince gum,** a member of the class of amyloid gums which are distinguished from others by giving a blue color with iodine solution, as starch does, whence the name.—**Ribbon-gum,** one of the peppermint-trees, *Eucalyptus amygdalina.* See *swamp-gum* and *stringy-bark.*—**River-gum,** *Eucalyptus rostrata.* See *red-gum* and *swamp-gum.*—**Rusty gum,** *Eucalyptus eximia.*—**Scrub-gum,** *Eucalyptus cosmophylla.* **Sennaar gum,** the choicest white variety of gum arabic. Also called *picked Turkey gum.* See *gum arabic.* **Seraphic gum.** Same as *sagapenum.* **Sour-gum.** (*a*) See *sour-gum.* (*b*) The sorrel-tree, *Oxydendrum arboreum.*—**Spruce-gum,** the black spruce, *Picea Mariana*; also the gum obtained from this tree.—**Star-leaved gum,** the sweet gum, *Liquidambar Styraciflua*: so called from the star-shaped leaves.—**Sugar-gum.** (*a*) See *sugar-gum.* (*b*) The cider-gum or cider-tree, *Eucalyptus Gunnii.* **Swamp gum.** See *swamp-gum.* **Tuno gum,** see ★*tuno.*—**Tupelo gum.** Same as *tupelo.*—**Turpentine-gum.** Same as *American thus* (which see, under *thus*[2]).—**Water-gum.** (*a*) Any one of three trees of the myrtle family, *Callistemon lanceolatus*, *Tristania laurina*, called also *bastard box*, and *T. neriifolia.* (*b*) The *water-tupelo* (which see).—**Weeping-gum,** the woolly-but, *Eucalyptus viminalis*, in New South Wales, and *E. pauciflora* in Tasmania.—**White gum.** (*a*) See *white*[1]. (*b*) The sweet gum, *Liquidambar Styraciflua.* —**Wood-apple gum,** a substance, resembling gum arabic, collected as an exudation from the Indian tree, *Feronia elephantum.* It is met with in Europe as an adulterant of gum arabic, and by Indian native physicians is used as a demulcent remedy in the treatment of diarrhea and dysentery. Known in India as *kathbel.* **Wood-gum,** a gum applied to tragacanth and resembling cherry-tree gum, extracted from birch, ash, alder, oak, beech, and willow. It yields xylose when hydrolyzed.—**Yellow gum.** (*a*) The hickory-eucalyptus, *E. punctata.* (*b*) The black- or sour-gum, *Nyssa sylvatica.*

gümbelite (gim'bel-īte), *n.* [Named after C. W. *Gümbel*, a German geologist.] A glittering greenish-white silicate of aluminium, iron, and

potassium, not infrequently replacing the bituminocarbonaceous film of the graptolites. It may be an impure pyrophyllite.

gumbo[1], *n.* **4.** A type of soil in the southern and western United States which forms a tough, dark-colored mass in a high degree plastic and clay-like, yet sometimes consisting chiefly of silt or very fine sand. It is very sticky and difficult to till when wet, and when dry breaks into hard cubondal lumps. See ★*gumbo clay.*—**Gumbo clay,** a clay which resembles the gumbo of the Mississippi valley, a stratified boulder-clay of the lower till. From the known characters of this material, the term is less precisely applied to any dense, massive, or stratified clay of marked plasticity, especially those forming the subsoil layers of many farming districts.

gum-box (gum′ boks), *n.* In southern Chile, *Escallonia macrantha*, an aromatic evergreen shrub with resinous-dotted simple leaves and red flowers. An infusion is made from the leaves and flowers which is administered as a tonic and carminative, and a balm is made with oil for dressing wounds. Also called *siete camisas.*

gum-digger (gum′dig″ėr), *n.* A person engaged in digging fossil resin of the kauri pine, which is used in the manufacture of varnish. [New Zealand.]

gum-disease (gum′di-zēz″), *n.* A disease of the bark of orange-trees. See ★*gummosis*, 2.

gum-field (gum′feld), *n.* In New Zealand, an area where kauri-gum may be found.

gum-flower (gum′ flou″ėr), *n.* An artificial flower. [Scotch.]

gum-flux (gum′fluks), *n.* Same as ★*gummosis*, 2.

gumi (gō′mi), *n.* [Jap.] The Japanese name of *Elæagnus longipes*, a bush that is now cultivated in the United States, prized both for its ornamental character and for the edible cranberry-like fruits.

gum-lancet (gum′lân″set), *n.* An instrument for incising the gum over a tooth, or for pushing back the gum so as to free the neck of a tooth about to be extracted. See *lancet.*

gumma-bush (gum′ä̈-bûsh), *n.* [West Indian negro *gumma*, supposed to be of African origin, + *bush*[1].] The black nightshade, *Solanum nigrum*, which is used as a pot-herb by the negroes.

gummer, *n.* **2.** A workman whose business it is to use the gummer in widening the spaces between the teeth of a saw.

gummic (gum′ik), *a.* [NL. ★*gummicus*, < L. *gummi*, gum.] Pertaining to or derived from gum or gummic acid.—**Gummic acid.** Same as *arabin.*

gummose[1] (gum′ōs), *a.* [NL. ★*gummosus*, < L. *gummi*, *gummus*, gum: see *gum*, *n.*] Gummy; gummatous.

gummose[2] (gum′ōs), *n.* [*gum* + chem. *-ose.*] An unfermentable reducing sugar, produced by the hydrolysis of mucin.

gummosis, *n.* **2.** An abnormal production and flow of gum from cracks or wounds of trees. Apricots, cherries, and plums are especially subject to this disease. Fungi and bacteria are frequently found in the affected tissues and gum and are believed by some authors to be the cause of the pathological conditions. Also called *gum-flux* and *gum-disease.*

gum-shoe (gum′shō), *n.* A shoe made of gum, that is, india-rubber; a rubber overshoe. [Colloq., U. S.]

gum-shrub (gum′shrub), *n.* In St. Helena, *Commidendrum rugosum*, one of the shrubs there called *gum-wood.* See *scrubwood* and *gum-wood*, 2.

gum-succory (gum′suk″ō-ri), *n.* See *succory.*

gum-sucker (gum′suk″ėr), *n.* A person of European descent born in the Colony of Victoria, in Australia. [Australia; now rare.]

gum-swamp (gum′swomp), *n.* In the southeastern United States, a swamp, or more commonly an area in a large swamp, in which the black-gum or sour-gum, *Nyssa sylvatica*, or any other species of *Nyssa*, is the dominant tree. In the Dismal Swamp these areas are distinguished from the juniper-swamps.

gum-thistle (gum′this″l), *n.* A spiny, cactus-like plant of Morocco, *Euphorbia resinifera*, which yields an acrid, poisonous gum-resin, and is often seen in cultivation. See *euphorbium*, 1, and cut at *Euphorbia*, 1.

gum-tooth (gum′tōth), *n.* A molar tooth.

gum-wax (gum′waks), *n.* The balsamic exudate from the sweet gum, *Liquidambar Styraciflua.*

gum-weed (gum′wēd), *n.* **1.** The gum-plant, *Grindelia* (which see; also ★*Grindelia*).—**2.** A weed of the Great Plains, *Lygodesmia juncea*, of the *Cichoriaceæ*. It is a rigid, branching, skeleton-like plant with most of the leaves very small or reduced to scales.

gun[1], *n.* **7.** A professional criminal; a thief; a pickpocket. [Thieves' cant.]

No one knows absolutely how many *guns* there are in New York; the Front Office itself could not tell for a certainty the number of first-class thieves who are on the streets at this moment; but it is a generally accepted fact among the *guns* themselves that every day in the week there are enough grafters in the city to people a good-sized county-seat. *McClure's Mag.*, XVI. 571, 572.

Automatic gun, a gun, generally of small-arms caliber, in which the recoil or the pressure of the powder-gases may be utilized, after the first round (by actuating the proper lever), to perform continuously all the operations of loading, firing, and ejecting the cartridge-case. The cartridges are fed from belts, and very great rapidity of aimed fire may be attained. See *pompom.*—**Barisal guns,** a mysterious booming noise, as of a distant cannon, heard off the coast near Barisal, India, the nature of which is not yet clearly understood. Similar noises off the coast of Holland are there known as *mistpoffers.* In both places they occur in foggy weather. Analogous sounds are often reported from the coasts of Nova Scotia, New Brunswick, and Florida, and from Seneca Lake, New York, where they are known as the *Seneca Lake guns.* Various plausible explanations have been suggested, but nothing has as yet been demonstrated.—**Bofors guns,** a gun of Swedish manufacture, built up of steel castings, having a breech-mechanism and mounted on a carriage of such design that the action may be semi-automatic.—**Built-up gun.** See *gun*[1]. The largest piece is the central tube, which extends throughout the length of the gun. Upon this tube is shrunk a series of jackets and hoops, the most important one of which is the jacket that covers the rear part of the tube from a third to half its length. In modern guns, the threads for the breech-plug are cut in this jacket. The number of hoops and jackets varies with the size and type of gun.—**Canet gun,** a gun manufactured in France on the system of M. Canet. It does not differ materially from other built-up guns, but, with its special mounting, is designed to give high initial velocity and rapid fire.—**Converted gun,** a muzzle-loading gun which has been changed to a breech-loading gun.—**Creusot gun,** a gun manufactured at the Schneider works in Le Creusot, France. The firm manufactures built-up guns of all calibers for any service.—**Crozier wire-wound gun,** a gun composed of a heavy tube wrapped with steel wire. The special feature of its construction is the initial compression of the tube beyond the elastic limit of the metal.—**Disappearing gun,** a gun mounted on a disappearing gun-carriage. See ★*gun-carriage.*—**Dismountable gun,** a gun for mountain service or for the use of naval landing-parties, so designed that it may readily be taken apart for transportation by pack-train and for easy handling.—**Ericsson gun,** a cannon built up by forcing on thin rings under pressure.—**Gathmann gun,** a comparatively short cannon of large caliber, specially designed for firing the Gathmann projectile, which is filled with guncotton as a bursting-charge.—**Gun down,** in *trap-shooting*, said of a gun when it is held in such a position that the butt is below the shooter's elbow.

Shooting to begin at 2 P. M. sharp. First cup, 25 birds, handicap, "*gun down.*"
Forest and Stream, Jan. 24, 1903, p. 79.

Hooped gun, a gun in which the central tube or barrel is reinforced by hoops shrunk on the outside.—**Hotchkiss gun,** a gun manufactured at the Hotchkiss works in St. Denis, France; especially, a revolving cannon, and also the mountain- or field-gun of this manufacture. See *machine-gun*, *mountain-artillery*, under *artillery*, and *field-gun.* **Lancaster gun,** a piece of ordnance, patented in the year 1850, having an elliptical bore and increasing twist. It proved to be a failure, since the projectile exerted a wedging action.—**Life-line gun,** a gun about the size and pattern of a cavalry carbine, used to throw a life-line to the top of a burning building to save life imperiled there.—**Maxim gun.** See *machine-gun.*—**Naval gun,** a cannon mounted on board a war-ship or used by the naval forces of a country.—**Nordenfelt gun.** See *machine-gun.* **Rapid-fire gun,** a breech-loading gun of from 1½ to 8 inches caliber which uses metallic ammunition. Each type is designated by the name of the inventor of the breech-loading system used, as the Gerdom, Fletcher, Seabury, Dashiel, Canet, Schneider, Armstrong, Driggs-Schroder, Maxim-Nordenfelt, Hotchkiss, Gruson, and others.—**Semi-automatic gun,** a cannon of small caliber in which the recoil may be utilized to open the breech, thus saving the time necessary to perform this operation by hand and permitting more rapid firing.—**Seneca Lake guns.** See *Barisal* ★*guns.*—**Sims-Dudley pneumatic gun,** a powder pneumatic gun, the best-known form of which consists of three parallel tubes, of which the center one is much longer than the other two. Both the center and right-hand tubes open at the breech, the former for the introduction of the projectile and the latter for the powder charge. In action, the powder is exploded in the right barrel and the gases pass to its front end, then across to the left barrel, and are finally admitted behind the projectile in the center barrel, mixed with the air in the two side barrels which has been compressed by the process. Shells containing sensitive high explosives can thus be discharged without sufficient shock to cause explosion.—**Subcaliber gun,** a small cannon, generally about 1½ to 3 inches in caliber, placed axially in the chamber of a cannon of large caliber to be fired in target-practice. The arrangement is such that the breech-mechanism of the large gun is operated, and the object of its use is to permit considerable practice without the great expense and wear attending the firing of the large cannon. Also, a small-arms barrel placed, for the same purpose, in the chamber of a field- or siege-gun.—**To lay a gun,** to give a gun the proper elevation and direction to hit an object; aim or point. **Under the gun,** in *poker*, said of the first man to bet—the player immediately to the left of the age.—**Vickers-Maxim mountain-gun** a mountain-gun of medium power, easily dismounted and having a well-designed pack outfit for gun, carriage, and ammunition.

gun[1], *v.* **II.** *trans.* In *forestry*, to aim (a tree) in felling it. In the case of very large, brittle trees, such as the redwood, a sighting device, called a *gunning-stick*, is used.

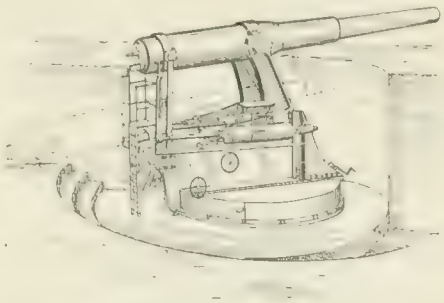
guna, *n.* **2.** In the *Sankhya philos.* of India, one of the three constituents of the primal matter out of which the world is evolved. See the extract.

The originator of the Sankhya doctrine believed that he recognized in the world of matter three substances or constituents (*gunas*, usually, and very erroneously, rendered by "qualities"), unequal, and mingled in varying proportions: of which the first exhibits the characteristics of lightness, of light, and of delighting; the second, those of mobility, of excitation, and of pain-giving; the third, those of heaviness, of obstruction, and of stupefaction. . . . The undeveloped primeval matter is accordingly the condition of equilibrium of the three *gunas.*
R. Garbhe, Sānkhya, in Univ. Cyc., VII. 297.

gun-bed (gun′bed), *n.* In *ordnance*, the platform or wood planking on a deck which supports a gun-mount.

gun-bright (gun′brīt), *n.* The common scouring-rush, *Equisetum hyemale*, used in polishing guns.

gun-carriage, *n.*—**Disappearing gun-carriage,** a gun-carriage so arranged that the gun after being fired descends, under the influence of the force of recoil, to the loading position behind the protection of the parapet, where it can be maneuvered without exposing the gun detachment to the enemy's fire. During the recoil of the gun sufficient energy is stored up, by means of a counterweight or by air-compression, to raise the gun to firing position when released. The *Buffington-Crozier disappearing gun-carriage* has been adopted for the sea-coast



Disappearing Gun-carriage with Gun in Firing Position.
Loading position shown in dotted outline.

service of the United States. The gun is mounted upon levers trunnioned in a top carriage which rolls back under the force of recoil. The lower ends of the levers are compelled to move between vertical guides and raise a counterweight. The constrained motion on two lines approximately perpendicular to each other, thus causing the gun to describe an arc of an ellipse in recoiling, is the mechanical principle of the carriage.—**Hydraulic-recoil gun-carriage,** in *ordnance*, one in which the recoil of the gun, when fired, is gradually resisted by pistons in cylinders filled with liquid. See ★*gun-mount.*

gun-case (gun′kās), *n.* A covering for protecting a gun, generally of cloth or leather: sometimes provided with a handle for carrying the gun when it is not to be used.

gunda (gun′dä̈), *n.* [Hind. *gaṇḍa*, *guṇḍa*, Beng. *gaṇḍá*].] A copper coin of Bengal of the value of 4 cowries, or one twentieth of an anna.

gun-fence (gun′fens), *n.* See *fence.*

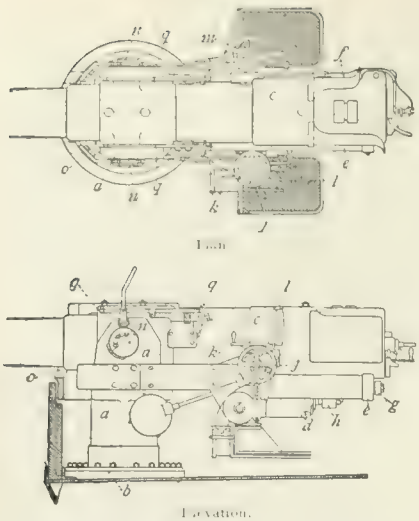
gun-fire, *n.* **2.** The discharge of small arms or cannon.

gun-layer (gun′lā″ėr), *n.* One who lays or aims a gun; gun-pointer. [Eng.]

Expert *gun-layers* and well-drilled detachments are thus of cardinal importance. *Encyc. Brit.*, XXVIII. 453.

gun-money (gun′mun″i), *n.* **2.** Prize-money, reckoned at so much per gun, given to the captors of an enemy's ship of war that had been destroyed or deserted in fight. *Admiral Smyth*, Sailor's Word-book.

gun-mount (gun′mount), *n.* In *ordnance*, the ensemble of the mechanism, placed on a platform or deck, or in a turret, by which a gun is supported and manipulated. In a modern deck-mount, the principal parts are the pedestal or stand and the top-mount or -carriage. The pedestal or stand is the lower fixed part, permanently bolted to the platform or deck. Upon it the top-carriage turns on a vertical axis to train the gun. The top-carriage includes the gun-cradle or -saddle and the sleeve. The sleeve has trunnions forming a horizontal axis by which it is supported in the saddle, and the gun carried in the sleeve can be elevated or depressed by the elevating gear which connects the sleeve to the saddle. The sleeve carries the hydraulic recoil-cylinders, which check the recoil of the gun through the sleeve when fired, and the springs, which return the gun to its normal position in the sleeve. In a turret-mount, the turret support or foundation on which it rotates replaces the pedestal; the turret itself, with its gun-girders, is equivalent to the saddle. Attached to the girders are heavy steel castings, called *deck-lugs*, which are equivalent to the upper part of the saddle. They have in their upper parts trunnion-bearings to receive the trunnions on the sleeve which carries the gun. The sleeve is of the same general character as that of a deck-mount



Plan.

Elevation.

Central Pivot Gun-mount for 6-inch Rapid-fire Gun.

a, top-carriage saddle; *b*, pedestal or pivot (the only part of the pedestal showing in the cut is the deck-flange, the remainder being in the interior of the top-carriage); *c*, cylindrical sleeve; *d*, hydraulic recoil-cylinder; *e*, *f*, spring return-cylinders; *g*, projecting arm by which gun is attached to spring return-rods; *h*, projecting arm by which gun is attached to recoil-cylinder piston-rod; *j*, hand-wheel for elevating gear; *k*, hand-wheel for training gear; *l*, shoulder-piece; *m*, auxiliary training-wheel; *n*, *n*, trunnion bearings; *o*, gun-shield; *q*, *q*, gun-sights.

described above. (See cut under ★*turret*.) The rapid progress of invention in guns and gun-mounts has resulted in a large number of types, and uncertainty and variety in the nomenclature of the parts.

gunnage, *n.* 2. Same as ★*gun-money*, 2.

gunnarite (gun′ar-īt), *n.* [*Gunnar*, a Swedish name, + *-ite*[2].] An iron-nickel sulphid, perhaps $3FeS_2.2NiS$, occurring with pyrrhotite in Sweden.

gunnel[2] (gun′l), *n.* [*gunnel*[1], *n.*] A name of the elongate blennies, found on the rocky coasts of the North Atlantic and North Pacific, belonging to the genus *Pholis*. The best-known of these fishes in the North Atlantic is *P. gunnellus*.

Gunnellops (gun′e-lops), *n.* [NL., ⟨ *Gunnellus*, + Gr. ὤψ (ὠπ-), eye, face.] A genus of blennies, small fishes allied to *Pholis*, found in the North Pacific.

Gunner's daughter, a name formerly given to the broadside gun to which offenders were secured before being lashed or otherwise punished.—**To marry the gunner's daughter**, to be bound to the 'gunner's daughter.'—**Gunner's gang**, the gunner and his mates whose duty it is to keep the guns and mounts clean and in good order.—**Gunner's tailor** (*naut.*), formerly, the man who made the cartridge-bags for the guns.—**Master gunner**, one of the warrant-officers in the British service.

gunning-stick (gun′ing-stik), *n.* A stick used in guiding the fall of a tree. See ★*gun*[1], *v. t.*

gunny-sack (gun′i-sak), *n.* Same as *gunny-bag* (which see, under *gunny*).

gun-pointer (gun′poin″tėr), *n.* The member of a gun's crew whose duty it is to keep the gun pointed at the target and to fire it. In modern methods of gun-practice, the pointer keeps his eye continuously at the sight and manipulates the training and elevating gear to keep the gun continuously aimed at the target notwithstanding the rolling of the vessel.

gunpowder, *n.*—**Smokeless gunpowder**, a substitute for gunpowder which gives off little or no smoke when discharged in a gun and develops increased velocity in the projectile without increased pressure in the gun. It consists in general of an oxidizing agent and a substance added to regulate the explosive force. This latter is technically called a deterrent. Smokeless powders are classified according to the oxidizer used: (1) Picric-acid powders (these are not generally stable); (2) ammonium-nitrate powders (these are highly hygroscopic); (3) guncotton powders; (4) nitroglycerin and guncotton powders. The first two classes have practically been abandoned. Smokeless powders are designated from their appearance, the name of the inventor, or arbitrarily, as *cordite*, *Peyton*, *poudre B.*, etc.

gunpowder-engine (gun′pou-dėr-en″jin), *n.* An internal-combustion motor of early design in which the fuel to supply heat and expand the air in the mixture behind the working-piston came from a charge of gunpowder introduced at each stroke behind the piston and fired. It was noisy and impossible to regulate closely, and the sudden shocks from the explosion of the power made frequent repair necessary. The gasification of the solid material in the gunpowder produced high pressures from small quantities of powder.

gunpowder-hammer (gun′pou-dėr-ham″ėr), *n.* A device for driving piles by exploding gunpowder on top of a piston on whose rod is attached a hammer-head or tup, which is thus driven downward against the top of the pile with great force.

gun-sen (gön′sen″), *n.* [Jap.] In Japan, a large iron-framed folding fan used for signaling and as a weapon of defense.

gun-shield (gun′shēld), *n.* In *ordnance*, an armored shield attached to and turning with the top-carriage of a gun: designed to protect the mechanism and the gun's crew. Such shields are of varied size and shape, in some cases approaching the dimensions of a turret, except that the shield is relatively of thinner armor and is open at the back. See cut under *shield*, 2 (*a*).

gun-sight (gun′sīt), *n.* The rear sight of a small arm or cannon, marked with graduations corresponding to various ranges. See *sight*[1], 12 (*c*).

gun-spaniel (gun′span″yel), *n.* A spaniel used in the field in shooting game.

Gun-stock deformity. See ★*deformity*.

gunter (gun′tėr), *n.* Same as *Gunter's scale* (which see, under *scale*[3]).—**According to Gunter.** See ★*according*.

gunyah (gön′yä), *n.* [Aboriginal Australian.] A shelter of the native Australians; a hut of any kind. Compare ★*goondie*.

gunyang (gön′yang), *n.* [Aboriginal Australian.] The native name of the kangaroo-apple, *Solanum aviculare*.

gurah, *n.* See ★*gora*.

gurahen, *n.* Same as ★*buranhem*.

gurgeon-stopper (gėr′jon-stop″ėr), *n.* See *stopper*, 3.

gurjunic (gėr-jö′nik), *a.* [*gurjun* + *ic*.] Of or pertaining to gurjun resin.—**Gurjunic acid**, a crystalline acid, $C_{44}H_{68}O_8$, from gurjun resin.

gurnard, *n.*—**Bearded gurnard**, *Mullus barbatus*, a fish of the family *Mullidæ*, found in European waters.—**Red gurnard**, the European species of gurnard or sea-robin, *Trigla cuculus*.—**Striped gurnard**, or sea-robin, *Prionotus evolans*, a trigloid fish found on the South Atlantic coast of the United States. Also called *sea-robin*.—**Tub gurnard**, *Trigla birundo*, a gurnard found on the coast of Europe.

Striped Gurnard (*Prionotus evolans*).
(From Bulletin 47, U. S. Nat. Museum.)

gurnet[1], *n.* 2. In Australia, the fish *Centropogon scorpænoides*, of the family *Scorpænidæ*.—**Flying gurnet**, *Chelidonichthys polyommata*, found on all the Australian coasts from New South Wales to Western Australia. It has large pectoral fins, but cannot support itself in the air like the flying-fish.

gurolite (jur′ō-līt), *n.* Same as *gyrolite*.

gusle (gös′le), *n.* [Servian *gusle*, Bohem. *housle*, = Russ. *gusli*, a fiddle, violin, ⟨ OBulg. *gaňdaň*, *gaňsti*, Russ. *gusti*, etc. (√*gond-*), play on the guitar, etc.] A Servian viol having only one string; a form of rebab.

gusli (gös′li), *n.* [Russ. *gusli*: see ★*gusle*.] A Russian zither.

gusset, *n.*, (*b*) In *iron shipbuilding*, a piece of plate of triangular form reinforcing on one side the junction of a part which meets another angularly, the gusset-plate being approximately normal to the line of the joint between the parts. See cut under ★*bracket*[1], 9 (*b*).

gusset-needle (gus′et-nē″dl), *n.* In *knitting*, a needle used for inserting a gusset, as that in a stocking.

gusset-plate (gus′et-plāt), *n.* A triangular metal plate used to join two or more pieces where they meet and form a corner or panel-point in a truss; a gusset-stay. *R. H. Thurston*, The Steam-boiler, p. 415.

gusset-stay (gus′et-stā), *n.* A triangular plate having a flange turned on two sides, which is used as a bracket-stay in the corners of a steam-boiler.

Gustatory center, image. See ★*center*[1], ★*image*.

gusto, *n.* 2. Artistic 'style' or 'taste': as, the grand *gusto* (It. *il gran gusto*), the grand style.

Gutenstein limestone. See ★*limestone*.

gut-hook (gut′hůk), *n.* A hook, made by bending a piece of wire, used for joining small round belts, as on a sewing-machine.

gutta[1], *n.*—**Guttæ Anglicanæ** ['English drops'], a preparation, composed chiefly of ammonia and alcohol, formerly employed as a cerebral stimulant.—**Gutta rosacea**, in *pathol.*, same as *acne rosacea*. See *acne*.

gutta[2], *n.* 2. A colorless pulverulent compound, $C_{10}H_{16}$, contained in gutta-percha. It begins to melt at 180° C., and loses its flexibility on exposure to air and light.—**Gutta merah** [Malay *getah merah*, 'nice gutta'], a trade-name for one of the commercial grades of gutta-percha. *Elect. World and Engin.*, March 14, 1903, p. 449.

gutta-band (gut′ä-band), *n.* In *Greco-Rom. arch.*, same as *regula*, 2.

guttajoolatong (gut″a-jö-lä′tông), *n.* [Prop. **gutta-jelatong*, ⟨ Malay *getah*, gutta, + *jelātang*, stinging nettle.] The concrete latex obtained from any one of several Malayan trees of the genus *Dyera* of the dogbane family, especially *D. costulata*. It is an inelastic, creamy-white substance which somewhat resembles gutta-percha, and is imported in large quantities into the United States for mixing with other ingredients in the manufacture of low-grade rubber-goods. Called also *jelatong* and *pontianak*.

Importations of "*gutta-joolatong*," a product of India, which is used in certain industries as a substitute for india rubber, now average more than a million pounds a month.
Elect. World and Engin., June 18, 1904, p. 1150.

gutta-milk (gut′ä-milk), *n.* The freshly exuded milky juice of *Isonandra gutta*, which on drying forms the valuable substance *gutta-percha*. *Sci. Amer. Sup.*, Feb. 28, 1903, p. 22707.

gutta-percha, *n.* 2. In *geol.*, an exceedingly fine, laminated glacial clay. [Scotland.]

guttatim (gu-tā′tim), *n.* [L. *guttatim*, ⟨ *gutta*, a drop.] Drop by drop.

gutter[1], *n.* 9. In *turpentine-making*, one of two thin bent strips of metal which are inserted in gashes cut into the face of a tree and serve to conduct resin into a cup.—**Parallel gutter**, a gutter specially built with accurately parallel sides, as distinguished from a fillet gutter or valley gutter.—**Parapet gutter**, a gutter raised upon the surface of a sloping roof near its lower edge, and usually composed of the flashing turned up against the parapet wall beyond.—**Seminal gutter**, in certain earthworms, a groove which connects the two openings of the spermiducal glands on each side of the body.—**Valley gutter**, a gutter produced by the metal flashing of the valley in a roof. Where the run of water is very great this flashing may be hollowed into a decided channel.

gutter-drift (gut′ėr-drift), *n.* Same as *gutter*[1], 5.

gutter-fillet (gut′ėr-fil″et), *n.* A cove made by flashing, as where a chimney breaks the slope of a roof and the flashing is turned up to throw the water away from the masonry.

gutterman (gut′ėr-man), *n.* Same as *swamper*.

gutter-member (gut′ėr-mem″bėr), *n.* The architectural feature made by the decorative treatment of the front or outer edge of the roof-gutter: prominent in the design in the Doric style and in some modern styles.

gutter-plane (gut′ėr-plān), *n.* A grooved plane with a rounded iron which cuts a smooth, hollow molding.

gutter-tile (gut′ėr-tīl), *n.* A tile, usually of pottery, bent to a half-circle or nearly so. Such tiles can be used with the concave side up, forming gutters, or with the convex side up, forming ridges.

gutter-tongs (gut′ėr-tôngz), *n.* A variety of roofing-tongs used in forming the gutters of a tin roof.

gutter-tree (gut′ėr-trē), *n.* 1. Same as *gaiter-tree*.—2. The red-osier dogwood or kinnikinick, *Cornus stolonifera*.

guttery (gut′ėr-i), *n.*; pl. *gutteries* (-iz). [*gut* + *-ery*.] A place where fish are gutted.

gut-tie (gut′tī), *n.* 1. A condition of cattle in which a loop or knuckle of intestine enters a tear in the peritoneum and is held between the remains of the spermatic cord and the anterior margin of the hip-bone, causing obstruction to the passage of excrement and exciting an inflammation which terminates in gangrene and death. Also called *peritoneal hernia*. *U. S. Dept. Agr.*, Rep. on Diseases of the Horse, 1903, p. 56.—2. The twisting or knotting of the bowels of animals, causing severe colicky pains. Same as *volvulus* in man.

Guttural pouch. See ★*pouch*.

gutturalism (gut′u-ral-izm), *n.* [*guttural* + *-ism*.] Guttural quality or character.

There existed of old in the language a group of words beginning with wh and wr; such as whale, wharf, . . . wrath. . . . The contagion of these examples spread to words beginning with H or R simple, and the movement was perhaps aided . . . by the desire to reassert the languishing *gutturalism* of H and . . . of R.
Earle, Philol. Eng. Tongue, ¶ 166.

gutturalize, *v. t.* 2. To impart a guttural character to; render guttural: as, to *gutturalize* a vowel.

gutturolabial (gut″u-rō-lā′bi-al), *a.* and *n.* I. *a.* Pertaining to or produced by both the throat and the lips.

II. *n.* A sound produced in this way.

gutturonasal (gut″u-rō-nā′zal), *a.* Belonging to both the throat and the nose.

gutturopalatine (gut″u-rō-pal′a-tin), *a.* Belonging to both the throat and the palate.

gutturosibilant (gut″u-rō-sib′i-lant), *a.* and *n.* **I.** *a.* Belonging to the throat, but sibilant.

II. *n.* A sound which possesses that characteristic.

gutty[2] (gut′i), *n.* [A diminutized form of *gutta-percha.*] In *golf*, the gutta-percha ball. [Slang.]

gut-weed (gut′wēd), *n.* The corn sow-thistle, *Sonchus arvensis.*

guvacine (gō′va-sin), *n.* A monacid alkaloid, $C_6H_9NO_2$, from the areca-nut. It is deposited in small lustrous crystals which melt at 271–272° C.

guvern, guverness, etc. Simplified spellings of *govern, governess,* etc.

guy[1], *n.* **Jib-boom guys,** ropes which steady the jib-boom sidewise. They lead from the outboard end of the spar to the bows of the vessel, where they are set up. **Lower-boom guys,** ropes used for steadying the swinging-boom. **Spanker-boom guy,** a rope for steadying the spanker-boom when running before the wind, so that the spar may not swing inboard when the vessel rolls deeply to windward.

guy-belly (gī′bel″i), *n. Naut.,* a rope that supports the middle part of a derrick or sheer-leg.

guy-chain (gī′chan), *n.* A chain used as a tension-brace or -guy instead of the customary rope.

guy-crane (gī′krān), *n.* A derrick; a crane which is held upright by tension-braces or-guys.

guy-peg (gī′peg), *n.* A peg, usually of wood but sometimes of metal, to which the tension-brace or -guy of a derrick, tent, etc., is made fast.

guy-rings (gī′ringz), *n. Naut.,* the iron rings of the head-block on a derrick-mast, to which the guy-ropes are secured.

guy-rod (gī′rod), *n.* A tension-brace or -stay made from a rod instead of rope, as is customary.

Guy-rods are 8 ft. x ⅝ in., provided with an eye at one end, threaded 2 in. at the other, each fitted with two nuts and one washer, and all are of wrought iron or mild steel. *Electr. World and Engin.,* Oct. 31, 1903, p. 711.

guz (guz), *n.* [Also *gaz* and *gudge*; ⟨ Hind. *gaz,* an iron bar, a ramrod, a yard-measure, a footrule, etc.; Hind. *desi gaz,* the 'native yard' (33 inches), *lambari gaz,* the 'standard yard' (36 inches); Pers. *gaz,* an ell.] A measure of length used in Hindustan and Arabia, equal to about 27 inches in Bombay, to 33 inches in Madras, to 36 inches in Bengal, to 38 inches in Mysore, to 25 inches at Mocha, and to 31.6 inches at Bagdad.

Gyalectaceæ (jī″a-lek-tā′sē-ē), *n. pl.* [NL., ⟨ *Gyalecta* + *-aceæ.*] A family of gymnocarpous lichens named from the genus *Gyalecta.*

Gymnachirus (jim-nak′i-rus), *n.* [NL., ⟨ Gr. γυμνός, naked, + ἀχειρ, ἄχειρος, without hands.] A genus of scaleless soles of the family of *Soleidæ*: found in South America.

Gymnasteria (jim-nas-tē′ri-ä), *n.* [NL., ⟨ Gr. γυμνός, naked, + ἀστήρ, star.] The typical genus of the family *Gymnasteriidæ. Gray.*

Gymnasteriidæ (jim-nas-te-rī′i-dē), *n. pl.* [NL., ⟨ *Gymnasteria* + *-idæ.*] A widely distributed family of *Stelleroidea.* It consists of phanerozonia with opposite ambulacral ossicles and unequally developed marginal plates, abactinal skeleton tessellate with irregular plates, and the whole test covered with membrane. The typical genus is *Gymnasteria.*

gymnastics, *n.* **Swedish gymnastics.** Same as *Swedish* ★*movements.*

Gymneleotris (jim-nel-ē-ō′tris), *n.* [NL., ⟨ Gr. γυμνός, naked, + ἐλέωτρις, a fish of the Nile.] A genus of small gobies with the body largely naked, found about Panama.

Gymnelinæ (jim-ne-lī′nē), *n. pl.* [NL., ⟨ *Gymnelis* + *-inæ.*] A subfamily of fishes of the family of *Zoarcidæ,* typified by the genus *Gymnelis.*

Gymnelis (jim′ne-lis), *n.* [NL., used for the proper form **Gymnenchelys,* ⟨ Gr. γυμνός, naked, + ἔγχελυς, eel.] A genus of small brightly colored eel-shaped fishes of the family of *Zoarcidæ,* found in the Arctic and Antarctic waters of the Pacific. *G. viridis* is common in Bering Sea.

gymnemic (jim-nem′ik), *a.* [*Gymnema* + *-ic.*] Noting a resinous acid extracted from the leaves of *Gymnema sylvestris,* indigenous in India. The leaves, when chewed, produce the curious effect of temporarily destroying the sense of taste as respects sweet and bitter, so that such substances as sugar and quinine become indistinguishable in the mouth. *E. B. Titchener,* Exper. Psychol., I. ii. 104.

Gymnoascaceæ (jim″nō-as-kā′sē-ē), *n. pl.* [NL., ⟨ *Gymnoascus* + *-aceæ.*] A family of simple ascomycetous fungi, named from the genus *Gymnoascus.* It has small ascocarps consisting of a thin peridium of loose hyphæ inclosing globose asci which arise as lateral branches of the ascogenous hyphæ. Simple mold-like conidia occur in many cases. See ★*Gymnoascus.*

Gymnoascus (jim-nō-as′kus), *n.* [NL. (Baranetzky, 1872), ⟨ Gr. γυμνός, naked, + ἀσκός, a sack.] A small genus of fungi of the family *Gymnoascaceæ.* They have the peridium composed of a loose layer of thick-walled much-branched hyphæ whose terminal branches are frequently pointed and sometimes hooked. The spores are simple and hyaline or bright-colored, varying from globose to spindle-shaped. *G. Reessii* occurs on dung.

gymnoblastous (jim-nō-blas′tus), *a.* Same as *gymnoblastic.*

Gymnocanthus (jim-nō-kan′thus), *n.* [NL., an error for **Gymnacanthus,* ⟨ Gr. γυμνός, naked, + ἄκανθα, spine.] A genus of fishes of the family *Cottidæ* (the sculpins), found in the North Atlantic and North Pacific. It is characterized by the absence of teeth on the vomer and by the presence of antler-like spines on the preopercle. *G. tricuspis* is found on the coast of Canada.

Gymnocarpeæ (jim-nō-kär′pē-ē), *n. pl.* [NL.] Same as ★*Discolichenes.* See *gymnocarpous.*

gymnocarpic (jim-nō-kär′pik), *a.* Having the spore-bearing surface or hymenium naked: applied by Brefeld to the *Uredinales* and *Dacryomycetales.*

Gymnoglossa (jim-nō-glos′ä), *n. pl.* [NL., ⟨ Gr. γυμνός, naked, + γλῶσσα, tongue.] A group of gastropods destitute of radula and jaws. The proboscis is prominent and in parasitic forms is used to suck the juices of the host. The group contains the families *Eulimidæ* and *Pyramidellidæ.*

gymnoglossate (jim-nō-glos′āt), *a.* and *n.* [As *Gymnoglossa* + *-ate*[1].] **I.** *a.* Having the radula hidden or absent; of or pertaining to the *Gymnoglossa.*

II. *n.* Any gastropod of the group *Gymnoglossa.*

Gymnogongrus (jim-nō-gong′grus), *n.* [NL., ⟨ Gr. γυμνός, naked, + γόγγρος, an excrescence.] A large genus of red algæ which resembles *Chondrus,* or Irish moss; it is widely distributed.

gymnoplast (jim′nō-plást), *n.* [Gr. γυμνός, naked, + πλαστός, formed.] A naked protoplasmic mass, that is, one without an inclosing wall or membrane.

Gymnosarda (jim-nō-sär′dä), *n.* [NL., ⟨ Gr. γυμνός, naked, + σάρδη, L. *sarda,* sardine.] A genus of the *Scombridæ* or mackerel-like fishes found in most tropical seas, swimming freely in the open ocean. Members of the species are smaller in size than the true tunnies, reaching a weight of 5 or 6 pounds, and are known as *small tunnies* and *oceanic bonitos.* Two species are well known, *G. alleterata* and *G. pelamis.*

Gymnosarda alleterata.
(From Bulletin 47, U. S. Nat. Museum.)

gymnosome (jim′nō-sōm), *n.* [NL. *gymnosoma.*] In *zoöl.,* one of the *Gymnosomata*; a pteropod with a naked body.

gymnospermic (jim-nō-spêr′mik), *a.* Same as *gymnospermal.*

gymnospermy (jim′nō-spêr-mi), *n.* [*Gymnosperm-ous* + *-y*[3].] In *bot.,* the state or character of being gymnospermous.

gymnospore, *n.* **2.** Specifically, in *bot.,* a spore that is naked in the sense of not being produced in a sporangium.—**3.** In the classification of Le Maout and Decaisne, a cellular cryptogamic plant in which the spores, by absorption of the mother-cell, become free in a common cavity. Their group *Gymnospores* is coextensive with the *Bryophyta.* No longer used.

Gymnosporidia (jim″nō-spō-rid′i-ä), *n. pl.* [NL., ⟨ Gr. γυμνός, naked, + σπορά, seed (spore), + dim. *-ιδιον.*] In Labbé's classification, a group of protozoan cell-parasites, which form an order or a suborder of *Hæmosporidia.* They infest warm-blooded hosts and owe their name to the fact that no resistant cysts are formed in these hosts, sporogony, so far as observed, taking place in an intermediate invertebrate host.

Gymnostomata (jim-nō-stō′ma-tä), *n. pl.* [NL., ⟨ Gr. γυμνοί, naked, + στόμα(τ-), mouth.] An order of *Ciliata* in which the mouth is usually closed except during the inception of food, and is without an undulating membrane. The pharynx, when distinctly developed, is without ciliary structures, but is usually provided with a rod-apparatus or with a modification of one. It includes the families *Chilomonadontia, Enchelina,* and *Trachelina.* Compare ★*Trichostomata.*

gymnostomatous (jim-nō-stō′ma-tus), *a.* [Gr. γυμνός, naked, + στόμα(τ-), mouth.] Having the mouth unprovided with an undulating membrane, as certain ciliate infusorians.

Gymnothorax (jim-nō-thō′raks), *n.* [NL., ⟨ Gr. γυμνός, naked, + θώραξ, chest.] A genus of morays or eels, of the family *Murænidæ,* comprising many of the largest and most ferocious members of the group. The genus is characterized by the well-developed dorsal fins and by the absence of tentacles on the posterior nostrils. There are very many species, some of them brilliantly and fantastically colored. *G. moringua* and *G. funebris* are common in the West Indies.

Gympie series. See ★*series.*

gynæcandrous, gynæcarchy, etc. See ★*gynecandrous,* etc.

gynæceum, *n.* **4.** In some countries, that part of a Christian church which is reserved for the women of the congregation.

gynandrism (ji-nan′drizm), *n.* [*gynandr-ous* + *-ism.*] The state of being monœcious or hermaphrodite.

gynandrocratic (ji-nan-drō-krat′ik), *a.* [Gr. γυνή, woman, + ἀνήρ (ἀνδρ-), man, + *-κρατία,* ⟨ κρατεῖν, rule.] Equally ruled by man and woman; characterized by social independence of each sex. *L. F. Ward,* Pure Sociol., p. 373.

gynandromorph (ji-nan′drō-môrf), *n.* [Gr. γύνανδρος, female and male, + μορφή, form.]

Insect gynandromorph: a moth (*Intermelia*), female on the left, male on the right side of the body.

In *biol.,* an animal of a unisexual species but exhibiting the anomaly of having part of the body male and part female. Gynandromorphs are most frequently found among insects.

gynandromorphic (ji-nan-drō-môr′fik), *a.* [*gynandromorph* + *-ic.*] Possessing the characteristics of gynandromorphism.

Gynandromorphic insects, in which the characters of the whole or part of one side of the body, wings and antennæ, are male, while those of the other side are female. *W. Bateson,* Study of Variation, p. 68.

gynandromorphy (ji-nan-drō-môr′fi), *n.* Same as *gynandromorphism. W. Bateson,* Study of Variation, p. 35.

gynecandrous, gynæcandrous (jin-ē-kan′drus), *a.* [Gr. γυνή (γυναικ-), woman, + ἀνήρ (ἀνδρ-), man, + *-ous.*] In *bot.,* containing both staminate and pistillate flowers, as the spikelets of some carices; androgynous. [Rare.]

The terminal spike is, in this species, nearly always *gynæcandrous. Amer. Jour. Sci.,* April, 1904, p. 308.

gynecarchy, gynæcarchy (jin′ē-kär-ki), *n.* [Gr. γυνή (γυναικ-), woman, + ἀρχή, rule. Cf. *gynarchy.*] Rule or supremacy of the female, especially the alleged mother-right or matriarchate of primitive human society. *L. F. Ward,* Pure Sociol., p. 336.

gyneclexis (jin-ek-lek′sis), *n.* [NL., ⟨ Gr. γυνή, female, + ἐκλεξις, choice; see *eclectic.*] Sexual selection through choice by the female. *L. F. Ward,* Pure Sociol., p. 361.

gynecocentric, gynæcocentric (jin″ē-kō-sen′trik), *a.* [Gr. γυνή, woman, + κέντρον, center, + *-ic.*] Centering in and depending upon the female. *L. F. Ward,* Pure Sociol., p. 296. —**Gynecocentric theory,** the view that "the female sex is primary and the male secondary" in organic life and evolution, and that the male was developed "under the operation of the principle of advantage to secure organic progress through the crossing of strains." *L. F. Ward,* Pure Sociol., p. 296.

gynecocrat, gynæcocrat (jin′ē-kō-krat), *n.* [*gynecocracy* (*-crat-*).] One who favors or upholds female government. *Fitzedward Hall,* in The Nation, LVI. 68.

gynecocratic, gynæcocratic (jin″ē-kō-krat′ik), *a.* [*gynecocracy* (*-crat-*) + *-ic.*] Organized on the basis of descent in the female line and governed by woman or by her male relatives; matriarchal.

This phenomenon may point to an original *gynæcocratic* age, such as that proposed by Töpffer in the case of the Minyadæ.
A. H. Smith, in Jour. Hellenic Studies, xiv. 250.

gynecomania, gynæcomania (jin″ē-kō-mā′ni-ą), *n.* [NL., < Gr. γυνή (γυναικ-), woman, + μανία, madness.] Same as *satyriasis.*

gynecomorphous, gynæcomorphous (jin″ē-kō-môr′fus), *a.* [Gr. γυνή (γυναικ-), woman, + μορφή, form, + *-ous.*] In *biol.*, having the form, attributes, or appearance of a female.

gynecopathic, gynæcopathic (jin″ē-kō-path′ik), *a.* [*gynecopath-y* + *-ic.*] Of or pertaining to gynecopathy.

gynecopathy, gynæcopathy (jin-ē-kop′ą-thi), *n.* [Gr. γυνή (γυναικ-), woman, + πάθος, disease.] A disease peculiar to women.

gynecophoral, gynæcophoral (jin-ē-kof′ō-rąl), *a.* [*gynecophor-ous* + *-al*[1].] Same as *gynecophoric.*

gynerhopy (ji-ner′ō-pi), *n.* [Irreg. < Gr. γυνή, female, + ῥοπή, inclination downward, decline.] The state or condition of a species in which the females depart more widely than the males from the ancestral condition.

When female preponderance occurs, it might be called *gynerhopy.* *Science*, Feb. 13, 1903, p. 250.

gynetype (jin′ē-tīp), *n.* [Gr. γυνή, woman, + τύπος, type.] In *zoöl.*, a female specimen taken as the type of a species.

gyniatrics (jin-i-ā′triks), *n.* [Gr. γυνή, woman, + ἰατρικός, of medical treatment: see *iatric.*] The treatment of diseases peculiar to women.

gynocardate (jin-ō-kär′dāt), *n.* [*gynocardic* + *-ate*[1].] A salt of gynocardic acid, the active principle of chaulmugra-oil, used in the treatment of leprosy. *Buck*, Med. Handbook, V. 490.

gynocardic (jin-ō-kär′dik), *a.* [*Gynocardia* + *-ic.*] Of or derived from *Gynocardia.*—**Gynocardic acid,** the active principle of chaulmugra-oil. Its salts are used in the treatment of leprosy.

gynocardin (jin-ō-kär′din), *n.* [*Gynocardia* + *-in*[2].] A glucoside from the seeds of *Gynocardia odorata.*

gynodiœcism (jin″ō-dī-ē′sizm), *n.* [*gynodiœc(ious)* + *-ism.*] The condition of being gynodiœcious.

gynogenetic (jin″ō-je-net′ik), *a.* [Gr. γυνή, female, + γένεσις, generation: see *genetic.*] Productive of females only.—**Gynogenetic parthenogenesis,** the production of females only from unfertilized eggs; thelytoky. See ★*homoparthenogenesis.*

gynomonœcism (jin″ō-mō-nē′sizm), *n.* [*gynomonœc(ious)* + *-ism.*] The condition of being gynomonœcious.

gynoplasm (jīn′ō-plazm), *n.* [Gr. γυνή, female, + πλάσμα, anything formed (see *plasm*).] The material that is supposed by Haeckel and others to enter into the composition of female cells and give them their distinctive character, and to be unlike anything that enters into the composition of male cells. See quotation under ★*androplasm.*

gynospore (jin′ō-spōr), *n.* [Gr. γυνή, female, + σπορά, seed (spore).] Same as ★*macrogamete.* *Buck*, Med. Handbook, VIII. 541.

gynostyle (jin′ō-stīl), *n.* [Gr. γυνή, woman, + στῦλος, pillar: see *style*[2].] In siphonophorans, a female blastostyle.

Gynura (ji-nō′rą), *n.* [NL. (Cassini, 1825), < Gr. γυνή, female, + οὐρά, tail. The name alludes to the elongated, tail-like stigmas.] An untenable name for *Crassocephalum*, a genus of plants of the family *Asteraceæ.* See ★*Crassocephalum.*

gypsine[2] (jip′sin), *n.* [*gyps-um* + *-ine*[2].] **1.** The trade-name for a fire-proof material, for use in building, consisting of plastic hydraulic lime mixed with coke or sand and asbestos and pressed into blocks like bricks.—**2.** A dusting-powder containing arseniate of lead, applied to plants as an insecticide. *E. G. Lodeman*, The Spraying of Plants, p. 147.

gypsite (jip′sīt), *n.* [*gyps-um* + *-ite*[2].] Gypsum in a finely granular form: a local name in Kansas and Texas, where this variety occurs.

Under the general head of calcined plaster, or plaster of paris, in these reports is included the product of cement plaster made from gypsum dirt, or "*gypsite.*" A greater portion of the gypsum product of Kansas and Texas is of this variety. . . . Under the microscope the *gypsite* of Kansas is seen to consist of a mass of small, angular gypsum crystals of varying size.
Ann. Rep. U. S. Geol. Surv., 1897-98, pp. 584, 585.

Gypskeuper (güps′koi-pėr), *n.* [G., 'gypsum keuper.'] In *geol.*, a subdivision of the Triassic system in Germany. It is correlated by German geologists with the upper part of the Keuper, and is underlain by the Lettenkohl and overlain by the Rhætic. It reaches a thickness of 1,000 feet and contains numerous plants (*Equisetum columnare*) and labyrinthodont and fish remains.

Gypsornis (jip-sôr′nis), *n.* [NL., < Gr. γύψος, gypsum, + ὄρνις, bird.] An extinct genus of grallous birds like the rail, found in the Eocene gypsum-beds of Montmartre, France.

gypsum, *n.*—**Gypsum tablet,** a smooth plate of plaster of Paris used in the blowpipe analysis of minerals, particularly of those which yield colored sublimates.—**Paris gypsum,** in *geol.*, the uppermost division of the Upper Eocene (Oligocene) in the Paris Tertiary basin. It consists of four beds of gypsum, intercalated with sands and marls, the highest of which is celebrated for the profusion of its mammalian remains (*Anoplotherium, Palæotherium*, opossum, pachyderms, *Carnivora*).

gypsum-furnace (jip′sum-fêr″nąs), *n.* A furnace used to calcine gypsum in the manufacture of stucco or plaster of Paris. More commonly called *gypsum-kiln.*

gypsum-kiln (jip′sum-kil), *n.* Same as ★*gypsum-furnace.*

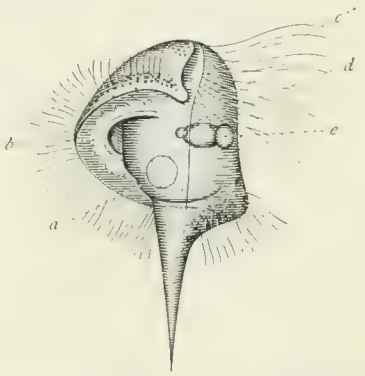
gyration, *n.* **2.** In univalve shells, one of the whorls of the spire.—**3.** Any system of gyri or convolutions in the brain. *Amer. Anthropologist*, July–Sept., 1901, p. 465.—**Dove's law of gyration.** See *Dove's law of the rotation of the* ★*winds.*—**Gyration in storm-areas,** the rule, announced by Ferrel, that in the northern hemisphere winds must circulate about a low pressure in the direction contrary to the movement of the hands of a watch, but that in the southern hemisphere the circulation must be with the movement. See *Ferrel's* ★*law.*

gyrinid (jī-rin′id), *n.* and *a.* **I.** *n.* One of the *Gyrinidæ.*

II. *a.* Of or belonging to the coleopterous family *Gyrinidæ.*

gyroceracone (jī-rō-ser′ą-kōn), *n.* [Irreg. < Gr. γυρός, round, + κέρας, horn, + κῶνος, cone.] A shell of a nautiloid cephalopod which is curved in a loose spiral like that of *Gyroceras*, the volutions being sometimes in contact but with no impressed zone. *Hyatt.*

Gyrocoryna (jī″rō-kō-rī′nä), *n. pl.* [NL., < Gr. γυρός, round, + κορύνη, a club.] A family of hetero-



Cœnomorpha medusula Perty.

From the ventral side, slightly turned to the right.
a, contractile vacuole; *b*, adoral zone; *c*, cirri; *d*, micronucleus; *e*, meganucleus. Highly magnified. (Bütschli, after Blochmann. From Lankester's "Zoölogy.")

rotrichous, trichostomatous ciliates. They have a bell-shaped body, with the anterior end rounded and the posterior as a caudal appendage projecting from the bell, and a ventral furrow of cilia, with a row of cilia at the edge of the bell leading to the mouth at the base of the appendage. The only genus is *Cœnomorpha.*

Gyrocotyle (jī-rō-kot′i-lē), *n.* [NL., < Gr. γυρός, round, + κοτύλη, cup.] The typical genus of the family *Gyrocotylidæ. Diesing*, 1850.

Gyrocotylidæ (jī″rō-kō-til′i-dē), *n. pl.* [NL., < *Gyrocotyle* + *-idæ.*] A family of monozoic tapeworms. They have a leaf-shaped body with crenate margins; a small but deep sucker at the pointed extremity; and at the opposite end a rosette organ carried by a cylindrical peduncle, traversed by a canal which opens at each end, from which a peculiar proboscis-like organ can be everted. *Gyrocotyle* is the typical genus.

Gyrodus (jī′rō-dus), *n.* [NL., < Gr. γυρός, round, + ὀδούς, a tooth.] A genus of extinct ganoid fishes. They have a very flat and deep body completely covered with scales; a blunt nose; flat bean-shaped teeth on the palate and splenial, and a few sharp prehensile teeth on the dentary; a symmetrical caudal fin, and thick scales ridged at the margin. The genus is common in the Jurassic rocks.

gyrograph (jī′rō-gràf), *n.* [Gr. γῦρος, a wheel, + γράφειν, write.] An instrument for registering the revolutions of a mechanism, such as a wheel.

gyrographic (jī-rō-graf′ik), *a.* [Gr. γῦρος, a wheel, a circle, + γράφειν, write, + *-ic.*] Noting an organic acid found in certain lichens (*Gyrophora* or *Umbilicaria pustulata*).

Gyrolepis (jī-rol′ē-pis), *n.* [NL., < Gr. γυρός, round, + λεπίς, a scale.] A genus of heterocercal ganoid fishes characterized by having the anterior rays of the pectoral fins not articulated and scales marked with irregular wrinkles. It is common in the Mesozoic rocks.

gyromele (jī′rō-mēl), *n.* [Gr. γῦρος, a wheel, a turn, + μήλη, a probe.] A device consisting of a sponge on the end of a long rotating bougie, used for swabbing out the stomach.

gyrometer (jī-rom′e-tėr), *n.* [Gr. γῦρος, a turn, revolution, + μέτρον, a measure.] An instrument for indicating continuously the number of revolutions of a rotating axis.

Gyromitra (jī-rō-mī′trą), *n.* [NL. (Fries, 1849), < Gr. γυρός, round, + μίτρα, a head-dress,

Gyromitra esculenta.

One fourth natural size; *a*, general view of plant; *b*, cross-section of same. (From Engler & Prantl's "Pflanzenfamilien.")

a turban.] A genus of ascomycetous fungi of the family *Helvellaceæ*, having large fleshy stipitate fruiting bodies (ascomata) with the surface irregularly depressed and folded. The name refers to the convoluted turban-like ascoma. Eleven species have been described, some of which are among the largest known *Ascomycetes. G. esculenta*, as its name indicates, is an edible species occurring in America and Europe.

Gyrophoraceæ (jī″rō-fō-rā′sē-ē), *n. pl.* [NL., < *Gyrophora* + *-aceæ.*] A family of gymnocarpous lichens named from the genus *Gyrophora.*

gyro-pigeon (jī′rō-pij″on), *n.* [Gr. γῦρος, a turn, + E. *pigeon.*] A contrivance of tin having flanges so arranged spirally that when a rotary motion is imparted to it its gyrations cause it to rise in the air: formerly used as a target for shooting.

gyroplane (jī′rō-plān), *n.* [Gr. γῦρος, a ring (wheel), + *-plane*, as in E. *aëroplane.*] A type of flying-machine. See the extract.

A further departure from the present fashion of machine is the *gyroplane* of Messrs. Breguet, which revives interest in the attempt to overcome gravity by vertical screw propellers. As at present designed, it is supported by four propellers placed at the corners of a square.
Nature, Dec. 5, 1907, p. 107.

Gyroscopic precession. See ★*precession.*

gyrostatics (jī-rō-stat′iks), *n.* That branch of the science of kinetics which deals with the laws of rotating solids.

gyrus, *n.*—**Broca's gyrus.** Same as *inferior frontal gyrus.* See *frontal gyri* under *gyrus.*—**Central gyri.** Same as *central* ★*convolutions.* **Composite gyrus,** a gyrus, or ridge, just below and in front of the precrucial or anterior portion of the sigmoid gyrus.—**Dentate gyrus,** an imperfectly formed convolution within the dentate fissure.—**Fusiform gyrus,** the lateral occipitotemporal convolution, a convolution of the temporal lobe which lies between the collateral and third temporal fissures. It forms the posterior portion of the fourth temporal gyrus. —**Gyrus geniculi,** a vestigial or degenerate gyrus at the anterior end of the callosum: a prolongation of the longitudinal striæ of the callosum. **Gyrus intermedius rhinencephali,** a name applied by Retzius to the tubercle of the olfactory tract in the brains of marsupials and edentates.—**Gyrus limbicus,** a thin strip of gray matter upon the callosum which contains the longitudinal striæ of Fancisii. Also *indusium griseum.*—**Gyrus lunaris,** a small sagittal gyrus lying behind the gyrus intermedius in the brains of marsupials, edentates, and insectivores.—**Gyrus subcallosus,** a gyrus which extends from the rostrum of the callosum to the base of the cerebrum immediately in front of the precommissure and lamina terminalis.—**Internal gyrus.** Same as *callosal gyrus.*—**Lingual gyrus,** the median occipitotemporal convolution of the brain.—**Paracentral gyrus,** a convolution bounded by the paracentral and callosomarginal sulci.—**Postcentral gyrus,** a convolution posterior to the central sulcus.—**Precentral gyrus,** a convolution bounded posteriorly by the central sulcus: same as *ascending frontal gyrus.*—**Sagittal gyrus,** a large convolution on each half of the cerebrum, adjacent to the median line or fissure which separates the halves of the cerebrum. It is more or less parallel with the sagittal suture of the skull.

3. (*d*) In *mineral.*, the initial letter of the general symbol, *hkl*, applied to a face of a crystal in the system of Miller. See ★*symbol.* (*e*) In *elect.*, the symbol for *henry* (which see).—**4.** (*f*) In *pathol.*, *hypermetropia.*

h., hy. In electrotechnics, abbreviations of *henry.*

ha. An abbreviation of *hectare.*

haa (hä'ä), *n.* [Hawaiian.] A tree of the spurge family, *Antidesma platyphyllum*, found on most of the Hawaiian Islands, and reaching a height of 30 feet. Its fruit is a reddish drupe with a bony, flattened putamen.

habanera (hä-bä-na'rä), *n.* [Sp., < *Habana*, Havana.] A slow Spanish dance in triple rhythm; also, the music for such a dance.

habdalah (häb-dä'lä), *n.* [Heb.: *ha*, the, *b'dālah*, < *badal*, separate.] A religious ceremony among orthodox Jews at the close of the Sabbath. On returning home from the synagogue the master of the house lights a special wax taper, fills a cup with wine, and recites several passages of Scripture which treat of salvation, beginning with: "This is the God of my salvation, in whom I trust and will not be afraid"; "God is my strength and song, and he became my salvation, etc. He then pronounces a blessing on the wine; an ornamented, chased, or carved spice-box is produced, of which all the members of the household smell; and the following blessing is pronounced: "Blessed thou art, O God of the universe, who created all kinds of spices."

Habeas corpus ad respondendum, a writ by which a person was removed out of the custody of one court into that of another to answer to a suit in the latter. It was also employed to compel the production of a person in confinement to answer to a criminal charge. **Habeas corpus ad satisfaciendum,** a writ by which a prisoner imprisoned by virtue of the judgment of one court was brought into another court to charge him in execution upon a judgment of the latter.

habenal (hą-bē'nąl), *a.* [NL. **habenalis*, < L. *habena*, a thong, strap, rein, < *habere*, hold: see *have.*] Same as *habenar.* *Buck*, Med. Handbook, II. 152.

Habenular ganglion. See ★*ganglion habenulæ.*

Haberlia (ha-bēr'li-ą), *n.* [NL. (Dennstedt, 1818), named in honor of Karl Konstantin *Haberle* (1764–1832), professor of botany at Pesth.] A genus of dicotyledonous trees of the family *Anacardiaceæ.* See *Odina.*

habilla (ä-bē'lyä), *n.* [Amer. Sp., dim. of Sp. *haba*, broad bean, < L. *faba*, bean.] **1.** The sand-box tree, *Hura crepitans*, and especially its seeds, which are a drastic cathartic. Called also *javille.* See *Hura* and *sand-box.* 3.—**2.** In Central America, *Lens phaseoloides*, or its seeds. See *Entada*, *sea-bean*, 1, and ★*lens*, 5.

habit, *n.*, **1.** (*d*) In *petrog.*, the general appearance of a rock given by the texture and the mode, that is, the mineral composition. Rocks may have the same habit and not agree closely in composition.

6. A small piece of linen attached to a woman's collar at the back, designed to go under the neck of the dress and keep the collar in place.

Dyvour's habit, in *Scots law*, a habit which bankrupts were compelled to wear unless in the bankruptcy proceedings it was alleged and proved that the insolvency was the result of misfortune. Bankrupt dealers in an illicit trade were condemned to wear the habit in any event. *Bouvier*, Law Dict.—**Land of steady habits,** the State of Connecticut.

habitancy, *n.* **2.** Inhabitants collectively. *De Quincey.*

Habitat group, a sum of plant species affiliated by their requiring similar environments. *Pound and Clements.*

Habitual time. See ★*time*[1].

habituation, *n.* **Error of habituation.** See ★*error of expectation.*

habutai (hä″bö-tī'), *n.* [Jap. *habutaye.*] A Japanese silk.

hache (häsh), *n.* [F. *hache*, an ax: see *hatchet.*] A palæolithic stone implement, called originally *lang de chat*, evidently used for a great variety of purposes. Also called *coup de poing* (de Mortillet), and Chelleau implement.

This [a Palæolithic workshop] was represented by a dense layer of flint chips, which had evidently never been disturbed since the materials were operated upon, for Mr. Spurrell was able to piece many of the flakes, and to demonstrate that the object sought was the manufacture of *haches.* *J. Geikie*, The Great Ice Age, p. 637.

hacienda-piece (äth-i-ąn'dä-pēs), *n.* A private coin struck by the proprietor of an hacienda or ranch in Mexico or Central America.

hack[2], *n.*, **1.** (*a*) The board on which a hawk's meat is laid. **To be at hack,** to have partial liberty, as eyas hawks before they begin to be trained.—**To fly at hack,** to be at partial liberty, as a half-trained hawk.

hack[1], *v. i.* **4.** To do work as a hack or literary drudge: as, to *hack* for a living.

hackee[2] (hak'ē), *n.* [Origin not ascertained.] In *ceram.*, a mixture of whiting and gum painted on biscuit-ware when a reserved design is desired in a printed pattern. The whiting drops off in the kiln, leaving a white reserved design on the ground color.

hacking[1], *n.* **4.** In *pathol.*, the emission of a succession of short coughs.—**5.** In *massage*, the act of striking the muscles with the side of the hand.

hacking-board (hak'ing-bōrd), *n.* A board on which unburned bricks are dried or hacked.

hackle[3], *n.* **6.** One of the long hairs which, when erected, form a crest along the neck and back of a dog.

I could see the great dog standing, not sleeping, in the veranda, the *hackles* aliff on her back, and her feet planted as tensely as the drawn wire rope of a suspension bridge. *R. Kipling*, The Recrudescence of Imray.

Dun hackle, in *angling*, an artificial fly.

hackle[3], *v. t.* **3.** In *angling*, to dress (an artificial fly) with hackle.

hackle-back (hak'l-bak), *n.* Same as ★*hatchet-back.*

hackle-bench (hak'l-bench), *n.* A bench or table for supporting hackling-pins.

hackle-sheet (hak'l-shēt), *n.* The movable apron, or sheet, to which are attached the hackling-pins of a hackling-machine.

hackmack (hak'mak), *n.* Same as *hackmatack.*

hackmannite (hak'man-īt), *n.* [Named for Dr. Victor *Hackman* of Helsingfors.] A member of the sodalite group of minerals which occurs in pale reddish-violet dodecahedrons in the rock called tawite from the Tawa valley, Kola Peninsula, Lapland. It is near sodalite in composition but contains also the radical NaS.

hackmatack, *n.* **2.** The juniper, *Juniperus communis.*

hackney, *n.* **2.** Specifically, a breed of horses which combines thoroughbred blood with that of the English shire horse or cart-horse and also that of the native Irish horse. A hackney is a horse of moderate size, but over 14 hands, compact build, good action and good disposition, not so heavy as a coach-horse nor so 'leggy' as a hunter. The term is used in England much as *roadster* or *driver* is used in the United States, but includes horses for riding as well as for driving.

hack-saw (hak'sâ), *n.* See *saw*[1].

hack-saw (hak'sâ), *v. t.* To cut with a hack-saw.—**Hack-sawing machine,** a power-machine employing a reciprocating hack-saw and used for cutting metal rods, bars, and pipes. Two types are in use. In one the saw is operated by an oscillating frame, and in the other it is directly connected with a rod and crank-pin on a wheel, suitable mechanism being provided for holding the saw to its work on the draw or backward stroke and allowing it to run free on the return stroke, and for allowing for the wear of the saw. Feed-mechanism is also used to bring the rod to be cut to the vise, locking it in the vise while the cut is made, and releasing the saw and the vise while the next length is fed to the saw. The depth and length of cut are adjustable.

hackthorn (hak'thôrn), *n.* [S.AF.D. *haakedorn*, hook-thorn.] A South African thorny, leguminous shrub, *Acacia detinens*, which is considered sacred by some of the native tribes. Called also *wait-a-bit thorn.*

hack-tree (hak'trē), *n.* Same as *hackberry*, 2.

haddock, *n.* **2.** A name wrongly applied to *Pseudophycis barbatus* and *Merluccius australis* allied to the family *Gadidæ* or codfishes. The European species of *Merluccius* is known as the *hake.*—**New Zealand haddock,** a gadoid fish, *Merluccius australis*, found in Australian waters.

Hadean (hā'dē-an), *a.* Of or pertaining to Hades: as, *Hadean* realms.

When Charon's boat conveyed a spirit o'er
The Lethean water to the *Hadean* shore,
The fare was just a penny,—not too great,
The moderate, regular, Stygian statute rate.
J. G. Saxe, Money King, l. 188.

hadrome (had'rōm), *n.* [Gr. ἁδρός, strong, + E. *-ome.*] The xylem or woody part of a vascular bundle.

Hadromerina (had″rō-me-rī'nä), *n. pl.* [NL., < Gr. ἁδρός, thick, large, + μέρος, part, + *-ina*[2].] An order of monaxonidan *Demospongiæ*, usually of massive form, sometimes stalked or cup-shaped, of compact structure, with the skeletal framework radiate or without order, and the spongin absent or very feebly developed. It includes several families, among them the *Coppatiidæ*, *Clionidæ*, and *Suberitidæ.*

hadromerine (ha-drom'e-rin), *a.* [*Hadromerina.*] Resembling sponges of the order *Hadromerina*; having a massive form.

hadromin (had'rō-min), *n.* [Formation not ascertained.] An aldehyde substance said to accompany natural vanillin.

Hadropterus (ha-drop'te-rus), *n.* [NL., < Gr. ἁδρός, thick, + πτερόν, wing (fin).] A genus of etheostomatine perches or darters, containing some of the largest and most active species of the group. They are small fishes, olivaceous in color, with large black blotches on the sides, found in the bottom of clear streams in the Mississippi valley. *H. aspro* is the common black-sided darter.

hadrosaurid (had-rō-sâ'rid), *n.* One of the *Hadrosauridæ.*

hadrosauroid (had-rō-sâ'roid), *a.* and *n.* **I.** *a.* Resembling or allied to *Hadrosaurus.*

II. *n.* A saurian having affinities with *Hadrosaurus.*

Haeckelism (hek'el-izm), *n.* The opinions or speculations of Ernst Haeckel, a German zoölogist, especially his opinion that the life-history of the individual organism is a recapitulation of its ancestral history. See ★*recapitulation*, 3, and *Haeckel's* ★*law.*

Hæmamœba (hem-ą-mē'bä), *n.* [NL., < Gr. αἷμα, blood, + NL. *amœba.*] **1.** The typical genus of the family *Hæmamœbidæ.* *H. malariæ* (*Plasmodium quartanæ*) is the cause of quartan fever in man. See ★*malaria*, with cuts. *Grassi and Feletti*, 1890.—**2.** [*l. c.*] An organism of this genus. Also *hemamœba.*—**Hæmamœba immaculata,** a non-pigmented variety of *H. præcox.*—**H. præcox.** Same as *Plasmodium malariæ.*—**H. relicta,** a protozoan blood parasite of the sparrow.—**H. sub-immaculata,** a protozoan blood parasite of the hawk.—**H. subpræcox,** a protozoan blood parasite in the owl, lark, and other birds.—**H. vivax.** Same as *Plasmodium testianæ.*

Hæmamœbidæ (hem-ą-mē'bi-dē), *n. pl.* [NL., < *Hæmamœba* + *-idæ.*] A family of *Hæmosporidia*, consisting of amœboid organisms found mostly in the red blood-corpuscles. It includes *Halteridium*, found in birds, causing fever and sometimes death; *Hæmamœba*, the cause of malaria in man; and other forms parasitic in frogs, cattle, and other animals.

The Italian observers have found that all three species of the human *Hæmamœbidæ* are cultivable in Anopheles claviger and not only in this but in other Italian species of Anopheles, while they . . . have failed to cultivate the parasites in Culex. *L. O. Howard.*

hæmatein, *n.* See *hematein.*

hæmatinone (hē-mat'i-nōn), *n.* Same as *hæmatinum.*

Hæmocytozoa (hem-ō-sī-tō-zō'ä), *n. pl.* [NL., < Gr. αἷμα, blood, + κύτος, a hollow (a cell), + ζῷον, animal.] Same as ★*Hæmosporidia.*

Hæmogregarina (hem-ō-greg-ą-rī'nä), *n.* [NL., < Gr. αἷμα, blood, + NL. *Gregarina.*] A genus of *Hæmosporidia*, typical of the family *Hæmogregarinidæ.* It is parasitic in reptiles, amphibians, and fishes. *Danilewsky*, 1885.

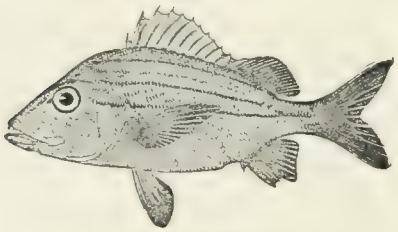
Hæmogregarinidæ (hem-ō-greg-ą-rin'i-dē), *n. pl.* [NL., < *Hæmogregarina* + *-idæ.*] A family of blood-parasites of the order *Hæmosporidia.* The typical genus is *Hæmogregarina.*

Hæmosporidia (hem″ō-spō-rid′i-ä), *n. pl.* [NL., < Gr. *αἷμα*, blood, + *σπορά*, seed (spore), + dim. *-ιδιον*.] An order of *Sporozoa*, the members of which are parasitic in the blood of fishes, amphibians, and reptiles. The trophozoite is generally a vermiform hæmogregarine, which passes its early stages in a blood-corpuscle, but becomes free when full-grown. There appears to be no alternation of hosts, the entire cycle of development being passed in the body of one animal. This order contains the genera *Lankesterella*, *Karyolysus*, and *Hæmogregarina*. *Danilewsky*.

hæmosporidian (hem ō-spō-rid′i-an), *a.* and *n.* **I.** *a.* Of or pertaining to the *Hæmosporidia*.

II. *n.* One of the *Hæmosporidia*.—2. A general designation of the pathogenic *Protozoa* that live and multiply in the corpuscles of the red blood of mammals, and give rise to malaria. See ★*malaria*.

Hæmulidæ (hē-mū′li-dē), *n. pl.* [NL., < *Hæmul(on)* + *-idæ*. Cf. *Hæmulonidæ*.] A family of sparoid fishes, typified by the grunts, which constitute the genus *Hæmulon*. They differ from the *Sparidæ* in having the teeth all pointed; from the *Lutianidæ* in having no teeth on the vomer; and from



Hæmulon Macrostomum.
(From Bulletin 47, U. S. Nat. Museum.)

the *Serranidæ* in having the maxillary bone or side of the upper jaw slipping under the edge of the preorbital bone. The species are widely diffused in tropical seas and are valued as food. The family is often called *Pristipomatidæ*. The typical genus is *Hæmulon*.

hæmuloid (hem′ū-loid), *n.* Any fish of the family *Hæmulidæ*.

hagbaha (häg-bä′hä), *n.* [Heb., < *gabah*, lifting.] The elevation of the open sacred scroll (torah) after the reading of the ★parasha (which see). When it is thus exposed to the view of the congregation, all stand up and recite the following: "And this is the law which Moses placed before the children of Israel," etc.; "This is a tree of life to them that grasp it," etc. All ceremonies in connection with the reading of the law, including the hagbaha, are considered meritorious, and are performed by prominent members of the synagogue.

hagbrier (hag′brī-ėr), *n.* The hispid greenbrier, *Smilax hispida*, the stems of which are thickly set with long, straight, slender spines. It ranges from Ontario to North Carolina, and westward to Minnesota and Texas.

haggadah, *n.* **3.** The Jewish ritual for the first two nights of Passover. It contains extracts from the Bible and the Talmud treating of the exodus from Egypt, also praise, including hallel (Ps. cliii.–cvii.), and prayer for future redemption.

hagiasterium (hā″ji-as-tē′ri-um), *n.*; pl. *hagiasteria* (-ä). [NL., < Gr. *ἁγιαστήριον*, a sanctuary, < *ἁγιάζειν*, make sacred, < *ἅγιος*, sacred: see *hagiology*.] In *early Latin arch.*, the sanctuary, as distinguished from the choir occupied by the singers.

hagiolater (hā-ji-ol′a-tėr), *n.* [Gr. *ἅγιος*, saint, + *-λάτρης*, -worshiper.] A saint-worshiper. *F. P. Cobbe*.

hahanui (hä-hä-nō′ē), *n.* [Hawaiian.] A spiny, bristling shrub, *Cyanea ferox*, of the family *Campanulaceæ*, with dissected leaves and purplish-blue flowers.

Hahnemannism (hä′ne-man-izm), *n.* The medical theories of Dr. Hahnemann; homeopathy.

haigua (hī′gwä), *n.* [Nootka *haigua*, also spelled *hiagua*, *hiaqua*, *higua*, *hyagwa*, in Chinook jargon *hykwa*, *hyakwa*.] The *Dentalium* shell used by the Indians of the North Pacific coast of America for ornaments. Sometimes the surface of the shell was decorated with delicate carvings. It was valued according to its size, the value being determined by the number of shells required to make a string one fathom in length. The shortest kind was also called *coopcoop* or *kopkops* (Chinook *ikupkup*).

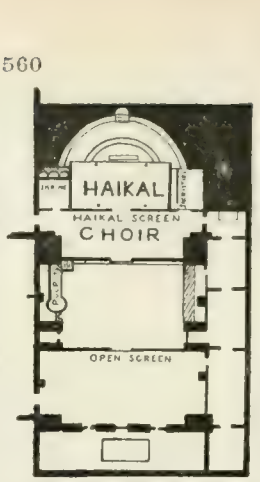
haikal (hī′käl), *n.* [Coptic.] In churches of the Levant, a sacred place, usually distinguished from the choir. In the Coptic churches of Egypt it forms an important member of the plan and is in some cases covered with a cupola which is richly adorned, having mosaics or paintings. See cut in next column.—**Haikal Screen,** in churches of the Levant, a decorative and elaborate screen-wall which shuts off the haikal from the body of the church. In churches of the Greek rite the screen is called *iconostasis*.

haikh (hīch), *n.* [The native name of Armenia.] The Armenian language.

haikwan (hī-kwän′), *n.* [Chinese, < *hai*, sea, + *kwan*, a gateway, a custom-house.] Maritime customs in China.

hail[1], *n.*—**Soft hail,** small pellets of ice, sometime frozen raindrops, at other times small hail, usually falling together with rain and rapidly melting away.

hail[3], *n.* The various responses made by naval officers at night to the sentry, by which the latter may learn the rank of the officer approaching the vessel, are as follows: Flag-officers answer "flag!" the captain gives the name of his ship; the ward-room officers answer, "Aye, aye!" the steerage and warrant officers answer, "No, no!" and petty officers and members of the crew answer, "Hello!" Yachtsmen have adopted this code with a slight modification.



Haikal in the Church of Abu's Sitain, old Cairo. (From Butler's "Ancient Coptic Churches of Egypt.")

hail[3], *v. t.*—**To hail the ball,** to throw or drive the ball to the goal; win the goal. *N. E. D.* [Scotch.]

hail-backed (hāl′bakt), *a.* Having a broad stripe of white running from the back of the neck to the root of the tail: said of cattle.

hail-band (hāl′band), *n.* One of the narrow tracts covered with hail which are characteristic of severe hail-storms, especially in France. They generally lie parallel to one another and to the general path of the storm, leaving between them lanes of little hail but of heavy rain and destructive winds.

hail-cannon (hāl′kan-on), *n.* A small cannon or tube set vertically and furnished with a conical prolongation. The discharge of a few ounces of gunpowder in the cannon sends a vortex-ring of smoke rapidly upward to an altitude of about 1,000 feet. Such cannon have been extensively used since 1890 in southern Europe, under the mistaken belief that numerous discharges of them will prevent injurious hail-storms. See ★*grelifuge cannon*.

hail-cloud (hāl′kloud), *n.* A cloud from which hail falls; that portion of a cumulus cloud which represents the so-called hail-stage and within which the temperature is at freezing-point, the cooling due to expansion being just counterbalanced by the evolution of the latent heat of freezing water from the drops of rain that are being frozen.

hail-gage (hāl′gāj), *n.* A special form of rain-gage constructed to separate the hail from the rain-water and allow of the separate measurment of each.

hailing-port (hāl′ing-pōrt), *n.* The name of the port from which a vessel hails, required by law to be painted on the stern of all documented vessels in the United States; the port in which the managing owner of the vessel lives, or which is nearest to his place of residence; the home port of a vessel.

hail-shooting (hāl′shö″ting), *n.* The firing of cannon for the purpose of dissipating hail-storms or preventing hail: beneficial results of this practice have not been demonstrated.

hailweed (hāl′wēd), *n.* Dodder, especially the thyme-dodder or the flax-dodder. Also *hairweed*.

haimarada (hī-mä-rä′dä), *n.* [Arawak.] *Lindernia diffusa*, a herbaceous plant of the family *Scrophulariaceæ*, native of South America. In Guiana it is used as medicine in fevers, dysentery and disorders of the liver.

Haimea (hā′mē-ä), *n. pl.* [NL.] The typical genus of the family *Haimeidæ*. *Milne-Edwards*.

Haimeidæ (hā-mē′i-dē), *n. pl.* [NL., < *Haimea* + *-idæ*.] A family of protalcyonacean *Alcyonaria*, consisting of solitary polyps with or without spicules. It contains the genera *Haimea*, *Hartea*, and *Monoxenia*.

hainberry (hān′ber i), *n.* Same as *hindberry*.

hainite (hīn′it), *n.* [G. *hain*, grove (see def.), + *-ite*[2].] A silicate, allied to wöhlerite in composition, occurring in slender, colorless to yellow, triclinic crystals: found in phonolite of the Hohe Hain ('high grove') in northern Bohemia.

hair[1], *n.*—**Beaded hair.** See ★*beaded*.—**Collecting hairs,** the hairs on the styles of certain composite plants the function of which it is to collect the pollen as it falls from the anthers.—**Curled hair,** hair from animals' manes and tails steamed and twisted, when hot, into rope, and afterward untwisted and picked apart, making a light springy material for upholstering.—**Fine hair,** an inner and finer hair or down, found on skins, which sometimes remains after the coarser hair is removed.—**In the hair,** with the hair remaining: said of skins.—**Peppercorn hair,** the hair of some African negroid tribes: named from the small spirals which it forms, beginning at the root. The closeness of these spirals gives the impression that the hair grows in tufts, although the roots are quite regularly distributed.—**Ringed hair** a kind of gray hair in which the affected hair is marked by segments of white alternating with the normal color. Also called *trichonosis versicolor*.—**Salamander's hair,** the mineral asbestos.—**Thetis's hair,** a name given by C. T. Jackson to quartz which contains fine needle-like inclosures of actinolite or asbestos. The fibers are generally straight, but penetrate the mass in several directions.—**True-wool hair,** the hair of a sheep's fleece, which possesses the textile properties of a serrated surface, curliness, and elasticity, the typical example being that from the merino sheep.

hair[1], *v. i.* **2.** To form fine fibers, as syrup, when tested by dripping.

hair-ball (hār′bâl), *n.* A small pellet or a large concretion, composed chiefly of hair, found in the stomachs of animals which have the habit of licking themselves or other animals. See *bezoar* and ★*heterolith*. *Yearbook U. S. Dept. Agr.*, 1897, p. 501.

Hair-comber's disease. See ★*disease*.

hair-cord (hār′kôrd), *n.* A fabric woven with very fine lines or stripes, usually running lengthwise. Also called *hair-line*.

hair-cuticle (hār′kū-ti-kl), *n.* The outer layer of cells of a hair. See *hair*.

hair-drawn (hār′drân), *a.* Drawn out as fine as a hair; characterized by over-refinement or nicety: as, *hair-drawn* dialectics. *Schaff*.

hair-felt (hār′felt), *n.* Felt made of animal hair.

hair-fern (hār′fėrn), *n.* The American maidenhair, *Adiantum pedatum*.

hair-germ (hār′jėrm), *n.* An ingrowth of epidermal cells from whose base a hair is subsequently developed.

hair-grass, *n.*—**Bearded** or **long-awned hair-grass,** *Muhlenbergia capillaris*, a species which bears a large light-purple panicle with slender, spreading branches and very delicate pedicels, the flowers also with a slender awn. This grass is found in sandy or rocky soils in the eastern United States.—**California hair-grass,** *Deschampsia holciformis*, a much stouter plant than the Eastern species of the same genus. Also the slender hair-grass, *D. elongata*, and the oat-like hair-grass, *D. calycina*.—**Oat-like hair-grass.** See *California* ★*hair-grass*.—**Silvery hair-grass,** a low, tufted grass, *Aira caryophyllea*, nearly related to *Deschampsia*. Its shining panicle gives a silvery tinge to fields where it abounds. It is a European plant, of no value agriculturally, introduced into the eastern United States and into California. In England sometimes called *mouse-grass*.—**Slender hair-grass.** See *California* ★*hair-grass*.—**Tufted hair-grass,** *Deschampsia cæspitosa*, a European and North American grass found in the northern United States and especially abundant in the Rocky Mountains. It is of little agricultural value, but from its tussock-forming habit is useful in building up and giving firmness to low, wet ground. The stems in rural England have been made into door-mats, and furnish a fiber. Also *hassock-grass* and *tussock-grass*.—**Water hair-grass.** See *water-hairgrass*.—**Wavy hair-grass.** Same as *wood* ★*hair-grass*.—**Wood hair-grass,** *Deschampsia flexuosa*, a more delicate European and American species, worthless except in woodland pastures. The leaves are filiform, the branches of the panicle hair-like, often flexuous.

Tufted Hair-grass (*Deschampsia cæspitosa*).
a, plant, one fourth natural size; *b*, spikelet, enlarged; *c*, florets, still more enlarged.

hairhoof (hār′höf), *n.* [One of the numerous variants of *hairif*.] The woodruff, *Asperula odorata*.

hairhound (hār′hound), *n.* Same as *hoar-hound* (*b*).

hair-line, *n.* **3.** Same as ★*hair-cord*.

hair-moss (hār′mōs), *n.* Same as *haircap-moss*.

hair-moth (hār′môth), *n.* One of the clothes-moths, *Tineola biselliella*, whose larva feeds on hair and woolen goods.

hair-peg (hār′peg), *n.* A straight hair-pin with an ornamental head. *A. M. Earle*, Costume of Colonial Times, p. 122.

hair-pencil (hār′pen″sil), *n.* In *entom.*, a group of very long hairs which may occur on several parts of the body of a lepidopterous insect.

hair-plate (hār′plāt), *n.* The iron plate at the back end of a bloomery-hearth.

hair-restorer (hār′rē-stōr″ėr), *n.* A preparation used to restore the hair when it is scant.

hair-rooted (hār′rō-ted), *a.* Noting clouds which have a bulbous center whence proceed long wisps like hairs and short wisps like roots: as, *hair-rooted* cirro-stratus. Also called *tailed cirrus* by Clayden, and *cirrus caudatus* by Clayton.

hair-scale (hār′skāl), *n.* One of the modified hair-like scales which occur on different parts of the body of certain lepidopterous and trichopterous insects.

hair-shot (hār′shot), *n.* In *billiards*, a shot which barely moves the first object-ball; also, one which barely misses the second.

hair-slip (hār′slip), *n.* A place on a green skin where the grain has become decayed, enabling the hair to slip. *Flemming*, Practical Tanning, p. 265.

hair-slipped (hār′slipt), *a.* Marked by places where the grain has decayed: said of skins. *Flemming*, Practical Tanning, p. 265.

hair-snake (hār′snāk), *n.* A nematoid worm, *Gordius*, parasitic in insects in its early stages and frequently found in damp places or in pools when mature. Also known as *hairworm* and *horsehair-snake*, from the popular superstition that it is a hair that has metamorphosed into a worm.

hair-stone (hār′stōn), *n.* Quartz penetrated by slender crystals of rutile, amphibole, or other mineral species. Also called *Venus hair-stone* and *flèche d'amour*.

hairstreak, *n.*—**Acadian hairstreak,** an American butterfly, *Thecla acadica*, occurring from New England to Montana and up and down the Pacific coast. Its larvæ feed on the willow.—**Banded hairstreak,** a lycænid butterfly, *Thecla calanus*, occurring throughout the northern United States east of the Rocky Mountains. The upper surface of the wings is dark brown and the under surface slate-brown. Its larvæ feed on the leaves of the oak and the hickory.—**Coral hairstreak,** an American lycænid butterfly, *Strymon titus*, of wide distribution within the United States. Its larvæ live on the wild cherry and the plum. **Gray hairstreak,** an American lycænid butterfly, *Uranotes melinus*, occurring throughout the United States. Its larvæ feed on the bean, hop, hawthorn, St.-John's-wort, and hound's-tongue. **Great purple hairstreak,** an American lycænid butterfly, *Atlides halesus*, the largest of the eastern hairstreaks, expanding nearly two inches. Its larvæ feed on the oak.—**Least purple hairstreak,** an American lycænid butterfly, *Calycopis cecrops*. **Olive hairstreak,** an American hesperiid butterfly, *Mitoura damon*, occurring in the southern United States, where its larvæ feed on the red cedar and the smilax. **Striped hairstreak,** an American lycænid butterfly, *Thecla liparops*, wide-spread in the United States east of the Rocky Mountains. Its larvæ live on the oak, willow, shad-bush, and blueberry. **White-M-hairstreak,** an American lycænid butterfly occurring throughout the southern United States, ranging as far north as New Jersey, Pennsylvania, and Ohio. Its larvæ live on the oak and the milk-vetch.

Gray Hairstreak (*Uranotes melinus*).

a, butterfly; *b*, butterfly with wings closed; *c*, larva from side; *d*, pupa; *e*, egg, all slightly enlarged except *e*, greatly enlarged. (Howard and Chittenden, U. S. D. A.)

hairstrong (hār′strông), *n.* Same as *harstrong*.

hair-weed (hār′wēd), *n.* **1.** Any hair-like alga. See *mermaid's-hair*.—**2.** Same as ★*hailweed*.

hair-whorl (hār′hwėrl), *n.* A more or less spirally arranged ridge of hair, produced by the meeting of hairs running in different directions.

hairy-back (hār′i-bak), *n.* Any fish of the family *Trichonotidæ*, found in the western Pacific.

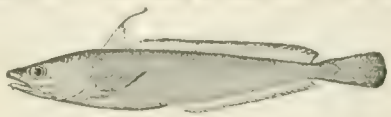
hairy-tongue (hār′i-tung), *n.* Hypertrophy of the filiform papillæ of the tongue: it gives to the surface a hairy appearance. *Buck*, Med. Handbook, III. 291.

hai-tsai (hī-tsī′), *n.* [Chinese, < *hai*, sea, + *ts'ai*, weed.] A seaweed, *Gloiopeltis tenax*, and a gelatin prepared from it. The gelatin is used in the manufacture of lanterns to strengthen or varnish the paper, and to give gloss to silk or gauze. Windows of split bamboo crossed diagonally have their rhombic openings filled with a film of it as a substitute for glass.

hakam (ċha-käm′), *n.* [Judeo-Arabic *ḥakām*, < Heb. *ḥakam*, be wise. Compare Aram. *ḥakim* or *ḥakima*; Ar. *ḥakīm*: see *hakim*.] In Jewish use, a sage or philosopher: a title given to the Sephardi rabbis in the Orient. The chief rabbi of Constantinople is styled *hakām pasha*.

Hakatist (hä-kä-tist′), *n.* [G. *ha*, H, + *ka*, K, + *te*, T, + *-ist*. The letters are the initials of the three founders of the league, Von Hansemann, Von Kennemann, and Von Tiedemann.] A member of the league organized in Germany for the support of Prussian measures against the Poles in Posen. *N. and Q.*, 9th ser., IX. 145, 374.

hake[2], *n.*—**White hake,** a small fish of the family



White Hake (*Urophycis tenuis*).
From Bulletin 47, U. S. Nat. Museum.

Gadidæ, or codfishes. *Urophycis tenuis*, a common species, is found off the New England coast. Others are found in the same region and in Europe.

hako (hä′kō), *n.* [Pawnee.] A ceremony of the Pawnee Indians, intended to benefit certain individuals by bringing to them the promise of children, long life, and plenty, and establishing at the same time a bond between the persons taking part in it, thus insuring friendship and peace between different clans or tribes. *Alice C. Fletcher*, 22d Rep. Bur. Amer. Ethnol., II. 14.

The expression "*hako*" is used to describe the whole of the articles employed in the ceremony, which are two feathered stems of ash wood from which the pith is burnt out; an ear of white corn; three sticks of plane tree; owl and eagle feathers; the heads of two woodpeckers; the head, neck, and breast of two ducks; a wild cat skin; fat from a consecrated deer or buffalo; an oriole's nest; and other objects. . . . The two feathered stems are treated by the tribe with great reverence, and always deposited on the wild cat skin when not in use. One symbolizes the sky, the other the earth. The ear of corn represents the fruitfulness of the earth, and is called "mother." This seems to indicate an origin for the ceremony among agricultural tribes, though it has been adopted by the hunting tribes. It does not appear, however, that the rites were performed at any stated time, or had any connexion with planting or harvesting.

Athenæum, May 20, 1905, p. 628.

hala (hä′lä), *n.* [Hawaiian.] The native screw-pine of the Hawaiian Islands, *Pandanus tectorius*. Coarse mats are made of the leaves.

halachist (hä-läċh′ist), *n.* One who is learned in the halachah (which see).

Halælurus (ha-lē-lū′rus), *n.* [NL., < Gr. ἅλς, sea, + αἴλουρός, cat.] A genus of sharks of the tropical Pacific, belonging to the family *Scyliorhinidæ*.

halah (ċhä′lä), *n.*; pl. *halōth* (ċhä′lōt). [Heb., < *ḥalal*, perforated.] A cake; originally, a loaf used in offerings (Num. xv. 20 *et passim*) and now partaken of at the three meals of Sabbaths and festivals. As now used it is a well-baked, elongated, and twisted loaf, thick in the middle and tapering toward the ends, with poppy-seed sprinkled over the top. The halah of some festivals differs in form from the ordinary Sabbath cake: for example, that used at the Rosh ha-shanah festival (New-Year's day) is made in the form of a ladder. The reason given is that, it being the season of prayer for forgiveness, the ladder symbolizes the ascension of the prayers heavenward.

halapepe (hä-lä-pā′pā), *n.* [Hawaiian.] A tree of the lily family, *Dracæna aurea*, bearing golden-yellow flowers and small yellow berries, and yielding a soft, whitish wood out of which the natives used to carve their idols.

halatinous (ha-lat′i-nus), *a.* [Gr. ἁλάτινος, of salt, < ἅλας (ἅλατ-), salt, < ἅλς, salt: see *salt*[1].] Having the character of common salt. [Rare.]

halbling (hälb′ling), *n.* [G., < *halb*, half, + dim. *-ling*. Cf. *halfling*[1].] A small coin of Basel and of other Swiss and German states.

halching (hal′ching), *n.* [*halch* + *-ing*.] The entanglement of the coils of yarn at the nose, or top, of a spinning-mule cop. *Nasmith*, Cotton Spinning, p. 286.

Haleciidæ (hā-lē-sī′i-dē), *n. pl.* [NL., < *Halecium* + *-idæ*.] A family of campanularian hydroids having the hydrothecæ reduced to shallow, saucer-shaped, pedunculate appendages, the hydranths with conical hypostomes and the gonophores hedrioblastic. It contains the genera *Halecium*, *Diplocyathus*, and *Ophioides*.

Halecium (hā-lē′si-um), *n.* [NL.] The typical genus of the family *Haleciidæ*. *Oken*, 1815.

half. I. *a.*—**Half fifteen,** in *tennis*, a point given to a supposably inferior player at the beginning of the second and subsequent alternate games of the set.—**Half forty,** in *tennis*, two points given to a supposably inferior player at the beginning of the first game, three at the beginning of the second, and so on alternately in the subsequent games of the set. **Half thirty.** See ★*thirty*.

II. *n.*—**Half a stroke.** See ★*stroke*[1].

half-arc (häf′ärk), *a.* Noting an electric arc-lamp of approximately half the usual illuminating power. In commercial practice arc-lamps supplied with from 9.5 to 10 amperes and 450 or more watts were classed as full-arc lamps; those taking from 6.5 to 7 amperes and 325 to 350 watts, as half-arcs. Also used substantively.

half-beam (häf′bēm), *n.* In *ship-building*, a deck-beam which extends only part way across the vessel, being cut off at a hatchway or similar opening through the deck.

half-bird (häf′bėrd), *n.* One of the smaller ducks, such as the teal: so named because it sells for half the price of the larger species. [Eng.]

half-bit (häf′bit), *n.* The Spanish half-real in the British West Indies.

half-blind (häf′blīnd), *a.* Noting holes in plates (which are to be riveted together) which do not coincide or match, those of one plate being partly covered by the other plate.

half-breadth (häf′bredth), *n.* In *ship-building*, the distance of any given point on the outer skin or of the exterior line of the frames (in the latter case called *molded half-breadth*) to the central longitudinal plane of the vessel.

Half-breadth plan. See *plan*.

half-breed, *n.*—**Bigeneric half-breed,** the product of a cross between varieties of species belonging to different genera.

half-broad (häf′brâd), *n.* An English gold coin, a double crown of James I.

half-bull (häf′bůl), *n.* A term employed by sealers to denote a male fur-seal from four to six years old. The largest half-bulls are practically full grown, but not strong enough to fight their way into the rookeries and establish themselves. They are dark gray in color, lacking the brownish tint characteristic of old male fur-seals. This class of seals is termed *polusikatchi* by the Russians.

half-butt (häf′but), *n.* A cue, used only in English billiards, the length of which is half-way between that of a long and that of an ordinary cue.

half-center (häf′sen″tėr), *n.* The position of the crank-pin of an engine when it is midway between the two dead-centers or dead-points.

half-clutch (häf′kluch), *n.* A jaw-clutch in which each jaw is half a cylinder, and consequently has only one driving-face for each direction.

half-column (häf′kol″um), *n.* An engaged column of which only half, or about half, projects horizontally from the surface of a wall.

half-crown, *n.*—**Newark half-crown,** an English piece of Charles I., struck at the siege of Newark.

half-davit (häf′dav″it), *n.* *Naut.*, a fish-davit.

half-florin (häf′flor″in), *n.* An English coin, first coined in gold by Edward III. in 1344. It was current for 3 shillings and weighed 54 grains.

half-hardy (häf′här″di), *a.* In *hort.*, noting an intermediate grade between tender and hardy: said of plants which withstand a little frost, but not a hard one, and are sown or planted out after frosty weather is past and before the weather becomes thoroughly settled. Sometimes used also for plants which will live out of doors throughout the year if given shelter or protection.

half-hit (häf′hit), *n.* See ★*hit*[1].

half-iron (häf′ī″ėrn), *n.* In *golf*, a half-shot with an iron club.

half-joe (häf′jō), *n.* A Portuguese gold coin, originated in 1722, the half-dobra of 6,400 reis: one of the most popular gold coins of the New World in the eighteenth century.

half-lap (häf′lap), *n.* The metallic matrix, or bed, in which are embedded the rows of combing-needles in a cotton-combing machine.—**Half-lap roller,** the part of a cotton-combing machine which carries forward the combed sliver.

half-lapped (häf′lapt), *a.* Lapped about one half as much as when brought to the proper position: used of rivet-holes that do not meet properly, but are half-blind.

half-lichen (häf′lī″ken), *n.* An ascomycete which lives as a saprophyte during its early stage, but later becomes associated with algæ which, usually, have been injured.

Spheria Lemaneæ and Thermutis velutina are examples of *half-lichens*.

D. H. Campbell, University Text-book of Bot., p. 188.

half-looper (häf′lö pėr), *n.* Any one of many noctuid larvæ which, because they do not have the normal number of prolegs, move like geometrid larvæ.

half-man (häf′man), *n.* On coasting-vessels, a landsman, or deck-boy. [Eng. slang.]

half-moon, *n.* 5. A species of rudder-fish, *Medialuna californiensis*, found on the coast of southern California.

half-mourner (häf′mōr″nėr), *n.* An old British collectors' name for a black and white European agapetid butterfly, *Melanargia galathea*. Also called the *marbled white*.

half-noble (häf′nō″bl), *n.* A gold coin of Edward III. of England, and of succeeding kings to Edward VI.

half-pace, *n.* 2. A landing in a stair which separates two flights of stairs. It differs from quarter-pace in that it crosses the ends of both flights, so that the direction of the stairs is completely changed.

halfpenny, *n.*—**Mark Newby halfpenny.** Same as *St. Patrick* ★*halfpenny.*—**St. Patrick halfpenny,** a private copper token issued in Ireland between 1660 and 1680, with St. Patrick on the reverse: current in New Jersey in 1682.

half-plane (häf′plān), *n.* Same as ★*hemiplane.*

half-proof (häf′prōf), *n.* In *civil law*, evidence entitled to some weight, but insufficient as foundation for a sentence or decree.

half-rater (häf′rā″tėr), *n.* A small yacht of less than the unit of rating (one ton). [Eng.]

half-ray (häf′rā), *n.* In *math.*, the aggregate of all points of a straight which are on one and the same side of O, a point of the straight.

half-seal (häf′sēl), *n.* In *Eng. law*, a seal used in the Court of Chancery to seal commissions issued to delegates appointed to hear appeals in marine or ecclesiastical causes.

half-sheet (häf′shēt), *n.* In *printing*, an abbreviation of *one half of a sheet of double size.*

When presswork was done on a hand-press, upon sheets of small size, the sheet of octavo had its pages 1, 16, 13, 4, 9, 8, 5, 12, first printed from one form on one side of the sheet. Pages 3, 14, 15, 2, 11, 6, 10, 7, were next printed on the back of that sheet, so arranged that they would fold in order as one sheet of 16 consecutive pages. This method was called *sheetwise*. When large machines were used for presswork the two forms were rearranged in one form to produce 16 pages at one impression on one side. Turning the paper upside down for the subsequent printing on the back of the sheet enables the pressman to back each page with its proper mate and produce two copies of 16 pages. Each *half-sheet* of the paper cut in two contains the same number of pages as that of the sheet, printed sheetwise.
De Vinne, Mod. Book Composition, p. 337.

half-shoe (häf′shö), *n.* A shoe which covers but one side of a horse's foot: used to correct some defect in the growth of the hoof.

half-shot, *n.* 2. In *golf*, a stroke of less distance than a full shot, and played with a half swing: less than a three-quarter shot and more than a wrist or quarter shot.

half-sibling (häf′sib″ling), *n.* A breeders' term for a half-brother or half-sister; the offspring of different mothers by the same sire.

The high values, however, found for *half-siblings* in the case of the thoroughbreds seem to indicate that we must look rather to unit prepotency than intermittent prepotency for the source of the high value of fraternal as compared with parental correlation in the case of the horse. *Biometrika*, Nov. 1903, p. 391.

Half-speed shaft. See ★*shaft.*

half-spring (häf′spring), *n.* A spring made up of one set of leaves; a half-elliptic spring.

half-sprit (häf′sprit), *n.* The sprit of a fore-and-aft rigged vessel, all on one side of the mast.

As she sailed before with a *half-sprit*, like a yacht, she sailed now with a square sail and a mizzen, like a ketch.
Defoe, Captain Singleton, xviii.

half-stopped (häf′stopt), *a.* In *organ-building*, said of pipes which are partially closed at the top by a lid or cover.

half-tone, *n.* 3. A picture printed from a plate produced by the half-tone process (which see), or the plate itself.—**Half-tone process,** a phototypographic method in which, in the process of photographing the object, a screen of netting, or a ruled glass, is interposed between the lens and the sensitized plate. From the negative thus made, a positive image is produced upon a prepared metal plate and etched into relief by acids. The screen is designed to give to the etching a texture similar to that produced by the engraver. A common, but in large manner remediable, effect of its use is an undue softening of both lights and shadows with loss of distinctness.—**Half-tone screen,** in *photog.*, a sheet of glass ruled with fine lines, crossing one another at right angles, inserted in the camera about one sixteenth of an inch from the negative. It enables half-tones to be obtained in photo-engraving. The lines run from 100 to 250 per square inch. See ★*half-tone process.*—**Three-color half-tone process,** a method of engraving in relief by photography, and etching upon three separate metal plates of printing-surfaces of yellow, red, and blue, which are successively superimposed in printing on a typographic press, to produce the many needed combinations of color required for a truthful picture. Successful workmanship depends on the ability of the photographer to detect and practically dissect the primary colors of a pictorial design, on the skill of the engraver by hand who may seek improvement in varying the cross lines on the plates that make neater combinations of colored lines, on the purity of the primary colors and accuracy of register in printing. The *four-color* process has the added color of black or other dark color that aids distinctness.

II. *a.* Noting a print or plate, produced by the half-tone process. See above.

half-top (häf′top), *n.* *Naut.*, a small, narrow platform which rests upon the trestle-trees of the lower mast on a square-rigged mast; a contracted top. See *top*[1], *n.*, 9.

half-trunk (häf′trungk), *a.* Pertaining to or having a trunk or hollow piston-rod to which the connecting-rod is attached, but not having a trunk on the opposite side of the piston.

half-vision (häf′vizh″on), *n.* Hemianopsia.

half-volley (häf′vol″i), *n.* In *cricket*, a ball which reaches the batsman just after it has pitched upon the ground. *Hutchinson*, Cricket, p. 55.

halibios (ha-lib′i-os), *n.* [Also *halibius*; ⟨ Gr. ἁλς, the sea, + βίος, life.] The animals and plants of the ocean considered collectively and in contrast with the animals and plants of fresh water and those of the land. *Haeckel* (trans.), Planktonic Studies, p. 578.

halibiotic (hal i-bī-ot′ik), *a.* [Also *halobiotic*; as *halibios* + *-ot-ic.*] Living in the sea.

halibut, *n.*—**Arrow-toothed halibut,** the slender-bodied halibut, *Atheresthes stomias*, of the North Pacific, with arrow-shaped teeth.—**Bastard halibut,** a large flounder, *Paralichthys californicus*, found in the Gulf of California. It differs from the true halibut in the much smaller size and in the fact that its tail is doubly concave at the point, instead of simply lunate or forked.

Halichœres (hā-li-kē′rēs), *n.* [NL., prop. *Halicharus*, ⟨ Gr. ἁλς, sea, + χοῖρος, hog.] A genus of *Labridæ* found in tropical seas. It is characterized by the presence of 9 spines in the dorsal fin, of large scales, and of a canine tooth in the posterior part of the jaw. There are many species, highly variegated in color. *H. radiatus* is the pudding-wife and *H. bivittatus* the Slippery Dick of the Atlantic coast of the United States.

halichondrine (hal-i-kon′drin), *a.* Resembling or having the characteristics of the sponges belonging to the order *Halichondrina*; halichondroid.

halicurrent (hal-i-kur′ent), *n.* [Gr. ἁλς, sea, + L. *currens*, current.] A stream or current in mid-ocean, as contrasted with a coast current. The Gulf Stream is the most familiar example of a halicurrent. *Haeckel* (trans.), Planktonic Studies, p. 625.

halide (hal′id), *a.* [Gr. ἁλς, salt, + *-ide*[1].] In *chem.*, having a constitution similar to that of common salt; haloid: thus, potassium iodide is a halide salt analogous to sodium chlorid or common salt.—**Halide acid,** an acid corresponding to a halide, or haloid, salt, containing hydrogen in place of the electropositive element or radical of the salt, as hydrochloric acid from sodium chlorid, or hydriodic acid from potassium iodide. *Jour. Physical Chem.*, April, 1904, p. 302.

Halieutæa (hal″i-ū-tē′ä), *n.* [NL., ⟨ Gr. ἁλιευτής, otherwise ἁλιεύς (ἁλιευτ-), a fisher, a seaman, ⟨ ἁλιεύειν, fish.] A genus of frogfishes of the family *Ogcocephalidæ*, found in the deep waters of the Pacific.

Halieutella (hal″i-ū-tel′ä), *n.* [NL., ⟨ Gr. ἁλιευτής, a fisher, + L. *-ella.*] A genus of frogfishes of the family *Ogcocephalidæ*, found in the deep waters of the Atlantic.

halieutic (hal-i-ū′tik), *a.* [Gr. ἁλιευτικός: see *halieutics.*] Of or pertaining to fishing.

Halieutichthys (hal″i-ū-tik′this), *n.* [NL., ⟨ Gr. ἁλιευτής, fisher, + ἰχθύς, fish.] A genus of frogfishes of the family *Ogcocephalidæ*, found in the deep waters off the West Indies.

halieutics, *n.* 2. That branch of practical theology ('fishing for men') which treats of the theory of the extension of Christian missions; the science of Christian missions, specifically, of foreign missions.

Halieutinæ (hal-i-ū-tī′nē), *n. pl.* [NL., ⟨ *Halieut*(*æa*) + *-inæ.*] A subfamily of frogfishes of the family *Ogcocephalidæ*, typified by the genus *Halieutæa*.

haligi (hä-lē′gē), *n.* [Also (Sp.) *haligui*, ⟨ Tagalog and Bisaya *haligi.*] In the Philippine Islands, one of the wooden posts or piles on which the native houses are built.

haligraphy (ha-lig′ra-fi), *n.* [Gr. ἁλς, salt, + γραφία, ⟨ γράφειν, write.] A discussion of the sources, properties, etc., of saline substances. [Rare.]

halilimnic (hal-i-lim′nik), *a.* [Gr. ἁλς, sea, + λίμνη, lake, + *-ic.*] Living in fresh water, but exhibiting genetic affinity with forms of life that are restricted to salt water; actually limnetic, but phylogenetically marine. Also *halolimnic.* See ★*halibiotic.*

The fauna of Lake Tanganyika is to be regarded as a double series, one-half consisting of forms which are found everywhere in African fresh waters, the other of what we may call *halolimnic* organisms, which are found nowhere else in the world, at least so far as is at present known.
J. E. S. Moore, quoted in Internat. Year Book, 1898, p. 270.

halimeter (ha-lim′e-tėr), *n.* [Gr. ἁλς, salt, + μέτρον, measure.] An apparatus for determining the strength of a saline solution; specifically, a device for estimating the amount of water in beer by determining the quantity of salt the beer will dissolve.

halimetric (hal-i-met′rik), *a.* [*halimetr-y* + *-ic.*] Of or pertaining to halimetry or the halimeter. [Rare.]

halimetry (ha-lim′et-ri), *n.* [Gr. ἁλς, salt, + *-μετρια*, ⟨ μέτρον, measure.] Determination of the strength of a saline solution. [Rare.]

halimous (hal′i-mus), *a.* [Gr. ἁλιμος, of the sea (⟨ ἁλς, the sea), + *-ous.*] Having relation to the sea, to sea-water, or to common salt. [Rare.]

haling-hand (hāl′ing-hand), *n.* One of a pair of heavy gloves or woolen mittens used to protect the hands of sailors and fishermen on the Maine coast, while hauling heavy cables, etc.: frequently double lined in the palms with leather. *A. M. Earle*, Costume of Colonial Times, p. 122.

halinous (hal′in-us), *a.* [Gr. ἁλινος, of salt, ⟨ ἁλς, salt.] Having relation to common salt. [Rare.]

haliplankton (hal-i-plangk′ton), *n.* [Gr. ἁλς, the sea, + NL. *plankton.*] The floating and swimming organisms of the ocean, considered collectively and in contrast with the organisms that float or swim in fresh water; the plankton. Also *haloplankton.* See ★*plankton* and ★*limnoplankton.* *Haeckel* (trans.), Planktonic Studies, p. 580.

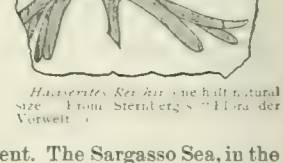
Halisarca (hal-i-sär′kä), *n.* [NL., ⟨ Gr. ἁλς, the sea, + σάρξ (σαρκ-), flesh.] The typical genus of the family *Halisarcidæ*. *Dujardin.*

Halisarcidæ (hal-i-sär′si-dē), *n. pl.* [NL., ⟨ *Halisarca* + *-idæ.*] A family of hexaceratine triaxonian sponges, having the flagellated chambers, syconate and the skeletal structures absent. It contains the genera *Halisarca* and *Bajulus.*

Halisaurus (hal-i-sâ′rus), *n.* [NL., ⟨ Gr. ἁλς, sea, + σαῦρος, lizard.] A genus of marine reptiles, referred to the *Mosasauridæ*, based on incomplete material from the Cretaceous of New Jersey: a synonym of ★*Baptosaurus.*

Haliseris (ha-lis′e-ris), *n.* [NL., ⟨ Gr. ἁλς, the sea, + σέρις, endive, chicory.] The correct form for *Halyseris* (which see).

Haliserites (hal″i-se-rī′tēz), *n.* [*Haliseris* + *-ites.*] See *Halyserites.* This plant has flat fronds many times dichotomously divided. The dicotyledonous genera *Fontainea* and *Sapindopsis* from the Amboy clays of New Jersey and the Middle Potomac formation of Virginia, respectively, closely resemble it, and it is regarded by some paleobotanists as a dicotyledonous plant.



Haliserites Sternbergii, one half natural size. (From Sternberg's "Flora der Vorwelt.")

halistase (hal′i-stās), *n.* [Gr. ἁλς, sea, + στάσις, standing.] The tract of quiet water within the gyration of a great oceanic current. The Sargasso Sea, in the North Atlantic, is the most familiar example of a halistase. *Haeckel* (trans.), Planktonic Studies, p. 622.

halisteresis (ha-lis-tę-rē′sis), *n.* [Gr. ἁλς, salt, + στέρησις, deprivation, ⟨ στερεῖν, deprive.] Deprivation of salts; specifically, loss of the mineral constituents of bone which causes osteomalacia.

halisteretic (ha-lis-tę-ret′ik), *a.* [*halisteresis* (*-et-*) + *-ic.*] Relating to or affected with halisteresis.

halitherioid (hal-i-thē′ri-oid), *n.* and *a.* **I.** *n.* A sirenian mammal allied to *Halitherium.*

II. *a.* Resembling *Halitherium.*

halitosis (hal-i-tō'sis), *n.* [NL., < L. *halitus*, breath, + *-osis*.] Offensive breath.

halitsa, chalitza (ċha-lit'sä), *n.* [Heb. *ḥalitsa*, < *ḥalats*, draw off or out.] The Jewish ceremony of taking off the brother-in-law's shoe. According to the command (Deut. xxv. 5-10), the brother-in-law who refused to marry the widow of his brother who died without child was obliged to appear before the elders at the gate, where the ceremony of taking off the shoe was performed. The formula is still in use, as otherwise the widow, according to Jewish law, is forbidden to marry.

haller (hal'ėr), *n.* [G. dial. variant of *heller*.] A small copper coin of the Swiss canton of Zug.

Halleyan line. See ★*line*[2].

halliblash (hal'i-blash), *n.* A great fire. [Prov. Eng.]

'Oh, go long wi yo!' said Hannah in high wrath. 'He an his loike'll mak a *halliblash* of us aw soon, wi their silly faddle, an pamperin o' workin men, wha never wor an never will be noa better nor they should be.'
Mrs. Humphry Ward, David Grieve, iv. 11.

hallopodous (ha-lop'ō-dus), *a.* Of or pertaining to the *Hallopodidæ*; of the nature of the *Hallopoda*.

Hallstattian (häl stät'i-an), *a.* [G. *Hallstatt*, in Austria, where extensive remains characterizing this period were found, + *-ian*.] In *prehistoric archæol.*, noting the first period of the iron age.

hallucar (hal'ū-kär), *a.* [L. *hallux* (*hallue-*), the great toe, + *-ar*[3].] Relating to the hallux or great toe; hallucal. [Rare.]

hallucination, *n.*—**Collective hallucination,** in *psychol.*, a hallucination experienced similarly and simultaneously by a number of persons similarly situated.

hallucinative (ha-lū'si-nā-tiv), *a.* Hallucinatory; productive of hallucinations.

Hallux dolorosus, a condition associated with flat-foot in which pain is felt in the great toe when an attempt is made to walk. **Hallux flexus,** hammer-toe affecting the great toe. **Hallux rigidus,** stiffness of one or of both of the joints of the great toe.—**Hallux valgus,** deviation of the great toe outward, so that it overlaps the other toes.—**Hallux varus,** deviation of the great toe inward, away from its fellows.

halma (hal'mä), *n.* [Gr. ἅλμα, a leap, < ἁλλεσθαι, leap.] A game for two persons, played on a special board of 256 squares with 19 men apiece, the object of the player being to drive out his opponent's men from their position and to replace them with his own.

halmatogenesis (hal″ma-tō-jen'e-sis), *n.* [Gr. ἅλμα(τ-), a leap, + γένεσις, production.] In *biol.*, the sudden appearance of new characters in animals or plants. Same as *saltatory* or *discontinuous* ★*variation*.

halo, *n.*—**Diffraction halo.** See ★*diffraction*.—**Hering's halo,** in *psychophys.*, the bright fringe which surrounds the dark after-image of a bright object seen on a dark background; an effect of brightness contrast. *E. C. Sanford*, Exper. Psychol., p. 161.

Halobia (ha-lō'bi-ä), *n.* [NL., < Gr. ἁλς, sea, + βίος, life.] A genus of prionodesmaceous pelecypod mollusks, characterized by the absence of an auricle. It is very abundant in the Triassic rocks. **Halobia shales.** See ★*shale*[2].

halobiotic (hal″ō-bī-ot'ik), *a.* Same as ★*halibiotic*.

halochromism (hal-ō-krōm'izm), *n.* [Gr. ἁλως, a halo, + χρῶμα, color, + *-ism*.] The property possessed by certain organic compounds of forming highly colored salts with colorless acids and without themselves undergoing any change of structure.

In connection with this subject reference may be made to some recent work of v. Baeyer and Villiger on dibenzylidene acetone and triphenyl methane. They refer to the constitution of colourless substances which form highly coloured salts, and term the phenomenon *halochromism*.
Rep. Brit. Ass'n Advancement of Sci., 1902, p. 119.

halogenate (hal'ō-jen-āt), *v. t.*; pret. and pp. *halogenated*, ppr. *halogenating*. [*halogen* + *-ate*[2].] To introduce a halogen atom into (a compound); especially, to substitute a halogen for hydrogen in an organic compound.

A restatement of the view that the reactivity of the halogens in ortho- and para-*halogenated* nitrobenzenes is due to the assumption of the elements of a molecule of water by the nitro-group, with subsequent intramolecular changes, leading to the production of a tautomeric form of a nitrophenol with the loss of a molecule of a haloid acid. *Nature*, Feb. 12, 1903, p. 358.

halogenize (hal'ō-jen-īz), *v. t.*; pret. and ppr. *halogenized*, ppr. *halogenizing*. [*halogen* + *-ize*.] In *chem.*, to cause (a substance) to combine with or to take up one of the halogen elements, as chlorin or bromine. *Smithsonian Rep.*, 1890, p. 383.

haloidite (hal'oi-dīt), *n.* [Gr. ἁλς, salt, + εἶδος, form, + *-ite*[2].] In *petrog.*, a term applied by Wadsworth (1892) to rock-salt.

halolimnic (hal-ō-lim'nik), *a.* Same as ★*halilimnic*.

halology (ha-lol'ō-ji), *n.* [Gr. ἁλς, salt, + *-λογία*, < λέγειν, speak.] The discussion of saline substances as a class of chemical compounds. [Rare.]

halometer (ha-lom'e-tėr), *n.* [Gr. ἁλς, salt, + μέτρον, measure.] An instrument for measuring the form, angles, and plane surfaces of crystalline salts.

halonial (ha-lō'ni-al), *a.* [*Halonia* + *-al*[1].] Belonging or relating to the fossil plant-form called *Halonia* (which see).

halophil (hal'ō-fil), *a.* Same as *halophilous*. Also *halophile*.

halophilism (ha-lof'i-lizm), *n.* [*halophil* + *-ism*.] The character of being halophilous.

I found a close correspondence between the *halophilism* of the plant and the power of its root-hairs to resist plasmolysis. *W. F. Ganong*, in Bot. Gazette, Nov., 1903, p. 354.

halophilous, *a.* **2.** In *zoöl.*, inhabiting salt marshes and sea-coasts.

It seems that littoral Myriopods are much more frequent than is generally supposed, but the author distinguishes accidental *halophilous* forms (three species of Lithobius found in Normandy by Gadeau de Kerville).
Jour. Roy. Micros. Soc., April, 1904, p. 180.

halophyte, *n.* **2.** In *phytogeog.*, a plant adapted to the absorption of common salt or other salts and confined to or preferring a salty substratum, as the sea or the sea-shore. Halophytes were treated by Warming as a class coordinate with hydrophytes, xerophytes, and mesophytes, though recognized as essentially xerophytic in physiological character. Schimper and other late writers have regarded them as included in xerophytes.

halophytic (hal-ō-fit'ik), *a.* [*halophyte* + *-ic*.] **1.** Having the character of a halophyte; halophilous: as, a *halophytic* plant.—**2.** Adapted to the growth of halophytes: as, a *halophytic* region.

haloplankton (hal-ō-plangk'ton), *n.* Same as ★*halioplankton*.

Halopsyche (hal-op-sī'kē), *n.* [NL., < Gr. ἁλς, the sea, + ψυχή, a butterfly.] The typical genus of the family *Halopsychidæ*. *Brown*, 1862.

Halopsychidæ (hal-op-sik'i-dē), *n. pl.* [NL., < *Halopsyche* + *-idæ*.] A family of tectibranchiate gasteropods of the order *Euthyneura*, which have the body ovate and rounded behind, the fins broadened at the back, and gills and proboscis absent. It includes the genus *Halopsyche*.

halosauroid (hal-ō-sâ'roid), *a.* Of or belonging to the family *Halosauridæ*. *Proc. Zool. Soc. London*, 1897, p. 268.

Halosauropsis (hal″ō-sâ-rop'sis), *n.* [NL., < Gr. ἁλς, sea, + σαῦρος, lizard, + ὄψις, appearance.] A genus of deep-water eel-shaped fishes of the family *Halosauridæ*. Also called *Aldrovandia*.

halosel (hal'ō-sel), *n.* [Gr. ἁλς, salt, + F. *sel*, < L. *sal*, salt.] In *chem.*, a salt of the same type as sodium chlorid; a halide or haloid salt. [Rare.]

halo-symptom (hā'lō-simp″tom), *n.* The appearance as of a colored circle surrounding a light: one of the signs of glaucoma.

halotechnic (hal-ō-tek'nik), *a.* [Gr. ἁλς, salt, + τέχνη, art, + *-ic*.] Concerned with the extraction, preparation, and use of saline substances, as of common salt.

halotechny (hal'ō-tek'ni), *n.* [Gr. ἁλς, salt, + τέχνη, art, + *-y*[3].] The art of extracting, preparing, and using common salt and other saline substances. [Rare.]

halter[2], *v. t.* **2.** To hang with a halter; hang.

halter-cast (hâl'tėr-kâst), *a.* Said of an animal which has been thrown by becoming entangled in its halter.

Halteridide (hal-tę-rid'i-dē), *n. pl.* [NL., < *Halteridium* + *-idæ*.] A family of *Sporozoa*, of the order *Hæmosporidia*, which contains the genera *Halteridium* and *Polychromophilus*. The former is found in the blood of birds and the latter in that of bats.

Halteridium (hal-tę-rid'i-um), *n.* [NL., < (?) Gr. ἁλτήρ, a balancing-weight in leaping, < NL. *halter* (see *halter*[3]), + Gr. dim. *-ιδιον*.] **1.** A genus of *Hæmosporidia* which consists of halter-shaped organisms parasitic in the blood-corpuscles of common birds. The typical genus of the family *Halteridide*. *Labbé*, 1894.—**2.** [*l. c.*] A protozoan of the genus *Halteridium*.

Ross further showed that the mosquito which served as an intermediate host for this parasite could not transmit the malarial parasite of man or another similar parasite of birds (*halteridium*).
G. M. Sternberg, in Pop. Sci. Mo., Feb., 1901, p. 367.

halukah (hä-lō'kä), *n.* [Also *chaluka*; Heb. *ḥalūkah*, < *ḥālak*, divide.] The annual and other contributions sent by Jews for the support of their brethren in the Holy Land. It is divided according to the decision of the Jewish authorities in Jerusalem.

halurgist (hal'ėr-jist), *n.* [*halurg-y* + *-ist*.] A worker in salt.

halurgy (hal'ėr-ji), *n.* [Gr. ἁλς, salt, + ἔργον, work.] The manufacture of salt; salt-working. *T. Ross*, trans. of Humboldt, Travels, III. xxxi. *N. E. D.*

halved, *a.* **2.** In *golf*, having the same score on each side: as, a hole is *halved* when each side takes the same number of strokes; a match is *halved* when both sides have won the same number of holes, or have proved equal; etc.

halving (hä'ving), *n.* The act of dividing anything into halves or sharing by halves; specifically, the act of putting together two pieces of material, as wood, by cutting away half of the thickness of each and lapping them one upon another, when a pin or nail or glue may hold them fast.

halving-joint (hä'ving-joint), *n.* A joint made by ★halving (which see).

halyard, *n.*—**Ensign-halyards,** the line or whip by which the ensign is run up or hoisted to the peak of the gaff or to the head of the flag-staff.—**Flying-jib halyards,** the purchase used to hoist the flying-jib along its stay.—**Jib-halyards,** the tackle used in hoisting the jib. The power of the purchase is adapted to the weight of the sail and ranges from a single whip to a double and single block.—**Jib-o'-jib halyards,** the halyards used in hoisting the jib-o'-jib.—**Royal-halyards,** the purchase by which the royal-yard is hoisted.—**Smoke-stack halyards,** a sailors' name for the cog-wheel or other mechanism by which telescoping smoke-stacks are hoisted.

Staysail-halyards, the purchase by which a staysail is run up on its stay. **Studdingsail-halyards,** the whip which is bent to the studdingsail-yard and by means of which the latter is hauled out to the yard-arm.—**Topgallant-halyards,** the purchase which is used to hoist the topgallant-yard after the topgallantsail has been sheeted home, so that the canvas will be flattened or extended to the wind.—**Topsail-halyards,** these halyards are the heaviest of any for hoisting yards. They pass over large gin- or tie-block sheeves abaft the respective masts, and in order to get a big purchase are rigged or rove as follows: on one side of the deck a long pendant is shackled, which reaches to the top; then a long drift of chain is shackled in, which leads through the gin-block, or topsail tie-block, and thence toward the deck, and to this end, some distance above the deck a purchase is secured by means of which the yard is hoisted.

halysitid (ha-lis'i-tid), *n.* One of the *Halysitidæ*.

ham[1], *n.*—**Beef ham.** Same as *collared beef* (which see, under *collared*).

hamamelidaceous (ham-a-mē-li-dā'shius), *a.* Belonging or pertaining to the plant family *Hamamelidaceæ*.

hamathionic (ham″a-thī-on'ik), *a.* [Gr. ἅμα, together, + θεῖον, sulphur, + *-on* + *-ic*.] Noting an acid, a syrupy compound, $C_{12}H_{18}SO_{16}$, formed by the action of sulphuric acid on euxanthic acid.

hamatum (hā-mā'tum), *n.*; pl. *hamata* (-tä). [NL., neut. (sc. *os*, bone) of L. *hamatus*, hooked: see *hamate*.] The outermost bone in the second row of carpals, commonly called *unciform* (which see).

hambergite (ham'bėrg-īt), *n.* [Named after A. *Hamberg*, a Swedish mineralogist.] A hydrated beryllium borate, $Be_2(OH)BO_3$, occurring in grayish-white orthorhombic crystals: found in southern Norway.

Hambleton oölite. See ★*oölite*.

hame[1], *n.*—**Concord hame,** a bent-wood harness-hame, strengthened by a strap of iron on the outside.

haminura (ham-i-nū'rä), *n.* [Said to be S. Amer.] A large food-fish, *Hoplias malabaricus* (*Macrodon trahira*), of the family *Erythrinidæ*, inhabiting fresh waters of South America.

Hamitoid (ham'i-toid), *a.* [*Hamite* + *-oid*.] In *ethnol.*, similar to the Hamites; especially, of a Hamitic type which is influenced by negro blood.

Hamito-Semitic (ham'i-tō-sē-mit″ik), *a.* Relating to the peoples speaking Hamitic and Semitic languages which are considered members of one linguistic stock.

hamlet[2], *n.* **2.** *Gymnothorax moringa*, an eel of the family *Muræniidæ*.

hamlinite (ham'lin-īt), *n.* [Named after A. C. *Hamlin*, an American mineralogist.] A phosphate of aluminium and strontium with fluorin and water, occurring in colorless rhombohedral crystals: found at Stoneham, Maine, and also in Brazil.

hamma (ham'ä), *n.* [AL., < AS. and ME. *ham* (*hamm-*), an inclosure: see *ham*[3].] In *old*

Eng. law, a small inclosed field or meadow; a closed yard adjoining a house.

hammada (ham′ä-dä), *n.* [Ar.] A stony desert upland or plateau. [Sahara.]

The composition and influence on the hydrography of the *hammada*, or Cretaceous and Tertiary plateaux of the higher and lower Sahara.

Geog. Jour. (R. G. S.), XVI. 225.

Hammarbya (ham-är′bi-ä), *n.* [NL. (Kuntze, 1891), named in commemoration of *Hammarby*, the villa of Linnæus in the suburbs of Upsala.] A genus of monocotyledonous plants belonging to the family *Orchidaceæ*. See *Malaxis*.

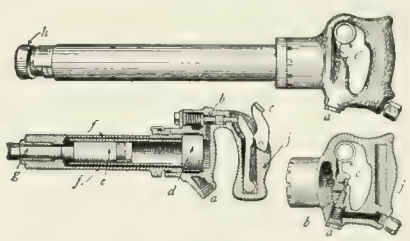
hammel[2] (ham′l), *n.* A shed of about 150 feet area opening into a small courtyard, employed in Great Britain for feeding cattle singly or at most by twos.

hammel-feeding (ham′l-fē″ding), *n.* The system of feeding cattle in hammels. It has the advantage over stall-feeding and box-feeding (feeding free in an inclosure about 10 feet square and 12 feet high) of permitting the animal air and exercise, and also requires less litter.

These objects are attained by the system of *hammel-feeding*, as it is termed. A *hammel* consists of a small shed, etc.

Fream, Complete Grazier (14th ed., 1900), p. 171.

hammer[1], *n.*, **2.** (*j*) In *athletics*, a 16-pound weight (or a 12-pound weight for school-boys), attached by ball-bearing to a wire handle, which competitors, standing in a marked circle, endeavor to throw as far as possible. The old-fashioned hammer had an ordinary stiff wooden handle.—**Boiler-maker's hammer**, a hammer resembling the bridge-builder's hammer, but with shorter and larger heads.—**Bordeaux hammer**, the headache following a debauch. [Colloq.]—**Bridge- or ship-builder's hammer**, a heavy hammer with two long heads with small faces.—**Coppering-hammer**, a boat-builder's hammer with a large flat face and curved peen ending in a claw.—**Corrigan's hammer**, a metal disk attached to a wooden hammer-shaped appliance, formerly employed, when heated and applied to the skin, to cause rubefaction or a blister: similar in principle and application to *Corrigan's button* (which see, under *button*).—**Duplex hammer**, same as *double hammer* (which see, under *hammer*[1]).—**Interchangeable hammer**, a hammer having a clamp on the handle for holding different styles of head and face.—**Magnetic hammer**, a long-handled tack-hammer having a head with a long slender peen. The head is a permanent magnet and can be used to pick up a tack by its head and hold it in position for driving.—**Pneumatic hammer**, a hammer operated by compressed air. It has an automatic valve which alternately



Pneumatic Hammer.

a, inlet for compressed air by flexible hose; *b*, throttle-valve controlling entrance of air; *c*, trigger for operating throttle by thumb of operator; *c′*, trigger for operating throttle by forefinger of operator; *d*, valve-box, carrying valve which admits air to cylinder, drives piston out for working stroke, and retracts it; *e*, piston sliding in working-cylinder, and acting as hammer; *ff*, channel by which air gets to front of piston to drive it back; *g*, shank of cutting-tool or riveting-set or swage; *h*, riveting-set or swage; *j*, handle-grip

admits and exhausts the air so long as a trigger is kept pressed down by the thumb or forefinger of the workman.

Revolving hammer, a form of trip-hammer in which a revolving cam makes the hammer strike a quick succession of blows.—**Slater's hammer**. Same as *sax*[1], 2 (which see).—**Wagner hammer** [from P. Wagner], an automatic electromagnetic interrupter which constitutes the buzzer of du Bois-Reymond's inductorium.

hammer[1], *v.* **I.** *trans.* **5.** To declare (a member) to be in default, after notice by hammering three times on the rostrum. [Stock-exchange slang, Eng.]—**6.** To beat down or depress (price or the market); bear.

II. *intrans.* **4.** To make a knocking noise, as a steam-pipe when steam is let on and a water-hammer is produced. See *water-hammer*, 2.

hammer-action (ham′ėr-ak″shọn), *n.* In *pianoforte-making*, a collective name for the parts which compose and control the hammers.

hammer-block (ham′ėr-blok), *n.* The steel face of a steam-hammer which is fastened to the tup by a dovetailed-joint. Various kinds of hammer-blocks can be used, the form depending on the work to be done.

hammer-break (ham′ėr-brāk), *n.* A system of ignition for internal-combustion motors where an arc is formed by separating two surfaces between which the current passes when they are in contact. When the gap is formed between them, an arc or stream of sparks crosses the gap and fires the charge. The movable element is often shaped like the head of a hammer, and the sparks pass as the hammer is lifted from the anvil on which it has rested.

hammer-butt (ham′ėr-but), *n.* In *pianoforte-making*, the block, pivoted upon the action-rail, into which the base of a hammer-shank is fitted. See cut under *pianoforte*.

hammer-check (ham′ėr-chek), *n.* Same as *hammer-catcher* and *check*[1], 16.

hammerclavier (ham′ėr-kla-vēr), *n.* One of the early forms of the pianoforte.

Hammered pottery. See ★*pottery*.

Hammer-fish oil. See ★*oil*.

hammer-head (ham′ėr-hed), *n.* In *pianoforte-making*, the padded projection of the hammer which strikes against the string.

hammerless (ham′ėr-les), *a.* [*hammer* + *-less*.] Having no hammer or no visible hammer: applied, specifically, to a breech-loading small arm in which the cartridge is fired by the action of a firing-pin or a concealed hammer.

hammer-palsy (ham′ėr-pâl″zi), *n.* See ★*palsy*.

hammer-rest (ham′ėr-rest), *n.* In *pianoforte-making*, the rail which extends through the action from side to side and against which the hammers rest when not in use. Also called *spring-rail*. See cut under *pianoforte*.

hammer-shank (ham′ėr-shangk), *n.* In *pianoforte-making*, the slender rod or shank of wood which bears the hammer-head. See cut under *pianoforte*.

hammersmith (ham′ėr-smith), *n.* One who works or forges metal with a hammer; particularly, one who works large forgings under a steam-hammer.

hammer-tail, *n.* **2.** In *pianoforte-making*, the backward projection of a hammer-head, designed to engage with the check.

hammer-toe (ham′ėr-tō), *n.* A deformity of one of the toes, commonly the second, marked by ankylosis of the joints—the proximal in extension, the distal in flexion.

hammochrysus (ham-ō-krī′sus), *n.* [L.; also *ammochrysus*, < Gr. ἀμμοχρυσος (only in Pliny and later Latin writers), < ἄμμος, sand, χρυσός, gold.] In Pliny and later writers, a name probably designating a yellow mica schist or the sand yielded by it.

hammock[1], *n.*—**Up all hammocks!** The command to lash hammocks and bring them on deck for stowing in the hammock-nettings.

hammock-berthing (ham′ọk-bėr″thing), *n.* *Naval*, a box-like structure built above the deck at the side and forming bulwarks, or in the interior against the side, in which the hammocks are stowed when not in use. See cut under *frame*, 6.

hammock-box (ham′ọk-boks), *n.* *Naval*, a large box in which are stowed hammocks for which there is not room in the hammock-berthing.

hammock-carriage (ham′ọk-kar″äj), *n.* A vehicle in which the passenger is carried in a hammock swung between two posts attached to the axles. [Madeira.]

hammock-lines (ham′ọk-līnz), *n. pl.* *Naut.*, sets of cords at each end of a hammock, by which it is hung up. Also called *clues*.

hammock-moth (ham′ọk-môth), *n.* A South American moth, *Perophora sanguinolenta*, whose larva constructs a portable habitation from its own excrement.

hammock-rail (ham′ọk-rāl), *n.* *Naut.*, the rail around the long troughs, known as hammock-nettings, built on top of the bulwarks.

hammock-stanchions (ham′ọk-stan″shọnz), *n. pl.* *Naut.*, iron shapes to which are secured the hammock-rails. These stanchions are fixed either on the main rail of the ship or on the plank-sheer or covering-board.

hamo (hä′mō), *n.* [Jap.] An eel, *Muræsnesox cinereus*, of the family *Muræsnesocidæ*, found in the waters of Japan.

Hampstead beds. See ★*bed*[1].

ham-tail (ham′tāl), *n.* A tail (of a horse) shaped like a ham.

hamular, *a.* **II.** *n.* The hamular process or slender curved end of the pterygoid. [Rare.]

The bullæ are so flattened that when viewed from behind . . . they appear to rise scarcely above the level of tips of *hamulars*. *Annals and Mag. Nat. Hist.*, May, 1901, p. 450.

hana-kago (hä′nä-kä′gō), *n.* [Jap., < *hana*, flower, + *kago*, basket.] In Japan, a flower-basket.

hanch[2] (hanch), *v. t.* and *i.* To snap at threateningly, as a wild or infuriated animal.

Several men had been terribly torn by the bloodhounds, who, when their masters had fled, noble brutes as they were, stood gasping and barking; and *hanching* at us, at the entrance of the opening, thus covering their retreat; — spouting out in a bound or two towards us every now and then, and immediately retiring, and yelling and barking at the top of their pipes.

M. Scott, Cruise of the Midge, p. 19.

hancockite (han′kok-īt), *n.* [Named after E. P. *Hancock* of Burlington, New Jersey.] A member of the epidote group, peculiar in containing lead and strontium, found at Franklin Furnace, New Jersey.

hand, *n.*—**An old hand.** (*a*) One who has had long experience: as, he's *an old hand* at that game. (*b*) One who, in the early days of Australian history, had been a convict.

The men who had been convicts are termed *old hands*; they are mostly rude rough men with no moral principle or religious feeling.

T. Mc Combie, Australian Sketches, quoted in E. E. Morris, Austral English.

A taut hand, *naut.*, an officer who is a strict disciplinarian.—**Book hand**, a style of penmanship suitable for books, as distinct from ordinary cursive forms of writing.—**Broken hand**, in *bridge*, a hand in which the strength is distributed; one in which there is no suit long enough to be made the trump.—**Buddha's-hand**, a cultivated variety of the citron, *Citrus medica*, in which the individual carpels of the fruit are partially separated, often for half their length, and each is covered by the highly aromatic, oily rind; the whole fruit bearing a rough resemblance to the human hand. This fruit has an important place in Japanese and Chinese mythology and is very often used as a decorative design in ceramics and other works of art.

Fruit of *Citrus medica* (Buddha's-hand). Reduced.

Huge bowls of rare old porcelain held pyramids of fruits—apples, sweet-smelling quinces, and the highly perfumed "*Buddha's-hand*."

Katharine A. Carl, The Century, Nov., 1905, p. 45.

Cleft hand. See ★*cleft*.—**Comparison of hands.** See ★*comparison*.—**Complete hand**, in *poker*, a hand from which cards have been discarded and to which other cards have been drawn.—**Dead-man's hand**, in *poker*, two pairs, jacks and eights.—**First hand.** (*b*) In *card-playing*, the one who leads in any trick.—**Hands down**, with ease; easily: as, to win the race *hands down*.—**Hand under hand**, the natural movement of the hands when descending a rope without employing the feet.—**Original hand.** In *card-playing*: (*a*) A hand which has not been discarded from. (*b*) In *poker*, the hand before the draw.—**Piano hand**, in *whist* or *bridge*, an easy hand to play.—**Younger hand**, in *card-playing*: (*a*) The opposite of *eldest hand*; the second player on the first trick. (*b*) In *piquet*, the dealer.

hand, *v. t.*—**To hand over**, to deliver.

hand-box (hand′boks), *n.* In *hort.*, a small box, usually of wood, with a sliding pane of glass, used for setting over individual plants or hills of plants in order to force them ahead of their season or to protect them. *L. H. Bailey*. See ★*forcing-hill*.

hand-canter (hand′kan″tėr), *n.* An easy, slow canter. In racing it is understood to refer to an easy victory. If the winner come in at a hand-canter it means that he is so much ahead of his competitors that there is no longer necessity to gallop—that victory is assured.

handcuf, handcuft. Simplified spellings of *handcuff*, *handcuffed*.

hand-dynamometer (hand′dī-na-mom″e-tėr),

Hand-dynamometer.

n. In *physiol.* and *psychophysics*, a dynamometer, of an oval shape, commonly used to measure the force of grip or squeeze of the hand. *E. B. Titchener*, Exper. Psychol., I. ii. 167.

hand-grenade, *n.* **2.** A fire-extinguisher consisting of a glass bottle filled with chemicals.

handhold, *n.* **3.** In *car-building*, an iron bar firmly fixed to the side or end of a freight-car to assist trainmen in boarding it; a grab-iron.

handicap, *n.*—**Flying handicap**, a race in which the starting-post is passed at full speed.

handing (han′ding), *n.* Making work which is symmetrical, on the right and the left hand, with respect to an assumed plane of symmetry.

hand-iron (hand′ī″ėrn), *n.* A tinman's stake. See *stake*[1], 5.

hand-lamp (hand′lamp), *n.* In *elect.*, an arc-lamp without automatic feed, in which the adjustment of the carbons is made by hand from time to time.

handle, *n.* **4.** The feel or touch of goods handled. *C. Vickerman*, Woollen Spinning, p. 266.

handle-bar (han'dl-bär), *n.* In a bicycle or motor-cycle, the curved bar in front of the rider by which the vehicle is guided by the hands. In the motor-cycle many of the controlling devices are affixed to the handle-bar.

handle-piano (han'dl-pi-an ō), *n.* A mechanical pianoforte operated by a handle or crank, as a street-piano.

hand-light (hand'līt), *n.* A hand-glass; a bell-shaped glass used to shelter young seedlings and cuttings from rain and wind: not in general use in the United States.

Hand-lights are freely used in the market gardens of this district [the vicinity of Evesham and Pershore] for the protection of cucumbers and vegetable marrows.
Encyc. Brit., XXVIII. 532.

handling-room (hand'ling-röm), *n.* In a warship, an ammunition handling-room; a comparment immediately adjacent to those in which ammunition is stored and into which they open. The lower ends of the ammunition-hoists are in the handling-rooms and the ammunition is passed from the magazines into the handling-rooms to be loaded into the hoists. See cut under ★*turret.*

handmaid-moth, *n* **Walnut handmaid-moth,** *Datana integerrima*, an American species whose larvæ damage forest trees of different kinds.

hand-me-down (hand'mē-doun″), *a.* Same as *reach-me-down.*

hand-out (hand'out), *n.* In *hand-ball*, *hand-tennis*, and similar sports, the condition of the game when the striker is out and the players change places.

hand-pike (hand'pīk), *n.* A piked lever, usually from 6 to 8 feet long, used in handling floating logs.

hand-rest (hand'rest), *n.* The T-rest on a hand-lathe: so called because used as a rest for a hand-tool in turning and to distinguish it from an automatic or slide-rest.

handscrew, *n.* **2.** A carpenter's clamp.

hand-specimen (hand'spes″i-men), *n.* A specimen of rock or mineral not too large nor too small to be conveniently handled for purposes of study. The standard size for rocks is 1 by 4 by 3 inches.

handspike (hand'spīk), *v. t.*; pret. and pp. *handspiked*, ppr. *handspiking.* **1.** To move by means of a handspike: as, to *handspike* a cannon into place.—**2.** To strike with a handspike.

Perhaps he did not know me—no, he could not, or he never would have *handspiked* me.
Marryat, Snarleyow, vi.

handspoke (hand'spōk), *n.* A long spoke or bar fitted at each end for the hand; specifically, one of the two used in Scotland in carrying a coffin to the cemetery, or from the hearse to the grave. Also called *handspike.*

The coffin, covered with a pall, and supported upon *handspikes* by the nearest relatives, now only waited the father to support the head. *Scott*, Antiquary, xxxi.

hand-square (hand'skwãr), *n.* A modification of the squaring-machine, operated by hand, for the preliminary shaping and truing of tiles. See ★*rubbing-bed.*

hand-stake (hand'stāk), *n.* In *glove-making*, a tool used for stretching skins. See the extract.

As soon as the skin is received by the glove maker it is immediately staked by the *hand stake*, which consists of two upright and two horizontal bars, one of the latter being movable to admit the skin, which is held in position by a wedge inserted at the end of the bar. The stretching is then done by pressing over the skin so placed a blunt iron like a spade, having round corners and a handle which fits under the arm.
Sci. Amer. Sup., Jan. 24, 1903, p. 22629.

hand-stamp (hand'stamp), *n.* Any form of marking-, printing-, or impressing-stamp used by hand.

hand-tree (hand'trē), *n.* Same as *handflower-tree.*

hang, *v.* **I.** *trans.*—**To hang up.** (*c*) To hitch or tie up (a horse) to a post, a tree, or the like. [Colloq. Australia.]

The mail-boy is waiting impatiently in the verandah, with his horse *hung up* to one of the posts.
E. W. Hornung, quoted in E. E. Morris, Austral English.

II. *intrans.* **13.** In *cricket*, to come from the pitch at a perceptibly decreased rate of speed: said of a ball bowled. *Hutchinson*, Cricket, p. 67.—**Hanging ball, bits, glacier, lie, valley.** See ★*ball*[1], etc.

hang-down (hang'doun), *n.* A bearing which is suspended from a roof or beam by a hanging bracket; a hanger.

hanger, *n.*, **5.** (*f*) A vat in which skins are tanned by being suspended in the liquor. *Modern Amer. Tanning*, p. 78. (*g*) A long loop or looped rod which hangs from a transverse beam attached to a foundry crane, and which receives the trunnions of a molding-flask slung therefrom.—**Expanding hanger.** (*h*) An adjustable hanger: a hanger having adjustments to allow for taking up wear and to keep the shaft in line even though the building settles.

hanging-block (hang'ing-blok), *n.* *Naut.*, one of the blocks which are secured under the eyes of the rigging on the foremast, and through which the halyards of the head-sails are rove.

hanging-drop (hang'ing-drop), *n.* The minute portion of nutrient solution suspended from a slide or cover-glass and usually inclosed in a cell, in which bacteria and other micro-organisms are cultivated.

hanging-parrot (hang'ing-par″ọt), *n.* See ★*bat-parrakeet.*

Hangman's knot. See ★*knot*[1].

hangout (hang'out), *n.* One's place of business or resort; a rendezvous. [Colloq.] *Forest and Stream*, Feb. 21, 1903, p. 143.

hank-dyeing (hangk'dī″ing), *n.* The process of dyeing yarn in the form of hanks or skeins. It is carried out both by hand and by machinery. Also called *skein-dyeing.* *Georgievics* (trans.), Chem. Technol. Textile Fibres, p. 205.

hank-indicator (hangk'in″di-kā-tọr), *n.* A device attached to some textile machines for registering the amount (in hanks) of their production. *Thornley*, Cotton Combing Machines, p. 196.

hannahill (han'a-hil), *n.* [Origin unknown.] A name of the black sea-bass, *Centropristes striatus*, found on the Atlantic coast of the middle United States. *Jordan and Evermann*, Fishes of North and Middle Amer., p. 1199.

Hannekin defense. Same as *Berlin* or *Prussian* ★*defense.*

Hanot's cirrhosis. See ★*cirrhosis.*

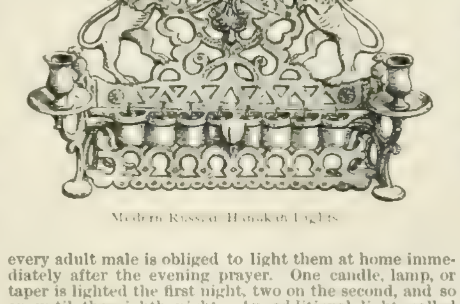
Hansard[2] (han'särd), *n.* [*Hansard*, one of the original compilers.] The official report of the proceedings and debates of the British parliament.

Hansardize (han'sär-dīz), *v. t.*; pret. and pp. *hansardized*, ppr. *hansardizing.* To confront (a member of parliament) with his previous utterances on some question, as recorded in Hansard, and thus convict him of inconsistency. [Colloq., Eng.]

hansom, *n.*—**Cape hansom,** a hansom-cab with a bow top, fitted with a pole like a Cape cart.

Hants. A contraction of ancient *Hantesshire* (now *Hampshire*).

Hanukah (ċhä'nö-kä), *n.* [Also *Chanukah*, *Chanuca.* Heb. *hanūkah*, < *hanak*, dedicate.] Among the Jews, the festival of dedication. Josephus (Antiq., XII. vii. 7) calls it the "festival of lights." It is the only post-Biblical festival of importance among the Jews. It begins on the twenty-fifth day of Chisleu (Kisleu), about the end of December, and lasts eight days (until the second day of Tebeth). This festival, like Purim (which see), is the occasion of much rejoicing. It is celebrated in commemoration of the defeat of Antiochus Epiphanes by the Maccabees (B. C. 164). When the temple was recovered from the defeated Syrians it was cleansed and the sacred vessels were purified. One vial of undefiled oil for the golden candlestick was found. According to tradition, that small quantity of oil miraculously continued to burn for eight days and nights until more oil was procured. In memory of this, the rabbis decreed the perpetuation of the festival. Orthodox Jews scrupulously keep the Festival of Lights. Special prayers and praises are added to the daily ritual. The chief feature of Hanukah is the 'Hanukah lights.' Every household and even



Modern Russian Hanukah Lights.

every adult male is obliged to light them at home immediately after the evening prayer. One candle, lamp, or taper is lighted the first night, two on the second, and so on until the eighth night. An additional light, called *shamash* ('servant'), serves to supply the light to the others. Two such lights are sometimes placed in modern forms.

haoma (hä'ọ-mä or hou'mä), *n.* [Avestan *haoma* = Skt. *soma*: see *soma*[2].] Same as *homa* and *soma*[2].

On the position of the *Haoma* in the Avesta of the Parsees. *Smithsonian Rep.*, 1890, p. 91.

haori (hä'ọ-rē), *n.* A short loose over-jacket or -coat worn in Japan.

Women under their umbrellas wore the graceful short overcoat they call *haori*, and tottered over the wet ground on high wooden pattens.
La Farge, Artist's Letters from Japan, p. 274.

hapaxanthic (hap-aks-an'thik), *a.* [Gr. ἅπαξ, once, + ἄνθειν, bloom, + *-ic.*] Same as ★*hapaxanthous.*

hapaxanthous (hap-aks-an'thus), *a.* [Gr. ἅπαξ, once, + ἄνθειν, bloom, + *-ous.*] In *bot.*, having only a single flowering-period: applied to herbs which after once seeding die throughout. Such plants may be annual (monocyclic) or biennial (dicyclic). *F. E. Clements.*

haphalgesia (haf-al-jē'si-ä), *n.* [NL., < Gr. ἁφή, touching, + ἄλγησις, the feeling of pain.] A condition of hyperæsthesia in which the slightest touch causes pain.

haplite, *n.* Haplite proper is a granite free, or nearly free, from muscovite or any dark silicate. The name is also applied by Rosenbusch and other petrographers to the highly feldspathic members of the syenite, monzonite, and diorite families, such rocks being usually called *syenite-haplite, diorite-haplite*, etc. This extension of the term is connected with the belief that such haplitic rocks are differentiation products of syenitic, monzonitic, or dioritic magmas. The rocks in question often occur in dikes and possess the panautomorphic granular texture, and these features enter into the definitions given by Rosenbusch.

haplitic (hap-lit'ik), *a.* [Also *aplitic;* < *haplite* + *-ic.*] In *petrog.*, pertaining to or having the characters of the rock called haplite.

haplobacteria (hap-lō-bak-tē'ri-ä), *n. pl.* [Gr. ἁπλόος, single, + NL. *bacteria.*] Unicellular bacteria of the ordinary rod, spiral, or spherical form, as contrasted with the ★trichobacteria (which see).

Haplocheilus (hap-lọ-kī'lus), *n.* [NL., also *Aplocheilus;* < Gr. ἁπλόος, single, + χεῖλος, lip.] A genus of killifishes closely allied to *Fundulus*, but differing in the short dorsal and longer anal fin. The species are mainly Asiatic. *Aplocheilus* is the original form of the name.

haplochlamydeous (hap″lọ-kla-mid'ẹ-us), *a.* [Gr. ἁπλόος, simple, + χλαμύς (χλαμυδ-), a cloak, + *-eous.*] In *bot.*, having a simple or rudimentary floral envelop, as in the pistillate flowers of the *Juglandaceæ.* In plant development the haplochlamydeous stage succeeds the achlamydeous and is followed by the homoiochlamydeous.

Haplocrinidæ (hap-lọ-krin'i-dē), *n. pl.* [NL., < *Haplocrinus* + *-idæ.*] A family of crinoids which belongs to the order *Larviformia* and is typically represented by the genus *Haplocrinus.*

Haplocrinus (hap-lok'ri-nus), *n.* [NL., < Gr. ἁπλόος, single, + κρίνον, a lily (see *crinoid*).] A genus of inadunate or larviform crinoids typical of the family *Haplocrinidæ*, of which it is the only representative. It has a small pyriform calyx in which there are three compound and two simple radials, uniserial and non-pinnulate arms. It occurs in the Middle Devonian.

Haplodinotinæ (hap″lọ-di-nọ-tī'nē), *n. pl.* [*Haplodinotus* + *-inæ.*] A subfamily of freshwater drums, typified by the genus *Haplodinotus* (or *Aplodinotus*).

Haplodoci (hap-lod'ọ-si), *n. pl.* [NL., < Gr. ἁπλόος, single, + δοκός, a beam, bar.] A suborder or group of fishes, typified by the toadfishes or *Batrachoididæ.* It is characterized by the peculiar structure of the pectoral arch.

haplodonty (hap'lọ-don-ti), *n.* [*haplodont* + *-y*[3].] The condition or fact of having molar teeth with simple crowns. See *haplodont.*

haplohedral (hap-lọ-hē'dral), *a.* [Gr. ἁπλόος, single, + ἕδρα, base, + *-al.*] In *mineral.*, noting the asymmetric or pediad group of the triclinic system in which each form has one face only. See ★*symmetry.*

haplogamic (hap-lọ-gam'ik), *a.* Pertaining or relating to haplogamy.

haplogamy (hap-log'a-mi), *n.* [Gr. ἁπλόος, simple, + γάμος, marriage.] A method of cell-conjugation in which the fusions of the nuclei and the chromatin are not deferred to permit the formation of vegetative cells or tissues, plasmapsis, karyapsis, and mitapsis occurring in the same cell. Vegetative tissues of haplogamic structures are composed of cells with a single nucleus and a single set of chromosomes. The alternatives of haplogamy are ★*apandrogamy* and ★*paragamy.* *Cook and Swingle.*

haplology (hap-lol'ọ-ji), *n.* [Gr. ἁπλόος, single, + -λογία, < λέγειν, speak.] The utterance of only one of two similar adjacent syllables or sounds that appear in the full pronunciation of the word. The phenomenon is a universal linguistic fact, and is parallel to that of *haplography* (which see). Both

influences appear in the history of many words. Examples are *idolatry* for *idololatry*, *symbology* for *symbolology*, *register* for *registrer*, *registrar*, *ably* for *ablely*, *idly* for *idlely*, *wholly* (pronounced *wholy*) for *wholely*, etc.

The phenomena seemed related to those of *haplology* in the history of words, as in 'nutrix' for 'nutritrix.'
Scripture, Exper. Phonetics, p. 168.

haplome[2] (hap'lōm), *n.* A member of the *Haplomi.*

Haplomi[2] (hap-lō'mī), *n. pl.* [NL., < Gr. ἁπλόος, single, + ὦμος, shoulder, upper arm.] An order or suborder of fishes which is characterized by the absence of the mesocoracoid arch and of spines in all of the fins. The families contained in this group are the *Pœciliidæ*, or killifishes, the *Esocidæ* or pikes, the *Umbridæ* or mud-minnows, and the *Amblyopsidæ* or blind-fishes.

Haploscleridæ (hap-lō-sklē'ri-dē), *n. pl.* [NL.]. A large family of halichondrine *Demospongiæ* The spiculation is of a simple type, and the microscleres, if present, are never chelæ. It contains *Halichondria*, *Chalina*, *Reniera*, *Spongilla*, and many other genera.

haploscope (hap'lō-skōp), *n.* [Gr. ἁπλόος, single, + σκοπεῖν, view.] In *physiol.* and *psychol. optics*, a stereoscope which presents to either eye a field invisible to the other. *E. C. Sanford*, Exper. Psychol., p. 404.

haploscopic (hap-lō-skop'ik), *a.* [*haploscope* + *-ic.*] Pertaining to the haploscope or to its use.

This test is superior to the tests with *haploscopic* figures because it is dependent upon true psychical fusion, while the latter are dependent upon the mere matching together of divided figures.
Optical Jour., June 2, 1904, p. 963.

Haplosporidia (hap″lō-spo-rid'i-ä), *n. pl.* [NL., pl of *Haplosporidium.*] An order of *Sporozoa.* The developmental cycle is very simple. The youngest stage of the parasite is a minute rounded corpuscle with single nucleus; as growth proceeds, multiplication of nuclei occurs, and the mass finally separates into a number of spores of uniform structure, which give rise to uninucleated corpuscles, thus completing the cycle. It contains the genera *Bertramia*, *Haplosporidium*, and *Cœlosporidium*, parasitic in worms, rotifers, and crustaceans.

Haplosporidium (hap″lō-spō-rid'i-um), *n.* [NL., < Gr. ἁπλόος, single, + σπορά, seed (spore), + dim. *-ιδιον.*] The typical genus of the order *Haplosporidia.* *Caullery et Mesnil*, 1899.

haptere (hap'tēr), *n.* [G. *hapter*, < NL. *hapteron.*] Same as ★*hapteron.*

hapteron (hap'te-ron), *n.*; pl. *haptera* (-ä). [NL., irreg. < Gr. ἅπτειν, fasten.] In *phytogeog.*, a special organ of attachment composed of non-vascular tissue, developed by many aquatic lithophytes, as *Podostemaceæ* and marine algæ. *E. Warming.*

haptic (hap'tik), *a.* [Gr. ἁπτικός, < ἅπτειν, touch: see *apse.*] Tactile; of or pertaining to haptics: as, a *haptic* sensation. *Amer. Jour. Relig. Psychol. and Education*, May, 1904, p. 33.

haptical (hap'ti-kal), *a.* Same as ★*haptic.*—**Haptical image.** See ★*image.*

haptics (hap'tiks), *n.* [Pl. of *haptic.*] In *psychol.* and *physiol.*, the science of touch: as optics is the science of sight and acoustics the science of hearing. As generally used, the term includes the physiology and psychology not only of the skin and the adjoining mucous membrane, but also of the kinesthetic organs (muscles, tendons, joints).

As a general term for perceptions of touch in the widest sense, M. Dessoir [1892] suggests *Haptics* as an analogue of Optics and Acoustics. This he further divides into Contact-sense (including pure contact and pressure) and Pselaphesia . . . (including active touch and 'muscle sense').
E. C. Sanford, Exper. Psychol., p. 1.

haptine (hap'tin), *n.* [Gr. ἅπτειν, touch, fasten, + *-ine*[2].] A cast-off receptor. The haptines are represented by the antitoxins, the agglutinins, the precipitins, and the amboceptors of the hemolysins, the bacteriolysins, etc. See ★*immunity.*

haptogenic (hap-tō-jen'ik), *a.* [Gr. ἅπτειν, touch, + *-γενης*, -produced.] Used in the term *haptogenic membrane*, a hypothetical albuminous membrane which according to Ascherson surrounds every globule of fat in milk. *C. E. Simon*, Physiolog. Chem., p. 408.

haptophil (hap'tō-fil), *a.* [Gr. ἅπτειν, fasten, + φιλεῖν, love.] Same as ★*haptophoric.*

haptophore (hap'tō-fōr), *a.* [Also *haptophore*; < Gr. ἅπτειν, fasten, + *-φορος*, < φέρειν, bear.] Same as *haptophoric.* Also *haptophor.*

Ehrlich's hypothesis to explain such facts is usually spoken of as the side-chain theory of immunity. He considers that the toxins are capable of uniting with the protoplasm of living cells by possessing groups of atoms like those by which nutritive proteids are united to cells during normal assimilation. He terms these *haptophor* groups, and the groups to which these are attached in the cells he terms receptor groups. The introduction of a toxin stimulates an excessive production of receptors, which are finally thrown out into the circulation, and the free circulating receptors constitute the antitoxin. The comparison of the process to assimilation is justified by the fact that non-toxic substances like milk introduced gradually by successive doses into the blood-stream cause the formation of anti-substances capable of coagulating them.
Rep. Brit. Ass'n Advancement of Sci., 1902, p. 778.

haptophoric (hap-tō-fō'rik), *a.* [As *haptophore* + *-ic.*] Pertaining to that group of a toxin molecule which unites with the corresponding receptor of a cell. The same term is used to designate that group of cell receptors which unites with the immunizing substance. See ★*immunity.*

haptophorous (hap-tof'ō-rus), *a.* [As *haptophore* + *-ous.*] Same as ★*haptophoric.*

haptotics (hap-tot'iks), *n.* [Irreg. < Gr. ἅπτειν, touch, + *-otic.*] Same as ★*haptics.*

hapuku (hä'pö-kö), *n.* [Maori.] A fish, the groper (*Polyprion oxygeneios*), found on the coast of New Zealand. Its average weight is about 45 pounds, and in some places it forms an important article of trade. Also *hapuka.*

harakeke (hä-rä-kā'kā), *n.* [Maori.] The common variety of the New Zealand flax, *Phormium tenax.*

harbor-deck (här'bor-dek), *n.* See ★*deck*, 2.

harbor-pirate (här″bor-pī rat), *n.* One who robs vessels in port by coming alongside in a small boat and carrying off portable articles, such as brass belaying-pins, running-gear, etc.: a thief whose trade is to steal cargo from docks and vessels in harbor.

harbor-porpoise (här'bor-pôr″pus), *n.* The small porpoise or puffing-pig, *Phocæna phocæna*, or *P. communis*, frequently seen in bays and estuaries.

Harcourt air-gas pentane standard. See ★*air-gas.*

hard, *a.*, **10.** (*h*) In *vocalization*, of a tone made with a rigid attitude of the vocal organs, so as to be wanting in mellowness and sympathy.

hard, *adv.*—**Hard ashore**, said of a vessel when it is firmly fixed on the rocks or on a shoal or beach.—**Hard aweather!** a command to put the steering-wheel over so that the tiller will be turned toward the weather side and the ship's head deflected from the wind: opposed to *hard alee!*—**Hard down!** a command to put the wheel over so that the ship may be brought to the wind: opposed to ★*hard aweather!*—**Hard over!** an order to the helmsman to jam the wheel or tiller over as far as possible.

hardback (härd'bak), *n.* **1.** Any fish of the genus *Callichthys*; any catfish of the family *Loricariidæ*, found in the fresh waters of South America.—**2.** In the British West Indies and British Guiana, any large beetle, especially one of the larger *Scarabæidæ.*

hard-earned (härd'ėrnd), *a.* Earned with difficulty or hard work.

harden[2], *n.* **2.** A cloth of coarse fiber and texture, made from hards.

hardener, *n.* **2.** In *photog.*, a chemical, such as alum, which is added to the fixing-bath in the making of gelatin negatives. It prevents the dissolving of the film in warm weather.

hardening-machine, *n.* **2.** See ★*heating-machine.*—**3.** A heating-machine adapted to heating small balls, parts of machines, saw-teeth, nuts, bolts, etc., and delivering them automatically while hot to oil or water hardening-tanks. For heating balls for ball-bearings a spiral conveyer is used to convey the balls through the furnace. Other machines employ different forms of link-belt conveyers, the aim in each type of machine being to expose the things to be heated to the direct action of the gas-flames and to protect the conveyer as much as possible from the destructive effects of the heat. This is accomplished by supporting the things to be heated on rods which project through a slot in the bottom of the furnace, the conveyer carrying the rods being outside the furnace, or by placing refractory bricks on the conveyer.

hardening-off (härd″ning-ôf'), *n.* In *hort.*, the process of inuring or habituating a plant to untoward conditions, as to adapt it gradually to cold before removing it from a hotbed or forcing-house.

hardening-tank (härd'ning-tangk), *n.* A tank or bath containing oil or water in which small metal objects are hardened as they come from the heating- or hardening-machine.

hardenite (här'de-nīt), *n.* A name proposed for the solid solution of iron and carbon containing 0.9 per cent. of carbon: it has the lowest transformation-point. The name has been abandoned by many authorities on iron and steel as being misleading.

Carbonists, however, hold that the pale areas are *hardenite* containing dissolved cementite, the dark areas being a mixture of *hardenite* and free cementite (M. Osmond's methods are evidently not sufficiently delicate to detect in the dark so-called martensite the constituent last named).
Nature, April 14, 1904, p. 554.

Harderian fossa. See ★*fossa*[1].

hard-grass, *n.* **2.** See *St. Augustine* ★*grass.*

hard-gut (härd'gut), *n.* *Mugil dobula*, a fish found in Australia.

hardhack, *n.* **2.** The hop-hornbeam, *Ostrya Virginiana.* [Vermont.]

hardhead, *n.* **3.** The name is also applied to many other fishes having hard heads: as in America to *Chriodorus atherinoides* of the family *Hemiramphidæ*, and *Salmo gairdneri*, a trout; in England to *Myoxocephalus scorpius*, a cottoid fish.

11. In the Bahamas, a shrub of the spurge family, *Phyllanthus Epiphyllanthus.* Also called *seaside laurel.* See *laurel*, 3.

hard-horse (härd'hôrs), *n.* A sailors' term for a tyrannical officer.

hardie (här'di), *n.* [AF.: see *hardy.*] **1.** An English billon coin of Edward III. See *hardhead*, 2.—**2.** A French copper coin of the year 1270, the liard of Philip le Hardi.

Harding sandstone. See ★*sandstone.*

hard-meat (härd'mēt), *n.* Dry fodder; corn and hay as fodder, as distinguished from grass. [Prov. Eng.]

hardness, *n.* **2.** Water, as found in nature, containing salts of lime or magnesia or both of these in considerable quantity, is said to be *hard*; it curdles or precipitates soap by forming insoluble lime or magnesia salts of the fatty acids. Any lime or magnesia present in the condition of carbonate is held in solution by carbonic acid, and if this latter is driven off as carbon-dioxid gas by boiling the water, the earthy carbonates are precipitated, so that the water is to this extent softened. The part of the original hardness which is thus removable by boiling is called *temporary hardness.* The part due to calcium or magnesium in the condition of chlorid or sulphate is not thus removable, and is called *permanent hardness.* The sum of the temporary and permanent hardness constitutes the *total hardness.* Hardness is frequently stated in degrees, each degree representing hardness equivalent to that caused by 1 grain of calcium carbonate in 1 imperial gallon of water; or, now more commonly, 1 part of calcium carbonate in 1,000,000 parts of water.

hard-spun (härd'spun), *a.* Compactly twisted: said of yarn.

hardtail, *n.* **2.** See ★*Gila.*

hardwood (härd'wůd), *a.* and *n.* **I.** *a.* Having a hard wood (see *hard wood*, under *wood*[1], *n.*), as a tree; bearing trees with hard wood, as a forest; made of hard wood: as, a *hardwood* floor.

II. *n.* A hardwood tree.

hardyhead[2] (här'di-hed), *n.* An atherinoid fish, *Atherina lacunosa*, inhabiting Australian waters. *E. E. Morris*, Austral. English.

hardy-hole (här'di-hōl), *n.* A rectangular hole in a blacksmith's anvil for the insertion of the shank of a cutting-tool or other piece.

hardystonite (här'di-ston-īt), *n.* [*Hardyston* (see def.) + *-ite*[2].] A silicate of zinc and calcium ($Ca_2ZnSi_2O_7$) which occurs in white granular masses at Franklin Furnace, in Hardyston township, Sussex county, N. J.

hare[1], *n.*, **1.** So many new species and subspecies of hares have been described of late years that common names have not kept pace with scientific names.—**Desert hare**, a subspecies of the Texan hare, *Lepus texensis deserticola*, which like other desert-dwellers has a pale coat.—**Polar hare**, the white northern species which are pure white in winter save the tips of the ears which are black. Besides *Lepus arcticus* other species are now recognized differing decidedly in the proportions of their ears and feet.—**Varying hare**, a name of several species of North American hares, especially of *Lepus americanus* and *L. campestris* which turn white in winter in the northern portion of their ranges.

harebell, *n.*—**Australian harebell.** Same as *Tasmanian* ★*bluebell.*

harelip-needle (hãr'lip-nē″dl), *n.* A slender cannula with a spear-pointed trocar which is passed through the two halves of the lip, the freshened edges being in apposition: the trocar is then withdrawn and a figure-of-8 suture is applied over the cannula.

harem, *n.* **4.** The group of female fur-seals (cows) controlled by a single male fur-seal (bull): the unit of life on the fur-seal rookeries. *Jordan*, Fur Seals and Fur-seal Islands.

Harengula (ha-reng'gū-lä), *n.* [NL., dim. of *harenga*, herring.] A genus of fishes of the family *Clupeidæ*, or herrings, characterized by the firm, usually adherent scales. The species are of small size and tropical in their distribution.

hare-wallaby (hãr'wol a-bi), *n.* Same as *hare-kangaroo.*

harf (härf), *n.* [Abyssinian.] An Abyssinian silver coin, the dahab, equal to one twenty-third of a dollar.

Hargeria (här-gē'ri-ä), *n.* [NL.] A genus of extinct toothed birds from the Cretaceous of Kansas. They are closely related to *Hesperornis*, but are distinguished by differences in the quadrate and in having a more slender femur. *Lucas*, 1902.

haricot (har'i-kō), *v. t.* To prepare as, or convert into, a haricot: as, to *haricot* a neck of mutton.

harifuku (hä-ri-fö″kö), *n.* [Jap.] The Japanese name of a fish of the family *Diodontidae*, *Diodon holacanthus.*

harigue, *n.* See ★*arigue.*

Häring beds. See ★*bed*[1].

Hariota (har-i-ō′tä), *n.* [NL. (Adanson, 1763), named in honor of Thomas *Hariot* (also spelled *Harriot*) (1560–1621), who accompanied Grenville to Virginia and wrote an account of its products. Compare ★*Harriotta.*] A genus of plants of the family *Cactaceæ.* See *Rhipsalis.*

harisembon (hä ri-sem′bŏn), *n.* [Jap.] Same as ★*harifuku.*

Harlequin caterpillar, pigeon, quail, ring, table. See ★*caterpillar,* etc.

harmalol (här′ma-lŏl), *n.* [*harmal(ine)* + *-ol.*] A brick-red compound, $C_{12}H_{12}ON_2.3H_2O$, formed by the action of hydrochloric acid on harmaline. It crystallizes in needles.

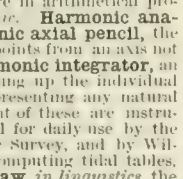
harmamaxa (här-ma-mak′sä), *n.* [Gr. *ἁρμαμαξα,* ⟨ *ἁρμα,* jointed, + *ἀμαξα,* wagon.] In *Gr. antiq.,* a covered wagon, much used by women, which is mentioned by Herodotus and Xenophon in descriptions of Persian luxury. It was similar to the ★apena (which see).

harminic (här-min′ik), *a.* [*harmin* + *-ic.*] Derived from harmin or harmaline. **Harminic acid,** a colorless compound, $C_{10}H_8O_4N_2$, formed by the oxidation of harmin or harmaline. It crystallizes in silky needles and melts and decomposes at 345° C.

harmol (här′mŏl), *n.* [*harm(in)* + *-ol.*] A compound, $C_{12}H_{10}ON_2$, formed by the action of fuming hydrochloric acid on harmin.

harmolic (här-mol′ik), *a.* [*harmol* + *-ic.*] Derived from harmol. **Harmolic acid,** a colorless compound, $C_{12}H_{10}O_5N_2$, formed by fusing harmol with potassium hydroxid. It crystallizes in small needles melting at 247° C.

harmonic. **I.** *a.* **Harmonic analysis.** (*c*) The resolution or analysis of a series of observed values of any quantity into an equivalent summation of a series of sine and cosine terms each pair of which represents the effect of an imaginary force operating in a specific way. The periods of the successive circles are in arithmetical progression, hence the term *harmonic.* **Harmonic analyzer.** See ★*analyzer.* **Harmonic axial pencil,** the four planes projecting harmonic points from an axis not coplanar with their bearer. **Harmonic integrator,** an apparatus for mechanically summing up the individual terms of the harmonic series representing any natural phenomenon. The most important of these are instruments devised by William Ferrel for daily use by the United States Coast and Geodetic Survey, and by William Thomson (Lord Kelvin) in computing tidal tables, for use in England.—**Harmonic law,** *in linguistics,* the law according to which the vowels in one word must belong to one class, so that *o,* for instance, may stand in conjunction with *ä* and *u,* but not with *e* and *i.*—**Harmonic minor mode** or **scale,** in *music,* that form of the minor mode or scale that has a minor sixth and a major seventh. Also called *instrumental minor.* **Harmonic optimum.** See ★*optimum.*—**Harmonic planes.** Same as ★*harmonic axial pencil.* **Harmonic points.** (*a*) In *projective geom.,* a harmonic range. (*b*) In *function theory,* two pairs of points, one pair the intersections of a circle about with a circle through the other pair. **Harmonic quadrangle.** See ★*quadrangle.* **Harmonic range,** four costraight points, if the first and third are codots of a tetrastigm while the other two are on the connectors through the third codot. Also called *harmonic points.*—**Harmonic spheres.** See ★*sphere.*—**Harmonic straights.** See ★*straight, n.*—**Simple harmonic motion,** that type of linear vibratory motion which is defined by the equation $x = a \cos tw$. If the path of the vibrating particle be taken as the diameter of a circle, the displacement of the particle will always be such that its position is the normal projection, upon the diameter, of the position of a point moving around the circle with uniform speed. Let a point starting from P move around a circle P Q D at uniform speed, and another point starting from P move along the diameter in such a manner that when the first point reaches P_1, P_2, P_3, etc., the second will reach p_1, p_2, p_3, etc. The motion of the point along the diameter is then a *simple harmonic motion.* **Spherical harmonic analysis,** in *math.,* the calculus of special harmonic functions where values are given on a sphere.



Simple Harmonic Motion.

II. *n.*—**Electrical harmonics,** electrical oscillations of higher frequency accompanying an oscillation of lower frequency, usually of greater amplitude, and related to the latter as the harmonic overtones of a complex sound are related to the fundamental tone.—**Ellipsoidal harmonic.** Same as *Lamé's function* (which see, under *function*).—**Higher harmonics,** in alternating currents, electromotive forces, waves of higher frequency, or overtones, which overlie the fundamental harmonic wave and more or less distort it.—**Perturbed harmonic,** in *acoustics,* an overtone the frequency of which is so modified as to throw it out of harmonic relation with the fundamental tone. **Solid zonal harmonic,** $P_m(\cos\theta)$. **Surface zonal harmonic,** $P_m(x)$ or $P_m(\cos\theta)$; also known as a *Legendre's coefficient.* **Tesseral harmonics,** $\cos n\phi \sin^n\theta \frac{d^n P_m(\mu)}{d\mu^n}$ and $\sin n\phi \sin^n\theta \frac{d^n P_m(\mu)}{d\mu^n}$; special cases of the spherical harmonic.

harmonica, *n.* **3.** In *organ-building,* a mixture-stop. [Rare.]

harmonograph (här-mon′ō-graf), *n.* [Irreg. ⟨ Gr. *ἁρμονία,* harmony, + *γράφειν,* write.] An apparatus in which two pendulums vibrate at right angles to each other, the movement of a stylus or pen attached to one making a record on a plane surface supported by the other.

Moreover, the table carrying the paper can be rotated and a variety of figures thus obtained, including the epicycloids and hypocycloids, and also curves similar to those given by a *harmonograph* with clockwork table, but without the gradual decrease in amplitude.
Nature, March 6, 1902, p. 421.

harmony, *n.*—**Dominant harmony,** in *music,* either the same as *dominant chord* (which see, under *dominant*), or, more loosely, all chords for which the dominant serves as the bass or which are associated with it as a general basis of reference.

harness, *n.* **8.** *Naut.,* an obsolete term for the furniture of a ship. **Cape harness,** a harness with a wide breast-collar connected with the breeching. It has hip- and neck-straps, but no saddle or girth. It is used in Cape Colony, South Africa.—**Centered tie-harness,** a method of tying up the heddles of a Jacquard loom for producing large effects from small pattern-cards.—**Coupé harness,** a heavy single harness, generally of a showy character, used with heavy closed pleasure-carriages.—**Double equal plain tie-harness,** a method of tying up the harness of a Jacquard loom in which four comber-boards are used to weave double equal plain fabrics.—**Double-scale harness,** a loom-harness for weaving wide patterns with a set of small Jacquard cards.—**Pressure harness,** a combination of a Jacquard and heddles, in a loom, both moving independently though acting on the same threads.

harness-room (här′nes-röm), *n.* A room in which sets of harness are cleaned, repaired, and stored.

harness-shaft (här′nes-shäft), *n.* A frame for holding the heddles of a loom.

harness-slip (här′nes-slip), *n.* In gauze or doup weaving, that part of a doup-heddle which controls the crossing of the warp-thread. *T. W. Fox,* Mechanism of Weaving, p. 234.

harp, *n.* **David's harp,** the gold florin of David of Burgundy, Bishop of Utrecht (1455–96), with the effigy of St. David and his harp.—**Harp instrument.** See ★*instrument.*—**Pointed harp,** a small triangular form of zither, now obsolete, played in an upright position on a table, having the higher strings on one side of the sound-board and the lower strings on the other. Also called *arpanetta* and *spidzharfe.*

Harpagodes (här-pa-gō′dēz), *n.* [NL., ⟨ Gr. *ἁρπαγή,* a hook, + *εἶδος,* form.] A genus of platypodous gastropod mollusks, belonging to the family *Strombidæ* and closely allied to the recent genus *Pterocera,* having an expanded body-whorl with reflected canal and the outer margin of the aperture produced into a number of tubular spinous processes. It occurs in the Jurassic and Cretaceous rocks.

Harpedidæ (här-ped′i-dē), *n. pl.* [NL., ⟨ *Harpes* (assumed stem *Harped-*) + *-idæ.*] A family of trilobites characterized by the broad horseshoe-shaped expansion of the cephalon, simple eyes on the fixed cheeks, numerous thoracic segments, and very small pygidium. Species occur in Silurian and Devonian rocks.

Harpes (här′pēz), *n.* [NL., perhaps ⟨ Gr. *ἁρπη,* a sickle.] The typical genus of the *Harpedidæ.*

harp-file (härp′fil), *n.* A wire hook for filing papers, attached to a harp-shaped piece of iron. *Stand. Dict.*

harpy-bat (här′pi-bat), *n.* An East Indian fruit-bat of the genus *Harpyia,* distinguished by tubular, projecting nostrils. There are two or three species of moderate size, the largest being *H. major* of New Guinea and the adjoining islands.

Harriotta (ha-ri-ot′ä), *n.* [NL., named after Thomas *Hariot* or *Harriot* (1560–1621), an English mathematician connected with Grenville's expedition to Virginia under appointment of Raleigh. Compare ★*Hariota.*] A genus of chimæras found in the deep waters of the Gulf Stream, characterized by the long snout which is produced in a soft flat blade. *H. raleighana* is the known species.

Harriotta raleighana.
(From Bulletin 47, U. S. Nat. Museum.)

Harris-buck (har′is-buk), *n.* The large sable antelope, *Hippotragus niger,* of South Africa, discovered by Sir C. Harris.

Harrison china. See *Columbian Star* ★*china.*

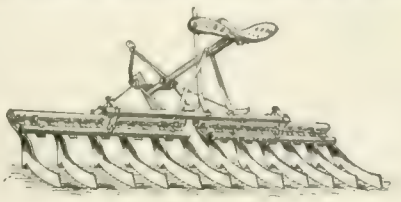
Harris's bark-louse, butterfly, cormorant. See ★*bark-louse,* etc.

Harrovian (ha-rō′vi-an), *a.* and *n.* **I.** *a.* Of or pertaining to Harrow, England.

II. *n.* A pupil or student in the college at Harrow, England.

Sir Douglas Straight is credited with being "Sigma," the old *Harrovian* who wrote 'Personalia,' chiefly on the strength of the Harrow Register of his day, which contains the names of many distinguished men, but of very few who are both literary and legal.
Athenæum, Nov. 21, 1903, p. 686.

harrow[1], *n.* **2.** A harrow-like military formation; also, that assumed by flying flocks of wild geese.—**Pulverizing harrow,** a form of riding-harrow in which broad elastic teeth resting on edge are suspended from the frame and are trailed over the ground, acting as small plowshares.—**Spring-tooth harrow,** a harrow having, in place of the fixed teeth used in the ordinary frame-harrow, curved steel teeth bent into a half-circle and acting as curved springs.


Pulverizing Harrow.

harry[2] (har′i), *n.* [Said to be so named from King *Harry* or Henry VIII.] A playing-card having a slight blemish on one surface.

Harry[3] (har′i), *n.* [Also *Harrie,* earlier *Herry, Herrie,* assimilated forms of *Henry,* OF. *Henri,* etc.] A common personal name, also used in various extraneous applications. See ★*'Arry,* and *Old Harry,* under *old.*—**Black Harry,** the black sea-bass, *Centropristes striatus,* so named along the Atlantic coast of the United States.

hart, *n.* and *v.* A simplified spelling of *heart.*

hartbeest, *n.*—**Bastard hartbeest.** Same as *sassaby* (which see).—**Hunter's hartbeest,** *B. hunteri,* from Somaliland, distinguished by the white A-shaped marks on the forehead, and long horns.

harth, *n.* A simplified spelling of *hearth.*

Hartogia (här-tō′ji-ä), *n.* [NL. (Linnæus, 1759), named in honor of John *Hartog,* an early Dutch traveler in South Africa.] A genus of plants of the family *Rutaceæ.* They are upright heath-like shrubs, the leaves usually alternate and commonly small and entire, the small white, red, or lilac flowers in terminal umbels or heads, rarely single in the axils of the leaves. There are about 100 species, native in South Africa, several of which are cultivated in greenhouses.

Hart's cell. See ★*cell.*

Hartshill quartzite. See ★*quartzite.*

hartshorn, *n.*—**Oil of hartshorn,** the liquid product, of oily consistence and immiscible with water, obtained in the destructive distillation of the antlers of deer, as formerly practised. It is essentially the same as bone-oil. *Thorpe,* Dict. Applied Chem., III. 8.

harty, *a.* and *n.* A simplified spelling of *hearty.*

Harveian (här′vē-an), *a.* Named, established, or delivered in honor of the famous physician William Harvey (1578–1657), the discoverer of the circulation of the blood: as, the *Harveian* Society of London; the *Harveian* lectures. *Lancet,* June 6, 1903, p. 1608.

harvesting-ant (här′ves-ting-ant), *n.* An ant of the genus *Aphænogaster* or of one of its immediate allies, such as *Pogonomyrmex.*—They form deep underground nests composed of many chambers, in some of which are stored the seeds of grasses and grains as provision against winter. *Cambridge Nat. Hist.,* VI. 164.

Harveyize (här′vi-īz), *v. t.* [H. A. *Harvey,* the inventor of the process, + *-ize.*] To subject the face of (a steel plate, particularly a steel armor-plate), for the purpose of chilling, to a process of cementation which increases the carbon in that portion of the plate and produces a plate with a comparatively soft and ductile body and a very hard face.

harzburgite (härts′bèr-gīt), *n.* [*Harzburg,* in Saxony, + *-ite*[2].] Same as *saxonite.*

hash-house (hash′hous), *n.* A cheap boarding-house. [Slang, U. S.]

haskinization (has′kin-ī-zā′shon), *n.* [*haskinize* + *-ation.*] A process by which heat of over 212° F. is applied to green lumber under pressure of 200 pounds to the square inch. Wood thus treated becomes indurated and durable. The process is sometimes substituted for creosoting.

haskinize (has′ki-nīz), *v. t.*; pret. and pp. *haskinized,* ppr. *haskinizing.* [*Haskin,* the inventor of the process, + *-ize.*] To subject to the process of ★haskinization (which see).

hasp-hinge (hasp′hinj), *n.* In *hardware,* a combined hinged plate and hasp used on trunks and boat and yacht fittings.

Hassall or **Hassall's bodies.** See ★*body.*

hassar (has′är), *n.* [S. Amer., perhaps ⟨ Tupi *acara* in a form *'agara.*] Same as ★*hardhead.*

Hassler's map-projection. See *polyconic map-projection.*

hassocky (has'ok-i), *a.* [*hassock*[1] + *-y*[3].] **1.** Full of thick clumps of coarse grass or sedge. See *hassock*[1], 1, and *hassock grass.*— **2.** Of the nature of the soft calcareous sandstone which separates the beds of Kentish ragstone in England.

haste[1], *n.*—**To make haste.** (*b*) In *cricket*, to move quickly after the pitch and of a ball.

hastifoliate (has-ti-fo'li-āt), *a.* Same as *hastifolious.*

hastingsite (hās'tingz-īt), *n.* [*Hastings* (see def.) + *-ite*[2].] A variety of amphibole from the nephelin-syenite of Dungannon, Hastings county, Ontario: its composition is analogous to that of garnet.

hat[1], *n.* **5.** In *bot.*, the pileus or cap of a mushroom.—**Alpine hat.** See ★*alpine.*—**Bee-gum hat,** a silk hat. [Local, U. S.] *Dialect Notes,* II. vii.—**Black hat,** a fresh immigrant; a new-comer; a 'new chum.' [Slang, Australia.] *E. E. Morris,* Austral English. **Cabbage-tree hat.** See ★*cabbage-tree.*—**Hat trick,** in *cricket*, the feat of a bowler who gets out three batsmen in three successive balls: so called because formerly it was rewarded by the present of a new hat.

It is the custom of many committees to give a sovereign to every professional who scores fifty runs, and money to those who perform the *hat trick* (i.e., take three wickets with consecutive balls). *Encyc. Brit.,* XXVII. 276.

Mackinaw hat, a very coarse straw hat. [U. S.]—**Old hat,** in Australian (Victorian) political slang, see the extract.

Mr. Frank Stephen was the author of the well-known epithet '*Old Hats,*' which was applied to the rank and file of Sir James M'Culloch's supporters. The phrase had its origin through Mr. Stephen's declaration at an election meeting that the electors ought to vote even for an old hat if it were put forward in support of the M'Culloch policy.

The Argus, May 1, 1895, quoted in E. E. Morris, [Austral English.

Tamsui hat [named from *Tamsui,* a port and river in Formosa], a hat made of strips of the bleached leaves of *Pandanus tectorius,* a species of screw-pine growing everywhere in Formosa. It rivals the Panama hat in its resistance to weather and hard usage.

hat-camera (hat'kam″ẹ-rą̈), *n.* A detective camera that may be concealed in a hat.

hatch[1], *n.*—**Take care of the lee hatch,** an obsolete order to the helmsman which signified that he was not to steer to leeward of the compass course given him.

Hatch Act. See ★*act.*

hatch-beam (hach'bēm), *n.* An extra strong beam fitted across the deck of a vessel at the ends of a large hatch, to compensate for the reduction in strength caused by the opening.

hatch-boat, *n.* **2.** A vessel of which the hatches extend fore and aft; a cargo-barge in which the deck is composed almost entirely of hatches.

hatch-coaming (hach'kō″ming), *n.* Same as *coaming.*

hatch-davit (hach'dav″it), *n.* A small portable davit overhanging a hatch, used for loading stores, ammunition, etc., below, by means of a whip, the block of which is hooked into an eye in the upper end of the davit.

hatchet-back (hach'et-bak), *n.* A large river-mussel, *Symphynota complanata,* having a wing-like projection on one edge of the shell, found in the Mississippi river. The shell is used for the manufacture of pearl buttons. Also called *hackle-back.*

hatchetman (hach'et-man), *n.* One who wields a hatchet, in any kind of work.

The fear of a highbinder outbreak in Chinatown grows as the activity of the dreaded *hatchetmen* is observed.
San Francisco Chronicle, Nov. 14, 1894.

hatchettite (hach'et-īt), *n.* [*Hatchett* (see *hatchettin*) + *-ite*[2].] Same as *hatchettin.*

hatch-gate (hach'gāt), *n.* A gate to regulate the flow of water through a dam or dike or from a reservoir.

hatching-house (hach'ing-hous), *n.* A house in which fish-eggs are hatched.

hatching-pen (hach'ing-pen), *n.* A pen for drawing the fine lines used in shading mechanical drawings and making hatchings.

hatching-station (hach'ing-stā″shọn), *n.* An establishment where fish-eggs are hatched.

hatchling (hach'ling), *n.* [*hatch*[2] + *-ling*[1].] A very young fish, usually artificially hatched and not old enough to take care of itself. The young in a fish-hatchery are so called during the period in which they are protected and given prepared food.

hatch-rings (hach'ringz), *n. pl.* Large iron rings in the corners of hatches used for lifting the hatches on and off.

hatch-tackle (hach'tak″l), *n.* A luff-tackle.

Hat-finishing lathe. See ★*lathe*[1].

hath (hąt), *n.* [Hind. *hāth,* a hand, also a measure of length, Prakrit *hattho,* < Skt. *hasta,* a hand.] A Hindu unit of length, equal to 18 inches.

hatherlite (hath'ẹr-līt), *n.* [*Hatherley,* in the Transvaal, + *-ite*[2].] A syenite composed chiefly of soda-microcline (anorthoclase) with a little brown hornblende, green pyroxene, and biotite, found in the Transvaal. *Henderson,* 1898.

Hathor (hąt'hor), *n.* [Also written *Athor, Hat-har* (Gr. 'Αθυρί), < Egypt. *Hāt-Hēr,* 'the house of Horus.'] In *Egypt. myth.*, a divinity, the female counterpart of Osiris, patroness of the cow: usually represented with the head and horns of a cow surmounted with the solar disk

Hathoric (hat-hor'ik), *a.* In *Egypt. antiq.*, pertaining to the goddess Hathor; decorated with a face or head assumed to be an image of Hathor: as, a *Hathoric* capital or statue; a *Hathoric* column.

Hathoric Capital.

hat-maker (hat'mā″kẹr), *n.* A maker of hats; a hatter.

hatoba (hą̈'tọ-bą̈), *n.* [Jap.] A pier or wharf; a landing-place.

hat-palm (hat'päm), *n.* Any one of several species of palms the leaves of which are used for making hats, especially *Inodes causiarum, I. glauca, Thrinax laxa,* and *T. latifrons* of Porto Rico, and *Thrinax argentea* of Panama.

hat-pin (hat'pin), *n.* A long metallic pin, often with a fancy head, used for fastening on a woman's hat.

hat-shag (hat'shag), *n.* A silk-plush fabric for hats.

hatting, *n.* **3.** Working by one's self and without associates or helpers, specifically as practised in gold-mining in Australia; one who has everything 'under his own hat.' See *hatter*[1], 2. [Slang, Australia.]

hat-tree, *n.* **2.** In Australia, one of the trees called sycamore, *Pœcilodermis lurida.* It yields a white, soft, easily split wood, occasionally used for shingles, and a strong bast fiber.

hat-wire (hat'wīr), *n.* A specially tempered wire used for hat-rims.

hau (hou), *n.* [Hawaiian.] The Hawaiian name of the mahoe, *Paritì tiliaceum,* which occurs in nearly all tropical countries and is abundant in all Pacific islands. It is generally planted near native habitations on account of its dense shade. For its various uses in Polynesia, see ★*balibago* and ★*fau,* 2. In Hawaii a decoction of the flowers is used as an emollient in bronchial and intestinal catarrhs.

hauchecornite (hōsh'kôr-nīt), *n.* [Named for M. *Hauchecorne.*] A sulphobismuthide of nickel, $Ni_7(S,Bi)_8$, occurring in tabular tetragonal crystals of metallic luster and bronze-yellow color.

hauhele (hou-hā'lā), *n.* [Hawaiian.] A native name of a tall shrub or small tree, *Hibiscus Arnottianus,* belonging to the mallow family. Also called *kokio-keokeo.*

haul, *v. t.*—**Hauling-down vacancy,** formerly in the British navy, a vacancy left on the (customary) promotion of the flag-lieutenant and senior midshipman on the conclusion of a cruise and the hauling down of the admiral's flag.—**Let go and haul,** a command, used in tacking a square-rigged vessel, signifying that the braces on one side of the ship are to be let go and the braces on the opposite side hauled on so as to reverse the bracing of the yards.—**To haul over,** to shift (something, as a sheet) across the deck.

haul, *n.* **5.** The distance and route over which something is hauled.—**Haul of all** (*naut.*), the act of swinging all the yards at once.

haulabout (hâl'ą-bout), *n.* A barge for coaling ships. It carries its own hoisting apparatus, derricks, etc., but has no propelling-engines.

Another type of coaling device which has proved highly successful is what is known as the "*haulabout.*" These *haulabouts* are plain steel hulls, similar to barges, with hatchways extending nearly across the vessel. Fitted to each *haulabout* are two self-contained Temperley traveling tower transporters, the beams of which have a very long over-reach on either side, and are sufficiently high to take coal from a large collier, and deliver it directly to the boat deck of the largest battleships or cruisers, if necessary. *Sci. Amer.,* July 23, 1904, p. 63.

haulage-way (hâl'ąj-wā), *n.* A passage through which material is hauled or drawn.

Descending by means of an elevator into the depth of the soft-coal mine before mentioned, we find ourselves in front of a whitewashed *haulageway* which extends far into the distance. *Sci. Amer.,* May 23, 1903, p. 392.

haul-back (hâl'bak), *n.* In *lumbering,* a small wire rope, traveling between the donkey-engine and a pulley set near the logs which are to be dragged, used to return the cable. Also called *trip-line, pull-back,* and *back-line.*

hauling (hâ'ling), *n.* In growing sea-island cotton, the operation of drawing up to the foot of the plant, with the hoe, the loose dirt left by the plow.

This is called "*hauling,*" and by it the new bed is completed, the cotton is kept from "flagging" (falling down), and the grass is kept under.
U. S. Dept. Agr., The Cotton Plant, p. 230.

hauling-ground (hâ'ling-ground), *n.* The portion of the shores of the fur-seal islands which is occupied by the young male or bachelor seals: contrasted with *rookery,* the ground occupied by the breeding seals.

As this is a large *hauling-ground,* . . . on which fifteen or twenty thousand (seals) commonly rest.
Elliott, Fur-Seal Islands of Alaska, p. 43.

hauling-line (hâ'ling-līn), *n.* *Naut.*, a small line lowered to the deck from a top or yard to be bent on to such articles as are needed for work which is going on aloft, as a maul, a marlinspike, or the like.

haul-up (hâl'up), *n.* In *lumbering,* a light chain and hook by which a horse may be hitched to a cable in order to move it where desired.

haunch-bone (hänch'bōn), *n.* The hip-bone, or os innominatum, which forms one side of the pelvis; also the ilium or the largest of the three bones composing each innominate bone.

The skeleton of the hip, or *haunch bone,* is called the os innominatum, and there is one such on each side in the adult man. *Mivart,* Elem. Anat., p. 177.

haunch-joint (hänch'joint), *n.* The hip-joint.

haunch-stone (hänch'stōn), *n.* In a stone arch, any stone placed at or near the haunches of the arch. See *haunch,* 5.

Haussmannize (hous'mąn-īz), *v. t.*; pret. and pp. *Haussmannized,* ppr. *Haussmannizing.* [*Haussmann* (see def.) + *-ize.*] To alter the appearance of (a city) by cutting long, straight avenues, building fine fronts upon these avenues, and setting up important buildings at either end, so that they will show from afar, as was done in Paris under the control of Baron Haussmann during the Second Empire.

As Louis XIV. set the fashion to palace-builders with Versailles so Haussmann, by the creation of a new Paris, excited to emulation the shapers of cities, and to "*Haussmannize*" has come to mean the substitution of monotonous avenues and rectilinear spaces for the crooked ways and irregular boundaries dear to the archæologist and the historian. *Encyc. Brit.,* XXIX. 235.

haustrum (hâs'trum), *n.*; pl. *haustra* (-trą̈). One of the small pockets or sac-like folds in the terminal division of the colon.

hautboy, *n.* **3.** In *organ-building,* same as *oboe,* 2.

hautecontre (ōt-kontr'), *n.* [F., 'alto counter.'] The obsolete alto viol. See *viola da braccio.*

hautefeuillite (hōt-fẹ'i-yīt or hât-fū'i-līt), *n.* [Named for M. P. *Hautefeuille,* a French mineralogist.] A hydrated phosphate of magnesium which resembles bobierrite but differs in containing several per cent. of calcium: it is from Bamle, Norway.

haüynite (hą̈'win-īt), *n.* [*haüyne* + *-ite*[2].] Same as *haüyne.*

hav, *v.* A simplified spelling of *have.*

havers[3] (hą̈'vẹrz), *n.* Same as *haver-grass.*

The wild oat-grass, or *havers,* Avena fatua L., is a weed of cornfields. *Fream,* Complete Grazier, p. 914.

Haversian fringes, system. See ★*fringe,* ★*system.*

haversine (hav'ẹr-sīn), *n.* [*ha(lf) vers(ed) sine.*] In *navig.*, half the versed sine. The word was introduced by James Inman in the 1835 edition of his "Navigation."

havier (hav'yer), *n.* [Also *haver, haveer, hevior,* also *halfer;* origin uncertain.] A castrated fallow-deer.

A poll *havier* has no antlers, nor even the stumps, because he was added to the list in his infancy.
The Field, March 7, 1891, p. 332.

haw[2], *n.* **Black haw.** (*a*) See ★*black-haw,* 1 and 2. (*b*) *Cratægus tomentosa,* the pear-haw, and sometimes *C. Douglasii,* the Western haw. **Dotted haw,** *Cratægus punctata,* a species of the more northern United States east of the Mississippi, with obovate leaves and white-dotted fruit. Sometimes called *large-fruited thorn.*—**May-haw.** See ★*May-haw.*—**Purple haw.** Same as *bluewood* and *logwood,* 3. **Red haw,** the scarlet haw or

scarlet-fruited thorn, *Cratægus coccinea;* also other red-fruited species, especially *C. mollis, C. Crus-galli, C. cordata,* and *C. viridis.* — **Scarlet haw,** *Cratægus coccinea,* a species, as now understood, ranging from Newfoundland to Connecticut and through the St. Lawrence valley to western Quebec. **Summer haw.** (*a*) See *haw*[2], 3. (*b*) Same as ★*May-haw.* **Tree-haw,** *Cratægus viridis,* a species with nearly the distribution of the May-haw, largest (sometimes 35 feet high) in western Louisiana and eastern Texas, where it often forms large thickets. The foliage is extremely brilliant in autumn. Also *red haw.* **Washington haw.** Same as *Washington thorn* (which see, under *thorn*[1]). **Western haw,** *Cratægus Douglasii,* of the northwestern United States and British Columbia, a tree 30 or 40 feet high. Most often called *thorn-apple;* also *black thorn,* etc.

haw[3], *n.* **2.** (*b*) The inner eyelid or nictitating membrane of dogs: usually concealed, but noticeable in the bloodhound.

Hawaiian subregion. See ★*subregion.*

hawberk, *n.* See *hauberk.*

hawk[1], *n.* **3.** A double-hooked instrument for drawing or moving about the cloth in the dyeing-liquor of a hawking-machine.—**Cooper's**

Cooper's Hawk (*Accipiter cooperi*).

hawk, *Accipiter cooperi,* a small but strong and active hawk, abundant in North America south of the Canadian boundary: more destructive to chickens and young poultry than any other species. It is bluish gray above, and white, barred with rufous below, and about 18 inches long and 30 in spread of wings. **Harris's hawk,** *Parabuteo unicinctus harrisi,* a rather large species, found in the southern and western United States. It has dark plumage and the tail is black with a white band at base and one at the tip.—**Red-**

Red-shouldered Hawk (*Buteo lineatus*).

shouldered hawk, *Buteo lineatus,* a common species of the eastern United States, of a dark reddish brown above and rather rusty colored below: length about 18 inches: spread of wing about 42 inches. It is one of the most omnivorous of hawks, eating frogs, fish, insects, and small mammals. **Swainson's hawk,** *Buteo swainsoni,* a western species, about 20 inches long and 48 in spread of wing: usually distinguished easily by its rufous breast-band, which contrasts sharply with the white plumage of the underside.—**Tarantula-hawk.** See ★*tarantula-hawk.*

hawk[1], *v.* **II.** *trans.* To draw or to pull with a hawk, as cloth through the dye-vat of a hawking-machine.

hawk-cuckoo (hâk′kŭk″ō), *n.* Any one of six species of cuckoos of the genus *Hierococcyx* which resemble small hawks in appearance and flight. They are gray above, more or less rufous below, and have a banded tail and large yellow eye. All are Asiatic.

hawking-machine (hâ′king-ma-shēn″), *n.* A cloth-dyeing machine constructed with guide-rollers designed to keep the goods covered by the dye-liquor and protected from the air

hawk's-eye, *n.* **2.** The dark-blue variety of crocidolite found in South Africa: when cut in a rounded form and showing the cat's-eye effect, it is known as *hawk's-eye stone.*

hawkweed, *n.* **Mouse-ear hawkweed.** Same as *mouse-ear,* 1. This plant is adventive in Ontario and in adjacent parts of the United States.—**Orange** or **tawny hawkweed.** Same as *golden mouse-ear* (which see, under *mouse-ear*). The orange hawkweed has become established in parts of Canada and the Eastern and Middle States, and is a bad weed in grass-lands. Called also *red daisy, lady's-paintbrush,* and *devil's-paintbrush,* the latter names probably both referring to the peculiar strong coloring of the heads, the last also to the noxious character of the plant. Compare *king-devil.* See cut under ★*devil's paintbrush.*

hawok (hä′wok), *n.* [Southern Maidu (in central California).] Shell money of the Californian Indians, consisting of circular disks of *Pachyderma crassatelloides* from a quarter of an inch to an inch in diameter and perforated in the center for stringing.

hawse[1], *n.* **In the hawse,** a short distance in advance of the cutwater. **To have a bold hawse** said of a vessel when its hawse-holes are high above the water.

hawse[3], *n.* **2.** A ridge or neck (generally at the head of two oppositely-descending stream-valleys) which connects two higher ridges or summits, as on the Scottish border and in the Lake district of the North of England. [Local.] *N. E. D.*

hawse-boxing (hâz′bok″sing), *n.* An old-fashioned method in ship-building by which a projection equal to the thickness of the inner and outer planking was left upon the hawse-timbers in the wake of the hawse-poles. Against this projection the planking butted.

hawse-fallen (hâz′fâ″ln), *p. a.* In the phrase *to ride hawse-fallen,* said of a vessel when it is at anchor and the water which reaches the decks through the hawse-pipes is heavy in volume.

hawse-full (hâz′fûl), *adv.* See *to* ★*ride hawse-full.*

hawse-jackass (hâz′jak″ȧs), *n.* A canvas bag shaped like a cornucopia, stuffed with oakum and thrust into the hawse-pipes when at sea to prevent the waves from flowing inboard as they break against a vessel's bows.

hawse-laid (hâz′lād), *a.* *Naut.,* same as *hawser-laid.*

hawser-bend (hâ′zêr-bend), *n.* A bend for joining two hawsers. It is customary to make a bowline in each hawser, so that the bight of one will pass through the bight of the other, or to make a carrick-bend (which see).

Hawthorn beds. See *bed*[1].—**Hawthorn decoration,** a characteristic style of ornamentation on Chinese porcelain, having a blue, black, green, or red ground. See *hawthorn china,* under *hawthorn.*—**Hawthorn lace-bug.** See ★*lace-bug.*—**Indian** or **East Indian hawthorn,** a hardy, ornamental, evergreen shrub of the apple family, *Raphiolepis Indica.* It is a native of southern China and is often cultivated in European gardens.

Chinese Porcelain Jar with Hawthorn Decoration. In the Pennsylvania Museum, Philadelphia.

hawthorn-gooseberry (hâ′thôrn-gōs″ber-i), *n.* See ★*gooseberry.*

hay[1], *n.* **Sour hay,** a form of silage long produced in Austria and Hungary by filling green fodder tightly into pits, either lined or not, and covering with a layer of earth. The resulting fermentation renders the mass acid and imparts a deep brown color, whence the name *brown hay.* In England sometimes *pitted hay,* and, fancifully, *potted hay.*

It gives as its product what is known all over the Austrian Empire as *sour hay.*

J. Wrightson, Fallow and Fodder Crops, p. 246.

haya[2] (hä′yä), *n.* [Jap.] A fish, *Pseudorasbora parva,* of the family *Cyprinidæ,* found in the waters of Japan. Also known as *moroko.*

hay-carrier (hā′kar i-êr), *n.* Same as ★*hay-elevator.*

haye (hä′ye), *n.* [Also *hae;* Jap. *haye,* splendor.] A Japanese name for small shiners or minnows of the family *Cyprinidæ,* belonging to the genus *Zacco,* found in the waters of Japan. Also known as *oikawa* and *zako.*

hay-elevator, *n.* These machines, commonly called *hay-carriers,* are used to lift, transport, and deliver hay, straw, corn-stalks, or other material in bulk or in bales. The simplest forms are hay-stackers, which employ a derrick or a cableway, supported by struts, on which a trolley carrier may run. Both employ a mechanical hay-fork or sling for gathering the hay from a wagon and delivering it to a stack or to the cableway, on which it travels to any part of a large and long stack. Those used in barns employ lifting appliances and carriers traveling upon fixed tracks suspended from the roof of the barn. They are usually automatic, and gather the hay from the wagon, elevate it, transport and deliver it, and return for the next load with only slight attention from the operator. See ★*hay-fork* and *stacker*[2].

hay-fork, *n.* Hay-forks used with hay-carriers are made in the form of spears or harpoons, or of hinged grappling-irons resembling a clam-shell dredge. The harpoons are single or double and are provided with barbs which, when the shaft is thrust into the hay, can be thrown out to gather and lift a large bunch of it. The grappling-forks are opened and dropped upon the hay, when a pull upon a cord draws the tines together, gathering and lifting the hay.

hayko (hī′kō), *n.* A Russian name applied in Alaska to the dog- or calico-salmon, *Oncorhynchus keta.*

hay-loader, *n.* A hay-loader of the modern type consists essentially of a broad inclined elevator supported on a pair of wheels, and designed to be attached to the rear end of a hay-wagon; some form of raking or gathering device for collecting the hay from the ground or from windrows; and a conveyer for carrying the hay, as fast as gathered, up to the elevator and stacking it on the wagon. The forward movement of the wagon causes the wheels of the loader to communicate motion, by means of belts, to some form of revolving or reciprocating hay-rake and some form of conveyer that lifts the loose hay gathered by the rakes and deposits it on the wagon. Such machines have largely superseded hand labor in gathering the hay crop.

haymaking (hā′mā″king), *n.* The mowing, curing, and housing of the haycrops; haying.

hayo (hī′yō), *n.* [Native name.] In Venezuela, any one of several species of *Erythroxylum,* the leaves of one of which, *E. Coca,* are known as coca-leaves and yield the alkaloid cocaïne.

hay-rigging (hā′rig″ing), *n.* A temporary wooden framework placed in a wagon to increase its capacity for light loads, such as hay or seaweed; also, a cheap form of farm-wagon having flaring stakes at the sides, used to carry hay.

hay-rope (hā′rōp), *n.* In *foundry-work,* a rope form of tightly twisted hay or dried prairie-grass, used in making cores.

hay-scales (hā′skālz), *n. pl.* Public weighing-scales maintained by a town for general use, as in weighing loads of hay.

haysel (hā′sel), *n.* The haying or haymaking time. [Local, Eng.]

hay-spade (hā′spād), *n.* A hay-knife (which see).

hay-stacker (hā′stak″êr), *n.* A hay-elevator specially designed for placing hay in stacks out of doors. See ★*hay-elevator.*

hay-sweep (hā′swēp), *n.* A large hand hay-rake. [Local.]

hay-tosser (hā′tos″êr), *n.* A machine for tossing hay in the process of drying it.

hay-worm (hā′wêrm), *n.* A caterpillar which feeds on hay, as the clover-hay worm (larva of *Hypsopygia costalis*), which see, under *clover.*

hazard, *n.* **8.** In *golf,* a bunker, water, path, road, railway, fence, or ditch.—**Hazard chase** or **opening,** in *golf,* a small opening in a hazard or bunker to allow passage for the players.

haze[1], *n.*—**Aqueous haze,** a hazy or misty appearance of the atmosphere due to the presence of particles of water. When the particles are the smallest possible, this haze has a delicate blue tint, but when they are larger a whitish tint. A haze due to dry dust is usually yellowish or reddish. See *water-haze,* under *haze*[1].

hazel[1], *n.* **2.** The wood of the sweet-gum, *Liquidambar Styraciflua:* a common use of the word among lumbermen and builders of the eastern United States.—**3.** In Australia, either of two small evergreen trees of the buckthorn family, *Pomaderris apetala* and *P. lanigera,* yielding excellent wood. See *bastard* ★*dogwood* (*b*), *cooper's-wood,* and *Pomaderris.*—**Black-knot of hazel.** See ★*black-knot.*—**Snapping hazel,** the witch-hazel: so called from the elastic bursting of the ripe capsule by which its bony seeds are projected.

hazel[2] (hā′zl), *n.* [Short for *hazel-earth.*] A soil consisting of a mixture of gravel or sand, clay, and loam.

hazel-carpet (hā′zl-kär″pet), *n.* See ★*carpet,* 4.

hazel-dodder (hā′zl-dod″êr), *n.* See ★*dodder*[1].

hazel-fly (hā′zl-flī), *n.* A British anglers' name for a scarabæid beetle, *Phyllopertha horticola,* and for an artificial one made in imitation of it.

hazeline (hā′zl-in), *n.* [*hazel*[1] + *-ine*[2].] A trade-name of a toilet preparation said to be distilled from the fresh leaves and twigs of witch-hazel, *Hamamelis Virginiana.*

hazelly[2] (hā′zl-i), *a.* [*hazel*[2] + *-y*[1].] Consisting of hazel-earth: as, *hazelly* loam. *N. E. D.*

hazelnut, *n.*—**Chinese hazelnut,** the lichi, *Litchi*

hazel-worm (hā′zl-wėrm), *n.* [A translation of German *haselwurm.*] The blindworm, or slow-worm, *Anguis fragilis.*

hazzan, chazzan (ċhä′zän), *n.* [Heb. *hazzan,* Aram. *hazzana,* prob. < Assyr. *hazanu, hazannu,* overseer, director.] In Jewish use, an overseer; specifically, an official of a Jewish synagogue. Formerly the functions of the hazzan were various; he was not only overseer but also *dayan* (judge), *saphra* (scribe), etc. The chief function of the modern hazzan is that of reader or cantor.

Hb. A contraction of *hemoglobin.*

H-bar (āch′bär), *n.* A bar with an H section.

H. B. Curves. Curves exhibiting the variation of magnetic induction (B) with the magnetizing force (H).

H. C. An abbreviation (*b*) of *Heralds' College.*

H. C. M. An abbreviation of *His* (or *Her*) *Catholic Majesty.*

he[2] (hā), *n.* [Heb. *hē.*] The fifth letter (ה) of the Hebrew alphabet, corresponding to the English *h.* Its numerical value is 5.

He. The chemical symbol of *helium.*

H. E. An abbreviation (*a*) of *His Eminence;* (*b*) of *His* (or *Her*) *Excellency;* (*c*) of *Hydraulic Engineer.*

h. e. An abbreviation (*a*) of the Latin *hic est,* 'he is'; (*b*) of the Latin *hoc est,* 'this is.'

head. **I.** *n.,* **6.** (*aa*) (2) A rubble-drift capping a cliff, on the coast of Devon and Cornwall.

This '*head*' consists of a more or less coarse agglomeration of angular débris and large blocks set in an earthy matrix. *J. Geikie,* The Great Ice Age, p. 389.

(*u*) In a bow for instruments of the viol class, properly the end farthest from the player's hand; the point: opposed to *heel* or *nut.* Sometimes, however, the term is loosely applied to the projecting piece at the heel. (*v*) The flexible shank attached to a molded button; a tuft of cloth protruding from the back of a button, by which it may be attached. (*w*) A rotating piece on a machine which carries cutting-knives, as on a wood-planing machine. (*x*) The ram in a quartz-crushing machine. [Mining term, Australia.] (*y*) In *archery,* an arrow-head. (*z*) All the lower part of a golf-club to which the shaft is connected. (*aa*) The upper, or proximal end of a long bone, which has a rounded articular surface, suggesting the head of a man.

The upper end of the humerus shows a large, rounded *head.* *Mivart,* Elem. Anat., p. 148.

(*bb*) The upper, or proximal end of a muscle where it is attached to a bone, and whence its pull is transmitted to another bone.

The biceps is the well-known muscle used in flexing the arm. It arises by two *heads.* *Mivart,* Elem. Anat., p. 293.

(*cc*) The upright timber of a gate which forms the front or swinging end.

7. (*b*) Specifically, the vertical height of the surface of a liquid in a reservoir above the center of figure of an orifice through which efflux takes place. When a liquid flows from a closed vessel under pressure mechanically produced, as by the action of a piston, the pressure at the orifice is always equivalent to that which would be caused by a vertical column of the liquid of requisite height and this height measures the *virtual head.* (*c*) A unit for estimating amounts of water used in irrigation—the amount flowing through an opening 33⅓ inches wide and 3 inches high under a pressure of 4 inches. *U. S. Dept. Agr.,* Div. of Veg. Pathol., Bulletin 2, 1892, p. 85. —**16.** In *astrol.,* the commencement of a zodiacal sign, that is, the point where the sun enters it. *N. E. D.*—**17.** A quarrymen's term for that direction in a massive crystalline rock along which fracture is produced with the greatest difficulty.—**18.** A local name in southern England for the residual products from the weathering of rocks, more or less sorted by the rains. *Geikie,* Text-book of Geol., p. 460. —**19.** In *textile-manuf.,* a section in a machine with completely independent functions, as in a drawing-frame, combing-machine, ribbon lap-machine, etc. *Thornley,* Cotton Combing Machines, p. 20.—**Effective head,** the head or pressure actually available for doing work; the net head; the static head minus the head lost in imparting velocity and overcoming friction and other losses before reaching the point where the force is applied to the motor.—**Head of a ship,** the extreme forward section of a vessel, from the knight-heads forward, including the figure- or scroll-head.—**Head on.** (*b*) The situation of a vessel when her head is held dead against the sea and wind. (*c*) Resulting from the sudden impact of two trains meeting directly on the same track: as, a *head on* collision.—**Heads and posts,** a cavalry exercise consisting in thrusting and cutting at leather heads placed on posts. *Encyc. Brit.,* XXVI. 156. **Head to tide,** the position of a ship when its head is pointing dead against the tide-stream. **Hydrostatic head,** the pressure due to a column of water when at rest. **Knee of the head.** See ★*knee.* **Railway head,** an attachment to several carding-machines for drawing and evening the card-sliver for the subsequent process.—**Rain-water head,** a center of a rain-water supply, such as is provided by the large continuous roofs of a public building.

A very large field is also opening for cast-lead work, whether associated with architecture, as in the leaden-covered way over Northumberland Street, in London . . . and the fine *rain-water heads* of the Birmingham Law Courts. *Encyc. Brit.,* XXX. 645.

Seamen's head (*naval*), the crew's water-closets, usually placed in the bows of the ship.—**Static head,** the pressure due to a column of liquid of a given height when such liquid is at rest. **To pump by heads.** See ★*pump.* **Universal head,** a device with jaws adapted for holding a variety of work: used on the spindle of a lathe or milling-machine.—**Velocity head,** in *hydraul.,* the effective head at the orifice of efflux of a tube through which a liquid flows; the head which, if there were no friction or other resistance to flow, would produce the existing velocity of the liquid. If the velocity of efflux be v, which corresponds to a head of liquid, $h_v = \frac{v^2}{2g}$, then h_v is called the *velocity head.*

II. *a.*—**Head tide.** See ★*tide*[1].

head, *v.* **I.** *trans.*—**Heading-up machine,** in *barrel-making,* a machine for placing the head in a new barrel, forcing it into the croze and holding it there while one or more hoops are put on, and making it ready for the hoop-driver.—**To head a trick,** to play a better card than any already played to a trick, but not necessarily the best card.—**To head back,** in *hort.,* to shorten or cut off the shoots of (plants); head in.—**To head in,** in *hort.,* to reduce in length or shorten (the shoots and twigs of plants). —**To head off.** (*c*) To direct (a vessel's head) from the course; to allow (a ship) to diverge suddenly from the compass direction which it has been pursuing.—**To head up,** to bring (a ship's head) more in line with the wind or with an object.

II. *intrans.* **5.** Said of the wind when it changes so as to get more in line with the direction that a ship desires to head, or when it draws more ahead of a ship.—**6.** In *geol.,* to slope upward when viewed from below: said of inclined strata; the same as *dip,* 4, but the beds are seen from the opposite direction.—**To head up,** said of a vessel when it 'looks up' closer to the wind.

headache, *n.*—**Bilious headache.** Same as *sick-headache.*—**Organic headache,** a headache due to actual disease of the brain or of the meninges.—**Reflex headache,** a headache due to eye-strain, nasal disorder, indigestion, or some other cause outside of the brain or its membranes. See def. 1 (*c*).

head-ax (hed′aks), *n.* In *whaling,* an ax used for decapitating a whale, when cutting in.

head-bander (hed′ban″dėr), *n.* A person who fastens on the head-bands of books. *N. E. D.*

head-block, *n.* **3.** In a railroad switch, the timber on which the switch-stand and the ends of the switch-rails rest.—**4.** The pivoted casting at the top of the mast of a derrick, to which the guy-ropes, tackle-blocks, etc., are fastened. —**5.** The log placed under the front end of the skids in a skidway, to raise them to the desired height.

head-bolt (hed′bōlt), *n.* A bolt having a head by which it can be turned.

head-clip (hed′klip), *n.* An adjustable clip, usually of metal, for steadying the head: used in photography and in certain psychophysical experiments.

head-cone (hed′kōn), *n.* A cephalocone.

head-course (hed′kōrs), *n.* Same as *heading-course.*

head-cowl (hed′koul), *n.* In certain pteropods, one of the two coverings of the head which inclose and protect the cephalocones.

header, *n.* **10.** A connection at the ends of the tubes in a water-tube boiler. The water usually descends in one header and steam rises in another, thus keeping the current of water and steam flowing in one direction and promoting good circulation.

Instead of having two *headers,* as is the case with the latter type, the Niclausse has only one *header,* which is divided so as to allow for both the upward and downward flows. *Sci. Amer. Sup.,* Jan. 24, 1903, p. 22624.

11. In a floor or roof, the timber used for framing round an opening. It is supported by two trimmers, one at either end, and, in its turn, supports the ends of the two tail-beams. —**12.** A horse used in helping to haul heavily-laden vehicles up heavy grades.—**13.** In *cigar-making,* a workman who shapes or finishes the head or mouth-end of a cigar; also, an appliance used for the same purpose.

header-binder (hed′ėr-bīn″dėr), *n.* A form of header in which the heads are delivered to a binder.

head-fold (hed′fōld), *n.* In *embryol.,* a fold of the amnion covering the head of the vertebrate embryo; also, a fold in the blastodisc which marks off the head-region of the embryo. See cut in next column.

head-footed (hed′fut″ed), *a.* Having the feet or locomotor organs attached to the head-region, as in cephalopods; cephalopodous.

head-gear, *n.* **4.** The head-rigging of a vessel.

head-gland (hed′gland), *n.* In many nemertines, one of the collections of gland-cells which lie in the head and open at the tip of the latter in a disk-shaped group of cells bearing long hairs or bristles. It may function as an organ of taste. Also known as *frontal gland. Proc. Zool. Soc. London,* 1901, II. 95.

g, Head-fold.

A median longitudinal, or sagittal, section through a rabbit embryo and blastodermic vesicle at the end of the ninth day. (In part after Van Beneden and Julin.)

a, tail-fold of amnion; *b*, hind-gut; *c*, mid-gut; *d*, fore-gut; *e*, pericardial cavity; *f*, mid-brain; *g*, head-fold of amnion; *h*, proamnion; *i*, sinus terminalis; *j*, hypoblast; *k*, epiblast; *l*, epiblastic villi; *m*, cavity of yolk-sac, or blastodermic vesicle; *n*, sinus terminalis; *o*, mesoblast; *p*, thickened epiblast by which the blastodermic vesicle is attached to the uterus; *q*, extra-embryonic part of the cœloma or body-cavity; *r*, allantois. (From Marshall's "Vertebrate Embryology.")

head-hole (hed′hōl), *n.* One of the eyelet-holes in the head of a sail by which it is secured to a yard or gaff by robands which are passed through the holes and the jack-stay, or by a lacing.

head-house, *n.* **2.** In *railroading,* the end of a terminal station; that part of a terminal station building which contains the ticket-offices, waiting-rooms, and concourse, and forms the front or entrance to the train-shed. It is usually much higher than the train-shed, the upper stories being used as offices for the company, and the main floor connecting with the tracks and platforms and serving as the entrance and exit for the outgoing and arriving passengers. *Sci. Amer.,* Jan. 14, 1899, p.

heading-chipper (hed′ing-chip″ėr), *n.* A pneumatic chipping-hammer used for heading rivets or boiler-tubes.

head-kidney, *n.* **2.** The primitive kidney of annelid worms. *Parker and Haswell,* Zoology, I. 416.

head-lacing (hed′lā″sing), *n.* The lacing which confines the head of a fore-and-aft sail to the gaff.

head-lifting (hed′lif″ting), *n.* A method of divination, practised by the Eskimo and by the Chukchee, in which the future is divined by tying a thong around the head of a reclining person. A second person tries to lift the head of the first by this thong, and his questions as to the future are answered in the affirmative if the head can be lifted, in the negative if it cannot be lifted. Similar forms of divination by lifting stones and charms are found as far south as the Amur river.

Head-lifting is one of the chief divining methods, not less among the Chuckchee than among the American Eskimo. *Amer. Anthropologist,* 1902, p. 635.

Headlight oil. See ★*oil.*

head-line, *n.* **3.** One of the lines in the title of a newspaper article, printed in large type to attract attention.—**4.** Same as *head-fast.*

headline (hed′līn), *v. t.*; pret. and pp. *headlined,* ppr. *headlining.* To announce, refer to, or mention in the large print of newspaper head-lines; give prominence to in head-lines.

My job is private secretary to the President of this Republic, and my duties are running it. I'm not *headlined* in the bills, but I'm the mustard in the salad dressing. *McClure's Mag.,* Feb., 1903, p. 431.

head-mark, *n.* **2.** An unplowed ridge of land left to serve as a boundary; a balk.

head-motion (hed′mō″shon), *n.* A mechanism at the end of a fancy cassimere-loom or dobby-loom embracing the pattern-chains for operating the warp-harnesses and shuttle-boxes.

head-note, *n.* **2.** See *head-tone* and *head-voice.*

Headon beds. See ★*bed*[1].

Headon Hill sands. See ★*sand*[1].

head-pence (hed′pens), *n. pl.* [See *head-penny.*] A tax of forty shillings or more formerly collected from the people of the county of Northumberland by the sheriff twice in every seven years. The sheriff was not accountable to the king for this tax. It was abolished in the reign of Henry VI.

head-piece, *n.* **4.** The figurehead, scroll-piece, or fiddle-head under a vessel's bowsprit.

head-rigging (hed′rig″ing), *n.* The rigging belonging to the foremast, bowsprit, and jib-booms.

head-ring, *n.* 2. In a four-in-hand harness, a ring, fixed at the crown of the bridle of a wheel-horse, through which the lead-rein for one of the leaders passes.

head-room (hed′röm), *n.* 1. The vertical distance from a floor to the ceiling or beams above it: so named because this distance determines whether or not a person has room for his head when standing or walking on the floor.—2. Specifically, the space left above a stair by means of which the head of the person ascending the stair is kept free from striking or coming too near the superstructure. The term may apply either to the vertical distance from the nosing of the step below to the ceiling or any cross-beam or the like above, or to the distance measured out diagonally from the nosing of a step.

head-scab (hed′skab), *n.* Any acariasis of the head, as the sarcoptic scab (black-muzzle head-scab) of sheep. The parasites give rise to a violent itching, causing the sheep to rub and scratch their heads. In advanced cases the eyes may be partly closed, and breathing and even eating may become difficult because of the formation of crusts about the mouth and nostrils.

head-shaping (hed′shā″ping), *n.* The practice of changing the natural conformation of the head by compression: common among many uncivilized tribes and peoples.

Head-shaping has been universal.
Smithsonian Rep., 1899, p. 516.

head-sill, *n.* 2. In a wooden window-frame or door-frame, the horizontal strip or piece which forms the top and holds the sides together.

head-snapping (hed′snap″ing), *n.* Same as *head-hunting.* *Ratzel* (trans.), Hist. of Mankind, I. 447.

head-spanner (hed′span″ėr), *n.* In *anthrop.*, an instrument for measuring the dimensions of the head.

In order to confine the cost of the inquiry within reasonable bounds, a special *head-spanner* was devised.
K. Pearson, in Biometrika, March–July, 1904, p. 134.

head-stock, *n.*, 1. (*d*) The central frame of a spinning-mule, containing the operative mechanism of the machine. *Nasmith*, Cotton Spinning, p. 244.—2. The wooden cross-beam to which a bell is bolted and which serves as the pivot on which it swings. Also called *stock.*

head-wall (hed′wâl), *n.* See *head.*

head-water (hed′wâ″tėr), *n.* One of the upper tributaries of a river: usually in the plural. Also used adjectively.

The *headwater* tributaries of Gila river drain the slopes of several ranges of the Mogollon mountains.
Dept. Com. and Labor, Bur. of Census, Bulletin 16, Irrig. in U. S., 1902, p. 70.

Head-water mark, a point or mark to define or limit the maximum permissible height of water above a dam, or in a pond, reservoir, or waterway subject to artificial regulation.

headway, *n.* 4. In *railroading*, the time which elapses after one train passes a certain point before the following train passes that point.

head-work, *n.* 3. *pl.* The group of artificial works or constructions at the head of an artificial canal or channel necessary to divert and regulate the flow of water from a river or other body of water into the canal. For an irrigating canal, the head-works would include a diversion weir, if any, with its accessories, a guard-boom to divert floating objects away from the canal-gates, head-gates or sluices to regulate the admission of water to the canal, and gaging or measuring appliances for determining the quantity of water entering the canal. For a water-power canal extending from a stream, reservoir, or mill-pond to a water-power station, the head-works would include a dam to divert or raise the level of the water, a guard-boom to divert large floating objects away from the entrance, a rack or screen to prevent the entrance of smaller floating material, and sluice-gates to regulate the flow of water into the canal.

Headworks can be placed more easily along the banks of smaller streams, or dams built across their beds, raising and controlling the waters.
Sci. Amer. Sup., Jan. 10, 1903, p. 22597.

4. *pl.* A platform or raft with windlass or capstan which is attached to the front of a log-raft or boom of logs for warping, kedging, or winding it through lakes and still water, by hand or horse-power.

heady, *a.* 4. Intelligent.

health, *n.*—**Diploma in Public Health.** See ★*diploma.*

heapstead (hēp′sted), *n.* The entire plant above ground at the shaft of a coal-mine.

hearst† (hėrst), *n.* [Also *hearse;* origin obscure.] In *hunting*, a hind in the second or third year.

heart, *n.*—**Accessory hearts,** certain organs in brachiopods erroneously supposed to function as hearts.—**After one's own heart.** See ★*after.* **Athletic heart.** See ★*athletic.* **Fatty heart.** (*a*) Fatty degeneration or infiltration of the wall of the heart. (*b*) An excessive deposit of fat around the heart.—**Heart and soul,** entirely; wholly; unreservedly; with eager enthusiasm; enthusiastically: as, he threw himself *heart and soul* into the work. **Iced heart.** See ★*iced.* **Irritable heart,** a functional disorder of the heart marked by rapid pulsations or palpitation, cardiac pain, shortness of breath, etc., on slight exertion or following mental excitement.—**Left heart,** the left auricle and ventricle of the heart taken collectively as the center of the systemic circulation.—**Military heart,** irritable heart in soldiers. **Pulmonary heart.** Same as *right* ★*heart.*—**Respiratory heart,** the right auricle and ventricle, which receive the blood from the system and send it to the lungs. [Rare.]—**Right heart,** the right auricle and ventricle of the heart taken collectively as the center of the pulmonary circulation.—**Sweepstake hearts,** a form of the game of hearts in which the player who takes no hearts wins everything on the table.—**Systemic heart,** the left auricle and ventricle considered together as furnishing the blood to the body generally. [Rare.] **To lose heart,** to become discouraged. **Wandering heart,** an abnormally mobile heart.

heart-block[2] (härt′blok), *n.* Contraction of the auricles of the heart which is not transmitted to the ventricles, the auricular pulsations being sometimes of more than double the frequency of the ventricular.

Stokes noted on the readmission of his patient a new symptom—a remarkable pulsation in the right jugular vein, more than double the rate of the ventricular contractions. This feature has been studied by Chauveau, by Quincke, by His, jun., and others, who are of opinion that the jugular pulsations correspond to independent auricular contractions which are not propagated to the ventricles—a state of "*heart-block,*" as Gaskell terms it.
Lancet, Aug. 22, 1903, p. 523.

heart-borer (härt′bōr-ėr), *n.* An American noctuid moth, *Anarta cordigera*, found in Canada, Labrador, and Colorado.

hearth-bottom (härth′bot″um), *n.* The stone which forms the bottom of the hearth in a blast-furnace.

hearth-broom (härth′bröm), *n.* A small broom used about a fireplace for sweeping up ashes, cinders, etc.

hearth-brush (härth′brush), *n.* A small brush used to sweep up ashes, etc., on a hearth.

hearth-pit (härth′pit), *n.* A pit under the floor in front of a Lancashire boiler.

hearth-plate, *n.* 2. One of the floor-plates over the hearth-pit of a Lancashire boiler.

heart-hurry (härt′hur″i), *n.* Extreme rapidity of pulse, appearing suddenly and of short duration: a form of tachycardia.

There are certain peculiarities which distinguish true tachycardia from the evanescent "*heart-hurry*" so frequently produced by the most trivial causes.
Med. Record, Feb. 7, 1903, p. 204.

hearting, *n.* 2. (*a*) The interior portion of a mass of masonry, as the portion between the up-stream and down-stream faces of a masonry dam. Commonly called the *backing.* (*b*) The impervious vertical wall of masonry, concrete, or even clay puddle which is placed inside an earth embankment which forms a dam or a reservoir bank, for the purpose of preventing leakage through the embankment. Commonly called *core-wall* if of masonry or concrete, and *puddle-wall* if of clay.

The tower is constructed with a facing of granite, all the stones being dovetailed in the usual manner. The *hearting* of the base is largely composed of concrete.
Encyc. Brit., XXX. 254.

heart-moth (härt′môth), *n.* A British collectors' name for a European noctuid moth, *Dicycla oo.*

heart-rot, *n.* 2. A fungous disease of beets, due to *Phoma Betæ*, which causes a decay of the center of the root.

heart-sac (härt′sak), *n.* The pericardium.

heart's-ease, *n.*, 2. (*c*) In Australia, a small scrophulariaceous plant, *Gratiola pedunculata.*

heart-sounds (härt′sounds), *n. pl.* The sounds caused by closure of the valves of the heart during contraction and relaxation of the muscular walls. The first sound is prolonged and dull, the second short and sharp. **Reduplication of the heart-sounds,** a double in place of a single first or second heart-sound, due to a lack of synchronism in the closure of the valves.

heart-stroke (härt′strōk), *n.* 1. The impulse of the apex of the heart against the chest wall.—2. Angina pectoris.

heart-trace (härt′trās), *n.* Same as *cardiogram.*

heart-trowel (härt′trou″el), *n.* A moulders' trowel having a heart-shaped outline.

heart-water (härt′wâ″tėr), *n.* A serious, non-contagious, infectious disease of sheep and goats, rarely of calves, in South Africa. The diagnosis depends chiefly upon the post-mortem appearance of the viscera, the distinctive features of the disease being only feebly or not at all evident, until the animal is very near death. The specific cause (doubtless a micro-organism) is unknown. Transmission is by means of the 'bont-tick' (*Amblyomma hebræum*), which sucks blood from the diseased animal, then falls to the ground to moult, and after moulting attacks other sheep or goats and infects them with the disease.

The Government entomologist, Mr. C. P. Lounsbury, records an important discovery in regard to the propagation of the South African sheep and goat disease known as "*heartwater.*" The bont-tick has been found to be the only medium of spreading the disease.
Nature, Nov. 26, 1903, p. 91.

heart-wood, *n.* 2. The Tasmanian ironwood, *Notelæa ligustrina*, the hard, close-grained wood of which is used for turning.

heart-work (härt′wėrk), *n.* Work that has been prompted by the heart, or executed with all one's heart.

With all the head-work that there is in these volumes, and all the *heart-work*, too, I have not bitten my nails over a single sentence which they contain.
Southey, Doctor, lviii.

heat, *n.* 9. The quantity or weight of metal undergoing a metallurgical process. See *heat*, 4.—**Blue heat,** in *forging*, the temperature of the heated metal which gives to the film of oxid which forms on a bright surface of a steel bar a color which is blue in daylight. The temperature ranges with the quality of the steel from 430° F. to 560° F.—**Dynamical theory of heat,** the theory that heat is a mode of motion. See def. 2. The term is sometimes applied to the relations of heat and work (thermodynamics), sometimes to the science of radiation, and sometimes to the general theory that heat consists of motions of the particles of matter.—**Heat center.** See ★*center*[1].—**Heat of combustion,** the amount of heat produced when a certain unit mass of a substance is completely burned in oxygen. For a fuel, the unit mass may be one gram, for a chemical compound it may be a gram-atom or a gram-molecule.—**Heat of dilution.** See ★*dilution.*—**Heat of evaporation.** Same as ★*heat of vaporization.*—**Heat of formation,** in *phys. chem.*, the amount of heat set free when a gram-molecule of a compound is formed from its elements. It is positive for exothermic compounds and negative for endothermic compounds, and is measured in calories, that is, by the number of grams (or kilograms) of water warmed one degree, under specified conditions, by the heat produced in the reaction. Commonly it can be experimentally determined by indirect methods; by direct methods only when the reaction of formation can be made to take place rapidly, and without concurrent formation of other compounds. The heat of formation of liquid water from its elements is expressed by the number of grams of water warmed one degree centigrade by the union of sixteen grams of oxygen with 2.015 grams of hydrogen, which is found to be 68400.—**Heat of fusion.** See *latent heat of fusion*, under *fusion.*—**Heat of neutralization,** in *phys. chem.*, the amount of heat produced when a gram-equivalent of a base or of an acid, in dilute solution, is neutralized with a gram-equivalent of an acid or of a base. It is measured in terms of the calory (which see).—**Heat of solution,** in *phys. chem.*, the amount of heat produced when one gram-molecule (or one gram) of a substance is dissolved in a very large volume of the solvent. It has the negative sign when heat is absorbed in the act of solution.—**Heat of vaporization,** the heat, in calories, required to convert one gram of a liquid into vapor. Also called *latent heat of vaporization.*—**Heat rigor.** See ★*rigor.*—**Heat sum,** the sum of the amounts of heat developed in any series of chemical reactions. The total amount of heat developed in a chemical process is independent of the number of stages into which the process may be divided. This principle, due to Hess, is known as the *constancy of the heat sum.*—**Irreversible heat.** (*a*) That part of the heat in a thermodynamic cycle or process which cannot be reconverted into mechanical energy. (*b*) In *elect.*, that portion of the heat developed in an electric circuit which cannot be converted directly into electric energy. The total heat in an electric circuit is $HJ = I^2Rt + PIt$, where H is the heat in calories, J is the mechanical equivalent, I the current, R the resistance, t the time during which the current flows, and P is the difference of potential due to the heating of any metal junctions that may exist in the circuit. The term I^2Rt represents the *irreversible heat.* Also called *ohmic heat.* Compare *reversible* ★*heat.*—**Joulean heat,** the heat developed by flow of current in an electric circuit. It was shown by Joule that the heat (H) produced by causing an electric current of strength I to flow for t seconds through a resistance r is $H = I^2rt$. The quantity of heat thus produced, which is proportional to the square of the current and to the resistance of the circuit, is called (in recognition of the discoverer of this law) *Joulean heat.*—**Latent heat of precipitation,** in *meteor.*, that fraction of the latent heat of vaporization which is set free when the vapor is subsequently condensed or precipitated as water and especially as a cloud. If the latent heat remains in the cloud the water, the remaining vapor, and the air have a slightly higher temperature. If the water-drops fall to the earth the remaining vapor and air of the cloud have a still higher temperature.—**Latent heat of vaporization.** Same as ★*heat of vaporization.* **Law of constant heat sums,** the law, in thermochemical reactions, that the total heat absorbed when certain substances are formed from certain others is independent of the number and nature of the intermediate processes. See ★*heat sum.* **Low-red heat,** a heat sufficient to impart to iron a strong red color, its temperature being about 1290° F.—**Molecular heat of fusion,** the heat of fusion of a substance multiplied by its molecular weight. Also called *molecular latent heat.*—**Molecular heat of vaporization,** the heat of vaporization of a substance multiplied by its molecular weight.—**Ohmic heat.** See *irreversible* ★*heat.*—**Reversible heat,** in *elect.*, that portion of the heat developed by the flow of current in a heterogeneous circuit which appears or is absorbed at the junction of two metals, according to the direction of the current: distinguished from the so-called *irreversible heat* of the

Joule effect, which is due to the resistance of the circuit and is independent of the direction of the current. **Stagnation of heat,** an expression intended to mean 'accumulation of heat' caused by the lack of conductivity in the surrounding material: as, in the case of a boiler when the boiler plate is coated with scale.—**Stellar heat,** heat from the fixed stars or planets. Observations of the spectra of stars show that many of these bodies are very similar to the sun and that they probably have temperatures comparable with the solar temperature. It is to be expected, therefore, that heat radiated to the earth by the stars bears the same proportion to their light-giving power as the heat from the sun does to the light received from that luminary. Attempts to detect the heat from the stars by placing the most delicate heat-measuring instruments, as the thermopile or bolometer, in the focus of a telescope directed to a bright star such as Arcturus or Vega have given, however, negative results. Edison, in 1878, made observations on Arcturus by means of the tasimeter, but the indications of heat detected with this instrument in the image of that star have been seriously questioned. In 1888, Boys brought a new instrument, the radiomicrometer, to bear on this subject, and although the sensitiveness of the apparatus was such that $\frac{1}{1000000}$ of the heat received from the moon could have been detected, no effects were obtained in observations upon Jupiter, Saturn, Arcturus, Vega, Capella, and other stars. In 1888–1900 E. F. Nichols, using his form of radiometer and a concave mirror of 61 centimeters aperture, obtained measurable indications of heat in the images of Arcturus, Vega, Jupiter, and Saturn. The sensitiveness of the instrument was such that a candle placed at a distance of 633 meters gave a deflection of 67 millimeters. Since it was possible to read deflections of one tenth of a millimeter it was computed that the heat from a candle at a distance of 4.3 kilometers was capable of detection. The mean intensity of the radiation from two fixed stars and two planets, expressed in meter-candles, was as follows:

Vega,	0.51×10^{-8}	meter-candles.
Arcturus,	1.14	" "
Jupiter,	2.3	" "
Saturn,	0.37	" "

The total radiation of these stars stands in the ratio:

Vega : Arcturus = 1 : 2.2
Vega : Jupiter = 1 : 4.7
Vega : Saturn = 1 : 0.74

Since the photometric intensities of Vega and that of Arcturus are nearly equal it follows that the infra-red spectrum in Arcturus is proportionately much stronger than that of Vega. **Thermometric heat,** the heat of matter, measurable in calories, as distinguished from radiant energy.—**Total heat.** (*a*) In *thermodynam.*, the quantity E + pv, where E is the intrinsic energy of a substance, p its pressure, and v its volume.

The *total heat* as defined by Regnault . . . differs from (E + pv) only by a quantity which is inappreciable in ordinary practice. *Encyc. Brit.*, XXXIII. 285.

(*b*) The heat in calories required to convert a gram of liquid at its melting-point into saturated vapor at a given pressure.

heat-asphyxia (hēt′as-fik″si-ā), *n.* Symptoms of collapse caused by excessive heat.

heat-coil (hēt′koil), *n.* Same as ★*heating-coil*, 1.

heater, *n.*, (*d*) In *elect.*, that part of the Nernst lamp which, in starting, is heated by the electric current and by its heat starts the glower. See *Nernst* ★*lamp*.—**Baltimore heater,** a stove designed to be set in a fireplace and, commonly, to heat a room overhead by means of hot-air pipes.

heat-filter (hēt′fil″tèr), *n.* In *photog.*, a cell having parallel glass sides filled with water, alum solution, or the like, interposed in the path of rays with the object of removing heat-rays but allowing those of light to pass.

Sun-light and a calcium burner, both of which throw parallel rays, being out of the question for me, I have taken a powerful projection lantern and set it as near to the microscope as the intervening *heat-filter* will permit. *Woodbury*, Encyc. Dict. of Photog., p. 367.

heat-gage (hēt′gāj), *n.* An instrument for ascertaining the temperature of furnaces, depending upon the comparison of the incandescent spiral of an electric lamp with that of the furnace. When both glow alike, the reading of an ammeter, in circuit with a rheostat, is taken. A table gives the corresponding degree of heat.

heath, *n.* **4.** In Tasmania, the popular name for several species of the genus *Epacris*, especially *E. impressa*, a beautiful slender shrub bearing white or red axillary flowers. See *Epacris*.—**Alkali heath,** *Frankenia grandifolia*, a deep-rooted perennial able to persist in cultivated ground, the most characteristic plant of the 'gooselands' of California. It is a useful alkali indicator, its presence implying an excess of Glauber's salts in the soil, incompatible with the raising of wheat or stone fruits. Also called *yerba reuma* from its medicinal properties.—**Australian heath,** any one of various species of the genus *Epacris*, which are cultivated in greenhouses, especially *E. longiflora*.—**Besom-** or **broom-heath,** the cross-leafed heath. See *heath*, 2.—**Cornish heath,** *Erica vagans*, a low gregarious species ranging around the Mediterranean and up the Atlantic coast to Cornwall. Also called *moor-heath*.—**False heath.** Same as *false* ★*heather* (*a*).—**Mountain-heath,** *Phyllodoce cærulea*, an ericaceous shrub, with yew-like evergreen leaves and clusters of pink or purple flowers of the heather type. It is found in the northern Old World, and on the high mountains of New England and far north in North America.

heath-aster (hēth′as″tèr), *n.*—**Rose heath-aster,** *Leucheria ericoides*, a low tufted plant of the aster family with terminal heads, the white rays turning rose-red in drying, found on the plains from Nebraska to Texas and west to California and Mexico.—**White heath-aster.** See ★*aster*1.

heath-butterfly (hēth′but″ėr-flī), *n.* A British collectors' name for several species of agapetid butterflies. See *heath*, 3.

heather, *n.*—**Alaska heather,** the Alaskan ericaceous plant, *Harrimanella Stelleriana*, also any Alaskan plant of the genus *Cassiope*.—**Alpine heather,** a low heather-like shrub, *Phyllodoce Breweri*, found at the snow-line on the high Sierras of California. It forms a carpet with a surface of rosy flowers. (*Parsons and Buck*, Wild Flowers of California, p. 246.)—**Beach-heather.** Same as *false* ★*heather*.—**Bell-heather,** the Scotch heather. See *heath*, 2.—**False heather.** (*a*) An American cistaceous shrub, *Hudsonia tomentosa*, found on sandy shores of the Atlantic, in pine-barrens, and on inland shores northward. It is analogous in habit and habitat to the Old World heaths. Also called *false heath* and *beach-heather*. (*b*) *Menziesia pilosa*. See *Menziesia*.—**Mountain-heather.** Same as *sand-myrtle* (which see, under *myrtle*).—**Red heather,** in northwestern America, the ericaceous shrub, *Phyllodoce glanduliflora*. **White heather,** *Phyllodoce empetriformis*, of the same region as the red heather. Compare *alpine* ★*heather*.

False Heather (*Hudsonia tomentosa*).
a, plant, one third natural size; *b*, flower, enlarged.

heather-honey (heтн′ėr-hun″i), *n.* Honey gathered from heather.

heath-stone (hēth′stōn), *n.* A name used by architects in England for certain sandstones which occur in the Bagshot beds of the Eocene.

heating, *n.*—**Counter-current heating.** See *parallel* ★*heating*.—**Parallel heating, parallel-current heating,** the heating of a fluid flowing through a tube or flue by a substance on the outside of the tube flowing in a direction parallel to the direction of flow of the fluid on the inside: distinguished from *counter-current heating*, in which the currents flow in opposite directions.

heating-coil (hē′ting-koil), *n.* A coil of wire heated by the passage of an electric current and used for producing and maintaining a high temperature in various scientific operations or for industrial purposes. Also written *heat-coil*.

heating-furnace (hē′ting-fėr″nās), *n.* Same as *reheating-furnace* (which see, under *furnace*).

heating-machine (hē′ting-ma-shēn″), *n.* A combined heating-furnace and automatic feeding- and conveying-machine. The leer, the reel, and the rotary oven are heating-machines, but the term is commonly applied to combined gas-furnaces and conveying-machines used in annealing, brazing, tempering, and coloring small parts of machines, hardware, and metal pipes, rods, and sheets.

heat-rash (hēt′rash), *n.* Prickly heat (which see, under *heat*).

heat-ray (hēt′rā), *n.* A ray of heat; specifically, one of the less refrangible, infra-red, long-waved rays of the spectrum, discovered by the elder Herschel, which are invisible and have little actinic power, but are detected by means of their thermal effects. In the normal solar spectrum as studied by Langley, they extend the spectrum below the line A to a distance nearly double the length of the visible spectrum. Strictly, all rays of the spectrum are heat-rays, since when absorbed they all heat the absorbing surface.

heat-stroke (hēt′strōk), *n.* Collapse or fever caused by exposure to excessive heat of the atmosphere. See *sunstroke*. *Buck*, Med. Handbook, III. 195.

heat-tone (hēt′tōn), *n.* In *thermo-chem.*, the sum of the heat developed in a chemical reaction and of the heat-equivalent of the external work.

Since we have reactions which evolve heat . . . and also reactions in which heat is absorbed, . . . the *heat tone* may be positive or negative. *H. C. Jones*, Physical Chem., p. 286.

heat-unit, *n.*—**Gram-centigrade heat-unit,** the quantity of heat required to raise one gram of water from 0° to 1° C.; a calory.—**Kilogram-centigrade heat-unit,** the quantity of heat required to raise one kilogram of water from 0° to 1° C.; a greater calory.

heat-wave (hēt′wāv), *n.* **1.** A day or series of days of unusually hot weather; a hot wave; a broad area of descending wind, dynamically warmed by compression, moving eastward over the United States and often occupying several days in its transit.—**2.** In *phys.*, an ether-wave capable, by the transformation of the energy of the vibratory disturbance into heat, of raising the temperature of bodies placed in its path. All ether-waves are heat-waves, but the term is usually applied to the longer waves of the spectrum, because these alone possess, in general, sufficient energy to produce a noticeable heating effect. See *heat*, *n.*, 2.

heat-weight (hēt′wāt), *n.* In *mech.*, the entropy-factor: an erroneous term used in discussions on the theory of heat-action upon gases or other media for the conversion of heat-energy into mechanical power. The energy in heat-units expended by a gas in expanding from a higher absolute temperature T_1 to a lower temperature T_2 is the product of the range or difference in absolute temperatures multiplied by the change in the value of the entropy-factor during the expansion. The temperature-range measures the availability of the transformation, and this range must be multiplied by the entropy to give a product denoting the expended energy. In hydraulic-motor practice, the difference in heights of the head-race and tail-race levels measures the availability of the water-power, and this range of height multiplied by the weight of water falling measures the energy expended. Now, by analogy, the entropy-factor acts to multiply temperature, as the weight acts to multiply height in feet: hence, the notion of calling this entropy-factor the *heat-weight* in an effort to give to the entropy a physical presentation as a property of heat-media, which is an impossibility.

heautophany (hē-â-tof′a-ni), *n.* [Gr. ἑαυτοῦ, of himself, + -φανεια, < -φανής, < φαίνειν, show, manifest.] Self-manifestation.

heautophonics (hē-â-tō-fon′iks), *n.* [Gr. ἑαυτοῦ, of himself, + φωνή, sound, + -*ics*.] Same as *autophony*.

heautotype (hē-â′tō-tīp), *n.* [Gr. ἑαυτοῦ, of itself, + τύπος, type.] Any specimen identified with a species already described and named, and chosen by the author as an illustration of that species. *Science*, June 9, 1905.

heav, *v.* and *n.* A simplified spelling of *heave*.

heave, *v. i.*—**Heave and awash!** a call to the men at the windlass or capstan signifying that one more turn or heave will bring the anchor-ring to the surface of the water.—**Heave and aweigh!** an order to the men at the windlass or capstan to heave once more, in order to lift the anchor from its bed. **Heave and break!** Same as ★*heave and aweigh*.—**Heave and pawl!** an order to the men at the capstan to heave until the pawl drops into its socket.—**Heave and rally!** an order to the men at the capstan or windlass to exert themselves; an encouraging cry to the crew.—**Heave in!** a command to get in some of the cable; haul in the slack.—**Heave killick!** heave anchor.—**Heave round!** an order to turn the capstan around by its bars or by steam-power.—**Heave short!** a command to heave in most of the anchor-chain: the cable is hove short when the ship is riding nearly over her anchor without having slack cable out.—**Heave up!** an order to lift the anchor from the bottom.—**To heave and set,** to rise and fall, as a ship, owing to the undulation of the sea; the rise and fall of the waves.—**To heave astern,** to move a ship backward by heaving in on the rope or cable that leads astern.—**To heave away,** to commence heaving in; heave round the capstan; work the windlass-brakes.—**To heave the ship ahead,** to advance the vessel by heaving in on the anchor-chain, or on the line leading ahead.

heave, *n.*—**Cornwall heave,** in *wrestling*, a throw in which the wrestler seizes his opponent by placing one arm in front of him and the other behind him, and lifts and throws backward, falling with him.—**Heave of the sea.** When a vessel is sailing more or less in the trough of a heavy sea the effect of it is to drive her to leeward; this drift, or lifting off, is expressed as *heave of the sea* or *send of the sea*. A shallow vessel will be lifted off more than a deep vessel, and for that reason no general rule can be given for the navigator.

heaved (hēvd), *p. a.* In *geol.*, horizontally displaced by a fault: said of rock-masses or strata. Contrasted with *thrown*, or vertically displaced.

Heaven, *n.*—**Son of Heaven,** a translation of Chinese *T'ien tse*, one of the titles given to the Emperor of China, who is supposed to rule by the will of Heaven.

heavs, *n.* A simplified spelling of *heaves*.

heavy, *a.* **II.** *n.* **1.** The heavy part in a theatrical representation in which the dignity and self-importance of successful middle life are portrayed.—**2.** The actor who takes this part.—**3.** A member of the heavy cavalry or artillery: usually in the plural.—**Heavy liquor.** See ★*liquor*.

heavy-back (hev′i-bak), *n.* A Jamaican name for a kind of helmet-shell, *Cassis madagascarensis*.

he-balsam (hē′bâl″sam), *n.* See ★*balsam*.

hebamic (he-bam′ik), *a.* [G. *hebamme*, a midwife, + -*ic*.] Of or pertaining to a midwife or midwifery; maieutic.

But the soul is far wiser and truer than it knows and clung to what concealed worth for itself through dark ages and persecutions in a way our philosophy is too small to explain and which should forever make us treat even superstition and the blindest and narrowest orthodoxies with sympathy and if possible with the *hebamic* art which Socrates praised. *Amer. Jour. Relig. Psychol. and Education*, May, 1904, p. 46.

hebbakhade (heb-a-kä′de), *n.* A gum-resin similar to myrrh, but more acrid, imported from Africa. Also called *besabol* and (incorrectly) *East Indian myrrh*.

hebephrenic (hē-bē-fren′ik), *n.* and *a.* Same as *hebephreniac*.

Heberden's nodes. See ★*node*.

hebetic (he-bet′ik), *a.* [Gr. ἡβητικός, < ἡβήτης, youthful, < ἥβη, youth.] Relating to or occurring at the time of puberty.

Hebr. An abbreviation (*a*) of *Hebrew;* (*b*) of *Hebrews.*

Hebraizer (hē′brā-ī-zèr), *n.* One who Hebraizes.

hecastotheism (he-kas-tō-thē′izm), *n.* [Gr. ἑκάστος, each, + θεός, God, + *-ism.*] The type of primitive belief in which supernatural powers are attributed to both animate and inanimate objects.

In classifying Indian myths Major Powell distinguishes four stages in the growth of mythic philosophy. To the first of these he gives the name of *hecastotheism*, the stage in which supernatural powers are attributed to both animate and inanimate objects, an all pervading animism which answered the questions of how and why to the savage mind. In the second stage or zootheism this attribution of extra-natural and mysterious potencies is confined to animate forms and animals, usually by reason of some special quality, as strength, swiftness, cunning, etc., become deified. In the third stage, to which he gives the name physitheism, the agencies of nature, sun, moon, stars, rain and wind become personified and exalted into omnipotence. The fourth stage, which includes the domain of the spiritual concept, has not yet been reached by any of the Amerindian tribes.
Amer. Jour. Psychol., Jan., 1903, p. 63.

hecatolite (he-kat′o-lit), *n.* [Gr. Ἑκάτη, Hecate (the moon), + λίθος, stone.] Same as *moonstone.*

hecdecane (hek′dē-kan), *n.* Same as ★*hexadecane.*

hechima (hā′chē-mä), *n.* [Jap.] The sponge-gourd, *Luffa Luffa.* It is grown everywhere in Japan and large numbers of the common, spongy, fibrous variety are exported, while a slender, tender variety is cultivated exclusively as an article of food.

Heckerism (hek′èr-izm), *n.* [*Hecker* (see def.) + *-ism.*] The theological views attributed to Rev. Isaac T. Hecker, in which he was charged with minimizing Roman Catholic doctrine to suit American notions. See ★*Americanism.*

heckler, *n.* **2.** One who severely questions and cross-questions another; specifically, one who severely questions a candidate for the purpose of finding some weak point in his political creed or professions, or of bringing out his actual opinions or position. [Great Britain.]

The man who asks questions and insists on their being answered is a familiar presence at all party meetings [in England]. One of England's many debts to Scotland is the loan of the expressive word used to describe him. He is known as the *heckler.* The speaker is not allowed to disregard him.
Sidney Brooks, in Harper's Mag., Aug., 1900, p. 338.

heckling-machine (hek′ling-mạ-shēn″), *n.* Same as *heckle.*

Hectarthropidæ (hek-tär-throp′i-dē), *n. pl.* [NL., ⟨ *Hectarthropus* + *-idæ.*] A family of caridean macrurous crustaceans having all of the trunk-legs similar in structure, simple, six-jointed, with the fifth joint not subdivided, and with the first five pairs carrying exopods. It includes the genera *Procletes*, *Icotopus*, *Eretmocaris*, and *Hectarthropus*, the last being the type.

Hectarthropus (hek-tär′thrō-pus), *n.* [NL., ⟨ Gr. ἕκτος, sixth, + ἄρθρον, joint, + πους (ποδ-), foot.] The typical genus of the family *Hectarthropidæ.* *Spence Bate*, 1888.

hecto-ampere (hek′tō-am-pàr′), *n.* In *elect.*, one hundred amperes or ten c. g. s. units: a practical unit of current strength.

hectocotyliferous (hek″tō-kot-i-lif′èr-us), *a.* [NL. *hectocotylus* + L. *ferre*, bear, + *-ous.*] Bearing or provided with a hectocotylus: as, a *hectocotyliferous* male among cephalopods.

hectocotylism (hek-tō-kot′i-lizm), *n.* [*hectocotylus* + *-ism.*] The formation or development of a hectocotylus.

hectocotylize (hek-tō-kot′i-līz), *v. t.*; pret. and pp. *hectocotylized*, ppr. *hectocotylizing.* [*hectocotylus* + *-ize.*] To transform or modify into a hectocotylus; fecundate with a hectocotylus.

hectol. An abbreviation of *hectoliter.*

hectowatt (hek′tō-wot), *n.* [*hecto-* + *watt.*] In *phys.*, a practical unit of power equal to 100 watts or 1×10^9 ergs per second. [Rare.]

hectowatt-hour (hek″tō-wot-our′), *n.* In *phys.*, a practical unit of work, equal to 100 watt-hours or 360,000 joules. [Rare.]

hed, *n.* A simplified spelling of *head.*

hedake, *n.*, *a.*, and *v.* A simplified spelling of *headache.*

heddle-setting (hed′l-set″ing), *n.* An arrangement of the heddles in a loom when a change is made from a fine to a coarse reed, or vice versa.

heddling (hed′ling), *n.* A set of heddle-frames for a loom.

Hedenstrœmia (hed-en-strē′mi-ä), *n.* [NL., ⟨ *Hedenstrom*, a Swedish naturalist.] The typical genus of the family *Hedenstrœmidæ.*

Hedenstrœmidæ (hed″en-strem′i-dē), *n. pl.* [NL., ⟨ *Hedenstrœmia* + *-idæ.*] A family of ammonoid cephalopods or ammonites in which the principal septal sutures have lobes and saddles with ceratitic outlines. It occurs in Triassic rocks.

heder (hā′dèr), *n.* [Heb.] In Jewish use, an inclosure; a chamber or secret compartment; specifically, a primary school for Jewish children where they are instructed exclusively in Hebrew and the Jewish religion.

hederic, *a.* **2.** Derived from *Hedera helix.*— **Hederic acid,** a colorless compound, $C_{16}H_{28}O_4$, found in the berries and leaves of the ivy, *Hedera helix.* It crystallizes in needles or scales and melts at 223° C.

hederidin (he-der′i-din), *n.* [*heder(ine)* + *-id* + *-ine.*] A colorless cleavage-product, $C_{26}H_{40}O_4$, of the glucoside hederine. It crystallizes in prisms, and melts at 324° C.

hederigerent (hed-ẹ-rij′ẹ-rẹnt), *a.* [L. *hederiger*, ivy-bearing (⟨ *hedera*, ivy, + *gerere*, bear), + *-ent.*] Ivy-bearing; wreathed or garlanded with ivy, as the bacchantes in the Dionysian festivals.

Ethel, by this time breathless, threw her tambourine on the bed, and sat down. . . . The *hederigerent* Mænads of old were never more filled with excitement.
Mortimer Collins, Marquis and Merchant, xxiii.

hederinic (hed-ẹ-rin′ik), *a.* [*heder-ic* + *-in* + *-ic.*] Same as *hederic.*

hedge-bantling (hej′bant″ling), *n.* An illegitimate brat.

"Oh, bathos!" said Lady Bath. . . "Is this *hedge-bantling* to be fathered on you, Mr. Frank?"
"It is necessary, by all laws of the drama, Madam," said Frank, . . . "that the speech and the speaker shall fit each other."
C. Kingsley, Westward Ho! ii. 41.

hedge-bill, *n.* **2.** In *entom.*, a British collectors' name for a tineid moth, *Cerostoma horridella.*

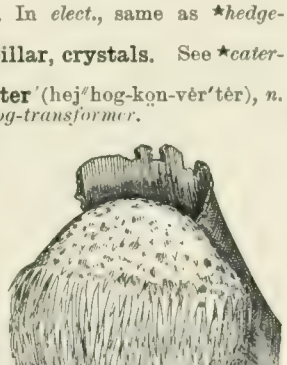
hedgehog, *n.* **6.** In *elect.*, same as ★*hedgehog-transformer.*

Hedgehog caterpillar, crystals. See ★*caterpillar*, ★*crystal.*

hedgehog-converter (hej′hog-kọn-vèr′tèr), *n.* Same as ★*hedgehog-transformer.*

hedgehog-fish (hej′hog-fish), *n.* Any of the porcupine-fishes of the family *Diodontidæ*, found in most tropical seas.

hedgehog-mushroom (hej′hog-mush″röm), *n.* The edible fungus *Hydnum Erinaceum.* See *hedgehog*, 3.


Hedgehog-mushroom (*Hydnum Erinaceum*), one-fourth natural size.

hedgehog-shell (hej′hog-shel), *n.* A species of *Murex*, *M. erinaceus*, bearing numerous spines.

hedgehog-transformer (hej″hog-tràns-fôr′mèr), *n.* A type of transformer with open magnetic circuit and a straight core of iron wires, the ends of which are separated from one another as widely as possible, like little bristles: hence the name. Also called *hedgehog-converter.*

hedge-hook (hej′hùk), *n.* A local English term for *bill-hook* (which see).

hedge-radish (hej′rad″ish), *n.* Same as *wild radish* (which see, under *radish*).

hedge-rustic (hej′rus″tik), *n.* A British collectors' name for a European noctuid moth, *Luperina cespitis.*

hedionda (ä-dē-ōn′dä), *n.* [Amer. Sp. *hediionda*, fem. (parallel to Sp. *hediondo*, m., applied to another plant, Syrian rue), ⟨ Sp. *hediondo*, fetid, stinking, ⟨ *heder*, ⟨ L. *fetere*, stink: see *fetid.*] **1.** In Porto Rico and Spanish America, the coffee-senna, *Cassia occidentalis.* See *Cassia*, 1, and *negro coffee* (under *coffee*).— **2.** In New Mexico, the creosote-bush, *Covillea tridentata.* See *Larrea.*

hedland, *n.* A simplified spelling of *headland.*

hedlong, *adv.*, *a.*, and *v.* A simplified spelling of *headlong.*

hedonal (hed′ō-nal), *n.* [Gr. ἡδονή, pleasure, + *-al*[1].] A hypnotic remedy; chemically, the ester of methyl propylcarbinol-carbamic acid.

hedonic, *a.* **3.** Pertaining to sexual excitement. **Hedonic calculus, tone.** See ★*calculus*, ★*tone*[1].

hedrioblast (hed′ri-ō-blàst), *n.* [Gr. ἕδριον, dim. of ἕδρα, a seat, a base, + βλαστός, a germ.] A term proposed by Allman for the fixed medusoids or sporosacs of hydromedusans; a gonophore. Compare *planoblast.*

hedrumite (hed′rum-īt), *n.* [*Hedrum*, in Norway, + *-ite*[2].] In *petrog.*, a variety of syenite with little or no nephelite which has a trachytic or laminated texture due to the tabular form of the feldspar crystals. *Brögger*, 1890.

Hedyscepe (hē-dis′ē-pē), *n.* [NL. (Wendland and Drude, 1875), ⟨ Gr. ἡδύς, sweet, charming, + σκέπη, shelter. The name alludes to the beauty of the type species, *H. Canterburyana*, which is called *umbrella-palm* in Lord Howe Island.] A genus of palms. See *Kentia.*

heehaw (hē′hâ), *n.* The bray of an ass or mule.

heel[1], *n.*, **2.** (*b*) The extremity of a knife-blade or of any tool (excluding the handle) which is opposite the point. (*c*) In a bow for instruments of the viol class, the end nearest the player's hand; the nut: opposed to *head* or *point.* (*d*) The base of a tobacco-leaf: so called by manufacturers.— **Glome of the heel.** See ★*glome.*— **Heel of the flat.** See ★*flat*[1].— **His heels,** at *cribbage*, a jack which is cut for a starter, and which counts two immediately.— **Lark heel, larkspur heel,** in *anthrop.*, the prominent long heel of negroid races.— **To go round on her heel,** to turn short around: said of a vessel.

heel[1], *v. t.* **6.** In *golf*, to strike (a ball) on the heel of the club. *W. Park*, Game of Golf, p. 100.— **To heel in,** to store (young trees) for planting by laying (them) against the side of a trench and covering the roots with earth.

heel[2], *v. t.*— **To heel the ship,** to list the vessel over on her side.

heel[2], *n.*— **Angle of heel.** See ★*angle*[3].

heel-brace (hēl′brās), *n.* The iron shape on the lower part of a rudder, which acts as a reinforcement to the lower pintles.

heel-chain (hēl′chān), *n.* A light chain formerly used to secure the after end of the jib-boom to the bowsprit. An iron band is now generally employed for this purpose.

Heeled bet. See ★*bet*[2].

heel-fly (hēl′flī), *n.* The adult of the American ox-bot or ox-warble, an œstrid fly, *Hypoderma lineata.* It flies about the heels of cattle and lays its eggs on the hair, whence they are licked by the animal.

Heel-fly (*Hypoderma lineata*).
Female, slightly enlarged. ("Insect Life," U. S. D. A.)

heeling-indicator (hē′ling-in″di-kā-tọr), *n.* An instrument designed to show the angle of heel or the roll of a vessel: it may be a pendulum, the lower end of which is pointed and moves over a graduated arc, or a spirit-level, curved in an arc of a circle, the bubble of which indicates the angle on a graduated scale.

heel-lashing (hēl′lash″ing), *n.* A lashing passed around the heel of a spar; a number of turns of line around the inner end of a studdingsail-boom and its yard; the rope that secures the inner end of the jib-boom to the bowsprit.

heel-piece, *n.* **3.** In *iron ship-building*, a short length of angle-bar which is used to connect the heels of the two sections of a frame which meet at the center-line of the vessel.

heel-string (hēl′string), *n.* The tendo Achillis.

heel-tackle (hēl′tak″l), *n.* A purchase hooked to the heel of a spar; a tackle for securing the heel of a sheer-leg.

heemraad (hām′räd), *n.* [D., ⟨ *heem*, home, + *raad*, council.] A local petty court established by the Dutch in South Africa in 1682 for the settlement of minor disputes between the burghers. It consisted of the landrost and four unpaid assessors who held office for two years.

Heersian (hār′siạn), *a.* and *n.* [*Heers*, a town in Belgium.] In *geol.*, noting the lowest division of the Eocene Tertiary in Belgium, corresponding in part to the Thanet sand of England.

hefer, *n.* A simplified spelling of *heifer.*

hefner (hef′nèr), *n.* A unit of intensity of light; the light from a standard amyl-acetate lamp of the form devised by Hefner-Alteneck. See ★*light standard.*

hefner-lux (hef′nèr-luks), *n.* Same as ★*lux*[3], 2.

hefner-meter (hef′nĕr-mē′tĕr), *n.* A unit of illumination, the illumination from a source of light equal in intensity to one hefner at a meter's distance; a lux.

heft[5], *n.* 2. A part or number of a serial publication, as of a magazine; a division of a work which is being issued in parts.

hegemon (hej′e-mon), *n.* [Gr. ἡγέμων, a leader: see *hegemony.*] A leader; a ruling power.

The *hegemon* of the Western hemisphere is the United States. Her power is paramount, as all the world recognizes. *The Forum*, Jan.-March, 1904, p. 347.

hegemonist (hē-jem′ ō-nist), *n.* An advocate of hegemony.

Hegetotheriidæ (hē″jē-tō-thē′ri-i-dē), *n. pl.* [NL. *Hegetotherium*, the type genus, + *-idæ.*] A family of extinct ungulate mammals, of the suborder *Typotheria*, from the Eocene of Patagonia. *Ameghino*, 1894.

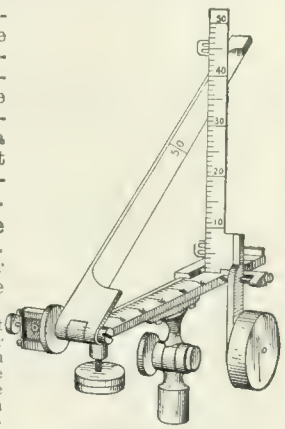
H. E. I. C. An abbreviation of *Honorable East India Company.*

H. E. I. C. S. An abbreviation of *Honorable East India Company's Service.*

Height index. Same as *altitudinal* ★*index.*—**Height of a homogeneous atmosphere.** See ★*atmosphere.*—**Height of land.** See ★*land*[1].—**Metacentric height,** in *naval arch.*, the distance from the center of gravity of the vessel as a whole to the metacenter (which see). The metacentric height is a measure of the stability of a vessel when inclined to a small angle from the position of equilibrium. *Negative metacentric height* is that in which the metacenter is below the center of gravity; the vessel is then in unstable equilibrium and will not remain upright although it may be stable at an inclination from the upright.—**Molar height,** in *craniom.*, the height of the lower jaw at the level of the second molar.—**Nasal height,** in *craniom.*, the distance from the nasion to the medial point of the level of the inferior margin of the nasal aperture.

height-gage (hīt′-gāj), *n.* A fine steel measuring-instrument for ascertaining the height of projections above a plane surface. It measures in thousandths of an inch.

height-measure (hīt′mezh′ūr), *n.* An instrument for measuring the height of a tree.



Height-measure.

The instrument is set up where the operator can readily see both the top and the base of the tree, and the oblique distance from the center of the instrument to the base of the tree is measured. The sliding, weighted rule is then set on the base rule at the graduation corresponding to the measurement just procured. A sight is then taken through the eyepiece and the objective on the base rule to the base of the tree, the hair of the objective being brought into line with the base of the tree. A screw is set to hold the instrument at this angle. A second sight, to bring the hair of the objective on the oblique rule in line with the top of the tree, is then taken. The height of the tree is indicated on the upright rule at the point where the edge of the oblique rule passes it.

heimin (hā-min′), *n.* [Jap., < *hei*, common, + *min*, people.] In Japan, the common people, as distinguished from the nobility.

heintzite (hint′zīt), *n.* [*G. heintzit* (1890), named after Prof. *W. H. Heintze*, of Halle, a German chemist.] A hydrous borate of magnesium and potassium occurring in colorless and white monoclinic crystals, found at Leopoldshall, Strassfurt, Prussia.

heir, *n.*—**Irregular heir,** in the civil law of Louisiana, one who takes the succession by provision of law when there are neither legal nor testamentary heirs.—**Legal heir,** in *civil law*, one of the same blood as the descendant who takes the succession by force of law rather than by will. There are three classes: (*a*) children and lawful descendants; (*b*) parents and lawful ascendants; (*c*) collateral kindred.

hei-tiki (hā-tē′kē), *n.* [Maori, < *hei*, a neck ornament, + *tiki*, a carved figure on the gable of a house, also the name of a deity, the creator of man.] Among the Maoris, a small jade figure or image worn around the neck.

hel, *n.* and *v.* A simplified spelling of *hell.*

helbeh (hel′be), *n.* [Ar. *hilba.*] The fenugreek, *Trigonella Fœnum-græcum*, and especially its seeds, which when made into flour and mixed with dhurra form a food largely used by the working classes of Egypt. See *fenugreek.*

helcodermatous (hel-kō-dĕr′ma-tus), *a.* [Gr. ἕλκειν, draw, + δέρμα(τ-), skin, + *-ous.*] Boring or tearing; given to boring or tearing.—**Helcodermatous spine.** See ★*spine.*

Helderberg group. See ★*group*[1].

Helderbergian (hel-dĕr-bĕr′gi-an), *n.* In *geol.*, a group of strata, regarded by New York geologists as of earliest Devonian age, lying on the water-limes of the late Silurian and overlain by the Oriskany sandstone. It takes its name from its typical development in the Helderberg Mountains of New York, where its members, from the base upward, are Coeymans limestone, New Scotland beds, and Becraft limestone. In the earlier nomenclature of the New York rocks it was termed first the Helderberg group and subsequently the Lower Helderberg. See ★*group.*

helenene (hel′ē-nēn), *n.* [*helen(in)* + *-ene.*] A yellow, oily hydrocarbon which is formed when helenin is distilled with phosphorus pentoxid.

heleoplankton (hē-lē-ō-plangk′ton), *n.* [Gr. ἕλος (gen. ἕλεος), a marsh, + NL. *plankton.*] The plankton of a marsh.

helepole (hel′ē-pōl), *n.* [F. *hélépole*, < LL. *helepolis*, < Gr. ἑλεπόλις, a besieging engine, prop. adj., 'city-taking' (applied to Helen and Iphigenia), < ἕλειν, take, + πόλις, city.] A military engine anciently used in sieges, supposed to have been invented by Demetrius Poliorcetes.

helianthic (hē-li-an′thik), *a.* [*Helianthus* + *-ic.*] Pertaining to the sunflower.—**Helianthic acid,** a colorless compound, $C_{14}H_{18}O_8$, which occurs in sunflower seeds. It is resolved by dilute mineral acids into a fermentable sugar and an acid-violet coloring-matter.

helichryse (hē′li-krīz), *n.* [= *Helichrysum*, Anglicized.] Some golden-flowered plant, perhaps ideal.

> While curling through lush grass one spies
> Tendrils of honied *helichryse.*
>
> *Symonds*, In the Key of Blue. *N. E. D.*

helicin (hel′i-sin), *n.* [Appar. < Gr. ἕλιξ (ἑλικ-), a spiral, + *-in*[2].] A colorless compound, $C_6H_{11}O_5\overset{9}{O}C_6H_4\overset{1}{C}HO$, which is formed by the action of nitric acid on salicin. It crystallizes in slender, silky needles, melts at 175° C., and is the glucoside of orthohydroxybenzaldehyde.

Helicina (hel-i-sī′nä), *n.* [NL., appar. < Gr. ἕλιξ (ἑλικ-), a spiral, + *-ina.*] The typical genus of the family *Helicinidæ.* About 500 species are known, most of which inhabit the Antilles, none being found in Africa. *Lamarck*, 1799.

Helicinidæ (hel-i-sin′i-dē), *n. pl.* [NL., < *Helicina* + *-idæ.*] A family of rhipidoglossate gastropods of the order *Streptoneura*, having the epipodium without tentacles, branchia absent, mantle-cavity transformed into a pulmonary chamber, heart with a single auricle, not traversed by the rectum, and the operculum without apophysis. It contains the genera *Helicina*, *Hydrocena*, and *Georissa*, all terrestrial and found in warm regions.

helicoceran (hel-i-kos′e-ran), *a.* Having the aspect of, or pertaining to, the cephalopod genus *Helicoceras.*

Helicoceras (hel-i-kos′e-ras), *n.* [N.L, < Gr. ἕλιξ (ἑλικ-), a spiral, + κέρας, horn.] A genus of ammonoid cephalopods showing phylogenic senility in the open spiral, the coils of which do not touch. It occurs in the Cretaceous rocks.

helicoid, *n.* 2. A helicoid parabola.—**Skew helicoid.** Same as *right helicoid.*—**Helicoidal anemometer.** See ★*anemometer.*

Helicolenus (hel-i-kol′e-nus), *n.* [NL., said to be < Gr. "ἡλίκος, strong" (it means 'as big as'), + "ὠλένη, elbow, arm."] A genus of scorpænoid fishes, remarkable for their brilliant red coloration, found in the deep waters of both the Atlantic and Pacific. *H. dactylopterus* of the Mediterranean (extending to the Gulf Stream and Japan) is the best-known species.

helicopepsin (hel″i-kō-pep′sin), *n.* [Gr. ἕλιξ (ἑλικ-), a spiral shell, + E. *pepsin.*] A pepsin-like ferment which is found in snails.

helicoproteid (hel″i-kō-prō′tē-id), *n.* [Gr. ἕλιξ (ἑλικ-), a spiral shell, + E. *proteid.*] A nucleoalbumin which is found in the albuminous gland of snails. It contains a large amount of reducing substance.

helicopter (hel-i-kop′tĕr), *n.* [Gr. ἕλιξ (ἑλικ-), helix, + πτερόν, wing.] A flying-machine in which revolving screws or revolving helicoidal surfaces are depended upon to sustain the machine in the air.

helicorubine (hel″i-kō-rō′bin), *n.* [Gr. ἕλιξ (ἑλικ-), a spiral shell, + L. *rubus*, red, + *-ine*[2].] An orange-red pigment found in the so-called livers of certain invertebrates.

Helicosporium (hel″i-kō-spō′ri-um), *n.* [NL. (Nees, 1816), < Gr. ἕλιξ, a spiral, + σπορά, seed (spore).] A genus of hyphomycetous fungi which have a creeping mycelium with short, erect, dark-colored conidiophores bearing curled or spiral, hyaline or colored septate spores. About 40 species have been described. They occur mostly on decaying wood.

helictite (he-lik′tīt), *n.* [Gr. ἑλικτός, twisted (< ἑλίσσειν, turn about, twist: see *helix*), + *-ite*[2].] A twisted twig-like form of calcium carbonate which occurs in caves in limestone.

Helietta (hē li-et′ä), *n.* [NL. (Tulasne, 1847), named in honor of Th. *Hélie*, a French physician and pharmacologist.] A genus of shrubs or trees of the family *Rutaceæ.* It is related to the hop-tree, *Ptelea*, but the fruit has three or four carpels, with oblique wings similar to those of a maple. There are two species, one in Colombia, the other (for which see ★*barreta*) in Texas and Mexico.

Heligoland yellow. See ★*yellow.*

Heliocentric parallax. See ★*parallax.*

heliocentrically (hē″li-ō-sen′tri-kal-i), *adv.* In a heliocentric manner; as if from the sun's center.

heliochrome (hē′li-ō-krōm), *n.* [Gr. ἥλιος, the sun, + χρῶμα, color.] A photograph showing an object in its natural colors; specifically, the product of a process devised by Niepce. See *heliochromotype.*

heliochromoscope (hē″li-ō-krō′mō-skōp), *n.* Gr. ἥλιος, the sun, + χρῶμα, color, + σκοπεῖν, view.] A device for superposing three specially prepared photographs of an object, one with red, one with green, and one with blue-violet light, so as to obtain a picture in the natural colors. See ★*chromascope*, with cut.

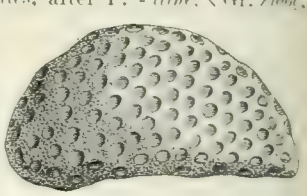
heliofugal (hē-li-of′ū-gal), *a.* [Gr. ἥλιος, the sun, + L. *-fugus*, < *fugere*, flee, + *-al.*] Moving away from the sun, or tending to produce such motion.

heliogram (hē′li-ō-gram), *n.* [Gr. ἥλιος, the sun, + γράμμα, a writing.] A message which is transmitted by heliographic methods. See *heliograph.*

Heliographic chart, paper. See ★*chart*, ★*paper.*

heliographically (hē″li-ō-graf′i-kal-i), *adv.* By heliography; through the heliograph.

Heliolites (hē″li-ō-lī′tēz), *n.* [NL., < Gr. ἥλιος, the sun, + *-l-ites*, after F. *-lithe*, < Gr. λίθος, a stone.] A genus of fossil alcyonarian corals of the family *Helioporidæ.* They grow in massive coralla in which the autopores have pseudosepta or spinules and sometimes a columella; the siphonopores being without septa and multiplying by fission or intramural gemmation. The genus is characteristic of the Upper Silurian, but also occurs in the Devonian.



Small Colony of *Heliolites interstinctus*, Linné. Natural size. (From Nicholson and Lydekker's "Palæontology.")

heliologue (hē′li-ō-log), *n.* [Gr. ἥλιος, the sun, + λόγος, word.] Same as ★*heliogram.* *Pall Mall Gazette*, Jan. 8, 1900. [Rare.]

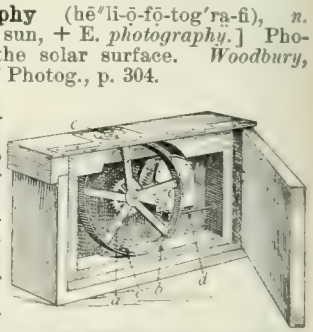
heliometry (hē-li-om′e-tri), *n.* [As *heliometer* + *-y*[3].] The art of using the heliometer; also (rarely), the art of making measurements upon the sun.

heliophobia (hē″li-ō-fō′bi-ä), *n.* [NL., < Gr. ἥλιος, the sun, + *-φοβία*, < φοβεῖν, fear.] A morbid dread of sunlight.

heliophobous (hē-li-of′ō-bus), *a.* [Gr. ἥλιος, the sun, + *-φοβος*, < φοβεῖν, fear.] In *phytogeog.*, shunning full sunlight: said of plants which require shade. *F. E. Clements.*

heliophotography (hē″li-ō-fō-tog′ra-fi), *n.* [Gr. ἥλιος, the sun, + E. *photography.*] Photography of the solar surface. *Woodbury*, Encyc. Dict. of Photog., p. 304.

heliophotometer (hē″li-ō-fō-tom′e-tĕr), *n.* [Gr. ἥλιος, the sun, + φῶς (φωτ-), light, + μέτρον, measure.] In *meteor.*, a special apparatus for recording the duration of sunlight: constructed by Professor F. Craveri and in use at the observatory at Brá, near Turin, since 1874.



The Heliophotometer of Craveri.

The wheel *a* and drum *b* rotate once a day by clockwork, causing a long, narrow slit of sensitized photographic paper to pass slowly below and close to the narrow slit *c*, in a thin plate of platinum. The ends of the paper strip are clamped at *e*. The mechanism is adjusted from the outside by the screw *d*, so as to keep the paper strip at the proper distance from *c*. A box about 14 x 6 x 8 inches protects the recording-apparatus.

heliophyllite (hē-li-of'i-lit), *n.* [Gr. ἥλιος, the sun, + φύλλον, leaf, + *-ite*².] Same as ★*cedemite*.

Heliophyllum (hē-li-ō-fil'um), *n.* [NL., < Gr. ἥλιος, the sun, + φύλλον, leaf.] A genus of tetracorals of the family *Cyathophyllidæ*, which grow as simple, occasionally composite coralla, the septa bearing fine vertical ridges or carinæ. It occurs in Devonian rocks.

heliopolar (hē″li-ō-pō'lär), *a.* [Gr. ἥλιος, the sun, + πόλος, pole: see *polar*.] Related to the pole of the sun's rotation as determining one axis of coördinates.

The vector diagram in *heliopolar* coordinates takes the form of a conical surface around the Sun.
Science, Feb. 7, 1902, p. 223.

helioscopy (hē″li-os'kō-pi), *n.* [Gr. ἥλιος, the sun, + -σκοπία, < σκοπεῖν, view.] Observation of the sun; the use of the helioscope.

heliotactic (hē″li-ō-tak'tik), *a.* [Gr. ἥλιος, the sun, + ταξις, disposition (see *tactic*).] Sensitive to or responsive to the sun's rays.

It would be extremely interesting to learn something of the mating habits of these highly *heliotactic* males and wingless females. *Biol. Bulletin*, May, 1904, p. 253.

heliotherapy (hē″li-ō-ther'a-pi), *n.* [Gr. ἥλιος, the sun, + θεραπεία, medical treatment.] Treatment of disease by means of sunlight: a form of phototherapy. *Lancet*, July 11, 1903, p. 104.

heliothermometer (hē″li-ō-thèr-mom'e-tèr), *n.* [Gr. ἥλιος, the sun, + E. *thermometer*.] An instrument for determining the intensity of solar radiation: usually a black-bulb thermometer inclosed in a glass-covered case internally blackened.

heliotrope, *n.* **6.** A direct coal-tar color of the disazo type, derived from dianisidine. It dyes unmordanted cotton reddish violet in an alkaline salt bath.—**Alizarin heliotrope,** a mordant dyestuff which produces reddish-violet shades with an aluminum mordant. Its constitution has not been published. **Heliotrope 2B,** a direct coal-tar color of the disazo type, derived from benzidine.

heliotropin (hē-li-ot'rō-pin), *n.* [*heliotrope* + *-in*².] Same as ★*piperonal*.

heliotypography (hē″li-ō-ti-pog'ra-fi), *n.* [Gr. ἥλιος, the sun, + τύπος, type, + -γραφία, < γράφειν, write.] The art of making heliotypes; phototypy; collotypy; that process in photoengraving in which a gelatin film toughened by the action of chrome-alum is employed.

helioxanthin (hē″li-ō-zan'thin), *n.* [Gr. ἥλιος, the sun, + ξανθός, yellow, + *-in*².] An acid coal-tar color: same as *diphenylamine-orange* (which see, under *orange*¹).

heliozincography (hē″li-ō-zing-kog'ra-fi), *n.* [Gr. ἥλιος, the sun, + E. *zincography*.] In *photog.*, a method of reproducing directly on a sensitized zinc plate in contact with a reversed negative. See the extract.

For the rapid reproduction of maps photozincography was, until a few years ago, the method invariably used. Two new methods have now superseded photozincography; one of these, "*heliozincography*," was worked out by the Ordnance Survey, and subsequently adopted by the survey of India; the other, the "Vandyke process," was invented by Mr. Vandyke, of the Survey of India, and has now been adopted by the Ordnance Survey. The first method consists in reproduction direct on a sensitised zinc plate in contact with a reversed negative.
Nature, Nov. 19, 1903, p. 60.

helixigenin (hē-lik-sij'e-nin), *n.* [*helixi*(*n*) + *-gen* + *-in*².] A crystalline compound, $C_{26}H_{40}O_4$ obtained, together with glucose, by heating the glucoside helixin with dilute mineral acids.

helixin (hē'lik-sin), *n.* [*helix* (see def.) + *-in*.] A white crystalline glucoside, $C_{32}H_{52}O_{10} + 2H_2O$, contained in the leaves and seeds of the English ivy, *Hedera Helix*.

helixoid (hē'lik-soid), *a.* and *n.* Same as *helicoid*.

hell¹, *n.* **Harrying** or **harrowing of hell.** See *harrow*². **The hound of hell.** See ★*hound*.

hellandite (hel'an-dīt), *n.* [Named after Prof. Ahmund *Helland*, Christiania.] Asilicate of calcium, the cerium metals, aluminium, and iron, which occurs in monoclinic crystals in pegmatite veins near Kragerö, Norway: related to guarinite. The crystals are more or less hydrated and have become optically isotropic in consequence of alteration.

hell-box (hel'boks), *n.* The box provided for the bruised or condemned types of a printing-house. [Printers' slang.]

hell-devil (hel'dev″l), *n.* The hellgrammite-fly or its larva.

helleborate (hel-e-bō'rāt), *a.* [*hellebore* + *-ate*¹.] Mixed or prepared with hellebore.

helleboreïn (hel-e-bō'rē-in), *n.* [*hellebore* + *-e-* + *-in*².] A colorless glucoside, $C_{26}H_{44}O_{15}$, the most important constituent of black and green hellebore-roots (*Helleborus niger*, *H. viridis*, and *H. fœtidus*). It crystallizes in nodules which carbonize at 280° C., has a sweet taste, and is poisonous. Helleborin, $C_{36}H_{42}O_6$ (?), occurs with it. It is a powerful intestinal irritant and is used in veterinary medicine.

helleboresin (hel″e-bō-rez'in), *n.* [*hellebo*(*re*) + *resin*.] A resinous substance, $C_{30}H_{38}O_4$, formed, together with glucose, by the action of dilute acids on helleborin.

helleboretin (hel″e-bō-rē'tin), *n.* [*hellebore* + Gr. ῥητίνη, resin.] A greenish amorphous powder, $C_{19}H_{30}O_5$, formed, together with glucose and acetic acid, by the hydrolysis of helleboreïn.

helleboric (hel-e-bō'rik), *a.* Of or pertaining to hellebore.

helleborism, *n.* **2.** Symptoms due to poisoning by hellebore.

Helleno-Italic (hel″en-ō-i-tal'ik), *a.* Relating to the ancient Greeks and Italians of Roman affinity.

heller, *n.* **2.** A modern Austrian coin, the one-hundredth part of a crown.

Helleria (he-lē'ri-ä), *n.* [NL. (Ebner, 1868), < G. *Heller*, a surname.] The typical and only genus of the family *Helleriidæ*. The single species, *H. brevicornis*, is found in damp moss in Corsica and Italy.

Helleriidæ (he-le-rī'i-dē), *n. pl.* [NL., < *Helleria* + *-idæ*.] A small family of oniscoid crustaceans containing the single genus *Helleria*.

hellhoffite (hel'hof-īt), *n.* [From a surname *Hellhoff* + *-ite*².] An explosive consisting of a mixture of dinitrobenzene and nitric acid: one of the Sprengel safety-mixtures.

hell-matter (hel'mat″èr), *n.* Broken or battered type or printing-material that has been condemned to or put in the hell-box. See ★*hell-box*. [Printer's slang.]

helm¹, *n.* **Helm-angle indicator.** See ★*helm-indicator*.—**Helm circle.** See ★*circle*.—**Lee helm,** the position of the tiller when the forward end or head is over on the lee side. See *alee*. **Port helm,** the position of the tiller when its head is on the port side of the midship line of the vessel.—**Put the helm down!** an order to put the tiller to leeward.—**Put the helm up!** an order to put the tiller to windward.—**Starboard helm,** the position of the tiller when its head is on the starboard side of the midship line of the vessel.—**To carry a hard helm,** said of a vessel when the wheel turns hard or when great effort is required to get it to respond to the rudder.—**To carry a lee helm,** said of a vessel the tendency of which is to go off from the wind, and which requires a lee tiller to keep its head up. This is a dangerous fault, since it may be the means of sending a vessel off into the trough of the sea.—**To carry an easy helm,** said of a vessel which steers without effort or requires only a very moderate wheel (number of spokes) to change the direction of its head.—**To carry a weather helm.** (*a*) See *carry*. (*b*) Said of a vessel the tendency of which is to keep coming up into the wind, and which requires that the tiller be kept more or less to windward to counteract it.—**To meet the helm,** to put the tiller over to the opposite side, so as to counteract the swinging of the ship.—**To put the helm alee.** See *alee*.—**To put the helm amidships.** See *amidships*.—**To put the helm aweather,** to shove the tiller over on the weather side of the ship, so that the vessel's head will fall off to leeward.

helmet, *n.* **6.** In *entom.*, the galea of an insect's maxilla.—**7.** *pl.* A breed of small, fancy pigeons which have a white body and the tail and top of head black or red. The name is given in allusion to this cap or helmet.—**Helmet creamer.** See ★*creamer*.

helmet-hornbill (hel″met-hôrn'bil), *n.* See ★*hornbill*.

helmet-urchin (hel″met-ėr'chin), *n.* Any sea-urchin of the family *Galeritidæ*.

Helmholtz pendulum. See ★*pendulum*.

Helmholtzian (helm-hōlt'si-an), *a.* Of or pertaining to the German physicist, physiologist, and psychologist Hermann Ludwig Ferdinand von Helmholtz, or to his work or theories: as, the *Helmholtzian* fundamental colors, etc.

helm-indicator (helm'in″di-kā-tor), *n.* *Naut.*, an electrical or mechanical apparatus for indicating in the pilot-house or other steering-station the position of the helm or rudder. Also called *helm-angle indicator* and *rudder-telltale*.

helminthite (hel'min-thīt), *n.* [Gr. ἕλμις (ἕλμινθ-), a worm, + *-ite*².] A trail of a worm on stone (a fossil), or a worm-like mark in stone.

Helminthochiton (hel-min-thō-kī'ton), *n.* [NL., < Gr. ἕλμις (ἕλμινθ-), worm, + NL. *Chiton*, a genus of mollusks.] A genus of chitons or polyplacophorous mollusks from the Silurian rocks.

helmintholite, *n.* **2.** Same as ★*helminthite*.—**3.** Lumachelle or fire-marble.

helminthophobia (hel-min-thō-fō'bi-ä), *n.* [NL., < Gr. ἕλμις (ἕλμινθ-), worm, + -φοβία, < φοβεῖν, fear.] A morbid dread of intestinal worms, usually associated with an illusion of being infested with them.

helminthous (hel-min'thus), *a.* [Gr. ἕλμις (ἕλμινθ-), worm, + *-ous*.] **1.** Infested with intestinal worms.—**2.** Relating to worms, especially intestinal worms.

helmitol (hel'mi-tōl), *n.* A colorless, crystalline citric-acid derivative of hexamethylene-tetramine; hexamethylene-tetramine-anhydromethylene citrate: recommended for cystitis, urethritis, pyelitis, etc.

helm-kick (helm'kik), *n.* A sudden jerk of the rudder in a seaway.

helm-port (helm'pōrt), *n.* Same as *rudder-port*.

helm-wind (helm'wind), *n.* Any wind that has the particular combination of moisture and wind-direction necessary to produce helm-cloud.

Helohyidæ (hē-lō-hī'i-dē), *n. pl.* [NL. *Helohyus*, type genus, + *-idæ*.] A family of extinct artiodactyl mammals which have distant affinities with the hogs whose remains occur in the Bridger Eocene. *Marsh*, 1877.

helotism, *n.* **3.** The maintenance, by animals of one species, of individuals of another species in return for their labor as servants.—**4.** In *bot.*, a peculiar form of symbiosis in which one organism bears to another the relation of slave to master; noting especially the relation of the algal to the fungal component of a lichen: opposed to *mutualistic* ★*symbiosis*. *Warming*.

heloxyle (hē-lok'sil), *n.* [Gr. ἕλος, bog, + ξύλον, wood.] Peat-fiber compressed and hardened into various forms for use in building walls, ceilings, floors, etc.: esteemed where dryness, warmth, and freedom from noise are desired. *Sci. Amer. Sup.*, May 21, 1904, p. 23735.

helth, helthy. Simplified spellings of *health*, *healthy*.

helv, *n.* and *v.* A simplified spelling of *helve*.

Helvelius, great circle of. See ★*circle*.

helvellaceous (hel-ve-lā'shius), *a.* Resembling or pertaining to the family *Helvellaceæ* or the order *Helvellales*.

Helvellales (hel-ve-lā'lēz), *n. pl.* [NL., < *Helvella* + *-ales*.] An order of discomycetous fungi having ascomata of various forms and including the families *Geoglossaceæ*, *Helvellaceæ*, and *Rhizinaceæ*. Also *Helvellineæ*.

helvellic (hel-vel'ik), *a.* [*Helvella* + *-ic*.] Pertaining to or derived from *Helvella*.—**Helvellic acid,** a highly poisonous organic acid found in certain mushrooms of the helvella family: particularly abundant in old plants.

Helvellineæ (hel-ve-lin'ē-ē), *n. pl.* Same as ★*Helvellales*.

Helvetian epoch. See ★*epoch*.—**Helvetian stage,** a term employed by the French geologists to designate the middle division of the Miocene Tertiary both in Switzerland and in the Paris basin. These deposits are profuse in remains of marine mollusks as well as in mammalian remains—mastodon, hippopotamus, monkeys, cats, sea-cow, dolphin, etc.

Helvidian (hel-vid'i-an), *a.* and *n.* [NL. *Helvidianus*, < *Helvidius* (see def.).] **I.** *a.* Pertaining to the doctrine of Helvidius, a layman of the fourth century, who denied the perpetual virginity of the mother of Christ.

II. *n.* One who holds the view of Helvidius.

Helygia (he-lij'i-ä), *n.* [NL. (Blume, 1826), irreg. (instead of "*Helveia*) < Gr. ἕλιξ (ἑλικ-), a spiral. The name alludes to the twining habit of the species.] A genus of dicotyledonous plants belonging to the family *Apocynaceæ*. See *Parsonsia*, 2.

helypsometer (hel-ip-som'e-tèr), *n.* [Irreg. < Gr. ἥλιος, the sun, + E. *hypsometer*.] In *photog.*, a photographic instrument for determining latitude at sea. It consists of a hollow brass hemisphere, about 10 inches in diameter, swung in gimbals, and has a closely fitting cover, pierced at its center with a small round hole. The apparatus is mounted on a foot or base. The silvered interior surface is sensitized with the vapor of iodine. When the cover of the instrument is adjusted and placed in sunlight, the path of the sun is traced on the sensitive surface. By applying a circular protractor after the exposure, the sun's altitude is found in degrees and minutes.

hemachromatosis, hæmachromatosis (hem″a-krō-ma-tō'sis), *n.* Bad forms for ★*hematochromatosis*.

hemacite, hæmacite (hem′a̤-sīt), *n.* [Altered, by blunder or intention, from **hematite* (which is used in another sense), ⟨ Gr. *αἷμα*, blood, + *-ite*[2].] A plastic material, a substitute for horn, made from blood with the addition of sundry vegetable and mineral materials.

hemacyte, hæmacyte (hem-a̤-sīt), *n.* Bad forms for ★*hemocyte*, ★*hematocyte*.

hemacytozoön, hæmacytozoön (hem″a̤-sī-tō-zō′on), *n.*; pl. *hemacytozoa, hæmacytozoa* (-ä). [Prop. *hemo-*; ⟨ Gr. *αἷμα*, blood, + *κυτος*, a hollow (a cell), + *ζῷον*, animal.] An animal microparasite of the blood-cells. *Buck*, Med. Handbook, V. 674.

hemad, hæmad (hem′ad), *n.* [Gr. *αἷμα*, blood, + *-ad*[2].] A hematocyte or blood-corpuscle.

hemadromometer, hæmadromometer (hem-a̤-drō-mom′e-tèr), *n.* [Prop. *hemo-*; ⟨ Gr. *αἷμα*, blood, + *δρόμος*, a running, + *μέτρον*, measure.] A device for measuring the rapidity of the blood-current.

hemagglutinative, hæmagglutinative (hem-a-glō′ti-na̤-tiv), *a.* Causing agglutination or clumping of red blood-corpuscles.

I have also tested abrin and ricin, which are strongly *hæmagglutinative*, without finding a corresponding protection. *Hideyo Noguchi*, in Jour. Exper. Med., VII. 201.

hemagglutinin, hæmagglutinin (hem-a-glō′ti-nin), *n.* Same as ★*hemoagglutinin*.

hemal. I. *a.*—**Hemal axis.** Same as *aorta*.—**Hemal canal.** See ★*canal*[1].—**Hemal process,** the arch below the centrum of a vertebra in fishes. *Starks*, Synonymy of the Fish Skeleton, p. 524.—**Hemal ridge.** See ★*ridge*.

II. *n.* Same as *hemal spine*.

Caudal with long neurals and *hæmals*.
Encyc. Brit., XXIX. 397.

hemalum, hæmalum (hem′a̤-lum), *n.* [*hemal, hæmal*, + *-um*.] Same as *ammonia* ★*hematate*. *Lancet*, July 4, 1903, p. 13.

hemamœba, *n.* See ★*Hæmamœba*, 2.

hemangioma, hæmangioma (hem-an-ji-ō′-mä), *n.*; pl. *hemangiomata, hæmangiomata* (-ma-tä). [NL. *hæmangioma*, ⟨ Gr. *αἷμα*, blood, + NL. *angioma*.] A tumor composed of blood-vessels; an angioma.

hemapophysis, *n.* 2. A lateral process in fishes to which the rib is usually attached. The term *hemapophysis* is used by Vogt and Yung for the bone so named by Owen and for the bone called *parapophysis* by Owen. *Starks*, Synonymy of the Fish Skeleton, p. 525.

hemarthrosis, hæmarthrosis (hem-är-thrō′-sis), *n.* [Gr. *αἷμα*, blood, + *ἄρθρον*, joint, + *-osis*.] Effusion of blood into a joint.

hemase, hæmase (hem′ās), *n.* [Gr. *αἷμα*, blood, + *-ase*.] A catalase found in the blood.

hematachometry, hæmatachometry (hem″a̤-ta-kom′e-tri), *n.* [Prop. *hemo-*; ⟨ Gr. *αἷμα*, blood, + *ταχύς*, swift, + *μέτρον*, measure.] Measurement of the rapidity of the circulation of the blood.

hemataërometer, hæmataërometer (hem″a̤-ta̤-e-rom′e-tèr), *n.* [Gr. *αἷμα(τ-)*, blood, + *ἀήρ*, air, + *μέτρον*, measure.] A device for estimating the pressure of gases in the blood. *Buck*, Med. Handbook, VI. 950.

hematate, hæmatate (hem′a̤-tāt), *n.* [Gr. *αἷμα(τ-)*, blood, + *-ate*[1].] A compound of hematein.—**Ammonia hematate,** an unstable violet-black compound, $C_{16}H_{12}O_{62}NH_3$, of ammonia and hematein. It is used as a stain for microscopical preparations.

hematherapy, hæmatherapy (hem-a̤-ther′a̤-pi), *n.* Bad forms for ★*hematotherapy*.

hematicum, hæmaticum (hē-mat′i-kum), *n.* [NL. *hæmaticum*, ⟨ Gr. *αἱματικός*, of blood: see *hematic*.] A red-brown, clear, aqueous-alcoholic solution of neutral iron compounds. It is used in medicine.

hematid, hæmatid (hem′a-tid), *n.* [Gr. *αἷμα(τ-)*, blood, + *-id*[2].] A red blood-corpuscle.

hematimeter, hæmatimeter (hem-a̤-tim′e-tèr), *n.* [Properly **hematometer*, ⟨ Gr. *αἷμα (αἱματ-)*, blood, + *μέτρον*, measure.] A form of hemochromometer, hemoglobinometer, or hematinometer.

hematimetry, hæmatimetry (hem-a̤-tim′e-tri), *n.* [Properly **hematometry*: see ★*hematimeter*.] The process of counting the number of corpuscles in a given quantity of blood.

hematinic, *n.* II. *a.* Relating to hematin.—**Hematinic acids,** two acids, $C_8H_9O_4N$ and $C_8H_8O_5$, discovered by Küster, formed upon oxidation of hematin.

hematinon (hē-mat′i-non), *n.* [Also erron. *hæmatinone* (Watts); ⟨ L. *hæmatinon* (sc. *vitrum*, glass), ⟨ Gr. *αἱμάτινον*, neut. of *αἱμάτινος*, bloody: see *hæmatinum* and *hematin*.] Same as *hæmatinum*; also, a similar red glass made by modern processes. *H. Watts*, Dict. of Chem., III. 3.

hematite, *n.* 2. An intaglio cut in hematite.

There is in the British Museum a certain lenticular *hematite*.
A. B. Cook, in Jour. Hellenic Studies, XIV. 133.

Brown hematite. Under this name, or that of *brown iron ore*, are included both the mineralogical species limonite and goethite. *Thorpe*, Dict. Applied Chem., I. 387.

hematobium, hæmatobium (hem-a̤-tō′bi-um), *n.*; pl. *hematobia, hæmatobia* (-ä). [NL. *hæmatobium*, ⟨ Gr. *αἷμα(τ-)*, blood, + *βιος*, life.] A blood-parasite; one of the *Hæmatozoa*.

hematoblastic, hæmatoblastic (hem″a̤-tō-blas′tik), *a.* [*hematoblast* + *-ic*.] Pertaining to or of the nature of a hematoblast; having reference to the formation of blood-corpuscles.

hematocathartic, hæmatocathartic (hem-a̤-tō-ka-thär′tik), *a.* [Gr. *αἷμα(τ-)*, blood, + *καθαρτικός*, cathartic.] Tending to purify the blood.

hematocele, *n.*—**Pelvic hematocele,** effusion of blood into the cellular tissue beneath the peritoneal covering of the uterus and adnexa, or into the cavity of the peritoneum between the uterus and the rectum. **Pudendal hematocele.** See *pudendal*.—**Scrotal hematocele,** a tumor caused by effusion of blood into the tunica vaginalis testis or into the tissues of the scrotum.

hematochezia, hæmatochezia (hem″a̤-tō-kē′-zi-ä), *n.* [NL. *hæmatochezia*, ⟨ Gr. *αἷμα(τ-)*, blood, + *χέζειν*, evacuate the bowels.] Passage of blood from the bowels.

hematochlorin, hæmatochlorin (hem″a̤-tō-klō′-rin), *n.* [Gr. *αἷμα(τ-)*, blood, + *χλωρός*, green, + *-in*[2].] A green pigment which has been obtained from the marginal zone of the placenta.

hematochromatosis, hæmatochromatosis (hem″a̤-tō-krō-ma̤-tō′sis), *n.* [Gr. *αἷμα(τ-)*, blood, + *χρῶμα*, color, + *-osis*.] The general staining of the tissues with blood-pigment.

hematochrome, hæmatochrome (hem′a̤-tō-krōm), *n.* [Gr. *αἷμα(τ-)*, blood, + *χρῶμα*, color.] **1.** The red coloring-matter of the eye-spot or stigma of the *Flagellata* and other *Protozoa*.—**2.** The red coloring-matter of *Sphærella* and a few other algæ. It is contained in an oily solution instead of a chromatophore.

hematocrit, hæmatocrit (he-mat′ō-krit), *n.* [Gr. *αἷμα(τ-)*, blood, + *κριτής*, judge, ⟨ *κρίνειν*, separate, decide.] A centrifuge with accurately graduated tubes, used for determining the volume of the corpuscular elements in a given quantity of blood. Also *hematokrit, hæmatokrit*.

hematocyanin, hæmatocyanin (hem″a̤-tō-sī′-a̤-nin), *n.* A more correct form of *hemocyanin*.

hematocyst, hæmatocyst (hem′a̤-tō-sist), *n.* [Gr. *αἷμα(τ-)*, blood, + *κύστις*, bladder (cyst).] **1.** A cyst with bloody contents.—**2.** Hemorrhage into the bladder.

hematocyte, hæmatocyte (hem′a̤-tō-sīt), *n.* [Gr. *αἷμα(τ-)*, blood, + *κυτος*, a hollow (a cell).] A blood-corpuscle.

hematocytometer, hæmatocytometer (hem-a̤-tō-sī-tom′e-tèr), *n.* [Gr. *αἷμα(τ-)*, blood, + *κύτος*, a hollow (a cell), + *μέτρον*, measure.] A device for counting the blood-cells.

hematodynamics, hæmatodynamics (hem″a̤-tō-dī-nam′iks), *n.* [Gr. *αἷμα(τ-)*, blood, + E. *dynamics*.] A more correct form of *hemadynamics* (which see).

hematodynamometer, hæmatodynamometer (hem′a̤-tō-dī-na̤-mom′e-tèr), *n.* [Gr. *αἷμα(τ-)*, blood, + E. *dynamometer*.] A more correct form of *hemadynamometer* (which see).

hematodyscrasia, hæmatodyscrasia (hem′a̤-tō-dis-krā′si-ä), *n.* [NL. *hæmatodyscrasia*, ⟨ Gr. *αἷμα(τ-)*, blood, + *δυσκρασία*, bad temperament: see *dyscrasia*.] A disease of the blood.

hematogen, hæmatogen (hem′a̤-tō-jen), *n.* [Gr. *αἷμα(τ-)*, blood, + *-γενής*, -producing, + *-in*[2].] An iron-containing nuclein which may be obtained from the yolk of hens' eggs. It is supposed to be concerned in the production of hemoglobin.

hematogenous, *a.* **2.** Relating to the formation of blood; derived from blood.—**Hematogenous jaundice.** See ★*jaundice*.

hematoglobinuria, hæmatoglobinuria (hem″a̤-tō-glō-bi-nū′ri-ä), *n.* [Gr. *αἷμα(τ-)*, blood, + E. *globin* + Gr. *οὖρον*, urine.] A more correct form of *hemoglobinuria*.

Hematoid cancer. Same as *fungus hematodes*.

hematokrit, hæmatokrit, *n.* See ★*hematocrit*.

hematolin, hæmatolin (hem-a̤-tō′lin), *n.* A dark-blue metallically lustrous compound, $C_{68}H_{78}O_7N_8$, obtained from hematin. See *hematin*, 1.

hematologist, hæmatologist (hem-a̤-tol′ō-jist), *n.* [*hematolog-y* + *-ist*.] One who makes a special study of the blood and of the changes which occur in it in health and in disease. *Lancet*, June 25, 1904, p. 1790.

hematolysis, hæmatolysis (hem-a̤-tol′i-sis), *n.* [Gr. *αἷμα(τ-)*, blood, + *λύσις*, dissolution.] The breaking down or dissolution of the red blood-corpuscles with decreased coagulability of the blood; hemolysis.

hematolytic, hæmatolytic (hem″a̤-tō-lit′ik), *a.* Of or pertaining to hematolysis; hemolytic.

hematomania, hæmatomania (hem a̤-tō-mā′-ni-ä), *n.* [Gr. *αἷμα(τ-)*, blood, + *μανία*, madness.] A craze for shedding blood.

The mania for murder which seized the Parisian populace in 1793 was a true pathological outburst. No sense of patriotism thrilled the crowds who ran by the tumbrils and surrounded the guillotines. It was *hæmatomania*, the blood-madness, that was upon them.
Brinton, Basis of Social Relations, p. 11[illegible].

hematomphalocele, hæmatomphalocele (hem-a̤-tom′fa̤-lo-sel), *n.* [Gr. *αἷμα*, blood, + *ὀμφαλός*, navel, + *κήλη*, tumor.] A blood-filled sac projecting at the umbilical opening.

hematomyelia, hæmatomyelia (hem a̤-tō-mī-ē′li-ä), *n.* [Gr. *αἷμα(τ-)*, blood, + *μυελός*, marrow.] Effusion of blood into the substance of the spinal cord.

hematomyelopore, hæmatomyelopore (hem-a̤-tō-mī′e-lō-pōr), *n.* [Gr. *αἷμα*, blood, + *μυελός*, marrow, + *πόρος*, passage.] A cavity in the substance of the spinal cord remaining after the absorption of a blood-clot.

hematonephrosis, hæmatonephrosis (hem″a̤-tō-nē-frō′sis), *n.* [Gr. *αἷμα(τ-)*, blood, + *νεφρός*, kidney, + *-osis*.] Hemorrhage into the pelvis of the kidney.

hematonic, hæmatonic (hem-a̤-ton′ik), *a.* and *n.* [Prop. *hemo-*; ⟨ Gr. *αἷμα*, blood, + *τόνος*, tone, + *-ic*.] I. *a.* Tending to improve the quality of the blood.

II. *n.* A blood-tonic.

Iron and arsenic are invaluable *hæmatonics*.
Med. Rec., July 11, 1903, p. 56.

hematopathology, hæmatopathology (hem″a̤-tō-pa-thol′ō-ji), *n.* [Gr. *αἷμα(τ-)*, blood, + E. *pathology*.] The science of the diseases affecting the constitution of the blood.

hematophagous, hæmatophagous (hem-a̤-tof′a-gus), *a.* [Gr. *αἷμα(τ-)*, blood, + *φαγεῖν*, eat.] **1.** Feeding on blood-corpuscles: said of the plasmodium of malaria and kindred diseases.—**2.** Feeding upon blood, as do some insects and the bats of the genus *Desmodus*.

hematophilic, hæmatophilic (hem″a̤-tō-fil′-ik), *a.* [Gr. *αἷμα(τ-)*, blood, + *φίλος*, loving, + *-ic*.] Same as *hemophilic*.

hematophyte, hæmatophyte (hem′a̤-tō-fīt), *n.* [Gr. *αἷμα(τ-)*, blood, + *φυτόν*, plant.] A bacterial parasite in the blood.

hematoplania, hæmatoplania (hem″a̤-tō-plā′ni-ä), *n.* [Gr. *αἷμα(τ-)*, blood, + *πλάνη*, wandering.] Discharge of blood from some unusual locality, as in vicarious menstruation.

hematoplast, hæmatoplast (hem′a̤-tō-plast), *n.* [Gr. *αἷμα(τ-)*, blood, + *πλαστός*, formed.] Same as *hematoblast*.

hematoplastic, hæmatoplastic (hem″a̤-tō-plas′tik), *a.* [*hematoplast* + *-ic*.] Same as ★*hematoblastic*.

hematoporphyrin, hæmatoporphyrin (hem″a̤-tō-pôr′fi-rin), *n.* [Gr. *αἷμα(τ-)*, blood, + *πορφύρα*, purple dye, + *-in*[2].] A purplish pigment obtained by treating hematin with concentrated sulphuric acid saturated with hydrobromic acid, the iron of the hematin being split off as the result. Hematoporphyrin is thus hematin minus iron. The substance is apparently related closely to a corresponding pigment which is derived from the chlorophyl of plants and which is termed phylloporphyrin. Both are possibly different oxidation-products of one and the same mother-substance—a chemical evidence of the close genetic relationship between animal and plant life.

hematoporphyrinuria, hæmatoporphyrinuria (hem″a̤-tō-pôr′fi-ri-nū′ri-ä), *n.* [*hematoporphyrin* + Gr. *οὖρον*, urine.] The presence of hematoporphyrin in the urine when voided. *Lancet*, April 18, 1903, p. 1097.

hematoporphyroidin, hæmatoporphyroidin (hem″a̤-tō-pôr-fi-rō′i-din), *n.* A decomposition-product of hematoporphyrin, described by Nobel.

hematoscope, hæmatoscope (hem′a̤-tō-skōp), *n.* [Gr. *αἷμα(τ-)*, blood, + *σκοπεῖν*, view.] A form of spectroscope used in examining the spectrum of the blood.

hematoscopy, hæmatoscopy (hem-a̤-tos′kō-pi), *n.* [Gr. *αἷμα(τ-)*, blood, + *-σκοπία*, ⟨ *σκοπεῖν*, view.] Examination of the blood by means of the hematospectroscope. Also *hemoscopy*.

hematosepsis, hæmatosepsis (hem″a-tō-sep′-sis), *n.* [Gr. *αἷμα(τ-)*, blood, + *σῆψις*, putrefaction.] Same as *septicemia*.

hematospectroscope, hæmatospectroscope (hem″a-tō-spek′trō-skōp), *n.* [Gr. *αἷμα(τ-)*, blood, + E. *spectroscope*.] A spectroscope used to determine the presence and amount of hemoglobin in the blood.

hematotherapy, hæmatotherapy (hem″a-tō-ther′a-pi), *n.* [Gr. *αἷμα(τ-)*, blood, + *θεραπεία*, medical treatment.] Treatment of disease by blood or some preparation from it.

hematotoxic, hæmatotoxic (hem″a-tō-tok′-sik), *a.* [Gr. *αἷμα(τ-)*, blood, + *τοξικόν*, poison.] 1. Relating to toxemia; causing blood-poisoning.—2. Same as ★*hematolytic*.

hematotympanum, hæmatotympanum (hem″a-tō-tim′pa-num), *n.* [Gr. *αἷμα(τ-)*, blood, + *τύμπανον*, drum: see *tympanum*.] An effusion of blood into the drum of the ear. *Phil. Med. Jour.*, Jan. 31, 1903, p. 200.

hematoxic, hæmatoxic (hem-a-tok′sik), *a.* Same as ★*hematotoxic*.

hematozoön, hæmatozoön (hem″a-tō-zō′on), *n.*; pl. *hematozoa, hæmatozoa* (-ä). [Gr. *αἷμα(τ-)*, blood, + *ζῷον*, animal.] A blood-parasite, as the organism of malaria; a hematozoan.

hematuresis, hæmaturesis (hem″a-tū-rē′sis), *n.* [Gr. *αἷμα(τ-)*, blood, + *οὔρησις*, urination.] Same as *hematuria*.

hemautogram, hæmautogram (hem-â′tō-gram), *n.* [Gr. *αἷμα*, blood, + *αὐτός*, self, + *γράμμα*, writing.] Same as ★*hemautograph*.

hemautograph, hæmautograph (hem-â′tō-grâf), *n.* [Gr. *αἷμα*, blood, + *αὐτός*, self, + *γράφειν*, write.] A tracing made by blood spurting from a punctured artery, used to register the blood-pressure.

hemautographic, hæmautographic (hem′â-tō-graf′ik), *a.* Of or pertaining to hemautography or the hemautograph; traced by the hemautograph: as, a *hemautographic* pulse curve.

hemautography, hæmautography (hem-â-tog′ra-fi), *n.* [As *hemautograph* + *-y*³.] A method of recording variations in blood-pressure, by which an incision is made into an artery and the escaping jet of blood is directed against a moving strip of paper.

hemera (hem′e-rä), *n.*; pl. *hemeræ* (-rē). [Gr. *ἡμέρα*, a day.] In *geol.*, a subdivision of a zone corresponding to the vertical distribution of characteristic species. *Dana*, Manual of Geol., p. 407.

hemeralope (hem′e-ra-lōp), *n.* [A back-formation from *hemeralopia*.] One who is suffering from hemeralopia. *Buck*, Med. Handbook, IV. 627.

hemeralopic, *a.* **II.** *n.* A hemeralope.

After the capture of Sebastopol the number of *hemeralopics* was so great in the French army that certain regiments could not furnish the necessary number of men to mount guard. *Buck*, Med. Handbook, II. 620.

hemeranthous (hem-e-ran′thus), *a.* [Gr. *ἡμέρα*, day, + *ἄνθειν*, bloom, + *-ous*. [In *bot.*: (*a*) Opening only in sunlight: said of flowers. (*b*) Bearing hemeranthous flowers: said of plants. *Pound and Clements*.

hemeranthy (hem-e-ran′thi), *n.* [Gr. *ἡμέρα*, day, + *ἄνθειν*, bloom, + *-y*³.] In *bot.*, the character of being hemeranthous.

hemeristiid (hem-e-ris′ti-id), *n.* and *a.* **I.** *n.* One of the *Hemeristiidæ*.

II. *a.* Having the characters of, or pertaining to, the *Hemeristiidæ*.

hemerobaptism (hem″e-rō-bap′tizm), *n.* [NL. *hemerobaptista*, < Gr. *ἡμέρα*, day, + *βαπτιστής*, baptist.] Daily baptism practised by certain Jewish and Christian sects. The Essenes (which see) practised daily baptism. The pious among the modern Hasidim still practise daily immersion before morning prayers, so as to pronounce the name of Jehovah in a state of purity. Some of the earlier Christians, including the Ebionites, adopted the same practice.

hemerobiid (hem″e-rō-bī′id), *n.* and *a.* **I.** *n.* A member of the neuropterous family *Hemerobiidæ*.

II. *a.* Of or belonging to the family *Hemerobiidæ*.

hemerology (hem-e-rol′ō-ji), *n.* [Gr. as if **ἡμερολογία* (*ἡμερολόγιον*, a calendar), < *ἡμερολογεῖν*, count by days, < *ἡμέρα*, day, + *λόγος*, a count.] The knowledge of calendars; the art of making calendars; a treatise on calendars.

No better idea can be formed of the number and variety of the Babylonian feasts than by reading a *hemerology* of the intercalary month of Elul, where we find that every day is dedicated to one or other of the gods, and certain rites and ceremonies prescribed for each. *A. H. Sayce*, Anc. Babylonians, p. 69.

hemerozoic (hem-e-rō-zō′ik), *a.* [Also erroneously *hæmerozoic*; < Gr. *ἥμερος*, tame, + *ζῷον*, animal, + *-ic*.] In *geol.*, noting a division of the Human period characterized by evidence of domesticated animals.

hemerythrin, hæmerythrin (hem-e-rith′rin), *n.* [Gr. *αἷμα*, blood, + *ἐρυθρός*, red, + *-in*².] A red coloring-matter found in the corpuscles of the fluid in the body-cavity of gephyreans, probably having a respiratory function like the hemoglobin of other animals. Also *hemærythrin*.

hemiachromatopsia (hem″i-a-krō-ma-top′-si-ä), *n.* [Gr. *ἡμι-*, half, + *χρῶμα(τ-)*, color, + *ὄψις*, view.] Partial or complete color-blindness involving one half of the field of vision. *Encyc. Brit.*, XXXI. 569.

hemialbumin (hem″i-al-bū′min), *n.* [*hemi-* + *albumin*.] A hypothetical albuminous substance containing only the hemicomplex of Kühne, namely, that complex which is readily digested by trypsin and is ultimately converted into leucin and tyrosin and related acids.

hemialgia (hem-i-al′ji-ä), *n.* [NL., < Gr. *ἡμι-*, half, + *ἄλγος*, pain.] Neuralgia involving only one side of the head or body.

hemiamaurosis (hem″i-am-â-rō′sis), *n.* [NL., < Gr. *ἡμι-*, half, + *ἀμαύρωσις*, dimness (see *amaurosis*).] Hemianopsia.

hemiamblyopia (hem″i-am-bli-ō′pi-a), *n.* [NL., < Gr. *ἡμι-*, half, + *ἀμβλύς*, dim, + *ὤψ* (*ὠπ-*), eye. Defective sight in one half of the visual field; incomplete hemianopsia.

Thus if the left occipital region be injured in a man, a hemianopia of the left sides of both retinæ follows, and the patient sees nothing in the right half of his visual field. If the same operation be performed in a dog, it causes not a complete hemianopia but a *hemiamblyopia*. The dog is not blind for the right half of its visual field, but has only a reduced power of vision. *J. Loeb*, Comp. Physiol. of the Brain, p. 271.

hemianatropous (hem-i-a-nat′rō-pus), *a.* Half-anatropous. See *amphitropous*. *Gray*.

Hemiancistrus (hem-i-an-sis′trus), *n.* [NL., < Gr. *ἡμι-*, half, + *ἄγκιστρον*, a hook.] A genus of South American fresh-water fishes of the family *Loricariidæ*.

hemiangiocarpic (hem″i-an″ji-ō-kär′pik), *a.* [Gr. *ἡμι-*, half, + *ἀγγεῖον*, a vessel, + *καρπός*, fruit.] Having the hymenium covered with a membrane for a part of the time: said of the conidiophore of a fungus.

hemianopia (hem″i-a-nō′pi-ä), *n.* [NL., < Gr. *ἡμι-*, half, + *ἀν-* priv. + *ὤψ* (*ὠπ-*), eye.] Same as *hemianopsia*. *J. Loeb*, Comp Physiol. of the Brain, p. 271.

hemianopic (hem″i-a-nō′pik), *a.* Same as *hemianoptic*.

Hemianthias (hem-i-an′thi-as), *n.* [NL., < Gr. *ἡμι-*, half, + *ἄνθος*, flower.] A genus of tropical fishes, of the family *Serranidæ*, related to the sea-bass.

Hemiascales (hem″i-as-kā′lēz), *n. pl.* [NL., < Gr. *ἡμι-*, half, + *ἀσκός*, a bag (see *ascus*, 1), + *-ales*.] An order containing what are regarded as the lowest forms of ascomycetous fungi. They produce a many-celled mycelium and bear sporangia (asci) which contain a large and indefinite number of spores. Also called *Hemiascineæ* and *Hemiasci*.

Hemiasci (hem-i-as′sī), *n. pl.* [NL., < Gr. *ἡμι-*, half, + *ἀσκός*, a bag (see *ascus*, 1).] Same as ★*Hemiascales*.

Hemiascineæ (hem″i-a-sin′ē-ē), *n. pl.* [NL.] Same as ★*Hemiascales*.

hemiaspidid (hem-i-as′pi-did), *n.* One of the *Hemiaspididæ*.

Hemiaspididæ (hem″i-as-pid′i-dē), *n. pl.* [NL., < *Hemiaspis* (*-aspid-*) + *-idæ*.] A family of fossil merostomatous crustaceans of primitive character, typified by *Hemiaspis*, which has a short cephalothorax, nine thoracic segments, and a long tail-spine. All members of the family are from the Silurian rocks.

Hemiaspis limuloides, Woodw. Silurian, Leintwardine, England. (After Woodward.) (From Zittel's "Paleontology.")

hemiaspidoid (hem-i-as′pi-doid), *a.* [*Hemiaspis* (*-aspid-*) + *-oid*.] Similar or related to *Hemiaspis*.

Hemiaspis (hem-i-as′pis), *n.* [NL., < Gr. *ἡμι-*, half, + *ἀσπίς*, a shield.] The typical genus of the family *Hemiaspididæ*.

hemiataxia (hem″i-a-tak′si-ä), *n.* [NL., < Gr. *ἡμι-*, half, + *ἀταξία*, disorder.] Incoördination affecting one side of the body.

hemiataxy (hem″i-a-tak′si), *n.* Same as ★*hemiataxia*.

Hemibasidiales (hem″i-ba-sid-i-ā′lēz), *n. pl.* [NL., < *hemi-* + *basidium* (which see) + *-ales*.] Same as ★*Ustilaginales*. Also *Hemibasidii* and *Hemibasidiaceæ*.

hemibenthic (hem-i-ben′thik), *a.* [*hemi-* + *benthic*.] Incompletely benthic; floating or swimming in the water at one time or at one stage of development and living upon or in the bottom at another time or stage. Most hydroids, which are sessile and give rise to swimming medusæ, and most echinoderms, which swim in their larval condition and creep over the bottom when adult, are hemibenthic. Also *hemibenthonic*. See ★*benthic*, *pelagic*, ★*planktonic*.

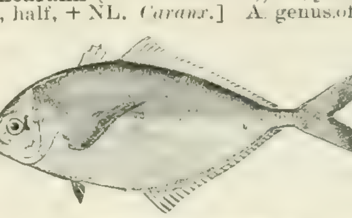
In the neritic epiplankton of polar waters the larvæ of *hemibenthic* forms are almost absent; indeed, the development of cold-water benthos, whether shallow or abyssal, appears to be in most cases direct, that is, without a larval metamorphosis. *Encyc. Brit.*, XXXIII. 936.

hemibenthonic (hem-i-ben-thon′ik), *a.* Same as ★*hemibenthic*.

hemibody (hem′i-bod-i), *n.* [*hemi-* + *body*.] An albumin which is made up of hemigroups, in the sense of Kühne—for example, casein. See ★*hemigroup*.

Hemibrycon (hem-i-brī′kon), *n.* [NL., < Gr. *ἡμι-*, half, + NL. *Brycon*.] A genus of South American fresh-water fishes of the family *Characinidæ*.

Hemicaranx (hem-i-kar′anks), *n.* [NL., < Gr. *ἡμι-*, half, + NL. *Caranx*.] A genus of pom-



Hemicaranx amblyrhynchus.
(From Bulletin 47, U. S. Nat. Museum.)

panos, or fishes of the family *Carangidæ*. *H. amblyrhynchus* is the best-known species.

hemicellulose (hem-i-sel′ū-lōs), *n.* [*hemi-* + *cellulose*.] A form of cellulose which is easily hydrolyzed by dilute acids and readily attacked by certain enzyms.

hemicephalous (hem-i-sef′a-lus), *a.* [Gr. *ἡμι-*, half, + *κεφαλή*, head, + *-ous*.] Lacking one side of the head: as, a *hemicephalous* fetus. *Buck*, Med. Handbook, I. 129.

Hemichorda (hem-i-kôr′dä), *n. pl.* [NL., < Gr. *ἡμι-*, half, + *χορδή*, string, cord.] A group of worm-like marine animals considered to be related to the *Chordata*, owing to their possession of gill-slits, a partly dorsal nervous system, and a rudimentary notochord. It includes the genera *Balanoglossus*, *Cephalodiscus*, and *Rhabdopleura*. The name was introduced in 1884, by Bateson, as a phyletic name for the *Enteropneusta*, then regarded as a class and containing only the genus *Balanoglossus*.

Hemicidaridæ (hem″i-si-dar′i-dē), *n. pl.* [NL., < *Hemicidaris* (*-arid-*) + *-idæ*.] A family of fossil sea-urchins, or *Echinoidea*, having very large spine-tubercles decreasing in size toward the poles, ambulacra increasing in width actinally, and few interambulacral plates. Its species occur in the Permian, Jurassic, and Cretaceous rocks.

Hemicidaris (hem-i-sid′a-ris), *n.* [NL., < Gr. *ἡμι-*, half, + NL. *Cidaris*, a genus of sea-urchins.] The typical genus of the *Hemicidaridæ*.

hemiclastic (hem-i-klas′tik), *a.* [Gr. *ἡμι-*, half, + *κλαστός*, broken.] Half clastic: in *petrog.*, applied by Senft to volcanic tuffs and conglomerates.

hemiclistogamous (hem″i-klis-tog′a-mus), *a.* [*hemi-* + *clistogamous*.] Opening only partially, hence not easily cross-fertilized: said of flowers. Hemiclistogamous flowers are either chasmantherous or clistantherous. *Pound and Clements*, Plant Life of Nebraska.

hemicollin (hem-i-kol′in), *n.* [Gr. *ἡμι-*, half, + *κόλλα*, glue, + *-in*².] A vitreous compound, $C_{47}H_{70}O_{19}N_{14}$, formed, together with semiglutin, by boiling glue for thirty hours with water.

hemicomplex (hem-i-kom′pleks), *n.* Same as ★*hemigroup* (in the sense of Kühne).

hemicrescentic (hem″i-kre-sen′tik), *a.* Having the shape of half a crescent: applied to the form of the bill in some birds.

hemicrystalline (hem-i-kris'ta-lin), *a.* [Gr. ἡμι-, half, + κρυστάλλινος, crystalline.] Same as ★*hypocrystalline.*

hemicyclone (hem-i-sī'klōn), *n.* [*hemi-* + *cyclone.*] In *meteor.*, the upper or lower half of the ideal theoretical cyclonic system, the dividing plane being supposed to be horizontal.

hemidiorite (hem-i-dī'ō-rīt), *n.* [Gr. ἡμι-, half, + E. *diorite.*] A name given by Dana (1883) to mica-diorite in order to limit the name *diorite* to hornblendic varieties of the rock.

hemiepiphyte (hem-i-ep'i-fīt), *n.* See ★*epiphyte*, 1.

hemifacial (hem-i-fā'shal), *a.* [*hemi-* + L. *facies*, face, + -*al*[1].] Of or relating to one side of the face.

hemiglossitis (hem″i-glo-sī'tis), *n.* [NL., < Gr. ἡμι-, half, + γλῶσσα, tongue, + -*itis.*] Inflammation of one lateral half of the tongue.

hemigroup (hem'i-grōp), *n.* [*hemi-* + *group.*] Literally, a half-group. The terms *hemigroup* and *antigroup*, in reference to the constitution of albumins, were originally introduced by Kühne. According to his doctrine, two large complexes exist in most albumins, which are separated during the process of digestion. Of these the hemicomplex is readily hydrolyzed by trypsin, while the anticomplex is quite resistant. In the former the monoamido acids prevail, in the latter the diamido acids. Protoalbumose may be regarded as representing the hemigroup, and heteroalbumose the antigroup. Collagen apparently contains no hemigroup, while casein is a pure hemibody. Kühne's original view is still upheld, but it is now recognized that the majority of albumins contain a third large complex, in which the carbohydrate group is represented.

hemihedral, *a.* **3.** In the relation of so-called hemihedral crystals to crystal symmetry, see ★*symmetry.*

hemiheterocercal (hem-i-het'e-rō-sêr″kal), *a.* [*hemi-* + *heterocercal.*] In fishes, having the upper lobe of the externally symmetrical caudal fin partly or completely covered with scales.

hemiheterocercy (hem-i-het'e-rō-sêr″si), *n.* [*hemi-* + *heterocercy.*] A condition denoted by the existence of a hemiheterocercal tail, as in fishes.

hemihydrate (hem-i-hī'drāt), *n.* [*hemi-* + *hydrate.*] In *chem.*, a compound containing water in the proportion of half a molecule for one molecule of another substance, as a salt. Thus calcium sulphate as thrown down in the crystalline state from the water in steam-boilers has the composition $CaSO_4.\frac{1}{2}H_2O$—more correctly represented as $(CaSO_4)_2.H_2O$—and is spoken of as a *hemihydrate.*

hemihyperæsthesia (hem″i-hī″pêr-es-thē'si-ä), *n.* [*hemi-* + *hyperæsthesia.*] Increased sensitiveness limited to one side of the body.

hemihypertrophy (hem″i-hī-pêr'trō-fi), *n.* [*hemi-* + *hypertrophy.*] Hypertrophy of one half: as, facial *hemihypertrophy.*

hemi-idealism (hem″i-ī-dē'a-lizm), *n.* The doctrine that secondary qualities are relative to cognition, while primary qualities are independent of it.

Hemilepidotinæ (hem″i-lep″i-dō-tī'nē), *n. pl.* [NL., < *Hemilepidotus* + -*inæ.*] A subfamily of sculpins, or *Cotidæ*, typified by the genus *Hemilepidotus.*

Hemilepidotus (hem-i-lep-i-dō'tus), *n.* [NL., < Gr. ἡμι-, half, + λεπιδωτός, scaled, scaly, < λεπίς, scale.] A genus of sculpins of the North Pacific, characterized by the presence of two

Hemilepidotus hemilepidotus.
(From Bulletin 47, U. S. Nat. Museum.)

rows of scales along the side separated by a naked area. The species are known in Bering Sea as *Irish lords.* *H. hemilepidotus* and *H. jordani* are both common. The former is distinguished by its spotted ventral fins.

hemilogous (he-mil'ō-gus), *a.* [*hemi-* + (*ana*)*logous.*] In *chem.*, a term which has been suggested for series of organic compounds the terms of which differ by *n*CH.

hemilytic (hem-i-lit'ik), *a.* [*hemi-* + (*dia*)*lytic.*] Noting a stage or condition in which evolutionary progress is retarded by inbreeding and close selection which eliminates the normal individual diversity of the natural species, as in carefully selected domesticated varieties. Compare ★*catalytic*, 2, ★*dialytic*, 4, and ★*prostholytic.* *O. F. Cook.*

hemimellitic (hem″i-me-lit'ik), *a.* [*hemi-* + *mellitic.*] Noting an acid, a colorless compound, $C_6H_3(\overset{1}{C}OOH)(\overset{2}{C}OOH)(\overset{3}{C}OOH)$, sparingly soluble in water, from which it is deposited in needles, melting at 185° C.

hemimerid (he-mim'e-rid), *n.* and *a.* **I.** *n.* A member of the family *Hemimeridæ.*

II. *a.* Of or belonging to the family *Hemimeridæ.*

Hemimeridæ (hem-i-mer'i-dē), *n. pl.* [NL., < *Hemimerus* + -*idæ.*] A remarkable family of blind wingless *Orthoptera* inhabiting Africa and comprising the single genus *Hemimerus.* The development is intra-uterine. *H. hansenii* lives on the body of a large rat. A distinct order, *Diploglossata*, was erected by Saussure for these insects, but has not been accepted.

hemimetabolous (hem″i-me-tab'ō-lus), *a.* [*hemi-* + *metabolous.*] Undergoing partial metamorphosis, as one of the *Hemimetabola.*

Hemimorphic classes of crystals. See ★*symmetry.*

hemimorphous (hem-i-môr'fus), *a.* [Gr. ἡμι-, half, + μορφή, form, + -*ous.*] Same as *hemimorphic.* *Nature*, Sept. 24, 1903, p. 520.

hemimorphy (hem'i-môr-fi), *n.* [*hemimorph-ic* + -*y*[3].] Same as *hemimorphism.*

hemin, hæmin (hem'in), *n.* [Gr. αἷμα, blood, + -*in*[2].] A crystalline substance which may be obtained from hematin on treating it with salt and glacial acetic acid. Its formula is $C_{34}H_{33}N_4O_4FeCl$. The crystals are quite characteristic in appearance, and their formation has for many years represented one of the most important tests for blood-coloring matter. See *Teichmann's* ★*crystals.*—**Hemin test.** See ★*test*[1].

hemioctahedral (hem-i-ok-ta-hē'dral), *a.* [*hemioctahedr(on)* + -*al*[1].] Tetrahedral; of or pertaining to a hemioctahedron.

hemioctahedron (hem-i-ok-ta-hē'dron), *n.* [*hemi-* + *octahedron.*] A tetrahedron; also, a hemipyramid.

hemiologamous (hem″i-ō-log'a-mus), *a.* [Gr. ἡμι-, half, + ὅλος, whole, + γάμος, marriage.] Having one fertile and one neuter flower; sesquialteral: said of the spikelets of some grasses, as species of *Panicum.* *Brande. N. E. D.*

hemiope (hem'i-ōp), *n.* [Gr. ἡμίοπος (sc. αὐλός, flute), with half the usual holes, namely, with only three holes, < ἡμι-, half, + ὀπή, hole.] An ancient flute with but few holes.

hemiparabola (hem″i-pa-rab'ō-lä), *n.* [*hemi-* + *parabola.*] That part of a parabola which lies on one side of the axis.

hemiparæsthesia (hem-i-par-es-thē'si-ä), *n.* [*hemi-* + *paræsthesia.*] Perverted sensation on one side of the body, right or left.

hemiparalysis (hem″i-pa-ral'i-sis), *n.* [*hemi-* + *paralysis.*] Same as *hemiplegia.*

hemiparasite (hem-i-par'a-sīt), *n.* [*hemi-* + *parasite.*] A partially parasitic plant.

Like hemisaprophytes, *hemiparasites*, which obtain only a portion of their necessary carbon in an organic form, more or less resemble autotrophic plants as regards the amount of chlorophyll they contain and as regards the form of their leaves.
A. F. W. Schimper (trans.), Plant-Geog., p. 203.

hemiparasitic (hem″i-par-a-sit'ik), *a.* Pertaining to or having the character of a hemiparasite

The degree of connexion between the two and the dependence of the parasite upon the host vary between the completeness of that of holoparasitic Rhizanths, in which little more than the flower of the parasite is visible upon the outside of the stem of the host and the parasitism is absolute, and the limitation of that of the *hemiparasitic* Rhinantheæ, in which to all appearance there is an independent autotrophic geophyte. *Encyc. Brit.*, XXV. 439.

hemipelic (hem-i-pel'ik), *a.* [Gr. ἡμι-, half, + πηλός, clay, + -*ic.*] Of a medium fine clayey consistency. See ★*pelogenous.*

hemipenis (hem-i-pē'nis), *n.*; pl. *hemipenes* (-nēz). [NL., *hemi-* + *penis.*] One of the two intromittent organs of snakes.

Like the Sauria the Serpentes possess two intromittent organs or *hemipenes.*
Cope, Rept. U. S. Nat. Mus., 1898, p. 700.

hemipeptone (hem-i-pep'tōn), *n.* [*hemi-* + *peptone.*] A hypothetical peptone containing those groups of the albuminous molecule which can be readily liberated on tryptic digestion. According to Kühne's doctrine, gastric digestion leads to the formation of an amphopeptone in which the hemipeptone and antipeptone are still united. During tryptic digestion the hemi- and anti-group are at once separated, the former giving rise to leucin and tyrosin, etc.

hemiphonon (hem-i-fō'non), *n.*; pl. *hemiphona* (-nä). [NL., < Gr. ἡμίφωνον, a semivowel, as *r* and *s* (Aristotle), neut. of ἡμίφωνος, 'half pronounced,' < ἡμι-, half, + φωνή, sound.] In *phonol.*, a semivowel.

hemipic (he-mip'ik), *a.* [*hemi-* + (*o*)*p*(*ium*)(!) + -*ic.*] Same as ★*hemipinic.*

hemipinic (hem-i-pin'ik), *a.* [*hemi-* + (*o*)*p*(*ium*) + -*in* + -*ic.*] Noting an acid, a colorless compound, $(\overset{4}{C}H_3O)_2C_6H_2(\overset{1}{C}OOH)(\overset{2}{C}OOH)$, formed, together with opianic acid and meconin, by the oxidation of narcotin and narceine. It crystallizes with water of crystallization in quadratic plates, melts at 182° C., and readily forms an anhydrid.

hemiplane (hem'i-plān), *n.* [*hemi-* + *plane*[1].] That part of a plane on one side of a straight line of the plane.

hemiplankton (hem-i-plangk'ton), *n.* [Gr. ἡμι-, half, + NL. *plankton.*] In *phytogeog.*, that part of a plant plankton which occurs in shallow water and sinks to the bottom at certain periods, and is thus not wholly independent of the soil, as the typical plankton is. Some macrophytes (*Hydrocharis*, etc.) are included with the microphytes.

hemiplanktonic (hem-i-plangk-ton'ik), *a.* Of or pertaining to hemiplankton.

hemiplegia, *n.*—**Alternate hemiplegia,** paralysis of the face on one side and of the extremities on the other, or of an arm and a leg on opposite sides.—**Crossed hemiplegia.** Same as *alternate* ★*hemiplegia.*—**Hephestic hemiplegia.** Same as *hammer-*★*palsy.*—**Spinal hemiplegia,** hemiparaplegia due to lesion of the spinal cord.

hemiplegiac (hem-i-plē'ji-ak), *a.* and *n.* **I.** *a.* Same as *hemiplegic.*

II. *n.* One who is suffering from hemiplegia.

Hemipristis (hem-i-pris'tis), *n.* [NL., < Gr. ἡμι-, half, + πρίστις, a large fish.] A genus of selachian fishes or sharks of the family *Carchariidæ.* They have the principal teeth large and serrated, and the lower ones slender, incurved, and smooth on the edge. The genus is common in the Miocene and Oligocene Tertiary, and is represented by one living species.

hemiprotein (hem-i-prō'tē-in), *n.* [*hemi-* + *protein.*] Same as ★*hemialbumin.*

hemipsammic (hem-ip-sam'ik), *a.* [Gr. ἡμι-, half, + ψαμμός, sand, + -*ic.*] Of a medium fine sandy texture. See ★*psammogenous.*

hemipteroid (hē-mip'te-roid), *a.* and *n.* [*Hemiptera* + -*oid.*] **I.** *a.* Having the characters of the *Hemiptera* or *Hemipteroidea.*

II. *n.* One of the *Hemipteroidea.*

Hemipteroidea (hē-mip-te-roi'dē-ä), *n. pl.* [NL., < *Hemiptera* + -*oidea.*] In Scudder's classification of the Paleozoic insects, an order constructed on the same plan as the living *Hemiptera*, but distinguished in name because of their more primitive expression.

hemipterygoid (hem-ip-ter'i-goid), *n.* A small bone resting upon and fusing with the posteroventral part of the palatine, with which the pterygoid articulates.

Hemipuccinia (hem″i-puk-sin'i-ä), *n.* [NL., < *hemi-* + *Puccinia.*] A group of species of the genus *Puccinia* in which only uredospores and teleutospores are known. *Schröter.*

Hemiramphidæ (hem-i-ram'fi-dē), *n. pl.* [NL., < *Hemiramphus* + -*idæ.*] A family of soft-rayed fishes characterized by the great elongation of the lower jaw, the upper jaw being

Hemiramphus brasiliensis.
From Bulletin 47, U. S. Nat. Museum.)

very short. The species are known as *half-beaks* and are found in the tropical seas. The typical genus is *Hemiramphus.*

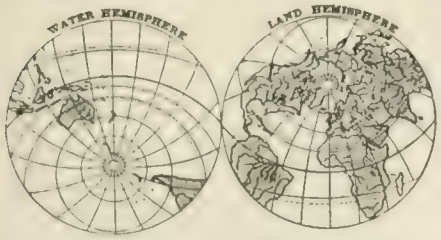
hemisaprophyte (hem-i-sap'rō-fīt), *n.* [*hemi-* + *saprophyte.*] A partially saprophytic plant. See the quotation under ★*hemiparasite* and compare ★*holoparasite.*

hemisomnambulism (hem″i-som-nam'bū-lizm), *n.* In *mental pathol.*, a partial somnambulism; a state in which the subject, while normally conscious and retaining his normal personality, shows certain somnambulistic symptoms (as writing automatically).

As to the persistency of the normal consciousness, while these automatic phenomena are being accomplished, it is the most curious and most discussed characteristic of *hemisomnambulism.*
P. Janet (trans.), Mental State of Hystericals, p. 428.

hemisphere, *n.*—**Biot's hemispheres,** an apparatus used to demonstrate that a charge of static electricity is distributed on the surface. It consists of a polished brass globe on an insulated stand, and of two hollow hemispheres of lacquered brass with insulating handles. If the globe is charged and is then incased by the hemispheres, the latter on being removed take the charge with them on their outer surfaces.—**Hemisphere**

of illumination, that half of a planet's or satellite's surface upon which the sun is shining.—**Hemisphere of vision,** the hemisphere which an observer sees.—**Land hemisphere,** in *phys. geog.*, that half of the earth's sur-



face which is chosen so as to include the greatest possible area of land. The pole of the land hemisphere lies in southeastern England or northwestern France.—**Vegetative hemisphere,** that half or portion of the egg which contains the food-yolk, as distinguished from the *animal hemisphere*, which consists of the more active protoplasm and nuclear elements.—**Water hemisphere,** that half of the earth's surface which contains the greatest area of water.

Hemispheric anomaly, the departure of a local temperature from the corresponding hemispheric normal for the given latitude: the anomaly of Dove (1846).

hemistater (hem-i-stā'tèr), *n.* [Gr. *ἡμιστάτηρον*, < *ἡμι-*, half, + *στατήρ*, stater.] An ancient Greek coin of the value of half a stater.

hemisternum (hem-i-stèr'num), *n.*; pl. *hemisterna* (-nä). One of the two bars of cartilage from which the sternum is developed.

hemisymmetric (hem″i-si-met'rik), *a.* [*hemi-* + *symmetric.*] 1. Symmetrical with regard to one axis only, as the parabola in contradistinction to the ellipse and hyperbola.—2. Pertaining to or exhibiting hemisymmetry. See ★*hemisymmetry*, 2. *Bateson*, Study of Variation, p. 35.—3. In *crystal.*, hemihedral; characterized by hemisymmetry, that is, by a grade of symmetry which requires only half the faces that belong to the corresponding form of the holosymmetric (holohedral) type. See ★*symmetry*.

hemisymmetrical, *a.* Same as *hemisymmetric*.

hemisymmetry, *n.* 2. In *biol.*, bilateral symmetry; the construction of the body of an organism in such a way that one half is a reversed copy of the other.

hemisystematic (hem″i-sis-te-mat'ik), *a.* Hemisymmetric.

hemitery (hem'i-ter-i), *n.* [Gr. *ἡμι-*, half, + *τέρας*, monster, + *-y*[3].] Congenital malformation which is not sufficient in degree to amount to monstrosity.

Hemitomes (he-mit'ō-mēz), *n.* [NL. (Gray, 1857), < Gr. *ἡμιτόμης*, a half-eunuch (in allusion to the atrophy of one of the anther cells); or a mistaken form for **Hemitomias*, < Gr. *ἡμιτομίας*, half a eunuch. Cf. *ἡμίτομος*, half cut through, < *ἡμι-*, half, + *-τομος*, < *ταμεῖν*, cut.] A genus of dicotyledonous plants belonging to the family *Monotropaceæ*. See *Newberrya*.

Hemitripterinæ (hem″i-trip-te-rī'nē), *n. pl.* [NL., < *Hemitripterus* + *-inæ.*] A subfamily of gadoid fishes characterized by the many-rayed spinous dorsal fin, which is developed into two fins, and by the rough surface of the body. The typical genus is *Hemitripterus*.

hemitropism (hē-mit'rō-pizm), *n.* [*hemitrop-ic* + *-ism.*] The crystallization characteristic of ordinary twin crystals, in which one half of the compound crystal has a position relatively to the other half as if it had been revolved through 180°. Also *hemitropy*.

Hemitrypa (hem-i-trī'pä), *n.* [NL., < Gr. *ἡμι-*, half, + *τρῦπα*, a hole.] A genus of fossil *Bryozoa*, of the family *Fenestellidæ*. It differs from *Fenestella* in having a reticulate superstructure corresponding in position with the apertures of the mesh on the lower side. This structure rests on pillars which rise at regular intervals from the carinæ of the branches. The genus occurs in Silurian and Devonian rocks.

hemivertebra (hem-i-vèr'tē-brä), *n.*; pl. *hemivertebræ* (-brē). [*hemi-* + *vertebra.*] One of the vertebræ, in fishes, in which ossification develops below the notochord a hippocrepian plate to which the hemal arches in the caudal region are attached. The vertebral centrum is represented by a pair of lateral plates which are usually fused into a second hippocrepian half-ring, the vertebræ thus consisting of two half-rings.

Hemizonia (hem-i-zō'ni-ä), *n.* [NL. (De Candolle, 1836), < Gr. *ἡμι-*, half, + *ζώνη*, girdle. Each ray achenium is half inclosed by an involucral bract.] A genus of plants of the family *Asteraceæ*. They are erect branching annuals, viscid-glandular and ill-scented, with narrow alternate leaves and yellow or white ray-flowers. There are about 12 species, natives of western North America. Like the species of the closely related genus *Madia*, they are commonly called *tar-weed*.

hemlock, *n.*—**Creeping hemlock.** Same as *ground-hemlock*. **Western hemlock bark-borer.** See ★*bark-borer*. **Hemlock bark extract.** See ★*extract*.

hemming-machine (hem'ing-ma-shēn″), *n.* In *sheet-metal work*, a machine for folding over the edges of narrow strips of sheet-metal used in making the handles for cans and other tinware.

hemoagglutinin, hæmoagglutinin (hem″ō-a-glō'ti-nin), *n.* [Gr. *αἷμα*, blood, + E. *agglutinin.*] An agglutinin which will cause the agglutination of red blood-corpuscles.

hemochromatosis, hæmochromatosis (hem-ō-krō-ma-tō'sis), *n.* [Gr. *αἷμα*, blood, + *χρῶμα(τ-)*, color, + *-osis.*] A condition, associated with extensive blood-destruction, in which a deposition of hematogenous pigment occurs in the liver and other organs. The pigment usually found is hemosiderin.

There was a profound *hæmochromatosis*, consisting mainly in the deposition of iron-free pigment granules in the intestinal mucosa, the liver, the blood, the lymph channels, and in the renal epithelium.
Jour. Exper. Med., March 17, 1902, p. 252.

hemochrome, hæmochrome (hem'ō-krōm), *n.* [Gr. *αἷμα*, blood, + *χρῶμα*, color.] The coloring-matter of the blood.

hemochromogen, hæmochromogen (hem-ō-krō'mō-jen), *n.* [Gr. *αἷμα*, blood, + *χρῶμα*, color, + *-γενής*, -producing.] The iron-containing pigment-radical of the coloring-matter of the blood, hemoglobin. It readily combines with oxygen to form hematin. The latter bears the same relation to oxyhemoglobin which hemochromogen bears to hemoglobin. In acid solutions hemochromogen loses its iron and is converted into hematoporphyrin. In alkaline solutions it presents a cherry-red color, and on spectroscopic examination gives rise to two bands of absorption. The substance is crystallizable.

hemochromometer, hæmochromometer (hem″ō-krō-mom'e-tèr), *n.* [Gr. *αἷμα*, blood, + *χρῶμα*, color, + *μέτρον*, measure.] An apparatus for determining the hemoglobin in fluids by a comparison with standard solutions; a hemoglobinometer.

hemocœle, *n.* 2. A system of blood-sinuses formed by the enlargement and union of blood-vessels.

[The] blood-vessels have swollen and united to form an extensive series of blood-sinuses, to which I have given the name "*hæmocœl*."
E. R. Lankester, Nat. Sci., April, 1897, p. 268.

hemocœlic, hæmocœlic (hem″-ō-sē'lik), *a.* [*hemocœle* + *-ic.*] Of or pertaining to a hemocœle.

With regard to the development of the vascular system, little can be said here, except that it appears to arise in all cases from the spaces of the mesoblastic reticulum. These acquire special epithelial walls, and form the main trunks and network of smaller vessels found in animals with a canalicular vascular system, or the large sinus-like spaces characteristic of animals with a *hæmocœlic* body-cavity.
Encyc. Brit., XXVIII. 146.

hemocœloma, hæmocœloma (hem″ō-sē-lō'mä), *n.* [NL.; also erroneously *hema-*, *hæmacœloma*, < Gr. *αἷμα*, blood, + *κοίλωμα*, a hollow (see *cœloma*).] In *embryol.*, the portion of the true body-cavity, or cœloma, which in the mammalian embryo is constricted off to form the cavity of the heart.

hemoconion, hæmoconion (hem-ō-kō'ni-on), *n.*; pl. *hemo-*, *hæmoconia* (-ä). [Also *hemokonion*; NL. *hæmoconion*, < Gr. *αἷμα*, blood, + *κόνις*, dust.] One of certain minute granules which occur free in the blood-plasma and are supposedly derived from leucocytes. Also called *dust-particles of Müller*.

hemoconiosis, hæmoconiosis (hem-ō-kō-ni-ō'sis), *n.* [*hemoconi(on)* + *-osis.*] A condition in which there is an unusual amount of blood-dust in freshly drawn blood.

hemocrystallin, hæmocrystallin (hem-ō-kris'ta-lin), *n.* Same as *hematocrystallin*.

hemocyte, hæmocyte (hem'ō-sīt), *n.* Same as ★*hematocyte*.

hemocytolysis, hæmocytolysis (hem″ō-sī-tol'i-sis), *n.* [*hemocyte* + Gr. *λύσις*, dissolution.] A breaking down or dissolution of the blood-corpuscles.

hemocytometer, hæmocytometer (hem″ō-sī-tom'e-tèr), *n.* Same as ★*hematocytometer*. *Nature*, Feb. 26, 1903, p. 388.

hemodynamics, hæmodynamics (hem″ō-dī-nam'iks), *n.* [Gr. *αἷμα*, blood, + E. *dynamics.*] A more correct form of *hemadynamics* (which see).

hemodynamometer, hæmodynamometer (hem-ō-dī-na-mom'e-tèr), *n.* [Gr. *αἷμα*, blood, + E. *dynamometer.*] A more correct form of *hemadynamometer* (which see).

hemoferrum, hæmoferrum (hem-ō-fer'um), *n.* [Gr. *αἷμα*, blood, + L. *ferrum*, iron.] A dry organic compound of iron made from ox-blood and consisting principally of oxyhemoglobin.

hemofuscin, hæmofuscin (hem-ō-fus'in), *n.* [Gr. *αἷμα*, blood + L. *fuscus*, fuscous, + *-in*[2].] A pigment, derived from hemoglobin, which is free from iron. Its formation is often associated with degenerative changes, as in atrophy of the heart and unstriped muscle-tissue.

hemogallol, hæmogallol (hem-ō-gal'ōl), *n.* [Gr. *αἷμα*, blood, + *gall(ic)*[2] + *-ol.*] A reduction-product of hemoglobin which contains iron. It is a reddish-brown powder used as a hematogenous tonic.

hemogenesis, hæmogenesis (hem-ō-jen'e-sis), *n.* [Gr. *αἷμα*, blood, + *γένεσις*, generation.] Same as *hematogenesis*.

hemoglobinated, hæmoglobinated (hem-ō-glō'bi-nā-ted), *a.* [*hemoglobin* + *-ate*[1] + *-ed*[2].] Containing or tinctured with hemoglobin. *Buck*, Med. Handbook, II. 21.

hemoglobinometer, *n.*—**Gower's hemoglobinometer,** an apparatus for determining the percentage of hemoglobin in blood. A small drop of blood (20 cubic millimeters) is diluted with water to measure 2 cubic centimeters. The color of this solution is then compared with a standard color produced by dissolving picrocarmine in glycerin.

hemoglobinous, hæmoglobinous (hem-ō-glō'bi-nus), *a.* [*hemoglobin* + *-ous.*] Containing or tinged by hemoglobin, as the nervous system of heteronemertines.

The *hæmoglobinous* nerve tissue is thus brought close to the surrounding medium.
E. R. Lankester, Treatise on Zoology, IV. 186.

hemoglobinuric, hæmoglobinuric (hem-ō-glō-bi-nū'rik), *a.* Relating to or affected with hemoglobinuria.—**Hemoglobinuric fever.** Same as *hemoglobinuria*.

hemogregarian, hæmogregarian (hem″ō-grē-gā'ri-an), *n.* [*Hemogregar(ina)* + *-ian.*] A hemogregarine; any member of the family *Hæmogregarinidæ*. *Nature*, Aug. 11, 1904, p. 360.

hemogregarine, hæmogregarine (hem-ō-greg'a-rin), *n.* [Gr. *αἷμα*, blood, + E. *gregarine.*] The trophozoite stage of some *Hæmosporidia*, the organism having a fixed body-form and, though motile, not being amœboid like a hemamœba.

hemoid, hæmoid (hē'moid), *a.* [Gr. *αἱμοειδής*, < *αἷμα*, blood, + *εἶδος*, form.] Having the appearance of blood.

hemokonia, hæmokonia, *n. pl.* See ★*hemoconion*.

hemol, hæmol (hē'mol), *n.* [Gr. *αἷμα*, blood, + *-ol.*] A reduction-product of hemoglobin which contains iron. It is used as a hematogenous tonic.—**Copper hemol,** a dark-brown powder consisting of a copper compound of hemol. It contains 2 per cent. of copper, and is used in tuberculosis, scrofula, etc. Also called *cuprohemol*.—**Hemol mercuric iodide,** a hemol compound said to contain 13 per cent. of mercury and 28 per cent. of iodine; hydrargyri-iodo-hemol: used in syphilis.—**Zinc hemol,** a zinc compound of hemol containing 1 per cent. of zinc: antidiarrheic and hematinic.

hemolin (hem'ō-lin), *n.* [Gr. *αἷμα*, blood, + *-ol* + *-in*[2].] A trade-name for a solution of the coloring-matter of logwood used in dye-ingleather. *Flemming*, Practical Tanning, p. 120.

hemolutein, hæmolutein (hem-ō-lū'tē-in), *n.* [Gr. *αἷμα*, blood, + L. *luteus*, muddy, + *-in*[2].] A yellow lipochromic pigment which is found in the blood-serum of some animals.

hemolymph, *n.* 2. The blood and the lymph considered together.

In the second case (advanced cirrhosis) the lymphoid tissue presented the characteristics of hyperplastic *hæmolymph* nodes. *Med. Record*, May 30, 1903, p. 870.

Hemolymph glands or **nodes.** See ★*gland*.

hemolymphocytotoxin, hæmolymphocytotoxin (hem-ō-lim″fō-sī-tō-tok'sin), *n.* A toxin which acts upon the blood- and lymph-corpuscles.

hemolysin, hæmolysin (he-mol'i-sin), *n.* [*hemolysis* + *-in*[2].] A cellular product, having the character of an amboceptor, which causes the dissolution of the red corpuscles of the blood in the presence of a suitable complement. Certain hemolysins can be classed as cytotoxins. These result on immunization of one animal with the blood-corpuscles of an animal of an alien species. Also called *hemotoxin*.

hemolysis, hæmolysis (he-mol'i-sis), *n.* [Gr. *αἷμα*, blood, + *λύσις*, dissolution.] The process of dissolution of the blood-corpuscles (notably the red cells) by means of specific lysins (hemolysins). Also *hematolysis*.

An investigation of the effect of antitoxines (salts, proteids, normal serum, antitetanolysin, etc.) on the power of toxines (ammonia, alkalies, tetanolysin) to produce *hæmolysis* of blood corpuscles, and an attempt to explain the results on the basis of the mass law.
Jour. Phys. Chem., May, 1904, p. 366.

hemolytically, hæmolytically (hem-ō-lit'i-kal-i), *adv.* In reference to hemolysis; by hemolysis.

hemolyzability, hæmolyzability (hem″ō-lī-za bil'i-ti), *n.* Susceptibility or liability to hemolysis.

hemolyzable, hæmolyzable (hem'ō-lī-za-bl), *a.* [*hemolyze* + *-able.*] Capable of undergoing hemolysis.

hemolyze, hæmolyze (hem'ō-līz), *v. t.*; pret. and pp. *hemo-, hæmolyzed*, ppr. *hemo-, hæmolyzing.* [Also *hemolyse;* ⟨ *hemoly(sis)* + *-ize.*] To bring about hemolysisin.

The blood of animals also is *hæmolysed* by foreign sera—the red corpuscles of the rabbit, for example, being dissolved readily by dog's serum.
Jour. Exper. Med., March 17, 1902, p. 280.

hemomediastinum, hæmomediastinum (hem'ō-mē di-as-tī'num), *n.* [Gr. *αἷμα*, blood, + NL. *mediastinum.*] Effusion of blood into the mediastinum.

hemometer, *n.* 2. Same as *hemoglobinometer.*

hemopathology, hæmopathology (hem″ō-pa-thol'ō-ji), *n.* [Gr. *αἷμα*, blood, + E. *pathology.*] The science of the diseases of the blood.

hemoperitoneum, hæmoperitoneum (hem-ō-per'i-tō-nē'um), *n.* [Gr. *αἷμα*, blood, + *περιτόναιον*, peritoneum.] Effusion of blood into the peritoneal cavity.

hemophile, hæmophile (hem'ō-fil), *a.* and *n.* [Gr. *αἷμα*, blood, + *φιλεῖν*, loving.] **I.** *a.* Having reference to an abnormal tendency toward hemorrhage.

II. *n.* One who is subject to hemophilia.

hemophiliac, hæmophiliac (hem-ō-fil'i-ak), *a.* and *n.* Same as ★*hemophile.* *Buck*, Med. Handbook, V. 361.

hemophobia, hæmophobia (hem-ō-fō'bi-ä), *n.* [Gr. *αἷμα*, blood, + *-φοβία*, ⟨ *φοβεῖν*, fear.] Same as *hematophobia.*

hemoplasmodium, hæmoplasmodium (hem″-ō-plas-mō'di-um), *n.* [NL., ⟨ Gr. *αἷμα*, blood, + *plasmodium.*] **1.** The plasmodium of a hematozoan, or blood-parasite, such as the malarial plasmodium.—**2.** Same as *hematozoan.*

hemopoiesis, hæmopoiesis (hem″ō-poi-ē'sis), *n.* Same as *hematopoiesis.*

hemopoietic, hæmopoietic (hem″ō-poi-et'ik), *a.* Same as *hematopoietic.*

hemoptysic, hæmoptysic (hem-op-tiz'ik), *a.* Same as *hemoptysical.*

hemopyrrol, hæmopyrrol (hem-ō-pir'ōl), *n.* [Gr. *αἷμα*, blood, + *πυρρός*, reddish, + *-ol.*] A decomposition-product which can be obtained from hematoporphyrin, as well as from phylloporphyrin, on reduction with phosphonium iodide.

hemorhodin, hæmorhodin (hem-ō-rō'din), *n.* A rose-colored pigment found in the blood of the sea-hare, *Aplysia depilans.*

hemorrhage, *n.*—**Primary hemorrhage,** hemorrhage occurring at the time the causal injury is received or an operation is performed.—**Punctate hemorrhage,** minute areas of blood effused into the tissues from ruptured capillary vessels.

Hemorrhagic septicemia. Same as *cattle-and-game* ★*disease.*

hemorrhagin, hæmorrhagin (hem'ō-raj-in), *n.* [*hemorrhage* + *-in*[2].] The cytotoxin (endotheliotoxin) which causes the destruction of vascular endothelial cells and thus brings about the occurrence of extravasations of blood.

Hemorrhoidal arteries. See ★*artery.*

hemoscope, hæmoscope (hem'ō-skōp), *n.* Same as ★*hematoscope.*

hemoscopy, hæmoscopy (hem-os'kō-pi), *n.* Same as ★*hematoscopy.*

hemosiderin, hæmosiderin (hem-ō-sid'e-rin), *n.* [Gr. *αἷμα*, blood, + *σίδηρος*, iron, + *-in*[2].] A dark pigment containing iron which has been found in extravasated blood and thrombi. It is undoubtedly derived from the blood-pigment.

hemosiderosis, hæmosiderosis (hem-ō-sid-e-rō'sis), *n.* [*hemosider(in)* + *-osis.*] A form of hemachromatosis in which hemosiderin is deposited in the tissues or organs.

hemosozic, hæmosozic (hem-ō-sō'zik), *a.* [Irreg. ⟨ Gr. *αἷμα*, blood, + *σώζειν*, save, + *-ic.*] Same as ★*antihemolytic.*

hemostat, hæmostat (hem'ō-stat), *n.* [Gr. *αἷμα*, blood, + *στατός*, ⟨ *ἱστάναι*, cause to stand.] An instrument used to compress a bleeding vessel in order to arrest hemorrhage.

Hemorrhage is arrested by picking up the divided blood-vessels with *hemostats.*
Phil. Med. Jour., Jan. 31, 1903, p. 223.

Hemostatic forceps. See ★*forceps* and ★*hemostat.*

hemotachometry, hæmotachometry (hem″-ō-ta-kom'e-tri), *n.* [Gr. *αἷμα*, blood, + *τάχυς*, swift, + *-μετρία*, measurement.] Measurement of the rapidity of the circulation of the blood.

hemotoxic, hæmotoxic (hem-ō-tok'sik), *a.* Same as ★*hematotoxic* and *hemolytic.*

hemotoxin, hæmotoxin (hem″ō-tok'sin), *n.* Same as ★*hemolysin.*

hemotropic, hæmotropic (hem-ō-trop'ik), *a.* [Gr. *αἷμα*, blood, + *-τροπος*, ⟨ *τρέπειν*, turn, + *-ic.*] A term sometimes applied to the cytophilic group of the hemolytic amboceptors. **Hemotropic poison.** See ★*poison.*

hemp, *n.*—**African hemp.** (*b*) Same as *South African* ★*hemp.* See *Sparmannia.* **American hemp.** (*a*) The common hemp as produced in America. (*b*) The Indian hemp, *Apocynum*, chiefly *A. cannabinum.* (*c*) Same as *American jute* (which see, under *jute*[2]). - **Blackfellow's hemp,** in Australia, the fiber yielded by *Commersonia Fraseri*, a hardy evergreen shrub or small tree belonging to the family *Sterculiaceæ;* or, the plant itself. The bark is used by the settlers as a tying material.—**Bologna hemp,** a very fine, flexible, lustrous white Italian hemp.—**Canadian hemp.** Same as *American* ★*hemp* (*b*).—**Cebu hemp.** Same as *Manila hemp* (which see, under *hemp*).—**Colorado river hemp,** the plant *Sesban macrocarpa* or its fiber product. This plant ranges in low grounds from Pennsylvania to Central America, growing in vast quantities along the Colorado river in Arizona, where it is called *wild hemp.* Its bast has been represented as a fiber of great economic capacity, but as yet has no commercial standing. See *sesban*, 2 [*cap.*].—**Dekhan hemp,** a small herbaceous shrub of the mallow family, *Hibiscus cannabinus*, a native of India, but largely cultivated throughout the world for its fiber. It is also grown in Persia and southeastern Russia, where it is known as *kanaff.* See *Hibiscus*, 1, and *bastard jute*, under *jute*[2].—**Female hemp,** properly, the pistillate plant of the common hemp, as *male hemp* should be the staminate plant; but, according to Lyons ("Plant Names"), in popular use the application of these names is reversed, doubtless from the more fruitful appearance of the staminate panicle.—**Hemp broom-rape, canker, oil.** See ★*broom-rape*, etc.—**Ife hemp,** the fiber of *Cordyline cylindrica.* See ★*ife.*—**Indian hemp.** (*c*) The Indian mallow or velvetleaf, *Abutilon Abutilon.* Also called *American jute.* (*d*) The black Indian hemp, *Apocynum cannabinum.* See *Apocynum.* (*e*) The white Indian hemp, either of two American species of *Asclepias*, *A. incarnata*, the swamp-milkweed, and *A. pulchra*, the hairy milkweed, which yield a white or light-gray fiber of some commercial value.—**Italian hemp,** *Cannabis sativa*, or common hemp.—**Kaffir hemp,** the strong white bast-fiber obtained from the star-bush, *Grewia occidentalis.*—**Ko hemp,** the fiber obtained from the succulent stems of a twining leguminous plant, *Pueraria Thunbergiana*, native to China.—**Male hemp.** See *female* ★*hemp.*—**Mauritius hemp,** a commercial name for the fiber obtained from the large fleshy leaves of *Furcræa fœtida*, a plant widely distributed in the tropics of both hemispheres, but cultivated on a commercial scale only on the island of Mauritius. It is used in the manufacture of bags, hammocks, etc., but principally for mixing with manila and Sisal fiber in making medium grades of cordage.—**New Zealand hemp.** Same as *New Zealand flax.* See *Phormium.*—**Pooa** (or **pua**) **hemp,** the fiber of *Maoutia Puya.* See *pooa.*—**Russian hemp,** a commercial grade of the ordinary hemp fiber, grown in Russia or Poland.—**South African hemp,** *Vossianthus Africanus*, a tall shrub of the linden family which yields a strong bast. It is a native of the Cape of Good Hope, but is widely cultivated in greenhouses, and in Queensland is grown for its fiber.—**Swedish hemp,** the common nettle, *Urtica dioica*, said to be used as a fiber plant in Sweden. See *nettle*[1], 1.—**Tampico hemp.** Same as *Tampico* ★*fiber.*—**Wild hemp.** See *Colorado river* ★*hemp.*

hemp-beater (hemp'bē″tėr), *n.* One who beats retted stems of hemp to separate the fibrous bast.

Hempel's gas-analysis apparatus. See ★*apparatus.*

Hemphill porcelain. See *American* ★*porcelain.*

Hempstead beds. Same as *Hampstead* ★*beds.*

hen[1], *n.*—**Hen and chickens,** a name for the Pleiads.—**Native hen,** *Tribonyx mortieri*, an Australian rail.

hen[1] (hen), *v. i.*; pret. and pp. *henned*, ppr. *henning.* To back down in a cowardly way; funk out: as, he *henned* at the last minute. [Scotch.]

henchwoman (hench'wum″an), *n.* A female attendant. [Nonce-word.]

Gudrun and her faithful *henchwoman*, Dalla, illustrate in themselves the conservativeness of the feminine mind.
Daily Telegraph, April 20, 1886, p. 2.

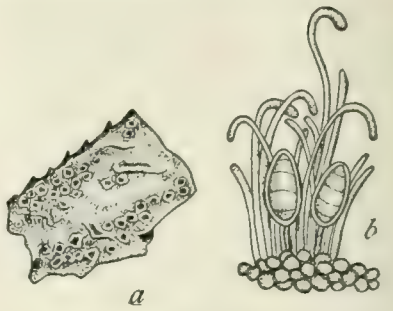
hendecane (hen'de-kān), *n.* [Gr. *ἕνδεκα*, eleven, + *-ane.*] Another name for ★*undecane.*

hendecatoic (hen-dek-a-tō'ik), *a.* [Gr. *ἕνδεκα*, eleven, + *-to-* + *-ic.*] Same as ★*undecylic.*

hendecenoic (hen″dē-se-nō'ik), *a.* [Gr. *ἕνδεκα*, eleven, + *-en* + *-o-* + *-ic.*] Same as ★*undecylenic.*

hendecoic (hen-dē-kō'ik), *a.* [Gr. *ἕνδεκα*, eleven, + *-o-* + *-ic.*] Same as ★*undecylic.*

Hendersonia (hen-dėr-sō'ni-ä), *n.* [NL. (Berkeley, 1841), named for E. G. *Henderson*, an English botanist.] A large genus of sphæropsidaceous fungi having the pycnidia borne



Hendersonia lineolans.

a, habit of the fungus, somewhat enlarged; *b*, hymenium with spores, highly magnified. (From Engler and Prantl's "Pflanzenfamilien.")

beneath the surface of the host but becoming erumpent at maturity. The spores are dark-colored, more or less elongate, and 3- or more celled. Over 250 species have been described. They occur chiefly on the dead branches of trees, but several species have been found on living leaves. *H. Cydoniæ* occurs on quince-leaves in America and *H. lineolans* on branches of willow (*Salix*).

heneicosane (hen-ī'kō-sān), *n.* [Gr. *ἑν*, one, + *εἴκοσι*, twenty, + *-ane.*] A colorless hydrocarbon, $C_{21}H_{44}$, found in brown coal paraffin. It melts at 40.4° C., and boils at 215° C. under 15 millimeters pressure.

hen-feathered (hen'feтн″ėrd), *a.* Wearing the plumage of the hen; henny: said of a cock. See *henny.*

hen-feathering (hen'feтн″ėr-ing), *n.* The plumage of the hen worn by the cock of the domesticated fowl.

hen-flea (hen'flē), *n.* A cosmopolitan flea, *Sarcopsylla gallinacea*, especially injurious to young poultry.

hen-frigate (hen'frig″āt), *n.* A vessel in which the master's wife or daughter interferes with the general rules, regulations, and customs on board ship. [Slang.]

Henicocephalus culicis. Much enlarged.

Henicocephalidæ (hen″i-kō-se-fal'i-dē), *n. pl.* [NL. *Henicocephalus* (*Enicocephalus*, Westwood, 1837) + *-idæ.*] A remarkable heteropterous family, allied to the *Reduviidæ*, in which the upper wings are entirely membranous, as in *Hymenoptera*, and the anterior pair of legs is greatly enlarged. Twelve species are known, two occurring in the United States; they are *Henicocephalus culicis* and *H. formicinis.*

Henle's ligament, loops, spine. See ★*ligament*, etc.

hen-louse (hen'lous), *n.* A wide-spread mallophagan, *Menopon pallidum*, of the family *Liotheidæ.* Compare ★*chicken-louse.*

Hen-louse (*Menopon pallidum*). Enlarged.

hennotannic (hen-ō-tan'ik), *a.* [*henna* + *tannic.*] Noting an acid, a brown resinous compound resembling tannin, contained in commercial henna.

henny, *a.* **II.** *n.* A cock which has the plumage of a hen.—**Henny game,** a breed of game-fowls in which the cocks have the plumage of the hens.

Henoch's purpura. See ★*purpura.*

henogenesis (hen-ō-jen'e-sis), *n.* [Gr. *εἷς* (*ἑν-*), one, + *γένεσις*, generation.] The development of the individual, or ontogeny, as contrasted with the development of species. [Rare.]

henogeny (he-noj'e-ni), *n.* Same as ★*henogenesis.*

hen-pox (hen'poks), *n.* A disease of ordinary fowls, turkeys, pigeons, and more rarely geese, chiefly affecting the head and appearing as an eruption of round or oblong yellow nodules having somewhat the appearance of warts. See also ★*bird-pox.*

Henrietta cloth. See ★*cloth.*

henry (hen'ri), *n.*; pl. *henries* (-riz). [From Joseph *Henry*, 1797–1878.] An electrical unit, the inductance in a circuit when the electromotive force induced in this circuit is one international volt while the inducing current varies at the rate of one ampere per second.

hense, *adv.* and *v.* Another spelling of *hence.*

Hensel, basilar length of. See ★*basilar.*

henselion (hen-se'li-on), *n.* [Named for *Hensel*, a German anatomist.] In *anthrop.*, the medial point back of the alveoli of the middle incisors. *O. Thomas.*

Hensen, canal of, plane of. See ★*canal*[1], ★*plane*[1].

Hensen's disk, prop-cells. See ★*disk*, ★*prop-cell.*

hentricontane (hen-trī-kon'tān), *n.* [Gr. *ἑν*, one, + *τρι(α)κοντα*, thirty, + *-ane.*] A colorless hydrocarbon, $CH_3(CH_2)_{29}CH_3$, of the methane series, contained in beeswax and in petroleum. It melts at 68.1° C., and boils at 302° C. under 15 millimeters pressure.

hep[3] (hep), *interj.* [Var. of *hip*[5].] A quick explosive utterance, leading to a sonorous outburst, urging men or horses to more rapid action.

hepar, *n.* **3.** In the homeopathic materia medica, calcium sulphid. **Hepar antimonii,** in *old chem.*, liver of antimony, the product obtained by fusing together antimonious sulphid and potassium or sodium sulphid. This product consisted of a sulphantimonite of potassium or sodium in a more or less pure condition and partially soluble in water.

hepatectomy (hep-a̤-tek'tō-mi), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *ἐκτομή*, excision.] Surgical removal of a part of the liver.

Hepatic apoplexy, cæcum, ligaments, sugar. See ★*apoplexy*, etc.

hepaticopulmonary (hē-pat″i-kō-pul'mō-nā-ri), *a.* [Gr. *ἡπατικός*, of the liver, + L. *pulmonarius*, of the lungs.] Relating to both the liver and the lungs.

hepatitis, *n.* **Acute parenchymatous hepatitis.** Same as *acute yellow atrophy of the liver* (which see, under *yellow*).—**Chronic interstitial hepatitis,** cirrhosis of the liver.

hepatochrome (hep'a̤-tō-krōm), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *χρῶμα*, color.] Same as ★*cholechrome.*

hepatocolic (hep″a̤-tō-kol'ik), *a.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *κόλον*, colon, + *-ic.*] Relating to both the liver and the colon.—**Hepatocolic ligament.** See ★*ligament.*

hepatoduodenal (hep″a̤-tō-dū-ō-dē'nal), *a.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + E. *duodenum* + *-al*[1].] Relating to both the liver and the duodenum.

hepatodynia (hep″a̤-tō-din'i-ä), *n.* [NL., < Gr. *ἧπαρ* (*ἥπατ-*), liver, + *ὀδύνη*, pain.] Pain in the hepatic region.

hepatogenic (hep-a̤-tō-jen'ik), *a.* Same as *hepatogenous.*

Hepatogenous jaundice. See ★*jaundice.*

hepatoid (hep'a̤-toid), *a.* [Gr. *ἡπατοειδής*, < *ἧπαρ* (*ἥπατ-*), liver, + *εἶδος*, form.] Resembling the liver in structure.

hepatolith (hep'a̤-tō-lith), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *λίθος*, stone.] A gall-stone.

hepatolithic (hep″a̤-tō-lith'ik), *a.* [*hepatolith* + *-ic.*] Relating to or characterized by the presence of gall-stones.

hepatological (hep″a̤-tō-loj'i-ka̤l), *a.* [*hepatology* + *-ic* + *-al*[1].] Of or relating to hepatology.

hepatolysin (hep-a̤-tol'i-sin), *n.* [*hepatolys*(*is*) + *-in*[2].] A cytolysin which results on immunization with liver cells.

hepatolysis (hep-a̤-tol'i-sis), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *λύσις*, dissolution.] Destruction of the cells of the liver.

hepatolytic (hep″a̤-tō-lit'ik), *a.* Causing hepatolysis.

> The post-mortem findings resemble those of acute yellow atrophy, or of phosphorus poisoning. We have to deal in this case with a *hepatolytic* serum.
>
> *Med. Record*, July 18, 1903, p. 84.

hepatomalacia (hep″a̤-tō-ma-lā'si-ä), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *μαλακία*, softness, < *μαλακός*, soft.] Softening of the liver.

hepatoperitonitis (hep″a̤-tō-per″i-tō-nī'tis), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + NL. *peritonitis.*] Inflammation of the peritoneal coat of the liver.

hepatopexy (hep'a̤-tō-pek-si), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *πῆξις*, fastening.] Surgical fixation of a floating liver.

hepatophlebitis (hep″a̤-tō-flē-bī'tis), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *φλέψ* (*φλεβ-*), vein, + *-itis.*] Inflammation of the veins of the liver.

hepatoptosis (hep″a̤-top-tō'sis), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *πτῶσις*, falling.] Displacement downward of the liver.

hepatopulmonary (hep″a̤-tō-pul'mō-nā-ri), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + L. *pulmonarius*, of the lungs.] Same as ★*hepaticopulmonary.*

hepatorenal (hep a̤-tō-re'nal), *a.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + L. *ren*, kidney, + *-al*[1].] Relating to both the liver and the kidney.—**Hepatorenal ligament.** See ★*ligament.*

hepatorrhaphy (hep-a̤-tor'a̤-fi), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *ῥαφή*, sewing.] The operation of suturing a wound in the liver.

hepatorrhexis (hep″a̤-tō-rek'sis), *n.* [NL., < Gr. *ἧπαρ* (*ἥπατ-*), liver, + *ῥῆξις*, rupture.] Rupture of the liver.

hepatosplenitis (hep″a̤-tō-splē-nī'tis), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *σπλήν*, spleen, + *-itis.*] Inflammation of both liver and spleen; Banti's disease.

hepatotoxemia (hep″a̤-tō-tok-sē'mi-ä), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *τοξ*(*ικόν*), poison, + *αἷμα*, blood.] Systemic poisoning through circulation in the blood of toxic products normally destroyed in the liver.

hepatotoxin (hep″a̤-tō-tok'sin), *n.* [Gr. *ἧπαρ* (*ἥπατ-*), liver, + *τοξ*(*ικόν*), poison, + *-in*[2].] A cytotoxin resulting on immunization with liver cells.

Hephæstic, Hephestic (he-fes'tik), *a.* [*Hephæstus* + *-ic.*] Of or pertaining to Hephæstus, the Greek Vulcan; hence, allusively, relating to blacksmithing, or wielding of the hammer. **Hephæstic cramp** or **Hephæstic hemiplegia.** Same as *hammer-palsy.*

hepialid, *n.* and *a.* See ★*epialid.*

Heppia (hep'i-ä), *n.* [NL. (Nägeli, 1854), named for Philip *Hepp*, a German lichenologist.] A genus of lichens having a foliose thallus and large disciform immersed apothecia. The spores are unicellular and hyaline.

Heppiaceæ (hep-i-ā'sē-ē), *n. pl.* [NL., < *Heppia* + *-aceæ.*] A family of gymnocarpous lichens named from the genus *Heppia.*

Hepplewhite (hep'l-hwīt), *n.* A style of furniture based on the designs of A. Hepplewhite, in England, in the later part of the eighteenth century. The Hepplewhite style is a delicate well-made adaptation of the current French motives of the period.

Hepplewhite Chair.

heptacarbon (hep-ta̤-kär'bon), *a.* [Gr. *ἑπτά*, seven, + *carbon.*] Containing seven atoms of carbon.

hepta-compound (hep-ta̤-kom'pound), *n.* A compound containing seven atoms of some element.

heptactin (hep-tak'tin), *n.* [Gr. *ἑπτά*, seven, + *ἀκτίς* (*ἀκτιν-*), a ray.] A sponge-spicule having seven arms.

Heptad axis of symmetry. See ★*symmetry.*

heptadecane (hep-ta̤-dek'ān), *n.* [Gr. *ἑπτά*, seven, + *δέκα*, ten, + *-ane.*] A colorless crystalline compound, $CH_3(CH_2)_{15}CH_3$, found in brown coal paraffin. It melts at 22.5° C. and boils at 303°C. Also called *normal heptadecane.*

heptahydrate (hep-ta̤-hī'drāt), *n.* [Gr. *ἑπτά*, seven, + *ὕδωρ* (*ὑδρ-*), water, + *-ate*[1].] In *chem.*, a compound containing seven molecules of water, as common copperas in crystals, or ferrous sulphate heptahydrate ($FeSO_4.7H_2O$).

heptahydrated (hep-ta̤-hī'drā-ted), *a.* [As *heptahydrate* + *-ed*[2].] In *chem.*, containing seven molecules of water, as heptahydrated sodium sulphate ($Na_2SO_4.7H_2O$). *G. Lunge*, Sulphuric Acid, II. 22.

heptameral (hep-tam'e̤-ra̤l), *a.* [NL., < Gr. *ἑπτά*, seven, + *μέρος*, part.] Having seven chambers or spaces, especially as applied to septal divisions in the *Anthozoa* or corals.

heptametrical (hep-ta̤-met'ri-ka̤l), *a.* In *pros.*, consisting of seven feet or measures. *Southey.*

heptanone (hep'ta̤-nōn), *n.* A ketone, $C_7H_{14}O$, derived from heptane. Three isomeric forms are known: 2-*heptanone*, which boils at 151–152° C.; 3-*heptanone*, which boils at 147–148° C.; and 4-*heptanone*, which boils at 143.5° C. These are also known, respectively, as *methylamyl ketone*, *ethylbutyl ketone*, and *dipropylketone* or *butyrone.*

Heptapla (hep'ta̤-plä), *n.* [Gr. *ἑπταπλόος*, sevenfold, < *ἑπτά*, seven, + *-πλοος*, -fold.] One of the editions of the Old Testament, by Origen (third century) containing seven versions of the Scriptures (or of parts of them) in parallel columns.

Heptastadium (hep-ta̤-stā'di-um), *n.* [Gr. *ἑπταστάδιον*, a space of seven stadia, neut. of *ἑπταστάδιος*, seven stadia long, < *ἑπτά*, seven, + *στάδιον*, stadium.] A great mole, built by Ptolemy Soter (117–81 B.C.), connecting Pharos island with the mainland at Alexandria in Egypt: so named from its length (seven stadia). The region is now a wide isthmus and occupied.

> Any remains that may exist at the Emporium, the Apostases, the Navalia, the *Heptastadium*, the buildings on the Pharos island or round the Eunostus Harbour (i. e., the present port), are either under the sea or beneath occupied land. They cannot be explored and are probably not in the least worth exploring.
>
> *E. F. Benson*, in Jour. Hellenic Studies, XV., Sup., p. 11.

heptatonic (hep-ta̤-ton'ik), *a.* [Gr. *ἑπτάτονος*, seven-toned, < *ἑπτά*, seven, + *τόνος*, tone.] In *music*, consisting of seven tones to the octave: said of scales: often contrasted with *pentatonic.*

heptavalency (hep-ta̤-vā'le̤n-si), *n.* [Gr. *ἑπτά*, seven, + E. *valency.*] In *chem.*, valence or valency equivalent to that of seven monad atoms, as of hydrogen.

heptine (hep'tin), *n.* [Gr. *ἑπτά*, seven, + *-ine*[2].] A colorless liquid, C_7H_{12}, with a characteristic odor, formed by the distillation of colophonium resin. It boils at 103–104° C., readily absorbs oxygen, and is a homologue of acetylene. There are four other isomeric compounds to which the term *heptine* is strictly applicable and which differ according to the position of the acetylene union.

heptoic (hep-tō'ik), *a.* [*hept*(*ane*) + *-o-* + *-ic.*] Pertaining to or derived from heptane.—**Heptoic acid** a colorless liquid compound, $CH_3(CH_2)_5COOH$, with an odor of tallow, formed by the oxidation of castor-oil or of oleic acid. It boils at 223–223.5° C. and melts at 10.5° C. Also called *œnanthic acid.*

heptone (hep'tōn), *n.* [Gr. *ἑπτά*, seven, + *-one.*] A colorless liquid compound, C_7H_{10}, belonging to the valylene series of hydrocarbons. It boils at 115° C.

heptose (hep'tōs), *n.* [Gr. *ἑπτά*, seven, + *-ose.*] Sugar containing seven atoms of carbon. Such sugars closely resemble the corresponding ones of the hexose series.

heptoxid (hep-tok'sid), *n.* [Gr. *ἑπτά*, seven, + *oxid.*] In *chem.*, a compound containing seven atoms of oxygen, as sulphur heptoxid (S_2O_7), corresponding to persulphuric acid ($H_2S_2O_8$).

Heptranchias (hep-trang'ki-as), *n.* [NL., a blunder for **Heptabranchius*, < Gr. *ἑπτά*, seven, + *βράγχια*, gills.] A genus of sharks of the family *Hexanchidæ*, remarkable for the presence of seven gill-openings instead of five, the usual number. They are closely related to extinct forms. *H. cinereus* is found in the Mediterranean, *H. maculatus* on the coast of California.

heptylamine (hep-til-am'in), *n.* [Gr. *ἑπτά*, seven, + *-yl* + *amine.*] A colorless compound, $CH_3(CH_2)_5CH_2NH_2$, prepared by the action of bromine and potassium hydroxid on caprylic amide. It boils at 153–155° C. Also called 1-*aminoheptane.*

heraclin (her'a̤-klin), *n.* [*Heracl*(*eum*) + *-in*[2].] A colorless indifferent compound, $C_{22}H_{22}O_{10}$, obtained from the seeds of *Heracleum villosum.* It forms long, silky, lustrous needles melting at 185° C.

Heræa (hē-rē'ä), *n. pl.* [Gr. *Ἡραῖα*, neut. pl. of *Ἡραῖος*, adj. < *Ἥρα*, Hera.] In *Gr. archæol.*, a festival celebrated in honor of Hera.

Heraldic crab. See ★*crab*[1].

herapathite (her'a̤-path-it), *n.* [*Herapath*, name of its discoverer, + *-ite*[2].] A little-used name for a crystalline iodoquinine sulphate used in medicine.

herbarism† (hėr'ba̤-rizm), *n.* [*herbary* + *-ism.*] Herbalism; botany.

> The very pith and marrow of *herbarism.*
>
> *Southey*, Doctor, xxiv. P. I.

Herbert river cherry. Same as *Queensland* ★*cherry.*

herb-impious (hėrb-im'pi-us), *n.* [NL. *herba impia*, 'irreverent plant.'] The cotton-rose, *Gifola Germanica*: so called because each succeeding flower-head rises above the last older one. This plant is related to the cudweeds *Gnaphalium.*

herbivority (hėr-bi-vor'i-ti), *n.* [*herbivor-ous* + *-ity.*] The quality of being herbivorous; herbivorous nature.

> Admitting the *herbivority* of the fossil [Stereognathus], it is not certain that it was hoofed.
>
> *Owen*, in Encyc. Brit. (8th ed.), XVII. 158

Herbivorous ladybird. See ★*ladybird.*

Herculaneum ware. See ★*ware*[2].

Hercules metal, powder, stone. See ★*metal,* etc.

Hercynian, *a.* 2. In *geol.*: (*a*) Applied to a division of the Precambrian crystalline rocks in Westphalia, termed by Gümbel the *Hercynian gneiss,* lying above more highly altered rocks, and beneath those which are less altered and consist of mica schists and shales. (*b*) First applied to the lowest Devonian strata of the Harz Mountains and Westphalia, but subsequently restricted so as to refer to the calcareous or deeper water facies of these early Devonian rocks and their organic contents.

herderite, *n.*—It occurs also at Paris and Hebron, Maine. It is shown by Penfield to be monoclinic (pseudo-orthorhombic) in crystallization, with a composition expressed by the formula $Ca[Be(F,OH)]PO_4$. Pure fluor-herderite has not yet been observed; the mineral from Paris is a hydrofluor-herderite, and that from Hebron a hydro-herderite.

herd-header (hêrd'hed″er), *n.* The bull which heads a herd of cattle.

The man who expects success as a breeder cannot look upon the selection of his *herd-header* as a light matter.
Rep. Kan. State Board Agr., 1901–02, p. 50.

herdwick (hêrd'wik), *n.* [*herd*[2] + *wick*[2].] Hence the frequent village name *Hardwick.*] 1†. The tract of land under the charge of a herd or shepherd.—2. Applied to designate a hardy breed of sheep, found in the mountains of Cumberland and Westmoreland, and usually rented with the farm on which they are owned.

here[1] (hēr), *n.* [*here,* adv.] That which is here; the present; this world. [Poetical.]

A half-effaced inscription . . .
Full of hope and yet of heart-break,
Full of all the tender pathos
Of the *Here* and the Hereafter.
Longfellow, Hiawatha, Introd., l. 113.

hereanent (hēr'a-nent'), *adv.* [*here* + *anent.*] Relating to or concerning this; having a bearing on this matter. [Chiefly Scotch.]

Hereditary substance. See *substance* of ★*heredity.*

hereditation (hē-red-i-tā'shon), *n.* [NL. **hereditatio*(*n-*), ⟨ LL. *hereditare,* inherit: see *heredity, inherit.*] Generation of like by like, by regular course; reproduction. [Rare.]

hereditist (hē-red'i-tist), *n.* [*heredit*(*y*) + *-ist.*] One who believes that children inherit their character from their parents. [Rare.]

hereditivity (hē-red-i-tiv'i-ti), *n.* [**hereditive* + *-ity.*] Ability to reproduce or generate descendants like the parents. [Rare.]

Natural selection resolves itself into two laws: *heredi-tivity* and adaptivity, the latter being the accomodation to circumstances, etc. *Science,* May 2, 1902, p. 711.

heredito-syphilitic (hē-red″i-tō-sif-i-lit'ik), *a.* and *n.* I. *a.* Relating to or suffering from hereditary syphilis.

II. *n.* One who suffers from hereditary syphilis.

heredity, *n.* 2. (*c*) Metaphorically, that which makes living beings inherit; the explanation or cause of the kinship or resemblance to ancestors which living beings exhibit, or the force or agent or principle that brings about this kinship or resemblance. This metaphorical use of the word leads to forgetfulness of the fact that the word is only a general term for formulating the facts of kinship, and to the regarding of heredity and variation as independent and antagonistic principles or agents or factors in the origin of species. Since we can separate, in our minds, the kinship of living beings, or their likeness to their kind, from their individuality or difference from their kind, and since we find this intellectual analysis useful, some think that what is intellectually separable must be separate in fact, and that organic development is due to heredity and variation as antagonistic principles or agencies.—**Amphigonic heredity,** inheritance in organisms produced by sexual reproduction. *Weismann* (trans.), Germ-plasm, p. 253.—**Ancestral heredity.** See ★*inheritance.*—**Cross heredity,** the resemblance of descendants to ancestors considered reciprocally. See *heredity.*—**Galton's and Pearson's laws of heredity.** See ★*inheritance.*—**Homochronic heredity,** the development of the organs and tissues in the same chronological order in the offspring as in the parent, considered as a distinct form of inheritance. *Weismann* (trans.), Germ-plasm, p. 75.—**Homotopic heredity,** the development of the tissues and organs of the offspring in their parental positions, considered as a distinct form of inheritance. *Weismann* (trans.).—**Social heredity,** the acquisitions by social animals of the habits and customs and traditions of their kind, through their power to profit by experience and to use it to advantage, and quickly to acquire the mode of life that is characteristic of their species by imitation and example and instruction, without the risk that attends trial and error: considered as a determining factor in the origin of species. Since social animals cannot acquire the customs of their kind without natural aptitude, and since those that fail to find places for themselves in society are at a disadvantage in the struggle for existence, social heredity is rather a special case of natural selection than an independent determining factor in the origin of species. **Substance of heredity, hereditary substance.** (*a*) The material basis of inheritance or the living matter that is transmitted from parent to offspring in reproduction, and in the transmission of which reproduction consists. There is evidence, which is accepted as conclusive by most authorities, that the essential fact in reproduction is the transmission of the chromosomes of the germ-cells, and this is commonly held to be proof that the chromosomes are the material basis of inheritance, although this conclusion does not follow of necessity from the facts, if the term is understood as implying that they are not also the material basis of individuality. While descendants resemble ancestors, they are never identical with them. Each living being is unique: there is no other like it; and while it resembles its kind, it is different from all of its kind and from everything else in nature. Proof that the chromosomes are the substance of heredity is no proof that they are not also the substance of variation. (*b*) Metaphorically, the substratum or support or bearer or giver or cause of inheritance: that which makes the offspring to be like its parents or ancestors. This meaning (which depends upon an uncritical use of the word *substance,* and upon the opinion that we account for inheritance by calling it heredity) leads to the belief that since resemblance to parents may be considered by itself, it therefore exists in nature separated from the individuality of living beings.

Hereford (her'ē-ford), *n.* A breed of beef cattle, maintained chiefly in Herefordshire, England. The body color is a deep red, the face, mane, throat and chest white, and the horns are moderately long.

heregeld, *n.* A variant of *heregild.*

herem (her'em), *n.* [Heb. *herem,* ⟨ *haram,* to ban, exterminate, forbid: see *harem.*] Excommunication from the synagogue. This punishment was specially meted out to those holding doctrines contrary to the Jewish religion. The reformed Jews, however, have abandoned the practice, but it is still a formidable weapon in the hands of the rabbis of orthodox Jewish communities in Russia and the Orient. Also *cherem.*

Heremetabola (her-ē-me-tab'ō-lä), *n. pl.* [NL., said to be formed (if so, properly **Eremometabola*) ⟨ Gr. ἤρεμα, quiet, + μεταβολή, change.] A group of insects including those forms which have a gradual but incomplete metamorphosis, with a resting-stage, as in the *Cicadidæ.*

hereticize (hē-ret'i-sīz), *v. t.*; pret. and pp. *hereticized,* ppr. *hereticizing.* [*heretic* + *-ize.*] Same as *heteriate.*

Hering's and Wundt's figures. See ★*figure.*

herisseal (he-ris'ē-al), *n.* [Appar. ⟨ F. *hérisson,* hedgehog, + *-e-al.*] A lateral bone behind the eyeball of the head of fishes connected with the pterygoid and palatine; the mesopterygoid. *Starks,* Synonymy of the Fish Skeleton, p. 514.

heritage, *n.*—**Diligence against the heritage.** See ★*diligence.*

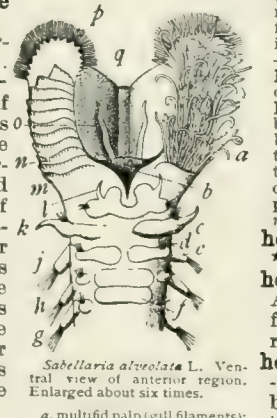
hermana (er-mä'nä), *n.* [Sp.] 1. A sister.—2. A sister-in-law.

Hermann's demarcation current. Same as ★*current of injury.*

hermano (er-mä'nō), *n.* [Sp.] 1. A brother.—2. A brother-in-law.

Hermaphrodite duct. See ★*duct.*

Hermellidæ (hêr-mel'i-dē), *n. pl.* [NL., ⟨ *Hermella* + *-idæ.*] A family of cryptocephalous *Polychæta* having the peristomium enormously developed and in the form of a bilobed hood capable of closing over the mouth, the lobes bearing defensive chætæ. It contains the single marine genus *Sabellaria* or *Hermella,* which lives in tubes in the sand.



Sabellaria alveolata L. Ventral view of anterior region. Enlarged about six times.

a, multifid palp (gill filaments); *b,* mouth; *c,* notopodial cirrus; *d,* neuropodium; *e,* notopodium; *f,* ventral (tubiparous) gland shield; *m, k, j, h,* and *g,* segments following peristome; *l,* neuropodial cirrus; *n,* ridges after removal of gill filaments; *o,* tentacle; *p,* peristomial chaetæ; *q,* hood formed by peristomium. (From "Cambridge Natural History.")

hermeneutical (hêr-mē-nū'ti-kal), *a.* Relating to hermeneutics; hermeneutic.

Hermetic books. See *Hermetic,* 2.

Hermetism (hêr'me-tizm), *n.* [*cap* or *l. c.*] The philosophical, theosophical, and alchemical doctrines of Hermes Trismegistus; hermetics.

The modern alchemists accept all the traditions of their ancient predecessors, but give them a new significance, and interweave the novel phenomena derived from researches in pure science. They claim that during the fourteenth, fifteenth and sixteenth centuries the official schools of instruction taught exclusively the physical part of the sciences, and that the metaphysical part (which is the real life and soul of the study) has been rejected under the opprobrious name of occult science. This living aspect of science has, however, been studied in the secret societies of the initiated, which have preserved the traditions of the kabala, the mysteries of *hermetism,* and the practice of transmutation.
H. C. Bolton, in Smithsonian Rep., 1897, p. 213.

Hermetist (hêr'me-tist), *n.* [*cap.* or *l. c.*] One who accepts the occult doctrines of the Hermetic books; a Hermetic philosopher.

The astral undulations determine the position of the atoms or neutralize them. Herein lies the secret of transmutation, and it becomes the privilege of the *hermetist* to acquire the power of controlling this agent.
H. C. Bolton, in Smithsonian Rep., 1897, p. 215.

hermetologist (hêr-me-tol'ō-jist), *n.* A Hermetist; a believer in the Hermetic philosophy.

The services of the new psychology to the Christian religion, I believe it is impossible to overestimate. Its teachings of the manifold human degeneracies make the doctrine of sin as vital as with the most ardent of the old *hermetologists,* and far more tempered and potent.
G. S. Hall, in The Forum, Aug. 1894, p. 719.

herminiid (hêr-min'i-id), *n.* and *a.* I. *n.* One of the lepidopterous family *Herminiidæ.*

II. *a.* Of or belonging to the *Herminiidæ.*

hermitage, *n.* 3. In *landscape-gardening,* a secluded building, arbor, or other feature.

The *hermitage* being directly on the axis of the villa, one looks out from the latter down the admirable perspective of the tapis vert and up the Scala Santa to the little house at its summit.
Edith Wharton, Italian Villas, p. 66.

Hermite process. See ★*process.*

hermit-lobster (hêr″mit-lob'stêr), *n.* A hermit-crab.

hermophenol (hêr-mō-fē'nōl), *n.* [Gr. Ἑρμῆς, Hermes, Mercury, + E. *phenol.*] Mercury-phenol-disulphonate of sodium. It is antiseptic and antisyphilitic.

Hermosilla (hêr-mō-sil'ä), *n.* [NL., ⟨ *Hermosilla,* the capital of Sonora, Mexico, ⟨ Sp. *hermoso,* beautiful, ⟨ L. *formosus,* beautiful.] A genus of rudder-fishes of the family *Kyphosidæ,* found on the coast of Sonora in the Gulf of California. *H. azurea* is the known species.

hernani (er-nä'ni), *n.* [From the (F.) personal name *Hernani.*] A grenadine dress fabric woven in small meshes of coarse threads of silk, cotton, or wool, and their intermixtures.

hernia, *n.*—**Complete hernia,** a hernia in which the contents have passed beyond the external ring of the inguinal canal.—**Concealed hernia,** a form of incomplete hernia of such small size as to be impossible of detection by ordinary examination.—**Congenital hernia,** a scrotal hernia present at birth or appearing shortly after.—**Diaphragmatic hernia,** hernia of a portion of the bowel through a ruptured diaphragm into the chest cavity.—**Diverticular hernia,** a hernia formed by a diverticulum from the intestine, usually the ileum, and not containing a complete loop of the bowel.—**Hernia obturatoria,** hernia through the obturator foramen.—**Hernia of the cornea.** Same as *ceratocele.*—**Hernia testis,** a fungus-like appearance of the testicle due to rupture of the fibrous coat.—**Hesselbach's hernia,** a form of femoral hernia.—**Incomplete hernia,** a hernia in which the sac has not passed beyond the external ring.—**Littré's hernia.** Same as *diverticular* ★*hernia.*—**Mucosal hernia,** extrusion of the mucous membrane of the intestine through a defect in the muscular coat.—**Peritoneal hernia.** See ★*gut-tie.*—**Richter's hernia,** hernia in which only a part of the circumference of the bowel is involved: possibly an early stage of a diverticular hernia.—**Slipped** or **sliding hernia,** hernia of the cæcum or sigmoid flexure, in which only a portion of the bowel is in the sac, the outside part having no peritoneal covering.—**Tunicary hernia.** Same as *mucosal* ★*hernia.*

hernia-knife (hêr'ni-ä-nīf), *n.* Same as ★*herniotome.*

herniarin (hêr-nī'a-rin), *n.* [*Herniaria* + *-in*[2].] A grayish powdery glucoside, $C_{19}H_{30}O_{10}$, found in *Herniaria glabra* and *H. hirsuta.* It resembles saponin in general properties.

herniotome (hêr'ni-ō-tōm), *n.* [*hernia* + Gr. *-τομος,* ⟨ ταμεῖν, cut.] A knife resembling a bistoury with a short cutting-edge, the rest of the blade being rounded, used for incising the constricting tissues in hernia.

herniotomist (hêr-ni-ot'ō-mist), *n.* [*herniotom-y* + *-ist.*] One who is skilled in herniotomy.

Herodianic (he-rō-di-an'ik), *a.* Of or pertaining to Herodianus, a Byzantine grammarian of about 200 A. D.—**Herodianic signs.** See ★*sign.*

Heroic age. See *Heroic* ★*age.*

heroin, *n.* A simplified spelling of *heroine.*

heroin (her'ō-in), *n.* Diacetyl-morphia: a remedy valuable in the treatment of various forms of respiratory disease. It allays cough and acts as a hypnotic.

heron, *n.*—**Purple heron.** See *purple.*

Heronic (hē-ron'ik), *a.* Of or pertaining to Heron (about 250 B. C.), an Alexandrian mathematician.—**Heronic cyclic polygon, cyclic quadrilateral, parallelogram, pyramid.** See ★*polygon*, etc.

heronite (her'on-īt), *n.* [*Heron* Bay, on the north shore of Lake Superior, + *-ite*[2].] An aphanitic dark-colored rock occurring in a dike composed of analcite, orthoclase, plagioclase, and ægirite. The analcite forms a matrix for the other minerals, which are in radiating groups. *Coleman*, 1899.

Heros (hē'ros), *n.* [NL., without evident allusion, < L. *heros*, < Gr. ἥρως, hero.] A very large genus of perch-like fishes found in the waters of Central and South America, and characterized by the large number of anal spines. The species are very numerous, one of them, *H. cyanoguttatus*, extending north to the waters of Texas.

Hero's lamp. See ★*lamp*[1].

herotheism (hē-roth'ē-izm), *n.* [Gr. ἥρως, hero, + θεός, god, + *-ism*.] The worship of deified heroes. *N. E. D.*

Herpes circinatus, ringworm.—**Herpes iris**, a form of herpes in which the vesicles are grouped in an annular form.—**Herpes præputialis**, herpes affecting the prepuce.

herpet. An abbreviation of *herpetology*.

herpetiform (hêr-pet'i-fôrm), *a.* [Gr. ἑρπετόν, reptile, + L. *forma*, form.] Resembling or having the characters of a reptile.

herpetography (hêr-pe-tog'ra-fi), *n.* [Gr. ἑρπετόν, reptile, + -γραφία, < γράφειν, write.] The description of reptiles; also, in a general sense, same as *herpetology*.

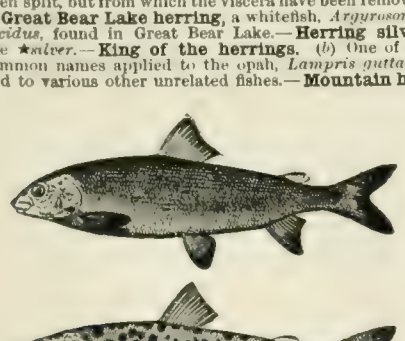
herpetospondylian (hêr″pe-tō-spon-dil'i-an), *a.* and *n.* **I.** *a.* Relating to or having the characters of the *Herpetospondylia*.

II. *n.* A member of the reptilian subclass *Herpetospondylia*.

Herpobdellidæ (hêr-pob-del'i-dē), *n. pl.* [NL., < **Herpobdella* + *-idæ*.] A family of leeches in which the pharynx is without denticulate jaws but has three unarmed chitinous plates. It contains the genus *Trocheta*.

Herpotrichia (hêr-pō-trik'i-ä), *n.* [NL. (Fuckel, 1869), irreg. < Gr. ἑρπεν, creep, + θρίξ (τριχ-), hair, thread.] A genus of pyrenomycetous fungi having the perithecia usually seated upon a brown mycelial layer, a subiculum. The spores are more or less elongate, several-celled, and brown. *H. nigra* is parasitic on pines and other conifers in alpine or subalpine regions. The mycelium envelops the twigs and fastens them together in a dark-brown mass.

herring, *n.* **2.** In Australia, *Prototroctes maræna*, the Yarra herring, fresh-water herring, grayling, or cucumber-mullet, found in the rivers of Victoria and Tasmania. *Austral English.*—**Big-eyed herring.** (*a*) The alewife, or branch herring, *Pomolobus pseudoharengus*. (*b*) The tenpounder, *Elops saurus*, found in all tropical waters.—**Blear-eyed herring**, the alewife, *Pomolobus pseudoharengus*.—**Blueback herring**, the lake herring, *Argyrosomus artedi*, of the Great Lakes.—**Blue herring**, a species of alewife, *Pomolobus chrysochloris*, of the family *Clupeidæ*, found in all the larger streams of the Mississippi valley.—**Fresh-water herring.** (*b*) *Clupea* or *Harengula richmondia*: so called in Sydney, Australia; elsewhere in Australia, and in Tasmania, the grayling.—**Gibbed herring**, a pickled herring which has not been split, but from which the viscera have been removed.—**Great Bear Lake herring**, a whitefish, *Argyrosomus lucidus*, found in Great Bear Lake.—**Herring silver.** See ★*silver*.—**King of the herrings.** (*b*) One of the common names applied to the opah, *Lampris guttatus*, and to various other unrelated fishes.—**Mountain herring**, the Rocky Mountain whitefish, *Coregonus williamsoni*, a small gamy fish of great excellence as food, found in streams of the Rocky Mountains, the Sierra Nevada, and northward. **Perth herring**, *Dorosoma erebi*, a clupeoid fish found in Australia. Also called *bony bream*.—**Picton herring**, a name given to several fishes when dried (like 'kipper'), especially to the sea-mullet, and the moray of New South Wales. *E. E. Morris*, Austral English.



Mountain Herring (*Coregonus williamsoni*).
Upper figure, mature fish; lower figure, young fish.
(From Bulletin 47, U. S. Nat. Museum.)

Queen of the herrings, *Alosa alosa*, a clupeoid fish found on the coasts of Europe.—**Rainbow herring**, a common name for *Osmerus dentex*, a smelt found on the coast of Alaska, and south on the eastern Pacific coast of northern China. **River herring**, the alewife, *Pomolobus pseudoharengus*. **Summer herring.** Same as *glut-herring*.—**Tailor herring.** Same as *fall herring* (which see, under *herring*).—**Yarra herring.** Same as ★*grayling*, 4.

herring-bone, *v. t.* **2.** In *carp.*, to strengthen (a floor) by herring-bone bridging, that is, with short pieces of studding set diagonally from the lower edge of one beam to near the upper edge of the next.—**3.** In *masonry*, to build, as a wall, of stone, tiles, or bricks laid at an angle with the horizon so as to show on the face in a series of diagonals, generally in alternate courses so as to produce a continued zigzag.

herring-cale (her'ing-käl), *n.* In New South Wales, the fish *Olistherops brunneus*, of the family *Labridæ*, or wrasses. *E. E. Morris*, Austral English.

herringer, *n.* **2.** A boat engaged in the herring-fisheries.

herring-pond (her'ing-pond), *n.* The Atlantic Ocean. [Jocose.]

herring-salmon (her'ing-sam″un), *n.* A whitefish, *Argyrosomus artedi*, found in the Great Lakes. It is neither a herring nor a salmon.

Herschel's fringes. See ★*fringe*.

Herts. An abbreviation of *Hertfordshire*.

Hertwigia (hêrt-wig'i-ä), *n.* [Named from *Hertwig*.] The typical genus of the family *Hertwigidæ*. *O. Schmidt*, 1880.

Hertwigidæ (hêrt-wig'i-dē), *n. pl.* [NL., < *Hertwigia* + *-idæ*.] A family of lyssacine, hexactinellid sponges, having the skeletal framework composed of hexactines and diactines united by synapticulæ. It contains the genera *Hertwigia* and *Trachycaulus*.

Hertzian (hert'si-an), *a.* Of or pertaining to Heinrich Hertz, (1857–1894) the discoverer of electro-magnetic waves, or (specifically) to such waves.—**Hertzian exciter.** See ★*exciter*.—**Hertzian wave.** See ★*wave*[1].

Herzegovinian (hert″se-gō-vin'i-an), *a.* and *n.* [*Herzegovina* + *-ian*.] **I.** *a.* Of or pertaining to Herzegovina.

II. *n.* A native of Herzegovina.

hesperetin (hes-pe-rē'tin), *n.* [Appar. < Gr. ἑσπέρα, the west, + ῥητίνη, resin. If this is correct, the form *hesperitin* is an alteration.] Same as ★*hesperitin*.

hesperetol (hes-per'e-tōl), *n.* [*hesperet(in)* + *-ol*.] A colorless crystalline compound, $CH_2:\overset{1}{C}H.C_6H_3(\overset{3}{O}H)\overset{4}{O}CH_3$, formed by heating isoferulic acid. It melts at 57° C.

hesperic (hes-per'ik), *a.* [Gr. ἑσπέρα, the west, + *-ic*.] Noting an acid, a colorless, crystalline, tasteless compound, $C_{22}H_{28}O_7$, extracted from orange-peel by means of alcohol.

hesperidene (hes-per'i-dēn), *n.* [*hesper(ic)* + *-id* + *-ene*.] Same as *citrene* and *carvene*.

hesperinic (hes-pe-rin'ik), *a.* [*hesper(ic)* + *-in* + *-ic*.] Derived from hesperidene.—**Hesperinic acid**, a colorless compound, $C_{20}H_{26}O_{17}\cdot 2H_2O$, formed by the oxidation of d-limonene with nitric acid.

Hesperioidea (hes-per-i-oid'ē-ä), *n. pl.* [NL., < *Hesperia* + *-oidea*.] The butterflies of the family *Hesperiidæ* considered as a superfamily.

hesperitin (hes-per'i-tin), *n.* [See ★*hesperetin*.] A colorless, intensely sweet compound, $\overset{3}{H}OC_6H_3(\overset{4}{O}CH_3)\overset{1}{C_2}H_2 . \overset{5}{O}COC_6H_3(\overset{1}{O}H)\overset{2}{)_2}$, which is obtained by boiling hesperidin with dilute aqueous-alcoholic sulphuric acid. It crystallizes in plates and melts and decomposes at 226° C.

Hesperornithes (hes-pe-rôr'ni-thēz), *n. pl.* [NL., pl. of *Hesperornis*.] An order of toothed birds representing the superorder *Odontolcæ* and represented by the genus *Hesperornis* (which see).

hesperornithid (hes-pe-rôr'ni-thid), *n.* One of the *Hesperornithidæ* or *Hesperornithes*.

hesperornithoid (hes-pe-rôr'ni-thoid), *a.* and *n.* [*Hesperornis* (*-ornith-*) + *-oid*.] **I.** *a.* Having the characters of or related to the *Hesperornithes*.

II. *n.* A bird resembling *Hesperornis*.

hessenbergite (hes'en-bêrg-īt), *n.* [*G. Hessenberg* + *-ite*[2].] A silicate of undetermined composition occurring in colorless tabular crystals in the hematite of Mount Fibbia, St. Gotthard, Switzerland. It may be the same mineral as the more recently described bertrandite.

Hessian[1], *a.*—**Brilliant Hessian purple.** See ★*purple*.—**Hessian bellows, blue, Bordeaux, brown, violet, yellow.** See ★*bellows*, etc.

Hessian[2], *n.*—**Hessian of a curve** (of the *n*th order), a curve of the $3(n-2)$th order, which not only passes through the double points of the original, but has itself double points which coincide with them.—**Hessian of a net of plane curves**, the locus of the double points of the curves of the net. It is the locus of points whose polars with regard to these curves are copunctal.—**Hessian of a surface** (of the *n*th order), a surface of the $4(n-2)$th order, which passes through the double and the parabolic points of the original.

Hessle clay. See ★*clay*.

hetæric (he-ter'ik), *a.* [Gr. ἑταιρικός, < ἑταιρος or ἑταιρα, companion: see *hetæra*.] Of or pertaining to the hetæræ. Also *hetairic*.

Heteractidæ (het-e-rak'ti-dē), *n. pl.* [NL., < *Heteractis* + *-idæ*.] A family of actiniarian *Zoantharia* which have clavate knobbed tentacles. It contains the genera *Heteractis*, *Stauractis*, *Rhopalactis*, *Ragactis*, and *Eloactis*.

heteractinid (het-e-rak'ti-nid), *a.* [Gr. ἕτερος, other, + ἀκτίς (ἀκτιν-), ray, + *-id*.] Having more than the usual (five) rays, as an echinoderm, especially one of the genus *Asterias*.

Heteractis (het-e-rak'tis), *n.* [NL., < Gr. ἕτερος, other, + ἀκτίς (ἀκτιν-), ray.] The typical genus of the family *Heteractidæ*. *Milne-Edwards*, 1857.

Heterandria (het-er-an'dri-ä), *n.* [NL., < Gr. ἕτερος, other, different, + ἀνήρ (ἀνδρ-), man (male).] A genus of very small killifishes which belong to the family *Pœciliidæ*. The males are very much smaller than the females, and the anal fin of the male is much modified, serving as an intromittent organ. *H. formosa* is common in Florida. It attains a length of a little more than half an inch, and is perhaps the smallest known vertebrate.

heterandrous (het-er-an'drus), *a.* [Gr. ἕτερος, other, different, + ἀνήρ (ανδρ-), man, stamen, + *-ous*.] In *bot.*, having stamens of two kinds as regards length or other characters.

heterandry (het-er-an'dri), *n.* [*heterandr-ous* + *-y*[3].] The character of being heterandrous.

heteraxial (het-e-rak'si-al), *a.* [Gr. ἕτερος, other, + L. *axis*, axis, + *-al*[1].] Having three axes, of unequal length, perpendicular to one another.

Hetereupuccinia (het″e-rū-puk-sin'i-ä), *n. pl.* [NL., < Gr. ἕτερος, different, + εὐ-, true, + NL. *Puccinia*.] A group of species of fungi of the genus *Puccinia*, in which the uredospores and teleutospores are developed on one host and the spermogonia and æcidia on another.

heterism (het'e-rizm), *n.* [Gr. ἕτερος, other, different, + *-ism*.] A general term for intraspecific differences of organisms not caused by the environment. Diversified sexes and castes are specializations of heterism. *Cook and Swingle*.

heterization (het″e-rī-zā'shon), *n.* [*heterize* + *-ation*.] The act or process of heterizing or making other or different.

The estrangement, alienation or *heterization* of the individual from the whole and the ultimate reconciliation is well illustrated in sex love, which from the standpoint of intelligence seems the most personal thing in the world, but is really, when we penetrate the illusions, seen to be in every item dominated by the interest of the species. *Saunders and Hall*, in Amer. Jour. Psychol., XI. 574.

heterize (het'e-rīz), *v. t.*; pret. and pp. *heterized*, ppr. *heterizing*. [Gr. ἕτερος, other, + *-ize*.] To make other or different; change.

heteroagglutinin (het″e-rō-a-glō'ti-nin), *n.* An agglutinin which will cause the coalescence of cells from an animal of an alien species: in contradistinction to ★*isoagglutinin*.

heteroalbumose (het″e-rō-al'bū-mōs), *n.* A primary albumose which is very closely related to the original albumin from which it is derived. On standing it becomes insoluble in part and is then called *dysalbumose*. Heteroalbumose is an antibody, in the sense of Kühne, and is thus related to antipeptone. See ★*albumose* and *peptone*.

heterobiophorid (het″e-rō-bī-of'ō-rid), *n.* See ★*biophorid*.

heteroblastically (het″e-rō-blas'ti-kal-i), *adv.* In a heteroblastic manner.

heteroblasty (het'e-rō-blas″ti), *n.* [Gr. ἕτερος, other, + βλαστος, germ, + *-y*[3].] In *embryol.*, the origin, in allied animals, of organs, similar in function and position, from different embryonic or germ layers.

Heterocardia (het″e-rō-kär'di-ä), *n. pl.* [NL., Gr. ἕτερος, other, + καρδία, heart.] A division of the gastropod *Mollusca* now regarded as equivalent to the suborder *Docoglossa*; the limpets. *Perrier*.

heterocarpic (het″e-rō-kär'pik), *a.* Same as *heterocarpous*. *Amer. Nat.*, Jan., 1904, p. 82.

heterocarpism (het-ę-rō kär'pizm), *n.* [*heterocarpous* + *-ism*]. The character of being heterocarpous.

heterocarpy (het'ē-rō-kär pi), *n.* Same as ★*heterocarpism*.

heterocaseose (het-ę-rō-ka'sē-ōs), *n.* The heteroalbumose derived from casein.

heterocerid (het-ę-ros'ę-rid), *n.* and *a.* **I.** *n.* A member of the coleopterous family *Heteroceridæ*.

II. *a.* Of or belonging to the family *Heteroceridæ*.

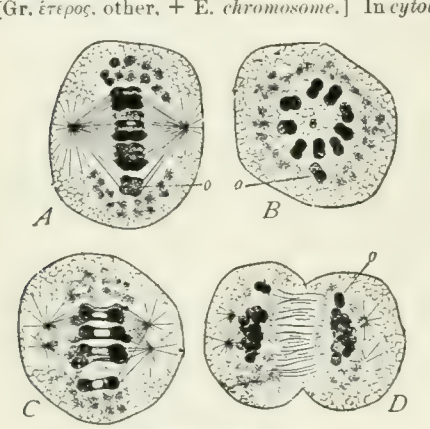
heterochiral (het″ę-rō-kī'ral), *a.* [Gr. ἕτερος, other, + χείρ, hand, + *-al*[1].] Reversed as regards right and left, but otherwise identical in form and size; having the relations of an object to its image in a plane mirror.

heterochlamydeous (het″ę-rō-kla-mid'ē-us), *a.* [Gr. ἕτερος, different, + χλαμύς (χλαμυδ-), a cloak, + *-eous*.] In *bot.*, dichlamydeous, with the inner whorl of a different color from the outer. It applies to the most normal type of floral envelop, in which the calyx is green and the corolla of some other color. In plant development the heterochlamydeous stage succeeds the homochlamydeous.

heterochromatic (het″ę-rō-krō-mat'ik), *a.* Containing or consisting of more than one color: opposed to *monochromatic*.— **Heterochromatic photometry.** See ★*photometry*.

heterochrome (het'ē-rō-krōm), *a.* [Gr. ἕτερος, other, + χρῶμα, color.] In *psychol. optics*, pertaining to or concerned with different colored lights or color-sensations: as, *heterochrome* brightness; *heterochrome* photometry.

heterochromosome (het″ę-rō-krō'mō-sōm), *n.* [Gr. ἕτερος, other, + E. *chromosome*.] In *cytol.*,



Heterochromosome.
Maturation divisions in an insect, *Anasa*.

A, primary spermatocyte in metaphase; *B*, equatorial plate, showing ten large tetrads and one small one, the heterochromosome, at *o*; *C*, separation of the dyads; *D*, telophase, which is also a prophase of the second division. (From Wilson's "The Cell.")

a modified chromosome differing in form, size, and presumably also in function from all the other chromosomes in the same nucleus. *T. H. Montgomery*, 1904.

heterochrosis (het″ę-rō-krō'sis), *n.* [NL., < Gr. ἕτερος, other, + χρῶσις, coloring.] Organic coloring which is different from that which prevails in the species; specifically, in *ornith.*, an abnormal coloration of the plumage which may take the form of albinism, melanism, the intensification of the normal colors or, more rarely, the introduction of other colors.

heterochthon (het-ę-rok'thon), *n.* [NL., < Gr. ἕτερος, other, + χθών, earth.] That element of the fauna of a given region which is evidently derived by immigration from another region: contrasted with ★*autochthon*, 3.

The parasitic worms of the holarctic region are not found with the indigenous (autochthon) mammals or birds, but only with the strangers (*heterochthon*) that immigrated at a late period. *Amer. Nat.*, May, 1903, p. 350.

heterocladic (het″ę-rō-klad'ik), *a.* [Gr. ἕτερος, other, + κλάδος, branch.] Noting an anastomosis between terminal twigs derived from different arteries: opposed to ★*homocladic*.

heteroclinous (het″ę-rō-klī'nus), *a.* Same as *heterocline*.

Heterocœla (het″ę-rō-sē'lä), *n. pl.* [NL., < Gr. ἕτερος, other, + κοῖλος, hollow.] A suborder of calcareous sponges in which the collared cells are restricted to more or less well-defined flagellated chambers. It contains the families *Leucasidæ*, *Sycettidæ*, *Grantiidæ*, *Heteropidæ*, and *Amphoriscidæ*. Compare ★*Homocœla*.

heterocœlous (het″ę-rō-sē'lus), *a.* [Gr. ἕτερος, other, + κοῖλος, hollow.] 1. having the gastral layer discontinuous and restricted to chambers, as the *Heterocœla*: opposed to ★*homocœlous*.—2. Having the ends of the vertebral centra concave in one plane and convex in the other, as the cervicals of birds; saddle-shaped; ephippic.

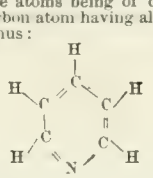
Both ends of each vertebra are saddle-shaped, . . . a condition which may be called *heterocœlous*.
Coues, Key to North Amer. Birds, p. 138.

heterocomplement (het″ę-rō-kom'plē-ment), *n.* A complement furnished by an animal of a species different from the one which yields the amboceptor.

heterocomplementophilic (het″ę-rō-kom″plē-men-tō-fil'ik), *a.* [*heterocomplement* + Gr. φίλος, loving, + *-ic*.] Having reference to an affinity for heterocomplements.

Heterocotylea (het″ę-rō-cot-i-lē'ä), *n. pl.* [NL., < Gr. ἕτερος, other, + κοτύλη, cup.] An order of trematoids having one or several suckers at the posterior end. It includes several families, among them the *Polystomidæ*, *Gyrodactylidæ*, and *Microcotylidæ*.

heterocyclic (het″ę-rō-sik'lik), *a.* [Gr. ἕτερος other, + κύκλος, circle.] In *chem.*, of a substance the molecule is believed to consist of a ring or continuous chain of atoms, containing in such a ring atoms of more than a single element. Thus the molecule of pyridine consists of a ring of six atoms consecutively united with each other, five of these atoms being of carbon and one of nitrogen (each carbon atom having also a hydrogen atom attached to it)—thus:



Heterocyemida (het″ę-rō-sī-em'i-dä), *n. pl.* [NL., < **Heterocyema* + *-ida*.] An order of *Rhombozoa* in which the ectoderm of the adult is not ciliated and there is no polar cap, but at the anterior end the ectoderm cells contain refringent bodies and may give rise to four terminal wart-like papillæ. It contains the genera *Conocyema* and *Microcyema*, both parasitic in the renal sacs of cephalopods.

Heterocysteæ (het″ę-rō-sis'tē-ē), *n. pl.* [NL., < Gr. ἕτερος, other, + κύστις, a bag, + *-eæ*.] In *bot.*, a suborder of the blue-green algæ characterized by the presence of heterocysts (which see).

heterocytotoxin (het-ę-rō-sī-tō-tok'sin), *n.* [Gr. ἕτερος, other, + E. *cytotoxin*.] A cytotoxin which will cause the destruction of cells from an animal of an alien species. *Science*, May 2, 1902, p. 697.

heterodermatous (het″ę-rō-dėr'ma-tus), *a.* [Gr. ἕτερος, other, + δέρμα(τ-), skin, + *-ous*.] Having the skin of a different character in different parts of the body.

heterodesmotic (het″ę-rō-des-mot'ik), *a.* [Gr. ἕτερος, other, + δεσμός, a band, + *-ot-ic*.] Noting nerve-fibers which connect dissimilar centers in the gray matter of the brain or spinal cord, or connect a nerve-center with an end-organ.

heterodiphycercal (het″ę-rō-dif″ i-sėr' kal), *a.* [Gr. ἕτερος, other, + δίφυής, of double nature, + κέρκος, tail, + *-al*.] In *ichth.*, noting a form of the caudal fin in which the vertebral column is elongated in an upward curve and fringed above and below with fin-rays, but the rays of the upper lobe are much less developed than those of the lower.

heterodistyly (het″ę-rō-dis'ti-li), *n.* [Gr. ἕτερος, other, + δι-, two, + στῦλος, pillar (style), + *-y*[3].] In *bot.*, that form of heterostyly in which some of the flowers have long filaments and short styles, and others short filaments and long styles.

heterodontism (het″ę-rō-don'tizm), *n.* [*heterodont* + *-ism*.] The condition of having teeth of more than one kind, as in most mammals where incisors, canines, premolars, and molars may be present: opposed to ★*homodontism*.

heterodrome (het'ę-rō-drōm), *n.* [Gr. ἕτερος, other, + δρόμος, a running, < δραμεῖν, run.] In *physiol.*, a negative induction-current. *Philos. Trans. Roy. Soc.* (London), 1901, ser. B, p. 184.

heterodynamous (het″ę-rō-din'a-mus), *a.* [Gr. ἕτερος, other, + δύναμις, power.] Of or pertaining to the condition of dominance in respect to a given character in ancestral inheritance. (See ★*inheritance*.) When the cross-bred offspring of two parental races or varieties produce descendants of which some are like one parental race, and others like the other, the parental races are said to be *heterodynamous*.

Correns proposes the terms "*heterodynamous*" and "homodynamous" to express that an organism is dominant or not dominant in respect of a given character.
Bateson and Saunders, Rep. Evol. Com. Roy. Soc., 1902, p. 126.

Heterodynamous determinant. See ★*determinant*.

heteroform (het'ę-rō-fôrm), *a.* Relating to the heteroproteoses in contradistinction to the protoproteoses. *C. E. Simon*, Physiological Chem., p. 175.— **Heteroform ferment.** See ★*ferment*.

heterogamic (het″ę-rō-gam'ik), *a.* Same as *heterogamous*. *Science*, Oct. 7, 1904, p. 472.

heterogamous, *a.* **2.** Illustrative of or characterized by heterogenesis, or alternation of generations.—**3.** Of or pertaining to heterogamy, or the marriage or pairing of unlike individuals.— **Heterogamous mating.** See ★*mating*.

heterogamy, *n.* **2.** In *biol.*, heterogenesis, or alternation of generations, considered as an alternation between sexual and asexual reproduction or between parthenogenesis and bisexual reproduction.—**3.** Marriage or mating or pairing between unlike individuals, as contrasted with homogamy, or the mating of like with like.

heterogeneity, *n.* **2.** A dissimilarity of structure in different parts of an organism.— **Lithological heterogeneity,** in *geol.*, the commingling in glacial drift of materials derived from rock formations of different characters.— **Physical heterogeneity,** in *geol.*, the mingling of unassorted constituents of unlike physical character: especially characteristic of glacial till where coarse and fine materials of all grades are deposited together in a mass. *R. D. Salisbury*, in Geol. Surv. of New Jersey, 1891, p. 48.

heterogenic (het″ę-rō-jen'ik), *a.* Of other or different origin; characterized by heterogenesis.

heterogenicity (het″ę-rō-jē-nis'i-ti), *n.* [*heterogenic* + *-ity*.] The character of being heterogenic. *Jour. Exper. Med.*, Nov. 29, 1901, p. 82.

heterogenite (het-ę-roj'e-nīt), *n.* [*heterogen-ic* + *-it-e*[2].] A hydrated oxid of cobalt which occurs in black amorthous masses. It is derived from the alteration of smaltite.

heterogeny, *n.* **2.** In *biol.*, mixed parthenogenesis, the alternation of sexual and parthenogenetic generations. See *normal* ★*parthenogenesis*.

heteroglobulose (het″ę-rō-glob'ū-lōs), *n.* A heteroalbumose derived from a globulin.

heterognath (het'ę-rō-gnath), *a.* and *n.* **I.** *a.* Of or pertaining to the suborder *Heterognathi*, fresh-water fishes of the tropics related to the *Cyprinidæ*.

II. *n.* One of the *Heterognathi*.

Heterognathi (het-ę-rog'na-thī), *n. pl.* [NL., < Gr. ἕτερος, other, different, + γνάθος, jaw.] A suborder of fishes typified by the South American family of river-fishes, *Characinidæ*. They differ from the *Cyprinidæ* in having teeth in the jaws and an adipose fin.

heterogomph (het'ę-rō-gomf), *a.* [Gr. ἕτερος, other, + γόμφος, peg, tooth.] Having dissimilar teeth, as the bristles of certain chætopodous worms.

A more important point, however, is the occurrence of *heterogomph* bristles at the inferior border of the upper series of bristles in the foot.
Annals and Mag. Nat. Hist., Sept., 1902, p. 256.

heterogone, *a.* **II.** *n.* A heterogonous plant.

heterogonous, *a.* **2.** In *biol.*, characterized by indirect development, with metamorphosis or alternation of generations.

heterogony, *n.*—**Law of the heterogony of ends.** See ★*end*.

heterography, *n.* **2.** The writing of another word instead of the one intended by the writer: analogous to *heterophemy*.

heteroicism, *n.* Same as *heteræcism*.

heteroimmune (het″ę-rō-i-mūn'), *a.* Immune to cells or cell-products of an animal of a different species from the one which furnishes the immune serum. *Lancet*, April 4, 1903, p. 944.

heterokinesis (het″ę-rō-ki-nē'sis), *n.* [NL., < Gr. ἕτερος, other, + κίνησις, movement.] The division of cells into daughter-cells which are different from one another in their hereditary tendencies and in the history for which each is predestined. Belief in heterokinesis is an essential part of Weismann's view of the nature of inheritance, although some authorities believe there is experimental evidence that all cell-division is into parts that are essentially alike, and that the differences in their history are due to the presence or absence of food within them and to their interactions among one another and with the external world.

heterokinesy†, *n.* Action caused by something else. See *autokinesy*. *Cudworth*.

heterolalia (het″ẹ-rō-lā′li-ä), *n.* [Gr. ἕτερος, other, + -λαλία, < -λαλος, < λαλεῖν, talk.] A form of aphasia in which the words uttered are not those in the mind of the speaker.

heterolateral (het″ẹ-rō-lat′ẹ-ral), *a.* [Gr. ἕτερος, other, + L. *latus* (*later-*), side, + *-al*[1].] Referring to opposite sides. *Buck*, Med. Handbook, II. 240.

heterolecithal (het″ẹ-rō-les′i-thal), *a.* [Gr. ἕτερος, other, + λεκίθος, the yolk of an egg.] In *embryol.*, having the food-yolk distributed unequally, as in telolecithal and perilecithal eggs: opposed to ★*homolecithal*. *Baldwin*, Dict. of Philos. and Psychol., I. 476.

heterolith (het′ẹ-rō-lith), *n.* [Gr. ἕτερος, other, + λίθος, stone.] A concretion in the intestinal tract of animals, not formed from mineral matter. Heteroliths are principally found in the stomachs of ruminants and are due to the accumulation of masses of hair and dry vegetable matter. See ★*hair-ball*.

heterologous, *a.* **3.** In researches in immunity, originating, as cells or serum, from an animal of a species different from the one undergoing immunization: thus, in immunizing a rabbit with the red blood-corpuscles of a goat, the latter are of *heterologous* origin. —**Heterologous determinant, id, tumor.** See ★*determinant*, etc.

heterolysin (het-ẹ-rol′i-sin), *n.* [*heterolys-is* + *-in*[2].] A lysin which will cause the destruction of cells of animals of an alien species: used in contradistinction to ★*isolysin* or ★*homolysin*.

heterolysis (het-ẹ-rol′i-sis), *n.* [NL., < Gr. ἕτερος, other, + λύσις, dissolution.] The destruction of cells by heterolysins. See ★*autolysis*. *Vaughan and Novy*, Cellular Toxins, p. 129.

heterolytic (het″ẹ-rō-lit′ik), *a.* [*heterolysis* (*-lyt-*) + *-ic*.] Of or pertaining to heterolysis or the heterolysins.

heteromaton (het-ẹ-rom′a-ton), *n.* [Gr. ἕτερος, other, + ματος, moving, moved: see *automaton*.] A thing that is moved by something else.

heteromecic (het″ẹ-rō-mē′sik), *a.* [Gr. ἕτερος, other, different, + μῆκος, length.] Having different lengths (or values).—**Heteromecic number.** See ★*number*.

heterometabolic (het″ẹ-rō-met-ạ-bol′ik), *a.* Same as *heterometabolous*.

Heteromi (het-ẹ-rō′mī), *n. pl.* [NL., < Gr. ἕτερος, other, different, + ὦμος, shoulder, upper arm.] An order or suborder of fishes which comprises the *Notacanthidæ* and related families; eel-like fishes having a short girdle inserted behind the head and spines in the dorsal fin.

Heteromonadidæ (het″ẹ-rō-mọ̄-nad′i-dē), *n. pl.* [NL., < **Heteromonas* (*-monad-*), a genus (?), + *-idæ*.] A family of flagellate *Protozoa* which consists of small colorless monads having one or two accessory flagella in addition to the chief flagellum. They are often colonial upon a stalk. Reproduction is by longitudinal fission. Among the genera included are *Monas*, *Dendromonas*, and *Anthophysa*.

Heteromonadina (het″ẹ-rō-mon-ạ-dī′nä), *n. pl.* [NL.] Same as ★*Heteromonadidæ*.

heteromorph, *n.* **2.** A decorative design representing a certain object, but modified in character by representing another object at the same time, as, for instance, flower designs the branches of which represent animals.

I propose to adopt the term *heteromorph* for a confusion with one another of two or more different skeuomorphs, or with the amalgamation of any two or more biomorphs, or with the combination of any skeuomorph with any biomorph. *Haddon*, Evolution in Art, p. 192.

heteromorphic, *a.* **3.** Of or pertaining to heteromorphism, in any sense of that word. *T. H. Morgan*, Regeneration, p. 24.

heteromorphism, *n.* (*d*) In *biol.*, the property of replacing lost parts by new parts which are different from those that have been lost. See ★*heteromorphosis*.

heteromorphosis (het″ẹ-rō-mōr′fō-sis), *n.* [NL., < Gr. ἕτερος, other, + μόρφωσις, formation.] In *biol.*: (*a*) The replacement of a lost part by a new part that is different from the part that has been removed; neomorphosis.

The processes of *heteromorphosis*—that is, the transformation or substitution of one organ for a morphologically different one by means of certain external influences—force us to the same view.
J. Loeb, Compar. Physiol. of the Brain, p. 203.

When the new part is different from the part removed the process has been called by Loeb *heteromorphosis*.
T. H. Morgan, Regeneration, p. 24.

(*b*) The replacement of a lost part by a new part that has its axes reversed as compared with the old part of which it is a mirror image. *T. H. Morgan*, Regeneration, p. 25.

heteromorphous, *a.* **2.** Same as ★*heteromorphic*, 3.

Heteromyidæ (het″ẹ-rō-mī′i-dē), *n. pl.* [NL. *Heteromys*, the type genus, + *-idæ*.] A family of rodents which comprises the kangaroo-rats, pocket-mice, and their allies. The name replaces *Dipodidæ*, which is not available. *J. A. Allen*, 1893.

Heteronemertini (het″ẹ-rō-nē-mėr-tī′nī), *n. pl.* [NL., < Gr. ἕτερος, other, + NL. *Nemertini*.] An order of nemerteans in which the lateral nerves are in the dermal muscles outside the circular muscles, and the body-wall consists of ectoderm, dermis, an outer longitudinal layer of muscles, a circular and an inner longitudinal muscular layer. It includes the families *Eupoliidæ* and *Lineidæ*. Compare ★*Protonemertini*, ★*Mesonemertini*, and ★*Metanemertini*.

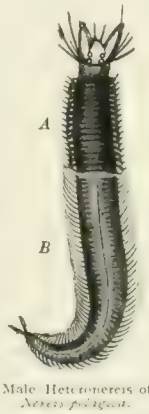
heteronephrolysin (het″ẹ-rō-nef-rol′i-sin), *n.* [Gr. ἕτερος, other, + E. *nephrolysin*.] A nephrolysin which is directed against the renal cells of animals of a different species.

heteronereid (het″ẹ-rō-nē′rẹ̄-id), *n.* and *a.* **I.** *n.* A heteronereis.

II. *a.* Of or pertaining to a heteronereis: as, a *heteronereid* condition. *Science*, April 14, 1905, p. 570.

heteronereis (het″ẹ-rō-nē′rẹ̄-is), *n.* [ML., < Gr. ἕτερος, other, + NL. *Nereis*.] The sexual stage of some worms of the genus *Nereis*: so named on the erroneous supposition that they are of a distinct genus. Compare ★*heterosyllis*.

In many species of Nereis, for instance, those segments containing the generative products undergo more or less extensive changes (at maturity) while the anterior ones remain unaltered. The body of the ripe Nereis is then distinguishable into an anterior non-sexual region and a posterior sexual region; and so great are these changes in certain species that the mature worms were for a long time believed to belong to a different genus, and received the name *Heteronereis*.
Camb. Nat. Hist., II. 276.



Male Heteronereis of *Nereis pelagica*.
A, non-sexual region; *B*, sexual, modified region. Natural size. (From "Cambridge Natural History.")

heteronomous, *a.* **3.** Subject to or governed by different principles or laws.—**4.** In *zoöl.*, made up of dissimilar segments or metameres: said of annelids or arthropods in which the various metameres differ in structure through the suppression of certain organs and the unusual development of others. Opposed to ★*homonomous*.

heteronomously (het-ẹ-ron′ọ-mus-li), *adv.* In a heteronomous manner.

heteronomy, *n.* **3.** In *biol.*, the state of divergent modification in parts that exhibit general homology or homonomy. When the serially homologous, or homonomous, segments of an annelid are modified in different ways they may be said to exhibit heteronomy in so far as their modifications are under consideration. Heteronomy is the secondary, or adaptive, complication of homonomy.

Heteronymous diplopia. Same as *crossed* ★*diplopia*. —**Heteronymous images.** See ★*image*.

heteroparthenogenesis (het″ẹ-rō-par″then-ọ̄-jen′e-sis), *n.* [Gr. ἕτερος, other, + NL. *parthenogenesis*.] **1.** That type of parthenogenesis in which the unfertilized eggs produce males and females: contrasted with ★*homoparthenogenesis*, or the production of only one sex from unfertilized eggs. Parthenogenetic female animals which produce both males and females are called *sexupara*. See *normal* ★*parthenogenesis* and ★*sexupara*.—**2.** Mixed parthenogenesis, or the alternation of sexual and parthenogenetic generations. See *normal* ★*parthenogenesis*.

heterophlebia (het″ẹ-rō-flē′bi-ä), *n.* [NL., < Gr. ἕτερος, other, + φλέψ (φλεβ-), vein.] A genus of fossil dragon-flies from the Jurassic lithographic slates of Bavaria.

heterophony (het-ẹ-rof′ọ-ni), *n.* Same as *heterophonia*.

heterophoric (het″ẹ-rō-for′ik), *a.* Related to or affected with heterophoria.

heterophthalmia (het″ẹ-rof-thal′mi-ä), *n.* [NL., < Gr. ἕτερος, other, + ὀφθαλμός, eye.] A want of similarity, as in color or in the direction of the axes, in the two eyes.

heterophthalmy (het″ẹ-rof-thal′mi), *n.* Same as ★*heterophthalmia*.

heterophyletic (het″er-ọ-fī-let′ik), *a.* [Gr. ἕτερος, other, + φῦλον, tribe, family.] **1.** Of or belonging to different groups.—**2.** In *biol.*, different in ancestry, but alike in appearance; convergent; isomorphic.

A few fundamental characters are better indications of the affinities of a given group of birds than a great number of agreements if these can be shown to be cases of isomorphism or *heterophyletic*, convergent analogy.
Encyc. Brit., XXVI. 795.

Heteropia (het-ẹ-rō′pi-ä), *n.* [NL., < Gr. ἕτερος, other, + ὤψ (ὠπ-), eye, face.] The typical genus of the family *Heteropidæ*. *Carter*, 1886.

Heteropidæ (het-ẹ-rop′i-dē), *n. pl.* [NL., < *Heteropia* + *-idæ*.] A family of heterocœlus *Calcarea* which have a poriferous dermal cortex and subdermal sagittal triradiate spicules: an articulate chamber skeleton may or may not be present. It contains the genera *Heteropia*, *Grantessa*, and *Vosmæropsis*.

heteroplasm (het′ẹ-rō-plazm), *n.* [Gr. ἕτερος, other, + πλάσμα, anything formed.] Any heterologous tissue. See *heteroplasia*.

heteroplastid (het″ẹ-rō-plas′tid), *n.* [Gr. ἕτερος, other, + E. *plastid*.] An organism consisting of numerous cells differing from one another in structure: opposed to ★*homoplastid*.

heteroplasty (het′ẹ-rō-plas″ti), *n.* [Gr. ἕτερος, other, + πλαστός, < πλάσσειν, form.] **1.** A surgical operation, for the restoration of a lost part, in which the new skin or other tissue is taken from another individual.—**2.** Abnormal formation of tissue; heteroplasia.

heteropodal (het-ẹ-rop′ọ-dal), *a.* In *neurol.*, of or pertaining to nerve-cells which have branches or processes of different kinds: opposed to ★*homoiopodal*. *Baldwin*, Dict. of Philos. and Psychol., II. 155.

Heteropolar dynamo, a generator or motor the armature windings of which in revolving pass successively poles of opposite magnetization.

Heteropora (het-ẹ-rop′ọ̄-rä), *n.* [NL., < Gr. ἕτερος, other, + πόρος, a pore.] A genus of cyclostomatous *Bryozoa* of the family *Cerioporidæ* which have ramose or massive zoaria, zoœcia with rounded apertures, and abundant interstitial tubes. It abounds in the Jurassic and Cretaceous rocks and has existed to the present time.

heteroproteose (het″ẹ-rō-prō′tẹ̄-ōs), *n.* [Gr. ἕτερος, other, + E. *proteose*.] A heteroalbumose derived from any albumin in the narrower sense of the term. See ★*proteose* and ★*albumin*.

It appears that the *hetero-proteose* molecule is about five or six times the size of the molecule of proto-proteose. *Encyc. Brit.*, XXXI. 720.

heterorhabdic (het″ẹ-rō-rab′dik), *a.* [Gr. ἕτερος, other, + ῥάβδος, a rod.] Having the gill-filaments unlike in size, as in certain mollusks. Compare ★*homorhabdic*. *Lankester*.

The filaments of the same gill-lamella may be arranged in a flat, uniform series, or the lamella may be thrown into vertical folds or plicæ. . . . The filament that occupies the bottom of the depression between two successive plicæ of a plicate lamella is in most species of greater size than the others. It will be spoken of as the principal filament, the others as ordinary filaments. Homorhabdic gills are those with all the filaments alike; *heterorhabdic* gills are those which exhibit the above-mentioned differentiation into principal and ordinary filaments.
Philos. Trans. Roy. Soc. (London), 1903, ser. B, p. 154.

heteroscope (het′ẹ-rō-skōp), *n.* [Gr. ἕτερος, other, + σκοπεῖν, view.] An instrument for determining the degree of heteroscopy. *Optical Jour.*, March, 1904, p. 351.

heteroscopy (het-ẹ-ros′kō-pi), *n.* [Gr. ἕτερος, other, + -σκοπία < σκοπεῖν, view.] Inequality of vision in the two eyes.

heterosexual (het″ẹ-rō-sek′sū-al), *a.* [Gr. ἕτερος, other, + L. *sexus*, sex, + *-al*[1].] Relating to the opposite sex. *Buck*, Med. Handbook, V. 134.

Heterosporium (het″ẹ-rō-spō′ri-um), *n.* [NL. (Klotzsch, 1832), < Gr. ἕτερος, other, + σπορά, seed (spore).] A genus of hyphomycetous fungi. They have short simple or branched conidiophores, usually forming a layer on the surface of the matrix, and the spores are dark-colored, 3- or more celled, and roughened with warts or spines. Some species are regarded as the cause of plant-diseases. *H. echinulatum*, a widely distributed species, is said to cause the fairy-ring spot of carnations.

heterospory (het-ẹ-ros′pō-ri), *n.* [*heterosporous* + *-y*[3].] The condition of being heterosporous.

heterostachyous (het″ẹ-rō-stā′ki-us), *a.* [Gr. ἕτερος, other, + στάχυς, an ear or spike of corn, + *-ous*.] In *bot.*, having the flowers bisexual and the sexes in different spikes: said of species of *Carex*.

Where a species with normally gynæcandrous spikes appears as inseparable from others which are truly *heterostachyous*. *Amer. Jour. Sci.*, Dec., 1903, p. 452.

Heterosteus (het-ē-ros'tē-us), *n.* [NL., < Gr. ἕτερος, other, + ὀστέον, bone.] A genus of arthrodirous fishes of very large size, similar to *Homosteus*, but with enormous anterior processes on the dorsolateral body-plates. It occurs in the Upper Devonian.

Heterostichus (het-ē-ros'ti-kus), *n.* [NL., < Gr. ἕτερος, other, + στίχος, line.] A genus of blennies found on the coast of California. They are characterized by the scaly body and forked tail.

heterostracan (het-ē-ros'tra-kan), *a.* and *n.* **I.** *a.* Of or pertaining to the *Heterostraci*. **II.** *n.* One of the *Heterostraci*.

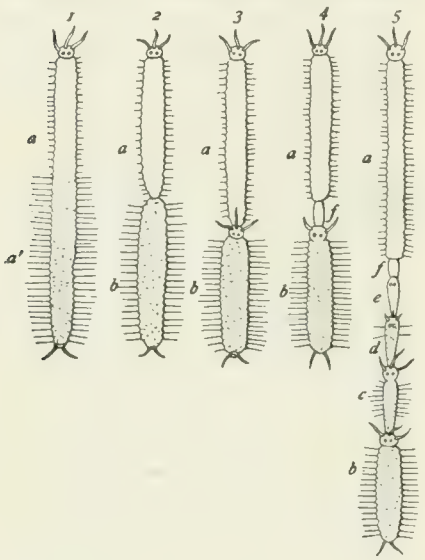
Heterostraci (het-ē-ros'tra-sī), *n. pl.* [NL., < Gr. ἕτερος, other, + ὄστρακον, shell.] An order of ostracodermous fishes. They have an exoskeleton of shagreen, plates or scales without bone-cells, each plate consisting of three layers, and bodies without paired appendages. They are all of Paleozoic age.

heterostracous (het-ē-ros'tra-kus), *a.* Having the structure of or pertaining to the *Heterostraci*.

heterostylous (het-ē-rō-stī'lus), *a.* Same as *heterostyled*.

heterostyly (het-ē-rō-stī'li), *n.* Same as *heterostylism*.

Heterosyllis (het″ē-rō-sil'is), *n.* [NL., < Gr. ἕτερος, other, + *Syllis*.] See the extract.



Heterosyllis.

Diagram illustrating the various stages in the asexual formation of a chain of zooids. (Modified from Malaquin.)

1, heteronereid or heterosyllid stage; *a*, non-sexual, *a'*, sexual region of the body, with modified parapodia. 2, *Syllis*, the hinder sexual region; *b* is similarly modified, and will separate from the parent zooid, *a*, and become an independent zooid. 3, *Autolytus*; the hinder zooid, *b*, develops a head by budding before separation. 4, *Autolytus*, etc.; a zone of budding, *f*, makes its appearance in front of the head of *b*, and by its growth will give rise to a series of new segments in the middle of the body. 5, *Myrianida*, *Autolytus*, etc. From the zone of budding, *f*, a very large number of segments have been formed, which have, further, become grouped so as to form three individuals, *c*, *d*, *e*; *b* is the hindmost zooid, which is either formed from the hinder segments of the parent zooid or is produced by budding, like *c*, *d*, *e*. (From Cambridge Natural History.)

In some genera [of the family *Syllidæ*], there occur changes quite similar to those characterising "Heteronereis" that is, the posterior segments in which the genital organs exist become altered, so that the worm consists of two distinct regions, and is termed a "*Heterosyllis*."
Camb. Nat. Hist., II. 278.

heterotelic (het″ē-rō-tel'ik), *a.* [Gr. ἕτερος, other, + τέλος, end.] Directed upon or subserving an external or foreign end: opposed to ★*autotelic*. *Baldwin*, Dict. of Philos. and Psychol., I. 96.

heterothallic (het'ē-rō-thal″ik), *a.* [Gr. ἕτερος, other, + θαλλός, sprout, shoot, + *-ic*.] Having the zygospores formed only as the result of the conjugation of hyphæ from two different strains: said of zygospore-forming plants.

heterotherm (het'ē-rō-thèrm), *n.* [Gr. ἕτερος, other, + θέρμη, heat.] A cold-blooded animal, or one whose bodily temperature differs little from that of the surrounding medium and changes with it.

With the others the (*heterotherms*) . . . there is a temperature which is correspondingly low.
Smithsonian Rep., 1900, p. 412.

heterothermal (het″ē-rō-thèr'mal), *a.* [Gr. ἕτερος, other, + θέρμη, heat, + *-al*.] Having blood which varies in temperature with the temperature of the environment; poecilothermal: said of cold-blooded animals such as reptiles. Opposed to ★*homæothermal*.

heterothermic (het″ē-rō-thèr'mik), *a.* [As *heterotherm* + *-ic*.] 1. Noting a condition of water, air, or other liquid in which warm and dry air are very much mixed without having had time to come to an equilibrium. — 2. Of or pertaining to heterotherms or cold-blooded animals; cold-blooded.

Another class of organisms, representatives of which are never found among birds or mammals, are called *heterothermic* — cold-blooded — animals; creatures of variable temperature, since, in their normal physiological state, their individual temperature follows closely the changes in the atmosphere about them.
Smithsonian Rep., 1890, p. 407.

heterotonous (het-ē-rot'ō-nus), *a.* [Gr. ἕτερος, other, + τόνος, tone.] In *music*, of scales or chords, having tones that are unlike.

heterotristyly (het″ē-rō-tris'ti-li), *n.* [Gr. ἕτερος, other, + τρι-, three, + στῦλος, pillar (style), + *-y*[3].] That form of heterostyly in which there are three kinds of flowers, namely, those having a long style with medium and short stamens, those having a medium style with long and short stamens, and those having a short style with long and medium stamens.

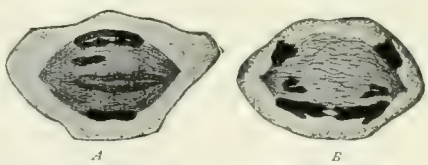
heterotrophic (het″ē-rō-trof'ik), *a.* [Gr. ἕτερος, other, + τροφή, nourishment, + *-ic*.] Not self-sustaining; dependent upon others for food. Since all animals depend, either immediately or ultimately, upon plants for food, they are sometimes termed *heterotrophic*, in contrast with the *autotrophic* or self-sustaining plants. See ★*autotrophic*.

The root-difference between plants and animals is one of nutrition. Plants are autotrophic, animals *heterotrophic*.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 820.

heterotropia (het″ē-rō-trō'pi-ä), *n.* [NL., < Gr. ἕτερος, other, + τρόπος, a turning, < τρέπειν, turn.] In *ophthalmol.*, strabismus or squint. *Optical Jour.*, March, 1904, p. 348.

heterotropy (het-ē-rot'rō-pi), *n.* [Gr. ἕτερος, other, + -τροπια, < τρέπειν, turn.] In *embryol.*, same as ★*anisotropy*, 2 (which see).

heterotype (het'ē-rō-tīp), *a.* [Gr. ἕτερος, other, + τύπος, type.] Of a different type or of different types. — **Heterotype division** or **mitosis**, that form of mitotic or karyokinetic cell-division in which the chromosomes undergo a precocious longitudinal splitting and form more or less regular rings. *Flemming*, 1887.



A *B*

Heterotype Division in Spermatocytes of Salamander.

A, first division in metaphase, showing heterotype rings; *B*, anaphase, longitudinal splitting of the daughter-loops. (From Wilson's "The Cell.")

heterotypic (het″ē-rō-tip'ik), *a.* [Gr. ἕτερος, other, different, + τυπικός, typical.] Relating to the first nuclear division occurring after mitapsis: so called because it is strikingly different from the ordinary mitoses (nuclear divisions). *Cook and Swingle*.

heterotypical (het″ē-rō-tip'i-kal), *a.* Same as ★*heterotypic*.

heteroxanthin (het″ē-rok-san'thin), *n.* [Gr. ἕτερος, other, + E. *xanthin*.] A xanthin derivative, $C_6H_6N_4O_2$, which contains one methyl group. It has been found in the urine.

heterozetesis (het-ē-rō-zē-tē'sis), *n.* [NL., < Gr. ἕτερος, other, + ζήτησις, seeking, inquiry, investigation.] The confusion of what one has really proved with a different proposition; the opinion that one has proved what one has not proved: a fault of logic substantially the same as an *ignoratio elenchi*. *G. S. Hall*, Adolescence, II. 533.

heterozonal (het″ē-rō-zō'nal), *a.* [Gr. ἕτερος, other, + ζώνη, belt (zone), + *-al*.] Belonging to different zones: said of the faces of a crystal. Compare *tautozonal*.

heterozygosis (het″ē-rō-zī-gō'sis), *n.* [NL., < *heterozyg(ote)* + *-osis*.] Development from a heterozygote.

Special attention has been given to the illustrations of reversion following *heterozygosis*.
W. Bateson, Exper. Studies, II. 4.

heterozygote (het″ē-rō-zī'gōt), *n.* and *a.* [Gr. ἕτερος, other, + E. *zygote*.] **I.** *n.* **1.** A zygote formed by the union of two unlike gametes. — **2.** In Mendelian phraseology, a hybrid animal or plant which combines the characters of two dissimilar parents; a mule-form.

Consequently if *Aa*'s breed together, the new *A* gametes may meet each other in fertilization, forming a zygote *AA*, namely, the pure *A* variety again. Similarly two *a* gametes may meet and form *aa*, or the pure *a* variety again. But if an *A* gamete meets an *a*, it will once more form *Aa*, with its special character. This *Aa* is the hybrid or "mule" form, or, as I have elsewhere called it, the *heterozygote*, as distinguished from *AA* or *aa* the homozygotes.
W. Bateson, Mendel's Prin. of Heredity, p. 23.

II. *a.* Of or pertaining to a fertilized egg, or to origin from a fertilized egg, which is formed by the union of two opposite allelomorphic germ-cells: as, *heterozygote* characters. *Bateson and Saunders*, Rep. Evol. Com. Roy. Soc., 1902, I. 127.

heterozygous (het″ē-rō-zī'gus), *a.* [Gr. ἕτερος, other, + ζυγόν, yoke.] **1.** Of or pertaining to germ-cells with opposite allelomorphic characters. *Bateson and Saunders*, Rep. Evol. Com. Roy. Soc., 1902, I. 147. — **2.** Of or pertaining to characters which will not become fixed or constant under continual selection. — **Heterozygous forms**, certain forms which, as has long been known to breeders, cannot be fixed by selection.

heth (chāt, chāth), *n.* [Heb. *hēth*, *hēt*. From the corresponding Phen. name was derived the name of the Greek ἦτα, used for long E.] The eighth letter (ח) of the Hebrew alphabet, corresponding in sound to the Scotch *ch* in *loch*. Its numerical value is 8.

hether, *n.* A simplified spelling of *heather*.

hetocresol (het-ō-krē'sōl), *n.* [Gr. ἕτερος, other, + E. *cresol*.] A non-poisonous crystalline compound, the cinnamic acid ester of metacresol: used in treatment of tuberculosis.

hetol (hē'tōl), *n.* [Appar. < *he(c)t(ic)* + *-ol*.] Cinnamate of sodium, a remedy which has been used in the treatment of tuberculosis.

Hettangian (he-tan'ji-an), *a.* Of Hettange in Luxemburg: applied, in *geol.*, to a stage of the Lias in France and Switzerland which lies at the base of the series. The rocks are marls, sandstones, and limestones which abound in invertebrate fossils and remains of ferns and cycads.

heubachite (hoi'bach-īt), *n.* [Named from (G.) *Heubachthal* in Baden.] A hydrated oxid of cobalt and nickel occurring as a black incrustation on barite.

heumite (hä'öm-īt), *n.* [*Heum*, in Norway, + *-ite*[2].] In *petrog.*, a name given by Brögger (1898) to a dark-colored aphanitic rock without phenocrysts, composed of abundant soda-orthoclase or soda-microcline and barkevikite, with considerable biotite and a small amount of nephelite, sodalite, and diopside, and accessory minerals.

heuristic, *a.* **II.** *n.* Same as *heuretic*.

Many analogies of this change are, and more may be, drawn from the metamorphosism of insects, and here biology supplies the best *heuristic*.
G. S. Hall, Adolescence, II. 331.

Heuskara (hūs-kä'rä), *n.* Another form of *Euskara* (the Basque language).

Heuskarian (hūs-kä'ri-an), *a.* and *n.* Another form of *Euskarian*.

heveene (hē'vē-ēn), *n.* [*Hevea* + *-ene*.] An amber-yellow oil, $C_{15}H_{24}$, belonging to the sesquiterpenes; the least volatile product of the destructive distillation of caoutchouc and gutta-percha. It boils at 255–265° C.

heven, *n.* A simplified spelling of *heaven*.

hevy, *a.* and *n.* A simplified spelling of *heavy*.

Hewers of wood and drawers of water, persons who perform the humblest kind of work; drudges; slaves.

And the princes said unto them, Let them live; but let them be *hewers of wood and drawers of water* unto all the congregation. *Joshua* ix. 21.

hex-, hexa-. [Gr. ἕξ, in comp. ἑξα-, six.] In *chem.*, in compound words, signifying the presence of six atoms of an element or six molecules of a compound.

hexabasic (hek-sa-bā'sik), *a.* [Gr. ἕξ, six, + βάσις, base, + *-ic*.] Having a basicity of six; capable of combining with a proportion of base or metal equivalent to six atoms of hydrogen.

hexacanth (hek'sa-kanth), *a.* [Gr. ἕξ, six, + ἄκανθα, thorn.] Having six hooks: as, the *hexacanth* embryo of some tapeworms.

hexacanthous (hek-sa-kan'thus), *a.* Same as ★*hexacanth*.

hexacarbon (hek-sa-kär'bon), *a.* [Gr. ἕξ, six, + E. *carbon*.] Containing six carbon atoms.

Hexaceratina (hek″sa-sē-rat'i-nä), *n. pl.* [NL., < Gr. ἕξ, six, + κέρας (κερατ-), horn, + *-ina*[2].] An order of ceratose sponges proposed by Lendenfeld to contain the families *Aplysillidæ*

and *Halisarcidæ*. It includes sponges with large and saccular ciliated chambers with simple canals, the skeleton composed of soft horny fibers, sometimes accompanied by horny spicules. The skeleton may be absent.

hexachlorid (hek-sạ-klō'rid), *n.* [Gr. ἑξ, six, + E. *chlorid.*] In *chem.*, a compound containing six atoms of chlorin united to a more electropositive element or radical: as, tungsten *hexachlorid* (WCl_6). *Jour. Soc. Chem. Industry*, XI. 599.

hexachordal (hek-sạ-kôr'dạl), *n.* [*hexachord* + *-al*[1].] Pertaining to or consisting of hexachords.

hexacid (heks-as'id), *a.* [Gr. ἑξ, six, + E. *acid.*] Used, in contrast with ★*hexabasic*, to denote that a substance is capable of combining with six equivalents of an acid.

hexacompound (hek-sạ-kom'pound), *n.* A compound containing six similar atoms or groups.

hexacontahedron (hek″sạ-kon-tạ-hē'drọn), *n.* [Gr. ἑξήκοντα, sixty, + ἕδρα, seat, base.] A solid of sixty sides. **Deltoidal hexacontahedron**, a 60-faced solid, formed by a deltoidal bossing of the icosahedron and reciprocal to the small rhombicosidodecahedron.

Hexacrinus (hek-sak'ri-nus), *n.* [NL., ⟨ Gr. ἑξ, six, + κρίνον, a lily (see *crinoid*).] A genus of camerate *Crinoidea* belonging to the family *Hexacrinidæ*. It is characterized by three basal plates and five very large and elongate radials with a similar anal plate. It is found in the Devonian of Europe and North America.

hexact, *a.* **II.** *n.* Same as ★*hexactine.*

hexactine (hek-sak'tin), *n.* [Gr. ἑξ, six, + ἀκτίς (ἀκτιν-), ray.] In the nomenclature of the spicular elements of sponges, a six-rayed or triaxial form typically expressed as six arms at right angles to one another. The hexactine is the fundamental form in the silicious skeletons of the *Hexactinellida* and is susceptible of modification into a vast variety of shapes, anchors, umbels, pine-trees, fish-hooks, rosettes, etc. The fusion of the arms of adjacent hexactines produces a latticed supporting skeleton in some orders of *Hexactinellida*.

hexactine (hek-sak'tin), *a.* [For ★*hexactinine*, ⟨ Gr. ἑξ, six, + ἀκτίς (ἀκτιν-), ray, + *-ine*[1].] **1.** Having six rays: same as *hexactinal.*—**2.** Having the characters of or pertaining to a hexactine.—**3.** Hexactinellidan.

hexactinellidan (hek-sak-ti-nel'i-dạn), *a.* and *n.* **I.** *a.* Pertaining to or characteristic of the *Hexactinellida.*

II. *n.* Any sponge of the order *Hexactinellida.*

hexactinian (hek-sak-tin'i-ạn), *a.* and *n.* **I.** *a.* Pertaining to or having the characters of the *Hexactiniæ*; having six mesenteries or tentacles, or a multiple of that number, as some anthozoans.

II. *n.* Any anthozoan of the group *Hexactiniæ.*

hexad. **I.** *n.* **3.** A hexagon.

Given two opposite points of a regular *hexad* (namely, the corners a_1, a_4, of a regular hexagon).
Harkness and Morley, Analytic Functions, p. 25.

II. *a.* Having a combining power equivalent to six times that of hydrogen. Same as *hexavalent* and *sexivalent.*

hexadecane (hek-sạ-dek'ān), *n.* [Gr. ἑξ, six, + δέκα, ten, + *-ane.*] A colorless compound, $CH_3(CH_2)_{14}CH_3$, contained in petroleum. It forms pearly lustrous leaflets, which melt at 19–20° C. and boil at 287.5° C. Sometimes called *cetane.*

hexadecoic (hek″sạ-de-kō'ik), *a.* [Gr. ἑξ, six, + δέκα, ten, + *-o-* + *-ic.*] Containing sixteen carbon atoms. - **Hexadecoic acid.** Same as *palmitic acid.*

hexadecyl (hek-sạ-dē'sil), *n.* [Gr. ἑξ, six, + δέκα, ten, + *-yl.*] The radical $C_{16}H_{33}$. It is derived from hexadecane, and is also called *cetyl.*

hexadecylic (hek″sạ-dē-sil'ik), *a.* [*hexadecyl* + *-ic.*] Pertaining to hexadecyl or hexadecane.

hexadrachm (hek'sạ-dram), *n.* [Gr. ἑξάδραχμος, of the value of six drachmas, ⟨ ἕξ, six, + δραχμή, drachma.] An ancient Greek gold coin of the value of 6 drachmas.

hexaëdral (hek-sạ-ē'drạl), *a.* See *hexahedral.*

hexagon, *n.*—**Brianchon hexagon,** a hexagon circumscribed about a conic. See *hexagram*, 2.—**Lemoine hexagon,** the hexagon whose vertices are the 6 intersections with the sides of a triangle of the parallels to the sides drawn through the symmedian point (the Lemoine point K). **Pascal hexagon,** a hexagon inscribed in a conic. See *hexagram.*

Hexagonal number. See ★*number.*

hexagonite (hek-sag'ọ-nīt), *n.* [*hexagon* + *-ite*[2].] A pink variety of tremolite from St. Lawrence county, New York, supposed at first to be a new hexagonal species. It contains a small amount of manganese.

hexagonize (hek-sag'ọ-nīz), *v. t.*; pret. and pp. *hexagonized*, ppr. *hexagonizing.* [*hexagon* + *-ize.*] To change into a hexagon; make hexagonal. *N. E. D.*

Hexagramminæ (hek″sạ-gra-mī'nē), *n. pl.* [NL., ⟨ *Hexagrammos* + *-inæ.*] A subfamily of fishes typified by the genus *Hexagrammos.*

hexahedrite (hek-sạ-hē'drit), *n.* [*hexahedr-on* + *-ite*[2].] A meteoric iron having a cubic or hexahedral structure and cleavage. Iron meteorites of this class are much less common than the octahedrites. See ★*meteorite.*

hexahemeron (hek-sạ-hem'ẹ-rọn), *n.* Same as *hexaëmeron.*

hexahydrate (hek-sạ-hī'drāt), *n.* [Gr. ἑξ, six, + E. *hydr(ogen)* + *-ate*[1].] In *chem.*, a compound containing six molecules of water, as crystallized calcium chlorid or calcium chlorid hexahydrate ($CaCl_2,6H_2O$).

hexahydrated (hek-sạ-hī'drā-ted), *a.* In *chem.*, containing six molecules of water, as the mineral carnallite, which is hexahydrated potassium-magnesium chlorid ($KCl.MgCl_2.6H_2O$). *G. Lunge*, Sulphuric Acid, II. 44.

hexahydrocarvacrol (hek″sạ-hī-drọ-kär'vạ-krol), *n.* [Gr. ἑξ, six, + E. *hydro(gen)* + *carvacrol.*] A colorless oily compound, $CH_3C_6H_9(C_3H_7)OH$, formed by the action of hydrogen on carvacrol. It boils at 220° C.

hexahydrothymol (hek″sạ-hī-drọ-tī'mol), *n.* [Gr. ἑξ, six, + E. *hydro(gen)* + *thymol.*] compound, $CH_3.C_6H_9(C_3H_7)OH$, formed by the action of hydrogen on thymol. It closely resembles hexahydrocarvacrol in properties.

hexaicosane (hek-sạ-ī'kō-sān), *n.* [Also *hexeikosane*, and erroneously called *hexacosane*, *hexakosane*; Gr. ἑξ, six, + εἴκοσι, twenty, + *-ane.*] A soft, waxy compound, $C_{26}H_{54}$, closely resembling paraffin. It melts at 44° C.

hexakisoctahedral (hek″sạ-kis-ok-tạ-hē'-drạl), *a.* See ★*hexoctahedral.*

hexakistetrahedral (hek″sạ-kis-tet-rạ-hē'-drạl), *a.* Of or pertaining to a hexakistetrahedron; same as ★*hexatetrahedral.*

hexakistetrahedron (hek″sạ-kis-tet-rạ-hē'-drọn), *n.* [Gr. ἑξάκις, six times, + τέτρα-, four, + ἕδρα, base.] In *crystal.*, the hemihedral form of the hexakisoctahedron; same as *hexatetrahedron.*

hexakosane, *n.* See ★*hexaicosane.*

hexaldehyde (hek-sal'dē-hīd), *n.* [Gr. ἑξ, six, + E. *aldehyde.*] A colorless liquid, $CH_3(CH_2)_4CHO$, prepared by the distillation of a mixture of calcium formate and calcium caproate. It boils at 128° C. Also called *hexyl aldehyde*, *caproic aldehyde*, and *hexanal.*

hexamere (hek'sạ-mēr), *n.* [Gr. ἑξ, six, + μέρος, part.] In the nomenclature of the skeletal parts of reticulate sponges, or *Dictyospongidæ*, a reticulum mesh of the sixth order.

hexamerism (hek-sam'ẹ-rizm), *n.* [*hexamer-ous* + *-ism.*] The condition or state of having the organs arranged according to the number six or to a multiple of that number, as in some anthozoans, especially corals. *Science*, July 17, 1903, p. 80.

Hexameroceras (hek″sam-ẹ-ros'ẹ-ras), *n.* [Gr. ἑξαμερής, of six chambers, + κέρας, horn.] A Silurian genus of nautiloid *Cephalopoda*, belonging to the family *Trimeroceratidæ*, and characterized by having six lateral sinuses in the aperture.

hexamethylated (hek-sạ-meth'i-lāt-ed), *p. a.* [Gr. ἑξ, six, + E. *methyl* + *-ate*[1] + *-ed*[2].] Containing six methyl groups or radicals. *Buck*, Med. Handbook, VI. 785.

hexamethylene (hek-sạ-meth'i-lēn), *a.* [Gr. ἑξ, six, + E. *methylene.*] Containing six methylene (CH_2) groups.

hexanephric (hek-sạ-nef'rik), *a.* [Gr. ἑξ, six, + νεφρός, kidney.] Having six Malpighian vessels, as nine of the orders of insects.

hexaped (hek'sạ-ped), *n.* [Gr. ἑξ, six, + L. *pes* (*ped-*), foot.] See *hexapod.*

hexaphase (hek'sạ-fāz), *a.* [Gr. ἑξ, six, + φασις, phase.] Having six phases: said of certain types of alternating currents.

hexapodal (hek-sap'ọ-dạl), *a.* [*hexapod* + *-al*[1].] Same as *hexapodous.*

hexaprotodont (hek-sạ-prō'tọ-dont), *a.* [Gr. ἑξ, six, + πρῶτος, first, + ὀδούς (ὀδοντ-), tooth.] Having six lower incisors; resembling or having the characters of *Hexaprotodon*, a genus of extinct hippopotamuses distinguished by the presence of six lower incisors.

hexaradial (hek-sạ-rā'di-al), *a.* [Gr. ἑξ, six, + NL. *radius*, radius, + *-al*[1].] Having six parameres or structural radii.

The lily has the same regular typical form as the *hexaradial* coral or anemone.
Haeckel (trans.), Wonders of Life, p. 171.

hexarch (hek'särk), *a.* and *n.* [Gr. ἑξ, six, + ἀρχή, beginning (used for a vascular strand).]

I. *a.* Having six strands: as, a *hexarch* stele.

II. *n.* In *bot.*, a stele which has six pleroma strands.

hexasepalous (hek-sạ-sep'ạ-lus), *a.* [Gr. ἑξ, six, + NL. *sepalum*, sepal, + *-ous.*] In *bot.*, having six sepals.

hexastigm (hek'sạ-stim), *n.* [Also *hexastim*; Gr. ἑξ, six, + στίγμα, a point, dot.] A polystigm of 6 dots, that is, a system of 6 coplanar points, with all the ranges they determine (connectors).

In a *hexastim* there are 15 connectors and 45 codots. In a hexagram there are 15 fans and 45 diagonals.
Merriman and Woodward, Higher Mathematics, p. 77.

hexastylic (hek-sạ-stil'ik), *a.* [*hexastyle* + *-ic.*] Same as *hexastylar.*

hexasulphid, hexasulphide (hek-sạ-sul'fid, or -fīd), *n.* [Gr. ἑξ, six, + E. *sulphid.*] In *chem.*, a compound containing six atoms of sulphur, as triphosphorus hexasulphid (P_3S_6).

hexatetrahedral (hek″sạ-tet-rạ-hē'drạl), *a.* Of or pertaining to a hexatetrahedron or the class of crystals of which it is the characteristic form. See ★*symmetry*, 6.

hexavalency (hek-sav'a-lẹn-si), *n.* [Gr. ἑξ, six, + E. *valency.*] In *chem.*, valence or valency equivalent to that of six monad atoms, as of hydrogen. *W. Ramsay*, in N. Y. Sun, Dec. 30, 1900.

hexazane (hek-saz'ān), *n.* [Gr. ἑξ, six, + E. *az(ote)* + *-ane.*] Same as *piperidine.*

hexazene (hek-saz'ēn), *n.* [Gr. ἑξ, six, + E. *az(ote)* + *-ene.*] A colorless liquid, $NH<^{CH_2.CH_2}_{CH:CH}>CH_2$, which decomposes when boiled. Also called *tetrahydropyridine* and *piperideine.*

hexeikosane, *n.* See ★*hexaicosane.*

hexene (hek'sēn), *n.* [Gr. ἑξ, six, + *-ene.*] A colorless, liquid, olefinic compound, $CH_3(CH_2)_3CH:CH_2$, which boils at 68–70° C. It is prepared from hexyl chlorid and is homologous with ethylene. Also called *hexylene* and *normal butylethylene.*

hexine (hek'sin), *n.* [Gr. ἑξ, six, + *-ine*[2].] A colorless unstable liquid, $CH_3.C{\equiv}C(CH_2)_2CH_3$, which boils at 83–84° C. It is prepared from hexylene bromide and is homologous with acetylene. Also called *methyl normal propylacetylene.*

hexiodide (hek-sī'ọ-did), *n.* [Gr. ἑξ, six, + E. *iodide.*] In *chem.*, a compound containing six atoms of iodine: as, sulphur *hexiodide* (SI_6).

hexite (hek'sīt), *n.* [Gr. ἑξ, six, + *-ite*[2].] An alcohol, such as mannitol, containing six hydroxyl groups. The compounds are sometimes termed *hexahydric alcohols* and *hexacid alcohols.*

hexobiose (hek-sō-bī'ōs), *n.* [Gr. ἑξ, six, + E. *biose.*] A disaccharide which yields two hexose molecules on decomposition, as cane sugar, which yields one molecule of dextrose and one of levulose.

hexoctahedral (hek-sok-tạ-hē'drạl), *a.* [*hexoctahedr-on* + *-al*[1].] Of or pertaining to a hexoctahedron or to the class of crystals of which it is the characteristic form. See ★*symmetry*, 6.

hexode (hek'sōd), *a.* [Gr., ⟨ ἑξ, six, + ὁδός, way.] In *elect.*, six-way; sixfold; such that six messages can be sent at the same time over the same wire, as in a multiplex telegraph.

hexoic (hek-sō'ik), *a.* [Gr. ἑξ, six, + *-o-* + *-ic.*] Pertaining to hexane.—**Hexoic acid.** Same as normal *caproic acid.*

hexone (hek'sōn), *n.* [= G. *hexon*; ⟨ Gr. ἑξ, six, + *-one.*] **1.** A term applied by Kossel to any one of several bases, such as arginin, lysin, etc., which contain six atoms of carbon in the molecule.

This gave a solution which should contain the *hexon* bases, viz., arginine, lysine, histidine, and lysatine.
Amer. Chem. Jour., April, 1903, p. 378.

2. A liquid mixture of hydrocarbons, C_6H_8, obtained by compressing illuminating gas, which has been prepared by heating fats and resins. It boils at 70–85° C.

hexonic (hek-son'ik), *a.* [*hexone* + *-ic.*] Of or pertaining to the hexone bases arginin, lysin, and histidin. See ★*hexone*, 2.

hexosazon (hek-sos-az'on), *n.* [Gr. ἕξ, six, + E. *osazon.*] The osazon of a hexose sugar; that is, a sugar containing six carbon atoms.

hexose (hek'sos), *n.* [Gr. ἕξ, six, + *-ose.*] A simple sugar (monosaccharide) containing six atoms of carbon.

hexoside (hek'sō-sid), *n.* [*hexose* + *-ide*[1].] A glucoside derived from a hexose.

hexotriose (hek-sō-trī'ōs), *n.* [Irreg. < Gr. ἕξ, six, + *-o-* + Gr. τρι-, three, + *-ose.*] The class name of sugars which contain eighteen atoms of carbon in the molecule and are capable of resolution into three molecules of a sugar which contains six atoms of carbon in the molecule. Thus raffinose is a hexotriose and may be decomposed into equal molecules of fructose (levulose), glucose, and galactose.

hexoylene (hek-sō'i-lēn), *n.* [Gr. ἕξ, six, + *-o-* + *-yl* + *-ene.*] A colorless liquid, $CH_3(CH_2)_3C{\vdots}CH$(?), prepared from hexylene bromide. It boils at 80–85° C. Also called *5-hexine* and *normal-butylacetylene.*

hextetrahedral (heks-tet-ra-hē'dral), *a.* Same as ★*hexatetrahedral.*

hextetrahedron (heks″tet-ra-hē'dron), *n.* Same as *hexatetrahedron.*

hexylamine (hek-sil-am'in), *n.* [Gr. ἕξ, six, + *-yl* + *amine.*] A poisonous ptomaïne ($C_6H_{15}N$) found in cod-liver oil and also obtained from yeast.

hexylene (hek'si-lēn), *n.* [Gr. ἕξ, six, + *-yl* + *-ene.*] A colorless liquid, $CH_3(CH_2)_3CH{:}CH_2$, prepared from hexyl chlorid and formed during the distillation of boghead coal or from superheated paraffin. It boils at 68–70° C. Also called *5-hexene.*

hexylic (hek-sil'ik), *a.* [*hexyl* + *-ic.*] Pertaining to hexane or hexylic acid. Same as *hexyl.*—**Hexylic acid.** Same as *caproic acid.*

Heyduck, *n.* Same as *Haiduk* (which see).

hf. A contraction of *half.*

hf. bd. A contraction of *half-bound.*

hf. cf. A contraction of *half calf.*

hg[2]. An contraction of *hectogram.*

H. G. An abbreviation (*a*) of *His Grace;* (*b*) of *Horse Guards.*

H. G. D. H. An abbreviation of *His* (or *Her*) *Grand Ducal Highness.*

H. I. An abbreviation of *Hawaiian Islands.*

hiagua, *n.* See ★*haigua.*

hialoa (hē-ä-lō'ä), *n.* [Hawaiian.] A common weed, *Waltheria Americana,* of the family *Sterculiaceæ,* occurring in many of the Polynesian islands and most tropical countries.

hiant (hī'ant), *a.* [L. *hians* (*hiant-*), ppr. of *hiare,* gape: see *hiatus.*] Gaping: said of the jaws of certain insects.

Hiatus aorticus, the aortic orifice in the diaphragm. See *aortic orifice.*—**Hiatus ventriculi,** a term proposed by A. Hill as synonymous with *choroidal fissure,* or the lateral portion of the rima transversa cerebri. *Philos. Trans. Roy. Soc.* (London), 1893, ser. B, p. 425.

hiba (hē'bä), *n.* [Jap.] A species of cypress, *Thuyopsis dolobrata,* easily distinguished from other species by the yellow-green of the upper side of the leaves and the blue-green and peculiar marking of the under side. Its wood is yellow, and is remarkably durable in water, so that it is much used for stakes as well as in ship- and bridge-building. It is also used for lacquer-ware. See *Thuyopsis.*

hibachi (hē-bä'-chē), *n.* [Jap. *hibachi,* < *hi,* fire, + *hachi,* a bowl, basin, pot.] In Japan, a pan or box in which charcoal is kept burning for the purpose of warming the hands or heating an apartment; a brazier.

Hibachi, with Tongs.

hibernant (hī'-bèr-nant), *a.* and *n.* **I.** *a.* Hibernating or lying dormant during winter. [Rare.]

II. *n.* An animal that hibernates; a resident of a given locality during the winter season only. [Rare.]

hibernate, *v. i.*—**Hibernating gland.** See ★*gland.*

hibernator (hī'bèr-nā-tor), *n.* An animal that hibernates or lies dormant during the winter; contrasted with ★*estivator.*

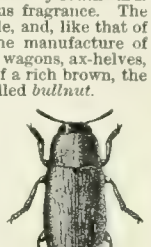
The Taurdc is really one of the *hibernators* like our own hedgehog. *Sunday Mag.,* 1888, p. 674.

Hiberno-Celt (hī-bèr'nō-selt″), *n.* A native Irishman of Celtic stock.

hibschite (hib'shīt), *n.* [Named after J. E. *Hibsch.*] A mineral occurring with green melanite crystals in the phonolite of the Marienberg near Aussig, Bohemia. It is isotropic, has an octahedral form, and, in composition, is near lawsonite, having perhaps the same formula ($H_4CaAl_2Si_2O_{10}$).

hickory, *n.* **3.** In Australia, a name applied to several trees the wood of which is used for the same purposes as that of the American hickories, especially the hickory-acacia, *Acacia leprosa,* the blackwood of Australia, *Acacia Melanoxylon,* and the hickory-eucalyptus, *Eucalyptus punctata.*—**4.** In Tasmania, a shrub or small tree of the rue family, *Phebalium squameum,* conspicuous for its strong smell, silvery under-surface of the leaves, and small pink-and-white flowers.—**Big-bud hickory,** *Hicoria alba.* See *white-heart* ★*hickory* and *mockernut.* [Florida.]—**Bitter hickory.** Same as *bitternut.*—**Black hickory.** (*a*) Same as *pignut,* 2. (*b*) Same as *white-heart* ★*hickory.*—**Broom-hickory,** the pignut, *Hicoria glabra:* so called from the use of its finely split wood in making brooms.—**Brown hickory.** See *pignut,* 2.—**Hickory gall-louse, horned-devil caterpillar.** See ★*gall-louse,* ★*caterpillar.*—**Nutmeg-hickory.** See ★*nutmeg-hickory.*—**White hickory.** (*a*) Same as *white-heart* ★*hickory.* (*b*) Same as *pignut,* 2. (*c*) Same as *bitternut.* (*d*) The shellbark, *Hicoria ovata.*—**White-heart hickory,** the mockernut, *Hicoria alba,* a timber-tree distributed from southern Ontario and southern New England over the eastern United States, abundant only southward. The leaves have a conspicuous resinous fragrance. The wood is heavy, hard, tough, and flexible, and, like that of the shellbarks, is of great value in the manufacture of agricultural implements, carriages and wagons, ax-helves, etc., and for fuel. The heart-wood is of a rich brown, the thick sap-wood nearly white. Also called *bullnut.*

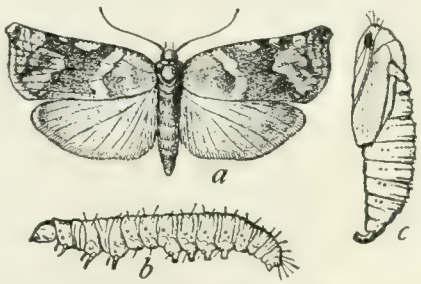
hickory-aphis (hik'ō-ri-ā″fis), *n.* A plant-louse, *Lachnus caryæ,* which infests the twigs and small branches of the hickory.



Hickory-borer (*Dicerca lurida*).

hickory-borer (hik'ō-ri-bōr″-èr), *n.* Any one of more than forty species of cerambycid, ptinid, or scolytid beetles whose larva bore into the trunk and limbs of hickory-trees. A common hickory-borer is *Dicerca lurida.*—**Painted hickory-borer,** a cerambycid beetle, *Cyllene pictus.*

hickory-moth (hik'ō-ri-môth), *n.* Any one of several moths whose larvæ feed on hickory leaves. Among them are the hickory tussock-moth, *Halisidota caryæ,* of the family *Arctiidæ; Ennomos subsignarius,* of the family *Geometridæ; Acrobasis rubrifasciella,* of the family *Phycitidæ;* and *Archips* (*Cacœcia*) *semiferana,* of the family *Tortricidæ.*



Hickory-moth (*Archips semiferana*).
a, moth; *b,* larva; *c,* chrysalis. About twice natural size.

hickory-pole (hik'ō-ri-pōl), *n.* A pole of hickory, often used as a flagstaff. From 1828 to 1860 a pole of this kind with a brush at the top was the emblem of the Democratic party in the United States: in allusion to Andrew Jackson's popular name of 'Old Hickory.' *Jour. Amer. Folk-lore,* Oct.–Dec., 1902, p. 245.

hickory-shad, *n.* **2.** A fish, *Pomolobus mediocris,* of the Atlantic coast of the United States.

Hicks's bottles. See ★*bottle*[2].

Hicoria (hi-kō'ri-ä), *n.* [NL. (Rafinesque, 1808), < *hickory,* the American name.] A genus of dicotyledonous trees belonging to the family *Juglandaceæ.* Until recently it has been known as *Carya,* a name given it by Nuttall, but now Rafinesque's name *Hicoria,* from the aboriginal Indian name, has been restored, and all the species have been renamed under this latter generic name. The species of *Hicoria* are all native to eastern North America, and are about fifteen in number. The shellbark hickory, pecan, pignut, mockernut, and bitternut all belong in this genus. See *Carya.*

hidalga (ē-däl'gä), *n.* [Sp.] A Spanish noblewoman. See *hidalgo.*

hidalgoism (hi-dal'gō-izm), *n.* Same as *hidalgism* (which see).

hidated (hī'dā-ted), *p. a.* Measured by or reckoned in hides. See *hide*[3], *n.*

An elaborate *hidated* survey, which possesses a peculiar value from its references to the Domesday survey. *Athenæum,* Sept. 28, 1889, p. 421.

hidation (hī-dā'shon), *n.* Measurement or assessment by hides.

hideling, *a.* **II.** *n.* A person or a thing that is in the habit of hiding itself. *N. E. D.*

hideondo (ē-dā-on'dō), *n.* [Amer. Sp.] The creosote-bush, *Covillea tridentata.*

hidradenitis (hi-drad-e-nī'tis), *n.* [NL., < Gr. ἱδρ(ώς), sweat, + ἀδήν, gland, + *-itis.*] Inflammation of the sweat-glands.

hidroadenitis (hid″rō-ad-e-nī'tis), *n.* Same as ★*hidradenitis.*

hidropoiesis (hid″rō-poi-ē'sis), *n.* [NL., < Gr. ἱδρώς, sweat, + ποίησις, making.] Secretion of the sweat.

hidropoietic (hid″rō-poi-et'ik), *a.* Pertaining to or characterized by hidropoiesis; sudoriparous.

hielaman (hē'la-man), *n.* [Australian *elimang* (Hunter), *e-lee-mong* (Collins), *hīlaman* (Ridley).] A narrow, elongated shield used by the Australian aborigines. *E. E. Morris,* Austral English.

hielaman-tree (hē'la-man-trē″), *n.* The bat's-wing coral-tree, *Erythrina Vespertilio,* so called from the use of its wood by the Australian natives for making their hielamans or shields. See *bat's-wing* ★*coral-tree.*

Hieracian (hī-e-rā'shan), *n.* Same as *Hieracite.*

hieratica (hī-e-rat'i-kä), *n.* [L. fem. of *hieraticus,* hieratic.] A grade of papyrus, used for religious writings in Egypt.

hieratite (hī'e-ra-tīt), *n.* [Named from *Hiera,* an ancient name of Vulcano.] A mineral containing silicon, fluorin, and potassium, obtained in isometric crystals from the aqueous solution of stalactitic concretions found at the crater of Vulcano, one of the Lipari Islands.

hierocratic (hī″e-rō-krat'ik), *a.* [*hierocracy* (*-crat-*) + *-ic.*] Pertaining to or of the nature of a hierocracy; hierarchal: as, *hierocratic* rule.

hierodulic (hī″e-rō-dū'lik), *a.* [*hierodule* + *-ic.*] Of or pertaining to the hierodule or temple slave.

hierogamy (hī-e-rog'a-mi), *n.* [Gr. ἱερός, sacred, + γάμος, marriage.] A sacred marriage. *Stand. Dict.*

We must now recall the fact that the *hierogamy* of Zeus and Europa was annually celebrated at Gortyna in Crete. *Lenormant* (trans.), Beginnings of Hist., App. i, p. 550.

hieroglyphic. I. *a.* **4.** Of or pertaining to certain vermiform structures which occur in the flysch, in Carpathian sandstone, and in the marine facies of the Cretaceous and Jurassic formations of the Alps. See II, 2.

II. *n.* **2.** One of certain vermiform structures, abundant in the Cretaceous and Jurassic rocks of some countries, probably in part the trails of mollusks or worms.

hieroglyphism (hī-e-rog'li-fizm), *n.* [*hieroglyph* + *-ism.*] The use of hieroglyphs in expressing ideas.

It is far beyond the scope of the present article to describe fully the development of *hieroglyphism* in Egypt. *Encyc. Brit.,* I. 605.

hieroglyphology (hī″e-rō-gli-fol'ō-ji), *n.* [*hieroglyph* + Gr. *-λογία,* < λέγειν, speak.] The scientific study of hieroglyphs.

hieroglyphy (hī-e-rog'li-fi), *n.* [*hieroglyph* + *-y*[1].] The art of writing in hieroglyphs; the use of hieroglyphs.

hieroglyptic (hī″e-rō-glip'tik), *a.* [Gr. ἱερός, sacred, + γλυπτικός, carved: see *glyptic.*] Same as *hieroglyphic.*

Two other characteristics of *hieroglyptic* script are also to be noted. *A. J. Evans,* in Jour. Hellenic Studies, XIV. 300.

hieromania (hī″e-rō-mā'ni-ä), *n.* [NL., < Gr. ἱερός, sacred, religious, + μανία, madness.] Religious mania.

hieropœi (hī″e-rō-pē'ī), *n. pl.* [NL., < Gr. ἱεροποιοί, pl. of ἱεροποιός, < ἱερά, sacred rites, + ποιεῖν, do.] In *Gr. antiq.,* secondary officers of temples, usually grouped in colleges, charged with assisting the priests, and with various duties about the temples.

They are the accounts of the *Hieropœi* of the Delian temple of Apollo, and they give, amongst other things, the salaries of various officials. *F. B. Jevons,* in Jour. Hellenic Studies, XV. 246.

high. I. *a.* 15. Noting the strength of a suit, as in whist or bridge: as, queen *high* in spades, and ten *high* in diamonds. – **High roof, tide, vacuum.** See ★*roof*[1], etc. **No higher** (*naut.*), an order to the helmsman not to bring the ship any closer to the wind. **The sun is high.** See ★*sun*[1]. – **To point high.** See ★*point*[1].

II. *n.* 3. One of the points in the game of all-fours.—4. The area of high barometric pressure shown on the daily weather map, usually moving eastward and toward the equator, its front being marked by suddenly falling temperature, drier air, strong polar winds, and spits of rain or snow, followed by clear weather and by a temperature that may be either high or low depending on the balance between radiation, isolation, connection, and thermodynamic action.

The hot wave had its inception in the wake of a high area, which dropped down from northern New York over Virginia and the neighboring States. Here it seemed to join forces with the permanent *high* over the ocean and remained nearly stationary for a number of days.
Yearbook, U. S. Dept. Agr., 1900, p. 332.

Tropical high, the area of high pressure under the tropics of Capricorn or Cancer, which prevails over the continents in winter, but over the oceans in summer.

high-ball (hī′bâl), *n.* 1. A method of settling who shall pay for something, in which the numbered balls that are used in the game of pin-pool are thrown out from a receptacle, the highest ball winning and the lowest paying.—2. A 'long drink,' consisting of a modicum of whisky diluted with club soda or mineral water, and served with cracked ice in a tall glass. [Slang.]

high-blower (hī′blō″ėr), *n.* A horse that 'blows' vigorously in galloping: a healthy habit, entirely different from 'roaring.' *U. S. Dept. Agr.*, Rep. on Diseases of the Horse, 1903, p. 118.

high-duty (hī′dū″ti), *a.* Performing a high percentage of service; high-economy: used of pumping-engines. A high-duty pump is one that delivers a proportionately large number of foot-pounds of work, in the form of water pumped, per million heat-units furnished by the boiler. The American basis for measuring duty is now the million heat-units furnished by the boiler, instead of (as formerly) a given quantity of coal burned.

high-five (hī′fīv), *n.* See ★*cinch*, 4.

high-flier, *n.* 3. A phaëton with low front wheels, arched reaches, and boxes over both axles. The body was hung high upon four S-springs. It was popularized by the Prince of Wales (afterward George IV.) and other young sporting men of his day.

high-grade (hī′grād), *a.* Of a superior grade or quality; specifically, having more than three quarters pure blood: applied by stock-breeders to animals.

high-handedness (hī′han″ded-nes), *n.* High-handed, arbitrary, and unreasonable conduct or treatment.

The "free-choice" system in club practice was generally recommended as supplying the relatively best protection against the *high-handedness* of the clubs.
Lancet, April 4, 1903, p. 997.

high-heeled (hī′hēld), *a.* Made with or having high heels: as, *high-heeled* shoes.

high-kilted (hī′kil″ted), *a.* Having the skirt or petticoat kilted or tucked up.

Highland Scotch. See ★*Scotch*[1].

highlander, *n.* 2. A playing-card having slight blemishes on both surfaces. *Household Words*, VI. 332. – **Arctic highlanders,** the Eskimo tribe of Smith Sound, Greenland, so called by their discoverer, Sir John Ross.

high-low-jack, *n.* 2. A form of billiard-pool with fifteen object-balls, based in part on the card game of all-fours: once popular, but now obsolete.

high-pressure, *a.* 2. Noting an engine which exhausts at atmospheric pressure as distinguished from a condensing-engine; hence, non-condensing. This use of the term is confusing and inadvisable.

high-roller (hī′rō″lėr), *n.* A recklessly extravagant, high-living 'sport.' [Slang.]

high-warp (hī′wärp), *a.* A translation of French *haute-lisse* (which see).

All three of the tapestry looms at Merton are constructed on the *high-warp* system.
A. Vallance, William Morris, p. 92.

Higo pottery. See ★*pottery*.

higuera (ē-gā′rä), *n.* [One of the extended uses of Sp. *higuera*, a fig-tree, < *higo*, < L. *ficus*, a fig: see *fig*[1].] In Porto Rico, the calabash-tree, *Crescentia Cujete*. See *Crescentia*. In Mexico and other Spanish-American countries it is commonly called *jícara*.

hike (hīk), *v.* [Also *hyke*; a widely used dialect word, parallel to *hick*[1] and *hitch*, recently emerging into some colloquial use; prob. orig. an imitative word, parallel to *hit*, expressing a quick stroke or motion; compare E. Fries. *hikken*, thrust, push, punch. See *hick*[1] and *hitch*.] I. *trans.* 1. To thrust; push; punch or gore with the horns.—2. To toss up and down; swing; jolt.—3. To lift out with a sharp instrument; move with a jerk; pull; raise; lift.—4. To snatch away; run off with.—5. To dismiss peremptorily.

II. *intrans.* To move suddenly or hastily; go away; walk off; decamp. [Prov. or colloq. Eng. and U. S., in all uses.]

hiker (hī′kėr), *n.* [*hike*, *v.* + *-er*[1].] An overdrawn bridle-check. [Local, southern U. S.]

hikuli (hē-kō′lē), *n.* [Tarahumar, a Piman dialect spoken in Chihuahua, Mexico.] In the state of Chihuahua, Mexico, the name of the narcotic cactus *Lophophora Williamsii*, a plant held in high esteem by the Indians. See ★*mescal-button*.

At one of the feasts which I witnessed I wished to taste *hikuli*, as it was new to me. . . . The man who carried the gourd first danced in front of the shaman, then around the fire, and finally brought it to me. The liquid tasted somewhat bitter, but not exactly disagreeable; and while I drank, the man looked at me with astonishment, as if he had expected that *hikuli* would refuse to be taken by me.
C. Lumholtz, Unknown Mexico, I. 374.

hil, *n.* and *v.* A simplified spelling of *hill*.

hilaria (hi-lā′ri-ä), *n. pl.* [L., neut. pl. of *hilaris*, joyful: see *hilarious*.] In *Rom. antiq.*, a joyous festival in honor of Cybele, celebrated at the vernal equinox.

hilasmic (hi-laz′mik), *a.* [Gr. ἱλασμός, propitiation, < ἱλάσκεσθαι, appease, propitiate.] Propitiatory. [Rare.]

Hildebrandic (hil-dē-bran′dik), *a.* Same as *Hildebrandine*.

hill[1], *n.*, 3. (*b*) The cluster of plants in a hill. Formerly, the practice of 'hilling' was general, when only hand tools were used; but latterly the universal tendency is to practise level culture. While the hill itself has disappeared, the group of plants has taken the name. A 'hill,' therefore, is a more or less separated or detached group of two or more plants, in contradistinction to the single plants that follow each other regularly in a drill.— **Lenticular hill,** a drumlin, or drumloidal hill.

They exhibit many variations in size and shape, however, some being nearly circular, mammillary hills, and others *lenticular hills*, in which the longer axis is two or three times as great as the shorter axis.
I. C. Russell, Glaciers of North America, p. 24.

Mammillary hill, a hill of rounded form. *I. C. Russell*, Glaciers of North America, p. 24.— **Remnant hill,** a residual hill remaining when the neighboring surface is worn down to a peneplain; a small monadnock. *W. M. Davis*, Elem. Phys. Geog.

hill[1], *v. i.* 2. To assemble on rising ground. [Rare.]

In the spring the Ruffs *hill*, as it is termed; that is they assemble upon a rising spot of ground contiguous to where the Reeves propose to deposit their eggs.
G. Montagu, Ornith. Dict., p. 444.

hill-engraver (hil′en-grā″vėr), *n.* A man skilled in representing topography by means of hachures or contours on an engraved plate.

This course, in addition to being, I believe, the best method of representation, would have the additional advantage of continuing for a time the employment of *hill-engravers*, who are, as already stated, so much required for the completion of the hill-engraving of the 1-inch map. *Geog. Jour.* (R. G. S.), XV. 589.

hill-fox (hil′foks), *n.* A fox, *Vulpes montanus*, very similar to the common fox of Europe, but paler: found in the Himalayas.

hill-grub (hil′grub), *n.* A British gardeners' name for the larva of a European noctuid moth, *Charæas graminis*. It injures pastures and meadows.

hill-map (hil′map), *n.* A topographic map showing the relief of the land surface.

Progress of the 1-inch *hill-map* of the United Kingdom. *Geog. Jour.* (R. G. S.), XV. 578.

hill-planting (hil′plan″ting), *n.* Same as ★*mound-planting*.

Hillsboro sandstone. See ★*sandstone*.

hill-shading (hil′shā″ding), *n.* A conventional graphic device for representing the slopes of the earth's surface.

The map is clearly drawn, and printed in four colours—sea, blue; *hill-shading*, brown; forests, green; and rivers, roads, and lettering, black.
Geog. Jour. (R. G. S.), XV. 678.

hilum, *n.*, 2. (*d*) A protrusion of a portion of the iris through a rupture of the cornea. (*e*) A depression on the ventrolateral surface of the mammalian brain in the region of the vallecula Sylvii. *Philos. Trans. Roy. Soc.* (London), 1899, ser. B, p. 297.

hilus (hī′lus), *n.* Same as *hilum*. *Proc. Zool. Soc. London*, 1902, I. 226.

H. I. M. An abbreviation of *His* (or *Her*) *Imperial Majesty*.

hind[1], *n.* 3. A small bass-like fish, *Cephalopholis cruentalis*, of the family *Serranidæ*, found in the West Indies. Those found in deep waters are red, and are known as *red hinds*; those found near the shore are dark brown, and are known as *brown hinds*. – **Rock hind,** a species of grouper of the family *Serranidæ*, *Epinephelus adsensionis*, found in the West Indies. – **Speckled hind,** a species of grouper, *Epinephelus drummond-hayi*, characterized by dark-brown color marked with bright white spots, found in the Gulf of Mexico.

hind-castle (hīnd′kâs″l), *n.* The high poop, or after-castle, on old-fashioned vessels, as distinguished from the *forecastle*; formerly the elevated structure on the after part of a ship, the top of which was used as a fighting-platform.

hinder[2] (hin′dėr), *n.* In *hand-ball*, a ball struck by a player which afterward strikes his opponent; or one with which the server hits his opponent while standing in the ace-line; or one which strikes the opponent, who thus hinders it from reaching the front wall.

Hindia (hin′di-ä), *n.* [NL., named after G. J. *Hinde*.] A Silurian genus of lithistid sponges, belonging to the suborder *Eutaxicladina*, characterized by the spherical body and the composition of the skeletal elements which consist of three single rays and a reduced button-like fourth ray.

hind's-foot (hīnds′fůt), *n.*; pl. *hind's-feet* (-fēt). A crossbow bent by a lever composed of two articulated pieces. See *goat's-foot lever*, under *lever*[1].

Hind's nebula. See ★*nebula*.

Hindu numerals. See ★*numeral*.

hindwing (hīnd′wing), *n.* A moth of the family *Noctuidæ*.—**American copper hindwing,** *Pyrophila pyramidoides*, a noctuid moth of wide range in the United States, where its larvæ feed on the foliage of the grape and the Virginia creeper.

hinge, *n.* 6. In *bot.*, the flexible lamella of the guard-cells of a stoma which renders them mobile. – **Frontonasal hinge,** in *ornith.*, a transverse groove which more or less completely separates the nasals and frontals, permitting considerable freedom of movement, in a vertical plane, to the beak. It is most marked in parrots, where the separation is nearly or quite complete, but is found to a lesser degree in many other birds, such as cormorants. This arrangement permits the beak to serve to some extent as an organ of prehension, and facilitates the capture and manipulation of food. Also *nasal hinge*.— **Nasal hinge.** Same as *frontonasal* ★*hinge*. — **Parliament hinge,** a simple form of hinge or butts in which the joint projects from the door and frame, keeping the door when open away from the molding or edge of the door-frame.

hinge-area (hinj′ä″rē-ä), *n.* The space between the beaks of the dorsal and ventral valves of a bivalve mollusk.

hinge-ligament (hinj′lig″a-ment), *n.* In bivalve mollusks, a tough, uncalcified, elastic membrane which connects the two valves. It consists of two parts, the external, or ligament proper, and the internal, or cartilage. The former is inelastic, while the latter is very elastic and is composed of parallel fibers.

The operation of [the *hinge-ligament*] . . . is in opposition to that of the adductor muscles. When the latter close the valves, they compress the ligament, an action which its elasticity resists: thus its operation tends in part towards keeping the valves open. But when ligament and cartilage are both fully developed, they work in opposition to one another, the ligament, by its resistance to compression, preventing any straining of the adductor muscles when the valves are open, and the cartilage, for the same reason, preventing the ventral margins of the shell from closing too rapidly upon one another when the valves are being shut. *Cambridge Nat. Hist.*, III. 272.

hinge-plate (hinj′plāt), *n.* In the *Brachiopoda*, a plate which bounds the elevated sockets of the dorsal valve; in the *Pelecypoda*, the horizontal lamina of the cardinal margin on which the teeth are set.

Hinnites (hi-nī′tēz), *n.* [NL., < Gr. ἵννος, a mule, + *-ites*, E. *-ite*[2].] A genus of pionodesmaceous pelecypod mollusks belonging to the family *Pectinidæ*, characterized by an adherent and more or less distorted shell. It extends from the Trias to the present time.

hinoki (hē-nō′kē), *n.* [Jap. *hi-no-ki*, 'fire-tree': *hi*, fire, *no*, of, *ki*, tree.] A variety of the Japanese cypress, *Chamæcyparis obtusa*, having foliage of a golden color. See *Retinospora*. This tree is particularly sacred in Shinto worship, and on this account is cultivated more than any other. Its wood is white or pink, smooth, light, and very tough. It is preferred to all others for lacquer-ware, and is used exclusively in building Shinto temples.

hinterhand (hin′tėr-hand), *n.* [G.] In *skat*, the last player on the first trick.

hinterland (hin′tėr-land), *n.* [G., < *hinter*, back, + *land*, country.] Territory that lies

back of and is tributary to a coast region or port.

The province of Shantung is the *hinterland* of the very large harbor the Germans have seized.
Bulletin Amer. Geog. Soc., XXX. 57.

hintzeite (hint'se-īt), *n.* [G. *hintzit*, named (by L. Milch, 1890) after C. H. *Hintze*, a German mineralogist.] Same as ★*heintzeite*.

Hiodon (hī'ō-don), *n.* [NL. (Le Sueur, 1818), erroneously for *Hyodon*, < Gr. ὑ(οειδής), Y-shaped (see *hyoid*), + ὀδοὺς (ὀδοντ-), tooth.] A genus of mooneyes, herring-like fishes of a brilliant silvery color, remarkable for a row of strong teeth on the tongue: found in the Mississippi basin and neighboring waters. *H. tergisus* is the common species.

Hiodontidæ (hī-ō-don'ti-dē), *n. pl.* [NL., < *Hiodon(t-)* + *-idæ*.] A family of herring-like fishes known as mooneyes, typified by the genus *Hiodon*. Three species are known, all of which are confined to the Mississippi valley and neighboring waters.

hi-ogi (hē-ō'gē), *n.* [Jap. *hi-ōgi*, < *hi*, fire (in *hi-noki*: see ★*hinoki*), + *ōgi*, a folding fan.] In Japan, a folding court-fan made of hinoki, a delicate brown wood used in its natural color.

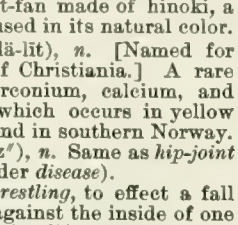
hiortdahlite (hē-ôrt'dä-līt), *n.* [Named for Prof. Th. *Hiortdahl* of Christiania.] A rare silicate containing zirconium, calcium, and sodium, with fluorin, which occurs in yellow triclinic crystals: found in southern Norway.

hip-disease (hip'di-zēz″), *n.* Same as *hip-joint disease* (which see, under *disease*).

hipe (hīp), *v. i.* In *wrestling*, to effect a fall by pressing the knee against the inside of one of the opponent's legs after lifting him from the ground. Also spelled *hype*.

hip-pain (hip'pān), *n.* Sciatica. [Colloq.]

hippalectryon (hip-a-lek'tri-on), *n.* [Gr. ἱππαλεκτρυών, < ἵππος, horse, + ἀλεκτρυών, cock.] In *Gr. antiq.*, an imaginary animal which combines the head and front of a horse with the tail and feet of a cock. Its representation in art is not common. The most important example is a fragment of late sixth-century sculpture found upon the Acropolis at Athens.



Hippalectryon.
From an amphora in the Louvre.

hipparaffin (hi-par'a-fin), *n.* [*hip(puric)* + *paraffin*.] A colorless compound, $CH_2(NHCOC_6H_5)_2$, formed by the oxidation of hippuric acid or from benzonitrile and methylal. It crystallizes in long needles and melts at 220.5–221° C. Also called *methylene-dibenzamide*.

hipparch (hip'ärk), *n.* [Gr. ἱππάρχης, also ἱππαρχος, < ἵππος, horse, + ἄρχειν, lead.] In *Gr. antiq.*, a leader of cavalry. In the Ætolian and Achean leagues this officer was charged with other functions.

Hipparchia (hi-pär'ki-ä), *n.* [NL.] Same as *Satyrus*, 3.

Hipparionyx (hi-pär-i-on'iks), *n.* [NL., < Gr. ἱππάριον, a colt, + ὄνυξ, a hoof.] A genus of Devonian *Brachiopoda* which attained a large size. It is named from the singular resemblance of the cast of the ventral valve to the impression of a colt's foot. It belongs to the family *Strophomenidæ*, and is abundant in and very characteristic of the Oriskany sandstone of New York and the equivalent horizon in other regions.

Hipparionyx proximus.
Oriskany sandstone.
(From N. Y. Geol. Reports, after Hall and Clarke.)

hipped[1], *p. a.* **2.** Having hips: said of a roof, or of one end of a roof. A roof may be hipped at one end and gabled at the other.

Hippelates fly. See ★*fly*[2].

hippiatrical (hip-i-at'ri-kal), *a.* Same as *hippiatric*.

hippiatrics (hip-i-at'riks), *n.* Same as *hippiatry*.

hippic (hip'ik), *a.* [Gr. ἱππικός, < ἵππος, horse, = L. *equus*, horse: see *equine*.] Of or pertaining to horses or horse-racing: as, *hippic* festivals.

Hippidium (hi-pid'i-um), *n.* [NL., < Gr. ἱππίδιον, dim. of ἵππος, a horse.] Same as *Pliohippus*.

hippo[2] (hip'ō), *n.* A colloquial abbreviation of *hippopotamus*.

In broad daylight a *hippo* charged the steamer that was towing my dahbeeah.
Sir S. W. Baker, Wild Beasts and their Ways, p. 247.

hippoboscid (hip-ō-bos'id), *n.* and *a.* **I.** *n.* A member of the family *Hippoboscidæ*.

II. *a.* Of or belonging to the dipterous family *Hippoboscidæ*.

Hippocampal commissure. See ★*commissure*.—**Hippocampal lobule.** See ★*lobus pyriformis*.—**Hippocampal tubercle.** See ★*tubercle*.

Hippocampus nudus, a small portion of hippocampus which appears on the median surface of the brain, filling up the concavity of the arc formed by the subsplenial bending of the fascia dentata.

hippocentaur (hip-ō-sen'târ), *n.* [Gr. ἱππόκενταυρος, < ἵππος, horse, + κένταυρος, centaur.] A fabulous animal, part man and part horse; a horse-centaur.

Hippocephalus (hip-ō-sef'a-lus), *n.* [NL., < Gr. ἵππος, horse, + κεφαλή, head.] A genus of sea-poachers of the family *Agonidæ*. They are remarkable for the external distortion of the head. *H. japonicus* is found in the Kurile Islands.

hippocoprosterin (hip″ō-kō-pros'te-rin), *n.* [Gr. ἵππος, horse, + κόπρος, dung, + στέαρ, fat, + *-in*[2].] A form of cholesterin obtained from the feces of the horse.

Hippocratic fingers or **nails, oath.** See ★*finger*, ★*oath*.

hippodamist (hi-pod'a-mist), *n.* [Gr. ἱππόδαμος, horse-taming, + *-ist*.] A horse-breaker.

hippodamous (hi-pod'a-mus), *a.* [Gr. ἱππόδαμος, horse-taming, < ἵππος, horse, + δαμάζειν, tame.] Relating to the taming or breaking of horses.

hippo-fly (hip'ō-flī), *n.* An undetermined gadfly of the family *Tabanidæ*, common in the upper Nile valley and in wet places in equatorial Africa.

Owing to the numerous swamps, flies of various kinds are abundant, and as early as September the large biting fly called the "*hippo*" *fly* was a great annoyance. Our stock suffered severely from the thousands of these flies which attacked them every evening.
Geog. Jour. (R. G. S.), XVIII. 75.

hippoform (hip'ō-fôrm), *n.* [Gr. ἵππος, horse, + L. *forma*, shape.] Having the form of a horse. *Amer. Anthropologist*, Jan.–March, 1903, p. 138.

Hippoglossina (hip″ō-glo-sī'nä), *n.* [NL., < Gr. ἵππος, horse, + γλῶσσα, tongue, + *-ina*[1].] A genus of flounders of the shores of tropical America. *H. macrops*, of the west coast of Mexico, is the species longest known.

hippoid (hip'oid), *a.* and *n.* [Gr. ἵππος, horse, + εἶδος, form.] **I.** *a.* Pertaining to or having the characters of the *Hippidæ*.

II. *n.* An animal which is related to or resembles the horse.

hip-pole (hip'pōl), *n.* A beam which supports an angle-rafter.

hippological (hip-ō-loj'i-kal), *a.* Relating to hippology or the scientific study of the horse.

Hippolyte (hi-pol'i-tē), *n.* [NL. (Leach, 1813), < Gr. Ἱππολύτη, a female name.] The typical genus of the family *Hippolytidæ*.

Hippolytidæ (hip-ō-lit'i-dē), *n. pl.* [NL., < *Hippolyte* + *-idæ*.] A family of macrurous decapod crustaceans. They have a large rostrum, the eyes not covered by the carapace, the mandibles with or without a cutting-edge and palp, and the first and second pair of trunk-legs with chelæ. It includes about a dozen genera, among them being *Cryptocheles*, *Hippolyte*, and *Platybema*.

hippomelanin (hip-ō-mel'a-nin), *n.* [Gr. ἵππος, horse, + μέλας (μελαν-), black, + *-in*[2].] A black pigment which has been obtained from melanotic tumors of horses.

Hipponychidæ (hip-ō-nik'i-dē), *n. pl.* [NL., < *Hipponyx* (*-onych-*) + *-idæ*.] A family of tænioglossate pectinibranchiate gastropods. The visceral mass and shell are conical, and the foot is reduced, secreting a thin calcareous plate on its ventral surface. The family contains the genera *Hipponyx* and *Mitrularia*.

Hipponyx (hip'ō-niks), *n.* [Gr. ἵππος, a horse, + ὄνυξ, hoof.] A genus of capulid *Gasteropoda* characterized by a thick, obliquely conical shell and an internal hippocrepian muscular impression. It has existed from the Cretaceous period to the present time.

hippophagism (hi-pof'a-jizm), *n.* [*hippophag-y* + *-ism*.] Same as *hippophagy*.

hippopotamian (hip″ō-pō-tā'mi-an), *a.* Resembling or suggesting a hippopotamus.

hippotragine (hi-pot'ra-jin), *a.* Related to, resembling or having the characters of the genus *Hippotragus*: as, the *hippotragine* section of the *Bovidæ*.

hippurin (hip'ū-rin), *n.* [*hippur-ic* + *-in*[2].] A colorless oxidation-product of hippuric acid, $C_8H_9O_2N$. It crystallizes in large needles and melts at 45.7° C.

Hippurite limestone. See ★*limestone*.

hipsy (hip'si), *n.* [Origin obscure.] A sailors' punch composed of wine, water, and brandy.

Drinking of *Hipsy*, a liquor compounded of wine, water, and brandy, which, by the admirers of it, is also call'd meat, drink, and cloth.
W. Betagh, in N. and Q., 10th ser., III. 61.

hip-truss (hip'trus), *n.* A truss erected to sustain the angle-rafters of a hip-roof.

Hirado porcelain. See ★*porcelain*[1].

Hircic acid. See ★*hircin*.

hircin (hêr'sin), *n.* [L. *hirc-us*, goat, + *-in*[2].] A fatty principle found in the fat of goats and, to a certain extent, in that of sheep. The corresponding fatty acid is termed *hircic acid*.

hircocerf (ēr-kō-serf'), *n.* [F., < L. *hircus*, goat, + *cervus*, deer. The word translates Gr. τραγέλαφος: see *tragelaphus*, *n.*, 1.] A fabulous animal, the same as *tragelaphus*.

Renan described himself as "a tissue of contradictions, recalling the classic *hir[c]ocerf* with two natures. One of my halves is constantly occupied in demolishing the other, like the fabulous animal of Ctesias, who ate his paws without knowing it."
C. Lombroso (trans.), Man of Genius, p. 25.

hiro (hē'rō), *n.* [Jap.] A Japanese unit of length equal to 4.97 feet; a 'fathom.'

H-iron (āch'i″ern), *n.* An I-beam with flanges very wide relatively to the vertical depth.

hirrient (hir'i-ent), *n.* [L. *hirriens*, ppr. of *hirrire*, snarl, as a dog: an imitative word.] In *phonetics*, a strongly trilled sound, like the snarl of a dog.

hirschgulden (hirsh'göl″den), *n.* [G.: see *hart*[1] and *gulden*.] A coin of Würtemberg of the seventeenth century, so called from the figure of a hart on the reverse.

hirsinghar (hêr-sing-gär'), *n.* [Hindi.] A tall Indian shrub of the olive family, *Nyctanthes Arbor-tristis*. Also called *sad-tree*, *night-flower*, and *night-jasmine*. See *Nyctanthes*.

hirst-frame, *n.* See ★*hurst-frame*.

hirsuties, *n.* **2.** In *pathol.*, excessive hairiness, especially in women.

hirtic (hêr'tik), *a.* [*hirta* (see def.) + *-ic*.] Derived from *Usnea hirta*.—**Hirtic acid**, an acid found in the lichen *Usnea hirta*.

hirudine (hi-rō'din), *a.* [For ★*hirudinine*, < L. *hirudo* (*hirudin-*), a leech, + *-ine*[1].] Relating to or characteristic of the leeches.

hirudinean (hir-ō-din'ē-an), *n.* [*Hirudinea* + *-an*.] Any leech of the group *Hirudinea*.

hirudiniculture (hir-ō-din'i-kul-tūr), *n.* [L. *hicudo* (*-din-*), leech, + *cultura*, culture.] The art or occupation of propagating leeches.

hislopite (his'lop-īt), *n.* [Named (1859) after the Rev. Stephen *Hislop*, who brought the mineral from India.] A grass-green cleavable calcite from India which derives its color from inclosed glauconite.

Hispa, *n.* **2.** [*l. c.*] A beetle of the genus *Hispa*.—**Rosy hispa**, an American chrysomelid beetle, *Odontota rosea*, whose larvæ damage the leaves of apple-trees.

Hispano-Moresque (his-pan″ō-mō-resk'), *a.* Pertaining to the art of the Moors in Spain or to Spanish art as influenced by that of the Moors.—**Hispano-Moresque pottery**, pottery made in Spain which shows Moorish influence. Much of this ware was covered with a metallic glaze or luster.

Hispano-Portuguese (his-pan″ō-pōr-tū-gēs'), *a.* Belonging or common to both Spain and Portugal.

histerid (his'te-rid), *n.* and *a.* **I.** *n.* A member of the family *Histeridæ*.

II. *a.* Of or belonging to the coleopterous family *Histeridæ*.

histic (his'tik), *a.* [Gr. ἱστός, a web, tissue, + *-ic*.] Relating to or having the properties of a tissue.

histidin (his'ti-din), *n.* [Gr. ἱστίον, web, tissue, + *-id* + *-in*[2].] A colorless compound, $C_6H_9O_2N_3$, formed by the hydrolysis or decomposition of many proteids and albuminoids, such as casein, albumin, and horn. It crystallizes in plates.

Histiobranchus (his″ti-ō-brang'kus), *n.* [NL., < Gr. ἱστίον, web, + βράγχος, gill.] A genus of deep-sea eels of the family *Synaphobranchidæ*.

histioclastic (his″ti-ō-klas'tik), *a.* [Gr. ἱστίον, a web, tissue, + κλαστός, < κλᾶν, break.] Breaking-down tissues: said of certain cells, like the osteoclasts, which destroy cartilage and produce a medium in which the osteoblasts can live and produce bone. *Proc. Zool. Soc. London*, 1902, I. 208.

Histiocottus (his″ti-ō-kot′us), *n.* [NL., < Gr. *ἱστίον*, web, + *κόττος*, a fish (see *cottus*).] A genus of sculpins of the family *Cottidæ* found in the North Pacific.

histionic (his-ti-on′ik), *a.* [Gr. *ἱστίον*, a web, + *-ic.*] In *biol.*, pertaining to or derived from a tissue or unitarily functioning cell-group.

If a single stimulus may . . . leave a permanent impression, which can be spontaneously reproduced later on, we are bound to assume, in explaining the phenomenon, a *histionic* presentation, dependent on the psychoplasm of the associated tissue-cells.
Haeckel (trans.), Riddle of the Universe, p. 118.

histoblast (his′tō-blȧst), *n.* [Gr. *ἱστός*, a web, tissue, + *βλαστός*, a germ.] **1.** The cell or morphological unit which is distinctive of a particular tissue.—**2.** An imaginal disk, one of the formative cell-centers in the insect larva which give rise to the appendages and other organs of the imaginal or adult insect.

histocyte (his′tō-sīt), *n.* [Gr. *ἱστός*, a web, + *κύτος*, a hollow (a cell).] A tissue-forming cell, as in sponges.

histodialytic (his″tō-dī-ȧ-lit′ik), *a.* [*histodialysis* (*-lyt-*) + *-ic.*] Of or pertaining to histodialysis.

histogeography (his″tō-jē-og′rȧ-fi), *n.* [For **histo(rio)geography*, < Gr. *ἱστορία*, history, + *γεω)γραφία*, geography.] Same as ★*anthropogeography.* [Rare.] *W. Z. Ripley*, Races of Europe, p. 6.

histogram (his′tō-gram), *n.* [Gr. *ἱστός*, a web, + *γράμμα*, a writing.] A diagram of structural form-elements.

We should like to protest against any such crude process of determining goodness of fit as that of placing a normal curve down on seven or eight blocks forming a "*histogram*," and judging the look of the fit.
Nature, Dec. 17, 1903, p. 149.

histographer (his-tog′rȧ-fêr), *n.* [*histograph(y)* + *-er*[2].] One who is versed in histography; a histologist.

histographical (his-tō-graf′i-kȧl), *a.* Of or pertaining to histography.

histology, *n.*—**Pathological histology.** Same as ★*histopathology.*

histometabasis (his″tō-me-tab′ȧ-sis), *n.* [Gr. *ἱστός*, web, + *μετάβασις*, exchange.] That condition of fossilization in which an entire exchange of the original substance for another has occurred in such manner as to retain or reproduce the minute and even microscopic texture of the original. *C. A. White*, Smithsonian Rep. (Nat. Mus.), 1892, p. 264.

histomorphotic (his″tō-môr-fot′ik), *a.* [*histomorphosis* (*-phot-*) + *-ic.*] Of or pertaining to histomorphosis, or the formation of tissue in plants or animals.

histon (his′ton), *n.* [Gr. *ἱστός*, a web, tissue.] An albuminous substance which occurs in combination with certain radicals, such as hematin (in hemoglobin), and nucleinic acids (nucleoproteids). Bodies of this order have been obtained from the thymus, the lymph-glands and spleen, the red corpuscles of the goose, etc. Globin, the albuminous radical of hemoglobin, is a histon. The histons are closely related to the protamines, and, like these, are markedly basic: they both form precipitates with albumins. The thymus histon is said to have the composition $C_{273}H_{459}N_{81}SO_{84}$.

Histona (his-tō′nȧ), *n. pl.* [NL., < Gr. *ἱστός*, tissue, + *-ona.*] A term proposed by Haeckel to designate the multicellular organisms, or those with tissues, as contrasted with the *Protista.*

histonal (his-tō′nal), *a.* [*Histona* + *-al*[1].] **1.** Of or pertaining to the *Histona.*—**2.** Same as ★*histionic* (which see).

We have cellular ideas, *histonal* ideas, unconscious ideas of the ganglionic cells, . . . all of them being physiological functions of their psychoplasm.
Pop. Sci. Mo., Sept., 1902, p. 416.

Histonal selection. See ★*selection.*

histopathologic (his″tō-path-ō-loj′ik), *a.* [Gr. *ἱστός*, a web, tissue. + E. *patholog-y* + *-ic.*] Pertaining or referring to diseased tissues in animals or plants.

The *histopathologic* states of the finer structures of the labyrinth. *Detroit Med. Jour.*, Feb., 1903, p. 705.

histopathological (his-tō-path-ō-loj′i-kȧl), *a.* Same as ★*histopathologic.*

histopathology (his″tō-pā-thol′ō-ji), *n.* [Gr. *ἱστός*, a web, tissue, + E. *pathology.*] The study of morbid changes in minute structures. *Med. Record*, March 28, 1903, p. 511.

histophysics (his-tō-fiz′iks), *n.* [Gr. *ἱστός*, a web, tissue, + *φυσικά*, physics.] The physics of the animal and plant tissues.

histophysiology (his″tō-fiz-i-ol′ō-ji), *n.* [Gr. *ἱστός*, a web, tissue, + E. *physiology.*] The physiology of the cells and tissues as distinguished from the physiology of the organs.

historical, *a.* **5.** In *biol.*, ancestral or inherited, or due to conditions which existed in the past history of an organism.

So far as the definition given above of *historical* properties concerns the inherited specific peculiarities of plants, the term is not metaphorical from the point of view of the Theory of Descent, but must be taken in its literal signification. *Sachs* (trans.), Botany, p. 697.

Historical painting. See ★*painting.*

historicocritical (his-tor″i-kō-krit′i-kȧl), *a.* Based on both historical and critical investigation: as, "the *historicocritical* reconstruction of primitive Christianity," *Schaff.*

historics (his-tor′iks), *n.* History conceived as a division of social science coördinate with statistics, economics, and politics. [Rare.]

I classify the sciences of sociology as *statistics, economics, civics, historics*, and *ethics*, and shall attempt to characterize them for the purpose only of setting forth their nature. *J. W. Powell*, in An. Rep. Bur. Amer. Ethnol., 1898–99, p. lx.

historiographership (his-tō-ri-og′rȧ-fêr-ship), *n.* The office of historiographer.

historionomer (his-tō-ri-on′ō-mêr), *n.* [Gr. *ἱστορία*, history, + *νόμος*, law, + *-er*[2].] A historian who is versed in both the facts of history and the principles which regulate its course. *Lowell, Leaves from Journal in Italy.*

Histosporidia (his″tō-spō-rid′i-ȧ), *n. pl.* [NL., < Gr. *ἱστός*, a web, tissue, + *σπορά*, seed (spore), + dim. *-ιδιον.*] The *Myxosporidia* and the *Sarcosporidia* taken together. Also *Histozoa.* *Labbé.*

histotherapy (his-tō-ther′ȧ-pi), *n.* [Gr. *ἱστός*, a web, tissue, + *θεραπεία*, medical treatment.] A method of treating disease by the use of substances derived from the tissues or organs of animals. *Buck*, Med. Handbook, VI. 409.

histotomy (his-tot′ō-mi), *n.* [Gr. *ἱστός*, a web, tissue, + *-τομια*, < *ταμεῖν*, cut.] The dissection or analysis of animal and plant tissues; histology.

Histozoa (his-tō-zō′ȧ), *n. pl.* Same as ★*Histosporidia.*

Histrionic paralysis. See ★*paralysis.*

histrixite (his′trik-sīt), *n.* [Erroneously formed; properly **hystrichite*, < Gr. *ὑστρίξ* (*ὑστριχ-*), a porcupine, + *-ite*[2].] A doubtful sulphid of bismuth, antimony, copper, and iron occurring in radiating groups of crystals: found in Tasmania.

hit[1], *v. t.*—**To hit off.** (*c*) In *cricket*, to score (a required number of runs) by hitting or forcing the game.—**To hit off the neck,** in *golf*, to strike (a ball) on the neck of the club.

hit[1], *n.* **8.** In *archery:* (*a*) The act of hitting the target. (*b*) An arrow which hits the target. Usually a hit is scored according to its nearness to the center.—**9.** In *base-ball*, a safe hit (see below); also, though not usually, any kind of stroke wherein the bat hits the ball.—**Base hit,** in *base-ball*, a ball hit fairly by the batsman to such a place that it cannot be caught on the fly or thrown by a fielder to first base before the runner can reach that point.—**Fair hit.** See ★*fair*[1].—**Free hit,** in *field-hockey* and similar games, a hit allowed, as a penalty or otherwise, with which the opponents cannot interfere.—**Half-hit,** in *cricket*, a mistimed or misdirected hit which sends the ball into the air.—**Leg-hit,** in *cricket*, a hit to leg, that is, to that part of the field which is directly behind the batsman as he is batting. *R. H. Lyttelton*, Cricket and Golf, p. 33.—**Safe hit,** in *base-ball*, a base hit; a ball that is hit within the foul-lines with such force or in such a direction that a fielder cannot catch it before it strikes the ground, or cannot, even with the most accurate play, get it to the first-baseman before the runner reaches that base.—**Two-base hit,** in *base-ball*, a ball hit under such conditions as enable a runner to reach second base before the ball can be caught or fielded there. Similarly, *three-base hit*, etc.

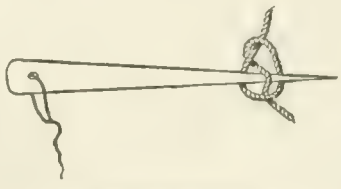
hit-and-catch (hit′and-kach′), *n.* A difficult shot in billiards. With the three balls almost in a straight-line 'tie-up,' with no cushion to aid, and too far out for a massé, the striker is required to carom by double contact, so as not wholly to sacrifice position. He must drive the first ball nearly full upon the second or his own will go wide of the mark. Out in the open the force communicated to the second ball will almost equal that imparted to the first, and the striker's ball has to travel about fifteen inches to catch up.

hit-and-miss (hit′and-mis′), *a.* That sometimes hits and sometimes misses. Used specifically in describing a type of governor much used on internal-combustion engines. This governor controls the engine by making it miss an impulse as occasion demands.

hitch[1], *v.* **I.** *intrans.* **5.** To catch or dig into: said specifically of a tool that digs too deeply into a piece of work that is being cut. This action is usually due to an incorrect form of the cutting-tool, but it may be due to the fibrous structure of the material.

II. *trans.* **4.** In *mining*, to dig or pick (pockets) to receive the ends of timbers.

hitch[1], *n.* **4.** In *mining:* (*b*) A hole or pocket made to receive the end of a timber. (*c*) The sudden stoppage of a pumping-engine.—**8.** In *yachting*, a tack. **Marlinespike hitch** (*naut.*), a simple way of catching the point of the marlinespike in the seizing-stuff whereby it may be hove taut.—**Midshipman's hitch** (*naut.*), several turns with the end of a rope under and over around the bight.—**Slippery hitch** (*naut.*), a hitch that will not hold; a landsman's effort.



Marlinespike Hitch.

Midshipman's Hitch.

hitch[2] (hich), *n.* [Appar. California Indian: see ★*chi*[2], ★*chigh.*] A large chub, *Lavinia exilicauda*, found in the waters of California. Also *chi.*

hitch-pin (hich′pin), *n.* In *pianoforte-making*, the pin to which a string is fastened at the end opposite to the tuning-peg.

hitchpin-block (hich′pin-blok), *n.* In *pianoforte-making*, the bar or brace in which are the hitch-pins.

Hitopadesha (hi-tō-pa-dā′shȧ), *n.* [Skt. *hitopadeṣa*, good instruction, < *hitá*, good, lit. 'put,' + *upadeṣa*, instruction, rule, reference.] The Sanskrit name of a collection of tales and fables compiled from the larger collection known as the Panchatantra, and forming one of the sources of the Æsopic fables of Europe.

Hittorf rays. See *obscure* ★*rays.*

Hittorf's transport numbers. See *transport* ★*numbers.*

hive, *n.* **6.** In *oyster-culture*, an artificial bed prepared for spat.—**Bar-hive,** a hive in which the honeycomb is hung from bars.

hive-evil (hīv′ē″vl), *n.* A sickness to which bees are liable. *N. E. D.*

hive-syrup (hīv′sir″up), *n.* A syrup containing squill, senega, and tartar emetic; compound syrup of squill; croup syrup.

hjelmite, *n.* See *hielmite.*

hkl. See ★*k*, 6.

hl. An abbreviation of *hectoliter.* See *metric system.*

hlonipa (hlō-nē′pä), *n.* [Zulu *hlonipa*, act respectfully or modestly; *inhloni*, shame.] A custom among the Zulus and certain other tribes of South Africa according to which they must show respect to certain of their relatives and to the head men of the tribe. This is done in several ways, but especially by refraining from mentioning their names and from using any word similar in sound. This necessitates the substitution or coinage of new words, and leads to many changes in the vocabulary of the language.

That strange custom (by no means unknown elsewhere in Africa) of "*hlonipa*," by which a constant local change of vocabulary takes place owing to the dislike to mentioning names of things which resemble the names of relatives; so that if there be a prominent person in the tribe, for instance, whose name is actually equivalent to "ox," or even whose name sounds like the word for ox, in that village or community the ox will henceforth be known by a paraphrase or by a substituted word.
Nature, May 19, 1904, p. 57.

hm. An abbreviation of *hectometer.* See *metric system.*

H. M. An abbreviation (*b*) of *Hallelujah Meter;* (*c*) of *Home Mission* or *Home Missionary.*

H. M. P. An abbreviation of the Latin *hoc monumentum posuit*, erected this monument.

Hoar-frost line, a curve indicating upon a diagram the pressures at which, for different temperatures, a solid and its vapor may occur simultaneously.

hoary-edge (hōr′i-ej), *n.* An American hesperiid butterfly, *Achalarus lycidas*, occurring in the United States from the Mississippi valley eastward. Its larvæ feed on *Meibomia.*

hob[1], *n.*, **3.** (*b*) A milling-machine cutter used in forming the teeth of worm-gears. It is of the shape of the worm which is to mesh in the interdental spaces of the gear, and in use cuts out of the blank gear this space, leaving the teeth correctly formed.

7. A master die; a steel punch cut to a certain design, used for making coining-dies.

hobbing (hob′ing), *n.* The process of cutting the threads of worm-wheels, dies, or chasers with a hob or master tap in a milling-machine or a lathe. See ★*hob*[1], 3 (*b*).

hobbing-machine (hob'ing-ma-shēn″), *n.* A milling-machine specially designed to cut gears by means of a hob. See ★*hob*[1], 3 (*b*).

hobo (hō'bo), *n.* [Origin obscure.] A tramp. [Recent slang, U. S.]

hobson-jobson (hob'son-job'son), *n.* [An Anglo-Indian corruption of the cry *Ya Hasan! Ya Hosain!* of the "Mohammedans as they beat their breasts in the procession of the *Moharram.*" *Yule and Burnell.*] In India, a native festal excitement; especially the Moharram ceremonies. *Yule and Burnell.*

hock[1], *n.* **To cap the hocks.** See ★*cap*[1].—**Vulture hock,** in fanciers' language, a tarsus clothed with stiff feathers.

While the feathering should be abundant, all semblance to *vulture hock,* or stiff feathering, should be avoided.
U. S. Dept. Agr., Standard Varieties of Chickens, p. 14.

hocking (hok'ing), *n.* The feasting and merriment of the annual hocktide festival formerly observed in England.

Hock-Tuesday money. See ★*money.*

Hodgson's disease. See ★*disease.*

hodometric (hod-ō-met'rik), *a.* Pertaining to or measured by a hodometer; hodometrical; odometric.

hoe[1], *n.*—**D-hoe,** a scuffle, or Dutch hoe, in which the blade is secured to the handle by curved prongs, which have, with the blade, the form of a capital D. See *hoe*[1], Fig. *b.*

hoe[1], *v. i.* **2.** To play or dance a hoe-down. [Colloq., southern U. S.]

hoe[5], *n.* See ★*hoey.*

hoe-mother (hō'muтн″ėr), *n.* [*hoe*[2] + *mother*[1].] The basking-shark, *Cetorhinus maximus,* found in the arctic seas. It reaches a length of nearly 40 feet.

hoe-plow (hō'plou), *v. t.* To dig and turn over (earth) with a hoe as a preparation for planting. [West Indies.]

The land should be ploughed or *hoe-ploughed* twice in the wettest season of the year.
Letter of John Castles from Grenada, read before the [Roy. Soc., May, 1890.

hoernesite (hėr'ne-sīt), *n.* [Named for Dr. *Hörnes,* an Austrian mineralogist.] A hydrated magnesium arseniate, $Mg_3As_2O_8 + 8H_2O$, occurring in snow-white monoclinic crystals: found in Hungary. Also *hörnesite.*

hoe-tusk (hō'tusk), *n.* A shark, *Mustelus canis,* of the family *Galeidæ:* found in the Atlantic on the coasts of the United States and Europe.

hoey, hoe[5] (hō-ā', hō-ē'), *n.* [Chinese *hwui,* Amoy *hòe, húi,* Swatow *húi,* Fu-chau *hwi,* etc.] A society of Chinese, especially a secret society of Chinese resident in a foreign community.

Hoffman kiln. See ★*kiln.*

Hoffmann's anodyne. See ★*anodyne.*

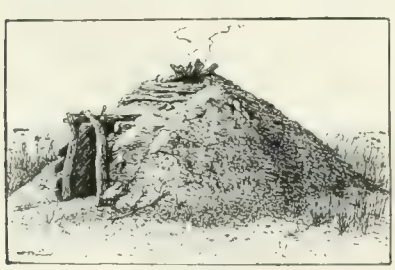
hog[1], *n.* **11.** A small locomotive used for hauling cars about mines; a hogback locomotive. [Slang.]

In anthracite drifts steam locomotives of a small and peculiar type known as "*hogs*" haul the trains.
Sci. Amer., May 23, 1903, p. 392.

12. A machine for grinding logs. [Western U. S.] *Dialect Notes,* II. vi.—**13.** In *shipbuilding,* the condition of being hogged: generally used quantitatively with reference to the amount of deflection from the normal condition. See *hog*[1], *v. i.,* 1.

hog[1], *v. t.* **4.** To act as greedily and as selfishly as a hog in regard to (something); take more than one's share of; appropriate selfishly. [Slang, U. S.]

hogan[2] (hō-gan'), *n.* [Navaho *qoghán.*] A hut of the Navaho Indians, consisting of a



A Navaho Hogan.

conical framework covered with poles, bark, and earth. The main beams turn north, south, and west, while the entrance is on the east side. Sometimes the shelters of the Pima tribes are also called *hogans.*

hogback, *n.* **II.** *a.* Resembling a hog's back in form: used specifically in describing a small locomotive which is very low in build and has no cab.

The motor or "electric mule" is a vehicle closely resembling a "*hog-back*" mine locomotive, and is 10 feet long by 2 feet wide and 30 inches from the rail.
Amer. Inventor, April 15, 1904, p. 173.

hog-beetle (hog'bē″tl), *n.* An old name for a curculionid beetle. [Eng.]

Hog-cholera bacteria. See ★*bacterium.*

hog-engine (hog'en″jin), *n.* A locomotive-engine having usually four pairs of drivers and receiving steam from a boiler with a very wide fire-box at the back.

hog-feast (hog'fēst), *n.* The feast that follows the killing of the family pig by a peasant or cottager. [Prov. Eng.]

hogger-pump (hog'ėr-pump), *n.* The top pump in the series, when stage-pumping is used for draining a mine.

hogging[2] (hog'ing), *n.* The curving or distortion of a structure when it droops at the ends or rises in the middle, as a boiler-furnace or a ship. The hogging of boiler-furnaces is usually due to the local expansion of the flue, caused by the fire being particularly hot in one part of the grate.

hogging-moment (hog'ing-mō″ment), *n.* In *naval arch.,* the moment, at any given point, of the forces which tend to cause a vessel to hog: opposed to *sagging-moment,* that which tends to cause a vessel to sag. These moments for each point in the length of a vessel are plotted in a curve of bending-moments. See ★*curves of ship calculations.*

Any ordinate of the latter curve represents to scale the bending moment (usually expressed in foot-tons) at the corresponding cross-section of the ship. Ordinates set off above the base-line indicate '*hogging*' *moments,* while 'sagging moments' are indicated by ordinates set off below the base-line. *White,* Naval Arch., p. 304.

hog-meat, *n.* **2.** Pork.

hog-perch (hog'pėrch), *n.* *Percina caprodes,* a percoid fresh-water fish found in the Great Lakes and southward.

hog-plague (hog'plāg), *n.* A fatal infectious disease of swine, producing necrotic ulceration of the intestinal mucous membrane, with sometimes a secondary involvement of the lungs; hog-cholera.

hog-pox (hog'poks), *n.* An acute febrile eruptive disease of swine similar to sheep-pox and smallpox, characterized by the formation of pocks in various parts of the body.

Hogshead of sugar, in the West Indies, often a definite weight of 1,600 pounds.

hog's-pence (hogz'pens), *n.* Roman coins found in Leicestershire: so called from being turned up by swine.

hog-tie (hog'tī), *v. t.;* pret. and pp. *hog-tied,* ppr. *hog-tying.* To tie as a hog is tied, all four feet together.

Mr. Masterson wore a narrow crimson sash wound twice about his waist, . . . and when [he] donned it, . . . he explained the same as something wherewith he might *hogtie* steers when in the course of duty he must rope and throw them. Doubtless the sash, being of a soft, reluctant texture and calculated to tie very tight into knots that would not slip, was of the precise best material with which to *hogtie* steers.
A. H. Lewis, Sunset Trail, p. 3.

hog-truss (hog'trus), *n.* The main truss or frame of a dredge or boat. See cut under *hog-frame.*

The upper structure of the boat (which is stayed by means of *hog trusses* and 22-foot King posts) covers its full width and the rear eighty feet of its length.
Elect. World and Engin., Oct. 1, 1904, p. 559.

hogweed, *n.* **2.** In the West Indies, any one of several plants of the genus *Boerhaavia,* especially *B. erecta,* which is much relished by hogs.

hohlflute (hōl'flōt), *n.* [G. *hohlflöte,* ⟨ *hohl,* hollow, + *flöte,* flute.] In *organ-building,* a flue-stop of metal which gives a dull, hollow tone; it is made in three or four sizes or pitches. Also *holflute.*

hohl-quint (hōl'kwint), *n.* [G.] In *organ-building,* a quint stop of the hohlflute kind.

hohmannite (hō'man-īt), *n.* Same as ★*amarantite.*

hoi (hō'i), *n.* [Polynesian.] In Hawaii and Tahiti, the common yam, *Dioscorea sativa.* Before the introduction of the potato it was cultivated for the supply of ships.

hoist, *n.*—**Builders' hoist,** a hoisting-machine of a portable or semi-portable type, having the boiler, engine, and drum on one bed, for use in raising building materials in structures in process of erection.—**Hoist-conveyer.** See ★*conveyer.*—**Traveling hoist,** any form of hoist in which the hoisting-motor or -machine is arranged to travel along an elevated trackway. In the electric traveling hoist, the motor, gearing-blocks, and hoisting-ropes are on a trolley which is supported on wheels that run on the flanges of an I-beam or other form of beam. In some hoists the operator travels in a cab suspended from the track, operating the motor to lift the load and also to cause it to travel along the track.—**Tripping hoist,** a hoist which trips or tips the bucket at a prescribed point, thus emptying the load automatically.

hoistaway (hoist'a-wā), *n.* An elevator; a hoist; a lift; a device for raising or lowering heavy weights.

hoist-hole (hoist'hōl), *n.* An elevator-shaft; a hole or opening through which materials are hoisted.

hoisting-block (hois'ting-blok), *n.* The lower of the two blocks of a block-and-fall; the block which moves with the load.

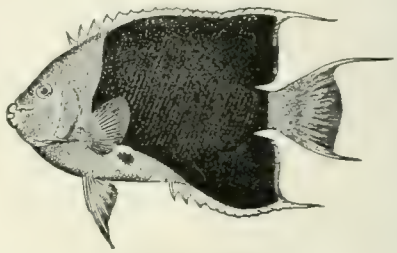
hoki (hō'kē), *n.* [Maori.] A New Zealand fish, *Coryphænoides novæ-zelandiæ,* belonging to the family *Macruridæ,* which are deep-sea gadoids. See *Tasmanian* ★*whip-tail. Austral English.*

hokko, *n.* See *hocco.*

hola (hō'lä), *n.* [Hawaiian.] A name in Hawaii of the root and stalk of the ahuhu, *Cracca purpurea.* See ★*ahuhu* and *Tephrosia.*

Holacanthinæ (hol″a-kan-thī'nē), *n. pl.* [NL., ⟨ *Holacanthus* + *-inæ.*] A subfamily of butterfly-fishes of the family *Chætodontidæ,* typified by the genus *Holacanthus.*

Holacanthus (hol-a-kan'thus), *n.* [NL., ⟨ Gr. ὅλος, whole, + ἀκανθα, spine.] A genus of



Holacanthus tricolor.
(From Bulletin 47, U. S. Nat. Museum.)

butterfly-fishes of the family *Chætodontidæ.* They are characterized by the many spines in the dorsal fin, and by the presence of a strong spine on the preopercle. Many of the species are brilliantly colored. *H. ciliaris* is the angel-fish of the Florida Keys. *H. tricolor* is found in the same region.

holagogue (hol'a-gog), *n.* [Gr. ὅλος, whole, + ἀγωγός, a leader.] In *med.,* an agent supposed to be capable of removing all morbid humors.

Holanthias (hō-lan'thi-as), *n.* [NL., ⟨ ὅλος, whole, + ἀνθίας, a certain fish (⟨ ἄνθος, flower).] A genus of fishes of the family *Serranidæ* found in tropical seas.

Holarctic region or **realm.** See ★*region.*

holarthritis (hol-är-thrī'tis), *n.* [NL., ⟨ Gr. ὅλος, whole, + ἄρθρον, joint, + *-itis.*] Inflammation involving all or most of the joints of the body.

Holconoti (hol-kō-nō'tī), *n. pl.* [NL., pl. of *Holconotus.*] A group of the *Embiotocidæ,* or viviparous surf-fishes: found in the waters of the Pacific from California to Japan.

Holconotus (hol-kō-nō'tus), *n.* [NL., ⟨ Gr. ὁλκός, drawing, trailing (⟨ ἕλκειν, draw, trail, tow), + νῶτος, back.] A genus of surf-fishes, of the family *Embiotocidæ,* found on the coast of California. *H. rodoterus* is the common species.

hold[1], *v.* **I.** *trans.*—**Holding-out catch.** See ★*catch*[1].—**To hold a good full, a good luff, a good wind.** See ★*full*[1], ★*luff*[2], ★*wind*[2].—**To hold of.** (*b*) To belong or pertain to; depend on or upon.

A spark disturbs our clod;
Nearer we *hold of* God
Who gives, than of His tribes that take, I must believe.
Browning, Rabbi Ben Ezra, stanza 5.

To hold out. (*c*) In *poker* and other card-games, to hold (certain cards) in the sleeve or elsewhere until there is a valuable stake for which to play.—**To hold the land, the luff, the wind.** See ★*land*[1], ★*luff*[2], ★*wind*[2].—**To hold to.** (*a*) To adhere to: as, he still *holds to* his former statement. (*b*) Same as *hold*[1], *v. i.,* 7.—**To hold up.** (*d*) To refuse to give up (the commanding card of an adversary's suit), especially in whist and bridge. (*e*) To hold or back up (a rivet which is being headed over).

II. *intrans.* **6.** (*b*) Specifically, in *archery,* to make a short pause, after drawing a bow, for fixing the aim and preparing to loose the bowstring.—**7.** Of a female animal, to retain the spermatozoa of the male so that she may become pregnant.—**To hold true,** to remain true; be applicable or indisputable: as, "the saying of the poet *holds true* in a large degree." *S. Smiles,* Character, ii.

hold[1], *n.* **8†.** In *old Eng. hist.,* the title of an officer in the Danelaw corresponding to the high reeve among the English.—**Referee's hold,** in *wrestling,* a hold given to opponents by the referee.—

Shore hold, in *lumbering*, the attachment of the hawser of a raft of logs to an object on the shore. **Tail hold**, in *lumbering*, a means of obtaining increased power, in moving a log by tackle, by passing the cable through a block attached to the log and fastening the end to a stationary object, so that hauling on the other end gives twice the power which would be attained by attaching the cable directly to the log.

hold[3], *n.* **Hold stanchions.** See ★*stanchion.* **Lower hold** (*naut.*), the second space beneath the spar-deck, or the space under the lower deck, of a vessel having two decks.—**To break out the hold**, to begin to unload the cargo of a ship; break bulk.

hold-all (hōld′âl), *n.* A portable bag or case used in traveling, etc., for holding miscellaneous articles.

hold-down (hōld′doun), *n.* A device to prevent a machine or piece of apparatus from jumping or shaking: as, the *hold-down* of a saw-table.

holder-up (hol′dėr-up), *n.* One who holds a sledge or anvil against a rivet which is being headed; also, a device for holding rivets by air-pressure while they are being driven.

holdfast, *n.* **3.** The root-like organ of attachment developed by many of the algæ. Also *haptere* and *rhizoid*.

Kelp *hold-fasts*, of which none grow in the immediate vicinity, were taken in abundance by the dredge.
Science, Jan., 1902, p. 59.

holding, *n.* **6.** In *archery*, the short pause after drawing a bow to fix the aim and make ready for loosing the bowstring. See ★*hold*[1], *v. t.*, 6 (*b*).

holding-boom (hōl′ding-böm), *n.* See ★*storage-boom.*

holding-plate (hōl′ding-plāt), *n.* Same as *anchor-plate*, 1.

hold-on (hōld′on), *n.* Any weight, base, or heavy casting which serves to hold a portable tool or machine in place while it is in use.—**Magnetic hold-on**, an electromagnet which serves to hold a tool to any iron or steel surface. See *magnetic* ★*chuck.*

hold-over (hōld′ō″vėr), *n.* **1.** A place of detention; a lock-up. *New York Times*, July 15, 1905.—**2.** An office-holder who remains in office, or in possession, beyond his regular term: sometimes used attributively.

hold-stringer (hōld′string″ėr), *n.* *Naut.*, a combination of angle-bars and plates, fitted on the inside of the frames of a vessel between the upper turn of the bilge and the lowest complete tier of beams.

hole[1], *n.*—**Tap-sized hole**, a hole of such a diameter as to be ready to receive the tapered end of a screw-cutting tap and admit the cutting of a full thread inside of it. It has the diameter of the tap measured between the bottoms of the threads on opposite ends of a diameter.

hole[1], *v. i.* **To hole out.** (*a*) In *golf*, to play the ball into one of the holes of the course: as, *to hole out* in four strokes. (*b*) In *billiards*, to win by pocketing. Some billiard games of mixed pockets and caroms require the final shot to be a carom; others insist upon a pocket.—**To hole up**, to retire to a burrow for winter; to den up.

hole, *a.*, *n.*, and *adv.* A simplified (and the earlier) spelling of *whole*.

holectypoid (ho-lek′ti-poid), *a.* [*Holectypoid-a.*] Having the characters of, or related to, the *Holectypoida*.

Holectypoida (ho-lek-ti-poi′dạ̈), *n. pl.* [NL., ‹ *Holectypus* + *-oida*.] An order of sea-urchins or *Euechinoidea*. They have an actinal, central peristome, the periproct situated beyond the dorsocentral system in the posterior interambulacrum, and a pair of pores, or only one pore, to an ambulacral plate.

Holectypus (ho-lek′ti-pus), *n.* [Gr. ὅλος, entire, + ἔκτυπος, worked in relief, ‹ ἐκ, out, + τύπτειν, strike.] A genus of *Euechinoidea* typical of the *Holectypoida*. They have straight, narrow ambulacra and wide interambulacra; large decagonal peristome; and pyriform periproct situated between the peristome and the posterior edge of the test. They occur in Jurassic and Cretaceous rocks.

holely, *adv.* An amended spelling of *wholly*.

holesale, *n.*, *a.*, and *v.* An amended spelling of *wholesale*.

holesum, *a.* An amended spelling of *wholesome*.

holetrous (hō-lē′trus), *a.* Having the characters of the *Holetra*.

holflute, *n.* Same as ★*hohlflute.*

holiday, *n.*—**The holidays.** Specifically—(*a*) School vacation. (*b*) The Christmas season. [U. S.]

holidayer (hol′i-dā-ėr), *n.* One who takes or makes a holiday; an excursionist or picnicker on a holiday; a holiday pleasure-seeker.

holkion (hol-kī′on), *n.*; pl. *holkia* (-ạ̈). [Gr. ὁλκεῖον, also ὅλκαιον.] In *Gr. archæol.*, a large bowl.

Holland process. See ★*process.*

Hollander, *n.* **2.** [*l. c.*] In *paper-manuf.*, a beating-engine or beater; a Holland beater. See *beating-engine.*

Hollardia (ho-lär′di-ä), *n.* [NL. (Poey, 1858 or 1861), named for Henri *Hollard*, a French professor of zoölogy.] A genus of trigger-fishes, of the family *Triacanthidæ*, found on the coast of Cuba.

hollow-backed (hol′ō-bakt), *a.* Having the back abnormally curved downward: a common deformity in horses. Less properly, same as ★*broken-backed*, 3.

hollower (hol′ō-ėr), *n.* A machine for hollowing out the inner sides of the staves for a keg, barrel, or cask.

hollow-ware, *n.* **2.** China, glass, and other wares in the form of cups, tumblers, tea-pots, etc.: in distinction from *flat ware*, such as plates, saucers, or the like. *Webb*, Industrial Democracy, II. 685.

holluschick (hol′us-chik), *n.*; pl. *holluschickie* (-chik-i). An American corruption, in Alaskan waters, of *holostiak*, a young male fur-seal. See ★*holostiak.*

The "*holluschickie*" are the champion swimmers of all the seal-tribe. *Elliott*, Fur-Seal Islands of Alaska, p. 45.

holly[1], *n.*—**Cape holly**, the saffronwood, *Elæodendrum croceum.*—**Ground-holly**, the pipsissewa or prince's-pine, *Chimaphila umbellata.*—**Native holly.** (*a*) In Australia, *Tricondylus ilicifolius*, a small tree of the family *Proteaceæ.* (*b*) In Tasmania, a shrub of the madder family, *Coprosma hirtella.* See ★*coffee-berry*, 2.—**New Zealand holly**, a spiny-leaved shrub or small tree of the aster family, *Shawia ilicifolia* (*Olearia ilicifolia* of Hooker), valued by the Maoris on account of its musky odor.

Hollybush sandstone. See ★*sandstone.*

holly-cherry (hol′i-cher″i), *n.* Same as *islay.*

hollyhock-bug (hol′i-hok-bug), *n.* An American capsid bug, *Orthotylus delicatus*, bright green in color. It sucks the juices of young hollyhock plants, causing them to wilt, and is also found on ash and other trees and plants.

hollyhock-disease (hol′i-hok-di-zēz″), *n.* See ★*disease.*

Holman's formula. See ★*formula.*

holm-berry (hōlm′ber″i), *n.* See ★*berry*[1].

holm-gang (hōlm′gang), *n.* A going to a holm to engage in mortal combat; the duel then fought. *Kingsley.*

Holmgren test. See ★*test*[1].

Holmia[1] (hol′mi-ạ̈), *n.* [NL., named after G. *Holm*, a Swedish geologist.] A genus of trilobites belonging to the family *Olenidæ* and characterized by possessing 10 free segments and a small unsegmented pygidium. It occurs in the Lower Cambrian rocks.

holmia[2] (hol′mi-ạ̈) *n.* [NL.: see ★*Holmia*[1].] In *chem.*, one of the rare earths, found with yttria in gadolinite, and supposed to be the oxid of a distinct element, holmium: but it may be an as yet unseparated mixture. What was first called *holmia* has been shown to contain dysprosia, and the name now applies to what remains after this has been separated.

holmic (hol′mik), *a.* [*holm*(*ium*) + *-ic.*] In *chem.*, containing holmium: as, *holmic* oxid; a *holmic* salt.

holmos (hol′mos), *n.*; pl. *holmoi* (-moi). [Gr. ὅλμος, a round, smooth stone, a mortar, etc.] In *Gr. antiq.*, a mortar; also, a drinking-vessel. The name is also applied to a bowl-like crater sometimes supported on a trumpet-shaped foot. The holmos frequently had two handles set low and horizontally.

holoacid (hol′ọ-as-id), *n.* [Gr. ὅλος, whole, + E. *acid.*] In *chem.*, a hypothetical product of the union of an acid oxid, not merely with the elements of water, but also of hydrogen dioxid.

holoacral (hol-ō-ā′kral), *a.* [Gr. ὅλος, whole, + ἄκρον, summit, + *-al*[1].] In *math.*, having all the summits opposite to similar summits. See *summit*, 3.

holoaxial (hol-ō-ak′si-al), *a.* [Gr. ὅλος, whole, + L. *axis*, axis, + *-al*[1].] Noting a form of crystal having all the axes of symmetry which can coexist, but without planes of symmetry. *H. A. Miers.*

holobaptist (hol-ọ-bap′tist), *n.* [Gr. ὅλος, whole, + βαπτιστής, baptist.] One who baptizes the whole body; an immersionist.

holobenthic (hol-ọ-ben′thik), *a.* [Gr. ὅλος, entire, + E. *benthic.*] Completely benthic; living on the bottom under the water and nowhere else. See ★*benthos*, ★*benthic.*

Another hindrance to the extension of many deep-sea species is that they are *holobenthic*, that is, do not pass through a free swimming larval stage.
Encyc. Brit., XXXIII. 935.

holobranch (hol′ọ-brangk), *a.* and *n.* [Gr. ὅλος, whole, + βράγχια, gills.] **I.** *a.* Having each branchial arch provided with a pair of hemibranchs or half-gills: said of the gills of fishes.

II. *n.* A gill having filaments on both of its lower and posterior edges.

Holobranchia, *n. pl.* **3.** A subclass of the *Bryozoa*, characterized by having the lophophore unbroken and either circular or horseshoe-shaped.

holocaine (hō-lok′ạ-in), *n.* [Gr. ὅλος, whole, + E. (*co*)*caine.*] A local anesthetic, resembling in its action, and employed as a substitute for, cocaine; a combination of paraphenetidin and phenacetin.

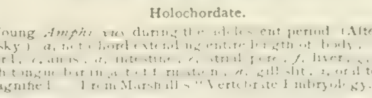
holocarpic (hol-ọ-kär′pik), *a.* [Gr. ὅλος, whole, + καρπός, fruit, + *-ic.*] In certain unicellular algæ, noting the transformation of the simple vegetative body into a sporangium or a spore.

holocarpous (hol-ọ-kär′pus), *a.* [Gr. ὅλος, whole, + καρπός, fruit, + *-ous.*] Same as ★*holocarpic.*

Holochoanites (hol″ọ-kō-ạ-nī′tēz), *n. pl.* [NL., prop. singular, ‹ Gr. ὅλος, entire, + χόανος, a funnel, + *-ites*, E. *-ite*[2].] A suborder of the nautiloid cephalopods in which the funnels of siphuncular segments reach from the septum of origination to the next septum apicad or beyond this.

holochoanitic (hol″ọ-kō-ạ-nit′ik), *a.* Of or resembling the *Holochoanites;* having the structure of the siphuncular wall as in the *Holochoanites.*

holochordate (hol-ọ-kôr′dāt), *a.* [Gr. ὅλος, whole, + χορδή, chord, + *-ate*[1].] Having the



Holochordate.

Young *Amphioxus* during the adolescent period. (After Kowalevsky.) *a*, notochord extending entire length of body; *b*, spinal chord; *c*, anus; *d*, intestine; *e*, atrial pore; *f*, liver; [illegible] with tongue bar in [illegible]; *h*, gill slit; *i*, oral tentacles. (Magnified. From Marshall's "Vertebrate Embryology.")

chorda or notochord extending the full length of the body, as *Amphioxus.*

holochroal (hō-lok′rọ-ạl), *a.* [Gr. ὅλος, whole, + χρόα, the skin, + *-al*[1].] In the compound eyes of trilobites and other crustaceans, having a corneous layer extending continuously over the entire visual surface, as in *Proëtus*, *Asaphus*, etc. Contrasted with ★*schizochroal.*

holoclastic (hol-ọ-klas′tik), *a.* [Gr. ὅλος, whole, + κλαστός, broken.] Noting clastic rocks of aqueous origin as distinguished from those of volcanic origin (hemiclastic). *Senft*, 1857.

Holocystis (hol-ọ-sis′tis), *n.* [NL., ‹ Gr. ὅλος, entire, + κύστις, a bladder.] A genus of Cretaceous corals having characters of the *Tetracoralla*, four of the septa being larger than the rest and the visceral chamber containing tabulæ.

holoedric (hol-ọ-ē′drik), *a.* [Gr. ὅλος, whole, + ἕδρα, seat, base.] In *group-theory*, designating isomorphism in which two groups are simply isomorphic.

hologonic (hol-ọ-gon′ik), *a.* [Gr. ὅλος, whole, + γωνία, angle, + *-ic.*] Same as ★*holoacral.*

hologonidium (hol″ọ-gọ-nid′i-um), *n.*; pl. *hologonidia* (-ạ̈). [Gr. ὅλος, whole, + NL. *gonidium.*] A group of algal cells invested with fungus threads which, under proper conditions, may reproduce the thallus of a lichen. Also *soredium.*

holohedron (hol-ọ-hē′drọn), *n.* [Gr. ὅλος, whole, + ἕδρα, seat, base.] A holohedral (holosymmetric) crystal. See ★*holosymmetric*, 2.

holohexagonal (hol″ō-hek-sag′ọ-nạl), *a.* [Gr. ὅλος, whole, + ἑξάγωνος, six-cornered, + *-al*[1].] See ★*holosymmetric*, 2.

holohyaline (hol-ọ-hī′ạ-lin), *a.* [Gr. ὅλος, whole, + ὑάλινος, of glass.] In *petrog.*, completely glassy; without crystals.

holo-isometric (hol″ọ-ī-sọ-met′rik), *a.* See ★*holosymmetric*, 2.

holometabole (hol″ọ-me-tab′ọ-lẹ), *n.* [NL.] Same as *holometaboly.*

Holometopa (hol-ọ-met′ọ-pä), *n. pl.* [NL., ‹ Gr. ὅλος, whole, + μέτωπον, front, face.] In Brauer's system, a group of dipterous insects including the family *Conopidæ* and the acalyptrate *Muscidæ.*

holomorphic, *a.* **2.** (*b*) Noting a function of a complex variable which is continuous, one-valued, and has a derived function when the variable moves in a certain region of the plane: so called to indicate that it is like an integer function for which this property holds throughout the entire plane.

holomorphosis (hol-ọ-môr′fọ-sis), *n.* [NL., ‹ Gr. ὅλος, entire, + μόρφωσις, formation.] In

hol., the perfect replacement or regeneration of a lost part, as contrasted with ★*meromorphosis.*

Under this heading we may distinguish two cases, in one of which the entire lost part is at once, or later, replaced — *holomorphosis*; in the other the new part is less than the part removed — meromorphosis.
T. H. Morgan, Regeneration, p. 24.

holoparasite (hol-ō-par'ą-sit), *n.* [Gr. ὅλος, whole, + παράσιτος, parasite.] A completely parasitic plant. Compare ★*hemiparasite.*

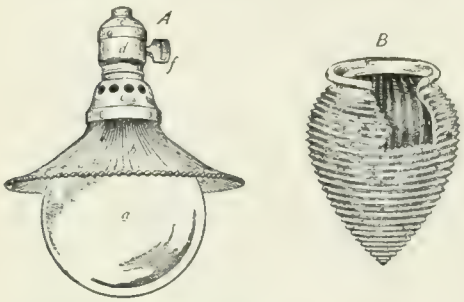
Holoparasites, which live entirely at the cost of the organic substance of their host, like holosaprophytes are devoid of chlorophyll and, if phanerogams, develop scales in the place of foliage-leaves.
A. F. W. Schimper (trans.), Plant-Geog., p. 203.

holoparasitic (hol″ō-par-ą-sit'ik), *a.* [*holoparasite* + *-ic.*] Pertaining to or of the nature of a holoparasite.

The degree of connexion between the two and the dependence of the parasite upon the host vary between the completeness of that of *holoparasitic* Rhizanths, in which little more than the flower of the parasite is visible upon the outside of the stem of the host and the parasitism is absolute, and the limitation of that of the hemiparasitic Rhinantheæ, in which to all appearance there is an independent autotrophic geophyte.
Encyc. Brit., XXV. 439.

Holopea (hol-ō-pē'ą), *n.* [NL., < Gr. ὅλος, entire, + ὤψ (ὠπ-), face.] A genus of *Gasteropoda* belonging to the family *Littorinidæ.* It is characterized by a short conical shell and roundly oval aperture with entire margin, and occurs in the Silurian and Devonian rocks.

holophane (hol'ō-fān), *n.* [Gr. ὅλος, whole, + -φανής, < φαίνεσθαι, appear.] A trade-name of



Holophane.

A, meridian lamp with holophane reflector: *a*, bulb; *b*, holophane reflector; *c*, reflector-holder, *d*, socket-cover; *e*, socket-cap; *f*, key. *B*, holophane globe.

a glass globe or reflector for electric or other lights, of clear glass, pressed, either only on the outer surface or on both surfaces, with prismatic corrugations: in the latter case the prisms of the inner surface are at right angles to those of the outer surface and are arranged so as to scatter the transmitted light in the special manner required.

holophrase (hol'ō-frāz), *n.* Same as ★*holophrasm.* See *holophrasis.*

holophrasm (hol'ō-frazm), *n.* [Irreg. formed from *holophrasis.*] A holophrastic expression. *Amer. Anthropologist*, Oct.–Dec., 1900, p. 615.

holophyte (hol'ō-fīt), *n.* [Gr. ὅλος, whole, + φυτόν, plant.] In *bot.*, a plant which manufactures its own food, being in no sense saprophytic or parasitic.

holophytic, *a.* **2.** In *bot.*, having the character of a complete plant in point of nutrition; autotrophic: said of ordinary green plants as opposed to parasites and saprophytes.

holoplankton (hol-ō-plangk'ton), *n.* [Gr. ὅλος, entire, + NL. *plankton.*] The plants and animals that pass their whole life swimming or floating in the water, considered collectively and in contrast with those that float or swim for only a part of their lives, passing the rest upon or in the bottom. See ★*hemibenthic*, ★*holobenthic*, ★*hemiplankton*, ★*holoplanktonic*, ★*planktonic.*

holoplanktonic (hol″ō-plangk-ton'ik), *a.* [*holoplankton* + *-ic.*] Living in the water of the sea throughout life: contrasted with ★*meroplanktonic* (which see). *Haeckel* (trans.), Planktonic Studies, p. 583.

holopneustic (hol-op-nū'stik), *a.* [Gr. ὅλος, entire, + πνευστός, < πνεῖν, breathe.] Having many pairs of external openings to the air. Most adult insects are holopneustic, being provided with a tracheal system which communicates with the outer air through many pairs of stigmata or external apertures.

holopodous (hō-lop'ō-dus), *a.* Belonging to or characteristic of the family *Holopodidæ.*

Holops (hol'ops), *n.* [NL., < Gr. ὅλος, whole, + ὤψ, the face.] A genus of crocodiles from the Cretaceous rocks of North America.

holoptic (hō-lop'tik), *a.* [Gr. ὅλος, whole, + ὀπτικός, of seeing.] In *entom.*, having the eyes of the two sides meeting in a line on top of the head, as in many male dipterous insects.

holoptychiid (hol-op-tik'i-id), *n.* One of the *Holoptychiidæ.*

holorachischisis, holorrhachischisis (hol″ō-ra-kis'ki-sis), *n.* [NL., < Gr. ὅλος, whole, + ῥάχις, spine, + σχίσις, division.] Spina bifida extending the entire length of the spine.

holorhiny (hol-ō-rī'ni), *n.* [Gr. ὅλος, whole, + ῥίς (ῥιν-), nose, + *-y*[3].] In *ornith.*, the fact or condition of having holorhinal nostrils, that is, of having the narial openings more or less oval in shape and with their posterior margin in advance of the posterior ends of the premaxillaries.

holosaprophyte (hol-ō-sap'rō-fīt), *n.* [Gr. ὅλος, whole, + E. *saprophyte.*] A completely saprophytic plant. See extract under ★*holoparasite.*

holosaprophytic (hol″ō-sap-rō-fit'ik), *a.* Pertaining or relating to a holosaprophyte.

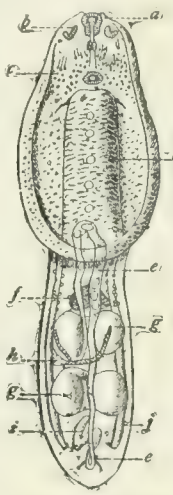
holospheric (hol-ō-sfer'ik), *a.* [Gr. ὅλος, whole, + σφαῖρα, sphere, + *-ic.*] Of the entire globe. — **Holospheric anomaly**, the departure of a local temperature from the holospheric normal for that latitude. — **Holospheric isabnormal**, a line connecting places having the same holospheric anomaly. *Sella*, 1896. — **Holospheric normal**, the average temperature of the whole of any two circles of equal latitude in the northern and southern hemispheres. *Sella*, 1896.

holostiak (ho-los-tyäk'), *n.*; pl. *holostiaks* or (after Russian) *holostiaki* (-tyä'ki). [Russ. *kholostyákŭ* (pl. *-kii*), a bachelor.] A young male fur-seal; a bachelor seal. Compare ★*holluschick.*

He carefully distinguishes the various classes of seals, . . . the polusikatchi, or young bulls; the *holustiaki*, or bachelors. *L. Stejneger*, Russian Fur-seal Islands, p. 60.

Holostomatidæ (hol″ō-stō-mat'i-dē), *n. pl.* [NL.] An erroneous form for *Holostomidæ.*

Holostomidæ (hol-ō-stom'i-dē), *n. pl.* [NL., < *Holostomum* + *-idæ.*] A family of trematoids of the order *Malacotylea.* They have two suckers and a peculiar adhesive apparatus behind the ventral sucker on the anterior region of the body, and the body divided into an anterior flattened and a posterior cylindrical region. The family contains the genera *Holostomum*, *Diplostomum*, *Hemistomum*, and *Polycotyle*, found mostly in the alimentary canal of birds, reptiles, and mammals, rarely in amphibia and fishes.



Holostomidæ (*Metazatica*) *Hemistomum* of Birds. *Hemistomum clathratum* Diesing, from the gut of *Lutra brasiliensis*, ventral view (from Bronn, after Brandes).
a, oral sucker; *b*, openings of glands, *c*; *d*, ventral adhesive apparatus (the ventral sucker is just in front of this); *e*, uterus (the opening of the uterus is rather indistinctly rendered, just below the lower *e*); *f*, ovary; *g*, testis; *h*, shell-glands; *i*, vesicula seminalis; *j*, yolk-glands.
(From Sedgwick's "Zoology.")

Holostomum (hō-los'tō-mum), *n.* [NL., < Gr. ὅλος, whole, + στόμα, mouth.] The typical genus of the family *Holostomidæ. Nitzsch*, 1816.

holostylic (hol-ō-stil'ik), *a.* [*holostyl-y* + *-ic.*] Relating to or having the condition of the visceral arches known as holostyly.

holostyly (hō-los'ti-li), *n.* [Gr. ὅλος, entire, + στῦλος, pillar, + *-y*[3].] The condition of having the palatoquadrate fused with the cartilaginous cranium and the second visceral arch entire and free from the cranium. It occurs in the chimæras or *Holocephali. W. K. Gregory*, 1904.

holosymmetric, *a.* Specifically — **2.** Having the highest degree of symmetry possible under the given system, and hence showing the maximum number of faces for each form. The holosymmetric forms under each of the crystalline systems are sometimes designated, respectively, as *holoisometric* (also *holotesseral*, etc.), *holotetragonal*, *holohexagonal*, etc. — **Holosymmetric group.** See ★*symmetry*, 6.

holosystematic (hol″ō-sis-te-mat'ik), *a.* Same as ★*holosymmetric*, 2.

holotesseral (hol-ō-tes'e-ral), *a.* [Gr. ὅλος, whole, + L. *tessera*, a square, + *-al*[1].] See ★*holosymmetric*, 2.

holotetragonal (hol″ō-te-trag'ō-nal), *a.* [Gr. ὅλος, whole, + τετρά(γ)ωνος, four-cornered, + *-al*[1].] See ★*holosymmetric*, 2.

holotonia (hol-ō-tō'ni-ą), *n.* [NL., < Gr. ὅλος, whole, + τόνος, tension.] General muscular spasm of the entire body.

holotonic (hol-ō-ton'ik), *a.* [*holotonia* + *-ic.*] Relating to or affected with holotonia.

holotrichal (hō-lot'ri-kal), *a.* Same as ★*holotrichous.*

holotrochal (hō-lot'rō-kal), *a.* [Gr. ὅλος, whole, + τροχός, a wheel, + *-al*[1].] Having the body covered with cilia: said of certain invertebrate larvæ: opposed to ★*atrochal. Proc. Zool. Soc. London*, 1901, II. 716.

holotropical (hol-ō-trop'i-kal), *a.* [Gr. ὅλος, whole, + -τροπος, < τρέπειν, turn, + *-ic-al*[1].] Same as *tropicopolitan.*

holotype (hol'ō-tīp), *n.* [Gr. ὅλος, entire, + τύπος, type.] A particular individual selected as the type of a species, or the only specimen known at the time of publication of the species.

A *holotype*, therefore, is always a single individual, but may embrace one or more parts, as the skin, skeleton, or other portions. *Science*, April 23, 1897, p. 638.

holoxid (hol-ok'sid), *n.* [Gr. ὅλος, whole, + *oxid.*] In *chem.*, a compound assumed to contain as a constituent molecular instead of atomic oxygen.

Holstein-Friesian cattle. See ★*cattle.*

Holy City. (*b*) A nickname for Adelaide, South Australia. *E. E. Morris*, Austral English. — **Holy-Cross toad.** Same as *Catholic* ★*frog.*

holzin (hōlt'sin), *n.* [G. *Holz*, a German surname (?), + *-in*[2].] A solution of formalin in methyl alcohol, used as a deodorizer.

holzinol (hōlt'si-nol), *n.* [*holzin* + *-ol.*] A mixture of menthol and formalin.

hom[3] (hōm), *n.* Same as ★*homa.*

homa (hō'mą), *n.* [Middle Pers. *hōma*, Avestan *haoma*, = Skt. *soma*: see *soma*[2].] Same as *soma*[2].

The Soma or *Homa* ceremony consisted in the extraction of the juice of the *Homa* plant by the priests during the recitation of prayers, the formal presentation of the liquid extracted to the sacrificial fire, the consumption of a small portion of it by one of the officiating priests, and the division of the remainder among the worshippers. As the juice was drunk immediately after extraction and before fermentation had set in, it was not intoxicating. The ceremony seems to have been regarded, in part, as having a mystic force, securing the favor of heaven; in part, as exerting a beneficial influence upon the body of the worshipper through the curative power inherent in the *Homa* plant.
G. Rawlinson, Seven Great Monarchies, The Third Monarchy, II. iv.

The word is used erroneously in the following quotation:

Persia was accustomed to set her own peculiar seal upon her figured webs by mingling in her designs the mystic "*homa*." . . . Borrowed perhaps originally from Hebrew tradition, this symbol of "the tree of life" had in it nothing objectionable to the Christian, the Jew, or the Moslem.
D. Rock, S. K. Handbook, Textile Fabrics, p. 52.

Homacanthus (hom-ą-kan'thus), *n.* [NL., < Gr. ὁμός, equal, + ἄκανθα, a spine.] A group of slender, bilaterally symmetrical fish spines (probably belonging to the cestraciont sharks) found in the Devonian and Carboniferous rocks.

Homacodontidæ (hom″ą-kō-don'ti-dē), *n. pl.* [NL. *Homacodon*, the type genus, + *-idæ.*] A family of small, extinct, artiodactyl, ungulate mammals, which contains species about the size of rabbits. The brain-case is large, the orbit open, and the molars have conspicuous, conical tubercles. *Nanomeryx* and *Bunomeryx* are other genera. The species occur in the Eocene of North America and Miocene of Europe. *Marsh*, 1894.

Homalocenchrus (hom″ą-lō-sen'krus), *n.* [NL. (Mieg, 1760), in allusion to the compressed spikelets and the general resemblance of the plant to millet-grass, *Milium effusum*; < Gr. ὁμαλός, flat, compressed, + κέγχρος, millet.] A genus of grasses. See *Leersia.*

Homalodontotheriidæ (hom″ą-lō-don-tō-thē-rī'i-dē), *n. pl.* [NL. *Homalodontotherium*, the type genus, + *-idæ.*] A family of extinct artiodactyl mammals, of the suborder *Ancylopoda*, which contains a number of genera of large mammals from the Santa Cruz (Miocene ?) of Patagonia. The skull is massive, limbs stout, and vertebral centra slightly flattened. *Ameghino*, 1889.

homalographic (hom″ą-lō-graf'ik), *a.* [*homalograph-y* + *-ic.*] Pertaining to or by means of homalography: noting a method of anatomical demonstration by means of a series of plane sections, usually of a frozen body.

homalography (hom-ą-log'rą-fi), *n.* [Gr. ὁμαλός, level, plane, + γράφειν, write.] In *anat.*, the study of anatomical structures by means of plane sections of the body.

homaloid (hom'a-loid), *n.* [Gr. *ὁμαλός*, level, plane, + *εἶδος*, form.] A homaloidal space or universe.

Homaloidal surface. See ★*surface.*

Homalonotus (hom"a-lō-nō'tus), *n.* [Gr. *ὁμαλός*, smooth, + *νῶτος*, back.] A genus of trilobites belonging to the family *Calymmenidæ.* They are characterized by a broad, flat body in which the lobation is very indistinct, and are usually of large size; they prevailed in the late Silurian and early Devonian.

homalotropous (hom-a-lot'rō-pus), *a.* [Gr. *ὁμαλός*, level, + *-τροπος*, ⟨ *τρέπειν*, turn, + *-ous.*] In *bot.*, growing in a horizontal direction. *Nall.*

homaxial (hō-mak'si-al), *a.* [Gr. *ὁμός*, the same, + L. *axis*, axis, + *-al*[1].] Same as *homaxonial.*

Home counties. See ★*county*[1].

home-bird (hōm'bèrd), *n.* A bird raised or cared for in the home; hence, a child nurtured at home, and under home influences.

The child is still a *home-bird*, and in the humanities above all, this sentiment must find a place right through into boyhood. *Nature*, Feb. 5, 1903, Sup., p. v.

homelyn (hōm'lin), *n.* [Also *homlin, hommelin*; origin obscure.] The rough ray, *Raja maculata*, found on the coasts of Europe.

homeochronous (hō-mē-ok'rō-nus), *a.* [Gr. *ὅμοιος*, of the same appearance, like, + *χρόνος*, time.] Same as ★*homochronous.*

homeophony (hō-mē-of'ō-ni), *n.* [Gr. *ὅμοιος*, of the same nature, + *φωνή*, voice, sound.] Similarity of sound.

homeopraxis (hō"mē-ō-prak'sis), *n.* [Gr. *ὅμοιος*, of the same nature, + *πρᾶξις*, doing, action.] A similar action or a like development; a parallel evolution.

This is a phenomenon of "dynamic convergence," which the author calls "*homeopraxis.*" It is, indeed, very striking that the rightful tenant and the insinuated parasite which replaces it should have similar adaptations, both structural and functional, securing emergence. There is a parallel adaptation of host and parasite to the same conditions.
Jour. Roy. Micros. Soc., Dec., 1904, p. 649.

homer[1], *n.* 2. In *base-ball*, a home run.

Homerist (hō'mē-rist), *n.* 1. A Homeric scholar; a student or an admirer of Homer or his poems.—2. An imitator of Homer or his style.

Homerologist (hō-mē-rol'ō-jist), *n.* One who is versed in Homerology.

homested, *n.* and *v.* A simplified spelling of *homestead.*

homester (hōm'stèr), *n.* [*home* + *-ster.*] One who belongs to or represents the locality; especially, a member of the local or 'home' team in any sporting contest. [Eng.]

Homesthes (hō-mes'thēz), *n.* [NL. (Gilbert), ⟨ Gr. *ὁμός*, the same, + *ἐσθίειν*, eat.] A genus of blennies found on the coast of Panama.

homethrust (hōm'thrust), *v. i.* To thrust home; deliver a home thrust; hit the mark directly and with effectiveness.

hominal (hom'i-nal), *a.* [L. *homo* (*homin-*), man, + *-al*[1].] Pertaining to or characteristic of man or mankind; human. [Rare.]

hominian (hō-min'i-an), *n.* [L. *homo* (*homin-*), man, + *-ian.*] One of the *Hominidæ*; a human being.

hominify (hō-min'i-fī), *v. t.*; pret. and pp. *hominified*, ppr. *hominifying.* [L. *homo* (*homin-*), man, + *-ficare*, ⟨ *facere*, make.] To render manlike or human; attribute human qualities to; make man.

hominocentric (hom"i-nō-sen'trik), *a.* [L. *homo* (*homin-*), man, + *centrum*, center, + *-ic.*] Pertaining to the doctrine or idea that all things are created or designed to please or satisfy man. [Rare.]

It was the old idea that all things exist merely to please man: this *hominocentric* doctrine Darwin disproved.
L. H. Bailey, Outlook to Nature, p. 272.

homobiophorid (hō"mō-bī-of'ō-rid), *n.* [Gr. *ὁμός*, the same, + E. *biophorid.*] See ★*biophorid.*

homobranchiate (hō-mō-brang'ki-āt), *a.* [Gr. *ὁμός*, the same, + *βράγχια*, gills, + *-ate*[1].] Having gills of uniform structure, as decapod crustaceans; pertaining to or having the characters of the *Homobranchia.*

homobront (hō'mō-bront), *n.* [Gr. *ὁμός*, the same, + *βροντή*, thunder.] A line connecting points around an advancing thunder-storm at which the first thunder is heard simultaneously; an isobront. *Von Bezold.*

homocamphoric (hō"mō-kam-for'ik), *a.* [Gr. *ὁμός*, the same, + (*cyan*)*camphor* + *-ic.*] Noting an acid, a colorless crystalline compound, $HO.COC_8H_{14}.CH_2.COOH$, formed by boiling cyancamphor with potassium hydroxid. It melts at 234° C., and was at one time called, incorrectly, *hydrocamphocarboxylic acid.*

homocentrically (hō-mō-sen'tri-kal-i), *adv.* Concentrically.

homocerebrin (hō-mō-ser'ē-brin), *n.* [Gr. *ὁμός*, the same, + L. *cerebrum*, brain, + *-in*[2].] A colorless compound, $C_{70}H_{138}O_{12}N_2$(?), formed by the action of barium hydroxid solution on brain matter. It crystallizes in transparent spheres, melts at 170–176° C., and is also called *phrenosin.*

homochelidonin (hō"mō-ke-lid'ō-nin), *n.* [Gr. *ὁμός*, the same, + *Chelidon*(*ium*) + *-in*[2].] An alkaloid, $C_{21}H_{21}O_5N$, obtained from the root of *Sanguinaria Canadensis.* Two compounds with this formula are known, distinguished as *β-* and *γ-homochelidonin.* Both crystallize in needles; the former melts at 156° C., the latter at 169° C. The latter is also found in *Chelidonium majus.*

homochiral (hō-mō-kī'ral), *a.* [Gr. *ὁμός*, the same, + *χείρ*, hand, + *-al*[1].] Related in the manner of one right hand to another right hand, or of one left hand to another left, that is, formed in the same way and turned in the same direction; identical in form and direction.

homochirally (hō-mō-kī'ral-i), *adv.* In a homochiral manner.

homochlamydeous (hō"mō-kla-mid'ē-us), *a.* [Gr. *ὁμός*, the same, + *χλαμύς* (*χλαμυδ-*), cloak, + *-e-ous.*] In *bot.*, dichlamydeous, but with all the members of the perianth similarly colored. In plant development, the homochlamydeous stage succeeds the homoiochlamydeous, and is followed by the heterochlamydeous.

homochromosome (hō-mō-krō'mō-sōm), *n.* [Gr. *ὁμός*, the same, + *χρῶμα*, color, + *σῶμα*, body: see ★*chromosome.*] An ordinary or typical chromosome, as contrasted with an accessory chromosome.

Montgomery's (26) terms *homochromosome* and heterochromosome to distinguish between the ordinary chromosomes and the accessory. *Biol. Bulletin*, Dec., 1904, p. 6.

homochromy (hō-mok'rō-mi), *n.* [Gr. *ὁμός*, the same, + *χρῶμα*, color.] The coloring of organisms in resemblance to the prevailing color of their normal environment; general cryptic coloring.

homochronic (hō-mō-kron'ik), *a.* [As *homochron-ous* + *-ic.*] Appearing in the offspring at the same point of development as in the parent.—**Homochronic heredity.** See ★*heredity.*

homochronous (hō-mok'rō-nus), *a.* [Gr. *ὁμόχρονος*, of the same time, ⟨ *ὁμός*, the same, + *χρόνος*, time.] Appearing in the children at the same age as in the parents. See the extract.

This kind of inheritance (of characters of the parents in such manner that they appear in the latter at the same age in which they occur in the former) has been called *homochronous.* *Eimer*, Organic Evolution, p. 167.

homocladic (hō-mō-klad'ik), *a.* [Gr. *ὁμός*, the same, + *κλάδος*, branch.] Noting an anastomosis formed between terminal twigs of the same artery: opposed to ★*heterocladic.*

Homocœla (hō-mō-sē'lä), *n. pl.* [NL., ⟨ Gr. *ὁμός*, the same, + *κοῖλος*, hollow.] A suborder of calcareous sponges in which there are no flagellated chambers, the entire internal surface being lined by collared cells. It includes the family *Asconidæ.* Compare ★*Heterocœla.*

homocœlous (hō-mō-sē'lus), *a.* [Gr. *ὁμός*, the same, + *κοῖλος*, hollow, + *-ous.*] Having the gastral layer of cells continuous, as in sponges of the family *Clathrinidæ;* resembling or having the characteristics of the *Homocœla*: opposed to ★*heterocœlous.*

homoconine (hō-mō-kō'nin), *n.* [Gr. *ὁμός*, the same, + E. *conine.*] A colorless liquid, $C_5H_9(NH)CH_2.CH(CH_3)_2$, closely allied to conine, which it resembles in odor. It boils at 181–182° C. Also called *α-isobutylpiperidine.*

homocyclic (hō-mō-sik'lik), *a.* and *n.* [Gr. *ὁμός*, the same, + *κύκλος*, circle.] **I.** *a.* Having the same or only one circle or cycle.

Spectra of the third variety. These show absorption bands, and the substances yielding them are generally constituted on the type of benzene, naphthalene, anthracene, phenanthrene, &c.; but the rings may be either *homocyclic* or heterocyclic without the character of the spectra being altered. *Nature*, Sept. 17, 1903, p. 475.

II. *n.* A closed-chain compound in which the ring consists only of carbon atoms, as benzene.

Homocysteæ (hō-mō-sis'tē-ē), *n. pl.* [Gr. *ὁμός*, the same, + *κύστις*, a bag, + *-eæ.*] A suborder of the blue-green algæ characterized by the absence of heterocysts.

homodermatous (hō-mō-dèr'ma-tus), *a.* [Gr. *ὁμός*, the same, + *δέρμα*(*τ-*), skin, + *-ous.*] Having the skin of uniform structure throughout the body.

homodermy (hō-mō-dèr'mi), *n.* [Gr. *ὁμός*, the same, + *δέρμα*, skin.] In *biol.*: (*a*) Similarity in relation to the germ-layers. (*b*) The doctrine or opinion that homologous parts always stand in the same relation to the embryonic germ-layers, and that embryonic origin is the final and decisive test of homology.

homodesmotic (hō"mō-des-mot'ik), *a.* [Gr. *ὁμός*, the same, + *δεσμός*, a bond, + *-otic.*] Joining similar parts of the central nervous system: noting nerve fibers which perform this office.

homodontism (hō-mō-don'tizm), *n.* [*homodont* + *-ism.*] The condition of having a dentition in which all teeth are alike, as toothed whales. [Rare.]

homodoxia (hō-mō-dok'si-ä), *n.* [NL., ⟨ Gr. *ὁμός*, the same, + *δόξα*, opinion.] The holding of opinions in common; or, opinions held in common. *G. S. Hall*, Adolescence, II. 133.

homodrome (hō'mō-drōm), *n.* [Gr. *ὁμός*, the same, + *δρόμος*, a running.] In *physiol.*, a positive induction current. *Proc. Roy. Soc.* (London), July, 1902, p. 190.

homodynamic (hō"mō-dī-nam'ik), *a.* Same as *homodynamous* in all senses.

homodynamous, *a.* 2. Noting the absence of a condition of dominance in respect to a given character in ancestral inheritance. When the cross-bred offspring of two parental races or varieties breeds true or produces offspring like itself, the parents of the cross-bred offspring are held to be *homodynamous.*—**Homodynamous determinant.** See ★*determinant.*

homœocephalic (hō"mē-ō-se-fal'ik), *a.* [Gr. *ὁμός*, the same, + *κεφαλή*, head, + *-ic.*] Relating to skulls of similar type.

homœochromatic (hō"mē-ō-krō-mat'ik), *a.* [Gr. *ὅμοιος*, like, + *χρῶμα*(*τ-*), color.] Exhibiting similar colors (in different adjacent species); of or pertaining to homœochromatism.

homœochromatism (hō"mē-ō-krō'ma-tizm), *n.* [*homœochromat*(*ic*) + *-ism.*] In *biol.*, similarity in the colors of different species of animals or plants that occur in the same locality. *Athenæum*, Oct. 24, 1903, p. 552.

homœocrystalline (hō"mē-ō-kris'ta-lin), *a.* [Gr. *ὅμοιος*, like, + E. *crystalline.*] In *petrog.*, composed of crystals or grains of equal size: sometimes applied to evenly granular crystalline rocks.

homœogenesis (hō"mē-ō-jen'e-sis), *n.* [NL., ⟨ Gr. *ὅμοιος*, like, + *γένεσις*, genesis.] Community of origin or ancestry. [Rare.]

homœogeneous (hō-mē-ō-jē'nē-us), *a.* [Gr. *ὁμοιογενής*, of like kind, + *-eous.*] Of a similar kind.

homœokinesis (hō"mē-ō-ki-nē'sis), *n.* [NL., ⟨ Gr. *ὅμοιος*, like, + *κίνησις*, motion.] The form of karyokinetic or mitotic cell-division in which the two daughter-nuclei receive chromosomes of the same kind: opposed to ★*heterokinesis.*

homœomorphic (hō'mē-ō-môr'fik), *a.* [Gr. *ὁμοιόμορφος*, of the same form, + *-ic.*] Of similar type or order.

In a remarkable proportion of cases of mental and other nervous disturbances we find a history of antecedent nervous conditions, either *homœomorphic*, i.e., of the same order, or heteromorphic, of different type.
Buck, Med. Handbook, IV. 600.

homœomorphous, *a.* 2. Of like shape and structure.

homœoplasia (hō"mē-ō-plā'si-ä), *n.* [NL., ⟨ Gr. *ὅμοιος*, like, + *πλάσις*, forming.] The assumption by the tissues of one part of the body of the form of those from another region, as when the skin of the arm is grafted on the cheek to heal a wound.

homœosis (hō-mē-ō'sis), *n.* [NL., ⟨ Gr. *ὁμοίωσις*, a becoming like, likeness, ⟨ *ὁμοιοῦν*, make like, ⟨ *ὅμοιος*, like.] In *biol.*, the presence in an organism of a normal member of a meristic series of parts in an abnormal position, as the presence, in a crustacean, of an antenna in the place where the eye is normally situated. When homœosis is exhibited in the part that replaces a part that has been removed, as when the amputated eye of a crustacean is replaced by an antenna, the phenomenon is termed *heteromorphosis.* See ★*heteromorphosis* and ★*metamorphy*, 2.

For the term 'Metamorphy' I therefore propose to substitute the term *Homœosis*, which is also more correct, for the essential phenomenon is not that there has merely been a change, but that something has been changed into the likeness of something else.
W. Bateson, Study of Variation, p. 85.

homœotherm (hō′mē-ō-thèrm), . . [Gr. *ὁμοιόθερμος*, of like warmth, < Gr. *ὅμοιος*, like, + *θερμή*, heat.] An animal with a bodily temperature which is nearly constant and independent of, and usually higher than, that of the surrounding medium; a warm-blooded animal. [Rare.]

These phenomena, which are numerous . . . in animals of the higher class (*homœotherms*), are much less so in cold-blooded animals. *Smithsonian Rep.*, 1890, p. 411.

homœothermal (hō′mē-ō-thèr′mal), *a.* [As *homœotherm* + *-al*[1].] Having blood which retains a uniform temperature notwithstanding the temperature of the environment: said of warm-blooded as opposed to cold-blooded, pœcilothermic, or heterothermal animals.

homœothermic (hō′mē-ō-thèr′mik), *a.* [*homœotherm* + *-ic.*] Of or pertaining to homœotherms or warm-blooded animals; homœothermal.

Man, mammals, and birds are called . . . *homœothermic* — that is, warm-blooded — animals.
Smithsonian Rep., 1890, p. 407.

homœothermism (hō′mē-ō-thèr′mizm), *n.* [As *homœotherm* + *-ism.*] The maintenance by warm-blooded animals of a bodily temperature which is independent of that of the surrounding medium.

homœotic (hō-mē-ot′ik), *a.* [*homœosis* (*-ot-*) + *-ic.*] Pertaining to or characterized by homœosis.

Though in some of these examples there may be change in the total number of vertebræ shewing that true Meristic change has occurred, they cannot well be treated apart from the more distinctly *Homœotic* cases.
W. Bateson, Study of Variation, p. 106.

Homœotic variation. See ★*variation.*

homœotopy (hō-mē-ot′ō-pi), *n.* Such a similarity of words as leads to errors in copying.

homœotype (hō′mē-ō-tīp), *n.* [Gr. *ὅμοιος*, like, + *τύπος*, type.] A specimen identified by a specialist from comparison with the original type, or a subsequently selected cotype: designed to replace *homotype*, which is in use for another purpose.

homœotypical (hō″mē-ō-tip′i-kal), *a.* [Gr. *ὅμοιος*, like, + *τύπος*, type, + *-ic-al*[1].] In *cytol.*, of or pertaining to a form of mitosis occurring in the secondary spermatocytes of some animals, such as the salamander, and differing from the typical form of mitosis only in the shortness of the chromosomes and their irregular arrangement in the daughter-nuclei. *Flemming*, 1887.

homogamic (hō-mō-gam′ik), *a.* Same as *homogamous.*

homogamous, *a.* **2.** Of or pertaining to homogamy or assortative mating. Also *homogamic.*

The whole range of effects from pure random mating to perfectly *homogamous* unions.
Biometrika, Nov., 1903, p. 481.

Homogamous mating. See ★*mating.*

homogamy, *n.* **2.** Assortative mating; the pairing or mating of animals, or the marriage of human beings, with some common distinctive characteristic considered apart from the question whether the mating is due to conscious selection of, or preference for, this characteristic or is unintentional or unconscious; sexual selection in its widest sense.

If the male class of a given character tends to mate with a female class with generally like character, we have a tendency to *homogamy*. *Biometrika*, Nov., 1903, p. 481.

homogen, *n.* **3.** A homogenous or homogenetic part or organ.

Homogeneous part. See ★*part.*

homogenetical (hō″mō-jē-net′i-kal), *a.* Of or pertaining to homogeny.

homogenic (hō-mō-jen′ik), *a.* Of or pertaining to homogeny; exhibiting homogeny or sameness of nature.

homogenist (hō-moj′e-nist), *n.* [*homogen-y* + *-ist.*] One who believes that the races of mankind have had a common origin or ancestral history and that they constitute a single species.

homogenize, *v. t.* **Homogenized milk,** a trade-name for milk which has been heated to 185° F. and forced by heavy pressure through a number of very fine openings, the jets impinging upon a porcelain plate. It is asserted that the result is to divide the fat into globules much smaller and more nearly uniform in size than those of the original milk, so that the product may be kept for a long time without the emulsion being broken up by the separation of cream in a distinct layer. *Sci. Amer.*, April 16, 1904, p. 315.

homogentisic (hō″mō-jen-tis′ik), *a.* [Gr. *ὁμός*, the same, + E. *gentisic.*] Noting an acid, a colorless compound, $HO_2C_6H_3CH_2COOH.H_2O$, found in small quantity in normal urine and in plant-roots. The amount is increased in cases where alkapton is present in the urine, or when the roots are geotropically stimulated. It crystallizes in prisms and melts at 146.5–147° C. Also called *dihydroxy-phenylacetic acid.*

homogentisin (hō-mō-jen′ti-sin), *n.* An incorrect term for ★*homogentisic acid.*

homogentisinic (hō-mō-jen-ti-sin′ik), *a.* An incorrect term for ★*homogentisic.*

homoglot (hō′mō-glot), *a.* [Gr. *ὁμός*, the same, + *γλῶττα*, tongue.] Possessing the same language. *N. E. D.*

homogomph (hō′mō-gomf), *a.* [Gr. *ὁμός*, the same, + *γόμφος*, a bolt, a nail.] Having similar spines or 'teeth.'

The setigerous region ends in a conical papilla behind that for the spine, and bears a single brown spine and a series of *homogomph* bristles.
Annals and Mag. Nat. Hist., Sept., 1902, p. 259.

homogonous, *a.* **2.** In *biol.*, characterized by direct development, without metamorphosis or alternation of generations.

homogony, *n.* **2.** In *biol.*, same as *homogenesis.*

homographic, *a.* **3.** In *philol.*, of or pertaining to homographs.—**Homographic division.** See ★*division.*

homoiochlamydeous (hō″moi-ō-kla-mid′ē-us), *a.* [Gr. *ὅμοιος*, like, + *χλαμύς* (*χλαμυδ-*), cloak, + E. *-eous.*] In *bot.*, having a single but fully developed floral envelop, as the oaks, the nettle family, etc. In plant development the homoiochlamydeous stage succeeds the haplochlamydeous, and is followed by the homochlamydeous.

homoiopodal (ho-moi-op′ō-dal), *a.* [Gr. *ὅμοιος*, like, + *πούς* (*ποδ-*), foot, + *-al*[1].] In *neurol.*, noting nerve-cells which have branches or processes of only one kind: opposed to ★*heteropodal. Baldwin*, Dict. of Philos. and Psychol., II. 155.

homoiothermal (hō″moi-ō-thèr′mal), *a.* Same as ★*homœothermal.*

Homola (hom′ō-lä), *n.* [NL. (Leach, 1815).] The typical genus of the family *Homolidæ.*

homolecithal (hō″mō-les′i-thal), *a.* [Gr. *ὁμός*, the same, + *λέκιθος*, yolk, + *-al*[1].] In *embryol.*, having the food-yolk uniformly distributed throughout the egg, as in alecithal eggs: opposed to ★*heterolecithal. Mark*, 1892.

Homolidæ (hō-mol′i-dē), *n. pl.* [NL., < *Homola* + *-idæ.*] A family of anomalous *Brachyura* in which the carapace is quadrangular or subtriangular, the eye-stalks usually very long

Latreillia [illegible] (de Haan).

a, female; *b*, head of male; *c*, head of female; *d*, same, from below; *e*, abdomen of male; *f*, abdomen of female.

and slender, the orbits incomplete, and the first antennæ not retractile into special fossettes. There are 5 genera, *Homola*, *Dicranodromia*, *Latreillia*, *Latreillopsis*, and *Homologenus*, and the various species extend to moderate depths.

homolinolein (hō″mō-li-nō′lē-in), *n.* [Gr. *ὁμός*, the same, + E. *linolein.*] In *chem.*, the substance $C_3H_5.(C_{18}H_{31}O_2)_3$, which forms the chief constituent of linseed-oil. The name *linolein* is reserved for the corresponding glycerid of an acid with 16 atoms of carbon.

homologen (hō-mol′ō-jen), *n.* [*homolo(gous)* + *-gen.*] The group of atoms by which a member of a homologous series differs from the one immediately preceding or succeeding it. In the methane series of compounds the homologen is CH_2.

homologenic (hō-mol-ō-jen′ik), *a.* [*homologen* + *-ic.*] Noting the molecule or group to which the homologen is successively added.

homologous, *a.* (*c*) In *pathol.*, noting a neoplasm composed of tissues of the same type as those of the part from which it springs; distinguished from ★*heterologous.* —**Homologous determinant, id, series, tumor, twins.** See ★*determinant*, etc.

homology, *n.* (*c*) In *chem.*, the relationship which the members of a homologous series bear to one another.—**Genetic homology,** special homology regarded as a result of descent from a common ancestor.—**Meristic homology** the similarity between corresponding or repeated parts in the same individual; nearly equivalent to *serial homology.* The five rays of a starfish are meristically, but not serially, homologous. *E. B. Wilson*, Biol. Lectures, 1895, p. 101.—**Parameter of homology,** the coefficient of homology.

homolysin (hō-mol′i-sin), *n.* [Gr. *ὁμός*, the same, + *λύσις*, dissolution, + *-in*[2].] A lysin which will cause the destruction of the cells of an animal of the same species.

homomorph (hō′mō-môrf), *n.* [Gr. *ὁμός*, the same, + *μορφή*, form.] In the study of primitive art, a term used to describe characters, types, or motives which are essentially the same in form.

Characters substantially the same, or "*homomorphs*" (to use Colonel Mallory's term) made by one set of people, have a different signification among others.
Haddon, Evolution in Art, p. 215.

homomorphosis (hō″mō-môr′fō-sis), *n.* [NL., < *ὁμός*, the same, + *μόρφωσις*, formation.] The replacement of a lost part in an organism by a part that is like the one that has been lost: opposed to ★*heteromorphosis.*

When the new part is like that removed, or like a part of that removed, as when a leg or a tail is regenerated in a newt, the process is one of "*homomorphosis.*"
T. H. Morgan, Regeneration, p. 23.

homonataloin (hō″mō-nā-tal′ō-in), *n.* [Gr. *ὁμός*, the same, + (?) L. *natus*, born, + E. *aloin.*] A colorless compound, $C_{15}H_{16}O_7$, obtained from aloin.

homonoia (hō-mō-noi′ä), *n.* [Gr. *ὁμόνοια*, agreement, concord, < *ὁμόνοος*, of the same mind, < *ὁμός*, the same, + *νόος*, mind.] **1.** The sharing of thoughts and sentiments; or, thoughts and sentiments mutually shared. *G. S. Hall*, Adolescence, II. 133.—**2.** [*cap.*] A Greek divinity equivalent to the Roman *Concordia.* She is often represented on coins.

homonomous, *a.* **2.** In *zoöl.*, made up of like segments or metameres: said of annelids or arthropods in which the various metameres are of the same or similar structure. Opposed to ★*heteronomous.*

homonomously (hō-mon′ō-mus-li), *adv.* In a homonomous manner.

homonym, *n.* **3.** Specifically, in systematic biology, a name given to a group (usually a genus or species) at a later date than that at which the same name had been given to another group. Such a name is said to be *preoccupied.* In order to avoid confusion with the earlier names, all homonyms are rejected. Thus the use of *Torreya* by Rafinesque in 1818 as the name of a genus of plants belonging to the family *Menthaceæ* prevents the recognition of *Torreya*, published by Arnott in 1838, as a valid name for a genus of the family *Taxaceæ*, the latter genus consequently taking its next older name *Tumion*, published in 1840. Similarly *Agriotherium* was used by Wagner for a genus of carnivores and by Scott for a genus of ungulates; and *Brachyurus* was applied by Fischer to a genus of rodents and by Spix to a genus of monkeys.

Homonymous images. See ★*image.*

homoparthenogenesis (hō″mō-pär-the-nō-jen′e-sis), *n.* [NL., < Gr. *ὁμός*, the same, + NL. *parthenogenesis.*] That type of parthenogenesis in which the unfertilized eggs produce only one sex, as contrasted with ★*heteroparthenogenesis*, or the production of both males and females from unfertilized eggs. When the unfertilized eggs produce only males, as in the bee, the phenomenon has been called *arrhenotoky* or *androgenetic parthenogenesis.* When females alone are produced it has been called *thelytoky*, or *gynogenetic parthenogenesis.*

homoperiodic (hō″mō-pē-ri-od′ik), *a.* [Gr. *ὁμός*, the same, + *περιοδος*, period, + *-ic.*] Having the same periods.

homophene (hō′mō-fēn), *n.* [Irreg. < Gr. *ὁμός*, the same, + *φαίνειν*, show, appear.] A word having the same visible form or spelling as another; a homograph.

homophenous (hō-mof′e-nus), *a.* Having the character of a homophene.

homoplastid (hō-mō-plas′tid), *n.* [Gr. *ὁμός*, the same, + E. *plastid.*] An organism consisting of numerous cells of uniform structure: opposed to ★*heteroplastid.*

homoplasty (hō′mō-plas-ti), *n.* [Gr. *ὁμός*, the same, + *πλαστός*, formed, + *-y*[3].] Same as *homoplasy.*

homopolar, *a.* **2.** In *elect.*, same as *unipolar*, 1. *Jour. Brit. Inst. Elect. Engin.*, 1901–02, p. 948.

homorhabdic (hō-mō-rab′dik), *a.* [Gr. *ὁμός*, the same, + *ῥάβδος*, rod.] Having the gill-filaments of the same size, as certain mollusks: opposed to ★*heterorhabdic. Lankester.*

homosexual (hō-mō-sek′sū-al), *a.* [Gr. *ὁμός*, the same, + L. *sexus*, sex, + *-al*[1].] **1.** Of or pertaining to the same sex or to individuals of the same sex.—**2.** Relating to homosexuality.

In one of our cases, *homosexual* impulses were a feature of degeneracy. *Med. Record*, June 13, 1903, p. 925.

homosexuality (hō′mō-sek-su-al′i-ti), *n.* [*homosexual* + *-ity*.] Perverted sexual desire for one of the same sex. *C. H. Hughes*, in Alien. and Neurol., Feb., 1903, p. 74.

Homosteus (hō-mos′tē-us), *n.* [NL., < Gr. ὁμός, the same, + ὀστέον, bone.] A genus of arthrodirous fishes belonging to the family *Coccosteidæ*. They are of very large size, with slender and toothless jaws, and orbits completely inclosed in the head-shield. They are found in the Old Red Sandstone.

homostyly (hō-mos′ti-li), *n.* [*homostyl(ed)* + -*y*³.] In *bot.*, the condition of being homostyled.

homosystemic (hō″mō-sis-tem′ik), *a.* [Gr. ὁμός, the same, + E. *system* + *-ic*.] Of or pertaining to the same system, as organs derived from the same germ-layer in the embryo.

homotaxia (hō-mō-tak′si-ä), *n.* [NL.] Same as *homotaxis*.

homotenous (hō-mot′e-nus), *a.* Noting insects which have incomplete metamorphoses, as opposed to the polymorphous groups. *A. S. Packard*, Text-book of Entom., p. 597.

homothallic (hō-mō-thal′ik), *a.* [Gr. ὁμός, the same, + θαλλός, sprout, + *-ic*.] Having the zygospores formed only as the result of the conjugation of hyphæ from a single plant or strain: said of zygospore-forming plants.

homothermic (hō-mō-thêr′mik), *a.* Same as *homothermous*.

homothetic, *a.* **II.** *n.* A transformation which changes every plane figure into a homothetic figure.

For example, the group of the projective transformations of the plane and the group of *homothetics*, that is to say, transformations which change every plane figure into a homothetic figure [a figure similar and similarly placed]. *Science*, Sept. 16, 1904, p. 360.

homotonic (hō-mō-ton′ik), *a.* Same as *homotonous*.

homotopic (hō-mō-top′ik), *a.* [Gr. ὁμός, the same, + τόπος, place, + *-ic*.] Occurring at the same place in the offspring as in the parent.—**Homotopic heredity.** See ★*heredity*.

homotopy (hō-mot′ō-pi), *n.* [Gr. ὁμός, the same, + τοπος, place, + -*y*³.] The development of an embryo into an adult organism by a series of changes which occur in the parts of the body in which they occurred in the development of its parents. [Rare.] *Cope*, in Amer. Nat., Jan., 1878.

homotype, *n.* (*c*) Same as ★*homœotype*.

homotypic, *a.* **2.** In *cytol.*, relating to the second nuclear division after mitapsis: so called because it is very similar to ordinary mitosis. *Cook and Swingle*.

homotyposis (hō″mō-tī-pō′sis), *n.* [NL., < Gr. ὁμός, the same, + τυπωσις, < τυπος, type.] In *biol.*, a forming after a model: a term proposed by Pearson for the correlation between meristically repeated parts.

On *Homotyposis* in Homologous but Differentiated Organs: Prof. Karl Pearson, F. R. S. *Nature*, Feb. 12, 1903, p. 360.

Cross-homotyposis, homotyposis considered reciprocally. *Biometrika*, April, 1902, p. 344.

homozygosis (hō″mō-zī-gō′sis), *n.* [Gr. ὁμός, the same, + ζυγωσις, joining. See *zygote*.] Development from a homozygote.

In such cases . . . proof of *homozygosis* of resolved forms will furnish the only reliable criterion. *W. Bateson*, in Rep. Evol. Com. Roy. Soc., 1905, II. 125.

homozygote (hō-mō-zī′gōt), *n.* [Gr. ὁμός, the same, + E. *zygote*.] A zygote formed by the union of two gametes of the same kind or stock: opposed to ★*heterozygote*. See extract under ★*heterozygote*.

homozygous (hō-mō-zī′gus), *a.* [Gr. ὁμός, the same, + ζυγόν, yoke, + *-ous*.] Of, pertaining to, or derived from like zygotes or germ-cells.

The hybrids produced by pairing a heterozygous waltzing form $G'_1G'_2$ with a *homozygous* albino GG will be of two kinds, GG'_1 and GG'_2. *Biometrika*, Jan., 1904, p. 16.

Hon. An abbreviation (*b*) of *honorary*.

Honble. A contraction of *Honorable*. Same as *Hon.* (*a*).

Hond. An abbreviation of *Honduras*.

Honduras rubber. See ★*rubber*.

honey, *n.* **Date honey.** See the extract.

Other varieties [of dates], such as the Khars, which are full of sugary juice when ripe, are not so easily handled. The Arabs usually hang up the bunches and allow the juice to drain off into jars. This juice, which they call *date honey*, is preserved and used, and the fruit, which has become somewhat dry, is then packed in boxes, or more often in skins. *Yearbook U. S. Dept. Agr.*, 1900, p. 482.

Extracted honey, honey which has been separated from the comb.—**Sham honey,** a hard glossy body found in the flowers of *Lopezia*, *Parnassia*, and *Cleome*, resembling drops of nectar, and so placed as to promote cross-fertilization through the agency of the attracted insects, which are deceived by it.—**White honey,** honey that flows from the cells spontaneously without pressure, being that made by bees that have not swarmed. *N. E. D.*

honey-board (hun′i-bōrd), *n.* In *bee-keeping*, a partition of perforated sheet-metal placed in a hive to confine the queen bee to the brood-chamber and yet permit other bees to pass from one division of the hive to another through the perforations.

honey-box (hun′i-boks), *n.* In *bee-keeping*, a folding wooden box in which the bees in a hive form a comb and fill it with honey. At the end of the season the filled box is removed from the hive without disturbing the bees. Also called a *honey-section*.

Honeycomb coral. See ★*coral*.—**Honeycomb scall** or **tetter.** Same as *favus*, 2.

honeycomb-radiator (hun′i-kōm-rā″di-ā-tor), *n.* A radiator much used on motor-cars for abstracting the heat from the cooling-water. It is made up of a series of small hexagonal passages surrounded by thin walls, and in appearance somewhat resembles a honeycomb.

honeycomb-weave (hun′i-kōm-wēv), *n.* A style of weave resembling the cells of a honeycomb.

honey-creeper, *n.*—**Bahama honey-creeper,** a small bird, *Cœreba*, or *Certhiola*, *bahamensis*, belonging to the family *Cœrebidæ*. The general coloration is gray and yellow.

honey-crop (hun′i-krop), *n.* The distended crop of the honey-bearers among the so-called honey-ants.

honey-drop (hun′i-drop), *n.* A mole or similar spot on the skin.

honey-evaporator (hun′i-ē-vap″ō-rā-tor), *n.* An apparatus for removing any excess of liquid from the honeycomb for the safe transportation of the latter.

honey-extractor (hun′i-eks-trak″tor), *n.* A honey-strainer.

honey-flower, *n.* **2.** Same as ★*honey-plant*, 2. See *Hoya*.—**3.** In Australia, a tall evergreen shrub of the family *Proteaceæ*, *Lambertia formosa*: so named from the large quantity of nectar contained in its flowers.

honey-gate (hun′i-gāt), *n.* A gate-valve made particularly for drawing off honey, molasses, or other thick liquids from barrels, extractors, etc.

honey-guide, *n.* **2.** In *bot.*, a marking or a streak of nectar or honey in a flower serving to guide the insect to the nectary.

honey-holder (hun′i-hōl″dêr), *n.* Same as *honey-bearer*.

honey-mark (hun′i-märk), *n.* **1.** A spot of a different color from the rest of the corolla of a flower, supposed by Sprengel to guide insects to the nectary.—**2.** Same as ★*honey-drop*.

honey-mushroom (hun′i-mush″röm), *n.* The fungus *Armillaria mellea*, which produces a form of root-rot in trees.

honey-plant (hun′i-plant), *n.* **1.** The bee-balm, *Melissa officinalis*.—**2.** A plant of the genus *Hoya*.—**3.** In Tasmania, a shrub, *Cystanthe scoparia* (*Richea scoparia* of Hooker), of the family *Epacridaceæ*, growing in the form of a very dense bush, one and a half feet high, and bearing small honey-scented flowers which vary in color from white to pink and orange.

honey-section (hun′i-sek″shon), *n.* Same as ★*honey-box*.

honey-stopper (hun′i-stop″êr), *n.* An arrangement of chitinous valves fringed with bristles at the entrance of the proventriculus or honey-stomach of the honey-bee.

honeysuckle, *n.* **4.** The color of the flowers of the common honeysuckle; "a combination of pale pink and even paler yellow." *Daily News* (London), Nov. 20, 1890. *N. E. D.*—**Cape honeysuckle,** *Leucadendron melliferum*. See *Leucadendron*.—**Honeysuckle ornament,** in the *fine arts*, a peculiar type of decoration, in which there is a resemblance to a sprig or flower of the honeysuckle: found especially on late Greek vases. See *anthemion* (*a*), with cut.

honey-weasel (hun′i-wē″zl), *n.* The ratel or honey-badger, *Mellivora ratel*, a large member of the weasel family found in Africa. A near relative, *M. indica*, occurs in India. The animal is fond of honey, whence the common name.

honeywood. (hun′i-wud), *n.* The Tasmanian dogwood. See *dogwood*, 3, and *Tasmanian*.

Honiton braid. See ★*braid*¹.

honky-tonk (hong″ki-tongk′), *n.* A low groggery: a slang name among the negroes of the southern United States.

honoki (hō-nō′kē), *n.* [Jap.] A tall Japanese timber-tree, *Magnolia hypoleuca*. The light, grayish-white wood, which gradually changes to a deeper shade, is soft, easily bent, and elastic, and has a fine, even grain, making it applicable to many uses. It is used for the groundwork in the manufacture of lacquer ware, for pattern-blocks in printing cloth, and from it is prepared the soft, fine-grained charcoal which is used throughout Japan for rubbing the lacquer, and for polishing the enamel of cloisonné ware.

honor, *n.* **11.** In *golf*, the right to play off first from the tee. **Simple honors,** in *bridge*, three out of the five honors which may be held.—**To do the honors,** to act as host or hostess on any occasion, as in presiding at a banquet or in dispensing hospitality.

honoris causa (hō-nō′ris kâ′zä). [L.] See ★*causa*.

honthin (hon′thin), *n.* A tasteless, odorless compound of tannin, keratin, and albumin claimed to be unaffected by the gastric juice but decomposed into its components by the intestinal secretions: an intestinal astringent.

hood, *n.* **6.** (*b*) The rise in the quarter-deck which gives more head-room to the cabin. (*c*) A covering over a hatchway to protect the opening from the weather.—**7.** (*a*) A projecting shelter-like canopy over an outer door, usually carried by corbels or brackets. See *hood-mold*. (*b*) A similar projecting member over a hearth, intended to direct the smoke inward toward the flue. In houses the fire might be built on a wholly open hearth without projecting jambs, and the hood six or seven feet above it was conical or pyramidal in form, leading to the flue above. This hood might hang free in the room, but was more commonly attached to the wall, from which it projected, and supported on corbels. (*c*) In modern ventilation, a projection above a range or furnace, intended to carry off the smell of cooking or noxious gases. (*d*) In chemical laboratories, a fixed appliance consisting of an inclosed and covered space within which offensive gases or vapors may be evolved and carried off by a connected flue without escaping into the room. It is usually provided with a sliding or hinged door in front for the introduction and removal of apparatus. (*e*) A curved cover for a machine or for any part of one. (*f*) The cover for a blacksmith's forge. (*g*) In *elect.*, a protecting cover, also sometimes serving as a reflector, placed over an arc-lamp.—**Naval hoods,** in *ship-building*, heavy pieces of timber which encircle the hawse-holes.—**Oral hood,** the fringed membrane which surrounds the vestibule or mouth-opening of amphioxus (*Branchiostoma*).

hood-cover, *n.* **2.** *Naut.*, a covering of wood or canvas for a hatch, companionway, or skylight.

hood-nozle (hud′noz″l), *n.* A nozle having a hood or hinged cover which may be swung across its mouth to cut off a part or all of the stream of water.

hoof, *n.*—**Dished hoof,** a hoof in which the wall is concave from the coronet to the plantar surface.—**Hoof-and-mouth disease.** Same as *foot-and-mouth disease* (which see, under *foot*).—**To beat the hoof.** See ★*beat*¹.—**To pad the hoof.** See *pad*¹.

hooflet (höf′let), *n.* [*hoof* + *-let*.] One of the small or false hoofs found in many ruminants, especially in deer, on either side of the pair of principal hoofs; a dew-claw. They may have their supporting bones in a very vestigial condition, as in the ox and bison, or of considerable size, as is the case with the moose and reindeer. *Smithsonian Rep.* (*Nat. Mus.*), 1896, p. 566.

hook, *n.* **10.** In *golf*: (*a*) The angle of the face of a club when it lies in to the ball. (*b*) A ball played with a distinct curve to the left. —**11.** In *cricket*, the ★hook-stroke (which see). —**12.** A curved or angled line added to a written or printed letter, or forming a part of it, or, as in phonography, used as a distinct symbol.—**13.** In *well-boring*, a fishing-tool in the form of a horizontally curved hook which engages the shoulder of rods or tools that may have become unscrewed.—**Malgaigne's hooks,** sharp hooks used to bind together the two parts of a fractured patella.

hook, *v. t.* **6.** In *golf*, to play (a ball) so that it curves more or less to the left.

When standing too far, the ball is apt to be 'drawn' or 'hooked'—that is to say, struck with the point or 'toe' of the club, in which case the ball flies in to the left. *Chambers' Inform.*, II. 695. *N. E. D.*

7. In *cricket*, to hit (the ball) to the 'on' side with a horizontal bat, after stepping back: said of the batsman.—**To hook Jack,** to play truant. [Slang.]

The boy "*hooked Jack*" for a whole day. *Joseph Lincoln*, Partners of the Tide, iv.

hook-and-strap (hùk″and-strap′), *n.* A hinge-strap in which the hook or pintle is an integral part of the strap. It is more customary to form the eye on the strap.

hook-book (hùk′bùk), *n.* In *angling*, a case in the form of a book, with leaves of cloth or other material, in which fish-hooks are kept; a fly-book.

hooker[1], *n.* 3. [*cap.*] See ★*Amish.*

Hookera (hŭk′e-rä), *n.* [NL (Salisbury, 1808), named for William *Hooker* (1779–1832), a British botanical artist.] A genus of plants of the family *Liliaceæ*. There are about 15 species, natives of western North America, chiefly of California. See ★*Brodiæa.*

hooker-on (hŭk′ėr-on′), *n.* In *mining*, a bottom-man; a man who puts mine-cars on a cage. *Barrowman*, Glossary.

Hooke's law. See ★*law*[1].

hookey[2], *n.*—**Blind hookey**, a gambling game, frequently played on transatlantic steamers. The banker offers the pack to the players and they divide it into several packets, face down. One of these, chosen at random, is assigned to the banker. Bets are then placed on the remaining piles and all are then turned face up. The bottom cards of each pile that are higher than that of the dealer's win; those lower lose. Also called *Dutch bank.*

hook-gage (hŭk′gāj), *n.* An instrument for measuring the head of water on the crest of a weir. See ★*gage*[2].

hook-gear (hŭk′gēr), *n.* A valve-gear for engines, in which the eccentric-rod is hooked on a pin on the valve-stem.

hooklet, *n.* (*c*) One of the hook-shaped bodies which form a circle about the head of the echinococcus, and are found floating free in the fluid of a hydatid cyst.

hook-plate (hŭk′plāt), *n.* A casting forming a long and narrow plate from the face of which projects a line of curved hooks; an expansion-plate. It is fastened to a wall to support a series of steam-heating pipes. When rings are substituted for hooks it is called a *ring-plate.*

hook-stroke (hŭk′strōk), *n.* In *cricket*, the stroke in which the batsman steps back and hits the ball round to the 'on' side with a horizontal bat.

hook-tender (hŭk′ten″dėr), *n.* The foreman of a yarding-crew; specifically, one who supervises the attaching of the cable to a turn of logs.

hook-worm (hŭk′wėrm), *n.* An intestinal parasite, *Uncinaria americana* or *Ankylostoma duodenale*: so called originally from the presence of rays or ribs, interpreted as hooks, in the membranous expansion or caudal bursa, at the hinder end of the male worm. It infests man, cattle, dogs, foxes, sheep, seals, and other animals.

hooligan (hö′li-gan), *n.* Originally, a member of a South London gang of young street rowdies said to have been led by one named Hooligan, who indulged in boisterous horse-play and breaches of the peace; hence, any street ruffian, especially one who is a member of an organized gang; a 'hoodlum.'

hooligan (hö′li-gan), *v. i.* and *t.*; pret. and pp. *hooliganed*, ppr. *hooliganing.* **I.** *intrans.* To play the hooligan.

II. *trans.* To assault in the manner of the hooligans.

hooliganism (hö′li-gan-izm), *n.* Indulgence in the boisterous horse-play and ruffianism of the hooligans of South London and other large centers of population.

There is a good deal of moralizing in print over the disorderly scenes and outbreaks of "*Hooliganism*" at London's patriotic town show. *N. Y. Tribune*, Oct. 31, 1900.

Hoop punishment, a former punishment of boys on shipboard in which their left wrists were seized to a loose sail-hoop, and each of them was provided with a nettle or lash made of rope-yarns. At the word of command the boatswain gave the boy nearest to him a cut with his cat, and he in turn hit the boy ahead of him, and so on. This form of mutual punishment was also adopted for quarrelsome members of the ship's company.

hoop-machine (höp′ma-shēn″), *n.* In *woodworking*, a power-machine for cutting barrel-hoops and the long thin strips used in making coiled barrels, and also in cutting thin veneers or strips used in making wooden fruit-baskets.

hoop-stick (höp′stik), *n.* **1.** A thin, pliable stick or sapling used for making barrel-hoops.—**2.** A light stick used by children for rolling a hoop.

hoop-wood (höp′wŭd), *n.* **1.** In the United States, the hoop-ash, *Fraxinus nigra.*—**2.** In Jamaica, a tree of the mimosa family, *Pithecolobium latifolium.* See *horsewood.*—**3.** Same as ★*can-hoop.*

Hoorebekia (hō-rę-bek′i-ä), *n.* [NL. (Cornelisson, 1817), named for Charles Joseph van *Hoorebeke*, who in 1818 published in Ghent a memoir on the relation of broom-rapes to the cultivation of clover.] A genus of dicotyledonous plants belonging to the family *Asteraceæ.* See *Haplopappus.*

hoot[1], *n.* **2.** The cry of an owl.

The lover, skulking in some neighbouring copse, . . .
Curses the owl, whose loud, ill-omen'd *hoot*
With ceaseless spite takes from his listening ear
The well-known footsteps of his darling maid.
J. Baillie, A Summer's Day.

hoot[2] (höt), *n.* [Maori *utu*, money.] Money paid as compensation; payment; recompense; remuneration. [Slang, New Zealand.]

"*Hoot* is a very frequent synonym for money or wage. I have heard a shearer . . . enquire of the gilt-edge clerk behind the barrier, 'What's the *hoot*, mate?' The Maori equivalent for money is utu, pronounced by the Ngapuhi and other northern tribes with the last syllable clipped, and the word is very largely used by the kauri-gum diggers and station hands in the North Island.
Truth (Sydney), Jan. 12, 1896, quoted in E. E. Morris, Austral English.

hop[2], *n.*—**Hop plant-louse.** Same as ★*hop-aphis.*—**Native hop.** (*a*) In Australia, same as *hop-bush.* (*b*) In Tasmania, a leguminous shrub, *Daviesia latifolia.* Also called *butter-leaf.* **Wild hop.** (*a*) See *wild hop*, under *wild*1. (*b*) Same as *native* ★*hop* (*b*).

hop-aphis (hop′ā″fis), *n.* A plant-louse of the family *Aphididæ*, *Phorodon humuli*, common to Europe and the United States. It winters in the egg state on plum-trees and develops a winged generation in spring which flies to the hop-plant, a return migrant generation being developed in the autumn. Also called *hop-fly*, *hop-louse*, and *hop-plant louse.*

Hop-aphis (*Phorodon humuli*) of the generation which flies to the hop, charged; *a*, head, still more enlarged.

hop-borer (hop′bōr″ėr), *n.* The larva of an American noctuid moth, *Gortyna immanis*, which bores into young hop-shoots in the northern United States. See ★*hop-grub.*

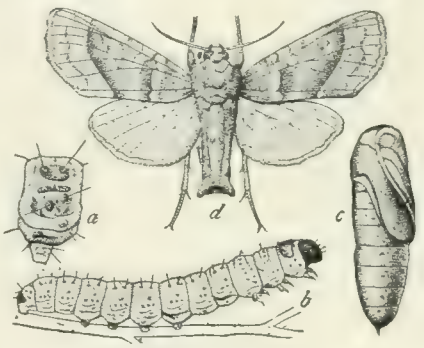
hop-disease (hop′di-zēz″), *n.* See ★*disease.*

hop-dog, *n.* **2.** The larva of a European liparid moth, *Dasychira pudibunda.* [Eng.]

hop-dresser (hop′dres″ėr), *n.* A hop-grower; one who cultivates hops.

hop-gland (hop′gland), *n.* One of the glands on the fruit of the hop-yielding lupulin; a lupulinic gland. See *lupulin*, 3.

hop-grub (hop′grub), *n.* The larva of an American noctuid moth, *Gortyna immanis.* See ★*hop-borer.*



Hop-grub (*Gortyna immanis*).
a, enlarged segment of larva; *b*, larva; *c*, pupa; *d*, adult. (Three fourths natural size.)

Hopkinson effect, the sudden loss of magnetic susceptibility by iron at or just above the critical temperature (775° C.): discovered by Hopkinson in 1889.

Hoplites (hop-lī′tēz), *n.* [NL., ⟨ Gr. ὁπλίτης, an armed man: see *hoplite.*] A genus of Cretaceous ammonites belonging to the family *Hoplitidæ* of the suborder *Pachycampyli.* It is characterized by high volutions and forked ribs with prominent tubercles.

Hoplitidæ (hop-lit′i-dē), *n. pl.* [NL., ⟨ *Hoplites* + *-idæ.*] A family of the ammonoid cephalopods belonging to the suborder *Pachycampyli.* It is characterized by having the costæ bifurcated on the sides and by umbilical shoulders and prominent tubercles at the forks.

hoplomachy (hop-lom′a-ki), *n.* [Gr. ὁπλομαχία, ⟨ ὁπλομαχος, adj., fighting in armor, ⟨ ὅπλα, armor, + μάχεσθαι, fight.] In *Gr. antiq.*, a battle, or mimic battle, fought in heavy armor.

Fighting in full and heavy armor, *hoplomachy*, which Plato praised as a noble art, came somewhat later.
G. S. Hall, Adolescence, II. 259.

Hoplomytilus (hop-lō-mit′i-lus), *n.* [NL., ⟨ Gr. ὅπλον, a weapon, + *Mytilus*, a genus of mollusks.] A genus of prionodesmaceous *Pelecypoda* belonging to the family *Myalinidæ.* It is characterized by a triangular shell with a thickened plate below the umbo, in front of which there is a tooth in the right valve. It occurs in the Devonian.

Hoplopagrinæ (hop′lō-pa-grī′nē), *n. pl.* [NL., ⟨ *Hoplopagrus* + *-inæ.*] A subfamily of snappers of the family *Lutianidæ*, typified by the genus *Hoplopagrus.*

Hoplopagrus (hop-lop′a-grus), *n.* [NL., ⟨ Gr. ὅπλον, weapon, + πάγρος, var. of φάγρος, a fish, the sea-bream.] A genus of snappers of the family *Lutianidæ*: distinguished by the form of the nostrils and by the presence of molar teeth in the jaws. The single known species, *H. güntheri*, abounds on the west coast of Mexico.

Hoplopteryx (hop-lop′tę-riks), *n.* [NL., ⟨ Gr. ὅπλον, a shield, + πτέρυξ, a wing.] A genus of the teleost acanthopterygian fishes belonging to the family *Berycidæ.* It is characterized by a short head, a deep dorsal fin, and large ctenoid scales: common in the Upper Cretaceous.

Hoplosaurus (hop-lō-sâ′rus), *n.* [NL., ⟨ Gr. ὅπλον, a shield, + σαῦρος, a lizard.] A genus of dinosaurian reptiles from the Upper Cretaceous of Austria. It is based on fragmentary remains and is of uncertain systematic position.

Hoplostethus (hop-los′tē-thus), *n.* [NL., ⟨ Gr. ὅπλον, a shield, + στῆθος, breast, thorax.] A genus of deep-sea fishes of the family *Trachichthydæ.* *H. mediterraneus* is the important species.

hop-louse (hop′lous), *n.* Same as ★*hop-aphis.*

Hoplunnis (hop-lun′is), *n.* [NL., ⟨ Gr. ὅπλον, a shield, + ἴννις, ἴννη, ἴνις, a plowshare.] A genus of eels of the family *Murænesocidæ*, found in the Caribbean Sea.

hop-merchant (hop′mėr′chant), *n.* Any one of several species of vanessoid butterflies, supposedly so named by hop-growers because of the silver-and-gold markings of the chrysalis. The comma butterfly, *Polygonia comma*, and the violet-tip, *Polygonia interrogationis*, are two of the most abundant forms in the hop-yards. *Comstock*, Manual of Insects, p. 405. See *violet-tip*, with cut.

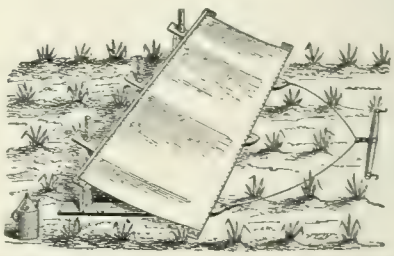
hopo (hō′pō), *n.* [African.] An African V-shaped trap for game. It consists of two converging hedges between which the game is driven into a pit at the point.

hopper[1], *n.* and *a.* **I.** *n.* **9.** In *geol.*, a hopper-shaped pit or depression in the land.—**Steam-hopper,** a hopper-bottomed barge propelled by its own steam. It is used to receive the excavated material from dredging operations and carry it away for dumping in deep water by the opening of the hopper-bottom.

II. *a.* Having the form of an inverted pyramid: as, a *hopper* ship, the bottom of which consists of a series of hoppers: a type of vessel used on the Great Lakes for carrying bulk cargoes.—**Hopper crystal.** See ★*crystal.*—**Hopper salt.** See ★*salt*[1].

hopper-apron (hop′ėr-ā″prun), *n.* In *cotton-manuf.*, an endless traveling apron, or lattice, in an automatic hopper for feeding cotton to an opening-machine.

hopperdozer (hop′ėr-dō″zėr), *n.* [*hopper*[1], 1 (*c*), + (*bull*)*dozer.*] In *agri.*, a large shallow pan partly filled with tar or kerosene and mounted upon runners, or a canvas frame, similarly mounted, and smeared or saturated with tar or oil. See the extract.



Canvas Hopperdozer, to be drawn by a horse. (Riley, U. S. D. A.)

Hopperdozers are long, shallow pans of any convenient dimensions, made of galvanized iron or other material, mounted upon runners about an inch thick. The pan is partly filled with water, a small quantity of kerosene is added to form a film, and a screen is placed upright on the back to prevent the locusts from jumping over the pan. As *hopperdozers* are drawn over the ground by either men or horses, the young locusts jump into the air, fall into the pan, and are wetted and killed by the kerosene.
U. S. Dept. Agr., Div. Entom., 1904, Cir. 53, p. 2.

hopper-feeder (hop′ėr-fē″dėr), *n.* In *textile-manuf.*, an automatic feeder and supply-regulator of raw stock to some one of the preparatory machines, as the opener, picker, scouring-apparatus, carding-engine, etc.

hopperings (hop′ėr-ingz), *n. pl.* The residue which remains in a hopper.

hopper-punt (hop′ėr-punt), *n.* A flat-bottomed mud-lighter fitted with a movable bottom for celerity in dumping. See *hopper*[1], 5.

hopping-fish (hop′ing-fish), *n.* Same as ★*climbing-fish*, 2.

hoppity (hop'i-ti), *n.* [*hop*[1] + *-ity*, a termination expressive of quick motion.] Same as ★*halma*.

hopple, *v. t.* **2.** To harness (a horse) so as to change its gait mechanically.

hop-pocketing (hop'pok"et-ing), *n.* A coarse material of cotton, or jute and linen: used for the packing of hops. *N. and Q.* 10th ser., II. 268, 312.

hoppo-men (hop'ō-men), *n. pl.* Chinese custom-house officials.

hop-sack (hop'sak), *n.* Same as ★*hop-sacking*, 2.

hop-sacking, *n.* **2.** A wool dress-fabric of coarse texture.

hop-toad (hop'tōd), *n.* A toad. [Colloq.]

hop-vine, *n.*—**Devil's hop-vine.** See ★*devil.* —**Hop-vine hypena, thecla.** See ★*Hypena*, ★*Thecla.*

hor. An abbreviation (*a*) of *horizon;* (*b*) of *horology.*

Horæ (hō'rē), *n. pl.* [L. *Horæ*, < Gr. Ὥραι: see *hour.*] The Hours. See *hour*, 5. In Greek mythology the Horæ are personifications of the same class as the Moræ, Charites, and Musæ. They presided over the meteorological phenomena which regulate vegetation and animal life and were almost invariably benignant. They served Zeus by opening and closing the doors of Heaven. In Homer and the Homeric Hymns their number is vague. Hesiod makes them three, and calls them Eunomia, Dike, and Eirene. On the vases, early and late, either two or three Horæ are represented. The Horæ are prominent in the poems of Pindar, who retains the names and number of Hesiod. He uses them to express the beauty of spring, and youth, and all loveliness. The city of Corinth was their preferred abiding-place. In later mythology the Horæ were merged in the Seasons and their number was fixed at four.

Horæ.

Horary prediction. See ★*prediction.*

horbachite (hôr'bach-īt), *n.* An iron-nickel sulphid related to pyrrhotite: from Horbach in the Black Forest.

hordeic (hôr-dē'ik), *a.* [L. *horde-um*, barley, + *-ic.*] Noting an acid, a colorless compound, $C_{12}H_{24}O_2$, prepared by the action of dilute sulphuric acid on barley. It crystallizes in plates, melting at 60° C.

hordeiform (hôr-dē'i-fôrm), *a.* [L. *hordeum*, barley, + *forma*, form.] Having the form of barley-grains; resembling barley in form.

horismascope (hō-ris'ma-skōp), *n.* [Irreg. < Gr. ὅρισμα, limit, bound, + σκοπεῖν, view.] An apparatus for detecting albumin in urine. See ★*albumoscope.*

horizon, *n.* **Apparent horizon.** See *horizon*, 1.—**Axis of the horizon,** a perpendicular to the plane of the horizon at the point of observation.—**Contracted horizon,** a horizon whose limits are less than normal because of mist, rain, snow, or smoke.—**Mean horizon,** the middle position in any irregularity of the horizon-line. **Oblique horizon,** the horizon of a place so situated that the celestial pole is neither in its zenith nor on its horizon. This is the case for all stations except at the equator or the poles of the earth.—**Paradoxides horizon.** See ★*Acadian, n.*, 2.—**Real horizon,** the astronomical horizon: distinguished from the *apparent horizon*, which is affected by dip and refraction.—**Right horizon,** the celestial horizon of a place on the equator, the plane of which is perpendicular to that of the equinoctial circle: opposed to *oblique horizon*, that of any place between the equator and either pole. *N. E. D.*—**Sensible horizon,** the plane which touches the earth at the place of the observer and extends to the celestial sphere.

horizon (hō-rī'zon), *v. t.* To limit or bound by a horizon. *Mary Howitt.*

horizontal. **I.** *a.* -**Horizontal candle-power, moon.** See ★*candle-power*, ★*moon*[1].

II. *n.* **2.** *Anodopetalum biglandulosum*, a Tasmanian plant of the family *Cunoniaceæ*, which sometimes forms a tree 60–70 feet high, with a trunk 4 feet in circumference. It is named from its peculiar habit of growth. The main stem after reaching a certain height assumes a horizontal or drooping position, from which the branches ascend and repeat the action of the stem. The same is done by the secondary branches, all of which interlock and form an almost impenetrable thicket known as *horizontal scrub.*

horizontalism (hor-i-zon'tal-izm), *n.* The quality or state of being horizontal; horizontal character.

horizontalize (hor-i-zon'tal-īz), *v. t.* and *i.*; pret. and pp. *horizontalized*, ppr. *horizontalizing.* To place in or to assume a horizontal position.

hormion (hôr'mi-on), *n.*; pl. *hormia* (-ia). [NL. dim. of Gr. ὁρμή, onset, attack (?).] In *craniom.*, the point where the lower border of the vomer touches the base of the skull. *Von Torök.*

Hormogoneales (hôr"mō-gō-nē-ā'lēz), *n. pl.* [Gr. ὁρμος, necklace, + γόνος, offspring, + *-ales.*] An order of blue-green algæ which always consist of more than one cell. The cells may or may not be branched, and either have or have not an outer gelatinous sheath.

horn, *n.*, **4.** (*t*) In *sheet-metal work*, an attachment to a press which, in its most simple form, resembles the horn of an anvil. In seaming and pressing locked sheets of tin together it serves as the anvil on which the joined sheets are laid while the press bends the seams down. It gives name to the work of *horning*, or seaming with a horn, and to the *horning-press*, a press on which horning is done. (*u*) In *organ-building*, a reed-stop with a tone like that of the French horn. (*v*) In *golf*, same as ★*bone*[1], 10. (*w*) The bare branch of a leafless tree. [Figurative.] *Tennyson*, In Memoriam, cvii. (*x*) One of the branches of the V-shaped comb found in such breeds of poultry as the Polish and La Flèche.

7. In *archery:* (*a*) The tip at each end of a bow, usually made of horn and provided with a nock for fastening the bowstring. (*b*) A reinforcement at the butt of an arrow, fitted with a nock to receive the bowstring: usually made of horn. (*c*) The portion of a composite bow which is made of horn: see *bow*[2], 2.—**8.** In *mach.*, a curved lever, pivoted on the side of a planing-machine, which, on being knocked over by the tappets on the moving table, gives, through a linkage, the reversing movement to the driving mechanism.—**Cutaneous horn,** a horn-like excrescence on the skin of the head or other part. —**Following horns,** in dynamo-electric machinery, those horns of a generator away from which the armature moves in its rotation. **Hollow horn.** Same as ★*horn-ail.*—**Horn alligator.** See ★*alligator.* **Horn of a dynamo,** in *elect.*, that edge of the face of the pole-piece of a generator or motor which runs parallel to the axis of the armature.—**Horn of consecration,** in *Mycenæan art*, a pictographic type representing a cult-form found in connection with the double ax and pillar. It is a compound of a rectangular base with two horn-like projections at either end. The horns are usually quite conventional, but sometimes resemble the horns of oxen. The object was evidently portable and placed upon altars. It is frequently set at the foot of a sacred tree or column.

The columns are clearly indicated as aniconic images by the *horns of consecration* placed beside them and at their feet. *A. J. Evans*, in Jour. Hellenic Studies, XXI. 123.

Horn tenure. See ★*tenure.*—**Impressed horn,** horn molded into various forms after it has been softened in boiling water. It is common in the industrial arts. As a fine art the impressing of horn has been carried to a high state of perfection in China and Japan, and in Europe, where it has been much used for snuff-boxes.—**Leading horns,** in dynamo-electric machinery, those horns of a generator or motor toward which the armature is carried in its revolution.—**Miners' horn,** a shallow spoon of horn, rubber, or metal for collecting particles of gold by washing.—**Perioplic horn,** a thin varnish-like layer of glistening horn secreted by the perioplic band of the hoof and forming the outer surface of its wall. It prevents evaporation of moisture from the wall of the hoof.—**Spouting horn,** a sea-cave which penetrates far into an overhanging cliff and pierces the roof, so that an opening is made to the surface. Incoming waves force their way through the cavern and dash spray through the funnel-like opening on top of the cliff.—**To take a horn,** to take a drink of liquor. [Colloq.]

horn, *v. t.* **6.** To operate upon by means of a horn-press or horning-press. See ★*horn*, *n.*, 4 (*t*).

horn-ail (hôrn'āl), *n.* An imagined disease of cattle, having no scientific foundation. Also called *hollow horn.*

horn-beetle (hôrn'bē"tl), *n.*—**Spotted horn-beetle,** *Dynastes tityus.* See *Dynastes* and *rhinoceros-beetle.*

hornbill, *n.*—**Helmet-hornbill,** *Buceros galeatus*, a species characterized by having a thick and nearly vertical horny outgrowth from the top of the beak: found in Borneo and Sumatra. Also *helmeted hornbill.*

Hornblende schist. See *hornblende rock* and *schist.*

hornblendite (hôrn'blen-dīt), *n.* [*hornblende* + *-ite*[2].] A rock composed entirely or almost entirely of hornblende, a variety of igneous rock closely related to the peridotites.

hornblock (hôrn'blok), *n.* A steel or iron casting riveted to a locomotive frame to receive the axle-box, which it constrains to move only vertically.

horn-blower, *n.* **2.** In *entom.*, a southern United States tobacco-growers' name for the tobacco sphinx-moth, *Phlegethontius carolina*, the parent of the horn-worm of tobacco.

horn-cell (hôrn'sel), *n.* One of the ganglion-cells belonging to the anterior or posterior cornua of the spinal cord.

Most of these fibres run upwards, but some descend to form synapses with dorsal *horn-cells* on a lower level. *Encyc. Brit.*, XXV. 400.

Hornera (hôr'ne-rä), *n.* [NL., from a surname *Horner.*] A genus of cyclostomatous *Bryozoa* belonging to the family *Idmoneidæ.* It has free or anastomosing zoaria, subcylindrical branches, and irregularly distributed zooecial apertures. It extends from the Cretaceous to recent time.

hornerah (hôr'ne-rä), *n.* [Native Australian: cf. ★*woomera.*] A throwing-stick with a peg at one end which fits into a socket in the spear-shaft. By swinging the throwing-stick the spear is propelled by this peg and thrown with greater force than can be given to it by the hand alone. Similar devices are used by the Eskimos, the Mexicans, and some South American Indians. See ★*atlatl, throwing-stick.* [Australia.]

Horneridæ (hôr-ner'i-dē), *n. pl.* [NL., < *Hornera* + *-idæ.*] A family of cyclostomatous, gymnolæmatous *Polyzoa*, in which the zoœcia open on one side only of a ramose zoarium and are never adnate and repent. It contains the genus *Hornera.*

hörnesite, *n.* See ★*hoernesite.*

Hornets'-nest beetle. See ★*beetle*[2].—**White-faced hornet.** Same as *white-faced* ★*wasp.*

hornet-hawk (hôr'net-hâk), *n.* Same as *hornet-clearwing.*

hornfels (hôrn'felz), *n.* [G. *horn*, horn, + *fels*, stone.] In *petrog.*, a dense, aphanitic rock composed of feldspar, quartz, and other minerals, usually a product of the contact-metamorphism of an intrusive rock upon shale or other sedimentary rock. Sometimes called *hornstone.*

hornfelsed (hôrn'felzd), *a.* In *geol.*, changed to hornfels in contact-metamorphism.

The Old Red Sandstone is indurated and often *hornfelsed* to a varying distance from the margin. *Rep. Brit. Ass'n Advancement of Sci.*, 1901, p. 634.

horn-flint (hôrn'flint), *n.* A flint resembling horn in appearance and translucency.

horn-fly (hôrn'flī), *n.* **1.** An injurious muscid fly, *Hæmatobia serrata*, common to Europe and the United States: named from its habit of clustering on the horns of cattle. It annoys cattle greatly by its bite, and lays its eggs in freshly dropped cow-dung in which its larvæ live.

Horn-fly (*Hæmatobia serrata*).
a, egg; *b*, larva; *c*, puparium; *d*, adult in biting position. All enlarged.

2. A sphingid moth: same as ★*horn-blower*, 2.

horn-hipped (hôrn'hipt), *a.* Having the point of the ilium (haunch-bone) projecting too high: said of a horse.

horning, *n.* **4.** See ★*horn*, *n.*, 4 (*t*).

horning-press (hôr'ning-pres), *n.* See ★*horn*, *n.*, 4 (*t*).

horn-nut (hôrn'nut), *n.* The horned fruit of any species of *Trapa*, or the plant itself. See *Trapa.*

horn-ore (hôrn'ōr), *n.* Horn-silver or cerargyrite.

horn-ray (hôrn'rā), *n.* A fish, *Rhinobatus banksii*, one of the thick-tailed rays found in Australia and New Zealand. Also called *shovel-nosed ray.*

Horn's azotometer. See ★*azotometer.*

horn-shell (hôrn'shel), *n.* A horn-shaped, many-whorled univalve shell of the genus *Cerithium.*

horn-slate (hôrn'slāt), *n.* Same as *hornstone.*

horn-snake, *n.* **2.** The bull-snake or pine-snake of the central United States, *Pituophis melanoleucus*, a large species marked with black and white.

horn-socket (hôrn'sok"et), *n.* In *well-boring*, a fishing-tool terminating in a hollow cone or bell which is rammed down over the broken ends of rods or tools to bring them to the surface.

hornswoggle (hôrn'swog-l), *v. t.*; pret. and pp. *hornswoggled*, ppr. *hornswoggling.* To humbug; bamboozle; bedevil. [Slang.]

horn-worm (hôrn'wèrm), *n.* Any sphingid larva which bears a horn at its anal extremity; specifically, the tobacco horn-worm, larva of *Phlegethontius carolina.*

horny, *a.*, 2. (*b*) In *bot.*: (2) More or less translucent and of a flinty texture; glassy: said chiefly of the grains of the harder wheats, characterized by a large gluten content. Compare ★*starchy*², 2, and see ★*farinaceous*. (*d*) In *petrog.*, flint-like, having a compact, homogeneous texture like that of horn or flint.

horoeka (hō′rō-ā″kä), *n.* [Maori.] In New Zealand, a very variable tree of the ginseng family, *Pseudopanax crassifolius*, sometimes called grass-tree. See ★*grass-tree*, 4 (*a*).

horografy, etc. A simplified spelling of *horography*, etc.

horopito (hō′rō-pē-tō), *n.* [Maori.] A small evergreen New Zealand tree, *Drimys axillaris*, belonging to the magnolia family. The flowers are very fragrant, and the whole plant is aromatic and stimulant. It is used by the Maoris for various diseases. Also called *pepper-tree*.

horoscopal (hō-ros′kō-pal), *a.* [*horoscope* + *-al*¹.] Of or pertaining to a horoscope.

horoscopography (hor″ō-skō-pog′ra-fi), *n.* [Gr. ὡροσκόπειον, horoscope, + -γραφία, ⟨ γράφειν, write, draw.] The art of drawing horoscopes. [Rare.]

horrescent (ho-res′ent), *a.* [L. *horrescens*, ppr. of *horrescere*, ⟨ *horrere*, bristle, shake, shudder: see *horrent*.] Bristling with horror; shuddering. [Rare.] *N. E. D.*

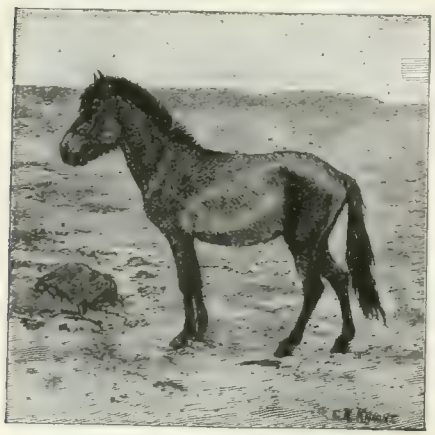
horripilant (ho-rip′i-lant), *a.* [L. *horripilans* (*-ant-*), ppr. of *horripilare*: see *horripilation*.] Causing goose-flesh.

horripilate, *v. t.* **II.** *intrans.* To have goose-flesh.

horse¹, *n.* **1.** The researches of Ewart, Osborn, and others show the probability that the modern horse, like the dog, has been derived from several sources. Prjevalsky's horse is considered to be one of these, while two other forms are recognized—the Celtic pony and the Norse horse.

5. (*i*) One of the inclined timbers in a staircase which support the steps.

6. In *mining*: (*b*) A lenticular bed of shale or old channel fillings which cuts out coal-seams.—**12.** In *chess*, same as *knight*. [Rare.] *Staunton*, Laws and Practice of Chess, p. 4.—**13.** In *astron.*, the constellation of Pegasus (see *flying* ★*horse*); also, the equine part of Sagittarius (represented as a centaur).—**14.** A Danish silver coin of the value of 1*s.* 2*d.*—**Celtic horse,** the variety characteristic of western Europe, found in a pure state in Iceland, and called by Ewart *E. caballus celticus*. The Shetland pony is an example of this large-headed, rough-haired variety or species.—**Curly horse,** a local breed of Indian ponies having a rough, curly coat.—**Cutting horse,** in *stock-raising* in the western United States, a horse trained to cut cattle out of a herd. See *to cut out* (*g*), under *cut*.—**Flying horse,** the mythical winged horse of the Muses, Pegasus; hence, in *astron.*, the constellation Pegasus. *N. E. D.*—**Fore-sheet horse** (*naut.*), an iron span set athwartships at the middle of the deck under the after end of the fore-boom on a schooner, for the fore-sheet block to travel on; also, a like span for a forestaysail-sheet block to travel on when the latter sail has a boom to which its foot is laced. See *fore-sheet* ★*traveler*.—**Grass horse,** a horse which has been living entirely on pasture. *N. E. D.*—**Horse and horse,** equally divided or matched; no one better than the other. [Colloq., U.S.]—**Irish horse,** old pickled beef. [Sailors' slang.]—**Iron horse** (*b*), *naut.*, the deck-horse on which the traveler of the fore-sheet or boom-sheet slides horizontally across the deck.—**Line horse,** in *lumbering*, the horse that drags the cable from a yarding-engine to the log to which the cable is to be attached.—**Little horses,** the modern substitute for roulette. See *petits chevaux*, under ★*cheval*.—**Norse horse,** the variety of horse peculiar to northern Europe and assumed by Ewart to be that on which Linnæus based his species *Equus caballus*: called by Ewart *E. caballus typicus*.—**Prjevalsky's horse,** *Equus prjevalskyii*, the only true horse now found in a wild state: discovered in 1881 in the desert region of Central Asia near Zaisan. It is of small size, of a dun color, without a dorsal stripe, and with an erect mane.



Prjevalsky's Horse (*Equus prjevalskyii*).

horse¹, *v. t.* **8.** To hang (as skins) over a wooden horse or stand. *Mod. Amer. Tanning*, p. 169. **To horse logs,** in river-driving, to drag stranded logs back to the stream by the use of peaveys.—**To horse out,** in *carp.*, to cut, as a plank or beam, with a saw: used chiefly in connection with the string-piece of a stair, which is said to be *horsed out* when the support of the treads is got by cutting material away in the form of a notch, but *plowed out* when a broad groove or slot is cut to receive the ends of the treads.

horse-ambulance (hôrs′am″bū-lans), *n.* A vehicle used for the conveyance of sick or wounded horses or other large animals. That used by the New York Society for the Prevention of Cruelty to Animals has a large padded box hung very low and a windlass attached at the front end.

horse-bean, *n.* **2.** In the southwestern United States, either of two species of palo verde, *Parkinsonia aculeata* and *P. microphylla*, the twigs of which are eaten by horses.

horse-bee (hôrs′bē), *n.* Same as *horse-bot*.

horse-bucket (hôrs′buk″et), *n.* A covered bucket for carrying water or spirits. [Sailors' slang.]

horse-bush (hôrs′bûsh), *n.* In the Bahamas, a tree of the family *Cæsalpiniaceæ*, *Baryxylum adnatum* (*Peltophorum adnatum* of Grisebach).

horse-conch (hôrs′kongk), *n.* A large univalve shell, *Strombus gigas*.

horse-course (hôrs′kōrs), *n.* A race-course; also, a horse-race. *Swift*.

horse-cradle (hôrs′krā″dl), *n.* A device, consisting of narrow strips of wood connected by leather straps, placed about a horse's neck to prevent him from turning his head sideways.

horse-daisy, *n.* **2.** The mayweed.

horse-dam (hôrs′dam), *n.* A temporary dam made by placing large logs across a stream, in order to raise the water behind it so as to float logs on the rear.

Horse-eye jack. See ★*jack*¹.

horse-fiddle (hôrs′fid″l), *n.* A device for making a noise, usually consisting of a large, open packing-box across the rosined edges of which a rough plank or rail is drawn like a huge bow. [Colloq.]

horse-fig (hôrs′fig), *n.* See ★*fig*².

horse-flesh, *n.* **4.** In Guiana, the dark-red flesh-colored wood of the bully-tree, *Mimusops Balata*, or that obtained from panococo, *Tounatea tomentosa*. See *bully-tree* and *panococo*, 2.

horse-fly, *n.*—**Black horse-fly,** any black dipterous insect of the family *Tabanidæ*; specifically, *Tabanus atratus*, a large species having a wide distribution in the United States.—**Mourning horse-fly.** Same as *black* ★*gadfly*.

Horsefoot oil. See ★*oil*.

horse-gentler (hôrs′jen″tlèr), *n.* A horse-breaker.

horse-gold (hôrs′gōld), *n.* Same as ★*gold-weed*.

horse-grease (hôrs′grēs), *n.* Fat obtained from the carcasses of horses: used in soap- and candle-making.

Horsehair case, a bag or envelop made of horsehair in which the meal produced by grinding oil-seeds (colza-seed, cotton-seed, etc.) is subjected to pressure in order to extract the oil.—**Horsehair snake.** Same as ★*hair-snake*.

horsehead, *n.* **5.** In *mach.*, a lever, so named because of its shape, used on a Heilmann cotton-combing machine as part of the detaching mechanism. *Thornley*, Cotton Combing Machines, p. 163.

horsehoof, *n.* **2.** A horseshoe-crab, or king-crab, *Limulus polyphemus*.

horse-laughter (hôrs′läf″tèr), *n.* Coarse, loud, vulgar laughter.

horseless (hôrs′les), *a.* [*horse* + *-less*.] Having no horse; propelled without the aid of horses.—**Horseless carriage,** a carriage not intended to be drawn by horses, but propelled by an electric or other motor.

horse-lily (hôrs′lil″i), *n.* Same as *beaver*-★*lily*.

horse-louse (hôrs′lous), *n.* **1.** A pediculid, *Hæmatopinus asini*, commonly known as the *sucking horse-louse*.—**2.** A mallophagan, *Trichodectes pilosus*, commonly known as the *biting horse-louse*. Both of the above species occur also on asses and mules.

Horse-louse (*Trichodectes pilosus*). Much enlarged.

horse-mackerel, *n.* (*b*) In Sydney, Australia, *Auxis ramsayi*, of the family *Scombridæ*; in New Zealand, *Trachurus trachurus*, which is the same fish as the horse-mackerel of England. *Austral English*.

horseman-crab (hôrs′man-krab), *n.* Same as *chevalier* ★*crab*.

horse-nicker (hôrs′nik″èr), *n.* [*horse*¹, *n.*, 11, + *nicker*², 3.] A seed of the nicker-tree. The lead-colored seeds of *Guilandina Crista*, and especially the yellow seeds of *G. major*, are used by children in the West Indies for playing marbles.

horse-platform (hôrs′plat″form), *n.* In *mining*, the switches and crossing used with the rails of a horse-road.

horse-power, *n.* **Brake horse-power,** the net horse-power developed by an engine, motor, or turbine as shown by a friction-brake or dynamometer; the horse-power actually delivered by the engine or motor. *Trans. Amer. Inst. Elect. Engin.*, 1899, p. 34. **Effective horse-power,** in *naval arch.*, the net horse-power required to drive a vessel at any given speed, or the work expressed in horse-power that would be necessary to tow the vessel without screw-propellers or paddle-wheels at a given speed. It is that part of the indicated horse-power of the propelling engines which remains after deducting the losses due to engine-friction, inefficiency of the paddles or propellers in the water, etc.—**French horse-power,** the work done in raising 75 kilograms one meter in one second, or 4,500 kilograms one meter in one minute; it is about 1⅛ per cent. less than the horse-power founded on the English foot and the avoirdupois pound. See *metric* ★*horse-power*.—**Gross horse-power,** the theoretical horse-power of a motor, made up of the net horse-power together with that wasted on its own friction: same as *indicated horse-power* (which see).—**Horse-power hour.** See ★*hour*.—**Horse-power of water,** the horse-power developed by falling water, one horse-power of water being equal to 15 cubic feet of water acting for one second with a head of one foot.—**Metric horse-power,** the French horse-power, the unit of work in countries where the metric units are in use. It equals 32.549 foot-pounds per minute, 4,500 kilogram-meters per minute, or 0.9863 horse-power in the British units.—**Net horse-power,** the horse-power which an engine or a motor develops above that needed to overcome its own friction.

horseradish-tree, *n.* **2.** In Australia, a tree of the pokeweed family, *Gyrostemon cotinifolius*, so called from the taste of its leaves. The bark contains a bitter principle, for which reason it is also known as *quinine-tree* and *medicine-tree*.

horseshoe, *n.* **2.** (*d*) *Naut.*, a composition strap bent in the form of a horseshoe and used for fastening the stem to the keel.—**Horseshoe nebula.** See ★*nebula*.

horseshoe-fern (hôrs′shō-fèrn), *n.* See ★*fern*¹.

horseshoe-grass (hôrs′shō-grâs), *n.* See ★*side-oats*.

horse-sickness (hôrs′sik″nes), *n.* An infectious disease of horses, mules, and asses, observed only in South Africa, characterized by extensive serous exudations, and caused by an organism so minute as to pass through the pores of a filter.

An interesting interim report upon Cape *horse-sickness* has been published by Dr. Watkins Pitchford, the Government bacteriologist of Natal. In some respects this disease resembles human malaria, for it especially attacks horses kept on low-lying marshy ground, and those animals left to graze all night. In affected districts horses may be moved during the day without contracting the disease. Dr. Pitchford now suggests that a mosquito, probably of the genus Anopheles, is responsible for the conveyance of the infection. *Nature*, June 4, 1903, p. 110.

horsetail, *n.* **5.** In *meteor.*, a form of cirrus cloud.—**Horsetail agaric,** an edible mushroom, *Coprinus comatus*, having a shaggy pileus.

horse-tamer (hôrs′tā″mèr), *n.* One whose business is the taming of unruly horses; a horse-breaker.

horse-towel (hôrs′tou″el), *n.* An endless towel for general use, hung on a roller; a jack-towel.

Horsetown beds. See ★*bed*¹.

horse-tub (hôrs′tub), *n.* A harness-cask.

horse-watcher (hôrs′woch″èr), *n.* One who is in the habit of observing the performance of race-horses, in order to come to some conclusion as to their chances of winning.

horst (hôrst), *n.* [G. *horst*, a wood, grove, thicket, high nest, aery, retreat, also sandbank, sandy islet.] In *geol.*, a term introduced by E. Suess to denote areas of the earth's surface which have acquired immobility and have served as buttresses against which surrounding areas have been pressed and dislocated in the general rupture and subsidence of the terrestrial crust.

The region has occasionally been much faulted, and locally crushed up against a "*horst*" of Archæan rock. *Nature*, June 4, 1903, p. 105.

hort., hortic. Abbreviations (*a*) of *horticultural*; (*b*) of *horticulture*.

Hortensia (hôr-ten′si-ä), *n.* The greenhouse hydrangea, *Hydrangea opuloides* (*H. hortensis* of Smith, *H. Hortensia* of Siebold), of which a great number of horticultural forms are known. The species is Chinese and Japanese. It varies into two fairly well marked groups: the hortensia group, with globose flower-trusses and nearly all the flowers sterile and enlarged, and the japonica group, with the trusses nearly or quite flat and bearing both fertile and sterile flowers.

horticulture, *n.*—**Landscape horticulture,** that part of horticultural discussion and practice that has to do with planting and lawn-making for artistic effects. It

is one of the crafts on which landscape gardening or landscape architecture depends. *L. H. Bailey.*

Horton series. See ★*series.*

hose, *n.* **9.** In *entom.*, a peculiar organ or gland at the base of the tarsal claws of the *Psocidæ.*—**10.** The wide trousers formerly worn by seamen.—**Armored hose,** rubber hose about which steel wire is wound spirally to protect it from injury.

hospital, *n.*, **3.** The term is now extended to include establishments for the care and cure of sick or injured animals, such as horses, dogs, cats, etc. **Hospital bed, sore throat, tax.** See ★*bed*[1], ★*throat*, ★*tax.* **State hospital,** an institution for the insane conducted by a State government.

hospital (hos′pi-tal), *v. t.*; pret. and pp. *hospitaled, hospitalled,* ppr. *hospitaling, hospitalling.* To receive and care for in a hospital.

hospitant (hos′pi-tant), *n.* [G. *hospitant,* < L. *hospitans* (*-ant-*), ppr. of *hospitari,* be a guest: see *hospitate.*] A special unmatriculated foreign student at a German university who enjoys all the privileges of a regular student (except that of graduating) and is enrolled as a 'guest.'

These figures, however, include only the lawfully immatriculated students; to them must be added those who are enrolled as *hospitants,* of which 9,187 are reported in the foregoing table, including 7,874 male and 1,313 female attending as special students.
Science, April 8, 1904, p. 595.

Hosselkus limestone. See ★*limestone.*

host[2], *n.*—**Definitive host,** in the life-cycle of parasites which, during their course of development, inhabit different hosts, that host in which the sexual phases of the parasite are passed.

hostly (hōst′li), *a.* [*host*[2] + *-ly*[1].] Pertaining or proper to a host.

host-plant (hōst′plant), *n.* In *bot.*, same as *host*[2], 2 (*a*).

hot[1], *a.* **9.** Ardently or earnestly supported, as indicated by the betting: as, a *hot* favorite. [Racing slang.]—**Hot air,** wasted breath; talk that will result in nothing: applied often to anything said or threatened which the hearer or the criticized does not like. [Recent political slang, U. S.]

hot-closet (hot′kloz″et), *n.* **1.** A closet, attached to a stove or some other source of heat, in which dishes and food are kept warm.—**2.** In *candle-making,* a heated chamber in which candle-molds are kept warm previous to being used, to prevent the chilling of the stearic acid.

hot-drawn (hot′drân), *a.* That has been drawn through dies while hot: said of pipe or rods.

Hotei (hō′tā), *n.* [Jap.] One of the seven beneficent beings of the Japanese pantheon: represented as a fat, smooth-faced man, with a protruding, naked abdomen, and usually carrying a big hempen bag.

Hotei, the Japanese transcription of the Chinese Putai, represents Putai Hoshang, the "Monk with the Hempen Bag," of Chinese Buddhist lore.
S. W. Bushell, Oriental Ceramic Art, p. 757.

hotfoot (hot′fût), *v. t.* To chase or pursue in hot haste; follow at a hot pace. [Colloq.]

Zuléma discovers her irate father, who . . . [has] been *hotfooted* up hill and down dale by the bloodthirsty Anglais. *F. B. Smith,* How Paris Amuses Itself, p. 103.

hot-plate, *n.* **2.** In *gas-fitting,* a small portable cooking-appliance consisting of an iron table supported on short legs and having one or more Bunsen burners for boiling, etc.

hot-pot, *n.* **3.** A local name in Utah of certain hot calcareous springs which have built up mounds of tufa around their orifices. Within, the waters bubble with carbonic-acid gas, and, unless artificially tapped below, flow off over the rim, thus constantly adding tufa to the mounds. *Sci. Amer. Supp.,* Sept. 12, 1903, p. 27157.

hot-stoking (hot′stō″king), *n.* In *glass-manuf.,* the operation of raising the temperature of the furnace until the batch or frit in the melting-pot is completely fused. Same as *fining* or *refining.* Compare *cold-stoking.*

Hottentot apron. Same as ★*tablier,* 2.—**Hottentot rice.** See ★*rice*[1].

Hottentot's-god (hot′n-tots-god), *n.* A South African mantis, worshiped formerly by the Hottentots.

hot-tube (hot′tūb), *n.* and *a.* **I.** *n.* A tube which is kept red-hot by a flame and is used for igniting the charge in an internal-combustion engine.

II. *a.* Using a red-hot tube as a torch or igniter.—**Hot-tube igniter.** See ★*igniter.*

hot-well, *n.* **2.** A hot spring, especially one at whose orifice there is a pool of relatively quiet water.

hot-windy (hot′win″di), *a.* Characterized by the presence or the prevalence of the 'hot wind' of Australia: as, *hot-windy* weather. See ★*wind*[2]. [Australia.]

houhere (hō-ō-hā′rā), *n.* [Maori, < *hou,* bind or fasten together, + *here,* tie.] A name in New Zealand of two trees belonging to the mallow family. Both of them have tough bark, which in former times was used by the natives for making tapa, or bark-cloth. One, *Hoheria populnea,* known also as the lacebark or thousand-jacket, has bark which readily separates into many thin, lace-like layers. It is distinguished by having fruit composed of 5 separable carpels. The other, *Plagianthus betulinus,* known commonly as ribbonwood, is a much larger tree than the preceding. It has fruit consisting of a single naked capsule. Also called *houi* and *whauwhi.* See *ribbonwood* and *lacebark,* 3.

hound, *n.* **Cat-hound,** a breed of hounds used for hunting wildcats and panthers.—**Orion's hound,** the constellation of the Greater Dog.—**Rampur hound,** an East Indian breed of dogs, resembling the Great Dane, used for hunting.—**Smooth hound,** a small blunt-toothed shark, *Mustelus mustelus.* **The hound of hell,** Cerberus, the three-headed watch-dog who, according to Greek mythology, was stationed at the entrance of hell to see that the living did not enter or the dead escape.

houndfish, *n.* **5.** A name applied to fishes of the genus *Tylosurus,* especially to *T. raphidoma* and *T. acus,* both of the West Indies.

hour, *n.* **6.** In *astron.* and *geog.,* an angular measure of right ascension or longitude, being the twenty-fourth part of a great circle of the sphere, or fifteen degrees. *N. E. D.*—**Eight-hour movement.** See ★*eight*[1]. **Horse-power hour,** a compound unit, used in comparing efficiencies, equivalent to one horse-power maintained for one hour.—**Long hours,** the hours which are struck with a great number of strokes, as eleven and twelve.—**Lunar hour,** the twenty-fourth part of a lunar day, that is, of the interval time between two successive transits of the moon across the meridian.—**Metric horse-power hour,** an amount of work equivalent to a metric horse-power exerted for one hour.—**Planetary hour,** in *astrol.,* the twelfth part of the time occupied between the sun's rising and setting, or vice versa: supposed to be ruled in rotation by the seven planets.—**Shop-hour.** (*a*) A unit of the time required for doing a piece of work, consisting of the total number of hours spent by all the men who have worked upon it divided by that number. (*b*) One hour in a shop. In many technical schools students are required to spend a certain number of hours in workshops. These are called *shop-hours,* to distinguish them from the hours spent in the recitation-room.—**Short hours,** the hours which are struck with few strokes, as one and two.—**The hour,** the time in question or particularly referred to; the time being; the moment.

Hour-glass screw, spring, stomach. See ★*screw*[1], etc.

hour-index (our′in″deks), *n.* An index or pointer which can be turned to any hour marked on the hour-circle around the pole of an artificial globe.

hour-stroke (our′strōk), *n.* One of the strokes or marks which indicate the hours on a dial-plate.

hour-watch (our′woch), *n.* A watch with a single hand which indicates only the hours.

hour-zone (our′zōn), *n.* One of the strips or lunes of the earth's surface separated by meridians 15 degrees apart on the equator, beginning with the standard meridian of Greenwich. The standard time for all places within any one hour-zone is the same, or should be, except when local circumstances make it convenient to shift the dividing-lines a little. The minutes and seconds on this system are everywhere identical with those of Greenwich time.

The groups of 15 degrees of longitude form naturally the 24 *hour-zones* into which the circumference of the equator is divided, and which, numbered from 0 to 23, will give the time of all places on the Earth in terms of the initial hour. *Geog. Jour.* (R. G. S), XI. 677.

house[1], *n.*—**Black house,** a rude house built of stone, without windows, used in some parts of Scotland for a habitation and for sheltering domestic animals.—**Down the house, up the house,** two terms used to denote the direction with reference to the iron pots employed in the Pattinson process (which see, under *process*) for the extraction of silver from lead. The former denotes the direction toward the market-pot, while the latter refers to the contrary direction. The process is now almost obsolete.—**House burn.** See ★*burn*[1], *n.*, 5 (*b*).—**House of eternity,** or **of graves,** or **of life,** a Jewish cemetery.—**Keeping house,** in *Eng. law,* the act of a man in business, who indicates by his keeping away from his place of business and remaining at home an intention to evade his creditors: implying an act of bankruptcy. [Slang.]—**Tied house,** an establishment engaged in retail trade, particularly a public house or saloon, which is under contract to sell the goods of a particular producer (a brewer or distiller) who is usually its backer. [Eng.]

The consumer has (owing to the "*tied house*" system) in many cases no choice but to drink the beer offered him, and is therefore practically not a free agent.
Encyc. Brit., XXVI. 363.

To make a house, in parliamentary parlance, to see that a quorum is present.

And in the absence of party government, it was nobody's business *to make a house.*
Jour. Hellenic Studies, VIII. 108.

house[2], *n.* **3.** In some tunicates, as *Appendicularia* and *Oikopleura,* a temporary gelatinous envelop, representing the tunic of other forms. It is formed with great rapidity as a secretion from the surface of the ectoderm and is frequently thrown off and renewed.

house-ant (hous′ant), *n.* Any ant which habitually enters houses, or nests in the walls, such as *Monomorium pharaonis, M. minutum,* and *Tetramorium cæspitum.*

house-barge (hous′bärj), *n.* A house-boat.

house-bound (hous′bound), *a.* Confined to the house, as with sickness; 'shut in.'

housebreaker, *n.* **2.** Same as ★*house-wrecker.*

house-builder (hous′bil″dèr), *n.* One whose business is the building of houses; specifically, a carpenter who gives special attention to the construction of wooden dwelling-houses.—**House-builder moth.** See ★*moth*[1].

house-burn (hous′bèrn), *n.* See ★*burn*[1], 5 (*b*).

house-carpenter (hous′kär″pen-tèr), *n.* A carpenter who works upon the trim and interior finish of a house, as distinguished from a ship-carpenter. [Great Britain.]

house-fly, *n.*—**Little house-fly,** a small anthomyiid fly, *Homalomyia brevis,* found commonly about houses and breeding in decaying vegetable material and dung.

house-mosquito (hous′mus-kē″tō), *n.* The common cosmopolitan mosquito, *Culex pipiens,* which usually breeds in and about houses.

house-mover (hous′mö″vèr), *n.* A man engaged in raising and moving buildings by means of jack-screws and rollers moving upon prepared wooden ways.

housesmith (hous′smith), *n.* A mechanic who works upon the ironwork of buildings.

house-staff (hous′stàf), *n.* The resident physicians and surgeons in a hospital.

housework (hous′wèrk), *n.* Domestic work; the work of housekeeping.

house-wrecker (hous′rek″èr), *n.* One who takes down old buildings and sorts out and saves the materials for future use. In England, called a *housebreaker.*

housing[1], *n.* **8.** (*b*) The inboard end of the bowsprit; also, that part of a mast that is below the upper or spar-deck.

housing-bolt (hou′zing-bōlt), *n.* A bolt above a gun-port on a war-vessel, used in housing a gun.

housing-line (hou′zing-līn), *n.* *Naut.,* a line used in housing an awning.

housing-pivot (hou′zing-piv″ọt), *n.* *Naut.,* the bolt which locks a gun-carriage in the desired position.

housing-topmast (hou′zing-top″mạst), *n.* A topmast rigged so as to be lowered without loss of time.

houtberg (hout′berg), *n.* [D., < *hout,* wood, + *berg,* hill, mountain.] A wooded mountain. [South African Dutch.]

Hovenia (hō-vē′ni-ạ), *n.* [NL. (Thunberg, 1781), named in honor of David *Hoven,* a senator of Amsterdam and a patron of Thunberg's botanical expedition to Japan.] A genus of trees of the family *Rhamnaceæ.* There is only one species, *H. dulcis,* remarkable for the curious fleshy, edible pedicels of the fruit. It is occasionally cultivated in the United States and is hardy as far north as Washington. It is known as *Japanese raisin-tree* and *coral-tree.* See ★*coral-tree,* 2.

Coral-tree (*Hovenia dulcis*).
Flowering branch, one fifth natural size (upper figure); cluster of fruit, one third natural size (lower figure).

hover, *n.* **3.** Same as *hoverer.*

hover-fly (huv′-èr-flī), *n.* Any one of very many flies of the families *Syrphidæ* and *Bombyliidæ* which hover over flowers, rapidly vibrating their wings while searching for honey. *Nature,* Dec. 17, 1903, p. 158.

howardite (hou′ärd-īt), *n.* [Named after Edward *Howard,* who first showed (1802) the presence of nickel in meteoric iron.] A kind of meteoric stone or aërolite. See ★*meteorite.*

howarditic (hou-ärd-dit′ik), *a.* [*howardite* + *-ic.*] Relating to or resembling howardite.

howdenize (hou′dn-īz), *v. t.*; pret. and pp. *howdenized,* ppr. *howdenizing.* To equip with the Howden system of forced draft, in

which the air supplied to the furnace is heated by the waste heat from the products of combustion.

howell (hou'el), *n.* [Perhaps for **howl*, dial. variant of *hole*[1].] The upper stage of a porcelain kiln. Also called *crown* and *cowl*. *Wagner*, Chem. Technol.

howl, *v. i.* **4.** Of an organ-pipe, same as *cipher*, *v.*, 4.

howler, *n.* **3.** A calling device employed in telephony in place of the magnetic call-bell; a buzzer. [Slang.]

When a subscriber leaves his receiver off the hook, no busy signal is made should a call for that telephone be made. By means of a "*howler*" current the diaphragm of the hanging receiver is vibrated rapidly to attract the subscriber's attention.
Elect. World and Engin., July 4, 1903, p. 12.

howo (hō'wō'), *n.* [Jap. *hōwō*, < Chinese *fūng-hwang*: see ★*fēng-hwang*.] A fabulous bird used as an imperial emblem in Japan; the phenix. See ★*fēng-hwang*, with cut.

H. P. An abbreviation (*b*) of *half pay*; (*c*) of *High Priest*; (*d*) of *high-pressure*, when applied to cylinders: when applied to engines it means *horse-power*, and, to prevent confusion, when a high-pressure engine is meant the words should be written out.

H. P. M. An abbreviation of *halleluiah particular meter*.

H. Q. An abbreviation of *headquarters*.

hr. A contraction of *hour*.

H. R. An abbreviation (*b*) of *Home Ruler*.

h. r. In *elect.*, an abbreviation of *high resistance*.

H. R. E. An abbreviation of *Holy Roman Empire*.

H. R. I. P. An abbreviation of the Latin *hic requiescit in pace*, here rests in peace.

H-section (āch'sek″shon), *n.* A rolled piece of iron or steel the cross-section of which resembles a capital H, the flanges being wider than the depth of the beam.

H. S. S. An abbreviation of the Latin *Historiæ Societatis Socius*, Fellow of the Historical Society.

ht. A contraction of *height*.

h. t. An abbreviation of *hoc titulo*, 'in (or under) this title.'

H. T. L. An abbreviation of *half-tide level*.

huaca (hwä'kä), *n.* [Quichua.] **1.** Originally the generic name for the spirits thought by the Peruvian Indians to be disseminated through the whole visible and perceptible world; also applied to every object, natural or artificial, supposed to be the abode of such a spirit. Hence—**2.** A fetish. The sun, moon, and stars, all meteorologic phenomena, the mountains, rivers, in short, everything striking in nature, and every idol, were *huaca*.—**3.** An aboriginal ruin: now the common use of the word. Any ruin of ancient Indian architecture is a *huaca*. See ★*huaco*.

huaco (hwä'kō), *n.* [Also *guaco*: Quichua.] In Peru, Bolivia, and Chile, pre-Columbian pottery or other Indian antiquities.

huajillo (hwä-hē'lyō), *n.* [Mexican.] An evergreen shrub or small tree, *Havardia brevifolia*, of the mimosa family, growing in southern Texas and northern Mexico.

huantajayite (hwän-ta-hā'yīt), *n.* Argentiferous sodium chlorid, found at Huantajaya mountain in Arequipa.

Huanuco bark. Same as *Cuenca* ★*bark*.

huascolite (hwäs'kō-līt), *n.* [*Huasco* (see def.) + Gr. λίθος, stone.] A sulphid of lead and zinc allied to galena, found near Huasco, Chile, and elsewhere.

hub, *n.*—**Hub-boring machine.** See ★*boring-machine*.

Hübl process. See ★*process*.

Hubrechtia (hū-brek'ti-ä), *n.* [NL. (Bürger, 1892), from a surname, *Hubrecht*.] The typical genus of the family *Hubrechtidæ*.

Hubrechtidæ (hū-brek'ti-dē), *n. pl.* [NL., < *Hubrecht* + *-idæ*.] A family of nemerteans, of the order *Protonemertini*. The lateral organs are spherical structures which lie deep within the body-wall and project into the lateral vessels; the brain and lateral nerve-cords lie beneath the reticular dermis; a dorsal vessel is present, and the excretory organs constitute a richly branched canal-system. The family contains only one genus, *Hubrechtia*.

huckleberry, *n.*—**Bear-huckleberry.** Same as ★*buckberry*, 2.—**Blue huckleberry,** in general, same as ★*blueberry*(*a*); specifically, *Vaccinium vacillans*, also called *low blueberry*, a small stiff shrub of eastern North America bearing an abundance of blue-glaucous fruit of medium quality.—**Box-huckleberry,** *Gaylussacia brachycera*, a low stiff huckleberry, with somewhat the habit and foliage of box. It is found in dry woods from Pennsylvania to Virginia.—**Dwarf** or **bush huckleberry,** *Gaylussacia dumosa*, a low species, with a horizontal creeping root, found along the Atlantic and Gulf coasts of the United States.—**Hairy huckleberry.** (*a*) *Vaccinium hirsutum*, a blueberry of shady mountain slopes in North Carolina, Tennessee, and Georgia. Nearly all the growing parts are pubescent or hirsute, and the fruit is covered with short glandular hairs. This plant, early described by Buckley, was lost sight of for many years. (*b*) *Gaylussacia hirtella*, a true huckleberry, related to the dwarf huckleberry, but with the young parts and even the fruit hispid. It is found along the lower Atlantic and the Gulf coasts of the United States.—**He-huckleberry.** Same as ★*leatherwood*, 3.—**Tree-huckleberry.** Same as *farkleberry*.

huckleberry-lily (huk'l-ber-i-lil″i), *n.* The red lily.

hucklebone, *n.* **3.** *pl.* A game played with hucklebones. The Greeks used the astragalus for the same purpose.

huck-shouldered (huk'shōl″dêrd), *a.* Humpbacked.

huddling-chamber (hud'ling-chām″bêr), *n.* A space in which a fluid gathers; specifically, an annular space under the projecting collar of a pop safety-valve, in which the steam collects as soon as the valve opens at all and, by thrusting on the ring, forces the valve open wider and holds it open until the pressure drops. See *safety-valve*. [Colloq.]

hudge (huj), *n.* In *mining*, an iron or steel hoisting-bucket.

Hudson-Champlain trough. See ★*trough*.

Hudsonian zone. See *life* ★*zone*.

Hudson River shale. See ★*shale*[2].

huemul, *n.* Same as ★*guemul*.

huf, *v.*, *n.*, and *a.* A simplified spelling of *huff*.

Hüfner's apparatus. See ★*apparatus*.

hug, *v. t.*—**To hug the land** (*naut.*), to keep in close touch with the shore; sail as close to the land as the depth of water and other features will allow.—**To hug the wind** (*naut.*), to sail close to the wind; have the yards braced up and the ship steered as close to the wind as she will lie.

Huggins series. See ★*series*.

Hughes's induction-balance. See ★*induction-balance*.

huila (hwē'lä), *n.* [Mex.] A stimulating liquor distilled from a species of the mescal agave.

Other liquors distilled from various species of the Mescal Agave are known as "tequila," "*huila*" and "comiteco."
Sci. Amer. Sup., Dec. 12, 1903, p. 23365.

huisache (hwē-sä'chā), *n.* In Texas, the opopanax, *Acacia Farnesiana*. This is a small thorny tree with pinnate leaves and small globose heads of flowers, with a rich fragrance of the violet type. It is widely diffused, either as native or introduced, in the warmer parts of the earth, and under the name *cassie* is extensively cultivated in the south of France for perfumery-making. Also *guisache*.

huiscoyol (hwēs-kō-yōl'), *n.* [Nahuatl *huitzo*, thorny, + *coyolli*, a nut-bearing palm.] A name applied in Mexico and some parts of Central America to spiny palms of the genera *Acrocomia*, *Astrocaryum*, and *Bactris*; especially to *Bactris acuminata*, *B. horrida*, and *Acrocomia aculeata*. Also *huiscoyul* and *biscoyol*. See *gru-gru*, 2.

hula-hula (hö″lä-hö'lä), *n.* [Hawaiian *hula-hula*, music, dancing, singing, etc.] A native Hawaiian dance, accompanied by singing and drumming. *Deniker*, Races of Man, p. 208.

hule (ö'lā), *n.* [Nahuatl *ulli* or *olli*, caoutchouc.] **1.** Same as *ule*.—**2.** Any one of several species of Central American rubber-producing trees of the genus *Castilla*, especially *C. elastica*.—**3.** A shrubby composite plant, *Parthenium argentatum*, which has a milky juice containing considerable caoutchouc. The latter is usually obtained by grinding up the plants and extracting with chemicals.

hull[1], *v. t.* **3.** To shell (oysters). [Southern U. S.]

hull[2], *n.*—**Hull sunk,** sunk to the bulwark rail below the horizon: said of a ship.—**Hull up,** said of a vessel when her entire hull appears above the horizon line.—**To lie a hull** (*naut.*), to be stripped down to bare poles; have no sail set.

hull-cytode (hul'sī″tōd), *n.* A cytode or non-nucleated cell with a cell-membrane.

hull-efficiency (hul'e-fish″en-si), *n.* In *naval arch.*, the ratio of the net work or horse-power required to drive a ship's hull at a given speed when towed without her propeller, to that required to drive the same vessel at the same speed through the water by means of her propeller.

hull-strained (hul'strānd), *a.* Showing weakness in timbers or planking after being subjected to rough handling as at sea in heavy weather: said of a wooden ship. An iron vessel is *hull-strained* when from any cause her framing or plating shows buckling or separation.

Hulme porcelain. See *American* ★*porcelain*.

huma (hū'ma), *n.* [Pers. Hind. *huma*, a phenix.] A fabulous bird of Persian legend, similar to the phenix.

human, *a.* **3.** In *geol.*, noting the period of the later beds of the Post-tertiary or Quaternary series (the recent, alluvial, and post-glacial periods). The mammals are all, or nearly all, of still living species. The epithet *human* is not strictly applicable to this series, for it is quite certain that man coexisted with the fauna of the Pleistocene period.

humanism, *n.* **4.** The body of opinions which characterized those scholars who, in the early sixteenth century, decried the medieval theology and logic and sought inspiration from ancient Greek and Roman sources, and in particular objected to the use in Latin, which was then the common language of philosophy and science, of any words not found in the writings of the early Latin writer Cicero.—**5.** Since 1903, the doctrine that there is no absolute being or absolute truth not relative to human faculties and needs. The term was proposed by F. C. S. Schiller to designate the general philosophical opinion of himself and Professor William James. These writers deny infinity of every kind; and it is likely that this denial will be considered as implied in the term. It is not logically implied in the above definition.

I propose to convert to the use of philosophic terminology a word which has long been famed in history and literature, and to denominate *Humanism* the attitude of thought which I know to be habitual in William James and in myself.
F. C. S. Schiller, Humanism, Pref., p. xvi.

Humaria (hū-mā'ri-ä), *n.* [NL. (Fuckel, 1869), < L. *humus*, soil.] A genus of discomycetous fungi, of the family *Pezizaceæ*, having sessile, variously colored ascomata and hyaline one-celled smooth or roughened spores. The name refers to the usual habitat of the plants, which is vegetable mold.

Humata (hū-mā'tä), *n.* [NL. (Cavanilles, 1801), named from the village of *Humatag* (Sp. *Humata*), now called Umata, on the west coast of the island of Guam, where first collected.] A genus of polypodiaceous ferns of the tribe *Davallieæ*, widely distributed among the Malayan, Philippine, and various other Pacific islands. There are about 15 species, mainly epiphytic, with chaffy creeping rhizomes and thick coriaceous more or less dimorphous fronds, varying in form from simply lanceolate to pinnatifid and deltoid bipinnatifid. The sori are terminal upon the veins near the margin, the roundish or reniform thick indusia being attached basally and thus free apically toward the margin.

humect, *v.* **II.** *intrans.* In *chem.*, to become moist by attracting vapor of water from the atmosphere; to deliquesce.

humectation, *n.* **3.** Same as *edema*, 1.

humeral. **I.** *a.*—**Humeral gland.** See ★*gland*.
II. *n.* **3.** The clavicle; a large bone of the shoulder-girdle of fishes. Not homologous with the bone called *humeral* by Agassiz, nor with that called *humerus* by Geoffroy or Owen or Erdl. *Starks*, Synonymy of the Fish Skeleton, p. 521.

humerofemoral (hū″me-rō-fem'ō-ral), *a.* Relating to both the humerus and the femur.—**Humerofemoral index,** in *anthrop.*, the length of the humerus expressed in percentages of the femur. *Amer. Anthropologist*, July-Sept., 1901, p. 572.

Humeroradial index. Same as *radiohumeral* ★*index*.

humerus, *n.*—**Perforated humerus,** the condition of the humerus in which the olecranon fossa is perforated to form the entepicondylar foramen.

humidifier (hū-mid'i-fī-êr), *n.* One who or that which humidifies or moistens; specifically, a mechanical device for moistening the atmosphere, as in a textile-factory, to keep it at a desired degree of relative humidity.

humidity, *n.*—**Complement of the humidity,** the difference between one hundred per cent. and the actual percentage of relative humidity; the percentage by which the actual relative humidity falls short of complete saturation.—**Humidity wind-rose.** See ★*wind-rose*.

humidor (hū'mi-dôr), *n.* A box, often ornamental, in which cigars are kept moist or prevented from becoming too dry.

humidostat (hū-mid'ō-stat), *n.* [L. *humidus* for *umidus*, moist, + Gr. στατός, < ἱστάναι, cause to stand.] A small chest or cabinet lined with sheet-metal and fitted with some device for holding a damp sponge or piece of felt: used to keep cigars moist.

humification (hū-mi-fi-kā'shon), *n.* [L. *humus*, soil, + *-ficatio*(*n*)-, < *facere*, make.] The process by which humus is formed from vegetable matter in the soil or on top of the ground and then percolates into it by the action of rain-water.

humify[1] (hū'mi-fī), *v. i.*; pret. and pp. *humified*, ppr. *humifying*. [L. *humus*, soil, + *-ficare*, < *facere*, make.] To become humus or soil.

From a chemical standpoint the soils of the two regions are similarly characterized: (1) By an exceptionally large amount of thoroughly *humified* organic matter.
U. S. Dept. Agr., Bur. Plant Industry, 1901, Bulletin 3, p. 19.

humify[2] (hu′mi-fī), *v. t.* Same as *humefy*.

humilific (hu-mi-lif′ik), *a.* [L. *humilis*, humble, + *-ficus*, ⟨ *facere*, make.] That humiliates or tends to humiliate; humiliating.

Rural life and city life, honorific employments and *humilific* employments.
E. A. Ross, in Amer. Jour. of Sociol., IX. 192.

humiriaceous (hu-mir-i-ā′shius), *a.* In *bot.*, belonging to or resembling the *Humiriaceæ*.

Humist (hu′mist), *n.* A follower or supporter of David Hume or of his philosophical doctrines. See *Humian*.

humite, *n.* The relation in chemical composition of the species of the humite group is shown by the following formulæ, established by Penfield and Howe: chondrodite, $Mg_3[Mg(F_1OH)]_2[SiO_4]_2$; humite, $Mg_5[Mg(F_1OH)]_2[SiO_4]_3$; clinohumite, $Mg_7[Mg(F_1OH)]_2[SiO_4]_4$. In these formulas the magnesium atoms present are, respectively, 5, 7, and 9, and these numbers also express the ratio of the vertical crystallographic axes of the three species. The fourth possible compound, $Mg[Mg(F_1OH)]_2SiO_4$, is probably represented by the species prolectite, which, though not yet analyzed, has been shown (Sjogren) to be crystallographically the first member of this series whose vertical axes are in ratio of 3:5:7:9. See ★*prolectite*.

hummer, *n.* **4.** A calling device employed in telephony in place of the magnetic call-bell; a buzzer.

humming-bee (hum′ing-bē), *n.* Same as *bumblebee* and *humblebee*. *Kirby and Spence*.

humming-bird, *n.* **Hermit humming-bird**, any species of the genus *Phaethornis*, rather dull-plumaged

Hermit Humming-bird (*Phaethornis guy*).

birds with wedge-shaped tails.—**Humming-birds' trumpet.** Same as *California* ★*fuchsia*. **King humming-bird**, a humming-bird of the genus *Topaza*, which has the outer tail-feathers long and curved inward.—**Saw-beaked humming-bird**, any one of a group of humming-birds distinguished by having the edges of the front part of the upper mandible slightly notched.—**Sword-billed humming-bird.** Same as *swordbill* (which see).—**Vervain humming-bird**, *Mellisuga minima*, a species found in Jamaica, almost the smallest of the group.—**White-crowned humming-bird**, one of the few species of the genus *Microhera*, which have the top of the head pure white.

humming-stick (hum′ing-stik), *n.* Same as *bull-roarer*.

hummock, *n.* **3.** A low hill of sand on the sea-shore. Compare *dune*[1].

hummocking (hum′ok-ing), *n.* The production of mounds and ridges of broken ice when two floes crowd upon each other.

humor, *n.*—**Glacial humor**, vitreous humor.—**Hyaline humor.** Same as *glacial* ★*humor*.—**Scarpa's humor**, endolymph.

humor, *v. t.* **3.** To give a slight direction or turn to (a fly, in fishing, or the like). *N. E. D.*

hump, *n.* **2.** A sailors' name for a worthless member of the crew; a green hand.—**3.** A long tramp with a load on the back. [Australia.] *E. E. Morris*, Austral English.

hump, *v. t.* **To hump bluey.** See ★*bluey*.

Humpbacked sucker. See ★*sucker*.

humphed (humft), *a.* Altered by contact with igneous rock: said of coal. *Barrowman*, Glossary. [Scotch.]

hump-shouldered (hump′shōl″dêrd), *a.* Having high and humped shoulders.

humus, *n.* **Acid humus.** See *sour* ★*humus*.—**Mild humus**, humus in a condition favorable to forest growth.—**Sour humus**, humus harmful to forest growth, owing to the presence of humic or similar acids, produced by decomposition under excess of moisture and lack of air.

Hun. An abbreviation of *Hungary*.

hunakai (hö-nä′kī), *n.* [Hawaiian, ⟨ *huna*, very small or fine, + *kai*, the sea. The plant bears white flowers and grows on the sea-beach, almost within reach of the surf.] A native name for a species of morning-glory, *Ipomœa acetosæfolia*, which creeps in the sand along the sea-beach. It is a native of the West Indies, Guiana, and Brazil.

Hunchakist (hun′cha-kist), *n.* and *a.* [⟨ Armenian *hunchagyán*, ⟨ *hunchág*, a bell.] **I.** *n.* A member of one of the first Armenian patriotic revolutionary societies which arose against the oppressive misrule of the tyrant Sultan Abd-ul-Hamid II. of Turkey. The society published a paper for its propaganda, called *Hunchág*, which had with the title the picture of a bell, symbolizing its mission to awaken the people.

II. *a.* Of or pertaining to the Hunchagyán society.

Hungarian blue-grass. See ★*blue-grass*.—**Hungarian mill.** See ★*mill*[1].

Hungaritidæ (hung-ga-rit′i-dē), *n. pl.* [NL., ⟨ **Hungarites* + *-idæ*.] A family of the ammonites belonging to the suborder *Discocampyli*.

hunger-evil (hung′gèr-ē″vil), *n.* Sudden attacks of extreme hunger in the horse: it occurs also, as a manifestation of epilepsy, in man.

Hungry quartz. See ★*quartz*.

Hunnemannia (hun-e-man′i-ä), *n.* [NL. (Sweet, 1828), named in honor of John *Hunnemann*, an English botanist.] A genus of plants of the family *Papaveraceæ*. It contains a single Mexican species, *H. fumariæfolia*, now somewhat cultivated under the name *tulip-poppy*. It is treated as a garden annual, being closely allied to the California poppy (*Eschscholzia*), from which it differs in having distinct sepals. The flowers are tulip-like, large, and yellow; the foliage is finely cut.

hunt, *v. i.* **4.** In *mech.*, to jump back and forth instead of remaining steady. Thus an engine governor is said to be 'hunting' when it goes too far in cutting off steam or putting it on, making the speed of the engine vary a little each way from the designed speed.—**To hunt at the view**, to pursue game by sight, as the greyhound.—**To hunt riot**, of foxhounds, to run a scent other than that of the fox.

hunt, *n.*[1] **7.** In *bell-ringing*, a bell which is taken out of its order and then hunted by the others in the peal. See *hunt*, *v. i.*, 3.—**8.** In *elect.*, the see-sawing, surging of speed, or oscillating which sometimes occurs in synchronous motors or other electrical apparatus. *Trans. Amer. Inst. Elect. Engin.*, 1901, p. 374.

hunter, *n.* **5.** A watch having a double case, that is, two single covers, one covering the works and the other the dial; a hunting-watch. Many antique watches were made with two distinct parts, the one an inner watch with a back of metal and a face of glass, and the other an outer case with only one metal back. In this manner the watch could be used as an open face, or else the dial or glass side of the watch could be reversed and thus protected by its hunting-case.

Hunter's moon. See ★*moon*[1].

hunting, *n.* **3.** An arrangement in the number of teeth of gears in contact such that the same teeth come into touch with each other only after a number of revolutions. *Taggart*, Cotton Spinning, II. 5.

hunting-cat (hun′ting-kat), *n.* The chetah, *Cynælurus jubatus*, which is used for hunting deer and other game.

Huntingdon Connection. See ★*connection* and *Huntingdonian*.

hunting-horse (hun′ting-hôrs), *n.* A horse used for hunting; a hunter.

hunting-lodge (hun′ting-loj), *n.* Same as *hunting-box* or *shooting-box*.

hunting-match (hun′ting-mach), *n.* A competition between shooters of game. Usually the several species of game killed are scored by a scale of points, and the match is won by the side scoring the highest number of points.

hunting-piece (hun′ting-pēs), *n.* A representation of a hunting scene.

Hunts. An abbreviation of *Huntingdonshire*.

huntsman, *n.* **3.** In Honduras, the foreman of a gang of slaves, whose duty it is to search the woods to find employment for his men.

hurdle, *v.* **II.** *intrans.* To jump over a hurdle, as in a hurdle-race; hence, to jump over anything as if it were a hurdle.

hurdler (hèr′dlèr), *n.* **1.** One who hurdles, or runs a hurdle-race.—**2.** A hurdle-maker. *T. Hardy*.

hurdle-racer (hèr′dl-rā″sèr), *n.* A horse that competes in hurdle-races.

It has been remarked that steeplechase horses are usually in the first place schooled over hurdles, and many animals remain *hurdle-racers* till the end. More speed is required for hurdles than for a steeplechase course, and there is more money to be won over hurdles than over "a country." *Encyc. Brit.*, XXIX. 333.

hurdle-screen (hèr′dl-skrēn), *n.* In *mining*, a curtain or brattice hung in a roadway to divert the air-current upward and so free a hole in the roof of gas. *Barrowman*, Glossary.

hurdy-gurdy, *n.* **1.** In a five-stringed instrument the lowest open string is called the *bourdon*, that next above the *mouche*, and the highest the *trompette*, and the melody strings are called *chanterelles*.—**Hurdy-gurdy house**, a dance-house in a mining-camp. [Western U. S.]

Hurlet limestone. See ★*limestone*.

hurley[2] (hèr′li), *n.* In *mining*, a box on wheels; a mine-car. *Barrowman*, Glossary.

Huron shale. See ★*shale*[2].

Huronia (hū-rō′ni-ä), *n.* [NL., ⟨ *Huron*, one of the Great Lakes.] A genus of the nautiloid cephalopods of the family *Actinoceratidæ*: known by its siphuncle, which is very wide and consists of ring-like segments inflated directly behind the septa. It occurs in the Silurian.

Hurricane distance. The following table shows the approximate distance that has been calculated for the center of the hurricane, according to the average fall of the barometer per hour. Although admittedly a rough calculation, it has been found to possess a certain value for the navigator.

Average fall of barometer per hour.	Distance in miles from storm-center.
From 0.02 in. to 0.06 in.	From 250 to 150.
" 0.06 " " 0.08 "	" 150 " 100.
" 0.08 " " 0.12 "	" 100 " 80.
" 0.12 " " 0.15 "	" 80 " 50.

Hurricane range. West India hurricanes, as a rule, range between the parallels of 10° and 50° N. and the meridians of 55° and 85° W.—**Hurricane track.** In the northern hemisphere a hurricane originating between the parallels of 10° and 18° N. advances in a northwesterly direction, and between the parallels of 25° and 30° N. curves to a northeasterly direction. In the southern hemisphere the cyclone has its origin in the equatorial regions and advances in a southwesterly direction. About the parallel of 25° S. it curves to a southeasterly direction. **Hurricane wind.** See ★*wind*[2]. **Paddy's hurricane.** When there is no wind, so that the pennant hangs alongside the mast, it is said that a *Paddy's hurricane* is blowing, or that the wind is up and down the mast.

hurricane-beach (hur′i-kān-bēch), *n.* See the extract.

At the windward corner of an atoll parallel lines of shingle beaches are usually found. As these beaches appear to be due each to a single storm they are termed *hurricane-beaches*, and they may be used to supply some approximation to a chronological system for measuring the rate of growth of coral formations.
Geog. Jour. (R. G. S.), XI. 674.

hurricane-bird (hur′i-kān-bèrd), *n.* The frigate-bird: so named from a popular belief that when it flies near the water a hurricane will follow. [Rare.]

hurricane-lamp (hur′i-kān-lamp), *n.* A tall glass chimney or shade placed over a lighted candle or lamp to protect it from the wind.

hurry, *n.* **4.** In *phys.*, a proposed unit of acceleration; an acceleration of one foot per second per second.

hurry-gum (hur′i-gum), *n.* In *mining*, dross or fine coal passed through a hurry. *Barrowman*, Glossary. [Scotch.]

hurst-frame (hèrst′frām), *n.* The frame which carries the bearings for the trunnions attached to the helve of a trip-hammer. Also spelled *hirst-frame*.

Hurter and Driffield's actinograph. See ★*actinograph*.

husi (hö′sē), *n.* [Philippine Sp., also *jusi*; ⟨ Tagalog *husi*.] In the Philippine Islands, a thin fabric woven from the fibers of the Manila plantain, *Musa textilis*, and pineapple leaves, to which filaments of imported silk are sometimes added and sometimes a little cotton. It is woven principally in Iloilo and western Luzon: used for women's dresses and, to some extent, for men's shirts.

husk[1], *n.* **5.** Corn-meal bran. [Southern U. S.]—**6.** A cup-shaped form composed of short leaves, common in Greek, Roman, and Renaissance decoration, from which rinceaux and other motives usually start. There are about 84 of these starting-points. *Arch. Pub. Soc. Dict.*

husk[3], *n.* **2.** The verminous bronchitis of cattle, found particularly in calves, and caused by roundworms belonging to the species *Metastrongylus micrurus*.

husker, *n.* **2.** Improved power-machines now separate the corn in the husk from the stalks and leaves, strip the husks from the unshelled cobs, clean and cut the stalks, leaves, and husks into convenient form for feed,

or for other purposes, and deliver the corn, by means of a conveyer, to a wagon, bin, or corn-sheller. See ★*corn-sheller*.

huskie, *n.* See ★*husky*[3].

husky[2], *a.* 2. Rough and big; rough and energetic; burly: as, a *husky* fellow. [Slang, U. S.]

II. *n.* A 'husky' fellow; an energetic man; a hustler. [Canadian Northwest.]

husky[3], *n.* 2. An Eskimo.

Before leaving, arrangements were made for Eskimo (or *Huskies*, as I shall in future call them) to meet me at Churchill in the following spring.
Geog. Jour. (R. G. S.), XVI. 64.

3. The Eskimo language.

hussakite (hö′sak-īt), *n.* [Named after E. *Hussak* of the Geological Survey of Brazil.] Xenotime in prismatic crystals, first described from Brazil. It is a common microscopic constituent of crystalline rocks elsewhere.

hustle, *v. t.* 2. To inveigle into dishonest games. [Slang.]

hustler, *n.* 2. A strong, heavy turning-chisel.

hut[1], *n.* 4. The cottage of an Australian shepherd, sheep-shearer, or miner. *E. E. Morris*, Austral English.

hutch-cleading (huch′klē″ding), *n.* In *mining*, the bottom-, side-, and end-boards of a hutch or mine-car. *Barrowman*, Glossary.

Hutchinsonian[2] (huch-in-sō′ni-ạn), *a.* Relating to or discovered by Jonathan Hutchinson (born in 1828), an English surgeon: noting various diseases and symptoms of disease discovered or first described by him.

hutchinsonite (huch′in-sọn-īt), *n.* [Named after Arthur *Hutchinson*, a demonstrator of mineralogy, Cambridge.] A rare sulph-arsenite of thallium, lead, silver, and copper, occurring in orthorhombic crystals of prismatic habit and red to grayish-black color: found in the dolomite of the Binnenthal, Switzerland.

Hutchinson pupil. See ★*pupil*[2].

Hutchinson's teeth. See ★*tooth*.

hutch-road (huch′rōd), *n.* In *mining*, a mine road. *Barrowman*, Glossary.

hut-circle (hut′sėr″kl), *n.* In *archæol.*, a ring of stones or of earth left after the destruction of a hut or tent and marking its circumference.

hutia (hö′ti-ạ̈), *n.* [NL. *hutia, utia*, ⟨ West Indian (Taino) *huti, cuti*, otherwise *aguti*: see *agouti*.] A name for the large rat-like rodents of the genus *Capromys*. The seven species are confined to the larger islands of the West Indies and are remarkable as being the only native land mammals save the curious *Solenodon*.

hut-keep (hut′kēp), *v. i.* To take care of an Australian station-hut or cottage. *E. E. Morris*, Austral English.

Huttonian character, the style of Arabic numerals in which they are all the same height, as 1234567890: first introduced by Dr. Charles Hutton in 1785.

Huttonianism (hu-tō′ni-ạn-izm), *n.* In *geol.*, the views advocated by James Hutton (1726–1797), a Scotch geologist, and his followers. They emphasized igneous phenomena, are collectively called *Plutonism*, and are contrasted with ★*Wernerianism* or ★*Neptunism*.

hutu (hö′tö), *n.* Same as ★*futu*.

Huxleian (huks′lē-ạn), *a.* Of or pertaining to Thomas Henry Huxley, an English naturalist and comparative anatomist (1825–95).

Yet it is worth while, now and then, to take stock of advances subsequent to, and largely consequent on, the *Huxleian* declaration. *Science*, March 22, 1901, p. 453.

Huxley's layer or **membrane.** See ★*membrane*.

Huygens's construction, zone. See ★*construction, half-period* ★*element*.

Huzvarish, Huzvaresh (huz-vä′rish, -resh), *n.* [Middle Persian.] A name applied to the later form of Achæmenian dialect of the ancient Persian.

huzzard (huz′ärd), *n.* [Poss. a dial. form of *uzzard* for *izzard*.] A British anglers' name for an undetermined yellow fly used as bait.

hy-. In *math.*, a prefix used as an abbreviation of *hyperbolic*: as, *hy*sin x for sinh x, etc.

hyacinth, *n.*—**California hyacinth.** Same as ★*Brodiæa*, 2.—**Hyacinth bacteriosis.** See ★*bacteriosis of the hyacinth*.—**Oriental hyacinth,** a variety of corundum.—**Water-hyacinth.** See ★*Piaropus*.—**Yellow disease of hyacinth.** Same as ★*bacteriosis of the hyacinth*.

Hyacinthia (hī-ạ̈-sin′thi-ạ̈), *n. pl.* [Gr. Ὑακίνθια, neut. pl. of Ὑακίνθιος, ⟨ Ὑάκινθος, Hyacinthus.] In *Gr. antiq.*, a Spartan festival celebrated at Amyclæ, in Laconia, in honor of the hero Hyacinthus and of Apollo. It was probably held in the latter part of July. Its duration is not known.

hyacinth-stone (hī′ạ̈-sinth-stōn), *n.* 1. The sapphire.—2. A red or orange-red variety of zircon; also, as used by the jewelers, the orange-red or honey-red variety of hessonite garnet.

Hyænanche (hī-ē-nang′kē), *n.* [NL. (Lambert, 1797), ⟨ ὕαινα, hyena, + ἄγχειν, to strangle. The name alludes to the use of the fruit for poisoning hyenas.] A genus of plants belonging to the family *Euphorbiaceæ*. See *Toxicodendron*.

hyænictine (hī-ē-nik′tin), *a.* Pertaining to or typified by the genus *Hyænictis*: as, the *hyænictine* group of the *Hyænidæ*.

Hyænictis (hī-ē-nik′tis), *n.* [NL., ⟨ Gr. ὕαινα, a hyena, + ἰκτίς, a ferret.] A genus of hyenas (*Hyænidæ*) which shows, in the character of its teeth, a transition from the genus *Palhyæna* of the Lower Pliocene to the *Euhyæna* or living species of *Hyæna*. Its remains have been found in the Pliocene of Europe and India.

hya-hya (hī-ạ̈-hī′ạ̈), *n.* [Native name.] The name in British Guiana of the milk-tree, *Tabernæmontana utilis*. See *milk-tree*, 2, and *Tabernæmontana*.

Hyaline humor. Same as *glacial* ★*humor*.

Hyalodidymæ (hī″ạ-lō-did′i-mē), *n. pl.* [NL., ⟨ Gr. ὕαλος, glass, + δίδυμος, twin.] A name applied by Saccardo to artificial divisions of various families and orders of fungi, especially those of the *Pyrenomycetes* and *Fungi Imperfecti*, to include the genera which have hyaline and uniseptate spores.

hyalogen (hī′ạ-lō-jen), *n.* [Gr. ὕαλος, glass, + -γενής, -producing.] The name of a class of compounds which possibly belong to the albuminoids. Some members are found in edible bird's-nests, others in the vitreous humor from the eyes of oxen and pigs.

hyalographer (hī-ạ̈-log′rạ-fėr), *n.* [*hyalograph-y* + -*er*[1].] An etcher on glass or other transparent substance.

Hyaloid body, the vitreous humor of the eye.

hyalomicte (hī′ạ-lō-mik″tē), *n.* [Gr. ὕαλος, glass, + μικτός, mixed.] Same as *greisen*.

Hyalonematidæ (hī″ạ-lō-nē-mat′i-dē), *n. pl.* [NL., ⟨ *Hyalonema(t-)* + -*idæ*.] Same as *Hyalonemidæ*.

hyalophagia (hī″ạ-lō-fā′ji-ạ̈), *n.* [Gr. ὕαλος, glass, + φαγεῖν, eat.] Glass-eating.

hyalophane (hī′ạ-lō-fān), *n.* [Gr. ὕαλος, glass, + -φανής, ⟨ φαίνεσθαι, appear, shine.] A monoclinic barium feldspar ($K_2BaAl_4(SiO_3)_8$) occurring sparingly, in glassy crystals resembling adularia, in the dolomite of the Binnenthal, Switzerland. Related, but less distinctly characterized, barium feldspars occur elsewhere.

Hyalophragmiæ (hī″ạ-lō-frag′mi-ē), *n. pl.* [NL., ⟨ Gr. ὕαλος, glass, + φράγμα, partition.] A name applied by Saccardo to artificial divisions of various families and orders of fungi, especially those of the *Pyrenomycetes* and *Fungi Imperfecti*, to include the genera which have hyaline and 2- or more septate spores.

hyalopilitic (hī″ạ-lō-pi-lit′ik), *a.* [Gr. ὕαλος, glass, + πῖλος, felt, + -*ite*[2] + -*ic*.] In *petrog.*, noting the structure of some lavas in which microscopic prisms are crowded in a glass matrix. *Rosenbusch*, 1887.

hyaloplasma (hī″ạ-lō-plaz′mạ̈), *n.* [Gr. ὕαλος, glass, + πλάσμα, anything formed.] Same as ★*cytolymph*.

hyalose (hī′ạ-lōs), *n.* [*hyal(in)* + -*ose*.] A sugar said to be formed by the hydrolysis of hyalin. It is almost certainly identical with glucose.

hyaloserositis (hī″ạ-lō-sē-rō-sī′tis), *n.* [Gr. ὕαλος, glass, + NL. **serosus*, serous, + -*itis*.] Chronic inflammation of a serous membrane accompanied by an exudation of a fibrinous material which undergoes hyaline degeneration, giving rise to the condition called *icing liver*, *icing heart*, etc., according to the membrane involved.

hyalosome (hī′ạ-lō-sōm), *n.* [Gr. ὕαλος, glass, + σῶμα, body.] In *cytol.*, one of the nucleolus-like bodies which stain only faintly in nuclear or plasmic stains.

Hyalosporæ (hī-ạ-lō-spō′rē), *n. pl.* [NL., ⟨ Gr. ὕαλος, glass, + σπορά, seed (spore).] A name applied by Saccardo to artificial divisions of various families and orders of fungi, especially those of the *Pyrenomycetes* and *Fungi Imperfecti*, to include the genera which have unicellular, ovoid or oblong, and hyaline spores.

Hyalostelia (hī″ạ-lō-stē′li-ạ̈), *n.* [NL., ⟨ Gr. ὑάλος, glass, + στήλη, a pillar.] A genus of Paleozoic lyssacine hexactinellid sponges possessing regular hexactine and stellate skeletal elements with reduced vertical ray and with inflated nodes and root-tufts composed of long fibers.

hyalotype (hī′ạ-lō-tīp), *n.* [Gr. ὕαλος, glass, + τύπος, type.] A positive photograph on glass copied from a negative; a photographic transparency. [Obsolete.]

hyawaballi (hī-ä-wä-bal′i), *n.* [Carib name.] In Guiana, same as *zebra-wood*, 1.

Hybocrinus (hī-bok′ri-nus), *n.* [Gr. ὑβός, humped, + κρίνον, a lily (see *crinoid*).] A Silurian genus of the fistulate *Crinoidea* belonging to the family *Hybocrinidæ*. It is characterized by a large inferradial plate, a small superradial, and simple arms devoid of pinnulæ and composed of quadrangular joints. It occurs in the Lower Silurian.

Hybognathus (hī-bog′nạ-thus), *n.* [NL., ⟨ Gr. ὑβός, humped, + γνάθος, jaw.] A genus of small minnows, abundant in the eastern United States, characterized by the elongate intestines and the herbivorous habit. *H. nuchalis* is the commonest of the numerous species.

Hybopsis (hī-bop′sis), *n.* [NL., ⟨ Gr. ὑβός, blunt, + ὄψις, face.] A genus of minnows of the eastern United States, characterized especially by the presence of barbels at the corner of the mouth. *H. kentuckiensis* is the commonest of the numerous species.

hybrid. I. *n.*—**Attenuated hybrids,** those hybrids in which the blood has been weakened by being subsequently again crossed. Even when the cross is much attenuated—or three or four or even more times removed from a pure hybrid origin by means of subsequent crossings—it may still produce marked effects in a cross without introducing such contradictory characters as to jeopardize the value of the offspring.—**Bigeneric hybrid,** a hybrid between species of different genera; bigener. See *bigener*.—**Extracted hybrid,** an extracted dominant or an extracted recessive considered as a Mendelian hybrid. See ★*dominant*, 2.—**False hybrid,** a cross-bred organism which exhibits, and transmits to descendants, the characteristics of only one parent to the exclusion of those of the other.—**Mendelian hybrid,** a cross-bred organism, the offspring of parents which belong to two pure races or varieties differing from each other in respect to characteristics which are antagonistic or incompatible, and which transmits to some of its descendants the characteristics in question of one parent and to others those of the other; a cross-bred organism which conforms to or illustrates Mendel's principles of ancestral inheritance. See *ancestral* ★*inheritance* (c).

II. *a.* **Hybrid purple.** See ★*purple*.

hybridism, *n.*—**False hybridism,** the exhibition of only one parental type, to the exclusion of the other, by cross-bred organisms and their descendants. *Bateson and Saunders*, Rep. Evol. Com. Roy. Soc., 1902, I. 155.

hybridogam (hī′brid-ō-gam), *n.* [*hybridogam(y)*.] A hybrid between different species.

hybridogamy (hī-bri-dog′ạ-mi), *n.* [E. *hybrid*, + Gr. γάμος, marriage.] Hybridization between different species.

hyd., hydraul. Abbreviations of *hydraulics*.

hyd., hydros. Abbreviations of *hydrostatics*.

hydantoic (hī-dan-tō′ik), *a.* [*hydanto(in)* + -*ic*.] Of or pertaining to hydantoin or hydantoic acid.—**Hydantoic acid,** a colorless compound, $H_2NCONHCH_2COOH$, prepared by boiling hydantoin or a mixture of glycerol and urea with barium-hydroxid solution. It crystallizes in monoclinic prisms and melts and decomposes at 153–156° C. Also called *urea-methyl-carboxylic acid*.

hydantoin (hī-dan′tọ-in), *n.* [*hyd(rogen)* + (*all*)-*antoin*.] A colorless compound, $CO\langle\begin{matrix}NH.CH_2\\|\\NH.CO\end{matrix}$, formed by the action of alcoholic ammonia on bromacetyl urea, or by the action of concentrated hydriodic acid on allantoin. It crystallizes in needles and melts at 215° C. Also called *glycolyl urea*.

Hydaspian (hī-das′pi-ạn), *a.* and *n.* [Of *Hydaspes*, a river of India, now *Jhelum*.] I. *a.* In *geol.*, designating the lowest stage of the Dinarian or upper division of the Lower Triassic formation as classified by the Austrian geologists. It lies beneath the Anisian and above the Jakutian stages.

II. *n.* The Hydaspian stage.

Hydatid fremitus. Same as *hydatid thrill* (which see, under *thrill*[1]).—**Hydatid pregnancy.** See ★*pregnancy*.

hydatogenic (hī″dạ-tọ-jen′ik), *a.* [Gr. ὕδωρ (ὑδατ-), water, + -γενής, -producing, + -*ic*.] In *petrog.*, relating to precipitation from aqueous solutions: a term applied by Renevier (1882) to rocks precipitated from water, as rock-salt, gypsum, etc. In connection with the deposition of ores it is used in contrast with ★*pneumatogenic*.

hydatomorphic (hī″dạ-tọ-môr′fik), *a.* [Gr. ὕδωρ (ὑδατ-), water, + μορφή, form, + -*ic*.] In *geol.*, metamorphic processes involving solution in and crystallization from water.

hydatopneumatic (hī-da-top-nū-mat'ik), *a.* [Gr. ὕδωρ (ὑδατ-), water, + πνεῦμα(τ-), wind, or air, + -*ic*.] In *petrog.*, resulting from the action of gases and water: used in connection with the formation of ore deposits.

hydatopneumatolithic (hī"dā-top-nū"ma-tō-lith'ik), *a.* [Gr. ὕδωρ (ὑδατ-), water, + πνεῦμα(τ-), wind, or air, + λίθος, stone, + -*ic*.] Same as ★*hydatopneumatic*.

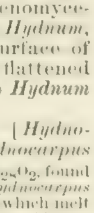
hydatopyrogenic (hī"dā-tō-pī-rō-jen'ik), *a.* [Gr. ὕδωρ (ὑδατ-), water, + πῦρ, fire, + -γενής, producing, + -*ic*.] Same as ★*aqueo-igneous*.

Hydnaceæ (hid-nā'sē-ē), *n. pl.* [NL., < *Hydnum* + -*aceæ*.] A family of hymenomycetous fungi, named from the genus *Hydnum*, having the hymenium covering the surface of spines or teeth which are sometimes flattened or reduced to mere tubercles. See *Hydnum* and ★*Irpex*.

hydnocarpic (hid-nō-kär'pik), *a.* [*Hydnocarpus* + -*ic*.] Derived from *Hydnocarpus Kurzii*. **Hydnocarpic acid**, an acid, $C_{16}H_{28}O_2$, found as a glyceride in the oil from the seeds of *Hydnocarpus Kurzii*, from India. It crystallizes in leaflets which melt at 59-60° C., and is a homologue of chaulmugric acid.

Hydnocarpus (hid-nō-kär'pus), *n.* [NL. (Gaertner, 1788), < Gr. ὕδνον, truffle, + καρπός, fruit. The name alludes to the superficial appearance of the fruit of *Hydnocarpus venenata*.] A genus of plants of the family *Flacourtiaceæ*. They are trees with alternate, pinnately veined, short-stalked, toothed or entire leaves, diœcious flowers in small axillary racemes, and berry-like capsules with woody walls. There are about 23 species, native from eastern India to Sumatra and Java. The seeds of *H. anthelmintica* are used in China as a remedy for leprosy and skin-diseases; those of *H. venenata*, the Ceylon fish-poison, for similar purposes and as a source of lamp-oil. See *Ceylon* ★*fish-poison*.

Hydnoceras (hid-nos'e-ras), *n.* [Gr. ὕδνον, a tuber, prob. a truffle, + κέρας, a horn.] A genus of lyssacine hexactinellid sponges belonging to the family *Dictyospongidæ* and originally described by Conrad as a cephalopod. It is characterized by an obconical shape with eight prism faces and prominent tufted nodes arranged in horizontal and vertical rows. It was very abundant in the Upper Devonian, frequently growing in extensive plantations.



Hydnoceras tuberosum. (Chemung group. From N. Y. Geol. Reports, after Hall and Clarke.)

Hydnora (hid-nō'rä), *n.* [NL. (Thunberg, 1775), named because of the resemblance of the flower to a fungus of the genus *Hydnum*, the original species of *Hydnora*, *H. Africana*, having, on the inner surface of the perianth lobes, soft spines similar to those of the hymenium of *Hydnum*.] A genus of plants, typical of the family *Hydnoraceæ*. They are leafless parasites which grow on the roots of trees and shrubs. The large tubular flowers are borne singly on root-like, subterranean, branching axes. There are about 8 species, natives of Africa, Madagascar, and the island of Bourbon. *H. Africana* is known as *jackals-kost* (which see).

Hydnoraceæ (hid-nō-rā'sē-ē), *n. pl.* [NL., (Solms-Laubach, 1874), < *Hydnora* + -*aceæ*.] A small anomalous family of dicotyledonous archichlamydeous plants of the order *Aristolochiales*, allied to the *Rafflesiaceæ* and formerly included in it, and typified by the genus ★*Hydnora* (which see for principal characters). There is only one other small genus, a native of Argentina, *Hydnora* being chiefly South African. They are thick, succulent, leafless root-parasites of strange aspect.

hydracetin (hī-dras'ē-tin), *n.* [*hydr*(*ogen*) + *acetin*.] Same as *pyrodin*.

hydradenitis (hī-dra-de-nī'tis), *n.* [Gr. ὕδωρ (ὑδρ-), water, + ἀδήν, a gland, + -*itis*.] **1.** Inflammation of a lymph-gland.—**2.** Same as *hydroadenitis*.

hydradenoma (hī'dra-de-nō'mä), *n.*; pl. *hydradenomata* (-ma-tä). [NL., < Gr. ὕδωρ (ὑδρ-), water, + ἀδήν, a gland, + -*oma*.] A tumor due to hypertrophy of the sweat-glands.

hydradephagan (hī-dra-def'a-gan), *n.* One of the *Hydradephaga*.

hydramide (hī-dram'id), *n.* [*hydr*(*ogen*) + *amide*.] The name of a class of crystalline compounds, N_2R_3 (where R is any alkyl radical), formed by the action of ammonia on aldehydes, chiefly those of the aromatic series.

hydramine (hī-dram'in), *n.* [*hydr*(*ogen*) + *amine*.] The name of a class of liquid, strongly alkaline compounds, such as ethylene hydramine ($HOCH_2CH_2NH_2$), formed by the action of ammonia on alkaline oxids. Also called *hydroxylalkyl bases*.

hydramnion (hī-dram'ni-on), *n.* [NL.] Same as *hydramnios*.

hydrangin (hī-dran'jin), *n.* [*hydrang*(*ea*) + -*in*[2].] A colorless crystalline glucoside, $C_{34}H_{25}O_{11}$(?), found in the root of *Hydrangea arborescens*. It melts at 228° C.

hydrant-cock (hī'drant-kok), *n.* A hydrant-valve; a valve fitted with a waste-pipe and used to control the supply of a fire-hydrant. When closed it shuts off the supply and opens a waste-pipe to release the water standing in the hydrant above the valve. When opened it closes the waste-pipe.

hydrant-valve (hī'drant-valv), *n.* A special long-stemmed valve used to connect a hydrant with a water-main.

hydrarenite (hī-drar'ē-nīt), *n.* [Gr. ὕδωρ (ὑδρ-), water, + L. *arena*, sand, + -*ite*[2].] Any sedimentary hydroclastic rock of somewhat fine or medium grain; a sandrock; a granular sediment. *Grabau.*

hydrargillutite (hī-drär-jil'ū-tīt), *n.* [Gr. ὕδωρ (ὑδρ-), water, + ἄργιλλος, clay, + L. *lutum*, mud, + -*ite*[2].] A hydroclastic sedimentary rock of extremely fine grain, whose chief constituent is clay; an argillaceous shale.

hydrargyrosis (hī-drär-ji-rō'sis), *n.* [NL., < *hydrargyrum* + -*osis*.] Same as *hydrargyriasis*.

hydrargyrous (hī-drär'ji-rus), *a.* Containing mercury; mercurial. [Rare.]

Hydrargyrum ammoniatum, white precipitate; ammoniated mercury. **Hydrargyri chloridum corrosivum**, corrosive sublimate; bichlorid of mercury. **Hydrargyri chloridum mite**, calomel; protochlorid or subchlorid of mercury. **Hydrargyri oxidum rubrum**, red precipitate. **Hydrargyri subsulphas flavus**, turpeth mineral.—**Hydrargyri sulphidum nigrum**, æthiops mineral. **Hydrargyri sulphidum rubrum**, cinnabar.—**Hydrargyrum cum creta**, gray powder.

hydrarthros (hī-drär'thros), *n.* Same as *hydrarthrosis*.

hydrastinic (hī-dras-tin'ik), *a.* [*hydrastin*(*ine*) + -*ic*.] Pertaining to hydrastinine.—**Hydrastinic acid**, a colorless compound,

$$CH_2\langle{}^{O}_{O}\rangle C_6H_2\langle{}^{CONH_2CH_3}_{COCOOH},$$

prepared by the oxidation of hydrastinine. It forms broad needles which melt at 164° C.

hydrastinine (hī-dras'ti-nin), *n.* [*hydrastine* + -*ine*[2].] A colorless crystalline compound,

$$CH_2\langle{}^{O}_{O}\rangle C_6H_2\langle{}^{CHO}_{CH_2CH_2NHCH_3},$$

formed by the oxidation of hydrastine. It melts at 116–117° C.

hydrastinum (hī-dras'ti-num), *n.* [NL.] Same as *hydrastine*.

hydrastonic (hī-dras-ton'ik), *a.* [*hydrast*(*ine*) + -*one* + -*ic*.] Noting a colorless acid,

$$CH_2\langle{}^{O}_{O}\rangle C_6H_2(\overset{2}{C}H:CH_2)\overset{1}{C}H_2COC_6H_2(\overset{3\,4}{OCH_3})_2\overset{2}{C}OOH,$$

prepared by the action of potassium hydroxid on hydrastine methiodide. It crystallizes in plates.

hydrate, *v. t.*—**Hydrated soap.** Same as *filled* ★*soap*.

hydration, *n.*—**Water of hydration**, water chemically combined, as distinguished from hygroscopic moisture.

hydratropic (hī-dra-trop'ik), *a.* [Gr. ὕδωρ (ὑδρ-), water, + *atropic*.] Noting a colorless acid, $CH_3CH(C_6H_5).COOH$, formed by the reduction of atropic acid. It boils at 264–265° C. Also called *a-phenylpropionic acid*.

Hydraulic foot-bond. See ★*foot-bond*.—**Hydraulic giant**, in *mining*, a large stream of water under a high head, used for washing down a bank containing minerals. See cut under *hydraulic mining*. **Hydraulic gradient, lift, limestone, mining-cartridge.** See ★*gradient*, ★*lift*2, ★*limestone*, ★*cartridge*.—**Hydraulic-recoil carriage.** See ★*carriage*.

hydraulic (hī-drâ'lik), *v. t.* In *mining*, to work by the hydraulic-mining process.

hydrazobenzene (hī"dra-zō-ben'zēn), *n.* [*hydr*(*ogen*) + *azo-* + *benzene*.] A colorless crystalline compound, $C_6H_5NH.NHC_6H_5$, prepared by the action of zinc dust and alcoholic potassium hydroxid on azobenzene or nitrobenzene. It melts at 126° C. and is readily converted into aniline or into benzidine.

hydrazoic (hī-dra-zō'ik), *a.* [*hydr*(*ogen*) + *azo-* + -*ic*.] Noting an acid, a colorless, very poisonous liquid, N_3H, prepared from nitrous oxid and sodium amide or from hydrazine sulphate and nitrous acid. It has a penetrating, unbearable odor, closely resembles hydrochloric acid in general properties, and its metallic salts resemble the chlorids, with the exception that they dissolve in concentrated mineral acids and all explode with extreme violence when heated. The acid, both in the liquid state and in solution, is one of the most highly explosive substances known. It boils at 37° C. Also called *azo-imide* and *hydronitric acid*.

hydrazone (hī'dra-zōn), *n.* [*hydr*(*ogen*) + *az*(*o-*) + -*one*.] The name of a class of organic compounds with the group R'CH:NNHR or R'R"C:N.NHR, formed by the action of a hydrazine on a compound containing a carbonyl group, water being eliminated. The hydrazines and substituted hydrazines are generally formed with ease and crystallize readily, consequently they are widely used for the identification and separation of aldehydes and ketones.

hydrazulmine (hī-dra-zul'min), *n.* [*hydr*(*ogen*) + (Sp.) *azul*, blue, + (*a*)*mine*.] A black compound, $NC.C(NH_2)NHNHC(NH_2)CN$, formed by mixing dry cyanogen with dry ammonia. It crystallizes in plates, with a luster resembling pitch, and decomposes, without melting, when heated.

hydrencephalic (hī-dren-se-fal'ik), *a.* Relating to or dependent upon a hydrencephalon.

hydresculin (hī-dres'kū-lin), *n.* [*hydr*(*ogen*) + *esculin*.] A compound obtained by the action of sodium amalgam on esculin.

hydriatric (hī-dri-at'rik), *a.* [Gr. ὕδωρ (ὑδρ-), water, + ἰατρικός, curative.] Relating to the water-cure or hydrotherapeutics.

hydriatrics (hī-dri-at'riks), *n.* Same as *hydrotherapeutics*.

hydriatrist (hī-dri-at'rist), *n.* [*hydriatr-ic* + -*ist*.] One who treats disease by means of hydrotherapeutics.

hydriatry (hī'dri-at-ri), *n.* [Gr. ὕδωρ (ὑδρ-), water, + ἰατρεία, medical treatment.] Same as *hydrotherapeutics*.

hydrics (hī'driks), *n.* [Gr. ὕδωρ (ὑδρ-), water, + -*ics*.] That branch of physics which deals with the properties of water.

hydrid[1], *n.*—**Nitrogen hydrid**, an improperly formed name which has been applied to hydrazoic acid or azo-imide.—**Palladium hydrid**, the remarkable product obtained by heating metallic palladium in hydrogen gas or bringing the metal in contact with nascent hydrogen. Palladium absorbs several hundred times its own volume of hydrogen, the gas being expelled again on ignition. In this product the existence of a definite compound, Pd_4H_2, has been assumed, but it is more probable that the hydrogen is physically occluded in or dissolved by the metal, which undergoes notable expansion in absorbing it.

-hydrin. In *chem.*, this termination indicates a compound formed by replacing with a halogen atom or the cyanogen group one or more hydroxyl groups in a compound containing several of the latter.

hydrindene (hī-drin'dēn), *n.* [*hydr*(*ogen*) + *indene*.] A colorless oil, $C_6H_4\langle{}^{\overset{1\,2}{CH_2}}_{CH_2}\rangle CH_2$, formed by the reduction of indene. It boils at 176° C.

hydriodide (hī'dri-ō-did, -dīd), *n.* A salt of hydriodic acid. The term is sometimes applied, also, to substances, other than salts, formed by the addition of hydriodic acid to compounds.—**Triethylamine hydriodide**, a colorless compound, $N(C_2H_5)_3HI$, formed by triethylamine and hydriodic acid, or from diethylamine and iodide of ethyl. It resembles ammonium iodide in its general properties. Also called *triethylammonium iodide*.

hydroacridine (hī-drō-ak'ri-din), *n.* [*hydro*(*gen*) + *acridine*.] A colorless compound, $C_6H_8\langle{}^{N}_{CH}\rangle C_6H_8$, formed by the action of hydriodic acid and phosphorus on acridine. It crystallizes in leaves or long plates, melts at 48° C., and boils at 320° C. Also called *octohydroacridine*.

hydroalcoholic (hī"drō-al-kō-hol'ik), *a.* [Gr. ὕδωρ (ὑδρ-), water, + E. *alcohol* + -*ic*.] Consisting of water and alcohol: applied to solutions in this medium.

hydroanisoin (hī"drō-a-nis'ō-in), *n.* [*hydro*(*gen*) + *anis*(*ic*) + -*o-* + -*in*[2].] A colorless compound, $CH_3\overset{1}{O}C_6H_4\overset{4}{C}HOH\overset{4}{C}H(OH)C_6H_4\overset{1}{O}CH_3$, prepared by the reduction of anisic aldehyde with sodium amalgam. It crystallizes in very thin rhombic plates and melts at 172° C.

hydroanthracene (hī-drō-an'thra-sēn), *n.* [*hydro*(*gen*) + *anthracene*.] A colorless compound, $C_6H_4\langle{}^{CH_2}_{CH_2}\rangle C_6H_4$, formed by the reduction of anthracene by hydriodic acid and phosphorus, or by sodium amalgam. It crystallizes in large monoclinic plates, melts at 108.5° C., boils at 313° C., and sublimes in needles. Also called *dihydroanthracene*.

hydroarion (hī-drō-ā'ri-on), *n.*; pl. *hydroaria* (-ä). [Gr. ὕδωρ (ὑδρ-), water, + ᾠάριον, a little egg, used for NL. *ovarium*, ovary.] Watery cyst of the ovary.

hydro-aromatic (hī"drō-ar-ō-mat'ik), *a.* [*hydro*(*gen*) + *aromatic*.] Noting certain organic compounds which contain reduced aromatic nuclei, that is, benzene or condensed benzene nuclei to which hydrogen has been added.

hydrobenzoic (hī"drō-ben-zō'ik), *a.* [*hydro*(*gen*) + *benzoic*.] Derived from hydrogen and benzoic acid: descriptive of a class of com-

pounds formed by the addition of varying amounts of hydrogen to benzoic acid. One of the best-known of these is Δ^2-tetrahydrobenzoic acid or benzoleic acid, $CH_2 < {CH:CH \atop CH_2.CH_2} > CHCOOH$, formed by the reduction of benzoic acid by means of sodium amalgam. It is a colorless liquid, with an odor of valerian, and boils, in an atmosphere of carbon dioxid, at 234-235° C.

hydrobenzoin (hī-drō-ben'zō-in), *n.* [*hydro(gen)* + *benzoin.*] A colorless compound, $C_6H_5CHOH.CHOHC_6H_5$, prepared by the reduction of benzaldehyde. It crystallizes in lustrous leaves or monoclinic plates, melts at 134° C., and boils above 300° C.

hydroberberine (hī-drō-bēr'be-rin), *n.* [*hydro(gen)* + *berberine.*] A colorless compound,

$$(CH^{1,2}_3O)_2C_6H_2 < {CH_2.CH \atop CH_2.N.CH_2.CH_2} > C_6H^{1,2}_2 < {O \atop O} > CH_2,$$

formed by the reduction of berberine, into which it is readily converted by oxidizing agents. It crystallizes in diamond lustrous grains, in long, flat monoclinic needles, or in octahedra, and melts at 167° C.

Hydrobia (hī-drō'bi-ä), *n.* [NL. (Hartmann, 1821), < Gr. ὑδωρ (ὑδρ-), water, + βιος, life.] The typical genus of the family *Hydrobiidæ.*

Hydrobiidæ (hī-drō-bī'i-dē), *n. pl.* [*Hydrobia* + *-idæ.*] A family of tænioglossate gastropods, having the operculigerous lobe without filaments and the shell small and acuminate. It includes the following genera, found in brackish or fresh water: *Hydrobia, Bithynia, Lithoglyphus, Pomatiopsis, Bithynella,* and *Assiminea.*

hydrobilirubin (hī″drō-bil-i-rō'bin), *n.* [*hydro(gen)* + *bilirubin.*] A reddish-brown powdery compound, $C_{32}H_{40}O_7N_4$, found in the urine of fever-patients and in feces. It is generally supposed to be a reduction-product of bilirubin, formed by the activity of bacteria in the intestinal canal. According to others, and notably Garrod, it is a laboratory product and occurs neither in the urine nor in the feces.

hydroblepharon (hī-drō-blef'a-ron), *n.* [Gr. ὑδωρ (ὑδρ-), water, + βλέφαρον, eyelid.] Edematous swelling of the eyelid.

Hydrobromic ether. See ★*ether*[1].

hydrobromide (hī-drō-brō'mid), *n.* [*hydrobrom-ic* + *-ide*[1].] The class name of the salts of organic bases with hydrobromic acid. The term is sometimes applied to compounds, other than salts, which are formed by the direct addition of hydrobromic acid to some substance.

hydrocalcirudite (hī″drō-kal-si-rō'dīt), *n.* [Gr. ὑδωρ (ὑδρ-), water, + L. *calx* (*calc-*), lime, + *rudes,* rubbish, + *-ite*[2].] A coarse hydroclastic rock made up in large part of limestone pebbles; a limestone conglomerate.

hydrocampid (hī-drō-kam'pid), *n.* and *a.* **I.** *n.* A member of the lepidopterous family *Hydrocampidæ.*

II. *a.* Of or belonging to the family *Hydrocampidæ.*

Hydrocarbon gas. See ★*gas.*

hydrocarbonate, *n.* 2. In *modern chem.* and *mineral.,* an acid carbonate or carbonate of hydrogen and a metal: as, *hydrocarbonate* of magnesia (magnesium acid carbonate), $H_2Mg(CO_3)_2$; also, but improperly, applied to a compound of a metal with hydroxyl and the radical of carbonic acid: as, *hydrocarbonate* of copper (of the mineral malachite) equals copper hydroxycarbonate, $Cu_2.(HO)_2.CO_3$.

hydrocarbostyril (hī″drō-kär-bō-stī'ril), *n.* [*hydro(gen)* + *carbo(n)* + *styr(ax)* + *-il.*] A colorless compound, $C_6H_4 < {CH_2.CH_2 \atop NH.CO}$, prepared by melting hydrocarbostyril-β-carboxylic acid. It crystallizes in large lustrous prisms and melts at 163° C.

hydrocarotin (hī-drō-kar'ō-tin), *n.* [*hydro(gen)* + L. *carota,* carrot, + *-in*[2].] A colorless compound, $C_{18}H_{30}O$(?), formed in small quantity in carrots. It closely resembles cholesterol, crystallizes in monoclinic plates, and melts at 137.4° C. Also spelled *hydrocarrotin.*

hydrocaulus, *n.* 2. The atheciferous stem of the hydroid corals: sometimes applied to the filiform process by which the sicula of the graptolite is suspended.

Hydrocele agar. See ★*agar*[2].

Hydrocephalic cry. See ★*cry.*

hydrocephalis (hī-drō-sef'a-lis), *n.* [NL., < Gr. ὑδωρ (ὑδρ-), water, + κεφαλή, head.] In hydroid polyps, the oral and stomachal regions, considered together. Compare ★*hydrocope.*

hydrocephalocele (hī-drō-sef'a-lō-sēl), *n.* [Gr. ὑδωρ (ὑδρ-), water, + κεφαλή, head, + κήλη, tumor.] Same as *hydrocephalocele.*

hydrocephalus, *n.* **Internal hydrocephalus,** a collection of fluid in the ventricles and at the base of the brain, usually an accompaniment of tuberculous meningitis, but occasionally independent of tuberculosis.

hydrocephaly (hī-drō-sef'a-li), *n.* [NL. ★*hydrocephalia.*] The proper form for *hydrocephalus.*

hydroceramic (hī-drō-se-ram'ik), *a.* [Gr. ὑδωρ (ὑδρ-), water, + κεραμικός, of pottery: see *ceramic.*] Of the nature of, or consisting of, clay which remains porous after baking. Unglazed vessels of this material are used to cool liquids by evaporation.

hydrocharidaceous (hī″drō-kar-i-dā'shius), *a.* Belonging to or having the characters of the plant family *Hydrocharidaceæ.*

hydrocharidian (hī″drō-ka-rid'i-an), *a.* [*Hydrocharis* (*-id-*) + *-an.*] In *phytogeog.,* having the ecological character of *Hydrocharis,* that is, swimming free in water, either submerged or more or less emerging, whether small like *Lemna* or larger like *Stratiotes.* See quotation under ★*limnean.*

hydrochlorid (hī-drō-klō'rid), *n.* [*hydrochloric* + *-id*[1].] The class name of salts of organic bases with hydrochloric acid. It is occasionally applied to compounds, other than salts, formed by the direct addition of hydrochloric acid to a substance.

hydrochore (hī'drō-kōr), *n.* [Gr. ὑδωρ (ὑδρ-), water, + χωρεῖν, spread abroad.] In *phytogeog.,* a plant distributed exclusively by water, as by ocean currents, streams, etc. *F. E. Clements.*

hydrochorous (hī-drō-kō'rus), *a.* [*hydrochore* + *-ous.*] Having the character of, or pertaining to, hydrochores. *F. E. Clements.*

hydrocinnamic (hī-drō-sin'a-mik), *a.* [*hydro(gen)* + *cinnamic.*] Derived from hydrogen and cinnamic acid.—**Hydrocinnamic acid,** a colorless compound, $C_6H_5CH_2CH_2COOH$, prepared by the reduction of cinnamic acid and formed during the putrefaction of ox-urine or fibrin, and by the pancreatic putrefaction of albumin. It crystallizes in monoclinic prisms or long needles, melts at 48.7° C., and boils at 279.8° C. Also called *homotoluic acid, benzyl-acetic acid,* and *β-phenyl-propionic acid.*

hydrocinnamide (hī-drō-sin'a-mid), *n.* [*hydro(gen)* + *cinnam(on)* + *-ide*[1].] A colorless compound, $N_2(C_6H_5C_3H_3)_3$, prepared by the action of ammonia on cinnamon-oil. It crystallizes in needles melting at 106° C.

hydrocladium (hī-drō-klā'di-um), *n.*; pl. *hydrocladia* (-ä). [NL., < Gr. ὑδωρ (ὑδρ-), water, + κλάδος, branch.] One of the hydrotheca-bearing branches or ramuli of the cœnosarc of *Plumularidæ.*

hydroclastic (hī-drō-klas'tik), *a.* and *n.* [Gr. ὑδωρ (ὑδρ-), water, + κλαστός, broken, + *-ic.*] **I.** *a.* In *petrog.,* noting clastic rocks formed by the action of water.

II. *n.* A fragmental rock produced by the action of water.

Hydrocleys (hī-drok'lē-is), *n.* [NL. (Richard, 1815), irreg. < Gr. ὑδωρ (ὑδρ-), water, + κλείς, bolt, key. The allusion is apparently to the obstruction of waterways by the plant.] A genus of plants of the family *Butomaceæ. H. nymphoides,* the only species, is an aquatic plant of tropical America, often cultivated in tanks and ponds under the name *Limnocharis Humboldti.* It has ovate, cordate, entire floating leaves, similar to those of a small water-lily, and a pale-yellow flower about 2 inches in diameter, much resembling a poppy, whence the common name *water-poppy.*

Hydrocleys nymphoides, one fifth natural size.

hydroclistogamy (hī″drō-klis-tog'a-mi), *n.* [Gr. ὑδωρ (ὑδρ-), water, + E. *clistogamy.*] That type of pseudoclistogamy in which flowers remain closed under adverse conditions of moisture. *Pound and Clements,* Plant Life of Nebraska.

hydrocœl, *n.* See ★*hydrocœle.*

hydrocœle (hī'drō-sēl), *n.* [Gr. ὑδωρ (ὑδρ-), water, + κοῖλος, hollow.] In *embryol.,* the portion of the left enterocœlic sac which in echinoderms gives rise to the radial vessels and the ring-vessel of the ambulacral system. He [Bury] describes the origin of the ampulla of the stone-canal from the anterior cœlomic cavity of the left side, and the growth of the left posterior segment of the cœlom so as to completely encircle the *hydrocœle* or rudiment of water-vascular system.

Philos. Trans. Roy. Soc. (London), 1903, ser. B, p. 288.

hydrocollidine (hī-drō-kol'i-din), *n.* [*hydro(gen)* + Gr. κόλλα, glue, + *-id*[1] + *-ine*[2].] A colorless oily ptomaïne, $C_8H_{13}N$, formed by the distillation of nicotine with selenium and by the putrefaction of flesh. It has a penetrating aromatic odor and boils at 205° C.

hydrocope (hī'drō-kōp), *n.* [Gr. ὑδωρ (ὑδρ-), water, + κώπη, handle.] The peduncle of a hydroid polyp, as distinguished from the ★*hydrocephalis* (which see).

hydrocoridine (hī-drō-kor'i-din), *n.* [*hydro(gen)* + Gr. κόρις, a bug, + *-id* + *-ine*[2].] A crystalline ptomaïne, $C_{10}H_{17}N$, obtained from the cultures of certain kinds of bacteria on peptone agar.

hydrocorisan (hī-drō-kor'i-san), *a.* and *n.* [*Hydrocorisæ* + *-an.*] **I.** *a.* Of or belonging to the heteropterous series *Hydrocorisæ.*

II. *n.* A member of the series *Hydrocorisæ.*

hydrocotoin (hī-drō-kō'tō-in), *n.* [*hydro(gen)* + *Coto* + *-in*[2].] A pale-yellow compound, $HOC^6_6H_2(OCH_3)^{2,4}_2COC_6H_5$, found in Coto bark. It crystallizes in large prisms or long thin needles, and melts at 98° C. Also called *benzoylphloroglucinol dimethyl ether, benzocotoin,* or preferably *trihydroxydiphenylketone dimethyl ether.*

hydrocoumarin (hī-drō-kō'ma-rin), *n.* [*hydro(gen)* + *coumar-ic* + *-in*[2].] A colorless compound, $C_6H_4 < {CH_2 \atop O.CO} > CH_2$, formed by the distillation of orthohydrocoumaric acid. It crystallizes in plates, melts at 25° C., boils at 272° C., and has an odor of coumarin. Also called *orthophenolpropylic anhydrid* or *melilotic anhydrid.*

hydrocroconic (hī″drō-krō-kon'ik), *a.* [*hydro(gen)* + *croconic.*] Noting an acid, a yellowish-brown compound, $OC:CHCH(COOH)_2$(?), formed by the reduction of croconic acid with hydriodic acid. Most of its salts are red.

hydrocurcumin (hī-drō-kēr'kū-min), *n.* [*hydro(gen)* + *curcumin.*] A brownish-white powder, $C_{14}H_{16}O_4$, obtained by the action of sodium amalgam on curcumin. It melts at about 100° C.

hydrocyanate (hī-drō-sī'a-nāt), *n.* [*hydrocyan-ic* + *-ate*[1].] A disallowed synonym of *hydrocyanide.*

Hydrocyanic acid. This compound has recently been prepared by passing an electric discharge through a mixture of carbon monoxid, nitrogen, and hydrogen. Such gaseous mixtures are manufactured on a large scale under the name of *generator gas.* Gaseous hydrocyanic acid is used to an increasing extent as an insecticide. It is specially employed for the fumigation of citrus- and apple-trees as a specific against the San José scale (which see).—**Hydrocyanic ether.** See ★*ether*[1].

hydrocyanuric (hī-drō-sī-a-nū'rik), *a.* Noting an acid, $C_3H_3N_3O_3$, which results from heating biuret, ammonia being liberated at the same time.

hydrocycle (hī'drō-sī-kl), *n.* [Gr. ὑδωρ (ὑδρ-), water, + κύκλος, wheel.] A velocipede adapted for propulsion on the surface of the water. *N. E. D.*

hydrocyst, *n.* 2. A cyst containing a clear watery fluid.

Hydrodamalidæ (hī″drō-da-mal'i-dē), *n. pl.* [NL. *Hydrodamalis,* type genus, + *-idæ.*] A family of sirenian mammals whose only known member is the northern sea-cow or *Rhytina.* By the rule of priority this name takes the place of *Rhytinidæ. Palmer,* 1895.

Hydrodamalis (hī-drō-dam'a-lis), *n.* [NL., < Gr. ὑδωρ (ὑδρ-), water, + δαμάλις, a young cow.] The earliest generic name of the arctic sea-cow, *Rhytina. Retzius,* 1794.

hydrodiffusion (hī″drō-di-fū'zhon), *n.* [Gr. ὑδωρ (ὑδρ-), water, + E. *diffusion.*] The intermingling of fluids.

hydro-economics (hī″drō-ē-kō-nom'iks), *n.* The economies of waters, water-rights, and the uses of waters, particularly in their industrial and sanitary relations. *Science,* April 21, 1905, p. 618.

hydro-electric, *a.* 2. Of or pertaining to the generation of electric currents by means of water-power.—**Hydro-electric bath.** See ★*bath*[1].

hydro-electricity (hī″drō-ē-lek-tris'i-ti), *n.* Electricity generated by means of water-power or steam.

hydro-electrothermic (hī″drō-ē-lek-trō-thēr'mik), *a.* A name given by Slavianoff to a method of electric welding devised by him.

hydro-extractor (hī″drō-eks-trak'tor), *n.* **1.** A centrifugal machine, specifically one used

by dyers, bleachers, and scourers to extract water from textile material. The wet material is placed in a perforated drum or basket and revolved at a speed of from 500 to 1,000 or more revolutions per minute, thus causing the water to be expelled through the perforations by centrifugal force.

2. In *tanning*, a wringer for removing water from skins. *Modern Amer. Tanning*, p. 36.

hydroferricyanate (hī″drō-fer-i-sī′ą-nāt), *n.* A salt of hydroferricyanic acid: more commonly called a *ferricyanide*: as, potassium *ferricyanide*.

hydroferrocyanate (hī-drō-fer-ō-sī′ą-nāt), *n.* A salt of hydroferrocyanic acid: more commonly called a *ferrocyanide*: as, potassium *ferrocyanide*.

hydrofobia, *n.* A simplified spelling of *hydrophobia*.

hydrofranklinite (hī-drō-frangk′lin-īt), *n.* A hydrated oxid of iron, manganese, and zinc, occurring at Franklin Furnace, N. J. It was at first supposed to be an independent isometric species, but is in fact identical with chalcophanite, having a rhombohedral, not octahedral form.

hydrogallein (hī-drō-gal′ē-in), *n.* [*hydrogalle-ic* + *-in*[2].] A colorless crystalline compound, $O < \begin{matrix} C_6H_2(OH)_2 \\ C_6H_2(OH)_2 \end{matrix} > C < \begin{matrix} C_6H_4 \\ O— \end{matrix} > CO$, prepared from hydrogalleic acid, of which it is the anhydrid.

hydrogel (hī′drō-jel), *n.* [Gr. ὕδωρ (ὑδρ-), water, + L. *gel(are)*, cool (see ★*gel*, *n.*).] A gel in which the individual gelatinous particles are supposed to be surrounded by water; the gelatinous hydrate formed by a colloid.

The inorganic colloids or so-called *hydrogels* have been studied by Van Bemmelen. They are chiefly characterized by the peculiar structural relation they bear to water. They can be hydrated and rehydrated indefinitely unless by heating to too high a temperature the colloid structure is destroyed. *Science*, Feb. 6, 1903, p. 213.

Hydrogen, *n.* Hydrogen compounds with strongly electronegative elements or radicals, easily exchanging hydrogen for strongly electropositive elements or radicals to form salts, are the same as acids: as hydrogen chlorid (hydrochloric acid), hydrogen sulphate (sulphuric acid), etc.—**Cosmic hydrogen,** the peculiar form of hydrogen discovered by Pickering in ζ Puppis. The lines of this series lie between those of the long-known ordinary series, and in their arrangement follow a very similar but not identical law.—**Hydrogen dioxid,** a substance occurring in traces in the atmosphere, and produced to some extent during the oxidation of turpentine and other materials in presence of water, prepared in quantity by the action of dilute sulphuric acid on barium dioxid. It is a somewhat viscid, colorless liquid (in mass of deeper blue color than water), of density 1.5, with an irritant smell and harsh, acrid taste, corrosive to the skin and capable of bleaching colors of organic origin, less volatile than water (boils at 184° F. under 68 millimeters pressure), and easily decomposed by heat or by contact with sundry substances, such as spongy platinum, silver oxid, etc., into oxygen gas and water. Its composition is represented by the formula H_2O_2, or, when acting as a radical in combination, HO. Used in certain processes of bleaching, in chemical analysis, and as an antiseptic. Also known as *hydrogen peroxid* and by a number of trade-names.—**Hydrogen disease,** a weakness in metals or alloys caused by their being permeated with hot and reducing gases. *Jour. of Franklin Inst.*, July, 1905, p. 20.—**Hydrogen disulphid,** a liquid of oil-like appearance and yellow color, specific gravity about 1.7, obtained by addition of dilute hydrochloric acid to a solution of calcium polysulphids. It decomposes very easily into free sulphur and sulphureted hydrogen, making it difficult to determine its exact composition; this is probably H_2S_2, analogous to that of H_2O_2, or hydrogen dioxid.—**Hydrogen monoxid,** the technical name of the common substance water. Also called *hydrogen protoxid*.—**Hydrogen nitrate.** Same as *nitric acid* (HNO_3).—**Hydrogen nitride,** a name which has been applied to hydrazoic acid, but which might also be used for ammonia or for hydrazine.—**Hydrogen peroxid.** See ★*hydrogen dioxid*.—**Hydrogen persulphid.** Same as ★*hydrogen disulphid*.—**Hydrogen protoxid.** Same as ★*hydrogen monoxid*.—**Hydrogen selenide.** Same as *seleniureted hydrogen* or *hydroselenic acid* (which see, under *hydrosulphuric*).—**Hydrogen sodium phosphate,** sodium acid phosphate, either NaH_2PO_4 or Na_2HPO_4, more frequently the latter of these, the common phosphate of soda of the shops.—**Hydrogen star.** See ★*star*[1].—**Hydrogen sulphate.** Same as *sulphuric acid* (H_2SO_4).—**Hydrogen trinitride.** Same as *hydrazoic acid*. See ★*hydrazoic*.—**Hydroxylic hydrogen** hydrogen in combination forming a part of the radical hydroxyl (HO). In common alcohol (C_2H_6O) one out of the six atoms of hydrogen is hydroxylic, the substance being ethyl hydroxid ($C_2H_5.HO$).—**Liquid hydrogen.** The early experiments of Cailletet and Pictet only indicated the probability that hydrogen gas might be liquefied. Since then Olszewski and Dewar have accomplished its liquefaction and also solidification on a scale amply sufficient to permit the study of its properties in the liquid and solid states. Hydrogen at about −258° C. (or 15° above the absolute zero of temperature) is a clear, colorless solid, which melts at about −256.3° C. to an equally colorless liquid of a density only .07 of that of water, boiling under common atmospheric pressure at −252.5° C. Its critical temperature is about −220° C.—**Ozone hydrogen,** a name given by Osann to hydrogen liberated by the action of an electric current on water containing a little sulphuric acid. He believed that it exhibited greater chemical activity than ordinary hydrogen, thus resembling the more active form of oxygen, ozone.—**Phosphureted hydrogen.** See *phosphureted*.—**Tellureted hydrogen.** See *tellureted*.

hydrogenase (hī′drō-je-nās), *n.* [*hydrogen* + *-ase*.] A type of reducing ferment.

hydrogenic (hī-drō-jen′ik), *a.* [*hydrogen* + *-ic*.] Same as *hydrogenous*, in any sense.

hydrogenization (hī″drō-jen-i-zā′shọn), *n.* [*hydrogenize* + *-ation*.] In *chem.*, the production of combination with hydrogen.

hydrogeological (hī″drō-jē-ọ-loj′i-kạl), *a.* Of or pertaining to hydrogeology.

hydrogode (hī′drō-gōd), *n.* [*hydrog(en)* + Gr. ὁδός, way.] In *elect.*, a negative terminal of an electrolytic cell.

hydrografy, etc. A simplified spelling of *hydrography*, etc.

hydrograph (hī′drō-graf), *n.* [Gr. ὕδωρ (ὑδρ-), water, + γράφειν, write.] 1. A diagram showing the heights of water in a river day by day during any interval.

The highest and lowest water, mean stage, and monthly range at 134 river stations are given in Table VII. *Hydrographs* for typical points on seven principal rivers are shown on Chart V.

U. S. Mo. Weather Rev., Jan., 1902, p. 3.

2. An apparatus for automatically recording the height of water in rivers or in wells, analogous to the limnograph for lakes or to a self-recording tide-gage for oceans. It has a vertical scale for the height of water and a horizontal scale for the time.

Hydrographic chart, engineer. See ★*chart*, ★*engineer*.

hydrographically (hī-drō-graf′i-kal-i), *adv.* By the art or methods of hydrography.

hydrohemia (hī-drō-hē′mi-ą), *n.* Same as *hydremia*.

hydroherderite (hī-drō-hėr′dėr-īt), *n.* See ★*herderite*.

hydroholoxid (hī″drō-hō-lok′sid), *n.* [*hydro(gen)* + Gr. ὅλος, whole, + E. *oxid*.] A hypothetical product of the union of a basic oxid not merely with the elements of water but also with those of hydrogen dioxid.

hydrohyalus (hī-drō-hī′ą-lus), *n.* [Gr. ὕδωρ (ὑδρ-), water, + ὑαλος, glass.] A kind of fixative used to preserve the color of marble and poros statues in the National Archæological Museum at Athens. It is a solution of calcined soda in water in the proportion of one to two. *Jour. Hellenic Studies*, X. 275.

hydroid, *n.* 2. A hydropolyp.

hydroidean (hī-droi′dē-an), *a.* and *n.* **I.** *a.* Of or pertaining to the *Hydroidea*.

II. *n.* A hydroid polyp.

hydro-igneous (hī-drō-ig′nē-us), *a.* Same as ★*aqueo-igneous*.

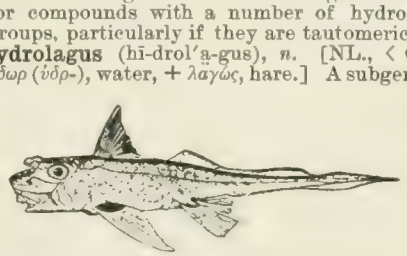
hydroiodic (hī″drō-ī-od′ik), *a.* Same as *hydriodic*.

hydroisatin (hī-drō-ī′sā-tin), *n.* A colorless unstable compound, $C_8H_7NO_2$ (?), formed by the reduction of isatin.

hydrokineter (hī″drō-ki-nē′tėr), *n.* [Gr. ὕδωρ (ὑδρ-), water, + κινητήρ, a mover.] A device for circulating the water in a steam-boiler while the fire in the furnace is being started, or when natural circulation or convection is inadequate. It consists of a nozle, located below the water-level, through which a jet of steam is thrown into the water in the boiler, thus warming it and keeping it in circulation. *Marine Rev.*, Nov. 17, 1898, p. 16.

hydrol (hī′drol), *n.* [*hydr(ogen)* + *-ol*.] A hypothetical hydroxylated derivative of phenolphthalein. In general the name might be used for compounds with a number of hydroxyl groups, particularly if they are tautomeric.

Hydrolagus (hī-drol′ą-gus), *n.* [NL., < Gr. ὕδωρ (ὑδρ-), water, + λαγώς, hare.] A subgenus



Hydrolagus colliei.
(From Bulletin 47, U. S. Nat. Museum.)

of the genus *Chimæra*, typified by the elephant-fish of the California coast, usually called *Chimæra colliei*.

hydrolatry (hī-drol′ą-tri), *n.* [Gr. ὕδωρ (ὑδρ-), water, + λατρεία, worship.] The worship of water. *Jour. Amer. Folk-lore*, April–June, 1903, p. 132.

hydrolutidin (hī-drō-lū′ti-din), *n.* [Gr. ὕδωρ (ὑδρ-), water, + L. *lutum*, mud, + *-id* + *-in*[2].] A ptomaïne, $C_7H_{11}N$.

hydrolutite (hī-drō-lū′tīt), *n.* [Spelled, with intended distinction, *hydrolutyte*; < Gr. ὕδωρ (ὑδρ-), water, + L. *lutum*, mud, + *-ite*[2].] A hydroclastic rock-flour; a water-transported mud. *Amer. Geol.*, April, 1904, p. 247.

hydrolymph (hī′drō-limf), *n.* [Gr. ὕδωρ (ὑδρ-), water, + L. *lympha*, water, lymph.] A more or less colorless, watery fluid which constitutes the blood of many invertebrates, especially the lower forms. *Buck*, Med. Handbook, III. 95.

hydrolyse, *v.* See ★*hydrolyze*.

hydrolyst (hī′drō-list), *n.* [*hydroly(sis)* + *-(i)st*.] A hydrolytic agent; a substance which causes hydrolysis. *N. E. D.*

hydrolyte (hī′drō-līt), *n.* [Gr. ὕδωρ (ὑδρ-), water, + λυτός, < λύειν, dissolve.] A substance which is undergoing hydrolysis.

hydrolyze (hī′drō-līz), *v. t.*; pret. and pp. *hydrolyzed*, ppr. *hydrolyzing*. [*hydroly(sis)* + *-(i)ze*. Cf. *analyze*.] To cause (a substance) to undergo hydrolysis. This is often done indirectly by the action of bases or acids, the metal or acid being subsequently replaced by hydrogen and hydroxyl respectively. Thus, if fat is treated with steam, fatty acids and glycerol are formed: this is *direct hydrolysis*. If the fat is heated with a solution of a base, glycerol and the fatty acid salts of the base are produced, from which the free fatty acids are liberated by the addition of a mineral acid: this is *indirect hydrolysis*. The reaction is one of extreme importance in chemistry.

The formation of starch, its chemical composition and the changes it undergoes when *hydrolysed*.

Nature, April 16, 1903, p. 553.

hydromania, *n.* 2. A morbid impulse to excessive drinking of water.

hydromase (hī′drō-mās), *n.* A ferment found in the hyphæ of certain fungi which is capable of destroying the lignified walls of vegetable cells.

hydromechanical (hī″drō-mē-kan′i-kal), *a.* Of or pertaining to the science of liquids in motion, or to mechanical devices in which water is employed.

hydrometeonic (hī″drō-mē-kon′ik), *a.* [*hydro(gen)* + *meconic*.] Noting an acid, a colorless, syrupy compound, $C_7H_{10}O_7$, which is formed by the reduction of meconic acid. It decomposes when heated.

hydromellitic (hī″drō-me-lit′ik), *a.* [*hydro(gen)* + *mellitic*.] Noting an acid, a colorless compound, $C_{12}H_{12}O_{12}$, prepared by the reduction of mellitic acid. It crystallizes with considerable difficulty.

hydromellonic (hī″drō-me-lon′ik), *a.* [*hydro(gen)* + *mellone* + *-ic*.] Same as ★*cyamelonic*.

hydromeningocele (hī″drō-mē-ning′gō-sēl), *n.* [Gr. ὕδωρ (ὑδρ-), water, + μῆνιγξ (μηνιγγ-), membrane, + κήλη, tumor. See *meningocele*.] A tumor caused by protrusion of the membranes of the brain or spinal cord. It contains cerebrospinal fluid, but no nerve substance.

hydrometallurgical (hī″drō-met-ą-lėr′ji-kal), *a.* Noting the performing of a metallurgical process by hydraulic power.

hydrometamorphic (hī″drō-met-ą-môr′fik), *a.* In *geol.*, characteristic of, or produced by, hydrometamorphism.

hydrometeoric (hī″drō-mē-tē-or′ik), *a.* [*hydrometeor* + *-ic*.] Of or pertaining to the aqueous phenomena of the atmosphere.—**Hydrometeoric equator.** See ★*equator*.

hydrometer, *n.*—**Tralles hydrometer,** a hydrometer so graduated that in a mixture of alcohol and water at 60° F. each degree of the scale represents 1 per cent. by volume of pure alcohol of sp. gr. 0.7939. The indications of this instrument are legally in use in the United States.

hydrometrical (hī-drō-met′ri-kal), *a.* Same as *hydrometric*.

hydromineral (hī-drō-min′e-ral), *a.* [Gr. ὕδωρ (ὑδρ-), water, + E. *mineral*.] Relating to mineral waters; noting the treatment of disease by means of medicinal springs.

hydromuconic (hī″drō-mū-kon′ik), *a.* Noting two acids (dihydromuconic acids), which may be obtained by the reduction of muconic acid. The $\Delta\alpha\beta$ isomer, $HOCOCH_2CH_2CH:CHCOOH$, crystallizes in plates, melting at 168–169° C. The $\Delta\beta\gamma$ isomer, $HOCO.CH_2CH:CHCH_2COOH$, forms long, columnar crystals, which melt at 196° C.

hydromuscovite (hī-drō-mus′kō-vīt), *n.* See *muscovite*.

hydromyelocele (hī-drō-mī′e-lọ-sēl), *n.* [Gr. ὕδωρ (ὑδρ-), water, + μυελός, marrow, + κήλη, tumor.] An excess of fluid in the central canal of the spinal cord; hydromyelia.

hydronephros (hī-drō-nef′ros), *n.* [NL., < Gr. ὕδωρ (ὑδρ-), water, + νεφρός, kidney.] Edematous infiltration of the kidney.

hydroneurosis (hī″drō-nū-rō′sis), *n.* [NL., < Gr. ὕδωρ (ὑδρ-), water, + NL. *neurosis*.] An

exaggerated or pathological fondness for water; an extreme tendency to hydropsychoses. *G. S. Hall*, Adolescence, II. 194.

hydronitric (hī-drō-nī′trik), *a.* [Gr. ὕδωρ (ὑδρ-), water, + NL. *nitricus*, nitric.] Hydronitric acid. Same as ★*hydrazoic acid.*

hydroparacoumaric (hī″drō-par-a-kō-mar′ik), *a.* [*hydro(gen)* + *paracoumaric.*] Noting an acid, a colorless compound, $HO\overset{4}{C}_6H_4\overset{1}{C}H_2CH_2COOH$, found in urine and in the putrefaction-products of tyrosin, and prepared by the reduction of paracoumaric acid. It forms small monoclinic crystals and melts at 128–129° C.

hydropathic, *a.* **II.** *n.* [Short for *hydropathic establishment.*] A sanatorium in which the treatment is chiefly hydropathic; a water-cure establishment.

There are also mud-baths and *hydropathics.*
Encyc. Brit., XXX. 125.

hydroperoxid (hī″drō-pér-ok′sid), *n.* Same as ★*hydrogen dioxid:* a term not in general use.

hydrophil (hī′drō-fil), *a.* [Gr. ὕδωρ (ὑδρ-), water, + φίλος, loving.] **1.** Capable of readily taking up water; hygroscopic; bibulous.

Two electrodes of 10 sq. cm. surface were applied to the ends of a space 10 cm. by 6 cm. on the shaven skin of a rabbit, contact being made by means of *hydrophil* cotton impregnated with a 1 per cent. solution of zinc chloride.
Elect. World and Engin., Nov. 28, 1903, p. 888.

2. In *bot.*, same as *hydrophilous.*

hydrophilia (hī-drō-fil′i-ä), *n.* [NL., < Gr. ὕδωρ (ὑδρ-), water, + -φιλία, < φίλος, loving.] Fondness for being wet, for playing in or with water, for watching and hearing the flow of water, etc. *G. S. Hall*, Adolescence, II. 195.

hydrophilic (hī-drō-fil′ik), *a.* Same as ★*hydrophil.* *Buck*, Med. Handbook, III. 694.

hydrophilous, *a.* **2.** In *phytogeog.*: (*a*) Requiring much moisture: said of plants. (*b*) Less properly, presenting conditions favorable to such plants; hydrophytic. (*c*) Aquatic: applied by Pound and Clements to a class of fungi. Also *hydrophil.*—**3.** In *entom.*, having the character of a beetle of the genus *Hydrophilus* or family *Hydrophilidæ.*

hydrophily (hī-drof′i-li), *n.* Same as ★*hydrophilia.*

hydrophlorone (hī-drō-flō′rōn), *n.* [*hydro(gen)* + *phlorone.*] A colorless compound, $(\overset{1}{C}H_3)_2C_6H_2(\overset{2}{O}H)_2$, prepared by the action of sulphur dioxid on phlorone. It crystallizes in pearly, lustrous leaves, melts at 212° C., and sublimes. Also called *hydroparaxyloquinone*, or 1,4-*dimethylphendiol*(2,5).

hydrophobiac (hī-drō-fō′bi-ak), *n.* [*hydrophobia* + *-ac.*] One who is affected with hydrophobia.

hydrophobian (hī-drō-fō′bi-an), *n.* [*hydrophobia* + *-an.*] Same as ★*hydrophobiac.*

hydrophobist (hī-drō-fō′bist), *n.* [*hydrophobia* + *-ist.*] One who has a morbid dread or fear of water. *N. E. D.*

hydrophobous (hī-drof′ō-bus), *a.* Same as *hydrophobic.*

hydrophone (hī′drō-fōn), *n.* [Gr. ὕδωρ (ὑδρ-), water, + φωνή, a sound.] **1.** An instrument for detecting the flow of water in a pipe (thus locating waste) by the sounds produced in a microphone.—**2.** An instrument used in auscultation whereby sounds are conveyed through a column of water.

hydrophore, *n.* **2.** A flattened, or saucer-shaped, pedunculate appendage, in campanularian hydroids, representing a reduced hydrotheca.

hydrophoria (hī-drō-fō′ri-ä), *n.* [Gr. ὑδροφορία (fem. sing.), water-carrying, also, like the usual ὑδροφόρια (neut. pl.), a festival so called, < ὑδροφόρος, carrying water: see *hydrophore.*] In *Gr. antiq.*, a water-carrying; a group of women carrying water from a fountain: a subject often represented on the Greek hydria, or water-pots.

hydrophthalic (hī-drof-thal′ik), *a.* [*hydro(gen)* + *phthalic.*] Noting an acid, a substance formed by the addition of hydrogen to phthalic acid. Seventeen such compounds are known. They differ (1) by the number of atoms, 2, 4, or 6, of hydrogen added to the phthalic acid; (2) by the different positions of the double unions in the molecule; (3) by the spatial arrangement of the groups, which leads, in some cases, to the exhibition of optical activity. The compounds have proved to be of extreme importance in the study of the constitution of benzene.

hydrophyte, *n.* **2.** In *phytogeog.*, a plant adapted to live under conditions of abundant moisture, or, in late usage, abundant physiological moisture. Compare ★*mesophyte* and ★*xerophyte.*

hydrophytic (hī-drō-fit′ik), *a.* [*hydrophyte* + *-ic.*] **1.** Having the character of a hydrophyte: as, a *hydrophytic* plant; composed of hydrophytes: as, a *hydrophytic* formation.—**2.** Presenting conditions favorable to hydrophytes: as, a *hydrophytic* locality.

hydrophyton, *n.* **2.** A chitinous or calcareous skeleton frequently secreted at the base of the polyp-stocks of the *Hydrozoa.*

hydropicoline (hī-drō-pik′ō-lin), *n.* [*hydro(gen)* + *picoline.*] A colorless liquid,

$$CH_2\langle\begin{matrix}CH(CH_3)CH_2\\CH_2.CH_2\end{matrix}\rangle NH,$$

prepared by the reduction of the corresponding methylpyridine. It boils at 125–126° C. Also called *β-pipecoline*, or 3-*methylpiperidine.*

hydropiperic (hī″drō-pi-per′ik), *a.* [*hydropiper-ine* + *-ic.*] Pertaining to hydropiperine.

Hydropiperic acid, a colorless compound, $C_{11}H_{12}O_4$, prepared by the reduction of piperic acid. It crystallizes in long, thin needles and melts at 75–76° C.

hydroplane (hī′drō-plān), *n.* [Gr. ὕδωρ (ὑδρ-), water, + E. *plane*[1], *n.*] A name given by its inventor to the horizontal side-submerging rudder of the Lake type of submarine boat. There are two of these horizontal rudders on each side of the boat manipulated in unison; when they are inclined forward and downward they cause the boat to be submerged bodily instead of having a diving motion.

hydroplastics (hī-drō-plas′tiks), *n.* Same as ★*hydroplasty.*

hydroplasty (hī-drō-plas′ti), *n.* [Gr. ὕδωρ (ὑδρ-), water, + πλαστός, formed, + -*y*[3].] The electric deposition of metal upon molds or forms; hydroplastics; galvanoplasty.

hydroplutonic (hī′drō-plō-ton′ik), *a.* [Gr. ὕδωρ (ὑδρ-), water, + E. *Plutonic.*] In *geol.*, noting deep-seated igneous processes which involve water as well as heat.

Hydropneumatic brake. See ★*brake*[3].

hydropolyp, *n.* **2.** A hydrula.

hydropore (hī′drō-pōr), *n.* [Gr. ὕδωρ (ὑδρ-), water, + πόρος, pore.] In larval echinoderms, a pore opening from the left hydrocele to the exterior.

hydropot (hī′drō-pot), *n.* [Gr. ὑδροπότης, a water-drinker, < ὕδωρ (ὑδρ-), water, + πότης, drinker.] A water-drinker; a teetotaler.

hydropotassic (hī″drō-pō-tas′ik), *a.* [*hydro(gen)* + *potass-ium* + *-ic.*] In *chem.*, containing both hydrogen and potassium as constituents: as, *hydropotassic* sulphate ($KHSO_4$).

hydropsical (hī-drop′si-kal), *a.* [*hydrops(y)* + *-ical.*] Same as *dropsical.* *Buck*, Med. Handbook, V. 332.

hydropsychosis (hī-drop-si-kō′sis), *n.*; pl. *hydropsychoses* (sēz). [NL., < Gr. ὕδωρ (ὑδρ-), water, + NL. *psychosis.*] In *psychol.*, a specific mental process aroused by and referring to water; especially, in *genetic psychol.*, a manifestation of interest in and fondness for water, supposed to be atavistic.

Youth works a sea change and the *hydropsychoses* strike inward. . . . I can not read these youthful ebullitions without inclining to believe in residual traces that hark back through ages, and that the soul is still marked like our body by vestiges of pelagic life.
G. S. Hall, Adolescence, II. 196.

hydropyridic (hī″drō-pi-rid′ik), *a.* Of or pertaining to the hydropyridines.

hydropyridine (hī-drō-pir′i-din), *n.* [*hydro(gen)* + *pyridine.*] A class name applied, in organic chemistry, to compounds derived from pyridine by the addition of two, four, or six atoms of hydrogen, respectively, giving derivatives of dihydropyridine, C_5H_7N, tetrahydropyridine, C_5H_9N, and hexyhydropyridine, $C_5H_{11}N$. Many of the compounds are closely related to alkaloids and to ptomaïnes.

hydroquinine (hī-drō-kwin′in), *n.* [*hydro(gen)* + *quinine.*] **1.** A bitter, alkaline, levorotatory alkaloid, $C_{20}H_{26}O_2N_2.2H_2O$, found in cinchona bark, together with quinine, which it closely resembles in medicinal and general chemical properties. It crystallizes in needles, and, when dehydrated, melts at 172.3° C.—**2.** A greenish resin, $C_{20}H_{26}O_3N_2.H_2O$, formed by the reduction of quinine in acid solution. It softens at 35° C. and melts at 100° C.

hydrorhabd (hī′drō-rabd), *n.* [Gr. ὕδωρ (ὑδρ-), water, + ῥάβδος, rod.] The rhabdosome of the graptolites.

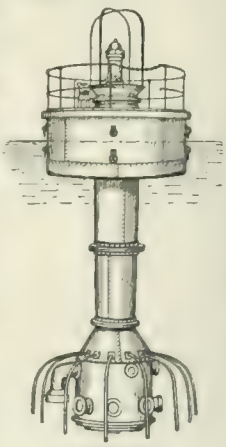
hydrorudite (hī-drō-rō′dīt), *n.* [Spelled with intended distinction *hydrorudyte*, < Gr. ὕδωρ (ὑδρ-), water, + *rudus*, rubble, + *-ite*[2].] A fragmental rock of coarse grain, formed by the action of water; a conglomerate. *Amer. Geol.*, April, 1904, p. 247.

hydrosalt (hī′drō-sâlt), *n.* [*hydro(gen)* + *salt*[1].] Same as *acid salt* (which see, under *salt*[1]).

Hydrosauria (hī-drō-sâ′ri-ä), *n. pl.* [NL., < Gr. ὕδωρ (ὑδρ-), water, + σαῦρος, a lizard.] Same as *Crocodilia* (which see).

hydroscheocele (hī-dros′kē-ō-sēl), *n.* [Gr. ὕδωρ (ὑδρ-), water, + E. *oscheocele.*] Scrotal hernia containing fluid.

hydroscope, *n.* **3.** An apparatus for observing objects in the sea or on the sea-bottom. It consists of a steel tube carrying twelve lenses acting as an objective and a series of mirrors arranged within the tube to reflect light to a sort of camera-obscura house above. The platform of the float can carry four people. The apparatus was invented by Giuseppe Pino. *Elect. World and Engin.*, Jan. 24, 1903, p. 161.



Hydroscope.

hydroscopic (hī-drō-skop′ik), *a.* **1.** Same as *hygroscopic*, 2.—**2.** Of or pertaining to the hydroscope.

hydroscopical (hī-drō-skop′i-kal), *a.* Same as ★*hydroscopic.*

hydroscopist (hī′drō-skō-pist), *n.* [As *hydroscope* + *-ist.*] One who searches for water with the assistance of a divining-rod.

hydrosilicarenite (hī″drō-sil-i-kar′ē-nīt), *n.* [Spelled with intended distinction *-yte*; < Gr. ὕδωρ (ὑδρ-), water, + NL. *silica* + L. *arena*, *harena*, sand, + *-ite*[2].] A medium-grained silicious hydroclastic rock; a sandstone. *Amer. Geol.*, April, 1904, p. 247.

hydrosilicate (hī-drō-sil′i-kāt), *n.* [Gr. ὕδωρ, (ὑδρ-), water, + E. *silicate.*] A silicate which contains water, particularly one which gives off water readily upon heating. It is impossible to draw the line between true hydrous silicates and those basic (or acid) species containing hydroxyl (or hydrogen) and which give off water on intense ignition.

hydrosilicilutite (hī″drō-sil″i-si-lō′tīt), *n.* [Spelled with intended distinction *-yte*; < Gr. ὕδωρ (ὑδρ-), water, + L. *silex*, flint, + *lutum*, mud, + *-ite*[2].] A fine-grained silicious hydroclastic rock; a fine silicious mud; a fine silicious shale. *Amer. Geol.*, April, 1904, p. 247.

hydrosilicirudite (hī″drō-sil″i-si-rō′dīt), *n.* [Spelled with intended distinction *-yte*; < Gr. ὕδωρ (ὑδρ-), water, + L. *silex*, flint, + *rudus*, rubble, + *-ite*[2].] A coarse silicious hydroclastic rock; a silicious conglomerate. *Amer. Geol.*, April, 1904, p. 247.

hydrosodic (hī-drō-sō′dik), *a.* [*hydro(gen)* + *sod-ium* + *-ic.*] In *chem.*, containing both hydrogen and sodium as constituents: as, *hydrosodic* sulphate (sodium-acid sulphate, $NaHSO_4$).

hydrosol (hī′drō-sol), *n.* [*hydr(ate)* + *sol(uble).*] In *chem.*, a term proposed by Graham to signify the soluble hydrate of a colloid substance. It has been used to include metals, as gold or silver, in a state of extreme subdivision and permanently suspended or apparently dissolved in water.

hydrosorbic (hī-drō-sôr′bik), *a.* [*hydro(gen)* + *sorbic.*] Derived from hydrogen and sorbic acid.—Hydrosorbic acid, a colorless liquid, $CH_3(CH_2CH{:}CHCH_2COOH$, formed by the reduction of sorbic acid. It boils at 208° C. Also called *β-γ-hexenic acid.*

hydrosphygmograph (hī-drō-sfig′mō-grâf), *n.* [Gr. ὕδωρ (ὑδρ-), water, + E. *sphygmograph.*] A device consisting of a cylinder containing water and connected with a registering tube, used to record the amount of blood forced with each pulsation into a limb incased in the apparatus.

With the sphygmograph (or, rather, the *hydrosphygmograph*) he observed the degree of excitement produced on various individuals by the sight of wine, cigars, food, money, and photographs of nude women.
H. H. Ellis, The Criminal, p. 122.

hydrospiric (hī-drō-spī′rik), *a.* Of or pertaining to the hydrospires of the *Blastoidea.* *Amer. Geol.*, Jan., 1904, p. 46.

hydrostatic, *a.* **2.** In *phytogeog.*, taking place under conditions of substantially uniform wetness: said of a succession of vegetations. *F. E. Clements.*—Hydrostatic head. See ★*head.*

hydrostatist (hī′drō-stā-tist), *n.* [*hydrostat(ic)* + *-ist.*] Same as *hydrostatician.*

hydrostome (hī'drọ-stōm), *n.* [Gr. ὕδωρ (ὑδρ-), water, + στόμα, mouth.] The mouth of a hydroid polyp, or hydranth.

hydrosulphid, *n.* 2. A compound in which one of the atoms of hydrogen in hydrosulphuric acid (sulphureted hydrogen) is replaced by a more strongly electropositive element or radical: as, sodium *hydrosulphid* (NaHS). *Jour. Soc. Chem.*, IX. 804.

hydrosulphite, hydrosulfite (hī-drō-sul'fīt), *n.* [*hydrosulphurous* + *-ite*².] In *chem.*, a salt of hydrosulphurous acid, now called hyposulphurous acid ($H_2S_2O_4$).

hydrosulphocyanic (hī-drọ-sul fọ-si-an'ik), *a.* [*hydro(gen)* + *sulphocyanic.*] In *chem.*, same as *sulphocyanic*, more properly *thiocyanic*: as, *hydrosulphocyanic* acid (now *thiocyanic* acid).

hydrosulphuric (hī-drọ-sul-fū'rik), *a.* [*hydro(gen)* + *sulphur* + *-ic.*] In *chem.*, containing hydrogen and sulphur as constituents: as, *hydrosulphuric* acid.

hydrosyringomyelia (hī″drọ-si-ring″gọ-mī-ē'li-ä), *n.* [NL., < Gr. ὕδωρ (ὑδρ-), water, + σῦριγξ (συριγγ-), a pipe, + μυελός, marrow.] The formation of cavities in the spinal cord, together with accumulation of fluid in the central canal.

hydrotachymeter (hī″drọ-tạ-kim'e-tėr), *n.* [*hydr(aulic)* + *tachymeter.*] A governor or regulator for indicating and controlling the speed of a hydraulic turbine. *Nature*, March 5, 1903, p. 431.

hydrotactic (hī-drọ-tak'tik), *a.* [*hydrotaxis* (*-tact-*) + *-ic.*] Of or pertaining to the movement of cells or of organisms in relation to moisture; exhibiting hydrotaxis.

hydrotasimeter (hī″drọ-tạ-sim'e-tėr), *n.* [Gr. ὕδωρ (ὑδρ-), water, + E. *tasimeter.*] An electric device for indicating the level of water in a tank or reservoir.

hydrotaxis (hī-drọ-tak'sis), *n.* [NL., < Gr. ὕδωρ (ὑδρ-), water, + τάξις, disposition.] The movement of a cell or of an organism in relation to moisture.

hydrotechnic (hī-drō-tek'nik), *a.* Of or pertaining to hydrotechny; relating to hydraulic engineering.

hydrotechnical (hī-drọ-tek'ni-kạl), *a.* Same as ★*hydrotechnic.*

hydrotechnics (hī-drọ-tek'niks), *n.* Same as ★*hydrotechny.*

hydrotechnologist (hī″drō-tek-nol'ọ-jist), *n.* [Gr. ὕδωρ (ὑδρ-), water, + E. *technolog-y* + *-ist.*] One versed in the art of storing and distributing water, or in the general problems relating to water-supply.

> As to the physics of running water, *hydrotechnologists* have recognized the dependence of velocity on the declivity of the water surface and depth.
> *Geog. Jour.* (R. G. S.), X. 619.

hydrotechnology (hī″drọ-tek-nol'ọ-ji), *n.* [Gr. ὕδωρ (ὑδρ-), water, + E. *technology.*] The scientific study of hydrotechny.

hydrotechny (hī'drọ-tek-ni), *n.* [Gr. ὕδωρ (ὑδρ-), water, + τέχνη, art.] That branch of hydraulic engineering which deals with the storage and distribution of water; the technics of water-supply.

> In Arizona, Mexico, and Peru reservoirs and aqueducts prove that *hydrotechny* was understood.
> *Encyc. Brit.*, XXV. 374.

hydrotherapic (hī″drọ-the-rap'ik), *a.* [*hydrotherap-y* + *-ic.*] Same as *hydrotherapeutic.*

Hydrothermal fusion. See ★*fusion.*

hydrothionæmia (hī″drō-thī-ọ-nē'mi-ä), *n.* [Gr. ὕδωρ (ὑδρ-), water, + θεῖον, sulphur, + αἷμα, blood.] The presence in the blood of hydrogen sulphid, as in certain forms of auto-intoxication. *Buck*, Med. Handbook, I. 642.

hydrothionic (hī″drọ-thī-on'ik), *a.* [Gr. ὕδωρ (ὑδρ-), water, + θεῖον, sulphur, + *-ic.*] Noting an acid discovered by Schützenberger and first called by him *hydrosulphurous acid*, now generally called *hyposulphurous acid*, this latter name having formerly been used for a different substance now known as *thiosulphuric acid*, $H_2S_2O_3$. The formula for Schützenberger's acid is probably $H_2S_2O_4$. It is an energetic reducing agent.

hydrothionuria (hī″drọ-thī-ọ-nū'ri-ä), *n.* [NL., < Gr. ὕδωρ (ὑδρ-), water, + θεῖον, sulphur, + οὖρον, urine.] The elimination of hydrogen sulphid in the urine.

hydrotic, *a.* 2. Noting an acid, a syrupy compound, $C_5H_9O_7N$, found in perspiration.

hydrotimetric (hī″drọ-ti-met'rik), *a.* Relating to hydrotimetry.

hydrotimetry (hī-drọ-tim'e-tri), *n.* [Gr. ὑδρότης, moisture, + -μετρία, < μέτρον, measure.] In *chem.*, the determination of the degree of hardness of a natural water. See *hydrotimeter.*

hydrotropic, *a.* 2. In *phytogeog.*, governed by conditions which change from dry to wet: said of a succession of vegetations. *F. E. Clements.*—3. In *psychol.*, interested in water: tending to hydropsychoses.

> In the normal soul there is now an outcrop of the same psychic strata which once created and gave life and sacredness to lustrations, baptisms, oracles, water deities, philosophemes like those of Thales, who made water the source of all things, or of Heraclitus, who saw in vapor, water, and ice the key to the universe which was constantly fluxing up or down the long way of rarefication and condensation between ether and rock. So, too, the stream is in a hundred ways the type of life. The soul is *hydrotropic*, and this is the sacred hour of opportunity for bringing these dim and dumb molimena of the soul to their issue, for wedding the individual promptings to the best that literature, art, history of the races have to offer in a way that makes teaching at its best such a high and sacred calling.
> *G. S. Hall*, Adolescence, II. 197.

hydrox-. See ★*hydroxy-.*

hydroxanthic (hī-drok-san'thik), *a.* [*hydro(gen)* + *xanthic.*] Same as *xanthic.*

hydroxid, *n.* **Sodium hydroxid**, caustic soda (NaHO), extensively manufactured especially for soap-boilers' use: often but improperly called *sodium hydrate.* **Strontium hydroxid**, a material used in the strontic process for treating beet-root molasses; chiefly prepared by strongly heating the mineral strontianite in a gas-fired kiln with a basic lining, and afterward slaking the strontia thus obtained by addition of water, dissolving, and crystallizing.

hydroxidated (hī-drok'si-dā-ted), *a.* [*hydroxid* + *-ate*¹ + *-ed*².] In *chem.*, converted into a hydroxid.

hydroxy- (hī-drok'si-). [*hydr(ogen)* + *oxy(gen).*] An initial member in many compound terms in chemistry, often written as if a separate word, *hydroxy*, indicating that the substance designated contains the hydroxyl radical or group, HO. The term *oxy-* is often used, less correctly, with the same meaning.—**Hydroxy acid**, an organic acid which contains, in addition to carboxyl, one or more hydroxyl groups. These give alcoholic properties to the compound in addition to its character as an acid. Such compounds are often, less correctly, called *oxyacids.*—**Hydroxy compound**, in *chem.*, a compound of which the radical hydroxyl is a constituent.—**Hydroxy group.** Same as *hydroxyl.*

hydroxyacetone (hī-drok-si-as'e-tōn), *n.* Same as ★*acetol.*

hydroxyacid (hī-drok'si-as″id), *n.* See ★*oxy-acid.*

hydroxyammonia (hī-drok″si-a-mō'ni-ạ̈), *n.* Same as ★*hydroxylamine.*

hydroxyaromatic (hī-drok″si-ar-ọ-mat'ik), *a.* Noting any organic compound, of the aromatic series, which contains one or more hydroxyl groups. *Nature*, Feb. 5, 1903, p. 332.

hydroxyazo-. A prefix in chemistry. See ★*oxyazo-.*

hydroxybenzene (hī-drok-si-ben'zen), *n.* A phenol.

hydroxycarbamide (hī-drok-si-kär'bạ-mid), *n.* See ★*hydroxylcarbamide.*

hydroxycomenic (hī-drok″si-kọ-men'ik), *a.* [*hydr(ogen)* + *oxy(gen)* + *comenic.*] Noting a colorless compound, $C_6H_4O_6$, formed by the oxidation of meconic acid by hydrogen peroxid. It crystallizes in small modular prisms, or long, fine needles, melting at 277° C.

hydroxydimethylpyrone (hī-drok″si-dī-meth-il-pī'rōn), *n.* [*hydr(ogen)* + *oxy(gen)* + *di-*² + *methyl* + *pyrone.*] A colorless compound, $CO < {COH:C(CH_3) \atop CH:C(CH_3)} > O$, formed by the oxidation of dimethylpyrone in hydrogen peroxid. It crystallizes in needles, melts at 162.5° C., and may be sublimed.

hydroxyketone (hī-drok-si-kē'tōn), *n.* See ★*oxyketone.*

hydroxylamine (hī-drok-sil-am'in), *n.* [*hydroxyl* + *amine.*] A colorless basic compound, NH_2OH, prepared by the reduction of various oxygen derivatives of nitrogen. It crystallizes in scales, or hard needles, melts at 33° C., boils at 58° C. under 22 millimeters pressure, and easily explodes when heated. In its general properties and in those of its salts it closely resembles ammonia, with the exception that it readily reduces certain metallic salts such as those of silver or mercury. It is much used in organic chemistry for the isolation of ketones or aldehydes. Occasionally called *hydroxyammonia.* **Hydroxylamine nitrate**, a colorless crystalline compound, $HONH_3NO_3$, the salt of nitric acid and hydroxylamine. It is readily soluble in absolute alcohol and decomposes into water and nitric oxid when heated.

hydroxylate (hī-drok'si-lāt), *v. t.*; pret. and pp. *hydroxylated*, ppr. *hydroxylating.* [*hydroxyl* + *-ate*¹.] In *chem.*, to cause to combine with the radical hydroxyl. *Rep. Brit. Ass'n Advancement of Sci.*, 1900, p. 298.

hydroxylated (hī-drok'si-lā-ted), *p. a.* Containing the hydroxyl group or radical.

hydroxylation (hī-drok-si-lā'shọn), *n.* [*hydroxylate* + *-ion.*] In *chem.*, combination with the radical hydroxyl, HO.

hydroxylcarbamide (hī-drok-sil-kär'bạ-mid), *n.* A colorless compound, $H_2NCONHOH$, prepared by the action of hydroxylamine nitrate on potassium cyanate. It crystallizes in needles and melts at 130° C. Also called *hydroxycarbamide, hydroxyurea*, and formerly *hydroxylurea.*

hydroxylic (hī-drok-sil'ik), *a.* [*hydroxyl* + *-ic.*] Pertaining to or containing the hydroxyl group. *Encyc. Brit.*, XXVIII. 364. **Hydroxylic hydrogen.** See ★*hydrogen.*

hydroxylinolein (hī-drok″si-li-nō'lẹ-in), *n.* [*hydr(ogen)* + *oxy(gen)* + L. *linum*, flax, + *oleum*, oil, + *-in*².] In *chem.*, a neutral substance believed to be formed during the drying of linseed-oil by the absorption of oxygen from the air: essentially the same as ★*linoxyn* (which see).

hydroxylurea (hī-drok-si-lū'rẹ-ạ̈), *n.* Same as ★*hydroxylcarbamide.*

hydroxypyrone (hī-drok-si-pī'rōn), *n.* [*hydr(ogen)* + *oxy(gen)* + Gr. πῦρ, fire, + *-one.*] A colorless compound, $CO < {COH:CH \atop CH:CH} > O$, prepared by the distillation of meconic acid. It crystallizes in large prisms, melts at 117° C., boils at 227–228° C., and sublimes at the ordinary temperature.

hydroxysulphid (hī-drok-si-sul'fid), *n.* In *chem.*, a compound containing both hydroxyl and sulphur, as calcium hydroxid and hydrosulphid occurring combined (or merely mixed) in the tank waste of alkali works. *G. Lunge*, Sulphuric Acid, II. 817.

hydroxyurea (hī-drok-si-ū'rẹ-ạ̈), *n.* Same as ★*hydroxylurea* and ★*hydroxylcarbamide.*

hydrozone (hī'drọ-zōn), *n.* [*hydr(ogen)* + *ozone.*] A trade-name for hydrogen dioxid.

hydrula (hī'drū-lạ̈ or hid'rū-lạ̈), *n.*; pl. *hydrulæ* (-lē). [NL., dim. of *hydra*, hydra.] In the development of hydroid polyps, the stage succeeding the planula, the simple polyp having a disk of attachment at its proximal end, and at the distal end a manubrium and a circlet of tentacles. By the budding of the hydrula a branched colony is produced.

hydruresis (hī-drọ-rē'sis), *n.* [Gr. ὕδωρ (ὑδρ-), water, + οὔρησις, urination.] Same as *hydruria.*

hydrureted, hydruretted (hī'drọ-ret-ed), *a.* In *chem.*, combined with hydrogen: an antiquated term at no time in general use.

hydurilate (hī-dū'ri-lāt), *n.* [*hyduril-ic* + *-ate*¹.] A salt of hydurilic acid.

hydurilic (hī-dụ-ril'ik), *a.* [*hyd(rogen)* + *ur(ic)* + *-il* + *-ic.*] Noting an acid, a colorless compound, $CO < {NHCO \atop NHCO} > CH:CH < {CONH \atop CONH} > CO(?)$, formed by the oxidation of uric acid and by the prolonged boiling of alloxan and alloxantin with dilute sulphuric acid. It is obtained in small tetragonal columnar crystals with $2H_2O$, or pulverulent with $1H_2O$, and is a strong dibasic acid.

hyenasic (hī-ẹ-nā'sik), *a.* [*hyen-ic* + *-ase* + *-ic.*] Same as ★*hyenic*, 2.

hyenic, *a.* 2. In *chem.*, derived from the hyena. **Hyenic acid**, a colorless compound, $C_{24}H_{49}COOH$, found in combination with glycerol in the anal granular pouches of the striped hyena (*Hyæna striata*) and in the fat of sheep's wool. It crystallizes in nodules and melts at 77–78° C.

Hyetal coefficient. See *pluviometric* ★*coefficient.*

hyfen, *n.* and *v. t.* A simplified spelling of *hyphen.*

hygiastic (hī-ji-as'tik), *a.* [Gr. ὑγιαστικός, serving to heal, < ὑγιάζειν, heal, < ὑγιής, healthy: see *hygiene.*] Same as *hygienic.*

hygiastics (hī-ji-as'tiks), *n.* Same as *hygiene.*

hygric (hī'grik), *a.* [Gr. ὑγρός, moist, + *-ic.*] Relating to moisture or humidity.

> Hallucinations of cutaneous and thermal sensibility, of pain, of the muscular sense, hallucinatory sensations of moisture on the skin (*hygric* hallucinations).
> *Lancet*, April 18, 1903, p. 1115.

hygrinic (hī-grin'ik), *a.* [*hygrine* + *-ic.*] Derived from hygrine.—**Hygrinic acid**, a colorless compound, $CH_3NC_4H_7COOH$, prepared by the oxidation of the base $C_8H_{15}ON$ (from hygrine). With $1H_2O$ it crystallizes in needles, softens at 85° C., and melts at 130° C.; when dehydrated the melting-point is 164° C.

hygrograph, *n.*—**Hair-hygrograph**, an instrument, based on the principle of the hair-hygrometer, used for recording variations in the moisture of the air.

hygrology, *n.* 2. The study of the origin and properties of aqueous vapor, including its

evaporation, condensation, pressure, relative humidity, density, weight, and all the relations of vapor or moisture to the atmosphere.

hygroma, *n.* **Fleischman's hygroma,** an enlargement of a bursa lying to the outer side of the genioglossus muscle in the floor of the mouth.

hygrometer, *n.* **Dufour's hygrometer,** a porous diaphragm through which the vapor diffuses at a rate which varies with the difference of the elastic vapor pressures on either side of the diaphragm. The air within the diaphragm is kept saturated. Schidlofski modified this by using a metallic vessel containing water and having a porous cap over the opening, and a similar vessel containing air that is dried by a chemical absorbent. The differential rate of diffusion is the basis of the calculation of relative humidity.—**Edelmann's hygrometer,** a hygrometer which determines the tension or volume of the vapor present in a gaseous form, without taking account of any particles of fog that may be present in the atmosphere.—**Hair-hygrometer,** an instrument for the measurement of humidity in which the influence of moisture upon the length of a hair is used. A human hair, freed from fat by treatment with alkali, is suspended vertically. The lower end passes around a pulley, to which a pointer is attached, and is held taut by means of a weight. In moist air the hair absorbs water and increases in length. Changes of length, indicative of variations in the humidity of the surrounding atmosphere, cause a rotary movement of the pointer along a circular scale.—**Mason's hygrometer,** the wet-and-dry bulb or psychrometer as arranged by Mason, now replaced by the whirled, sling, or ventilated psychrometer.—**Renoux-Matern hygrometer,** a hygrometer which determines the deficit of tension or the quantity of water-vapor needed in order to saturate a given space, whence follows the quantity that was already present.—**Trouton's electrical dew-point hygrometer,** an apparatus in which the deposit of the slightest film of moisture on a polished metallic surface is announced by the completion of the electric circuit through the dew.—**Trouton's gravimetric recording hygrometer,** an apparatus in which the weight of a hygrometric body with its varying amount of moisture is recorded by an inked stylus on a revolving drum of graduated paper. The weight is assumed to vary with the hygrometric state or relative humidity of the atmosphere.

Hygrometric water. See ★*water.*

hygrometrically (hī-grō-met'ri-kal-i), *adv.* In a manner pertaining or relating to the moisture of the air; by means of hygrometry or of the hygrometer.

hygrometricity (hī″grō-me-tris'i-ti), *n.* [*hygrometric* + *-ity.*] The property of being hygrometric or of becoming moist by the absorption of water from the atmosphere.

hygrophant (hī'grō-fant), *n.* [Gr. ὑγρός, wet, + -φάντης, ⟨ φαίνειν, show.] A special form of hygrometer graduated to indicate humidity and temperature directly.

hygrophil (hī'grō-fil), *a.* [Gr. ὑγρός, moist, + φίλος, loving.] Same as ★*hygrophilous.*

hygrophilous (hī-grof'i-lus), *a.* [Gr. ὑγρός, moist, + φίλος, loving, + *-ous.*] Moisture-loving; in *phytogeog.*, having the character of a hygrophyte. First used by Thurmann (1849), who regarded hygrophilous plants as correlated with eugeogenous soils. Also *hygrophil.* See quotation under ★*xerophilous.*

hygrophily (hī-grof'i-li), *n.* [*hygrophil* + *-y*[3].] Adaptation for life in damp places. *Encyc. Brit.*, XXV. 432.

hygrophthalmic (hī-grof-thal'mik), *a.* [Gr. ὑγρός, moist, + ὀφθαλμός, eye.] Relating to moisture in the eyes; lacrymal.

hygrophyte (hī'grō-fīt), *n.* [Gr. ὑγρός, wet, + φυτόν, plant.] In *phytogeog.*, same as ★*hydrophyte:* apparently first used by Wiesner (1889), in the form *hygrophyta*, by him opposed to *hydrophyta.*

Typical *hygrophytes* have weakly developed roots, elongated axes, and large thin leaf-blades.
A. F. W. Schimper (trans.), Plant-Geog., p. 17.

hygroplasm (hī'grō-plazm), *n.* Same as *hygroplasma.*

hygroscopically (hī-grō-skop'i-kal-i), *adv.* In the manner of a hygroscopic substance.

hygroscopy (hī-gros'kō-pi), *n.* [*hygroscope* + *-y*[3].] **1.** The art of using the hygroscope.—**2.** The art of making hygroscopes.—**3.** The actual observation of the general condition of the atmosphere as to moistness or dryness.—**4.** The art of making the presence of aqueous vapor apparent by some one of its visible effects, such as cloud, haze, change of color, change of form or shape, expansion, etc.

hygrothermal (hī-grō-ther'mal), *a.* [Gr. ὑγρός, moist, + θέρμη, heat, + *-al*[1].] Relating to a special combination of hygrometric and thermal conditions: as, a *hygrothermal* area, one whose condition is included within given limits as to temperature and humidity.

Hylæobatrachus (hī″lē-ō-bat'ra-kus), *n.* [Gr. ὑλαῖος, pertaining to the forest, + βάτραχος, a frog.] A genus of anurous *Amphibia* representing the earliest known urodeles. It occurs in the Lower Cretaceous of Belgium.

hylegiacal (hī-lē-jī'a-kal), *a.* [*hyleg* + *-i-ac-al.*] In *astrol.*, belonging to the hyleg. *Zadkiel*, Gram. of Astrol., i. 15.

hylic (hī'lik), *a.* [Gr. ὑλικός, ⟨ ὕλη, matter.] Pertaining to matter; material: among the Gnostics opposed to *psychic* and *pneumatic.*

hylogenesis, *n.* **2.** The manufacture or production of substances by a cell: for example, the production by a cell of substances which are to be secreted or removed from the cell, as contrasted with their secretion or removal.

The process of the manufacture of substances by a cell I have . . . proposed to call "*hylogenesis,*" literally meaning the formation of substance.
A. Mathews, Biol. Lectures, 1899, p. 165.

hylonism (hī'lō-nizm), *n.* [Gr. ὕλη, matter, + *-n* + *-ism.*] Theoretical materialism. *Haeckel* (trans.), Wonders of Life, p. 82.

hylopathian (hī-lō-path'i-an), *a.* [*hylopathism* + *-i-an.*] Same as *hylopathic.* *Cudworth*, Intell. Syst., III. 402.

hylophyte (hī'lō-fīt), *n.* [Gr. ὕλη, wood, + φυτόν, plant.] A woody plant. Hylophytes are treated by the authors of the term as a subdivision of the mesophytes. *Pound and Clements.*

hylotropic (hī-lot'rō-pik), *a.* [Gr. ὕλη, matter, + τρόπος, turn, + *-ic.*] Capable of change from one phase into another, without variation of the properties of the residue and of the new phase; not separable into two or into fractions having different composition. The term *hylotropic body* is the same as *chemical individual* or *substance*, but is broader than this.

Bodies of the first description we will call solutions, and of the second, *hylotropic* bodies. You will be inclined to call the latter substances or chemical individuals, and indeed both concepts are most nearly related. However, the concept of a *hylotropic* body is somewhat broader than that of a substance. *Nature*, May 5, 1904, p. 16.

hylotropy (hī-lot'rō-pi), *n.* [*hylotrop-ic* + *-y*[3].] The condition of being hylotropic.

Thus the chemical element is defined as a substance which retains its *hylotropy* under all conditions; and the difference between elements and compounds lies, not so much in the ultimate nature of the two classes of substances, as in the extent to which they possess a certain quality—*hylotropy.*
Electrochem. Industry, Sept., 1904, p. 361.

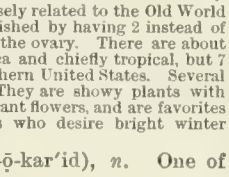
hylozoic, *a.* **2.** Same as ★*zoömimetic.*

Hymenocallis (hī″men-ō-kal'is), *n.* [NL. (Salisbury, 1812), ⟨ Gr. ὑμήν, membrane, + κάλλος, beauty. A membrane connects the stamens.] A genus of plants of the family *Amaryllidaceæ.* It is closely related to the Old World *Pancratium*, but is distinguished by having 2 instead of many ovules in each cell of the ovary. There are about 30 species, natives of America and chiefly tropical, but 7 of them extend into the southern United States. Several species are in cultivation. They are showy plants with umbels of mostly white fragrant flowers, and are favorites with painstaking gardeners who desire bright winter bloom. See *pancratium*, 2.

hymenocarid (hī″men-ō-kar'id), *n.* One of the *Hymenocaridæ.*

Hymenocaridæ (hī″men-ō-kar'i-dē), *n. pl.* [*Hymenocaris* (*-rid-*) + *-idæ.*] A primitive family of malacostracous *Crustacea* belonging to the suborder *Hymenocarina.* The carapace is pod-shaped and not divided by a median suture, the body segments are 8 or 9, and the caudal spines are in 3 pairs. The species are of Cambrian age.

Hymenocaris (hī-men-ō-kar'is), *n.* [NL., ⟨Gr. ὑμήν, a membrane, + καρίς, a shrimp.] The typical genus of the *Hymenocaridæ.*



Hymenocaris vermicauda, Upper Cambrian (Salter) (From Nicholson and Lydekker's "Paleontology.")

Hymenocephalus (hī″men-ō-sef'a-lus), *n.* [NL., ⟨ Gr. ὑμήν, membrane, + κεφαλή, head.] A genus of grenadier-fishes of the family *Macruridæ*, characterized by the thin and papery bones of the skull. Numerous species are found in the deep sea.

Hymenochæte (hī″men-ō-kē'tē), *n.* [NL. (Léveillé, 1846), ⟨ Gr. ὑμήν, a membrane, + χαίτη, mane (NL. bristle).] A large genus of hymenomycetous fungi of the family *Thelephoraceæ*, having leathery or corky sporophores of various shapes either resupinate or pileate. The hymenium bears simple cystidia intermingled with the basidia. The species are widely distributed and occur commonly on the trunks and branches of fallen trees. The name refers to the downy appearance of the hymenium of some species, caused by the projecting cystidia.

hymenodictyonine (hī″men-ō-dik'ti-o-nin), *n.* [*Hymenodictyon* (see def.) + *-ine*[2].] A crystalline alkaloid, $C_{23}H_{40}N_2$, contained in the East Indian shrub *Hymenodictyon excelsum.* Also *hymenodyctine.*

Hymenogasteres (hī″men-ō-gas'te-rēz), *n. pl.* Same as ★*Hymenogastrales.*

Hymenogastrales (hī″men-ō-gas-trā'lēz), *n. pl.* [NL.] An order of subterranean gasteromycetous fungi including the single family *Hymenogastraceæ.* Also *Hymenogasteres* and *Hymenogastrineæ.*

Hymenogastrineæ (hī″men-ō-gas-trin'ē-ē), *n. pl.* Same as ★*Hymenogastrales.*

Hymenomycetineæ (hī″men-ō-mī-sē-tin'ē-ē), *n. pl.* [NL.] Same as *Hymenomycetes.*

Hymenoptera, *n. pl.*—**Stinging Hymenoptera,** the hymenopterous insects of the suborder *Aculeata.*

hymenopterological (hī″me-nop″te-rō-loj'i-kal), *a.* Of or pertaining to hymenopterology.

Hymenosoma (hī″men-ō-sō'mä), *n.* [NL. (Demarest, 1823), ⟨ Gr. ὑμήν, membrane, + σῶμα, body.] The typical genus of the family *Hymenosomidæ.*

Hymenosomidæ (hī″men-ō-som'i-dē), *n. pl.* [NL., ⟨ *Hymenosoma* + *-idæ.*] A family of crabs having a flat, more or less triangular, and usually thin carapace.

Hymenostomata (hī″men-ō-stō'ma-tä), *n. pl.* [NL., ⟨ Gr. ὑμήν, membrane, + στόμα(τ-), mouth.] A suborder of holotrichous *Ciliata*, in which the mouth is usually situated at the bottom of an elongated, gutter-like, peristomial depression and opens into a short esophageal tube which is never supported by a palisade of rods. In many, perhaps all, forms there is a small undulating membrane at the margin of the mouth. The families included are *Chilifera, Microthoracina, Paramœcina, Urocentrina, Pleuronemina, Isotrichina*, and *Opalinina*, found mostly in infusions, though the last two are parasitic. *Delage.*

Hymenula (hī-men'ū-lä), *n.* [NL. (Fries, 1825), dim. of Gr. ὑμήν, membrane.] A genus of hyphomycetous fungi of the family *Tuberculariaceæ*, having the sporophores conglutinate in a disciform layer. The conidia are unicellular and oval or elongate. Over 40 species have been described. They occur mostly on decaying herbaceous stems.

hymnic, *a.* **II.** *n.* A hymn-like composition. *Lamb. N. E. D.*

Hynnis (hin'is), *n.* [NL., ⟨ Gr. ὕννις, ὕνις, ὕννης, a plowshare.] A genus of cavallas of the family *Carangidæ*, typified by the compressed body. They are found in warm seas. *H. hopkinsi* occurs on the west coast of Mexico.

hyocephalous (hī-ō-sef'a-lus), *a.* [Gr. ὗς, swine, pig, hog, + κεφαλή, head.] Pig-headed. [Rare.]

We coined . . . the adjective "*hyocephalous,*" which is a euphemism that comes in very conveniently when talking about Englishmen. *Bookman*, July, 1905, p. 452.

hyocholalic (hī″ō-ko-lal'ik), *a.* [Gr. ὗς, swine, + χολή, bile, + *-al*[1] + *-ic* (see *cholalic*).] Noting an acid, $C_{25}H_{40}O_4$, which results, on decomposition, from hyoglycocholic acid. It resembles cholalic acid, and like this is transformed into dyslysin in the intestinal canal.

hyocholic (hī-ō-kol'ik), *a.* [Gr. ὗς, swine, + χολή, bile, + *-ic.*] Pertaining to hyocholic acid.—**Alpha-hyocholic acid,** a bitter compound, $C_{25}H_{40}O_4$, obtained from α-hyoglycocholic acid by the action of potassium-hydroxid solution. It forms granules which melt somewhat above 100° C. and otherwise resembles the β-acid.—**Beta-hyocholic acid,** a compound, $C_{24}H_{40}O_4 \cdot \frac{1}{2}H_2O$(?), formed by prolonged treatment of β-hyoglycocholic acid with sodium-hydroxid solution. It melts at about 100° C., exhibits absorption bands, and is dextrorotatory.

hyoglycocholate (hī″ō-glī'kō-kol-āt), *n.* [*hyoglycochol-ic* + *-ate*[1].] A salt of hyoglycocholic acid.

hyoglycocholic (hī″ō-glī-kō-kol'ik), *a.* [Gr. ὗς, swine, + γλυκύς, sweet, + χολή, bile, + *-ic.*] Noting an acid, a solid, dextrorotatory compound, $C_{26}N_{43}O_5N$, obtained from swine's bile, in which it is present as a sodium salt. It forms resinous drops and exists in two modifications, termed α- and β-hyoglycocholic acid, which differ in the solubility of their salts.

Hyohippus (hī-ō-hip'us), *n.* [NL., ⟨ Gr. ὗς, pig, + ἵππος, horse.] A genus of Miocene Tertiary ungulates having affinities with the horse, but generally regarded as belonging to the family *Palæotheriidæ.*

Hyoid arch, the chain of hyoid bones in the skull of a fish, which lies just anterior to the branchial arches and terminates anteriorly in the tongue.—**Hyoid bar,** the cartilaginous rod on either side in the hyoid or first postmandibular arch of sharks or of the embryos of higher vertebrates.

hyolithid (hī-ō-lith'id), *n.* One of the *Hyolithidæ.*

Hyolithidæ (hī-ō-lith'i-dē), *n. pl.* [*Hyolithus* + *-idæ.*] A family of fossils, of doubtful systematic position, which are currently placed with the *Pteropoda.* It includes symmetrical conical or pyramidal shells, the aperture of which is completely closed by a free operculum. It extends from the Cambrian to the Permian.

hyolithoid (hī-ō-lith'oid), *a.* [*Hyolith(us)* + *-oid.*] Having the characters of the genus *Hyolithus.*

Hyolithus (hī-ol'i-thus), *n.* [NL., ⟨ Gr. *ὑς*, pig, + *λίθος*, stone.] The typical genus of the *Hyolithidæ.*

Hyomandibular cleft. See ★*cleft*[1].

hyoplastral, *a.* **II.** *n.* One of the two bones which form the hyoplastron of turtles. See cut under *Chelonia*, I. *Annals and Mag. Nat. Hist.*, Jan., 1903, p. 120.

Hyopsodidæ (hī-op-sod'i-dē), *n. pl.* [NL. *Hyopsodus*, the type genus, + *-idæ.*] A family of small lemur-like animals whose fossil remains occur in the Wasatch and Bridger Eocene. *Schlosser*, 1887.

hyosternal, *a.* **II.** *n.* Same as *epihyal. Starks*, Synonymy of the Fish Skeleton, p. 517.

hyostyly (hī-os'ti-li), *n.* [*hyo(id)* + Gr. *στῦλος*, pillar, + *-y*[3].] That condition of the cranium in which the palatoquadrate articulates with the cartilaginous cranium and the hyomandibular serves, to a greater or less extent, as a suspensorium for the jaws: found in sharks and rays. **Hyostyly proper,** a condition in which the second visceral arch is intact, the hyomandibular and hyoid segments together forming a movable support for the jaws: found in most sharks and, typically, in *Squatina.* Correlated with ★*cubostyly.*

hyosuspensorial (hī″ō-sus-pen-sō'ri-al), *a.* [*hyo(id)* + *suspensorium* + *-al*[1].] Relating to the hyoid and suspensorium. *Proc. Zool. Soc. London*, 1894, p. 636.

hyotaurocholic (hī-ō-tâ-rō-kol'ik), *a.* [Gr. *ὑς*, pig, + *ταῦρος*, bull (see *taurin*), + *χολή*, bile, + *-ic.*] Noting an organic acid, $C_{26}H_{45}NSO_6$, found in the bile of pigs. On decomposition it yields taurin and hyocholalic acid.

hyothyroid (hī-ō-thī'roid), *a.* [*hyo(id)* + *thyroid.*] Same as *thyrohyoid.*

hypabyssal (hip-a-bis'al), *a.* [Gr. *ὑπό*, under, + E. *abyssal.*] In *petrog.*, a term applied by Brögger (1894) to igneous rocks intermediate in texture between coarse-grained (abyssal) forms and extrusive lava. They occur as facies of the coarse-grained forms in some instances, and in dikes and sheets. They correspond to Rosenbusch's 'dike-rocks (*Ganggesteine*). *Geikie*, Text-book of Geol. (4th ed.), p. 197.

hypactic (hi-pak'tik), *a.* [Gr. *ὑπακτικός*, ⟨ *ὑπάγειν*, carry off below, ⟨ *ὑπό*, under, + *ἄγειν*, lead, carry.] Purgative; cathartic.

hypacusia (hi-pa-kū'si-ä), *n.* [NL.] Same as *hypacusis.*

hypæthros (hī-pē'thros), *n.* Same as *hypæthron.*

hypalbuminosis (hip-al-bū-mi-nō'sis), *n.* [*hyp(o-)* + *albumen(-min)* + *-osis.*] The presence of a subnormal amount of albumins in the bloodplasma.

hypallactic (hip-a-lak'tik), *a.* [Gr. *ὑπαλλακτικός*, exchangeable, ⟨ *ὑπαλλάσσειν*, exchange.] Pertaining to or of the nature of hypallage. *Fitzedward Hall.*

hypallelomorph (hip-a-lel'ō-môrf), *n.* [*hyp(o-)* + *allelomorph.*] In *biol.*, one of the constituents of a compound allelomorph. See the extract.

To sum up the phenomena of compound allelomorphism, we may say that the evidence shows that the characters of a pure form when crossed with another may be broken up into compound characters or *hypallelomorphs*, and that the decomposition may take place in various degrees of completeness.
Bateson and Saunders, Rep. Evol. Com. Roy. Soc., [1902, I. 148.

hyparcuale (hī-pär-kū-ā'lē), *n.*; pl. *hyparcualia* (-li-ä). [NL., ⟨ Gr. *ὑπό*, under, + L. *arcus*, arch.] A bony arch, developed on the superior side of the notochord, which forms the neural arch: the equivalent of the ★*basidorsale* of Gadow.

The whole neurapophysis consists originally of a *hyparcuale* (my basidorsal proper) and of an eparcuale (my supradorsal).
Philos. Trans. Roy. Soc. (London), 1896, ser. B, p. 13.

Hypaxial actinophores. See ★*actinophore.*

hype, *v. i.* See ★*hype.*

Hypena, *n.* 2. [*l. c.*] A moth of this genus. **Hop-vine hypena,** *Hypena humuli*, whose larvæ live on the leaves of the hop-plant and sometimes do considerable damage.

Hypenantron (hī-pe-nan'tron), *n.* [NL. (Corda, 1829), a typographical error for "*Hypenantion*, ⟨ Gr. *ὑπεναντίος*, opposite, ⟨ *ὑπό*, under, + *ἐναντίος*, opposite.] A large genus of liverworts of the family *Marchantiaceæ*, distinguished from *Marchantia* chiefly by the inner or false involucre being split at maturity into 3–many-lanceolate lobes. There are 44 species growing on rocks or on the ground in nearly all parts of the world.

Hypenantron tenella.
a, plant, two thirds natural size; *b*, cross-section of fruiting head, enlarged; *c*, capsule dehiscing; *d*, elater; *e*, spore. *c*, *d*, and *e*, magnified. (From Gray's "Manual of Botany.")

hypenchyme (hip'-eng-kim), *n.* [Gr. *ὑπό*, under, + NL. *enchyma.*] In *embryol.*, primitive connective tissue developing in the cavity of the archenteron, as distinguished from *mesenchyme.*

A process of cell-proliferation then causes the formation of mesenchyme and *hypenchyme* (the latter filling the archenteron). *Nature*, April 10, 1902, p. 551.

hypenid (hī-pen'id), *n.* and *a.* **I.** *n.* A member of the lepidopterous family *Hypenidæ.*

II. *a.* Of or belonging to the family *Hypenidæ.*

hyper-. (*d*) In *mod. math.*, chiefly denoting extension, generalization, or complication, as in *hyperspace*, *hypergeometrical.*

hyperabsorption (hī″pèr-ab-sôrp'shon), *n.* Excessively active absorption. *Philos. Trans. Roy. Soc.* (London), 1902, ser. B, p. 59.

hyperacid (hī-pèr-as'id), *a.* Extremely or strongly acid.

hyperacusia (hī″pèr-a-kū'si-ä), *n.* [NL.] Same as *hyperacusis.*

hyperacute (hī pèr-a-kūt'), *a.* Extremely acute. *Buck*, Med. Handbook, III. 40.

hyperalbuminosis (hī″pèr-al-bū-mi-nō'sis), *n.* The presence of an unusually large amount of albumins in the blood-plasma.

hyperalimentation (hī″pèr-al″i-men-tā'shon), *n.* The taking of food in excess of the ordinary needs of the body.

hyperalkalinity (hī″pèr-al-ka-lin'i-ti), *n.* Excessive alkalinity.

hyperanabolic (hī″pèr-an-a-bol'ik), *a.* Abnormally or excessively anabolic.

[The] ash and smoke . . . of the combustion of the products of a *hyperanabolic* activity.
G. S. Hall, Adolescence, I. 486.

hyperaphia (hī-pèr-ā'fi-ä), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *ἁφή*, touch.] Abnormal acuteness of touch.

hyperbola, *n.*—**Imaginary semi-axis of a hyperbola,** the conjugate semi-axis, *b.*

hyperbolatoid (hī-pèr'bō-la-toid), *n.* [*hyperbola* + *-ate*[1] + *-oid.*] The solid cut out between two parallel planes by a straight line which intersects them and so moves as to return to its initial position.

Hyperbolic area, the lateral areas of the proostracum of the shell of *Belemnites*, situated on either side of the dorsal area and separated from it by the asymptotes. It is covered with very obliquely arched lines in a hyperbolic form.—**Hyperbolic cosine, function, involution, paraboloid.** See ★*cosine*, ★*function*, ★*involution*, ★*paraboloid.* **Hyperbolic secant of x, sine of x.** See ★*secant*, ★*sine*[2].—**Hyperbolic substitution, tangent of x.** See ★*substitution*, ★*tangent.*

hyperbolo-parabolical (hī-pèr″bō-lō-par-a-bol'i-kal), *a.* Like the hyperbola or parabola, or like both at once.

hyperbrachyuranic (hī-pèr-brak″i-ū-ran'ik), *a.* [*hyper-* + *brachyuranic.*] Having an excessively short palate, that is, in *craniom.*, having an excessively high palatomaxillary index.

hyperbulia (hī-pèr-bū'li-ä), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *βουλή*, will.] The possession of abnormally great will force.

hypercarbureted, hypercarburetted (hī-pèr-kär'bū-ret-ed), *a.* Charged with carbon in excess, as illuminating-gas containing such a large proportion of carbon as to burn with a smoky flame.

hypercementosis (hī-pèr-sē-men-tō'sis), *n.* [Gr. *ὑπέρ*, over, + NL. *cementum*, cementum, + *-osis.*] An overgrowth of the cementum of a tooth.

hyperchlorhydria (hī″pèr-klōr-hī'dri-ä), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *chlor(in)* + *hydr(ogen)* + *-ia.*] The presence of an abnormal proportion of hydrochloric acid in the gastric juice.

hyperchlorhydric (hī″pèr-klōr-hī'drik), *a.* Relating to hyperchlorhydria. *Med. Record*, Feb. 7, 1903, p. 229.

hyperchloridation (hī″pèr-klō-ri-dā'shon), *n.* [*hyper-* + *chlorid* + *-ation.*] The charging in excess with chlorin or one of its compounds, as the administration to a patient of an excessive amount of common salt, sodium chlorid. *Lancet*, June 18, 1904, p. 1758.

hypercholia (hī-pèr-kō'li-ä), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *χολή*, bile.] An abnormally profuse secretion of bile.

hyperchromatic (hī″pèr-krō-mat'ik), *a.* [*hyper-* + *chromatic.*] 1. Excessively pigmented. —**2.** Staining with extreme facility.

hyperchromatopsy (hī-pèr-krō'ma-top-si), *n.* [Gr. *ὑπέρ*, over, + *χρῶμα(τ-)*, color, + *ὄψις*, view.] An anomaly of vision in which all objects appear to be colored.

hyperchromatosis (hī″pèr-krō-ma-tō'sis), *n.* [*hyperchromat-ic* + *-osis.*] The state or condition of containing more than the normal amount of chromatin: said of certain cells. Opposed to ★*hypochromatosis.*

hypercomposite (hī″pèr-kom-poz'it), *a.* Excessively composite; composed of an excessive number of ingredients.

The receipts collected in . . . books for domestic practice are some of them so *hyper-composite* that even Tusser's garden could hardly supply all the indigenous ingredients.
Southey, Doctor, xxiv., P. I.

hypercycle, *n.* 2. Same as ★*equidistantial.*

hypercycloid (hī-pèr-sī'kloid), *n.* [*hypercycle* + *-oid.*] In *Bolyaian geom.*, a surface generated by a hypercycle or equidistantial.—**Hypercycloid of revolution,** the straight equidistant surface or tube of revolution with rectilinear axis.

hyperdactylia (hī″pèr-dak-til'i-ä), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *δάκτυλος*, finger.] The presence of more than five fingers or toes on a hand or foot.

hyperdicrotism (hī-pèr-dik'rō-tizm), *n.* [*hyper-* + *dicrotism.*] A condition of very pronounced dicrotism or rebounding of the pulse.

hyperdissyllable (hī″pèr-di-sil'a-bl), *n.* and *a.* **I.** *n.* A word of more than two syllables.

II. *a.* Of more than two syllables: as, a *hyperdissyllable* participle. *N. E. D.*

hyperdistension (hī″pèr-dis-ten'shon), *n.* Extreme distension.

hyperdiuresis (hī″pèr-dī-ū-rē'sis), *n.* [NL., ⟨ *hyper-* + *diuresis.*] Same as *polyuria.*

hyperdolichocephalic (hī-pèr-dol″i-kō-se-fal'ik), *a.* [*hyper-* + *dolichocephalic.*] In *anthrop.*, having a cephalic index from 65.0 to 65.9. *Keane*, Ethnology, p. 147.

hyperdolichopellic (hī-pèr-dol″i-kō-pel'ik), *a.* [*hyper-* + *dolichopellic.*] In *anat.*, having a pelvic index more than 116, as found in anthropoid apes. *Amer. Anthropologist*, Oct.–Dec., 1901, p. 713.

hyperdynamia (hī″pèr-dī-nam'i-ä), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *δύναμις*, power.] Abnormally great nervous or muscular force.

hypereosinophilia (hī″pèr-ē″ō-sin-ō-fil'i-ä), *n.* [NL., ⟨ *hyper-* + *eosinophilia.*] The presence in the blood of a larger number of eosinophilic leucocytes than is normal.

hyperequatorial (hī″pèr-ē-kwā-tō'ri-al), *a.* More than equatorial in temperature.

If you strip Peter, you will see a fellow
Scorched by Hell's *hyperequatorial* climate
Into a kind of a sulphureous yellow.
Shelley, Witch of Atlas, To Mary, st. 6.

hypererethism (hī-pèr-er'e-thizm), *n.* Excessive irritability.

hyperesthete (hī-pèr-es'thēt), *n.* One who is affected with hyperæsthesia; one who is abnormally sensitive.

hypereutectic (hī″pèr-ū-tek'tik), *a.* Having an excess of cementite over the eutectic ratio of 7 to 1; containing (as steel) more carbon in the form of cementite than 0.90 per cent.

The percentage of the excess of ferrite or cementite for hypo- and *hyper-eutectic* steels respectively.
Encyc. Brit., XXIX. 572.

hyperexcitability (hī″pèr-ek-sī-ta-bil'i-ti), *n.* An excessive degree of excitability.

hyperextension (hī″pèr-eks-ten'shon), *n.* The extension of a joint beyond the straight line or the normal limit of such movement.

hypergas (hī'pèr-gas), *n.* See *fourth state of* ★*matter.*

hypergaseous (hī-pèr-gas'ē-us), *a.* Of or pertaining to a hypergas or to the fourth state of matter (Crookes). See ★*matter.*

Hypergeometric equation. Same as *Gauss's* ★*equation*.

hypergeometrical (hī″pėr-jē-ō-met′ri-kạl), *a.* Same as *hypergeometric*.

hypergeometry (hī″pėr-jē-om′e-tri), *n.* **1.** Geometry of point-space of more than three dimensions. — 2. The geometry of non-Euclidean space.

His (Lobatchewsky's) first contribution to the theory of *hypergeometry* is believed to have been given in a lecture at Kazań in 1826. *Encyc. Brit.*, XXX. 596.

hyperglobulia (hī″pėr-glō-bū′li-ạ), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + L. *globulus*, globule.] A condition in which the red blood-corpuscles are in excessive amount.

hyperglycemia (hī pėr-glī-sē′mi-ạ), *n.* The presence in the blood of a large quantity of sugar. Also *hyperglykemia*.

hyperglycemic (hī pėr-glī-sē′mik), *a.* Relating to or affected with hyperglycemia. *Med. Record*, Jan. 24, 1903, p. 123.

hypergon (hī′pėr-gon), *n.* [Gr. *ὑπέρ*, over, + *γωνία*, angle.] In *photog.*, a wide-angled lens, devised by Goerz, embracing an angle of 135°. It is a double anastigmat, the symmetrical doublet consisting of two very thin semi-spherical single lenses.

hyperheredity (hī″pėr-hē-red′i-ti), *n.* The hypothetical accumulation or culmination of inheritance in the offspring of delayed mating.

Conversely, . . . *hyperheredity* due to long delay of propagation may be a factor for accounting for . . . some of the monsters of the geologic past.
G. S. Hall, Adolescence, II. 607.

hyperhexapodous (hī pėr-hek-sap′ō-dus), *a.* Same as *hyperhexapod*.

hyperiastian (hī″pėr-ī-as′ti-ạn), *a.* [Gr. *ὑπεριάστιος*, ⟨ *ὑπέρ*, over, + Ἰάστιος, Ionian, ⟨ Ἰάς, Ionian.] See *mode*[1], 7 (*a*) (1).

hypericaceous (hī-per-i-kā′shius), *a.* Belonging to or having the characters of the plant family *Hypericaceæ*.

Hypericales (hī″per-i-kā′lēz), *n. pl.* [NL. (Small, 1903), ⟨ *Hypericum* + *-ales*.] A large order of dicotyledonous, chiefly choripetalous plants, characterized by regular flowers (except in the *Violaceæ*), usually numerous stamens, a compound ovary, and parietal placentæ (whence often called *Parietales*). It includes 31 families. They are mostly herbs, but some are shrubs, and there are a few tropical trees. The principal families are the *Hypericaceæ*, *Theaceæ*, *Clusiaceæ*, *Cistaceæ*, *Violaceæ*, *Flacourtiaceæ*, *Turneraceæ*, and *Begoniaceæ*.

hyperinvolution (hī″pėr-in-vō-lū′shọn), *n.* In *physiol.*, involution which is excessive in either extent or rapidity. See *involution*, 7.

hyperisotonic (hī″pėr-ī-sō-ton′ik), *a.* [*hyper-* + *isotonic*.] Exerting greater osmotic pressure than an isotonic solution. *Simon*, Physiological Chem., p. 327.

hyperkeratosis (hī″pėr-ker-ạ-tō′sis), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *κέρας* (*κερατ-*), horn, + *-osis*.] **1.** Hypertrophy of the horny layer of the epidermis. — 2. Same as *conical* ★*cornea*.

hyperlactation (hī″pėr-lak-tā′shọn), *n.* Secretion of milk in excessive amount or for an abnormally prolonged period. *Buck*, Med. Handbook, II. 224.

hyperlethal (hī-pėr-lē′thạl), *a.* More than sufficient to cause death: noting an amount of a poisonous drug. *Philos. Trans. Roy. Soc.* (London), 1898, ser. B, p. 269.

hyperleucocytosis (hī″pėr-lū″kō-sī-tō′sis), *n.* Same as *leucocytosis*.

hypermastia (hī-pėr-mas′ti-ạ), *n.* [Gr. *ὑπέρ*, over, + *μαστός*, breast.] Excessive development of the breasts.

hypermature (hī″pėr-mạ-tūr′), *a.* Overripe, as a cataract in the eye. *Buck*, Med. Handbook, II. 720.

hypermegacranious (hī″pėr-meg-ạ-krā′ni-us), *a.* In *craniom.*, having a skull of very large volume, over 2,280 cubic centimeters in males, over 1,960 cubic centimeters in females.

hypermegaprosopous (hī″pėr-meg-ạ-pros′ō-pus), *a.* In *anthrop.*, having a facial skeleton whose volume exceeds 790 cubic centimeters for males, and 630 cubic centimeters for females. *E. Schmidt*.

hypermesaticephalic (hī″pėr-mes″ạ-ti-se-fal′-ik), *a.* In *anthrop.*, having a mesaticephalic form of head, but approaching brachycephalism.

hypermetropia, *n.* **Total hypermetropia,** the sum of the latent and manifest hypermetropia.

hypermicroprosopous (hī″pėr-mī-krō-pros′ō-pus), *a.* In *anthrop.*, having a facial skeleton whose volume is less than 460 cubic centimeters for males, and 400 cubic centimeters for females. *E. Schmidt*.

hypermnesis (hī-pėrm-nē′sis), *n.* [NL.] Same as *hypermnesia*.

hypernephroma (hī-pėr-nef-rō′mạ), *n.*; pl. *hypernephromata* (-ma-tạ). [NL., ⟨ Gr. *ὑπέρ*, over, + *νεφρός*, kidney, + *-oma*.] A tumor of the adrenal gland.

hypernidation (hī″pėr-ni-dā′shọn), *n.* [*hyper-* + *nidation*.] Formation in abnormal amount, during menstruation, of a membrane analogous to the decidua. *G. S. Hall*, Adolescence, I. 483.

hypernitrogenous (hī″pėr-nī-troj′e-nus), *a.* Containing nitrogen in excess of the normal amount, as soil or other substances.

hypernormal (hī-pėr-nôr′mạl), *a.* In excess of the normal; above the normal.

The temperature is reduced from 1–1°.5 C., but this is recovered from in 2–2½ hours, and become[s] thereafter slightly *hypernormal*.
Philos. Trans. Roy. Soc. (London), 1902, ser. B, p. 101.

hypernutrition (hī″pėr-nū-trish′ọn), *n.* Nutrition beyond the normal needs of the body. *Med. Record*, Feb. 7, 1903, p. 227.

Hyperoartii (hī″pėr-ō-är′ti-ī), *n. pl.* [NL., ⟨ Gr. *ὑπερῷον*, upper room (palate), + *ἄρτιος*, complete (entire).] The order or subclass of the *Marsipobranchii*, typified by the lampreys. In this group the nasal duct is a fluid-sac, not penetrating the palate.

Hyperodapedon (hī″pėr-ō-dap′ē-don), *n.* [NL., ⟨ Gr. *ὑπέρ*, above, + *δαπέδον*, pavement.] A genus of rhynchocephalian reptiles from the Upper Trias of Europe and India, which attained a length of from 10 to 14 feet. The skull is triangular in form, flat on top, and bears a long curved premaxillary beak, and its upper dentition is spread over a compound triangular bone, termed the palato-maxilla, in several rows of pyramidal teeth with grooves between for the reception of the edges of the mandible.

Hyperodapedon Gordoni.

Left lateral view of the skull, as restored by Professor Huxley, from the Trias of Elgin. *Or*, orbit; *t*, infratemporal fossa. Reduced. From Nicholson and Lydekker's "Paleontology."

hyperope (hī′pėr-ōp), *n.* [Gr. *ὑπέρ*, over, + *ὤψ* (*ὠπ-*), eye.] Same as *hypermetrope*.

hyperorthognathous (hī″pėr-ôr-thog′nạ-thus), *a.* [Gr. *ὑπέρ*, over, + *ὀρθός*, right, + *γνάθος*, jaw.] In *anthrop.*, having a facial angle exceeding 90°.

hyperosmic (hī-pėr-os′mik), *a.* [Gr. *ὑπέρ*, over, + *ὀσμή*, smell.] **1.** Relating to or affected with hyperosmia, or abnormal acuteness of smell. — **2.** Noting an acid, osmium tetroxid.

hyperosmotic (hī″pėr-os-mot′ik), *a.* Produced by or inducing increased rapidity of osmosis. *Med. Record*, Jan. 24, 1903, p. 121.

hyperosteogenic (hī″pėr-os″tē-ō-jen′ik), *a.* Pertaining to or affected with hyperosteogeny. *G. S. Hall*, Adolescence, I. 81.

hyperosteogeny (hī-pėr-os-tē-oj′e-ni), *n.* [Gr. *ὑπέρ*, over, + *ὀστέον*, bone, + *-γενεια*, ⟨ *-γενής*, -producing.] Hypertrophy of bone.

hyperostotic (hī-pėr-os-tot′ik), *a.* [*hyperostosis* (*-ot-*) + *-ic*.] Relating to hyperostosis or hypertrophy of bone.

Hyperotreti (hī″pėr-ō-trē′tī), *n. pl.* [NL., irreg. ⟨ Gr. *ὑπερῷον*, upper room (palate), + *τρητός*, perforated.] The order or subclass of the *Marsipobranchii*, typified by the hagfishes. In this group the nasal duct is a tube with cartilaginous rings penetrating the palate.

hyperoxid (hī-pėr-ok′sid), *n.* [*hyper-* + *oxid*.] In *chem.*, an oxid containing a larger proportion of oxygen than some other analogous compound referred to: as, *hyperoxid* of lead, lead dioxid, PbO_2, in which the proportion of oxygen is larger than in litharge, PbO, or red lead, Pb_3O_4: same as *peroxid*.

hyperoxygenate (hī-pėr-ok′si-jen-āt), *v. t.*; pret. and pp. *hyperoxygenated*, ppr. *hyperoxygenating*. In *chem.*, to charge with oxygen in excess.

hyperoxygenize (hī-pėr-ok′si-jen-īz), *v. t.*; pret. and pp. *hyperoxygenized*, ppr. *hyperoxygenizing*. Same as ★*hyperoxygenate*.

hyperpepsia (hī-pėr-pep′si-ạ), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *πέψις*, digestion.] Indigestion resulting from an abnormal proportion of chlorids in the gastric juice.

hyperpeptic (hī-pėr-pep′tik), *a.* Relating to or affected with hyperpepsia.

hyperper (hī-pėr′pėr), *n.* [ML. *hyperperum* (also *perperum*, *perperus*), *hyperpyrum*, ⟨ MGr. *ὑπέρπυρον*, a coin so called as made from gold considered as highly refined by fire, ⟨ *ὑπέρ*, over, + *πῦρ*, fire.] In *numis.*, a Byzantine gold coin somewhat heavier than a half-sovereign; the gold solidus. See *solidus*, 1.

In return he was to receive 1,000 silver marks, and as much land in the west, that is, in Epeiros, as will yield an annual revenue of 10,000 gold *hyperpers*.
J. B. Bury, in Jour. Hellenic Studies, VII. 312.

hyperperfection (hī″pėr-pėr-fek′shọn), *n.* [*hyper-* + *perfection*.] Perfection to excess; perfection, in the parts or functions of animals or of man, which is considered to be beyond the limits of usefulness.

hyperperistalsis (hī″pėr-per-i-stal′sis), *n.* [NL., ⟨ *hyper-* + *peristalsis*.] Abnormally rapid peristalsis.

hyperphalangeal (hī″pėr-fạ-lan′jē-ạl), *a.* [Gr. *ὑπέρ*, over, + *φάλαγξ*, phalanx, + *-eal*[1].] Having more than the normal number of phalanges in a digit.

Embryos are *hyperphalangeal*, the fourth toe developing six phalanges.
H. Gadow, Amphibia and Reptiles, p. 441.

hyperphalangism (hī″pėr-fạ-lan′jizm), *n.* [Gr. *ὑπέρ*, over, + *φάλαγξ* (*φαλαγγ-*), phalanx, + *-ism*.] The occurrence of more than three phalanges in a digit. There are as many as fourteen phalanges in the fingers of some cetaceans.

The number of the phalanges of the second and third digits (in whales) always exceeds the normal number in mammals, sometimes very considerably (*hyperphalangism*). *Flower and Lydekker*, Mammals, p. 226.

With regard to *hyperphalangism* he agrees . . . that it is a result of retarded ossification and the formation of double epiphyses.
Jour. Roy. Micros. Soc., Feb., 1904, p. 55

hyperphalangy (hī″pėr-fạ-lan′ji), *n.* Same as ★*hyperphalangism*.

hyperphoria (hī-pėr-fō′ri-ạ), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *-φορία*, ⟨ *-φορος*, ⟨ *φέρειν*, carry.] A condition in which one visual axis tends to be inclined upward more than the other. See ★*hypertropia*.

hyperphoric (hī-pėr-for′ik), *a.* [Gr. *ὑπέρ*, over, + *-φορικός*, ⟨ *φέρειν*, carry.] In *petrog.*, noting changes in a rock or mineral produced by addition or subtraction of material.

hyperphosphorescence (hī″pėr-fos-fō-res′ens), *n.* [*hyper-* + *phosphorescence*.] The emission of obscure rays, capable of affecting the photographic plate, by certain bodies that have been previously exposed to light.

hyperphrenia (hī-pėr-frē′ni-ạ), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *φρήν*, mind.] Extreme mental excitement.

hyperpiesis (hī″pėr-pī-ē′sis), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *πίεσις*, pressure.] Increase of blood-pressure beyond the normal degree.

hyperpigmentation (hī″pėr-pig-men-tā′shọn), *n.* An excess of pigmentation.

hyperpigmented (hī-pėr-pig′men-ted), *a.* Excessively pigmented. *Buck*, Med. Handbook, V. 485.

hyperplane (hī′pėr-plān), *n.* [*hyper-* + *plane*[1].] An $(n-1)$-dimensional plane, defined in n-dimensional space by a homogeneous linear equation between its homogeneous coördinates.

hyperplasia, *n.* **2.** In *bot.*, an abnormal increase in the volume of cells, due to their unusual multiplication. Compare ★*hypoplasia*.

hyperplasm (hī′pėr-plazm), *n.* **1.** Same as *hyperplasia*. — 2. Same as *hyperinosis*.

hyperplatyrrhine (hī-pėr-plat′i-rin), *a.* [*hyper-* + *platyrrhine*.] In *anthrop.*, having a nasal index of the skull over 58.

hyperporosis (hī″pėr-pō-rō′sis), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *πώρωσις*, formation of callus: see *porosis*.] Excessive callus-formation in the healing of a broken bone.

hyperpraxia (hī-pėr-prak′si-ạ), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *πρᾶξις*, action.] Excessive activity. *Baldwin*, Dict. of Philos. and Psychol., I. 64.

hyperpresbyopia (hī″pėr-pres-bi-ō′pi-ạ), *n.* [*hyper-* + *presbyopia*.] Same as *hypermetropia*.

hyperprochoresis (hī″pėr-prō-kō-rē′sis), *n.* [NL., ⟨ Gr. *ὑπέρ*, over, + *προχώρησις*, going forward.] Abnormally rapid propulsion of food from the stomach into the intestine.

Hyperprosopon (hī-pėr-pros′ō-pon), *n.* [NL., ⟨ Gr. *ὑπέρ*, above, + *πρόσωπον*, face.] A genus of surf-fishes of the family *Embiotocidæ*, known as *walleyes* on the coast of California. *H. argenteus* is the common species.

hyperpyretic (hī-pèr-pī-ret'ik), *a.* [Gr. ὑπερ, over, + πυρετος, fever, + -ic.] Same as *hyperpyrexial.*

hyperpyrexic (hī″pèr-pī-rek'sik), *a.* Same as *hyperpyrexial.*

hypersolid (hī-pèr-sol'id), *n.* [*hyper-* + *solid.*] A solid of four or more dimensions.

hyperspace. *n.* 2. Non Euclidean space.

II. *a.* Pertaining to either genus of hyperspace, *n*-dimensional or non-Euclidean.

This strictly logical tendency has been much more influential in building up the *hyperspace* geometry and the modern theory of numbers than the layman recognizes.
Journ. of Philos., Psychol. and Sci. Methods, Feb. 4, 1904, [p. 60.

hypersphere (hī'pèr-sfēr), *n.* [Gr. ὑπέρ, over, + σφαιρα, sphere.] 1. Equidistantial surface.—2. In four-dimensional space, the three-dimensional quadric spaces through the intersection of $X_5=0$ and S'_3, where S'_3 is a three-dimensional space which is met by any line of S_4 in two points.

hyperstatic (hī-pèr-stat'ik), *a.* [*hyper-* + *static.*] In *elect.*, noting that the potential of the static current is very high.

When near enough (one or two centimeters), a spark jumped from the electrode and impinged on the skin. The electric current then traversed the body, seeking the most convenient path to earth. To this spark I later gave the name "*hyperstatic*," to imply that the potential of the static current had been raised, and to the instrument the term "*hyperstatic* transformer" has been applied. *Med. Record*, March 7, 1903, p. 363.

hyperstrophic (hī-pèr-strof'ik), *a.* [Gr. ὑπερ, over, + -στροφος, < στρέφειν, turn.] In snail-shells, reversed sinistrally or dextrally, or abnormally sinistral or dextral, as in *Lanistes* and *Limacina:* ultra-dextral or ultra-sinistral. *Encyc. Brit.*, XXX. 795.

hypersurface (hī″pèr-sèr'fās), *n.* [*hyper-* + *surface.*] In space of *n*-dimensions, S_n, the aggregate of points whose coördinates satisfy a rational homogeneous equation with integral coefficients.

hypertely (hī'pèr-tel-i), *n.* [NL. "*hypertelia*," < Gr. ὑπερτέλειον, beyond completeness or perfection, < ὑπερ, over, + τέλειος, complete, perfect, < τέλος, end.] In *biol.*, a development of protective resemblance which transcends usefulness: a term proposed by Brunner von Wattenwyl and generally adopted. For example, where the wing of a locustid resembles in color and shape the leaf of a tree on which the insect feeds, the further resemblance of certain clear spots on the wing to fungous spots on the leaf, or to spots nibbled by an insect, is hypertely.

hypertension (hī-pèr-ten'shon), *n.* [*hyper-* + *tension.*] Extreme tension.

hyperthermal (hī-pèr-thèr'mal), *a.* Same as ★*hyperthermic.*

hyperthermia (hī-pèr-thèr'mi-ä), *n.* [NL., < Gr. ὑπερ, over, + θέρμη, heat.] Same as *hyperpyrexia.*

hyperthermic (hī-pèr-thèr'mik), *a.* [Gr. ὑπέρ, over, + θέρμη, heat, + -ic.] Relating to a high temperature, or to a condition of great excess of heat; having a tendency to raise the temperature.

hyperthymia (hī-pèr-thī'mi-ä), *n.* [NL., < Gr. ὑπερθυμία, < ὑπερθυμος, high-spirited, very angry, < ὑπέρ, over, + θυμός, spirit, mind.] Insanity marked by violence and an impulse to acts of cruelty.

hyperthyroidation (hī-pèr-thī-roi-dā'shon), *n.* [*hyperthyroid* + *-ation.*] Same as ★*hyperthyroidism.*

hyperthyroidism (hī-pèr-thī'roi-dizm), *n.* [*hyper-* + *thyroid* + *-ism.*] A condition of over-activity of the thyroid gland. Also called *hyperthyroidation* and *hyperthyroidization.* *Buck*, Med. Handbook, IV. 396.

hyperthyroidization (hī-pèr-thī-roi-di-zā'shon), *n.* Same as ★*hyperthyroidism.*

hyperthyrum (hī-pèr'thi-rum), *n.*; pl. *hyperthyra* (-rä). [L. *hyperthyrum*, the lintel or cornice over a door; < Gr. ὑπερθύριον, also ὑπερθύρειον, the lintel over a door, < ὑπέρ, over, + θύρα, door.] The lintel or the cornice over a door.

hypertonia (hī-pèr-tō'ni-ä), *n.* [NL., < Gr. ὑπερτονία, < ὑπερτονος, overstrained, < ὑπερ, over, + τονος, tension, strain: see *tone*[1].] Extreme reflex irritability. Also called *hypertonicity* and *hypertonus.*

hypertonic (hī-pèr-ton'ik), *a.* [Gr. ὑπέρ, over, + τονος, strain, tension, + -ic.] In *phys. chem.*, having a greater osmotic pressure than some solution regarded as a standard. See ★*isotonic*, 2.

In which the pressure is first increased, sometime before the cleavage, which takes place after the return from the *hypertonic* solution to the sea water.
Biol. Bulletin, April, 1904, p. 235.

hypertonicity (hī″pèr-tō-nis'i-ti), *n.* [As *hypertonic* + *-ity.*] Same as ★*hypertonia.*

hypertrophy, *n.*—**Compensatory hypertrophy,** increase in the muscular tissue of the heart by which it is enabled to maintain the circulation in spite of a defect in the valves: applied also to analogous conditions in other organs or parts. **Eccentric hypertrophy,** increase in size of a hollow organ, due to greater thickness of the walls as well as to dilatation of its cavity.—**False hypertrophy,** hyperplasia of the connective-tissue stroma, but not of the functional elements of the structure.—**Functional hypertrophy,** increase in size of a part following upon increased use. **Numerical hypertrophy.** Same as *hyperplasia.* **Physiological hypertrophy,** hypertrophy from increased use. **Quantitative hypertrophy.** Same as *hyperplasia.*

hypertropia (hī-pèr-trō'pi-ä), *n.* [Gr. ὑπέρ, over, + τρόπος, turn, direction.] A condition in which one visual axis is inclined above the other. See ★*hyperphoria.* *Med. Record*, April 18, 1903, p. 610.

hypertype (hī'pèr-tīp), *n.* [Gr. ὑπέρ, over, + τύπος, type.] An individual possessing the characteristics of a type in an excessive degree.

Exaggerated specimens, *hypertypes*, as they are called, do however occur, but only in one or two respects; such are the Fijian Kai Colos, who are said to be "hypertypical Melanesians, because of the excessive dolichocephaly of their cranna (Flower). *Keane*, Ethnology, p. 12.

hyperuresis (hī″pèr-ū-rē'sis), *n.* [Gr. ὑπέρ, over, + οὐρησις, urination.] Same as *polyuria.*

hypervenosity (hī″pèr-vē-nos'i-ti), *n.* [*hyper-* + *venosity.*] An abnormal development of the venous system. *Buck*, Med. Handbook, III. 754.

hypha, *n.* **Woronin's hypha,** the peculiar curved hypha, crowded with protoplasm, which is found in certain fungi at the base of the forming perithecium before the development of asci.

hyphen, *n.* 3. The symbol +, = plus. [Rare.]

hypho (hī'fō), *n.* [*cap.* and *l. c.*] An abbreviation of *Hyphomycetes* or ★*hyphomycete.*

The largest order of the fungi imperfecti is the group of fungi often known as the Hyphomycetes, and called "*Hyphos*" for short.
Underwood, Moulds, Mildews and Mushrooms, p. 74.

Hypholoma (hī-fō-lō'mä), *n.* [NL., < Gr. ὑφή, web, + λωμα, fringe.] A genus of agaricaceous fungi having fleshy pilei or caps and a membranous or cobweb-like veil, part of which usually remains attached to the margin of the pileus. The spores are dark or purplish-brown, and the stipe without a distinct annulus. The species are numerous, growing on the ground or decayed wood. *H. fasciculare* is a common species with a tawny pileus said to cause a root-rot of the raspberry in Australia.

hyphomycete (hī-fō-mī'sēt), *n.* Any member of the *Hyphomycetes.*

hyphomycetic (hī″fō-mī-set'ik), *a.* Same as *hyphomycetous.*

hyphydrogamic (hip-hī-drō-gam'ik), *a.* [Gr. ὑπο, under, + ὑδωρ, water, + γαμος, marriage, + -ic.] In *bot.*, hydrophilous, with the pollination taking place below the surface of the water.

hypisotonic (hip-ī-sō-ton'ik), *a.* [Gr. ὑπό, under, + ἰσος, equal, + τονος, tension, + -ic.] Same as ★*hypotonic*, 1.

Hypleurochilus (hip″lū-rō-kī'lus), *n.* [NL., so called in allusion to the Y-shaped lateral lips; < ὑ, the letter Y, + πλευρά, side, + χεῖλος, lip.] A genus of small blennies found in tropical America, having the gill-openings restricted to the sides and with the body naked.

hypnagogue (hip'na-gog), *n.* [Gr. ὕπνος, sleep, + ἀγωγός, leading, bringing.] Something which induces sleep; a hypnotic.

As a *hypnagogue*, the reading [to the British troops in 1796] of Pye's translation of Tyrtæus seems to have held its own with that of the Articles of War in our own day.
N. and Q., 10th ser., III. 346.

hypnal (hip'nal), *n.* [Gr. ὕπνος, sleep, + -al[3].] A trade-name for a compound of antipyrin with chloral, used as a hypnotic.

hypnesthesis, hypnæsthesis (hip-nes-thē'sis), *n.* [NL. *hypnæsthesis*, < Gr. ὕπνος, sleep, + αἴσθησις, perception, feeling.] 1. Blunted sensibility.—2. Sleepiness.

hypnic (hip'nik), *a.* [Gr. ὕπνος, sleep, + -ic.] Relating to or causing sleep; hypnotic.

hypnocyst, *n.* 2. In *bot.*, same as ★*akinete.*

hypnody (hip'nō-di), *n.* [F. *hypnodie*, < Gr. ὑπνωδία, sleepiness, < ὑπνώδης, sleepy, < ὕπνος, sleep, + εἶδος, form.] An excessively long resting-period in the life of an insect, or the condition of the insect during that period.

The larvæ of the host and of the parasite are thus both in that state of somnolence which I have called "*hypnoda*," on the other hand, the chrysalis of the former and the nymph of the latter are both active and capable of developing the most extraordinary energy in order to escape from their prison.
Annals and Mag. Nat. Hist., Oct., 1904, p. 341.

hypnoid (hip'noid), *a.* [Gr. ὕπνος, sleep, + εἶδος, form.] Resembling hypnosis; akin to the hypnotic state.

Some, again, are now seeking to vindicate or probabilize the fact of inspiration . . . by a new scrutiny of not only genius but of ecstatic and *hypnoid* states in which the ordinary mental processes are quickened and exalted.
Amer. Jour. Relig. Psychol. and Education, [May, 1904, p. 2.

By the term *hypnoid* I indicate the coexistence of two or more fully independent functioning constellations of moments consciousness, such as is presented in the phenomena of automatic writing and of hysteria.
B. Sidis, Psychol. of Suggestion, p. 234.

hypnoidal (hip-noi'dal), *a.* [*hypnoid* + -al[1].] Resembling sleep or hypnosis.—**Hypnoidal state,** a pathological condition in which fragments of unrecognized past experience rise to clear consciousness from the subconscious life. See the extract under ★*hypnoidic.*

hypnoidic (hip-noi'dik), *a.* See the following phrase.—**Hypnoidic state,** a pathological condition in which more or less systematized experiences, implying personality, rise spontaneously from the subconscious life into clear consciousness.

While the *hypnoidic states* form complete systems of experiences, whole personalities, the hypnoidal states are mere bits, chips of past experiences.
B. Sidis, Psychol. of Suggestion, p. 239.

hypnoidization (hip-noi-di-zā'shon), *n.* [*hypnoid* + *-ize* + *-ation.*] A method of inducing light hypnosis. See the extract.

The method which I term *hypnoidization* . . . consists in the following procedure: The patient is asked to close his eyes and keep as quiet as possible, without, however, making any special effort to put himself in such a state. He is then asked to attend to some stimulus, such as reading or singing. When the reading is over, the patient, with his eyes still shut, is asked to repeat it, and tell what came into his mind during the reading, during the repetition, or after it. Sometimes . . . the patient is simply asked to tell the nature of ideas and images that entered into his mind at that time or soon after. This method, simple as it is, I find to work wonders, especially in cases of amnesia. *B. Sidis*, Psychol. of Suggestion, p. 224.

hypnoleptic (hip-nō-lep'tik), *a.* [Gr. ὕπνος, sleep, + ληπτικος, < λῆψις, taking.] Characterized by the oncoming of hypnotic sleep. **Hypnoleptic state,** an intermediate state, of short duration, which occurs between the two phases of double consciousness or double personality.

This intermediate *state* was an attack; it was sudden in its onset, and may be termed *hypnoleptic.*
B. Sidis, Psychol. of Suggestion, p. 227.

hypnologic (hip-nō-loj'ik), *a.* Same as *hypnological.*

hypnosophist (hip-nos'ō-fist), *n.* One versed in hypnosophy or the science of sleep and its phenomena.

hypnosophy (hip-nos'ō-fi), *n.* [Gr. ὕπνος, sleep, + σοφία, wisdom.] The scientific study of the nature, cause, and mode of production of sleep, and of all the phenomena of this state.

hypnotherapy (hip-nō-ther'a-pi), *n.* [*hypnosis* + *therapy.*] The therapeutic use of hypnotism. *Alienist and Neurologist*, Nov., 1907.

hypo[2], *n.* 2. In the manufacture of india-rubber goods, a trade-name for lead thiosulphate, used as a vulcanizing material. Also known as *black hypo.*

hypoacidity (hī″pō-a-sid'i-ti), *n.* [*hypo-* + *acidity.*] Acidity in an inferior degree, as less acidity of the gastric juice than is usual or normal. *Encyc. Brit.*, XXXI. 551.

hypoactivity (hī″pō-ak-tiv'i-ti), *n.* [*hypo-* + *activity.*] A diminished degree of activity.

hypoæolic (hī-pō-ē-ol'ik), *a.* Same as ★*hypoeutectic.* *Electrochem. Industry*, March, 1904, p. 120.

hypobenthic (hī-pō-ben'thik), *a.* [*hypobenthos* + *-ic.*] Same as ★*hypobenthonic.*

hypobenthonic (hī″pō-ben-thon'ik), *a.* [*hypobenthos* + *-on-ic.*] Of or pertaining to the animals of the deep sea, or hypobenthos, below the 500-fathom line. See ★*benthos*, ★*hypobenthos.* *Encyc. Brit.*, XXXIII. 935.

hypobenthos (hī-pō-ben'thos), *n.* [NL., < Gr. ὑπό, under, + βένθος, depth (see ★*benthos*).] The animals that live upon or in the bottom of the deep sea, below the 500-fathom line, considered collectively: contrasted with the *epibenthos*, or fauna and flora of the bottom in shallow water, and the *mesobenthos*, or the inhabitants of the bottom between 100 and 500 fathoms; the abyssal benthos. One of the most remarkable results of the exploration of the deep sea is the discovery that the bottom, even under more than five miles of water, supports a rich fauna of characteristic animals, living under conditions which had long been supposed to be incompatible with life. Their bodies support a pressure which, in the greatest depths, is more

than five tons to the square inch, and they live in water that is always near the freezing-point, in total darkness except for the light which they themselves produce by means of luminous organs. Since plants are completely absent in the depths, the only ultimate source of the food of these animals is the rain of dead plants and animals which is constantly falling upon them from the higher levels. See ★*benthos*, ★*epibenthos*, ★*mesobenthos*.

In this zone, which extends from about 500 fathoms to the greatest depths (which may in some cases exceed 5,000 fathoms, or more than 5½ miles), the temperature at any given point is uniform throughout the year. The darkness is probably absolute; for food the animals are dependent upon each other and upon the incessant rain of dead plankton from higher levels; the pressure may be anything between half a ton and five tons per square inch. To the fauna which lives in these remarkable circumstances the name *hypobenthos* may be applied.

Encyc. Brit., XXXIII. 933.

hypobulia (hī-pō-bū li-ä), *n.* [NL., ⟨ Gr. ὑπο, under, + βουλή, will.] Impaired will-power.

hypocarp (hī'pō-kärp), *n.* [NL. *hypocarpium*, ⟨ Gr. ὑπό, under, + καρπός, fruit.] An enlarged growth of the disk and peduncle beneath a fruit. See *Anacardium* (with cut).

hypocarpium (hī-pō-kär'pi-um), *n.*; pl. *hypocarpia* (-ä). Same as ★*hypocarp*.

hypocathartic (hī″pō-ka-thär'tik), *a.* [*hypo-* + *cathartic*.] Laxative.

hypocentrum (hī-pō-sen'trum), *n.*; pl. *hypocentra* (-trä). [Gr. ὑπό, beneath, + κέντρον, center.] Ordinarily the same as *intercentrum*, a bone wedged in between the centra of the vertebræ: usually more or less wedge-shaped, and appearing on the ventral side of the vertebral column, but in the mud-fish *Amia* of about the same size as the true centrum. It is an important component of the vertebræ in the extinct *Stegocephala*. By some authorities the chevron-bones of mammals are considered as developed from the hypocentra. – **Hypocentrum arcuale**, an arched band of bone on the under, ventral, side of the notochord, formed by the union of two *arcualia*: the basiventralia of Gadow. **Hypocentra pleuralia**, a pair of bony plates, or arcualia, which lie on the under side of the notochord behind the hypocentrum arcuale: the 'interventralia' of Gadow. Some confusion exists in the use of the term *hypocentrum*, but it is ordinarily as given above.

hypocephalid (hī-pō-sef'a-lid), *n.* and *a.* **I.** *n.* A member of the coleopterous family *Hypocephalidæ*.

II. *a.* Of or belonging to the family *Hypocephalidæ*.

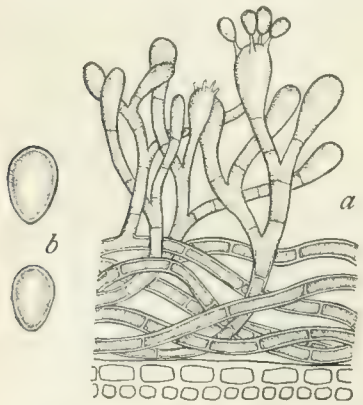
hypochlorhydria (hī″pō-klōr-hī'dri-ä), *n.* [Gr. ὑπό, under, + *chlor(in)* + *hydr(ogen)* + *-ia*.] The presence in the gastric juice of an amount of hydrochloric acid less than normal.

hypochlorin (hī-pō-klō'rin), *n.* [Gr. ὑπό, under, + χλωρός, green, + *-in*².] A term used by Pringsheim to designate an organic substance found in cells containing chlorophyl.

hypochlorization (hī″pō-klō-ri-zā'shon), *n.* [*hypo-* + *chlor(id)* + *-ize* + *-ation*.] Reduction in the amount of table-salt, sodium chlorid, in the dietary of epileptics.

Hypochnaceæ (hī-pok-nā'sē-ē), *n. pl.* [NL., ⟨ *Hypochnus* + *-aceæ*.] A family of hymenomycetous fungi named from the genus *Hypochnus*. See ★*Hypochnus*.

Hypochnus (hī-pok'nus), *n.* [NL. (Ehrenberg, 1818), ⟨ Gr. ὑπό, under, + χνοος, χνοῖς, down.] A genus of hymenomycetous fungi, type of the family *Hypochnaceæ*, having the



Hypochnus Solani.

a, section of the fungus showing hyphæ, basidia, and spores; *b*, spores. (Much enlarged. From Engler and Prantl's "Pflanzenfamilien.")

hymenium consisting of a thin arachnoid layer spreading over the surface of the matrix. The basidia bear 2, 4, or 6 sterigmata. About 30 species have been described, most of which are saprophytic. *H. Solani* has been found on potatoes and *H. cucumeris* is said to attack cucumbers.

hypochordal (hī-pō-kôr'dal), *a.* [Gr. ὑπό, under, + χορδή, cord, + *-al*¹.] Lying beneath, on the ventral side of the spinal cord.

A second or *hypochordal* arch connected with the bases of the neural and visceral arches, lying on the ventral side of the perichordal elements. *Encyc. Brit.*, XXV. 397.

hypochromatic (hī-pō-krō-mat'ik), *a.* [*hypo-* + *chromatic*.] Containing less than the normal amount of chromatin or than the normal number of chromosomes: said of certain cell-nuclei.

hypochromatosis (hī″pō-krō-ma-tō'sis), *n.* [NL., ⟨ Gr. ὑπό, under, + χρῶμα(τ-), color, + *-osis*.] **1.** The state or condition of containing less than the normal amount of chromatin: said of certain cells: opposed to ★*hyperchromatosis*.—**2.** A pathological condition in which there is an abnormally small amount of pigment in the skin or other structures. Also called *hypochromia*.

hypochromia (hī-pō-krō'mi-ä), *n.* [NL., ⟨ Gr. ὑπό, under, + χρῶμα, color.] Same as ★*hypochromatosis*.

hypocinesis, *n.* See ★*hypokinesis*.

Hypocistis (hī-pō-sis'tis), *n.* [NL. (Adanson, 1763, adopted from Tournefort, 1700), ⟨ Gr. ὑποκιστίς, the Greek name of the plant, ⟨ ὑπο, beneath, + κίστος, the rock-rose, on the roots of which the plant is often parasitic.] A genus of dicotyledonous plants of the family *Rafflesiaceæ*. See *Cytinus*.

Hypoclydonia (hī″pō-kli-dō'ni-ä), *n.* [NL., ⟨ Gr. ὑπό, under, + κλύδων, wave, billow.] A genus of deep-water fishes of the family *Apogonidæ*.

Hypocoma (hī-pok'ō-mä), *n.* [NL., ⟨ Gr. ὑπό, under, + κόμη, hair.] The typical genus of the family *Hypocomidæ*. *Gruber*, 1884.

Hypocomidæ (hip-ō-kom'i-dē), *n. pl.* [*Hypocoma* + *-idæ*.] A family of freely moving, unattached *Suctoria* having a permanently ciliated ventral surface and one suctorial tentacle, and reproducing by cross-division. The typical and only genus is *Hypocoma*, found as an ectoparasite on *Zoothamnium*, another protozoan.

hypocondylar (hī-pō-kon'di-lär), *a.* [Gr. ὑπό, under, + κόνδυλος, condyle.] Situated below a condyle. *Buck*, Med. Handbook, IV. 260.

hypocone (hī'pō-kōn), *n.* [Gr. ὑπό, under, + κῶνος, a cone.] A cusp or point developed on the postero-internal angle of an upper molar. It arises from the cingulum, but soon takes its place on the crown. See cut under ★*tooth*, 1.

hypoconid (hī-pō-kon'id), *n.* [Gr. ὑπό, under, + κῶνος, cone, + *-id*.] A point or cusp developed on the postero-external angle of a lower molar. See cut under ★*tooth*, 1.

hypoconule (hī-pō-kon'ūl), *n.* [Gr. ὑπό, under, + NL. *conulus*, dim. of *conus*, cone.] A small or intermediate cusp, developed on the cingulum of the posterior portion of an upper molar.

hypoconulid (hī-pō-kon'ū-lid), *n.* [*hypoconule* + *-id*.] A small intermediate cusp or cuspule, developed on the cingulum of the posterior portion of a lower molar. See cut under ★*tooth*, 1.

hypocorism (hī-pok'ō-rizm), *n.* [Gr. ὑποκόρισμα, a coaxing name, a diminutive, ⟨ ὑποκορίζεσθαι, use childish names, use coaxing language, ⟨ ὑπό, under, + κόρος, m., κόρη, f., child.] A pet name.

hypocotyleal (hī″pō-kot-i-lē'al), *n.* [Gr. ὑπό, under, + κοτύλη, cup, socket, + *-al*¹.] The bone to which the lower jaw is attached in the teleost fishes; the quadrate bone. *Starks*, Synonymy of the Fish Skeleton, p. 513.

Hypocrea (hī-pok'rē-ä), *n.* [NL. (Fries, 1825), ⟨ Gr. ὑπό, under, + κρέας, κρέα, flesh.] A large genus of pyrenomycetous fungi having more or less cushion-shaped fleshy stromata in which the perithecia are embedded. The spores are hyaline and 2-celled, separating at the septum at maturity. The species are widely distributed and occur mostly on decaying wood.

Hypocreaceæ (hī-pok-rē-ā'sē-ē), *n. pl.* [NL., ⟨ *Hypocrea* + *-aceæ*.] A family of pyrenomycetous fungi coextensive with the order *Hypocreales*. See ★*Hypocreales*.

hypocreaceous (hī-pok-rē-ā'shius), *a.* Pertaining or belonging to the fungus family *Hypocreaceæ*. See ★*Hypocreaceæ* and ★*Hypocreales*.

Hypocreales (hī-pok-rē-ā'lēz), *n. pl.* [NL., ⟨ *Hypocrea* + *-ales*.] An order of pyrenomycetous fungi, containing the family *Hypocreaceæ* only, for the greater part light- or bright-colored and fleshy, or tough and having the perithecia buried in or seated upon a stroma. See ★*Hypocrea* and ★*Hypomyces*.

hypocrit, *n.* A simplified spelling of *hypocrite*.

hypocritism (hip'ō-krit-izm), *n.* The conduct of a hypocrite; habitual hypocrisy.

hypocrystalline (hī-pō-kris'ta-lin), *a.* [Gr. ὑπό, under, + E. *crystalline*.] In *petrog.*, partly crystalline, partly glassy: a texture frequently developed in volcanic lavas. Also *hemicrystalline*. See ★*merocrystalline*.

hypocycloidal (hī″pō-sī-kloi'dal), *a.* [*hypocycloid* + *-al*¹.] Of the nature of a hypocycloid.

hypocystic (hī-pō-sis'tik), *a.* [Gr. ὑπό, under, + κύστις, bladder, bag (see *cyst*).] Situated below the air-sac or pneumatophore: as, a *hypocystic* air-funnel in some siphonophorans.

hypoderma, *n.* **4.** [*cap.*] A genus of ascomycetous fungi, type of the family *Hypodermataceæ*, having the ascocarps elongate and opening by a longitudinal slit. The spores are hyaline, spindle-shaped, and 2-celled. About 30 species are known, occurring mostly on dead plants. *H. Rubi* is frequently found on canes of *Rubus* in Europe and America. *De Candolle*, 1805.

hypodermalium (hī″pō-dêr-mā'li-um), *n.*; pl. *hypodermalia* (-ä). [NL.: see *hypodermale*.] In sponges, one of the spicules which support the dermal membrane and have their axial cross beneath it. Compare ★*autodermalium* and *hypodermale*.

Hypodermataceæ (hī″pō-dêr-ma-tā'sē-ē), *n. pl.* [NL., ⟨ *Hypoderma(t)* + *-aceæ*.] A family of ascomycetous fungi named from the genus *Hypoderma*. See ★*hypoderma*, 4.

Hypodermella (hī″pō-dêr-mel'ä), *n.* [NL. (Tubeuf, 1885), ⟨ *Hypoderma* (see ★*hypoderma*, 4) + dim. *-ella*.] A genus of ascomycetous fungi closely related to *Hypoderma*, but differing in having 4-spored asci and unicellular spores. *H. Laricis* is a parasitic species which attacks the needles of the European larch, *Larix Europæa*. See ★*hypoderma*, 4.

Hypodermic impregnation, needle. See ★*impregnation*, ★*needle*.

hypodermoclysis, *n.* **2.** Subcutaneous injection of large quantities of a physiological salt solution in the treatment of shock and of certain acute affections.

hypodynamic (hī″pō-dī-nam'ik), *a.* [Gr. ὑπό, under, + δύναμις, power.] Of diminished power; weak.

hypo-eliminator (hī″pō-ē-lim'i-nā-tor), *n.* [*hypo*², *n.*, 1, + *eliminator*.] In *photog.*, any solution used to remove the last traces of sodium hyposulphite (hypo) from plates or prints after fixing. Zinc hypochlorite, alum, hydrogen peroxid, etc., can be employed. *Nature*, Aug. 14, 1902, p. 368.

hypo-ellipsoid (hī″pō-e-lip'soid), *n.* [*hypo-* + *ellipsoid*.] In *geom.*, a curve described by a point on the circumference of a circle or ellipse which rolls upon the inside of an ellipse.

hypo-eosinophilia (hī″pō-ē-ō-sin-ō-fil'i-ä), *n.* [*hypo-* + *eosinophilia*.] A diminution in the number of the eosinophilic leucocytes of the blood.

hypo-esophoria (hī″pō-ē-sō-fō'ri-ä), *n.* [NL., ⟨ Gr. ὑπό, under, + ἔσω, within, + *-ορια*, ⟨ *-φορος*, ⟨ φέρειν, bear.] Inward and downward deviation of the visual axis.

hypoesthetic, hypoæsthetic (hī″pō-es-thet'ik), *a.* Same as *hypæsthesic*. *Nature*, Oct. 15, 1903, p. 570.

hypo-eutectic (hī″pō-ū-tek'tik), *a.* Containing more than 0.90 per cent. carbon in the form of ferrite; having an excess of ferrite over the eutectic ratio of 7 to 1: said of steel.

They [steels] are called hyper-eutectic or *hypo-eutectic* according as this excess is cementite or ferrite.

Encyc. Brit., XXIX. 572.

hypogæic, *a.* Same as ★*hypogeic*.

hypogastrale (hī″pō-gas-trā'lē), *n.*; pl. *hypogastralia* (-li-ä). [NL., ⟨ Gr. ὑπό, under, + γαστήρ (γαστρ-), belly.] A sponge-spicule whose tangential rays are contained in the gastral wall.

Hypogastric fossa, ganglia, etc. See ★*fossa*, ★*ganglion*.

hypogastrodidymus (hī″pō-gas-trō-did'i-mus), *n.*; pl. *hypogastrodidymi* (-mī). [NL., ⟨ Gr. ὑπό, under, + γαστήρ, belly, + δίδυμος, twin.] A twin monster in which the point of union is at the abdomen below the umbilicus.

hypogeic[1] (hī-pō-jē'ik), *a.* [LL. *hypogeus*, *hypogæus*, ⟨ Gr. ὑπόγειος, ὑπόγαιος, under the earth (see *hypogeal*), + *-ic*.] Of or pertaining

to that deep-seated portion of the earth which is not open to observation. *Dana*, Manual of Geol. (4th ed.), p. 118.

hypogeic[2] (hī-pō-jē'ik), *a.* [*hypogæa* (see def.) + *-ic.*] Derived from *Arachis hypogæa.* — **Hypogeic acid**, a colorless compound, $C_{16}H_{30}O_2$, said to occur as a glyceride in peanut-oil, *Arachis hypogæa*, and formed by the oxidation of axic acid. It crystallizes in aggregates of needles melting at 33° C.

hypogenesis (hī-pō-jen'e-sis), *n.* [NL., < Gr. ὑπό, under, + γένεσις, generation.] That form of reproduction in which the product of each egg or each bud is a single organism like the parent; direct development without alternation of generations, as contrasted with *metagenesis* (which see). *Encyc. Brit.*, XXVII. 131.

hypogenetic (hī-pō-jē-net'ik), *a.* [*hypogenesis* (*-et-*) + *-ic.*] Of or pertaining to development by hypogenesis. *Encyc. Brit.*, XXVII. 131.

hypogenic (hī-pō-jen'ik), *a.* [Gr. ὑπό, under, + *-γενής*, -produced, + *-ic.*] Originating in the depths of the earth: applied to volcanoes, earthquakes, and kindred phenomena.

A discussion of the movements along this and other fault lines in Macedonia, and of changes in level which are apparently in progress at Salonika and its neighbourhood, leads to the conclusion that *hypogenic* geological processes have in this part of the world a marked activity. *Nature*, Dec. 17, 1903, p. 160.

hypoglobulia (hī″pō-glō-bū'li-ä), *n.* [NL., < Gr. ὑπό, under, + L. *globulus*, globule.] A pathological condition in which the blood-corpuscles are decreased in number.

Hypohomus (hī-pō'hō-mus), *n.* [NL., erroneously formed (intended to mean 'not quite uniform') < Gr. ὑπό, under, + ὁμός, the same.] A genus of darter-fishes of the family *Persidæ*, found in the upper Tennessee river. *H. aurantiacus* is the common species.

hypohyal (hī-pō-hī'al), *n.* [Gr. ὑπό, under, + E. *hyal.*] In fishes, one of two pairs of bones situated on each side of the anterior end of the hyoid arch. They are attached one above the other to the ceratohyal. Between the superior pair is the glossohyal and between the inferior pair is the urohyal.

hypohyaline (hī-pō-hī'a-lin), *a.* [Gr. ὑπό, under, + ὑάλινος, of glass.] Partly glassy; semivitreous: noting igneous rocks which are partly glassy, partly crystalline. See ★*merocrystalline.*

hypo-inosemia (hī″pō-in-ō-sē'mi-ä), *n.* [Irreg. < Gr. ὑπό, under, + *ἰς* (gen. *ἰνός*), fiber, + *αἷμα*, blood.] Diminished coagulability of the blood.

hypo-iodite (hī-pō-ī'ō-dīt), *n.* [Gr. ὑπό, under, + *iod(ine)* + *-ite*[2].] A salt of hypo-iodous acid. Such a salt seems to be formed by the action of iodine on the solution of an alkali, the solution possessing bleaching power and probably having a composition analogous to that of Javelle water or Labarraque's fluid.

hypo-iodous (hī-pō-ī'ō-dus), *a.* Noting an acid analogous to hypochlorous acid, which has probably been obtained in solution but is not known in the pure state.

hypo-ischium (hī-pō-is'ki-um), *n.*; pl. *hypo-ischia* (-ä). A rod of bone or cartilage which arises between the distal ends of the ischia and is directed backward from the inferior part of the pelvis: found in reptiles.

hypokinesia (hī″pō-ki-nē'si-ä), *n.* Same as ★*hypokinesis.*

hypokinesis (hī″pō-ki-nē'sis), *n.* [NL., < Gr. ὑπό, under, + κίνησις, motion.] Diminished power of movement; muscular weakness. Also *hypocinesis*, *hypokinesia.*

hypolemniscus (hī″pō-lem-nis'kus), *n.* [Gr. ὑπολημνίσκος, < ὑπό, under, + λημνίσκος, a band: see *lemniscus.*] A critical mark (÷), namely, a lemniscus (÷) with a dot below only.

hypoleucocytosis (hī″pō-lū″kō-sī-tō'sis), *n.* [NL., < Gr. ὑπό, under, + *leucocyte* + *-osis.*] A diminution in the number of the leucocytes of the blood. See *leucocytosis.*

hypolithic (hī-pō-lith'ik), *a.* [Gr. ὑπό, under, + λίθος, stone, + *-ic.*] In *bot.*, growing under stones.

hypologism (hī-pol'ō-jizm), *n.* [Gr. ὑπό, under, + λογισμός, reckoning, calculation.] The relation of four magnitudes when the ratio of the first to the second is less than the ratio of the third to the fourth.

hypomania (hī-pō-mā'ni-ä), *n.* [Gr. ὑπό, under, + *μανία*, madness.] A mildly maniacal state of short duration. *Buck*, Med. Handbook, V. 91.

hypomere, *n.* **2.** In *embryol.*, the portion of the mesoderm from which the walls of the pleuroperitoneal cavity of vertebrates arise.

hypomnesis (hī-pōm-nē'sis), *n.* [NL. (cf. Gr. ὑπόμνησις, a reminding), < Gr. ὑπό, under, + *μνῆσις*, memory.] Defective memory.

hypomnestic (hī-pōm-nes'tik), *a.* Relating to or characterized by defective memory.

Hypomyces (hī-pom'i-sēz), *n.* [NL. (Tulasne, 1860), < Gr. ὑπό, under, + *μύκης*, fungus.] A genus of hypocreaceous fungi having the perithecia seated upon or embedded in a thin stroma, and the spores elongate, pointed, and 2-celled. The species are mostly parasitic upon agaricaceous fungi. Conidia and chlamydospores are frequently found. *H. Lactifluorum* occurs on species of *Lactarius.*

hypomyotonia (hī″pō-mī-ō-tō'ni-ä), *n.* [NL., < Gr. ὑπό, under, + *μυς*, muscle, + *τόνος*, tone.] Diminished tone in the muscles.

hypomyxia (hī-pō-mik'si-ä), *n.* [NL., < Gr. ὑπό, under, + *μύξα*, mucus.] Diminished secretion of mucus.

hyponoëtic (hī″pō-nō-et'ik), *a.* [Gr. ὑπό, under, + *νοητικός*, < *νόησις*, understanding.] In *psychol.*, unconsciously logical: opposed to ★*noëtic* or consciously logical.

The conception of "distance between" answers, then, to what we have called a *hyponoetic* relation, and this is plainly distinct from the analysis of discrete complexes, with which, as said, noetic comparison is alone concerned. *Encyc. Brit.*, XXXII. 64.

hyponomic (hī-pō-nom'ik), *a.* [*hyponome* + *-ic.*] Of or pertaining to the hyponome. **Hyponomic sinus.** See ★*brachial sinuses.*

hyponychial (hī-pō-nik'i-al), *a.* [Gr. ὑπό, under, + ὄνυξ (ὀνυχ-), nail, + *-ial.*] Situated beneath a nail; subunguial.

hyponychon (hī-pon'i-kon), *n.*; pl. *hyponycha* (-kä). [NL., < Gr. ὑπό, under, + ὄνυξ (ὀνυχ-), nail.] A collection of blood beneath a nail.

hyponychum (hī-pon'i-kum), *n.*; pl. *hyponycha* (-kä). [NL., < Gr. ὑπό, under, + ὄνυξ (ὀνυχ-), nail.] The nail-bed.

hyponym (hī'pō-nim), *n.* [Gr. ὑπό, under, + ὄνομα, ὄνυμα, name.] A systematic name applied to an undetermined group of animals or plants, and thus not fully or finally established.

I have listed 485 names that were proposed between 1753, the first edition of Linnæus's 'Species Plantarum,' and 1821, including the first volume of Fries's 'Systema Mycologicum.' Of these, 242, or one half, are to be rejected for various reasons. Some are *hyponyms*, never having been associated with a recognizable binomial species. *Science*, March 25, 1904, p. 509.

hypo-osmious (hī-pō-os'mi-us), *a.* [*hypo-* + *osmi-um* + *-ous.*] In *chem.*, a term sometimes applied to compounds of osmium in which that metal has the lowest apparent valence: as, *hypo-osmious* chlorid or osmium dichlorid ($OsCl_2$).

hypopal (hī-pō'pal), *a.* [*hypopus* + *-al*[1].] Pertaining to or resembling the hypopus stage of an acarid. Also spelled *hypopial.* See *Hypopus.*

Hypoparia (hī″pō-pā-rī'ä), *n. pl.* [NL., < Gr. ὑπό, under, + *παρειά*, the cheek.] In Beecher's classification of the trilobites, an order characterized by the cheeks forming a continuous marginal plate in the cephalon and by the absence of compound eyes. It is regarded as the primitive order of the group, and is represented by such genera as *Agnostus* and *Trinucleus.*

hypopepsia (hī-pō-pep'si-ä), *n.* [NL., < Gr. ὑπό, under, + πέψις, digestion.] Weak digestion.

hypopepsy (hī'pō-pep-si), *n.* [NL. *hypopepsia.*] Same as ★*hypopepsia.*

hypopeptic (hī-pō-pep'tik), *a.* Relating to or affected with hypopepsia.

hypophalangia (hī″pō-fā-lan'ji-ä), *n.* The state or condition of having less than the normal number of phalanges in a digit: contrasted with ★*hyperphalangism.*

In man, a condition of *hypophalangia* (two-jointed instead of three-jointed digits) is dominant over the normal condition. *Pop. Sci. Mo.*, July, 1905, p. 195.

hypophare (hī'pō-fār), *n.* [Gr. ὑπό, under, + φάρος, a web (?).] In the rhagon stage of development of *Demospongiæ*, the lower region of the body, devoid of chambers or pores. Compare ★*spongophare.* *Lankester.*

hypophonic (hī-pō-fon'ik), *a.* Same as ★*hypophonous.*

hypophonous (hī-pof'ō-nus), *a.* [Gr. ὑπό, under, + φωνή, sound.] In *music*, subordinate or subsidiary: said of an accompaniment or response.

hypophosphoric (hī″pō-fos-for'ik), *a.* Noting an acid, a distinct tetrabasic acid, $H_4P_2O_6$, produced, along with phosphorous and phosphoric acids, by the slow oxidation of phosphorus in moist air at ordinary temperatures.

hypophrenic (hī-pō-fren'ik), *a.* [Gr. ὑπο, under, + φρήν, the diaphragm.] Situated below the diaphragm.

hypophysin (hī-pof'i-sin), *n.* [*hypophys-is* + *-in*[2].] The dried and powdered hypophysis cerebri.

hypoplankton (hī-pō-plangk'ton), *n.* [Gr. ὑπό, under, + NL. *plankton.*] Organisms that swim or float in the water immediately above the bottom, considered collectively and in contrast with those that creep or run over the bottom; the bathybic plankton. See ★*plankton*, ★*benthos.* *Nature*, Nov. 5, 1903, p. 23.

hypoplanktonic (hī″pō-plangk-ton'ik), *a.* Of or pertaining to the hypoplankton; floating or swimming in the water below 100 fathoms.

hypoplasia (hī-pō-plā'si-ä), *n.* [NL., < Gr. ὑπό, under, + πλάσις, formation.] Deficient growth or atrophy of a part through excessive destruction or defective formation of cells.

hypoplasm (hī'pō-plazm), *n.* [NL., < Gr. ὑπό, under, + πλάσμα, anything formed.] **1.** Same as ★*hypoplasia.* — **2.** Same as *hypinosis.*

hypoplastic (hī-pō-plas'tik), *a.* [Gr. ὑπό, under, + πλαστός, formed, + *-ic.*] Relating to or characterized by hypoplasia. *Buck*, Med. Handbook, I. 140.

hypoplastral, *a.* **II.** *n.* One of the two bones forming the hypoplastron of turtles. See cut under *Chelonia*, 1.

hypoplasty (hī'pō-plas-ti), *n.* [As *hypoplastic* + *-y*[3].] Same as ★*hypoplasia.*

hypoplasy (hī-pop'la-si), *n.* [NL. ★*hypoplasia*, < Gr. ὑπό, under, + πλάσις, molding.] A pathological process, due to disturbances of any kind, in which cells fail to attain their normal size, number, or differentiation; hypoplasia.

hypoplax (hī'pō-plaks), *n.* [NL., < Gr. ὑπό, under, + πλάξ, a plate.] In the shell structure of the pelecypod mollusk *Pholas* or *Martesia*, an accessory plate lying ventrally between the valves.

Hypoplectrus (hī-pō-plek'trus), *n.* [NL., < Gr. ὑπο, under, + πληκτρον, a striker, spear-point, spur.] A genus of small bass-like fishes known as *vacas* in Cuba. The species are numerous in the West Indies, and are subject to extra-

Hypoplectrus unicolor.
(From Bulletin 47, U. S. Nat. Museum.)

ordinary variation of color, some of them varying from deep blue to yellow, with or without checkers and stripes of brown or blue. *H. unicolor* is the most important species.

hypopraxia (hī-pō-prak'si-ä), *n.* [NL., < Gr. ὑπό, under, + πράξις, action.] Deficient activity. *Baldwin*, Dict. of Philos. and Psychol., I. 64.

Hypoprion (hī-pō-prī'on), *n.* [NL., < Gr. ὑπό, under, + πρίων, saw.] A genus of sharks of the West Indies, of the family *Galeidæ*, in which the upper teeth only are serrate. *H. brevirostris* is the common species.

hypopteral (hī-pop'te-ral), *a.* [*hypopter-on* + *-al*[1].] Of or relating to the hypopteron or axillary feather-tract.

hypopteron (hī-pop'te-ron), *n.*; pl. *hypoptera* (-rä). [NL., < Gr. ὑπό, under, + πτερόν, wing.] The linear tract of feathers which runs from the axilla outward, on the under side of a bird's wing.

hypoptyalism (hī-pop-tī'a-lizm), *n.* [Gr. ὑπό, under, + πτύαλον, spittle, + *-ism.*] Diminished secretion of saliva.

hyporadiolus (hī″pō-rā-dī'ō-lus), *n.* The singular of *hyporadioli.*

hyporadius (hī-pō-rā'di-us), *n.* The singular of *hyporadii.*

Hyporhamphus (hī-pō-ram'fus), *n.* [NL., < Gr. ὑπό, under, + ῥάμφος, beak.] A genus of halfbeaks, of the family *Hemiramphidæ*, comprising the commonest American species, *H. roberti*, and many others.

hyposarca (hī-pō-sär'kä), *n.* [NL., < Gr. *ὑπό*, under, + *σάρξ* (*σαρκ-*), flesh.] Excessive edema of the skin and subcutaneous tissues.

hyposcleral (hī-pō-skle'ral), *a.* [Gr. *ὑπο*, under, + *σκληρός*, hard, + *-al*[1].] Same as *subsclerotic*.

hyposcope (hī'pō-skōp), *n.* [Gr. *ὑπο*, under, + *σκοπεῖν*, view.] An attachment for a small-arm consisting of a number of mirrors placed at such angles and in such manner that the piece can be aimed accurately from behind a breastwork without exposure of the head.

hyposecretion (hī-pō-sē-krē'shon), *n.* [*hypo-* + *secretion*.] Secretion in diminished amount.

hyposoda (hī-pō-sō'dä), *n.* [*hypo-* + *soda*.] A trade-name for sodium thiosulphate, formerly known as *hyposulphite of soda*, used by tanners in the processes of mineral tanning with salts of chromium.

hyposphenal, *a.* **II.** *n.* The parasphenoid, a bone in the cranium of fishes which connects the vomer and basioccipital. *Starks*, Synonymy of the Fish Skeleton, p. 512.

Hypostatic pneumonia. See ★*pneumonia*.

hyposternal, *a.* **II.** *n.* The ceratohyal, a bone of the hyoid arch in fishes. *Starks*, Synonymy of the Fish Skeleton, p. 517.

hypostheniant (hī-pō-sthē'ni-ant), *a.* [*hypostheni-c* + *-a-* + *-ant*[1].] Reducing the strength or vital force.

hypostheniс (hī-pō-sthen'ik), *a.* and *n.* [Gr. *ὑπο*, under, + *σθένος*, strength, + *-ic*.] **I.** *a.* 1. Properly, having an inferior degree of strength. —2. Reducing the strength in general or the force of any vital action, such as the cardiac pulsations.

II. *n.* A debilitating agent, or one that diminishes the force of the heart's action.

hyposthenuria (hī-pos'thē-nū'ri-ä), *n.* [NL., < Gr. *ὑπό*, under, + *σθένος*, strength, + *οὖρον*, urine.] Suppression, partial or complete, of the urinary excretion.

Hypostomata, *n. pl.* **4.** A superclass of extinct, fish-like vertebrates, the *Ostracodermi* of Cope and other writers: contrasted with *Cyclostomata*, the lampreys, and *Gnathostomata*, vertebrates with true jaws. They have no true limbs, and no jaws; the vertebral column is acentrous and the dermal skeleton greatly developed. *Gadow.*

hypostomial (hī-pō-stō'mi-al), *a.* [*hypostoma* + *-i-al*[1].] Of or pertaining to the hypostoma. *Proc. Zool. Soc. London*, 1902, II. 177.

Hypostominæ (hī'pō-stō-mī'nē), *n. pl.* [NL., < *Hypostomus* + *-inæ*.] A subfamily of small mailed catfishes of the rivers of South America, typified by the genus *Hypostomus*.

hypostracum (hī-pos'tra-kum), *n.* [Gr. *ὑπό*, under, + *ὄστρακον*, a shell.] The third layer of the integument of mites, lying under the ectostracum. *Jour. Roy. Micros. Soc.*, April, 1903, p. 177.

hypostroma (hī-pō-strō'mä), *n.* [Gr. *ὑπό*, under, + *στρῶμα*, a bed.] Same as *mycelium*.

hyposulphate (hī-pō-sul'fāt), *n.* [*hyposulph(uric)* + *-ate*[1].] A salt of hyposulphuric acid, $H_2S_2O_6$, now called *dithionic acid;* dithionate.

hyposulphite, *n.*—**Alkaline hyposulphite,** a compound obtained by the action of hyposulphurous acid on the alkaline bases, as sodium hyposulphite.—**Hyposulphite silver-extraction process.** See ★*silver*.

hypotension (hī-pō-ten'shon), *n.* [Gr. *ὑπό*, under, + E. *tension*.] Diminished tension.

hypotetrarch (hī-pō-tet'rärk), *n.* [*hypo-* + *tetrarch*.] In *bot.*, a triarch stele in which the protoxylem of the median strand is divided.

hypoth. An abbreviation (*a*) of *hypothesis;* (*b*) of *hypothetical*.

hypotheca (hī-pō-thē'kä), *n.*; pl. *hypothecæ* (-sē). [Gr. *ὑπό*, under, + *θήκη*, a case.] The inner half of the frustule of a diatom.

hypothecal (hī-pō-thē'kal), *a.* [Gr. *ὑπό*, under, + *θήκη*, case (test), + *-al*[1]. In def. 2, < *hypotheca* + *-al*[1].] **1.** Situated beneath or within the test, as the radial water-tubes of echinoids. Compare ★*epithecal*, 2.—**2.** Of or pertaining to the hypotheca of a diatom.

Hypotheria (hī-pō-thē'ri-ä), *n. pl.* [NL., < Gr. *ὑπό*, under, + *θηρίον*, beast.] The hypothetical but probable ancestors of the *Mammalia:* small animals combining the characters of reptiles and mammals and closely related to the *Anomodontia*.

It is true that no small forms . . . have hitherto been discovered which can be regarded as ancestral types of the Mammalia (*Hypotheria* or Promammalia).
Encyc. Brit., XXX. 505.

hypothermal (hī-pō-thēr'mal), *a.* [Gr. *ὑπό*, under, + *θέρμη*, heat, + *-al*[1].] Same as ★*hypothermic*.

hypothermia (hī-pō-thēr'mi-ä), *n.* [NL., < Gr. *ὑπο*, under, + *θερμή*, heat.] A condition of reduced temperature, especially of animal heat.

hypothermic (hī-pō-thēr'mik), *a.* [Gr. *ὑπο*, under, + *θερμή*, heat, + *-ic*.] Relating to a moderate or lower temperature; having a tendency to reduce the temperature.

hypothesis, *n.*—**Difference, filar, glacial hypothesis.** See ★*difference*, etc.—**Meteoritic hypothesis,** the theory (of late specially elaborated, though not originated, by Sir Norman Lockyer), that the nebulæ consist of swarms of meteorites, and that stars and systems have been formed by the slow aggregation of these bodies. It is in contrast with the nebular hypothesis of Laplace, which presupposed an original mass of heated gas. Professor George Darwin has shown that in the long run such a meteoritic assemblage would behave in most respects like a gaseous mass contracting under its own gravitation, first rising in temperature to a maximum and then cooling after solidification. According to the meteoritic hypothesis the light of nebulæ is explained by the collisions between the meteors, and the bright lines that characterize the distinctly gaseous spectra of many nebulæ are attributed to gases liberated from the meteors themselves by these collisions, possibly illuminated by electric discharges, no general high temperature of the nebula being required. The theory finds plausible applications in explaining the phenomena of temporary (novæ) and variable stars, as due to the encounter of two or more such meteoritic clouds.—**Planetesimal hypothesis.** See ★*planetesimal*.—**Prout's hypothesis,** in *phys. chem.*, the hypothesis, put forward by William Prout in 1815 and 1816, that the atomic weights of the elements are multiples by whole numbers of the atomic weight of hydrogen —from which follows an obvious suggestion as to the relation of different elements to each other. It was shown that chlorin by no means agrees with the hypothesis, and the hypothesis was modified so as to assert that atomic weights are integral multiples of the half or of the fourth part of the atomic weight of hydrogen; this experimentation has disproved. It is possible to put smaller and smaller fractions in place of one half and one fourth, but the point is quickly reached where experiment cannot decide whether the suggested numbers are correct or not, and the new hypothesis ceases to be verifiable; so that Prout's hypothesis has failed to be of any direct service in revealing the nature of matter.—**Suess's hypothesis,** the hypothesis of Edward Suess, of Vienna, in explanation of the large inequalities of the earth's surface. It involves the conception that certain portions, called by Suess *horsts* (see ★*horst*), early acquired a marked stability and solidity, and that against these as buttresses, the remainder were crowded in the contraction of the globe.—**Working hypothesis,** a hypothesis suggested or supported in some measure by features of observed facts, from which consequences may be deduced which can be tested by experiment and special observations, and which it is proposed to subject to an extended course of such investigation, with the hope that, even should the hypothesis thus be overthrown, such research may lead to a tenable theory.

hypothesize, *v.* **II.** *trans.* To assume as a hypothesis.

This anatomical relation is the basis of the "avalanche conduction" *hypothesized* by Ramón y Cajal.
Buck, Med. Handbook, II. 334.

hypothyroidism (hī-pō-thī'roi-dizm), *n.* [Gr. *ὑπό*, under, + E. *thyroid* + *-ism*.] A pathological condition in which there is diminished activity of the thyroid gland.

hypotonia (hī-pō-tō'ni-ä), *n.* [NL., < Gr. *ὑπό*, under, + *τόνος*, tension, tone.] A condition of diminished tension or tone in a part or in the body in general.

hypotonic (hī-pō-ton'ik), *a.* [Gr. *ὑπό*, under, + *τόνος*, tone, + *-ic*.] **1.** Less than isotonic; specifically, noting a solution of salt when it contains a smaller amount than a second solution with which it is compared: applied in this sense to the blood-serum. Also *hypisotonic*. —**2.** Reducing tension or tone in a part or in the body in general.

hypotonus (hī-pō-tō'nus), *n.* [NL.] A less proper form for ★*hypotonia*.

hypotrichosis (hī'pō-tri-kō'sis), *n.* [NL., < Gr. *ὑπό*, under, + *θρίξ* (*τριχ-*), hair, + *-osis*.] Deficient growth of hair.

hypotrochanteric (hī'pō-trō-kan-ter'ik), *a.* [Gr. *ὑπό*, under, + *trochanter* + *-ic*.] Situated below the trochanter.

The third trochanter is almost always accompanied by a *hypotrochanteric* fossa. *Deniker*, Races of Man, p. 89.

hypotrochoidal (hī-pot'rō-koi-dal), *a.* [*hypotrochoid* + *-al*[1].] Like or pertaining to a hypotrochoid.

hypotrophy (hī-pot'rō-fi), *n.* [Gr. *ὑπό*, under, + *τροφή*, nourishment.] **1.** Same as *atrophy*. —**2.** An abnormal state due to defective nutrition.

hypotype (hī'pō-tīp), *n.* [Gr. *ὑπό*, under, + *τύπος*, type.] A specimen of a natural object which has been employed in supplementary illustration or description of a species: contrasted with the type or original specimen on which the species is founded.

hypovanadate (hī-pō-van'a-dāt), *n.* [*hypovanadic* + *-ate*[1].] A compound of hypovanadic oxid or vanadium tetroxid, V_2O_4, with a more strongly electropositive metallic oxid.

hypovanadic (hī'pō-vā-nad'ik), *a.* [Gr. *ὑπό*, under, + E. *vanadic*.] Containing less oxygen than a vanadic compound. **Hypovanadic oxid,** vanadium tetroxid, V_2O_4, which behaves both as a basic and as an acid oxid; in the former case it forms with acids hypovanadic salts.

hypovanadious (hī'pō-vā-nā'di-us), *a.* [Gr. *ὑπο*, under, + E. *vanadious*.] Containing less oxygen than a vanadious compound. **Hypovanadious oxid,** vanadium dioxid, V_2O_2 or VO, which forms with acids hypovanadious salts.

hypozygal (hī-pō-zī'gal), *a.* [Gr. *ὑπό*, under, + *ζυγόν*, yoke.] Noting the lower and non-pinnuliferous joint in the arm of a crinoid when the arms consist of alternating joints, one with and one without a pinnule: the upper is the *epizygal*. Each pair constitutes morphologically but one joint, and the suture between them is a syzygy.

Hypsagonus (hip-sag'ō-nus), *n.* [NL., < Gr. *ὑψι*, high, + NL. *Agonus*.] A genus of sea-poachers or *Agonidæ* found in the North Pacific.

hypsalograph (hip-sal'ō-gräf), *n.* [Gr. *ὕψος*, height, + *ἅλς*, sea, + *γράφειν*, write.] An apparatus for automatically recording the varying height of the ocean.

hypselodont (hip-sel'ō-dont), *a.* [Gr. *ὑψηλός*, high, + *ὀδούς* (*ὀδοντ-*), tooth.] Having teeth with long crowns and short roots: an amended form of *hypsodont*. *Proc. Zool. Soc. London*, 1897, p. 699.

hypselodonty (hip-sel'ō-don-ti), *n.* [*hypselodont* + *-y*[3]: an amended form of *hypsodonty*.] The fact or condition of having teeth with long crowns and short roots. *Proc. Zool. Soc. London*, 1902, II. 229.

hypsibrachycephalous (hip-si-brak-i-sef'a-lus), *a.* Same as *hypsibrachycephalic*.

hypsicephalic, *a.* **2.** Having a dolichocephalic high skull, with high forehead. *Aitken Meigs*.

hypsicephalous (hip-si-sef'a-lus), *a.* [Gr. *ὑψι-*, high, + *κεφαλή*, head, + *-ous*.] Same as ★*hypsicephalic*, 2.

hypsiconchic (hip-si-kong'kik), *a.* Same as ★*hypsiconchous*.

hypsiconchous (hip-si-kong'kus), *a.* [Gr. *ὑψι-*, high, + *κόγχη*, shell.] In *anthrop.*, having an orbital index exceeding 85. See *megaseme*.

hypsiconchy (hip-si-kong'ki), *n.* [*hypsiconch(ous)* + *-y*[3].] The quality or condition of being hypsiconchous. *Biometrika*, March–July, 1904, p. 236.

hypsicranial (hip-si-krā'ni-al), *a.* [Gr. *ὑψι-*, high, + *κρανίον*, skull, + *-al*[1].] In *anthrop.*, characterized by or exhibiting a skull of more than middle height. *Biometrika*, March–July, 1904, p. 240.

hypsidont (hip'si-dont), *n.* Same as *hypsodont*.

hypsilophodontid (hip-si-lof-ō-don'tid), *n.* and *a.* **I.** *n.* One of the *Hypsilophodontidæ*.

II. *a.* Of or pertaining to the *Hypsilophodontidæ*.

hypsilophodontoid (hip-si-lof-ō-don'toid), *a.* [*Hypsilophodon(t-)* + *-oid*.] Having relations with the reptilian genus *Hypsilophodon*.

hypsistegoid (hip-sis'tē-goid), *a.* [Gr. *ὑψι-*, high, + *στέγη*, roof, + *εἶδος*, form.] In *anthrop.*, high and roof-shaped: said of a cranium. *G. Sergi* (trans.), Var. of the Human Species, p. 53.

hypsistenocephalic (hip-sis'ten-ō-se-fal'ik), *a.* [Gr. *ὑψι-*, high, + *στενός*, narrow, + *κεφαλή*, head.] In *anthrop.*, characterized by great height combined with narrowness: said of skulls and heads. *Keane*, Man Past and Present, p. 127.

hypsistenocephalism (hip-sis'ten-ō-sef'a-lizm), *n.* Same as ★*hypsistenocephaly*.

hypsistenocephaly (hip-sis'ten-ō-sef'a-li), *n.* The quality or condition of being hypsistenocephalic. *Keane*, Ethnology, p. 363.

Hypsoblennius (hip-sō-bleu'i-us), *n.* [NL., < Gr. *ὑψι*, high, + L. *blennius*, blenny.] A genus of small blennies found in tropical America. It differs from *Blennius* in having no canine teeth. *H. hentzi* is common on the South Atlantic coast.

hypsocephalic, hypsocephalous, hypsocephaly. See ★*hypsicephalic*, ★*hypsicephalous*, *hypsicephaly*.

hypsographic (hip-sō-graf'ik), *a.* Of or pertaining to hypsography, or the science which deals with the altitudes of different portions of the earth's surface: as, a *hypsographic* map, one showing by contour-lines, or other symbols, the relative elevation of the different portions of the territory mapped. See *hypsography*. *Amer. Geol.*, Aug., 1903, p. 79.

hypsographical (hip-sō-graf'i-kal), *a.* Same as ★*hypsographic.*

Hypsometric formula. See ★*formula.*

hypsometrist (hip-som'e-trist), *n.* One who practises hypsometry, or measures the altitude of the land above the sea-level, or who illustrates the earth's relief by models or maps. *Sci. Amer. Sup.*, Jan. 1, 1898, p. 18354.

hypsometry, *n.* **Barometric hypsometry,** the art of determining the altitude above or below sea-level by the use of the barometer. The rough method known to Torricelli and his followers was perfected by the construction of the proper hypsometric formula, expressing the relation between pressure and altitude, by Laplace, and by the use of the accurate Fortin barometer. Modern improvements have been due to Angot's study of the effect of the variation of gravity and of atmospheric temperature and to the gradient correction given by the daily weather maps.

hypsophobia (hip-sō-fō'bi-ä), *n.* [Gr. ὕψος, height, + -φοβία, ⟨ φοβεῖν, fear.] A morbid fear of great heights.

hypsophyllous (hip-sof'i-lus), *a.* [*hypsophyl* + *-ous.*] Same as *hypsophyllary.*

Hypsopsetta (hip-sop-set'ä), *n.* [NL., ⟨ Gr. ὑψο-, ὑψι-, high, + ψῆττα, a flatfish.] A genus of small flounders, of the family *Pleuronectidæ*, having the teeth in more than one row: found on the coast of California. *H. guttulata* is the common species.

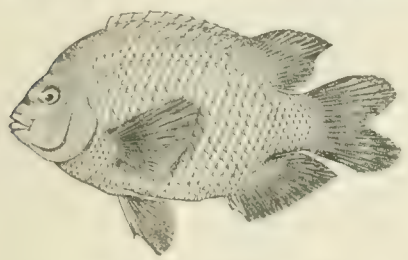
hypsothermometer (hip″sō-thèr-mom'e-tèr), *n.* Same as *hypsometer.*

It was first discovered by the *hapso-thermometer*, which showed to Bogdanovich the quite unexpected temperature of boiling water, 212.65° Fahr.

Geog. Jour. (R. G. S.), IX. 552.

Hypsurus (hip-sū'rus), *n.* [NL., ⟨ Gr. ὑψι-, high, + οὐρά, tail.] A genus of surf-fishes of the family *Embiotocidæ*, remarkable for their brilliant red and blue colors, and for the elongation of the body-cavity: found on the coast of California. *H. caryi* is the common species.

Hypsypops (hip'si-pops), *n.* [NL., orig. *Hypsipops* (Gill, 1861), irreg. ⟨ Gr. ὑψι-, high, + ὑπο, below, + ὤψ (ὠπ-), face.] A genus of damselfishes of the family *Pomacentridæ*, remarkable for their relatively large size and brilliant coloration. *H. rubicunda* is the garibaldi of the coast of California. When full grown it is of a uniform bright scarlet.



Hypsypops rubicunda.
(From Bulletin 47, U. S. Nat. Museum.)

hypural, *a.* **II.** *n.* In *ichth.*, the bone which supports the caudal fin. *Starks*, Synonymy of the Fish Skeleton, p. 526.

hyracodontid (hī-rak-ō-don'tid), *n.* and *a.* **I.** *n.* A member of the family *Hyracodontidæ.*

II. *a.* Of or pertaining to the *Hyracodontidæ.*

hyracodontoid (hī-rak-ō-don'toid), *n.* and *a.* **I.** *n.* A mammal like *Hyracodon.*

II. *a.* Having the characters of *Hyracodon.*

Hyracoidea, *n. pl.* Thirty-two species and subspecies of this order are now recognized, all placed in the genus *Procavia* (Storr, 1780), this name antedating *Hyrax* by three years. A fossil species, *Pliohyrax kruppii*, has been described from the Pliocene of Greece and the Isle of Samos, and *Archæohyrax*, from the Miocene of Patagonia, has been assigned to this group.

Hyrcanian (hèr-kā'ni-an), *a.* Of or pertaining to the ancient Hyrcania in Asia. *Shak.*, Hamlet, ii. 2.

hyssop, *n.* **4.** In the western United States, sage-brush, *Artemisia.* [Only in old writings.] *N. E. D.*— **Anise-hyssop,** the fragrant giant hyssop, *Agastache anethiodora.*— **Giant hyssop,** any plant of the labiate genus *Agastache*, especially *A. anethiodora*, sometimes distinguished as *fragrant giant hyssop.* It is native to the western plains of the United States. *A. mexicana* and *A. scrophulariæfolia* of the eastern United States are called respectively *catnip* and *figwort giant hyssop.*

Hystatoceras (his-ta-tos'e-ras), *n.* [NL., ⟨ Gr. ὕστατος, the hindmost, + κέρας, horn (used as a generic termination in fossil *Cephalopoda*).] A genus of ammonoid *Cephalopoda*, or ammonites, characterized by compressed, smooth, keeled young shells and costate, unkeeled later volutions.

hystazarin (his-taz'a-rin), *n.* An orange-yellow compound, $C_6H_4 < {CO \atop CO} > C_6H_2(OH)_2$, prepared from pyrocatechol and phthalic anhydrid. It crystallizes in slender needles, melts at 260° C., and, in the form of its monomethyl ether, occurs in the root of *Oldenlandia umbellata.* Also called *dihydroxyanthraquinon.*

Hysterangiaceæ (his-te-ran-ji-ā'sē-ē), *n. pl.* [NL., ⟨ *Hysterangium* + *-aceæ.*] A family of subterranean gasteromycetous fungi named from the genus *Hysterangium.*

Hysterangium (his-te-ran'ji-um), *n.* [NL. (Vittadini, 1831), so called in allusion to the form of the sporocarp; ⟨ Gr. ὑστέρα, uterus, + ἀγγεῖον, vessel.] A genus of subterranean gasteromycetous fungi which have the peridium separable from the gleba.

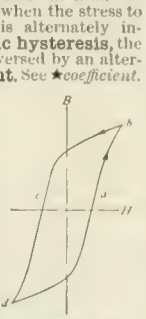
hysterectomy, *n.* **Cæsarean hysterectomy.** Same as *Porro's operation* (which see, under *operation*).

hysteresial (his-te-rē'si-al), *a.* [*hysteresis* + *-al*[1].] Same as ★*hysteretic.*

hysteresic (his-te-rē'sik), *a.* Same as ★*hysteretic.*

hysteresis, *n.*— **Dielectric** or **electrostatic hysteresis,** the loss of energy in an electrostatic condenser with an alternating electromotive force.— **Elastic hysteresis,** an effect, analogous to magnetic hysteresis in iron, observed in the relation of strain to stress when the stress to which an elastic body is subjected is alternately increased and diminished.— **Electrolytic hysteresis,** the loss of energy in a polarization-cell traversed by an alternating current.— **Hysteresis coefficient.** See ★*coefficient.*

Hysteresis loop. See *magnetic* ★*hysteresis.*— **Magnetic hysteresis,** the lag of magnetic flux behind the magnetomotive force which is the electrical equivalent of the energy consumed by molecular magnetic friction during a magnetic cycle and gives rise to the phenomena of permanent and remanent magnetism and coercitive force. The area of the hysteresis loop equals the energy consumed as heat, if no other energy is consumed or supplied, and the term *magnetic hysteresis* is therefore frequently used as synonymous with loss of energy by molecular magnetic friction. It is of very great importance in alternating magnetic fields of transformers, electric generators, etc. Magnetic hysteresis is closely proportional to the 1.6 power of magnetic induction. See *magnetic* ★*circuit.* The hysteresis loop, or magnetic loop, is a closed curve, a, b, c, d, which represents the changes in magnetic induction (B) in a piece of iron or steel when the magnetizing force (H) is progressively varied in intensity and direction. The arrows indicate the direction in which the cycle is followed.



Hysteresis loop.

hysteresis-meter (his-te-rē'sis-mē″tèr), *n.* In *elect.*, a device for measuring the hysteresis losses in samples of iron or steel. It consists of a spindle by means of which the sample may be revolved between the poles of a suspended magnet.

hysteresis-receiver (his-te-rē'sis-rē-sē″vèr), *n.* In *wireless teleg.*, a magnetic receiver which depends for its action upon hysteresis in iron.

hysterestic (his-te-res'tik), *a.* Same as ★*hysteretic.*

hysteretic (his-te-ret'ik), *a.* [*hysteresis* (*-et-*) + *-ic.*] Pertaining to or exhibiting hysteresis.

If it is desired to annihilate the *hysteretic* effects of previous magnetization, . . . it [the metal] may be demagnetized by reversal. *Encyc. Brit.*, XXX. 433.

Hysteretic coefficient. Same as *hysteresis* ★*coefficient.* **Hysteretic constant,** a constant which defines quantitatively the property of a sample of iron or steel as regards hysteresis.— **Hysteretic cycle,** the cycle of operations, consisting of magnetization in the + direction, demagnetization, magnetization in the reversed or − direction, and demagnetization, which makes up the hysteresis loop.

hysteretically (his-te-ret'i-kal-i), *adv.* [*hysteretic* + *-al*[1] + *-ly*[2].] In a manner involving or exhibiting hysteresis.

The actual condenser dissipates energy *hysteretically* in its dielectric. *Elect. World and Engin.*, XLIV. 163.

hysteriac (his-tē'ri-ak), *n.* [*hysteri-a* + *-ac.*] A hysterical person.

Hysteriaceæ (his-tē-ri-ā'sē-ē), *n. pl.* [NL., ⟨ *Hysterium* + *-aceæ.*] Same as *Hysterineæ*, of which it is the proper form.

Hysteriales (his-tē-ri-ā'lēz), *n. pl.* [NL., ⟨ *Hysterium* + *-ales.*] An order of ascomycetous fungi having the ascomata elongate or boat-shaped, closed at first, but finally opening by a longitudinal slit. See *Hysterium* and ★*Hysterographium.*

hysteric[1], *n.* **2.** A hysteric person; one who suffers from hysteria.

And again, the murder with an apparently sufficient motive, may be nothing more after all than the work of a maniac, epileptic, *hysteric*, etc.

Smithsonian Rep., 1890, p. 657.

hysteric[2] (his-ter'ik), *a.* Same as ★*hysteretic.* **Hysterical breast,** a circumscribed swelling of the breast, changeable as to size and location and painful on pressure, occurring in a hysterical subject. **Hysterical insanity, joint, spine,** etc. See ★*insanity,* etc.

hystericism (his-ter'i-sizm), *n.* [*hysteric*[1] + *-ism.*] The group of symptoms recognized as hysterical.

Hysteriineæ (his-te-ri-i'ne-ē), *n. pl.* [NL., ⟨ *Hysterium* + *-ineæ.*] Same as ★*Hysteriales.*

hysterism (his'te-rizm), *n.* [*hyster(ic)* + *-ism.*] The hysterical state; hysteria. *Amer. Jour. Psychol.*, II. 593.

hysterocarcinoma (his″te-rō-kär-si-nō'mä), *n.*; pl. *hysterocarcinomata* (-ma-tä). [NL., ⟨ Gr. ὑστέρα, uterus, + καρκίνωμα, cancer.] Cancer of the uterus.

Hysterocarpinæ (his″te-rō-kär-pī'nē), *n. pl.* [NL., ⟨ *Hysterocarpus* + *-inæ.*] A subfamily of the *Embiotocidæ* typified by the genus *Hysterocarpus.*

Hysterocarpus (his″te-rō-kär'pus), *n.* [NL., ⟨ Gr. ὑστέρα, uterus, + καρπός, fruit.] A genus of fishes of the family *Embiotocidæ.* It differs from all American surf-fishes in the very large number of its dorsal spines, and in its exclusively fresh-water habitat. *H. traski* is found in the tributaries of San Francisco bay. Like the marine species, it is viviparous, the young being about an inch long when born.

hysterocrystallization (his″te-rō-kris″ta-li-za'shon), *n.* [Gr. ὑστέρου, later, + E. *crystallization.*] Secondary crystallization in formerly compact rocks through the chemical action of aqueous solutions. *Naumann*, 1858.

hysterocystic (his″te-rō-sis'tik), *a.* [Gr. ὑστέρα, uterus, + κύστις, bladder, + *-ic.*] Relating to both the uterus and the bladder.

hystero-epileptic, *a.* **II.** *n.* One who suffers from hystero-epilepsy. *Buck*, Med. Handbook, IV. 833.

hysterogen (his'te-rō-jen), *a.* [Gr. ὕστερος, later, + -γενής, -produced.] Same as ★*hysterogenetic.*

hysterogenetic (his″te-rō-jē-net'ik), *a.* [Gr. ὕστερος, later, + γένεσις, genesis, + *-ic.*] Of later origin or formation; in *petrog.*, noting that part of an igneous rock which crystallizes last in the process of solidification of the molten magma. The term is applicable to the quartz and orthoclase in a diorite which crystallized after the plagioclase and ferromagnesian minerals. It also applies to contemporary veins of like composition that cut diorite masses, to many pegmatite veins, and to certain kinds of schlieren. *Zirkel*, 1866.

hysterogenic[2] (his″te-rō-jen'ik), *a.* [Gr. ὑστέρος, later, + -γενής, -produced, + *-ic.*] Same as ★*hysterogenetic.*

hysterogenite (his-te-roj'e-nīt), *n.* [Gr. ὕστερος, later, + -γενής, -produced, + *-ite*[2].] A mineral deposit of secondary or later formation, that is, one derived from the debris of other rocks. Compare ★*idiogenite* and ★*xenogenite.*

Hysterographium (his″te-rō-graf'i-um), *n.* [NL. (Corda, 1842), ⟨ *Hysterium* + *graphium.*] A genus of ascomycetous fungi of the family *Hysteriaceæ.* They have black carbonaceous ascomata with a longitudinal opening and colored muriform spores. About 70 species have been described. *H. Fraxini* occurs frequently on dead or dying branches of ash.

hysterolaparotomy (his″te-rō-lap-a-rot'ō-mi), *n.* [Gr. ὑστέρα, uterus, + E. *laparotomy.*] Surgical exsection of the uterus through an incision made in the abdominal wall.

hysterolith (his'te-rō-lith), *n.* [Gr. ὑστέρα, uterus, + λίθος, stone.] A concretion within the cavity of the uterus.

hysteromalacia (his″te-rō-ma-lā'si-ä), *n.* [Gr. ὑστέρα, uterus, + μαλακία, softness.] Softening of the uterus, especially the pregnant uterus.

hysterometry (his-te-rom'e-tri), *n.* [Gr. ὑστέρα, uterus, + μέτρον, measure.] Measurement of the uterus.

hysteromorphous (his″te-rō-môr'fus), *a.* [Gr. ὑστέρου, later, + μορφή, form.] In *petrog.*, noting those ore-deposits which have been formed by chemical and mechanical influences from previously existing deposits.

hysteromyoma (his″te-rō-mī-ō'mä), *n.*; pl. *hysteromyomata* (-ma-tä). [NL., ⟨ Gr. ὑστέρα, uterus, + NL. *myoma.*] A myoma of the uterus.

hysteromyomectomy (his″te-rō-mī-ō-mek'tō-mi), *n.* [NL. *hysteromyoma* + Gr. ἐκτομή, excision.] Excision of a myoma of the uterus.

hysteroncus (his-te-rong'kus), *n.* [NL., ⟨ Gr. ὑστέρα, uterus, + ὄγκος, a mass.] A tumor of the uterus.

hysteroneurasthenia (his″te-rō-nū-ras-the-ni'a), *n.* [NL., ⟨ Gr. ὑστέρα, uterus, + NL. *neurasthenia.*] A condition in which the symptoms of hysteria and of neurasthenia are both present.

hysteroneurosis (his te-rō-nū-rō′sis), *n.* [NL., < Gr. *ὑστέρα*, uterus, + *νεῦρον*, nerve, + *-osis.*] A nervous disorder occurring as a reflex in disease of the uterus.

hystero-oöphorectomy (his″te-rō-ō″ō-fō-rek′tō-mi), *n.* [Gr. *ὑστέρα*, uterus, + E. *oöphorectomy.*] Surgical removal of the uterus and ovaries.

hystero-ovariotomy (his″te-rō-ō-vā″ri-ot′ō-mi), *n.* Same as ★*hystero-oöphorectomy.*

hysteropathic (his″te-rō-path′ik), *a.* [*hysteropath-y* + *-ic.*] Suffering from a disease of the uterus. *Alien. and Neurol.*, Feb., 1903, p. 72.

hysteropathy (his-te-rop′a-thi), *n.* [Gr. *ὑστέρα*, uterus, + *-παθια*, < *πάθος*, disease.] Uterine disease.

hysteropexy (his′te-rō-pek-si), *n.* [Gr. *ὑστέρα*, uterus, + *πῆξις*, fastening.] Operative fixation of the fundus of the uterus to the anterior abdominal wall for the relief of prolapse.

hysterophyte. *n.* **2.** In *phytogeog.*, a herbaceous plant which does not elaborate its own nourishment, that is, a saprophyte or parasite: opposed to ★*autophyte.*

hysterophytic (his″te-rō-fit′ik), *a.* [*hysterophyte* + *-ic.*] Having the character of a hysterophyte, or pertaining to hysterophytes.

hysteroptosis (his-te-rop-tō′sis), *n.* [NL., < Gr. *ὑστέρα*, uterus, + *πτῶσις*, falling.] Falling of the womb.

hysterorrhaphy (his-te-ror′a-fi), *n.* [Gr. *ὑστέρα*, uterus, + *ῥαφή*, sewing.] **1.** Same as ★*hysteropexy.*—**2.** The closing of a wound in the uterus by sutures.

hysterorrhexis (his″te-rō-rek′sis), *n.* [NL., < Gr. *ὑστέρα*, uterus, + *ῥῆξις*, rupture.] Rupture of the uterus.

hysterotraumatic (his″te-rō-trâ-mat′ik), *a.* [Gr. *ὑστέρα*, uterus, + *τραῦμα*(*τ-*), wound, + *-ic.*] Relating to or suffering from hysterotraumatism.

hysterotraumatism (his″te-rō-trâ′ma-tizm), *n.* [*hysterotraumat*(*ic*) + *-ism.*] Hysteria following injury.

hystricomorphine (his″tri-kō-môr′fin), *a.* Same as *hystricomorphic.*

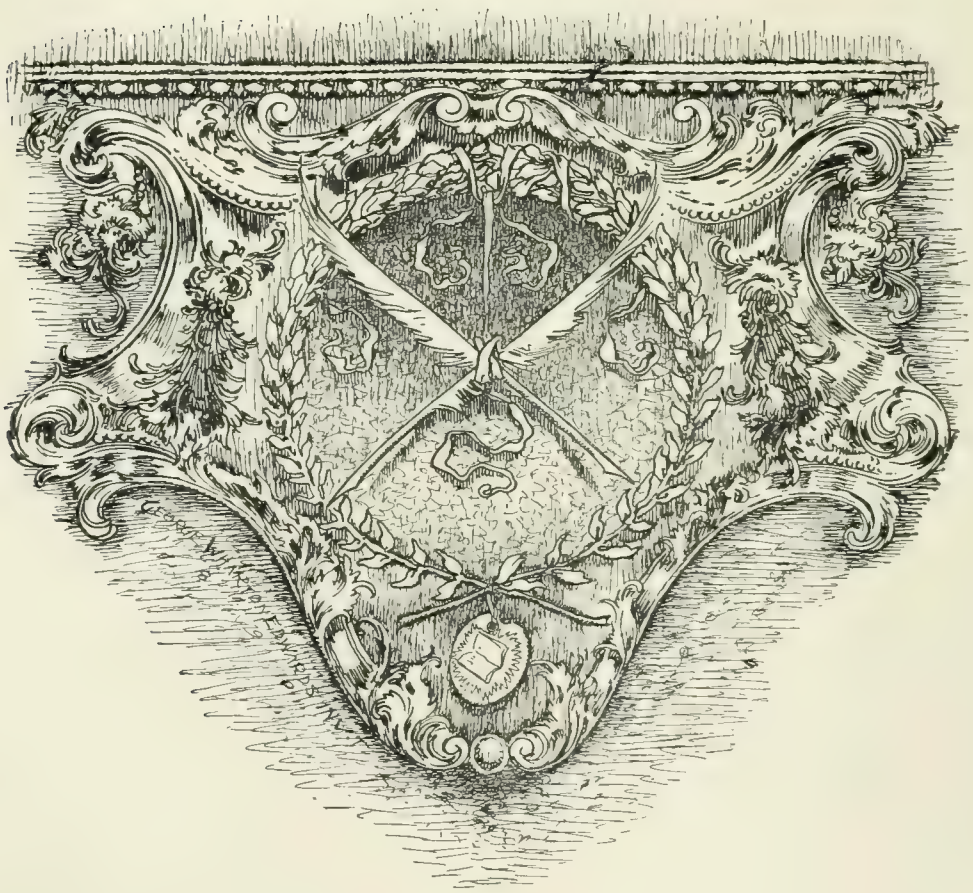
hystricomorphous (his″tri-kō-môr′fus), *a.* Same as *hystricomorphic.*

hystrixite (his′trik-sīt), *n.* Same as ★*histrixite.*

Hythe beds. See ★*bed*[1].

hyther (hī′thèr), *n.* [*hy*(*grometer*) + *ther*(*mometer*).] A line of equal comfort or discomfort so far as our sensations depend upon the conditions indicated by the hygrometer and the thermometer. See the extract.

> But one generalization seems to be allowable, namely, that the lines of equal comfort, or the zones of *hythers*, all run in approximately parallel directions, showing that the law governing the relation of humidity to temperature is similar in all cases.
>
> *W. F. Tyler*, in U. S. Monthly Weather Rev., May 1904, [p. 217.



2. (*d*) The usual symbol for the *moment of inertia*. (*e*) In *elect.*, a symbol for *current*. (*f*) In *math.*: (1) The symbol (*i* or i) for the neomon, the square root of minus one ($\sqrt{-1}$, $(-1)^{1/2}$). (2) In *quaternions*, the symbols *i*, *j*, *k* denote a system of three right versors in three mutually rectangular planes; thus *i* is a particular quaternion having for its amplitude one right angle. (*g*) In *chem.*, i- before certain compounds has reference to their inaction as distinguished from *dextro-rotation* (d-) or *levorotation* (l-).—**3.** An abbreviation (*d*) [*cap.*] of *Idaho*; (*e*) [*cap.*] of the Latin *Imperator*, emperor; (*f*) [*cap.*] of *Island*; (*g*) of *intransitive*.

-i[1] (-ī, or as L., -ē). [L *-ī* (whence It. *-i*), OL. *-ei*, *-e*, *-oe*, *-oi* (*-eis*, *-ēs*, *-is*) = Gr. *-οι* = Skt. *-ās* = Goth. *-ôs* = AS. *-as*, E. *-es*, *-s*, etc., Indo-Eur. *-ōs*, *-ās*, contracted from **-o-es*, **-a-es*. The original ending *-s*, which appears in other Latin and Greek declensions, was lost in the second declension through conformity to certain accompanying pronominal and adjective forms (L. *istī*, *illī*, Gr. *οἱ*, etc.).] A nominative plural ending of Latin masculine nouns and adjectives of the 'second' declension, with nominative singular in *-us*, or without suffix, many of which have come into English use, literary or technical. Examples are *acini*, *cuathi*, *denarii*, *loci*, *oculi*, *hippopotami*, *illuminati*, *literati*, *loci*, *oculi*, *radii*, *Galli*, *Theci*, *Chatti*, etc. In some instances there is also a regular English plural in *-es* after the ending *-us*, as *focuses*, *genuses*, *hippopotamuses*, etc. This plural suffix appears in many classnames in zoology and botany which are plurals of individual or generic names in *-us* which are less often used in the singular. Examples are *Acanthopterygii*, *Chondropterygii* (sc. *pisces*, fish), *Acrocarpi* (sc. *musci*, mosses), etc. See also *-ini*, etc.

-i[2] (ē). [It. *-i*, < L. *-ī*: see ★*-i*[1].] A nominative plural suffix of Italian nouns sometimes used in English, as *banditti*, *dilettanti*, *lazzaroni*, *scudi*, *soprani*, etc.

-i[3] (-ī, or as L., -ē). [L. *-ī* = O Celtic *-ī*, of different origin from Gr. *-ου*, etc., and L. *-is* (**-es-is*, > *-er-is*, etc.), AS. *-es*, Eng. *-es*, *s*, *'s*.] The ending of some Latin genitives singular of nouns and adjectives of the second declension, occurring in some ancient, medieval or modern Latin phrases used in English, as *genius loci*, *lapis lazuli*, *quid novi*, etc.

Ia. An abbreviation of *Iowa*.

iambist (ī-am'bist), *n.* [*iamb* + *-ist*.] A writer of iambic verse; hence, a satirist; a lampooner. See *iambus*.

With a malignity of personal slander not inferior to the *Iambist* Archilochus. *Grote*, Greece, VIII. ii. 67.

Ianassa (ī-a-nas'ä), *n.* [NL., < Gr. Ἰάνασσα, a name of a Nereid.] A genus of extinct fishes of the family *Petalodontidæ*, having a body shaped like a ray, with shagreen skin and the dentition consisting of pavement teeth arranged in longitudinal rows, each tooth overlapping the next in front. It is from the Carboniferous rocks in various parts of the world.

ianthine (ī-an'thin), *a.* [L. *ianthinus*, < Gr. ἰάνθινος, of the color of violets, < ἴανθος, ἴανθον, a violet, < ἴον, violet, + ἄνθος, flower.] Violet-colored. *Treas. Bot.*, p. 616. *N. E. D.*

iatrarchy (ī'ä-trär-ki), *n.* [Gr. ἰατρός, physician, + *-αρχια*, < ἄρχειν, rule.] The order or profession of physicians. *N. E. D.* [Nonce-word.]

The chiefs of the Hierarchy, the *Iatrarchy*, . . . the Hoplarchy. *Southey*, Doctor, VII. 498.

iatrochemistry (ī-ä″trō-kem'is-tri), *n.* [Gr. ἰατρός, physician, + E. *chemistry*.] The chemistry of the sixteenth and first half of the seventeenth centuries. In that period the substitution of remedies prepared by artificial chemical processes for the roots and herbs of earlier medicine greatly changed the practice of that art, while, on the other hand, medical or medicophysiological theories to a great extent stimulated and guided chemical investigation. Among the more prominent iatrochemists were Paracelsus, Libavius, Van Helmont, Sylvius, Tachenius, and Glauber.

It is difficult to realize at the present time how the *iatrochemistry* developed and flourished as long as it did. *Science*, July, 1904, p. 2.

iatromathematics (ī-ä″trō-math-ē-mat'iks), *n.* [Gr. ἰατρός, physician, + *μαθηματικα*, mathematics.] Same as ★*iatrophysics*.

iatrophysics (ī-ä-trō-fiz'iks), *n.* [Gr. ἰατρός, physician, + *φυσικά*, physics.] The theory and practice of the iatrophysical school of physicians.

Ibanag (ē-bä-näg'), *n.* [Ibanag (Cagayan) name.] **1.** The language spoken by the Cagayans of northern Luzon.—**2.** One who speaks the Ibanag language.

I-bar (ī'bär), *n.* **1.** A metal bar having a cross-section like the capital letter I.—**2.** A mistaken spelling for *eye-bar*.

Iberian[1]. **I.** *a.* **3.** In *anthrop.*, of or pertaining to the dolichocephalic dark type inhabiting the greater part of southern Europe and parts of northern Africa. Also called *Mediterranean*. It comprises the Ibero-insular and Atlanto-Mediterranean type of Deniker.

II. *n.* **3.** In *anthrop.*, a member of the Iberian race.

Iberian[2], *a.* **II.** *n.* An inhabitant of Iberia, a country of ancient Asia corresponding to what is now called Georgia.

Iberianism (ī-bē'ri-an-izm), *n.* [*Iberian*[1] + *-ism*.] The desire to unite Spain and Portugal under one crown, with the ancient name of Iberia. *Lit. World*, Oct. 3, 1880, p. 234.

Iberic (ī-ber'ik), *a.* and *n.* [L. *Ibericus*, < Gr. Ἰβηρικός, < Ἴβηρες, Iberians.] Same as *Iberian*[1].

This form of construction seems to be quite typical in the *Iberic* West.
A. J. Evans, in Jour. Hellenic Studies, XXI. 187.

Iberism (ī'bėr-izm), *n.* [*Iberia*, ancient name of the Spanish peninsula, + *-ism*.] The principles of the Iberists; Iberianism.

Iberist (ī'bėr-ist), *n.* [*Iberia* + *-ist*.] An advocate of the political union of Spain and Portugal.

Iberite[2] (ī'bėr-īt), *n.* [*Iberia* + *-ite*[2].] An advocate of Iberianism.

Ibero-Celtic (ī-bē″rō-sel'tik), *a.* Iberian and Celtic. *Keane*, Ethnology, p. 201.

Ibero-Celto-Teutonic (ī-bē″rō-sel″tō-tū-ton'ik), *a.* Iberian, Celtic, and Teutonic. *Keane*, Ethnology, p. 201.

Ibero-insular (ī-bē″rō-in'sū-lär), *a.* In *anthrop.*, of or pertaining to a race or type inhabiting a large part of Spain, Portugal, Corsica, Sardinia, and southern Italy, including Sicily, characterized by short stature, long heads, tawny white skin, and black hair. *Deniker*, Races of Man, p. 285.

ibex, *n.*—**Abyssinian ibex,** *Capra walie*, a rare species with strongly curved horns.—**Arabian ibex,** *Capra sinaitica*, a species of ibex which has much compressed horns with the knobs at irregular intervals: found in Arabia, Palestine, and upper Egypt.—**Himalayan ibex,** *Capra sibirica*, a large species of the mountains of central Asia, distinguished by its size and heavy beard.

Ibidium cernuum.

(From Britton and Brown's "Illustrated Flora of the Northern States and Canada.")

Ibidium (ī-bid'i-um), *n.* [NL. (Salisbury, 1812), < Gr. ἴβις (*ἰβιδ-*), ibis. The anthers were compared to the head of an ibis.] A genus of monocotyledonous plants belonging to the family *Orchidaceæ*. See *Spiranthes*.

ibis, *n.* **4.** In *angling*, an artificial hackle-fly, ribbed with silver tinsel, with body, hackle, wings, and tail scarlet.—**Straw-necked ibis,** *Carphibis spinicollis*, an Australian species which has the feathers of the lower neck developed as slender yellowish spines. Very similar species occur in South America.

-ible. See *-ble*.

iboga (ē-bō'gä), *n.* [W. African.] A name, in the Kongo region of West Africa, of a shrub of the dogbane family, *Tabernanthe Iboga*. Though growing wild in this region, it is frequently cultivated near the native villages for the sake of its medicinal and narcotic roots, which contain an alkaloid similar in its action to cocaine.

ibogaine (ē-bō'ga-in), *n.* [*iboga* + *-ine*[2].] An alkaloid extracted from the Kongo-plant and iboga. It produces anæsthesia like cocaine and acts upon the medulla like cola.

I. C. An abbreviation of the Latin *Iesus Christus*, Jesus Christ.

icacin (i-kä'sin), *n.* [*icaco* + *-in*[2].] A colorless compound, $C_{46}H_{76}O$ or $C_{47}H_{78}O$, found in elemi resin. It crystallizes in needles which melt at 175° C.

ice, *n.*—**Brash ice.** See *brash*[1], 4 (*b*).—**Dead ice,** ancient ice retained in 'fossil glaciers' or elsewhere under the soil and not moving downward.—**Rock ice,** ice of ancient origin, interbedded with detrital layers. *Geog. Jour.* (R. G. S.), XII. 167. **Sludge ice,** soft crystals which are formed by the frost when it first attacks the ruffled surface of the ocean. **Stone ice.** Same as *dead* ★*ice*.—**The great ice,** an ice-sheet; a continental glacier, as in Greenland. **To cut ice.** See ★*cut*.

I. C. E. An abbreviation of *Institute of Civil Engineers*.

Iceberg theory, the theory that the distribution of drift and of erratic boulders and the scoring of the underlying rock-surface are accounted for by the movements of icebergs during a period of continental submergence: now generally replaced by the ★*glacial theory* (which see).—**Tabular iceberg,** an even-topped iceberg of considerable size. Such bergs are common in the antarctic seas and are derived from the south polar ice-sheet.

ice-bird, *n.* **2.** The Indian goatsucker, *Caprimulgus asiaticus*: so called because its note resembles "the sound of a stone scudding over ice."

ice-blindness (īs'blīnd″nes), *n.* Same as *snow-blindness*. *Buck*, Med. Handbook, IV. 13.

ice-block (īs'blok), *n.* In *geol.*, a portion of a retreating glacier, isolated by melting.

ice-bolt (īs'bōlt), *n.* A sudden descent of ice; an avalanche; figuratively, a sensation as of the sudden chill of piercing cold.

The fearful *icebolts* of the mountain.
H. MacMillan, Bible Teachings, iv.

ice-borne (īs'bōrn), *a.* Borne or conveyed by ice: especially applied to a boulder which has been carried and deposited by ice during the glacial period. *Lyell*.

ice-breaker, *n.* **4.** A hand- or power-machine for breaking ice into small fragments for various uses.

ice-calk (īs'kâk), *n.* Same as *calk*[3], 2.

ice-can (īs'kan), *n.* A large, deep, and narrow sheet-iron can designed to hold the distilled water used in making ice. The can is sunk in the cold brine of the freezing-tank and remains there until its contents are frozen.

ice-cave (īs'kāv), *n.* **1.** A cave in which ice is formed in sufficient quantity to outlast the warm season; a glacière.—**2.** A hollow under the end of a glacier, whence the glacial stream flows out.

The term "*ice-cave*," in the author's opinion, should especially apply to the hollows in the ice at the lower end of glaciers, whence the glacier waters make their exit.
Geog. Jour. (R. G. S.), IX. 670.

ice-chipper (īs'chip″ėr), *n.* A hand-tool consisting of a combined knife and chisel for chopping ice into fragments.

ice-cliff (īs'klif), *n.* **1.** The precipitous front of a tide-water glacier.—**2.** A cliff formed by marine erosion, in arctic regions, where the land consists of ice with more or less interstratified and overlying detritus.

ice-cloud (īs'kloud), *n.* A cloud composed of fine globules of ice, or of globules of water colder than ice, which on touching any solid body adhere as frostwork; a frost-cloud; a rime-cloud: often a very low stratum of ice fog.

ice-craft (īs'kráft), *n.* Skill in traveling on ice, or in dealing with its dangers, as in arctic exploration or mountain-climbing. *Daily News*, March 5, 1890. *N. E. D.*

ice-creeper (īs'krē″pėr), *n.* Same as *creeper*, 6 (*h*).

Iced liver, heart, etc., chronic inflammation of the serous membrane covering the liver, heart, etc., accompanied by a fibrinous exudation resembling the icing on cake. *Med. Record*, Feb. 14, 1903, p. 273.

ice-dike (īs'dīk), *n.* A crevice in a glacier which becomes filled with ice of secondary or later development and strongly resembles a mineral vein. *W. H. Sherzer.*

ice-dock (īs'dok), *n.* A basin in the ice, either natural or sawed out with ice-saws, sufficiently large to accommodate a ship. Such 'docks' are often made by navigators in the polar regions in order to avoid being pinned or nipped between two closing floes.

ice-drag (īs'drag), *n.* A hooked iron instrument planted in the ice ahead of a vessel, used like a kedge-anchor in warping her along.

ice-dump (īs'dump), *n.* A sheet-iron tank containing a sloping grid in which an ice-can with its ice-block is upset to cause the block to slip out of the can. See ★*ice-can.*

ice-farm (īs'färm), *n.* A body of water with the necessary buildings, devoted to the production of ice for the market; in India, a place where ice is obtained by allowing water to freeze, at night, in shallow earthenware pans. *Sci. Amer.*, Jan. 25, 1908, p. 58.

ice-fender (īs'fen″dėr), *n.* A fender or guard for protecting a vessel from injury by ice.

ice-fish (īs'fish), *n.* **1.** A little fish, the caplin, *Mallotus villosus*, of the family *Argentinidæ*, living in arctic American waters and much valued as food. See *caplin*2. [Rare.]—**2.** A small translucent fish, *Salanx microdon*, of the rivers of Japan and China.

ice-fog (īs'fog), *n.* A fog produced by wind blowing over fields of ice.

ice-front (īs'frunt), *n.* The border of a glacier or ice-sheet.

ice-gorge (īs'gôrj), *n.* **1.** A blockade of ice in a river.—**2.** A narrow, steep-sided gorge in whose bottom, amid large fallen rocks, ice forms in the winter and endures until late in the summer or longer. Ice-gorges occur in a number of localities in New England and New York.

ice-guard (īs'gärd), *n.* In *lumbering*, a frame or fence of heavy timbers set sloping about a cluster of boom-piles, to prevent the destruction of the boom by ice. The timbers are securely fastened to the top of the boom-piles: the other end rests on the bed of the lake or stream, at an angle of about thirty degrees to the surface of the water. The ice is forced to mount the guards and is so broken up.

ice-gush (īs'gush), *n.* A mass of mingled ice and water standing at the bottom of a crevasse in a glacier.

Now and then a horse will lose his footing and slide down to the bottom with a rush, but never once did one of them refuse to climb out of an *ice-gush* when called upon to do so, although many times they left a trail of blood behind them where they had been cut and bruised in their fall. *Jour. Franklin Institute*, Oct., 1904, p. 304.

ice-hill, *n.* **2.** A large mass or mound of ice of indefinite height.—**3.** An artificial toboggan-slide.

The Russians are extremely fond of this amusement, and often have these *ice-hills* erected at some village at a little distance from the town.
Englishwoman in Russia, p. 215. *N. E. D.*

ice-hockey (īs'hok″i), *n.* A game, developed from field-hockey, played on ice, either on open ponds or in rinks. It is usually specified that the rink shall be at least 112 feet long by 58 feet wide. A team is composed of 7 men, 4 *forwards* or *rushers*, who carry the attack, and 3 others, called *cover-point*, *point*, and *goal-keeper*, whose work is principally defensive, although the cover-point often backs up or 'feeds' the rushers or forwards. The ice-surface for this game may vary in length or breadth. If played in a rink, goals are erected at either end and the surface is bounded by planking 2 feet or more in height. The sticks which the players use are made of ash, curved at the end; the curved part is formed into a blade less than 13 inches in length and 3 in width, which rests upon the surface of the ice, allowing about a foot of the stick upon the ice. The puck, as it is called, is a disk of vulcanized rubber 3 inches in diameter and 1 in thickness, which is slid along the ice, although it can be lifted by a wrist motion so as to fly through the air. Two halves of 20 minutes each constitute the time of play, with an intermission of 10 minutes. The game is started by facing the puck in the center of the field of play. This consists in placing the puck on the middle point of the field between the sticks of two opposing center forwards. The referee calls play, and each man then strives to gain possession of the puck and pass it to players of his own side. The forwards are usually divided into two centers and two wings and the puck is shot diagonally across the surface from one player to another. The players use both hands on the stick, and a good player rarely resorts to a one-hand use of the stick. No player is allowed to raise his stick above the shoulder. The puck may be advanced by the use of the stick, but it may be stopped by the skate or the body. The goal-tender stands between the goal-posts, and the rule provides that he must not lie, sit, or kneel upon the ice, but must maintain a standing position. His play consists in defending the goal and shooting the puck off from one side to the other when the goal is in danger. There is a referee who has charge of the play: two goal-umpires, one at each end, decide whether the puck passes through the goal. Rules for off- and on-side play prevail in hockey; that is, a player must always be on his own side of the puck, and is off-side if he is nearer the opponents' goal-line than the player of his own team who last hit the puck, in which event he is not allowed to touch it or interfere or obstruct an opponent until again on-side. He is put on-side when the puck has been touched by an opponent, or when he has skated behind one of his own side who either has possession of the puck or played it last when behind the offender. Body-checking, blocking, and interfering when on-side are allowed. Charging from behind, tripping, collaring, kicking, and cross-checking are not allowed. The final result is determined by the number of goals scored in the two halves.

ice-jam (īs'jam), *n.* A mass of fragments of river ice piled irregularly by the current, so as to obstruct its flow.

Iceland agate. See ★*agate*2.

ice-lead (īs'lēd), *n.* A temporary channel leading into or entirely through an ice-field, which is liable to be closed at any moment by the movement of the ice.

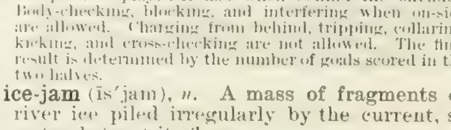
ice-line (īs'līn), *n.* In *thermodynam.*, a curve showing the pressure at which for any temperature a mixture of ice and water will be in stable equilibrium. *W. Watson*, Text-book of Physics, p. 267.

ice-lobe (īs'lōb), *n.* A forward-reaching part of an ice-sheet with a convex front, the advance of which is due to its having moved along lower ground than that on either side. Thus the continental ice-sheet of the glacial period in North America was divided into various ice-lobes, along its southern margin, known as the *Michigan lobe*, the *Green Bay lobe*, etc. See ★*lobe.*

The relation of the Michigan, Saginaw and Huron-Erie *ice-lobes* in lower Michigan during the Wisconsin stage of glaciation. *Science*, Feb. 6, 1903, p. 224.

ice-locomotive (īs'lō-kọ-mō″tiv), *n.* A locomotive or motor-car having spurs or teeth on its driving-wheels to enable it to travel on ice.

Icelus (is'e-lus?), *n.* [NL. (Kröyer, 1845), < Gr. Ἴκελος, Icelus, son of Hypnus, the god of



Icelus spiniger.
(From Bulletin 47, U. S. Nat. Museum.)

sleep.] A genus of fishes belonging to the family *Cottidæ*, found in the North Atlantic and Pacific. *I. bicornis* is the best-known species. *I. spiniger* is a species found in Bering Sea.

iceman, *n.* **3.** An official whose duty it is to keep the ice on a skating-pond in order and to assist those who meet with accidents while skating. See ★*ice-master*, 2.

A rescue by the *icemen* belonging to the Royal Humane Society. *All the Year Round*, 1860, p. 292.

ice-marker (īs'mär″kėr), *n.* A plow-shaped device for marking a groove in ice which is to be cut into blocks. It is guided by a gage which runs in the last-plowed groove.

ice-marking (īs'mär″king), *n.* Same as *ice-mark.*

ice-master, *n.* **2.** An official appointed to keep the ice on a public skating-pond in order. See ★*iceman*, 3.

ice-mill (īs'mil), *n.* Same as *moulin.*

Icenian (ī-sē'ni-ạn), *a.* [L. *Iceni*, an ancient people of southern Britain.] In *geol.*, a name which has been occasionally applied to the Norwich crag of the English Pliocene formation. See *crag*1, 2.

ice-nip (īs'nip), *n.* The nip or grip of the ice upon a vessel which is caught and squeezed between two floes.

ice-pan (īs'pan), *n.* A small sheet or slab of floating ice; pancake ice.

The *ice-pans* appear to drift capriciously backward and forward, without any apparent cause.
Geog. Jour. (R. G. S.), XVIII. 40.

ice-pigeon (īs'pij″ọn), *n.* A breed of small domesticated pigeons whose prevailing colors are pale bluish lavender, with faint lacings or spangles. The feet are heavily feathered save in the variety known as the *Ural.*

ice-pillar (īs'pil″ạ̈r), *n.* The pedestal of a glacier table.

ice-pilot (īs'pī″lọt), *n.* Same as *ice-master*, 1.

ice-pipe (īs'pīp), *n.* A projecting tube of ice which is produced by frost in regions whose surface soil is a tough, water-soaked clay. The upper layer of the soil is first frozen solid for a shallow depth. As the frost solidifies and expands the lower-lying layers, the neighboring water is forced to spurt through the crust at innumerable points, freezing as it emerges and forming the ice-pipes. *Van Hise*, U. S. Geol. Surv. Monographs, XLVII. 444.

ice-plank (īs'plangk), *n.* A bridge on the deck of an arctic vessel, crossing from one side to the other; a spike-plank.

ice-plant, *n.* **New Zealand ice-plant.** Same as *New Zealand spinach* (which see, under *spinach*). **Tasmanian ice-plant,** the Victorian bower-spinach, *Tetragonia implexicoma.* See *Australian spinach*, under *spinach.*

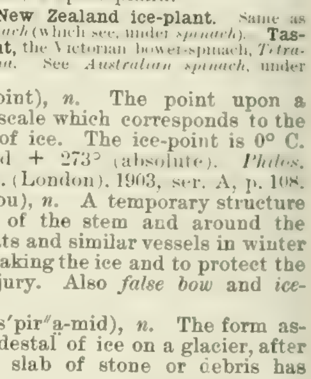
ice-point (īs'point), *n.* The point upon a thermometric scale which corresponds to the melting-point of ice. The ice-point is 0° C. + 32° F., and + 273° (absolute). *Philos. Trans. Roy. Soc.* (London), 1903, ser. A, p. 108.

ice-prow (īs'prou), *n.* A temporary structure fitted in front of the stem and around the bows of tugboats and similar vessels in winter to assist in breaking the ice and to protect the bows from injury. Also *false bow* and *ice-ram.*

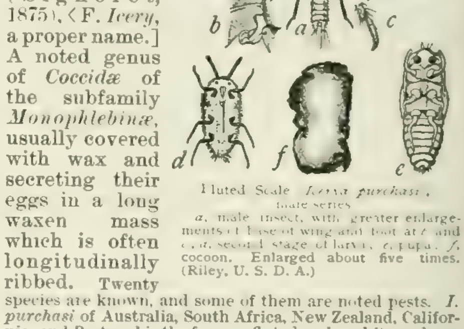
ice-pyramid (īs'pir″ạ-mid), *n.* The form assumed by a pedestal of ice on a glacier, after the protecting slab of stone or debris has fallen from it.

ice-ram (īs'ram), *n.* Same as ★*ice-prow.*

Icerya (is-e-rī'ä), *n.* [NL. (Signoret, 1875), < F. *Icery*, a proper name.] A noted genus of *Coccidæ* of the subfamily *Monophlebinæ*, usually covered with wax and secreting their eggs in a long waxen mass which is often longitudinally ribbed. Twenty species are known, and some of them are noted pests. *I. purchasi* of Australia, South Africa, New Zealand, California, and Portugal is the famous fluted scale, white scale, or cushion-scale (see *cushion-scale*) which was brought under control in California, South Africa, and Portugal by the introduction of the Australian ladybug, *Vedalia (Novius) cardinalis.* Other noted species are *I. ægyptiacum*, *I. sanchellarum*, and *I. montserratensis.* See *Australian* ★*ladybug*, with cut.

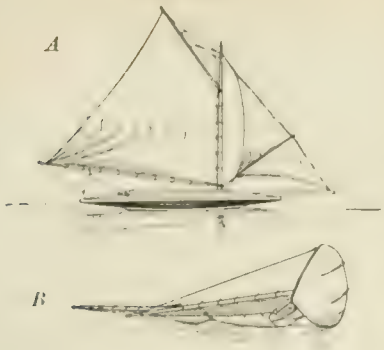


Fluted Scale (*Icerya purchasi*), male series.
a, male insect, with greater enlargements of base of wing and foot at *b* and *c*; *d*, second stage of larva; *e*, pupa; *f*, cocoon. Enlarged about five times. (Riley, U. S. D. A.)



Fluted Scale (*Icerya purchasi*), female series, illustrating development of female insect from young larva to adult gravid stage.
a, newly hatched larva; *b*, second stage; *c*, third stage; *d*, full-grown female; *e*, *f*, same after secreting egg-sac. All except *a* enlarged about twice natural size. (Riley and Marlatt, U. S. D. A.)

ice-scooter (īs'skö″tėr), *n.* A craft, a combination of sailing-yacht and ice-boat, peculiar to Long Island. It sails as well in water as on ice, and may be run from one element to the other without change of rig or appliances. On the flat hull of the boat steel runners are fitted, as on an ice-boat. The boat may



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be steered either by the one head-sail or by an oar-shaped metal blade trailed over the stern, which acts as a rudder when in the water, and when on the ice cuts into the surface on one side of the keel line or the other as may be required for turning the boat's head. These scooters may be run alternately through water and over ice, as their speed allows them to climb out of the water without any assistance other than their own momentum.

ice-scouring (īs'skour-ing), *n.* The general process of abrasion and erosion by means of glaciers.

Ice-scouring during maximum glaciation reached far up the mountain slopes above the trough walls, but was without great influence on form.
Science, April 5, 1901, p. 552.

ice-scraper, *n.* **2.** An implement of the Alaskan Eskimos consisting of a handle to which are attached several seal claws: used by hunters, who imitate the movements of the seal, to produce the noise made by basking seals.

ice-shed (īs'shed), *n.* The dividing-line from which the ice of a continental glacier moves in opposite directions.

ice-sky (īs'skī), *n.* A bright whitish sky in polar regions, near the horizon, indicating the existence of a distant field of ice or snow.

ice-spur (īs'spêr), *n.* A device worn on a shoe to prevent slipping on an icy surface. *Minsheu.*

ice-storm (īs'stôrm), *n.* A fall of ice, or of sleet turning to ice, or of hailstones and larger agglomerated masses of ice; a storm in which falling rain freezes upon the objects which it touches.

ice-tongue (īs'tung), *n.* **1.** A lobe of a glacier. See ★*ice-lobe.*

This book will consist of a detailed description of about fifteen Greenland *ice-tongues*, and of a portion of the main ice cap, dwelling especially upon the significant features. *Science*, Aug. 5, 1904, p. 188.

2. A submerged mass of ice which projects horizontally from an iceberg.

ice-tub (īs'tub), *n.* A tub-shaped receptacle of earthenware or glass for holding cracked ice. *E. A. Barber*, Pottery and Porcelain of U. S., p. 286.

ice-vein (īs'vān), *n.* Same as ★*ice-lead.*

ich. An abbreviation of *ichthyology.*

Ichabod (ik'a-bod), *n.* [LL. *Ichabod*, < Heb. *Ikhabōd*, < *ī*, not, + *khabōd*, glory. The allusion is to 1 Sam. iv. 21: "And she named the child Ichabod, saying, The glory is departed from Israel."] A Hebrew name (see etym.) used allusively in various connections, especially in the phrase *to say Ichabod* (to or of a thing), implying that its glory has departed.

"Whenever Wilmot Edge is away, the curries of this club go to the devil . . . He pushed away his plate. "Bring me some cold beef," he commanded, and the waiter brought it with an air that said "*Ichabod*" for the Imperium. *Anthony Hope*, Tristram of Blent, xxi.

ichabodiad (ik-a-bod'i-ad), *n.* [*Ichabod* + *-i-ad*, as in *Iliad*, *Jeremiad*, etc. The allusion is to 1 Sam. iv. 21: see ★*Ichabod.*] A lamentation for the fall or deterioration of something.

Leader-writers, contributors to magazines, British consuls, popular authors of jeremiads and *ichabodiads* write on this subject [geographical conditions affecting British trade], if not with unanimity, at least, for the most part, with a harmony that must be, and in fact is, very comforting to our competitors, but far from cheering to the representatives of British trade and industry.
Geog. Jour. (R. G. S.), XVIII. 425.

ichhu (ēch'hō), *n.* [Also *ichu*; Quichua *ichhu.*] Same as ★*puna-grass.*

ichiban (ē'chi-bän), *a.* [Jap. *ichi-ban*, number one, the first, the best, < *ichi*, one, + *ban*, a suffix indicating number.] Number one; the first; the best.

ichneumonid (ik-nū'mo-nid), *n.* and *a.* **I.** *n.* An insect of the hymenopterous family *Ichneumonidæ.*

II. *a.* Of or belonging to this family.

ichneumonize (ik-nu'mon-iz), *v. t.*; pret. and pp. *ichneumonized*, ppr. *ichneumonizing.* [*ichneumon* + *-ize.*] To parasitize, as with a member of the family *Ichneumonidæ.*

ichneumonoid (ik-nu'mon-oid), *a.* and *n.* **I.** *a.* Belonging to or having the characters of the superfamily *Ichneumonoidea.*

II. *n.* A member of this superfamily.

Ichneumonoidea (ik-nu-mō-noi'de-ä), *n. pl.* [NL., < *Ichneumon* + *-oidea.*] The hymenopterous family *Ichneumonidæ* considered as a superfamily.

ichneumonologist (ik-nū-mō-nol'ō-jist), *n.* [*ichneumonology* + *-ist.*] One who is versed in the study of the *Ichneumonoidea.*

ichneutic (ik-nu'tik), *a.* [Gr. ἰχνευτικός, < ἰχνευτής, a tracker, < ἴχνευα, track: see *ichneumon.*] Relating to tracking, or to the hunter who tracks his game.

ichnograph, *n.* **2.** A treatise on tracks, specially fossil trails, such as those found in the sandstones of the Connecticut valley.—**3.** A fossil track or trail of an extinct animal.

ichnomancy (ik'nō-man-si), *n.* [Gr. ἴχνος, footprint, + μαντεία, divination.] Divination by observation of footprints.

icho (ē'chō), *n.* [Jap.] The gingko or maiden-hair-tree of Japan, *Ginkgo biloba.* It is cultivated partly for its fruits, the kernels of which are eaten, but principally for the adornment of temple courts and cemeteries. Its wood is of a bright-yellowish color, fine-grained, capable of polish, tender and easily broken, and therefore not so highly prized as the woods of many other native trees.

ichthalbin (ik-thal'bin), *n.* [*ichth(yol)* + *alb(umen)* + *-in*[2].] A grayish-brown, odorless and almost tasteless powder made by precipitating a solution of ichthyol and albumen with mineral acids; ichthyol albuminate: used as an antiseptic (internal and external).

ichthargan (ik-thär'gan), *n.* [*ichth(yol)* + Gr. ἀργυρος, silver, + *-an.*] A trade-name of silver ichthyol sulphonate. It is used in medicine.

ichthoform (ik'thō-fôrm), *n.* [*ichth(y)o-(sulphonic)* + *form(aldehyde).*] A dark-brown, odorless and tasteless powder obtained by treating ichthyosulphonic acid with formaldehyde solution: a surgical and intestinal antiseptic.

ichthulinic (ik-thū-lin'ik), *a.* [*ichthulin* + *-ic.*] Derived from ichthulin: applied to an acid obtained by treating ichthulin with alkalies. It is similar in composition to avivitellinic acid; like this it is probably a paranucleinic acid.

ichthyal (ik'thi-al), *a.* [Gr. ἰχθύς, fish, + *-al*[1].] Same as *ichthyic.*

Ichthydiidæ (ik-thi-dī'i-dē), *n. pl.* [NL., < *Ichthydium* + *-idæ.*] A family of *Gastrotricha* having the skin either naked or beset with scales or papillæ, but never with spines. The typical genus is *Ichthydium.*

Ichthydium (ik-thid'i-um), *n.* [NL. (Ehrenberg, 1830), < Gr. ἰχθύδιον, dim. of ἰχθύς, a fish.] The typical genus of the family *Ichthydiidæ.*

ichthyization (ik''thi-ī-zā'shon), *n.* [*ichthyze* (< Gr. ἰχθύς, fish, + *-ize*) + *-ation.*] The process of evolution of the typical fish-like characters; the development of those traits which render an organism more and more definitely and completely a fish. *D. S. Jordan.*

ichthylepidin (ik-thi-lep'i-din), *n.* [Gr. ἰχθύς, fish, + λεπίς (λεπιδ-), scale, + *-in*[2].] An albuminoid found in the scales of fishes.

ichthyobatrachian (ik''thi-ō-ba-trā'ki-an), *a.* [Gr. ἰχθύς, fish, + βάτραχος, frog, + *-ian.*] Combining the characters of fishes and batrachians; ichthyopsid.

Ichthyobdella (ik''thi-ob-del'ä), *n.* [NL. (Blainville), < Gr. ἰχθύς, a fish, + βδέλλα, a leech.] The typical genus of the family *Ichthyobdellidæ.*

Ichthyobdellidæ (ik''thi-ob-del'i-dē), *n. pl.* [NL., < *Ichthyobdella* + *-idæ.*] A family of marine and fresh-water leeches, parasitic for the most part on fishes. The body may be cylindrical and consist of a narrower anterior and a wider posterior region, or it may be dorsiventrally compressed. The anterior and posterior suckers are distinct from the body. It includes several genera, among them being *Ichthyobdella*, *Branchellion*, *Pontobdella*, *Custobranchus*, and *Macrobdella.*

ichthyodont (ik'thi-ō-dont), *n.* [Gr. ἰχθύς, fish, + ὀδούς, ὀδοντ-, tooth.] A fossil fish-tooth.

ichthyofauna (ik'thi-ō-fâ''nä), *n.* [NL., < Gr. ἰχθύς, a fish, + NL. *fauna.*] The fish fauna of any given region.

ichthyographer (ik-thi-og'ra-fer), *n.* [*ichthyography* + *-er*[1].] A naturalist who writes on fishes.

Ichthyoid curve. See ★*curve.*

Ichthyoidea (ik-thi-oi'dē-ä), *n. pl.* [NL., < Gr. ἰχθύς, fish, + εἶδος, form.] A suborder of anurous aquatic *Amphibia* having amphicœlous vertebræ, three pairs of perennial external gills or, in their absence, a persistent branchial aperture, and small eyes without distinct lids.

ichthyolate (ik'thi-ō-lāt), *n.* [Gr. ἰχθύς, fish, + *-ol* + *-ate*[1].] The trade-name of magnesium ichthyolate. It is used in medicine.

ichthyol-oil (ik'thi-ol-oil), *n.* A brownish-yellow, syrupy liquid, with penetrating bituminous odor and taste, which results from the destructive distillation of a bituminous rock containing fossil fish found near Seefeld in the Tyrol.

Ichthyomethia (ik''thi-ō-mē'thi-ä), *n.* [NL. (Patrick Browne, 1756), so called in allusion to its use as a fish-poison, < Gr. ἰχθύς, fish, + μέθη, drunkenness.] A genus of dicotyledonous plants belonging to the family *Fabaceæ.* See *Piscidia.*

ichthyomorphic, *a.* **3.** In *decorative art*, noting motives based on the forms of fishes.

Ichthyomyzon (ik''thi-ō-mī'zon), *n.* [NL., < Gr. ἰχθύς, fish, + μύζων, ppr. of μύζειν, mutter.] A genus of lamprey eels which inhabit the fresh waters of the eastern United States.

ichthyonomy (ik-thi-on'ō-mi), *n.* [Gr. ἰχθύς, fish, + νόμος, arrangement.] The arrangement of fishes according to their relationships.

ichthyophagian (ik'thi-ō-fā'ji-an), *a.* [*ichthyophagi* + *-ian.*] Of or pertaining to ichthyophagi, or fish-eaters; characterized by the eating of fish, as "*ichthyophagian* banquets," *Badham*, Halieutics, p. 137.

ichthyophagic (ik''thi-ō-faj'ik), *a.* Same as *ichthyophagous.*

ichthyophagite (ik-thi-of'a-jit), *n.* [*ichthyophag-y* + *-ite*[2].] Same as *ichthyophagist.*

ichthyophagize (ik-thi-of'a-jīz), *v. i.*; pret. and pp. *ichthyophagized*, ppr. *ichthyophagizing.* [*ichthyophag-y* + *-ize.*] To feed on fish.

ichthyophobia (ik-thi-o-fo'bi-ä), *n.* [NL., < Gr. ἰχθύς, fish, + -φοβία, < φόβος, fear.] An extreme dislike either of handling or of eating fish.

ichthyopolism (ik-thi-op'ō-lizm), *n.* [*ichthyopol-ist* + *-ism.*] The business of selling fish.

ichthyopolist (ik-thi-op'ō-list), *n.* [Gr. ἰχθυοπώλης, a fish-seller, < ἰχθύς, fish, + πωλεῖν, sell, + *-ist.*] A fish-seller; a fish-dealer.

ichthyornithoid (ik-thi-ôr'ni-thoid), *a.* [*Ichthyornis(-ornith-)* + *-oid.*] Resembling *Ichthyornis.*

ichthyosaurid (ik''thi-ō-sâ'rid), *n.* One of the *Ichthyosauridæ.*

Ichthyosis hystrix. Same as *hystricismus.*

ichthyosism (ik'thi-ō-sizm), *n.* [*ichthyos(is)* + *-ism.*] A name given by Jacques Pellegrin to a disorder produced by the eating of decaying fish. It is usually accompanied by diarrhea and eruption of the skin, and is caused by the formation of leucomaines through the influence of bacteria. *Jordan*, Study of Fishes, I. 183.

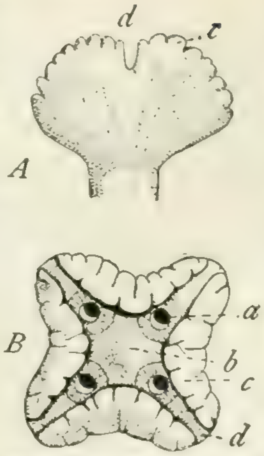
ichthyosulphonate (ik''thi-ō-sul'fō-nāt), *n.* [*ichthyosulphon(ic)* + *-ate*[1].] A salt derived from ichthyosulphonic acid.—**Ichthyosulphonate of ammonium.** Same as *ichthyol.*

ichthyosulphonic (ik''thi-ō-sul-fon'ik), *a.* [*ichthyol* + *sulphonic.*] Noting an acid, a dark resinous compound, $C_{28}H_{36}S_3O_6H_2$, prepared by treating crude ichthyol-oil with an excess of sulphuric acid and then shaking repeatedly with a saturated solution of common salt, whereby sulphurous and sulphuric acids are removed. Also *ichthyol-sulphonic acid.*

Ichthyotænia (ik'' thi-ō-tē'ni-ä), *n.* [NL., < Gr. ἰχθύς, fish, + τανία, a worm (see *tænia*).] The typical genus of the family *Ichthyotæniidæ.* It contains several species parasitic in fresh-water fishes. *Lonnberg.*

Ichthyotæniidæ (ik''thi-ō-tē-nī'i-dē), *n. pl.* [NL., < *Ichthyotænia* + *-idæ.*] A family of cestode worms, of the order *Tetracotylea*, having acetabulate suckers. It contains the genera *Ichthyotænia* and *Corallobothrium*, parasitic in fishes. See cut on next page.

Ichthyotomi (ik-thi-ot′ọ̄-mī), *n. pl.* [NL., ‹ Gr. ἰχθύς, a fish, + -τομος, ‹ τέμνειν, cut.] An order of selachian fishes having a well-calcified endoskeleton, pterygoquadrate movably articulated with the cranium, pectoral fins with segmented axis, and diphycercal tail. Members of the order are mostly of late Paleozoic age, but some occur in the early Mesozoic.



[illegible] of *Pleuracanthus* [illegible] after Kiggen[illegible], of the [illegible] A, side view; B, [illegible] from Kiggen[illegible] descriptions and figures: *a*, [illegible] *b*, [illegible] *c*, notched lobes [illegible] up from below the [illegible] and [illegible] a groove between them. (From Lankester's "Zoology.")

ichthyotoxicon (ik thi-ọ̄-tok′si-kon), *n.* [Gr. ἰχθύς, a fish, + τοξικόν, poison.] A poisonous substance in some fishes, the cause of poisoning by the eating of fish. *Vaughan and Novy*, Cellular Toxins, p. 188.

ichthyotoxicum (ik″thi-ọ̄-tok′si-kum), *n.* Same as ★*ichthyotoxicon.*

ichthyotoxin (ik thi-ọ̄-tok′sin), *n.* Same as ★*ichthyotoxicon.*

ichthyotoxism (ik″thi-ō-tok′sizm), *n.* [NL., *ichthyotoxismus*, ‹ Gr. ἰχθύς, fish, + τοξ(ικόν), poison, + L. *-ismus*, E. *-ism.*] Fish-poisoning; poisoning resulting from the eating of fish.

ichthytaxidermy (ik-thi-tak′si-dėr-mi), *n.* [Gr. ἰχθύς, fish, + E. *taxidermy.*] Taxidermy as applied to fishes.

icican (is′i-kan), *n.* [*icica* + *-an.*] A crystalline resin obtained (by further concentration after the separation of brean) from the alcoholic solution of the oleoresin of icica.

Icla shales. See ★*shale*[2].

Icon. An abbreviation (*a*) of *iconographic;* (*b*) of *iconography.*

iconodulic (ī-kọ̄-nod′ụ̄-lik), *a.* [*iconodul-y* + *-ic.*] Relating to the veneration of icons or images.

iconodulist (ī-kọ̄-nod′ụ̄-list), *n.* [As *iconodul-y* + *-ist.*] A venerator of icons or images.

iconoduly (ī-kọ-nod′ụ-li), *n.* [NGr. *εἰκονοδουλεία, ‹ Gr. εἰκών, an image, + δουλεία, service, worship.] The veneration of images.

iconological (ī′kon-ọ̄-loj′i-kal), *a.* [*iconolog-y* + *-ic-al*[1].] Relating to iconology.

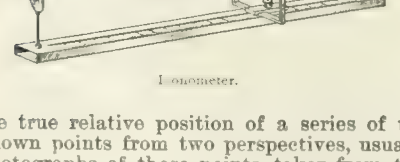
One of the most remarkable features of this restoration [of Spire's cathedral] has been the entire ornamentation of the interior with frescoes. . . . [A] . . . detailed account of this great *iconological* work is from the pen of an accomplished correspondent. *The Ecclesiologist*, XV. 25.

iconomania (ī″kon-ọ̄-mā′ni-ạ̈), *n.* [NL., ‹ Gr. εἰκών, an image, + μανία, madness.] An exaggerated devotion to icons or images; a mania for collecting icons.

iconomatically (ī-kon-ọ̄-mat′i-kal-i), *adv.* With reference to an icon, image, or picture. [Rare.]

That it [kan symbol] is not used *ikonomatically* here is evident, as kan in Maya is not a name for maize or grain of maize. *An. Rep. Bur. Am. Ethnol.*, 1894–95, p. 227.

iconometer (ī-kọ̄-nom′e-tėr), *n.* [Gr. εἰκών, an image, + μέτρον, measure.] An instrument used to facilitate the determination of



Iconometer.

the true relative position of a series of unknown points from two perspectives, usually photographs of those points, taken from two known points or stations. A pipe graduated in millimeters and about 20 centimeters long is fitted with a diopter and a movable light frame. Both of these may be placed within the pipe for convenient carrying.

iconometric (ī-kon-ọ̄-met′rik), *a.* Of or pertaining to the iconometer or to iconometry; obtained by means of the iconometer.

iconometry (ī-kọ̄-nom′e-tri), *n.* [As *iconometer* + *-y*[3].] The science of determining the relative positions of several unknown points by means of perspectives, usually photographs of those points, from two known points: especially applied to the photographic determination of points for topographical purposes, or phototopography.

iconophile (ī-kon′ọ̄-fil), *n.* [Gr. εἰκών, an image, + φιλεῖν, love.] Same as *iconophilist.*

iconophily (ī-kọ̄-nof′i-li), *n.* [*iconophile* + *-y*[3].] Same as *iconophilism.*

iconoplast (ī-kon′ọ̄-plȧst), *n.* [Gr. εἰκών, an image, + πλαστός, formed.] One who makes images or icons. [Rare.]

He [Pattison] could not, like Renan and especially like Matthew Arnold, be a thorough iconoclast, and yet delude himself into thinking that he was (if I may coin such a word) an *iconoplast* all the time. *Literature*, Jan. 8, 1898, p. 24.

iconoscope (ī-kon′ọ̄-skōp), *n.* [Gr. εἰκών, an image, + σκοπεῖν, view.] A device attached to a camera, which shows in reduced scale an image of an object to be photographed; a finder. It permits a choice of point of view and arrangement.

icosane (ī′kọ̄-sān), *n.* [Gr. εἴκοσι, twenty, + *-ane.*] A colorless hydrocarbon of the methane series, $C_{20}H_{42}$, obtained from brown coal paraffin. It melts at 36.7° C. and boils at 205° C. under 15 millimeters pressure. Also called *eicosane.*

icosinene (ī-kos′i-nēn), *n.* [Gr. εἴκοσι, twenty, + *-in*[2] + *-ene.*] Same as ★*eicosylene.*

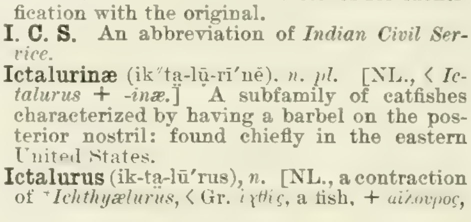
icositetrahedroid (ī″kọ̄-si-tet-ra-hē′droid), *n.* [*icositetrahedr-on* + *-oid.*] The four-dimensional analogue of the icositetrahedron.

icotype (ī′kọ̄-tīp), *n.* [Gr. εἰκός, likely (like), + τύπος, type.] In the nomenclature of types in natural history, a specimen that has not been used in literature but serves for identification with the original.

I. C. S. An abbreviation of *Indian Civil Service.*

Ictalurinæ (ik″ta-lụ̄-rī′nē), *n. pl.* [NL., ‹ *Ictalurus* + *-inæ.*] A subfamily of catfishes characterized by having a barbel on the posterior nostril: found chiefly in the eastern United States.

Ictalurus (ik-ta-lụ̄′rus), *n.* [NL., a contraction of **Ichthyælurus*, ‹ Gr. ἰχθύς, a fish, + αἴλουρος,



Ictalurus punctatus.
(From Bulletin 47, U. S. Nat. Museum.)

a cat.] A genus of fishes of the family *Siluridæ*, commonly called catfishes. They are notable for the forked tail and silvery coloration, and are confined to the eastern United States. The commonest species is the channel-cat, *I. punctatus.*

icteric, *n.* **2.** One who is suffering from icterus or jaundice.

icterode (ik′tẹ-rōd), *a.* [Gr. ἰκτερώδης, ‹ ἴκτερος, jaundice, + εἶδος, form.] Affected with jaundice; jaundiced.

icterogenic (ik″tẹ-rọ̄-jen′ik), *a.* [Gr. ἴκτερος, jaundice, + -γενής, -producing.] Causing icterus or jaundice.

Icteroid bacillus. See ★*bacillus.*

ictic, *a.* **2.** In *pros.*, produced by or relating to the ictus.

ictuate (ik′tụ̄-āt), *v. t.*; pret. and pp. *ictuated*, ppr. *ictuating.* [*ictus* (*ictu-*), stroke, + *-ate*[2].] To put the ictus on.

Ictus cordis, the pulse.—**Ictus sanguinis,** a stroke of apoplexy.

id (id), *n.* [G. *id* (Weismann, suggested by *idioplasm*), ‹ Gr. ἴδιος, own, proper, peculiar: see *idiot.*] In Weismann's doctrine of germ-plasm, the substance of inheritance or the bearer (*a*), in the germ-plasm, of the hereditary qualities of a single complete organism, or (*b*), in the somatic idioplasm of the hereditary qualities of a group of cells or a part of a developing embryo or growing organism. The term is used therefore with two meanings—to designate the bearer of the hereditary qualities of the ancestral idioplasm, or germ-plasm, which may give rise to a new and complete organism, and to designate the bearer of the hereditary qualities of the idioplasm of successive stages in the development and growth of the organism that arises from the egg. The id of this somatic idioplasm is held to be at first identical with that of the germ-plasm, but to become broken up into simpler and simpler ids as development advances. See *idioplasm, doctrine of* ★*germ-plasm.*

The supposed function of the *ids* as the bearers of hereditary qualities in fertilization. *Encyc. Brit.*, XXVII. 335.

Heterologous id, in Weismann's doctrine of germ-plasm, one of the ids which are the bearers of the hereditary qualities of groups of cells which are not homologous.—**Homologous id,** in Weismann's doctrine of germ-plasm, one of the ids which are the bearers of the hereditary qualities of homologous groups of cells. *Weismann* (trans.), Germ-plasm, p. 265.

-id[1]. **2.** This termination is to be given to the relatively *electronegative* constituent of a compound: as, hydrogen oxid (not oxygen hydrid), calcium sulphid (not sulphur calcid).

-id[2]. **2.** This termination affords a simple and regular method of transforming a family name ending in *-idæ* into a common 'English' noun serving as a name for any member of the family. Thus, any member of the *Felidæ* is a felid, any of the *Bradypodidæ* a bradypodid, any of the *Gadidæ* a gadid, etc. This overcomes the ambiguity of using the popular name of some member of the family as a common name for all. The popular name is often not conterminous in meaning with the New Latin name and it always has a set of cross associations that are absent from the New Latin name. The two kinds of names do not cover the same ground. Every member of the *Bradypodidæ* is a sloth, but not every member of the *Gadidæ* is a cod, as several other well-known fishes, such as the pollack and haddock, are members of that family.
3. A termination used by Osborn to designate the cusps of the lower teeth: for example, the cusp on a lower molar that corresponds to the hypocone of an upper tooth is the *hypoconid*, etc.

Ida. An abbreviation of *Idaho.*

Idæan, *a.*—**The Idæan mother,** the goddess Cybele, who had her sanctuary on Mount Ida.

idant (id′ant), *n.* [*id* + *-ant.*] **1.** A group of ids or bearers of the hereditary qualities of an individual organism in the germ-plasm or substance of inheritance. Weismann holds the conception of the *idant*, or group of ids, to be necessary to account for the production of germ-cells in the body of an organism developed from a single id. In asexual organisms all the ids in an idant are supposed to be alike, but different in organisms that have long multiplied by sexual reproduction, so that the children of the same parents are not commonly identical. See ★*Weismannism, doctrine of* ★*germ-plasm.*

In the first place, the mass of germ-plasm which is the starting-point of a new individual consists of several, sometimes of many, pieces named "*idants*," which are the chromosomes, into a definite number of which the nuclear material of a dividing cell breaks up. These *idants* are a collection of "ids," which Weismann tentatively identifies with the microsomata contained in the chromosomes. *Encyc. Brit.*, XXIX. 256, 257.

2. Figuratively used in sociology to designate certain naturally selected individuals of differing classes or races, who seek each other in reproduction, and so create a new stock, as idants (chromatic bodies) in the reproduction cell do in biological reproduction. *L. F. Ward*, Pure Sociology, p. 208.

iddingsite (id′ingz-īt), *n.* [Named after Professor Joseph P. *Iddings*, an American mineralogist.] A silicate of iron, calcium, and magnesium found in the augite-andesite of Carmelo Bay, California. It is probably an alteration-product of olivin.

idea, *n.*—**Dominant idea,** in *psychol.*, an imperative or insistent idea; an idea that dominates or besets the mind, in spite of all effort to inhibit it and in spite of one's assurance of its unreasonable character.

There is no end to the strange performances which may be thus called forth; but they are all referable to the one simple principle already laid down as the characteristic of this state, the possession of the mind by a *dominant idea.* *W. B. Carpenter*, Mental Physiol., p. 556.

Extensive idea, in *psychol.*, a temporal or spatial idea.

Spatial and temporal ideas are immediately distinguished from intensive ideas by the fact that their parts are united . . . in a definitely fixed order . . . Ideas with such a fixed arrangement are called in general *extensive ideas.* *W. Wundt* (trans.), Outlines of Psychol., p. 102.

Fixed idea. (*a*) A delusional idea or train of thought which dominates the mind in certain forms of insanity; a monomania. (*b*) Same as *imperative* ★*idea* (*a*).—**Flight of ideas.** See ★*flight*[1].—**Free idea,** in *exper. psychol.*, an idea or representation which is dissociated from sense-perception or presentation, and from the organic impulses connected with sense-perception, and which may therefore take its place in an associative train, may be utilized in the process of discrimination, etc.

It [the investigation] has denied the existence in animal consciousness of any important stock of *free ideas* or impulses, and so has denied that animal association is homologous with the association of human psychology. *E. L. Thorndike*, Animal Intelligence, p. 108.

Imperative idea. (*a*) A persistent or obsessing idea or train of thought which the subject cannot banish or escape, though he recognizes its falsity or triviality. Imperative ideas exist in all degrees of intensity, from the tune that 'runs in the head' to such obsessions as agoraphobia. (*b*) Same as *fixed* ★*idea* (*a*).—**Implicit idea,** in *psychol.*, the idea or group of ideational elements that fuses with the presentation in the act of perception; the ideational associate that raises a datum of sensation to the rank of perception. *Höffding.*

It [the idea] is, so to say, embryonic, something additional to the mere sensation assimilated, and yet something less than a "free or independent idea." It is, as it has been happily called, a tied (gebundene) or *implicit idea*. *Encyc. Brit.*, XXXII. 59.

Insistent idea. Same as *imperative ★idea.* — **Intensive idea,** in Wundt's psychology, a combination of sensational elements, in which the order of the elements may be indefinitely varied. *W. Wundt* (trans.), Outlines of Psychol., p. 93. **Musical idea.** See *idea*, 9, and *★metamorphosis*, 5. — **Secondary idea,** in Wundt's psychology, any idea successively associated with the assimilation which forms the core of mediate recognition or the starting-point of an associative train.

The principal idea may be assimilated first, the *secondary ideas* coming later as revivals of earlier experiences; this is a case of 'association by contiguity.'
W. Wundt (trans.), Human and Animal Psychol., p. 305.

ideal. I. *a.* **5.** In *projective geom.*, infinitely distant. **Ideal black body.** See *laws of ★radiation.* — **Ideal gas, point.** See *★gas*, etc.

II. *n.* **4.** In *math.*, an ideal number.

idealics (ī-dē-al'iks), *n.* Sociological knowledge applied to the realization of social ideals. *L. F. Ward*, Outlines of Sociol., p. 204.

Ideational rivalry, in *exper. psychol.*, retinal rivalry; the alternation and partial mutual suppression of different forms, colors, etc., presented under stereoscopic conditions to the two eyes.

In addition to lustre and *ideational rivalry*, there exists yet another form of the apprehension of binocular perceptions.
W. Wundt (trans.), Human and Animal Psychol., p. 205.

Ideational type. Same as *★memory type. E. B. Titchener*, Exper. Psych., I. i. 195. — **Ideational unity,** in Wundt's psychology, the principle in accordance with which the sensations aroused at a given moment are not perceived as a mere medley, but are associated to form ideas, which are then set in temporal and spatial relations; the principle which, under certain abnormal conditions of stimulation, leads to the case of vision to the phenomena of luster and ideational rivalry. *W. Wundt* (trans.), Human and Animal Psychol., pp. 204, 217.

ideatum (ī-dē-ā'tum), *n.*; pl. *ideata* (-tą). [NL., neut. of **ideatus*, pp. of **ideare*, form an idea: see *ideate*, *n.*] The thing as imagined, as opposed to *datum*, the thing as given; theory, as opposed to observed fact. *Science*, Feb. 26, 1904, p. 336.

Identical points. See *★point*[1]. — **Identical twins.** See *★twin*[1].

identically, *adv.* **2.** In *alg.*, for all values of the literal quantities.

identifier (ī-den'ti-fī-ėr), *n.* One who recognizes and proves the identity of others, especially of criminals.

It was finally determined that the prisoner, attorneys and *identifiers* should step into a side room.
Evening Dispatch (Columbus, Ohio), May 11, 1889. *N. E. D.*

identity, *n.* **2.** In *math.*: (*a*) The relation of an expression to another symbol for itself: often denoted by three short parallel horizontal lines, ≡ (derived from the mark of equality, =).

The symbol ≡ of *identity* . . . indicates that the single letter on one side of it is used to represent the expression or thing defined on the other side of it.
Newcomb, Calculus, p. 2.

(*b*) In *alg.*: (1) A relation of equivalence dependent only upon the very nature of the operations involved, and not at all upon the particular numbers operated with: for example, the *identity* of ab with ba. (2) An identical equation; an equation for any letter in which any number whatsoever may be substituted without destroying the equality or restricting the values of any other letter: for example, (a + b) + c = a + (b + c). — **Identity of forces,** the assumed unchanging quality and action of any physical, mental, or social force. — **Identity symbol,** the symbol ≡. See *★identity*, 2 (*a*). — **Old Identity,** in New Zealand, a well-known inhabitant or frequenter of a place: first used in a popular song in which "*Old Identity*" was carefully distinguished from "New Iniquity," one who came from Australia. — **Rule of identity,** the rule by which it is inferred that *y* is *x* if it has been proved that *x* is *y*, that no two *x's* are the same *n*, and that there are as many individuals in class *x* as in class *y*.

ideo-emotional (ī″dē-ō-ē-mō'shon-al), *a.* Noting a mind predominantly emotional and imaginative, but lacking high intellectual development: one of four types of mind each of which is widely enough distributed to constitute a recognizable class in a civilized population. Compare *ideomotor*. *Giddings*, Inductive Sociol., p. 63.

ideogenetic (ī″dē-ō-jē-net'ik), *a.* [Gr. *ἰδέα*, idea, + *γένεσις*, production (see *genetic*).] Productive of mental images or developed in terms of mental images: said of a process of thought or active imagination in which verbal (that is, symbolic) ideas are not employed.

The other extreme is that in which images constituting the meaning of the perceived words are easily presented, or in which, as in the *ideogenetic* thinking of artists, the word-symbols are not used.
Jour. Philos., Psychol. and Sci. Methods, July 21, 1904, [p. 412.

ideoglandular (ī″dē-ō-glan'dū-lär), *a.* [Gr. *ἰδέα*, idea, + E. *glandular*.] Relating to glandular action as the result of mental impressions.

ideogram, *n.* **2.** In *phonetics*, the visual symbol of a word or phrase that is perceived as a whole and thus constitutes a single idea. Ideograms are distinguished as sensory or motor, according as the word or phrase is seen or written. See *★ideophone. Scripture*, Exper. Phonetics, p. 132.

ideograph, *n.* **2.** Same as *★ideogram*, 2.

ideographic, *a.* **2.** In *phonetics*, pertaining to or composed of ideograms.

ideologize (ī-dē-ol'ō-jīz), *v. t.*; pret. and pp. *ideologized*, ppr. *ideologizing*. [*ideolog-y* + *-ize*.] To treat theoretically or in a speculating, idealistic way.

ideometabolic (ī″dē-ō-met-ą-bol'ik), *a.* [Gr. *ἰδέα*, idea, + E. *metabolic*.] Relating to metabolic changes as the result of emotional impressions. *Baldwin*, Dict. of Philos. and Psychol., II. 436.

ideomuscular (ī″dē-ō-mus'kū-lär), *a.* [Gr. *ἰδέα*, idea, + E. *muscular*.] Relating to muscular action as the result of mental impressions. *Baldwin*, Dict. of Philos. and Psychol., II. 436.

ideophone (ī-dē'ō-fōn), *n.* [Gr. *ἰδέα*, idea, + *φωνή*, sound.] In *phonetics*, the auditory symbol of a word or phrase that is perceived as a whole and thus constitutes a single idea. Ideophones are distinguished as *sensory* or *motor*, according as the sound or group of sounds corresponding to the word or phrase is heard or spoken. See *★ideogram*, 2. First used by A. J. Ellis. *Scripture*, Exper. Phonetics, p. 132.

ideophonetics (ī″dē-ō-fō-net'iks), *n.* [Gr. *ἰδέα*, idea, + *φωνητικός*, phonetic.] The method of direct representation of ideas by vocal sounds.

ideophonous (ī-dē-of'ō-nus), *a.* [As *ideophone* + *-ous*.] Representing ideas by vocal sounds; pertaining to ideophonetics.

ideoplastic (ī″dē-ō-plas'tik), *a.* [Gr. *ἰδέα*, idea, + *πλαστός*, formed, + *-ic*.] **1.** Pertaining to ideoplasy, or the suggestive function of the imagination. — **2.** Noting those physiological functions and processes which are supposed to be directly modifiable by mental suggestion. *Baldwin*, Dict. of Philos. and Psychol., I. 507.

ideoplasty (ī'dē-ō-plas'ti), *n.* Same as *★ideoplasy*.

ideoplasy (ī-dē-op'lą-si), *n.* [Gr. *ἰδέα*, idea, + *πλάσις*, formation.] The faculty or process of forming mental images; imagination: used especially of imagination in its supposed suggestive capacity, as directly modifying certain physiological processes and functions. *Baldwin*, Dict. of Philos. and Psychol., I. 507.

ideo-unit (ī″dē-ō-ū'nit), *n.* A group of elements that is perceived as a whole and therefore constitutes a single idea: used especially in phonetics as a general term covering *★ideophone* and *★ideogram*. *Scripture*, Exper. Phonetics, p. 133.

ideovascular (ī″dē-ō-vas'kū-lär), *a.* [Gr. *ἰδέα*, idea, + E. *vascular*.] Relating to vascular changes as the result of emotional impressions. *Baldwin*, Dict. of Philos. and Psychol., II. 436.

Idia, *n.* **2.** The typical genus of the family *Idiidæ*. *Lamouroux*, 1816.

Idiacanthidæ (id″i-a-kan'thi-dē), *n. pl.* [NL., < *Idiacanthus* + *-idæ*.] A family of eel-like deep-sea fishes.

Idiacanthus (id″i-ą-kan'thus), *n.* [NL., < Gr. *ἰδιος*, peculiar, + *ἄκανθα*, spine.] A genus of fishes of the family *Idiacanthidæ*.

idic (id'ik), *a.* [*id* + *-ic*.] Of or pertaining to ids. See *★id*.

Idiidæ (i-dī'i-dē), *n. pl.* [NL., < *Idia* + *-idæ*.] A family of campanularian *Hydromedusæ*, having the hydrotheca adnate to the hydrocaulus and the cœnosarc divided into segments which form two longitudinal series of intercommunicating chambers, each of which connects with the gastral cavity of a hydranth. It contains the genus *Idia*, found in the southern seas.

idiobiology (id'i-ō-bī-ol″ō-ji), *n.* [Gr. *ἰδιος*, own, + E. *biology*.] The biology of any particular organism.

idioblast, *n.* **2.** In *biol.*, one of the hypothetical, ultimate elements of living protoplasm, similar to the *gemmules* of Darwin, the *physiological units* of Herbert Spencer, the *biophores* of Weismann, etc. *O. Hertwig*, 1893.

Idiochelys (id-i-ok'ē-lis), *n.* [NL., < Gr. *ἰδιος*, peculiar, + *χέλυς*, a tortoise.] An extinct genus of pleurodirous chelonians or turtles having a deeply emarginate nuchal plate, neural plates short and interrupted, not exceeding seven in number and not reaching the single suprapygal. It is found in the Jurassic lithographic limestone of Bavaria.

idiochromatic (id″i-ō-krō-mat'ik), *a.* [Gr. *ἰδιος*, own, + *χρῶμα(τ-)*, color, + *-ic*.] Of the same color, whether existing in a large mass or reduced to a fine powder: said of a mineral substance, notably, lazulite and lapis lazuli, the ultramarine of the ancients.

idiochromosome (id″i-ō-krō'mō-sōm), *n.* [Gr. *ἰδιος*, own, + *χρωμα*, color, + *σῶμα*, body (see *★chromosome*).] A chromosome that forms the distinctive characteristic between the male-producing and female-producing spermatozoa in certain insects (*Hemiptera* and *Coleoptera*). The idiochromosomes, which are usually smaller in the male-producing than in the female-producing forms, are supposed to be definitely correlated with the sexual characters. *E. B. Wilson*, 1905.

idiocrasis (id-i-ok'rą-sis), *n.* [NL. < Gr. *ἰδιος*, peculiar, + *κρασις*, mixture, temperament.] Same as *idiocrasy*.

idiocy, *n.* — **Mongolian idiocy,** a form of congenital idiocy in which the subject has a flattened skull, slanting eyes like a Mongolian, and abnormally short thumbs.

idiogenesis (ī″di-ō-jen'e-sis), *n.* [Gr. *ἰδιος*, own, + *γένεσις*, origination.] Origination without apparent cause; spontaneous origination.

idiogenite (id-i-oj'e-nīt), *n.* [Gr. *ἰδιος*, own, + *γένεσις*, origin.] An ore-deposit contemporaneous in origin with the inclosing rock, as in the igneous iron ores: contrasted with *★xenogenite. F. Posepny*, in Trans. Amer. Inst. Min. Engin., 1893, p. 211.

idiographic, *a.* **2.** Concerned with the individual; descriptive and interpretative of single and unique facts and processes: opposed to *★nomothetic. Windelband.*

idiohypnosis (ī″di-ō-hip-nō'sis), *n.* [NL., < Gr. *ἰδιος*, own, + NL. *hypnosis*.] Hypnosis by autosuggestion; the self-induction of the hypnotic state.

idiohypnotism (ī″di-ō-hip'nō-tizm), *n.* [Gr. *ἰδιος*, own, + *hypnotism*.] Same as *★idiohypnosis*.

idiologism (id-i-ol'ō-jizm), *n.* [Gr. *ἰδιος*, own, + *λόγος*, word, + *-ism*.] A word or phrase peculiar to the individual and often repeated by him.

idiomere (id'i-ō-mēr), *n.* [Gr. *ἰδιος*, own, + *μέρος*, part.] In *cytol.*, a vesicle formed from an individual chromosome at the time when the daughter-nuclei are about to reconstitute themselves after karyokinetic cell-division. *V. Haecker*, 1902.

The nuclear stages in which the *idiomeres* (partial nuclei) and gonomeres (double nuclei) appear are closely related. *Bot. Gazette*, June, 1903, p. 443.

idiometer (id-i-om'e-tėr), *n.* [Gr. *ἰδιος*, own, + *μέτρον*, measure.] An instrument for determining the personal equation of an observer using a transit-instrument, by observation of the transit of an artificial star whose motion is known.

idiomorphosis (id-i-ō-môr'fō-sis), *n.* [Gr. *ἰδιος*, one's own, peculiar, + *μορφή*, form, shape.] A special kind of metamorphosis, as the petals of *Camellia*, from bundles of stamens, or petaloid sepals of *Polygala* (Delpino). *Jackson's Glossary.*

idiomorphous (id″i-ō-môr'fus), *a.* Same as *idiomorphic*.

idioneural (id″i-ō-nū'ral), *a.* [Gr. *ἰδιος*, own, + *νεῦρον*, nerve, + *-al*[1].] Pertaining to a single nerve or to the nervous system exclusively.

idioneurosis (id″i-ō-nū-ro'sis), *n.* [NL., < Gr. *ἰδιος*, own, + *νεῦρον*, nerve, + *-osis*.] A functional neurosis.

idionym (id'i-ō-nim), *n.* [Gr. *ἰδιος*, own, + *ὄνομα*, name.] A word, in the vocabulary of anatomy, which refers to but one anatomical part. *Wilder.*

idiophanic (id″i-ō-fan'ik), *a.* Same as *idiophanous*. **Idiophanic rings.** See *★ring*[1].

idiophrenic (id″i-ō-fren'ik), *a.* [Gr. *ἰδιος*, own, + *φρήν*, mind, + *-ic*.] Noting a form of insanity due to demonstrable disease of the brain.

idioplasm, *n.*— **Accessory idioplasm**, the idioplasm to which (according to Weismann) budding and the replacement of lost parts are due.

The mechanism for regeneration is certainly a very complicated one, for each separate bone is controlled by a number of different determinants, and not by a single one; and all these special determinants are contained in the *accessory idioplasm*.
Weismann (trans.), Germ-plasm, p. 104.

Blastogenic idioplasm, the idioplasm to the presence of which the development of a bud into a new organism is held by Weismann to be due. *Weismann* (trans.), Germ-plasm, p. 157.

idioplasmatic (id″i-ō-plaz-mat′ik), *a.* Same as ★*idioplasmic*.

idioplasmic (id″i-ō-plaz′mik), *a.* Of or pertaining to idioplasm.

On this view the locality of the pre-established organization is shifted from the cytoplasm to the nucleus, though it may still be admitted that in certain cases a cytoplasmic predetermination arises as a secondary result of *idioplasmic* influence. *Encyc. Brit.*, XXXII. 213.

idioplastic (id″i-ō-plas′tik), *a.* [Gr. ἴδιος, own, + πλαστός, < πλάσσειν, form, + *-ic*.] Same as ★*idioplasmic*.

idiopsychology (id″i-ō-sī-kol′ō-ji), *n.* [Gr. ἴδιος, own, + E. *psychology*.] 1. Personal psychology; the specific psychology of one's own mind. *N. E. D.*—2. Psychology constructed on the basis of a study of one's own mind; psychology in which one's own individual mental processes are generalized as common to all normal minds.—3. Same as *differential* or *individual* ★*psychology*.

idioreflex (id″i-ō-rē′fleks), *n.* [Gr. ἴδιος, own, + E. *reflex*.] A reflex provoked by a cause arising within the same organ or system: as, contraction of the pupil following the incidence of light-rays upon the eye. *Alien.* and *Neurol.*, Feb. 1903, p. 23.

idioretinal (id″i-ō-ret′i-nal), *a.* [Gr. ἴδιος, own, + NL. *retina*, retina, + *-al*[1].] Pertaining to the retina exclusively: as, *idioretinal* light, a subjective sensation of light originating in the retina itself.

Idiosepiidæ (id″i-ō-sē′pi-i-dē), *n. pl.* [NL., < *Idiosepi-on* + *-idæ*.] A family of chondrophorous, decapodous cephalopods, having the fins very small and terminal, and the fourth pair of arms in the male hectocotylized and bare of suckers. It contains the single genus *Idiosepion*. *I. pygmaeus*, found in the Indian Ocean, is the smallest cephalopod known, measuring only about 15 millimeters in length.

Idiosepion (id″i-ō-sē′pi-on), *n.* [NL. (Steenstrup, 1881), < Gr. ἴδιος, own, + σηπία, the cuttlefish.] The typical genus of the family *Idiosepiidæ*. Also called *Idiosepius*.

Idiosepius (id″i-ō-sē′pi-us), *n.* Same as ★*Idiosepion*.

idiosome (id′i-ō-sōm), *n.* [Gr. ἴδιος, own, + σῶμα, body.] In *biol.*, a hypothetical unit or ultimate element of living matter, which is imagined as independent of cell-boundaries, as the real builder of the organism, as the bearer of heredity, and as the seat of all growth, assimilation, reproduction, and regeneration. *C. O. Whitman*, Biol. Lectures, 1893, p. 123.

idiospasm (id′i-ō-spazm), *n.* A spasm affecting a limited area.

idiosyncratical (id″i-ō-sin-krat′i-kal), *a.* Same as *idiosyncratic*.

idiot, *n.*—**Mongolian idiot**, one who is the subject of Mongolian ★idiocy (which see).

idiothermic (id″i-ō-thėr′mik), *a.* Same as ★*idiothermous*.

idiothermous (id″i-ō-thėr′mus), *a.* [Gr. ἴδιος, own, + θέρμη, heat, + *-ous*.] Same as *homothermous*.

idiotrophic (id″i-ō-trof′ik), *a.* [Gr. ἴδιος, own, + τροφή, nourishment, + *-ic*.] Possessing the faculty of selecting its own nutrition: noting certain cells.

Idiotrophic means, strictly speaking, from its derivation (when applied to a neurone or group of neurones making a nerve center), a peculiarity of nutrition or selection of its nutrition.
C. H. Hughes, in Alien. and Neurol., Feb., 1903, p. 23.

idiotype, *n.* 2. In the nomenclature of types in natural history, a specimen, not a holotype, identified by the nomenclator himself.

idiozome (id′i-ō-zōm), *n.* [Gr. ἴδιος, own, + ζῶμα, girdle.] A body in the spermatids of animals, supposed, in some cases, to be concerned in the formation of the acrosome and the middle-piece of the spermatozoön, and in others to disappear without giving rise to any portion of the spermatozoön. The idiozome is sometimes regarded as the equivalent of the

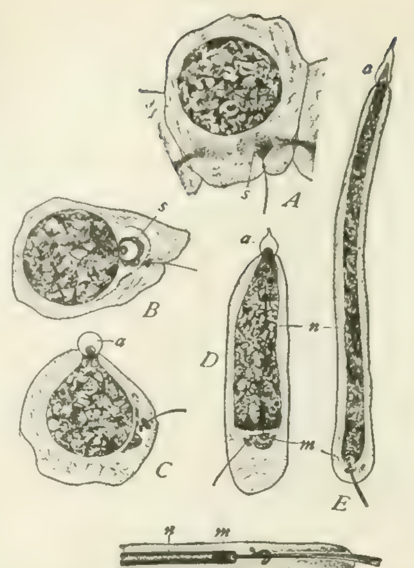


Figure showing idiozome in Spermatid of the Amphibian *Amphiuma*.

A, spermatid of *Amphiuma*, showing sphere-bridges and ring-shaped mid-bodies. *B*, later stage; outer centrosome ring-shaped, inner one double; idiozome, *s*, converted into the acrosome, *a*. *C*, migration of the centrosomes. *D*, middle-piece [illegible] *n*, nucleus; *m*, middle-piece; *n*, head derived from nucleus of spermatid. *E*, inner centrosome forming the end-knob within the middle-piece, which is now inside the nucleus. *F*, enlargement of middle-piece, end-knob within it, elongation of the ring. (After McGregor.)

(From Wilson's "The Cell.")

attraction-sphere of other cells besides the spermatids. *Meves*, 1897.

idite (id′īt), *n.* [Gr. ἴδιος, own (or L. *idem*, same?), + *-ite*[2].] A colorless syrup, $C_6H_{14}O_6$, formed by the reduction of idose. Two optical isomers are known.

idle, *a.* 9. Of machinery, doing no direct work; merely changing the direction of motion: as, an *idle* gear; also, running merely to carry transmission-elements: as, an *idle* ★pulley (which see).

idler, *n.* 4. In *railroading*, an empty car; an empty.

I. D. N. An abbreviation of the Latin *in Dei nomine*, 'in the name of God.'

idol, *n.*—**Moorish idol**, the common name of a fish, *Zanclus canescens*, of the South Seas and East Indies. It has a horn-like appendage on the forehead, and is held in great reverence by the fishermen of the Moluccas, who bow to it when it is captured and then restore it to the water. *Gill*, Standard Natural History, p. 210. See *Zanclus*, with cut.

idoloclastic (ī″dol-ō-klas′tik), *a.* [Gr. εἴδωλον, image, idol, + κλαστός, < κλᾶν, break.] Breaking images or idols; pertaining to the breaking of images; iconoclastic.

idolographic (ī-dol-ō-graf′ik), *a.* Same as *idolographical*.

idolomania (ī″dol-ō-mā′ni-ạ), *n.* [Gr. εἴδωλον, image, idol, + μανία, madness.] Excessive adoration of idols.

idolomancy (ī-dol′ō-man-si), *n.* [Gr. εἴδωλον, image, idol, + μαντεία, divination.] Divination by means of images or idols.

idolothyte (ī-dol′ō-thīt), *a.* and *n.* [Gr. εἰδωλόθυτος, < εἴδωλον, idol, + θυτός, < θύειν, sacrifice.] I. *a.* Offered to an idol: as, *idolothyte* meats.
II. *n.* Anything offered to an idol.

idoneal, *a.*—**Idoneal number**, one of a class of numbers, discovered by Euler about 1778, such that if an odd number, N, be expressible in only one way in the form (mx^2+ny^2) [with mx prime to ny] or (x^2+mny^2) [with x prime to mny], the positive idoneal being (mn), then N is either a prime or the square of a prime.
II. *n.* An idoneal number.

idoneity (ī-dō-nē′i-ti), *n.* [LL. *idoneitas*, < L. *idoneus*, fit: see *idoneous*.] Fitness; suitableness; adequacy.

They want the . . . meetness, the aptitude of *idoneity* for the inheritance of the Saints in light.
Howe, Blessedness of the Righteous, p. 139. *N. E. D.*

idonic (i-don′ik), *a.* [*id*(*ose*) + *-one* + *-ic*.] Derived from idose. **Idonic acid**, a colorless compound, $C_6H_{12}O_7$, formed from xylose. It exists in two isomeric forms.

idose (ī′dōs), *n.* [*id*(*ite*) + *-ose*.] A colorless carbohydrate, $C_6H_{12}O_6$, related to glucose. It is prepared by the reduction of idonic acid and exists in two isomeric forms given under ★*fluoranthene*.

idryl (id′ril), *n.* [Formation not obvious.] Same as ★*fluoranthene*.

Idsumo pottery. Same as *Idzumo* ★*pottery*.

idunium (i-dū′ni-um), *n.* [NL.] In *chem.*, the name of a supposed new element forming a constituent of a vanadium ore. There has been no confirmation of its existence.

idyler, idyller (ī′dil-ėr), *n.* Same as *idylist*.

idylism, idyllism (ī′dil-izm), *n.* [*idyl* + *-ism*.] Idyllic character; rural or pastoral simplicity.

The omission of these dramatic contrasts . . . makes your masterpiece soothing and tender almost to *idyllism*.
S. Ward, in Life of Longfellow, III. 219. *N. E. D.*

idylize, idyllize (ī′dil-īz), *v. t.*; pret. and pp. *idyllized*, ppr. *idyllizing*. [*idyl*(*l*) + *-ize*.] To give an idyllic, natural, or simple charm to; make idyllic or make an idyl of. *J. A. Symonds*, The Renaissance in Italy, VII. 12.

idyllian (ī-dil′i-ạn), *a.* [L. *idylli-um* + *-an*.] Same as *idyllic*.

-ie. The earlier form of the termination now usually written *-y*, of various origin (OF. *-ie*, *-ee*, *-e*, etc., L. *-ia*, *-ās* (*-āt-*), *-ēs* (*-ēd-*), etc.: see *-ie*[1], *-ie*[2], *-ie*[3], *-y*[1], *-y*[2], *-y*[3], etc.), as in *astronomie*, *familie*, *fancie*, *mercie*, *citie*, *companie*, *beautie*, etc. The spelling *-ie* is retained in the plural (*families*, *fancies*, *cities*, etc.), and in certain diminutives, chiefly Scotch, as *birdie*, *doggie*, *mousie*, etc., and in diminutive personal names, as *Charlie*, *Willie*, *Jennie*, *Annie*, etc.

I. E. E. An abbreviation of *Institute of Electrical Engineers* (British).

ie-ie (ē-ā-ē′ā), *n.* [Hawaiian *ie-ie* = Samoan *'ie 'ie* (see def.) = Maori *kiekie*, another species of the same plant; a reduplication of Hawaiian *ie*, the plant, also a mat made from it = Samoan *'ie*, a fine mat used by the natives as money = Tongan *kie*, a mat, etc.] 1. In Hawaii, a climbing screw-pine, *Freycinetia arborea*, from the aërial roots of which baskets (called *hinae opae*) are made by the natives, who use them for catching shrimp in the mountain streams. In Samoa the name is applied to *Freycinetia Reineckei*, from which fish-baskets are made.—2. Garlands made of the leaves of the ie-ie.

I-ety (ī′e-ti), *n.* [*I*[2] + *-ety* for *-ity* in abstract nouns, as in *egoity*, etc.] The sense of being 'I'; consciousness of one's personality. [Nonce-word.]

In spite of the honestest efforts to annihilate my *I-ety*, or merge it in what the world calls my better half, I still find myself a self-subsisting, and, alas, self-seeking me.
Mrs. Carlyle, Letter of June 1, 1835, in Letters, I. 14.

ife[2] (i-fā′), *n.* [W. African (Angola).] A plant of the lily family, *Cordyline cylindrica* (*Sanseviera cylindrica* of Bojer). Its firm, fleshy, cylindrical leaves are all basal and attain a length of 6 feet. The flowers are cream-white tinged with pink, and are borne in fascicles in a raceme a foot or more in length. The plant is a native of tropical Africa and yields from the leaves a strong cordage fiber known as *ife hemp*.

ifil (ē′fil), *n.* [= Chamorro *ifil*, Tagalog *ipil*, Samoan *ifi-lele*.] In Guam, *Intsia bijuga*, the most valuable timber-tree growing on the island. It has abruptly pinnate leaves, usually with two pairs of leaflets, and bears a rigid, flat pod containing from one to five seeds. The heart-wood is very hard and heavy but not elastic. It is tough and cross-grained and very difficult to plane, of a yellowish color at first but gradually turning darker until it resembles black walnut in color. Though of rather coarse grain it takes a fine polish and is much used for furniture and for the floors of houses of the better class. It resists the attacks of white ants (termites), and is used for posts. At Agaña, the capital of Guam, the pillars of the church are single straight trunks of this tree. See *vesi*.

I. G. An abbreviation (*a*) of *Inside Guard* or *Guardian*; (*b*) of *Inspector General*.

iganouwo (ē-gä-nō-ō′wō), *n.* [Jap., 'prickle fish.'] A fish, *Elops saurus*, of the family *Elopidæ*, found at Nagasaki. Also known as *Okikonoshiro* (off-shore shad).

igasud (ē′gä-söD), *n.* See the extract.

Igasud or Pepita de San Ignacio (Strychnos ignatii Berg.), a trailer which is only found in Visayas, principally near Catbalogan; the seeds of its fruit have various medicinal or antidote uses—stomachic, emetic, styptic, for paralytics, for women during parturition, for malarial fever, for rheumatism and indigestion, for contractions of the nerves, and pains in the body.
Pron. Gaz. Phillipine Is., p. 78.

igasurate (ig-ạ-sū′rāt), *n.* [*igasur-ic* + *-ate*[1].] A salt of igasuric acid.

igasuric (ig-ạ-sū′rik), *a.* [F. *igasurique*, given as from a Malay name, **igasur*, applied to St. Ignatius' bean.] Noting an amorphous astringent acid combined with the alkaloids in the seeds of *Strychnos Nux Vomica* and *S. Ignatia*, and probably identical with caffeotannic acid.

igasurine (ig-ạ-sū′rin), *n.* A substance found in *Strychnos Ignatia* (St. Ignatius' bean): once thought to be a distinct alkaloid, but found to be impure brucine.

igazol (ig'a-zol), *n.* Same as ★*formalina.*

igelströmite (ig'l-strē-mit), *n.* [Named after L. J. *Igelström*, a Swedish mineralogist.] 1. A silvery-white variety of pyroaurite from Scotland.—2. A ferruginous variety of knebelite.

igloogeak (ig'lō-ge-ak), *n.* [Eskimo *igloryuak*, a snow-house, < *iglo*, a house: see *igloo.*] An igloo with a dome-shaped roof, especially a structure made of blocks of frozen snow. These igloos are commonly built in one continuous layer, rising spirally to the top. There is no chimney or opening for smoke, as seal-oil burned in lamps is the only fuel. Light comes through the snow itself, or through a piece of smooth ice sometimes set in above the door.

Ignacio formation or quartzite. See ★*formation.*

Ignatianist (ig-nā'shan-ist), *n.* [*Ignatian*, adj., < *Ignatius*, + *-ist.*] A follower or adherent of Ignatius Loyola, or of the Jesuit order established by him.

Igneous rocks. See ★*rock*[1].

igniferous (ig-nif'e-rus), *a.* [L. *ignifer*, fire-bearing (< *ignis*, fire, + *ferre*, bear), + *-ous.*] Bringing, bearing, or producing fire. *Dekker*, Owl's Almanack, ii.

ignific (ig-nif'ik), *a.* [NL. **ignificus*, < L. *ignis*, fire, + *-ficus*, < *facere*, make.] Producing fire: fire-making.

igniform (ig'ni-fôrm), *a.* [NL. **igniformis*, < L. *ignis*, fire, + *forma*, form.] Having the form of fire or flame. *Berkeley*, Siris, § 322.

ignipotence† (ig-nip'ō-tens), *n.* [NL. **ignipotentia*, < L. *ignipotens*, ruling fire: see *ignipotent.*] Prevalency against, or power over, fire. *Bailey*, 1727.

igniter, *n.* 2. An electric apparatus, spark-coil, or induction-coil, which is used in gas- or gasolene-engines to ignite the charge in the engine-cylinder by means of an electric spark produced in the cylinder at the proper point of the piston-stroke.—**Flame-igniter,** an igniter for explosion-engines in which the mixture of gases is fired by means of a flame. **Hot-tube igniter,** a metal tube heated by a flame, used for igniting the compressed charge in the cylinder of an internal-combustion engine. When the mixture is of constant quality the ignition can be properly timed by the fact that the mixture will ignite at a certain point of compression in contact with a hot surface. When the mixture varies in volume or weight with varying loads a timing-valve system must be used. No such variation is possible as with electric ignitions in which ignition may be retarded and advanced relatively to the dead-point of the piston-travel. **Jablochkoff igniter,** the bit of conducting material between the terminals of a Jablochkoff candle which serves to carry the current when the candle is first put in circuit, and which, by burning away, establishes the arc. **Jump-spark igniter,** an igniter in which the electric spark from an induction-coil is made to jump between fixed terminals. *Sci. Amer.*, Jan. 17, 1903. **Make-and-break igniter,** an igniter for explosion-engines, in which the terminals between which the spark is to pass are automatically brought together and separated during each cycle. *Sci. Amer. Sup.*, July 23, 1904, p. 23880. **Spark-igniter,** an igniter for an internal-combustion engine which lights the charge by means of an electric spark. See ★*igniter*, 2.

Tube-igniter, an igniter for explosion-engines, consisting of a tube rendered incandescent by means of an electric current in a platinum wire.

igniter-lead (ig-nī'tèr-lēd), *n.* That which determines the time, in the cycle of an explosion-engine, at which ignition shall occur. *Sci. Amer.*, Nov. 29, 1902.

ignition, *n.* 5. In internal-combustion motors, the setting fire to the mixture of air and hydrocarbon vapor in the cylinder, so that the air shall expand and increase its pressure and perform the work required. Ignition is mainly effected, in modern motors, by an electric spark which jumps across a gap between terminals and in so doing raises the temperature of the mixture to the igniting-point. Such electric ignition may be by the jump-spark system, or by the make-and-break system. In the jump-spark system, the terminals on the secondary circuit of a Ruhmkorff or induction-coil are used. The current is made and broken on the primary or battery circuit, and this sends a secondary current of high intensity through the secondary line, in which are the gap-terminals. The primary make-and-break effect may be either by mechanical or by electrical vibrators, timed at will by the revolution of the motor-shaft. The hammer-break or arc system ignites by causing a flowing primary current to be mechanically interrupted by the separation of two contacts in the circuit. The current arcs across the break until the gap becomes too wide and the arc sets fire to the mixture around it. The make-and-break gives a 'fat' or copious spark, but considerable battery-power is needed; the jump-spark gives a tenuous high-tension spark, with less battery-power. Magneto-electric machines or small dynamos are much used for electric ignitions. Ignition may also be effected by compressing the mixture and at the right time allowing it to enter a hot tube of refractory material heated to redness by an exterior flame; or simple compression within the hot walls of the containing-chamber will fire an easily ignited mixture.—**Advanced ignition,** the ignition which is made to take place while the piston is at some distance from the end of the compressing-stroke, or before the crank has reached its dead-center.—**Automatic ignition,** that method of igniting the compressed combustible mixture of fuel and air behind the piston of an internal-combustion motor in which the fuel is ignited by raising the temperature by the compression in the heated cylinder so that the mixture takes fire without a flame or spark. (See ★*ignition*, 5.) It is objectionable in that the cold combustion- or mixture-chamber must be preheated to start, and that under variable loads and variable charges ignition is uncertain and explosive charges may either escape into the exhaust-piping, or be pre-ignited. **Ignition timing,** the act or process of so timing the ignition that it will take place at a certain instant, specifically, in a gas-engine, the timing of the ignition to take place when the piston is at a certain point in its travel.—**Retarded ignition,** ignition which is made to take place after the crank has passed the dead-center and the compressed mixture has begun to expand in volume. See ★*ignition*, 5. The spark is always advanced in starting the engine. To advance or to retard on either side of the most advantageous angle is to diminish the power of the working-stroke. **Temperature of ignition,** the lowest temperature at which a substance will burn or enter into combination, usually with the oxygen of the air, with production of heat and light. Very commonly the substance needs to be heated to attain this temperature, but in some cases the ignition-point is at or below the common temperature of the air, so that the substance takes fire as soon as it comes in contact with air. Such substances are said to be spontaneously combustible. *Roscoe and Schorlemmer*, Treatise on Chem., I. 228.

ignition-box (ig-nish'on-boks), *n.* In gas-engines, the chamber in which the charge of mixed air and gas is ignited in an internal-combustion engine.

The ignition of the charge is effected by heating the nickel tubes projecting about 2½ inches from the rear ends of the cylinders into the *ignition box.*
Hiscox, Horseless Vehicles, p. 184.

ignition-point (ig-nish'on-point), *n.* The time at which ignition takes place; that point in the stroke of an internal-combustion engine at which the charge is ignited.

ignition-slide (ig-nish'on-slīd), *n.* Same as ★*ignition-valve.*

ignition-tube (ig-nish'on-tūb), *n.* 1. A tube which is kept hot to serve as an igniter for the charge of an internal-combustion engine.

To start the motor cycle, the reservoir, G, is partly filled with gasoline; the door at the back of the ignition box is opened and the burner for heating the *ignition tube* is started by giving it a preliminary heating by means of an alcohol torch. *Hiscox*, Horseless Vehicles, p. 187.

2. In *chem.*, a small glass tube, closed at one end and often at this end expanded into a bulb, used to ignite or strongly heat in a blow-pipe flame a fragment of mineral or other substance in order to observe the evolution of gas or vapor.

ignition-valve (ig-nish'on-valv), *n.* A valve which opens communication between an igniter and the charge to be ignited. It closes as soon as ignition is effected.

ignitive (ig'ni-tiv), *a.* [*ignite* + *-ive.*] Having the quality of ignition; capable of producing flame.

ignobility, *n.* 2. The body of persons not of noble rank; the commons: opposed to *nobility.* [Nonce-word.]

The ceorl was an ignoble freeman, the gentleman was a noble freeman; for the nobility, like the *ignobility*, then and now, was divided into two ranks.
Fraser's Mag., XI. 315.

ignorance, *n.*—**Invincible ignorance,** in Roman Catholic theology, an ignorance of the truth of Catholic doctrine which cannot be overcome in the ignorant person, either owing to inherent limitations or to circumstances which deprive him of the possibility of enlightenment.

ignoration, *n.* 2. The act of ignoring; also, the state of being ignored.

It is accustomed to simplify its problems by the method of abstraction. . . . And by a long course of successful *ignoration* it may have acquired a habit of thinking that it can actually exclude, instead of only abstract, these disturbing causes.
Sir Oliver Lodge, in Proc. Soc. Psychical Research, [XVII. 43.

ignotobranchiate (ig-nō-tō-brang'ki-āt), *n.* [L. *ignotus*, unknown, + *branchiæ*, gills, + *-ate*[1].] See the quotation.

The number of the branchiæ has been used for the purpose of nomenclature, so that while the Nautilus Order belongs to the Tetrabranchiata, the Cuttle-fish Order belongs to the Dibranchiata. Besides these two orders there is an immense number of fossil forms, of whose branchiæ nothing is ever likely to be known, and they have accordingly been sometimes classed as Tetrabranchiates and sometimes as Dibranchiates, but they ought rather to be called *Ignotobranchiates.*
Encyc. Brit., XXVII. 319.

Igorrote (ē-gō-rō'te), *n.* and *a.* [A Sp. spelling of one form of the native name.] **I.** *n.* 1. A member of one of the tribes speaking the Igorrote language, including the Igorrotes proper, the Buriks, and the Busaos.—2. In a generalized sense, a member of one of the uncivilized tribes of northern Luzon until recently known as head-hunters; also rarely used to designate those of central Luzon and Mindanao.—3. In local Philippine usage, a savage; a pagan native. See ★*Indio* and ★*Remontado.*—4. The language, or any language, spoken by Igorrotes. There are many dialects which have been only scantily recorded or studied.

II. *a.* Of or pertaining to the Igorrotes.

iguanodontoid (i-gwan-o-don'toid), *a.* and *n.* **I.** *a.* Having the characters of or pertaining to *Iguanodon.*

II. *n.* A reptile allied to *Iguanodon.*

ihi (ē'hē), *n.* [Maori.] A name in New Zealand of the fish *Hemiramphus intermedius*, of the family *Hemiramphidæ.*

I. H. N. An abbreviation of *In His Name*, the motto of the Order of King's Daughters and Sons.

I. H. P. An abbreviation of *indicated horse-power.* See *horse-power.*

ijolite (ē'yo-lit or ij'o-lit), *n.* [*Ijo*, a district in northern Finland, + Gr. λίθος, stone.] A phanerocrystalline igneous rock composed of nephelite and pyroxene with small amounts of apatite, titanite, and ivaarite. It corresponds in composition to nephelinite, and occurs in dikes associated with nephelite-syenite.

ikoik (e'kō-ēk), *n.* [Native name.] In the Caroline Islands, *Cordia subcordata*, a handsome tree of the borage family. It has ovate, subcordate leaves and corymbs of orange or red funnel-shaped flowers. The heart-wood is dark brownish red, often marked with lighter bands; it is durable and is used for boat-building. See ★*kou* and ★*banago* (*b*).

il, *a.*, *n.*, and *adv.* A simplified spelling of *ill.*

ilang-ilang, *n.* [Bisaya.] See *ylang-ylang.*

ileocolostomy (il″ē-ō-kō-los'tō-mi), *n.* [NL. *ileum* + Gr. κόλον, colon, + στόμα, mouth, + *-y*[3].] The establishment, by a surgical operation, of a permanent communication between the ileum and colon.

ileo-ileostomy (il″ē-ō-il-ē-os'tō-mi), *n.* [NL. *ileum* + *ileum* + Gr. στόμα, mouth, + *-y*[3].] The establishment, by a surgical operation, of a permanent communication between two previously non-continuous portions of the ileum.

ileoproctostomy (il″ē-ō-prok-tos'tō-mi), *n.* [*ileum* + Gr. πρωκτός, anus, + στόμα, mouth, + *-y*[3].] The establishment, by a surgical operation, of direct communication between the ileum and the rectum.

ileosigmoid (il″ē-ō-sig'moid), *n.* [*ileum* + *sigmoid.*] Relating to both the ileum and the sigmoid curvature.

When a colectomy is impossible because of the site of the lesion, as, for instance, in the splenic flexure, an anastomosis is indicated, either colo-colic or *ileosigmoid.*
Therapeutic Gazette, Feb. 15, 1903, p. 102.

ilet, *n.* A simplified spelling of *islet.*

Ilex, *n.* 3. [*l. c.*] The holm-oak or holly-oak, *Quercus Ilex*, the leaves of which somewhat resemble those of the genus *Ilex.* See cut (fig. 4) under *oak*, 1.

Ilfracombe slates. See ★*slate*[2].

iliac[1], *a.*—**Iliac index.** See ★*index.*—**Iliac pocket** or **recess.** See ★*recess.*

Iliadic (il-i-ad'ik), *a.* [*Iliad* + *-ic.*] Of or pertaining to Homer's Iliad.

I have given the British Museum a copy of the Odyssey with the *Iliadic* passages underlined and referred to in MS. *S. Butler*, tr. of Odyssey, Pref., p. ix.

Iliadist (il'i-ad-ist), *n.* [*Iliad* + *-ist.*] 1. A writer of Iliads.

'I think all real Poets, to this hour, are Psalmists and *Iliadists* after their sort; and have in them a divine impatience of living among lies.'
Carlyle, Frederick the Great, I. i. 1.

2. Same as *rhapsodist*, 1.

iliahi (ē-lē-ä'hē), *n.* [Hawaiian name.] The Hawaiian sandalwood, *Santalum Freycinetianum*, the aromatic wood of which was once an important article of export from the Hawaiian Islands but has now become scarce. See *sandalwood.*

ilicate (il'i-kāt), *n.* [*ilic-ic* + *-ate*[1].] A salt of ilicic acid.

ilicic (i-lis'ik), *a.* [*ilex* (*ilic-*), holly, + *-ic.*] Derived from holly: as, *ilicic* acid.

ilima (ē-lē'mä), *n.* [Hawaiian name.] In Hawaii, a general name for plants of the genus *Sida*, applied especially to *S. fallax*, *S. cordifolia*, and *S. Meyeniana*, which grow spontaneously on the island and are also cultivated by the natives, who string their yellow flowers into wreaths and garlands for adorning themselves.

Iliofemoral triangle, the area bounded by a perpendicular line running upward from the greater trochanter of the femur, a horizontal line running backward from the anterior superior spine of the ilium, and a line drawn between the anterior superior spine of the ilium and the greater trochanter of the femur.

ilio-ischiadic (il i-o-is-ki-ad′ik), *a.* Same as *ilio-ischiadic*. **Ilio-ischiadic fissure, foramen.** See ★*fissure*, ★*foramen*.

iliopubic (il i-o-pu′bik), *a.* [NL. *ilium* + *pubes* + *-ic*.] Relating to both iliac and pubic bones. **Iliopubic ligament.** Same as *Poupart's ligament* (which see, under *ligament*).

ilioscrotal (il″i-ō-skrō′tal), *a.* [NL. *ilium* + *scrotum* + *-al*[1].] Relating to both ilium and scrotum; specifically, noting a small nerve.

iliotrochanteric (il i-ō-tro-kan-ter′ik), *a.* [NL. *ilium* + *trochanter* + *-ic*.] Relating to the ilium and the trochanters of the femur; specifically, noting the gluteal muscles attached to these parts.

Ilisha (i-lish′ä), *n.* [NL. (Bleeker, 1866), from an East Indian name of *Sardinella lisha* (Jordan and Evermann).] A genus of fishes, of the family *Clupeidæ*, found on the tropical coasts of America and Asia.

-ility. A termination (*-i-li-ty*, L. *-i-li-tas*) of nouns from adjectives in *-le*, *-ble*, *-ile*, etc., as *ability*, *agility*, *civility*, *probability*, etc. See *-ble*, etc.

Ill., Ills. Abbreviations of *Illinois*.

ill., illus., illust. Abbreviations of *illustrated* or of *illustration*.

Illænus (i-lē′nus), *n.* [NL., irreg. ⟨ Gr. ἰλλαίνειν, look awry, squint.] A genus of Silurian trilobites with large subequal and smooth head- and tail-shields, large compound eyes, and generally 10 thoracic segments.

illæsive, illesive (i-lē′siv), *a.* [L. *il-* for *in-*[3] priv. + *læsus*, pp. of *lædere*, hurt, + *-ive*.] Not injurious; harmless: as, *illæsive* games.

illapsive (i-lap′siv), *a.* [*illapse* + *-ive*.] Relating to an illapse, or inflowing of the Holy Spirit.

illative. **I.** *a.* **4.** In *gram.*, noting the case expressing motion into. See ★*introessive*. *Gatschet*, Gram. of the Klamath Lang., p. 482.

II. *n.* **3.** In *gram.*, the illative case.

illaudatory (i-lâ′dä-tō-ri), *a.* [*il-* for *in-*[3] priv. + *laudatory*.] Not given to praising: opposed to *laudatory*.

[The text of Tyrwhitt's] edition of the Canterbury Tales . . . wrung energetic and unqualified praise from the *illaudatory* pen of Ritson. *Blackwood's Mag.*, LVII. 787.

ill-breeding (il′brē′ding), *n.* Bad breeding; bad manners; rudeness; bad bringing up: as, "the *ill-breeding* of modern young men." [Originally written as two words.]

ill-come (il′kum′), *a.* Not well come; having come at a wrong time.

You are not *ill come*, neighbour Sordido, though I have not yet said, well-come.
B. Jonson, Every Man out of his Humour, ii. 1.

illegitimate, *a.* **II.** *n.* An emigrant who has come of his own volition and has not had 'legal reasons' for his voyage. See ★*legitimate*, *n.*, 2. [Australia.]

illeism (il′ē-izm), *n.* [L. *ille*, he, + *-ism*.] The unnecessarily frequent use of the pronoun *he* by a writer, especially in reference to himself in the third person; also, an instance of this use. *Coleridge*.

illeist (il′ē-ist), *n.* [L. *ille*, he, + *-ist*.] One who is given to illeism.

ill-gendered (il′jen′dèrd), *a.* Gendered unnaturally or irregularly. [Rare.]

The creature I had killed seemed to be of an *ill-gendered* kind, between a tiger and a leopard.
Defoe, Captain Singleton, vii.

ill-given (il′giv″n), *a.* Given to evil courses; having 'ill parts'; ill-disposed.

Salust was no soch man, neyther, for will to goodness, no skill by learning: but *ill geuen* by nature, and made worse by bringing up, spent the most part of his youth ver misorderly. *Roger Ascham*, The Scholemaster, ii.

Illinoisan. **I.** *a.* **2.** Specifically, in *geol.*, noting an epoch or subdivision of the glacial period, of which the deposits are well developed in Illinois.

II. *n.* **2.** One of the Illinois, an Indian tribe of Algonkian stock.

illipe (il′i-pē), *n.* [Tamil name.] Same as *illupi*. This name properly belongs to *Madhuca longifolia* of southern India, but when the more northern mahwa-tree, *M. Indica*, is found in the same region, the same name is applied by the Tamils to both species.

illoyalty (i-loi′al-ti), *n.* [*il-*[3] + *loyalty*.] Disloyalty; want of loyalty.

A piece of cowardice and *illoyalty*.
The Standard, Sept. 25, 1882.

illucidate (i-lū′si-dat), *v. t.*; pret. and pp. *illucidated*, ppr. *illucidating*. [*il-*[2] + *lucidus*, clear, + *-ate*[2].] To shed light upon; elucidate. *Blount*, Glossographia.

illucidation (i-lū-si-dā′shon), *n.* The act of throwing light upon something; elucidation. *Phillips*, 1658.

illucidative (i-lū′si-dā-tive), *a.* [*illucidate* + *-ive*.] Tending to make clear. *Talfourd*, Lamb's Final Memoirs, p. 256.

illuminating-shell (i-lū′mi-nā-ting-shel), *n.* A shell charged with combustible composition as well as a small bursting charge, designed to be fired at night and on bursting to illuminate the enemy's position long enough to permit accurate pointing.

illumination, *n.* **1.** Specifically, the measure of the amount of light falling on a surface. The illumination of a surface is proportional to the intensity of the source of light producing it, and it varies inversely as the square of the distance between the source and the illuminated surface. The unit of illumination is the *lux*, the illumination produced by a source of light having an intensity of one hefner and situated at a distance of one meter from the illuminated surface. Illumination is sometimes expressed in *candle-meters* (also written *meter-candles*), the candle-meter being the illumination produced by a standard candle at a distance of one meter. In countries where the standard candle has been defined as equal to the hefner, the candle-meter is the same as the lux. In those countries where British units still prevail, the unit of illumination is the *candle-foot* (also *foot-candle*), the illumination produced by a British standard candle at a distance of one foot. One candle-foot equals 12.2 luxes. The total flux of light from a given source is expressed in *lumens*, the lumen being the flux of light in a beam which subtends one unit of solid angle, the intensity of the source being one hefner. Since the unit solid angle subtends one square centimeter at a radius of one centimeter, the lux is the illumination produced by one lumen of light-flux per square centimeter of surface. Since the primary object of artificial lighting is to produce illumination, the establishment of a unit such as the lux, by means of which the illumination can be definitely measured and expressed, is of great importance in photometry. Instruments employed for the measurement of the intensity of the sources of light are called *photometers*. Any special form of photometer used for the direct determination of illumination is called a *luminometer* (sometimes written *illuminometer*). The illumination produced by different sources of artificial light under like conditions varies through a wide range. The following table gives results of the comparison of the light-sources commonly used in the projecting lantern, determined by measurement of the illumination received upon a screen.

Source of light	Lumens of flux.
Petroleum flame	3.79
Acetylene flame	20.82
Lime (freshly ignited)	56.71
Lime (old)	16.65
Electric arc, alternating 550 watts	330.00
Electric arc, direct carbons parallel 550 watts	464.80
Electric arc, direct carbons at 90° 550 watts	700.00
Electric arc, direct carbons at 154° 500 watts	921.60

The amount of energy necessary to produce an illumination of one lux varies with the temperature of the source of light and with the character of the radiating surface. The art of artificial illumination consists in furnishing the requisite amount of light of suitable color at the place where illumination is required. To fulfil these conditions it is requisite to know the illumination adequate for a given purpose in definite measure: for reading and writing, for example, it is found that the minimum illumination of the page permissible varies from 5 to 50 luxes, according to the size of the type and the character of the paper. For each purpose for which artificial light is used there is a proper illumination, and only when this is definitely known may methods of precision be applied.

7. In the *pictorial arts*, the quality and quantity of light expressed.

The *illumination* is that of the open air, tempered and modified by an overhanging canopy of green.
C. Phillips, in Portfolio, N. S., July, 1898, p. 24.

Equivalent illumination, the ratio of the illuminating power of a light to that of a standard light.—**Hemisphere of illumination.** See ★*hemisphere*.

Illuminatist (i-lū′mi-nā-tist), *n.* One of the *Illuminati*.

illuminator, *n.*—**Monochromatic illuminator,** in *optics*, a device for isolating an approximately monochromatic region of the spectrum and concentrating the rays thus obtained.—**Vertical illuminator,** an apparatus accessory to a microscope which adapts it to the observation of opaque objects. A simple form consists of a cover-glass mounted at an angle of 45° in a nose-piece placed between the objective and the body-tube. Light admitted through a side aperture is reflected from the cover-glass through the lenses of the objective upon the object under examination. The light is then reflected back in a vertical beam through the objective and the cover-glass to the eyepiece. This attachment is indispensable for the examination of metals in metallography.

illuminist (i-lū′mi-nist), *n.* [*illumine* + *-ist*.] **1.** An illuminator of manuscripts, books, etc.

[The cuts] are generally no more than rude outlines, having been intended to pass through the hands of the *Illuminist*, without whose aid some portion of the subject or design would be totally unintelligible.
S. W. Singer, Hist. Playing Cards, p. 104.

2. [*cap.*] A member of the Illuminati: a believer in illuminism. See *illuminate*, 2.

illuminometer (i-lū-mi-nom′e-tèr), *n.* [*illumination*) + Gr. μέτρον, measure.] An instrument for measuring the intensity of illumination. See ★*luminometer*.

illusion, *n.* **2.** In recent years, much attention has been devoted by experimental psychologists to the phenomena of optical illusion, more particularly to the group known as the geometrical optical illusions. Although it is impossible, at the present time, to offer any final classification of these illusions, the following list may be regarded as fairly complete. (1) *Illusions of reversible perspective.* There are certain figures of the sort represented by Schroeder's stair figure (which see, under ★*figure*), which are capable of two or more perspective interpretations. It is characteristic of these figures that, as one looks at them, the shift of perspective occurs spontaneously and at irregular intervals. The figures are best drawn in white lines on a black background, the black affording a roominess or spaciousness which favors the perspective effect. Two further examples are here given. Fig. 1 may be seen either as a square box resting upon the ground, or as a block projecting upwards and to the left from the plane of the paper; Fig. 2 may be seen with the lower plane nearer or farther than the upper. (2) *Illusions of extent.* These are of two kinds, variable and constant. Typical of the former is the Müller-Lyer figure (which see, under ★*figure*). Further examples are given in Figs. 3 and 4. Although the dimensions in these figures are objectively equal, the filled spaces appear larger than the open. Typical of the latter are the illusions embodied in Fig. 5, where, in spite of objective equality, the vertical line seems longer than the horizontal, and the upper half of the vertical longer than the lower. (3) *Illusions of direction.* These, like the illusions of extent, may be variable or constant. Instances of the former class have been given under ★*figure* (*Hering's* and *Wundt's* ★*figures*; *Münsterberg's* ★*figure*; *Poggendorff's* ★*figure*; *Zöllner's* ★*figure*). Typical of the latter class is Von Recklinghausen's illusion, shown in Fig. 6. If the figure is held a short distance from the eye, and its center steadily fixated, the hyperbolas become straight lines, so that the figure resembles a chess-board. (4) *Illusions of association.* These have been subdivided as assimilative and contrastive. Fig. 7 shows an assimilative illusion: the lines of the lower part of the figure appear larger than those of the upper. Fig. 8 shows a contrastive illusion: the space between the narrow rectangles appears wider than that between the broader. (5) *Mixed illusions*, derived from a complication of the above conditions. Thus in Fig. 9 there is a variable illusion of direc-

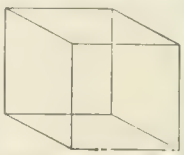


Fig. 1. Wheatstone's Figure.

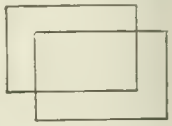


Fig. 2. Tweener-Planes.

Fig. 3. Oppel's Lines.

Fig. 4. Helmholtz's Squares.

Fig. 5.

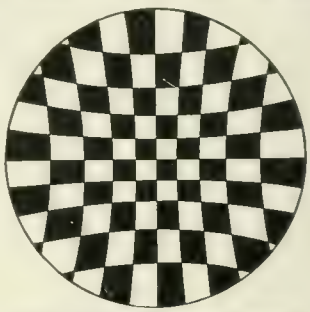


Fig. 6. Von Recklinghausen's Illusion.

Fig. 7. Wundt's Lines.

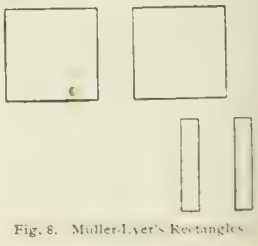


Fig. 8. Müller-Lyer's Rectangles.

tion, the smaller arc seems to belong to a circle of greater radius than the larger arc. There is also an illusion of assimilation, the larger and smaller arcs are referred to the same center. This class of illusions is, naturally, very wide. Finally (6), we may perhaps add, since by certain theorists they are connected with the geometrical optical illusions, the group of visual *illusions of movement*, one of which has been described under the term ★*autokinetoscope*. Explanations of these illusions range, as explanations of such phenomena always have ranged, between the two poles of physiology and psychology. Some investigators make them entirely a matter of perception, conditioned upon the structure and function of the sense-organ; they work with such factors as the nature of the retinal image, the direction of fixation, the movements of the eye. They point out, for instance, that reversal of perspective in class 1 can always be brought about by a shift of fixation, and that the spontaneous reversals noticed in ordinary observation are invariably connected with such shift, unconsciously made. They point out, again, that the extension and contraction of the lines in the Müller-Lyer figure may very well depend upon furtherance and arrest of eye-movement, according to the direction of the oblique end-pieces. Others, on the contrary, appeal, if not outright to such mental faculties as 'will' and 'imagination,' at any rate to purely psychological conditions; they make the illusions a matter not of perception but of judgment and association. The Müller-Lyer lines lengthen and shorten with the nature of the end-pieces because we read our own mechanical activities into the figure, feel ourselves in it as free or as constrained: eye-movements, save possibly as the vehicle by which these activities, efforts, and tensions come to expression, have nothing to do with the illusion. Between these extremes lie various forms of mixed interpretation; and it may be said definitely that, in the present state of our knowledge, recourse must be had for explanation both to physiology and to psychology. The illusions of class 4 have never been accounted for in physiological terms; while, conversely, the most ardent champions of the judgment theory cannot deny the influence of fixation in the illusions of class 1. Nor is there any reason for regarding the one mode of explanation as more 'scientific' than the other. The illusions have, admittedly, a physiological substrate: the question is only whether this substrate is altogether peripheral, given with the structure and function of the eyes, or is in part central, depending on connections within the cerebral cortex. The study of the optical illusions, if it has not as yet enabled us to decide this question, has at any rate brought to light a large body of interesting facts as well as a long list of possibilities of explanation; it has helped to illuminate various vexed problems in the perception of visual space; and it has thus cleared the ground for a future synthetic survey of space psychology.

5. In the pictorial arts, an imitation of the appearance of nature which is intended to create the impression of reality.

You cannot go beyond *illusion* in that direction, and yet illusion will only give you the sort of pleasure you derive from looking at a rope-dancer.
W. Armstrong, in Portfolio, N. S., Feb., 1895, p. 73.

Arrow-head and feather illusion, the illusion of the Müller-Lyer figure. See ★*figure*. **Von Recklinghausen's illusion.** See ★*illusion*, 2.

illusionary (i-lū′zhon-ā-ri), *a.* [*illusion* + *-ary*[1].] Having the characteristics of an illusion; fallacious; illusory.

The altered and *illusionary* perception of these numerous sensations increases with the concentration of the attention upon the self. *Buck*, Med. Handbook, V. 131.

illusorily (i-lū′sō-ri-li), *adv.* In an illusory manner; by way of illusion.

It is not that we see aright but judge wrongly: we actually see *illusorily*.
E. B. Titchener, Exper. Psychol., I. i. 152.

Illusory form. See ★*form*. **Illusory power** or **appointment.** See ★*power*[1].

illustration, *n.* 5. In *music*, same as *development*. [Rare.]

Illyrian, *n.* 4. The language of Illyria, or the group of ancient dialects represented by the modern Albanian; also applied to the modern Slavic dialects of the same or adjacent districts.

Illyric (i-lir′ik), *a.* and *n.* Same as *Illyrian*.

Ilocan (i-lo′kan), *a.* and *n.* Same as ★*Ilocano*.

Ilocano (il-ō-kä′nō), *a.* and *n.* [Philippine Sp., < *Ilocos*, name of two provinces, prop. 'river men' (Tagalog *ilog*, river).] **I.** *a.* Of or pertaining to the Ilocanos or their language.

II. *n.* 1. A member of one of the Malay tribes of the Philippine Islands, inhabiting the extreme northwestern part of Luzon.—2. An inhabitant of Ilocos without reference to race.—3. The language of the Ilocanos.

I. L. P. An abbreviation of *Independent Labor Party*.

ilumba (i-löm′bä), *n.* [Aboriginal name in central Australia.] An Australian timber-tree, *Eucalyptus tesselaris*, by the settlers commonly called *Moreton Bay ash*. See ★*ash*[1].

Ilyanthidæ (il-i-an′thi-dē), *n. pl.* [NL., < *Ilyanthus* + *-idæ*.] A family of zoantharians, of the order *Actiniidea*, which have free forms not adhering by a basal disk and the aboral end of the body rounded. It includes the genera *Ilyanthus*, *Halcampa*, and *Peachia*.

Ilyanthus (il-i-an′thus), *n.* [NL. (Dana, 1846), < Gr. ἰλύς, mud, + ἄνθος, flower.] The typical genus of the family *Ilyanthidæ*.

ilyogenic (il″i-ō-jen′ik), *a.* [Gr. ἰλύς, mud, + -γενής, -producing, + *-ic*.] In *petrog.*, of argillaceous origin: applied to rocks derived from mud. *Renevier*, 1881.

Ilyophidæ (il-i-of′i-dē), *n. pl.* [NL., < *Ilyophis* + *-idæ*.] A family of deep-sea eels from the eastern Pacific, commonly called *ooze-eels*.

Ilyophis (i-lī′o-fis), *n.* [NL., < Gr. ἰλύς, mud, + ὄφις, snake.] A genus of deep-sea eels of the family *Ilyophidæ*. They are found in the eastern Pacific.

Ilypnus (i-lip′nus), *n.* [NL., < Gr. ἰλύς, mud, + ὕπνος, sleep.] A genus of small fishes, of the family *Gobiidæ*, which inhabit mud-flats on the western coast of the United States.

image, *n.*—**Dermal image,** in *psychol.*, an image of a dermal sensation, an image of pressure, cold, warmth, or cutaneous pain. **Generic image,** in *psychol.*, a composite image derived from a number of like perceptions and standing to these much as the composite photograph stands to its originals: regarded by many psychologists as the vehicle or representative of the abstract idea.

Abstraction and generalization with no possible aid from language. These are called *generic images* by Huxley, Galton and Ribot. They are the same as Romanes's recepts, and are intermediate between the pure image on the one hand and generalizations on the other.
Amer. Jour. Psychol., XIII. 201.

Gustatory image, in *psychol.*, a reproduced sensation of taste; an image which stands to the peripherally excited sensation of taste as the image of a color stands to the peripherally excited color-sensation.—**Haptical image,** in *psychol.*, a reproduced haptical sensation; an image that stands to the peripherally excited haptical sensation as the image of a color stands to the peripherally excited color-sensation.

Haptical images, beside being vague and ill-defined, offer peculiar difficulties. *Amer. Jour. Psychol.*, XI. 25.

Heteronymous images, in *physiol. optics*, the two images seen in binocular vision when the eyes are focused upon a point beyond the object.—**Homonymous images,** in *physiol. optics*, the two images seen in binocular vision when the eyes are focused upon a point nearer than the object.—**Kinesthetic image,** in *psychol.*, a mental representation in kind of a peripherally aroused kinesthetic sensation, or group of kinesthetic sensations; a centrally excited kinesthetic sensation or sensation-group.

I have no doubt, in my own case, of the existence of visual and auditory images . . . I have no doubt, from the reports of others, of the existence of free *kinaesthetic images*, verbal or other.
Jour. Philos., Psychol. and Sci. Methods, Jan. 21, 1903, [p. 38.

Latent image, in *photog.*, the invisible image resulting from the action of light upon a sensitive photographic surface, which quickly becomes perceptible when treated with a reducing agent or developer.—**Olfactory image,** in *psychol.*, a mental representation in kind of a peripherally aroused olfactory sensation; a centrally excited olfactory sensation.

In the two following cases, the *olfactory image* only exists in a single instance, and appears to be produced by the combined operation of concomitant circumstances.
Ribot (trans.), Psychol. of Emotions, p. 145.

Pure image, in *psychol.*, an individual mental representation in kind of a peripherally aroused sensation or sensation-group; a concrete idea, as opposed to the generic image or the concept. *Amer. Jour. Psychol.*, XIII. 201.

Purkinje's image. (*a*) Same as *Purkinje's figures* (which see, under *figure*). (*b*) Images (as of a candle flame) reflected from the anterior and posterior surfaces of the crystalline lens and from the front of the cornea. The middle image (that from the anterior surface of the lens) varies in size and position as the eye is alternately accommodated for a farther and a nearer point. *E. C. Sanford*, Exper. Psychol., p. 33. **Real image,** any image formed at the actual intersection of rays brought to focus by an optical system: opposed to *virtual image* (which see, under *virtual*).

imagerial (im-ā-jē′ri-al), *a.* [Irreg. < *imagery* + *-al*[1].] Relating to imagery; symbolic; employing figurative illustrations.

Herat is called, after the *imagerial* way of the Easterns, the key of India. *Household Words*, IV. 230. *N. E. D.*

imagerially (im-ā-jē′ri-al-i), *adv.* Figuratively.

Ladies are creation's glory, but they are anti-climax, . . . recoil, cross-current; morally they are repentance, penance; *imagerially*, the frozen North on the young brown buds bursting to green. *G. Meredith*, Egoist, xx.

image-space (im′āj-spās), *n.* In *optics*, the space or region pertaining to any optical system within which the images of all the points of a given space, called the object-space, are situated. *P. Drude*, Theory of Optics, p. 15.

Imaginal buds. See ★*bud*[1].—**Imaginal fold.** Same as *imaginal disk*.

imaginary. **I.** *a.*—**Imaginary number, unit.** See ★*number*, etc.

II. *n.*—**Galois imaginary,** a kind of imaginary number occupying the same position in the theory of congruences that is occupied by the ordinary complex numbers in the theory of equations.—**Pure imaginary,** a neomonic number.

imaginate (i-maj′i-nāt), *v. t.*; pret. and pp. *imaginated*, ppr. *imaginating*. [L. *imago* (*-gin-*), image, + *-ate*[2].] In *entom.*, to transform from a pupa into an imago.

imagination, *n.* 5. In *entom.*, the act of transforming into an imago or of reaching the imaginal stage: said of insects completing their metamorphosis.—**Imagination consciousness,** in *psychol.*, consciousness as it is constituted and disposed during the exercise of imagination; the contents and arrangement of contents characteristic of the imagining mind. *E. B. Titchener*, Exper. Psychol., I. i. 1.

imbalance (im-bal′ans), *n.* [*im*-[3] + *balance*.] Defective balance; specifically, a lack of equality in the tension and contractile strength of the eye-muscles, leading to heterophoria. *Med. Record*, Feb. 7, 1903, p. 211.

Imbauba ant. See ★*ant*[1].

imbe (im-ba′), *n.* [Brazilian, < Tupi *imbe*.] A liana.

Imbibition theory, in *bot.*, the theory that the sap of plants ascends by a chemical process in the cell-walls and not by a physical process carried on by the vessels: proposed and defended by Sachs.—**Water of imbibition.** (*a*) The water held by the action of the molecular forces within the pores of a substance which is soaked but not submerged; specifically, the maximum amount of water which the soil is capable of retaining above the level of ground-water. (*b*) Same as *quarry-water*.

imbrocado (im-brō-kä′dō), *n.* Same as ★*embrocado*, 2.

imesatin (ī-mes′a-tin), *n.* [*im*(*ide*) + *isatin*.] A dark-yellow compound, $C_9H_6ON_2$, prepared by the action of ammonia on isatin. It crystallizes in prisms.

Imhofia (im-hō′fi-ä), *n.* [NL. (Heister, 1753–1755), named after *Imhof*, a privy councilor of Braunschweig and a patron of botany.] A genus of plants of the family *Amaryllidaceæ*. See *Nerine*.

imidazol (ī-mid-az′ol), *n.* [*imide* + *az*(*o*)- + *-ol*.] Same as ★*glyoxaline*.

imido-acid (ī′mi-dō-as″id), *n.* An incorrect form of ★*iminoacid*.

imido-ether (ī′mi-dō-ē″thèr), *n.* An incorrect form of ★*iminoester*.

imino-. [A combining form of ★*imine*, < *im*(*ide*) + *-ine*[2].] A combining form used in chemistry to indicate the presence, in the compound, of the divalent group NH. Incorrectly *imido-*.—**Imino-acid,** an acid which contains the group: NH combined with the hydrocarbon radical of the acid.

imino-ester (ī′mi-nō-es″tèr), *n.* A class of compounds, $HN:ROR_1$, prepared by the action of gaseous hydrogen chlorid on a mixture of a nitrile and an alcohol. The substances are basic and stable toward water. Also called, less correctly, *imido-ether*.

imitation, *n.*—**Laws of imitation.** See ★*law*[1].

immatriculate (im-ā-trik′ū-lāt), *v. t.*; pret. and pp. *immatriculated*, ppr. *immatriculating*. [*im*-[2] + *matriculate*, *v.* (after G. *immatriculiren*).] To matriculate.

immatriculation (im-ā-trik-ū-lā′shon), *n.* [G. *immatriculation*.] Matriculation, especially in a German university.

immedial (i-mē′di-al), *a.* [*immedi*(*ate*) + *-al*[1].] A trade-name applied to certain coal-tar colors of the sulphid type.—**Immedial black, blue.** See ★*black*, ★*blue*.

immediatism, *n.* 2. In *U. S. hist.*, the principles of the immediatists.

The speaker [H. G. Otis] was prepared to denounce the Society [for the immediate abolition of slavery] as a "dangerous association." . . . Its *immediatism* makes it a revolutionary society.
Garrison, Life of William Lloyd Garrison, I. 499.

immediatist (i-mē′di-ā-tist), *n.* [*immediate* + *-ist*.] One who believes in immediate action; specifically, in *U. S. hist.*, one who favored the immediate abolition of slavery.

He [H. G. Otis] denounced the "higher law"; denied that the Scriptures were anywhere opposed to Slavery; repeated that Christ "was not an *immediatist*."
Garrison, Life of William Lloyd Garrison, I. 500.

immediatorial (i-mē′di-ā-tō-ri-al), *a.* [*in*-[3] + *mediatorial*.] Not mediatorial.

When the object of the present Kingdom of Christ has been attained in the conquest of evil, there will be no longer need of a mediator. Then God will be known immediately. We shall know Him, when the mediatorial has merged in the *immediatorial*, in a way more high, more intimate, more sublime than even through Christ.
F. W. Robertson, Lectures on Epistles to Cor., Lecture xxx.

Immemorial usage. See ★*usage*.

immergence (i-mèr′jens), *n.* [*immerge* + *-ence*.] The act of immerging or plunging or sinking into or under anything; immersion: as, *immergence* in water.

immersement (i-mèrs′ment), *n.* Same as ★*immergence*.

immersion, *n.* 7. An antiquated term for the introduction of a solid substance into a liquid

reagent in order to produce chemical change, as the calcination of tin by immersion in nitric acid. **Center of immersion.** Same as *center of displacement.* **Immersion system,** in *microscopy,* an objective lens system designed for use with a layer of liquid between the objective and the cover-glass. See *immersion,* 5. **Oil-immersion lens.** See ★*lens.* – **Wedge of immersion.** See ★*wedge*1.

immethodic (im-e-thod'ik), *a.* [*im-*3 + *methodic.*] Same as *immethodical.*

immigration, *n.*—**Bureau of Immigration.** See ★*bureau.*

immigrator (im'i-grā-tor), *n.* An immigrant. *Lytton.* N. E. D.

immigratory (im'i-grā-tō-ri), *a.* [*immigrate* + *-ory.*] Pertaining to immigration.

Both *immigratory* and emigratory [movements of birds]. *The Naturalist,* Jan. 15, 1897.

immissivity (i-mi-siv'i-ti), *n.* [*in-*2 + *missive* + *-ity.*] Absorbing power for radiation, expressed either in terms of that of a black body or in absolute measure. Like emissivity, which is the corresponding physical constant for radiation, immissivity is defined in various ways: sometimes as the quantity of heat absorbed per second by a square centimeter of surface when the difference of temperature between the absorbing body and its surroundings is 1° C. A more usual measure of immissity is by means of the coefficient of absorption. See *absorption of light.*

immixture2 (i-miks'tūr), *n.* [*in-*2 + *mixture.*] The action of mixing; commingling; the condition of being mixed up in (something).

It [a principle] has enabled the court to avoid an *immixture* in political strife which must have destroyed its credit. *Bryce,* Amer. Commonwealth, I. xxiv.

immoderacy (i-mod'e-rā-si), *n.* Want of moderation. *Sir T. Browne,* Christian Morals, ii. § 1.

immodulated (i-mod'ū-lā-ted), *p. a.* [*in-*3 + *modulated.*] Unmodulated.

His voice was harsh and *immodulated.* *J. A. Symonds,* Shelley, p. 11. *N. E. D.*

immolation, *n.* **3.** The title of the eucharistic preface in the Gallican liturgy: so called because it is an introduction to the sacrifice of the mass. See *preface,* 2.

immoralist (i-mor'al-ist), *n.* [*immoral* + *-ist.*] One who opposes or disregards the principles of morality.

That arch *im-moralist* . . . Goethe. *Mrs. Craik.*

immoralize (i-mor'al-īz), *v. t.*; pret. and pp. *immoralized,* ppr. *immoralizing.* To demoralize; make immoral.

Immortal flower. Same as *immortelle.*

immotive (i-mō'tiv), *a.* [*in-*3 + *motive.*] Incapable of moving or of being moved. *Feltham,* Resolves, I. 190. *N. E. D.*

immundity (i-mun'di-ti), *n.* [L. **immunditas,* besides *immunditia* and *immundities,* < *immundus,* unclean: see *immund.*] Uncleanness; an unclean or impure thing.

The ascription to Sappho of the various extravagances and *immundities* of the common myth. *E. H. Pember,* Tragedy of Lesbos, Pref., p. 11. *N. E. D.*

immune. **I.** *a.* **Immune body.** Same as ★*amboceptor.* – **Immune proteid,** any protective albuminous substance, in the sense of an antitoxin or a bacteriolysin. – **Immune serum,** the serum of an immunized animal, containing the specific antibody to the substance used in immunization. See ★*immunity,* 5.—**Partial immune body,** one of a number of bodies of which, according to Ehrlich, each immune body is composed. See ★*immunity,* 5.

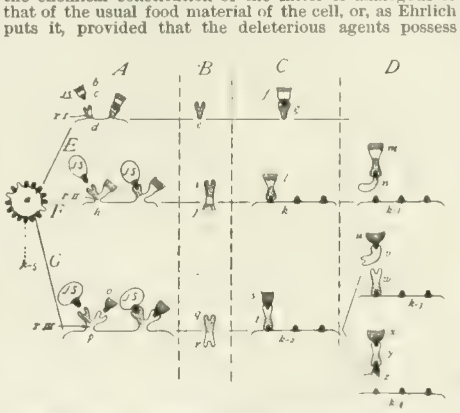
II. *n.* One who is exempt; specifically, one who is protected from a particular disease by inoculation or by a previous attack.

immunify (i-mū'ni-fī), *v. t.*; pret. and pp. *immunified,* ppr. *immunifying.* [L. *immunis,* safe, + *-ficare,* < *facere,* make.] To make immune; immunize.

immunist (i-mū'nist), *n.* [*immune* + *-ist.*] One who enjoys a certain exemption or immunity. See *immunity,* 1.

It is conceded that the '*immunist*' (it is convenient to borrow a term that French writers have coined) is entitled to many of the fines and forfeitures that arise from offences committed within his territory. *F. W. Maitland,* Domesday Book and Beyond, p. 277.

immunity, *n.* **5.** In *pathol.,* a lack or absence of susceptibility to disease. This may be either natural or acquired. *Natural immunity* may be of the most varied character. Thus it is found that animals are altogether insusceptible to many diseases which are common in man, such as yellow fever, smallpox, scarlet fever, measles, etc.; the cold-blooded animals, as a class, are free from many diseases which are common in the warm-blooded animals; birds and reptiles are exempt from tetanus, mice and rats from diphtheria. Again, children are much more prone to certain diseases (as measles, scarlatina, diphtheria, etc.) than adults. Certain individuals appear immune against diseases to which others of the same species readily succumb. A familiar example of *acquired immunity,* on the other hand, is that which follows an attack of yellow fever, or smallpox, typhoid fever, scarlet fever, etc. Immunity of this character, which depends upon actual infection, is called *active immunity,* since the body itself is active in its production. This is in contradistinction to *passive immunity,* which is referable to the introduction of protective substances from without. Such immunity is seen, for example, following protective injections of diphtheria antitoxin. Knowledge regarding the essential factors which are operative in the production of immunity to disease is still very defective, but many points have been worked out from which a general idea of the process can be formed. Through the researches of Ehrlich and his pupils in Germany more especially, and of Metchnikoff and Bordet in France, besides many others, the concept of immunity has been materially amplified; for it has been shown that the animal body has a mechanism of self-protection which is of the most extensive character and is directed not only against the harmful effects of bacteria but also against all alien cellular elements and cell-products of whatever kind, in so far, at least, as these latter are of an albuminous character. Thus it has been ascertained that the injection of certain soluble toxins leads to the production of corresponding antitoxins, as in diphtheria, tetanus, botulism, and poisoning with certain vegetable toxins, as ricin, abrin, crotalin, etc. Similarly, the introduction of various tissue-cells of an alien species leads to the formation of corresponding cytolysins or cytotoxins, such as hemolysins, leucolysins, neurolysins, endotheliolysins, spermatolysins, and so on apparently without limit. Then, again, it was shown that the injection of certain cells calls forth the production of corresponding *agglutinins,* which cause the clumping or coalescence of the cells in question. Various albuminous substances similarly lead to the production of bodies which, when brought together with the first, cause the formation of precipitates — the *precipitins.* There are also the *coagulins,* which result on injection of certain albumins; the *antiferments;* and so on. Thus it is seen that the introduction into the body of almost any foreign substance of an albuminous character (*antigen*) is followed by the production of a corresponding antagonistic or *antibody.* It is accordingly necessary to extend the meaning of the term *immunity* to include the general defensive reaction on the part of the body to the action of foreign cellular elements or their constituents. As regards the mechanism by which the various antibodies are formed and immunity is accordingly produced opinions differ, but there is a general tendency to accept the explanation offered by Ehrlich and his pupils, which is based upon the now famous lateral-chain theory (see below). The general study of immunity has led to a vast amount of experimental research, and to results of the utmost practical importance. Thus the discovery of diphtheria antitoxin has furnished a cure for one of the most fatal diseases to which man is subject. Tetanus is now successfully combated by an antitetanin. Snake-bite poisoning, which in India is annually responsible for many thousands of deaths, is readily amenable to specific treatment in a large percentage of cases. Antirabic treatment has lowered the fatality percentage of rabies to nearly one per cent. In many other diseases to which man is subject altogether satisfactory antisera have not as yet been developed, but a certain degree of protective immunity can be established in some, as in plague, typhoid fever, and dysentery. In these cases immunization is effected by means of attenuated cultures of the corresponding organisms. Of vast economic importance is the successful immunization of certain animals against diseases which would otherwise prove highly fatal, as of sheep against anthrax and of cattle against rinderpest. Important from the standpoint of prophylaxis, also, is the possibility of promptly recognizing the existence of tuberculosis in cattle by the injection of tuberculin, and, to judge from recent reports, it now seems possible also to immunize actively against the disease in question. *Ehrlich's lateral-chain theory,* upon which the modern doctrine of immunity is largely based, explains better than any other the various experimental data that have been elaborated within recent years. According to it, the living cell contains a formative central nuclear complex, the *Leistungskern* of Ehrlich, to which other molecular groups, the so-called *side-chains* or *receptors,* are united. Through the union of food material with these side-chains the nutrition of the cell is maintained. Through these same side-chains, however, the cell is also open to attack by the most diverse foreign agents, provided that the chemical constitution of the latter is analogous to that of the usual food material of the cell, or, as Ehrlich puts it, provided that the deleterious agents possess groups, or *haptophores,* which will fit the receptors of the cell. Ehrlich recognizes three varieties of receptors, which he classifies as belonging to the first, the second, and the third order. Those of the first and second orders contain only one combining group for the alien material, which is to act upon the cell; for this reason they are termed *uniceptors,* while the receptors of the third order have two combining groups and are called *amboceptors.* In the case of the receptors of the second and third orders the alien material, *antigen* or *immunizing body,* as it is generally termed, is capable of producing its specific effect upon the cell only in the presence of a ferment-like substance which must be especially supplied, as the so-called *complement* in the case of receptors of the third order, while in those of the second such a complex represents an integral component of the receptor (the zymophoric group). If, now, a foreign substance of a harmful nature effects a union with some of the receptors of a cell, these receptors are practically lost to the cell. In accordance with Weigert's overproduction theory, this loss, unless the cell has been injured beyond the possibility of recovery, is then not only made up by the production of other receptors of the same kind, but an overproduction occurs. The supernumerary side-chains are thrown off, and now circulate in the blood in the free state. In this condition they are known as *haptines,* and, like the original sessile receptors, they may be of the first, second, or third order, as already described. As their presence in the blood in the free state prevents the access of foreign cellular products to the cell, these haptines are antagonistic in their action to that of the alien material, and thus constitute true protective bodies. For this reason they are termed *antibodies,* or *adaptation-products,* the latter term indicating that they are formed as a result of an effort on the part of the body to adapt itself to the presence of the foreign substances. The sera in question are similarly known as *antisera* or *immune sera.* Upon this basis natural immunity is readily explained by the assumption that receptors corresponding to the infecting agent are lacking, so that an attack upon the cell is impossible. Acquired immunity, on the other hand, is the result of infection and the consequent formation of antibodies. It may be *antitoxic* or *bactericidal* in nature, according to the character of the infecting agent. *Antitoxic immunity* is thus far known to develop in only three conditions, namely, in diphtheria, tetanus, and botulism. *Bactericidal immunity,* in contradistinction to antitoxic immunity, depends upon the production of more complicated antibodies, namely, haptines of the third order (amboceptors, immune bodies, etc.), in which a coaction of a ferment-like complement is necessary to produce the specific effect. *Passive immunity* depends upon the introduction of specific antibodies from without, and can also be of the antitoxic or bacteriolytic type, according to the nature of the substances employed.—**Atreptic immunity,** immunity which is dependent upon the absence of a specific substance *x*, which is essential to continued growth, in the case of malignant tumors.—**Opsonic immunity,** immunity which is dependent upon the presence in the body of opsonins, to which, in turn, the phagocytic activity of the leucocytes is referable.



General Scheme Illustrating Ehrlich's Lateral-chain Theory.

A, action of immunizing substances (*J. S.*) upon receptors *I, II,* and *III* (*rI, rII, rIII*) of the body-cells; *B,* cast off free receptors (haptins); *C,* action of antibodies upon the soluble products (toxins) of cells or the cells themselves; *D,* action of anti-agglutinins, anti-immune bodies, anticomplements, which result on injection of agglutinins, hemolysins, etc.; *E,* soluble products (toxin, ferments); *F,* insoluble substances, producing agglutinins and coagulins; *G,* insoluble substances, leading to production of cytotoxic (bactericidal) immune substances; *b,* toxophoric group; *c,* haptophore group; *d, h, p,* body-cells; *k* (*k-1* to *k-5*), cells used in immunization; *o,* complement; *e,* antitoxin, antiferment; *i,* haptophoric group; *l,* zymophoric group (coagulins, agglutinins); *q,* cytophilic group; *r,* complementophilic group (immune body of the hemolysins, bacteriolysins, etc.); *f,* toxin; *g,* antitoxin; *l,* agglutinin; *s,* complement; *t,* immune body; *m,* agglutinin; *n,* anti-agglutinin; *u,* complement; *v,* anticomplement; *w,* immune body; *x,* complement; *y,* immune body; *z,* anti-immune body. (Drawn from "Zeitschrift f. allgem. Physiologie.")

immunization (i-mū-ni-zā'shon), *n.* [*immunize* + *-ation.*] The artificial adaptation of an animal to foreign cells or cell products, brought about by the injection of such foreign material. See ★*immunity,* 5.

immunizator (i-mū-ni-zā'tor), *n.* One who or that which immunizes or renders immune.

immunize (i-mū'nīz), *v. t.*; pret. and pp. *immunized,* ppr. *immunizing.* [*immune* + *-ize.*] To produce immunity in; render immune.

immunochemistry (i-mū-nō-kem'is-tri), *n.* [*immune* + *chemistry.*] The chemical study of immunity. *Arrhenius* (trans.).

immunotoxin (i-mū-nō-tok'sin), *n.* [*immune* + *toxin.*] Antitoxin employed in the prevention of disease.

immure, *v. t.* **3.** To build into a wall; imbed in masonry.

In them [the walls] are imbedded a large number of marble blocks, many of them square bases, stuck end outmost into the masonry. A curious decorative effect is given by a course of small marble columns similarly *immured,* the ends showing as a string of white circles. *Geol. Jour.* (R. G. S.), IX. 160.

imo (ē'mō), *n.* [Japanese name.] In Japan, a generic name for edible roots, such as yams, potatoes, sweet-potatoes, and taro. Used alone without a qualifying prefix, it is especially applied in Japan and in Korea to the taro, *Caladium Colocasia,* which is also called in Japan *sato-imo.* See *Colocasia, taro*1, and ★*gabi.*

Imouthes (i-mö'thēz), *n.* [Gr. Ἰμούθης, also Ἰμούθ, repr. Egypt. *I-em-hotep.*] I-em-hotep, an Egyptian god of medicine.

imp, *n.* **7.** The length of twisted hair in a fishing-line.

Imp. An abbreviation (*a*) of the Latin *Imperator,* emperor; (*b*) of *Imperatrix,* empress.

imp. An abbreviation (*a*) of *imperative;* (*b*) of *imperfect* (*tense*); (*c*) of *imperial;* (*d*) of *impersonal;* (*e*) of the Latin *imprimatur,* let it be printed.

impact-figure (im'pakt-fig"ūr), *n.* Same as *percussion-figure* (which see, under *percussion*).

impair2, *a.* **2.** Not one of a pair; odd; unmatched. *Todd,* Cyc. Anat., III. 829.

II. *n.* **1.** An impaired or odd thing; an article without a mate.—**2.** In *roulette,* an odd number.

The [roulette] wheel is divided into thirty-seven compartments, . . . numbered from one to thirty-six, the thirty-seventh being zero. Pair indicates even numbers, *impair* odd numbers. *Encyc. Brit.*, XXXII. 391.

impala (im-pa'la), *n.* [Also *impalla*, *impallah*, and *pala*; from an African name.] An African antelope of the genus *Epyceros*, which has rather long, divergent, lyrate horns. The best known species is *E. melampus* of South Africa, of a dark red color, white below, standing about 3 feet high. A small race of this species inhabits Nyassaland. Another species, *Æ. petersi*, with black marking on the face, is found in West Africa, in Angola. Also known as *pala*.

impaludism (im-pal'ū-dizm), *n.* [L. *in*, in, + *palus* (*palud-*), marsh, + *-ism*.] Chronic malaria; malarial cachexy.

impanel[2] (im-pan'el), *v. t.*; pret. and pp. *impaneled*, *impanelled*, ppr. *impaneling*, *impanelling*. [*in-*[2] + *panel*.] 1. To decorate or fit with panels: as, a house *impaneled* with oak.—2. To place as a panel in a wall.

Telford used to take much pleasure in pointing out to his visitors the painting of Westminster Bridge *impanelled* in the wall. *Smiles*, Engineers, II. 174.

imparasite (im-par'a-sīt), *n.* [*in-*[3] + *parasite*.] An insect which is predatory and carnivorous, but is not a parasite. *Kirby and Spence.*

imparlance, *n.*—**General special imparlance,** in *law*, an imparlance in which the defendant reserves all advantages and exceptions whatsoever, including the right to a plea that the court has no jurisdiction of the cause.

impartance (im-par'tans), *n.* [*impart* + *-ance*.] The act of imparting; impartment.

The balance between two opposing *impartances* of morality. *Shelley*, Letter to Elizabeth Hitchener, Oct. 18, 1811. [*N. E. D.*

imparticipable (im-pär-tis'i-pa-bl), *a.* and *n.* [*in-*[3] + *participable*.] I. *a.* That can not be shared or divided.

In radiant thousands, each star reigns
In *imparticipable* royalty
Leaderless, uncontrasted with the light
Wherein their light is lost.
Bailey, Festus, x. 88.

II. *n.* A thing that can not be shared or divided.

Every *imparticipable* produces twofold orders of things participated. *T. Taylor*, Proclus, II. 359. *N. E. D.*

impartivity (im-pär-tiv'i-ti), *n.* Imparting power; specifically, the power of an electric heater to impart heat to its surroundings.

Where high temperatures and rapid rates of *impartivity* are required lower variable voltages are used. *Elect. World and Engin.*, Jan. 9, 1904, p. 85.

impasto, *n.* 2. In *ceram.*, enamel colors or slip laid so thickly on the ware, in decoration, as to stand out from its surface in relief.

Impatientaceæ (im-pā"shi-en-tā'sē-ē), *n. pl.* [NL. (Bernhart, 1895), < *Impatiens* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Sapindales*, the jewel-weed family, typified by the genus *Impatiens* (which see). There is only one other monotypic genus, *Hydrocera*, a native of the East Indies. The family has generally been called *Balsaminaceæ*, a term based on an untenable genus name and therefore invalid.

impayable (im-pā'a-bl), *a.* [OF. *empayable*, unappeasable, not to be paid for, < *in-* priv. + *payable*, payable.] 1. That can not be paid: as, *impayable* debts or obligations. *Monthly Rev.*, XXIII. 60.—2. Beyond payment; priceless. [Colloq., French use.]

The cheese, the fruits, the salad, the olives, . . . and the delicious white wine, each in their way were *impayables*; and the good marquis . . . observed that his guests did sincere homage to their merits. *Scott*, Quentin Durward, Introd., p. xxix.

impecuniary (im-pē-kū'ni-ā-ri), *a.* [*in-*[3] + *pecuniary*.] 1. Impecunious.

This day have I received information from my man of law of the non- and never likely to be- performance of purchase by Mr. Claughton of *impecuniary* memory. *Byron*, Letter 188, Works, III. 95.

2. Having no relation to money; not pecuniary.

It is in vain that in this hemisphere we endeavour after *impecuniary* fancies. *Bagehot*, Literary Studies, I. 268. *N. E. D.*

imped (im'ped), *n.* [NL. **impes* (*imped-*), tr. Gr. ἄπους (Aristotle), < *in-*[3] priv. + *pes* (*ped-*), foot.] An animal without feet.

Aristotle had divided the group (warm-blooded vertebrates) into bipeds, quadrupeds, and *impeds*. The quadrupeds formed the great bulk. The *impeds* living in the sea, as fishes, were warm blooded and breathed air; the bipeds were ourselves. *Owen*, in Life, II. 119.

impedance, *n.* Impedance is the apparent resistance of an alternating-current circuit, or the ratio of the electromotive force consumed by an alternating current, divided by the current. On account of the electromotive force consumed by self-induction, the apparent resistance with alternating currents is greater than that with direct currents, though the power-consumption is the same. The impedance consists of two components—*resistance*, which consumes power, and *reactance*, which is the wattless resistance due to self-induction. See *resistance*, 3, and ★*reactance*. **Absolute impedance,** impedance expressed in the absolute units of the c. g. s. system. **Impedance factor.** See ★*factor*. **Internal impedance,** in *elect.*, the square root of the sum of the squares of the internal resistance and reactance.

A synchronous motor of *internal impedance*. *Steinmetz*, Elements of Electrical Engineering, p. 102.

impediment, *n.* **Prohibitive impediments,** in *law*, impediments to marriage which subject the offending party to punishment in case of marriage in spite of them, but which do not authorize to annul or avoid the marriage. **Relative impediments,** in *law*, impediments to marriage caused by the parties being within the prohibited degrees of consanguinity.

impeller, *n.* 2. Specifically, the revolving wheel or pumping element of a centrifugal fan or pump.

The conoidal pump is especially designed for pumping large volumes against low heads. In general appearance, it is somewhat different from the ordinary centrifugal pump, due partially to the widening of the pump chamber to admit a special form of *impeller*. *Elect. Rev.*, Aug. 27, 1904, p. 318.

impenetrate (im-pen'e-trāt), *v. t.*; pret. and pp. *impenetrated*, ppr. *impenetrating*. [*in-*[2] + *penetrate*.] To penetrate; permeate.

Love . . . surrounding and *impenetrating* the beloved with radiance. *Mrs. Craik*, Romantic Tales, p. 318. *N. E. D.*

imper. An abbreviation of *imperative*.

Imperata (im-pe-rā'tä), *n.* [NL. (Cyrilli, 1792), named in honor of Ferrante *Imperato*, an Italian apothecary who in 1599 published a natural history of Naples.] A genus of grasses related to *Saccharum*. They are erect, often tall perennials with long, cylindrical, spike-like terminal panicles, each spikelet surrounded by long, silvery, silky hairs. There are five species, widely distributed in tropical and subtropical regions. *I. arundinacea* is the cogon of the Philippine Islands and the alang-alang of the Malay Archipelago. See ★*alang-alang*.

imperation (im-pe-rā'shon), *n.* [NL. **imperatio*(*n-*), < L. *imperare*, command: see *imperative*.] The power or action of governing; commanding.

What is dominion? It is either the power of contrectation, or else that of *imperation*. . . . Under the head of the power of *imperation* is comprised all the power which the sovereign is accustomed to exercise. *Bentham*, Prin. Internat. Law, Works, II. 540.

imperative, *n.* **Social imperative,** social constraint and sanction within the domain of belief and action.

imperf., impf. Abbreviations of *imperfect*.

Imperfect square, cube, etc., a number whose square root, cube root, etc., is irrational.

imperfective (im-pèr-fek'tiv), *a.* [*imperfect* + *-ive*.] 1. Imperfect.—2. Serving to express action not completed (either continuous or repeated at various times): applied to a form or 'aspect' of the Slavic verb.

imperforate, *a.* 2. As applied to the shells of the gastropod *Mollusca*, having the inner parts of the whorls coalesced into a columella leaving no opening or perforation. In the *Echinoidea*, or sea-urchins, the mamelons which support the spines are imperforate when not pierced by a central foramen.

imperial, *n.* 11. A member of the imperial or emperor's party; a soldier of the imperial army.

The Emperor and Germans, or if you please the *Imperials*. *R. Johnson*, Kingdom and Commonwealth, p. 101. *N. E. D.*

12. An imperial personage; an emperor.

I have received my proportion, like the prodigious son, and am going with Sir Proteus to the *Imperial's* Court. *Shak.*, T. G. of V., ii. 3.

At twelve the *Imperials* [the Emperor and Empress of Russia] retired and dismissed us. *Mottley*, Correspondence, I. 89. *N. E. D.*

imperialine (im-pē'ri-a-lin), *n.* [NL. *imperialis* (see def.) + *-ine*[2].] A colorless, very bitter levorotatory alkaloid, $C_{35}H_{60}O_4N$, contained in the bulbs of *Fritillaria imperialis*. It crystallizes in short needles, darkens at 248° C., and melts at 254° C.

imperialism, *n.* 3. Specifically—(*a*) "In recent British politics, the principle or policy (1) of seeking, or at least not refusing, an extension of the British Empire in directions where trading interests and investments require the protection of the flag; and (2) of so uniting the different parts of the Empire having separate governments, as to secure that for certain purposes, such as warlike defence, internal commerce, copyright, and postal communication, they shall be practically a single state." *N. E. D.* (*b*) In United States politics, the extension of the rule of the American government over foreign countries acquired by conquest or purchase, without a corresponding grant to them of the constitution or of a republican form of government; the governing of other peoples on the monarchical principle, as subjects rather than as citizens.—**Liberal imperialism,** in recent British politics, the views of the Liberal imperialists.

imperialist, *n.* 3. Specifically, in recent and particularly in British and United States politics, one who favors the principles and practices of imperialism.—**Liberal imperialist,** in recent British politics, a Liberal who is in sympathy with the imperialistic ideas usually associated with the Conservative party.

impers. An abbreviation of *impersonal*.

imperscriptible, *a.* A mistaken form or misprint for *imprescriptible*, admitted into some dictionaries.

impersonalize (im-pèr'son-al-īz), *v. t.*; pret. and pp. *impersonalized*, ppr. *impersonalizing*. [*impersonal* + *-ize*.] To make impersonal. *N. E. D.*

impersonative (im-pèr'son-ā-tiv), *a.* [*impersonate* + *-ive*.] Relating to dramatic impersonation; capable of impersonating: as, *impersonative* talent.

impi (im'pi), *n.* [Zulu.] A band of African warriors; a native military expedition.

implantation, *n.* 2. Union of the two ends of intestine, after exsection of a segment, by the insertion of one into the other and retention by sutures.

implementiferous (im"plē-men-tif'e-rus), *a.* [*implement* + L. *ferre*, bear, + *-ous*.] Bearing implements or tools; containing stone implements made by early races of men, as certain geological deposits.

Collections from *implementiferous* gravels at Swanscombe, in Kent. *Nature*, Oct. 29, 1903, p. 636.

implexed (im'plekst), *a.* [L. *implexus*, entangled, + *-ed*[2].] In *bot.*, entangled or interlaced; implex. *F. V. Coville.*

Implication texture. Same as *graphic* ★*texture*.

implode (im-plōd'), *v.*; pret. and pp. *imploded*, ppr. *imploding*. [*im-*[2] + (*ex*)*plode*.] I. *intrans.* To burst inward: opposed to *explode*.

This bulb *implodes*, then the pressure is applied to the interior of the protected bulb, which, in its turn, explodes. *Nature*, Nov. 24, 1881, p. 92.

II. *trans.* To pronounce by implosion. *N. E. D.*

implosion, *n.* 2. In *phonol.*, see the extract.

The *implosion* consists in closing the glottis simultaneously with the stop position, and then compressing the air between the glottis stoppage and the mouth one. *H. Sweet*, Handbook of Phonetics, § 224.

implosive (im-plō'siv), *a.* and *n.* [*implos*(*ion*) + *-ive*.] I. *a.* In *phonol.*, produced by implosion: as, *implosive* stops.

II. *n.* A sound formed by implosion.

Some sounds are produced without either out- or in-breathing, but solely with the air in the throat or mouth. The '*implosives*' . . . are formed in the former, the suction-stops or 'clicks' in the latter way. *H. Sweet*, Primer of Phonetics, § 90.

impluvium, *n.* 2. Same as *compluvium*.

imp. meas. An abbreviation of *imperial measure*. *Dunglison.*

impost-block (im'pōst-blok), *n.* An impost taking the form of a separate member with a definite character, as in Byzantine and early Italian architecture where it rises like a separate capital above the capital proper of a column. The term is also used for the two blocks from which an arch in a continuous wall seems to arise and upon which it bears.

imposure (im-pō'zūr), *n.* [*impose* + *-ure*.] The act of imposing or of laying on: as, the *imposure* of a decree.

impound, *v. t.* 3. To gather and retain (water) in a reservoir, basin, or pond.

impredicable (im-pred'i-ka-bl), *a.* [*in-*[3] + *predicable*.] 1. That cannot be predicated or affirmed. *Cockeram.*—2. That cannot be predicted. [An erroneous use, doubtfully ascribed in the following case.]

There is, no doubt, one constant element in the reckoning, namely human nature, and perhaps another in human nature itself—the tendency to reaction from all extremes; but the way in which these shall operate, and the force they shall exert, are dependent on a multitude of new and *impredicable* circumstances. *Lowe*, Prose Works, V. 126.

impregnation, *n.*—**Constitutional impregnation,** the impression upon the constitution of an organism as a whole which is supposed by Eimer to be made by a characteristic of long standing. See the extract.

If a form remain stationary at a low phyletic stage, then, from purely constitutional causes, the longer it remains at that stage the more does it become different, because its characters stamp themselves more and more deeply on the organism (*constitutional impregnation*). *Eimer* (trans.), Organic Evolution, p. 51.

Hypodermic impregnation, in some leeches, as *Clepsine*, fecundation by the passage of spermatozoa which are deposited on the skin in spermatophores, through the skin into the coelomic spaces and thence probably to the ovaries.

imprescience (im-prē′shiens), *n.* [*in-*[3] + *prescience*.] The condition of being without foreknowledge or prescience.

Improvidence, *imprescience*, and selfish ease.
De Quincey, Posthumous Works, I. 2[illegible], note. *N. E. D.*

impress[1], *v. t.* 5. In *elect.*, to apply electromotive force to (a circuit) from some outside source or to create difference of potential in (a conductor).

impressed, *p. a.* 2. In *elect.*, supplied to a circuit by some outside source: for example, the impressed electromotive force of a circuit is the electromotive force supplied to it by a generator.

impression, *n.*—**Method of impression**, in *exper. psychol.*: (*a*) Any method of psychological analysis which involves the presentation of stimuli to the observer and the recording of his introspective judgments. (*b*) More particularly, a method for the study of the affective processes, consisting in the presentation to the observer of a large number of stimuli, serially or in pairs, and in the recording of the affective judgments, absolute or relative, passed upon these presented stimuli; opposed, in this sense, to the *method of* ★*expression*. **Sulphur impression**, an impression or cast made on so-called plastic sulphur, which is a ductile mass produced by pouring melted sulphur into water.

impressionalistic (im-presh ọn-ạl-is′tik), *a.* Same as *impressionistic*.

impression-cylinder (im-presh′ọn-sil in-dẹr), *n.* The cylindrical surface in a printing or other press which carries the type or the pattern to be impressed upon the paper or cloth fed to it by the feeding-rolls. See *cylinder*, 2 (*c*).

impressionism, *n.* The name was first given to an advanced school of modern painting in France, based on the principle that effects of light in nature are momentary, and that the painter, if he wishes to be true to nature, should confine his attention and effort as closely as possible to the moment of their occurrence. In order to express the high key of natural light, a coterie of extreme impressionists, called *pointillists*, have used pure color laid on in points or dots. See the extract.

The words Impressioniste, *Impressionisme*, are said to have arisen from a phrase in the preface to Manet's catalogue of his pictures exhibited in 1867 during the Exposition Universelle, from which he was excluded. "It is the effect," he wrote, "of sincerity to give to a painter's works a character that makes them resemble a protest, whereas the painter has only thought of rendering his impression. An alternative origin is a catalogue in which Claude Monet entitled a picture of sunrise at sea "Une Impression." The word was probably much used in the discussions of the group, and was caught up by the critics as characteristic. *Encyc. Brit.*, XXIX. 412.

impression-resist (im-presh′on-rē-zist″), *n.* In *printing*, the material used as an elastic aid to give pressure to the paper which covers the inked type upon a printing-press. For strong elastic pressure that overlaps the face of the type, woolen blankets and india-rubber cloth are preferred; for a truly flat surface impression, as is needed in all engravings in relief, better results are obtained from the resist of hard cardboard.

impression-stitch (im-presh′on-stich), *n.* In *shoe-manuf.*, an imitation or false stitch on the soles of shoes.—**Impression-stitch machine**, a machine for making shoe-soles in any form of fair stitch or other fancy sewing.

impressive, *a.* 3. In *psychol.*, directed inward; producing an internal effect, or carrying a meaning for the subject of the experience: opposed to *expressive*. See *method of* ★*expression* (*a*).

My fear or anger may chance to be expressive to another, but they must of necessity be *impressive* to me.
Encyc. Brit., XXXII. 65.

imprest[2], *n.*—**Auditor of the imprest**, an official of the department in charge of imprests. See *imprest office*, under *imprest*. **Bill of imprest**, an order for the drawing of money in advance. [Eng.]

imprimitive (im-prim′i-tiv), *a.* [*in-*[3] + *primitive*.] Not primitive: in *math.*, in group theory, applied to a group such that its elements can be divided into sets of an equal number of elements, so that every substitution replaces the elements of each set only by all the elements of a set.

Such that every operation of the group either interchanges the objects of a subset among themselves, or changes them all into the objects of some other subset. When this is the case the group is called *imprimitive* in respect of the set; otherwise the group is called primitive. A group which is doubly-transitive, in respect of a set of objects, obviously cannot be *imprimitive*.
Encyc. Brit., XXIX. 121.

imprimitivity (im-prim-i-tiv′i-ti), *n.* The state or character of being imprimitive, as a group.

improbative, *a.*—**Articles improbative.** See ★*articles*.

improving, *n.* 2. In *metal.*, an operation for removing a portion of the impurities from argentiferous lead by exposing the molten metal to the oxidizing influence of the air. The impurities, as they become oxidized, are removed from the surface of the bath by an iron rake, and the operation is continued until a nearly pure alloy of lead and silver is obtained. Also called *softening*.

improvisatrice (im-pro-ve-sä-tre′che), *n.*; pl. *improvisatrici* (-tre′chē). [It. *improvvisatrice*, fem. of *improvvisatore*: see *improvisatore*.] A woman who improvises.

We will not speak of the enthusiasm excited by actresses, *improvisatrici*, female singers.
Mary Fuller, Woman in the Nineteenth Cent., p. 48.

impsonite (imp′son-īt), *n.* [*Impson*, a proper name (?), + *-ite*[2].] A kind of asphalt resembling albertite: it occurs in Indian Territory.

impubescent (im-pū-bes′ent), *a.* [*in-*[3] + *pubescent*.] Not possessing pubescence: said, for example, of the elytra of certain *Coleoptera*.

Elytra convex, not widened posteriorly, attaining their greatest convexity at the middle, very closely and rather strongly punctured, the apex of each rounded, their epipleuræ concave, *impubescent*. [Coleoptera.]
Proc. Zool. Soc. London, 1902, I. 186.

impulse, *n.*—**Cardiac impulse**, the heart-beat.

Impulsive action. See ★*action*.

impulsivity (im-pul-siv′i-ti), *n.* [*impulsiv*(*e*) + *-ity*.] Impulsiveness; liability to hasty or violent action at the best of a momentary impulse or transient emotion. *C. Lombroso* (trans.), Man of Genius, p. 348.

In the execution of many of those acts denominated crimes the offender exhibits the phenomenon of a brief period of violent activity, extreme *impulsivity*.
A. F. Chamberlain, in Pop. Sci. Mo., March, 1902, p. 419.

impunctate, *a.* 2. Having no punctæ or perforations; imperforate: technically applied to the shells of *Brachiopoda*, which may be either punctate or impunctate.

impuritanism (im-pū′ri-tạn-izm), *n.* [*in-*[3] + *puritanism*.] Principles and practices opposed to those of the Puritans; unscrupulousness in religious matters.

imputation, *n.* 3. The erroneous ascription of effect to cause: as, the *imputation* of a disease to witchcraft. [Rare.]

Imputation, then, is the reference of a sense-impression, of which the mind is conscious as an effect, to a mistaken cause. *Rep. Bur. Amer. Ethnol.*, 1898–99, p. clxxiii.

Impx. A contraction of the Latin *Imperatrix*, Empress.

I. M. S. An abbreviation of *Indian Medical Service*.

imsonic (im-son′ik), *a.* [*im*(*itation*) + L. *sonus*, sound, + *-ic*.] Characterized by words imitative of sounds: an artificial word, not in actual use. *Max Müller*, Science of Language (ed. 1891), II. vii.

imu (ē′mō), *n.* [Hawaiian *imu*, also *umu*.] In the Hawaiian Islands, a pit used for baking meat or vegetables by means of heated stones.

in[1]. **I.** *prep.*—**To be in it**, to be actually engaged or participating in the matter or enterprise in question: usually with a negative, and often used exaggeratedly to imply 'not counted in the distribution of credit or honors or gains.' [Slang.]

II. *adv.*—**Well in**, profitably engaged (in speculation or business); hence, in general, well off. [Colloq., Australia.]

in[4], *n.* and *v.* A simplified spelling of *inn*.

inaccentuation (in-ak′sen-tū-ā′shọn), *n.* [*in-*[3] + *accentuation*.] Lack of accentuation or emphasis; equableness. *C. J. Smith*, Accent, Synonyms and Antonyms, p. 7.

inacceptable (in ak-sep′tạ-bl), *a.* [*in-*[3] + *acceptable*.] Unacceptable; not proper to be received.

Propositions for peace . . . appeared utterly *inacceptable*.
Lecky, England in the Eighteenth Cent., II. 445.

Inachidæ (ī-nak′i-dē), *n. pl.* [NL., < *Inachus* + *-idæ*.] A family of brachyurous podophthalmous crustaceans, having the eyes non-retractile or retractile against the sides of the carapace, the carapace varying from subtriangular to suborbicular, the rostrum simple or bifid, and the walking-legs often very long. It includes about 40 genera, among them *Inachus*, *Macropodia*, *Huenia*, and *Euprognatha*.

Inachus (ī′nā-kus), *n.* [NL. (Fabricius, 1798), < Gr. Ἴναχος, a river-god, son of Oceanus.] The typical genus of the family *Inachidæ*.

inactivate (in-ak′ti-vāt), *v. t.*; pret. and pp. *inactivated*, ppr. *inactivating*. [*inactive* + *-ate*[2].] To render inactive: applied to an immune serum the complement of which is being destroyed by heat or by age. Such a serum can be reactivated by the addition of fresh serum.

inactive, *a.* (*e*) In *chem.*, causing no rotation in the plane of polarized light.—**Inactive molecules.** See ★*molecule*.—**Optically inactive**, in *phys.* and *chem.*, incapable of causing a rotation of the plane of polarization of a beam of light: opposed to *optically active*. See *optically active substance*, under *active*.

inactose (in-ak′tōs), *n.* [*inactive* + *-ose*.] An optically inactive, syrupy sugar, said to be formed by the action of silver nitrate on cane-sugar.

inadequative (in-ad′ē-kwā-tiv), *a.* [*in-*[3] + *adequate* + *-ive*.] Not of the same equivalence; inadequate; insufficient.

inadequatively (in-ad′ē-kwā-tiv-li), *adv.* Insufficiently. *F. Hall*, Hindu Philos. System, p. 120.

Inadunata (in-ad-ū-nā′tạ), *n. pl.* [NL., neut. pl. of *inadunatus*: see ★*inadunate*.] In the current classification of the *Crinoidea*, an order characterized by having the arms free above the first radial plates and the topmost joint of the stem the youngest. The order contains only very primitive Paleozoic forms.

inadunate (in-ad′ū-nāt), *a.* [NL. *inadunatus*, < L. *in-*[3] + *adunatus*, pp. of *adunare*, unite: see *adunation*.] Not united; specifically, as applied to the calyxes of certain fossil crinoids, having the arms free above the first radial plates.

-inæ. 2. A terminal combining-form in botanical classification, chiefly in Engler's system, denoting groups with the rank of subtribes.

inæquipalp (in-ē′kwi-palp), *n.* One of the *Inæquipalpia*.

Inæquipalpia (in-ē-kwi-pal′pi-ạ), *n. pl.* [NL., < L. *inæquus*, unequal, + NL. *palpus*, palpus.] A group of trichopterous insects or caddis-flies in which the number of joints in the maxillary palpi differs in the two sexes. It includes the families *Phryganeidæ*, *Limnophilidæ*, and *Sericostomatidæ*.

inaja (in-ä-jä′), *n.* [Tupi *inajá*.] See *inaja-palm*.

inamovability (in-ạ-mō-vạ-bil′i-ti), *n.* The property or state of not being removable: as, the *inamovability* of judges.

inamovable (in-ạ-mō′vạ-bl), *a.* [*in-*[3] + *amovable*.] Incapable of being removed; not subject to removal: applied to Roman Catholic rectors who are not removable at the will of the bishop, but only by due process of canon law, that is, by a formal and solemn canonical trial under grave charges.

inanga (i-näng′gä), *n.* A name in New Zealand of two trout-like fishes, *Galaxias attenuatus* and *Retropinna retropinna*. They are also called *whitebait* and *minnow*, and in Tasmania the *Galaxias* is called *jolly-tail*. Also *inaka*.

inangulate (in-ang′gū-lāt), *a.* [*in-*[3] + *angulate*.] 1. Angled in an inward direction, as certain stripes on the wings of *Lepidoptera*. *Proc. Zool. Soc. London*, 1898, p. 441.—2. Having no angles.

inanimate[2], *a.* 3. In *gram.*, denoting inanimate things: applied to a phase of 'gender' distinction.

The distinction between animate and *inanimate* gender is still preserved in both Penobscot and Abenaki.
Amer. Anthropologist, Jan.–March, 1902, p. 27.

inao (ē-nä′ō), *n.* [Aino (Ainu).] A ceremonial object of the Ainos (Ainu), consisting of a wooden stick, often shaved, or with shavings attached, set up as an offering or considered as a messenger which conveys prayers to the deities. *J. Batchelor*, The Ainu and their Folk-Lore, p. 92.

inappertinent (in-ạ-pẹr′ti-nent), *a.* [*in-*[3] + *appertinent*.] Not appertinent. *Coleridge*.

inaugurative (in-ä′gū-rā-tiv), *a.* [*inaugurate* + *-ive*.] Inaugural; inaugurating: as, an *inaugurative* ball; the *inaugurative* lecture of a course.

inaxon (in-ak′son), *n.* [Gr. ἰς (ἰν-), nerve, + ἄξων, axis.] In *neurol.*, a nerve-cell with a long axon, or axis-cylinder process.

inbark (in′bärk), *n.* In *forestry*, a condition of wood in which portions of the external bark are included within the wood. It often occurs where branches separate from the trunk, and is caused by their growing together in the hollow of the fork. *Sci. Amer. Sup.*, March 25, 1905, p. 24433.

inboard, *a.* 3. In *mech.*, toward the inside; toward the main center or center-line: as, an *inboard* stroke of the piston; an *inboard* bearing.—**Inboard profile.** See ★*profile*.

in-book (in′bůk), *n.* Short for ★*in-clearing book*.

inbound (in′bound), *a.* Bound homeward; coming in, as to a place or harbor: as, an *inbound* fishing-fleet.

inbreather (in-brē′ȴẹr), *n.* One who inbreathes.

Man was not so much made, as breathed into life, by the quickening spirit of God. He was formed in the very image of the Maker, the *Inbreather*, having in measure the thoughts, faculties, emotions of God.
A. Raleigh, Way to the City, p. 280.

inc., incorp. Abbreviations of *incorporated*.
Incaic (ing-kā'ik), *a.* [*Inca* + *-ic*.] Same as *Incan*.
in-calver (in'kä-vėr), *n.* A cow that is pregnant. [Rare.]

In no case should a cow be allowed to calve in a byre with other *in-calvers*.
Rep. Kan. State Board Agr., 1901–02, p. 347.

in-calving (in-kä'ving), *a.* Said of a cow when bringing forth her calf.
Incandescent gas-lamp, lamp, mantle, oil-vapor burner. See ★*gas-lamp*, *incandescent light*, under *electric light*; also ★*lamp*[1], ★*mantle*, ★*burner*.
incardinate[2], *v. t.* **2.** To institute formally as cardinal.

When he had accepted the office of Cardinal, but before he was *incardinated*.
Hook, Lives of Archbishops, II. 663. *N. E. D.*

incardination (in-kär-di-nā'shọn), *n.* The formal act of institution or incorporation in a church or clan.

The form of tonsure affected by the un-Romanised clans [of Wales] about which we hear so much later, is shown to have been originally a tribal badge, symbol of *incardination* in the sept. *Dublin Rev.*, Oct., 1897, p. 483.

Incarian (ing-kā'ri-ạn), *a.* [*Inca* + *-arian*.] Same as *Incan*. [Rare.]
incarnadine, *a.* **II.** *n.* A color ranging from flesh-color to blood-red.

Incarnadine or flesh-colour.
Peacham, Compleat Gentleman, p. 155.

The field of Lützen, . . . not then for the last time to take the rich *incarnadine* of blood, was the spot which his death should make memorable for ever.
Trench, Gustavus Adolphus, i. 49.

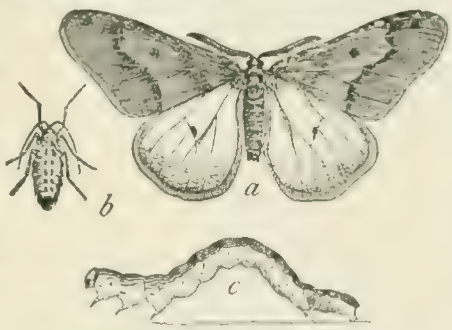
incarnationist (in-kär-nā'shọn-ist), *n.* [*incarnation* + *-ist*.] One who holds the doctrine of incarnation, that is, that the Divine Being has assumed human nature.
incasement, *n.* —**Theory of incasement.** (*b*) Swammerdam's theory of the preexistence in an insect's egg of the form of the larva, pupa, and imago, each stage being a distinct animal and one being contained inside the other like a nest of boxes.
incast, *n.* **2.** A casting or throwing inward: as, a fan-blower works by *incast* when it blows or forces the air into a space. Also used adjectively: as, an *incast* fan. *Buck*, Med. Handbook, I. 519.
Inca-stone (ing'kä-stōn), *n.* A piece of iron pyrites polished for use as a mirror, as by the Incas. Such objects are frequently several inches across.
inceal (in'sē-ạl), *n.* [F. *incéal*, referring to the incus, a bone of the internal ear, irreg. < L. *incus* (*incud-*), anvil: see *incus*.] One of the bones forming the gill-cover in fishes; the suboperculum. *Starks*, Synonymy of the Fish Skeleton, p. 515.
incense[2], *n.* **African incense,** an oleoresin from *Boswellia Frereana*. Also known as *Luban elemi* or *Oriental* or *African elemi*.
incense-spoon (in'sens-spön), *n.* A spoon used for incense.

Specially dainty and richly worked spoons to serve spices and sweets were used in the fourteenth century. . . . An *incense spoon* with rock-crystal shaft, dating from about 1480, and several of agate are in the Ferdinand Rothschild bequest in the British Museum.
J. S. Gardner, Old Silver Work, p. 32.

incense-tree, *n.* **3.** A tree of the genus *Boswellia*, especially *B. Carterii* and *B. serrata*. See *olibanum*. —**4.** In Australia, a name applied to some species of *Pittosporum*, on account of their fragrant flowers.
in-center (in'sen"tėr), *n.* [*in*[2] + *center*[1].] The center of an inscribed circle.
incept, *v. t.* **2.** Specifically, in *biol.*, to take in (nutriment): said of organisms or cells.
incept. An abbreviation of *inceptive*.
inch[1], *n.* —**Circular inch,** the area of a circle one inch in diameter, which equals 0.7854 square inch. One square inch equals 1.2732 circular inches. The circular inch is used in electrical calculations which involve the diameter and area of wires.—**Inch of mercury,** a unit of gaseous pressure; the pressure exerted by a vertical column of mercury one inch in height. It is .03342+ (or approximately $\frac{1}{30}$) atmospheres.—**Paris inch,** a former measure of length, occasionally referred to in optics, the equivalent of 2.7 centimeters or 1.062 English inches.
inch., incho. Abbreviations of *inchoative*.
inch-bones (inch'bōnz), *n. pl.* [*inch*[1] + *bones*.] Bone-fragments (as distinguished from bone-dust) used as manure. *J. B. Baxter*, Lib. Pract. Agr., II. 353. *N. E. D.*
inch-gauss (inch'gous), *n.* A practical unit of magnetic induction; a magnetic flux-density of one line of force (or maxwell) per square inch of cross-section.
inchman (inch'mạn), *n.* The bulldog ant: so called from its length. [Tasmania.]
inchoacy (in-kō'ạ-si), *n.* [*inchoa*(*te*) + *-cy*.] The state of being incipient or inchoate.

So ill satisfied was he [Clough] with his striking poem ["Amours de Voyage"], that he kept it nine years in MS. . . . What he doubted about in it was . . . its vigor and execution. Yet no execution could have been more perfect of the picture — a picture of *inchoacy*, I admit — which he intended to draw.
R. H. Hutton, Clough, in Literary Essays, p. 297.

inch-ton (inch'tun), *n.* A compound unit equivalent to one ton lifted one inch.
inchworm, *n.*—**Linden inchworm,** the larva of an American geometrid moth, *Erannis tiliaria*. It is yel-



Linden Inchworm (*Erannis tiliaria*).
a, male moth; *b*, wingless female; *c*, larva — slightly enlarged.

low, striped with black, and feeds on the leaves of the linden.—**Red-head inchworm.** See *pine* ★*span-worm*.
incide[2] (in-sīd'), *v. i.* [L. *incidere*, fall upon: see *incident*.] **1.** To fall upon, as a ray of light upon a surface; impinge; have incidence. —**2.** To have effect upon.

The cruel inequality with which the gabelle *incided* upon certain rural districts.
M. Bridges, Pop. Mod. History, p. 423. *N. E. D.*

incidence, *n.* **6.** The actual fall of taxation upon a particular individual or piece of property, in distinction from its nominal or supposed distribution.—**Grazing incidence,** in *optics*, incidence of a ray of light upon a reflecting surface in a direction such that the angle of incidence is nearly 90°.—**Principal incidence,** in *optics*, incidence at such an angle that the difference of phase of the two components of the reflected ray is $\frac{\pi}{2}$: said of the metallic reflection of light.
incident, *a.* **5.** Same as *afferent* (*c*): noting the nerves which convey impressions from the periphery to the nervous centers.—**Incident train.** See ★*train*[1].
incinerant (in-sin'ẹ-rạnt), *a.* [ML. *incinerans*, ppr. of *incinerare*, incinerate.] Incinerating; being reduced to ashes; burning to ashes.
incinerate, *v.* **II.** *intrans.* To be reduced to ashes by the burning off of organic matter. [Rare.]
incipial (in-sip'i-ạl), *a.* [Irreg. < L. *incipere*, begin, + *-ial*.] Of the beginning; initial. [Rare.]

The *incipial* words of the Preambulum.
Way, Promptorium Parvulorum, 1843–65, Pref., p. xvi.

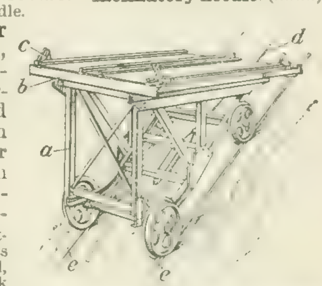
incipient, *a.* **2.** In *Heb. gram.*, noting the verbal tense or form with prefixed servile letters, otherwise called *future*, *present*, and *imperfect*.
incipit (in'si-pit), *v.* [L. *incipit*, 3d pers. sing. pres. ind. act. of *incipere*, begin: see *incipient*.] '(Here) beginneth': the first word in a preliminary formula common in medieval manuscripts and early printed books, introducing the title or name of the work or of the preface or other part of it: as, "*Incipit* preambulum"; "*Incipit* prologus in libellum qui dicitur Promptorius Parvulorum," etc. Compare *explicit*[2], *v.*
incipit (in'si-pit), *n.* [*incipit*, *v.*] The introductory words of a book or section of a book. Compare ★*explicit*, *n.*

The contents of each volume are fully given, for the most part with *incipits* and explicits.
Dublin Rev., Oct., 1897, p. 473. *N. E. D.*

Incised work. See ★*work*.
incisodentate (in-sī-sọ-den'tāt), *a.* [L. *incisus*, cut in, + *dentatus*, toothed (see *dentate*).] Having sharply cut teeth.
incisodenticulate (in-sī-sō-den-tik'ū-lāt), *a.* [L. *incisus*, cut in, + NL. *denticulatus*, having fine teeth (see *denticulate*).] Having fine, sharply cut teeth.
incisura (in-si-sū'rä), *n.* [L.: see *incisure*.] An incisure; a fissure; a notch.—**Incisura ischiadica,** the notch or emargination in the pelvis which marks the point of union of the ilium and ischium; or, as in the pelvis of an ostrich, the elongate space between these bones.—**Incisura pallii transversa,** the space between the cerebrum and cerebellum into which the tentorium dips.
incisural (in-sizh'ụ-rạl), *a.* [*incisure* + *-al*[1].] Pertaining to an incisure.
incitability (in-sī-tạ-bil'ị-ti), *n.* Capability of being stimulated or incited. *Syd. Soc. Lex.*
incitable (in-sī'tạ-bl), *a.* [*incite* + *-able*.] Capable of being stimulated to action.
incivic (in-siv'ik), *a.* [*in-*[3] + *civic*.] Lacking the qualities of good citizenship: the opposite of *civic*.

Ye rise above the base *Incivic* herd, like Cato and Brutus, superior to a senate of cowards and hirelings.
W. Taylor, in Monthly Rev., XVII. 505. *N. E. D.*

incl. An abbreviation (*a*) of *including*; (*b*) of *inclusive*.
inclavation (in-klạ-vā'shọn), *n.* [*inclav*(*ate*) + *-ation*.] The condition of being held in a socket by curved roots, as a tooth. [Rare.]
in-clearer (in'klēr"ėr), *n.* [*in*[1] + *clearer*.] In London, the bank-clerk whose duty it is to represent his bank in the clearing-house and receive through it all the bills of exchange, checks, etc., payable by his bank; the in-clerk. Called in New York *settling-clerk*. See ★*in-clearing*.
in-clearing (in'klēr"ing), *n.* [*in*[1] + *clearing*.] The bills of exchange, checks, etc., payable by a bank in any one day's clearing-house transactions, and received by that bank's in-clearer or settling-clerk for settlement. Compare ★*out-clearing*. [Eng.]—**In-clearing books,** the books in which a bank's in-clearings are entered.
in-clerk (in'klėrk), *n.* [*in*[1] + *clerk*.] An in-clearer or settling-clerk in a clearing-house. [Eng.]
Inclination of a straight to a plane, the angle between the straight and its projection on the plane.
inclinational (in-kli-nā'shọn-ạl), *a.* [*inclination* + *-al*[1].] Relating to inclination, either mental or physical.
inclinatory (in-klī'nạ-tō-ri), *a.* [*inclinat*(*ion*) + *-ory*.] Relating to the inclination or dip of the magnetic needle.—**Inclinatory needle**† (*naut.*), the dipping needle.
incline-car (in-klīn'kär), *n.* A freight- or passenger-car adapted for use on an inclined or mountain road or inclined elevator. The platform and seats are horizontal, while the truck or frame supported by the trucks may be higher at one end than at the other, to accommodate the car to the grade on which it is used. The illustration represents an incline-car on a narrow-gage industrial cable-railroad.



Incline-car.
a, steel frame of car [illegible]

incluse, *a.* **II.** *n.* A monk or nun who, with the permission of the superior, was (in the middle ages) voluntarily immured for life within the monastery.
inclusion, *n.* **3.** The contents of vesicles, of all sizes, in protoplasm as an emulsion, enveloped by pellicles of the continuous substance or plasma; the discontinuous portions of protoplasm.

Discontinuous elements or *inclusions*. In character these are most heterogeneous. . . . They are fluids of various degrees of viscidity. . . . Even very small areas are found to contain many chemically different *inclusions*.
G. F. Andrews, in Sup. Jour. of Morphol., XII. 14.

Inclusion cyst. See ★*cyst*.
inclusory (in-klö'sọ-ri), *a.* **1.** Inclusive: as, between the two *inclusory* extremes.—**2.** Including several elements: as, one *inclusory* statement.
incoercible, *a.* **2.** In *phys.*: (*b*) Incapable of reduction to tangible condition by pressure: applied to forms of energy, such as heat and electricity, when they were thought of as extremely subtile fluids.
incognite† (in-kog'nit), *a.* [L. *incognitus*, unknown.] Unknown.
incognitive (in-kog'ni-tiv), *a.* [*in-*[3] + *cognitive*.] Without the faculty of cognition.

God made the soul cognitive; and who shall make it *incognitive*?
Fitzedward Hall, Hindu Philos. System, p. 154. *N. E. D.*

incognoscent (in-kog'nọ-sẹnt), *a.* [L. *in-* priv.

+ *cognoscens(-ent-)*, ppr. of *cognoscere*, know.] Ignorant; unaware; without knowledge (of).

incoherent, *a.* **3.** In *geol.*, noting textures consisting of loose sediments which have never been cemented. *Geikie*, Text-book of Geol. (4th ed.), p. 138.

incohesive (in-kō-hē′siv), *a.* [*in*-3- + *cohesive*.] Not cohesive; not cohering.

Incommensurable number. Same as *irrational* ★*number*.

incommobility (in′kom-ō-bil′i-ti), *n.* [*in*-3 + *commobile* (see *commove*) + *-ity*.] The quality of not being moved to anger or other emotions.

Incommobilitas, which is called in Greek ἀοργησία, of a disposition incapable of being excited to anger.
T. Taylor, tr. of Apuleius, Philos. Plato, II. 346. *N. E. D.*

incommunication (in-kō-mū-ni-kā′shon), *n.* [Sp. *incomunicacion*; as *in*-3 + *communication*.] In *Sp. law*, the state of a prisoner who, by order of a judge, is not permitted to see or hold communication with any one during his confinement or until further order.

incommutative (in-kō-mū′ta-tiv), *a.* [*in*-3 + *commutative*.] Non-commutative.

Incompatible equation. See ★*equation*.

incompensated (in-kom′pen-sā-ted), *a.* Marked by lack of compensation: said of heart lesions. See ★*compensation*, 6.

Any of the organic heart lesions when *incompensated* may be followed by ascites.
Buck, Med. Handbook, I. 564.

incompetent, *a.* **II.** *n.* An incompetent person; one who is mentally or physically deficient.

This wretched person — a dauber, an *incompetent*, not fit to be a sign-painter — receives this morning an . . . offer . . . of a clerkship with nearly one hundred and fifty pounds a year, and . . . he refuses it! . . . For the sake of Art, he says.
R. L. Stevenson, New Arabian Nights, p. 326.

incomplexity (in-kom-plek′si-ti), *n.* [*in*-3 + *complex-ity*.] Simplicity; lack of complexity.

Artlessness, and *incomplexity* of fable.
V. Knox, Essays, III. clxxvi. 278. *N. E. D.*

incomprehensible, *a.* **II.** *n.* A thing or being that cannot be circumscribed within limits or that cannot be grasped by the intellect.

As also there are not three uncreated: nor three *incomprehensibles* [infinites], but one uncreated: and one *incomprehensible* [infinite].
The Athanasian Creed, in The Creeds of Christendom, II. 67.

incongruous, *a.* **3.** In the *theory of numbers*, not congruent: thus, 7 and 8 are incongruous to the modulus 3, giving different remainders when divided by the modulus.

inconscience (in-kon′shens), *n.* [*in*-3 + *conscience*.] Unconsciousness; lack of self-consciousness.

The genuineness and *inconscience* of these elemental motifs. *A. Lynch*, Modern Authors, p. 96. *N. E. D.*

Inconsistent equations. See ★*equation*.

inconsolate (in-kon′sō-lāt), *a.* [L. *in-* priv. + *consolatus*, pp. of *consolare*, console.] Unconsoled; disconsolate.

The despot of Cremona dying *inconsolate* because, having had the Pope and the Emperor on the tower of his cathedral, he had forgotten to hurl them down.
The Academy, Dec. 9, 1882, p. 407.

inconstructible (in-kon-struk′ti-bl), *a.* [*in*-3 + *constructible*.] That cannot be constructed.

incontinuity (in-kon-ti-nū′i-ti), *n.* [*in*-3 + *continuity*.] The quality of being incontinuous.

incontinuous (in-kon-tin′ū-us), *a.* [*in*-3 + *continuous*.] Not continuous; discontinuous. *R. L. Stevenson*, Across the Plains, 230. *N. E. D.*

incor. An abbreviation of *incorporated*.

incoronation (in-kor-ō-nā′shon), *n.* [*in*-2 + *coronation*.] Coronation.

The carvings around the choir wall are a series of presentations of the Divine Story, from the Nativity of the Virgin to her Assumption and *Incoronation*.
Mrs. Whitney, Sights and Insights, II. 426.

incorporable (in-kôr′pō-ra-bl), *a.* That may be incorporated.

Chelsea, Knightsbridge . . . and Mile-end were not really *incorporable*. *Daily News*, Sept. 19, 1899. *N. E. D.*

incorporation, *n.* (*f*) In *philol.*, the inclusion into one apparent whole of the verb or noun root with generic particles and affixes, or fragments thereof, forming what is, in effect, compared to Indo-European types of speech, a reduced sentence, but having the appearance of a long word; polysynthesis.

This bond is to be looked for in the inner structure of the dialects, a structure characterised especially by the development of pronominal forms, the abundance of generic particles, the more frequent use of ideas based on actions (verbs) than of ideas of existence (nouns), and as a consequence the subordination of the latter to the former in the proposition. The latter feature characterises the process called *incorporation*, all American Languages being polysynthetic. *Deniker*, Races of Man, p. 518.

incorporator, *n.* **2.** Specifically, a member of one university who is incorporated in, that is, has received an incorporating degree from, another university.

Having further been allowed by the Keeper of the Archives to extract all the names and particulars relative to *Incorporators* as well as honorary and nominal members of the University, I . . . proceeded to transcribe . . . list of degrees conferred.
J. Foster, Alumni Oxoniensis, Pref., p. vi.

incorporeal, *a.* **II.** *n.* An incorporeal thing; an immaterial being.

The divine nature of the celestial bodies cannot be seen through the telescope, and *incorporeals* are not to be viewed with a microscope eye.
T. Taylor, tr. of Plato, Introd., Timæus, p. 395.

incorporealize† (in-kôr-pō′rē-al-īz), *v. i.* [*incorporeal* + *-ize*.] To hold the theory that souls are an incorporeal substance distinct from matter. *Cudworth*, Intell. System, I. 22.

incorrosible (in-kō-rō′si-bl), *a.* Same as *incorrodible*.

incorrosive (in-kō-rō′siv), *a.* [*in*-3 + *corrosive*.] Not susceptible of corrosion: rarely, and incorrectly, used instead of *incorrodible* or ★*incorrosible*.

incr. An abbreviation (*a*) of *increased*; (*b*) of *increasing*.

increment, *n.* **6.** In *forestry*, the volume or value of wood produced during a given period by the growth of a tree or of a stand. See ★*accretion*, 5.—**7.** A uniform variation; a regular increase. *Elect. World and Engin.*, Feb. 21, 1903, p. 333.—**Increment borer.** See ★*borer*.—**Marginal increment,** in *polit. econ.*, the least important increment or unit of a commodity in the possession of an individual, or the last unit he is induced to produce or acquire. See the extract.

The increment of the commodity which he is only just induced to acquire (whether by his direct labour or by purchase) may be called its *Marginal Increment*; because he is on the margin of doubt whether it is worth his while to incur the outlay required to obtain it.
Alfred Marshall, Prin. of Economics, iii. 3.

Incremental lines of Salter, concentric lines in the dentin in the region of the crown of the tooth, analogous to the rings in the trunk of a tree, marking the successive growths of this substance.

incrimination (in-krim-i-nā′shon), *n.* The act of charging with a crime; the fact of being involved in a crime.

One other fact he noticed, which eventually became more important than many stronger circumstances of *incrimination*; this was that the shoes of the murderer, apparently new, creaked as he walked.
De Quincey, Three Memorable Murders.

incross (in′krôs), *n.* The process of breeding from parents which are close blood-relations; also, the offspring of such parents.

Recent results from *incrosses* and outcrosses lead to the belief that hybridizing is of paramount importance to supply the best stocks for the more laborious work of selection. *U. S. Dept. Agr.*, Div. Veg. Physiol. and Pathol., Bulletin 29, 1901, p. 55.

incruciation (in-krō-shi-ā′shon), *n.* [NL. **incruciatio*(*n-*), < **incruciare*, place on a cross, < L. *in*, on, + *crux* (*cruc-*), cross.] Same as *decussation*.

incubate, *v. t.* **2.** In *bacteriol.*, to place (a culture) in a thermostat or a similar apparatus for the purpose of obtaining the maximum growth of bacteria by keeping them at a constant optimum temperature.

incubational (in-kū-bā′shon-al), *a.* [*incubation* + *-al*1.] Relating to incubation.

incubator, *n.* **2.** Same as *couveuse*, 2.—**Bacteriological incubator,** an apparatus constructed to maintain a uniform temperature at which bacteria may develop. The triple-walled copper oven is provided with a space for water, which is heated to the proper degree, and fluctuations of temperature are prevented by an insulating air-space and by a cover of insulating material, such as asbestos-board.

inculpative (in-kul′pā-tiv), *a.* [*inculpate* + *-ive*.] Incriminative; inculpatory. *Sydney Smith*, Letters, iii. *N. E. D.*

incumbent, *a.* **4.** In *geol.*, resting upon: said of one series of strata which is supported by a subjacent one.

incunable (in-kū′na-bl), *n.* [F. *incunable*: see *incunabula*.] A book printed in the infancy of the art, before the year 1500. See *incunabula*, 3.

One of the early *incunables* or "fifteeners."
The Month, May, 1894. *N. E. D.*

incunabular (in-kū-nab′ū-lär), *a.* Of or pertaining to incunabula.

incunabulum (in-kū-nab′ū-lum), *n.*; pl. *incunabula* (-lä). [NL., a back-formation (as singular) from *incunabula*: see *incunabula*.] **1.** A book printed in the infancy of the art of printing. See *incunabula*, 3.—**2.** In *entom.*, a cocoon.

incuneation (in-kū-nē-ā′shon), *n.* [L. *in*, in, + *cuneus*, a wedge, + *-ation*.] The wedging together of the fragments in a certain form of fracture; impaction.

in-curve (in′kèrv), *n.* In *base-ball*, *lawn bowls*, *bowling*, etc., a ball so pitched or rolled by a right-handed man as to curve to the right.

incurved (in-kèrvd′), *a.* Bent or curved inward: in *bot.*, toward the axis.

ind. An abbreviation (*c*) of *index*; (*d*) of *indicative*; (*e*) [*cap.*] of *India*; (*f*) [*cap.*] of *Indian*; (*g*) [*cap.*] of *Indiana*.

I. N. D. An abbreviation of the Latin *In nomine Dei*, in the name of God.

indaba (in-dä-bä′), *n.* [Zulu.] Among the natives of South Africa, a council or conference for the discussion of affairs.

indamine (in′da-min), *n.* [*ind*(*igo*) + *amine*.] A basic coal-tar color of unknown constitution, produced when nitroso-dimethyl-aniline hydrochlorid reacts with toluidine.—**Indamine blue.** See ★*blue*.

indanthrene (in-dan′thrēn), *n.* [*ind*(*igo*) + *anthr*(*ac*)*ene*.] A coal-tar color related to anthracene made by fusing beta amino-anthraquinone with caustic potash. It dyes cotton and other vegetable fibers in a hyposulphite reduction-vat and gives very fast blues. When combined with flavanthrene it gives one of the fastest greens known.

indazin (in-daz′in), *n.* [*ind*(*igo*) + *az*(*ote*) + *-in*2.] A colorless compound, $C_6H_4 < \begin{matrix} CH \\ | \\ N \end{matrix} > NH$, prepared by heating orthohydrazin-cinnamic acid. It crystallizes in slender needles, melts at 146.5° C., and boils at 269–270° C. Also called, incorrectly, *indazole*.—**Indazin blue.** See ★*blue*.

indazole (in-daz′ol), *n.* [*ind*(*igo*) + *az*(*ote*) + *-ole*.] Incorrect for ★*indazin*.

indazurine (in-dazh′ū-rin), *n.* [*ind*(*igo*) + *azurine*.] **1.** The name given to several direct coal-tar colors which dye unmordanted cotton varying shades of blue. They are all of the diazo-sulphonic-acid type of colors.—**2.** A blue basic dyestuff of unknown constitution which dyes tannin-mordanted cotton navy-blue shades.

indazylic (in-da-zil′ik), *a.* [*indaz*(*in*) + *-yl* + *-ic*.] Pertaining to indazin or indazole compounds. *Nature*, Dec. 17, 1903, p. 167.

indecomponible (in′dē-kom-pō′ni-bl), *a.* [*in*-3 + *de-* + L. *componere*, compose, + *-ible*.] Indecomposable.

The assumed *indecomponible* substances of the Laboratory. *Coleridge*, in The Friend, III. 173. *N. E. D.*

indefinite, *a.* **5.** In *gram.*, not such as to make definite or determinate the person, thing, place, time, or manner in question: applied to certain adjectives, pronouns, and adverbs, as the indefinite article (see *article*, 11), *any*, *some*, *such*, *anywhere*, *anyhow*, *otherwise*, and to certain tenses of verbs, as the Greek aorist (which means 'indefinite') and the simple past in English.

indefinitive (in-dē-fin′i-tiv), *a.* [*in*-3 + *definitive*.] Not definitive; indefinite.

In a very few years a school of opinion [founded by the Anglo-Catholic party] was formed, fixed in its principles, *indefinitive* and progressive in their range; and it extended into every part of the country.
J. H. Newman, Difficulties of the Anglicans, Lecture iv.

indeflectible (in-dē-flek′ti-bl), *a.* [*in*-3 + *deflectible*.] Not to be deflected from the straight or right way: as, *indeflectible* justice; *indeflectible* loyalty.

indemnificator (in-dem′ni-fi-kā′tor), *n.* One who indemnifies. *Bentham*.

indemnificatory (in-dem′ni-fi-kā-tō-ri), *a.* Relating to indemnification; tending toward indemnifying: as, *indemnificatory* actions.

Indemnity lands. See ★*land*1.

indene (in′dēn), *n.* [*ind*(*igo*) + *-ene*.] A colorless viscid liquid, $C_6H_4 < \begin{matrix} CH \\ \\ CH_2 \end{matrix} > CH$, found in coal-tar oil. It boils at 179.5–180.5° C.

indent2, *n.* **4.** A requisition for military stores. [Anglo-Indian.]

indenter (in-den′tèr), *n.* **1.** One who binds or engages by indenture.—**2.** One who orders goods by indent.

indentor (in-den′tor), *n.* See ★*indenter*, 2.

indentwise (in-dent′wīz), *adv.* Like an indenture; with two interlocking edges, or edges fitting into each other's indents: as, tickets cut off *indentwise*. *N. E. D.*

independable (in-dē-pen′da-bl), *a.* [*in-*[3] + *dependable.*] Not to be depended upon; not trustworthy.

> Capricious, *independable*, and exacting.
> *Geog. Jour.* (R. G. S.), IX. 122.

independence, *n.* 3. In *bot.*, the abnormal separation of organs or parts which are usually united.

indesignate (in-des′ig-nāt), *a.* [*in-*[3] + *designate.*] Not designate; indefinite.

indeterminacy (in-dē-tėr′mi-nā-si), *n.* [*indetermina*(*te*) + *-cy.*] The quality of indeterminateness; vagueness; indefiniteness.

> Ambiguity is a confusion between ideas quite distinct. Vagueness is an *indeterminacy* in the limits of the application of an idea.
> *The Nation*, Oct. 27, 1892, p. 324.

index, *n.* 3. (*h*) In instruments having graduated circles for angular measurement, the pointer or mark on the movable arm which is so placed as to move in close proximity to the graduated circle and thus to indicate the angle passed over between any two given positions of the arm; also, the arm or revolving member pivoted at the center of the graduated circle, which carries the index-mark or pointer.—11. The numerical value of a measured object or process, or of a counted phenomenon, expressed in percentage of another measured object, or process, or counted phenomenon: applied particularly in measurements of organisms for expressing the ratio between the sizes of two organs. See *craniometry.*—12. In *forestry*, the highest average actually found upon a given locality.—**Altitudinal index**, the height of the skull expressed in percentage of its length: same as *vertical index* (which see, under *vertical*).—**Antebrachial index.** Same as *radiohumeral* ★*index.*—**Breadth index.** Same as *cephalic index* (which see, under *cephalic*).—**Bureau of Indexes and Archives.** See ★*bureau.*—**Cephalic index.** (*a*) See *cephalic.* (*b*) See *cranial* ★*index.*—**Cephalofacial index.** See ★*cephalofacial.*—**Clavicular index.** Same as *claviculohumeral* ★*index. Duckworth*, Jour. Anthrop. Inst., 1900, p. 148.—**Claviculohumeral index**, in *anthrop.*, the length of the clavicle expressed in percentage of the length of the humerus. *Turner.*—**Color index.** See ★*color.*—**Coronoid index**, the condylocoronoid width of the lower jaw expressed in percentage of its condylosymphysial length. *A. Thompson*, in Jour. Anthrop. Inst., XXXIII. 144.—**Cranial index**, in *craniom.*, the breadth of the skull expressed in percentage of its length. This index is often called *cephalic index*, although, strictly speaking, the cephalic index gives the corresponding proportion on the head including the soft tissues.—**Cubic index**, in *craniom.*, the proportion between one half of the product of the length, breadth, and height of the skull, and its capacity. *Broca.*—**Dental index**, in *craniom.*, the distance between the anterior surface of the first molar and the posterior surface of the third molar expressed in percentage of the basinasal length.—**Extraordinary index of refraction**, the index of refraction of the extraordinary ray in a crystal, taken when the optical axis is perpendicular to the plane of incidence.—**Femorohumeral index**, in *anthrop.*, the length of the humerus expressed in percentage of the length of the femur.—**Femorotibial index**, in *anthrop.*, the length of the tibia expressed in percentage of the length of the femur.—**Frontal index**, the ratio between the maximum transverse and the minimum frontal diameters of the skull, the transverse being represented by 100.—**Frontozygomatic index.** Same as *stephanozygomatic* ★*index.*—**Height index.** Same as *altitudinal* ★*index.*—**Hinrichs's climatic index**, a number, deduced from the theory of probabilities by the method of least squares, which shows the probability that a total rainfall of a given amount will occur within a given interval of time.—**Iliac index**, in *anthrop.*, the distance between the superior spines of the ilium expressed in percentage of the distance between the angle at the bottom of the acetabulum and the summit of the crest.—**Index of a surface** or **system of surfaces**, two more than the excess of the number of cross-cuts necessary to reduce it to simply connected surfaces over the number of those resulting surfaces.—**Index of the natural scale**, in *math.*, a symbol ω associated with the whole of the natural scale, or with any equivalent manifold similarly arranged; thus ω = ind. N = ind. ($v_1, v_2, v_3, \ldots$) when v_1, v_2, v_3, etc., is any manifold similar to the natural scale (N).—**Index of the pelvic brim**, in *anthrop.*, the anteroposterior diameter of the pelvic brim, measured from the posterior margin of the symphysis pubis to the promontory of the sacrum, expressed in percentage of the transverse diameter. *Turner.*—**Index of variability**, a numerical expression for the diversity among the individuals of a species or race or population considered as statistical deviation from the mean standard deviation. It is found by squaring all the deviations from the mean, adding, extracting the square root, and dividing by the number of cases. *H. E. Crampton*, in Biometrika, March–June, 1904, p. 117.—**Infraspinous index**, in *anthrop.*, the breadth of the scapula expressed in percentage of its infraspinous length. *Broca.*—**Innominate index**, in *anthrop.*, the breadth of the innominate bone expressed in percentage of the height of the pelvis. *Turner.*—**Intermembral index**, in *anthrop.*, the length of humerus plus radius expressed in percentage of the length of femur plus tibia.—**Ischio-innominate index**, the ischial length expressed in percentage of the pelvic height.—**Latitudinal index**, in *anthrop.* Same as *cephalic index* (which see, under *cephalic*).—**Law of rational indexes.** See ★*law*[1].—**Lumbar index.** Same as *lumbovertebral* ★*index.* Amer. Anthropologist, 1901, p. 36.—**Lumbovertebral index**, the proportion between the sum of the posterior depths of the lumbar vertebræ divided by the sum of their anterior depths. In accordance with the value of the index, Turner distinguishes kurtorachic, orthorachic, and koilorachic spinal columns, the dividing points between these three groups being 98 per cent. and 102 per cent.—**Mandibular index**, the condylosymphysial length of the lower jaw expressed in percentage of the intercondylic width. *A. Thompson.*—**Maxillary index**, in *craniom.*: (*a*) The width of the palate, measured at the outer border of the alveolar arch immediately above the width of the second molar expressed in percentage of the length of the palate, measured from the alveolar point to the posterior border of the maxillary bones. *Flower.* (*b*) Same as *palatomaxillary* or *palatoalveolar* ★*index. Turner.*—**Nasomalar index**, in *anthrop.*, the length of the jugonasal arc expressed in percentage of the jugonasal chord.—**Obturator index**, in *anthrop.*, the length of the transverse diameter of the obturator foramen expressed in percentage of its vertical diameter. *Sir W. Turner*, in Challenger Rep., XVI. xlvii. 7.—**Occipital index**, in *anthrop.*, the length of the arc of the brain from the parieto-occipital fissure to the most prominent point of the occipital pole expressed in percentage of the mesial arc. *Cunningham.*—**Palatomaxillary index**, the palatomaxillary width expressed in percents of the palatomaxillary length.—**Parietal index**, in *anthrop.*, the length of the arc between the central and parieto-occipital fissures of the brain expressed in percentage of the mesial arc. *Cunningham.*—**Phagocytic index.** Blood-serum is mixed with a bacterial culture and with blood-cells washed in a 0.9 per cent. solution of sodium citrate in physiological saline solution, in definite quantities, and after ingestion in an incubator for twenty minutes a drop of the mixture is examined under the microscope. The average number of bacilli ingested by each leucocyte is estimated, and the result is called the *phagocytic index.* It is an indication of the degree of opsonic power of the serum.—**Platymeric index**, in *anthrop.*, the sagittal diameter of the femur expressed in percentage of its transverse diameter, both being measured immediately below the lesser trochanter. This index determines the degree of platymeria.—**Pubo-innominate index**, the length of the os pubis expressed in percentage of the breadth of the innominate bone. *Turner.*—**Radiohumeral index**, the length of the radius expressed in percentage of the length of the humerus.—**Scapular index**, the breadth of the scapula expressed in percentage of the length.—**Staphylinic index**, the internal width of the palate measured at the second molar, expressed in the percentage of its length.—**Stephanozygomatic index**, the interstephanic breadth expressed in percentage of the bizygomatic breadth.—**Subspinal index.** Same as *infraspinous* ★*index.*

index-bar (in′deks-bär), *n.* The flat bar on a navigating-instrument of reflection, which has the mirror on one end and the vernier on the other.

index-eyepiece (in′deks-ī″pēs), *n.* See ★*eyepiece.*

index-hand (in′deks-hand), *n.* A movable pointer or hand of a clock, watch, or other indicating- or measuring-machine; particularly, a two-armed pointer on an indexing-device for spacing or dividing.

index-head (in′deks-hed), *n.* An attachment for a milling-machine, gear-cutter, or similar machine for rotating at regular intervals, through definite angles or aliquot parts of a circumference, the piece of material worked.

index-learning (in′deks-lėr″ning), *n.* Learning which depends upon the use of indexes (and goes no further); that is, knowledge acquired for the occasion, from books of reference. Compare the quotation from Fuller, under *indical.*

> How prologues into prefaces decay,
> And these to notes are fritter'd quite away:
> How *index-learning* turns no student pale,
> Yet holds the eel of science by the tail.
> *Pope*, Dunciad, i. 277.

index-machine, *n.* 2. A machine provided with an indexing mechanism by which the teeth of gear- or ratchet-wheels can be spaced.

index-plate (in′deks-plāt), *n.* A disk in a gear-cutter, milling-machine, or dividing-engine, having holes in its face to aid in dividing a gear-wheel or other piece into aliquot parts of a circumference and securing the desired number of teeth on the periphery; a division-plate.

index-wheel (in′deks-hwēl), *n.* 1. An index-plate.—2. A wheel having graduations and notches on its periphery, used to regulate the advance or feed of a machine.—3. A wheel with 80 teeth, divided into 20 sections of four teeth each, attached to the combing-cylinder of a cotton-combing machine to facilitate the adjustment of the time for the action of the various parts that act on the cotton. *Thornley*, Cotton Combing Machines, p. 37.

India china, India cotton (*b*). See ★*china*, ★*cotton*[1].

Indian. I. *a.*—**Indian beard-grass.** Same as ★*brook-grass.*—**Indian bread.** (*a*) See *Indian*, 3. (*b*) See *tuckahoe*, 2. (*c*) Large, flat cakes made of cassava meal and then roasted. See *cassava*, 2.—**Indian butterfly-plant.** Same as *moth-plant.*—**Indian butter-tree, Cetonia, cherry, cholera, cut, gift.** See ★*butter-tree*, etc.—**Indian cedar**, the hop-hornbeam or ironwood, *Ostrya Virginiana.*—**Indian cigar.** Same as *Indian bean* (which see, under *bean*[1]).—**Indian doob.** Same as *doob.*—**Indian dye.** Same as *Indian paint* (*b*) (which see, under *paint*).—**Indian fig.** See ★*fig*[2].—**Indian filbert.** See *soapberry.*—**Indian fog**, the dwarf houseleek, *Sedum reflexum.*—**Indian head, loaf.** See *tuckahoe*, 1.—**Indian mallow, meal-moth, melon, money, mozemize, oats, orchard, paint-brush.** See *mallow*, ★*meal-moth*, etc.—**Indian paper-birch, pine, pink, potato, puccoon, purge.** See ★*birch*, ★*pine*[1], ★*pink*[2], *potato*, ★*puccoon*, ★*purge.*—**Indian redroot.** See *redroot.*—**Indian sage, sanicle, shamrock.** See *sage*[2], etc.—**Indian strawberry, tobacco, wheat, whort.** See ★*strawberry*, etc.—**Indian turmeric.** Same as *turmeric-root.*—**Indian turnip.** (*b*) Same as *prairie turnip.*

II. *n.* 4†. A native of Australia or New Zealand, or of Polynesia.—5. Any native language of America. See ★*Amerindian.*—6. A constellation (Indus) lying between Sagittarius and the south pole.—**Copper Indian**, a member of the native race of America; a red Indian.—**Speckled Indian**, an Indian affected with partial albinism.

Indian-chief (in′di-an chēf), *n.* The shooting-star, *Dodecatheon Meadia.*

Indian-cup, *n.* 2. Same as *cup-plant.*

Indian-leaf (in′di-an lēf), *n.* Same as ★*malabathrum*, 1.

Indian-moccasin (in′di-an-mok″a-sin), *n.* Same as *Indian-shoe.*

Indian-pitcher (in′di-an pich″ėr), *n.* The pitcher-plant or sidesaddle-flower, *Sarracenia purpurea.*

Indian-posy (in′di-an-pō″zi), *n.* 1. The common life-everlasting, *Gnaphalium obtusifolium.*—2. The large-flowered everlasting, *Anaphalis margaritacea.*—3. The butterfly-weed or pleurisy-root, *Asclepias tuberosa.*

Indian-slipper (in′di-an-slip″ėr), *n.* Same as *Indian-shoe.*

Indian-soap (in′di-an-sōp), *n.* The American soapberry, *Sapindus marginatus.*

Indian-warrior (in′di-an-wor″i-ėr), *n.* A Californian species of lousewort, *Pedicularis densiflora*, with fern-like leaves and a thick spike of red flowers.

Indian-weed (in′di-an-wēd), *n.* Tobacco: a name common in colonial times.

indic[2] (in′dik), *a.* [*ind*(*igo*) + *-ic.*] Noting a hypothetical acid which, in the form of its potassium salt, $C_{16}H_{11}N_2O_3K$, is obtained by boiling indin, an isomer of indigo, with alcoholic potassium hydroxid. The salt is deposited in small black crystals.

indic. An abbreviation of *indicative.*

indical, *a.* 2. Relating to the index finger or the second digit of the forefoot.

indican, *n.* 2. The alkali salt of indoxyl-sulphuric acid, $C_8H_6NSO_4H$. It occurs in urine. See the following phrase.—**Urinary indican.** The indol which is formed during the process of intestinal putrefaction is in part oxidized to indoxyl and absorbed. In the body it then unites with sulphuric acid, namely, sodium or potassium sulphate, and in this form is known as *animal indican.* As such it appears in the urine. Normally the amount which is thus eliminated is small; larger quantities are met with in those pathological conditions which are associated with an increased degree of intestinal putrefaction. The test for indican in the urine is based upon the decomposition of the substance by means of a mineral acid, and the oxidation of the liberated indoxyl to indigo blue.

indicanine (in′di-ka-nin), *n.* [*indican* + *-ine*[2].] A syrupy compound, $C_{20}H_{23}O_{12}N$, prepared by the action of barium-hydroxid solution on indican.

indicanuria (in″di-ka-nū′ri-ä), *n.* [*indican* + Gr. οὖρον, urine.] The elimination of indican in the urine. Normally only of slight degree, larger quantities are excreted especially in conditions associated with an excessive degree of intestinal putrefaction.

indication, *n.*—**Letter of indication**, a letter of advice given by a banker to the holder of a letter of credit or circular note when issued. It contains the signature of the holder for identification, a list of the bank's correspondents where the holder may draw money, and other information.

indicator, *n.* 1. (*g*) In *chem.*, a substance used in volumetric chemical analysis, or some other chemical process, to indicate the condition of a solution, or to indicate exactly the point at which a certain reaction ends and another begins. The point at which this change takes place is called the *end-point.* Indicators are most frequently used to detect the presence of acids or alkalis. The most important indicators are litmus, lacmoid, phenol-phthalein, methyl orange, and cochineal.

> An *indicator*, to be of service in acidimetric processes, must be a substance of basic or acid character, which, like litmus, will show by a change of color, the presence of the slightest excess of free acid or alkali.
> *H. P. Talbot*, Quantitative Chem. Analysis, p. 65.

(*h*) In *railroad signaling*, a device for informing the leverman in a signal-cabin that a train is about to start from the station and indicating which track it will take; in its broadest sense, any appliance for displaying, in the signal-cabin, the condition of a track or of all the tracks in a yard, the position of the signals, semaphores, switches, and signal-lamps, the trains at rest, or moving, or about to enter or leave any block, etc. The indicator may be a number on a drop-plate, a disk or banneret, or a miniature signal-arm, and it may give information by its ap-

pearance or disappearance or by its position. It may also give a signal by means of a bell. An indicator may be operated from a distant station or cabin by a push-button, or it may be automatic, or it may be controlled by a train through a track-circuit. (*i*) In *mining*, an appearance of the surface of the ground which shows the presence of a mineral underneath.

The *indicators* of the Ballarat Goldfield, Victoria, are thin beds of dark-coloured shales and slates.
Rep. Brit. Assn. Advancement of Sci., 1901, p. 652.

(*j*) *Naval:* (1) An apparatus used in conjunction with a transmitter, operated by mechanical or electrical means for signaling orders from a central position to the various places on a war-ship at which the orders are to be executed. The transmitter is manipulated by the operator in the central station or in the conning-tower to show any desired order, and the same order is shown on one or more indicators connected to the transmitter by wires or shafting. A range-indicator shows the range of the object at which the guns are to be fired; a battle-order indicator shows various orders such as 'commence firing,' 'load with shell,' etc. (2) An apparatus to show at a convenient point the position of any mechanism: as, a revolution-*indicator* to show the direction of revolution of the main engines; a rudder-*indicator*, to show the position of the helm or rudder; a turret-*indicator*, to show the position of the turret guns with reference to the fore-and-aft line of the ship; etc. **Battle-order indicator,** an apparatus placed near the guns of a war-ship to indicate mechanically the orders of the captain, such as 'commence firing,' 'load with common shell,' etc. It is worked by electrical or mechanical means from a battle-order transmitter in the conning-tower or station of the captain on the bridge. See ★*indicator* (*j*) (1).—**Integrating indicator,** an engine-indicator combined with a recording apparatus for measuring, and usually for recording, the power developed by the engine in a number of revolutions. It consists of an indicator on the drum of which rests a wheel carried at the end of the arm of a planimeter. This planimeter-arm is moved up and down by the pencil-motion, and the recording-wheel is operated by the wheel at the end of the arm. A revolution-counter is attached which records the number of revolutions of the engine. There are many other forms. This indicator is used when power is rented to tenants and users, as a meter to determine the consumption to be paid for.—**Leeway indicator.** See ★*leeway*.—**Printers' indicator,** in *photog.*, a dialed instrument used to indicate to the printer the number of proofs desired and the number taken.

indicator-card (in′di-kā-tor-kärd″), *n.* A diagram which shows the pressure in the cylinder of an engine at any point of the stroke. It is made by an engine-indicator. This card is made to a definite quantitative scale for both height and length, and its area is therefore proportional to the work performed by the engine in one stroke. The horse-power calculated from the area of such a card is called the *indicated horse-power*. Its area divided by its length gives the mean height, and such mean height is the mean pressure during that stroke when multiplied by the scale of ordinates as related to the pressures. See *indicator*, 1 (*a*).

indicator-cock (in′di-kā-tor-kok″), *n.* A three-way cock so arranged that any steam left in the pipe after making a diagram (indicator-card) will be exhausted into the atmosphere when the valve is turned to cut off steam from the end of the cylinder. It also establishes atmospheric pressure-ordinates upon the indicator-diagram, and by comparison with a barometer-reading absolute pressures can be established.

indicator-drum (in′di-kā-tor-drum″), *n.* The cylinder or drum of an engine-indicator for holding the paper on which the diagram is to be traced as the piston makes its traverse.

indicator-piston (in′di-kā-tor-pis″ton), *n.* The piston of an engine-indicator on which the pressure in the cylinder acts when making an indicator-diagram.

indicator-planimeter (in′di-kā-tor-plā-nim″e-tèr), *n.* A special form of polar planimeter for finding the mean height of the curved line of an indicator-card. See ★*indicator-card* and *diagram*.

indicator-point (in′di-kā-tor-point″), *n.* In *thermodynamics*, a point upon a diagram which represents the instantaneous state of a system. *E. Buckingham*, Theory of Thermodynamics, p. 20.

indicator-post (in′di-kā-tor-pōst″), *n.* In a fire-service (particularly in a mill or factory which employs sprinklers for drenching the walls or partitions), an upright casting containing the key-stem and valve of the service-pipe and fitted with an indicator or movable sign to show instantly the position of the valve.

indicator-valve (in′di-kā-tor-valv″), *n.* A service-gate or valve in a fire-service system which indicates the exact position of the gate (whether it is shut or open).

indicatrix, *n.* **3.** In *crystal.*, a surface, in general (for a biaxial crystal) an ellipsoid having axes proportional to the principal refractive indexes, whose geometrical characters serve to exhibit the optical relations of the crystal: for a uniaxial crystal the surface becomes a spheroid and for an isotropic crystal a sphere. The indicatrix bears a simple relation to Fresnel's ellipsoid the axes of which are proportional to the reciprocals of the refractive indexes, that is, directly proportional to the light-velocities in the given axial direction. *L. Fletcher*, The Optical Indicatrix, London, 1892.

indicial[1] (in-dish′i-al), *a.* [L. *indicium*, a mark, sign: see *indicia*.] Indicative.

indicial[2] (in-dish′i-al), *a.* [Irreg. ⟨ L. *index* (*indic-*), index, + *-ial*.] Of or pertaining to an index. Compare *indical*.

indictional (in-dik′shon-al), *a.* [*indiction* + *-al*[1].] Of or pertaining to an indiction or cycle of years. See *indiction*, 2 and 3.

indictment, *n.*—**Joint indictment,** in *law*, an indictment in which two or more parties are together charged with the commission of the same crime.

indifference-point (in-dif′e-rens-point), *n.* In *psychol.*, a term used in several more or less technical meanings: (*a*) The point at which, with gradual increase of temperature of a stimulus, the sensation of cold gives place to the sensation of warmth. It is a matter of dispute whether this indifference-point is psychological (that is, appears in sensation) or whether it is simply mathematical. (*b*) In Wundt's curve of pleasantness-unpleasantness, the point at which decreasing pleasure passes over into unpleasantness. It is, again, a matter of dispute whether the point is psychological or merely geometrical. (*c*) In work upon the reproduction of time-intervals, the point at which reproduction is accurate, involving neither underestimation nor overestimation of the standard time.

Indifferent point. See ★*point*[1].

indifferential (in-dif-e-ren′shal), *a.* and *n.* [*in-*[3] + *differential*.] **I.** *a.* Indifferent; neither one thing nor the other.

II. *n.* A thing which may be done or not done, indifferently; a non-essential.

indifulvin (in-di-ful′vin), *n.* [*indi*(*can*) + L. *fulvus*, fulvous, + *-in*[2].] A brittle reddish-yellow resin obtained, together with indifuscin, by heating indican with dilute mineral acids.

indifuscin (in-di-fus′in), *n.* [*indi*(*can*) + L. *fuscus*, fuscous, + *-in*[2].] A brown amorphous compound, $C_{24}H_{20}O_9N_2$, obtained by heating indican with dilute mineral acids.

indifuscone (in-di-fus′kōn), *n.* [*indifusc-in* + *-one*.] A dark reddish-brown pulverulent compound, $C_{22}H_{20}O_5N_2$, contained in crude natural indigo.

indigen (in′di-gen), *n.* [*indi*(*go*) + *-gen*.] Same as *spirit-soluble induline*. See *induline*.

indigenity (in-di-jen′i-ti), *n.* [*indigen-ous* + *-ity*.] Indigenousness.

Many new species, but mostly of doubtful *indigenity*, have their line for the first time.
The Naturalist, No. 241, 1895. *N. E. D.*

indigenous, *a.* **3.** In *geol.*, noting a rock or a mineral which has originated as such in the place where it is found, such as granite or basalt *in situ*. A glacial boulder brought from a distance is *exotic* or *erratic*.—**4.** In *physiog.*, noting a stream which developed originally in its present surroundings: it is a consequent one in most cases.

The second class may be called the *indigenous* streams, as they are probably consequential and lie wholly within the bounding watershed of the basin-like area.
W. G. Tight, Drainage Modification, p. 13.

indigenousness (in-dij′e-nus-nes), *n.* The state of being indigenous or native to a place; not exotic.

indigestion, *n.*—**Acid indigestion.** Same as ★*hyperchlorhydria*.—**Intestinal indigestion,** arrest or retardation of digestion after the food has left the stomach.

indigitation, *n.* **2.** The interlocking of fibers at the junction of muscle and tendon or aponeurosis; digitation; invagination.

indiglycin (in-di-glī′sin), *n.* [*indi*(*can*) + *glycin*.] A name formerly given to the sugar obtained by the hydrolysis of indican. It is now known to be d-glucose. Also called *indiglucin*.

indignatory (in-dig′nā-tō-ri), *a.* [*indignat*(*ion*) + *-ory*.] Expressing indignation: as, *indignatory* answers; *indignatory* muscles.

indigo, *n.*—**American indigo,** the wild indigo, *Baptisia tinctoria*.—**Animal indigo,** indigo resulting from the oxidation of urine indican or indoxyl.—**Artificial indigo,** indigotin or indigo blue, manufactured from coal-tar products. In 1880 Baeyer obtained indigo blue in various ways from cinnamic acid. Since that time the methods of manufacture have been greatly improved and cheapened and the artificial is now a serious competitor of the natural indigo.—**Blue, blue false,** or **blue wild indigo.** Same as *false indigo* (*b*).—**Chinese green indigo,** a green dye obtained from the bark of any one of several species of *Rhamnus*, especially *R. saxtilis*. See *Rhamnus*. **Chinese indigo.** (*a*) *Isatis indigotica*. See *Isatis*[1]. (*b*) Same as *Japanese* ★*indigo*.—**Dwarf false indigo.** Same as *fragrant false* ★*indigo*. **Fragrant false indigo,** *Amorpha nana*, a leguminous plant of the prairie region of western North America.—**Gallanil indigo,** a mordant coal-tar color of the oxazin type, prepared by the action of aniline upon gallanil violet. It gives an indigo-blue shade upon chromium-mordanted wool.—**Green indigo.** See *Rhamnus*.—**Indigo extract.** See *indigo extract* (under *indigo*). The chief constituents of indigo extract are indigo-monosulphonic acids and indigo-disulphonic acids, the former being produced by the action of ordinary sulphuric acid and the latter by the action of fuming sulphuric acid upon indigo blue.—**Indigo salt,** a yellow crystalline mass consisting of the sodium-bisulphite compound of orthonitrophenyllactoketone: so called because it is readily converted into indigotin when treated with a dilute alkali. The free ketone is sold, under the name of *indigo salt T*, in the form of a buff powder which is insoluble in water but dissolves in sodium bisulphite solution. It is used in calico-printing for the production of indigo blues.—**Indigo substitute.** Same as ★*kassechwarz*. **Japanese indigo,** *Polygonum tinctorium*. See *Polygonum*. **Native indigo.** (*a*) In Tasmania, *Indigofera australis*, a congener of the common indigo. (*b*) In Australia, any plant of the genus *Swainsona* of the bean family, especially *S. galegifolia*. See *Swainsona*.—**Paraguay indigo,** a blue dye obtained from the leaves of a composite shrub, *Eupatorium laevigatum*. **Pegu indigo,** *Marsdenia tinctoria*, a tall, climbing shrub of the milkweed family, distributed from Burma to China. Its leaves yield indigo.—**Prairie-indigo,** *Baptisia alba*, a white-flowered species of the southern United States and Mississippi valley.—**Reduced indigo.** Same as *indigo white*.—**Vat indigo,** a name given to an indigo blue dyed in a reduction-vat to distinguish it from a blue dyed with indigo extract.—**White wild indigo,** any of the white-flowered species of *Baptisia*, especially *B. alba*. See *prairie*-★*indigo*. *B. leucantha* is the large white wild indigo. **Yellow indigo, yellow wild indigo,** *Baptisia tinctoria*, the common wild indigo with yellow flowers. Also called *yellow broom*.—**Yoruba indigo,** the blue dye obtained from a twining leguminous shrub of tropical West Africa, *Lonchocarpus cyanescens*.

indigoferous (in-di-gof′e-rus), *a.* [*indigo* + L. *-fer*, -bearing, + *-ous*.] Producing indigo: as, *indigoferous* plants.

indigo-gelatin (in′di-gō-jel″a-tin), *n.* The glutinous matter contained in crude natural indigo.

indigo-glutin (in′di-gō-glō″tin), *n.* Same as ★*indigo-gelatin*.

indigo-purpurin (in′di-gō-pèr″pū-rin), *n.* Same as *indigo red*.

indigo-sapphire (in′di-gō-saf″īr), *n.* The dark or indigo-colored sapphire from Ceylon or Australia.

indigo-vat (in′di-gō-vat), *n.* **1.** A vat or cistern specially constructed for dyeing raw material or cloth with indigo.—**2.** An indigo liquor prepared for dyeing raw material or cloth.

indigrubin (in-di-grū′bin), *n.* Same as *urrhodin*.

indileucin (in-di-lū′sin), *n.* [*indi*(*can*) + Gr. λευκός, white, + *-in*[2].] A colorless compound, $C_6H_4 < \begin{matrix} C(OH) \\ NH \end{matrix} > CC < \begin{matrix} CH \\ C_6H_4 \end{matrix} > NH$, prepared by the action of zinc dust and acetic acid on indirubin. It crystallizes in lustrous needles.

indimensible (in-di-men′si-bl), *a.* [L. *indimensus*, unmeasured, + *-ible*.] Not capable of being measured; not measurable.

indimensional (in-di-men′shon-al), *a.* [*in-*[3] + *dimension* + *-al*[1].] Not having dimensions; not having extension in space.

indin-potassium (in″din-pō-tas′i-um), *n.* See ★*indic*[2].

Indio (in′di-ō), *n.*; pl. *Indios* (-ōs). [Sp. Pg., ⟨ *India*, India.] **1.** In Spanish use, an 'Indian,' that is, one of the various native peoples of Asia or America; specifically—(*a*) in the Philippine Islands, a native and especially a Christian native; (*b*) a Malay of the Philippine Islands, as distinguished from members of other races living there.—**2.** A Portuguese silver coin, ordered to be struck in 1499, on the model of the Venetian marcella.

indispensable, *a.* **II.** *n.* **1.** An indispensable person or thing.

Necessary Linnen and those *Indispensables* that belong to young Women.
Mrs. Manley, Power of Love, vi. *N. E. D.*

2. Specifically, trousers. [Humorous.]

He slapped his hand against his yellow leather *indispensables*.
Comic Almanack, June (1842), (Farmer). *N. E. D.*

3. A bag or pocket, frequently of silk and much decorated, worn by women in the first years of the nineteenth century, on the outside of the gown, instead of inside, as an ordinary pocket would be.

Rows of pretty peeresses who sat eating sandwiches from silk *indispensables* [at Lord Melville's trial, 1806].
C. K. Sharpe, Correspondence, I. 265.

individual. I. *a.*—**Individual telesis, telics, variation.** See ★*telesis*, etc.

II. *n.* (*d*) In *biol.*: (2) A living being considered as unique or different from its kind and from the rest of nature, without reference to its morphological or physiological independence or dependence. It is in this sense that an organism is termed an *individual* with reference to reproduction and inheritance.

[When amongst] *individuals*, apparently exposed to the same conditions, any very rare deviation, due to some extraordinary combination of circumstances, appears in the parent—say, once amongst several million *individuals*

—and it reappears in the club, the mere doctrine of chances almost compels us to attribute its reappearance to inheritance. *Darwin*, Origin of Species, p. 10.

Genealogical individual, the series of stages between the fertilized egg and sexual maturity. *Huxley.*

individuality, *n.* **5.** In *biol.*: (*a*) Physiological completeness or independence; the ability of an organism to perform its normal functions or live out its life without the cooperation of others. The independence of a unicellular protozoan is an example of physiological individuality, as contrasted with the dependence of one of the cells of a metazoon upon the others and the whole. A physiological individual is sometimes termed a *bion* as contrasted with a morphological individual or *morphon*. See ★*bion* and ★*morphon*, 2. (*b*) Structural independence, or homology with or morphological equivalence to a physiological individual. The homology of each of the dependent members of a siphonophore with an independent hydra is an illustration of morphological individuality. So far as each of the constituent cells in the body of a metazoon is homologous with an independent protozoon it is a *morphon*, or morphological individual. Morphologists recognize and give names to several grades or categories of morphological individuality. See *plastid*, *idioplasm*, *person*, 8, and ★*cormus*, 3. (*c*) The uniqueness of a living being, or its difference from others of its kind and from the rest of nature. It is in this sense that the offspring is said to inherit the *individuality* or constitution of a parent. **Multiple individuality,** a term used by L. F. Ward to designate the structural or physiological independence of the units which make up the structure of a compound organism, such as the cells which compose the body of a metazoon.

Multiple Individuality. Each cell still acts and feels for itself, and maintains its individuality within the higher individuality.
L. F. Ward, Dynamic Sociol., I. 373.

individuation, *n.* **3.** In *biol.*: (*a*) A general term summarizing the conditions for the maintenance and perpetuation of an individual organism, when these conditions are considered collectively and in contrast with those which conduce to the generation of new beings.

Mr. Herbert Spencer has shown . . . that with all organisms a rift exists between what he calls *individuation* and genesis. *Darwin*, Descent of Man, I. 218.

(*b*) A unifying principle or a cause of individuality.

Such an animal is really the theatre of some unifying power which synthesizes its varied activities, dominates its forces, and is a principle of *individuation*.
Minot, The Cat, p. 376.

4. The unification of two distinct types of organisms into an individual whole, such as the lichen-thallus. *Tubeuf.*

individuative (in-di-vid′ū-ā-tiv), *a.* [*individuate* + *-ive*.] That individualizes: as, *individuative* development.

The eighteenth century having been an age of *individuation*, the nineteenth necessarily became an age of associative or coinonomic development.
J. H. Burton, Book Hunter, iii. 224.

individuum (in-di-vid′u-um), *n.*; pl. *individua* (-ä). [L., an undivided thing, an atom, neut. of *individuus*, undivided: see *individual*.] **1.** An undividable entity; one thing, inseparable into parts; the indivisible; formerly, an atom.—**2.** One individual person or thing out of many of the same kind.

Ind. Meth. An abbreviation of *Independent Methodist*.

Indo-Abyssinian (in″dō-ab-i-sin′i-an), *a.* and *n.* **I.** *a.* In *ethnol.*, including both the curly- or wavy-haired black peoples of India (Dravidians) and those of northeast Africa (Hamites).

Again, what is to be made of the expression "*Indo-Abyssinian*," or even "Abyssinian" at all as an ethnical term? The very word (Habeshi) means "mixed," and in African ethnology "Abyssinian" conveys no more meaning than does "Hungarian" in European ethnology; both are national not racial designations, and as a Hungarian may be a Magyar, a Slav, a Rumanian or a Teuton, so an Abyssinian may be a Hamite (Agao and others), or a Semite (Tigre and others). *Keane*, Ethnology, p. 170.

II. *n.* One who belongs to either of the above peoples.

Indo-African (in-dō-af′ri-kan), *a.* Related to or connected with India and Africa: applied to a continent supposed to have existed between India, Africa, and Australia, and now covered by the Indian Ocean.

It is admitted by all ethnologists that Asia is the original home of the Mongolic division, a fact which harmonises well with the view that the vanished *Indo-African* Continent was the cradle of mankind.
Keane, Ethnology, p. 295.

Indo-African continent. See ★*continent*.

Indo-Aryan (in″dō-är′yan), *a.* Of or pertaining to the Indic division of the Aryan family. *Torrens.*

Indo-Austral (in″dō-âs′tral), *a.* Related to India and to Australia or the Austral regions.

The possible fusion of Melanochroid Caucasic (South Indian) and Austral Negro blood at a remote epoch in some now perhaps submerged *Indo-Austral* region.
Keane, Ethnology, p. 236.

Indo-Celtic (in″dō-sel′tik), *a.* Same as *Indo-Germanic* and *Indo-European*: a term distinguishing Celtic as the most western member of the Indo-European family.

Indo-Dutch (in″dō-duch′), *a.* and *n.* **I.** *a.* Relating to India and to Holland, or to the Dutch in India.

On some Indo-French and *Indo-Dutch* coins.
Jour. Anthrop. Soc. Bombay, Jan. 29, 1890, p. 102.

II. *n. pl.* Dutch who are born or who reside in India.

Indo-Egyptian (in″dō-ē-jip′shan), *a.* Having the combined characteristics of Indian and Egyptian culture.

Indo-Eur. An abbreviation of *Indo-European*.

Indo-French (in-do-french′), *a.* and *n.* **I.** *a.* Relating to India and to France, or to the French in India.

II. *n. pl.* French who are born or who reside in India.

Indo-Gangetic (in″dō-gan-jet′ik), *a.* Of the Indus and the Ganges: as, the *Indo-Gangetic* plain of northern India.

In general "the extra-peninsular ranges, the great *Indo-Gangetic* plain, the northern margin of the peninsula, and the western coast owe their origin to another great series of earth-movements which took place during the tertiary era." *Keane*, Ethnology, p. 296.

indogenid (in-doj′e-nid), *n.* [*indogen* + *-id*[1].] The class-name of a series of compounds formed from indogen and certain aldehydes. They contain the group $C_6H_4<\begin{matrix}CO\\NH\end{matrix}>C$:, which is called the indoxylic or indogenic radical.

Indo-German (in″dō-jèr′man), *a.* and *n.* **I.** *a.* Same as *Indo-Germanic*.

II. *n.* A German who was born in or who resides in India. *Keane*, Ethnology, p. 395.

Indo-Greek (in″dō-grēk′), *a.* and *n.* **I.** *a.* Exhibiting the combined influence of India and Greece; also, pertaining to Greeks residing in India: specifically, noting a large number of monuments in northwestern India, and many sculptured decorations in the same region which show traces of Greek influence, due to the invasion of Alexander and the commercial supremacy of the Greeks in the East.

II. *n.* A member of the ancient Greek race residing in India.

A very interesting invention of the *Indo-Greeks*.
P. Gardner, Types of Greek Coins, p. 210.

Indoin blue. See ★*blue*.

Indo-Iranic (in″dō-ī-ran′ik), *a.* Pertaining to the Indic and Iranic divisions of the Aryan stock.

Indol blue. Same as *indoin* ★*blue*.

indolin (in′dō-lin), *n.* [*indol* + *-in*[2].] A pale yellow compound, $C_6H_4<\begin{matrix}CH:CH.NH\\NH.CH:CH\end{matrix}>C_6H_4$, prepared by the reduction of indigo white. It sublimes in long needles which melt at 245° C.

indolinone (in′dō-li-nōn), *n.* [*indolin* + *-one*.] Same as ★*oxindol*.

indoloid (in′dō-loid), *a.* [*indol* + *-oid*.] Pertaining to indol; specifically, noting the odor of this compound.

Another group of flowers have nauseous or *indoloid* odors due to the decomposition of some nitrogenous compound. They are often flesh-colored, blood red, dull dark purple or red, and sometimes they are marked with livid stripes or spots. By some authors they are regarded as resembling putrifying flesh or decaying carcasses.
Amer. Nat., July, 1903, p. 476.

Indo-Malayan (in″dō-mā-lā′yan), *a.* Relating to both India and the Malayan islands. **Indo-Malayan subregion,** in *zoögeog.*, the region comprised in the Malay Peninsula, the Philippines, Ceylon, Formosa, Sumatra, Java, and Borneo, together with many islands of minor area.

Indo-Malaysian (in″dō-mā-lā′si-an), *a.* Same as ★*Indo-Malayan*.

indone (in′dōn), *n.* [*ind(igo)* + *-one*.] The class-name of a series of dyes of the type $O:C_6H_3<\begin{matrix}N\\NR\end{matrix}>C_6H_4$, or $HOC_6H_3<\begin{matrix}N\\N\\HO\wedge R\end{matrix}>C_6H_4$, formed by the action of concentrated mineral acids on indulines.

Indonesian, *a.* **2.** Of or pertaining to a supposed aboriginal race of southeastern Asia and the Malay Archipelago, resembling Europeans in general appearance and believed by some authors to be related to them. They are believed to constitute one element of the mixed population of the Malay Archipelago, and to be found in a nearly pure state on some of the islands.

II. *n.* An individual belonging to the Indonesian race.

Indo-Oceanic (in″dō-ō-shē-an′ik), *a.* Relating or pertaining to the Indonesian Archipelago and to the islands of the Pacific Ocean.

Indoor base-ball. See ★*base-ball*.

Indo-Pacific, *a.* **2.** Of or pertaining to the group of languages, sometimes called *Malayo-Polynesian*, spoken from Madagascar to Easter Island (excluding Australia).

Indopelagia (in″dō-pē-lā′ji-ä), *n.* [NL., < Gr. Ἰνδός, Indian, + πέλαγος, sea.] A zoögeographical division which consists of the Indian Ocean north of the tropic of Capricorn. *Sclater.*

The Indian Sea-region, or *Indopelagia*, containing the Indian ocean down to about the same degree of south latitude, and extending from the coast of Africa on the west to Australia and the Malay archipelago on the east.
Geog. Jour. (R. G. S.), X. 219.

indophan (in′dō-fan), *n.* [*ind(igo)* + Gr. *-φανης*, < *φαίνεσθαι*, shine, appear.] A violet compound, $C_{20}H_{10}O_4N_4$, prepared from 2, 4, dinitro-*a*-naphthol and potassium cyanide. It has a green metallic luster and forms a purple-red solution with certain acids.

indophenin (in-dō-fē′nin), *n.* [*ind(igo)* + *phen(yl)* + *-in*[2].] A blue pulverulent compound, $C_{12}H_7ONS$, prepared by the condensation of isatin and thiophene. It crystallizes in small needles which have a coppery luster when rubbed.—**Indophenin reaction,** a reaction causing the formation of indophenin and used as a test for thiophene.

Indophile (in′dō-fil), *n.* [Gr. Ἰνδός, Indian (India), + φίλος, loving.] One who supports and advances the interests of India and her people. *Pall Mall Gazette*, Sept. 19, 1865.

Indophilism (in-dof′i-lizm), *n.* [*Indophile* + *-ism*.] Strong feeling for and championship of the interests of India.

Indophilist (in-dof′i-list), *n.* Same as ★*Indophile*.

indophor (in′dō-fōr), *n.* [*ind(igo)* + Gr. *-φορος*, -bearing.] A mixture of indoxyl and indoxylic acid which, when padded upon cotton and steamed, yields indigo blue. It was introduced in 1895 for calico-printing and was a step toward the introduction of artificial indigo.

Indo-Saracenic (in″dō-sar-a-sen′ik), *a.* Pertaining to the mixture of Indian and Saracenic elements.

Indo-Scythian (in″dō-sith′i-an), *a.* Of or pertaining to India and Scythia.

Indo-Spanish (in″dō-span′ish), *a.* Having both Spanish and American Indian traits; particularly, of mixed Spanish and American Indian blood.

Indo-Teutonic (in″dō-tū-ton′ik), *a.* Same as *Indo-European*.

indotype (in′dō-tīp), *n.* In *photog.*, a print by the gelatin process: a name not now in use.

indoxyl (in-dok′sil), *n.* [*ind(igo)* + *oxygen*] + *-yl*.] A colorless oil, $C_6H_4<\begin{matrix}COH\\NH\end{matrix}>CH$, occurring, in combination with sulphuric acid, in human urine. It is prepared by fusing indigo with potassium hydroxid and the reverse change readily occurs by the action of air or oxidizing agents. It is also called *3-hydroxyindole*.

indoxylcarboxylic (in-dok″sil-kär-bok-sil′ik), *a.* [*indoxyl* + *carboxyl* + *-ic*.] Noting an acid, a colorless crystalline compound, $C_6H_4<\begin{matrix}COH\\NH\end{matrix}>C.COOH$, prepared by the reduction of ethylorthonitro-phenylpropionate. It sublimes, melts at 122–123° C., and is readily converted into indigo. Also called *indoxylic acid*.

indoxylic (in-dok-sil′ik), *a.* Same as ★*indoxylcarboxylic*.

Indra's sheep. See ★*sheep*[1].

inductance, *n.* It is the property of an electric current in a circuit (called the *inducing circuit*) of producing a magnetic field surrounding the circuit, which when changing induces an electromotive force in a circuit surrounded by this field or a part thereof (called the *induced circuit*). If the induced and the inducing circuit are the same, the property is called *self-inductance*, otherwise *mutual inductance*. *Unit inductance* is the number of lines of magnetic force produced by unit current in the inducing circuit and interlinked with the conductor of the induced circuit: 10^9 times this unit is the practical unit of inductance, called a *henry*. **Ferric inductances.** See ★*ferric*. **Inductance factor.** See ★*factor*.—**Mutual inductance,** the numerical value of mutual induction; the coefficient of mutual induction. See ★*inductance* and ★*unit of inductance*.

inductance-coil (in-duk'tạns-koil), *n.* A coil which resists the passage of alternating or oscillatory currents on account of its inductance; a choke coil.

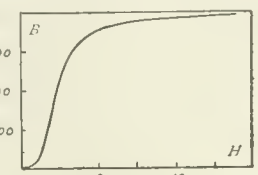
inductance-reactance (in-duk'tạns-rē-ak'tạns), *n.* The reactance of an inductance-coil as distinguished from that of a condenser.

inductance-shunt (in-duk'tạns-shunt), *n.* See ★*shunt*.

induction, *n.* 6. Magnetic induction is the flux density in a medium such as iron when subjected to a magnetizing force. It is expressed in terms of a unit called the *gauss*, namely, the number of lines of force per square centimeter of cross section of the substance. Induction, thus numerically defined, is usually designated by the letter B; the magnetizing force to which it is due, by the letter H. Induction is frequently determined by winding a ring-shaped piece of the iron to be tested with two coils of wire, the primary and the secondary coil. The secondary coil is connected to a ballistic galvanometer and a known current is suddenly sent through the primary coil. The magnetic field thus established within the iron induces a flow of electricity through the secondary coil and through the galvanometer, which affords a measure of the induction. The relation is expressed by the equation

$$B = \frac{QR}{n_2 S},$$

where Q is the quantity of electricity as measured by the deflection of the galvanometer, R is the resistance of the secondary circuit, S is the cross-section of the iron, and n_2 is the number of turns of wire in the secondary coil. The relation between induction and the magnetizing force may be expressed graphically by means of a curve, called the *curve of induction*, in which ordinates represent the values of the induction B and abscissæ the corresponding values of the magnetizing force H. The curve rises slowly for small magnetizing forces and then sharply, for a time, until the iron approaches saturation, after which the slope of the curve diminishes. These changes in the direction of the curve are due to variations in the permeability of the iron, which increases with the magnetizing force, reaches a maximum, and then diminishes again indefinitely. The induction B is not identical with the magnetization I which is defined by the equation



Curve of Magnetic Induction in Iron.

$$I = \frac{B - H}{4\pi}$$

7. The leading or admission of steam into a cylinder. **Bipolar induction.** See *unipolar* ★*induction*. — **Chemical induction,** in *phys.* and *photog. chem.*, the phenomenon in which light, falling on a sensitive substance, does not at once act with its full intensity, but at a much less rate, and attains its maximum action only after a certain time — measured in thousandths of a second in the case of a photographic plate, but in minutes in the case of a sensitive mixture of chlorin and hydrogen.

A second very remarkable phenomenon, first pointed out by the authors, is that of *chemical induction*. This refers to the fact that the action of light on the sensitive mixture of chlorine and hydrogen does not begin in its full intensity, but that it slowly increases, until after the lapse of a certain time it attains its regular and maximum rate. *Smithsonian Rep.*, 1899, p. 620.

Coefficient of induction, the numerical value of self-induction or mutual induction; inductance. — **Coefficient of mutual induction,** the numerical value of the induction produced by a changing current in a neighboring circuit; mutual inductance. — **Consilience of inductions.** See ★*consilience*. — **Curve of induction.** See ★*induction*, 6. — **Dynamic induction,** induction in which the conductor moves or revolves in the constant magnetic field or inversely. All dynamo-electric machinery is based on this principle. — **Forward induction,** in *elect.*, induction, due to the action of the current in the armature of a generator or motor upon the field, such as to strengthen instead of to oppose the field. — **Mathematical induction.** (*a*) See *induction*, 5. (*b*) In general, the principle that, given any class of terms *s*, to which belongs the first term of any progression, and to which belongs the term of the progression next after any term of the progression belonging to *s*, then every term of the progression belongs to *s*. — **Photochemical induction.** See *chemical* ★*induction*. — **Simultaneous light induction,** in *physiol.* and *psychol. optics*, a phenomenon of local adaptation. If the boundary line of two contrasting surfaces is steadily fixated, contrast gradually changes into its opposite; the sensory effect of the local stimulation spreads more and more widely over the background. This is *simultaneous light induction*. — **Successive light induction,** in *physiol.* and *psychol. optics*, the persistence of the phenomenon of simultaneous light induction after removal of the inducing stimulus, or closure of the eyes. — **Total magnetic induction,** the total flux in any space, measured in maxwells or unit lines. — **Tube of induction,** in *magnetism*, an imaginary tube the generating lines of which are the lines of force or lines of induction in a magnetic field, and whose form is such that the surface integral over any cross-section has a constant value.

Let us imagine two very narrow *tubes of induction* whose normal sectional areas are very small.
Du Bois, The Magnetic Circuit, p. 89.

Unipolar induction, induction due to any movement of a conductor in a magnetic field such that the cutting of lines of force occurs continuously in the same sense and the induced current flows always in the same direction in the conductor: opposed to so-called *bipolar induction*, in which there is reversal of current in the conductor every half-revolution.

induction-balance, *n.* — **Hughes's induction-balance,** an apparatus for detecting the presence of conducting or magnetic substances by their disturbing effect on a system of balanced induction-coils.

induction-booster (in-duk'shọn-bös'tẹr), *n.* An induction-generator connected in series in an alternating-current circuit to regulate the voltage. Such a machine when driven above synchronism raises the electromotive force of the circuit; when below synchronism it diminishes the voltage.

induction-current (in-duk'shọn-kur'ẹnt), *n.* A current in a body of water induced by the flow of another current. The induction-current flows in a direction opposite to that of the main current.

When the area over which a wind acts is small relatively to the size of the sheet of water, or when a part of the water is sheltered, e.g. by a headland, the return current may principally flow by the side of the drift instead of underneath. There is, besides, the polarization current due to gravity, a second sort of reverse current, viz. the *induction currents* (induced by viscosity), which, with eddies interposed as friction wheels, flow parallel with and in the opposite sense to the primary ocean currents. *Geog. Jour.* (R. G. S.), XI. 529.

induction-furnace (in-duk'shọn-fẹr'nās), *n.* Same as *electric* ★*furnace*.

induction-generator (in-duk'shọn-jen'ẹ-rā-tọr), *n.* In *elect.*, an alternating-current generator, consisting of an alternating, single-phase, or polyphase stationary and a short-circuited revolving winding, that is, of the same construction as an induction-motor (see *electric* ★*motor*). An induction-motor, when speeded up above its motor speed, becomes generator and produces electric power.

induction-meter (in-duk'shọn-mē'tẹr), *n.* A meter based on the principle of the induction-motor. See *electric machine*, under *electric*.

induction-motor (in-duk'shọn-mō'tọr), *n.* In *elect.*, an alternating-current motor in which the armature is short-circuited upon itself and the armature current is an induced current produced by the field or exciting current.

induction-regulator (in-duk'shọn-reg'ū-lā-tọr), *n.* A voltage or electric-pressure regulator consisting of two coils or sets of coils which can be moved against each other so as to change their inductive relation and thereby their voltage.

induction-top (in-duk'shọn-top), *n.* A metal disk which, while spinning about a vertical axis in a magnetic field, inclines under the influence of currents induced in the disk itself.

induction-wattmeter (in-duk'shọn-wot'mē-tẹr), *n.* See ★*wattmeter*.

inductiv, *a.* and *n.* A simplified spelling of *inductive*.

inductive, *a.* **II.** *n.* An electric circuit containing considerable self-induction. See *induction*.

inductometer, *n.* — **Differential inductometer,** an instrument devised by Latimer Clark for the discharging current from a cable.

inductophone (in-duk'tọ-fōn), *n.* [Irreg. < L. *inducere* (pp. *inductus*), induce, + (*tele*)*phone*.] A telegraphic device invented by Willoughby Smith for signaling between moving trains and stations along the line by means of induced currents.

inductor, *n.* 2. Specifically: (*a*) The revolving element of an inductor-alternator. (*b*) An induction-coil.

The 40-inch *inductor* is connected up, and demonstrations and lectures on all the apparatus are given every day at three o'clock.
Elect. World and Engin., Sept. 24, 1904, p. 514.

inductor-alternater (in-duk'tọr-al'tẹr-nā-tẹr), *n.* See ★*alternater*.

inductor-dynamo (in-duk'tọr-dī'nạ-mō), *n.* A type of electric generator in which field-coils and armature are fixed, and in which fluctuations are periodically caused in the magnetic field, thus inducing currents in the armature-windings, by the movement of masses of laminated iron (inductors).

inductorium, *n.* — **Double inductorium,** in *physiol.*, an instrument devised by M. von Vintschgau, consisting

Double Inductorium.

of two sets of primary and secondary coils mounted on the same base, and so disposed that the same electric current can be sent through both, at once or in immediate succession, or can be confined to the one or the other according to the requirements of experiment. The Wagner hammer is either mounted on a wooden block between the coils, or is set up upon a separate base.

inductory (in-duk'tọ-ri), *a.* [NL. **inductorius*, < L. *inducere*, lead in: see *induct*.] Serving to induct or bring in; introductory: as, laws *inductory* to a new régime.

Induline scarlet. See ★*scarlet*.

indulto, *n.* 2. In *Sp. law*, pardon for a criminal, or a remission of the sentence or penalty imposed upon him.

induna (in-dö'nạ), *n.* [Zulu.] An officer under the chief, among the Zulus and other South African tribes. There are usually several indunas in each tribe: they act both as councilors and ministers of the chief, being responsible to him only.

The chiefs are possessed of arbitrary power, but in practice the advice of a numerous body of councillors is invariably sought in all matters of importance. These councillors, or *indunas*, are in turn responsible to the chief for the conduct of affairs in the various districts in which they exercise authority.
Geog. Jour. (R. G. S.), XI. 514.

indurable[2] (in-dur'ạ-bl), *a.* [*in*-[3] + *durable*.] Not durable.

Soft wood blocks are insanitary and *indurable*.
The Hub, Oct. 28, 1899. *N. E. D.*

indurated, *p. a.* 2. In *geol.*, hardened; consolidated: applied specifically to fragmental sediments such as sandstone, clay, or shale.

induration, *n.* — **Primary** or **primitive induration,** the syphilitic chancre.

indurite (in'dū-rīt), *n.* [*indur*(*ate*) + -*ite*[2].] An explosive; a variety of smokeless powder consisting of one part guncotton blended with from one to two parts nitrobenzene. The paste is passed through rollers and granulated or pressed into the form of cords, and finally hardened or 'indurated' by the action of hot water or steam.

Indus (in'dus), *n.* [L. *Indus*, < Gr. Ἰνδός: see *Indian*.] The 'Indian,' a moderately large southern constellation between Grus and Pavo, containing, however, no conspicuous stars, its brightest being only of magnitude $3\frac{1}{2}$.

indusiform (in-dū'zi-fôrm), *a.* Same as ★*indusiiform*.

indusiiform (in-dū'zi-i-fôrm), *a.* Having the form or shape of an indusium.

indusioid (in-dū'zi-oid), *a.* [*indusi*(*um*) + -*oid*.] Resembling an indusium.

indusium, *n.* 5. A layer of gray matter covering the corpus callosum in the brain: also *indusium griseum*. — 6. One of the embryonic envelops developed in addition to the amnion and serosa in certain insects, such as the *Locustidæ*. *Wheeler*, 1893. — **Indusium verum,** the thin, vestigial cerebral cortex present on the dorsal surface of the callosum.

industrial, *n.* 2. A share of stock in an industrial (manufacturing or commercial) enterprise.

Great bales and bundles of "*industrials*" have had to be thrown over also for protective purposes.
N. Y. Times, July 22, 1903.

-ineæ (ī'nē-ē). [NL., fem. pl. of -*in-eu-s*: see -*ine*[1] and -*eæ*.] A terminal combining-form much used in botanical classification: usually denoting large groups. In Engler's system it denotes groups with the rank of suborders, called by him subseries (*Unterreihen*).

inée (ē-nā'e), *n.* [W. African.] An arrow-poison used by the natives of the Gaboon country. It is prepared from the seed of *Strophanthus hispidus*. Also called *Kombe arrow-poison*.

ineffable, *a.* **II.** *n.* 1. *pl.* Trousers. [Humorous.]

Shoes off, *ineffables* tucked up.
W. Cory, Letters and Journals, p. 196.

2. One who is not to be named; one who is too high in his profession or in the fashionable world to be named with others.

Two white-hatted and pigtopped *ineffables* had taken refuge under the colonnade from a transient shower of rain. It was a by-race, and there was little doing, so the *ineffables* put up their betting-books and relaxed into general conversation.
Illus. London News, June 15, 1861, p. 549.

ineffulgent (in-e-ful'jent), *a.* [*in*-[3] + *effulgent*.] That is not effulgent; lacking power to illuminate.

inemotivity (in-ē-mō-tiv'i-ti), *n.* [*in*-[3] + *emotive* + -*ity*.] Incapacity of showing emotion; lack of emotional sensibility.

The latter [Prof. James] himself candidly observes, "We must remember that the patient's *inemotivity* may have been a co-ordinate result with the anæsthesia of his neural lesions, and not the anæsthesia's mere effect."
Encyc. Brit., XXXII. 66.

inemulous (in-em'ū-lus), *a.* [*in*-[3] + *emulous*.] Without emulation; not emulous; not envious (foe).

He treads, *inemulous* of fame or wealth,
Profuse of toil, and prodigal of health,
With soft assuasive eloquence expands
Power's rigid heart, and opes his clenching hands.
Dr. E. Darwin, Botanic Garden, ii. 2.

inequality, *n.* **Inequalities in altitude,** the slight errors due to the expansion and contraction of the sextant frame from changes of temperature.

inequiactinate (in-e-kwi-ak'ti-nāt), *a.* [L. *in-* neg. + *æquus*, equal, + E. *actine* + *-ate*[1].] In sponge-spicules, having actines or rays of unequal length or size.

Oxeas in great variety of size and form . . . often *inequiactinate*, the large oxeas very broad in the middle and tapering gradually to fine points.
Proc. Zool. Soc. London, 1902, II. 214.

inequianchorate (in-e-kwi-ang'kor-āt), *a.* [L. *in-* neg. + L. *æquus*, equal, + E. *anchorate*.] Unequally anchorate. See ★*equianchorate*.

inequiaxed (in-e'kwi-akst), *a.* [L. *in-* neg. + *æquus*, equal, + *axis*, axis, + *-ed*[2].] Characterized by unequal axes. Also *inequiaxial*.

inequiaxial (in-ē-kwi-ak'si-al), *a.* Same as ★*inequiaxed*.

inequilaterality (in-ē-kwi-lat-e-ral'i-ti), *n.* [*inequilateral* + *-ity*.] The condition of being inequilateral, as the shells of the pelecypod *Mollusca*.

inequilaterally (in-ē-kwi-lat'e-ral-i), *adv.* With the sides unequal; specifically, in *zoöl.*: (*a*) unequally on two sides: as, *inequilaterally* rounded; (*b*) so as to have two sides unequal: as, *inequilaterally* produced or developed. *Buck*, Med. Handbook, I. 191.

inergetic (in-ēr-jet'ik), *a.* [For **inenergetic*, < *in*[3] + *energetic*.] Without energy. *Tupper*.

inerroneous (in-e-rō'ne-us), *a.* [*in-*[3] + *erroneous*.] Not erroneous; without errors.

There are many thoughtful, although possibly not *inerroneous* students of the subject.
R. G. White, Every-day English, p. 127. *N. E. D.*

inertia, *n.*—**Electric inertia.** (*b*) Inertia over and above that ascribable to the ordinary mass of a body and due to existence of an electric charge. Also called *electromagnetic inertia*. **Electromagnetic inertia.** See *electric* ★*inertia*.

The smaller the sphere to which the electric charge is given, the greater will be the *electromagnetic inertia*.
Elect. World and Engin., Jan. 17, 1903, p. 103.

Inertia curve. See ★*curve*.—**Inertia of attention,** in *psychol.*, the tendency of the attention to hold fast to a given object or topic, or to recur to this object or topic, in spite of distractions: the counterpart and corrective of the versatility of attention, that is, of its tendency to range over the whole field of consciousness. Inertia of attention is a characteristic of the habituated, versatility of attention a characteristic of the non-habituated consciousness.—**Inertia turning-moment,** in an engine, the turning-moment due to the inertia of the moving parts, particularly those parts which have a reciprocating motion.—**Initial inertia,** in *psychophys.*, that quality of nerve-substance or of the tissue of the end-organ in virtue of which a sensation does not rise at once to its full strength on the presentation of stimulus, but requires an appreciable time to attain its maximal intensity.—**Mechanical inertia,** inertia due strictly to the mass of a body, as distinguished from the extra electrical or electromagnetic inertia which it acquires when the body is electrically charged. **Rotational inertia.** Same as *moment of inertia* (which see, under *inertia*).

The *rotational inertia* of the body = $m_1r_1^2 + m_2r_2^2 + m_3r_3^2 + \ldots = \Sigma (mr^2)$. This quantity $\Sigma (mr^2)$ is generally called the Moment of Inertia of the body.
A. M. Worthington, Dynamics of Rotation, p. 20.

Terminal inertia, in *psychophys.*, that quality of nerve-substance or of the tissue of the end-organ in virtue of which a sensation does not cease at once with the removal of stimulus, but requires an appreciable time to disappear. *Baldwin*, Dict. Philos. and Psychol., I. 541.—**Unit moment of inertia,** a moment of inertia such that a unit couple will give unit angular acceleration.

inescatory (in-es'ka-tō-ri), *a.* [*inescate* + *-ory*.] Pertaining or adapted to inescation; baiting; alluring.

Mouse traps, *inescatory* traps.
Encyc. Antiq., I. 390. *N. E. D.*

inesculent (in-es'ku-lent), *a.* [*in-*[3] + *esculent*.] Not esculent; not eatable. *Peacock*, Crotchet Castle, ii.

inessive (in-es'iv), *a.* [L. *inesse*, be in (< *in*, in, + *esse*, be), + *-ive*.] In *gram.*, expressing 'position in'; locative. *Amer. Anthropologist*, Jan.–March, 1903, p. 26.

inexcommunicable (in-eks-ko-mū'ni-ka-bl), *a.* [*in-*[3] + *excommunicable*.] That cannot be excommunicated.

A multitude is *inexcommunicable*.
Collins, Def. of Bp. Ely, II. x. 531. *N. E. D.*

inexigible (in-ek'si-ji-bl), *a.* [NL. **inexigibilis*, < *in-* neg. + **exigibilis*, < L. *exigere*, exact: see *exact*, *v.*] That cannot be exacted.

From admiration of the degree of perfection in which these *inexigible* services have been rendered by a Parish Priest, a Patron bestows upon him . . . the rich living, the dignified Sinecure, the Bishopric.
Bentham, Church-of-Englandism and its Catechism Examined, App., p. 281.

inexplicate, *a.* **2.** Not explained.

inexpugnability (in-eks-pug-na-bil'i-ti), *n.* The state of being inexpugnable, or unconquerable.

He himself, behoving to stand firm if the worst was not to realize itself, had to draw largely on what silent courage, or private *inexpugnability* of mind, was in him.
Carlyle, Frederick the Great, III. xv. 5.

inexpungible (in-eks-pun'ji-bl), *a.* [*in-*[3] + *expunge* + *-able*.] Incapable of being rubbed out or obliterated.

The law is on the statute book of human thought, *inexpungible*. *Chicago Advance*, Feb. 20, 1896. *N. E. D.*

in. f. An abbreviation of the Latin *in fine*, at the end.

inface (in'fās), *n.* [*in*[1] + *face*[1].] The inward face; specifically, in *phys. geog.*, the steeper slope or escarpment of a cuesta, facing inland.

infacing (in'fa-sing), *a.* [*in*[1] + *facing*.] Facing inward; facing toward the inside, as of a fortification.

The steep *infacing* escarpment.
Geog. Jour. (R. G. S.), IX. 543.

infall, *n.* **2.** A junction; a falling or running together, as of streams; the joining of one road with another.

It was near to the *infall* of the road from Loch Dee that we first got sight of those we sought.
Crockett, Men of the Moss-Hags, xlvii.

3. The inlet or place where water enters a reservoir or basin: generally confined to cases where the water in entering pours or falls in.

infamatory (in-fam'a-tō-ri), *a.* **1.** Defamatory: as, an *infamatory* statement.—**2.** Rendering infamous.

infancy, *n.*—**Topographic infancy,** the stage of a land form which, in its present relation to base-level, has very recently been subjected to the processes of erosion.

infant, *n.* **4.** A royal prince or princess of Spain or Portugal: as, the *Infant* Don Philip: not necessarily the heir to the throne. See *infante*, *infanta*.

infantile, *a.* **3.** In *geol.*, of a land form, having been subjected to the processes of erosion, in its present relation to base-level, for a very short time.

infantilism (in'fan-til-izm), *n.* [*infantile* + *-ism*.] Arrested or retrogressive development; the persistence or recurrence in the adult of those characteristics which are normal, but transient, in the child.

The term *infantilism* is equally applicable to the congenital and the acquired forms. The former have never left their childhood behind, the latter return to it.
Ribot (trans.), Psychol. of Emotions, p. 422.

A case of *Infantilism* in a child, aged ten years, who had not grown since four years old. Her weight was 26 pounds and her height was three feet.
Lancet, May 30, 1903, p. 1526.

Psychological infantilism, in *psychol.*, a term introduced by Ribot to characterize the type of mind which is unstable, unquiet, nervous, and self-contradictory, on the ground that the distinctive mark of the childish character is mobility. *Ribot* (trans.), Psychol. of Emotions, p. 422.

infantry, *n.*—**Light infantry,** infantry trained and equipped for rapid marching, as the bersaglieri of Italy.—**Mounted infantry,** infantry which does not march on foot, but is transported from point to point, usually on horses. Abbreviated M. I.

Mounted infantry are not cavalry but simply mobile infantry; they may be on horses, bicycles, or carried in carts; but are usually mounted on horses for convenience in conveying them from point to point.
United Service Mag., April, 1901, p. 108.

infant's-breath (in'fants-breth), *n.* Same as ★*baby's-breath*.

infect, *v. t.* **4.** In *philol.*, to affect the quality of a sound in a following or preceding syllable: used especially in reference to the influence of prominent vowels, and phonetic changes, in the Celtic language.

infectant (in-fek'tant), *a.* [*infect* + *-ant*.] Infecting; having the power of communicating infectious disease.

infection, *n.* **4.** In *biol.*, the hypothetical influence upon the tissues of the mother animal by the sperm of a male, such that subsequent offspring of the mother by other sires are infected with the characteristics of the first sire: a hypothesis invented to account for telegony. See ★*telegony*. *Encyc. Brit.*, XXXII. 215.

infectionist (in-fek'shon-ist), *n.* [*infection* + *-ist*.] One who believes in the origin of disease through infection.

inferably (in'fēr-a-bli or in-fēr'a-bli), *adv.* By way of inference; in an inferable way. *Harvard Psychol. Studies*, I. 340.

inferent (in'fe-rent), *a.* [L. *inferens* (*-ent-*), ppr. of *inferre*, carry in: see *infer*.] Same as *afferent*: noting a nerve, a lymphatic vessel, or a blood-vessel.

Infericornia (in-fer-i-kôr'ni-ä), *n. pl.* [NL., < L. *inferus*, lower, + *cornu*, horn.] The group of heteropterous insects now known as the family *Lygæidæ*. *Amyot* and *Serville*.

inferior, *a.* **8.** In *anat.*, lying on the ventral side of the body; farther from the dorsal line, or back, than some other organ or part of an organ.

infernalize (in-fēr'nal-īz), *v. t.*; pret. and pp. *infernalized*, ppr. *infernalizing*. [*infernal* + *-ize*.] To imbue with infernal character or traits; make hellish.

To *infernalize* human nature by poisoning the very sources of morality and peace.
Coleridge, Own Times, III. 961.

infero-external (in″fe-rō-eks-tēr'nal), *a.* Below and on the outer side.

inferofrontal (in″fe-rō-fron'tal), *a.* Situated on the lower part of the frontal region of the cranium. **Inferofrontal fissure.** See ★*fissure*.

infero-internal (in″fe-rō-in-tēr'nal), *a.* Below and on the inner side.

inferolaterally (in″fe-rō-lat'e-ral-i), *adv.* Toward or on the lower portion of the side of any organ or object.

inferomarginal (in″fe-rō-mär'ji-nal), *a.* and *n.* [L. *inferus*, lower, + *margo*, margin.] Same as ★*inframarginal*.

inferradial (in-fe-rā'di-al), *a.* [For **inferoradial* or **infraradial*; < L. *inferus*, lower (or *infra*, below), + NL. *radialis*, radial.] Noting the lower radial or part of the radial plate in some of the crinoids. These are present when the radial plate is transversely divided, the lower division being termed *inferradial*, the upper *superradial*.

infidelic (in-fi-del'ik), *a.* [*infidel* + *-ic*.] Of or relating to infidelity: as, immoral and *infidelic* tendencies. *Homiletic Monthly*, July, 1882, p. 596.

infidelical (in-fi-del'i-kal), *a.* [*infidelic* + *-al*[1].] Same as ★*infidelic*. *Coleridge*, Unpub. Letters, p. 95.

infidelize (in'fi-del-īz), *v.*; pret. and pp. *infidelized*, ppr. *infidelizing*. [*infidel* + *-ize*.] **I.** *trans.* To make infidel: as, "to *infidelize* the world." *Medwin*, Shelley, II. 219. *N. E. D.*

A mark of disrespect publicly affixed upon it by individuals or bodies of men of high lead and authority, lets the anti-religionists loose at once, and the work of *infidelizing* a country is then more than half done.
Blackwood's Mag., XL. 591.

II. *intrans.* To become an infidel; adopt disbelief in the divine origin of Christianity.

in-fielder (in'fēl″dēr), *n.* In *base-ball*, a baseman, short-stop, or pitcher when he is fielding the ball.

in-fighting (in'fī″ting), *n.* In *boxing*, fighting at close quarters, where only short-arm blows can be delivered.

infiltration, *n.* **3.** In *geol.*, the introduction of water into porous or open-textured rock. The term is specially employed in the discussion of ore-deposits to describe the introduction of new minerals in solution.—**Infiltration by ascension.** See ★*infiltration theory*.—**Infiltration theory,** that theory among mining geologists which explains the introduction of ore and gangue into fissures by uprising water. The process is often called *infiltration by ascension*.—**Waxy infiltration.** Same as *lardaceous disease* (which see, under *lardaceous*).

infiltration-vein (in-fil-trā'shon-vān″), *n.* A vein produced by the introduction of the minerals in solution: contrasted with those filled by volatilization, or by replacement of wall-rock.

infiltrative (in-fil'trā-tiv), *a.* [*infiltrate* + *-ive*.] Producing infiltration; of the nature of infiltration.

infin. An abbreviation of *infinitive*.

infinit, *a.* and *n.* A simplified spelling of *infinite*.

infinitarily (in-fin-i-tā'ri-ly), *adv.* In an infinitary way.

We may also say f (*x*) is *infinitarily* smaller than g (*x*). In symbols f (*x*) < g (*x*).
J. Pierpont, Theory of Functions, I. 314.

infinite. **I.** *a.*—**Doubly infinite,** in *math.*, containing two parameters, to each of which independently an unlimited number of values may be assigned.—**Infinite set.** See ★*set*[1].

II. *n.* **2.** In *geom.*, the plane on which lie all points at infinity and all straights at infinity.

infinitesimal, *a.* and *n.* **I.** *a.*—**Infinitesimal number, operation.** See ★*number*, ★*operation*.

II. *n.*—**Method of infinitesimals.** See ★*method*.

infinitesimalism (in″fi-ni-tes'i-mal-izm), *n.* The doctrine that the potency of a drug is increased in proportion as the amount con-

tained in a given quantity of the triturate or solution approaches the infinitesimal.

infinitinomial (in-fin i-ti-no'mi-al), *a.* and *n.* [L. *infinitus*, infinite, + *nom(en)*, term, + *-ial*. Cf. *binomial*.] **I.** *a.* Having an infinite number of terms. [Rare.]

II. *n.* A function which has an infinite number of terms.

infinitively (in-fin-i-tī'val-i), *adv.* In the manner or with the force of an infinitive.

On the English Perfect Participle used *Infinitically*. *Amer. Jour. Philol.*, 1882, p. 297.

infinitive, *n.* **Gerundial infinitive.** See ★*gerundial*. **Split** (or **cleft**) **infinitive,** a name conveniently used to designate briefly the infinitive phrase consisting of the infinitive proper (for example, 'designate,' below) and the so-called 'sign,' the preposition 'to,' when separated by a qualifying adverb or phrase, as in 'to briefly designate,' 'to readily understand,' 'to suddenly and completely change one's attitude.' This use is in high disfavor with literary critics and purists who write upon the subject, but it occurs abundantly in English literature from the seventeenth century down. Nearly every 'standard author' is 'guilty' of it, as Fitzedward Hall and others have shown, and it is thoroughly established in popular speech. It is often dictated by a sense of rhythm, the placing of the adverb after the verb and before the week adjunct or object which follows the verb resulting often in disharmony of rhythm and stress. The idiom is a perfectly natural development of the conditions given: a verb to be qualified, a stress qualifier, and an unstressed syllable (*to*) of no definite meaning. This syllable *to* is instinctively treated as *a* or *the* is treated in a similarly stressed sequence of adjective and noun ('a brief designation,' 'the proper order,' etc.)

infinito-absolute (in-fin″i-tō-ab'sō-lūt), *a.* Both infinite and absolute. *Sir W. Hamilton.*

infinito-infinitesimal (in-fin″i-tō-in″fi-ni-tes'i-mal), *a.* Infinitesimal of the second order.

infinity, *n.* **4.** An infinite number: as, an *infinity* of straight lines. Its symbol is ∞.

On each of the ∞^2 points on a plane are the ∞^2 straights of a straight-sheaf, so there are just ∞^4 straights.
Merriman and Woodward, Higher Mathematics, p. 97.

Infinity of a function, in *function-theory*, a value x which makes the function infinite. **Infinity plug,** in *elect.*, a plug in a resistance-box which when removed from its seat opens the circuit (makes the resistance infinite).—**Point at infinity.** See ★*point*[1].

infissile (in-fis'il), *a.* [*in-*[3] + *fissile.*] Not capable of being split. *H. Spencer*, Prin. of Psychol., II. 210.

inflame, *v. i.* **2.** To become inflamed.

inflamer, *n.* **2†.** Specifically, a bookkeeper employed in inns to run up, increase, or inflame the bills of customers: called the *inflamer of reckonings.* Jonson introduces a man of this kind in "The New Inn."

inflammation, *n.*—**Obliterative inflammation,** inflammation of the lining membrane of a cavity, such for example as the pericardium or pleura, causing adhesions between the opposing surfaces and consequent obliteration of the cavity.

inflatant (in-flā'tant), *a.* [*inflate* + *-ant.*] Inflating; serving to inflate: also used substantively.

inflected, *p. a.* **4.** Serrated, or bent inward, as contour-lines representing deep ravines or narrow valleys cutting into an escarpment.

inflection, *n.* **6.** In *eccles. chanting*, same as *accent*, 7.

inflector (in-flek'tor), *n.* and *a.* [*inflect* + *-or.*] **I.** *n.* That which inflects or bends; specifically, a muscle that flexes or bends the joints of the limbs. The more commonly used word is *flexor.*

II. *a.* Inflecting or bending: as, the *inflector* muscles.

inflood (in-flud'), *v. i.* [*in-*[1] + *flood.*] To flow in; pour in, as a wave.

inflorescence, *n.* **2.** In *bot.*: (*b*) The portion of a plant devoted to reproduction, including the flowers, peduncles, rachides, general axes, flower-stalks, scapes, etc.

The *inflorescences*, as well as the leaves, contribute largely to the formation of mould, and vegetable mould is said to be capable of absorbing almost twice its own weight of water. *Geog. Jour.* (R. G. S.), X. 497.

inflorescent (in-flō-res'ent), *a.* [LL. *inflorescens(-ent-)*, ppr. of *inflorescere*, begin to blossom: see *inflorescence.*] **1.** Flowering; beginning to flower: said of plants or trees: as, early *inflorescent* grasses.—**2.** Of or pertaining to blooming or flowering: as, *inflorescent* forces.

The flowering of man's spiritual nature is as natural and as strict a process of evolution as the opening of a rose or morning-glory. The vital *inflorescent* forces are from within, and are continuous from the root up.
J. Burroughs, in Pop. Sci. Mo., May, 1887, p. 10.

influent, *a.* **3.** Noting that through which air or other fluid enters, either to cleanse or aërate: used of a pipe or duct, or channel.

II. *n.* A tributary stream, looked at from the point of view of the receiving stream.

influenza, *n.* **1.** Influenza is an acute infectious disease of which the most prominent symptoms are fever, general prostration, pains in various parts of the body, and inflammatory processes attacking the serous or mucous membranes, the lungs, or the nerves. The onset is usually abrupt with headache, backache, fever, and loss of strength. According to the organs most affected in its further progress, the disease is said to be of the respiratory, nervous, or gastro-intestinal form. Influenza is noteworthy for the rapidity with which an epidemic sweeps over entire countries and even from one continent to another, and for the large proportion of the population attacked when it is prevalent. The disease is caused by a small, non-motile bacillus which occurs in great numbers in the nasal and bronchial secretions of the patients. Influenza has a low death rate, but its effect on the general health is often severe and lasting, and many grave sequelæ are possible. One attack does not protect against a second. The ordinary influenza or 'grippe,' though in some ways simulating true epidemic influenza, is a different and much milder disease.

3. An infectious specific fever of horses, asses, and mules, characterized by alterations of the blood, great depression of the vital forces, and inflammatory complications, especially of the lungs, intestines, and brain. It usually assumes an epizoötic form.—**Influenza bacillus.** See ★*bacillus.*—**Laryngeal influenza,** a form of influenza among horses in which sore throat is the predominating symptom.

influenzal (in-flō-en'zal), *a.* [*influenza* + *-al*[1].] Of or relating to influenza. *Jour. Exper. Med.*, Oct. 1, 1901, p. 621.—**Influenzal pneumonia,** a form of pneumonia associated with the presence of the bacillus of influenza instead of that of the pneumococcus — the usual form.

influxible (in-fluk'si-bl), *a.* [*in-*[3] + *fluxible.*] Not liable to undergo flux or continual change.

infold, *v. t.* **3.** To inclose within a fold. —**Infolding the stomach,** an operation for ulcer of the stomach, in which a fold, with the lesion at the bottom, is made by stitching together the walls of the organ on either side. *Lancet*, Aug. 29, 1903, p. 592.

infolio (in-fō'li-ō), *n.* [NL. *in folio*, 'in (one) leaf': see *folio.*] A book or large leaf made by folding the sheet once only in its center.

infooted (in'fut″ed), *a.* [*in*[1] + *foot* + *-ed*[2].] Having the feet pointed inward; pigeon-toed.

infr. An abbreviation of the Latin *infricare*, to rub in.

infra-anal (in-frā-ā'nal), *a.* [L. *infra*, below, + *anus*, anus, + *-al*[1].] Situated below the anus.—**Infra-anal lobe,** a fleshy conical lobe, often with a horny point, directly beneath the vent in certain caterpillars. Its purpose is apparently to aid in pushing the excremental pellets away from the body.

infrabasal (in-frā-bā'sal), *n.* [L. *infra*, below, + Gr. βάσις, base, + *-al*[1].] In the dicyclic crinoids, one of the lowest series of plates in the test or calyx adjoining the column or stem or, where that is absent, the single centrodorsal plate. The infrabasals and the basals together constitute the base of the crinoid in dicyclic forms. Sometimes termed *underbasal.*

Sphærocrinus geometricus: abnormal specimen having the basal plate irregularly six-sided by reason of the flattening of the external angle of an *infra-basal* piece.
W. Bateson, Study of Variation, p. 437.

infrabass (in'frā-bās″), *n.* In *organ-building*, same as *subbass.*

infracalicular (in″frā-kā-lik'ū-lär), *a.* [L. *infra*, below, + NL. *calicula* + *-ar*[3].] Below the calyx: as, the *infracalicular* buds in madreporarian corals.

Infracalicular buds of the polyps.
Philos. Trans. Roy. Soc. (London), 1896, ser. B, p. 165.

infracentral (in-frā-sen'tral), *a.* Situated on the inferior, or ventral side, of the centrum.

The *infracentral* keel or spine of such vertebræ as those of the turtles, rabbits, etc. *Proc. Zool. Soc. London*, 1891.

infraclavicle (in-frā-klav'i-kl), *n.* [*infra-* + *clavicle.*] A backward projecting part of the hypocoracoid in the hemibranchiate fishes, long supposed to be a separate bone and homologized with the interclavicle of certain reptiles; an interclavicle.

But it has also been shown, by Starks, that such a thing as an *infraclavicle* does not exist even in the stickleback, the bone so-called being only a part of the coracoid; and as, in most of the sticklebacks, the pelvic bones join the latter, the resemblance between them and Lampris remains.
Annals and Mag. Nat. Hist., March, 1904, p. 173.

infraconscious (in-frā-kon'shus), *a.* Below the level of consciousness; subconscious; subliminal.

Those impulses or irritations which are infra-dominant, . . . in the psychical sphere, . . . bring about *infraconscious* or extra-marginal psychical activities.
Buck, Med. Handbook, III. 260.

infraction, *n.* **3.** An incomplete (greenstick) fracture.

infradiaphragmatic (in″frā-dī-a-frag-mat'ik), *a.* [L. *infra*, below, + *diaphragmat-*, diaphragm, + *-ic.*] Situated below the diaphragm.

infradominant (in-frā-dom'i-nant), *a.* In *neurol.*, weaker than *subdominant.* *Dominant* excitations are said to correspond to focal mental processes; *subdominant* to marginal; *infradominant* to extramarginal or infraconscious processes.

Those impulses or irritations which are *infra-dominant* act, in the psychical sphere, below the threshold of consciousness. *Buck*, Med. Handbook, III. 260.

infraglacial (in-frā-glā'shial), *a.* [L. *infra*, below, + *glacies*, ice, + *-al*[1].] Subglacial. *J. Geikie*, The Great Ice Age, p. 91.

infragranitic (in″frā-gra-nit'ik), *a.* [L. *infra*, below, + *granite* + *-ic.*] In *geol.*, situated below granite, or coming from lower depths than those occupied by granite: as, an *infragranitic* source of volcanic lavas.

infralabial (in-frā-lā'bi-al), *a.* and *n.* **I.** *a.* Lying below the lips.

II. *n.* One of the series of horny plates which cover the edge of the lower lip in reptiles such as snakes and lizards; a lower labial or inferior labial: correlated with ★*supralabial.*

The gastrosteges in one instance are 154, a common number in Sirtalis sirtalis, and the supralabials are sometimes seven, the normal number for Sirtalis sirtalis which also occasionally has nine *infralabials*, as occurs in two specimens of butleri. *Biol. Bulletin*, Nov., 1904, p. 295.

Infralias (in-frā-lī'as), *n.* [L. *infra*, below, + E. *Lias.*] In *geol.*, an extensive series of strata in the Tyrolese and Swiss Alps and in England lying between the Trias formation and the typical Lias above: more generally known as Rhætic beds, and in England as the Penarth beds. English geologists generally include this formation with the Trias, but on the Continent it is usually placed with the Lias.

infralittoral (in-frā-lit'ō-ral), *a.* [L. *infra*, below, + *littus* (*littor-*), shore, + *-al*[1].] Noting that zone of marine deposits which extends from below low-water mark over bottoms which are the wasted remains of former continents and are for the most part of relatively shallow depth, though they may lie at some hundreds of fathoms. These deposits are of terrigenous origin and are intermixed with remains of marine animals.

inframammillary (in-frā-mam'i-lā-ri), *a.* [L. *infra*, below, + *mammilla*, nipple, + *-ary*[2].] Situated below the nipple: as, the *inframammillary* region. *Buck*, Med. Handbook, I. 51.

inframarginal, *a.* **2.** In *zoöl.*, lying below the margin, as the plates in the test of certain starfishes. Also *inferomarginal.*

II. *n.* **1.** One of the plates in the lower row of marginal plates in certain starfishes.—**2.** One of the horny plates which cover the under side of turtles, lying between the marginals and abdominal scutes.

inframolecular (in″frā-mō-lek'ū-lär), *a.* [L. *infra*, below, + NL. *molecula*, molecule, + *-ar*[3].] Lying within the molecule or within the sphere of molecular influence. Modern speculation concerning the constitution of matter regards the molecule as a more or less complex system the relations between the parts of which are said to be *inframolecular.*

All her [nature's] operations upon an ultra-stellar scale, all her activities at *infra-molecular* degrees of proximity, are kept from our view by that heavy veil of Isis which man's limited senses and his restricted intellectual powers cannot lift. *Smithsonian Rep.*, 1899, p. 212.

inframontane (in-frā-mon'tān), *a.* [L. *infra*, below, + *mons(mont-)*, mountain.] Situated under a mountain, as a tunnel.

infraneolithic (in″frā-nē-ō-lith'ik), *a.* [L. *infra*, below, + E. *neolithic.*] Of or pertaining to deposits or strata below those of neolithic age. *Man*, 1901, p. 94.

infranodal (in-frā-nō'dal), *a.* [L. *infra*, below, + *nodus*, node, + *-al*[1].] Situated below the node or joints of a stem.

infranuclear (in-frā-nū'klē-ar), *a.* [L. *infra*, below, + *nucleus*, nucleus, + *-ar*[3].] In *histol.*, below the nucleus: said of the part of an epithelial cell beneath the nucleus.

infra-occipital (in″frā-ok-sip'i-tal), *a.* [L. *infra*, below, + E. *occipital.*] Situated below the occipital.—**Infra-occipital sulcus.** See ★*sulcus.*

infra-oral (in-frā-ō'ral), *a.* [L. *infra*, below,

+ *os(or-)*, mouth, + *-al*[1].] Situated below the mouth: used in ichthyology in describing any barbel or other appendage below the mouth. *Jordan and Evermann*, Amer. Food and Game Fishes, p. 536.

Infra-orbital neuralgia. Same as *facial ★neuralgia.*

Infra-orbital vacuity. See *★vacuity.*

infra-ordinary (in-frä-ôr'di-na-ri), *a.* [L. *infra*, below, + E. *ordinary.*] Below the ordinary; lower than ordinary; inferior.

infraperipheral (in"frä-pe-rif'e-ral), *a.* [L. *infra*, below, + E. *periphery* + *-al*[1].] Lying below the periphery: used in describing various organs of small invertebrates.

infrapharyngeal (in"frä-fa-rin'je-al), *n.* [L. *infra*, below, + *pharynx*, pharynx, + *-al*[1].] The lower pharyngeal, a bone situated behind the fourth gill-arch in fishes, usually bearing teeth. *Starks*, Synonymy of the Fish Skeleton, p. 519.

infrapsychical (in-frä-sī'ki-kal), *a.* [L. *infra*, below, + E. *psychical.*] In *neurol.*, below the level of the psychical or psychophysical; automatic: as, *infrapsychical* cerebral centers. *Lancet*, June 25, 1904, p. 1810.

infrapubian (in-frä-pū'bi-an), *a.* [L. *infra*, below, + *pubes*, pubes, + *-an.*] Same as *subpubic.*

infrapubic (in-frä-pū'bik), *a.* Same as *subpubic.*

infraquantivalent (in"frä-kwon-tiv'a-lent), *a.* [*infra-* + *quantivalent.*] Below the normal quantivalence.

We must ascribe to the affect the attribute of so changing the normal quantivalence of ideas that certain ones become supraquantivalent, others *infraquantivalent* in comparison. *Alien and Neurol.*, Feb., 1903, p. 51.

Infraspinous index. See *★index.*

infraterrene (in"frä-te-rēn'), *a.* [L. *infra*, below, + *terra*, earth, + *-ene* (cf. *terrene*).] Subterraneous.

Infratongrian (in-frä-tong'gri-an), *a.* [L. *infra*, below, + E. *Tongrian.*] Situated below the Tongrian: applied, in *geol.*, to the earliest stage of the Oligocene Tertiary series in southern Europe.

infratrochanteric (in-frä-trō-kan-ter'ik), *a.* [*infra-* + *trochanter* + *-ic.*] Situated below either of the trochanters. *Syd. Soc. Lex.*

infratubal (in-frä-tū'bal), *a.* [L. *infra*, below, + *tubus*, tube, + *-al*[1].] Situated beneath a tube, especially the Fallopian or Eustachian tube. *Buck*, Med. Handbook, VII. 157.

infraturbinal (in-frä-tèr'bi-nal), *n.* [*infra-* + *turbin(ate)* + *-al*[1].] The inferior turbinate bone.

infrequent, *a.* **3.** In *bot.*, distant; sparsely placed: said of punctures, glands, hairs, etc.

infructescence (in-fruk-tes'ens), *n.* [L. *in-*[2] + *fructus*, fruit, + *-escence.*] **1.** The mature stage succeeding inflorescence: used concretely for the fruit with its immediate supports.

Spinifex squarrosus, a rigid bluish grass, with large globular inflorescences and *infructescences.*
A. F. W. Schimper (trans.), Plant-Geog., p. 181.

2. A collective fruit. *Jackson*, Glossary.

infumba (in-fōm'bä), *n.* [Swahili.] Same as *★fumba.*

Infundibular canal. See *★canal*[1].

infus. An abbreviation of the Latin *infusus*, poured in. See *infusion.*

infuser, *n.* **2.** A funnel-shaped vessel, usually of glass, employed to contain a fluid used in intravenous infusion.

infusile (in-fū'sil), *a.* [*in-*[3] + *fusile.*] Incapable of fusing; not fusile. *Coleridge.*

infusion, *n.* **6.** The introduction into a vein of a quantity of saline solution or other fluid for therapeutic purposes.

infusionism (in-fū'zhon-izm), *n.* [*infusion* + *-ism.*] The doctrine that the soul has existed in a previous state and was infused or poured into the body at conception or birth. Plato, Philo, Origen, and, in modern times, many philosophers and theologians, have held this view.

infusionist (in-fū'zhon-ist), *n.* [*infusion* + *-ist.*] One who holds the doctrine of infusionism.

infusion-jar (in-fū'zhon-jär), *n.* A vessel, commonly a cylindrical jar of porcelain or earthenware, in which an infusion is prepared by pouring water or some other solvent over herbs, roots, etc., in order to extract their active principles. Frequently a false bottom or perforated partition serves to retain the insoluble residue, while the infusion may be poured off in a clear state.

infusion-pot (in-fū'zhon-pot), *n.* Same as *★infusion-jar*, except that an infusion-pot is usually of such material and so shaped as to admit of being placed over a fire in order to keep the contents heated.

infusor (in-fū'sor), *n.* [G. *infusor.*] Same as *infusorium.* *Parker and Haswell*, Textbook of Zool., I. 83.

infusorigen (in-fū-sō'ri-jen), *n.* [*infusorium* + *-gen.*] A gastrula-like phase in the development of rhombogenous *Dicyemida.*

infuze, *v. t.* and *n.* An amended spelling of *infuse.*

ingatherer (in'gaᴛʜ"èr-èr), *n.* One who collects or gathers in; a harvester. *F. D. Huntington.*

inga-tree (ing'gä-trē), *n.* See *Inga.*

ingenital (in-jen'i-tal), *a.* [L. *ingenitus*, inborn, + *-al*[1].] Ingenerate; innate.

In all cases where, population not being homogeneous, the different portions of a country . . . are variously coloured as by race, or religion, or history, or employments, the argument against centralisation acquires new force, in proportion as the central agent loses the power of sympathy and close adaptation to peculiar wants and wishes, and may lose also, where relations have not been altogether kindly, even the consciousness of this *ingenital* defect. *Gladstone*, Irish Question, ii. 49.

inglaze (in'glāz), *a.* [*in*[1] + *glaze.*] In *ceram.*, marked by the incorporation of the decorative colors with the glaze. By printing or painting on the glaze with underglaze colors and then firing the ware a second time in the glost-kiln, an effect is produced which it is difficult to distinguish from real underglaze printing or painting.
E. A. Barber, Pottery and Porcelain of the U. S., p. 14.

inglutition (in-glō-tish'on), *n.* [L. *in*, in, + *glutire*, swallow, + *-tion.*] Same as *deglutition.*

ingoting (ing'got-ing), *n.* [*ingot* + *-ing*[1].] The process of melting brass or bronze scrap and casting it into ingots to purify the metal by removing the dross from the surface while it is molten.

ingot-iron (ing'got-ī"èrn), *n.* Mild steel; a steel, low in carbon, which cannot be tempered, made either by the Bessemer or the open-hearth process, and poured in a fluid state into molds after leaving the producing-vessel. See *★ingot-metal.*

Owing to the method of its production it might in truth be called a soft steel with a very small percentage of combined carbon. The best description of this material is conveyed by the German term "Flusseisen," but its nearest British equivalent is "*ingot-iron.*"
Encyc. Brit., XXVIII. 118.

ingot-metal (ing'got-met"al), *n.* A general name for iron or steel which is poured into molds in a fluid state after the completion of the manufacturing process. If too low in carbon to harden or temper it is *ingot-iron;* if it has carbon enough to temper and harden it is *ingot-steel.*

Slagless or "*Ingot-metal*" Series.
Encyc. Brit., XXIX. 571.

ingot-pitch (ing'got-pich), *n.* The pitch at which ingots are cast; noting a variety of tough-pitch copper in which the poling for the removal of dissolved oxygen has not been carried on as long as it has in the wire-bar pitch variety. The longer the poling is continued the freer will the copper be from oxygen. See *★over-pole.* For ingots or cakes the amount of oxygen may be greater than for copper which is to be cast into wire-bars, which are rolled into rods and then drawn into wire for electrical conductors. As impurities reduce the conductivity of copper for electricity very greatly, the oxygen in such cases must be low. *Electrochem. Industry*, March, 1904, p. 90.

ingot-saw (ing'got-sâ), *n.* A saw especially constructed for sawing hot ingots. These saws are made several feet in diameter and are run at a very high speed. They have a fusing action at the cutting edge.

ingot-steel (ing'got-stēl), *n.* Steel which is cast in an ingot when it comes from the furnace. It may be Bessemer, open-hearth, or crucible-steel, and must have carbon or other hardness in sufficient percentage to exhibit the properties of hardening and tempering. See *★ingot-metal.*

Half-hard and High-Carbon Steels, sometimes called "*ingot-steel.*" They may be either Bessemer, open-hearth, or crucible steel. Malleable cast iron also often belongs here. *Encyc. Brit.*, XXIX. 571.

Ingrain colors, in *modern dyeing*, colors which are produced by definite chemical change of dyes already attached to the yarn or cloth: thus, cotton dyed yellow with primulin, by exposure to the diazotizing action of nitrous acid and afterward to an alkaline solution of β-naphthol, acquires a deep-red color.

Ingrassial (in-gras'i-al), *a.* and *n.* **I.** *a.* Same as *Ingrassian.*

II. *n.* In *ichth.*, a bone in front of the proötic in the cranium; the alisphenoid of Parker. *Starks*, Synonymy of the Fish Skeleton, p. 513.

ingratiatory (in-grā'shi-ä-tō-ri), *a.* [*ingratiate* + *-ory.*] Insinuating; serving to render acceptable or to ingratiate one with another.

ingravescence (in-grä-ves'ens), *n.* [L. *ingravescere*, grow heavy (*in-*, in, + *gravis*, heavy), + *-ence.*] The process of becoming more severe; specifically, the period of increase of a fever.

ingress, *v. i.* **2.** In *astrol.*, to transit the place which any of the four moderators has reached by direction. *Zadkiel*, Gram. of Astrol., ii. 17.

ingrown (in'grōn), *a.* [*in*[1] + *grown.*] **1.** Grown from within; innate: as, "Art with Language lived *ingrown*," *L. Morris.*—**2.** Grown inward: as, an *ingrown* nail.

inguino-abdominal (ing"gwi-nō-ab-dom'i-nal), *a.* [L. *inguen*, groin, + *abdomen* (*-min-*), abdomen, + *-al*[1].] Relating to the groin and the abdomen.

inguinocrural (ing"gwi-nō-krō'ral), *a.* [L. *inguen*, groin, + *crus* (*crur-*), leg, + *-al*[1].] Relating to the groin and the thigh.

inguinocutaneous (ing"gwi-nō-kū-tā'nē-us), *a.* [L. *inguen*, groin, + *cutaneus*, of the skin, + *-ous.*] Relating to the groin and the skin of the adjacent portion of the thigh: noting a branch of the first lumbar nerve.

inguinoscrotal (ing"gwi-nō-skrō'tal), *a.* [L. *inguen*, groin, + *scrotum*, scrotum, + *-al*[1].] Relating to the groin and the scrotum.

inhalant, *a.* **II.** *n.* That which is inhaled.

inhang (in'hang), *n.* [*in*[1] + *hang.*] The tumbling home of the ship's bulwarks; the leaning inboard of the bulwarks from the perpendicular: opposed to *wall-side.*

I . . . settled myself for the night, being very weary, under the *inhang* of [the ship's] heavy bulging side.
T. A. Janvier, Sargasso Sea, xxiii.

inhaul (in'hâl), *n.* [*in*[1] + *haul.*] A line for bringing a spar inboard: applied to the brails of a spanker, in distinction from the *outhaul*, which spreads the sail by hauling the head out to the gaff-end.

inherit, *v. t.* **Inherited drainage.** See *★drainage.*

inheritance, *n.* **Alternative inheritance,** the transmission to descendants of the characteristics of one parent by certain individuals, and of those of the other parent by others.

It must, however, be remembered that what is accepted as evidence of *alternative inheritance*, is not a proof that the dominance of either allelomorph is imperfect.
Bateson and Saunders, Rep. Evol. Com. Roy. Soc., 1902, [I. 129.

Ancestral inheritance, the contribution of each ancestor to the characteristics of descendants. (*a*) According to *Galton's law of ancestral inheritance*, the two parents contribute between them, on the average, one half of each inherited faculty, each of them contributing one quarter of it; the four grandparents contribute between them one quarter, or each of them one sixteenth; and so on. (*b*) According to *Pearson's law*, the contribution of the grandparents and great-grandparents is greater than Galton's law calls for, and the difference increases rapidly for more remote generations. Parental characteristics are sometimes strongly hereditary, sometimes slightly or not at all so; and while Galton and Pearson assume that these differences will, on the average, balance each other, the facts of inheritance show that this is not the case, and that the statistical laws, while no doubt useful for statistical purposes, are compiled from data some of which are data of inheritance and some not, and that they are of little value to the breeder who deals with individuals, or to the student of inheritance who seeks to distinguish hereditary from non-hereditary characters. So far as a parent resembles collateral relatives, such as brothers, sisters, and cousins, the resemblances are often transmitted to descendants with nearly or quite four times the frequency which these laws require. (*c*) *Mendel's law of ancestral inheritance.* In 1866 Gregor Johann Mendel (1822–84), an Austrian priest, published an account of experiments which he had undertaken for the purpose of determining the numerical value of parental characters in inheritance. Having obtained seed from the cross-breeding of two races or varieties of the garden pea which differed from each other in some one characteristic (for example, those with round and those with wrinkled seeds), he found that the cross-bred plants raised from these seeds manifested only one of the characteristics (roundness of seed, for example), which he called the *dominant* (*D*), to the total or almost total exclusion of the other (irregularity of seed, for example), which he called *recessive* (*R*). The second generation, produced from the cross-bred plants which were allowed to fertilize themselves, instead of being uniform like their parents, broke into the two original forms in the average ratio of three dominants to one recessive. The recessives are themselves pure, and, if allowed to fertilize themselves, give rise to recessives only, for many generations. One third of the dominants are also pure, while the other two thirds produce descendants of which two thirds are dominants and one third pure recessives. Each successive generation consists of dominants and recessives in the ratio, for each 100, of 25 dominants of pure blood, 25 recessives of pure blood, and 50 dominants which produce descendants in the ratio of three dominants to one recessive. This result is expressed by Mendel in the formula, for each successive generation, 25 DD; 50 DR; 25 R; but it may also be expressed as $x^2 + 2xy + y^2$; and the result of cross-breeding with any number of characters conforms closely to the algebraical binomial theorem, or the expansion of $(a + b + c + \ldots\ldots x)^n$. More recent study tends to show that Mendel's results hold good pretty generally, but by no means universally, in similar cases. Experiments and observations for the purpose of discovering the structural equivalent for the numerical law tend to support Mendel's opinion that there are, for two characters,

four sorts of germ-cells in the reproductive organs of the cross-bred individuals: dominant ova, recessive ova, dominant male cells, and recessive male cells; and that these are, on the average, equal in number, so that one-quarter of the descendants are born from dominant ova fertilized by dominant male cells and are pure dominants; one-quarter are born from recessive ova fertilized by recessive male cells, and are pure recessives; and one half are born from the union of an ovum of one sort with a male cell of the other sort, and are able to produce pure dominants, pure recessives, and cross-bred descendants in the original ratio. **Biparental inheritance,** inheritance considered in its relation to amphigonic or bisexual reproduction. **Blended inheritance,** the manifestation by descendants of an uninterrupted or continuous series of combinations of parental characters. See quotation under ★*blend*[1], *v. i.*, 3. **Crossed inheritance,** the inheritance by a child of one sex of the constitution of the parent of the other sex. [Rare.] **Exclusive inheritance,** the manifestation by the offspring of features of resemblance to one parent to the partial or complete exclusion of those of the other.

On another occasion, or in other offspring of one and the same mating, it may not be prepotent, or even the other parent may be prepotent. Such prepotency might exhibit itself in "alternative" or "*exclusive*" *inheritance*. *Biometrika*, 1903, p. 390.

Material basis of inheritance, that which is handed down from parent to offspring and in the transmission of which reproduction consists. Most authorities are now agreed that the material basis of inheritance is to be identified with the chromatin of the germ-cells. See *substance of* ★*heredity*. **Mosaic inheritance.** Same as *particulate* ★*inheritance*.—**Particulate inheritance,** the theory that the descendant inherits material particles from the parts of the bodies of a number of ancestors. See *ancestral* ★*inheritance*. **Use-inheritance,** the hypothetical transmission to descendants of a parental change which is the result of its own activity; the inheritance of an acquired character.

Darwin seems always to have regarded the direct action, of the environment and use and disuse as, at the most, subsidiary causes of variation; but Mr. Herbert Spencer and his followers regard '*use-inheritance*' as an all-important factor in evolution; while Cope and his followers in America, by a mixture of '*use-inheritance*' (Kinetogenesis) and Lamarck's neck-stretching theory (Archæsthetism), apparently see their way to account for the evolution of animals with but little help from natural selection.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 667.

inhibition, *n.* **4.** In *psychol.*, the supposed restraint or cancelation of a mental process by other concurrent mental processes.

The second law deals with *inhibition* or arrest: "Every psychical phenomenon tends to prevent the production or development, or to cause the disappearance of psychical phenomena which cannot be united to itself according to the law of systematic association, that is to say, which cannot be united with it for a common end" (Paulhan).
John Adams, Herbartian Psychol. Applied to Education, p. 76.

Coefficient of inhibition. See ★*coefficient*.

Inhomogeneous (in″hō-mō-jē′nē-us), *a.* [*in*-[3] + *homogeneous*.] Not homogeneous. *Jour. Phys. Chem.*, June, 1904, p. 425.

inhumanize (in-hū′man-īz), *v. t.*; pret. and pp. *inhumanized*, ppr. *inhumanizing*. [*inhuman* + *-ize*.] To make inhuman.

iniac (in′i-ak), *a.* [*ini-on* + *-ac*.] Same as *inial*.

iniad (in′i-ad), *a.* [*ini-on* + *-ad*[3].] Toward the inion.

inidoneity (in-ī-dō-nē′i-ti), *n.* [*inidone-ous* + *-ity*.] The quality of unfitness. *Church Times*, Jan. 19, 1894. *N. E. D.*

inidoneous (in-ī-dō′nē-us), *a.* [*in*-[3] + *idoneous*.] Unfit. *Blount*, Glossographia.

inioglabellar (in-ī-ō-glā-bel′ar), *a.* [*inion* + *glabellum* + *-ar*[3].] Same as ★*glabello-inial*.

An *inioglabellar* line can be drawn which will correspond very closely to the lower boundary of the cerebrum. *Science*, Oct. 30, 1903, p. 554.

inirritant (in-ir′i-tant), *a.* and *n.* [*in*-[3] + *irritant*.] **I.** *a.* That does not cause irritation: as, an *inirritant* drug.

II. *n.* That which does not irritate; specifically, a therapeutic agent which does not produce irritation.

init. An abbreviation of the Latin *initio*, in the beginning.

initial, *n.* **4.** In steam-engines, an abbreviation of *initial* ★*pressure* (which see).

initialist (i-nish′al-ist), *n.* [*initial* + *-ist*.] One who is known by his initials and not by his full name. *Blackwood's Mag.*, XIV. 438. *N. E. D.*

initialize (i-nish′al-īz), *v.*; pret. and pp. *initialized*, ppr. *initializing*. [*initial* + *-ize*.] **I.** *trans.* To designate by initials instead of by the full name.

II. *intrans.* To use an initial or initials (instead of one's full name).

Nobody had successfully *initialized* till L. E. L. arose. *New Monthly Mag.*, L. 78. *N. E. D.*

initiary (i-nish′i-ā-ri), *a.* [L. *initium*, beginning, + *-ary*[1].] Same as *initial*.

initiative, *n.* **3.** Specifically, the right to propose legislation, supplementary to the referendum. In Switzerland the initiative is in the form of a petition which is signed by a certain number of voters and which demands a popular vote upon a measure.

Besides the former "facultative Referendum" in certain cases, and the "*Initiative*" at the demand of 1000 citizens in case of amendments to the cantonal constitution, there is now also an "*Initiative*" in case of Bills, to be exercised at the demand of 50000 citizens. *Encyc. Brit.*, XXXIII. 943.

initionary (i-nish′on-a-ri), *a.* [*inition* + *-ary*[1].] Relating to inition, especially to the beginning of or entrance into college life.

initis (i-ni′tis), *n.* [NL., ⟨ Gr. *ἰς* (*ἰν-*), fiber, + *-itis*.] Inflammation of the muscular or fibrous tissues.

inj. An abbreviation of the Latin *injectio*, an injection.

injectable (in-jek′ta-bl), *a.* [*inject* + *-able*.] **1.** Capable of receiving an injection.—**2.** Capable of being injected.

injection, *n.* **7.** In *geol.*, the penetration of a rock by a molten magma. *Van Hise*, U. S. Geol. Surv., Monographs, XLVII. 646.—**Lit-par-lit** [F. 'bed-by-bed'] **injection** or **saturation,** in *geol.*, the injection of molten rock between the layers of a stratified one in such a manner that the two are intimately commingled. *Geikie*, Text-book of Geology, p. 728.

injector-condenser (in-jek′tor-kon-den″sér), *n.* Same as *injection-condenser*.

injector-furnace (in-jek′tor-fér″nas), *n.* See ★*furnace*.

injunct (in-jungkt′), *v. t.* [A back-formation from *injunction*.] Same as *enjoin*, 3. [Colloq. or humorous.]

injunction, *n.*—**Perpetual injunction.** Same as *permanent injunction* (which see, under *injunction*).

injunctive (in-jungk′tiv), *a.* [*injunct(ion)* + *-ive*.] Having the force of an injunction; enjoining. **Injunctive relief,** in *law*, the application of the equitable remedy of injunction.

injury, *n.*—**Current of injury.** See ★*current*[1].

ink[1], *n.* **Solid ink,** pigment of any color in its dry or solid state, as in a cake of India ink. It is often preferred by lithographers for its adaptability to rubbed tints and imitated pastel work.—**Vanadium ink,** a writing-fluid prepared by adding gallic acid to an aqueous solution of ammonium metavanadate slightly thickened with gum. *Thorpe*, Dict. Applied Chem., III. 896.

ink[1], *v. t.*—**To ink in,** in *tech. drawing*, to trace over and shade (a pencil drawing) with ink. The pen for this purpose is called an *inking-in* pen.

II. *intrans.*—**To ink up,** to carefully apply ink to type preliminary to its first impression. This is begun with pâte, or low color, and is gradually increased after successive trials.

ink-cap (ingk′kap), *n.* A mushroom of the genus *Coprinus*. See *ink-mushroom* and *Coprinus*.

ink-duct, *n.* **2.** In cephalopods, the duct through which the ink is discharged.

inkeer (in-kār′), *v. t.* [D. *inkeeren*, turn in, ⟨ *in*, in, + *keeren* (=G. *kehren*), turn: see *char*[1], *v.*] **1.** To turn (the water of a stream) into a field for purposes of irrigation.—**2.** To corral (cattle).

inkle-weaver (ing′kl-wē″vér), *n.* [*inkle*[2] + *weaver*.] A weaver of the strong, coarse tape known as inkle. See *inkle*[2].—**As (or so) thick as inkle-weavers,** very intimate, or friendly.

When tapes had to be hand-woven, a single tape to a loom, the weavers had naturally to work very close together, and hence the common saying to express crowding together, 'so *thick as inkle-weavers*.' *Eng. Dial. Soc.*

in-knee (in′nē), *n.* Same as *knock-knee*.

ink-slice (ingk′slīs), *n.* Same as *slice*, 3 (*c*) (1).

inkstand, *n.*—**Fountain inkstand,** an inkstand having a supplementary reservoir.

ink-trough (ingk′trôf), *n.* Same as *inking-trough*.

ink-value (ingk′val″ū), *n.* The properly expressed light and shade of a picture in colors as produced in one color of ink on a printing-press.

inlawry (in′lâ-ri), *n.* [*inlaw* + *-ry*.] The state of restoration to the protection of the law: the opposite of *outlawry*.

inlay, *v. t.*—**Inlaid tile.** Same as *mosaic* ★*tile* (which see).

Inlay casting. See ★*casting*.

inlaying, *n.* **2.** In *bookbinding*, the neat insertion (with proper cutting, shaving, and pasting) of a leaf or print in a larger leaf, with intent to give the inlaid matter greater security and a wider margin.—**3.** In *printing*, the insertion of the overlay made for an illustration between the sheets of the printing surface or between the plate and its support.

inleak, *n.* **2.** The leaking of a gas or liquid into an inclosed space or pipe.

inlet-valve (in′let-valv), *n.* Any valve, opening from without inward, through which a fluid may pass into a vessel; specifically, in motors, a valve through which motor fluid enters a cylinder.

in lim. An abbreviation of the Latin *in limine*, on the threshold.

in loc. An abbreviation of the Latin *in loco*, in the place.

in loc. cit. An abbreviation of the Latin *in loco citato*, in the place cited.

in loco. **2.** Specifically, in *music*, denoting that a passage is to be performed as written, not transposed: used only after a passage with the sign *al 8va* or *8vi*. Also simply *loco*.

innascible (i-nas′i-bl), *a.* [LL. *innascibilis*, ⟨ *in-* neg. + *nascibilis*, that may be born, ⟨ *nasci*, be born.] Not subject to birth; self-existent.

innate, *a.* **3.** In *biol.*, characteristic of a species or common to the individuals of a species, or alike in parent and in offspring; hereditary; constitutional; congenital. So far as the development of an individual organism from the egg is considered as characteristic of its kind, it is termed *innate* or *inherent*; so far as it is considered as taking place in an individual external environment with which it is in continual reciprocal interaction, it is termed *adventitious* or *induced*: the contrast or distinction being in the mind of the observer rather than in the facts of embryology.

The development of any normal, so-called "*innate*" character, such as, say, the assumption of the normal human shape and relations of the frontal bone, requires the co-operation of many factors external to the developing embryo, and the absence of abnormal distorting factors. *Encyc. Brit.*, XXIX. 259.

innaturate (i-nā′tūr-āt), *v. t.*; pret. and pp. *innaturated*, ppr. *innaturating*. [*in*-[2] + *nature* + *-ate*[2].] To imbue the nature of (a being) with something. [Rare.]

If those . . . who . . . crush the young shootings of the heart, and blight its growth . . . would but *innaturate* it with their poison and make it barren for ever!
Froude, Nemesis, p. 167. *N. E. D.*

inneity (i-nē′i-ti), *n.* [Irreg. ⟨ *inn(ate)* + *-eity*.] Innateness; the quality of being innate, inborn, or congenital. *Ribot* (trans.), Psychol. of Emotions, p. 237.

inner[1], *a.*—**Inner anhydrid,** a compound formed by the elimination of water and the formation of a ring of atoms from one molecule of the compound. It is contrasted with ordinary anhydrids, which are formed from two molecules of the compound.

inner[2] (in′ér), *n.* [*in*[1], *v. t.*, + *-er*[1].] One who takes in or reclaims land from water or marsh. See ★*inning*, 4.

inning, *n.* **4.** The process of taking in; specifically, the reclaiming of marshy land by draining and banking and fitting it for bearing crops; also the land so reclaimed.—**5.** The act or process of getting in, as crops; harvesting.

innocence, *n.* **6.** (*b*) A pretty American scrophulariaceous plant, *Collinsia verna*, the flowers of which have the lower lip blue and the upper purple or nearly white.

innocent, *a.* **8.** In *pathol.*, benign; not malignant.—**Innocent ball.** See ★*ball*[1].

Innominate index. See ★*index*.

innovational (in-ō-vā′shon-al), *a.* [*innovation* + *-al*[1].] Bringing in new forms or methods; introducing new things; pertaining to innovation.

innovatory (in′ō-vā-tō-ri), *a.* [*innovate* + *-ory*.] That innovates or has a tendency to innovate: as, *innovatory* ideas in politics.

innutrient (i-nū′tri-ent), *a.* [*in*-[3] + *nutrient*.] Not nutritious. *Biol. Bulletin*, Nov., 1904, p. 305.

inoculation, *n.*—**Curative inoculation,** the injection of an antiserum for curative purposes; for example, in the treatment of diphtheria, tetanus, and snake-poisoning, inoculation with the corresponding antisera.—**Jennerian inoculation,** vaccination.—**Protective inoculation.** (*a*) The injection of an antiserum for protective purposes, that is, to prevent disease, as diphtheria. (*b*) Vaccination against disease, as against smallpox, anthrax, rinderpest, and to some extent against typhoid fever, plague, dysentery, etc.

inogenesis (in-ō-jen′e-sis), *n.* [Gr. *ἰς* (*ἰν-*), fiber, + *γένεσις*, production.] Production of fibrous tissue.

inolith (in′ō-lith), *n.* [Gr. *ἰς* (*ἰν-*), fiber, + *λίθος*, stone.] A circumscribed calcareous deposit in fibrous tissue.

inoma (i-nō′mä), *n.* [Gr. *ἰς* (*ἰν-*), fiber, + *-oma*.] A fibrous tumor; scirrhus.

inominous (in-om′i-nus), *a.* [*in*-[3] + *ominous*.] Ill-omened; unfortunate.

As a kind of moral provision for such an *inominous* young person, Mr. Sheddon set apart a small property.
W. Mackintosh, Life of J. Sheddon, p. 32. *N. E. D.*

inone (in-wun′), *v. t.*; pret. and pp. *inoned*, ppr. *inoning*. [*in*[1] + *one*. Compare the earlier *atone*, *v.*] To unite; make one (with).

The Prophet uses the two imperatives, Seek Me and live, *inoning* both man's duty and his reward.
Pusey, Minor Prophets, p. 191.

inopectic (in-ō-pek′tik), *a.* [Gr. *ἰς* (*ἰν-*), fiber,

+ πηκτός, fastened, + *-ic*.] Of or relating to inopexia; affected with inopexia.

inopexia (in-ǫ-pek'si-ä), *n.* [NL., < Gr. ἴς (ἰν-), fiber, + πῆξις, fastening.] A tendency to spontaneous coagulation of blood.

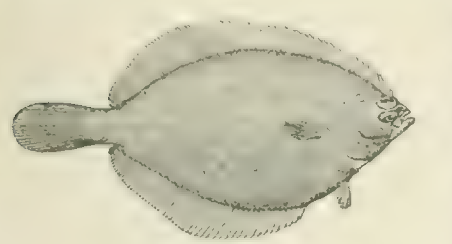
inopportunism (in-op-ǫr-tū'nizm), *n.* [*inopportune* + *-ism*.] The quality of being inopportune; inopportune action; specifically, the policy of the inopportunists.

inopportunist (in-op-ǫr-tū'nist), *n.* and *a.* [*inopportune* + *-ist*.] **I.** *n.* A member of the inopportunist or opposition party; one who disapproves of a certain policy on the ground of its inopportuneness; specifically, one who was opposed to the declaration of the dogma of papal infallibility at the Vatican Council in 1870, on the ground that its publication was inopportune.

II. *a.* Belonging to the inopportunists.

His [Leo XIII.'s] similar recognition of two of the most distinguished "*inopportunist*" members of the Vatican Council, Haynald, archbishop of Kalocsa, and Prince Furstenberg, archbishop of Olmütz, was even more noteworthy. *Encyc. Brit.*, XXX. 197.

Inopsetta (in-op-set'ä), *n.* [NL., < Gr. ἴς (ἰν-), strength, + ψῆττα, flounder.] A genus of flounders found off the Pacific coast of the United States.



Inopsetta ischyra.
(From Bulletin 47, U. S. Nat. Museum.)

inorderly (in-ôr'dėr-li), *a.* Not orderly; disorderly.

inorderly (in-ôr'dėr-li), *adv.* In a disorderly manner.

inorganism (in-ôr'gan-izm), *n.* [*in-*[3] + *organism*.] An object which is not an organism. [Rare.]

It is difficult . . . to avoid the theoretical conclusion that . . . the earliest primitive organisms [were] necessarily more like *inorganisms*. *Hyatt*, Biol. Lectures, 1899, p. 128.

inorganography (in-ôr-ga-nog'ra-fi), *n.* [L. *in-* neg. + Gr. ὄργανον, organ, + -γραφία, < γράφειν, write.] The scientific discussion of inorganic things: a term not in general use.

inoriginate (in-ǭ-rij'i-nāt), *a.* [L. *in-* priv. + NL. *originatus*, pp. of *originare*, originate: see *originate*, *v.*] Not originated; self-existent; having no beginning.

inoscleroma (īn-ǭ-sklē-rō'mä), *n.* [NL., < Gr. ἴς (ἰν-), fiber, + σκλήρωμα, a hardened part: see *scleroma*.] Hardening of the fibrous tissues.

inosclerosis (in″ǭ-sklē-rō'sis), *n.* [NL., < Gr. ἴς (ἰν-), fiber, + σκλήρωσις, a hardening, induration.] Fibrous induration or sclerosis.

inosin (in'ǭ-sin), *n.* [*inos*(*ite*) + *-in*[2].] An incorrect name for *inosite*.

inosinate (in'ǭ-si-nāt), *n.* [*inosin* + *-ate*[1].] A salt of inosinic acid.

inosinic (in-ǭ-sin'ik), *a.* [*inosin* + *-ic*.] Noting an acid, an amorphous compound, $C_{10}H_{13}O_8N_4P$, obtained from the flesh of certain animals. Some of its salts are crystalline.

inosituria (in″ǭ-si-tū'ri-ä), *n.* [*inosite* + Gr. οὖρον, urine.] Same as ★*inosuria*.

inosuria (in-ǭ-sū'ri-ä), *n.* [NL., < *inos*(*ite*) + Gr. οὖρον, urine.] The excretion of inosite or muscle-sugar in the urine.

inotagma (in-ǭ tag'mä), *n.*; pl. *inotagmata* (-ma-tä). [NL., < Gr. ἴς (ἰν-), muscle, + τάγμα, order, constitution.] One of the hypothetic ultimate elements of living protoplasm: similar to ★*plasome*, ★*biophore*, *physiological* ★*unit*, etc. *Engelmann*.

In other cases the assumption of invisible protoplasmic units has been inspired by a desire either to explain the general vital and assimilative powers of protoplasm . . . or the mechanism of some one function as the *inotagmas* of Englemann, assumed to be the agents of contractility. *Encyc. Brit.*, XXXII. 41.

inotropic (īn-ǭ-trop'ik), *a.* [Gr. ἴς (ἰν-), muscle, + -τροπος, < τρέπειν, turn, + *-ic*.] Impairing

the contractile power of muscular tissue. See the extract.

The movement of a muscle depends on the simultaneous operation of three functional properties of its constituent elements, i. e., excitability, conductibility and contractibility. . . . The author [T. W. Engelmann] describes as bathmotropic (from βαθμός = threshold) such influences as affect excitability, as dromotropic, such as interfere with conductibility, and as *inotropic* such as lessen or destroy contractibility. *Sci. Amer. Sup.*, July 4, 1903, p. 22992.

inotropism (i-not'rǭ-pizm), *n.* [*inotrop*(*ic*) + *-ism*[1].] Interference with the contractility of a muscle.

The centrifugal cardiac nerves influence the . . . force of contraction . . . of the excitatory wave (. . . *inotropism* of Englemann). *Encyc. Brit.*, XXXI. 733.

inoxidize (in-ok'si-dīz), *v. t.*; pret. and pp. *inoxidized*, ppr. *inoxidizing*. To protect from oxidation: an ill-formed word and one not in general use.

in petto. Cardinal in petto. See ★*cardinal*.

in-player (in'plā″ėr), *n.* In *rackets*, the server; the man in.

in pr. An abbreviation of the Latin *in principio*, in the beginning.

inpushed (in'pu̇sht), *a.* Pushed inward.

The epithelium lining the mouth becomes *inpushed* into the deeper layers, where teeth are to be formed. *J. S. Kingsley*, Vert. Zool., p. 19.

input, *n.* 2. Specifically, the power which is received by any machine. It includes the power actually required to do the work performed by the machine and the power necessary to run the machine itself.

The useful return or "output" at the terminals of a large machine may amount to as much as 95 per cent. of the mechanical energy which forms the "*input*." *Encyc. Brit.*, XXVII. 574.

3. The amount of food material introduced into the body. *Philos. Trans. Roy. Soc.* (London), 1892, ser. B, p. 228.

inquartate (in-kwâr'tāt), *v. t.*; pret. and pp. *inquartated*, ppr. *inquartating*. In *metal.*, to add silver to (an alloy of silver and gold) in order to give (it) the proportion required for the process of parting, that is, one part of gold to about three parts of silver. See *quartation*. *Phillips and Bauerman*, Elements of Metallurgy, p. 815.

inquest, *n.*—**Sheriff's inquest.** See *sheriff's jury* (under *jury*).

inquilinity (in-kwi-lin'i-ti), *n.* [*inquiline* + *-ity*.] The state or habit of being inquiline; specifically, in *zoöl.*, the habit of living in the nest or home of another, but not as a parasite. See *commensal*, 2.

inquisitionist (in-kwi-zish'ǫn-ist), *n.* [*inquisition* + *-ist*.] 1. One who makes inquisition or inquiry; an inquisitive questioner.—2. An inquisitor; one who upholds the practices of the Inquisition.

inquisitiv, *a.* A simplified spelling of *inquisitive*.

inquisitrix (in-kwiz'i-triks), *n.* [NL. *inquisitrix, fem. of L. *inquisitor*: see *inquisitor*.] A female inquisitor.

in-radius (in'rā″di-us), *n.*; pl. *in-radii* (-ī). [*in*[1] + *radius*.] The radius of an inscribed circle.

inrun (in'run), *n.* [*in*[1] + *run*[1].] 1. A running in; an inrush; an influx: as, an *inrun* of the sea.—2. A place of inrunning.

inrunning (in'run″ing), *n.* 1. Same as ★*inrun*.—2. Inflowing.

ins. An abbreviation (*a*) of *inspector*; (*b*) of *insurance*.

insalvability (in-sal-va-bil'i-ti), *n.* [*in-*[3] + *salvability*.] Impossibility of being saved. *Bp. Watson*, Life, II. 239.

Insane ear. See ★*ear*[1].

insane-root (in-sān'röt), *n.* The henbane, *Hyoscyamus niger*.

insanity, *n.*—**Alcoholic insanity**, mental disease caused by the abuse of alcoholic beverages. **Anticipatory insanity**, hereditary insanity occurring at an earlier age in the second generation than it did in the first.—**Compulsive insanity**, insanity in which imperative ideas, or obsessions, completely dominate the patient. **Confusional insanity**, a form of temporary insanity marked by acute failure of the mental powers, sometimes with hallucinations, following exhausting disease or a profound nervous shock.—**Delusional insanity**, a form of insanity which follows exhausting fevers, such as typhoid, seeming at times to be a continuation of the delirium of the fever.—**Hysterical insanity**, a form of insanity marked by sudden and short-lived emotional outbursts resembling hysterical symptoms. **Manic-depressive insanity**, a form of insanity in which there are alternations of mania and melancholia: it differs from circular insanity in the absence of deterioration. **Simultaneous insanity**, mental disorder occurring coincidently in two or more persons who live together or belong to the same family.—**Toxic insanity**, mental disease caused by the prolonged action of some poison, such as lead or alcohol.

insanoid (in-sā'noid), *a.* [*insane* + *-oid*.] Resembling insanity; also nearly insane: neuropathic. *Alien. and Neurol.*, Aug., 1907, p. 397.

insapiency (in-sā'pi-en-si), *n.* [*insapien*(*t*) + *-cy*.] Lack of sapiency, wisdom, or sagacity.

insapient (in-sā'pi-ent), *a.* [*in-*[3] + *sapient*. Compare *insipient*.] Lacking sapiency or wisdom; foolish.

inscript (in'skript), *n.* [L. *inscriptus*, pp.: see *inscribe*.] 1. An inscription.—2. In *geom.*, a line or figure inscribed within another figure.

inscription, *n.* 8. In *geom.*, the inscribing of one figure in another; also, the state of being so inscribed.—9. A tendinous line interrupting the fleshy fibers of a muscle: seen especially in the abdominal muscles.

inscriptionist (in-skrip'shǫn-ist), *n.* [*inscription* + *-ist*.] An inscriber. *F. Hall.*

inscriptured (in-skrip'tūrd), *a.* [*in-*[2] + *scripture* + *-ed*[1].] Having scriptures or inscriptions upon it, as a stone; inscribed.

insect, *n.*—**Lace-winged insects**, insects of the order *Neuroptera*.

insect (in'sekt), *v. i.* [*insect*, *n.*] To seek or catch insects, as a bird does.

We discovered the bird . . . *insecting* in the top of a newly-fallen hemlock. *J. Burroughs*, Locusts and Wild Honey, p. 203.

insectan (in-sek'tan), *a.* [*Insecta* + *-an*.] Of or pertaining to insects or the *Insecta*.

insect-beds (in'sekt-bedz), *n. pl.* See ★*bed*[1].

insect-box (in'sekt-boks), *n.* A box used in collecting insects.

insect-flowers (in'sekt-flou″ėrz), *n. pl.* The heads of half-expanded flowers of the plants from which insect-powder is made; the *pyrethri flores* of pharmacy. *Buck*, Med. Handbook, V. 151.

insecticide[1], *n.*—**Bollene insecticide**, a trade-name for an insecticide consisting essentially of carbon disulphid and crude petroleum with a very small quantity of other ingredients.

insectiferous (in-sek-tif'e-rus), *a.* [L. *insectum*, insect, + *-fer*, -bearing, + *-ous*.] Producing, containing, or infested with insects: as, *insectiferous* amber; an *insectiferous* log.

insectine (in'sek-tin), *a.* [*insect* + *-ine*[1].] Pertaining to or characteristic of insects.

insection (in-sek'shǫn), *n.* [L. *insectio(*n-*), < *insecare*, cut into: see *insect*.] A cutting up; division into segments; also, a segment or section.

insectologist (in-sek-tol'ǭ-jist), *n.* [*insectology + *-ist*.] One who studies insects; an entomologist.

insenescence (in-sē-nes'ens), *n.* [L. *insenescere*, grow old (< *in-* + *senescere*, grow old, < *senex*, old), + *-ence*.] The process of growing old; aging.

insenescible (in-sē-nes'i-bl), *a.* [LL. *insenescibilis*, < *in-* neg. + *senescibilis, < *senescere*, grow old.] Not capable of growing old.

insentience (in-sen'shi-ens), *n.* [*insentien*(*t*) + *-ce*.] Unconsciousness; lack of sensation. *F. Hall.*

insequent[2] (in-sē'kwent), *a.* [L. *in-*, not, + *sequens* (*-ent-*), following.] In *phys. geog.*, not following any manifest control: said of irregular streams, in contrast to *consequent*, *obsequent*, and other systematic classes of streams.

insertable (in-sėr'ta-bl), *a.* [*insert* + *-able*.] That may be inserted.

insertion-joint (in-sėr'shǫn-joint), *n.* A packed joint; a joint rendered steam- or water-tight by the insertion of a disk or ring of packing.

insertion-plate (in-sėr'shǫn-plāt), *n.* In the polyplacophorous *Mollusca*, or chitons, a projection of the inner or porcellanous shell-layer (articulamentum) beyond the margin of the plates into the girdle or flexible band which holds the plates together. Insertion-plates serve the function of binding the valves firmly to the girdle.

inset, *v. t.* 2. To add (a leaf or leaves) within the folded sections of a book, or between the sections, as a map, a printed illustration, or an advertisement.

inset, *n.* 1. (*b*) A small picture or diagram inserted within the border of a larger one.

insetting (in'set″ing), *n.* In *binding*, the placing of a leaf or leaves (as maps, illustrations, or advertisements) between or within the sections of a printed book, magazine, etc.

Ins. Gen. An abbreviation of *inspector-general*.

inshining (in'shī″ning), *n.* The act or fact of shining in; permeating with light.

When the soul feels the Divine *inshining*, all that is noble in it rises effloresent and victorious.
H. W. Beecher, Yale Lectures, 2d ser., iii. 58. *N. E. D.*

inship (in′ship), *adv.* On board; on the ship; embarked.

'Can't be too hard on a Home draf,' sez he; 'the great thing is to get thim *inship*.'
R. Kipling, The Big Drunk Draf, p. 59.

inshoot (in′shōt), *n.* The act of shooting or moving rapidly inward, as a base-ball that is pitched with a curve. *Sci. Amer.*, July 16, 1904, p. 42.

inside, *n.* **4.** In *field hockey*, the position between the center and the wings.

inside-fired (in′sīd-fīrd), *a.* Internally fired; having the fire-box surrounded, or nearly so, with that which it is desired to heat, as is the fire-box of a locomotive-boiler.

insidiosity (in-sid-i-os′i-ti), *n.* [L. *insidiosus*, insidious, + *-ity*.] Insidiousness.

insink (in′singk), *v. i.* In *embryol.*, to become invaginated or folded in, like the saucer-shaped depression which forms the otocyst in embryo vertebrates. *Buck*, Med. Handbook, III. 823.

insistency (in-sis′ten-si), *n.* Same as *insistence*.

insititious (in-si-tish′us), *a.* [L. *insiticius*, ‹ *insitus*, grafted, pp. of *insérere*, insert, ingraft.] Ingrafted; inserted; not natural to the place.

There are other passages in the poem [Paradise Lost] which have the air of being [printed] *insitious* in the place where they stand. The lines in Book iv., now in question, may reasonably be referred to 1640-42.
Mark Pattison, Milton, xiii. p. 167.

insolation, *n.*—**Asphyxial insolation**, exhaustion due to heat. See *sunstroke*. —**Pyrexial insolation**, thermic fever. See *sunstroke* and *fever*[1].

insole-machine (in′sōl-ma-shēn′), *n.* In *shoe-manuf.*, a hand- or power-machine for stamping, forming, and shaping canvas in-soles. Under this general term may be included a series of tools, dies, and machines for making and building up by cement several layers of canvas, rendering them flexible by scoring one side and bending the material and pressing, and trimming and finishing them ready for insertion.

insolubilize (in-sol′ū-bi-līz), *v. t.*; pret. and pp. *insolubilized*, ppr. *insolubilizing*. [L. *insolubilis*, insoluble, + *-ize*.] To render insoluble. *Buck*, Med. Handbook, VIII. 351.

insolvency, *n.*—**Open insolvency**, such inability to pay debts as will enable creditors to proceed against the sureties, guarantors, or indorsers of the debtor without first proceeding against the debtor himself.

insomniac (in-som′ni-ak), *n.* One who suffers from insomnia.

insonorous (in-sō-nō′rus), *a.* [*in*-[3] + *sonorous*.] Not sonorous or resonant.

Insp. An abbreviation of *inspector*.

inspeak (in-spēk′), *v. t.*; pret. *inspoke* (*inspake* archaic or poetical), pp. *inspoken*, ppr. *inspeaking*. [*in*-[1] + *speak*.] To speak into; instil into: as, to *inspeak* hope in the soul.

inspection, *n.* **2.** A district subject to official inspection.

In France . . . the forests of the country are first divided into cantonments and then into about 500 *inspections*.
Pall Mall Gazette, April 4, 1888.

inspectoral (in-spek′to-ral), *a.* [*inspector* + *-al*[1].] Pertaining to inspectors or to their duties. See *inspectorial*.

inspectorate, *n.* **3.** The position of an inspector; the duty or work of an inspector.

inspectorate-general (in-spek′tor-āt-jen′e-ral), *n.* The office, position, and duties of an inspector-general; the staff of an inspector-general.

inspirationalist (in-spi-rā′shon-al-ist), *n.* [*inspirational* + *-ist*.] One who inspires, or who aims to inspire, others; one whose beliefs tend to inspire others; also, one who professes to speak or act under spiritual guidance.

inspirationally (in-spi-rā′shon-al-i), *adv.* With inspiration; in a manner tending to infuse inspiration.

inspirator, *n.* **2.** An apparatus for inhaling or drawing in air, gas, or vapor.

inspirometer (in-spi-rom′e-tèr), *n.* [Irreg. ‹ *inspirare*, inspire, + Gr. μέτρον, measure.] An instrument for measuring the amount of air inspired.

inspissant (in-spis′ant), *a.* and *n.* [NL. **inspissans* (*-ant-*), ppr. of **inspissare*, thicken, ‹ *in-* + *spissus*, thick: see *inspissate*.] **I.** *a.* Inspissating; thickening.

II. *n.* That which thickens; a remedy which causes a thickening or concentration of the fluids of the body.

inspissator (in′spi-sā-tor), *n.* [NL.] A double-walled copper vessel containing water and employed in evaporating water from blood-serum, etc.: used in bacteriological laboratories.

inst. An abbreviation (*c*) of *institute* or of *institution*.

Inst. Act. An abbreviation of *Institute of Actuaries*.

installant (in-stâl′ant), *a.* and *n.* [NL. *installans* (*-ant-*), ppr. of *installare*, install.] **I.** *a.* Having power to install or invest with office; installing.

II. *n.* One who invests or installs.

instaminate (in-stam′i-nāt), *a.* [*in*-[3] + *staminate*.] In *bot.*, destitute of stamens. [Obsolete.]

instance, *n.* **Court of first instance**, a court of original jurisdiction in which a cause is first heard or (having been heard and reversed upon appeal) to which it is sent back for retrial.

instanding (in′stan-ding), *a.* Growing inward or with an inward tendency: as, *instanding* teeth.

Instantaneous center. See ★*center*[1].

instantograph (in-stan′tō-grâf), *n.* [*instant*(*aneous*) + (*phot*)*ograph*.] An instantaneous photograph. *Encyc. Dict.*

instar[2] (in′stär), *n.* [L. *instar*, likeness, image. Compare the similar modern use of L. *imago* (see *imago*).] Any one of the periods of an insect's life between two molts. The period immediately after hatching is said to be the first instar, and that after the first molt the second instar. If a caterpillar molts four times the pupa is the sixth instar and the adult the seventh. The term originated with Fischer in 1853, but has only recently been generally adopted.

Hence he adopts a term suggested by Fischer, and calls the insect as it appears after leaving the egg the first *instar*, and what it is after the first moult the second *instar*, and so on.
A. S. Packard, Text-book of Entom., p. 594.

in statu nascendi (in stā′tū na-sen′dī). [L., 'in the condition of being born.'] In *chem.*, in the nascent stage; in the condition of a substance at the moment of its separating from a compound, when it frequently exhibits a greater degree of chemical activity than it does after complete isolation: thus nascent hydrogen will decompose silver chlorid at atmospheric temperature, though hydrogen gas will not. This may be explained by the assumption that the hydrogen is evolved from combination as an immense number of single atoms, freely capable of uniting to those of some other element, but that they do not remain single, but promptly unite into molecules consisting each of two similar atoms, there being evidence that ordinary hydrogen gas consists of such diatomic molecules, and that subsequently these molecules must be broken up if their constituent atoms are to become combined with those of another element.

Inst. C. E. An abbreviation of *Institute of Civil Engineers*.

insted, *prep. phr.* A simplified spelling of *instead*.

instep, *n.* **3.** In *entom.*, the first joint of an insect's tarsus when it is very long and broad; the planta.

instep-brake (in′step-brāk), *n.* Same as ★*crimping-brake*.

instigant (in′sti-gant), *n.* [L. *instigans* (*-ant-*), ppr. of *instigare*, instigate.] An instigator.

instigative (in′sti-gā-tiv), *a.* [*instigate* + *-ive*.] Having power to incite or instigate: as, *instigative* suggestions; specifically, noting a type of disposition which achieves ends by inciting others to act. *Giddings*, Inductive Sociol., p. 63.

instinct, *n.* **1.** The definition of 'instinct,' and the demarcation of the range of instinct in the individual life, have long constituted a serious difficulty, both for the biologist and for the psychologist. Popular psychology (which rests upon a Cartesian dualism, and operates with the 'faculties' of eighteenth-century psychology) distinguishes instinct, as the dominant faculty of the animal mind, from reason, which is the prerogative and characteristic of the human mind. The division of labor among ants and bees, the 'prevision' of the caterpillar in spinning a cocoon, the bird's skill in nest-building,—all these things are ascribed to the guiding power of instinct. And the general faculty is subdivided into such minor faculties as the instinct of self-preservation, the parental instinct, the play instinct, etc. Here, of course, is no attempt at analysis, but merely a more or less complete logical classification under a common term. Some change, no doubt, has been wrought in this popular view by the doctrine of organic evolution. The gap between man and the lower animals has been bridged; instinct and reason are included under a 'generic identity'; rudimentary reason is ascribed to animals; and there is greater readiness to admit an instinctive factor in human conduct. But, in principle, the common-sense notion of instinct is the faculty-notion. It must be said now, that the term instinct cannot, in scientific usage, be regarded as a psychological term. The phenomena covered by the word are biological, in the widest sense of this adjective; specifically, they belong to the class known as psychophysical, that is to say, they have two sides, a physiological and a mental. If instinct is defined simply as a physiological phenomenon, it cannot be differentiated from other, non-instinctive activities. But similarly, if it is defined simply in psychological terms, it cannot be distinguished from other mental complexes, from other modes of the action-consciousness. An adequate definition must pay regard both to psychology and to physiology; in other words, must be biological. Taking the objective or physiological side of instinct first, we find that it presents four chief characters: it is a mode of response to stimulus that is inherited; that is common to a group or species; that is relatively complex; and that is obviously adaptive. So regarded, it is not markedly different from the reflex, on the one hand, and the secondary or acquired reflex (such activities for example, as bicycle riding), on the other. Its differentiation from the former must, in the last resort, depend upon its relative complexity; its differentiation from the latter, on its being inherited and not acquired. The former difference is, at best, only one of degree; the latter need be no more than a difference in the date at which the race acquires a certain habit of reaction. To these, however, must be added the psychological or subjective characters. The instinct-consciousness is an associative consciousness in which the situation-stimulus (the first term) is followed by a series of organic sensations, the sensations accompanying the instinctive movements. These processes, the perception of the situation and the organic consequences, hold the attention; the performance of the instinctive movements is highly pleasant, their inhibition highly unpleasant. In other words, the instinct-consciousness is a complex 'feeling,' not differentiable in type from other serial feelings. Putting together, however, the two sets of characters, objective and subjective, we have a biological or psychophysical phenomenon which is distinctly marked off from others of the same class. Two remarks may be added, by way of caution: (1) In animals endowed with memory, and therefore especially in man, the 'pure' instinct will occur only on the first presentation of the appropriate situation. When the situation recurs, the reaction to it will be complicated by memory of the foregone instinctive activities. (2) Many biologists would reduce such reactions as those of ants and bees to mere reflexes, denying the presence of mental processes in these creatures. The question cannot here be discussed: the answer to it, however, does not affect the definition of instinct just given. Of the origin of instinct there are three current theories. The first regards them as developments from the reflex,—as reflexes into which mental process has in some way been 'imported.' The second regards them as reductions from the impulse: actions, at first performed with full consciousness, have gradually been mechanized, retaining only so much of the impulse-consciousness as is indicated above; and the half-mechanized actions have become ingrained in the nervous system, and so inheritable. The third theory suggests that individual accommodations, conscious or unconscious, may serve the purpose of the species until congenital variations (the material of natural selection) appear to replace them by permanent endowment. This last is the most recent theory, and also, perhaps, the theory which stands in the forefront of current discussion.—**Acquired instinct**, an instinct developed by definite individual experience during a single lifetime.—**Instinct-action**, in *psychol.*, the hypothetical mode of reaction of an isolated living cell. See the quotation.

If we could isolate a living cell we must assume that it would react in a definite way to appropriate stimuli, and its reactions we may, if we choose, call its '*instinct-actions*.'
Jour. Philos., Psychol. and Sci. Methods, June 9, 1904, [p. 313.

Instinctive action. See ★*action*.

institor (in′sti-tor), *n.* [L. *institor*, ‹ *insistere* (pp. *institus*), set up, press upon: see *insist*.] In *civil law*, an agent; a factor; a steward.

institute, *n.*—**Farmers' institute**, a local educational gathering of farmers, conducted either by a State agricultural college or by a special officer, in which lectures on agricultural subjects are given by specialists, questions asked, and the subjects discussed. Such institutes are held in large numbers in most of the States, usually occur in winter, and occupy from two to four days. [U. S.]—**Naval institute**, a society whose object is to bring interesting naval professional subjects under discussion. The headquarters of the United States Naval Institute is at Annapolis, Maryland.

institutionalist (in-sti-tū′shon-al-ist), *n.* [*institutional* + *-ist*.] A writer on institutes or elementary rules, especially on legal institutes. Same as *institutist*.

institutionality (in′sti-tū-shon-al′i-ti), *n.* A stage of social evolution marked by the conversion of customary relations into true institutions. *J. F. Crowell.*

institutionalize (in-sti-tū′shon-al-īz), *v. t.*; pret. and pp. *institutionalized*, ppr. *institutionalizing*. [*institutional* + *-ize*.] To turn into an institution; give institutional form or order to.

Inst. M. E. An abbreviation of *Institute of Mechanical Engineers*.

Inst. N. A. An abbreviation of *Institute of Naval Architects*.

instratified (in-strat′i-fīd), *a.* [*in*[2] + *stratified*.] Same as *interstratified*. [Rare.]

instroke (in′strōk), *n.* [*in*[1] + *stroke*[1].] In an engine, that stroke during which the plunger enters into the cylinder; in a single-acting engine, the exhaust stroke.

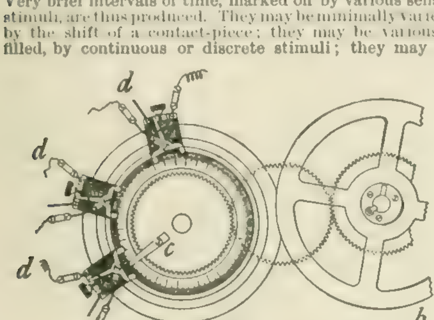
Suction during an entire outstroke of the piston; . . . compression during the following *instroke*.
Encyc. Brit., XXVIII. 183.

instructionary (in-struk′shon-ā-ri), *a.* [*instruction* + *-ary*.] Instructional; instructive.

instruction-car (in-struk′shon-kär), *n.* **1.** A

railroad-car arranged for the instruction and examination of engineers, firemen, and train-hands. It is fitted with a steam-boiler, heating apparatus, and working models of air-brakes, train-signals, and other train appliances.—**2.** An electric car on a short track, in a car-barn, for the instruction of motormen in the control of electric cars, signaling, the rules of the road, etc.—**3.** A working electric car used in technical schools for demonstrations and practice in the building and handling of electric cars.

instrument, *n.*—**Harp instruments**, in *music*, a general term for stringed instruments played by plucking or twanging: opposed to *bowed instruments*. Harp instruments include those of the harp, lyre, lute, and zither classes.—**Pravaz instrument**, a form of syringe for hypodermic injections.—**Tensile instrument.** Same as *stringed instrument* (which see, under *instrument*, 3).—**Time-sense instrument**, in *exper. psychol.*, an instrument designed for use in the study of the time-consciousness, more especially in the study of the temporal differential sensitivity, of temporal illusion, of the dependence of temporal estimation upon sense department, etc. A typical time-sense instrument consists of a metal spoke or radius, rotated at various speeds and with uniformity of rate, within a ring which carries projecting contact-pieces. As the radius strikes a contact-piece, an electrical circuit is momentarily made, and the making of the circuit coincides with a sound, flash, pressure, electric shock, etc. Very brief intervals of time, marked off by various sense-stimuli, are thus produced. They may be minimally varied, by the shift of a contact-piece; they may be variously filled, by continuous or discrete stimuli; they may be



Neumann's Time-sense Instrument

a, time-sense disk; *b*, kymograph drum; *c*, rotating spoke; *d, d, d*, contact-pieces.

presented for comparison in direct succession, or separated by variable blank intervals, etc. The time-sense instrument, in some form, has become a standard feature of the psychological laboratory.—**Tubular instrument**, a wind-instrument which consists of a tube.—**Vowel instrument**, in *acoustics*, an instrument designed to determine the resonance tones of the voice, and thus by instrumental synthesis to reproduce the vowel sounds. *Scripture*, Exper. Phonetics, p. 290.

insufficiency, *n.*—**Aortic, mitral insufficiency.** See *valvular* ★*insufficiency*.—**Muscular insufficiency.** Same as ★*imbalance*.—**Pulmonary insufficiency.** See *valvular* ★*insufficiency*.—**Pyloric insufficiency**, inability of the stomach to retain food to be acted upon by the gastric juice, through defective closure of the pylorus.—**Tricuspid insufficiency.** See *valvular* ★*insufficiency*.—**Valvular insufficiency**, defective closure of one or more of the valves of the heart, resulting in regurgitation of the blood: called, according to the valve affected, *aortic, mitral, pulmonary*, or *tricuspid insufficiency*.

insufflation, *n.* **4.** The process of decorating pottery or porcelain by blowing color on the surface of the ware through a hollow tube over the end of which gauze has been stretched. See *soufflé decoration*, under *soufflé*.

insula, *n.* **2.** In a Roman city, especially Rome itself, a building composed of distinct apartments let to several families; an apartment-house or tenement-house, in distinction from *domus*, an independent residence. Originally insulæ were separated by passages at least 12 feet wide, or by streets. In the later republic, however, stout partitions were considered sufficient. Augustus fixed the height of an insula at 70 feet, and Trajan at 60. Shops usually occupied the ground floor front.

3. In a smaller Roman city, especially Pompeii, a block of houses entirely surrounded by streets.

insular, *a.*—**Bureau of Insular Affairs.** See ★*bureau*.

insulated (in'sū-lā-ted), *p. a.* Being in a state of insulation, in any sense of that word; in a restricted sense, so remote from other bodies as to be beyond the reach of any sensible attraction, as solitary or isolated stars.

insulating-tape (in'sū-lā-ting-tāp"), *n.* Tape impregnated with an insulating compound and used as a covering for electric wires or other conductors.

insulating-tube (in'sū-lā-ting-tūb"), *n.* A tube of non-conducting material, used to protect a conductor, around which it is placed, from electric leakage.

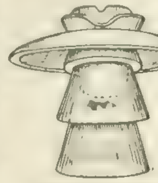
insulation-meter (in-sū-lā'shon-mē"tėr), *n.* A direct-reading instrument for the determination of electric insulation.

insulator, *n.*—**Petticoat-insulator**, an insulator with flaring annular base, used on overhead electric lines. Petticoat-insulators are sometimes made with deeply corrugated bases and are then called *double-petticoat* or *triple-petticoat insulators*, according to their form.—**Pigtail-insulator**, an insulator for electric lines which is provided with a piece of iron of double curvature to which the wire is fastened.

Cross-section of a Triple-petticoat Insulator

In the 'pigtail' insulator an additional iron piece in the shape of an S is moulded in the top.
Reber, in Trans. Amer. Inst. Elect. Engin., 1902, p. 721.

Shackle-insulator, a special form of insulator used for the support of overhead lines where great strength is required.—**Slot-insulator**, an insulator provided with a channel through which the wire passes.—**Strain-insulator**, an insulator placed between an overhead wire or cable and the guy-wires or supports by means of which it is kept stretched.—**Umbrella-insulator**, an insulator for high-tension circuits which is provided with a broad umbrella-shaped cover of glass or porcelain. The lower parts of the insulator are thus protected from rain, and the distance over the surface which leakage currents must traverse between the wire and its support is greatly increased.


Umbrella-insulator

insuliform (in'sū-li-fôrm), *a.* [L. *insula*, island, + *forma*, form.] Like an island or suggesting an island on a map: used in reference to markings on the skins of animals.

insulite (in'sū-līt), *n.* [*insul(ate)* + *-ite*2.] A substance made by impregnating sawdust with paraffin-oil under pressure: used for electrical insulation.

insult, *v.t.* **3.** In *pathol.*, to injure; inflict traumatism upon.

The patient's vitality is greatly reduced when the intestines are *insulted*, and there is great danger of the loops adhering in malposition and giving rise to intestinal obstruction. *Therapeutic Gazette*, Feb. 15, 1903, p. 129.

insult, *n.* **5.** In *pathol.*, external violence which causes a lesion.

insur. An abbreviation of *insurance*.

insurance, *n.*—**Cost, freight, and insurance.** See ★*cost*2.—**Mutual life-insurance company**, an insurance company whose fund for the payment of expenses and of amounts to be paid upon policies issued consists, not in capital subscribed or furnished by outside parties, but of premiums mutually contributed by the parties insured, each of whom, by virtue of being a policy-holder, is a member of the company.—**Insurance agent**, one who solicits business for an insurance company.

insurant (in-shör'ant), *n.* One whose property or life is insured.

insurgescence (in-sėr-jes'ens), *n.* [L. *insurgere*, rise, be insurgent, + *-escence*.] The beginnings of insurrection; incipient revolt against authority.

Int. An abbreviation (*c*) of *interior*; (*d*) of *interpreter*; (*e*) of *interval*; (*f*) of *interjection*.

intactile (in-tak'til), *a.* [*in-*3 + *tactile*.] Imperceptible to the touch; not tactile.

intake, *n.* **8.** Land taken in from a waste place, or from a common or tidal river.

intake-valve (in'tāk-valv), *n.* A valve for controlling the supply of a fluid (air, gas, oil, steam, or water) to an engine or machine.

intarsia (in-tär'si-ä), *n.* [It. *intarsia*, < *intarsiare*, inlay, < *in-* + *tarsia*, inlaid work, marquetry: see *tarsia*.] A highly developed form of inlay or marquetry in wood practised in Italy during the Renaissance period. The earliest examples are found on ivory boxes made in Venice in the fourteenth century. By using various colored woods and by staining with different colors, excellent pictorial effects were afterward produced, as in the doors of the audience-chamber in the Palazzo Vecchio in Florence.

intarsiatura (in-tär"si-ä-tö'rä), *n.* [It. *intarsiatura*, < *intarsiare*: see ★*intarsia*.] The process of making tarsia; also, the resulting work.

integer, *n.*—**Critical integer**, an integer *m* so connected with a function ϕt that

$$\frac{1}{2\pi i}\int\frac{\phi t}{t-z}\left(\frac{z}{t}\right)^m dt,$$

for increasing contours inclosing successive singularities of ϕt (of which there is an infinite series) tends toward zero.—**Ordinal integer**, a mark attached to an object to indicate its place in a series or row.

Integrable group. See ★*group*1.

integral. I. *a.* **4.** (*e*) Total.—**Integral curve, equation, series.** See ★*curve*, etc.

II. *n.* **Elementary integral**, a fundamental integral, one of the simplest of its kind.—**Fresnel's integrals**, the two integrals

$$x=\int\cos\phi\,ds,\ \text{and}\ y=\int\sin\phi\,ds,$$

in which x and y are the coordinates of any point on a Cornu spiral, ϕ is the inclination of the tangent to the spiral at that point to the axis of x, and ds is an element of arc. Fresnel's integrals are used in the theory of diffraction for computing the intensity of illumination.—**Gauss's integral**, according to Gauss, for a surface, the total curvature of a part bounded by a closed curve is the value, when the integration is extended over this part, of the double integral $\iint K\,d\sigma$, wherein K is the measure of curvature of the surface at every point and $d\sigma$ the surface element.—**Probability integral**, the integral which expresses the area of the normal curve or curve of error whose equation is

$$y=\frac{1}{\sqrt{2\pi}}e^{-\frac{1}{2}x^2}.$$

Time integral, the integral of a function taken over an interval of time or between two time limits.—**Variation of an integral**, the excess of the value of the integral along the varied curve above its value along the original curve.

integralization (in"tē-gral-i-zā'shon), *n.* [*integralize* + *-ation*.] The act of bringing into the form of an entire function.

integrand (in'tē-grand), *n.* [L. *integrandus*, future perf. part. of *integrare*, make whole: see *integrate*.] A mathematical expression integrated or to be integrated.

In this case the first *integrand* is Poynting's Energy Flow function. *Physical Rev.*, Aug., 1904, p. 101.

integraph (in'tē-gráf), *n.* [*inte(gral)* + Gr. γράφειν, write.] **1.** An instrument for measuring the area under a curve combined with a recording device which draws the integral curve of the curve traced by the point of the instrument; an integrator.

Areas may be measured by means of a planimeter or an *integraph*. Thus time values corresponding to different speed values are known, and the speed time curve may be plotted. *Elect. World and Engin.*, July 18, 1903, p. 96.

2. An instrument for determining the value of an indefinite integral.

Integraphs have also been constructed, by aid of which ordinary differential equations, especially linear ones, can be solved. *Encyc. Brit.*, XXX. 583.

integration, *n.* **4.** The determination of the average rate of flow of a stream. On account of the varying friction against the bottom, sides, and overlying air, this value, as a rule, differs from the rate at any particular place in the cross-section of the stream. *J. W. Powell*, 11th An. Rep. U. S. Geol. Surv., ii. 13.—**Graphic integration**, integration by means of the integraph, or by graphical construction of the integral curve.—**Law of integration.** See ★*law*1.—**Mechanical integration**, integration by an integraph.—**Reciprocal integration**, the mutual union of a male cell and a female cell to form a unit or fertilized egg. [Rare.]

Or interbreeding and crossing, with care or under nature, may unite by means of *reciprocal integration*—(fertilization)—two molecular mechanisms.
J. A. Ryder, Biol. Lectures, 1895, p. 49.

integrator, *n.*—**Amsler's integrator**, an instrument by means of which not only the area but the moment and moment of inertia about a given axis of any plane figure are obtained. By running a pointer on the instrument around the outline of the figure, and taking readings from certain wheels, these quantities are ascertained by a simple numerical operation.

integripallial (in"tē-gri-pal'i-al), *a.* [L. *integer*, whole, + NL. *pallium* + *-al*1.] Same as *integropalliate*.

integritive† (in-teg'ri-tiv), *a.* [Irreg. *integrit-y* + *-ive*.] Possessing integrity. *Burns. N. E. D.*

intellect, *n.*—**Economic theory of intellect**, an extreme form of pragmatism set forth by Dr. Ernst Mach, according to which general concepts and intelligence generally serve a purely economical purpose in enabling us to foresee how a given line of conduct will be adapted to our wishes. More moderate pragmatists maintain that desires and ends of all kinds essentially involve general concepts, so that, since 'economy is the adaptation of means to ends, and supposes that there are ends, it is incorrect to say that general concepts have only an economic utility. Common sense refuses to believe that the human mind can create ideas entirely unlike anything real, and therefore it is incredible that purpose should be purely illusory.

Intellectual aura, memory. See ★*aura*1, etc.

Intellectualistic psychology. See ★*psychology*.

Intelligence officer, an officer of a bureau or department of intelligence.

intelligize (in-tel'i-jīz), *v.*; pret. and pp. *intelligized*, ppr. *intelligizing*. [L. [illegible], understand, + *-ize*.] I. *intrans.* To think; use the intellectual powers.

II. *trans.* To receive or take into or by the intellect; assimilate mentally.

intend, *v. t.* **9.** To manage; superintend; supervise. *N. E. D.*

intendment, *n.*—**Double intendment**, double meaning: said of a word or phrase which has two meanings. See *double entendre*.

intens. An abbreviation of *intensive*.

intension, *n.* **4.** In *biol.*, the origin of a new variety, race, or species from individuals which are restricted from free interbreeding with their kind.

I now call the certainty that some form of divergent transformation will arise when intergeneration is prevented the principle of *intension*.
J. T. Gulick, in Trans. Linnean Soc. London, Zool., 1888, p. 216.

intensionally (in-ten'shọn-al-i), *adv.* So as to denote the sum of the characters given as a definition of a term.

A class may be defined either extensionally, by an enumeration of its terms, or *intensionally* by the concept which denotes its terms. *Nature*, Sept. 3, 1903, p. 411.

intensity, *n.*—**Calorific intensity.** See ★*calorific*.—**Communal intensity,** increase of numbers or activity, as of insects and parasitic fungi, in conditions of increased population and cultivation.

It is no doubt true that insects and fungi spread more rapidly than formerly because of the greater number and continuity of orchards, just as contagious diseases spread faster in cities than in the country. In the small and isolated orchards of former days, fungi and insects were confined within closer areas. This phenomenon of rapid distribution, due to greater extent of host-plants, may be termed *communal intensity*.
L. H. Bailey, Survival of the Unlike, p. 185.

Intensity-rhythm, intensity-verse. See ★*rhythm*, ★*verse*2.—**Mean spherical intensity,** in *photom.*, the value of the intensity of a source of light, obtained by averaging the intensities in all directions; the total flux from a source of light, in lumens, divided by 4π; the mean radius vector of the surface of spherical distribution from a light source.—**Unit of luminous intensity.** See ★*unit*.—**Unit of photometric intensity.** See ★*unit*, and *photometric standard*, under *photometric*.

intensive, *a.* **5.** In *agri.*, concentrated (cultivation): designating high culture, or the principle of a small area well tilled, the purpose being to secure the most from every acre of land by means of the application of labor and fertilizers and the most thorough tillage. Compare ★*extensive*, 5.—**6.** In *pathol.*, noting the treatment of disease by very large or frequently repeated doses, or by remedies of greatly increased strength or activity. *Lancet*, June 6, 1903, p. 1605.—**Intensive blue, feeling, magnitude.** See ★*blue*, etc.

intention, *n.* **10.** In *Rom. Cath. theol.*, in reference to the administration of the sacraments, the actual will, on the part of the one administrating, to perform seriously the rites prescribed by the church, and to do nothing to show contrary intention.

intentionally, *adv.* **2.** In intention only.

In this manner I quitted the fact [of murder] *intentionally* a hundred and a hundred times.
Defoe, Capt. Singleton, p. 11.

interacademic (in-tėr-ak-ạ-dem'ik), *a.* [*inter* + *academy* + *-ic.*] Common to or exchanged between two or more academies or academic institutions.

interacinar (in-tėr-as'i-nạ̈r), *a.* [*inter-* + *acinus* + *-ar*3.] Same as *interacinous*.

Lewaschew . . . thought that he was able to transform small groups of acini into typical *interacinar* islets, thus increasing their number at the expense of the secreting tissue. *Jour. Exper. Med.*, Jan. 15, 1901, p. 398.

interactionism (in-tėr-ak'shọn-izm), *n.* [*interaction* + *-ism.*] The metaphysical opinion that body and mind, having like modes of existence, act and react upon each other somewhat as two bodies may do, and that this is the manner in which forces acting upon the organs of sense affect the mind and in which volitions produce contractions of the muscles.

Those who hold this opinion do not consider themselves as materialists for several reasons, among which is their belief that matter can not feel, as the soul can; but they do hold the mind to be, in important respects, similar to matter. The principal advocate of this opinion is Lotze, who is particularly explicit in details in his "Microcosmus" and "Medicinal Psychology."

Interactionism seems almost to necessitate two juxtaposed realities exchanging influences, and thus to imply a metaphysical dualism.
C. A. Strong, Why the Mind has a Body, p. 33.

Interactionism has to maintain, in this concrete form of the 'survival theory,' that the mental process as such is an aid to evolution.
Pop. Sci. Mo., March, 1902, p. 459.

interactionist (in-tėr-ak'shọn-ist), *n.* and *a.* [*interaction* + *-ist.*] **I.** *n.* An adherent of the metaphysical theory of interactionism. *C. A. Strong*, Why the Mind has a Body, p. 33.

II. *a.* Consonant to the metaphysical theory of interactionism. *C. A. Strong*, Why the Mind has a Body, p. 23.

interadventual (in″tėr-ad-ven'tụ̄-ạl), *a.* Of or pertaining to the interval between the first and second advent of Christ. *Warfield.*

interagglutinate (in″tėr-a-glö'ti-nāt), *v. t.*; pret. and pp. *interagglutinated*, ppr. *interagglutinating*. [*inter-* + *agglutinate.*] To cause interagglutination.

Varieties of bacilli, related closely in morphology and cultural reactions, do not, as a rule, produce serums which *inter-agglutinate*.
Jour. Exper. Med., Oct. 1, 1901, p. 642.

interagglutination (in″tėr-a-glö-ti-nā'shọn), *n.* [*inter-* + *agglutination.*] The agglutination of one variety of cells by the agglutinins produced by a closely related variety.

These results will be seen to bear out Cushing's results in his experiments upon Bacillus O, that *inter-agglutinations* do not necessarily occur between closely related varieties of bacilli.
Jour. Exper. Med., Oct. 1, 1901, p. 640.

interalar (in-tėr-a'lạ̈r), *a.* [L. *inter*, between, + *ala*, wing, + *-ar*3.] Situated between the wings.

Thorax. Dark metallic green above, with all the sutures and the *interalar* space black.
Proc. Zool. Soc. London, 1902, I. 86.

interambulacral, *a.* **II.** *n.* In echinoderms, one of the plates which form the skeleton.

The *interambulacrals* lie in single columns between the ambulacra. *Encyc. Brit.*, XXVII. 621.

interanode (in-tėr-an'ōd), *n.* [*inter-* + *anode.*] That one of two metal plates, placed between the terminals of an electrolytic cell in the path of the current, from which metal is dissolved away.

interantennary (in″tėr-an-ten'ạ-ri), *a.* [L. *inter*, between, + NL. *antenna* + *-ary.*] Situated between the antennæ.

interapertural (in-tėr-ap'ėr-tụ̄r-ạl), *a.* [L. *inter*, between, + *apertura*, aperture, + *-al*1.] Situated between the apertures: as, the *interapertural* spaces in the zoaria of the *Bryozoa*.

interarcualis (in-tėr-ạ̈r-kụ̄-ā'lis), *n.*; pl. *interarcuales* (-lēz). [NL.] One of the muscles lying between the upper ends of the branchial arches.

The *interarcuales* are divided into two systems of muscles. *Amer. Nat.* Dec., 1905, p. 914.

interassociation (in tėr-ạ-sō-ṣi-ā'shọn), *n.* In *psychol.*, reciprocal or mutual association.

The perceptions of the various parts of a letter shoot together into the perception of the whole letter, the part perceptions mutually assisting each other according as, from being often presented together, they have habits of *interassociation*. *Amer. Jour. Psychol.*, XII. 300.

interasteric (in″tėr-as-ter'ik), *a.* [L. *inter*, between, + NL. *asterion* + *-ic.*] Situated between the two asteria. See *asterion*.

interastral (in-tėr-as'trạl), *a.* [L. *inter*, between, + *astrum*, star, + *-al*1.] Situated or taking place between or among the stars.

Interatheriidæ (in″tėr-ath-ẹ-rī'i-dē), *n. pl.* [NL., < *Interatherium*, the type genus, + *-idæ.*] A family of the *Typotheria* which contains extinct mammals of moderate size, with complete dentition, from the Santa Cruz Formation (Miocene?) of Patagonia. *Ameghino*, 1887.

interaural (in-tėr-â'rạl), *a.* [L. *inter*, between, + *auris*, ear, + *-al*1.] Situated between the ears.

interbed (in-tėr-bed'), *v. i.* and *t.*; pret. and pp. *interbedded*, ppr. *interbedding*. To take or cause to take a position of conformable stratification in a sedimentary series: chiefly used in the passive: as, to be *interbedded*.

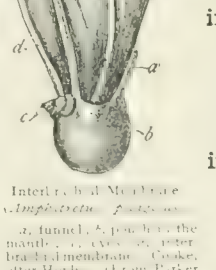
interbedding (in-tėr-bed'ing), *n.* In *geol.*, the process or property of forming a member in a conformably stratified series of rocks.

There is no sharp line of division between the igneous and sedimentary rocks, and along the contact there is more or less *interbedding* as though sedimentation was at times interrupted by lava flows and then again was resumed under more favorable conditions.
Amer. Geol., March, 1904, p. 136.

interbody (in'tėr-bod″i), *n.* [*inter-* + *body.*] An amboceptor of normal blood-serum, in contradistinction to those which result on special immunization.

interborough (in-tėr-bur'ō), *a.* [*inter-* + *borough.*] Existing or forming a communication between boroughs: as, the *interborough* railway in New York.

Interbrachial membrane, in certain cephalopods, the web-like fold which unites the arms and sometimes reaches nearly to their extremities, as in *Amphitretus*.



Interbrachial Membrane of *Amphitretus pelagicus*.
a, funnel; b, pouch of the mantle; c, c, eyes; d, interbrachial membrane. (Cooke, after Hoyle.) (From Parker and Haswell's "Zoology.")

intercadence (in-tėr-kā'dens), *n.* [*inter-* + *cadence.*] The intercurrence of an extra pulse-beat between two normal pulsations.

intercadent (in-tėr-kā'dent), *a.* [*inter-* + *cadent.*] Intercurrent; falling between: said of an occasional pulse-beat coming between two beats of the normal rhythm.

intercalarium (in tėr-kạ-lā'ri-um), *n.*; pl. *intercalaria* (-ạ̈). [NL.: see *intercalary.*] A segment intercalated or inserted between two vertebræ, on either the dorsal or ventral side of the vertebral column. In the latter case the intercalarium would be homologous with an intercentrum or hypocentrum: in the first instance it would be the equivalent of the interdorsalia of Gadow. Intercalaria occur typically in the vertebral column of sharks. *Phil. Trans. Roy. Soc.* (London), 1896, ser. B, p. 58.

intercalary, *a.* **4.** In *anat.*, additional; supernumerary; inserted between other parts, as the cartilages on the dorsal side of the vertebral column in many elasmobranchs.

In all recent forms the neural arch is converted into a closed canal by the insertion of *intercalary* pieces between the neural processes and the spine.
J. S. Kingsley, Vert. Zool., p. 234.

intercalicular (in″tėr-ka-lik'ụ̄-lạ̈r), *a.* [L. *inter*, between, + *caliculus*, a cup, + *-ar*3.] Situated between the calyces: as, *intercalicular* gemmation in corals. *Proc. Zool. Soc. London*, 1899, p. 752.

Intercanal system, in calcareous sponges, a system of irregular spaces, really external to the sponge, in which the water circulates before passing through the pores into the gastral cavity.

intercanalicular (in″tėr-kan-ạ-lik'ụ̄-lạ̈r), *a.* [L. *inter*, between, + *canaliculus*, a small channel, + *-ar*3.] In some of the silicious sponges, noting a series of cavities or interstices on the sponge-body lying among the tubes or foliæ constituting the skeleton, as in the *Mæandrospongidæ*.

intercapillary (in-tėr-kap'i-lạ̄-ri), *a.* [*inter-* + *capillary.*] Between or among the capillary blood-vessels.

intercarpellary (in-tėr-kạ̈r'pe-lạ̄-ri), *a.* [*inter-* + *carpellary.*] In *bot.*, situated between carpels.

intercatenated (in-tėr-kat'ẽ-nā-ted), *a.* [*inter-* + *catenate* + *-ed*2.] Chained together; linked firmly together: as, *intercatenated* ideas.

intercathode, interkathode (in-tėr-kath'ōd), *n.* [L. *inter*, between, + E. *cathode.*] That one of two metal plates, placed between the terminals of an electrolytic cell in the path of the current, upon which metal is deposited.

intercentrum, *n.* **2.** Same as *centrum*, 2 (*a*). *Amer. Nat.*, May, 1890.

intercepter, *n.* **2.** Specifically, in *mach.*, a T-shaped cylindrical vessel employed in connection with engines to prevent particles of water from being carried into the cylinder with the steam; a steam-separator. The steam, in its passage through the intercepter, meets a diaphragm-plate by which the water is thrown out and is subsequently drawn off by a drain-cock.

interception-band (in-tėr-sep'shọn-band), *n.* In *physiol.* and *psychophysics*, a narrow band of color produced, under certain conditions of experiment, by the passage of a pendulum or other light rod across a bicolor disk observed with the resting eye: so called, as opposed to *illusion-band*, because it is due to the purely geometrical relations of the disk and the intercepting pendulum.
Harvard Psychol. Studies, I. 190.

interceptor (in-tėr-sep'tọr), *n.* Same as *intercepter*.

interchanger, *n.* **2.** That part of an apparatus for the liquefaction of air wherein the compressed air is allowed to expand and is thus cooled to its point of liquefaction.

intercivic (in-tėr-siv'ik), *a.* [L. *inter*, between, + *civis*, citizen, + *-ic.*] Existing or taking place between citizens of the same place: as, an *intercivic* contest.

intercollision (in″tėr-kọ-lizh'ọn), *n.* [*inter-* + *collision.*] In *phys.*, a collision between the independently moving particles of a gas or other medium. *Elect. Rev.*, Aug. 8, 1903, p. 172.

intercolumniary (in″tėr-kō-lum'ni-ạ̄-ri), *a.* [L. *intercolumnium*, space between columns, + *-ary*2.] Same as *intercolumnar*.

intercommissural (in″tėr-kọ-miṣ'ụ̄-rạl), *a.* [*inter-* + *commissural.*] Situated between commissures: as, the *intercommissural* recess, a depression between the dorsal and ventral commissures in the lamina terminalis of the reptile brain. *Trans. Linnean Soc. London*, Zool., July, 1903, p. 471.

intercommuner (in″tėr-kọ-mū'nėr), *n.* **1.** In *Scots law*, one who intercommunes with a denounced person or a rebel. See *letters of intercommuning*, under *intercommune.*—**2.** One who communicates or conducts negotiations between other parties; an intermediary.

intercommunicative (in″tėr-kọ-mū'ni-kạ̄-tiv), *a.* [*inter-* + *communicative.*] Inclined to be communicative with each other; disposed toward mutual exchange of opinions, knowledge, or facts.

intercompany (in-tėr-kum'pạ-ni), *a.* [*inter-*

+ *company.*] Existing between, or among, two or more companies.

Within a great corporation proper co-operation allows of many "*intercompany*" economies.
Electrochem. and Metal. Industry, May, 1905, p. 167.

intercomparable (in-tėr-kom'pa-ra-bl), *a.* [*inter-* + *comparable.*] Capable of being compared.

intercompare (in-tėr-kom-pâr'), *v. t.*; pret. and pp. *intercompared*, ppr. *intercomparing.* [*inter-* + *compare.*] To compare.

The labors of Bessel, Clarke and others in *intercomparing* geodetic standards. *Science*, Jan. 13, 1905, p. 46.

intercomparison (in″tėr-kom-par'i-son), *n.* [*inter-* + *comparison.*] The act of intercomparing or comparing.

The opportunities for *intercomparison* afforded of late years. *Burlington Mag.*, III. 2-3.

intercondylic (in″tėr-kon-dil'ik), *a.* [*inter-* + *condyle* + *-ic.*] In *anthrop.*, relating to the distance between two condyles.

interconvertibility (in″tėr-kon-vėr″ti-bil'i-ti), *n.* Mutual convertibility; interchangeableness.

interconvertibly (in″tėr-kon-vėr'ti-bli), *adv.* In a reciprocally convertible manner.

intercooler (in-tėr-kö'lėr), *n.* [*inter-* + *cooler.*] A device for cooling air as it passes from one cylinder of a compressor to the next: similar to a condenser. It usually consists of a cylindrical shell in which are fitted tube-plates and tubes for the cooling water.

intercortical (in-tėr-kôr'ti-kal), *a.* [L. *inter*, between, + *cortex* (*cortic-*), bark, + *-al*[1].] Within the cortex: as, the *intercortical* cavities in certain sponges. *Proc. Zool. Soc. London*, 1902, p. 215.

intercostal, *a.* **2.** In *iron ship-building*, noting a structural member composed of a number of short pieces fitted in the spaces between a series of other continuous structural members which it crosses: as, an *intercostal* floor-plate, one in which the floor is in short pieces between the longitudinals; an *intercostal* keelson, *intercostal* longitudinal, one in short pieces between the frames; an *intercostal* angle-bar, *intercostal* seam-strap, one in short pieces between frames or deck-beams, etc.

When the deep vertical transverse plates forming the floors only extend between the keelsons, girders or longitudinals, and are attached to them by angle bars, the floors are called *intercostal* floors . . . when the keelsons, girders, or longitudinals extend only between the frames and floors, they are called *intercostal* keelsons, girders, and longitudinals. *Encyc. Brit.*, XXXII. 591.

intercostally (in-tėr-kos'tal-i), *adv.* In *iron ship-building*, (worked or fitted) in intercostal pieces. *Marine Rev.*, Nov. 17, 1898.

intercotylar (in-tėr-kot'i-lär), *a.* [L. *inter*, between, + NL. *cotyle* + *-ar*[3].] In *anat.*, lying between two cotylæ; specifically applied to the region between the cup-shaped depressions on the upper end of the tarso-metatarsus of a bird which receives the articular faces of the tibiotarsus.

The tarso-metatarsus of the Grebe may be distinguished from that of the Diver by the larger size of the *intercotylar* tubercle.
Proc. Zool. Soc. London, 1899, p. 1041.

intercourse, *n.* **Intersubjective intercourse.** See ★*intersubjective.*

intercrinal (in-tėr-krī'nal), *a.* [L. *inter*, between, + *crinis*, hair, + *-al*[1].] Between hairs; specifically applied to the material cementing or uniting the hairs to form the horns of some ruminants.

Nitsche has shown that the sheath [horn of the prong-buck] is an aggregation of sparse hairs connected by much *intercrinal* horn-substance . . .
Proc. Zool. Soc. London, 1902, p. 213.

Intercrural ganglion. Same as ★*ganglion isthmi.*

intercupola (in″tėr-kū'pō-lä), *n.* [*inter-* + *cupola.*] Same as ★*interdome.*

intercurrent, *a.* **3.** Noting a pulse in which there is an occasional supernumerary beat.

intercuspidal (in″tėr-kus'pi-dal), *a.* [L. *inter*, between, + *cuspis* (*cuspid-*), point, + *-al*[1].] Situated between cusps.

interdeal (in-tėr-dēl'), *v. i.* [*inter-* + *deal*[1], *v.*] To deal together or reciprocally.

interdenominational (in″tėr-dē-nom-i-nā'-shon-al), *a.* [*inter-* + *denomination* + *-al*[1].] Taking place between religious denominations; having the common support of such denominations.

Interdental splint. See ★*splint.*

interdepend (in″tėr-dē-pend'), *v. i.* [*inter-* + *depend.*] To depend upon each other.

interdependently (in″tėr-dē-pen'dent-li), *adv.* In a reciprocally dependent way.

interdespise (in'tėr-des-pīz'), *v. t.*; pret. and pp. *interdespised*, ppr. *interdespising.* [*inter-* + *despise.*] To despise reciprocally.

interdestructive (in″tėr-dē-struk'tiv), *a.* [*inter-* + *destructive.*] Causing mutual destruction; reciprocally destructive.

interdict, *n.* **5.** In *law*, an incompetent; one judicially declared to be incapable of caring for his person or estate. See *interdiction*, 2.

interdictor (in-tėr-dik'tor), *n.* In *Scots law*, one who causes an interdiction, that is, a legal restraint upon a person of weak mind who is liable to be imposed upon.

interdiffusive (in'tėr-di-fū'siv), *a.* [*inter-* + *diffusive.*] Mutually diffusive.

interdiffusivity (in″tėr-dif-ū-siv'i-ti), *n.* [*interdiffusive* + *-ity.*] The physical constant or coefficient which expresses the rate, in cubic centimeters per second, at which two fluids diffuse into each other through the unit area of a horizontal plane separating them: as, the *interdiffusivity* of CO_2 and O_2 is about 0.140 cm^2 / sec. *Poynting and Thomson*, Properties of Matter, p. 196.

interdigit (in-tėr-dij'it), *n.* [*inter-* + *digit.*] The fold between any two adjacent fingers or toes.

interdiscal (in-tėr-dis'kal), *a.* [*inter-* + *discal.*] In *entom.*, situated between the discal spots on the wing of a lepidopterous insect. *Annals and Mag. Nat. Hist.*, May, 1903, p. 504.

interdistichal (in-tėr-dis'ti-kal), *n.* [L. *inter*, between, + E. *distichal.*] In the calyx of the *Crinoidea*, one of the plates lying in the interradial areas between the distichals of the rays. See ★*distichal.*

interdome (in'tėr-dōm), *n.* [*inter-* + *dome.*] In a masonry cupola, the space between the inner and outer shell; by extension, the space between the inner masonry cupola and the outer dome-like roof of wood or metal, as in St. Paul's Cathedral, London. Also called *intercupola.*

interdorsale (in″tėr-dôr-sā'lē), *n.*; pl. *interdorsalia* (-li-ä). [NL., neut. of *interdorsalis*, < L. *inter*, between, + *dorsum*, back.] One of a pair of cartilages on the dorsal side of the notochord, posterior to the basidorsalia: commonly used in the plural.

interelectrode (in″tėr-ē-lek'trōd), *n.* [L. *inter*, between, + E. *electrode.*] A metal plate inserted between the terminals of an electrolytic cell.

interest, *n.*—**Law of interest,** in *psychol.* See ★*law*[1].

Reversionary interest, the future interest one has in lands now in the possession of another; also the remainder of an estate after a lesser estate has been taken out of it.

interestuarine (in-tėr-es'tū-a-rin), *a.* [L. *inter*, between, + *æstuarium*, estuary, + *-ine*[1].] Situated between estuaries.

interfault (in'tėr-fâlt), *a.* In *geol.*, situated between two faults: applied to the contained block of rock.

interfelted (in-tėr-fel'ted), *a.* [*inter-* + *felt*[3] + *-ed*[2].] In *geol.*, a descriptive term sometimes applied to beds or layers of sedimentary or metamorphic rocks which are closely involved with one another.

interfenestral (in″tėr-fē-nes'tral), *a.* [L. *inter*, between, + *fenestra*, window, + *-al*[1].] Situated or placed between the windows or between any two windows: as, an *interfenestral* panel; the *interfenestral* space.

interfenestration (in-tėr-fen-es-trā'shon), *n.* [NL., *interfenestratio(n-)*, < *inter*, between, + *fenestra*, window.] The space between two windows; by extension, the treatment of a front so that the windows and the space between them shall be artistically proportioned.

interferant (in-tėr-fēr'ant), *n.* [Prop. *interferent*; < *interfere* + *-ant* (*-ent*).] In *Amer. patent law*, a party who goes into interference. See *interference*, 4.

interfere, *v. i.* **5.** In *base-ball*, to obstruct unfairly a runner when he is endeavoring to reach a base; also, so to obstruct a catcher or fielder who is endeavoring to handle or throw the ball.—**6.** In *foot-ball*, to interpose between a runner and would-be tacklers in order to assist the former.

interference, *n.* **6.** In *base-ball* and *foot-ball*, the act of interfering. See ★*interfere*, *v. i.*, 5 and 6.—**Interference comparator.** See ★*comparator*, 1.

interference-bands (in-tėr-fēr'ens-bandz), *n. pl.* In *optics*, bands of color produced by the interference of light-waves. Where the bands are due to diffraction at a straight edge they are straight and parallel; in other cases they may be annular, as in Newton's rings, or hyperbolic, or they may have a variety of other forms determined by the conditions under which interference occurs. Also called *interference fringes.* See *diffraction*, 1, and *interference*, 5.

interference-fringe (in-tėr-fēr'ens-frinj), *n.* See *interference*, 5.

interference-tube (in-tėr-fēr'ens-tūb), *n.* A tube of such form as to afford two paths, adjustable as to length, to a train of acoustic or electrical waves, thus producing the phenomenon of interference.

Through *interference tubes* with two branches only those vibrations are transmitted which are parallel to the plane of the branches.
G. Quincke, in Rep. Brit. Ass'n, 1901, p. 39.

interferential (in″tėr-fē-ren'shal), *a.* [*interference* + *-ial.*] Of or pertaining to the interference of wave-systems, specifically, of light-waves.—**Interferential methods,** methods specifically for the measurement of small distances, in which the phenomena arising from the interference of light are employed. See ★*interferometer* and *extensometer.*

interfering-shoe (in-tėr-fēr'ing-shö), *n.* A horseshoe designed to cure or prevent interference in a horse; an interference-strap. See *interference*, 3.

interferometer (in″tėr-fē-rom'e-tėr), *n.* [Irreg. < *interfer*(*ence*) + Gr. *μέτρον*, measure.] An instrument for the measurement of lengths by means of the phenomena resulting from the interference of two rays of light. The development of the interferometer is chiefly due to Michelson, but the instrument in its modern form is based upon an extension of the principle used by Jamin in his refractometer. The Jamin refractometer was designed for the measurement of the indexes of refraction of transparent bodies by means of the retardation of a ray of light passing through a given thickness of the substance as indicated by its manner of interference with a ray not thus retarded. In this refractometer two plates of parallel glass of equal thickness, silvered on the back, are mounted in a vertical position with their faces parallel as shown in Fig. I. One of these plates, AA, makes an angle of 45° with the axis of the instrument; the second, BB, can be turned about a vertical axis and its distance from AA can be altered at will. A beam of light passes through the slit S and a portion of it reflected from the first face of AA reaches the other plate BB. That portion of this ray which penetrates the second plate and is reflected from the silvered surface at the back (D) is shown in the diagram. That portion of the incident ray which is transmitted by the plate AA is similarly reflected from the silvered back (C) of that plate and likewise reaches BB, a portion of it being reflected from the first surface of that plate. This ray and the one reflected from the back of BB follow the same path after leaving the second plate. When the plates are parallel the two rays will have followed equal and similar paths and will be in the same phase. If now the plate BB is slightly displaced from its vertical position there will be a difference of phase between the rays and a series of horizontal diffraction-fringes will appear. If a thin plate L of any refracting substance is placed in the path of one of the rays between AA and BB the retardation of the light in transmission through it will produce a shifting of the diffraction-fringes from which the index of refraction of the substance may be computed, if its thickness is known; or its thickness, provided the index is known. The instrument therefore may be used either as a refractometer or an interferometer. **Michelson's interferometer.** The principle of this instrument, which is given various forms according to the use to which it is to be put, may be seen from Fig. II. Four plates of plane parallel glass are mounted with their surfaces perpendicular to the bed of the instrument. Parallel rays of light from a source S reach the plate A at an angle of 45°. The back of this plate is covered with a thin film of silver, the density of which is such that approximately half the light is reflected to the plate D while the remainder is transmitted through the plate B to C. C and D are heavily coated with silver on the front face, forming two plane mirrors adjusted so as to return the light falling upon them on the same path. The returning ray from C is in part reflected toward E and the returning ray from D is in part transmitted along the same path. An observer at E, when the instrument is in adjustment, sees a system of hundred fringes due to the interference of these two rays. The plate B which should be as nearly as possible identical in thickness and optical quality with A, is used to compensate for the difference in the path of the two rays when the distances of C and D from A are equal. To an observer at E, rays turned from the plate D and transmitted by A will be seen to interfere with the rays from C reflected by A, provided the distance traversed by the light in traveling from A to D and back is very nearly equal to that from A to C and back. Any relative change in these distances, comparable in amount to a wave-length of light, will produce a shifting of the interference-fringes in the field of view, and it is by the

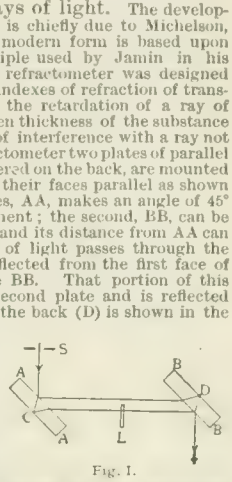


Fig. I.

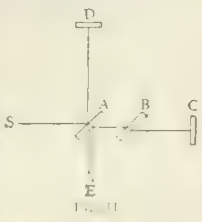


Fig. II.

observation of this shift, by means of a micrometer eyepiece not shown in the diagram, that measurements of distance by means of the interferometer are made. The extraordinary delicacy of this method, which enables a skilled observer to detect a movement of either of the mirrors C or D amounting to the one hundredth of the wave-length, or about .0000005 centimeter, has led to the use of the interferometer for refined determinations of various physical constants.

interferric (in-tėr-fer'ik), *a.* [*inter-* + *ferric.*] In dynamo-electric machinery, lying between the pole-piece and the iron of the armature of a generator or motor: said of the air-gap of such a machine or of any magnetic circuit.

The whole *interferric* gap between the iron of the pole-pieces and the iron of the armature may be treated as an air-space. *Encyc. Brit.*, XXVII. p. 586.

Interflamentar junction, in the gills of bivalve mollusks, one of the horizontal bars of tissue which connect the gill-filaments and cause externally the appearance of longitudinal striation.

interfilar (in-tėr-fī'lär), *a.* [L. *inter*, between, + *filum*, thread, + *-ar*[3].] In *cytol.*, situated or occurring between fibrils or fibrillæ: as, the *interfilar* substance of the cytoplasm of a cell. *Philos. Trans. Roy. Soc.* (London), 1894, ser. B, p. 322.

interflange (in'tėr-flanj), *n.* [*inter-* + *flange.*] The distance between the two flanges of a bobbin measured parallel to the axis.

interflow (in'tėr-flō), *n.* [*inter-* + *flow.*] The flowing of seas or rivers into each other or between boundaries, as between islands.

interfluence (in-tėr'flō-ens), *n.* [L. *interfluere*, flow between, + *-ence.*] A flowing into each other, as rivers; the state of being interfluent.

interfluve (in'tėr-flöv), *n.* [L. *inter*, between, + *fluvius*, river.] In *phys. geog.*, an upland or group of hills between two neighboring valleys.

interfluvial (in-tėr-flö'vi-al), *a.* [L. *inter*, between, + *fluvius*, river, + *-al*[1].] **1.** Situated between rivers.

A deposit of the flooded rivers during a stage of abundant ice melting, with considerable redistribution over the *interfluvial* upland areas by winds. *Sci. Amer. Sup.*, Feb. 14, 1903, p. 22679.

2. See the extract.

Accordingly, when referring to non-glaciated regions I shall use the terms "fluvial" and "*inter-fluvial*" and their derivatives as the designations of the contrasted climatic epochs ordinarily known as "glacial" and "interglacial" in Europe and America. *Bull. Amer. Geog. Soc.*, Nov., 1906, p. 673.

interfoliar (in-tėr-fō'li-är), *a.* [L. *inter*, between, + *folium*, leaf, + *-ar*[3].] **1.** Situated between or among the leaves.—**2.** Same as *interlamellar.* *Encyc. Brit.*, XXX. 798.

interfurrow (in-tėr-fur'ō), *n.* [*inter-* + *furrow.*] The open furrow between two ridges; a water-furrow or dead-furrow.

The form of the old ridges, and the situation of the *inter-furrows*, are preserved. *Loudon*, Encyc. Agr., p. 527.

Interfusion disk. See ★*disk.*

intergenerant (in-tėr-jen'e-rant), *a.* [L. *inter*, between, + *generans* (*-ant-*), ppr. of *generare*, generate.] Intergenerating; interbreeding.

An *intergenerant*, or intergenerating group, is a group of individuals so situated and so endowed that they freely cross with each other. *J. T. Gulick*, in Trans. Linnean Soc. London, Zool., [1888, p. 200.

intergenerating (in-tėr-jen'e-rā-ting), *a.* Interbreeding; intergenerant.

intergeneration (in-tėr-jen-e-rā'shon), *n.* [*inter-* + *generation.*] The interbreeding or crossing of the individuals that compose an intergenerant group.

intergenetic (in-tėr-je-net'ik), *a.* [*inter-* + *genetic.*] Generated or introduced during the individual life-history, or the ontogeny of the individual, or during that of ancestors. [Rare.]

Recurring to an earlier suggestion we may note that all three of these conceptions are '*intergenetic*,' or 'ontophyletic' (the former term being the one which I prefer, and shall use). *J. M. Baldwin*, Development and Evolution, p. 11.

intergential (in-tėr-jen'shial), *a.* [L. *inter*, between, + *gens* (*gent-*), tribe, nation, + *-ial.*] Existing between tribes or nations; international.

Interglacial climate, epoch. See ★*climate*, ★*epoch.*

interglacialism (in-tėr-glā'shial-izm), *n.* [*interglacial* + *-ism.*] The belief that the glacial period was made up of glacial and interglacial epochs.

interglacialist (in-tėr-glā'shial-ist), *n.* [*interglacial* + *-ist.*] One who believes in interglacialism.

intergluteal (in'tėr-glö-tē'al), *a.* [L. *inter*, between, + *glutæus* + *-al*[1].] Situated between the buttocks or nates. *Buck*, Med. Handbook, I. 404.

interglyph (in'tėr-glif), *n.* [L. *inter*, between, + Gr. γλυφή, a cutting, carving.] The space between any two grooves or incisions; especially, in a triglyph, one of the two spaces separating the three grooves.

intergradient (in-tėr-grā'di-ent), *a.* [*inter-* + *gradient.*] In the theory of evolution, said of forms or species that grade or vary into each other, or of grades between two given forms.

We have the evidence of *intergradient* forms from very wide differences to very small ones. *The Independent*, Jan. 26, 1899, p. 259.

intergrafting (in-tėr-gräf'ting), *n.* [*inter-* + *grafting.*] The practice of grafting, as between two given forms or species: usually employed with the idea of reciprocal grafting between the two.

intergranular (in-tėr-gran'ū-lär), *a.* [*inter-* + *granule* + *-ar*[3].] In *neurol.*, lying or situated between the granule-cells of the brain.

intergrow (in-tėr-grō'), *v. i.*; pret. *intergrew*, pp. *intergrown*, ppr. *intergrowing.* [*inter-* + *grow.*] To grow together.

intergrowth, *n.* Specifically—**2.** In *crystal.*, intercrystallization; the intimate union of two mineral species, often in parallel position, produced by simultaneous crystallization; also, one of the subindividuals involved in a composite growth of this character.—**Graphic intergrowth.** Same as *graphic* ★*texture.*

intergular (in-tėr-gū'lär), *a.* and *n.* [*inter-* + *gular.*] **I.** *a.* Lying between or just back of the gular shields of turtles.

With the exception of one species, which lacks horny shields on the shell, the whole of these tortoises are characterized by the presence of an *intergular* shield, between the two gulars on the front of the plastron. *R. Lydekker*, New Nat. Hist., V. 90.

II. *n.* **1.** In *herpet.*, a median, unpaired, horny plate covering the anterior end of the plastron in some of the *Pleurodira* or side-necked turtles.—**2.** In *ichth.*, a bony plate lying just back of the chin, between the rami of the jaw, as in the fresh-water dog-fish, *Amia.*

interhemal, *n.*—**Aggregated interhemal.** Same as ★*hæmal.* *Starks*, Synonymy of the Fish Skeleton, p. 526.

interhemispheral (in-tėr-hem-i-sfē'ral), *a.* [*inter-* + *hemisphere* + *-al*[1].] Same as ★*interhemispheric.* *Buck*, Med. Handbook, II. 187.—**Interhemispheral sulcus.** See ★*sulcus.*

interhemispheric (in-tėr-hem-i-sfer'ik), *a.* [*inter-* + *hemisphere* + *-ic.*] Situated between two hemispheres; specifically, between the two cerebral hemispheres. *Buck*, Med. Handbook, II. 256.

interim, *n.* **3†.** Something done in an interval.

This child of fancy that Armado hight,
For *interim* to our studies shall relate
In high-born words the worth of many a knight
From tawny Spain lost in the world's debate.
Shak., L. L. L., i. 1.

interimistic, *a.* **2.** Provisional; occurring in the interim: as, an *interimistic* truce.

interinsular (in-tėr-in'sū-lär), *a.* [L. *inter*, between, + *insula*, island.] Occurring or existing between islands.

interionic (in-tėr-ī-on'ik), *a.* [*inter-* + *ion* + *-ic.*] Acting between ions.

The deviations between the two values are, however, in most cases easily explainable by a consideration of the *interionic* forces, which probably exert an effect even at dilutions at which the intermolecular forces are negligible, and, further, of the complex ions which are so often formed in solution. *Nature*, Nov. 19, 1903, p. 65.

interisland (in-tėr-ī land), *a.* [*inter-* + *island*[1].] Between islands; belonging in common to several islands.

She [the "Relief"] was finally abandoned for hospital purposes and turned over to the Quartermaster's Department for use as an *inter-island* transport in the Philippines. *Buck*, Med. Handbook, IV. 739.

interjaculatory (in-tėr-jak'u-la-tō-ri), *a.* Of the nature of an inserted ejaculation: as, *interjaculatory* comments.

interjectionalize (in-tėr-jek'shon-al-iz), *v. t.*; pret. and pp. *interjectionalized*, ppr. *interjectionalizing.* To turn into an interjection.

interjectorily (in-tėr-jek'tō-ri-li), *adv.* Interjectionally.

interjectory (in-tėr-jek'tō-ri), *a.* [*interject* + *-ory.*] Of the nature of an interjection in either sense; interjectionary.

interjointal (in-tėr-join'tal), *a.* [*inter-* + *joint* + *-al*[1].] In *geol.*, between joints; occurring between joint-planes of rocks.

interjugal (in-tėr-jö'gal), *a.* [*inter-* + *jugal.*] In *cranium*, relating to or situated between the two jugal points of the skull.

interjugular (in-tėr-jö'gu-lär), *a.* [*inter-* + *jugular.*] In *anat.*, dividing the jugular foramen.

interkathode, *n.* See ★*intercathode.*

interlabial (in-tėr-la'bi-al), *a.* [L. *inter*, between, + *labium*, lip, + *-al*[1].] Situated between the two lips, or labia, or any two lip-like parts. *Buck*, Med. Handbook, IV. 321.

interlacustrine (in-tėr-lā-kus'trin), *a.* [L. *inter*, between, + *lacus*, lake (see *lacustrine*).] Situated between two lakes.

The great *interlacustrine* plateau. *Geog. Jour.* (R. G. S.), XV. 179.

interlamellation (in-tėr-lam-e-lā'shon), *n.* [L. *inter*, between, + *lamella*, lamella, + *-ation.*] The placing of one lamella or layer between others, or the state of being so placed.

interlaminated, *a.* **2.** In *geol.*, interstratified.

Igneous rocks everywhere *interlaminated* with limestone. *Geog. Jour.* (R. G. S.), XIII. 37.

interlatitudinal (in-tėr-lat-i-tū'di-nal), *a.* [L. *inter*, between, + *latitudo* (*-din-*), latitude, + *-al*[1].] Lying between designated parallels of latitude.

interleav, *v. t.* A simplified spelling of *interleave.*

interleaved (in-tėr-lēvd'), *p. a.* Having leaves placed within: specifically, in *geol.*, interstratified in very thin layers or folia.

interligamentary (in-tėr-lig-a-men'ta-ri), *a.* Same as ★*interligamentous.*

interligamentous (in-tėr-lig-a-men'tus), *a.* Situated between or among the ligaments.

interlineally (in-tėr-lin'ē-al-i), *adv.* By interlineation.

interlineate (in-tėr-lin'ē-āt), *v. t.*; pret. and pp. *interlineated*, ppr. *interlineating.* [ML. *interlineare* (pp. *-atus*): see *interline*[1].] To write or print between the lines of; insert between lines; write or print in alternate lines.

interlingual (in-tėr-ling'gwal), *a.* Relating to two or more languages: as, *interlingual* alphabet; *interlingual* geographical data.

interlobar (in-tėr-lō'bär), *a.* [*inter-* + *lobe* + *-ar*[3].] Situated between two lobes, as of the lung.

interlobate (in-tėr-lō'bāt), *a.* [*inter-* + *lobe* + *-ate*[1]. The proper form is *interlobar.*] Situated between lobes; specifically, in *geol.*, lying between adjacent glacial lobes, as deposits.

These at length united in one general ice sheet, but when they retired they assumed again their lobate forms outlined by moraines, and finally allowed an uncovered *interlobate* area of the high lands about the region of the Upper Mississippi. *Science*, March 29, 1901, p. 510.

Interlobate moraine. See ★*moraine.*

interlocal (in-tėr-lō'kal), *a.* [L. *inter*, between, + *locus*, place, + *-al*[1].] Situated between, belonging to, or connecting several places.

interlocally (in-tėr-lō'kal-i), *adv.* In an interlocal position; by way of connecting places or localities.

interlocate (in-tėr-lō'kāt), *v. t.*; pret. and pp. *interlocated*, ppr. *interlocating.* [*inter-* + *locate.*] To place or locate between (other things).

interlock, *v.* **I.** *intrans.* **2.** In *geog.*, to be involved together: specifically applied to the headwaters of two different drainage systems which dovetail together yet flow in opposite courses.

II. *trans.* **2.** To cross-lock or lock in combination: lock so that unlocking can be effected only under certain conditions, or after certain other motions have previously been made.

interlocker (in-tėr-lok'ėr), *n.* Any mechanical, electric, or pneumatic device for locking the levers of a railroad switching or signaling system; any device for controlling mechanism designed to perform only one movement at a time to the exclusion of all other movements. The most simple are catches, locks, or other mechanical appliances designed to prevent the movement of any and all other levers except the one in actual use.

interlocking (in-tėr-lok'ing), *n.* The act of locking together or in combination, as in a railway-switch and signal system. See *interlocking system of signals*, under *interlock*, and ★*signaling.*

interlocutive (in-tėr-lok'ū-tiv), *a.* Relating to interlocution; interlocutory.

interlocutor, *n.* **3.** In *negro minstrelsy,* the middleman. See *middleman,* 4.

interlude (in′tẽr-lūd), *v.*; pret. and pp. *interluded,* ppr. *interluding.* **I.** *trans.* To insert between, as an interlude.

II. *intrans.* To act as an interlude; come between other things.

Some pretty *interluding* discourse.
Quoted in *Southey,* Doctor, interchapter xiv.

interlunation (in″tẽr-lu-nā′shọn), *n.* [*inter-* + *lunation.*] In *astron.,* the period between the old and the new moon; figuratively, a blank or dark interval. *N. E. D.*

intermammary (in-tẽr-mam′ạ-ri), *a.* [L. *inter,* between, + *mamma,* breast, + *-ary.*] Situated between the mammæ or breasts. *Buck,* Med. Handbook, I. 78.

intermammillary (in-tẽr-mam′i-lā-ri), *a.* Same as ★*intermammary.*

intermandibular (in″tẽr-man-dib′ū-lär), *a.* [*inter-* + *mandibular.*] Lying between the mandibles or rami of the under jaw.

intermarginal (in-tẽr-mär′ji-nạl), *a.* [*inter-* + *marginal.*] Situated between the margins.

Longer spines with *intermarginal* plates, purplish and bluish color and larger-sized individuals, are the characters usually distinctive of A. ermaceus.
Science, Jan. 10, 1902, p. 61.

intermarine (in′tẽr-ma-rēn′), *a.* [*inter-* + *marine.*] Situated between seas; carried on between seas or on the sea.

The contention has been raised that large power stations producing electric waves will therefore play havoc with Hertzian wave telegraphy on a smaller scale, such as the ship to shore and *intermarine* communication.
Pop. Sci. Mo., Nov., 1903, p. 56.

intermaxilline (in-tẽr-mak′si-lin), *n.* [*inter-* + *maxilla* + *-ine*[1].] The premaxillary bone, the anterior of the two large bones which form the upper jaw in fishes. It usually bears teeth in the *Acanthopteri. Starks,* Synonymy of the Fish Skeleton, p. 516.

intermedial, *a.* **II.** *n.* A fissure in the parietal lobe of the brain. *Amer. Anthropologist,* Oct.–Dec., 1903, p. 626.

intermediary. **I.** *a.* **Intermediary body.** Same as ★*amboceptor.*

II. *n.* **2.** Same as *nerve of Wrisberg* (*b*) (which see, under *nerve*).

intermediate, *a.* **2.** In *musical notation,* of sharps or flats, accidental; not in the signature. **Intermediate moraine, yield.** See ★*moraine,* ★*yield.*

intermediatory (in-tẽr-mē′di-ạ-tō-ri), *a.* Pertaining to or of the nature of an intermediator.

intermental (in-tẽr-men′tạl), *a.* [L. *inter,* between, + *mens* (*ment-*), mind, + *-al*[1].] Between mind and mind. See the extract.

Suppose that you communicate your ideas to me by means of language. Here an event in your mind is followed by an event in mine, and the relation is obviously causal. On such *inter-mental* causal relations all human intercourse depends.
C. A. Strong, Why the Mind has a Body, p. 242.

intermetallic (in-tẽr-me-tal′ik), *a.* Intermediate as regards two metals; partaking of the nature of two metals; formed by the combination of two metals. *Rep. Brit. Ass'n Advancement of Sci.,* 1900, p. 131.

intermittence-tone (in-tẽr-mit′ẹns-tōn), *n.* See ★*tone*[1].

intermittent, *n.*—**Anticipating intermittent,** an intermittent malarial fever in which the paroxysms appear at an earlier hour in each recurring period.

intermodification (in-tẽr-mod′i-fi-ka′shọn), *n.* Reciprocal modification.

From the balance of *intermodification* between the two.
De Quincey, Logic of Polit. Econ., p. 149.

intermont (in-tẽr-mont′), *a.* [L. *inter,* between, + *mons* (*mont-*), mountain.] Same as *intermontane.*

The third, introduced by an uplift of less amount, a relatively brief episode up to to-day, inasmuch as it has permitted only the erosion of narrow valleys in the floor of the weak-rock *intermont* peneplains.
W. M. Davis, in Science, March 8, 1901, p. 396.

intermorainic (in″tẽr-mō-rā′nik), *a.* [*inter-* + *moraine* + *-ic.*] Situated or existing between moraines; pertaining to the region between two moraines, or to the time intervening between the formation of successive moraines. *J. Geikie,* The Great Ice Age, p. 593.

intermountain (in-tẽr-moun′tạn), *a.* Situated between mountains; intermontane.

He has undertaken the study of the anthropology of the Indian races in this *intermountain* region.
Science, June 12, 1903, p. 952.

intermuscular, *a.* **II.** *n.* One of the ray-like epipleural bones in fishes that are attached to the ribs or just above them. *Starks,* Synonymy of the Fish Skeleton, p. 525.

intermutant (in-tẽr-mu′tạnt), *n.* [L. *inter-,* between, + *mutans* (*mutant-*), ppr. of *mutare,* change.] In *math.,* a permutant having the blanks of each set in one column. *Cayley.*

intermutule (in-tẽr-mū′tul), *n.* [*inter-* + *mutule.*] In *classical arch.,* the space between two mutules, as on the under side of a cornice.

intern, *v. t.* **3.** Specifically, to confine (a ship of a belligerent) in a neutral port into which it may put: a duty of the neutral power, under the provisions of international law, in time of war.

At Woosung are now anchored seven Russian colliers, which will doubtless be *interned. N. Y. Times,* June 7, 1905.

internal, *a.* **6.** To be taken internally, as a medicine.—**7.** Applied to a student who has studied in a college of an examining university, as opposed to an *external* student, or one who has studied in a college not belonging to that institution. **Internal armor,** a backing for main or outboard armor, or for transverse bulkheads which extend from side to side and inclose the battery, protecting it against a raking fire. These bulkheads extend from the water-line to the lower part of the upper deck. **Internal contact, speech.** See ★*contact,* ★*speech.* **Total internal reflection.** See *refraction,* 1.

internalist (in-tẽr′nạl-ist), *n.* [*internal* + *-ist.*] Same as ★*internist.*

internalization (in-tẽr″nal-i-zā′shọn), *n.* **1.** The act of internalizing; the fact or condition of being internalized or made subjective and independent of outside objects.—**2.** That which is internalized.

internalize (in-tẽr′nạl-īz), *v. t.*; pret. and pp. *internalized,* ppr. *internalizing.* To make internal; invest with subjectivity or with inwardness; bring into the perception of the world of thought.

internasal, *a.* **II.** *n.* One of a pair of dermal shields which form part of the head-covering of some reptiles, lying between the nasals or nasal shields. *Proc. Zool. Soc. London,* 1903, p. 128.

internat (aṅ-ter-nä′), *n.* [F., < *interne,* an intern. The E. form would be ★*internate.*] The office filled by an intern.

Four years later, he obtained the *internat,* in which capacity he spent four years more in the hospitals of Paris, after which he was graduated doctor médic.
Nature, June 4, 1903, p. 105.

internat. An abbreviation of *international.*

International Bureau of the American Republics. See ★*bureau.*—**International code.** See ★*code.*—**International Polar Commission.** See ★*commission*[1].

Internationalism, *n.* **2.** [*l. c.*] Specifically, the principle of forcing a somewhat disorganized or weak country to submit to the combined control or protection of several stronger nations.

The investment proved most remunerative, and helped very materially to save the country from bankruptcy and *internationalism.* The danger of being again subjected to the evils of an international administration was very great, for the London Convention contained a stipulation to the effect that if Egypt could not pay her way at the end of two years, another International Commission would be appointed. *Encyc. Brit.,* XXVII. 705.

internationalist, *n.* **3.** An upholder of internationalism, in either sense.

internationality (in-tẽr-nash-ọ-nal′i-ti), *n.* The character or quality of being international or of being imbued with international sentiment.

internationalization (in-tẽr-nash-ọn-ạl-i-zā′shọn), *n.* The act of internationalizing. See ★*internationalism,* 2.

internationalize, *v. t.* **2.** To bring or force (a weak country or territory) under the control or protection of several stronger nations. See ★*internationalism,* 2.

internervular (in-tẽr-nẽr′vụ-lär), *a.* [*inter-* + *nervule* + *-ar*[3].] In *entom.,* situated between the nervules or wing-veins: said of the maculation of a lepidopter's wing. *Proc. Zool. Soc. London,* 1897, p. 13.

internidal (in-tẽr-nīd′ạl), *a.* [L. *inter,* between, + *nidus,* nest, + *-al*[1].] Between different nests: as, the relationships of a symbiotic character between different colonies of insects, such as ants or termites occupying different nests.

internist (in-tẽr′nist), *n.* [L. *internus,* internal, + *-ist.*] One who treats systemic diseases or those of the internal organs not amenable to operative measures; a physician, as distinguished from a surgeon.

Ophthalmologists of high repute and many *internists* (general physicians) of experience and authority.
Science, April 29, 1904, p. 696.

internobasal (in-tẽr-nọ-ba′sạl), *a.* [L. *internus,* internal, + *basis,* base, + *-al*[1].] In *entom.,* pertaining to the hind border of the wing next the body, in *Lepidoptera.* Also *proximocaudal. Proc. Zool. Soc. London,* 1898, p. 428.

internodal. **I.** *a.* **3.** Lying between (and usually alternate with) the nodal joints: applied to joints or segments comprising the column of the *Crinoidea* (those bearing no lateral appendages or cirri).

II. *n.* An internodal joint.

internode, *n.* (*c*) In *zool.*: (*c*) The contracted portion of the shaft of a feather between the slight swellings where the barbs are given off. (*d*) In *acoustics,* the loop or part of a vibrating string between two nodes. **Internode of Ranvier,** the portion of a nerve fiber between two nodes of Ranvier (which see, under *node*).

internodular (in-tẽr-nod′ū-lär), *a.* [*inter-* + *nodule* + *-ar*[3].] Situated between two nodules. *Buck,* Med. Handbook, I. 605.

internuclear, *a.* **2.** Situated between the nuclear layers of the retina.

internunciatory (in-tẽr-nun′si-ạ-tō-ri), *a.* Same as *internuncial.*

internuptial (in-tẽr-nup′shạl), *a.* **1.** Relating to intermarriage.—**2.** Relating to the period elapsing between two marriages of the same person.

Interocular distance. See ★*distance.*

interopercular, *a.* **II.** *n.* Same as *interoperculum. Starks,* Synonymy of the Fish Skeleton, p. 515.

Interorbital vacuity. See ★*vacuity.*

interosculate, *v. i.* **2.** In *biol.,* to form a connection between two species or varieties by intermediate forms.—**3.** In *anat.,* to form a communication between different structures, such as blood-vessels.

Interosseous arteries, veins. See ★*artery,* ★*vein.*

interossicular (in-tẽr-o-sik′ū-lär), *a.* Interosseous. **Interossicular ligament.** See ★*ligament.*

interpalatine (in-tẽr-pal′ạ-tin), *a.* and *n.* [*inter-* + *palatine*[2].] **I.** *a.* Lying between the palatines: as, the *interpalatine* vacuity, found in the skulls of many birds.—**Interpalatine spine.** See ★*spine.*

II. *n.* In *ornith.,* the antero-internal angle of the palatine where it rests against the sphenoid rostrum.

interpalmar (in-tẽr-pal′mär), *a.* and *n.* [*inter-* + *palmar.*] **I.** *a.* Lying in the interradial areas between the palmars of the rays (in the calyx of the *Crinoidea*). See *palmar.*

II. *n.* An interpalmar plate.

interpalpebral (in-tẽr-pal′pe-bral), *a.* [L. *inter,* between, + *palpebra,* eyelid, + *-al*[1].] Situated between the eyelids. *Buck,* Med. Handbook, I. 80.

interpanel (in-tẽr-pan′el), *n.* In *mural decoration,* a space between panels. See ★*interpaneling.*

interpaneling (in-tẽr-pan′el-ing), *n.* Interpanels collectively; ornamentation between panels, in mural decoration.

The paintings by Natoire of the story of Psyche, rest on the *inter-paneling* which separates the recesses.
Lady Dilke, French Furniture and Decoration of XVIIIth Cent., p. 17.

Interparietal shield. See ★*shield.*

interparliamentary (in-tẽr-pär-li-men′tạ-ri), *a.* Existing between or mutually pertaining to parliaments of various nations, or legislative bodies in general.

interparoxysmal (in-tẽr-par-ok-siz′mạl), *a.* [*inter-* + *paroxysm* + *-al*[1].] Occurring in the interval between successive paroxysms.

Interpeduncular ganglion. Same as ★*ganglion isthmi.*

interpellant (in-tẽr-pel′ạnt), *n.* [F. *interpellant,* ppr. of *interpeller:* see *interpel.*] In Continental politics, a member of a legislative assembly who interpellates or demands an explanation from the government.

interpellator (in″tẽr-pe-la′tọr), *n.* Same as ★*interpellant.*

interpenetrant (in-tẽr-pen′ē-trạnt), *a.* [*inter-* + *penetrant.*] Interpenetrating. *W. J. Lewis,* Crystallography, p. 463.

interpermeate (in-tẽr-pẽr′mē-āt), *v. t.*; pret. and pp. *interpermeated,* ppr. *interpermeating.* To pass into or through reciprocally; pervade; penetrate reciprocally.

interpetiolary (in-tėr-pet'i-ọ-la-ri), *a.* Same as *interpetiolar.*

interpilastering (in-tėr-pi-las'tėr-ing), *n.* Interpilasters collectively.

interplait (in-tėr-plat'), *v. t.* To braid or plait together, as locks of hair; braid or plait with something else, as locks of hair with ribbon; intertwine.

interplical (in-tėr-plī'kạl), *a.* [L. *inter*, between, + *plica*, fold, + *-al*¹.] Situated between folds or plications: as, the *interplical* spaces in the gills of lamellibranchs. *Philos. Trans. Roy. Soc.* (London), 1903, ser. B, p. 161.

interplicate (in-tėr-plī'kāt), *v. t.*; pret. and pp. *interplicated*, ppr. *interplicating.* To fold together; fold up between. *Cotgrave.*

interpolative (in-tėr'pọ̄-lā-tiv), *a.* Of the nature of or producing interpolation.

interpolator, *n.* **2.** In *elect.*, a form of relay for the automatic transmission to a submarine cable of signals received through another such cable.

interpolypal (in-tėr-pol'i-pạl), *a.* [*inter-* + *polyp* + *-al*¹.] Situated between polyps: as, an *interpolypal* surface. *Philos. Trans. Roy. Soc.* (London), 1896, ser. B, p. 165.

interporiferous (in″tėr-pọ̄-rif'ẹ-rus), *a.* [*inter-* + *poriferous.*] Lying between poriferous areas: applied to the imperforate plates in the test of some echinoids or sea-urchins.

interpose, *v. t.* **3.** In *chess*, to put (a piece) between the checked king and the checking piece.

interposition, *n.* **4.** In *mineral.*, same as *inclusion*, 2.

interpretational (in-tėr-pre-tā'shọn-ạl), *a.* Pertaining to or of the nature of interpretation.

interpretive (in-tėr'pre-tiv), *a.* Same as *interpretative.*

interprotoplasmic (in-tėr-prō-tọ̄-plaz'mik), *a.* [*inter-* + *protoplasmic.*] Between or connecting the cytoplasmic portions of adjacent or contiguous cells: distinguished from *intraprotoplasmic.* *Pop. Sci. Mo.*, Dec., 1901, p. 175.

interprotoplastic (in-tėr-prō-tọ̄-plas'tik), *a.* Same as ★*interprotoplasmic.*

interprotovertebral (in-tėr-prō-tọ̄-vėr'tẹ̄-brạl), *a.* [L. *inter*, between, + NL. *protovertebra* + *-al*¹.] In *embryol.*, occurring between successive protovertebræ, or mesoblastic somites in the vertebrate embryo. *Philos. Trans. Roy. Soc.* (London), 1895, ser. B, p. 186.

interpterion (in-tėrp-tē'ri-on), *n.*; pl. *interpteria* (-ä). [NL., < *inter*, between, + *pterion.*] In *anthrop.*, the space between the two pteria. *Amer. Anthropologist*, Jan.–March, 1901, p. 36.

interpterygial (in-tėrp-te-rij'i-ạl), *a.* [L. *inter*, between, + Gr. πτερύγιον, wing, + *-al*¹.] In *embryol.*, lying between the regions that give rise to the paired limbs in the vertebrate embryo: as, the *interpterygial* myotomes. *Pop. Sci. Mo.*, Oct., 1902, p. 542.

interpterygoid (in-tėrp-ter'i-goid), *a.* Lying between the pterygoid bones.—**Interpterygoid vacuity.** See ★*vacuity.*

interpterygoidal (in″tėrp-ter-i-goi'dạl), *a.* Same as ★*interpterygoid.*

interpunct (in'tėr-pungkt), *n.* [L. *inter*, between, + *punctum*, point.] A mark or point of punctuation. *Amer. Jour. Philol.*, XIX. 92.

interpunctuate (in-tėr-pungk'tụ̄-āt), *v. t.*; pret. and pp. *interpunctuated*, ppr. *interpunctuating.* [*inter-* + *punctuate.*] To put points between (words); punctuate.

interquarter (in-tėr-kwâr'tėr), *n.* The space between two quarters; specifically, the space between one stud (quarter) in a partition, or the like, and the next.

interradiate (in-tėr-rā'di-āt), *v. i.* [*inter-* + *radiate.*] To radiate into each other: as, an *interradiating* connection and dependence of the parts. *N. E. D.*

interradiation (in″tėr-rā-di-ā'shọn), *n.* The state of interradiating; the interpenetrating with rays of light.

interradium (in-tėr-rā'di-um), *n.*; pl. *interradia* (-ä). [NL. *inter*, between, + *radius*, ray.] **1.** That portion of the disk of an ophiuran or brittle-star which lies between adjoining arms. —**2.** The space between the radial plates in the calyx of a crinoid. Also called *interray.*

interray (in'tėr-rā), *n.* Same as ★*interradium.*

interregional (in-tėr-rē'jọn-ạl) *a.* [*inter-* + *region* + *-al*¹.] Situated between different regions: as, *interregional* zones. *J. P. Smith*, in Jour. of Geol., VIII. 695.

interregnal (in-tėr-reg'nạl), *a.* [*interregn(um)* + *-al*¹.] Relating to or of the nature of an interregnum.

interrenal (in-tėr-rē'nạl), *a.* and *n.* [L. *inter*, between, + *ren*, kidney, + *-al*¹.] **I.** *a.* Situated within the kidneys or the renal organ. *Nature*, Sept. 18, 1902, p. 516.

II. *n.* One of two long, slender bodies, lying in the median line of the ureter, which replace the suprarenals in elasmobranchs.

interresist (in″tėr-rẹ̄-zist'), *v. i.* [*inter-* + *resist.*] To react mutually, offering resistance as the particles of matter do when stress is applied which tends to bring them into closer proximity than that for which equilibrium exists.

> In the case of attractive forces we know nothing of their modus operandi except by the analogy of the collision of *inter-resisting* bodies, which makes us believe that something similar, we know not what, takes place in gravity, magnetism, electricity, etc. *Encyc. Brit.*, XXX. 667.

interresistance (in″tėr-rẹ̄-zis'tạns), *n.* Mutual impenetrability: as, the *interresistance* of the neighboring particles of a substance. *Encyc. Brit.*, XXX. 667.

interrog. An abbreviation (*a*) of *interrogation;* (*b*) of *interrogative;* (*c*) of *interrogatively.*

interrogant (in-ter'ọ̄-gạnt), *n.* An interrogator.

interrogational (in-ter-ọ̄-gā'shọn-ạl), *a.* Of the nature of interrogation; interrogative.

interrupter, *n.* (*a*) In *elect.*, a device for periodically making and breaking the primary circuit of an induction-coil. The simplest form of interrupter, and that usually employed with small coils, is the *Neff hammer* (Fig. 1). It consists of a small block of iron, *b*, mounted at the free end of a vertical metallic strip or spring, *d*. When no current is flowing through the primary coil the position is such that the contact-point *c* is closed. When current flows through the primary coil, however, the core, *a*, attracts *b* and the contact-points are separated. The attraction between the iron armature, *b*, and the core ceases as soon as contact is broken; the spring is released, contact is renewed, the armature is again attracted, and in this way the spring is maintained in rapid vibration, opening and closing the primary circuit at every oscillation. When it is desired to regulate the frequency of interruption, the Neff hammer is modified by the addition of a vertical rod, attached to the free end of the spring, which carries an adjustable weight, and upon the position of this weight the rapidity of interruption will depend. For large coils requiring heavy currents in the primary circuit, which would soon burn out the metallic contact-points of the interrupter just described, the form of *mercury - interrupter* devised by Foucault, shown in Fig. 2, is frequently used. It consists of a vertical spring of flat steel, *i*, fixed below and carrying a cross-arm. To this is attached the armature, *b*, and the contact-points, *c* and *d*, which dip from above into glass cups containing mercury. The height of the mercury is so adjusted that when the interrupter is at rest the contact-point *c* is slightly submerged. The current in the primary circuit, which flows through the mercury into *c*, thence through the coil of the small electromagnet, *a*, causes the latter to attract the armature, *b*, whereupon *c* rises, breaking circuit as it leaves the mercury. The spring is then released, contact

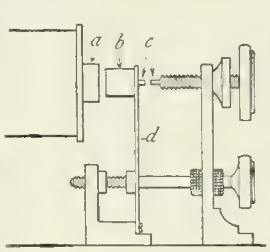


Figure 1

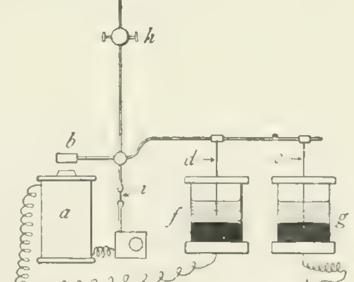


Figure 2
Foucault's Mercury-interrupter

is again made at *c*, and the interrupter continues to oscillate with a frequency determined by the position of the weight, *h*. To prevent the formation of an arc and the evaporation of the mercury, a thick layer of spirits of turpentine, alcohol, or oil fills the upper portions of the mercury cups. In the modern development of the induction-coil, particularly as applied to the production of electric waves and of X-rays, numerous other forms of interrupter have been devised. In one of these, the *turbine-interrupter*, a centrifugal pump forces a jet of mercury against a metal plate, thus furnishing a path for the current. The circuit is made and broken by the intervention of a motor-driven toothed wheel, the speed of which determines the frequency. In other forms of rotary motor-driven interrupters a platinum contact-point is plunged into mercury at each revolution of an eccentric movement attached to the shaft, or a well-insulated commutator is made to revolve in contact with brushes under oil. In the *electrolytic interrupter of Wehnelt* (Fig. 3), a lead plate, *a*, and a platinum wire, *b*, the latter entirely incased in a glass tube with the exception of one or two millimeters at the tip, are immersed in an electrolytic cell containing dilute sulphuric acid. When an electromotive force of from 25 to 80 volts is applied, the direction of the current being such that the lead plate is a cathode, the flow of current becomes rapidly intermittent and the cell forms a very effective interrupter. At higher voltages the platinum wire becomes surrounded with gas and the action ceases. The frequency of interruption increases with the voltage and it depends likewise upon the surface of platinum exposed. Another form of electrolytic interrupter, devised by Caldwell, consists of a cell with electrodes of lead between which an insulating partition with a small opening is mounted. The flow of current under these circumstances is intermittent, and the frequency of interruption depends upon the size of the hole. Interrupters of the vibrating-hammer type, in which the contact is made and broken in a vacuum, were used as early as 1859 by Poggendorff, and recent forms have been devised by McFarlan Moore. *In vacuo* sparking is eliminated and oxidation of the contact-points is prevented. The suddenness of interruption when no spark is present to carry the current is moreover advantageous in many lines of work with the induction-coil.—**Electrolytic interrupter,** in *elect.*, an interrupter for use with induction-coils, in which the current is interrupted by the formation of bubbles of gas by electrolysis at a point where the current is made to pass through an electrolyte. The formation of the bubble, the cessation of the current, the escape of the gas, and the reëstablishment of the current can be made to take place at very short intervals.—**Foucault interrupter.** See ★*interrupter* (*a*).—**Krille's interrupter,** a device for breaking an electrical circuit which is automatically remade after interruption. The bob of a heavy pendulum carries below a plate of mica, which, as the pendulum swings, cuts through a fine mercury bridge joining two adjacent mercury pools. After the pendulum has passed, the bridge is remade by the flow of the mercury.—**Rosapelly's interrupter,** an instrument for recording movements of the larynx. It consists of a small weight on a spring, whose inertia closes an electric circuit when its supporting frame is jarred. *Scripture*, Exper. Phonetics, p. 267.—**String-interrupter,** an interrupter for induction coils in which a vibrating string is used for periodically making and breaking circuit.—**Turbine-interrupter.** See ★*interrupter* (*a*).—**Vapor-interrupter,** a mercury arc in a vacuum. *Hewitt.*—**Wehnelt interrupter.** See ★*interrupter* (*a*).

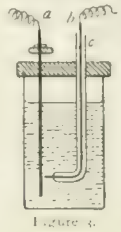
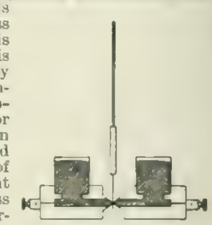
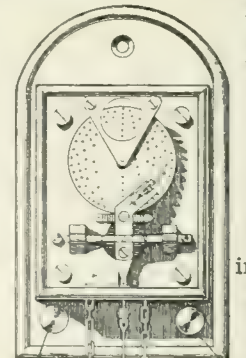


Figure 3.


Krille's Interrupter.

interrupter-clock (in-te-rup'tėr-klok), *n.* A clockwork provided with attachments whereby an electric circuit may be interrupted at recurring intervals of time. In Bowditch's interrupter-clock, as made by Baltzar, a metal tongue is drawn over a series of pins set in a contact-disk. There are ten sets of pins; and interruptions of the circuit may be effected, according to the position given to the tongue, at intervals of 1, 2, 3, 4, 5, 10, 15, 20, 30, or 60 seconds.


Interrupter-clock.
Interrupter-clock, showing the metal tongue [illegible] the figure.

interscapular, *n.* **2.** In the calyx plates of certain *Cystoidea*, like *Caryocrinus*, one of the plates of the third cycle representing the interradials of the *Crinoidea.*

interscendental (in″-tėr-sen-dent'ạl), *a.* [*interscendent* + *-al*¹.] Same as *interscendent.*

interscholastic (in-tėr-skọ-las'tik), *a.* Between schools: as, *interscholastic* games.

intersect (in-tėr-sekt'), *n.* [*intersect*, *v.*] In *geom.*, a point of intersection.

intersegment (in-tėr-seg'mẹnt), *n.* [*inter-* + *segment.*] The space or area between two segments, as in earthworms.

> Papillæ with the arrangement just described were only found in one example; in another, the *intersegment* bore but a single median (genital) papilla.
> *Proc. Zool. Soc. London*, 1901, II. 211.

intersegmentally (in-tėr-seg'men-tạl-i), *adv.* Between segments.

interseminal (in-tẽr-sem'i-nal), *a.* [L. *inter*, between, + *semen* (*semin-*), seed, + *-al*[1].] Situated between or among the seeds, as the scales in the spadices of fossil cycads.

interseptum (in-tẽr-sep'tum), *n.*; pl. *interseptæ* (-tē). Same as *septum*.

intersertal (in-ter-sẽr'tal), *a.* [L. *intersertus*, put between, + *-al*[1].] In *petrog.*, a texture in igneous rocks produced by the presence of numerous small crystals in spaces between tabular or prismatic crystals of feldspar. It is oftenest found in basalts.

intersesamoid (in-tẽr-ses'a-moid), *a.* Lying between sesamoid bones.

interset, *v. t.* **2.** To diversify or adorn (a thing) by placing or setting objects about or upon it.

A gentle wilderness *interset* with garden hidden villas.
T. A. Janvier, Christmas Kalends of Provence, p. 218.

intersexual (in-tẽr-sek'shū-al), *a.* Existing between the sexes; exerted by one sex upon the other.

A subtle but potent *intersexual* influence is among the strongest factors of all adolescent sport.
G. S. Hall, Adolescence, I. 223.

intersow (in-tẽr-sō'), *v. t.* **1.** To sow or sprinkle between other things; intersperse: as, to *intersow* tares with the wheat.—**2.** To plant (a field or other ground) with seed, corn, etc., scattered at intervals; also figuratively: as, the heavens, *intersown* with stars.

interspace, *n.* **3.** In *osteol.*, one of the interstices of bone between the Haversian systems.

interspinal, *a.* **II.** *n.* One of the interhemal or interneural bones of the fish skeleton. *Jordan and Evermann*, Amer. Food and Game Fishes, p. 536.

Interstate commerce law. See ★*law*[1].

interstephanic (in-tẽr-ste-fan'ik), *a.* [*inter-* + *stephan-ion* + *-ic.*] Situated between the stephania.

Frontal diameter, maximum (*interstephanic*) . . . 11.4.
Rep. Bur. Amer. Ethnol., 1895–96, p. 144.

intersterility (in″tẽr-ste-ril'i-ti), *n.* [*inter-* + *sterility.*] The sterility of individuals when crossed or interbred; mutual infertility. Individuals of different species usually exhibit intersterility, which is often called *the sexual bar*. Its existence has been held to be opposed to the opinion that species have originated through the survival of the fittest, because a characteristic cannot count in the struggle for existence unless it is transmitted to descendants.

There are many curious phenomena connected with the susceptibility of the reproductive functions which make it probable that the common *intersterility* of species is an accidental result. *Encyc. Brit.*, XXIX. 373.

Interstitial cell. See ★*cell.*

interstitium (in-tẽr-stish'i-um), *n.*; pl. *interstitia* (-ä). [L.: see *interstice.*] In *church arch.*, the place where the transept meets the nave and choir, this space often being covered by a tower or cupola; the cross.

interstratified, *a.* **2.** Noting volcanic surface-flows which become interbedded between sediments, being thus younger than those below, and older than those above. *Geikie*, Text-book of Geol., p. 719.

interstream (in'tẽr-strēm), *a.* [*inter-* + *stream.*] Lying between two streams.

interstriation (in-tẽr-strī-ā'shon), *n.* A long narrow ridge between two narrow grooves or striæ. [Rare.]

Its delicate ridges or *interstriations*.
Dana, Geology, p. 719.

intersubjective (in-tẽr-sub-jek'tiv), *a.* Existing or obtaining between different individual minds: used only in the phrase *intersubjective intercourse*. See the quotation.

Two forms of experience have emerged in the course of our previous discussion: the experience of a given individual, and Experience as the result of *intersubjective intercourse*. *J. Ward*, Naturalism and Agnosticism, II. 152.

intersuperciliary (in-tẽr-sū-pẽr-sil'i-ā-ri), *a.* [*inter-* + *superciliary.*] In *anthrop.*, located on the median line between the superciliary ridges.

intersystematical (in-tẽr-sis-te-mat'i-kal), *a.* Situated between systems (of stars). See ★*solitary*, 12. *Sir W. Herschel.*

intertemporal (in-tẽr-tem'po-ral), *a.* Situated between the temporal fossæ.—**Intertemporal width.** See ★*width.*

intertillage (in-tẽr-til'aj), *n.* [*inter-* + *tillage.*] In *agri.*, tillage or cultivation between plants (as corn and potatoes), in contrast to tillage of the entire surface when no growing crop is on it. *L. H. Bailey.*

intertongue (in-tẽr-tung'), *v. i.*; pret. and pp. *intertongued*, ppr. *intertonguing.* [*inter-* + *tongue.*] To fit into each other, as do the projections and grooves in tonguing and grooving in carpenters' work.

An intricate series of *intertonguing* areas.
Amer. Jour. Sci., Feb., 1904, p. 157.

intertonic (in-tẽr-ton'ik), *a.* [*inter-* + *tone*[1] + *-ic.*] Occurring between two tones or stresses: as, the first *i* in *tes timo'nial*, *mer ito'rious*; the second *o* in *monotone*, etc.

intertrabecula (in″tẽr-trā-bek'ū-lä), *n.*; pl. *intertrabeculæ* (-lē). [NL., < L. *inter*, between, + NL. *trabecula.*] In *anat.*, a cartilaginous rod lying between the trabeculæ in the embryonic skull: present also in the skull of the lamprey, where it is in two portions, termed respectively the *anterior* and *posterior intertrabecula*.

intertransversal (in″tẽr-trans-vẽr'sal), *a.* [*inter-* + *transverse* + *-al*[1].] Situated between the transverse processes of the vertebræ; noting the intertransversalis muscle. See *intertransversalis.*

intertrappean (in-tẽr-trap'ē-an), *a.* [*inter-* + *trap*[3] + *-e-an.*] In *geol.*, occurring between sheets of trap.

intertriglyph (in-tẽr-trī'glif), *n.* [*inter-* + *triglyph.*] In a Doric frieze, the space between any two triglyphs. Also called *metope*, which term, however, is now used chiefly for the block of marble, sometimes sculptured, which is used to fill that space.

intertrinitarian (in-tẽr-trin-i-tā'ri-an), *a.* [*inter-* + *trinity* + *-arian.*] Existing or occurring between the persons of the Trinity.

intertrude (in-tẽr-trud'), *v. t.*; pret. and pp. *intertruded*, ppr. *intertruding.* [LL. *intertrudere*, thrust between, < L. *inter*, between, + *trudere*, thrust.] To thrust (something) forcibly between. *N. E. D.*

intertuberal (in-tẽr-tū'be-ral), *a.* [L. *inter*, between, + *tuber*, knob, + *-al*[1].] Situated or lying between tuberosities. **Intertuberal diameter.** See ★*diameter.*

intertubercular (in-tẽr-tū-bẽr'kū-lär), *a.* [L. *inter*, between, + *tuberculum*, tubercle, + *-ar*[3].] Situated or occurring between tubercles. *Lancet*, March 16, 1901, p. 760.

intertwinement (in-tẽr-twīn'ment), *n.* The state or action of intertwining; an intertwined enlacement or network.

intertwist (in-tẽr-twist'), *n.* An intertwisted mass; the act of intertwisting or tangling.

interungular (in-tẽr-ung'gū-lär), *a.* [L. *inter*, between, + *ungula*, hoof, + *-ar*[3].] Situated or growing between the hoofs: as, the *interungular* glands of sheep.

interungulate (in-tẽr-ung'gū-lāt), *a.* Erroneous form for ★*interungular.*

interurban (in-tẽr-ẽr'ban), *a.* [L. *inter*, between, + *urbs*, city, + *-an.*] Existing between cities; connecting cities or towns; running or plying between two or more cities or towns: as, an *interurban* railway.

In the United States the original city lines have been extended into the suburbs, and *interurban* lines have been built, so that there are continuous electric lines of several hundred miles in length. The *interurban* service has developed electric railways.
Encyc. Brit., XXVIII. 92.

interureteric (in-tẽr-ū-rē-ter'ik), *a.* [*inter-* + *ureter* + *-ic.*] Situated between the ureters. *Buck*, Med. Handbook, I. 784.

intervaginal (in-tẽr-vaj'i-nal), *a.* [L. *inter*, between, + *vagina*, sheath, + *-al*[1].] Lying between two adjacent sheaths.

interval, *n.*—**Cardio-arterial interval.** See ★*cardio-arterial.*—**Interval of Sturm,** in *optics*, the distance between the two principal meridians of the maximum and minimum curvatures of a refracting surface. Also called *focal interval*. **Post-Kansan interval,** an interglacial epoch or period which followed the Kansan ice advance of the glacial period. *J. Geikie*, The Great Ice Age, p. 757.

intervallic, *a.* **2.** Pertaining to an interval in any sense.

inter-valve (in'tẽr-valv), *a.* In steam-engines, noting the space which is between the throttle- and slide-valves.

intervalvular (in-tẽr-val'vu-lär), *a.* Lying between valves.

intervascular (in-tẽr-vas'kū-lär), *a.* [L. *inter*, between, + *vasculum*, vessel, + *-ar*[3].] Lying between blood-vessels or other vascular structures.

intervein (in-tẽr-vān'), *v. t.* [*inter-* + *vein.*] To intersect with or as with veins.

interveniency (in-tẽr-vē'nien-si), *n.* Same as *intervenience.*

interventional (in-tẽr-ven'shon-al), *a.* [*intervention* + *-al*[1].] Of the value of or characterized by intervention.

interventive (in-ter-ven'tiv), *a.* [*intervent(ion)* + *-ive.*] Pertaining to, characterized by, or tending to intervention.

interventral (in-ter-ven'tral), *a.* [L. *inter*, between, + *venter* (*ventr-*), belly, + *al*[1] (see *ventral*).] One of a pair of cartilages on the ventral side of the notochord whose development forms the intercentrum or hypocentrum: commonly used in the plural.

Interventricular furrow. See ★*furrow.*

Intervertebral ring. See ★*ring*[1].

intervertebrally (in-tẽr-vẽr'tē-bral-i), *adv.* In an intervertebral manner; between vertebræ.

intervesicular (in-tẽr-ve-sik'ū-lär), *a.* [L. *inter*, between, + *vesicula*, vesicle, + *-ar*[3].] Situated between little cavities or vesicles; specifically, in *geol.*, noting the walls of the cavities of a pumiceous rock.

intervisibility (in-tẽr-viz-i-bil'i-ti), *n.* The possibility or fact of being intervisible or mutually visible.

intervocal (in-tẽr-vō'kal), *a.* Same as *intervocalic.*

intervolute (in-tẽr-vo-lūt'), *n.* In *arch.*, in an Ionic or composite capital, the space between the volutes or scrolls.

interzonal (in-tẽr-zō'nal), *a.* [L. *inter*, between, + *zona*, zone, + *-al*[1].] Being or lying between zones.—**Interzonal fibers.** See ★*fiber*[1].

intestin, *a.* and *n.* A simplified spelling of *intestine.*

intestinal, *a.* **4.** Domestic: same as *intestine*, *a.*, 3. [Rare.]

"T is the sword of Castruccio, O King,—
In that stuffe of *intestinal* hate,
Very famous!"
Mrs. Browning, Sword of Castruccio Castracani, st. 5.

Intestinal croup, sinus. See ★*croup*[1], ★*sinus.*

intestino-vesical (in-tes″ti-nō-ves'i-kl), *a.* Relating to the intestine and the bladder.

intimal (in'ti-mal), *a.* [*intima* + *-al*[1].] Relating to the intima or lining membrane of a blood-vessel. *Buck*, Med. Handbook, II. 98.

intimidative (in-tim'i-dā-tiv), *a.* [*intimidate* + *-ive.*] Having power to intimidate: as, an *intimidative* policy. *Giddings*, Prin. of Sociol., p. 112.

intimity (in-tim'i-ti), *n.* [F. *intimité*, < *intime*, < L. *intimus*, intimate: see *intim.*] **1†.** Intimate association; intimacy.—**2.** Intimate quality; inward or inner nature; close seclusion or privacy.

in-toe (in'tō), *n.* Same as ★*hallux valgus.*

in-toed (in'tōd), *a.* [*in*[1] + *toe* + *-ed*[2].] Having the toes turned in or inward.

intoxication, *n.* **Acid intoxication.** Same as ★*acidosis.*

intoxicative (in-tok'si-kā-tiv), *a.* [*intoxicate* + *-ive.*] Causing intoxication; specifically, poisonous.

intr. An abbreviation of *intransitive.*

intra-acinous (in-trä-as'i-nus), *a.* [L. *intra*, within, + NL. *acinus* + *-ous.*] Situated within an acinus, in any sense.

intra-appendicular (in-trä-ap-en-dik'u-lär), *a.* [L. *intra*, within, + *appendicula*, dim. of *appendix*, + *-ar*[3].] Situated or occurring within the appendix vermiformis.

Finkelstein has suggested the possibility of the production of a diverticulum from increased *intra-appendicular* pressure following occlusion of the mouth of the appendix and consequent collection of secretion.
M. H. Fischer, in Jour. Exper. Med., Jan. 1, 1901, p. 347.

intra-arachnoid (in-trä-a-rak'noid), *a.* Situated within, or pertaining to the interior of, the arachnoid membrane.

intra-articular (in″trä-är-tik'ū-lär), *a.* [L. *intra*, within, + *articulus*, a joint, + *-ar*[3].] Situated or occurring within a joint.

intra-atomic (in″trä-a-tom'ik), *a.* [*intra-* + *atom* + *-ic.*] Situated or acting within an atom. *Nature*, June 16, 1904, p. 151.

intra-aural (in-trä-ä'ral), *a.* [L. *intra*, within, + *auris*, ear, + *-al*[1].] Situated or occurring inside of the ear.

intra-auricular (in-trä-ä-rik'u-lär), *a.* [L. *intra*, within, + NL. *auricula*, auricle, + *-ar*[3].] Situated within an auricle, specifically within one of the auricles of the heart.

intrabiontic (in″trä-bī-on'tik), *a.* [L. *intra*, within, + Gr. βίος, life, + ὄν (ὄντ-), neut. of ὤν, being.] Of or pertaining to that which

exists or takes place within an organism. *Weismann* (trans.), Germ-plasm, p. 107. - **Intrabiontic selection.** See ★*selection.*

intrabred (in-trä-bred′), *a.* [*intra-* + *bred*[1].] Bred within the limits of the pure stock or race or tribe.

The "purest" race is for me the one which has been isolated, *intrabred*, and selected for the longest period.
Biometrika, Nov., 1903, p. 511.

intrabronchial (in-trä-brong′ki-al), *a.* [L. *intra*, within, + *bronchia* + -*al*[1].] Situated or occurring within the bronchial tubes. *Jour. Exper. Med.*, Oct. 25, 1900, p. 182.

intracanalicular (in-trä-kan-a-lik′ū-lär), *a.* [L. *intra*, within, + *canaliculus*, a little channel, + -*ar*[3].] Situated or occurring within a canaliculus.

Intracanalicular growth is to be noted compressing some of the ducts.
Jour. Med. Research, Dec., 1907, p. 306.

intracanonical (in″trä-ka-non′i-kal), *a.* [*intra-* + *canon* + -*ic* + -*al*[1].] Of or pertaining to that which is contained within the canon of Holy Scripture.

intracarpal (in-trä-kär′pal), *a.* [L. *intra*, within, + NL. *carpus*, + -*al*[1].] Situated within the tarsus, or among the bones of the wrist in man. *Buck*, Med. Handbook, I. 553.

Intracellular pangenesis. See ★*pangenesis.*

intrachordal (in-trä-kôr′dal), *a.* [*intra* + *chord(a)* + -*al*[1].] Occurring or situated within the chorda, or notochord of the vertebrate embryo. *Philos. Trans. Roy. Soc.* (London), 1896, ser. B, p. 10.

intracœlial (in-trä-sē′li-al), *a.* [L. *intra*, within, + Gr. κοιλία, belly, + -*al*[1].] Situated or occurring within any body-cavity or a ventricle of the brain.

intracolic (in-trä-kol′ik), *a.* [L. *intra*, within, + Gr. κόλον, colon, + -*ic*.] Situated or occurring within the colon.

intracollegiate (in″trä-ko-lē′ji-āt), *a.* [L. *intra*, within, + E. *collegiate*.] Taking place or occurring within a college or university: opposed to *intercollegiate*: as, *intracollegiate* sports. *New York Evening Post*, Dec. 22, 1905.

intracorporeal (in-trä-kôr-pō′rē-al), *a.* [L. *intra*, within, + *corpus* (*corpor-*), body, + -*e*-*al*[1].] Situated within the body or within any anatomical structure called corpus.

intracorpuscular (in″trä-kôr-pus′kū-lär), *a.* [L. *intra*, within, + *corpusculum*, corpuscle, + -*ar*[3].] Situated or occurring within a corpuscle, especially a blood-corpuscle.

intracutaneous (in″trä-kū-tā′nē-us), *a.* [L. *intra*, within, + *cutis*, skin: see *cutaneous*.] Lying within the substance or between the layers of the skin.

intrad (in′trad), *adv.* [L. *intra*, within, + -*ad*[3].] In a direction toward the interior of the body.

intradermic (in-trä-dēr′mik), *a.* [L. *intra*, within, + Gr. δέρμα, skin, + -*ic*.] Same as ★*intracutaneous.*

intraduodenal (in″trä-dū-ō-dē′nal), *a.* [L. *intra*, within, + *duodenum* + -*al*[1].] Situated or occurring within the cavity of the duodenum.

intradural (in-trä-dū′ral), *a.* [L. *intra*, within, + NL. *dura* + -*al*[1].] Lying between the layers of the dura mater.

intra-ecclesiastical (in″trä-e-klē-zi-as′ti-kal), *a.* [L. *intra*, within, + *ecclesia*, church: see *ecclesiastical*.] Of or pertaining to that which occurs or exists within the church.

intra-epiphyseal (in-trä-ep-i-fiz′ē-al), *a.* [L. *intra*, within, + *epiphysis* + -*e*-*al*[1].] Situated or occurring within the epiphysis: noting resection performed through the epiphysis of a long bone: opposed to extra-epiphyseal resection, in which the division is made through the shaft of the bone.

intrafetation (in″trä-fē-tā′shon), *n.* [L. *intra*, within, + *fetus* + -*ation*.] The development of a fetus or part of a fetus within another fetus. Also called *fetal inclusion* and *fœtus in fœtu*.

intrafilamentar (in″trä-fil-a-men′tär), *a.* [*intra-* + *filament* + -*ar*[3].] Situated within a filament: as, the *intrafilamentar* septum in the gill-filaments of some mollusks. *Philos. Trans. Roy. Soc.* (London), 1896, ser. B, p. 166.

intrafissural (in-trä-fish′ū-ral), *a.* [*intra-* + *fissure* + -*al*[1].] Situated within a fissure, as of the brain. *Buck*, Med. Handbook, II. 189.

intragastric (in-trä-gas′trik), *a.* [L. *intra*, within, + Gr. γαστήρ, stomach, + -*ic*.] Situated within the stomach. *Athenæum*, Sept. 26, 1903, p. 419.

intraglacial (in-trä-glā′shial), *a.* [*intra-* + *glacial*.] Situated or occurring within the mass of a glacier: englacial: as, *intraglacial* drift. *Dana*, Manual of Geol., p. 958.

intraglandular (in-trä-glan′dū-lär), *a.* [L. *intra*, within, + NL. *glandula*, gland, + -*ar*[3].] Situated or occurring within a gland.

intraglobular (in-trä-glob′ū-lär), *a.* [L. *intra*, within, + *globulus*, globule, + -*ar*[3].] Within a globule, specifically within a blood-corpuscle.

intraligamentary (in-trä-lig-a-men′ta-ri), *a.* [L. *intra*, within, + *ligamentum*, ligament, + -*ary*.] Situated within a ligament, specifically the broad ligament of the uterus.

intralingual (in-trä-ling′gwal), *a.* [L. *intra*, within, + *lingua*, tongue, + -*al*[1].] Situated within the tissues of the tongue.

intralocular (in-trä-lok′ū-lär), *a.* [L. *intra*, within, + NL. *loculus* + -*ar*[3].] Situated within the loculi (chambers or cellular spaces) of any structure.

intramammary (in-trä-mam′a-ri), *a.* [L. *intra*, within, + *mamma*, breast, + -*ary*.] Situated within the breast.

intramatrical, *a.* (*b*) Noting that part of a fungus or parasitic growth which lies within the host plant. See ★*extramatrical.*

The connection of the ascus-layer thus formed with the *intramatrical* mycelium can be seen even when the asci are mature.
De Bary (trans.), Compar. Morphol. and Biol. of Fungi, [p. 265.

intramental (in-trä-men′tal), *a.* [L. *intra*, within, + *mens* (*ment-*), mind, + -*al*[1].] Existing within the mind: opposed to ★*extramental.*

The *intra-mental* and the extra-mental objects are not different in kind as the Cartesians supposed, but rather, as Aristotle and the scholastics maintained, they differ only in position and in relational context.
Jour. Philos., Psychol. and Sci. Methods, May 26, 1904, [p. 300.

intramesenterial (in″trä-mez-en-tē′ri-al), *a.* [*intra-* + *mesentery* + -*al*[1].] In cœlenterates, situated within a mesentery or inclosed between the two mesenteries of a pair. **Intramesenterial space,** in cœlenterates, as the sea-anemones and corals, an endocœle. Also called *intraseptal space.*

intramorainic (in″trä-mō-rā′nik), *a.* [*intra-* + *moraine* + -*ic*.] Situated within, or relating to the area within, the curve of a lobate moraine. *Geikie*, Textbook of Geol. (4th ed.), p. 1342.

intramyocardial (in″trä-mī-ō-kär′di-al), *a.* [L. *intra*, within, + Gr. μῦς, muscle, + καρδία, heart, + -*al*[1].] Situated within the muscular wall of the heart. *Buck*, Med. Handbook, II. 110.

intranarial (in-trä-nā′ri-al), *a.* [L. *intra*, between, + *nares*, nostrils, + -*ial*.] Within the nostrils: usually with some qualifying phrase to indicate whether the anterior openings or the posterior nares are meant.

intranatal (in-trä-nā′tal), *a.* [L. *intra*, within, + *natus*, born, + -*al*[1].] Occurring during birth.

Ante-natal, *intra-natal*, or neo-natal conditions.
Encyc. Brit., XXXI. 304.

intraneous (in-trā′nē-us), *a.* [LL. *intraneus*, < *intra*, within: see *intra-*. Compare *extraneous*.] Existing within; internal; inner.

intraneural (in-trä-nū′ral), *a.* [L. *intra*, within, + Gr. νεῦρον, nerve, + -*al*[1].] Situated or occurring within the substance of a nerve. *Buck*, Med. Handbook, II. 110.

intranidal (in-trä-nid′al), *a.* [L. *intra*, within, + *nidus*, nest, + -*al*[1].] 1. In *neurol.*, being within a nidus or aggregate of nerve-cells: as, *intranidal* fibers.—2. In *zoöl.*, being or occurring within a nest or colony of insects: opposed to ★*internidal.*

in trans. An abbreviation of the Latin *in transitu*, in course of transit.

intransigeance (an-tron-sē-zhons′), *n.* [F.: see ★*intransigency.*] 1. Same as ★*intransigency.*—2. Intransigentism, especially in art. See ★*intransigeant.*

intransigeant (an-tron-sē-zhon′), *n.* [F.: see *intransigent*.] An intransigentist; specifically, a Parisian name for an ultra-independent among artists.

intransigency (in-tran′si-jen-si), *n.* In *politics*, the quality of absolute irreconcilableness; dogged hostility; obstinate refusal to make compromise.

intransitable (in-tran′sit-a-bl), *a.* [*in-*[3] + *transit* + -*able*.] Not possible for transit; impassable.

In *intransitable* gorges of the coast range of mountains.
Geog. Jour. (R. G. S.), X. 64.

intransitive, *a.* **1.** In *gram.*: (*b*) Noting the case which expresses the subject of the intransitive verb or the object of the transitive verb. (*c*) In *Eskimo gram.*, noting the thing possessed. Also called *objective*. *Barnum*, Innuit Language, p. 12.

intransitivity (in-tran-si-tiv′i-ti), *n.* [*intransitive* + -*ity*.] The quality of being intransitive, in any sense. Specifically, in *math.* and *logic*: (*a*) The quality or characteristic of being not transitive, that is, not necessarily transitive; that characteristic of a relation by which A's having it to B, and B's having it to C do not together always imply that A has it to C. (*b*) The quality or characteristic of being necessarily intransitive; that characteristic of a relation by which A's having it to B, and B's having it to C together always exclude A's having it to C.

The treatise proper extends over 39 pages, the successive headings being as follows: . . . Abelian groups, groups of order a power of a prime, Sylow's theorem and its extensions, Hamiltonian groups, transitivity, *intransitivity*.
Science, June 5, 1903, p. 904.

intransparency (in-tràns-pär′en-si), *n.* [*intransparen(t)* + -*cy*.] Opacity; also, an opaque body.

Centrally placed *intransparencies*, which cover the pupil. *Encyc. Brit.*, XXXI. 570.

intransparent (in-tràns-pär′ent), *a.* [*in-*[3] + *transparent*.] Opaque; not transparent.

This newly-formed tissue [cicatricial in cornea] is always *intransparent*, and remains so, except in very young children, in whom it gradually, to a great extent, clears up. *Encyc. Brit.*, XXXI. 570.

Intranuclear cycle or **stage,** the life-cycle which is passed through by a parasitic micro-organism in the nucleus of one of the cells of its host: opposed to ★*cytoplasmic cycle* or *stage.*

intra-oral (in-trä-ō′ral), *a.* [L. *intra*, within, + *os* (*or-*), mouth, + -*al*[1].] Situated or occurring within the cavity of the mouth.

Intra-orbital sulcus. See ★*sulcus.*

intra-osteal (in-trä-os′tē-al), *a.* Same as *intra-osseous.*

intra-ovular (in-trä-ō′vū-lär), *a.* Situated within the egg or ovum. Compare ★*extra-ovular.*

intraparenchymatous (in-trä-par-eng-kim′a-tus), *a.* [*intra-* + *parenchyma*(*t-*) + -*ous*.] Situated within the parenchyma of an organ. *Buck*, Med. Handbook, II. 109.

intraparochial (in″trä-pa-rō′ki-al), *a.* [L. *intra*, within, + ML. *parochia*, parish, + -*al*[1].] Occurring or existing within a parish.

intra partum (in′trä pär′tum). [L.] During childbirth.

intrapericardiac (in″trä-per-i-kär′di-ak), *a.* Same as ★*intrapericardial.*

intrapericardial (in″trä-per-i-kär′di-al), *a.* [L. *intra*, within, + NL. *pericardium* + -*al*[1].] Situated within the pericardium. *Buck*, Med. Handbook, I. 406.

intraperineal (in″trä-per-i-nē′al), *a.* [L. *intra*, within, + NL. *perineum* + -*al*[1].] Situated within the tissues of the perineum.

intraperiosteal (in″trä-per-i-os′tē-al), *a.* Situated or occurring within or beneath the periosteum.

These weapons with an increasing tendency of *intraperiosteal* growth reached a large size in width and length and remained permanent structures.
Proc. Zool. Soc. London, 1902, p. 218.

intraperitoneally (in-trä-per-i-tō-nē′al-i), *adv.* Within the peritoneal cavity. *Med. Record*, March 28, 1903, p. 495.

intrapial (in-trä-pī′al), *a.* [L. *intra*, within, + *pia* (*mater*) + -*al*[1].] Situated or occurring within the meshes of the pia mater.

intraplacental (in″trä-plā-sen′tal), *a.* [L. *intra*, within, + *placenta* + -*al*[1].] Situated within the substance of the placenta.

intrapleural (in-trä-plö′ral), *a.* [L. *intra*, within, + *pleura* + -*al*[1].] Situated within the pleural cavity.

intraplical (in-trä-plī′kal), *a.* [L. *intra*, within, + *plica*, a fold, + -*al*[1].] Lying within a fold or plication; interlamellar.

Ciliated discs are situated on the sides of long spurs or ingrowths from the interlamellar (*intraplical*) edge of the filament.
Philos. Trans. Roy. Soc. (London), 1903, ser. B, p. 210.

intrapolar (in-trä-pō′lär), *a.* In *elect.*, lying between the poles: said of the region between the terminals of an electrolytic cell or between the poles of a magnet.

intrapontine (in-trä-pon′tin), *a.* [L. *intra*, within, + *pons* (*pont-*), bridge, + *-ine*[1].] Situated within or passing through the pons Varolii. *Philos. Trans. Roy. Soc.* (London), 1894, ser. B, p. 765.

intraprecuneal (in″trä-prē-ku′nē-al), *n.* A fissure in the precuneal region of the human brain anterior to the cuneus. *Amer. Anthropologist*, Oct.–Dec., 1903, p. 623.

intraprostatic (in″trä-pros-tat′ik), *a.* [*intra-* + *prostate* + *-ic.*] Situated or occurring within the prostate gland.

Intrapulmonary respiration, the respiration of the pulmonate *Arachnoida*, where there is no respiratory motion of the body-wall.

intrapyretic (in″trä-pī-ret′ik), *a.* [L. *intra*, within, + Gr. *πυρετός*, fever, + *-ic.*] Occurring during the continuance of fever.

intraracial (in-trä-rā′shal), *a.* Occurring within a race. Compare with *interracial*.

The interracial correlation of the mean numbers of stamens and pistils is very much greater than the mean *intraracial* correlation between stamens and pistils, being to the latter nearly in the ratio of 1 to 7.
Biometrika, Feb., 1903, p. 152.

intrarectal (in-trä-rek′tal), *a.* [L. *intra*, within, + *rectum* + *-al*[1].] Situated within the rectum.

intrarachidian (in″trä-ra-kid′i-an), *a.* [*intra-* + *rachis* (*rachid-*) + *-an.*] Situated within the spinal canal.

intrascrotal (in-trä-skrō′tal), *a.* [L. *intra*, within, + *scrotum* + *-al*[1].] Situated within the scrotum.

intraselection (in″trä-sē-lek′shon), *n.* [*intra-* + *selection.*] In *biol.*, a hypothetical struggle for existence between the constituent elements of an organ or organism, with the survival of those fittest for the organ or organism under the conditions in which it is placed.

Weismann's "*Intra-selection*" also involves struggle, in an obscure way.
J. M. Baldwin, Development and Evolution, p. 218.

intraseminal (in-trä-sem′i-nal), *a.* [L. *intra*, within, + *semen* (*semin-*), seed, + *-al*[1].] Lying within a seed; also, admixed with the spermatic fluid. *Nature*, April 3, 1902, p. 519. **Intraseminal development**, the entire series of changes undergone by the embryo in the transformation of an ovule into a mature seed.

intraseptal (in-trä-sep′tal), *a.* [*intra-* + *septum* + *-al*[1].] Situated within a septum: as, the *intraseptal* space between a pair of mesenteries in *Anthozoa*.—**Intraseptal space.** Same as ★*intramesenterial space*.

intraserous (in-trä-sē′rus), *a.* [*intra-* + *serum* + *-ous.*] Occurring within the serum of the blood.

intraspecific (in″trä-spē-sif′ik), *a.* [L. *intra*, within, + E. *specific.*] Relating to characters or processes which have to do with the internal organization of species. Thus evolution is an intraspecific phenomenon and heterism is intraspecific diversification. *Cook and Swingle.*

intrasporal (in-trä-spō′ral), *a.* Taking place within the spores.

intrastitial (in-trä-stish′al), *a.* Situated or occurring within the cells or fibers of an organ: opposed to *interstitial*.

intrastriate (in-trä-strī′āt), *a.* A term used by G. Elliot Smith to emphasize the distinctive relations of the various occipital sulci of the human and ape brain to the cortical area which contains the stria Gennari.

intrastromal (in-trä-strō′mal), *a.* [L. *intra*, within, + NL. *stroma* + *-al*[1].] Lying within the stroma of any organ or other part.

intrasynovial (in″trä-si-nō′vi-al), *a.* [L. *intra*, within, + NL. *synovia* + *-al*[1].] Lying within the synovial cavity of a joint.

intratellural (in″trä-te-lū′ral), *a.* Same as *intratellaric*.

intratesticular (in″trä-tes-tik′ū-lär), *a.* Situated or occurring within the testicle.

intratrabecular (in″trä-trā-bek′ū-lär), *a.* [L. *intra*, within, + *trabecula* + *-ar*[3].] Being within the trabeculæ or supporting tissue: as, an *intratrabecular* network of blood-vessels.

intratracheal (in-trä-trā′kē-al), *a.* [L. *intra*, within, + *trachea* + *-al*[1].] Situated or occurring within the trachea.

intratubal (in-trä-tū′bal), *a.* [L. *intra*, within, + *tubus* + *-al*[1].] Being within a tube: usually noting the Fallopian or Eustachian tube.

intratubular (in-trä-tū′bū-lär), *a.* [*intra-* + *tubule* + *-ar*[3].] Being within a tubule, especially within the renal tubules.

intratympanic (in″trä-tim-pan′ik), *a.* [L. *intra*, within, + *tympanum* + *-ic.*] Situated or occurring within the tympanic cavity or drum of the ear.

At this moment . . . the *intra-* and extra-*tympanic* pressures are equalized. *Buck*, Med. Handbook, I. 649.

intra-urethral (in″trä-ū-rē′thral), *a.* [L. *intra*, within, + *urethra* + *-al*[1].] Situated within the urethra.

intravaginal (in-trä-vaj′i-nal), *a.* [L. *intra*, within, + *vagina* + *-al*[1].] Situated within the vagina.

intravertebral (in-trä-vèr′tē-bral), *a.* [L. *intra*, within, + *vertebra* + *-al*[1].] Situated or occurring within a vertebra; intraspinal.

intravertebrally (in-trä-vèr′tē-bral-i), *adv.* Within the body, or centrum, of a vertebra.

This *intravertebrally* situated cartilage has been erroneously described as chordal cartilage.
H. Gadow, Amphibia and Reptiles, p. 12.

intravital (in-trä-vī′tal), *a.* [L. *intra*, within, + *vita*, life, + *-al*[1].] Occurring during life.

intra vitam (in′trä vī′tam). [L.] During life.

Intra-vitam staining, the staining of tissues during the life of the organism, in contradistinction to staining of the isolated parts after death. Such staining is more commonly spoken of as *vital staining*.

in-tree (in′trē), *n.* [Burm. *eng* or *in* + *tree.*] Same as *eng*.

intrench, *v. t.* **5.** To incise; cut down or deepen the valley of (a stream).

If uplift permits a mature or old meandering river to *entrench* itself beneath its former flood plain, its new valley will be regularly curved, instead of irregularly crooked, as in its first youth.
W. M. Davis, Elem. Phys. Geog., p. 253.

Int. Rev. An abbreviation of *Internal Revenue*.

intrigant, *n.* **II.** *a.* Intriguing; plotting; manœuvering.

intrine (in-trīn′), *v. t.*; pret. and pp. *intrined*, ppr. *intrining*. [*in-*[2] + *trine*[3].] To unite in a group of three. [Rare.]

That living Light which so proceeds from its Lucent Source that It is not disunited from It, nor from the Love which with them is *intrined*, through Its own bounty collects Its radiance.
C. E. Norton, tr. of Dante, Paradise, xiii. 84.

intrinsic, *a.* **5.** In *pathol.*, pertaining to the internal parts or to the structures proper of an organ.—**Intrinsic pressure, strain, variation.** See ★*pressure*, etc.

intro. An abbreviation of *introduction*.

intro-active (in-trō-ak′tiv), *a.* [*intro-* + *active.*] Acting within or upon itself; loosely, reciprocally active.

introceptive (in-trō-sep′tiv), *a.* [*intro-* + (*re*)*ceptive.*] Receiving within itself or its own bounds.

introducer, *n.* **2.** An instrument for introducing an intubation-tube; an intubator.

introessive (in-trō-es′iv), *n.* [L. *intro*, within, + *esse*, be, + *-ive.*] In *gram.*, noting the case which expresses motion 'into.' Better called *illative*.

introitus (in-trō′i-tus), *n.* [L.: see *introit.*] In *anat.*, the entrance leading into a canal or cavity.

introjection (in-trō-jek′shon), *n.* [L. *intro*, within, + *-jectio*(*n-*), throwing.] The act of throwing within.

intromissible (in-trō-mis′i-bl), *a.* [L. *intromissus*, pp. of *intromittere*, intromit, + *-ible.*] That can be intromitted or introduced.

intromissive (in-trō-mis′iv), *a.* That can intromit or let in (light); relating to intromission.

introrsal (in-trôr′sal), *a.* Same as *introrse*.

introspectional (in-trō-spek′shon-al), *a.* Pertaining to or of the nature of introspection.

introsuction (in-trō-suk′shon), *n.* [*intro-* + *suction.*] A sucking inward.

introsuscept (in″trō-su-sept′), *v. t.* and *i.* [L. *intro*, within, + *suscipere* (pp. *susceptus*), take in.] Same as ★*intussuscept*.

introtraction (in-trō-trak′shon), *n.* [*intro-* + *traction.*] The process or act of drawing inward.

introverse (in-trō-vèrs′), *a.* [L. *introversus*, < *intro* + *versus*, turned inward: see *introvert.*] Introverted.

introvision (in-trō-vizh′on), *n.* [*intro-* + *vision.*] Introspection; inward vision.

introvolution (in″trō-vō-lū′shon), *n.* [*intro-* + *volution.*] The act of involving, infolding, or inwrapping one thing within another; the coiling of something around itself.

intrude, *v. t.*—**Intruded sheet.** See ★*sheet*[1].

intrusive, *a.* **3.** (*b*) Specifically, in *geol.* applied to those igneous masses which have forced their way between older rocks and have never reached the surface: contrasted with ★*extrusive*. See *intrusive rocks*, under *intrusive*. **Intrusive sheets.** See ★*sheet*[1].

II. *n.* In *geol.*, a mass of igneous rock which has forced its way between older walls or strata, but has never reached the surface of the earth. Intrusives occur as batholiths, laccoliths, intruded sheets, and dikes.

Believing that assimilation by magmatic action of some kind is responsible for practically all the chambers occupied by those *intrusives* with which he is more or less intimately acquainted.
R. A. Daly, in Amer. Jour. Sci., April, 1903, p. 272.

intubate (in′tū-bāt), *v. t.*; pret. and pp. *intubated*, ppr. *intubating*. [L. *in-*[2] + *tubus*, tube, + *-ate*[2].] To insert a tube into; specifically, perform intubation of the larynx. *Med. Record*, July 25, 1903, p. 129.

intubator (in′tū-bā-tor), *n.* An instrument for inserting the tube in the operation of intubation.

intuent (in′tū-ent), *a.* [L. *intuens* (*-ent-*), ppr. of *intueri*, contemplate: see *intuition.*] Knowing by intuition; intuitive.

intuitionalist, *n.* **2.** Same as *intuitionist*.

Hutcheson, Reid . . . Wilson and Hamilton . . . were all, more or less distinctively, *intuitionalists*.
Contemporary Rev., XI. 258. *N. E. D.*

intussuscept (in″tu-su-sept′), *v. t.* and *i.* [L. *intus*, within, + *suscipere* (pp. *susceptus*), take in. Compare ★*introsuscept.*] To take up into itself or into something else; invaginate.

A haunting tendency of modern conservatism to make the post and ante-mortem life *intussuscept* with each other.
Amer. Jour. Relig. Psychol. and Education, May, 1904, p. 48.

intussusceptum (in″tu-su-sep′tum), *n.*; pl. *intussuscepta* (-tä). [NL.] The portion of bowel which is contained within the other in intussusception.

intussuscipiens (in″tu-su-sip′i-ens), *n.* [NL.] The portion of bowel which contains the other in intussusception.

Inula camphor. Same as *alant camphor* (which see, under *camphor*).

inulaceous (in-ū-lā′shius), *a.* Belonging or relating to the plant genus *Inula*, or to the tribe *Inuleæ*.

inulase (in′ū-lās), *n.* [*inul-in* + *-ase.*] A ferment which converts inulin into fruit-sugar.

inulate (in′ū-lāt), *n.* [*inul-ic* + *-ate*[1].] A salt of inulic acid.

Inuleæ (i-nū′lē-ē), *n. pl.* [NL. (Cassini, 1812), < *Inula* + *-eæ.*] A large tribe of composite plants typified by the genus *Inula*, the elecampane family. It embraces 166 genera, subdivided into 9 subtribes. Besides the elecampane and other large yellow-flowered plants it includes the cudweeds and life-everlasting, which have a very different aspect.

inulin, *n.* **Soluble inulin.** Same as ★*inuloid*.

inuloid (in′ū-loid), *n.* [*inul-in* + *-oid.*] A colorless compound, $C_6H_{10}O_5$, differing in properties from inulin only by its greater solubility. It is contained in unripe Jerusalem artichokes. Also called *soluble inulin*.

inutile, *a.* **II.** *n.* A useless thing.

A "what-not," whose shelves bore a mock orange, a piece of glass in a curious chunk . . . and other *inutiles*, which kept their place merely because long occupancy had given them a permanent right of existence.
C. D. Stewart, Fugitive Blacksmith, ii.

inv. An abbreviation (*a*) of *invented*; (*b*) of *inventor*; (*c*) of *invoice*.

invaccination (in-vak-si-nā′shon), *n.* [*in-*[2] + *vaccination.*] Inoculation with some other disease during the process of vaccination.

invaginator (in-vaj′i-nā-tor), *n.* An instrument used to introvert the tissues in the radical operation for hernia.

invar (in-vär′), *n.* [*invar*(*iable*).] The trade-name of an alloy of steel and nickel which, when made with 36.2 per cent. nickel, has a coefficient of expansion for heat which is virtually zero: hence its name. It was discovered by Dr. Guillaume. Sometimes called *Guillaume alloy*, and also *Sèvres alloy*, from the fact that the investigation of its properties was made at Sèvres.

invariant. **I.** *a.* **2.** In *phys. chem.*, having a variance equal to zero. The variance (V) of a chemical system is expressed by the equation $V = c - 2 - \phi$, where c is the number of independent components and ϕ is the number of phases in which the system may exist.

II. *n.* **2.** An entity compounded of constituents, some of them subject to change or variation, which, despite this change, remains itself unchanged.—**Natural invariant**, an invariant constituted by the very nature of the thing to which

it pertains: thus, the product of an altitude by its base is a natural invariant for the triangle, the product of an altitude by the area of its base is a natural invariant for the tetrahedron.

invasion, *n.* **4.** In *phytogeog.*, the phenomenon of the movement of plants from an area of one character into one of a different character, and their colonization in the latter. It includes, according to F. E. Clements, the ideas both of migration and of ecesis. (See ★*migration*, 3, and ★*ecesis*.) The same author distinguishes invasions as continuous or intermittent, complete or partial, temporary or permanent. First thus used by Gueze, 1882.

inventorize (in-ven'tọ-rīz), *v.*; prep. and pp. *inventorized*, ppr. *inventorizing*. [*inventor-y* + *-ize*.] **I.** *trans.* To inventory; catalogue: as, to *inventorize* the furniture in a house.

II. *intrans.* To make an inventory.

Inverness coat, overcoat, or cape. See ★*coat*[2].

inverse. I. *a.* **3.** In *logic*, with conclusion as hypothesis and hypothesis as conclusion.

If, in the true statement *x* is *u*, we simply interchange the subject and predicate, without any restriction, we get the *inverse* statement *u* is *x*, which may be false.
G. B. Halsted, Theoret. Elem. of Geom., p. 4.

Inverse point. See ★*point*[1].

II. *n.* **2.** In *logic*, a proposition made by simply interchanging the hypothesis and conclusion of another, without any restriction.— **3.** In *math.*, an inverse point, curve, function, ratio, proportion, etc.—**4.** In *rouge-et-noir*, the triangular space in which bets are placed when wagering that the first card dealt for a color will not be the same color as the one that wins the coup: opposed to ★*couleur*. See *rouge-et-noir*.

inversion, *n.*—**Absolute inversion,** the substitution of $\frac{a}{x}$ for $\left|\frac{a}{x}\right|$, where x denotes the absolute value of x.—**Center of inversion.** See *geometrical inversion*, under *inversion*.—**Diurnal inversion of the wind.** See ★*wind*[2].—**Inversion of temperature.** See ★*temperature*.—**Origin of inversion,** center of inversion.—**Radius of inversion,** the side of the square equivalent to the rectangle of the sects from the center of inversion to two inverse points.—**Rule of inversion,** the rule that if the hypotheses of a group of demonstrated theorems exhaustively divide the universe of discourse into contradictories, so that one must be true, though we do not know which, and the conclusions are also contradictories, then the inverse of every theorem of the group will necessarily be true.—**Thermo-electric inversion,** the change of direction of the electromotive force of a thermo-couple when the mean temperature of the junctions passes the neutral point of the two metals of which the thermo-couple is made.

inversor (in-vèr'sọr), *n.* [*inverse* + *-or*[1].] That which transforms into the inverse.—**Peaucellier's inversor,** Peaucellier's cell.

invert, *v. t.* **3.** In *chem.*, to convert (cane-sugar) into a mixture of glucose and fructose. The operation, chemically considered, is a hydrolysis, that is, addition of water. The process is accompanied by a reversal of the direction of deflection of a ray of polarized light by the sugar solution: hence the term.

4. In *music*: (*a*) Of an interval, to transpose the lower tone an octave higher, so that it falls (usually) above the higher tone. (*b*) Of a melody or theme, to take its intervals in order downward instead of upward, thus making a new melody, but one whose relation to the first is exact and intelligible. (*c*) Of a chord, to arrange its tones in any order in which the root is not in the bass.

Invert. An abbreviation (*a*) of *Invertebrata*; (*b*) [*l. c.*] of *invertebrate*.

invertase (in-vèr'tās), *n.* [*invert* + *-ase*.] A ferment which inverts higher sugars to lower forms; specifically, a ferment which inverts cane-sugar to dextrose and levulose. Invertase occurs in many yeasts and other fungi, in pollen-grains, in the beet-root, in many of the higher plants, and in some of the animal digestive juices. Also *invertin*. The specific ferment is also termed *sucrase*.

Invertebrate determinant. Same as *zeroaxial determinant* (which see, under *determinant*).

Inverted converter. See ★*converter*, 3.

invertive (in-vèr'tiv), *a.* [*invert* + *-ive*.] Capable of producing inversion.

invertor, *n.* **2.** That which turns in: said of certain muscles.

For if either the evertor or *invertor* is out of use the combined action of these muscles (as contrasted with their single action) becomes impossible.
Lancet, July 4, 1903, p. 56.

invest, *v. t.* **Investing cartilage.** Same as *articular cartilage* (which see, under *cartilage*).

investigation, *n.*—**Unit of investigation,** the simplest form of the subject-matter of a science: a term employed chiefly in sociological discussion.

investigational (in-ves-ti-gā'shọn-ạl), *a.* [*investigation* + *-al*[1].] Pertaining to or of the nature of investigation.

Investigational apparatus of great importance.
Science, Sept. 29, 1905, p. 387.

investigatory (in-ves'ti-ga-tō-ri), *a.* [*investigate* + *-ory*.] Of or pertaining to investigation; given to investigation.

invigilate, *v. i.* **2.** To watch students in an examination-room. See ★*invigilator*. [Eng.]

invigilator (in-vij'i-la-tọr), *n.* One appointed to watch students during examination: proctors, examiners, and others are selected for this purpose. [Eng.]

invigorant (in-vig'ọr-ạnt), *n.* [*invigor* + *-ant*.] An invigorating beverage of some kind; a tonic.

invigorative (in-vig'ọr-ạ-tiv), *a.* [*invigorate* + *-ive*.] Invigorating; imparting vigor.

invinate (in-vī'nāt), *v. t.*; pret. and pp. *invinated*, ppr. *invinating*. [ML. *invinare*, embody in wine, < L. *in*, in, + *vinum*, wine.] To embody in wine: used in reference to the doctrine of transubstantiation. See ★*invination*.

invination (in-vi-nā'shọn), *n.* [NL. **invination-*, < ML. *invinare*: see ★*invinate*.] In the eucharistic controversy, the doctrine that after consecration the blood of Christ is locally present or infused in the wine, which remains unchanged.

invincible, *a.*—**Invincible ignorance.** See ★*ignorance*.

II. *n.* **1.** One who is invincible. Specifically—**2.** A member of an Irish society, organized in 1881, whose avowed object was "to remove all tyrants from the country."

invirile (in-vir'il), *a.* [*in-*[3] + *virile*.] Not manly; effeminate; not virile.

Ovid in Pontus, paling for his Rome
Of men *invirile* and disnatured dames.
Lowell, Cathedral, l. 292.

inviscation (in-vis-kā'shọn), *n.* [NL. **inviscatio*(*n-*), < L. *inviscare*, catch with bird-lime, < *in-* + *viscum*, bird-lime.] The act of smearing or mixing with glutinous matter; specifically, the act of mixing the food with the mucous secretion of the mouth.

invital (in-vī'tạl), *a.* [*in-*[3] + *vital*.] Having no vitality; lacking life or lifelike appearance.

in vitro (in vī'trō). [L.] Within glass, that is, a test-tube: said of chemical reactions, bacterial cultures, etc., obtained experimentally in the test-tube as contrasted with those occurring *in vivo*, that is, within the living body.

Serum obtained by immunising with one race did not necessarily give more than a trace of reaction *in vitro* and none whatever in vivo when tested with another race.
H. E. Durham, in Jour. Exper. Med., Jan. 15, 1901, p. 355.

in vivo (in vī'vō). [L.] Within the living body. See ★*in vitro*.

invocable (in'vọ-kạ-bl), *a.* [NL. **invocabilis*, < L. *invocare*, invoke.] That may be invoked or called on supplicatingly.

invocant (in'vọ-kạnt), *n.* [L. *invocans* (*-ant-*), ppr. of *invocare*, invoke.] One who calls upon or invokes.

invocative (in-vok'ạ-tiv), *a.* [*invocate* + *-ive*.] Invocatory; invoking.

involucrum, *n.* **3.** In *pathol.*, a wall of new osseous tissue inclosing the sequestrum in a case of necrosis.

involute, *a.* **3.** Noting a form of tooth-profile, used in gearing, traced by a point at the end of a tangent as it is unwrapped from a base-circle. The base-circle is the circle at the root of the teeth. All involute teeth of the same circular pitch will work together. They are much used in cases where the distance between the centers of the two shafts has to be slightly variable.

involute (in'vọ-lūt), *v. i.*; pret. and pp. *involuted*, ppr. *involuting*. [L. *involvere* (*involutus*), roll up: see *involve*.] To return to a normal condition.

The invasion of the non-hairy skin by the trichophyton fungus, all varieties of which cause at the beginning of infection a circular scaly pink patch that spreads peripherally with a pinkish border, and clears up or *involutes* in the central portion, leaving a faintly yellowish tinge in its wake, thus forming a ring.
Buck, Med. Handbook, VII. 782.

involuted, *a.* **2.** Having returned to the normal state: noting specifically the uterus after pregnancy.—**3.** Having undergone the retrograde processes peculiar to old age.

involution, *n.* **7.** (*b*) The atrophic or regressive changes occurring in old age.—**8.** In *biol.*, the possession by an organism which is adapted to conditions that are simpler than those under which its allies live, of an organization that is simpler than that of its allies, considered as evidence of inverse or retrograde evolution. [Rare.] **Hyperbolic involution,** an involution which has real double points (or lines).—**Involution axis,** in *projective geom.*, the locus of the crosses of coupled tangents of two conic pencils forming an involution.—**Involution center,** in *projective geom.*, the locus of the joins of coupled points of two conic ranges forming an involution.—**Involution form.** See ★*form*.—**Parabolic involution,** an involution which has coincident double elements.—**Point involution,** in *geom.*, one in which the elements are points.

involution-spore (in-vọ-lū'shọn-spōr), *n.* Same as *resting-spore*.

involutoric (in"vọ-lū-tor'ik), *a.* Same as *involutorial*. **Involutoric transformation,** that given by $(x-a)(x-b)=-(y-a)(y-b)$.

involv, *v. t.* A simplified spelling of *involve*.

inwrought (in-rât'), *p. a.* Wrought or worked in or into; having something (specifically, figures or patterns) worked into it.

inyala, nyala (in-yä'lä, nyä'lä), *n.* [S. African native name.] A South African antelope, *Tragelaphus angassi*, related to the bushbuck or harnessed antelope. The males are little over three feet high at the shoulder, of a bluish gray, with faint white markings.

Io. An abbreviation of *Iowa*.

Ioa (ī-ō'ä), *n.* [NL., < Gr. *ἰός*, an arrow.] A genus of fishes known as darters, inhabiting the fresh waters of the southeastern United States.

iodacetanilide (ī"ọd-a-set-an'i-lid), *n.* [*iod*(*ine*) + *acetanilide*.] A crystalline compound, $C_6H_4.I.NH.C_2H_3O$, prepared by the action of iodine on acetanilide. Also *iodantifebrin*.

iodamide (i-ō'da-mid), *n.* A violently explosive black powder produced by the interaction of iodine and aqueous ammonia. The substance so produced, however, varies in composition and is probably in the first instance nitrogen tri-iodide (NI_3, or rather N_2I_6), readily changing to compounds containing hydrogen, of which the only one for which the name *iodamide* should be used is NH_2I or $N_2H_4I_2$.

iodantifebrin (ī"ọ-dan-ti-feb'rin), *n.* [*iod*(*ine*) + *antifebrin*.] Same as ★*iodacetanilide*.

iodantipyrin (ī"ọ-dan-ti-pī'rin), *n.* [*iod*(*ine*) + *antipyrin*.] A colorless crystalline compound, $C_{11}H_{11}.I.N_2O$, obtained by the action of iodine chlorid on antipyrin. Also *iodopyrin*.

iodated (ī'ọ-dā-ted), *p. a.* [*iod*(*ine*) + *-ate*[1] + *-ed*[2].] In *chem.*, charged with iodine as a constituent.

iodation (ī-ọ-dā'shọn), *n.* [*iodate*[2] + *-ion*.] In *chem.*, the process of causing iodine to be taken up as a constituent, as in the production of iodo-benzene from benzene.

iodhydrargyrate (ī"ọd-hī-drär'ji-rạt), *n.* In *chem.*, a double salt containing mercuric iodide as one component.

iodhydrate (i-ọd-hī'drāt), *n.* [*iodhydr-ic* + *-ate*[1].] In *chem.*, a salt of iodhydric or hydriodic acid. Same as *hydriodate* or *iodide*.

iodhydric (ī-ọd-hī'drik), *a.* [*iod*(*ine*) + *hydr*(*ogen*) + *-ic*.] Same as *hydriodic acid*.

iodide, *n.*—**Alkaline iodide,** a compound obtained by the action of iodine on alkali-metal, as potassium or sodium iodide.—**Green iodide of mercury,** mercurous iodide, Hg_2I_2.—**Lead iodide,** a solid of bright yellow color, little soluble in cold water, more freely in boiling water. Its production by precipitation serves as a test for lead or for iodine.—**Mercuric iodide,** a substance obtainable in two conditions which are dimorphous in crystallization, the one red, the other yellow in color. The brilliant scarlet of the former of these makes its production a valuable test for mercury and iodine respectively. The solution of mercuric iodide in an aqueous solution of potassium iodide, with the addition of a caustic alkali, forms the Nessler solution used to detect and determine minute quantities of ammonia, as in the examination of drinking water.—**Nitrogen iodide,** a heavy black powder produced by the interaction of iodine and aqueous ammonia. It explodes violently by friction or slight heating, being resolved into nitrogen gas and vapor of iodine. It readily undergoes change, with replacement of iodine by hydrogen atoms, and the derivatives so formed are sometimes referred to rather loosely as iodides of nitrogen or iodamides.—**Palladious iodide,** a substance obtained as a very dark-brown precipitate on addition of a soluble iodide to the solution of a palladious salt. Its production is often used as a delicate test for iodides, as in mineral waters.—**Phosphonium iodide,** the product of the union of phosphine or phosphuretted hydrogen with hydriodic acid ($PH_3 + HI = PH_4I$), analogous to ammonium iodide, with phosphorus in place of nitrogen.—**Potassium iodide,** a colorless solid, readily soluble in water and easily crystallized in cubes: manufactured, on a large scale, for use in medicine and photography.—**Silver iodide,** one of the haloid salts of silver extensively in use by photographers, forming an important part of the sensitive film to be exposed to the action of light. It occurs sparingly in nature as the rare mineral iodyrite.—**Sulphur iodide,** the compound S_2I_2: used externally in medicine to a limited extent.

iodiferous, *a.* **2.** Containing iodine as a constituent.

iodinated (ī'ọ-din-ā"ted), *a.* [*iodine* + *-ate*[1] + *-ed*[2].] Charged with iodine, either in admixture or chemical combination.

iodine, *n.* **Churchill's iodine caustic.** See *Churchill's* ★*tincture of iodine.* **Iodine absorption,** the taking up of iodine, usually into chemical combination, as by fats and oils, in which the quantity of iodine taken up by a given quantity of the oil is used as a means of identifying the latter. See *Hübl* ★*process.* **Iodine candle.** See ★*candle.* **Iodine number,** the number expressing the quantity of iodine absorbed by a given amount of a particular fat or oil. See ★*iodine absorption* and *Hübl* ★*process.* **Iodine pentoxid,** a compound of two atoms of iodine and five of oxygen (I_2O_5). Also known as *iodic anhydrid.* It is decomposed by heat into iodine and oxygen.—**Iodine trichlorid,** a compound of one atom of iodine with three of chlorine. It forms lemon-yellow crystals easily decomposed by heat into chlorine and the more stable iodine monochlorid. **Iodine violet.** Same as *dahlia,* 3. **Iodine water,** a solution of iodine in water. When saturated at common temperature it only contains one part of iodine for about 3,000 parts of water, but has a decided brown color.

iodinize (ī′ō-din-īz), *v. t.*; pret. and pp. *iodinized,* ppr. *iodinizing.* [*iodine* + *-ize.*] Same as *iodate* or *iodize.*

iodinophilous (ī″ō-di-nof′i-lus), *a.* [*iodine* + Gr. φίλος, love.] Readily staining with iodine.—**Iodinophilous vacuole,** in sporozoans, as the *Myxobolidæ,* a vacuole in the sporoplasm containing a substance which stains reddish brown with iodine and gives some of the reactions of glycogen.

iodiodide (ī-od-ī′ō-did), *n.* In *chem.,* same as ★*iodo-iodide.*

iodipin (ī-ō′di-pin), *n.* A yellow, oleaginous addition-product of iodine and sesame-oil, containing either 10 or 25 per cent. of iodine: used in syphilis, scrofula, etc.

iodo-. An element in chemical terms, used in forming names of addition- and substitution-compounds of iodine which are made by adding iodine solution to other bodies as alkaloids, as *iodocinchonine, iodomorphine, iodostrychnine,* etc.

iodochlorid (ī″ō-dō-klō′rid), *n.* In *chem.,* a compound in which iodine and chlorin are both combined with the same metal or basic radical: as, mercuric *iodochlorid* (HgICl).

iodo-eugenol (ī″ō-dō-ū′jē-nol), *n.* Same as ★*eugenol-iodide.*

iodoform, *n.* This substance, much used in surgery, is now prepared electrolytically from a mixed solution of alcohol with an alkaline carbonate and iodide.

iodoformism (ī′ō-dō-fôrm-izm), *n.* [*iodoform* + *-ism.*] A condition induced by the poisonous action of iodoform.

iodogallicin (ī″ō-dō-gal′i-sin), *n.* [*iod(ine)* + *gallicin.*] A light, amorphous, gray powder, prepared by the action of bismuth oxyiodide on gallicin. It is an antiseptic.

iodoglycerin (ī″ō-dō-glis′ē-rin), *n.* [*iod(ine)* + *glycerin.*] A solution of iodine and potassium iodide in glycerol.

iodohematin (ī″ō-dō-hem′ą-tin), *n.* [*iod(ine)* + *hematin.*] A substance analogous to hemin, in which hydriodic acid is combined with hematin in the place of hydrochloric acid.

iodohemol, iodohæmol (ī″ō-dō-hem′ol), *n.* [*iod(ine)* + *hemol.*] An iodine compound of hemol containing 16 per cent. of iodine: used in syphilis, scrofula, etc.

iodohydrargyrate (ī″ō-dō-hī-drär′ji-rāt), *n.* [*iod(ine)* + *hydrargyrate.*] In *chem.,* a double iodide of mercury and a more electropositive metal: as, $(KI)_2.HgI_2$, potassium *iodohydrargyrate.*

iodo-iodide (ī″ō-dō-ī′ō-did), *n.* [*iod(ine)* + *iodide.*] In *chem.,* a compound of iodine with a basic radical of which iodine is a constituent.

iodomercurate (ī″ō-dō-mėr′kū-rāt), *n.* [*iodine*) + *mercurate.*] Same as ★*iodohydrargyrate.*

iodometrical (ī″ō-dō-met′ri-kąl), *a.* Same as *iodometric.*

iodometry (ī″ō-dom′e-tri), *n.* [*iod(ine)* + Gr. *-μετρια,* < *μέτρον,* measure.] In *chem.,* properly, the quantitative determination of iodine, usually by means of a standard solution of a thiosulphate or an arsenite, iodine acting in the presence of water as an indirect oxidizing agent. The term is often applied to the same process used in inverse form to determine, by means of a standard solution of iodine, some one of a number of substances capable of undergoing definite oxidation or deoxidation.

Starch and the Dextrins in Relation to *Iodometry.*
Science, Sept. 5, 1902, p. 365.

iodonium (ī-ō-dō′ni-um), *n.* [*iod(ine)* + *-one* + *-ium.*] The hypothetical, univalent, basic radical, IH_2. It is analogous to the radical ammonium, NH_4.

iodophen (ī′ō-dō-fen), *n.* [*iod(ine)* + *phen(yl).*] Same as ★*nosophen.*

iodophenin (ī″ō-dō-fē′nin), *n.* [*iod(ine)* + *phen(ol)* + *-in*[2].] A brownish powder or crystalline compound, $C_{20}H_{25}I_3N_2O_4$, obtained by precipitating an acidulated aqueous solution of phenacetin with a solution of iodine and potassium iodide; iodophenacetin; tri-iodo-diphenacetin: an external antiseptic.

iodophile (ī′ō-dō-fīl), *a.* [*iod(ine)* + Gr. φίλος, love.] Having an affinity for or readily absorbing or combining with iodine.

iodophilia (ī″ō-dō-fil′i-ą), *n.* [NL., < *iod(ine)* + *-philia,* < φιλία, love.] A pathological condition in which the leucocytes stain readily in iodine solution: noted in certain cases of suppuration.

iodophthisis (ī-ō-dof′thi-sis), *n.* [*iod(ine)* + Gr. φθίσις, wasting.] Emaciation due to the action of iodine.

iodopotassic (ī″ō-dō-pō-tas′ik), *a.* [*iod(ine)* + *potassium* + *-ic.*] Involving the use of potassium iodide, as in the production of a strong solution of iodine in water (Lugol's solution), by adding potassium iodide.

iodopyrin (ī″ō-dō-pī′rin), *n.* [*iod(ine)* + (*anti*)-*pyrin.*] A trade-name for iodo-antipyrin, a substance used medicinally as an antipyretic and resolvent.

iodoso (ī-ō-dō′sō), *n.* [*iod(ine)* + *-ose* + *-o.*] The univalent radical, IO.—**Iodoso benzene,** an amorphous, explosive, basic compound, C_6H_5IO, prepared by the action of alkali on phenylchloriodonium chlorid, $C_6H_5ICl_2$.

iodospermin (ī″ō-dō-spėr′min), *n.* [*iod(ine)* + Gr. σπέρμα, seed, + *-in*[2].] A substance formed on treating seminal fluid with a modified Lugol's solution (an iodine preparation). The reaction is supposedly due to the presence of choline.

iodosulphate (ī″ō-dō-sul′fāt), *n.* [*iod(ine)* + *sulphate.*] An iodine compound or addition-product of a sulphate: as, *iodosulphate* of quinine, or herapathite.

iodosulphid (ī″ō-dō-sul′fid), *n.* [*iod(ine)* + *sulphid.*] In *chem.,* a compound in which iodine and sulphur are both united to the same metal or basic radical. Also called *sulphiodide.*

iodotherapy (ī″ō-dō-ther′ą-pi), *n.* [*iod(ine)* + Gr. θεραπεία, medical treatment.] The therapeutic use of iodine or the iodides.

iodothyrin (ī″ō-dō-thī′rin), *n.* [*iod(ine)* + *thyr(oid)* + *-in*[2].] A complex substance containing iodine, obtained from the thyroid gland, in which it exists in combination with a globulin as thyreoglobulin. Together with another albuminous substance belonging to the nucleoproteids thyreoglobulin forms the colloid substance of the gland. Also *thyro-iodine.*

iodous (ī′ō-dus), *a.* [*iod(ine)* + *-ous.*] In *chem.,* related to, containing, or resembling iodine. *Iodous oxid* and *iodous acid* are terms which by analogy would be given to compounds containing less oxygen than *iodic oxid* or *acid,* but no such substances are known.

iodoxy (ī′ō-dok-si), *n.* [*iod(ine)* + *oxy(gen).*] The univalent radical, IO_2.

iodozone (ī′ō-dō-zōn), *n.* [*iod(ine)* + *ozone.*] A name given to an imaginary substance assumed to be a compound of iodine with ozone, or an iodine substitution product of ozone.

iodum (ī-ō′dum), *n.* [NL.: see *iodine.*] The pharmacopœial name for iodine.

ioduret (ī-od′ū-ret), *n.* [*iod(ine)* + *-uret.*] In *chem.,* same as *iodide:* a form not now in general use.

I. O. F. An abbreviation of *Independent Order of Foresters.*

I. of M. An abbreviation (*a*) of *Instructor of Musketry;* (*b*) of *Isle of Man.*

Ioglossus (ī-ō-glos′us), *n.* [NL., < Gr. ἰός, an arrow, + γλῶσσα, tongue.] A genus of gobioid fishes inhabiting the Gulf of Mexico.

I. O. G. T. An abbreviation of *Independent Order of Good Templars.*

ion, *n.* **2.** In *phys. chem.,* one of the particles, bearing electric charges, which carry electric currents through the air or other gas. See ★*electron,* 2.

Preston . . . and Runge and Paschen . . . think it possible that atoms of related elements are composed of the same kind of *ions,* and that the properties of these elements are determined by the arrangement of the *ions* in the atom. *Encyc. Brit.,* XXXII. 781.

Electronegative ion, electropositive ion. In *phys. chem.,* the ion, consisting of an atom or of a group of atoms called a radical, which is produced by the electrolytic dissociation of an electrolyte and which moves toward the positive pole or anode is the *electronegative ion* or the anion. That which moves toward the negative pole or cathode is called the *electropositive ion* or cation. **Migration of ions,** in *phys. chem.,* the movement of electrically charged ions toward the anode and toward the cathode in electrolysis, which is the means by which an electric current is carried through an electrolyte. The frictional resistance to the motion of bodies as small as ions is enormous, and the velocities produced are small. A fall of potential of one volt per centimeter causes the ions of hydrogen at 18° C. to move at the rate of less than 1/10 centimeters an hour, and all other ions move less rapidly. See *Hittorf's* ★*phenomenon.*

-ion[2]. In *phys. chem.,* the word *ion* added, as a suffix, to the abbreviated name of an atom or radical to form a name for the atom or radical in the ionic state: thus *chlorion* means an atom of chlorin in the ionic condition; *cuprion* or *cupriion,* the ion of univalent and of bivalent copper.

Ion. An abbreviation of *Ionic.*

ionic[2] (ī-on′ik), *a.* [*ion* + *-ic.*] In *phys. chem.,* of or pertaining to an ion or the ions which carry an electric current in electrolysis: see *Arrhenius's theory of electrolytic or ionic* ★*dissociation.*

The frictional resistance of the liquid to the passage of the ions, the reciprocal of which is called the *ionic fluidity.* *J. A. Fleming,* in Encyc. Brit., XXVIII. 44.

Ionic concentration. See ★*concentration.*—**Ionic velocity.** See *migration of* ★*ions.*

Ionicism (ī-on′i-sizm), *n.* [*Ionic* + *-ism.*] Same as *Ionism.*

ionium (ī-ō′ni-um), *n.* [NL. See ★*ion,* *n.,* 2.] A supposed disintegration-product of actinium from the disintegration of which radium, in turn, results. See the extract.

It has been found that uranium minerals contain a new radio-active element, to which the name "*ionium*" has been given. The chemical behavior of *ionium* is similar to that of thorium, from which it can not be separated by the usual reactions characteristic for thorium. *Ionium* emits an α radiation having a range of about 2·8cm in air, and probably also a β radiation. Results obtained on the growth of radium in solutions of *ionium* indicate that it is the immediate substance from which radium is formed. It is therefore undoubtedly a disintegration product of uranium intermediate between uranium X and radium. The relative activity of radium and *ionium* in minerals is in agreement with this assumption.

B. B. Boltwood, in Amer. Jour. Science, May, 1908, p. 381.

ionizable (ī′ō-nī-zą-bl), *a.* [*ionize* + *-able.*] Capable of being ionized: used both of electrolytes and of gases.

ionization (ī″ō-ni-zā′shon), *n.* [*ionize* + *-ation.*] In *phys. chem.*: (*a*) The electrolytic dissociation of an electrolyte by solution or by fusion. (*b*) The process by which a gas is converted into a conductor of electricity; the state or condition of being ionized. See ★*electron,* 2, ★*electron theory.*

The very large *ionization* of mercury vapour is interesting, as this is a monatomic gas; the process of *ionization* must, therefore, involve much finer subdivision than the splitting of a molecule into atoms.

J. J. Thomson, in Encyc. Brit., XXVIII. 39.

Ionization coefficient. See ★*coefficient.*

ionize[2] (ī′ō-nīz), *v. t.*; pret. and pp. *ionized,* ppr. *ionizing.* [*ion* + *-ize.*] In *phys. chem.*: (*a*) To separate into ions: said of the solvent in which an electrolyte is dissolved.

Sulphuric acid, which in the fairly strong solutions used by Thomson is only about half dissociated, gives a higher value for the heat of neutralization, so that heat must be evolved when it is *ionized.* . . . The problem of the cause of solubility still remains unsettled, but towards the explanation of *ionizing* power some advance has been made.

Encyc. Brit., XXVIII. 15.

(*b*) To produce ions in (air or other gas): said of Röntgen rays, of cathode and various other rays, of the electric field, of a glowing metal, and of violet light.

This equation has been verified in the case of a gas *ionized* by the Rontgen rays by Rutherford.

Encyc. Brit., XXVIII. 26.

ionizer (ī′ō-nī-zėr), *n.* Any device for producing the ionization of a gas or liquid.

ionograph (ī-on′ō-gráf), *n.* [*ion* + Gr. γράφειν, write.] An apparatus for recording automatically the state of ionization of the air or of any gas. It consists of an air-condenser, one plate of which is grounded through a high resistance while the other is connected to an electrometer. *Sci. Amer. Sup.,* Dec. 24, 1904, p. 24, 230.

ionone (ī′ō-nōn), *n.* [Gr. ἴον, violet, + *-one.*] In *chem.,* a hydro-aromatic ketone, made artificially from the citral of lemon-grass and other oils, possessing in a marked degree the odor of violet flowers, and hence used with advantage in modern perfumery.

ionoplasty (ī′ō-nō-plas-ti), *n.* [*ion* + Gr. πλαστός, formed, + *-y*[3].] The deposition of metals by means of the cathodic discharge. *Jour. of Phys. Chem.,* Nov., 1904, p. 583.

I. O. O. F. An abbreviation of *Independent Order of Odd Fellows.*

-ior[1]. [Also *-iour;* < L. *-ior,* in comparatives, as *inferior, superior, ulterior, junior, senior,* etc. See *-or*[4] and *-er*[3].] A suffix of Latin origin occurring in adjectives and nouns from original

Latin adjectives in the comparative degree, as *inferior, superior, interior, exterior, junior, senior*, etc.

-ior[2]. [Also *-iour;* < ME. *-iour, -eour, -eyour*, etc., < OF. *-eior, -eiur*, later *-ieur*, etc.] A suffix, the same as *-or*[2], with a preceding vowel, representing a type derived from Latin *-āt-or*. Examples are *savior, warrior*, etc., and *currior, curriour*, etc., now *currier*, etc. In some words the termination *-ior, -iour* has been substituted for a similar suffix of other origin, as in *harior, behaviour*.

I. O. R. M. An abbreviation of *Improved Order of Red Men*.

I. O. S. M. An abbreviation of *Independent Order of the Sons of Malta*.

-iour[1], suffix. See ★*-ior*[1].

-iour[2], suffix. See ★*-ior*[2].

Iowan, *a.* **2.** In *geol.*, noting an epoch or subdivision of the glacial period of which the deposits are well developed in Iowa.

ipado, *n.* Same as ★*ipadu*.

ipadu (ē-pä-dö′), *n.* [Tupi name.] In Brazil, same as *coca*[1].

I. P. D. An abbreviation of the Latin *in præsentia Dominorum*, 'in the presence of the Lords' [of session].

ipecac, *n.* **Bastard ipecac,** the St. Andrews cross, *Ascyrum hypericoides*. - **False ipecac.** Same as *American ipecac*, under *ipecac*. **Milk-ipecac,** the flowering spurge, *Euphorbia corollata*. - **Spurge-ipecac, white ipecac,** the American ipecacuanha, *Euphorbia Ipecacuanhæ*.— **Wild ipecac.** (*a*) See *wild*[1]. (*b*) The spreading dogbane, *Apocynum androsæmifolium*.— **Wood-ipecac,** *Triosteum perfoliatum*.

ipecacuanha-wine (ip-ē-kak-ū-an′ä-wīn″), *n.* **1.** A medicated wine made by macerating ipecac in wine,— **2.** A medicinal wine made by adding 10 parts of fluid extract of ipecac to a mixture of 100 parts of alcohol and 800 parts of white wine: an emetic and expectorant.

ipecacuanhic (ip-ē-kak-ū-an′ik), *a.* [*ipecacuanha* + *-ic*.] Of or relating to ipecacuanha.— **Ipecacuanhic acid,** a glucoside, related to tannic acid, found in the dried root of *Exea Ipecacuanha*.

Ipnopidæ (ip-nop′i-dē), *n. pl.* [NL., < *Ipnops* + *-idæ*.] A family of deep-sea fishes widely distributed.

Ipnops (ip′nops), *n.* [NL., < Gr. *ἰπνός*, a lantern, + *ὤψ*, eye.] A genus of deep-sea fishes of the family *Ipnopidæ*.

Ipo (ī′pō), *n.* [NL. (Persoon, 1807), < Macassar *ipo*, the upas-tree, *Ipo toxicaria*.] **1.** A genus of dicotyledonous plants belonging to the family *Moraceæ*. See *Antiaris*.— **2.** [*l. c.*] An arrow poison prepared from upas-sap, *Ipo toxicaria*, by the Kenyahs in Borneo, who also use it internally as a medicine for malaria.

ipomeic (ip-ō-mē′ik), *a.* [*Ipomœa* + *-ic*.] Pertaining to or derived from plants of the genus *Ipomœa*.— **Ipomeic acid.** Same as ★*ipomic* or *sebacic acid*.

ipomein (ip-ō-mē′in), *n.* [*Ipomœa* + *-in*[2].] A colorless amorphous glucoside, $C_{78}H_{132}O_{36}$, found in the root of *Ipomœa pandurata*. It is nearly related to convolvulin and jalapin. Also *ipomœin*.

ipomic (i-pō′mik), *a.* [*Ipom(œa)* + *-ic*.] Same as *ipomeic*. **Ipomic acid.** Same as *sebacic acid*.

ippi-appa (ip-ē-ä′pä), *n.* [*Jipijapa*, a town in Ecuador where fine Panama straw hats are made.] In Jamaica, a name applied to *Carludovica Jamaicensis*, from the leaves of which hats are braided. For making the hats only the finest straw is selected, the coarser being utilized for brooms and hand-baskets. The older leaves form an excellent and durable thatch for houses. Also called *broom-thatch*.

ipseity (ip-sē′i-ti), *n.* [L. *ipse*, oneself, + *-ity*.] The quality of being oneself or itself; the essential element of identity.

ipsographic (ip-sō-graf′ik), *a.* [L. *ipse*, oneself, + Gr. *γράφειν*, write, + *-ic*.] Self-registering; self-recording.

Ir. 3. An abbreviation of *Ireland*.

iracundity (ī-rā-kun′di-ti), *n.* [L. *iracunditas*, < *iracundus*, angry: see *iracund*.] Anger; irascibility.

Iran. An abbreviation (*a*) of *Iranian;* (*b*) of *Iranic*.

irascent (ī-ras′ent), *a.* [L. *irascens* (*-ent-*), ppr. of *irasci*, be angry: see *irascible*.] Growing angry; tending toward anger.

I. R. B. An abbreviation of *Irish Republican Brotherhood*.

Ire. An abbreviation of *Ireland*.

irenarchical (ī-rē-när′ki-kal), *a.* [Gr. *εἰρηναρχικός*, < *εἰρηνάρχης*, irenarch, + *-al*[1].] Relating or pertaining to the ancient peace-officer known as irenarch, or to his functions.

irenarchy (ī′rē-när-ki), *n.* [*irenarch* + *-y*[3].] The office or position of irenarch (which see).

iretol (ī′re-tol), *n.* [*ir(igenin)* + *-et* + *-ol*.] A colorless compound, $CH_3\overset{4}{O}C_6H_2(\overset{1}{O}H)_3$, obtained, together with iridic and formic acids, by the action of alkali on irigenin. It crystallizes in needles and melts at 186° C. Also called 1, 2, 5-*trihydroxy*-2-*methoxybenzene*.

iridal, *a.* **2.** Relating to the iris of the eye.

iridate (ī′ri-dāt), *n.* [*irid-ic* + *-ate*[1].] In *chem.*, a salt of iridic acid, the hydroxid, $Ir(OH)_4$. Also *iridiate*.

iridectomize (ir-i-dek′tō-mīz), *v. i.*; pret. and pp. *iridectomized*, ppr. *iridectomizing*. [*iridectom-y* + *-ize*.] To perform iridectomy.

irideous (i-rid′ē-us), *a.* Same as *iridaceous*.

iridial (ī-rid′i-al), *a.* Same as *iridal*.

iridic[1] (ī-rid′ik), *a.* [Gr. *ἶρις* (*ἰριδ-*), rainbow, iris, + *-ic*.] Same as *iridian*.

iridic[2] (ī-rid′ik), *a.* [*irid-ium* + *-ic*.] Pertaining to or containing iridious irigenin.— **Iridic acid,** a colorless compound, $(\overset{4}{C}H_3O)_2C_6H_2(\overset{1}{O}H)\overset{1}{C}H_2COOH$, obtained, together with iretol, by the action of alkali on irigenin. It crystallizes in prisms and melts at 118° C. Also called 4, 5-*dimethoxy*-3-*hydroxyphenylacetic acid*.

iridico-. A combining form of *iridic*, used in compound names of double salts in which iridium with apparently tetrad valence is present as a constituent: as, *iridico*-potassic chlorid, same as *potassium chloriridate*, K_2IrCl_6.

iridin (ī′ri-din), *n.* [*irid-ic* + *-in*[2].] A colorless glucoside, $C_{24}H_{26}O_{13}$, found in orris root. It crystallizes in colorless needles.

Iridio (ī-rid′i-ō), *n.* [NL., < Gr. *ἶρις* (*ἰριδ-*), the rainbow.] A genus of labroid fishes, commonly known as *doncellas*. They abound in kelp in the tropical seas of America.

Iridio radiatus.
(From Bulletin, 47, U. S. Nat. Museum.)

iridio-. A combining form of *iridium*, used in compound words, signifying the presence of iridium as a constituent: as, *iridio*-platinum, the alloy of 90 per cent. platinum with 10 per cent. iridium adopted as the material for the international standard meter and kilogram. *Iridio-* or *irido-* is used more specifically in the names of compounds in which iridium is present with apparently triad valence, as in *iridio*-chlorid of potassium, same as potassium chloriridite (K_3IrCl_6).

iridio-platinum (ī-rid″i-ō-plat′i-num), *n.* The alloy of iridium with nine times its weight of platinum. It is remarkably hard, elastic, and susceptible of high polish, and is attacked by very few chemical reagents. Besides its use for international standard weights and measures it has been employed to make telegraph-contact buttons, electrodes to be exposed to acid liquids, and wires to form part of high-temperature pyrometers. Also called *platino-iridium*.

iridious (ī-rid′i-us), *a.* In *chem.*, containing iridium: applied to compounds in which iridium is trivalent, as $IrCl_3$. Compare ★*iridic*[2].

iridite (ī′ri-dīt), *n.* [*irid-ium* + *-ite*[2].] In *chem.*, a salt of iridious acid, the hydroxid $Ir(OH)_3$ or $Ir_2(OH)_6$.

Iridium blue. See ★*blue, n.*

iridize[2] (ir′i-dīz), *v. t.*; pret. and pp. *iridized*, ppr. *iridizing*. [*irid-ium* + *-ize*.] To cover with iridium; tip with iridium.

iridoceratitis (ir″i-dō-ser-a-tī′tis), *n.* [NL., < Gr. *ἶρις* (*ἰριδ-*), iris, + *κέρας* (*κερατ-*), horn (cornea), + *-itis*.] Inflammation of the iris and cornea.

iridocyclochoroiditis (ir″i-dō-sī″klō-kō″roi-dī′tis), *n.* [NL., < Gr. *ἶρις* (*ἰριδ-*), iris, + *κύκλος*, circle, + E. *choroid* + *-itis*.] Inflammation of the iris, ciliary body, and choroid coat of the eye.

iridocyst (ir′i-dō-sist), *n.* [Gr. *ἶρις* (*ἰριδ-*), iris, + *κύστις*, bag (cyst).] A cell which, in *Sepia* and other cephalopods, produces iridescent colors by the diffraction of light. In addition to the chromatophores, the subepidermal tissues contain other modified connective tissue cells known as *iridocysts*; these cells are so modified as to produce iridescent colors by diffraction of light.
A. E. Shipley, Zool. of the Invertebrata, p. 220.

iridocyte (ir′i-dō-sīt), *n.* [Gr. *ἶρις* (*ἰριδ-*), iris, + *κύτος*, a hollow (a cell).] A refracting substance arranged like a plate in the skin of some fishes. *Proc. Zool. Soc. London*, 1898, p. 299.

iridodialysis (ir″i-dō-dī-al′i-sis), *n.* [NL., < Gr. *ἶρις* (*ἰρι-*), iris, + *διάλυσις*, separation.] A form of coretomy or iridectomy in which the iris is torn away from the ciliary ring.

iridokeratitis (ir″i-dō-ker″a-tī′tis), *n.* Same as ★*iridoceratitis*.

iridokinesis (ir i-dō-ki-nē′sis), *n.* [NL., < Gr. *ἶρις* (*ἰριδ-*), iris, + *κίνησις*, motion.] Muscular movement of the iris causing dilatation or contraction of the pupil.

iridol (ī′ri-dol), *n.* [Gr. *ἶρις* (*ἰριδ-*), iris, + *-ol*.] A colorless compound, $H\overset{3}{O}C_6H_2(\overset{4}{O}CH_3)_2\overset{1}{C}H_3$, prepared by the dry distillation of iridic acid. It is deposited in large crystals, melts at 54° C., and boils at 239° C. Also called 4, 5-*dimethoxy*-3-*hydroxytoluene*.

iridolin (ī-rid′ō-lin), *n.* [*iridol* + *-in*[2].] A colorless basic compound, $C_{10}H_9N$, contained in coal-tar oil. It boils at 252–257° C.

iridomalacia (ir″i-dō-ma-lā′si-ä), *n.* [NL., < Gr. *ἶρις* (*ἰριδ-*), iris, + *μαλακία*, softness.] Softening of the iris.

iridomotor (ir″i-dō-mō′tor), *a.* [Gr. *ἶρις* (*ἰριδ-*), iris, + L. *motor*, mover: see *motor, a.*] Relating to movements of the iris.

iridoptosis (ir″i-dop-tō′sis), *n.* [NL., < Gr. *ἶρις* (*ἰριδ-*), iris, + *πτῶσις*, falling.] Prolapse of the iris.

irigenin (ī-rij′e-nin), *n.* [*iri(din)* + *-gen* + *-in*[2].] A colorless compound, $C_{18}H_{16}O_8$, formed by the action of acids on iridin. It crystallizes in rhombohedra and melts at 186° C.

iris, *n.* **10.** The root of a species of iris cultivated in India and sold in the bazaars of Calcutta to be used, like the Florentine orris-root, in perfumery and medicine.— **11.** The iridescence in fractured pieces of rock-crystal. When the fractures are cut out with the upper crystal itself and polished, they show a beautiful play of color. The name is also applied to rock-crystal and the cheaper stones to which color is applied by means of a coating on the back to produce the effect of a play of colors. A similar effect is produced by cementing various colored glasses together and then coating them.

Quartz crystals are occasionally met with which are iridescent within, an effect due to fractures and cavities in the interior. Such crystals are cut and sold under the name of *iris*. The irised effect is frequently produced by artificial means, usually by heating and then suddenly cooling the specimen.
Smithsonian Rep. (*Nat. Mus.*), 1900, p. 526.

Florentine iris, *Iris Florentina*. See *Iris*, 8.— **Iris camphor,** the solid portion of oil of orris, consisting principally of myristicin.— **Iris of a lens system,** the stop or aperture which limits the divergence of the beam of light entering the system; the aperture of which the entrance-pupil is the image.— **Scorpion iris,** *Iris alata*, a handsome blue-flowered species of the Mediterranean region.

iris-coffee (ī′ris-kof″ē), *n.* The seeds of *Iris Pseudacorus*, sometimes used as a substitute for coffee.

Irish ague, cross, deer, diamond. See ★*ague*, etc.— **Irish lords.** See ★*Hemilepidotus*.— **Irish penny.** See ★*penny*.

irisin (ī′ri-sin), *n.* [*Iris* + *-in*[2].] A colorless compound, $C_6H_{10}O_5.\frac{1}{6}H_2O$, contained in the rhizomes of the water-lily, *Iris Pseudacorus*, and in other plants. It closely resembles starch in appearance and consists of microscopic spheres which melt at 218° C. and are not doubly refractive.

iritis, *n.*— **Plastic iritis,** a form of iritis in which there is an exudation of fibrinous material.

iritomy (ī-rit′ō-mi), *n.* Same as *iridotomy*.

irksum, *a.* An amended spelling of *irksome*.

irofa (ē-rō-fä′), *n.* [Jap. *i-ro-fa*, otherwise *i-ro-ha* (*kana*): named from the first three syllables *i, ro, ha*, later *fa*.] The Japanese syllabary.

The nido is exactly analogous to the Japanese Katakana script, in which modified forms of Chinese ideographs are used phonetically to express 47 syllables (the so-called *I-ro-fa* syllabary), raised to 73 by the nigori and maru diacritical marks.
Keane, Man, Past and Present, p. 308.

irok (ē′rōk), *n.* [Philippine name.] Same as ★*kauon*.

iroko (i-rō′kō), *n.* [Yoruba name in Lagos.] A valuable timber-tree of West Africa, *Chlorophora excelsa*, of the mulberry family. Its wood has a finely mottled grain and is

much used for building purposes on account of its resisting the attacks of termites.

iron, *n.* **2.** (*c*) In *golf*, a club with an iron head considerably lofted so as to raise the ball. **A-iron,** a compact and extremely hard form of iron made electrolytically, using an electrolyte of ferrous chlorid, ferrous sulphate, or ferrous ammonium sulphate and an iron anode. It differs from B-★iron (which see) in that it is harder, more compact, and of a silver-white instead of a grayish color. The use of the terms *A-iron* and *B-iron* should be discouraged, since they are liable to be confused with the alpha and beta modification of iron.—**Alpha-iron,** the allotropic modification of pure iron normal at all temperatures below Ar_2 (760° C.). Alpha-iron is the most magnetic substance known. It crystallizes in the cubic system. On being heated above a temperature of 760° C., it changes into beta-★iron (which see), with absorption of heat.—**Beta-iron,** an allotropic modification of iron existing between the temperatures of 760° and 900° C. (Ar_2 and Ar_4). Beta iron is almost without magnetism and crystallizes in the cubic system isomorphically with alpha-iron. On heating above 900° C. beta-iron changes into gamma-iron, with absorption of heat, undergoing also a critical change in electric conductivity.—**B-iron,** a form of iron produced electrolytically. It differs from A-★iron (which see) by the fact that higher voltage and higher current density are used, and that the electrolyte contains bivalent iron in some complex form, while the anode is made of platinum instead of iron.—**Carbide of iron,** iron chemically combined with carbon. The only known carbide of iron is cementite. See ★*cementite* and *combined* ★*carbon*.—**Chilled iron,** cast-iron which has been quickly cooled. The effect of this rapid cooling is to retain the whole, or the greater part, of the carbon (amounting to 3 or 4 per cent.) in solution or in chemical combination with the iron, as distinguished from graphite, which is separated in thin plates and flakes. Chilled iron is usually chilled only on the surface. The effect of this is to give an extremely hard and brittle surface, with a relatively soft and ductile center, where the slow cooling has permitted the carbon the necessary time to separate in the form of graphite. Thus railroad-car wheels are chilled on the tread and flange by being cast against cool iron placed in the molds at these parts. The hard exterior serves to resist the wear of the wheel against the railroad-track, while the more ductile web of the wheel consists of gray iron.—**Gamma-iron,** an allotropic modification of iron existing above 900° C. (Ar_3). It is almost without magnetism, but on heating above the temperature 1130° C. its magnetism suddenly increases by 50 per cent. of itself. Gamma-iron crystallizes in the cubic system, but is not isomorphous with either beta- or alpha-iron. It forms an isomorphous mixture or solid solution with carbon in all proportions up to 2 per cent. of the latter.—**Gray iron,** pig- or cast-iron which shows a gray, coarsely crystalline structure when fractured. It is generally used for castings when fine uniform ones are desired. When mixed with a proper proportion of scrap-iron it produces strong, tough castings. **Iron and iron, iron to iron,** in *mech.*, actual contact of one piece of metal against the other, no space being left between and no packing inserted. **Iron bacteria.** See ★*bacterium*. **Iron by hydrogen.** Same as *reduced iron* (which see, under *reduce*). **Iron carbide.** See ★*carbide*.—**Iron carbonyl,** a compound of iron with carbonyl (carbon monoxid). Two such compounds are known, one a viscid liquid, $Fe(CO)_5$, the other a crystalline solid, $Fe_2(CO)_7$. Possibly the vapor of still another may occur in water-gas, which sometimes, on being burned, deposits oxid of iron.—**Iron sulphate,** a salt in which iron replaces the hydrogen of sulphuric acid. The two best-known salts of this character are ferrous sulphate, $FeSO_4$, and ferric sulphate, $Fe_2(SO_4)_3$. The former of these crystallizes with 7 molecules of water, as copperas or green vitriol. Both are largely used in the arts, copperas especially being applied to a number of different purposes in dyeing, tanning, disinfecting, purifying coal-gas, the manufacture of pigments, etc.—**Magnetic iron,** magnetite.—**Metallic iron,** the metal iron as distinguished from iron ores.—**Meteoric iron.** See ★*meteorite*. **Mitis iron,** a very pure iron obtained by melting the best Swedish malleable scrap in plumbago crucibles. It is used for small castings, and about 1 per cent. of aluminium, in the form of ferro-aluminium, is added to insure sound casting.—**Nitrate of iron,** a salt of iron, ferric nitrate; also, a workmen's name for impure ferric sulphate made by oxidizing ferrous sulphate or green vitriol with nitric acid, and much employed as a dyers' mordant.—**Parallel iron,** a plane-iron of uniform thickness throughout its length: so called to distinguish it from those that are thicker at the lower end.—**Passive iron,** iron rendered non-corrosive by being heated or treated with acid.—**Pisolitic iron ore,** concretionary iron ore, usually limonite, in individual masses of about the size of a pea.—**Pyrolignite of iron.** See ★*pyrolignite*.—**Quevenne's iron.** Same as *reduced iron* (which see, under *reduce*).—**Russia iron,** a form of sheet-iron which has a smooth, glossy surface and does not rust. It is made in Russia (although imitations are also made in other countries) by a secret process which consists essentially of hammering the sheets when laid in piles with powdered charcoal between the various sheets. Also called *Russian iron*. **Silvery iron,** a fine-grained quality of cast-iron which has a light-gray color when fractured. The color is usually due to the presence of silicon as an alloy.—**Strong iron,** a name used by British foundrymen for a grade of cast-iron made by melting pig-iron and scrap-castings in the cupola. By increasing the proportion of scrap, the tensile strength is raised. The pig-iron used must be low in phosphorous, and the scrap must be taken from high-grade strong castings. Such iron will be indented by a hammer-blow without breaking and will have a tensile strength of 20,000 to 24,000 pounds per square inch.—**Structural iron,** a name applied to a variety of shapes of cross-sections of rolled iron and steel, such as angles, channels, tees, and Z-bars, used in structural ironwork. **Tally iron,** a corruption of *Italian iron* (which see, under *iron*).—**White iron.** See *white*1.

ironbark (ī′ėrn-bärk), *n.* In Australia, certain trees having a solid, close bark, especially species of *Eucalyptus*. See *ironbark-tree*.—**Broad-leaved ironbark,** *Eucalyptus siderophloia*, the heavy, light-colored wood of which is especially preferred for spokes, heavy beams, cross-ties, and uses where great strength is required. **Gray ironbark,** *Eucalyptus crebra*. See *ironbark-tree*.—**Leguminous ironbark,** a Queensland tree of the bean family, *Erythrophleum chlorostachys*, the red wood of which is considered the hardest in Australia.—**Lemon-scented ironbark,** *Eucalyptus Staigeriana*, the foliage of which yields a large quantity of volatile oil, having the odor of lemons or of the lemon verbena, *Lippia citriodora*.—**Narrow-leaved ironbark.** Same as *gray* ★*ironbark*.

iron-blue (ī′ėrn-blö), *n.* **1.** A blue pigment made from the mineral vivianite.—**2.** In *angling*, a name applied to several artificial flies having a steel-blue color.

iron-clad, *a.* **3.** Noting an electrical apparatus or machine in which the iron part of the structure completely or partly surrounds and thereby mechanically protects the electric conductors: as, an *iron-clad* armature, one having the conductors embedded in slots or holes.

The two pole *iron-clad* type [of field-magnet], so called from the exciting coil being more or less encased by the iron yoke. *Encyc. Brit.*, XXVII. 754.

Iron-clad inductance, wire coil surrounded by laminated iron to give high self-induction.—**Iron-clad motor,** a motor in which the iron of the field surrounds and protects the armature field-coils, etc. See cuts of railway motors at ★*motor*.

irone (ī-rōn′), *n.* [*Iris* + *-one*.] A colorless dextrorotatory oil,

$$\begin{array}{l} CH.CH_2.CH.CH_3 \\ \quad\| \qquad\quad \diagdown \\ \quad CHC(CH_3)_2CHCH{:}CHCOCH_3, \end{array}$$

the odoriferous constituent of orris-root. It boils at 144° C. under 16 millimeters pressure. Also called 3, 3, 5-*trimethylcyclohexane* (1′)-4′-*butenylone*.

iron-fall (ī′ėrn-fâl), *n.* The fall of a siderolite, or iron meteorite. *N. E. D.*

iron-free (ī′ėrn-frē), *a.* **1.** Free from or not containing iron.—**2.** In a metaphorical sense, free from the danger of iron weapons.

ironhead, *n.* **2.** Same as ★*ironweed*, 3.

iron-headed (ī′ėrn-hed″ed), *a.* **1.** Fitted with an iron head or tip, as a spade or a nail.—**2.** Determined; stubborn; resolute; hard-headed.

ironheart (ī′ėrn-härt), *n.* Same as *pohutukawa*. [Australia.]

iron-holder (ī′ėrn-hōl″dėr), *n.* **1.** A holder, made of cloth or other material, with which a hot flat-iron is handled.—**2.** An iron-stand.

iron-hole (ī′ėrn-hōl), *n.* The hole through which the iron is run out of a blast-furnace, as distinguished from the ★*slag-hole*.

ironing, *n.* **2.** In *metal.*, the adherence of imperfectly fused masses of iron to the twyers. *Phillips and Bauerman*, Elements of Metallurgy, p. 250.

ironmongery, *n.* **2.** Firearms. [Jocose.]

All men have their delicate side, and it was Mr. Allison's to regard the open wearing of one's *iron-mongery* as bad form. *A. H. Lewis*, Sunset Trail, x.

iron-pan (ī′ėrn-pan), *n.* A variety of hard-pan whose particles are cemented by oxid of iron. [Rare.]

iron-red, *n.* **2.** In *chem.*, an oxid of iron, ferric oxid, or colcothar, used as a pigment.

iron-shears (ī′ėrn-shērz), *n. sing.* and *pl.* **1.** A machine for cutting iron bars, plates, or rods; a power-shears.—**2.** Hand-shears for cutting thin sheet-metal or wire.

iron-shot (ī′ėrn-shot), *a.* Inclosing grains or streaks of iron, as an iron ore.

iron-stand (ī′ėrn-stand), *n.* A cast-iron support upon which a hot flat-iron is rested.

iron-steel (ī′ėrn-stēl), *n.* A material made by welding steel surfaces upon an iron back. The latter remains tough when the steel face is hardened, thus giving strength or toughness combined with a hard cutting-edge. It is used for shears, etc.

ironstone, *n.* **Ball-ironstone.** Same as ★*ball*1, 27.—**Cleveland ironstone,** a kind of clay ironstone (impure iron carbonate) found in the North Riding of Yorkshire, England: used as an ore of iron. *Thorpe*, Dict. Applied Chem., I. 570. **Ironstone china.** (*b*) Same as *white* ★*granite* (which see).

iron-tree, *n.* **2.** A name sometimes given to several species of the genus *Metrosideros* (which see).—**Australian iron-tree,** any one of several species of the genus *Notelæa*, especially *N. longifolia*. See *Notelæa*. **Java iron-tree,** *Metrosideros vera*. **Norfolk Island iron-tree.** Same as *Australian* ★*iron-tree*.

iron-turner (ī′ėrn-tėr″nėr), *n.* A person who turns iron or steel in a lathe.

ironweed, *n.* **1.** Also, any of the species of the genus *Vernonia*, handsome composite plants of North America. See *Vernonia*.

2. The blue vervain, *Verbena hastata*.—**3.** The black knapweed, *Centaurea nigra*. Also called *ironhead*. **Devil's ironweed.** See ★*devil's-ironweed*.

ironwood, *n.* **2.** In Polynesia, *Casuarina equisetifolia*, a littoral tree with jointed leafless branches and very hard and heavy wood: used by the natives for making spears. See *horsetail-tree* and ★*agoho*. **Ceylon ironwood,** the Indian rose-chestnut, *Mesua ferrea*. See *Mesua* and *nagkassar*.

New Zealand ironwood. (*a*) Same as *parera*. (*b*) A large tree of the myrtle family, *Metrosideros lucida*, yielding a very hard, strong, red wood, which is used for ship-building, spokes, hubs, and cross-ties for railways.—**Queensland ironwood,** any one of three trees of northern Australia, *Acacia excelsa*, a tall tree, the wood of which has the odor of violets; the ridge myrtle, *Melaleuca genistifolia*; and *Myrtus gonoclada*, a small tree with angled branches. **Santa Cruz ironwood,** *Lyonothamnus floribundus*, a rosaceous tree or shrub found on the islands of Santa Cruz, Santa Catalina, and San Clemente, off the coast of southern California. It sometimes attains

Santa Cruz Ironwood (*Lyonothamnus floribundus*).

a, upper part of flowering branch showing inflorescence and [illegible]; *b*, [illegible]; *c*, [illegible] (From Sargent's "Manual of the Trees of North America.")

a height of 40 feet and a diameter of 10 inches. It bears very peculiar odd-pinnate leaves, as well as simple ones, and cymose corymbs of white flowers.—**Scrub ironwood,** a shrub or small tree of Queensland, *Myrtus Hillii*, yielding close-grained, hard wood of a light-gray color. **Seychelles ironwood,** *Northea Seychellana*, a large tree of the family *Sapotaceæ*, which yields valuable timber for building purposes.—**Small-leaved ironwood,** *Mouriri myrtilloides*, a low tree or shrub of Jamaica, Haiti, and Cuba, belonging to the family *Melastomaceæ*.

Irpex (ėr′peks), *n.* [NL. (Fries, 1825), < L. *irpex*, *hirpex*, a kind of harrow.] A genus of hymenomycetous fungi of the family *Hydnaceæ*. The sporophore is usually resupinate or pileate and attached at one side, and the teeth are more or less irregular and flattened. About 70 species have been described, occurring on fallen trees and branches.

irradiate, *v. t.* **4.** To subject to the therapeutic action of the Röntgen or other rays.

The patient suffering from malignant disease is *irradiated* without first submitting to tentative exposures. *Med. Record*, Jan. 31, 1903, p. 168.

irradiation, *n.* **3.** In *neurol.*, the diffusion of a nervous impulse to parts outside the normal path of conduction. *Baldwin*, Dict. of Philos. and Psychol., I. 574.—**4.** In *therap.*, subjection to the influence of X-rays or other form of radioactivity.

Still it seemed to be preferable to extirpate the tumorous portions, as far as it was possible, before resorting to *irradiation*. *Med. Record*, Jan. 31, 1903, p. 169.

5. In *anat.*, the disposition of fibrous or other structures in stellate form. *Syd. Soc. Lex.*—**6.** In *chem.*, exposure to radiant light: as, some substances are said to phosphoresce by *irradiation*.

irrational. **I.** *a.*—**Irrational equation, number.** See ★*equation*, ★*number*.

II. *n.* **2†.** A prime number.—**3.** In *math.*, an irrational number, that is, the mark of a cut which separates all rational numbers into two classes, the first having no greatest number, the second no least.—**Transcendental irrational,** a number which cannot be the root of an algebraic equation with integral coefficients. Such are e and π.

irrationalism (i-rash′ọn-ạl-izm), *n.* [*irrational* + *-ism*.] The principles of a system of thought opposed to rationalism; irrationality; the quality of not being guided by reason.

irrationalist (i-rash′ọn-ạl-ist), *n.* [*irrational* + *-ist*.] One who believes in irrationalism.

irrationality, *n.* **3.** In *math.*, incommensurability.—**Algebraic irrationality,** irrationality such that the number having it can be a root of an algebraic equation with integral coefficients.

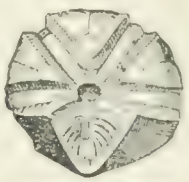
irrationalize (i-rash′ọn-ạl-īz), *v. t.*; pret. and pp. *irrationalized*, ppr. *irrationalizing*. [*irrational* + *-ize*.] To deprive of rational principles; make irrational.

irrecognizant (ir-ē-kog′ni-zạnt), *a.* [*in*-3 + *recognizant*.] Incapable of recognizing; not able to use the perceptive powers.

irredential (ir-ē-den′shạl), *a.* Pertaining to or advocating irredentism.

Irregular opening, reflection. See ★*opening*, ★*reflection*.

Irregulares (i-reg-u-lā′rēz), *n. pl.* [NL., pl. of *irregularis*, irregular.] An order of the *Blastoidea* in which one ambulacrum and the corresponding radial are different in form and size from the rest. This order embraces only 3 genera, [illegible] and [illegible], all from the Devonian and Carboniferous rocks.



irrelative, *a.* **3.** In *biol.*, of or pertaining to the reduplication or repetition of like parts or organs without mutual relation.

irrepressive (ir-ē-pres′iv), *a.* [*in*-3 + *repressive.*] Same as *irrepressible.* *Mrs. Browning*, Aurora Leigh, iii.

irrespirate (i-res′pi-rāt), *a.* [*in*-3 + *respirate.*] Not respired. *Stud Yale Psychol. Lab.*, X. 103.

irrespondence (ir-ē-spon′dens), *n.* [*in*-3 + *respondence.*] The state of not responding (to something); lack of respondence or response.

irrestrictive (ir-ē-strik′tiv), *a.* [*in*-3 + *restrictive.*] Not restrictive or subject to restriction.

irresultive (ir-ē-zul′tiv), *a.* [*in*-3 + *result* + *-ive.*] Useless; without result; done in vain.

irreticent (i-ret′i-sent), *a.* [*in*-3 + *reticent.*] Having no reticence.

irretractile (ir-ē-trak′til), *a.* [*in*-3 + *retractile.*] Not capable of being retracted or of retracting, as a metal.

irrevertible (ir-ē-vêr′ti-bl), *a.* [*in*-3 + *revertible.*] Not reverting, as a lease; not alterable.

Irrg. E. An abbreviation of *irrigation engineer.*

irrigation, *n.* - **Overhead irrigation,** a method of applying water by pipes, flumes, or troughs supported above the surface of the ground.— **Sewage irrigation,** the use, in irrigation, of sewage or waste water from towns or institutions, the object being the innocuous disposal of the waste water and also its use as a fertilizer.

irrigational (ir-i-gā′shon-al), *a.* [*irrigation* + *-al*1.] Of or pertaining to irrigation; irrigative.

irrigationist (ir-i-gā′shon-ist), *n.* [*irrigation* + *-ist.*] One who is interested, theoretically or practically, in irrigation; a student of irrigation.

irrigative (ir′i-gā-tiv), *a.* [*irrigate* + *-ive.*] Relating to irrigation or serving to irrigate.

irritability, *n.* **4.** In *pathol.*, morbid responsiveness to stimuli.— **Chemical irritability,** the property of functional reaction to chemical stimulation on the part of an organ or a cell, as contrasted with *mechanical* or *electrical irritability.*

Irritable ulcer. See ★*ulcer.*

Irrotational ellipsoid. See ★*ellipsoid.*

irrotationally (ir-ō-tā′shon-al-i), *adv.* Not in a rotational way.

irrumpent (i-rum′pent), *a.* [L. *irrumpens* (*-ent-*), ppr. of *irrumpere*, break in; see *irruption.*] Irruptive; bursting in. [Rare.]

irrupt (i-rupt′), *v.* [L. *irrumpere* (pp. *irruptus*), break in: see *irruption.*] **I.** *trans.* To break or force through: generally used as a participial adjective: as, *irrupted* barriers.

II. *intrans.* To enter forcibly; rush in: as, the enemy *irrupted* into the town.

-is3. A northern, and especially Scottish, form of *-ish*1, as in *Scottis* (contracted *Scots*) for *Scottish*, *Inglis* for *English* (*English*), etc.

is. An abbreviation of *island.*

I. S. An abbreviation (*a*) of *inside sentinel*; (*b*) of *Irish Society.*

isabel, *n.* **2.** One of the pigmy pouters: so called because of its general color (isabel yellow).

isabelita (iz″a-be-lē′tä), *n.* Same as *isabelite.*

isabella-moth (iz-a-bel′ä-môth), *n.* Same as *isabella tiger-moth* (which see, under *tiger-moth*). *J. B. Smith*, Econ. Entom., p. 266.

isabelle, *n.* **Manteau isabelle,** the trade-name for the reddish layer formed by exposure to the atmosphere on the outside of Marseilles mottled soap. Its production is due to oxidation of the iron which is present in small quantity.

isabelline, *a.* **II.** *n.* Same as *isabel.* *Proc. Zool. Soc. London*, 1902, II. 316.

isacoustic (ī-sa-kōs′tik), *a.* and *n.* [Gr. ἴσος, equal, + ἀκουστικός, of hearing: see *acoustic.*] **I.** *a.* Of or pertaining to equality of sound: as, an *isacoustic* line or surface.

The *isacoustic* lines (or lines of equal sound-audibility) are very elongated curves, distorted along the rectilinear band. *Nature*, March 17, 1904, p. 478.

Isacoustic curve, a curve passing everywhere through points of equal sound intensity; specifically, in the acoustics of buildings, a curve indicating the positions in a room in which the hearing is equally good. **Isacoustic surface,** a surface passing everywhere through points of equal audibility of sound. Such surfaces are used, in architectural acoustics, in determining the proper arrangement of sounding bodies in an auditorium.

II. *n.* A line or curve, upon a diagram of acoustic intensities, drawn everywhere through points of equal intensity of sound.

isactinic (ī-sak-tin′ik), *a.* [Gr. ἴσος, equal, + ἀκτίς (ἀκτῖν-), ray, + *-ic.*] Having equal intensity of actinic action.—**Isactinic line,** a line connecting points of equal actinic intensity.

isadelphia (ī-sa-del′fi-ä), *n.* [NL., < Gr. ἴσος, equal, + ἀδελφός, brother.] A condition in which well-formed twins, capable of independent existence, are united by bands of little or no vital importance.

Isaian (ī-za′yan), *a.* [*Isaiah* + *-an.*] Of or pertaining to the prophet Isaiah.

isametral (ī-sa-met′ral), *a.* and *n.* [Gr. ἴσος, equal, + μέτρον, measure, + *-al*1.] **I.** *a.* Having the same abnormal climatic features during any specific season or year or average of years.

II. *n.* A line connecting stations on the earth so characterized.

isamic (ī-sam′ik), *a.* [*is*(*atin*) + *am*(*monia*) + *-ic.*] Noting an acid, $C_{16}H_{13}O_4N_3$, prepared by the evaporation of ammonium isatate. It crystallizes in rhombohedral laminæ of the color of sublimed mercuric iodide, or in ruby-red thick hexagonal prisms, and is readily converted into isamide.

isamide (ī-sam′id), *n.* [*isam-ic* + *-ide*1.] A yellow pulverulent compound, $C_{16}H_{14}O_3N_4$, formed, together with isatic acid, by the evaporation of ammonium isatate.

isangelical† (ī-san-jel′i-kal), *a.* [Gr. ἴσος, equal, + ἀγγελικός, < ἄγγελος, angel.] Equal to an angel.

We may venture to call this resurrection-body of the just also an "angelical" or "*isangelical* body."
Cudworth, Intell. Syst., III. 314.

isanomal (ī-sa-nom′al), *n.* [Gr. ἴσος, equal, + ἀνώμαλος, irregular.] A line connecting places having equal anomalies of temperature, pressure, or other meteorological element.

isanomalous (ī-sa-nom′a-lus), *a.* [Gr. ἴσος, equal, + ἀνώμαλος, irregular, + *-ous.*] Having equal anomalies or departures from average values.—**Isanomalous line,** a line passing through places which have equal departures from the normal.

Maps of isotherms and *isanomalous lines* for January and July. *Geog. Jour.* (R. G. S.), XV. 662.

isanomaly (ī-sa-nom′a-li), *n.* [Gr. ἴσος, equal, + ἀνωμαλία, irregularity.] An equal anomaly or departure from the average.

isanther (ī-san′thèr), *n.* [Gr. ἴσος, equal, + ἄνθηρός, blossoming, blooming.] A line connecting places at which a given variety or species of plant blossoms at the same date. *Quetelet*, 1845.

isantheric (ī-san-ther′ik), *a.* [*isanther* + *-ic.*] Of or pertaining to an isanther; having the property or habit of blossoming simultaneously.

isapiol (ī-sap′i-ol), *n.* [Gr. ἴσος, equal, + E. *apiol.*] The methylene-dimethyl ether of 2, 3,4,5-tetrahydroxy-1-propen-1′-ylbenzene, $CH_2{:}O_2{:}C_6H(OH)_2CH{:}CHCH_3$. It is formed by heating apiol with sodium ethylate, and crystallizes in prisms which melt at 44° C.

isat-. A combining form used in chemistry to designate compounds related to isatin and indigo.

isatan (ī′sa-tan), *n.* [*isat*(*in*) + *-an.*] A colorless compound, $C_{32}H_{26}O_6N_4$, prepared by the reduction of isatin, by means of sodium, in acid solution. It crystallizes in small cubes.

isatate (ī′sa-tāt), *n.* [*isat-ic* + *-ate*1.] A salt of isatic acid.

isatid, *n.* Same as ★*isatyd.*

isatimide (ī-sat′i-mid), *n.* [*isat*(*in*) + *imide.*] A yellow compound, $C_{24}H_{17}O_4N_5$, formed, together with imasitin, by the action of ammonia on isatin. It crystallizes in rhombic plates.

isatinic (ī-sa-tin′ik), *a.* [*isatin* + *-ic.*] Pertaining to isatin.

isatinsulphonic (ī″sa-tin-sul-fon′ik), *a.* Pertaining to a sulphonic acid derived from isatin.

Isatinsulphonic acid, a yellow compound, $C_8H_4O_2{\cdot}NSO_3H.2H_2O$, prepared by the oxidation of indigosulphonic acid. It forms silky, lustrous crystals.

isatogenic (ī-sa-to-jen′ik), *a.* [*isat*(*in*) + *-gen* + *-ic.*] Noting an acid, a highly unstable compound, $C_6H_4{<}^{CO}_{N-O}{>}C-CO_2H$, formed by the intramolecular rearrangement of orthonitrophenol-propiolic acid under the influence of sulphuric acid.

isatoic (ī-sa-to′ik), *a.* [*isat*(*in*) + *-o-* + *-ic.*] Noting an acid, a colorless compound, $C_6H_4{<}^{CO}_{NCOOH}$, or $C_6H_4{<}^{COO}_{NHCO}$, prepared by the oxidation of isatin, or by the action of ethyl chlorformate on anthranilic (orthoaminobenzoic) acid. It crystallizes in small needles and melts and evolves carbon dioxid at 230° C. Also called *anthranilcarboxylic acid.*

isatropic (ī-sa-trop′ik), *a.* [Gr. ἴσος, equal, + E. *atropic.*] Noting three isomeric acids designated γ, δ, or ε, according to the position of the substituting groups. They are colorless compounds, $C_6H_5CH{\cdot}CHCOOH$ / $HOCOCH{\cdot}CHC_6H_5$, melting at 274° C., 290° C., and 228° C., respectively. They are formed by the prolonged heating of atropic acid, and are somewhat closely related to ecgonine and cocaine. Also called *diphenyl-cyclobutane-dimethyl acids.*

isatyd (ī′sa-tid), *n.* The preferred form of *isathyd.*

I. S. C. An abbreviation of *Indian Staff Corps.*

Iscariotism (is-kar′i-ot-izm), *n.* [*Iscariot* + *-ism.*] An act characteristic of Judas Iscariot; treachery or meanness and over-economy, as in the application of charitable or church funds.

ischiac (is′ki-ak), *a.* An erroneous form for *ischiatic.* - **Ischiac border,** the free margin of the ischium. In birds there is a lower ischiac border adjoining the pubis, a posterior border, and, in ostriches and their allies, a superior border.

ischialgic (is-ki-al′jik), *a.* [*ischialgia* + *-ic.*] Relating to or affected with ischialgia or sciatica.

Ischiatic foramen. Same as *ilio-ischiadic* ★*foramen.*

ischiatica (is-ki-at′i-kä), *n.* [NL., a medial form between *ischiadica* and its altered phase *sciatica*: see *sciatica.*] Same as *sciatica.*

ischiodidymus (is″ki-ō-did′i-mus), *n.*; pl. *ischiodidymi* (-mī). [NL., < Gr. ἰσχίον, the hip-joint, + δίδυμος, twin.] A double monster in which union exists in the region of the hip.

ischiofemoral (is″ki-ō-fem′ō-ral), *a.* [Gr. ἰσχίον, hip-joint, + L. *femur*, thigh, + *-al*1.] Pertaining to both the ischium and the thigh.

ischiognathite (is-ki-og′na-thīt), *n.* [Gr. ἰσχίον, hip-joint, + γνάθος, jaw, + *-ite*2.] In crustaceans, the third joint of a gnathite or foot-jaw.

ischio-innominate (is″ki-ō-i-nom′i-nāt), *a.* In *anat.*, relating to both the ischium and the innominate bone.—**Ischio-innominate index.** See ★*index.*

ischiopagus (is-ki-op′a-gus), *n.*; pl. *ischiopagi* (-jī). [NL., < Gr. ἰσχίον, hip-joint, + πηγνύναι, fasten.] A double monster united by fusion of the ischia.

ischiopubis (is″ki-ō-pū′bis), *n.*; pl. *ischiopubes* (-bēz). [NL., < *ischium* + *pubis.*] A bony plate, in the pelvic arch in the extinct stegocephalian *Amphibia*, produced by the union of the ischium and the pubis.

ischiosis (is-ki-ō′sis), *n.* [NL., < *ischium* + *-osis.*] Same as *sciatica.*

Ischnochitonidæ (isk″nō-kī-ton′i-dē), *n. pl.* [NL. *Ischnochiton* (< Gr. ἰσχνός, thin, lean, + NL. *Chiton*, a genus of mollusks), + *-idæ.*] A family of mesoplacophorous chitons having the surface of the intermediate valves divided by a diagonal rib. It occurs in the Tertiary rocks and present seas.

ischnophony (isk-nof′ō-ni), *n.* [Gr. ἰσχνόφωνος, thin-voiced (< ἰσχνός, thin, + φωνή, voice), + *-y*3.] Weakness or feebleness of voice.

ischochymia (is-kō-kī′mi-ä), *n.* [NL., irreg. < Gr. ἴσχειν, hold back, + χυμός, juice (see *chyme*1).] Retention of food in the stomach in consequence of arrest of the process of digestion.

ischogalactia (is″kō-ga-lak′ti-ä), *n.* [NL., < Gr. ἴσχειν, hold back, + γάλα (γαλακτ-), milk.] Suppression of the secretion of milk.

ischomenia (is-kō-mē′ni-ä), *n.* [NL., < Gr. ἴσχειν, hold back, + μῆνες, menses.] Same as *amenorrhea.*

ischuric (is-kū'rik), *a.* [*ischuria* + *-ic.*] **1.** Of or pertaining to ischuria.—**2.** Same as *ischuretic.*

Ischyodus (is-kī'o-dus), *n.* [NL., irreg. < Gr. *ἰσχύειν*, be strong, + *ὀδούς*, a tooth.] A genus of extinct selachian fishes, belonging to the family *Chimæridæ*, which has been found in nearly complete skeletons in the Jurassic slates of Bavaria. They have the upper part of the face covered with a thick layer of dentin and the edge of the mouth sharp. Both lower and upper dental plates bear four tough tritors.

Ischyromyidæ (is″ki-rō-mī'i-dē), *n. pl.* A family of small, extinct, rodent mammals whose remains occur in the White River Oligocene. *Alston*, 1876.

iseidomal (i-sī'do-mal), *a.* [Also *isoeidomal*, *iseidonal*, *isoeidonal* (the original formation being erroneous and thus subject to conjectural emendations); irreg. < Gr. *ἴσος*, equal, + *εἶδος*, I see, + *-al*[1].] Affording an equally good view: applied to a curve or surface passing through the various points, in a theater or hall, from which the view of the stage is equally good.

isenergic, *a.* **II.** *n.* In *thermodynam.*, a line which denotes graphically an operation such that the system operated upon neither gains nor loses energy.

isenite (ī'sen-īt), *n.* [NL. *Isena*, the Eis, a small tributary of the Rhine, Germany, + *-ite*[2].] In *petrog.*, an olivin-bearing amphibole and biotite-andesite with basaltoid character. *Bertels*, 1874.

Isentropic curve. See ★*curve.*

iserite (ī'zer-īt), *n.* [*iser(in)* + *-ite*[2].] Same as *iserin.*

isethionic (ī-seth-i-on'ik), *a.* [Gr. *ἴσος*, equal, + E. *ethionic.*] Pertaining to an isomeric variety of ethyl-sulphuric acid.—**Isethionic acid,** a colorless compound, $HO(CH_2)_2SO_3H$, isomeric with ethyl-sulphuric acid, prepared by the action of sulphuric acid on ether or absolute alcohol. It is crystalline, evolves water at 200° C., and is also called *1-ethanol-2-sulphonic acid.*

Ishmaelitic (ish″mā-e-lit'ik), *a.* [*Ishmaelite* + *-ic.*] Same as *Ishmaelitish.*

Isidæ (is'i-dē), *n. pl.* [NL., < *Isis* + *-idæ.*] A family of gorgonacean alcyonarians having an axis consisting of alternating horny and calcareous portions. It includes several genera, among them *Bathygorgia*, *Isis*, and *Mopsea.*

isinglass, *n.*—**Bengal isinglass,** agar-agar (which see). See also *isinglass*, 1.

Isis, *n.* **2.** The typical genus of the family *Isidæ.* *Linnæus.*

isl. An abbreviation of *island.*

Islamist (is'lam-ist), *n.* [*Islam* + *-ist.*] An adherent of Islam; an Islamite.

island[1], *n.* **4.** In *anat.*, any circumscribed portion of tissue or aggregation of cells differing in structure from the surrounding parts.

Brazilian island, a height of land in the southern part of the state of Goyaz, Brazil, from which the drainage radiates into several of the great rivers of South America. *Geog. Jour.* (R. G. S.), IX. 64.—**Continental island,** an island adjoining a continent and strictly a part of the same elevated mass, although separated by shallow sea. *Dana*, Manual of Geol. (4th ed.), p. 22.—**Islands of Langerhans,** collections of cells in the interstitial tissue of the pancreas, thought to be independent ductless glands furnishing an internal secretion.—**Island of safety** or **refuge.** See ★*isle of safety.*

II. *a.* Isolated; separate.—**Island case,** a special, isolated case in which particular specimens for scientific collections are packed for transportation.—**Island platform,** in *railroading*, a platform between two tracks: used at way-stations for convenience in transferring passengers and for safety in preventing passengers from crossing the tracks. It is reached from the waiting-rooms by means of bridges over or subways under the tracks, and connecting stairways.—**Island universe.** See ★*universe.*

Isle or **island of safety,** a short platform, generally protected by posts, placed in the middle of a busy street as a convenience and a temporary stopping-place in crossing the street and as a place of safety in avoiding passing vehicles. Also called *refuge.*

islet, *n.* **3.** An isolated piece of organic tissue; a cluster of cells; specifically, one of the islands of Langerhans.

I. S. M. An abbreviation of the Latin *Iesus Salvator Mundi*, Jesus Saviour of the World.

I. S. O. An abbreviation of *Imperial Service Order.*

iso-. **2.** In the names of chemical compounds, used to imply 'of equal or like formation' or 'isomeric,' distinguishing a compound from one isomeric with it. Of two such substances, that having the more complex structure or the one discovered later bears the prefix.

isoagglutinate (ī″sō-a-glō'ti-nāt), *v. t.* and *i.*; pret. and pp. *isoagglutinated*, ppr. *isoagglutinating.* [Gr. *ἴσος*, equal, + E. *agglutinate.*] To produce isoagglutination in; undergo isoagglutination.

The serum from such blood was also *isoagglutinating* to some extent, that is, it would agglutinate the red cells of another individual.
Alien. and Neurol., Aug., 1904, p. 386.

isoagglutination (ī″sō-a-glō-ti-nā'shon), *n.* [Gr. *ἴσος*, equal, + E. *agglutination.*] The agglutination of cells of an animal of one species by the corresponding agglutinins of another animal of the same species.

isoagglutinative (ī″sō-a-glō'ti-nā-tiv), *a.* Causing isoagglutination. *Science*, Nov. 28, 1902, p. 858.

isoagglutinin (ī″sō-a-glō'ti-nin), *n.* [Gr. *ἴσος*, equal, + E. *agglutinin.*] An agglutinin directed against cells of animals of the same species, as the one furnishing the agglutinin.

isoamyl (i-sō-am'il), *n.* [Gr. *ἴσος*, equal, + E. *amyl.*] A univalent organic radical,

$$\begin{matrix}CH_3\\CH_3\end{matrix}\!\!>\!CH.CH_2CH_2.$$

Its derivatives, such as isoamyl alcohol, isoamyl iodide, etc., are prepared from certain portions of fusel-oil.

isoamylamin (ī″sō-a-mil'a-min), *n.* [*isoamyl* + *-in*[2].] A poisonous ptomaine, $C_5H_{13}N$, probably derived from leucin: found in cod-liver oil.

isoamylate (ī-sō-am'i-lāt), *n.* [*isoamyl* + *-ate*[1].] The name of a metallic derivative of isoamyl alcohol.

isoanemonic (ī″sō-an-e-mon'ik), *a.* [Gr. *ἴσος*, equal, + E. *anemonic.*] Noting an acid, a compound, $C_{10}H_{10}O_5$, formed, together with anemonin, by the spontaneous decomposition of anemone camphor from *Anemone pulsatilla.*

isoapiol (ī-sō-ap'i-ol), *n.* [Gr. *ἴσος*, equal, + E. *apiol.*] A colorless compound, $C_6H(CH:CHCH_3)O_2:CH_2(OCH_3)_2$, prepared by the action of alcoholic potassium hydroxid on apiol. It crystallizes in large leaves or quadratic plates, melts at 55–56° C., and boils at 303–304° C.

isobar, *n.* **2.** In *thermodynam.*, a line or curve determined by the equation of state ($pv = RT$) of a system when p has any constant value; a line of equal pressures. *E. Buckingham*, Theory of Thermodynamics, p. 23.

isobaric, *a.* **2.** In *math.*, having all terms of equal weight. **Isobaric algorism.** See ★*algorism.*

II. *n.* In *thermodynam.*, a line or surface of equal pressures; an isobar.

The *isobarics* of evaporation happen to be isothermals—not by reason of anything that can fairly be called physical accident, because it is the conjunction of corresponding critical pressures and temperatures that determines the evaporation always by controlling and steadying the pressure and never by controlling and steadying the temperature. *The Engineer*, July 24, 1903, p. 83.

isobase (ī'sō-bās), *n.* [Gr. *ἴσος*, equal, + *βάσις*, base.] An imaginary line passing through all points which have undergone the same amount of deformation from their original position. *R. D. Salisbury*, in Geol. Surv. of New Jersey, 1893, p. 321.

Isobase.

Map of the Great Lakes, showing pairs of gaging-stations and [illegible] of outlets.
The isobases are marked by heavy lines, broken lines show the pairs of stations.

isobasial (ī-sō-bā'si-al), *a.* [Gr. *ἴσος*, equal, + *βάσις*, base, + *-al*[1].] In *craniom.*, having a skull the basion and opisthion of which are on the same level in relation to the horizontal plane of the skull.

isobath (ī'so-bath), *n.* [Gr. *ἴσος*, equal, + *βάθος*, depth.] **1.** A line connecting places that have the same depth below sea-level; an isobathymetric line.—**2.** An imaginary surface passing through all points in a body of water which have the same depth below the surface.

Warm currents follow the trend of deepest *isobaths*, ice currents exist only in shallow seas, where no warm current can melt them. *Nature*, Oct. 29, 1903, p. 632.

isobathic (i-sō-bath'ik), *a.* [*isobath* + *-ic.*] Pertaining to an isobath; indicating equal depths below the surface of a body of water.

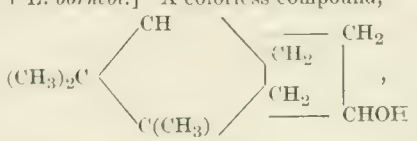
Towards the west this wall of limestone does not rise as high above the water, although the adjacent soundings are still so deep that the 100-metre *isobathic* line approaches to within 200 metres of the shore.
Geog. Jour. (R. G. S.), XXII. 128.

isobathymetric (ī″sō-bath-i-met'rik), *a.* [Gr. *ἴσος*, equal, + *βάθος*, deep, + *μέτρον*, measure, + *-ic.*] Having the same depth below sea-level.

isobiogenetic (ī″sō-bī-ō-jē-net'ik), *a.* [Gr. *ἴσος*, equal, + E. *biogenetic.*] Indicating corresponding weights of two different foodstuffs which have equal dynamogenic and thermogenic values.

The dynamogenic and thermogenic value of the aliment is at the same time its biogenetic value. Two weights of different aliments for which these numerical values are the same are said to be isodynamogenic, *isobiogenetic*, or isoenergetic weights. They are equivalent from the point of view of their alimentary value.
A. Dastre, in Smithsonian Rep., 1898, p. 543.

isoborneol (ī-sō-bôr'nē-ol), *n.* [Gr. *ἴσος*, equal, + E. *borneol.*] A colorless compound,



prepared by the action of sodium on camphor. It crystallizes in hexagonal plates, melts at 216° C., sublimes with extreme ease, and resembles borneol in general properties.

isobutyl (ī-sō-bū'til), *n.* [Gr. *ἴσος*, equal, + E. *butyl.*] An organic univalent radical, $\begin{matrix}CH_3\\CH_3\end{matrix}\!\!>\!CHCH_2$, occurring in a number of compounds, most of which are prepared from isobutyl alcohol, a constituent of fusel-oil.

isobutylate (ī-sō-bū'ti-lāt), *n.* [*isobutyl* + *-ate*[1].] A metallic derivative of isobutyl alcohol.

isobutyric (ī″sō-bū-tir'ik), *a.* [Gr. *ἴσος*, equal, + E. *butyric.*] Noting an acid, a colorless compound, $(CH_3)_2CHCOOH$, found in *Ceratonia Siliqua* and, combined with alcohol, in croton-oil. It closely resembles butyric acid in general properties, boils at 155° C., and is also called *dimethylacetic acid* or *methyl propanoic acid.*

isocephalic (ī-sō-se-fal'ik), *a.* [Gr. *ἴσος*, equal, + *κεφαλή*, head, + *-ic.*] Noting a figure-composition, especially a Greek bas-relief, in which the heads are placed nearly on the same horizontal line without considering the proportions of the figures. See *isocephaly.*

isocephalism (ī-sō-sef'a-lizm), *n.* [*isocephal(ic)* + *-ism.*] Same as *isocephaly.*

isocephalous (ī-sō-sef'a-lus), *a.* [Gr. *ἴσος*, equal, + *κεφαλή*, head, + *-ous.*] Same as ★*isocephalic.*

isocheim, isocheimal. See *isochime, isochimal.*

isochlor (ī'sō-klōr), *n.* [Gr. *ἴσος*, equal, + *χλωρός*, green (see *chlorin*).] An imaginary line connecting all places that have the same amount of chlorin.

The examination for chlorine has gone far enough to indicate the amounts normal in the several great districts of the State, but not far enough to enable us to make an accurate map showing chlorine content of waters. Further analyses will be necessary to make a detailed report, including all the sections and subdivisions of these great natural divisions and *isochlor* map of the State.
R. D. Salisbury, in Geol. Surv. of New Jersey, 1900, p. 2.

isocholesterin (ī″sō-ko-les'te-rin), *n.* [Gr. *ἴσος*, equal, + E. *cholesterin.*] In *chem.*, a substance of the class of the alcohols, isomeric with and generally similar to cholesterin or cholesterol, found in admixture with the latter, both chiefly in the form of esters, in wool-grease, fish- and whale-oils, etc.

isocholesterol (ī″sō-ko-les'te-rol), *n.* Same as ★*isocholesterin.*

isochrome (ī'sō-krōm), *n.* [Gr. *ἴσος*, equal, + *χρῶμα*, color.] In *optics*, a curve, in the interference pattern produced when a crystal is viewed in the convergent field of a polariscope, which passes everywhere through regions having the same color; a curve of equal difference of path; an isochromatic curve.

isochrone (ī'sō-krōn), *n.* [Gr. *ἰσόχρονος*, equal in time, < *ἴσος*, equal, + *χρόνος*, time.] **1.**

A line connecting points at which the same events occur simultaneously. Thus the isochrone of travel is the line connecting points attainable by a person riding or an army marching from a given center forward during a given interval of time; the phenological isochrone, the line connecting points at which plants of any species attain simultaneously the same stage of development.

Specifically—2. In *hydrol.*, the line bounding an area of watershed whose river-flow will concentrate in a given time at a central point to form a flood.

isochronize (ī-sok′rō-nīz), *v. t.*; pret. and pp. *isochronized*, ppr. *isochronizing*. [*isochron(ous)* + *-ize*.] To cause to vibrate in equal times; adjust to equality, as to frequency (any periodic operations or cycles).

Isochronous vibration. See ★*vibration*.

isoclasite (ī-sō-klas′īt), *n.* [Gr. *ἴσος*, equal, + *κλάσις*, breaking, + *-ite*[2].] A hydrated calcium phosphate occurring in colorless or snow-white crystalline and cleavable masses.

Isoclinal line or **ray**, in *geom.*, a ray from the vertex of an angloid equally inclined to the edges.—**Isoclinal plane**, in *geom.*, a plane equally inclined to the edges of an angloid.

isocnemic (ī-sō-nē′mik), *a.* [Gr. *ἴσος*, equal, + *κνημη*, tibia, + *-ic*.] In anthozoans, a term used to distinguish a unilateral pair composed of two equal mesenteries: contrasted with ★*anisocnemic*.

In Madrepora and Porites the new mesenteries arise as complete or incomplete bilateral pairs within one or both of the directive entocœles; but in Cladocora, Stephanocœnia, Solenostræa, and Oculina they arise as unilateral *isocnemic* pairs within one or more exocœlic chambers. *Annals and Mag. Nat Hist.*, Feb., 1903, p. 154.

isocodeine (ī″sō-kō-dē′in), *n.* [Gr. *ἴσος*, equal, + E. *codeine*.] A colorless amorphous basic compound, $CH_3O(OH)C_{16}H_{14}ONCH_3$, prepared by the action of dilute hydrochloric acid on dihydrothebaine. It softens at 55–60° C., and melts at 70–80° C.

isocœlous (ī-sō-sē′lus), *a.* [Gr. *ἴσος*, equal, + *κοῖλος*, hollow, + *-ous*.] In *ornith.*, noting an arrangement of the intestine in which the ascending and descending branches of the second and third loops are in contact, and the descending part lies to the left of the other.

Isocoma (ī-sok′ō-mä), *n.* [NL. (Nuttall, 1841), < Gr. *ἴσος*, equal, + *κόμη*, hair. The allusion is to the equal length of the florets in the flower-head, the genus differing in this characteristic from *Lessingia*.] A genus of dicotyledonous herbaceous or woody plants belonging to the family *Asteraceæ*. They are rather rigid, tufted, erect plants with somewhat viscid, entire, toothed, or pinnatifid leaves and a corymbose terminal cluster of rayless heads of yellow flowers. There are about 11 species, natives of western North America. See *Bigelovia* and ★*buck-brush* (*c*).

isocomplement (ī-sō-kom′plē-ment), *n.* [Gr. *ἴσος*, equal, + E. *complement*.] A complement furnished by the same animal, or one of the same species, which yields the amboceptor.

isocomplementophilic (ī″sō-kom-plē-men-tō-fil′ik), *a.* [*isocomplement* + Gr. *φίλος*, loving, + *-ic*.] Having reference to affinity for isocomplements.

isocoria (ī-sō-kō′ri-ä), *n.* [NL., < Gr. *ἴσος*, equal, + *κόρη*, pupil.] Equality in the diameters of the pupils of the eyes.

isocoumarin (ī-sō-kō′ma-rin), *n.* [Gr. *ἴσος*, equal, + E. *coumarin*.] A colorless compound, $C_6H_4\langle\begin{matrix}CO\cdot O\\ CH{:}CH\end{matrix}$, prepared by the distillation of silver isocoumarin carboxylate. It crystallizes in lustrous plates, melts at 47° C., boils, with some decomposition, at 285–286° C., and is also called *isocoumarincarboxylic anhydrid*.

isocracy (ī-sok′ra-si), *n.* [Gr. *ἴσος*, equal, + *-κρατία*, < *κρατεῖν*, rule.] A system of government in which political power is equally vested in all; equality in government.

isocrat (ī′sō-krat), *n.* [*isocrat(ic)*.] An advocate of isocracy. *N. E. D.*

isocratic (ī-sō-krat′ik), *a.* [*isocracy* (*-crat-*) + *-ic*.] Of or pertaining to isocracy; believing in isocracy.

isocratize (ī-sok′ra-tīz), *v.*; pret. and pp. *isocratized*, ppr. *isocratizing*. [*isocrat-ic* + *-ize*.] **I.** *intrans.* To be isocratic.

II. *trans.* To force (others) to be isocratic or hold isocratic principles.

isocreatinine (ī″sō-krē-at′i-nin), *n.* [Gr. *ἴσος*, equal, + *κρέας* (*κρεατ-*), flesh, + *-in*[2] + *-ine*[2].] A yellow basic compound, $C_4H_7ON_3$, obtained from the muscular tissue of the haddock. It crystallizes in lustrous leaflets which decompose at 230–240° C., without melting.

isocrotonic (ī-sō-kro-ton′ik), *a.* [Gr. *ἴσος*, equal, + E. *crotonic*.] Noting an acid, a colorless oil, $\begin{matrix}CH_3CH\\ \|\\ HCCOOH\end{matrix}$, with an odor like butyric acid. It is found in crude acetic acid from wood, boils at 75–76° C. under 25 millimeters pressure, and is in part converted into crotonic acid by boiling under the ordinary pressure.

isocrymal, *n.* (*b*) In *hydrog.*, a line joining places where the mean minimum temperatures of the ocean water are the same.

II. *a.* **1.** Having equal degrees of cold or equal low temperatures at any time or under any condition; having equal freezing temperatures.—2. Having similar physical properties at specific low temperatures.

isocrymic (ī-sō-krī′mik), *a.* Same as ★*isocrymal*.

isocyanate (ī-sō-sī′a-nāt), *n.* [*isocyan-ic* + *-ate*[1].] A salt of isocyanic acid.

isocyanic (ī″sō-sī-an′ik), *a.* [Gr. *ἴσος*, equal, + E. *cyanic*.] Noting an acid, a very volatile liquid, HNCO, formed by heating cyanuric acid, or by the action of phosphoric anhydrid on carbamide (urea). It has an intense odor of acetic acid, the vapor rapidly attacks the mucous membrane of the eye, and the liquid produces painful blisters on the skin. It quickly polymerizes, even at 0° C., into cyamelide, and is also called *carbonimide* or *carbimide*.

isocyanide (ī-sō-sī′a-nid), *n.* [Gr. *ἴσος*, equal, + E. *cyanide*.] Same as ★*isonitrile*.

isocyanuric (ī-sō-sī-a-nū′rik), *a.* [Gr. *ἴσος*, equal, + E. *cyanuric*.] Noting an acid, the same as *fulminic acid*.

isocyclic (ī-sō-sik′lik), *a.* [Gr. *ἴσος*, equal, + *κυκλος*, ring.] Containing a ring of atoms of one element, especially a ring composed exclusively of carbon atoms. It is practically identical in meaning with ★*carbocyclic* (which see).

isocytic (ī-sō-sit′ik), *a.* [Gr. *ἴσος*, equal, + *κυτος*, a hollow, a cell.] Pertaining to organisms in which no specialization of cells has taken place, the cells being all equal and similar in size, form, and function. *Cook and Swingle.*

isocytotoxin (ī-sō-sī-tō-tok′sin), *n.* [Gr. *ἴσος*, equal, + E. *cytotoxin*.] A cytotoxin which causes the destruction of homologous cells of the same species.

isodemic (ī-sō-dem′ik), *a.* [Gr. *ἴσος*, equal, + *δῆμος*, people, + *-ic*.] Of equal density of population.—**Isodemic lines,** lines drawn upon a map through points at all of which the density of population is the same.

isodiabatic, *a.* **II.** *n.* A curve which represents the isothermal changes of pressure and volume of a substance while the same quantity of heat is being transferred to it or from it.

isodialuric (ī-sō-dī-a-lū′rik), *a.* [Gr. *ἴσος*, equal, + E. *dialuric*.] Noting an organic acid of the uric-acid series, $C_4H_4N_2O_4$. On condensation with urea it forms uric acid.

isodiazo-. A combining form which has been suggested to designate compounds containing the group RN : NOM where M is an alkali metal and R an aromatic hydrocarbon radical.

isodictyal (ī-sō-dik′ti-al), *a.* [Gr. *ἴσος*, equal, + *δίκτυον*, net, + *-al*[1].] Having meshes of uniform size and shape, as a network of fibers in a sponge skeleton.

Skeleton consisting of . . . and a dermal *isodictyal* network with strands 2-3 spicules thick, with unispiculate strands in the interstices.
Proc. Zool. Soc. London, 1900, I. 138.

isodimorphic (ī″sō-dī-môr-fik), *a.* Same as *isodimorphous*.

isodipyridine (ī-sō-dī-pir′i-din), *n.* [Gr. *ἴσος*, equal, + E. *pyridine*.] A colorless liquid, $NC_5H_4\overset{2}{C}\langle\begin{matrix}CH{-}{-}CH\\ \|\\ N(CH_3)CH\end{matrix}$, prepared by the gentle oxidation of nicotine. It has a characteristic odor of mushrooms and boils at 280–281° C. Also called *nicotyrine*, or *n-methyl-β-pyridyl pyrrole*.

isodomic (ī-sō-dom′ik), *a.* Same as *isodomous*.

isodont, *a.* **2.** Having a series of teeth of equal length, as many snakes: used by Cope as a diagnostic character of various genera of snakes. Compare *diacranterian*.

Isodonta (ī-sō-don′tä), *n. pl.* [Gr. *ἴσος*, equal, + *ὀδούς* (*ὀδοντ-*), tooth.] In the *Pelecypoda*, a group in which the hinge-structure consists of an elaborate interlocking arrangement of two concentric teeth and sockets which cannot be separated without fracture, as in *Spondylus*. In *Pecten* and other less specialized forms the apparatus is not so intricate.

isodontous (ī-sō-don′tus), *a.* Having all the teeth alike; isodont.

isodulcitan (ī-sō-dul′si-tan), *n.* [Gr. *ἴσος*, equal, + E. *dulcitan* (?).] A colorless amorphous compound, $C_6H_{12}O_5$, prepared by heating rhamnose at 100° C. The reverse change takes place in the presence of water.

isodulcite (ī-sō-dul′sīt), *n.* [Gr. *ἴσος*, equal, + E. *dulcite*.] Same as ★*rhamnose*.

isodulcitic (ī″sō-dul-sit′ik), *a.* [*isodulcite* + *-ic*.] Derived from isodulcite.—**Isodulcitic acid,** a colorless compound, $C_6H_{10}O_9$, prepared by the action of nitric acid on rhamnose. It forms granular, vitreous, transparent crystals which decompose when gently heated.

isodulcitonic (ī-sō-dul-si-ton′ik), *a.* [*isodulcite* + *-one* + *-ic*.] Derived from isodulcite. Same as ★*rhamnonic*.

isodynamic, *a.* **2.** Having the same value in reference to the production of energy: said of different articles of food.

isodynamical (ī-sō-dī-nam′i-kal), *a.* Same as *isodynamic*.

isodynamogenic (ī-sō-dī-na-mō-jen′ik), *a.* [Gr. *ἴσος*, equal, + E. *dynamogenic*.] Equally dynamogenic: said of the corresponding weights of two different food-stuffs if their dynamogenic values are alike.

isodyne (ī′sō-dīn), *a.* [Gr. *ἴσος*, equal, + *δύν(αμις)*, power.] Having equal force: specifically applied by Professor Diro Kitao of Tokio, in 1887, to surfaces in the atmosphere at which the movement or force of the wind is equal.

isoeidomal, isoeidonal (ī-sō-ī′dō-mal, -nal), *a.* See ★*iseidomal*.

isoëlectric (ī″sō-ē-lek′trik), *a.* [Gr. *ἴσος*, equal, + E. *electric*.] In *phys. chem.*, possessing equal quantities of the two opposite kinds of electricity; acted upon by equal and opposite electric attractions.—**Isoëlectric point,** in *phys. chem.*, of colloids in solution, the point where the electrolytic motion of the dissolved colloid, which in certain conditions takes place in the direction of the electric current and in other conditions takes place in the opposite direction, is made to vanish, as by the addition of a minute quantity of an electrolyte. It is supposed that the colloid can exist in solution only as long as its particles preserve their electric charges. When an electrolyte is added it is supposed that the particles of the colloid have their charges neutralized by the conjunction with them of the mobile ions of the electrolyte and coagulation then occurs.

At the *isoelectric point*, for a distinct small quantity of barium chloride or acid, the electric movement vanishes and coagulation or precipitation occurs.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 61.

isoëmodin (ī-sō-em′ō-din), *n.* [Gr. *ἴσος*, equal, + E. *emodin*.] A crystalline compound, $C_{15}H_8O_4$, related to emodin, contained in buckthorn bark, *Rhamnus Frangula*. It is laxative.

isoënergetic (ī-sō-en-ér-jet′ik), *a.* [Gr. *ἴσος*, equal, + E. *energetic*.] Same as ★*isobiogenetic*.

isoënergic (ī″sō-e-nér′jik), *a.* [Gr. *ἴσος*, equal, + *ἐνεργός*, working (see *energy*), + *-ic*.] Of equal energy. The isoënergic lines of a diagram may show changes of any kind except intrinsic energy, which remains constant during the change of the other quantities.

isoëphedrine (ī-sō-ef′e-drin), *n.* [Gr. *ἴσος*, equal, + E. *ephedrine*.] A crystalline alkaloid, $C_{10}H_{15}NO$, isomeric with ephedrine contained in *Ephedra distachya*, and other species of *Ephedra*. It is a mydriatic.

isoeugenol (ī-sō-ū′jē-nol), *n.* [Gr. *ἴσος*, equal, + E. *eugenol*.] A colorless liquid, $HO\overset{4}{C}_6H_3\overset{3}{(}OCH_3)\overset{1}{C}H\cdot CHCH_3$, prepared by the action of potassium hydroxid on eugenol. It boils at 258–262° C. and is used in the manufacture of vanillin. Also called *1′-propenylphenyldiol-(3,4) 3-methyl ether*.

isoform (ī′sō-fôrm), *n.* [Gr. *ἴσος*, equal, + E. *form(ic)*.] 1. Same as *p-iodoxyanisol*, $CH_3OC_6H_4IO_2$.—2. An antiseptic powder composed of equal parts of iodoxyanisol and calcium phosphate.

isogamete (ī-sō-gam′ēt), *n.* [Gr. *ἴσος*, equal, + *γαμέτης*, spouse: see *gamete*.] One of two equal cells that unite to form a zygote.

isogamic (ī-sō-gam′ik), *a.* [Gr. *ἴσος*, equal, + *γάμος*, marriage, + *-ic*.] Concerning or pertaining to like gametes or germ-cells.

isogen (ī′sō-jen), *n.* [Gr. *ἴσος*, equal, + *-γενης*, < *γένος*, offspring.] A statistical curve of similar birth-rates in a natality-table.

In natality tables, the ages of the father and mother take the place of the longitudes and latitudes in weather charts, and the lines of similar birth rates, or, as I would call them, '*isogens*,' take the place of isobars.
Francis Galton, in Proc. Roy. Soc. London, Jan. 18, 1894.

isogonal. **I.** *a.* **2.** Orthomorphic. **Isogonal conjugates.** See ★*conjugate*.

II. *n.* **2.** *pl.* Any two straight lines which are symmetrical with regard to an angle-bisector: called *isogonals* with reference to that angle.

isogonality (ī-sō-gō-nal′i-ti), *n.* [*isogonal* + *-ity*.] The quality of being isogonal.

isogonic[1], *a.* **II.** *n.* In *terrestrial magnetism*, a line or surface connecting places where the magnetic needles have equal magnetic declinations.

isogonism, *n.* **2.** Similarity in crystalline form; specifically, that existing between the crystals of chemical compounds which are not closely related in composition. See *isomorphism*.

isogyre (ī′sō-jīr), *n.* [Gr. ἴσος, equal, + γῦρος, circle.] In *optics*, one of the lines or curves in the interference pattern produced when a crystal is viewed in the convergent field of a polariscope; a line of constant direction of polarization. The *principal isogyres* are heavy black

Isogyres

markings upon the interference pattern, sometimes in the form of a cross, sometimes appearing as hyperbolæ which pass through the optic axis. *P. Drude*, Theory of Optics, p. 354.

isogyric (ī-sō-jī′rik), *a.* [*isogyre* + *-ic*.] Of or pertaining to isogyres; having constant direction of polarization: said of certain curves in the interference patterns of crystals. See ★*isogyre*. *P. Drude*, Theory of Optics, p. 352.

isohaline (ī-sō-hā′lin), *n.* [Gr. ἴσος, equal, + ἅλς, salt, + *-ine*[1].] An imaginary line connecting all parts of the ocean that have the same salinity.

South of the Tropic of Capricorn the *isohalines* run nearly east and west, salinity diminishing quickly to the Southern Ocean. *Encyc. Brit.*, XXXI. 464.

isohelic (ī-sō-hē′lik), *a.* and *n.* [Gr. ἴσος, equal, + ἥλιος, sun, + *-ic*.] **I.** *a.* Having equal amounts of clear sunshine.

Probably, the observations of sunshine are still more complete in the British Isles than in any other country, but Herr Helmuth König, of Hamburg, has found sufficient material for a first attempt to draw '*isohelic*' lines for Western Europe. *Geog. Jour.* (R. G. S.), X. 306.

II. *n.* A line connecting points which have equal variability or equal annual amounts of sunshine.

isohemagglutination (ī-sō-hem-a-glō-ti-nā′shon), *n.* [Gr. ἴσος, equal, + αἷμα, blood, + E. *agglutination*.] Normal agglutination of the red blood-corpuscles. See the extract.

The power of the blood serum of certain individuals to agglutinate the red blood cells of certain other individuals has interested clinical pathologists for some time. . . . Whereas the earlier observers of human *isohemagglutination* asserted that isoagglutinins occurred only in the sera of pathological states, and was of specific and diagnostic importance, the later researches of Landsteiner and others have shown conclusively that the sera of normal individuals quite as frequently clump the corpuscles of other normal or diseased persons.
F. P. Gay, in Jour. Med. Research, Dec., 1907, p. 321.

isohemagglutinate (ī-sō-hem-a-glō′ti-nāt), *v. i.* and *t.* [See ★*isohemagglutination*.] To produce isohemagglutination.

The *isohemagglutinating* power of serum resists heating to 56° C. for thirty minutes, although the serum used in these experiments was freshly obtained and not heated.
F. P. Gay, in Jour. Med. Research, Dec., 1907, p. 321.

isohemolytic (ī″sō-hem-ō-lit′ik), *a.* [*isohemolysin* (*-lyt-*) + *-ic*.] Having reference to the action of an isohemolysin.

isohesperidin (ī″sō-hes-per′i-din), *n.* [Gr. ἴσος, equal, + E. *hesperidin*.] A yellowish, crystalline glucoside, $C_{22}H_{26}O_{12}.2H_2O$, said to be present in the bitter-orange peel.

isohomovanillin (ī″sō-hō″mō-vā-nil′in), *n.* [Gr. ἴσος, equal, + ὁμός, same, + *E. vanillin*.] A colorless compound,

$$CH_3\overset{1}{O}C_6H_2(OH)(\overset{4}{C}H_3)\ \overset{5}{C}HO,$$

prepared by the action of chloroform and alkali on the compound $CH_3OC_6H_3(OH)CH_3$. It crystallizes in needles and resembles vanillin in odor.

isohumic (ī-sō-hū′mik), *a.* [Gr. ἴσος, equal, + E. *humic*.] Having equal percentages of humic acid.

isohydric (ī-sō-hī′drik), *a.* [Gr. ἴσος, equal, + E. *hydr(ogen)* + *-ic*.] In *phys. chem.*, possessing equal concentration of hydrogen ions.

Some acetic acid is formed, and this process will go on till the solutions of the two acids are *isohydric*: that is, till the dissociated hydrogen ions are in equilibrium with both. *Encyc. Brit.*, XXVIII. 14.

isohyet (ī-sō-hī′et), *n.* [Gr. ἴσος, equal, + ὑετός, rain.] Same as *isohyetal*. Also *isohyetose*.

The increase of goats, mules, and asses in the drier areas is graphically shown on the maps, and would have been made clearer by a series of *isohuets*.
Geog. Jour. (R. G. S.), XV. 55.

isohygrometric (ī″sō-hī-gro-met′rik), *a.* [Gr. ἴσος, equal, + E. *hygrometric*.] Alike in average conditions of atmospheric moisture.

The flora of California may be likened to a checkerboard, the lines between the squares representing *isohygrometric* and isothermal lines.
F. V. Coville, contrib. Nat. Herb., IV. 20.

isohyp (ī′sō-hip), *n.* [Prop. ★*isohyps* or ★*isohypse*, < Gr. ἴσος, equal, + ὑψος, height.] A line joining isohypsometric localities.

isohypercytosis (ī″sō-hī-pêr-sī-tō′sis), *n.* [NL. < Gr. ἴσος, equal, + ὑπέρ, over, + κύτος, a hollow (a cell), + *-osis*.] An increase of the number of leucocytes, with normal percentage relations of the neutrophilic cells as regards the distribution of the different nuclear forms.

isohypocytosis (ī″sō-hī-pō-sī-tō′sis), *n.* [NL., < Gr. ἴσος, equal, + ὑπό, under, + κύτος, a hollow (a cell), + *-osis*.] A decrease in the number of leucocytes, with normal percentage relations of the neutrophilic cells as regards the distribution of the different nuclear forms.

isohypsometric (ī″sō-hip-sō-met′rik), *a.* [Gr. ἴσος, equal, + E. *hypsometr-y* + *-ic*.] Having the same altitude above mean sea-level.

iso-iwashi (ē″sō-ē-wä′shē), *n.* [Jap., < *iso*, shore, + *iwashi*, sardine.] A Japanese name of one of the atherine fishes, *Iso flos-maris*, a little fish of the surf. Also known as *namino-hana*, 'flower of the wave.'

isolactose (ī-sō-lak′tōs), *n.* A colorless sugar, $C_{12}H_{22}O_{11}.H_2O$, prepared synthetically from glucose and galactose. It is isomeric with lactose and is fermentable.

isolate, *a.* **II.** *n.* In *psychol.*, a feature or quality abstracted by attention from the complex of qualities constituting an object and considered by itself alone; the result of an analysis of a construct.

We may call the process by which we select a certain quality, and consider it by itself to the neglect of other qualities, isolation, and the products of the process we may term *isolates*.
C. L. Morgan, Animal Life and Intelligence, p. 322.

Isolated pawn. See ★*pawn*[2].

isolation, *n.* **1.** Specifically, removal from communication or contact with others; also, the condition of being so removed. An *isolation ward, hospital*, or *camp* is a ward, hospital, or camp in which isolation of the sick or of those who have been exposed to infection is secured.

Isolation of Blastomeres. As long ago as 1869 Haeckel divided the blastulæ or morulæ of Siphonophora with a fine needle into two, three, or four pieces, and observed that each developed into a complete larva.
Encyc. Brit., XXXII. 212.

2. In *psychol.*, the process whereby one selects a certain quality of an object for consideration, to the neglect of other qualities; selection by attention. *C. L. Morgan.*

Discriminate isolation, the separation or isolation of a race or variety from its parent stock in such a way as to prevent free intercrossing. **Indiscriminate isolation,** the separation of the individuals that compose a species into two or more sets without segregation or the selection of those that differ.

isolationist (is-ō-lā′shon-ist), *n.* [*isolation* + *-ist*.] **1.** One who believes that a new race or variety cannot become fixed or established through natural selection unless its representative individuals are locally or topographically separated or segregated from the remainder of the species.

This way of accounting for progress in one or more directions may prove as inadequate as the one suggested by *isolationists*.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 676.

2. In recent United States politics, an advocate of the policy of non-interference or non-participation in international affairs.

isolichenin (ī-sō-li′ken-in), *n.* [Gr. ἴσος, equal, + E. *lichenin*.] An amorphous water-soluble carbohydrate contained in Iceland moss, *Cetraria Islandica*.

isolysin (ī-sol′i-sin), *n.* [*isolysis* + *-in*[2].] A lysin which will cause the destruction of cells of an animal of the same species as the one which furnishes it.

isolysis (ī-sol′i-sis), *n.* [Gr. ἴσος, equal, + λύσις, dissolution.] The dissolution of cells of a given species by the homologous cells of an animal of the same species. *Vaughan and Novy*, Cellular Toxins, p. 129.

isolytic (ī-sō-lit′ik), *a.* [*isolysis* (*-lyt-*) + *-ic*.] Causing or having reference to isolysis.

It was found, in fact, that under these circumstances lytic substances are sometimes, though not uniformly, developed. The possibility of the formation of *isolytic* substances was thus established.
Med. Record, Feb. 14, 1903, p. 247.

isomagnetic (ī″sō-mag-net′ik), *a.* and *n.* [Gr. ἴσος, equal, + E. *magnetic*.] **I.** *a.* Having the same magnetic elements.

II. *n.* A line joining places which have the same magnetic elements. Terrestrial isomagnetics refer specifically to the earth's surface.

Rücker and Thorpe's next step was to obtain formulæ giving smooth curves of continuous curvature, approximating as closely as possible to the district lines. These smooth curves are called terrestrial *isomagnetics*; they may be supposed to show what the magnetic elements would be in the absence of disturbances peculiar to special parts of the survey area or its immediately coterminous regions. *Encyc. Brit.*, XXX. 461.

isomaltose (ī-sō-mâl′tōs), *n.* [Gr. ἴσος, equal, + E. *maltose*.] A substance formed together with maltose from starch on diastatic digestion. It has been produced synthetically from dextrose, does not ferment, and is isomeric with maltose, $C_{12}H_{22}O_{11}$.

isomeric, *a.* **3.** In *petrog.*, noting phanerocrystalline rocks composed of a single kind of mineral. *Brongniart*, 1827.

isomerism, *n.* In the widest sense this term is applied to any two or more chemical compounds having the same percentage composition. Various degrees and kinds of isomerism are distinguished, the primary distinction being between chemical and physical isomerism. *Chemical isomerism* may be subdivided as follows: *Polymerism*, which is applied to compounds with the same percentage composition, but with molecular weights differing by some constant value: example, ethylene, C_2H_4, and butylene, C_4H_8, molecular weights 28 and 56 respectively. Polymerism may be either *accidental* or *generic*, according to whether the compounds belong to the same or different classes. *Metamerism* is applied to compounds with the same percentage composition and molecular weight, but containing homologous radicals in the molecule: examples are propylamine, $C_3H_7NH_2$, ethylmethylamine, $C_2H_5NHCH_3$, and trimethylamine, $N(CH_3)_3$. *Chain* or *nucleus isomerism* characterizes compounds which have the same number of similar atoms in the molecule, but in which the carbon atoms forming the nucleus are differently grouped: as, normal butane, $CH_3CH_2CH_2CH_3$, and isobutane, $(CH_3)_2CH$. *Position* or *place isomerism* exists in compounds which have similar nuclei but differ in the relative position of certain substituting atoms or radicals in this nucleus: as, primary or α-propyl chlorid, $CH_3CH_2CH_2Cl$, and secondary or β-propyl chlorid, $CH_3CHClCH_3$. *Structural isomerism* applies to compounds which have the same percentage composition and molecular weight but differ in the arrangement of atoms in their molecules. *Physical isomerism* characterizes compounds which consist of varying aggregations of chemically similar molecules. It was first used of substances which are now termed geometrical, stereo-isomeric, or optically isomeric. *Alloisomerism* is a term occasionally applied to geometrically isomeric compounds one of which can pass into the other by the action of heat. *Dynamical isomerism* is applied to compounds which have perfectly similar linkage and spatial arrangement of atoms, but which differ in energy content, that is, in atomic motion. (*Tanatar*, Ann. Chem. (Liebig), 273, 55.) *Geometrical isomerism* or *stereo-isomerism* marks compounds which have the same constitution, but which differ in the spatial arrangement of certain constituent radicals or atoms. *Optical isomerism* is applied to stereo-isomeric substances which differ in their action on a ray of polarized light: they either deflect it to the right (dextrorotatory), to the left (levorotatory), or are optically inactive (racemic or mesoform).

isomerization (ī-som″e-ri-zā′shon), *n.* [*isomerize* + *-ation*.] In *chem.*, the production of isomeric forms of a given substance or class of substances. [Rare.] *Nature*, Nov. 13, 1902, p. 48.

isometric, *a.* **3.** In *petrog.*, evenly granular: as, an *isometric* texture in which the crystal grains are of nearly the same size.—**Isometric contraction.** See ★*contraction*.—**Isometric line,** in *thermodynam.*, a curve showing the relation between pressure and temperature in a body or system the volume of which remains constant. *W. Watson*, Text-book of Physics, p. 274.—**Isometric texture,** in *petrog.* See ★*anisometric texture*.

isometropia (ī″sō-mē-trō′pi-ä), *n.* [NL., < Gr. ἴσος, equal, + μέτρον, measure, + ὄψ (ὀπ-),

eye.] A condition in which refraction is the same in the two eyes.

isomorphic, *a.* **2.** In *biol.*: (*b*) Different in ancestry, but alike in appearance; heterophyletic: convergent. — **3.** In *group-theory*, related, as the group Γ to the group G, so that to every substitution g of G corresponds one substitution γ of Γ, and to the product gg' of any two substitutions of G corresponds the product $\gamma\gamma'$ of the two corresponding substitutions of Γ. **Multiply isomorphic,** said of two groups when Γ is isomorphic to G, but to a substitution of Γ may correspond more than one substitution of G. **Simply isomorphic,** said of two groups when Γ is isomorphic to G and, inversely, to every substitution of Γ corresponds but one substitution of G.

isomorphism, *n.* **2.** In *biol.*, the state or condition of being different in ancestry, but alike in appearance. See ★*isomorphic*, 2 (*b*). — **3.** In *group-theory*, the state or character of being isomorphic. — **Meriedric isomorphism,** multiple isomorphism. See *multiply* ★*isomorphic*. — **Multiple isomorphism,** the state of being multiply isomorphic. See *multiply* ★*isomorphic*.

isomorphous, *a.* **2.** In *math.*, same as *isomorphic*, 4.

-ison. [ME. *-ison, -isoun*, < OF. *-aison, -eison, -eson, -ison*, < L. *-atio(n-)* (whence the 'learned' form *-ation*, which is thus a doublet of *-ison*), *-etio(n), -itio(n).*] A suffix, really *-son*, with an element (*-i-*) belonging to the stem in some nouns coming from Latin through the Old French. It is equivalent to *-ation, -etion, -ition*, in nouns originally abstract. Examples are *comparison, fermison, garrison, jettison, orison, venison, warnison.* In *benison* and *malison* doublets of *benediction* and *malediction*, the *-i-* belongs to the reduced radical. In *caparison* the termination is conformative. See *-son, -tion.*

isoneph (ī′sō-nef), *n.* [Gr. *ἴσος*, equal, + *νεφ(έλη)*, cloud.] A line joining places that have the same percentage of cloudiness; an isonephelic line.

isonephrotoxin (ī′sō-nef-rō-tok′sin), *n.* [Gr. *ἴσος*, equal, + E. *nephrotoxin.*] A nephrotoxin directed against the renal cells of animals of the same species as the one furnishing the nephrotoxin.

isonicotic (ī″sō-ni-kot′ik), *a.* [*isonicot(ine)* + *-ic.*] Noting an acid, a colorless compound, $N < \begin{matrix} CHCH \\ CHCH \end{matrix} > CHCOOH$, prepared from lutidine. It crystallizes in groups of slender needles, or, by sublimation, in small plates and melts, in a sealed tube, at 298–299° C. Also called *pyrocinchomeronic acid*, or, preferably, 4- or γ-*pyridinecarboxylic acid.*

isonicotine (ī″sō-nik′ō-tin), *n.* [Gr. *ἴσος*, equal, + E. *nicotine.*] A colorless compound, $C_{10}H_{14}N_2$, prepared by the reduction of dipyridyl. It crystallizes in slender, very hydroscopic needles melting at 78° C.

isonicotinic (ī″sō-nik-ō-tin′ik), *a.* [*isonicotine* + *-ic.*] Same as ★*isonicotic.*

isonitrile (ī-sō-nī′tril), *n.* [Gr. *ἴσος*, equal, + E. *nitrile.*] The name of a class of organic compounds isomeric with the nitriles and cyanides, containing the univalent group NC. They are also called *isocyanides* and, less correctly, *carbylamines*, and are distinguished by their highly objectionable odor.

isonitro (ī-sō-nī′trō), *n.* [Gr. *ἴσος*, equal, + E. *nitro.*] A hypothetical divalent radical, $> N < \begin{matrix} O \\ OH \end{matrix}$, which occurs in certain organic compounds. They are isomeric with the nitro-derivatives and are pseudo-acids.

isonitroso (ī′sō-nī-trō′sō), *n.* [Gr. *ἴσος*, equal, + E. *nitroso.*] A hypothetical bivalent radical, > NOH, which occurs in certain organic compounds. These compounds are identical with the corresponding oximes, the only difference being in the mode of formation. Isonitroso derivatives are formed from nitrous acid and compounds containing the group $> CH_2$; oximes from hydroxylamine and compounds containing the group > CO.

isonormocytosis (ī″sō-nôr″mō-sī-tō′sis), *n.* [NL., < Gr. *ἴσος*, equal, + L. *norma*, norm, + Gr. *κύτος*, a hollow (a cell), + *-osis.*] A condition in which there is a normal number of the leucocytes with normal relations of the neutrophilic cells as regards the percentage distribution of the different nuclear forms.

iso-orcinol (ī-sō-ôr′si-nol), *n.* Same as ★*isorcinol.*

isopag (ī′sō-pag), *n.* [Gr. *ἴσος*, equal, + *πηγνύναι*, fix, stiffen, freeze (cf. *πάγος*, scum).] A line, on a chart, connecting places at which rivers, harbors, lakes, or the ground are frozen or covered with ice during the same number of days continuously in winter.

isoparaffin (ī-sō-par′a-fin), *n.* [Gr. *ἴσος*, equal, + E. *paraffin.*] The class-name of hydrocarbons of the paraffin series which have a branched carbon chain.

isoparthenogenesis (ī-sō-pär′then-ō-jen′e-sis), *n.* [NL., < Gr. *ἴσος*, equal, + NL. *parthenogenesis.*] Parthenogenesis, or development from unfertilized eggs, as part of a normal life-history; normal as contrasted with occasional or exceptional parthenogenesis. See *normal* ★*parthenogenesis.*

isopathic (ī-sō-path′ik), *a.* [*isopath-y* + *-ic.*] Of or pertaining to isopathy.

isopectic (ī-sō-pek′tik), *n.* [Gr. *ἴσος*, equal, + *πηκτός*, fixed, stiffened, frozen: see ★*isopag.*] A line, on a chart, connecting places at which the first ice of winter forms simultaneously.

isopelletierine (ī-sō-pel-e-tēr′in), *n.* [Gr. *ἴσος*, equal, + E. *pelletierine.*] A colorless oily alkaloid, $C_8H_{15}ON$, obtained, together with pelletierine, from the rind of pomegranate root. It boils at 125° C., under 100 millimeters, and has exactly the same properties as pelletierine, except that it is optically inactive.

isopentyl (ī-sō-pen′til), *a.* [Gr. *ἴσος*, equal, + E. *pentyl.*] Same as ★*isoamyl.*

isopepsin (ī-sō-pep′sin), *n.* [Gr. *ἴσος*, equal, + E. *pepsin.*] A supposed modified form of pepsin, effected by heat.

isopericœlous (ī″sō-per-i-sē′lus), *a.* [Gr. *ἴσος*, equal, + *περί*, around, + *κοῖλος*, hollow, + *-ous.*] In *ornith.*, noting an arrangement of the intestine in which all the loops are left-handed and the third is inclosed by the second.

isoperimeter (ī″sō-pe-rim′e-tēr), *n.* [Gr. *ἴσος*, equal, + E. *perimeter.*] A figure equal in perimeter to another.

isoperimetric (ī-sō-per-i-met′rik), *a.* Same as *isoperimetrical.*

isophenomenal (ī″sō-fē-nom′ē-nal), *a.* [Gr. *ἴσος*, equal, + *φαινόμενα*, phenomena, + *-al*[1].] Having the same or very similar phenomena; specifically—(*a*) In *phenology*, having the same dates of sprouting, budding, flowering, fruiting, ripening, etc. (*b*) In *terrestrial magnetism*, having the same magnetic declination, inclination, force, secular variation, diurnal variation, etc. (*c*) In *meteor.*, having the same frequency of cloudy or rainy weather, or similar atmospheric conditions in general.

isophone (ī′sō-fōn), *n.* [Gr. *ἴσος*, equal, + E. (*tele*)*phone.*] A form of microphonic telephone transmitter.

isophoria (ī-sō-fō′ri-ä), *n.* [NL., < Gr. *ἴσος*, equal, + *-φορια*, < *-φορος*, < *φέρειν*, bear.] Normality in the direction of the visual axes in the two eyes, the tension of the ocular muscles being equal.

isophotal (ī-sō-fō′tal), *a.* and *n.* [Gr. *ἴσος*, equal, + *οὦς* (*φωτ-*), light, + *-al*[1].] **I.** *a.* Of or pertaining to equality of illumination: as, an *isophotal* line.

II. *n.* In *photom.*, a line or surface, in a field of light-flux, drawn everywhere through points of equal illumination. Also called *isophote.* *Trans. Amer. Inst. Elect. Engin.*, July–Dec., 1902, p. 74.

isophote (ī′sō-fōt), *n.* [Gr. *ἴσος*, equal, + *φῶς* (*φωτ-*), light.] Same as ★*isophotal.*

isophotography (ī-sō-fō-tog′ra-fi), *n.* Photography of objects in their exact size. *Encyc. Dict.*

isophthalic (ī-sof-thal′ik), *a.* Noting an acid, a colorless compound, $C_6H_4(\overset{1}{C}O\overset{3}{C}H)_2$, prepared by the oxidation of various meta (1.3) dialkyl substituted benzene derivatives. It crystallizes in long hair-like needles, melts above 300° C., and sublimes without decomposition.

isophytotone (ī-sō-fī′tō-tōn), *n.* [Gr. *ἴσος*, equal, + *φυτόν*, plant, + *τόνος*, tension, stress.] In *phytogeog.*, a line connecting the latitudinal points of the same maximum or minimum temperature and, therefore, according to Pound and Clements (the authors of the term), limiting on either side the zone of the occurrence of plants of like maximum and minimum endurance. Compare *life* ★*zone.*

Isopiestic line. See ★*line*[2].

Isopisthus (ī-sō-pis′thus), *n.* [NL., < Gr. *ἴσος*, equal, + *ὀπισθεν*, behind. The name alludes to the equality of the soft dorsal and anal fins.] A genus of fishes of the family *Sciænidæ*, the croakers, found on both coasts of tropical America.

isoplere (ī′sō-plēr), *n.* [NL., < Gr. *ἴσος*, equal, + *-πληρης*, full.] In *thermodynam.*, a curve showing the variations of temperature with pressure of a gas or other body the volume of which remains constant; an isometric line. *W. Watson*, Text-book of Physics, p. 274.

isopleth (ī′sō-pleth), *n.* [Gr. *ἰσοπλήθης*, equal in number, quantity, or magnitude, < *ἴσος*, equal, + *πλῆθος*, fullness.] A line, on a chart, showing the occurrence of equal quantities, conditions, or frequencies of any phenomenon in its relation to two independent coördinates. This term was first used by Vogler (1880), but the lines themselves had long been familiar.

isopolite (ī-sop′o-līt), *a.* [Gr. *ἰσοπολίτης*, a citizen with equal rights, < *ἴσος*, equal, + *πολίτης*, citizen.] Same as ★*isopolitical.*

isopolitical (ī-sō-pō-lit′i-kal), *a.* [As *isopolite* + *-ic* + *-al*[1].] Relating to the possession of mutual political rights.

isoprecipitin (ī-sō-prē-sip′i-tin), *n.* [Gr. *ἴσος*, equal, + E. *precipitin.*] A precipitin which will react with the serum of an animal of the same species.

isoprene (ī′sō-prēn), *n.* A hydrocarbon (C_5H_8), one of the hemiterpenes, produced in the destructive distillation of india-rubber or gutta-percha, and also obtainable from oil of turpentine. It is a colorless, highly volatile liquid, which has special interest from the fact that it is converted into india-rubber by prolonged contact at ordinary temperature with strong hydrochloric acid or nitrosyl chlorid. *Sadtler*, Handbook of Indust. Chem., p. 99.

isopropyl (ī-sō-prō′pil), *n.* [Gr. *ἴσος*, equal, + E. *propyl.*] A hypothetical univalent radical, $(CH_3)_2CH$, occurring in many organic compounds. Also called *secondary propyl.* **Isopropyl alcohol,** a colorless liquid, CH^3OHCH^3, prepared by the action of lead hydroxid on isopropyl iodide; secondary propyl alcohol or 2-hydroxypropane. It boils at 82–85° C. and yields acetone when oxidized.

Isopsetta (ī-sop-set′ä), *n.* [NL., < Gr. *ἴσος*, equal, + *ψήττα*, a flounder.] A genus of Californian flounders.

isopsychric (ī-sō-sī′krik), *a.* and *n.* [Gr. *ἴσος*, equal, + *ψυχρός*, cold, + *-ic.*] **I.** *a.* Equal, as to moisture: said specifically of a thermodynamic process or state in which evaporation and condensation are both absent or precisely balance one another. *Jour. Phys. Chem.*, May, 1904, p. 344.

Isopsychric curve, in *thermodynamics*, a curve denoting a process in which evaporation equals and neutralizes condensation.

Curves of constant M_2 [mass of vapor] being termed *isopsychric curves.*

J. E. Trevor, in Jour. Phys. Chem., May, 1904, p. 344.

II. *n.* An isopsychric curve.

This curve is the locus of the points of mutual tangency of the adiabatics and *isopsychrics.*

J. E. Trevor, in Jour. Phys. Chem., May, 1904, p. 344.

isopter (ī-sop′tèr), *n.* [Gr. *ἴσος*, equal, + *ὀπτ(ικός)*, of seeing.] A curve denoting the points on the retina of equal visual acuteness.

isopurpurate (ī-sō-pèr′pū-rāt), *n.* [*isopurpuric* + *-ate*[1].] A salt of the hypothetical isopurpuric acid: the potassium salt, $C_8H_4O_6N_5K$, is prepared by the action of potassium cyanide on picric acid. It forms brown-red rhombic scales with a green luster and explodes at 215° C. or at the ordinary temperature when brought into contact with concentrated sulphuric acid.

isopyc (ī′sō-pik), *n.* [*isopyc(nic)*.] An isopycnic line. Also *isopyk.*

isopycnal (ī-sō-pik′nal), *a.* and *n.* Same as ★*isopycnic.* — **Isopycnal gradient.** See ★*gradient.*

isopycnic (ī-sō-pik′nik), *a.* and *n.* **I.** *a.* Relating to or indicating equality of density: as, an *isopycnic* line.

II. *n.* A line or surface, in a substance or medium, at every point of which the density is the same. Also *isopyc.*

isopyre (ī′sō-pīr), *n.* [Gr. *ἴσος*, equal, + *πῦρ*, fire.] An impure form of opal occurring in black compact masses, occasionally spotted red like heliotrope: sometimes used as a semi-precious stone.

isopyromucic (ī″sō-pī-rō-mū′sik), *a.* [Gr. *ἴσος*, equal, + E. *pyromucic.*] Noting an acid, a colorless compound, $C_5H_4O_3.2H_2O$, prepared by the distillation of mucic acid with potassium hydrogen sulphate. It melts at 80–85° C.; when dehydrated, at 90–95° C. *Nature*, Dec. 17, 1903, p. 168.

isorcin (ī-sôr′sin), *n.* Same as ★*isorcinol.*

isorcinol (ī-sôr′si-nol), *n.* [Gr. *ἴσος*, equal, + E. *orcinol.*] A colorless compound, $\overset{1}{C}H_3C_6H_3\overset{2\ 4}{(OH)_2}.H_2O$, prepared by fusing toluene-2,4-disulphonic acid with potassium hydroxid. It crystallizes in slender needles, melts at 87° C., boils at 260° C., and has a slightly sweet taste. Also called *iso-orcinol*, *cresorcinol*, or *γ-orcinol*.

isorropesis (ī-sǫ-rop′ẹ-sis), *n.* [Gr. *ἴσος*, equal, + *ῥοπή*, downward inclination, balance of the scale.] See the extract.

The make-and-break contact between the oxygen atoms would give marked activity to these atoms. Such a process other than tautomerism, where a wandering of a labile atom is suggested, has been named by Stewart and Baly "*isorropesis*" (equipoise), and differs from the former in that the head of its absorption band lies much nearer the red end of the spectrum or almost in the visible violet region. *Pop. Sci. Mo.*, Feb., 1908, p. 132.

isorropic (ī-sǫ-rō′pik), *a.* [Gr. *ἴσος*, equal, + *ῥοπή*, inclination downward, + *-ic.*] Noting a line or curve which passes through the coplanar points for which the value of a function is the same.

isorubine (ī-sǭ-rö′bin), *n.* [Gr. *ἴσος*, equal, + E. *rubine*2.] A basic coal-tar color: same as *new* ★*magenta*.

isosafrol (ī-sǭ-saf′rol), *n.* [Gr. *ἴσος*, equal, + E. *safrol.*] A colorless liquid,

$$CH_3CH:\overset{1}{C}HC_6H_3\left<\begin{matrix}\overset{3}{O}\\ \underset{4}{O}\end{matrix}\right>CH_2,$$

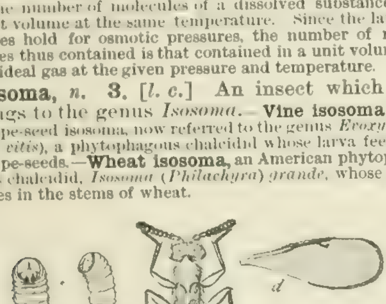
prepared by heating safrol with alcoholic potassium hydroxid. It boils at 246–248° C.

isoscope (ī′sǭ-skōp), *n.* [Gr. *ἴσος*, equal, + *σκοπεῖν*, view.] An appliance for determining the changes in position of the vertical and horizontal lines in movements of the eyeball.

isoseist (ī′sǭ-sīst), *n.* [Gr. *ἴσος*, equal, + *σειστός*, shaken, ‹ *σείειν*, shake, quake: see *seismic.*] **1.** A line drawn through points that experience an earthquake shock at the same moment; an isoseismal. *Rep. Brit. Ass'n Advancement Sci.*, 1900, p. 64.—**2.** Any event that occurs simultaneously with a given earthquake shock.

isosmotic (ī-sos-mot′ik), *a.* [Gr. *ἴσος*, equal, + E. *osmotic.*] In *phys.*, of equal osmotic pressure.—**Isosmotic solutions,** solutions which hold the same number of molecules of a dissolved substance per unit volume at the same temperature. Since the laws of gases hold for osmotic pressures, the number of molecules thus contained is that contained in a unit volume of an ideal gas at the given pressure and temperature.

Isosoma, *n.* **3.** [*l. c.*] An insect which belongs to the genus *Isosoma*.—**Vine isosoma,** the grape-seed isosoma, now referred to the genus *Evoxysoma* (*E. vitis*), a phytophagous chalcidid whose larva feeds in grape-seeds.—**Wheat isosoma,** an American phytophagous chalcidid, *Isosoma* (*Philachyra*) *grande*, whose larva lives in the stems of wheat.



Wheat Isosoma (*Isosoma* (*Philachyra*) *grande*).
a, b, larva; *c*, female; *d*, fore-wing; *e*, hind wing.
All enlarged.
(Riley, U. S. D. A.)

isospore, *n.* **3.** One of the non-sexual spores, of uniform size, formed by certain rhizopods: contrasted with ★*anisospore*.

isostasy (ī-sos′tạ-si), *n.* [Gr. *ἴσος*, equal, + *στάσις*, standing, station.] In *phys.*, balance or equilibrium; the property of attaining a condition of stable equilibrium when under the action of permanent stress.

According to the doctrine of *isostasy*, which has found much favor with geologists in recent years, the crust of the earth is in a delicately-balanced condition of equilibrium between forces which are tending on the one hand to depress and on the other to elevate it.
R. D. Salisbury, in Geol. Surv. of New Jersey, 1893, [p. 323.

isostath (ī′sǭ-stath), *n.* [For **isostathm*, ‹ Gr. *ἰσόσταθμος*, evenly balanced, ‹ *ἴσος*, equal, + *σταθμή*, rule, plumb, plummet, ‹ *ἵστασθαι*, stand.] A line connecting distant points in the earth's atmosphere which have the same buoyancy after allowing for the change in the force of gravitation. *Abbe*, Preliminary Studies.

isostathmic (ī-sǭ-stath′mik), *a.* [*isostath* (*isostathm-*) + *-ic.*] Of or relating to isostaths; having the properties of isostaths; illustrating the course of isostaths at any particular moment. **Isostathmic line,** a line of equal atmospheric buoyancy, as distinguished from a line of equal density; namely, the line that divides the lighter air from the heavier air, or the air that must go up from that which must go down in the interchange due to buoyancy.

isostatic, *a.* **2.** Related to or produced in accordance with isostasy.

isostatically (ī-sǭ-stat′i-kạl-i), *adv.* In a manner accordant with the principles of isostasy.

The elevation of the land caused an ice-sheet to form gradually over it until the surface was depressed, *isostatically*, by the weight of accumulated ice and the cooling of the crust itself. *Geog. Jour.* (R. G. S.), XVIII. 517.

isostere (ī′sǭ-stēr), *n.* [Also *isoster*; Gr. *ἴσος*, equal, + *στερεός*, solid.] **1.** A line connecting points of equal specific volume in the ocean or atmosphere: the inverse of ★*isopyc*. See ★*isostath*.

He [Professor V. Bjerknes] simplifies the hydrodynamic conceptions by dealing with density directly instead of temperature and pressure, and uses charts of "*isosteres*," or lines of equal density, very much as was proposed by the present writer in 1889 in his Preparatory Studies, where he utilized lines of equal buoyancy or "isostaths."
Cleveland Abbe, in Encyc. Brit., XXX. 719.

2. In *chem.*, a term applied to compounds possessing equal molecular volumes.

isosteric (ī-sǭ-ster′ik), *a.* [*isostere* + *-ic.*] **1.** Pertaining to or of the nature of an isostere. See ★*isostere*, 1.—**2.** In *phys. chem.*, having equal atomic volumes.

isosterism (ī-sos′tẹ-rizm), *n.* [*isostere* + *-ism.*] The property of being isosteric or an isostere, in either sense of that word.

isostylous (ī-sos′ti-lus), *a.* [Gr. *ἴσος*, equal, + *στῦλος*, pillar (style), + *-ous.*] In *bot.*, same as *homostyled*.

isotalantosan (ī″sǭ-tal-an-tō′sạn), *n.* [Gr. *ἴσος*, equal, + *ταλάντωσις*, oscillation, + *-an.*] In *meteor.*, a line or region of equal annual ranges of temperature; a line of equal variability of mean daily temperature. *Supan.*

isote (ē-sō′tạ), *n.* Same as ★*izote*.

Isotelus (ī-sot′ẹ-lus), *n.* [NL., also *Isoteles*; ‹ Gr. *ἴσος*, equal, + *τέλος*, an end.] A genus of Silurian trilobites closely allied to *Illænus*, but having eight thoracic segments.

isotheral, *a.* **II.** *n.* A line joining places on the earth's surface that have the same mean temperature during the summer season.

isotherm, *n.* **2.** In *math.*, a curve representing phenomena which happen at constant temperature.—**Dissociation isotherm,** the curve showing the relation of concentration and amount of dissociation at constant temperature.

isothermal. **I.** *a.* **2.** In *crystal.*, applied to the lines on a crystal face, or more generally to the surfaces in a crystal, which measure the rate of heat-conductivity, these lines or surfaces being characterized by equal degrees of temperature when heat is applied at a certain point. The isothermal lines on a crystal bear a simple relation to the molecular structure; for example, they are circles on the base of a hexagonal crystal, but ellipses on a prismatic face.

Isothermal coefficient of compressibility. See ★*coefficient*.—**Isothermal combustion, compression, curve, expansion.** See ★*combustion*, etc. **Isothermal surface,** a surface every point of which has the same temperature. The line of intersection of an isothermal surface and any plane not parallel to it is an isothermal line.

II. *n.* **2.** In *thermodynam.*, a line or curve determined by the equation of state ($pv = RT$) of a system, when T has any constant value; a line of equal temperatures.—**3.** In *spectrophotometry*, a curve showing the distribution of intensities in the spectrum of a source of light maintained at constant temperature. Also called *isotherm*.

In diagram A are drawn *isothermals*, curves of equal temperature in which the abscissæ are wave lengths, the ordinates intensities.
E. L. Nichols, in Amer. Jour. Sci., XVIII. 446.

isothermally (ī-sǭ-thėr′mạl-i), *adv.* In a manner involving no change of temperature: said of any process which involves changes of volume and pressure of a thermodynamic system, such as a gas or vapor, where there is no change of temperature.

isothermic (ī-sǭ-thėr′mik), *a.* Same as *isothermal*.

isothermobathic (ī″sǭ-thėr-mō-bath′ik), *a.* [*isothermobath* + *-ic.*] Pertaining to or of the nature of an isothermobath.

isothiocyanic (ī″sǭ-thī″ō-sī-an′ik), *a.* [Gr. *ἴσος*, equal, + *θεῖον*, sulphur, + *κύανος*, blue, + *-ic.*] Pertaining to the isothiocyanates.—**Isothiocyanic acid,** a hypothetical acid, HNCS, the esters of which constitute the mustard oils. Also called *thiocarbylamine*.

isotomic (ī-sǭ-tom′ik), *a.* [Gr. *ἴσος*, equal, + *τομή*, a cutting, + *-ic.*] Cutting a line at points equally distant from its opposite extremities.
Isotomic conjugate. See ★*conjugate*.

isotonia (ī-sǭ-tō′ni-ä), *n.* [NL., ‹ Gr. *ἰσοτονία*, equal tension, ‹ *ἰσότονος*, of equal tension, ‹ *ἴσος*, equal, + *τόνος*, tension, tone.] Equality in tension between the different elements of living matter or between two solutions divided by a dialyzing membrane. Isotonia of the blood is the state of equal tension in corpuscles and plasma, by which the integrity of the former is preserved. Isotonia in muscle is exhibited when the muscle shortens on the application of a stimulus, the two ends being approximated; it is destroyed when the extremities are fixed. Isotonia exists in two solutions separated by a porous membrane when no osmosis occurs. See *osmosis*. *Med. Record*, Aug. 1, 1903, p. 189.

isotonic, *a.* **2.** In *phys. chem.*, possessing or producing equal osmotic pressures; especially, having salts dissolved in such proportion as to occasion no change of volume in red blood-corpuscles put in contact with the solution. Solutions having less concentration are called *hypotonic*; those having greater concentration, *hypertonic*. *Poynting and Thomson*, Properties of Matter, p. 190.
3. Relating to isotonia.—**Isotonic contraction.** See ★*contraction*.

isotopic (ī-sǭ-top′ik), *a.* [Gr. *ἴσος*, equal, + *τόπος*, place, + *-ic.*] Similarly substituted: used of compounds containing similar atoms or groups in the same position with reference to some other atom or group, as m-chlortoluene and m-bromtoluene. *Cohen and Miller*, in Jour. Chem. Soc. (London), 1904, p. 1624.

isotoxic (ī-sǭ-tok′sik), *a.* [Gr. *ἴσος*, equal, + *τοξικόν*, poison.] Same as ★*isolytic*. *Science*, July 3, 1903, p. 9.

isotoxin (ī-sǭ-tok′sin), *n.* [Gr. *ἴσος*, equal, + E. *toxin.*] A toxin directed against cells of individuals of the same species. *Vaughan and Novy*, Cellular Toxins, p. 144.

Isotricha (ī-sot′ri-kä), *n.* [NL., ‹ Gr. *ἴσος*, equal, + *θρίξ* (*τριχ-*), hair.] The typical genus of the family *Isotrichidæ*. *Stein*, 1859.

Isotrichidæ (ī-sǭ-trik′i-dē), *n. pl.* [NL., ‹ *Isotricha* + *-idæ.*] A family of holotrichous ciliate infusorians, having a more or less plastic but not contractile body, the cuticle thick, and the mouth posterior and accompanied by a distinct pharynx. It includes the genera *Isotricha* and *Dasytricha*, parasitic in the digestive tract of ruminants. Also *Isotrichina*.

isotrimorphic (ī″sǭ-trī-môr′fik), *a.* Same as ★*isotrimorphous*.

isotrimorphism (ī″sǭ-trī-môr′fizm), *n.* [*isotrimorph-ous* + *-ism.*] Isomorphism among the members of trimorphous groups.

isotrimorphous (ī″sǭ-trī-môr′fus), *a.* [Gr. *ἴσος*, equal, + *τρι-*, three, + *μορφή*, form, + *-ous.*] Exhibiting isotrimorphism.

isotropal (ī-sot′rǭ-pạl), *a.* Same as *isotropic*.

isotropism (ī-sot′rǭ-pizm), *n.* [*isotrop-y* + *-ism.*] Same as *isotropy*.

isotropy, *n.* **2.** In *embryol.*, the property whereby all the parts of the unsegmented egg are alike capable of giving rise to any portion of the embryonic body: opposed to *anisotropy*.

isotropyl-cocaine (ī-sǭ-trō″pil-kō′kạ-in), *n.* Same as ★*truxilline*.

isouric (ī-sō-ū′rik), *a.* [Gr. *ἴσος*, equal, + E. *uric.*] Noting an acid, a colorless, pulverulent compound, $C_5H_4N_4O_3$, prepared by the interaction of cyanamide and alloxantin. It is isomeric with uric acid.

isovalerianic (ī″sǭ-vạ-lē-ri-an′ik), *a.* Same as ★*isovaleric*.

isovaleric (ī″sǭ-vā-lē′rik), *a.* [Gr. *ἴσος*, equal, + E. *valeric.*] Noting an acid, a colorless oily compound, $(CH_3)_2CHCH_2COOH$, prepared from isobutylcyanide or by the oxidation of isoamyl alcohol. It boils at 174° C. and has an odor of valerian. Also called 3-*methylbutanoic acid*.

isovoluminal (ī″sǭ-vǭ-lū′mi-nạl), *n.* [Gr. *ἴσος*, equal, + L. *volumen* (*volumin-*), in modern physical sense of 'volume,' + *-al*1.] A curve or surface of equal volumes upon a thermodynamic diagram or model. *Physical Rev.*, April, 1905, pp. 264, 265.

isoxazole (ī-soks-az′ōl), *n.* [Gr. *ἴσος*, equal, + E. *ox*(*ygen*) + *az*(*ote*) + *-ole.*] The name of a class of organic compounds containing the complex

$$\left.\begin{matrix}CR:CR\\ |\\ CR:N\end{matrix}\right>O.$$

They are anhydrids of the oximes of β-diketones or β-ketoaldehydes, and correspond to the pyrazoles. Many of them have a strong odor resembling that of pyridine.

isoxime (ī-sok'sim), *n.* [Gr. *ἴσος*, equal, + E. *oxime*.] The name given to one of two or more forms in which some oximes are obtained.

issue, *n.* **Failure of issue.** See ★*failure.* **Issues on sheriffs,** in *Eng. law,* amercements or fines to which sheriffs were subjected for neglect or omission to perform their duties. They were levied and collected out of the issues or profits of their lands; hence the name.

-ister[1]. [L. *-ister,* a comparative suffix, consisting of *-is,* representing the original comparative suffix *-os, -us* (as in *min-us,* etc.), + *-ter,* a secondary comparative suffix (see *-ter*).] A termination of several English words from the Latin, representing a comparative formation not felt in English use. Examples are *minister, sinister,* etc.

-ister[2]. [ME. *-istre,* < OF. *-istre,* a by-form of *-iste* (E. *-ist*), prob. due to conformity with agent-words in *-istre,* from L. *-ister, -is-ter,* as in *ministre,* < L. *minister* (see ★*-ister*[1]).] A suffix, a variant of *-ist,* occurring in *chorister, palmister, sophister,* and other words now obsolete, as *alchemister.* It may exist also in the English formation *barrister.*

istesso (i-stes'ō), *a.* [It. *istesso, stesso,* the same; < L. **iste ipsus, iste ipse,* 'that self': *iste,* he, that; *ipse,* he, one's self.] In *music,* in the expression *l'istesso tempo,* the same time or pace (as that of some preceding movement). Also called *medesimo tempo.*

Isthmiad (ist'mi-ad), *n.* [Gr. Ἰσθμιάς (*-αδ-*), prop. adj., < Ἰσθμια, the Isthmian games: see *Isthmian.*] In *Gr. antiq.,* the period of two years between dates of recurrence of the Isthmian games. The Isthmian games were held in the first month of the second and fourth years of each Olympiad.

isthmian, *a.* **II.** *n.* One who lives on an isthmus, as an Indian of the Isthmus of Panama.

isthmic (ist'- or is'mik), *a.* [Gr. *ἰσθμικός,* < *ἰσθμός,* isthmus.] Same as *isthmian.*

isthmoplegia (ist- or is-mō-plē'ji-ä), *n.* [NL., < Gr. *ἰσθμός,* isthmus, ridge, + *πληγή,* stroke.] Paralysis of the soft palate.

isthmus, *n.* **4.** In fishes, the lower part of the septum between the opposing gill-openings. It is supported and stiffened by the urohyal.

Istieus (is-ti-ē'us), *n.* [NL.] A genus of Cretaceous teleost fishes of the family *Albulidæ,* having an elongate body with much-extended dorsal fin, small anal fin, and forked tail. It closely resembles the living deep-sea fish *Bathythrissa.*

istle, *n.* **Jaumave istle,** the commercial name of the best grade of Tampico fiber. It is obtained from the young inner leaves of *Agave lophantha,* a plant native to northeastern Mexico. The center of production is the Jaumave valley, in the state of Tamaulipas.—**Palma istle,** a commercial grade of Tampico fiber, obtained from the inner leaves of several plants known in Mexico as palmas. The plants yielding the most of this fiber are the palma samandoca, *Samuela Carnerosana,* and the palma pita, *Yucca Treculeana.* See ★*palma pita* and ★*palma samandoca.*—**Tula istle,** a commercial grade of Tampico fiber, so called because produced most abundantly in the vicinity of Tula, in the state of Tamaulipas, Mexico. The fiber is obtained from the inner leaves of the lechuguilla, *Agave Lecheguilla.* It is from 12 to 30 inches long and nearly white in color.

istle-machine (is'tle-ma-shēn''), *n.* Same as *leaf-fiber machine* (which see, under ★*fiber*[1]).

isuret (ī-sū'ret), *n.* Same as ★*isuretine.*

isuretine (ī-sū-rē'tin), *n.* A colorless compound, $HON{:}CHNH_2$, prepared by the action of hydroxylamine and hydrocyanic acid. It forms rhombic columnar crystals, melting and partly decomposing at 104–105° C. Also called *methenylamidoxime.*

Isuropsis (ī-sū-rop'sis), *n.* [NL., < *Isurus* + Gr. *ὄψις,* appearance.] A subgenus of sharks belonging to the family *Samnidæ,* the mackerel-sharks.

Isurus (ī-sū'rus), *n.* [NL., < Gr. *ἴσος,* equal, + *οὐρά,* tail.] A genus of the mackerel-sharks, found on both sides of the northern temperate Atlantic.

Isurus dekayi.
(From Bulletin 47, U. S. Nat. Museum.)

Isvara (is'vä-rä), *n.* [Skt. *īśvará* (*iç-*), lit. 'able to (do), capable.'] Lord; master: an epithet of Brahma, Vishnu, Siva, Avalokiteshvara, and other deities.

I. S. W. G. An abbreviation of *imperial standard wire-gage.*

It. An abbreviation (*b*) of *Italy.*

I. T. An abbreviation of *Inner Temple.*

itaballi-wood (ē-tä-bä'li-wůd), *n.* [*itaballi,* native name of the tree in Guiana, + *wood.*] The wood of *Vochy Guianensis,* which is used by the natives for making canoes. See *Vochy* (*Vochysia*).

itabo (ē-tä'bō), *n.* [Native name.] In Costa Rica, *Yucca elephantipes,* a plant with trunk swollen at the base and growing to the height of 8 or 10 meters, with many compact branches and rigid, spreading, linear, minutely denticulate leaves. The flowers are creamy white, growing in a panicle. It is much planted about houses and in the hedges of native gardens. In Guatemala and Honduras called *izote.*

itaconic (it-a-kon'ik), *a.* Noting an acid, a colorless compound, $HOCOCH{:}C(CH_3)COOH$, formed by the hydration of citraconic anhydrid at 150° C. It crystallizes in rhombic octahedra, melts at 161° C., and is closely related to citraconic and mesaconic acids.

itadibrompyrotartaric (it''a-dī-brōm-pī''rō-tär-tar'ik), *a.* Noting a crystalline acid, $C_5H_6O_4Br_2$, prepared by the addition of bromine to itaconic acid. When boiled with water it gives aconic acid.

Italian. **I.** *a.*—**Italian defense, green, pool, sumac.** See ★*defense,* etc.

II. *n.* **3.** A member of a race of honey-bees imported into the United States from Italy and having at least three yellow bands across the abdomen when the latter is distended with honey.

Italian-May (i-tal''yan-mā'), *n.* The meadow-sweet, *Filipendula Ulmaria.*

itamalic (it-a-mā'lik), *a.* [*ita(conic)*? + *malic.*] Noting an acid, a hypothetical compound, $CH_2OHCH(COOH)CH_2COOH$, known only in the form of salts, the calcium salt being prepared by heating calcium paraconate with water and calcium carbonate.

itch, *n.*—**Barbers' itch,** ringworm of the beard; tinea sycosis.—**Farmers' itch,** usually the same as *winter itch.*—**Norwegian itch,** an ulcerative disease of the skin, thought by some to be syphilitic, by others lepric; also, a form of scabies caused by the presence of the Norway itch-mite, *Sarcoptes scabiei* var. *lupi* Megnin.—**Prairie itch,** usually the same as *winter itch.*—**Sugar-bakers' itch,** dermatitis affecting workers in sugar-refineries.—**Water-itch,** a form of itch affecting the feet of coolies working in the rice-fields.—**White itch,** in *leather-manuf.,* an imperfection on skins caused by some skin-disease. *C. T. Davis,* Manuf. of Leather, p. 96. [Rare.]

itch-tick (ich'tik), *n.* The itch-mite.

itchwood-tree (ich'wůd-trē), *n.* A forest-tree of the Fijian Islands, *Semecarpus Vitiensis,* belonging to the sumac family: called *kau-karo* (itch-tree) by the natives. It has an acrid, poisonous milky juice and produces an eruption on the skin like that caused by *Rhus Vernix.*

-ite[2]. (*e*) In *chem.,* a suffix used not only in the names of salts derived from sulphurous acid, as *calcium sulphite,* but also in the names of certain substances belonging to the class of sugars, as *mannite* and *dulcite,* though these latter names are now systematically made to end in *-ol* (indicating chemical relation to the alcohols), as *mannitol* and *dulcitol;* also used without technical precision in names of pharmaceutical and commercial products, as *glycerite, dynamite, vulcanite,* etc.

-itic. [L. *-iticus,* Gr. *-ιτικός, -ιτ-ι-κό-ς.*] A termination of adjectives of Latin or Greek origin or type, from nouns or adjectives in *-ite*[2], as in *anthracitic, dendritic, hematitic, pyritic,* etc., and *Hamitic, Semitic,* etc. It is sometimes used without an intermediate form in *-ite.* In *granitic* the termination is *-ite*[1] + *-ic.*

itin. An abbreviation of *itinerant* or *itinerary.*

itinerate (ī-tin'e-rāt), *a.* Itinerant.

-itious[2]. [Also, more prop., *-icious;* < L. *-ici-us, -īcius* (later often written *-itius*): (*a*) *-icius, -ic-iu-s,* from nouns, as *ciner-icius,* of the nature of ashes, *gentil-icius,* of the clansmen, *tribun-icius,* of a tribune; (*b*) *-īcius, -īc-iu-s,* from perfect participles, as *advent-īcius,* characterized by having come in from without, *adscript-īcius,* of the class of the *adscripti, comment-īcius, conduct-īcius, fact-īcius, fict-īcius, suppos-it-īcius,* etc., of an invented, hired, made, feigned, substituted, etc., nature.] A compound suffix in adjectives of Latin origin, as in *adscriptitious, adventitious, commentitious, conductitious, factitious, fictitious, suppositious,* etc., or formed on the Latin type, as *abstractitious, adscititious, excrementitious,* etc.

-itish. A termination of some patrial adjectives equivalent to the simple *-ite*[2] suffix, as *Ishmaelitish, Israelitish, Moabitish.*

itmo (it'mō), *n.* Same as ★*buyo.*

itoubou (ē''tō-bō'), *n.* [AF. spelling of a Carib name.] One of the plants which yield white ipecacuanha, *Calceolaria Calceolaria,* of the violet family. See *Ionidium.*

-itous. [F. *-iteux,* < L. *-it-ōsus,* for *-it-āt-ōsus.*] A compound suffix, composed of elements answering to *-ity* and *-ous,* occurring in some adjectives, as *calamitous, felicitous, gratuitous, iniquitous, necessitous,* etc.

itrol (it'rol), *n.* [*(c)itr(ate)* + *-ol.*] The trade-name of silver citrate, a substance used in medicine as an antiseptic.

itui (ē-tō'ē), *n.* [S. Amer.] An eel-like fish, of the family *Sternopygidæ,* found in the fresh waters of South America.

itzcuintli (ēts-kō-ēn'tli), *n.* [Nahuatl.] The indigenous Mexican dog.

itzli (its'li), *n.* Same as *iztli.*

iulid (ī-ū'lid), *n.* and *a.* **I.** *n.* A member of the family *Iulidæ* or *Julidæ.*

II. *a.* Of or belonging to the myriapodous family *Iulidæ* or *Julidæ.*

Iulidæ, *n. pl.* [NL.] See ★*Julidæ.*

Iulus, *n.* [NL.] See ★*Julus.*

-ium. [L. *-ium, -iu-m,* orig. **-io-m,* = Gr. *-ιον, -ιο-ν,* composed of suffix *-io, -yo,* + neuter ending *-m.*] **1.** A termination of many English nouns and adjectives from the Latin and Greek. It is usually without significance (in English) as a suffix. Examples are *medium, minium,* etc. In some words of Greek origin it represents an original diminutive form, as in ★*cephalium, geranium, megatherium,* etc.

2. In *chem.,* this suffix occurs especially in the names of the larger number of the metallic elements. The Latin names of some of the principal metals end in *-um,* as *argentum, aurum, cuprum, ferrum, plumbum,* etc. In forming names for the metals obtained from potash and soda, Davy, their discoverer, seems to have adopted the termination *-ium* merely for the sake of euphony. This ending has commonly prevailed in later formations, as *cadmium, iridium, lithium,* etc.; but *lanthanum, molybdenum, platinum, tantalum,* etc., occur, and *aluminum* besides *aluminium.*

ivain (ī'va-in), *n.* [*iva* + *-in*[2].] A dark-yellow resinous bitter compound, $C_{24}H_{42}O_3$, obtained from iva, the leaves and stems of *Achillea moschata,* gathered before flowering.

Ivernian (ī-vēr'ni-an), *a.* [L. *Iverna, Iuverna,* Hibernia, + *-an.* Cf. *Hibernian.*] Relating to the supposed pre-Celtic population of Ireland.

ivigtite (iv'ig-tit), *n.* [*Ivigt(ut)* + *-ite*[2].] A kind of potash mica occurring in seams in the cryolite of Ivigtut, Greenland.

ivorine (ī'vō-rin), *a.* [*ivor-y* + *-ine*[1].] Like ivory in consistence and color.

ivory[1], *n.*—**Morse ivory,** ivory taken from the tusks of the walrus. See *morse* 1, 1.

ivory-eater (ī'vō-ri-ē''tèr), *n.* Same as ★*ivory-rat.*

ivory-nut, *n.*—**Caroline Island ivory-nut,** the seed of *Cœlococcus Amicarum,* a pinnate-leaved palm indigenous to the Caroline Islands. The fruit has a hard glossy brown pericarp tesselated with overlapping scales after the manner of that of *Raphia* and *Calamus.* The albumen of the seed is hard and ivory-like and is used for making buttons and other objects. Allied species occurring in the Pacific are *Cœlococcus Salomonensis* of the Solomon Islands, *C. Vitiensis* of Fiji, and *C. Warburgi* of the New Hebrides. See ★*apple-nuts.*

ivory-plant (ī'vō-ri-plant), *n.* Any one of the three species of palms belonging to the genus *Phytelephas,* especially *P. macrocarpa.* See *Phytelephas* and *ivory-nut.*

ivory-plum (ī'vō-ri-plum), *n.* **1.** The creeping wintergreen or checkerberry, *Gaultheria procumbens.*—**2.** The creeping snowberry, *Chiogenes hispidula.*

ivory-rat (ī'vō-ri-rat), *n.* An African squirrel, *Xerus stangeri,* named *Sciurus eborivorus* by Du Chaillu, and known as *ivory-eater* from its habit of gnawing elephant-tusks.

ivory-saw (ī'vō-ri-sâ), *n.* A thin saw mounted in a steel frame, similar to a hack-saw, used for cutting ivory.

ivorywood (ī'vō-ri-wůd), *n.* The wood of an Australian tree, *Siphonodon australe,* of the staff-tree family. It is close-grained, firm, and easily worked, and is an excellent wood for the cabinet-maker.

ivy[1], *n.* **2.** In Australia, the cultivated varieties of *Pelargonium peltatum,* commonly known as ivy-leaved geraniums, which are there trained over fences and walls, sometimes to a height of 20 or 30 feet, supplanting the English or common ivy in this use. See *ivy-leaved* ★*geranium.*—**Big-leaved ivy,** the mountain-laurel or calico-bush, *Kalmia latifolia.*—**Boston ivy.** Same as *Japanese* ★*ivy.*—**Cape ivy,** *Senecio mikanioides.* Called

German ivy in cultivation. See *Senecio*, 1. —**Climbing ivy**, the poison-ivy, *Rhus radicans*.—**English ivy**, the usual name in America of the common ivy, *Hedera Helix*. —**Five-fingered ivy, five-leaved ivy**, the Virginia creeper, *Parthenocissus quinquefolia*.—**Ground ivy**. See *ground-ivy*.—**Ivy canker**. See ★*canker*.—**Japanese ivy**, *Parthenocissus tricuspidata*, a very ornamental vine which clings to walls and climbs freely over houses, churches, etc. Though a native of Japan, it thrives in most parts of Europe and America. In the United States it is often called *Boston ivy*.—**Laurel-ivy**. Same as *bay-leaved* ★*ivy*.—**Mexican ivy**, *Rosenbergia scandens*, a tender, showy climbing plant, often cultivated in gardens. See *Cobæa*.—**Native ivy**, in Australia (*a*) The Macquarie Harbor grape, *Calacinum adpressum*. (*b*) The naturalized Cape or German ivy, *Senecio mikanioides*. See *Senecio*, 1.—**Spoonwood ivy**, the sheep laurel or lambkill, *Kalmia angustifolia*.—**Three-leaved ivy**. See *poison-ivy*.—**West Indian ivy**, *Marcgravia umbellata*, a climbing shrub with thick, leathery leaves and curious long-stalked flowers in terminal umbels. See *Marcgravia*.

ivy[1] (ī′vi), *v. t.*; pret. and pp. *ivied*, ppr. *ivying*. [*ivy*[1], *n.*] To cover with ivy.

> Earth with her twining memories *ivies* over
> Their holy sepulchres; the chainless sea,
> In tempests or wide calms, repeats their thoughts.
> *Lowell*, Prometheus, iv.

ivy-berry (ī′vi-ber″i), *n.* The checkerberry, *Gaultheria procumbens*.

ivy-chickweed (ī′vi-chik″wēd), *n.* See ★*chickweed*.

ivy-flower (ī′vi-flou″ėr), *n.* The liverleaf, *Hepatica Hepatica*.

ivy-geranium (ī′vi-jē-rā″ni-um), *n.* Same as *ivy-leaved* ★*geranium*.

ivy-leaved (ī′vi-lēvd), *a.* Having leaves which resemble those of the ivy. **Ivy-leaved chickweed.** Same as *ivy* ★*chickweed*.

ivy-weed (ī′vi-wēd), *n.* The Kenilworth ivy, *Cymbalaria Cymbalaria*.

ivy-wood (ī′vi-wud), *n.* The mountain-laurel, *Kalmia latifolia*. [South Carolina.]

I. W. An abbreviation of *Isle of Wight*.

I. W. G. An abbreviation of *Indian wire-gage*.

I. X. An abbreviation of the Latin *Iesus Christus*.

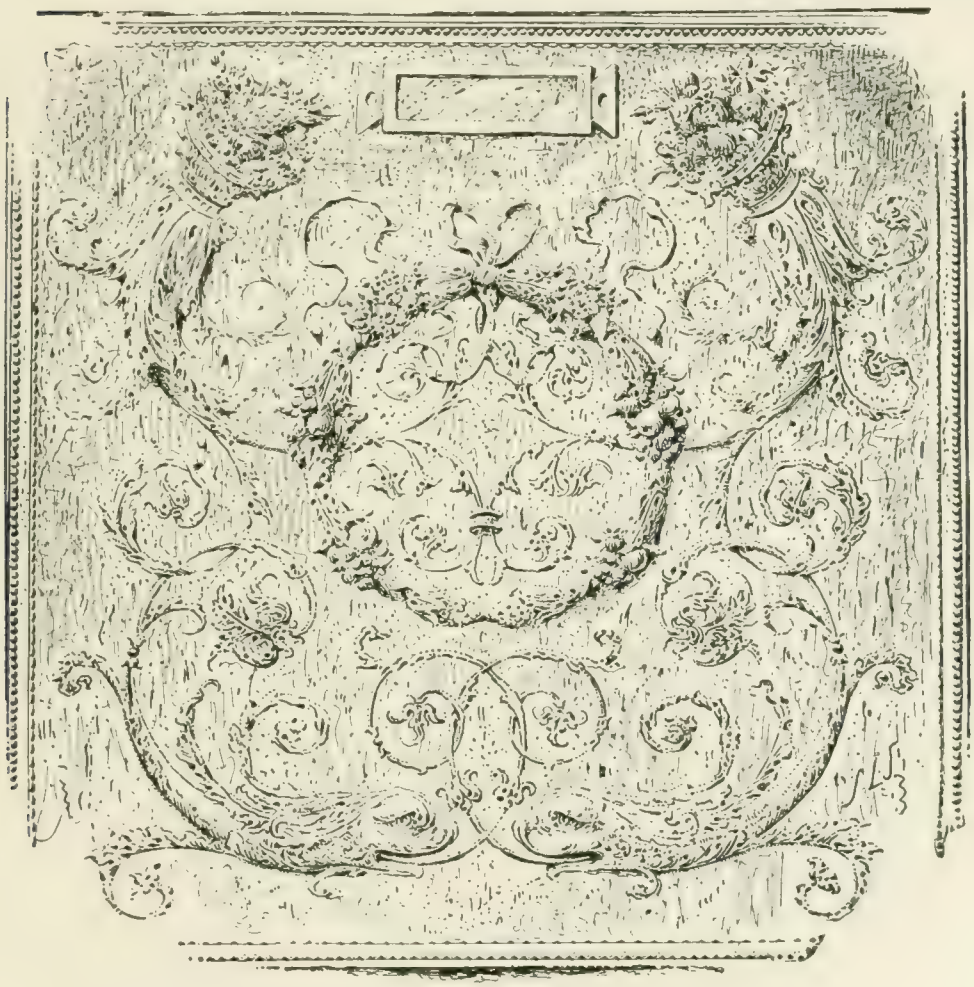
Ixionian (ik-si-ō′ni-an), *a.* [*Ixion* + *-ian*.] Relating to Ixion, in Greek legend, a king of Thessaly whose punishment in the lower regions was to be whirled forever on a revolving wheel.

ixodid (ik′so-did), *n.* and *a.* **I.** *n.* A member of the family *Ixodidæ*.

II. *a.* Resembling or belonging to the family *Ixodidæ*.

ixtli, *n.* See *istle*, ★*istle*, and ★*izote*.

izote (ē-thō′tā), *n.* [Mex. Sp. *izote*, < Nahuatl *izotl*, or *ixotl*, a generic name for yuccas.] In Mexico, Guatemala, and Honduras, a name of several species of *Yucca* and their allies, especially *Y. Treculeana*, which yields a fiber of commercial importance called *ixtli de Coahuila*; *Y. Schottii Jalisccnsis*, the source of the fiber called *ixtli de Jalisco*; *Samuela Carnerosana*, yielding the *ixtli de Carneros*, and *Y. baccata*, which bears edible fruit often called *datiles*. In Guatemala and Honduras the name is applied to *Y. elephantipes*, a species cultivated in gardens and planted in hedges, which in Costa Rica is called *itabo*.



3. An abbreviation (*a*) [*l. c.*] of the Latin *judex*, judge; (*b*) of *Jupiter*; (*c*) of *Justice*.— **White J**, an American nymphalid butterfly, *Eugonia j-album* so called from a white mark resembling the letter J on the under side of the hind wings. It occurs in Canada and the northern United States east of the Rocky Mountains, and its larvæ feed on the birch and willow. It is also known as the *Compton tortoise*.

White J (*Eugonia j-album*).

J. A. An abbreviation of *judge-advocate*.

jab, *n.* **2.** *Naut.*, a net used in catching the fry of fish.

jabiru, *n.* This name has also been applied to two large, stork-like birds of the Old World, somewhat smaller than the South American jabiru and having the head and neck feathered instead of bare. The African jabiru, *Ephippiorhynchus senegalensis*, is glossy black above, white below; the primaries are also white. The Australian jabiru, *Xenorhynchus australis*, is of a greenish black above.

jabon (hä-bōn′), *n.* [Cuban use of Sp. *jabon*, soap.] A serranoid fish, *Rypticus saponaceus*, found from Florida to Brazil.

jaboncillo (hä-bōn-thēl′yō), *n.* [Sp. dim. of *jabon*.] Same as ★*jabon*.

jabonine (jab′ō-nin), *n.* [*jabo(randi)* + *-n* + *-ine*[2].] A colorless oily basic compound, $C_9H_{14}N_2$, prepared by the action of barium hydroxid on pilocarpine or pilocarpidine. It boils at 235–240° C.

jaborandine (jab-ō-ran′din), *n.* [*jaborandi* + *-ine*[1].] Same as ★*jaboridine*.

jaboric (ja-bor′ik), *a.* [*jabor(andi)* + *-ic*.] Derived from jaborandi.—**Jaboric acid,** a solid compound, $C_{19}H_{25}O_5N_3$, formed by heating pilocarpine, of which it is a condensation-product.

jaboridine (ja-bor′i-din), *n.* [*jabor(andi)* + *-id* + *-ine*[2].] An amorphous, poisonous, mydriatic alkaloid, $C_{32}H_{32}O_4N_4$, one of the three found in jaborandi (*Pilocarpus*). Physiologically it is antagonistic to pilocarpine. Also *gaboridine*.

jabot, *n.* **2.** In *entom.*, the crop of any herbivorous orthopterous insect.

jabul (hä-böl′), *n.* [Sp. spelling for **habul*, **habol*, < Bisaya *habol*, **habul*, a garment (see def.), a blanket, sheet (*habol-habol*, a membrane): cf. *haból*, to weave, *haból*, a woven piece, thick and coarse.] A garment, worn by Moro women, formed of a long piece of cloth, sewed together at the ends, which is wrapped about the body in various ways. [Philippine Is.]

jabuticaba (zhä-bö-tē-kä′bä), *n.* [Tupi, < *jabuti*, tortoise, + *caba*, fat.] Any one of three species of myrtaceous trees belonging to the genus *Myrciaria*, *M. Jaboticaba*, *M. trunciflora* and *M. cauliflora*, yielding edible berries.

jacal (hä-käl′), *n.* [Also *jacale*; < Nahuatl *xacalli*, a straw hut, < *xalli*, sand, + *calli*, house.] A native Mexican house or hut of which the walls are constructed of rows of thin vertical poles, covered and chinked with mud. Also applied to this method of building.

On the western margin of the ruin, and nowhere else within it, there are traces of another kind of construction which was not found elsewhere within the canyon. This method is known to the Mexicans as "*jacal*," and much used by them. It consists of a row of sticks or thin poles set vertically in the ground and heavily plastered with mud. At present not one of these walls remains to a height of 6 inches above the ground, but the lines of poles broken off at the ground level are still visible.
Rep. Bur. Amer. Ethnol., 1894–95, p. 108.

jacaranda, *n.* **2.** [*l.c.*: Pg. pron. zhäk-ä-rändä′.] A name of certain large Brazilian trees which yield the rosewood of commerce; also, the wood itself. The trees so called include species of the bignoniaceous genus *Jacaranda*, *Dalbergia nigra*, and several species of the genus *Machærium* of the bean family, especially *M. scleroxylon*, *M. firmum*, and *M. legale*. The last two species are usually distinguished as *jacaranda roxa* (red jacaranda) and *jacaranda preto* (black jacaranda). See *rosewood*, 1, *Jacaranda*, 1, and *Machærium*, 1.

jack[1], *n.* **9.** (*f*) *Caranxus bartholomæi*, a fish found in the West Indies and northward to North Carolina. **11.** (*l*) (2) In *telephony*, a device for making switchboard connections. It consists of an insulated ring, to which one or more springs are attached, which is mounted upon the switchboard frame. Connections are made by inserting in the ring a conical metal plug to which the conductors to be brought into circuit are attached. (*m*) A device for transmitting motion from a horse-power or treadmill to a machine. (*n*) Any device consisting essentially of a roller or barrel used as a winch, crab, or hoisting- or hauling-derrick. (*o*) A machine in which skins are polished under pressure. (*p*) A device for winding the warp on the warping-beam of a loom.
22. Same as *black-jack*, 3.—**Answering jack,** a jack used by operators in a telephone exchange in answering the calls of subscribers.—**Chisel-mouth jack.** Same as ★*chiselmouth* and *hardmouth*.—**Coal-breaking jack.** See *jack*[1], 11 (*i*) (1).—**Horse-eye jack,** a common name applied to certain fishes of the family *Carangidæ*.—**Jack bean.** See ★*bean*[1].—**Jack Frost,** frosty weather; freezing cold personified.—**Jack's alive** (*naut.*), an old-fashioned seaport dance.—**Jack strippers,** in *euchre*, two knaves, usually of the same color, so trimmed that they can be withdrawn from the pack (for the purpose of cheating) and placed on the top at will.—**Multiple jacks,** jacks connected in multiple to each line of a telephone exchange and so placed along the switchboard as to enable any operator to reach any line.—**Natural jack,** in *poker*, a jack-pot which arises from some circumstance of the play, such as that of no one coming in against the age, as distinguished from jack-pots which are made by the circulation of a buck.—**Pendulum jack,** in *leather-manuf.*, a machine with an arm which swings like a pendulum. *C. T. Davis*, Leather, p. 271.—**Pneumatic jack,** a device consisting essentially of a cylinder closed at one end, and a plunger which fits it, the plunger being forced out by pneumatic pressure and thereby exerting a lifting or pushing force: similar to a hydraulic jack, but using air instead of water.—**Railroad jack.** Same as ★*rail-jack*.—**Yellow jack.** (*b*) A common name of certain fishes of the family *Carangidæ*. (*c*) The jonquil, *Narcissus jonquilla*.

jack[1], *v. t.* **3.** In *leather-manuf.*, to roll by means of a roller attached to an arm. *Modern Amer. Tanning*, p. 118.

jackanapes, *n.*—**Jackanapes-on-horseback,** the marigold, *Calendula officinalis*.

jackaroo (jak-a-rö′), *v. i.* [*jackaroo*, *n.*] To learn one's business by bush-farming: said of an inexperienced greenhorn in Australia who assumes the position and duties of a jackaroo before taking up a station of his own. See *jackaroo*, *n.* [Slang, Australia.]

jackass-hare (jak′ăs-här), *n.* A book-name for the jack-rabbit, *Lepus callotis*.

jack-bird, *n.* **2.** A passerine bird, *Creadion cinereus* Buller, of the South Island, New Zealand: placed near the starlings.

jack-box (jak′boks), *n.* A box or frame in which is carried a jack-shaft. Such a box carrying one or more shafts, each supporting a bevel-pinion, is used in the bevel differential gearing of motor-cars or self-propelling fire-engines.

jack-boy (jak′boi), *n.* A boy serving in a low capacity: often a contemptuous epithet.

jack-card (jak′kärd), *n.* A hand-instrument for carding cotton or wool; a hand-card. *C. Vickerman*, Woollen Spinning, p. 144.

jack-chain, *n.* **2.** In *lumbering*, an endless spiked chain which moves logs from one point to another, usually from the mill-pond into the sawmill; a bull-chain.

jacket, *n.* **8.** The loose wrapper of paper which protects the binding of a book.—**9.** The sheet of cardboard or thick paper which covers the impression surface of a printing-cylinder.—**10.** The hide or other natural covering of various animals, as sheep, seals, fish, etc.—**11.** The skin of a potato.—**To obtain one's jacket,** to secure, as an officer, appointment to the horse artillery. [Eng.]

After serving with a field battery for a few years, Lieut. T. *obtained his "jacket,"* and was the beau ideal of a horse-artillery officer. *Geog. Jour.* (R. G. S.), XI. 556.

Magellan jacket (*naut.*), a heavy, warm watchcoat provided with a hood, and used by officers and men in cold latitudes. It was designed by Captain James Cook of the British navy.—**Mask and smoke jacket,** a device similar to a diving helmet and jacket, but much lighter, worn over the head and upper part of the body to enable the wearer to enter a place filled with smoke or poisonous gases.—**Ragged jacket,** a young harp-seal during his first molt. *Goode*.—**Sayre's jacket,** a sort of corset made of plaster of Paris, used to support the spine in cases of Potts' disease.—**Yellow jacket,** a jacket (makwa) of imperial yellow brocaded silk bestowed as a distinction by the Emperor of China on a high official, usually in acknowledgement of some important service rendered. See *makwa*.

For these exploits he [Li Hung Chang] was made governor of Kiangsu, was decorated with a *Yellow Jacket*, and was created an earl. *Encyc. Brit.*, XXX. 268.

jacket-casing (jak′et-kā″sing), *n.* In engines, the jacket; the cover which incloses the steam-space about the cylinder of a steam-engine or the water-space about the cylinder of a gas-engine.

jacketing, *n.* **II.** *a.* Surrounding or protecting as a jacket: in *phys.*, said of a layer of insulating material surrounding a calorimeter or other chamber to prevent the inflow or egress of heat.

Beyond the point at which the *jacketing* water is taken off. *M. W. Travers*, Exper. Study of Gases, p. 315.

jacketing-machine (jak′et-ing-ma-shēn″), *n.* In *candy-making*, a machine consisting of two hoppers, placed side by side, each containing liquid chocolate or other syrup or candy material and delivering its contents between rolls and through dies, in slender streams, to a paper-covered traveling apron. One stream is in advance of the other; the second jackets or envelops the first and forms a double stick which is drawn out by the movement of the apron into a long thread which is cut into the required lengths by an automatic knife.

jacket-pipe (jak′et-pīp), *n.* The pipe which conveys steam or water to or from the jacket of an engine.

jacket-pump (jak′et-pump), *n.* A pump used to circulate the water in the water-jacket of an air-compressor or a gas-engine.

Jackfield ware. See ★*ware*[2].

jack-flange (jak′flanj), *n.* In *pianoforte-making*, the projection from the whip to which the jack is attached. See cut under *pianoforte*.

jack-fly (jak′flī), *n.* Same as *jack*[1], 11 (*g*).

jack-flier (jak′flī″ėr), *n.* A wheel attached to a roasting-jack for the purpose of keeping it turning by the inertia of the wheel.

jack-frame, *n.* **2.** In *cotton-manuf.*, a roving-frame used for fine yarns.—**3.** A frame for holding a jack or winch.

jack-in-a-basket (jak′in-a-bas″ket), *n.* *Naut.*, a basket or beacon placed on top of a pole to mark a shoal or other danger. Sometimes a tub or a barrel is used instead of a basket.

jack-in-a-box, *n.* **9.** A very small but powerful screw-jack used by burglars to force locks, particularly to pull the spindle of a combination lock from the door.—**10.** A device for holding the tool on a planing-machine in position while cutting.—**11.** In Australia, same as *hairtrigger-flower*. Also called *trigger-plant*. See *hairtrigger-flower* and *Stylidium*.—**Jack-in-a-box motion,** an epicyclic train of wheels, an essential feature in the mechanism of a cotton-roving frame for regulating the relative speed of the bobbin and flier. Also called *differential*, *equating*, and *sun-and-planet motion*.

jacking, *n.* **2.** An extra draft given to the roving (in spinning fine cotton yarn on the mule) near the end of the outward traverse of the spindle-carriage. *Nasmith*, Cotton Spinning, p. 253.

jacking-motion (jak'ing-mō shon), *n.* An operation (on a cotton-spinning mule) for putting supplementary drawing and twisting into the roving toward the end of the outward traverse of the spindle-carriage. *Nasmith*, Cotton Spinning, p. 319.

jack-in-trousers (jak'in-trou″zẽrz), *n.* The wild red columbine, *Aquilegia Canadensis.*

jack-ladder, *n.* 2. Same as ★*gangway*, 4.

jack-light (jak'lit), *v. i.* To hunt game or to fish with a jack-light: same as *jack*[1], 2.

jack-lighting (jak'lī-ting), *n.* The method or practice of hunting or fishing with a jack-light.

jack-nut (jak'nut), *n.* One of the nut-like separable portions of the jackfruit. See *jack-tree.*

jack-pine (jak'pīn), *n.* The gray pine, *Pinus divaricata.*

jack-pot, *n.* 2. In *lumbering*, an unskilful piece of work. [Slang.]—3. A pile of logs.

To open a jack-pot, in *poker*, to announce that the necessary qualification, jacks or better, is held.

jack-press (jak'pres), *n.* A baling-press for baling in which the pressure is exerted by means of a jack-screw or lever.

jack-pulley (jak'pul'i), *n.* 1. The belt-pulley on a roasting-jack by which it is made to turn.—2. The principal pulley on a jack-shaft. See ★*jack-shaft.*

jack-rod (jak'rod), *n.* In *ship-building*, a long iron rod, supported at frequent intervals by eye-bolts on the surface of structural parts, to which is secured by lashings the edges of awnings, weather-cloths, canvas covers, etc.

jack-rope (jak'rōp), *n.* The wire rope by which the foot of a fore-and-aft sail is secured to the boom. It runs fore and aft through the eyes screwed in on top of the boom, and through small thimbles sewed on the bolt-rope, on the foot of the sail, at every seam.

jack-shaft (jak'shaft), *n.* The first shaft from the prime mover from which the main or line-shaft is driven. It is usually of a short length, and is connected to the turbine or engine by belting, gearing, or by a rope-drive. *Elect. World and Engin.*, June 11, 1904, p. 149.

jack-shafting (jak'shaf″ting), *n.* Same as ★*jack-shaft.*

jack-shark (jak'shärk), *n.* A sailors' term for a shark.

jack-shay, jack-shea (jak'shā), *n.* In Australia, a tin quart-pot.

Hobbles and *Jack Shays* hang from the saddle dees. . . . A tin quart-pot, used for boiling water for tea, and contrived so as to hold within it a tin pint-pot.
A. C. Grant, Bush Life in Queensland, I. 209.

jackson (jak'son), *v. t.* To bother; annoy. [Whalers' slang.]

Jackson beds. See ★*bed*[1].

Jackson-vine (jak'son-vīn), *n.* The matrimony-vine, *Lycium vulgare.*

jack-spaniard, *n.* 2. In the British West Indies and Guiana, a large wasp of the genus *Polistes* which suspends its nests from the roofs of houses or the branches of trees.

That long black wasp, commonly called a *Jack Spaniard*, builds pensile paper nests under every roof and shed. *Kingsley*, At Last, v.

jack-spring (jak'spring), *n.* In *pianoforte-making*, a spring that pulls the jack back or down after it is released. See cut under *pianoforte.*

jack-strip (jak'strip), *n.* A strip of insulating material which forms the support of a group of jacks upon a telephone switchboard.

jack-the-painter (jak thē-pān'tẽr), *n.* In Australia, a very acrid green tea that leaves a stain on or in the mouth. *E. E. Morris*, Austral English.

jack-whip (jak'hwip), *n.* In *pianoforte-making.* Same as ★*whip*, 12. See cut under *pianoforte.*

jacky, *n.* 2. A familiar name for an enlisted man in the navy.

jack-yard (jak'yärd), *n.* A light yard used to extend the head of a square-cut gaff-topsail: common on English yachts. It differs from a sprit in that the latter is kept parallel with the topmast, while the jack-yard is carried a-cockbill—the highest end raking toward the stern when the yacht is on the wind. Also known as a *gaff-topsail-yard.*

a, jack-yard.

jacky-breezer (jak'i-brē zẽr), *n.* A dragon-fly.

jacky-winter (jak'i-win″tẽr), *n.* A small flycatcher, *Micræca fascicans*, supposedly named because it is abundant and sings in the winter. [New South Wales.]

jacob, *n.* 2. A jacobus, a gold coin of James I. of England.—3. (*a*)†. A housebreaker who carried a ladder. (*b*) A ladder. *Grose*, Dict. Vulg. Tongue.—4. A half-witted person. *Vaux*, Flash Dict.

Jacobian[2], *n.* 2. Short for *Jacobian curve.*

Jacobian of a net of plane curves. Same as ★*Hessian of a net of plane curves.*

Jacobi's unit of current, unit of resistance. See ★*unit.*

Jacobitish (jak'ō-bī-tish), *a.* [*Jacobite* + *-ish.*] Same as *Jacobite.*

Jacob's-ladder, *n.* 2. Also, any plant of the genus *Polemonium*, especially *P. cæruleum* and *P. reptans.* (*b*) The yellow toad-flax or butter-and-eggs, *Linaria Linaria.* (*c*) The climbing bittersweet, *Celastrus scandens.* **American Jacob's-ladder.** (*a*) *Polemonium Van Bruntiæ*, of northeastern North America, long confounded with *P. cæruleum.* (*b*) The carrion-flower, *Smilax herbacea.*

Jacobson's canal, cartilage. See ★*canal*[1], ★*cartilage.*

Jacob's-shell (jā'kobz-shel'), *n.* The scallop-shell worn by pilgrims who had visited the shrine of St. James the Greater, whose emblem it is.

Jacob's ulcer. Same as *rodent* ★*ulcer.*

Jacquard. An abbreviation of *Jacquard loom* or *Jacquard attachment* (which see, under *loom*).

Jacqueminot (zhäk-mi-nō'), *n.* [Named *General Jacqueminot* (after J. F. *Jacqueminot*, 1787–1865), a French general.] The name (*General Jacqueminot*) of a deep-red variety of the rose. Often called *jack-rose* or *jack.*

Jacques cell. See ★*cell.*

Jacquet's recording chronometer. See ★*chronometer.*

jactant (jak'tant), *a.* [L. *jactans* (*-ant-*), ppr. of *jactare*, boast: see *jactation.*] Boastful; given to bragging.

jactus (jak'tus), *n.* [L., a throwing, < *jacere*, throw: see *jet*[1].] In *law*, same as *jettison* (which see).—**Jactus lapilli** [Latin, 'throwing of a stone'], in *civil law*, a method of preventing the acquiring of title by prescription. The real owner of the land upon which another was building went upon the building and, in the presence of witnesses brought for the purpose, threw down a stone upon the land, thus challenging the builder's right.

jaculator-fish (jak'ū-lā-tor-fish″), *n.* A fish, belonging to the family *Toxotidæ*, which has been credited with the faculty of shooting drops of water at insects on low-hanging branches and thus securing them. This story has not been confirmed. See *archer-fish.*

jaculiferous (jak″ū-lif'ẽ-rus), *a.* [L. *jaculum*, dart, + *ferre*, bear, + *-ous.*] Bearing prickles or spine-like darts. *Syd. Soc. Lex.*

jacupirangite (jak″ū-pī-ran'jīt), *n.* [*Jacupiranga*, São Paulo, Brazil, + *-ite*[2].] In *petrog.*, a group of phaneric igneous rocks of somewhat variable composition associated with nephelite syenite. One variety consists of titaniferous augite, with magnetite, ilmenite, nephelite, and perovskite. Another variety contains a subordinate amount of augite: others are nearly pure ilmenite with scattered crystals of augite. *Derby*, 1891.

jade[1], *v. t.* 4†. To make a fool of; scorn.

I do not now foole my selfe, to let imagination *iade* mee. *Shak.*, T. N., ii. 5. 178.

jadeitite (jā'dīt-īt), *n.* [*jadeite* + *-ite*[2].] In *petrog.*, a rock composed of the mineral jadeite. Also called *jadeite-pyroxenite.*

Jadelot's furrows. See ★*furrow.*

jadoo (jä'dö), *n.* [Hind. Pers. *jādū*, Avestan *yātu.*] In India, magic; conjurers' tricks; an exhibition of apparently supernatural performances.

Suddhoo . . . said that Janoo had told him that there was an order of the Sirkar against magic. . . . I said that, if there was any *jadoo* afoot, I had not the least objection to giving it my countenance and sanction, and to seeing that it was clean *jadoo*—white magic, as distinguished from the unclean *jadoo* which kills folk.
Kipling, In the House of Suddhoo, in Plain Tales from the Hills, p. 135.

jadoo-fiber (jä'dö-fī″bẽr), *n.* A prepared cocoa-nut-fiber used in greenhouses for potting plants.

j'adoube (zhä-döb'). [F., 'I adjust': see *adub.*] An expression in chess by which a player notifies his adversary that he is merely adjusting one or more pieces on the board without intending to play either. Any form of stating the fact may be used.

jady (jā'di), *a.* [*jade*[1] + *-y*[1].] Vicious; tricky; ill-conditioned: said of a horse.

jag[2], *n.* 6. A rustic; a farm-hand: as, a plow *jag.* [Dialect, Eng.]

The North Lincolnshire "plough-*jags*" have gone from house to house this season [1901] fantastically attired for the Plough Monday mummeries.
N. and Q., 9th, ser. VII. 22.

J. A. G. An abbreviation of *Judge Advocate General.*

jag-bolt (jag'bōlt), *v. t.* To fasten by the use of a serrated or jagged bolt, as in ★*jagging* (which see).

jagger[1], *n.* 4. The rough projection raised by nicking a piece of metal with a chisel; a jag.—**Jagger wagon.** See ★*wagon.*

jagging (jag'ing), *n.* The use of a jag-bolt to secure or fasten something; the insertion of a jagged or serrated bar, bolt, or shaft in a casting, by casting the metal around it.

jagging-board (jag'ing-bōrd), *n.* An inclined board or box for washing ore-slimes.

jagong (jä'gong), *n.* [Malay.] Same as *maize*, 1 and 2.

jahad (jä-häd'), *n.* See *jihad.*

Jahveism, *n.* See ★*Jahvism.*

Jahvism (jä'vizm), *n.* [*Jahve*, *Yahweh* (see *Jehovah*), + *-ism.*] The religion of the ancient Hebrews, as based on the worship of Jahve (Yahweh) as the national deity.

jai-alai (hī″ä-lī'), *n.* Same as ★*pelota.*

jaiba (hä'ē-bä), *n.* [W. Ind. Sp., from the aboriginal W. Indian name.] A West Indian name for the common crab, *Callinectes sapidus.*

Jainist (jī'nist), *n.* and *a.* [*Jain* + *-ist.*] Same as *Jain.*

Jakutian (ya-kö'ti-an), *n.* In *geol.*, a stage of the Lower Pelagic Triassic series in India preceded by the Brahmanian and followed by the Hydaspian stage.

jalap, *n.*—**Cancer jalap.** See ★*cancer-jalap.* **False jalap.** (*a*) The root of the four-o'clock or marvel-of-Peru, *Mirabilis Jalapa.* (*b*) *Ipomœa Jalapa*, of the southern United States and tropical America. See *Mechoacan root*, under *root*[1]. **Fusiform jalap,** the male jalap or Orizaba-root, *Ipomœa Orizabensis.* **Sierra Gordo jalap.** Same as *Tampico jalap.* See *jalap.* **Wild jalap.** Same as *man-of-the-earth.* **Woody jalap,** the male jalap.

jalapate (jal'a-pāt), *n.* [*jalap* + *-ate.*] A salt of jalapic or jalapinic acid.

jalapinic (jal-a-pin'ik), *a.* Same as *jalapic.*

jalpaite (häl'pä-īt), *n.* [*Jalpa*, in Mexico, + *-ite*[2].] A cupriferous argentite from Jalpa, Mexico.

jam[1], *v. t.* 4. To push (a bill or measure) through the regular routine of a legislative body by the brute force of a majority controlled by 'the machine,' without proper consideration or discussion. [Political slang.] *N. Y. Com. Advertiser*, April 11, 1901.

jam[1], *n.*—**Center jam,** in *lumbering*, a jam formed on an obstacle in the middle of a stream, but which does not reach either shore.—**Stream jam.** Same as *center* ★*jam.*—**To shoot a jam,** in *lumbering*, to loosen a log-jam with dynamite.—**Wing jam,** in *lumbering*, a jam which is formed against an obstacle in the stream and slants upstream until the upper end rests solidly against one shore, with an open channel for the passage of logs on the opposite side.

jam[2], *n.* 2. An extra pool in the game of napoleon.

jam[2] (jam), *v.*; pret. and pp. *jammed*, ppr. *jamming.* [*jam*[2], *n.*] **I.** *trans.* To smear or spread with jam: as, a slice of bread thickly *jammed.*

II. *intrans.* To become jam; thicken to the consistency of jam. [Colloq.]

And I did so want that jam to *jam* properly.
R. Kipling, Fatima, in Indian Tales, p. 737.

jam[4] (jäm), *n.* [Sindhi *jām.*] The title of certain native chiefs in northwestern India.

K. S. Ranjitsinhji, the cricketer, had been adopted by the late *Jam*, but the adoption was set aside, with British sanction, in favour of a son by a Mahommedan mother.
Encyc. Brit., XXXI. 112.

jam[5] (jäm), *n.* [Hind. Pers. *jāmah*, *jāma*, a gown, a robe. Cf. *pajamas.*] In England, a kind of dress worn by children: so called from the Hindu *jama*, a long muslin gown worn in India by both Mohammedans and Hindus.

Jam. An abbreviation of *Jamaica.*

jama (jä'mä), *n.* [Hind. Pers. *jāmah*, *jāma.* Cf. ★*jam*[5] and *pajamas.*] In India, a gown, especially one that is long and very full, folded into many plaits.

Jamaica cucumber, discipline, wood. See ★*cucumber*, etc.

jamaisine (ja-mā'sin), *n.* Same as *berberine.*

jaman (jä'män), *n.* [Hindi.] The fruit of the jambolana, *Syzygium Jambolana.*

jambava (jam-bä'vä), *n.* [Hind. *jambāva*, < *jambū*, jambu.] In India, a liquor prepared from the fruit of the jambu by fermentation.

It is stimulating and tonic in its action and is a favorite beverage with the natives. *Buck*, Med. Handbook, V. 244.

jamb-lining (jam'li ning), *n.* A piece of light woodwork set up against a door-post or the like, one side of it forming the jamb.

jamborine (jam'bō-rin), *n.* [*jambo(lana)* + *-r-* + *-ine*[2].] A white crystalline substance of uncertain composition, said to be contained in the seeds of jambolana (*Syzygium Jambolana*).

jambos (jam'bōs), *n.* [Prop. pl. of *jambo*, a form of *jambu*. Hence, NL. *Jambosa*.] The rose-apple, *Caryophyllus Jambos*, a tree of East Indian origin, now widely cultivated throughout the warmer regions of the globe for the sake of its fragrant fruit, and also grown as a greenhouse subject. In Mexico and Central America it is called *pomarosa*. See *rose-apple*.

Jambosa (jam-bō'sä), *n.* [NL. (A. P. de Candolle, 1828, adopted from Rumphius), ⟨ *jambos*, a European form, properly pl. of *jambo*, *jambu*, the rose-apple.] An untenable name for *Caryophyllus*, a genus of plants of the family *Myrtaceæ*.
The Malay apple, *Caryophyllus Malaccensis*, the clove, *C. aromaticus*, and the rose-apple, *C. Jambos*, are well known species.

jambosade (jam'bō-zād), *n.* [*jambos*, native name.] The rose-apple, *Caryophyllus Jambos*. Also called *jambu* and *jamrosade*.

jambosine (jam'bō-sin), *n.* [*jambosa* + *-ine*[2].] A colorless, tasteless, crystalline alkaloid, $C_{10}H_{15}O_3N$, contained in the bark of the root of *Caryophyllus Jambos*. It is without physiological action.

jamb-stone (jam'stōn), *n.* A block or slab of stone set upright at the side of a doorway or window, so that one of its faces forms the jamb.

James (jāmz), *n.* A sovereign; the sum of twenty shillings. [Slang.]—**James Royal** (or **Ryall**), a silver coin of the reign of James VI. of Scotland, having the figure of a sword on one side, and vulgarly called the *sword-dollar*. *Jamieson*, Dict. Scot. Language.

James-Lange theory. See ★*theory*.

Jamin's tube. See ★*tube*.

jammer (jam'èr), *n.* In *logging*, an improved form of gin, mounted on a movable framework and used to load logs on sleds and cars by horse-power.

jamon (hä-mōn'), *n.* [Sp. *jamón*, leg, thigh, ham: see *gammon*[2].] **1.** A ham; bacon.—**2.** A guitar. [Southwestern U. S.]

jam-pin (jam'pin), *n.* A pin driven into a hole which is drilled or cut in a joint, to prevent one part shifting on the other.

jam-riveter (jam'riv″et-èr), *n.* A pneumatic riveting-hammer when used in a frame: so called because the riveter is used in a contracted space.

Janella (ja-nel'ä), *n.* [NL. (Gray, 1838).] The typical and only genus of the family *Janellidæ*.

Janellidæ (ja-nel'i-dē), *n. pl.* [NL., ⟨ *Janella* + *-idæ*.] A family of pulmonate gastropods consisting of slug-like animals with no lower tentacles and having the shell in the form of an internal plate. It contains the genus *Janella*.

jangada, *n.* **2.** The tibourbou, *Apeiba Tibourbou*: so called on account of the use of its very light wood for catamarans. See *jangada*, 1, and ★*tibourbou*.

janiceps (jan'i-seps), *n.* [NL., ⟨ L. *Janus*, Janus, + *caput*, head.] A joined twin monster the two heads of which face in opposite directions.

Janiform (jan'i-fôrm), *n.* Resembling Janus; two-faced.

janizary, *n.* **2.** A common name of *Clepticus*

Janizary (*Clepticus parræ*).
(From Bulletin 47, U. S. Nat. Museum.)

parræ, a labroid fish of the West Indian fauna. —**Janizary pedal.** See ★*pedal*.

Jankó keyboard. See ★*keyboard*.

Jansenist, *n.* **II.** *a.* **1.** Of or pertaining to the Jansenists.—**2.** Noting a style in decoration, especially in bookbinding, characterized by extreme plainness: especially adapted to levant morocco and other materials which present beautiful surfaces. *W. Matthews*, Modern Bookbinding, p. 81.

Janus, *n.* **4.** A double monster with the two heads looking in opposite directions. Also called *janiceps*. **Janus blue, brown, colors.** See ★*blue*, etc. **Janus green.** Same as *dualin* ★*green*. **Janus orange, red, yellow.** See ★*orange*[1], etc.

Jap. An abbreviation (*b*) of *Japan*.

japaconine (jap-ạ-kō'nin), *n.* [*japacon(it)ine*.] A pale-yellow amorphous alkaloid, $C_{26}H_{41}O_{10}N$ (?), prepared by heating japaconitine with alcoholic potassium hydroxid.

japaconitine (jap-ạ-kon'i-tin), *n.* [*Jap(anese)* + *aconite* + *-ine*[2].] A colorless, toxic, crystalline alkaloid, $C_{66}H_{88}O_{21}N_2$ or more probably $C_{34}H_{49}O_{11}N$, found in Japanese aconite (kuzauzu) from *Aconitum Japonicum*. It melts at 184–186° C. and closely resembles aconitin in many respects.

Japan cedar, moth. See ★*cedar*, ★*moth*[1].

japan, *v. t.* **2.** To invest with the black coat of a clergyman; ordain. [Slang.]

My friend's son had just been ordained Deacon, or, in the language of the day, '*japanned*.'
Sporting Mag., XVIII. 283. *N. E. D.*

Japanese banana, belladonna, oak-moth. See ★*banana*, etc.—**Japanese sardine-oil.** See ★*oil*.

japanesquery (jap-ạ-nes'kẹ-ri), *n.* [*Japanesque* + *-ry*.] Japanese style; the Japanese spirit or genius.

Japanism, *n.* **2.** A Japanese idiom, custom, or peculiarity.—**3.** Fondness for Japanese things or customs.

Japanize (ja-pan'īz), *v. t.*; pret. and pp. *Japanized*, ppr. *Japanizing*. [*Japan* + *-ize*.] To make conformable to Japanese ideas or customs; render Japanese.

Japanologist (jap-ạ-nol'ō-jist), *n.* [*Japanology* + *-ist*.] A student of Japanology.

Japanology (jap-ạ-nol'ō-ji), *n.* [*Japan* + *-o-logy*.] The scientific study of the people of Japan, their language, literature, history, customs, art, etc.

Japhetite, Japhethite (jā'fe-tīt, -thīt), *n.* A descendant of Japheth, the son of Noah.

japish (jā'pish), *a.* [*jape* + *-ish*[1].] Like a buffoon or jester; inclined to jokes or tricks.

Japonian† (ja-pō'ni-ạn), *n.* [NL. *Japonia*, Japan, + *-an*.] A Japanese. *Hakluyt*.

japonic[1] (ja-pon'ik), *a.* [NL. *Japonicus*, ⟨ *Japonia*, Japan.] Pertaining or relating to Japan or to Japanese customs.

japonic[2] (ja-pon'ik), *a.* [*japonica*, *n.*, 3.] Noting an acid, a black compound, $C_{12}H_5O_5$ (?), formed by the oxidation of catechin.—**Japonic earth.** See ★*earth*[1].

japonica, *n.* **3.** Same as *terra Japonica* (catechu).

Japonism, *n.* [F. *Japonisme*, ⟨ *Japon*, Japan, + *-isme*, E. *-ism*.] Same as *Japanism*.

Japygidæ (ja-pij'i-dē), *n. pl.* [NL., ⟨ *Japyx* (*Japyg-*) + *-idæ*.] A curious family of thysanurous insects of the suborder *Cinura*, having the mouth-parts free and the anal end of the body provided with a pair of forceps. They are slender in form and resemble young earwigs. They are found in moss and in shady places at the edges of woods. The type genus *Japyx* is the only one known.

Japyx (jā'piks), *n.* [NL., ⟨ Gr. Ἰάπυξ, son of the mythical Dædalus, and founder of Japygia (Italy).] The typical and sole genus of the thysanurous family *Japygidæ*.

jaquemase (jak'wē-mās), *n.* A reducing ferment obtained from *Eurotium Orizæ*.

jar[1], *v. t.* **4.** To drill by impact or percussion; use an impact drill or drill-jar upon.—**5.** To shock or surprise (one) with some sudden or extraordinary remark, statement, or fact. [Humorous.]

jar[1] *n.* **6.** A tool, used in drilling wells in rock, consisting of two long and flat links capable of sliding the one within the other, in order that the drill-bit may be loosened on the up stroke in case it has become jammed in the lock.

jar[3], *n.*—**Graduated jar,** in *chem.*, a glass jar, usually a tall cylinder of moderate diameter, with its internal capacity and the subdivisions thereof etched upon the outside, used in measuring off definite volumes of a liquid.—**Nessler jar,** in *chem.*, a cylindrical jar of light glass with a flat bottom, usually about nine inches high and one inch in diameter, used in the determination of ammonia by means of the Nessler reagent, and in general for the comparison of two or more liquids as to the depth of color presented by them in consequence of the presence of various quantities of the same coloring-substance.—**Species jar,** a glass jar of cylindrical shape and with a wide mouth, usually made of rather light glass and furnished with a tin-plate cap or cover, used by druggists and apothecaries to hold solid materials, chiefly dried herbs, roots, etc.

jararaca (jä-rä-rä'kä), *n.* [Tupi *jararaca*, also *jiraraca*, *geraraca*, a large serpent.] A venomous snake, *Trimesurus jararaca*, which inhabits a large portion of Brazil south of the Amazon. It reaches a length of six feet and is of a gray color with darker cross-bands.

jarave (hä-rä'vä), *n.* [Tarascan.] A national dance of the Tarascan Indians in Mexico. *C. Lumholtz*, Unknown Mexico, II. 382.

jardinière, *n.* **3.** A mixture of vegetables stewed in their own sauce; also, various vegetables used together as a garnish.—**À la jardinière,** served with a few vegetables, as peas, two or three slices of carrot, etc.: said of a roast.

jarganee (jär-gä-nē'), *n.* [Origin not ascertained.] A sea-shore worm used for fish-bait.

jargonaphasia (jär″gọn-a-fā'ziä), *n.* [NL., ⟨ E. *jargon*[1] + NL. *aphasia*.] A defect of speech in which several words are run into one so as to be unintelligible. *Buck*, Med. Handbook, I. 414.

jargonesque (jär-gọ-nesk'), *a.* [*jargon*[1] + *-esque*.] Having the character of jargon. *N. E. D.*

jargonic[1] (jär-gon'ik), *a.* [*jargon*[1] + *-ic*.] Resembling a jargon; nonsensical: as, a *jargonic* phrase.

jargoning (jär'gọn-ing), *n.* A confused chattering or gabbling; a twittering of birds.

jargonium (jär-gō'ni-um), *n.* [NL.: see *jargon*[2].] A supposed new chemical element announced as associated with zirconium in the mineral zircon or jargon. Its existence has not been confirmed.

jargonization (jär-gọn-i-zā'shọn), *n.* [*jargonize* + *-ation*.] The using of a jargon; the act of turning into a jargon.

jarosite, *n.* Varieties of this mineral in which the potassium is replaced by sodium and by lead have been called *natrojarosite* and *plumbojarosite* respectively.

jarosse (zha-ros'), *n.* [F.] Same as *chickling vetch* (which see, under *vetch*).

jaroul, *n.* See *jarool*.

jarul, *n.* See *jarool*.

jarvey (jär'vi), *v. i.*; pret. and pp. *jarvied*, ppr. *jarveying*. [*jarvey*, *n.*] To drive along, like a hackney-coachman or jarvey.

jarvil (jär'vil), *n.* Same as *chervil*.

jas (zhäs), *n.* [F. *jas*, in sense defined, also the stock of an anchor, ⟨ Pr. *jas*, *jatz*, lit. a layer or bed, ⟨ *jazer*, lie, ⟨ L. *jacere*, lie.] A storage reservoir or basin constructed on the coast of a tidal sea, into which sea-water flows at high tide and is concentrated by evaporation to furnish the feed for the vats or basins in which salt is made. *Encyc. Brit.*, XXI. 229.

jasmine, *n.*—**American jasmine.** (*a*) In the West Indies, the cypress-vine, *Quamoclit Quamoclit*. Also called *Indian* and *Barbados pink*. (*b*) The red morning-glory, *Quamoclit coccinea*.—**Bastard jasmine.** (*b*) The matrimony vine, *Lycium vulgare*.—**Crape jasmine,** *Tabernæmontana coronaria*, a tender, ornamental shrub of the dogbane family, with glossy green leaves and fragrant, white flowers 1–2 inches across, clustered or single in the forks of the branches: so called from the crimped margins of the petals. Also called *East Indian rose-bay* and *Adam's apple*.—**Native jasmine,** in Australia, a small erect shrub, *Ricinocarpos pinifolius*, of the spurge family. Its seeds resemble those of the castor-oil plant and yield an oil.—**Red jasmine.** (*b*) The cypress-vine, *Quamoclit Quamoclit*.—**Rock-jasmine.** See ★*Androsace*.—**Wild jasmine.** (*b*) In the Bahamas, a naturalized shrubby plant, *Clerodendrum fragrans*. See *Clerodendrum* and ★*glory-tree*. (*c*) In the West Indies, (1) *Faramea odoratissima*, a shrub or small tree of the madder family, one of the plants called *wild coffee*; (2) species of the genus *Ixora* (which see).

Crape Jasmine
(*Tabernæmontana coronaria*).
(One third natural size.)

jasmine-wood (jas'min-wụd), *n.* *Diporidium Mauritianum*, a tree of the family *Ochnaceæ*, occurring on the Island of Mauritius; or its wood. So called from the fragrance of its showy white flowers.

jasmone (jas'mōn), *n.* [*jasm(ine)* + *-one*.] A ketone, $C_{11}H_{16}O$, found in jasmine-oil. It boils at 258° C. and has, when diluted, an odor like that of jasmine.

jasper (jas'pėr), *v. t.* [*jasper, n.*] Same as *jasperize*.

jasperoid (jas'pėr-oid), *a.* [*jasper* + *-oid.*] Same as *jaspoid*.

The Townsend ridges are described as a long narrow line of outcropping *jasperoid* rocks. *Geog. Jour.* (R. G. S.), XV. 648.

jaspilite (jas'pi-līt), *n.* [Gr. *ἴασπις*, jasper, + *λίθος*, stone.] In *petrog.*, originally an acid igneous rock more silicious than rhyolite: as now used, in the Lake Superior region, a rock consisting of bands of red chert and hematite.

jasp-opal (jasp'ō-pal), *n.* Same as *jasper-opal*.

jassid (jas'id), *n.* and *a.* **I.** *n.* An insect of the homopterous family *Jassidæ*.

II. *a.* Of or belonging to the *Jassidæ*.

jassoid (jas'oid), *a.* and *n.* **I.** *a.* Of or belonging to the homopterous superfamily *Jassoidea*.

II. *n.* One of the *Jassoidea*.

Jassoidea (ja-soi'dē-ä), *n. pl.* [NL., < *Jassus* + *-oidea.*] The homopterous family *Jassidæ* considered as a superfamily.

jatahy (zhä-tä-hē'), *n.* [Brazilian.] Same as ★*jatoba*.

jati (jä'tē), *n.* [Malay *jāti*, in *pōhon jāti*, teak-tree, and *kāyu jāti*, teak-wood.] The East Indian teak, *Tectona grandis*. See *teak* and *Tectona*.

jatoba (zhä-tō-bä'), *n.* [Brazilian.] Any one of several Brazilian species of large leguminous trees belonging to the genus *Hymenæa*, especially *H. stilbocarpa*. They yield resins similar to that obtained from the more northern *H. Courbaril*. See *Hymenæa*. Called also *jatahy*.

jatropha-oil (jat'rō-fä-oil), *n.* An oil, resembling castor-oil in composition and properties, obtained from the seed of *Jatropha Curcas* (*Curcas purgans*) and *J. multifida*. Also known as *curcas-oil* and *purgueira-oil*.

jatrophic (ja-trof'ik), *a.* [*Jatroph(a)* + *-ic.*] Relating to the plant genus *Jatropha*, especially to *J. Curcas* or to its medicinal seeds.

jaun[2] (jân), *n.* [Beng. *jān* (pronounced *jān*), Hind. *yān*, a vehicle, < Skt. *yāna*, a vehicle, < √*yā*, a going, walking, way, course, go, move, walk.] A small palanquin-carriage such as is used in Calcutta by business men in going to their offices.

My work . . . was sedentary, save for an occasional run in an office *jaun* to the Customhouse or elsewhere. *E. Braddon*, in Blackwood's Mag., Oct., 1893, p. 499.

jaundice, *n.* **3.** Same as ★*grasserie*.—**Catarrhal jaundice**, jaundice occurring as a symptom of catarrhal inflammation of the bile-ducts. **Hematogenous jaundice**, a yellowish coloration of the skin due to blood-changes and not to the presence of bile-pigments in the tissues. **Hepatogenous jaundice**, jaundice resulting from disease of the liver. **Malignant jaundice**, acute yellow atrophy of the liver.—**Obstructive jaundice**, jaundice due to impediment to the flow of bile in the ducts. **Simple jaundice.** Same as *catarrhal* ★*jaundice*.

jaundice-root (jän'dis-röt), *n.* The orange-root, *Hydrastis Canadensis*.

jaune antique (zhōn on-tēk'). [F., 'old yellow.'] A variegated and crystalline terra-cotta, seen in vases. The colors are black and rich saffron. *Meteyard*, Hand-book of Wedgwood Ware, Glossary.

jaune brilliant (zhōn brē-yon'). [F., 'brilliant yellow.'] A trade-name for cadmium sulphid used as a pigment. Also known as *cadmium yellow*.

jaune clair (zhōn klãr'). [F., 'clear yellow.'] A clear yellow or canary-color seen in Sèvres porcelain.

Jav. An abbreviation of *Javanese*.

Java wax. Same as *fig* ★*wax*.

javali (hä-vä-lē'), *n.* [Also *javari*; S. Amer.] The South American peccary, *Dicotyles labiatus*.

Javan, *a.* **II.** *n.* A native of Java.

javanine (jav'a-nin), *n.* [NL. *javan(ica)* (see def.) + *-ine*[2].] A colorless alkaloid contained in the bark of *Cinchona Calisaya javanica*. It crystallizes in rhombic plates.

javelin-fish (jav'lin-fish), *n.* A fish, *Pomadasys hasta*, of the family *Hæmulidæ*, found along the East African coast and through all the Indian seas.

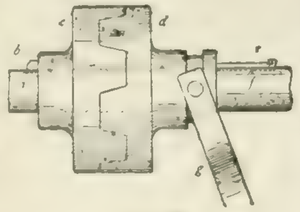
javilla (hä-vē'lyä), *n.* [Another spelling of Sp. *habilla*.] In Panama, same as ★*habilla*, 1.

jaw[1], *n.*—**Big jaw** or **lump jaw**, actinomycosis in cattle. *Buck*, Med. Handbook, I. 97.—**Phossy jaw**, necrosis of the jaw in phosphorous poisoning.

A case of death from phosphorus poisoning that occurred at the Poplar and Stepney Sick Asylum, due to a recent attack of "*phossy jaw*." *Lancet*, June 18, 1904, p. 1763.

jaw-chuck, *n.*—**Independent jaw-chuck**, a chuck in which the jaws for holding the work do not move radially together as in the self-centering chuck, but are movable and adjustable independently. **Inside jaw-chuck**, a chuck in which the jaws for holding the work move from within radially outward to grip hollow cylinders on their inner surfaces.

jaw-clutch (jâ'kluch), *n.* A device for joining the end of one shaft to the end of another. It consists of a pair of collars one of which is keyed to the end of each shaft. One of the collars is free to slide axially on its shaft, the other being fixed. When the movable piece slides toward the other, tongues on one enter jaws on the other and so unite the two shafts.



Jaw-clutch.
a, shaft carrying fixed collar *c*; *b*, key; *d*, collar moving axially on shaft *f*, prevented from rotating by feather *e*; *f*, shaft to be driven by the engagement of the clutch; *g*, arm for throwing clutch in or out.

jaw-fish (jâ'fish), *n.* A name of fishes of the family *Opisthognathidæ*, small fishes found near the rocky bottoms of tropical seas and remarkable for the great length of the upper jaw.

Jaw-fish (*Opisthognathus macrognathus*).
From Bulletin 47, U. S. Nat. Museum.

jaw-hole, *n.* **2.** An opening in the ground; the entrance to a cave or cavern. *Whitby Glossary*. [Prov. Eng. and Sc.]

jawing-tacks (jâ'ing-taks), *n. pl.* Same as *jaw-tackle*.

jaw-me-down (jâ'mē-doun″), *n.* A domineering arguer. [Naut. slang.]

jaw-twister (jâ'twis″tėr), *n.* A jaw-breaker.

jay[2], *n.* **1.** In England the name is locally given to birds that are not jays at all, including the Cornish chough and the mistlethrush, *Turdus viscivorus*.

4. In angling, a variety of artificial fly dressed with blue jay feathers.—**California jay**, *Aphelocoma californica*, a species much like the Florida jay, but lighter below.—**Siberian jay**, *Perisoreus infaustus*, a bird allied to the Canada jay or whisky-jack of North America, and the only jay belonging to a genus common to the Old and New Worlds.

jay-bird, *n.* **2.** A stupid person; a country simpleton; a hay-seed: same as *jay*[2], 3 (*b*). [Slang.]

From the land of logs and peaches
Came a callow *jay-bird* dressed
In homespun coat and breeches
And a gaudy velvet vest.
Eugene Field, in Chicago Daily News, July, 1886.

jayhawk, *v. t.* **2.** To strip one 4-foot length of bark from (a tan-bark oak), leaving the tree standing.

J. C. An abbreviation (*a*) of *Jesus Christ*; (*b*) of *Julius Cæsar*; (*c*) [*l. c.*] of the Latin *jurisconsultus*, jurisconsult; (*d*) of *justice clerk*.

J. C. D. An abbreviation of the Latin *Juris Civilis Doctor*, Doctor of Civil Law.

J. D. An abbreviation (*a*) of *Junior Deacon*; (*b*) of the Latin *Juris Doctor*, Doctor of Law.

jeanette-twill (jā-net'twil″), *n.* Same as *jeanette*.

jean-twill (jān'twil), *n.* Same as *jean*, 2.

jebaru (zhā-bä-rö'), *n.* [Brazilian.] *Eperua purpurea*, a large leguminous tree of northern Brazil, congeneric with the wallaba of Guiana. The natives use the tough bark in the manufacture of certain musical instruments.

Jebb process. See ★*process*.

jebel (jeb'el), *n.* [A European rendition of Ar. *jabal*, a mountain.] Mountain; mount: a term occurring in some geographic names of Arabic origin. It is concealed in *Gibraltar*.

jecolein (jek-ō-lē'in), *n.* [L. *jec(ur)*, liver, + *oleum*, oil, + *-in*[2].] One of the fatty principles contained in cod-liver oil.

jecorin (jek'ō-rin), *n.* [L. *jecur* (*jecor-*), liver, + *-in*[2].] An organic substance possibly derived from protagon, containing both sulphur and phosphorus. It is found in nerve-tissue, in the liver, in muscle-tissue, and in the blood. It reduces cupric oxid in alkaline solution.

jeel[2] (jēl), *n.* [Manx *jeeyl, jeeill, jeell*, Ir. *díoghbhail*, Gael. *dìobhail*, damage, loss, *dígbail*, diminution, < Ir. Gael. *di-* neg. + *gabhail*, taking (see *gavel*[1]).] Damage; trouble.

jeer-bitts (jēr'bits), *n. pl.* The bitts to which the jeers are made fast. See *jeer*[2].

jeer-block (jēr'blok), *n.* A block which forms part of the jeer-fall. See *jeer*[2] and ★*jeer-fall*.

jeer-capstan (jēr'kap″stan), *n.* A capstan placed amidships between the foremast and mainmast for general use, as for stretching rope, etc.

jeer-fall (jēr'fâl), *n.* A rope rove through the jeer-blocks which together form the jeers.

jeetee, *n.* Same as *jetee*.

jeffing (jef'ing), *n.* [*jeff*[1], *v.*] A game of chance played by type-setters. See *jeff*[1], *v.*

Jeffreysia (je-frē'zi-ä), *n.* [NL. (Forbes, 1850).] The typical genus of the family *Jeffreysiidæ*.

Jeffreysiidæ (jef-rē-sī'i-dē), *n. pl.* [NL., < *Jeffreysia* + *-idæ.*] A family of tænioglossate gastropods, of the order *Prosobranchiata*. They have the mantle with two pointed ciliated appendages in front, the tentacles also ciliated, eyes sessile and situated far behind the base of the tentacles, marginal teeth sometimes absent, and the shell small, thin, and pellucid. The family contains the genera *Jeffreysia* and *Dardania*, marine forms living on algæ.

jehad (jē-häd'), *n.* See *jihad*.

jeju (zhā-zhö'), *n.* [Tupi (southern Brazil) *jejú* (Martius, 1863).] A food-fish belonging to the family *Characinidæ*, found in the rivers of South America.

The "*jeju*" and agulha, which are valued as food fishes. *Rep. U. S. Nat. Mus.*, 1901, p. 199.

jejunectomy (jē-jö-nek'tō-mi), *n.* [NL. *jejunum* + Gr. *ἐκτομή*, excision.] Excision of a portion of the jejunum.

jejunitis (jē-jö-nī'tis), *n.* [NL., < *jejunum* + *-itis.*] Inflammation of the jejunum.

jejunostomy (jē-jö-nos'tō-mi), *n.* [NL. *jejunum* + Gr. *στόμα*, mouth.] The establishment by a surgical operation of an opening from the exterior of the body into the jejunum.

jelab, jellab (je-läb'), *n.* [Ar. *jallabīya*, a long blouse, connected with *jallābī*, imported, *jalba*, a foreign country, < *jalaba*, import.] A cloak with a hood worn by men in Morocco. Also *jelib*.

jelba (jel'bä), *n.* [Appar. < Ar. *jalba*, foreign country: see ★*jelab*.] A large coasting-vessel of the Red Sea.

jelloid (jel'oid), *a.* and *n.* [*jell(y)* + *-oid.*] **I.** *a.* Having the property of jelly; similar to a jelly.

II. *n.* A medicated tablet or lozenge of gelatin.

jelly[1], *n.* **4.** A jellyfish, as *Aurelia* or *Cyanea*.—**Mineral jelly**, a soft semisolid product from petroleum, the best free from crystalline paraffin, extensively used as a basis for salves and ointments. It is prepared by different processes, and sold under various trade-names, as *vaseline, cosmoline*, etc. Also called *petroleum jelly*.—**Royal jelly**, the especial food with which queen larvæ are fed by the worker honey-bees.

jelly[1] (jel'i), *v.* **I.** *trans.* To make a jelly of; reduce to the consistence of jelly.

II. *intrans.* To solidify or congeal; become a jelly.

jelly-leaf (jel'i-lēf), *n.* The Queensland hemp. See *Sida*, 1.

jelly-nut (jel'i-nut), *n.* An unripe cocoanut in which the kernel is still so soft that it can be scraped out in the form of a custard or jelly. See *cocoa*[1].

jelly-powder (jel'i-pou″dėr), *n.* **1.** A form of gelatin dynamite.—**2.** A powdered preparation of gelatin, of various flavors, used in making puddings, etc.

jelly-press (jel'i-pres), *n.* A device, worked by hand, which presses the juice from fruits in jelly-making.

jelous, jelousy. Simplified spellings of *jealous, jealousy*.

Jemmy Donnelly (jem'i don'el-i). Any one of three large, valuable timber-trees of Queensland, *Myrsine variabilis, Euroschinus falcatus* of the cashew family, and *Eucalyptus resinifera*. The last is also called *Jimmy Low* and *forest mahogany*. See *ironbark-tree*. [Colloq., Australia.]

Jemmy Jessamy (jem″i jes'a-mi). A dandy; a fop. Also used attributively. See *Jessamy, n.*

Jena glass. See ★*glass*.

je-ne-sais-quoi (zhė-n(e)-sā-kwo'), *n.* [F., 'I know not what.'] A something one can not describe; usually, something too attractive to be expressed.

jeniguana (hā-nē'gwä-nä), *n.* [Cuban Sp. *heniguana*, from a native West Indian name (Pichardo).] A hæmuloid fish, *Hæmulon melanurum*, reaching a length of about one foot, found in the West Indies and southward.

jeniguano (hä-nē′gwä-nō), *n.* [Cuban Sp.

Jeniguano (*Bathystoma aurolineatum*). (From Bulletin 47, U. S. Nat. Museum.)

heniguano (Pichardo).] A West Indian fish, *Bathystoma aurolineatum*.

Jenkins (jeng′kinz), *n.* [A common English surname used (like *Brown*, *Jones*, or *Robinson*) as a generic name for an otherwise anonymous person.] The imaginary name of a reporter of "society news" and social gossip.

Jenkinsia (jeng-kin-zi-ä), *n.* [NL., named after Oliver P. *Jenkins*, an American ichthyologist.] A genus of herrings found on both southern coasts of North America.

jenkinsite (jeng′kinz-īt), *n.* [Named after J. *Jenkins* of Monroe, New York.] A ferriferous serpentine, near hydrophite, occurring as an incrustation on magnetite in Orange county, New York.

Jennerian (je-nē′ri-an), *a.* Relating to Edward Jenner (1749–1823), the discoverer of the protective value of vaccination, or to vaccination or other similar methods for the prevention of infectious diseases.

Jennerization (jen″e-ri-zā′shon), *n.* [*Jennerize* + *-ation.*] Inoculation for the prevention of an infectious disease; vaccination; recently, the inoculation of cattle with tubercle bacilli from the human being, for the purpose of inducing a modified form of tuberculosis as a protection against the more violent form peculiar to cattle.

Jennerize (jen′e-rīz), *v. t.*; pret. and pp. *Jennerized*, ppr. *Jennerizing*. [*Jenner* (see ★*Jennerian*) + *-ize.*] To vaccinate or inoculate, in the manner practised or initiated by Edward Jenner. See ★*Jennerization*.

jennet[1], *n.* **2.** The female ass; a jenny. *Tegetmeier and Southerland*, Asses and Mule Breeding, p. 146.

jenny, *n.* **5.** A locomotive-crane; a self-propelling crane used for carrying heavy weights.—**6.** Compasses with one end bent inward.—**7.** A stroke in English billiards, originally a losing hazard made from balk into a middle pocket, the object-ball being near the pocket, but below it: now applied to any acute-angled pocketing placed from balk to a ball outside, and thence into any of the four pockets beyond balk. **Silver jenny**, a common name of *Eucinostomus gula*, a fish of the family *Gerridæ*, found from Carolina to Brazil.

jentacular (jen-tak′ū-lär), *a.* [NL. **jentacularis*, < L. *jentaculum*, an early breakfast, < *jentare*, breakfast: see ★*jentation*.] Relating to breakfast.

jentation† (jen-tā′shon), *n.* [LL. *jentatio(n-)*, < *jentare*, breakfast, appar. contracted from **jejunitare*, < *jejunus*, fasting. Cf. *dine*, *dinner*.] Breakfast.

jeopardy (jep′är-di), *v. t.*; pret. and pp. *jeopardied*, ppr. *jeopardying*. [*jeopardy*, *n.*] To jeopardize: as, he *jeopardied* his fame.

jepard, jepardy. Simplified spellings of *jeopard*, *jeopardy*.

jequitiba (zhä-kē-tē-bä′), *n.* [Brazilian.] Any one of several species of large Brazilian trees belonging to the genus *Cariniana*, of the family *Lecythidaceæ*; especially *C. Brasiliensis* and *C. excelsa*. They yield an astringent bark useful in bowel complaints, and a highly prized hard, tough, durable wood.

Jerahmeelite (je-rä′mē-el-īt), *n.* [*Jerahmeel* + *-ite*[2].] One of the descendants of Jerahmeel, the brother of Caleb (1 Chron. ii. 9), living on the southern border of Judah: probably an Amalekite or Edomite tribe which afterward was absorbed by Judah.

jerboa-kangaroo (jėr′bō-ä-kang-ga-rō″), *n.* One of the bush-tailed rat-kangaroos, *Bettongia cuniculus*, found in Tasmania.

jerboa-mouse, *n.* **2.** The North American jumping-mouse, *Zapus hudsonicus*.

jerboa-rat (jėr′bō-ä-rat″), *n.* A common name for the small rodents of the genus *Hapalotis*, found in Tasmania and the desert regions of Australia. The best-known species is *H. mitchelli*.

jerfar (jėr′fär), *n.* A fish, *Gymnarchus niloticus*, found in the Nile, the only representative of its family, remarkable for the cellular structure of its air-bladder, which resembles that of certain ganoid fishes and probably functions similarly as an imperfect lung.

jerib (je-rēb′), *n.* [Pers. Hind. Ar. *jarīb*.] A Persian measure of surface equal, in various localities, to from 1,000 to 1,066 square zar or from 1,294 to 1,379 square yards.

jerk[1], *n.* **6.** In *golf*, a stroke in which the club-head, after striking the ball, digs into the ground.—**7**†. An abrupt witticism; a sudden sally of wit.—**8.** *pl.* Chorea or tic.

jerk-finger (jėrk′fing″gėr), *n.* Same as *trigger-finger*. *Buck*, Med. Handbook, IV. 526.

jerm (jėrm), *n.* [Also *germe*; F. *djerme*, It. *germa*, < Ar. *jarm*.] A trading-vessel in the Levant; a vessel rigged with large lateen sails and used on the Egyptian coast for carrying passengers and freight.

jerrawicke (jer′a-wik), *n.* [Origin obscure.] A name formerly given in Australia to beer or ale made in that country. *E. E. Morris*, Austral English.

jerry, *n.* **2.** A machine for shearing fabrics.—**3.** The jocular uproar or noise made in a printing-house by compositors on any extraordinary occasion. [Printers' slang.]

II. *a.* Defectively or flimsily constructed; jerry-built: as, a *jerry* house; a *jerry* ship.

jerryism (jer′i-izm), *n.* Building in an unsubstantial, flimsy manner; jerry-building.

Jerry Sneak (jer′i snēk′). [*Jerry Sneak*, the cowardly henpecked 'Mayor of Garratt,' in Foote's play of that name.] A henpecked, mean, sneaking fellow.

jersey, *n.* **3.** [*cap.*] A celebrated breed of dairy cattle which originated in the island of Jersey, in the English channel, and is noted for the yield of milk. Jerseys are the smallest of dairy cattle, with rounded bodies, slender, rather short

Jersey Bull.

Jersey Cow.

legs, small, broad head, and small, waxy horns, often crumpled. The color is variable, preferably fawn with dark legs; but there are pure-bred animals of various shades of yellow, brown, tan, mouse-color, light red, and even black.—**Blue jersey**, a sailor.

jersey-blue (jėr′zi-blō′), *n.* An American breed of large-sized fowls which resemble the langshan, but are of a bluish color, with the hackle- and sickle-feathers nearly black.

Jerseyman (jėr′zi-man), *n.*; pl. *Jerseymen* (-men). An inhabitant of the State of New Jersey.

Jerusalem chamber. See ★*chamber*.—**Jerusalem corn.** See ★*Kaffir-corn*.

jervic (jėr′vik), *a.* [*jerv(ine)* + *-ic.*] Same as *chelidonic*.

jeso (jē′sō), *n.* [Sp. *yeso* = It. *gesso*, < L. *gypsum*, gypsum.] In *petrog.*, a bed of decomposed gypsum.

jessakeed (jes′a-kēd), *n.* [Ojibwa *jessakkid*.] A seer and prophet whose functions are those of a shaman: used to designate a particular class of shamans of the Ojibwa.

The birch-bark records of the society, and the mnemonic songs on birch-bark, employed by the Midé priests, as well as those of the *Jessakkid* and the Wabéno, which represent two other grades of Shamans. *Smithsonian Rep.*, 1890, p. 48.

jessamin, *n.* A simplified spelling of *jessamine*.

jestful (jest′fûl), *a.* [*jest*[1] + *-ful.*] Jesting; joking; given to jesting.

Jesuit, *n.* **Jesuits' bark.** (*b*) The high-water shrub, *Iva frutescens*.

Jesuitize (jez′ū-it-īz), *v.*; pret. and pp. *Jesuitized*, ppr. *Jesuitizing*. [*Jesuit* + *-ize.*] **I.** *trans.* To Jesuit.

II. *intrans.* To speak or act as a Jesuit.

Jet ware. See ★*ware*[2].

jet-black, *a.* **II.** *n.* A deep black color; specifically, an acid coal-tar color of the disazo type, derived from disulpho-azo-benzene-alpha-naphthylamine. It dyes wool a deep bluish black in a mildly acid or neutral bath. —**Diamine jet-black CR, OO, RB,** and **SS**, direct cotton coal-tar colors. They dye unmordanted cotton a jet-black in a salt bath.

jet-burner (jet′bėr″nėr), *n.* A hollow iron or steel casting pierced on its upper surface with a number of small holes. A mixture of air and vapor comes through these and forms jets of combustible vapor or gas, which, meeting additional air from tubes in the center of the groups of small holes, gives complete combustion and a blue flame.

jet-condenser (jet′kon-den″sėr), *n.* An apparatus for condensing steam by injecting into it a jet of cool water. This can be done in a vessel or chamber or in a pipe. The injected water mixes with the steam, and no attempt is made to keep them apart as in the surface-condenser.

jeterus, *n.* A spurious word, due to a misreading or typographical error for *icterus*, as used in botany. The mistake was made by Bischoff and copied by Lindley and others. See *icterus*, 2.

jet-pile (jet′pīl), *n.* A wooden or iron pile that can be set in position by means of a jet of water: so named to distinguish it from one driven into place by means of a pile-driver. The pile to be set in sand, either above or below the surface of the water, is placed upright, with the point resting on the sand. A length of gas-pipe is placed close beside the pile, the upper end being connected to a hose. When a powerful stream of water is forced through the pipe, the jet of water escaping at the lower end stirs and loosens the sand, and the pile, no longer supported by solid sand, sinks slowly downward by its own weight, the pipe sinking at the same time. When the pile is deep enough, the stream is cut off, and the sand compacts around the pile, holding it firmly in place. A less powerful jet loosens the pipe, and it can be withdrawn and used again. Iron piles are sunk by forcing the water through the hollow pile, the jet escaping from the point or toe of the pile. This process of pile-sinking is called *jet pile-driving*.

jet-propeller (jet′prō-pel″ėr), *n.* A device on an air-ship or a vessel for throwing a jet of air or water in a direction contrary to that in which it is desired to propel the vessel. The fluid is taken in at the forward end of the vessel and thrown out at the other end, the reactive energy of the jet being thus utilized to drive the vessel ahead.

jet-propulsion (jet′prō-pul″shon), *n.* The act or process of propelling a vessel or an air-ship by the reaction of a jet of water or air which is set in motion by machinery contained in the vessel.

jet-pump, *n.* **2.** Same as *filter-pump*.

jet-slug (jet′slug), *n.* A kind of slug.

jet-valve (jet′valv), *n.* **1.** A starting-valve in an injector or inspirator.—**2.** The valve controlling the water-jet in a jet-condenser.

jeu de règle (zhė de rā′gl). [F., 'play of rule.'] In *écarté*, a hand on which it is right to stand, or play without proposing; also, one with which it is right to refuse, or play without giving cards.

jew-balance (jö′bal″ans), *n.* The name given by sailors in the Mediterranean to the hammer-headed shark.

jewed (jöd), *a.* Having a jewing, or jew-wattle, at the base of the lower mandible, as some breeds of domesticated pigeons.

jewel-cup (jö′el-kup), *n.* The agate fixed in the center or the compass-card. It has a depression or socket which rests upon the upright pin in the center of the compass-bowl and on which the card revolves.

Jewelers' gold, grain. See ★*gold*, ★*grain*[1].—**Jewelers' lathe, vise.** See ★*lathe*[1], ★*vise*[1].

jewel-house, *n.* **2**†. A house or place in which treasures or jewels are kept; hence, a treasury. —**Master of the jewel-house**, an official who had charge of all the plate used for the table of the king or of a great

noble; specifically, one who had charge of all plate and jewels in the Tower of London. *Phillips*, 1706.

Thomas Cromwell;
A man in much esteem with the king, and truly
A worthy friend. The king has made him *master*
O' the jewel house,
And one, already, of the privy council.
Shak., Hen. VIII., iv. 1.

jewely, *a.* 2. Covered or adorned with jewels.

jewfish, *n.* (*b*) In New South Wales, a name of two or more species, all fishes of large size, as *Sciæna antarctica* and *Glaucosoma hebraicum*. *Sciæna antarctica* is the kingfish of the Melbourne market. *Sciæna* is called dewfish in Brisbane. It belongs to the family *Sciænidæ*. *E. E. Morris*, Austral English.

jewhood (jö′hud), *n.* Judaism; the state or condition of being a Jew. *Carlyle.*

Jewish fasts, festivals. See ★*fast*[3], ★*festival.*

Jewism, *n.* 2. A characteristic of the Jews or of their method of speech; a Jewish idiom.

jew-lizard (jö′liz ärd), *n.* A large lizard, *Amphibolurus barbatus*, of the family *Agamidæ*. It is found in Australia, where it is known also as the *bearded lizard* from the frill of spines beneath the throat.

jew-monkey (jö′mung ki), *n.* A name for two very different species of monkey, one, *Pithecia chiropotes*, from northern South America, and the common macaque, *Macacus cynomulgus*, of southern Asia: supposed to be given on account of the beard.

Jews'-stone, *n.* 3. Crystallized iron pyrites or pyrite, early used as a gem.

jew-wattle (jö′wot″l), *n.* Same as *jewing.*

The next important point is the beak wattle, which should appear (in the Dragoon) on the upper mandible alone, lower or *jew wattle* being a fault. *Book of Pigeons.*

jezail (je-zäl′, or -zäl′), *n.* [Also *jizail, juzail*; < Pers. *jazā'il.*] A long and heavy musket fired from a rest, used by Asiatic tribes. It is of the same character as the jingal.

All night the cressets glimmered pale
On Ulwar sabre and Tonk *jezail*,
Mewar headstall and Marwar mail,
That clinked in the palace yard.
R. Kipling, The Last Suttee, st. 2.

Nublee Baksh Punjabi Jat found a hide-bound flail,
Chimbu Singh from Bikaneer oiled his Tonk *jezail*.
R. Kipling, What Happened, st. 8.

Jezebelian (jez-e-bel′ian), *a.* Having the character of a Jezebel; impudent; wicked.

Jezebelish (jez′e-bel-ish), *a.* Same as ★*Jezebelian.*

jeziah (jez′yä), *n.* [Pers. Ar. *jizyah.*] A poll-tax imposed by Mohammedan law on non-Mohammedan subjects; specifically, that exacted by the Mogul emperors in India. *N. E. D.*

J. G. W. An abbreviation of *Junior Grand Warden.*

jharal (jä′ral), *n.* [E. Ind.] The East Indian thar, *Hemitragus jemlaicus*, one of the wild goats.

jhobu (jō′bö), *n.* [A Tibetan name.] A small breed of cattle, used as beasts of burden in Tibet: a local name adopted by various writers.

A cross-breed of horned cattle called *jhobu*.
Geog. Jour. (R. G. S.), XV. 153.

jhow (jou), *n.* [Anglo-Ind., < Hindi *jhau*, < Skt. *jhawaka.*] The Indian tamarisk, *Tamarix Indica*, a shrub or small tree found throughout India in the marshes of rivers and along the sea-coast. Its wood is used principally as fuel and the smaller twigs are used for thatching and basketry.

JHVH. See *Jehovah.*

jib[1], *n.* 2. The boom of a derrick; the inclined strut in a derrick, which can be swung in a vertical as well as a horizontal plane.—**Flying-jib halyards.** See ★*halyard.*—**Jib-and-staysail-jack,** a sailors' name for a nervous, fussy officer who keeps the watch unnecessarily on the move trimming and making and shortening sail. **Up jib!** (*naut.*), a command to start off.

As soon as I told him that, he *up jib* and went off.
Dialect Notes, II. vi.

jibaro (hē′bä-rō), *n.* [Also *gibaro*; W. Ind. Sp. *jíbaro*, rustic, savage, wild: from an aboriginal word; cf. Taino *zibao*, mountain region.] One of the poorer class of native peasantry in Porto Rico. *F. A. Ober*, Our West Indian Neighbors, p. 231.

jibbah (jib′ä), *n.* Same as *jubbah.*

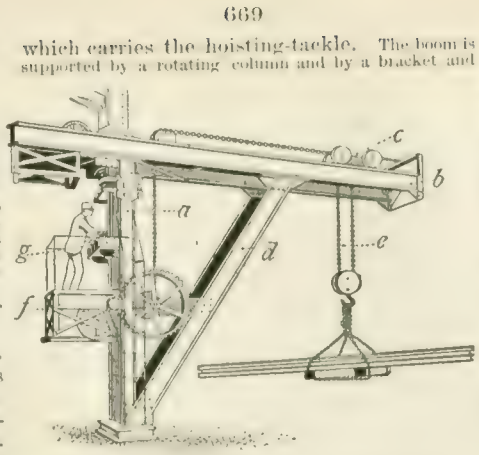
jibber[2] (jib′ėr), *v. i.* See *gibber*[1].

jibbong, *n.* Same as ★*geebung.*

jib-boom, *n.*—**Flying-jib boom,** the light spar that rests on the jib-boom and that is rigged out ahead of the latter. **Jib-boom guys.** See ★*guy*[1].

jibby-horse (jib′i-hôrs), *n.* A showman's horse covered with gaudy trappings.

jib-crane (jib′krān), *n.* A crane having a horizontal boom on which travels a trolley which carries the hoisting-tackle. The boom is supported by a rotating column and by a bracket and



Jib-crane.

a, mast pivoted below and above; *b*, jib or boom supporting trolley, *c*, trolley traversing jib; *d*, strut; *e*, hoisting-chain and block; *f*, motor; *g*, controller for handling hoist, traverse of trolley, and wing-gear of mast.

counterweights, or is pivoted to a fixed column. Many types are in use, operated by hand or by electric or pneumatic motors.

jib-foresail (jib′fōr″sāl), *n.* The first head-sail forward of the foremast on a fore-and-aft vessel, which sets on the forestay.

jib-headed (jib′hed″ed), *a.* Having, as a sail, its head shaped like that of a jib, namely, pyramidal or like an inverted V. All head-sails and gaff-topsails are jib-headed, with the exception of the English style of square-headed gaff-topsail. See ★*jackyard.*

jib-header (jib′hed″ėr), *n.* A sail whose head is shaped like the head of a jib. See ★*jib-headed.*

jib-iron (jib′ī″ėrn), *n.* *Naut.*, the thimble in the clue of a jib.

jib-machine (jib′ma-shēn″), *n.* In *mining*, a machine for cutting coal, in which the frame carrying the cutting-tools is mounted on the end of a jib, so that it may be swung around and worked at various angles.

jib-netting, *n.* **Flying-jib netting,** a safety netting rigged under the flying-jib boom.

jiboggan (ji-bog′an), *n.* [From a variant form of the Algonkin original of *toboggan.*] A large sled on runners. [New Eng.]

jiboo (ji-bö′), *v. t.* In *lumbering*, to remove a grab from (a log).

jiboya (ji-bō′yä), *n.* [Tupi (Martius).] The boa-constrictor.

jib-post (jib′pōst), *n.* The post of a jib-crane or derrick; the vertical member which supports the arm or jib of a crane or derrick.

jib-traveler (jib′trav″el-ėr), *n.* *Naut.*, the large iron ring to which the tack of a cutter-yacht's jib is made fast. This ring encircles the bowsprit, and is run in and out on that spar by means of an outhaul and an inhaul respectively. The jib is always set flying, the halyards and sheets being hooked in and unhooked as the sail is set and taken in.

jicama (hē′kä-mä), *n.* [Nahuatl *xicama*, or *xicamatl.*] In Mexico, a name applied to several edible roots, especially to that of the yam-bean, *Cacara erosa*, a leguminous plant with a sweetish, turnip-like root, which may be eaten either raw or cooked. This plant is now widely spread throughout the tropics.

jicara (hē′kä-rä), *n.* [Amer. Sp. *jícara*, < Nahuatl *xicalli*, the calabash-tree.] 1. Same as *calabash-tree.* Compare ★*higuera.*—2. Same as *calabash*, 1.—3. In *metal.*, a small bowl used in testing silver amalgam. *Phillips and Bauerman*, Elements of Metallurgy, p. 743.

jicote (hē-kō′tā), *n.* [Mex. Sp., < Nahuatl *xicotli.*] The name given in Mexico to any stinging burrowing bee.

jicotera (hē-kō-tā′rä), *n.* [Mex. Sp.] The nest of a jicote.

jiff[2] (jif), *n.* Short for *jiffy*: as, he was off in a *jiff.*

jiffle (jif′l), *v. i.*; pret. and pp. *jiffled*, ppr. *jiffling.* [Imitative variant of *shuffle.*] To shuffle with the feet. [Prov. Eng.]

jig, *n.*, 6. (*d*) An appliance used in the manufacture of articles on the interchangeable system, whereby exact uniformity of dimension is secured. The blank to be operated on is attached to the jig, and the latter compels all holes to come at determinate distances, and all profiles to measure alike when machining is completed, without calibration and measurement. (*e*) *Naut.*, a tackle made fast to one end of the throat and peak halyards so as to get an extra purchase after the regular hauling part has been belayed. **Collom jig,** in *mining*, an ore-jig in which the plungers are depressed by the blows of a heavy cast-iron rocker: much used in the Lake Superior copper region. **Harz jig,** in *mining*, the side-piston jig which had its development in the Harz mountains of Germany. **Krom jig,** in *mining*, an air-jig in which the separation of minerals of different specific gravity is effected by pulsating blasts of air.

jig, *v. t.* **To jig up** (*naut.*), to set up with the jig: said of the throat and peak of a sail.

jiga (je′gä), *n.* [Given as from "Chinese *jiga*, mimic me."] The name in China for any wasp which stores up caterpillars as food for its young. *Cambridge Nat. Hist.*, VI. 92.

jig-backed (jig′bakt), *a.* Having a crooked or twisted back.

It was discovered that, from a wrench, she [a mare] was also *jig-backed.* *Sporting Mag.*, VIII. 262. *N. E. D.*

jig-brow (jig′brou), *n.* In *mining*, an underground railroad operated by gravity: same as *jig*, 6 (*b*). [Eng.]

jig-drilling (jig′dril″ing), *n.* The process of drilling holes the location of which is determined by a jig or templet. The holes may be located very accurately in this manner, and any number of pieces can be drilled with the holes in the same relative position.

jig-dyer (jig′dī″ėr), *n.* A dyeing-machine largely used for dyeing cloth a solid color in the open or full width. It consists of a dye-vat above which are two rolls upon which cloth may be wound. The cloth passes through the dye liquor back and forth from one roll to the other until the dyeing process is completed.

jig-filing (jig′fī″ling), *n.* The process of filing to a definite size or outline by the use of a jig or templet.

jigged (jigd), *a.* Made in a jig; hence, accurately made. See ★*jig*, 6 (*d*).

jigger[1], *n.* 2. (*m*) A clutch for attaching mine-cars to a haulage rope, consisting of a vertical rod with side-hooks which hold by biting the rope as the rod turns. *Barrowman*, Glossary.

7. An illicit still.—8. A leaded hook or gang of hooks used without bait for catching fish by jigging. See *jig*, 6 (*c*).—9. A machine used for dyeing cloth. See ★*jig-dyer.*—10. In *golf*, a club with an iron head, between a mashy and a mid-iron, used for approaching.—11. In *wireless teleg.*, a small transformer used for regulating and maintaining the difference of potential between the terminals of a coherer.—12. In the Royal Mint, a small weight which it is necessary, in certain cases, to add to a given number of coins to make an exact pound in weight. *W. J. Hosking*, Royal Mint. *N. E. D.*

jigger[1], *v. t.* 2. To pull (a log) by horse-power over a level place in a slide.

jigger-block (jig′ėr-blok), *n.* A block having the strap, whether of rope or metal, continued out so as to furnish a convenient means of securing it.

jiggering (jig′ėr-ing), *n.* In *ceram.*, the process of making plates and saucers, and other flat-ware, on the jigger. See *jigger*[1], 2 (*e*).

jigger-sail (jig′ėr-sāl), *n.* A sail that sets on a jigger-mast.

jigger-tackle (jig′ėr-tak″l), *n.* *Naut.*, a handy-billy used about decks; a watch-tackle.

jigging (jig′ing), *n.* The sifting, dressing, or sorting of ore by means of a jigging-machine.

jiggle, *v.* **II.** *trans.* To jerk or joggle slightly.

jiggle (jig′l), *n.* A slight joggle; a quick jiggling movement.

jig-saw (jig′sâ), *v. t.* To cut with a jig- or scroll-saw.

jiguagua (hē-gwä′gwä), *n.* [W. Ind. Sp., from an aboriginal name.] A West Indian name of *Caranx hippos*, a carangoid fish found on both coasts of tropical America.

jilt, *n.* 2. Same as *gillet.* *Scott*, Old Mortality, viii.

jim-bang (jim′bang), *n.* Same as ★*jing-bang.*

jim-binder (jim′bīn″dėr), *n.* Same as ★*binder*, 10.

jim-crow, *n.* 2. In *mining*, a crowbar having at one end a claw similar to a hammer-claw.

jimjam, *n.* 3. *pl.* Oddities; fads.

jimmy-legs (jim′i-legz), *n.* A cant name for the master-at-arms in the United States navy.

Jimmy Low (jim″i lō′). The timber-tree called forest-mahogany, *Eucalyptus resinifera.* See *Eucalyptus*, *ironbark-tree*, and ★*Jeremy Donnelly.* [Colloq., Australia.]

Jimmy Squarefoot (jim″i skwär′fut). A sailors' name for the devil; the nautical Lucifer or Satan.

jin (jin), *n.* [Perhaps another use of *gin*[2] (a machine).] A tall pole used in connection with rope and tackle to raise heavy objects.

jina (jin'ä), *n.* [Skt.] The overcomer: a Buddha, or a Jain saint.

jing (jing), *v.* [Imitative, like *ring*², *tang*, *chink*, etc.] **I.** *intrans.* To ring.

II. *trans.* To ring or jingle.

jing (jing), *n.* [*jing*, *v.*] A short, sharp ring.

jing-bang (jing'bang), *n.* [Also *jim-bang*; an invented term.] 'Shebang'; concern; thing; used only in the phrase, 'the whole *jing-bang*.' [Slang.]

jingle, *n.* **6.** A two-wheeled car (like the Irish jingle) used in some parts of Australia. *E. E. Morris*, Austral English.

jingle-bell (jing'gl-bel), *n.* In the engine-room of a steamboat, a bell hung upon a spring and controlled by a cord or wire from the pilot-house. When rung, its jingling sound signifies that all is clear or 'full speed ahead,' or, after entering a slip or dock, that the boat is fast.

jingle-jangle (jing'gl-jang″gl), *v. i.* To make a jingling sound.

jingling (jing'gling), *n.* **1.** A continued ringing; a lively noise of bells, or the like clinking.—**2.** A game in which the players are blindfolded and try to catch one, called the 'jingler,' who is not blindfolded and who jingles a bell to attract their attention and, if skilful, to divert it. Also called *jingling-match*.

jingling-match (jing'gling-mach), *n.* Same as ★*jingling*, 2.

Jingo (jing'gō), *v. t.* To force to a certain course of action by the influence of the Jingo spirit, that is, an aggressive bellicose patriotism.

Jingoist (jing'gō-ist), *n.* and *a.* **I.** *n.* Same as *Jingo*, 2.

II. *a.* Resembling or having the qualities of Jingoism.

jink² (jingk), *n.* [Imitative; cf. *jing*, *chink*, etc.] The sharp jingle of coins; hence, coin itself; chink. [Slang.]

jinker, *n.* **2.** *pl.* An Australian contrivance much used in the bush for moving heavy logs and trunks of trees. It consists of two pairs of wheels with their axletrees joined by a long beam, under which the trunks are suspended by chains. Its structure is varied in town for moving wooden houses. Called in England a *whim*. *E. E. Morris*, Austral English.

jinket (jing'ket), *v. i.* [Imitative of quick motion; cf. *jink*.] To frolic and romp; fling or dance about.

jinkle (jing'kl), *v. i.*; pret. and pp. *jinkled*, ppr. *jinkling*. [Imitative; cf. ★*jinket*.] To move with quick, nimble action; dart and swerve.

jinny, *n.* **3.** The traveler on the arm of a crane from which the bight of the chain and the hook-block of the crane depend.

jinny-road (jin'i-rōd), *n.* In *mining*, a jig; a gravity-road in a coal-mine.

jinny-spinner (jin'i-spin'ėr), *n.* A sailors' name for the cockroach found on board ships.

jinrikisha (jin-rik'i-shä), *v. i.* To go about in a jinrikisha.

jin-sen (jin-sen'), *n.* The camp fan, an old type of flat feather fan used in Japan. *C. M. Salwey*, Fans of Japan, p. 20.

jipijapa (hē-pē-hä'pä), *n.* [Yunca Indian, in Ecuador; the name of a town in Ecuador.] **1.** A kind of grass used in Ecuador for making hats.—**2.** A hat made of the jipi japa grass. These hats are not of the best grade. The name is frequently given to all the straw hats more commonly known as *Panama hats*.

Ecuador is the real home of the hats wrongly designated under the name of "panama." . . . Everywhere in Latin America the hat is known under the name of *jipijapa*, in honor of the city where its manufacture was first started. It is only in Europe or outside of the producing countries that this hat receives the name of a city which does not make it. The finest hats are made in Jipijapa and at Montecristi, in the province of Manabi, Ecuador, this industry being one of the greatest resources of the country. *Amer. Anthropologist*, Jan. March, 1901, p. 206.

jiquilite (hē kē-lē'tā), *n.* [Nahuatl *xiuhquilitl*, < *xihuitl*, turquoise, + *quilitl*, plant.] In Mexico and Central America, the indigo-plants *Indigofera Anil* and *I. tinctoria*.

jirble (jėr'bl), *v.*; pret. and pp. *jirbled*, ppr. *jirbling*. [Imitative.] **I.** *intrans.* To spill over, as liquid from an unsteady vessel, with apparently some reference to its gurgling sound: as, a *jirbling* tub.

II. *trans.* To pour out (a liquid) with an unsteady hand: as, he *jirbles* out a dram. *N. E. D.*

jirga, jirgah (jėr'gä), *n.* [Afghani?] A council of elders or head men among the Afghans.

A *jirgah* is a friendly meeting in council of the headmen of different clans for the purpose of discussing intertribal affairs. *Geog. Jour.* (R. G. S.), XII. 361.

jiudo (jō-do'), *n.* [Also *ju-do*; < Jap. *jū*, *jū*, < Chin. *jou*, *jou*, soft, + *do*, < Chin. *tao*, way.] A modern modification of ★jiu-jutsu (which see).

Some confusion has arisen over the employment of the term "*judo*." To make the matter clear I will state that *judo* is the term selected by Professor Kano as describing his system more accurately than jiu-jitsu does.

Hancock and Hancock, The Complete Kano Jiu-Jitsu, [1905, p. xi.

The art of jiu-jitsu, so C. K. Moriya, the editor of the Japanese Times, said last night by way of introduction to an exhibition of native athletes at the Columbia University gymnasium, is some 350 years old, but the more modern development of *judo* has been worked out within the last quarter-century.

N. Y. Evening Post, Feb. 8, 1906.

jiu-jitsu (jō-jit'sō), *n.* See ★*jiu-jutsu*.

jiu-jutsian (jō-jut'si-an), *n.* [Also *jiu-jitsian*; < *jiu-jutsu* + *ian*.] One who practises or teaches the Japanese art of wrestling called *jiu-jutsu*.

jiu-jutsu (jō-jut'sō), *n.* [Also, less correctly, *jiu-jitsu*; < Jap. *jiu-jutsu*, otherwise *jū-jutsz* (Hepburn), < *jiu* or *jū* (not used in Jap. alone), < Chin. *jou* (Williams), *jou* (Giles), soft, yielding, pliant, + *jutsz* (Hepburn), art, science, rules, principles, artifice, trick, < Chin. *shu* (Canton and Hakka *shut*, Wunchow *jüe*, *züe*, etc.), an art, a trick, a mystery, a precept.] The system of wrestling practised in Japan. In its latest developments it has become an elaborate system of physical training directed particularly to the practice of certain holds and 'tricks' by which an adversary may be thrown or overcome.

Associated with sword-play was an art variously known as shinobi, yawara, and *jiujutsu*, names which imply the exertion of muscular force in such a manner as to produce a maximum of effect with a minimum of effort, by directing an adversary's strength so as to become auxiliary to one's own. *Encyc. Brit.*, XXIX. 707.

jiva (jē'vä), *n.* [Skt. *jīvá*, akin to L. *vīvus*, living: see *vivid*.] In Hindu philosophy, the individual soul or principle of life.

jivan-mukti (jē'van-mōk″tē), *n.* [Skt. *jīvan-mukti*, < *jīvana*, life, + *mukti*, release, deliverance, beatitude.] In Hindu philosophy, a release from evil obtained by means of true knowledge obtained in this life.

JJ. An abbreviation of *Justices*.

jn. A contraction of *junction*.

jo³ (jō), *n.* [Jap. *jō*, < Chin. *chang*, a measure of ten Chinese feet.] A Japanese measure of length legally established as 9.94 English feet. The cloth measure of the same name is said to be a fourth part longer. *Hering*, Conversion Tables, p. 34.

joan, *n.* **2.** [*cap.*] A familiar name for a country girl.

Now can I make any *Joan* a lady.

Shak., K. John, i. 1. 184.

job², *n.*—**A put-up job,** a hoax or cheat, arranged beforehand: as, the old woman's blindness was a *put-up job* to excite pity. [Colloq.] **To do one's job** or **to do the job for,** to kill or ruin one. [Slang.]—**To put up a job on one,** to cheat or hoax by some prearranged scheme. [Colloq.]

jobbernollism† (job'ėr-nol-izm), *n.* A stupid act or speech, characteristic of a jobbernoll.

jobbing-house (job'ing-hous), *n.* A mercantile house that buys in bulk from the importer or manufacturer and sells to the retailer.

jobbing-plate (job'ing-plāt), *n.* The trade-name for gold, silver, and other metals when rolled into thin plates for jewelers' use.

jobble (job'l), *n.* A choppy sea; a jabble. See *jabble*².

job-book (job'bůk), *n.* In *job-printing*, a book in which the particulars of each job, as the charges, the number printed, size, etc., are entered for reference.

jobing (job'ing), *n.* [*job*³ + *-ing*¹.] A scolding.

job-man (job'man), *n.* A job-master. [Eng.]

job-monger (job'mung-gėr), *n.* Same as *jobber*², 5.

job-press (job'pres), *n.* A small printing-machine, usually with platen movement, constructed for the rapid printing of the small cards and pieces of paper used in mercantile work.

job-printer, *n.* Specifically—**2.** A type-setter who composes cards, circulars, posters, and commercial forms with types made for that purpose.

job-printing (job'prin-ting), *n.* The customary work of a job-printer, such as the printing of cards, handbills, bill-heads, posters, etc. The term is also applied to pamphlet-catalogues, illustrated or in colors.

Job's coffin (jōbz kof'in). A popular name for the constellation Delphinus or the Dolphin.

jobsmith (job'smith), *n.* A smith who does jobs of all kinds.

Job's-tears, *n.* **Wild Job's-tears,** the Virginia false gromwell, *Onosmodium Virginianum*, so called from the shining nutlets.

jocalia (jō-kā'li-ä), *n. pl.* [ML.: see *jocal*.] In *law*, jewels; more especially, ornaments belonging to a married woman as her separate property, which, if not in keeping with her station in life, could be seized to satisfy her debts.

joch (yōch), *n.* [G., lit. yoke: see *yoke*.] An Austrian land-measure, equal to 1,600 square klafter, or 1.42 acres.

jock¹ (jok), *n.* [*jock*¹, *v.*] An iron rod, usually pronged, which is attached to the rear end of a train of mine-cars ascending an incline, and trails behind, to stop the descent of the cars if the rope breaks. [Scotch.]

Jock², *n.* **3.** A nautical name for a Scotch seaman.

jockey, *n.* **9.** Same as ★*jockey-weight*.

Along the bar runs a rubbing "*jockey*," which is worked to and fro by the regulator lever and a counter-weight. *Elect. World and Engin.*, Dec. 19, 1903, p. 1017.

Dumb jockey, a device for breaking colts to the bit and for training them to carry the head high. It consists of an X-shaped frame, two arms of which extend down the animal's sides and are secured by girths; the upper arms have loops and buckles for receiving the reins.

jockey, *v. t.*—**To jockey a yard,** to sit on the yard of a vessel with one's legs dangling on either side.

jockey-bar (jok'i-bär), *n.* The broad, flat top bar of a kitchen-grate. [Prov. Eng.]

The table was laid with cups and saucers, the kettle was singing on the *jockey-bar*, and Auntie Nan herself, . . . was fluttering about with . . . the light gaiety of a bird. *Hall Caine*, The Manxman, ii. 1.

jockey-boot (jok'i-böt), *n.* A top-boot at one time worn by jockeys. Also called *jockey*. *N. E. D.*

jockey-cap (jok'i-kap), *n.* A cap with a long peak, worn by jockeys.

jockeyship, *n.* **3.** The practice of deceiving in horse-dealing; hence, in trade, trickery; sharp practice.

jockey-weight (jok'i-wāt), *n.* A weight which is slid along a beam in a testing- or weighing-machine, to obtain accurate adjustment, or to secure finer readings than will be given by balance-weights.

jocko, *n.* Originally adopted by Buffon as the proper common name for the chimpanzee, it has become the favorite nickname for any of the smaller monkeys and the original use of the word has been forgotten. The name is a sophistication of a West African name, Buffon's *jocko* standing for *enjocko*, and that for West African *engeco*, *ncheko*, *nshicgo*, *enchesko*, etc., a chimpanzee.

jocu (hō-kö'), *n.* [W. Ind. Sp. *jocú*, from an aboriginal name.] A local name of *Neomænis jocu*, a lutianoid fish of the West Indies.

jocundry† (jok'un-dri), *n.* [*jocund* + *-ry*.] Cheerfulness; jocularity; a jocund action.

And favour our close *Jocundrie*,
Till all thy Dues be done and nought left out.
Milton, Corrections of Comus. *N. E. D.*

joe-bush (jō'bůsh), *n.* In the Bahamas, *Jaquinia Keyensis*, a common shrub growing upon coral limestone, and also found on the Florida keys. Compare *joewood*.

joepye-weed, *n.* **Spotted joepye-weed.** Same as *spotted* ★*eye-bright*.

joey, *n.* **3.** A young kangaroo. [Australia.]

In the case of the larger kangaroos, the young, or '*Joey*,' which may be the size of a hare before it finally leaves the pouch, must be a very serious burden to the female when at speed. *Knowledge*, May, 1905, p. 106.

4. 'A hewer of wood and drawer of water.' *E. E. Morris*, Austral English. [Australia.]

joey (jō'i), *v. t.* [*joey*, *n.*, 4. Cf. *kid*⁵, *v.*, to hoax.] To insult (a person) by the cry of 'joey.' [Slang, Australia.] *E. E. Morris*, Austral English.

jog, *v. t.*—**To jog the loo,** (*naut.*) to work the pump-handles.

jog, *n.* **5.** In *mining*, a short post or piece of timber placed between two others to keep them apart; a studdle. [Eng.]

joggle, *v. t.* **3.** In *iron ship-building*, to make a joggle in (a plate or bar).

joggle, *n.* **4.** In *mech.*: (*a*) A pin or tenon projecting from a casting to hold it when set in place. (*b*) A raised rib or ridge on which rests a plummer-block or other bearing.—**5.** In *iron ship-building*, a setting back of part of a plate or of a bar to obtain a flush surface where other parts cross, or to enable it to fit around a projection, as a butt-strap.

joggling-board (jog'ling-bōrd), *n.* A plank, suspended between supports at each end, upon which one sits and 'joggles' up and down for amusement or exercise. See the extract.

A "*joggling-board*" is the latest contrivance for exercise that has made its appearance in these parts and it is liable to become the poor man's horse . . . [It is] a hardwood board some 20 feet long, with solid supports at each end that allow the board to move freely and yet keep it from becoming detached. One sits on the board, waves his arms up and down and then "joggles," the board sending him up and down as on a horse.
Kansas City Daily Star, Aug. 18, 1904.

joggling-machine (jog'ling-ma-shēn'), *n.* A power machine for making a joggled edge on a steel plate. (See ★*joggle*, *n.*, 5.) It consists of two massive rollers, one above the other, on parallel axes. Each roller has two diameters, the large part of the top roller being over the small part of the bottom roller, and *vice versa*. The rollers being suitably adjusted, the edge of the plate is passed between them, thus pressing a joggle into the edge as the plate is rolled through.

A more recent appliance for reducing weight [of the butt-strap] is the *joggling-machine*.
Encyc. Brit., XXXII. 593.

joggly (jog'li), *a.* Shaky; joggling.

jog-trot (jog'trot), *v. i.* To go at a jog-trot or monotonous pace.

jog-trotty (jog'trot"i), *a.* Of a jog-trot, easy-going, monotonous character.

"And how do you get on, Richard?" said I.
"Oh! well enough!" said Richard. . . . "It's rather *jog-trotty* and humdrum. But it'll do as well as anything else."
Dickens, Bleak House, I. xvii.

John Day beds. See ★*bed*[1].

John Doe proceedings. See ★*proceeding*.

John-dory, *n.* 2. A name given in New South Wales and Tasmania to *Zeus australis*, of the family *Zeidæ*. It is nearly the same as *Zeus faber*, the John-dory of Europe. Also called *bastard dorey*, *boar-fish*, and *dollar-fish*. *E. E. Morris*, Austral English.

John Gilpin jug. See ★*jug*[1].

John-mariggle (jon"mar'i-gl), *n.* Same as *ten-pounder*, 3.

johnny, *n.* 5. [*cap.*] A hanger-on about a theater.

He was for years a *Johnny* in the green room.
Daily Newspaper.

Johnny Crapaud, a name (meaning 'Johnny Toad') sometimes given to a French seaman.—**Johnny Fresh,** a member of the ship's company who is making his maiden voyage.—**Johnny Newcome.** Same as ★*Johnny Fresh*.—**Johnny on the spot,** one who is always up to time or never caught napping. [Colloq.]
The Reader, May, 1904, p. 602.

johnny-cake, *n.* 3. In Australia, a cake baked on the ashes or cooked in a frying-pan. *E. E. Morris*, Austral English.

Johnny-jump (jon'i-jump), *n.* The shooting-star, *Dodecatheon Meadia*.

Johnny-jumper (jon'i-jum"pèr), *n.* Same as *Johnny-jump-up*. Both names are loosely applied to violets in general.

johnny-smoker (jon"i-smō'kèr), *n.* The long-plumed purple avens, *Sieversia ciliata*, of North America: so called from the smoke-like aspect of the plumose styles in the fruit.

Johnsonella (jon-sō-nel'ä), *n.* [NL. (Wight, 1905), a diminutive of *Johnsonia*.] A genus of monocotyledonous plants of the family *Liliaceæ*. See *Johnsonia*.

Johnson grass. See ★*grass*.

johnsonite (jon'son-īt), *n.* Same as ★*masrite*.

Johnson's mixture, powder. See ★*mixture*, ★*powder*.

johnstrupite (jon'strū-pīt), *n.* [Named for F. *Johnstrup* of Copenhagen.] A fluosilicate containing titanium, the cerium and yttrium metals, calcium, and other elements. It occurs in brownish-green monoclinic crystals and is found in southern Norway.

John's-wort, *n.*—**False John's-wort,** the pineweed or orange-grass, *Sarothra gentianoides*.

join, *v. t.* 7. To draw, as the sect of which A and B are the end points.

"*Join* FC." Custom seems to allow this singular expression as an abbreviation for "draw the straight line FC," or for "join F to C by the straight line FC."
Todhunter, Euclid, p. 254.

To join up, to join; join together.

Where gaps occur between different surveyed blocks, these have been *joined up* by triangulation.
Geog. Jour. (R. G. S.), XIII. 59.

join, *n.* 2. In *geom.*, the straight determined by two points.

1. A line determined by two points on it is called a 'straight.' 2. On any two points can be put one, but only one, straight, their '*join*.'
Merriman and Woodward, Higher Mathematics, p. 70.

join. An abbreviation of *joinery*.

joint, *n.* 5. In *racing* or *betting slang*, an outside book-maker's paraphernalia of list-frame, umbrella, etc., some of which are joined together in movable pieces. *N. E. D.*—**Bell-and-spigot joint.** See ★*bell*[1]. **Bonded joint,** a railroad joint having a metal bond designed to unite the ends of the rails when they form an electric circuit as in block-signaling. **Cardan joint,** a universal joint; one which permits of motion about two axes at right angles to each other.—**Chamfered joint,** a joint in carpentry or cabinet- or pattern-making in which the two elements to be joined are cut and finished so that the joint is at an angle with the face or edge of the piece.—**Charcot's joint.** Same as *Charcot's* ★*arthropathy*. **Chopart's joint,** in *anat.*, the joint between the two rows of tarsal bones. **Condyloid joint.** Same as ★*condylarthrosis*.—**Hysterical joint,** an affection of a hysterical nature which simulates an arthritis.—**Inserted joint,** in *plumbing*, etc., any form of joint in which one pipe is made to fit inside of another, as a common soil-pipe leaded joint: opposed to *dame-joint*. **Insulated joint,** in *railroading*, a joint in which a non-conducting material of the same section as the rail is placed between the ends of the rails and non-conducting guards and washers under the nuts of the joint-bolts. It is used at the ends of blocks to close the rail-circuit controlling a signal.—**Joint-motion sensation.** See *joint-pressure* ★*sensation*.—**Joint-pressure sensation.** See ★*sensation*. **Metacarpal joints,** attachments between the last four metacarpal bones.—**Metatarsal joints,** the articulations of the metatarsal bones one with another. **Pasteboard joint,** a joint made steam- or water-tight by pasteboard packing. **Putty-joint,** in *mech.*: (*a*) A pipe-joint in which muslin covered with putty is used for packing. (*b*) A joint between two metal plates, made water-tight by injecting thin putty into the crevices.—**Rolled joint,** a wiped solder-joint which connects two pipes, made by holding the wiper stationary and turning or rolling the pipes upon supports.—**Saddle-shaped joint.** Same as *saddle-joint*, 2. **Socket-and-spigot joint,** a bell-and-spigot joint. See ★*bell and spigot*.—**Struck joint,** in *masonry*, a joint that is finished by striking or smoothing the mortar with a jointer, no mortar being used but what is necessary to make the joint.—**Struck-and-trimmed joint,** a trimmed joint.—**Tarsometatarsal joint,** the articulation between the metatarsal bones and the bones forming the second row of the tarsus.—**Telescopic joint,** a joint in which one member of a two-part joint is free to slide in and out of the other member, as in the joints of a telescope.—**Trimmed joint,** in *masonry*, a joint between two adjacent bricks or stones which has been filled with mortar and struck or finished with a hollow-faced jointer, thus making a joint that rounds out.

Joint action. See ★*action*.

Joint cost. See ★*cost*[2].

joint-bolt (joint'bōlt), *n.* In *car-building*, any screw-bolt employed to bind together timbers that meet at a right angle. One form of it is called a *lug-bolt* (which see).

joint-collar (joint'kol"är), *n.* A flanged collar used for making a joint; a flanged coupling.

joint-coupling, *n.* 2. A shaft-coupling which permits the shafts to be more or less out of line; a flexible coupling joining two shafts. See *flexible coupling*, under *coupling*.

jointer[1], *n.* 3. In the West Indies, *Piper geniculatum*, a shrub with much swollen nodes or joints, and which sometimes forms almost impenetrable thickets.

jointer-plane (join'tèr-plān), *n.* Same as *jointing-plane*.

joint-ill (joint'il), *n.* A pyemic inflammation of the joints of young animals which occurs within the first month after birth and is usually connected with disease of the navel. The microbes from the infected navel pass into the system through the veins, causing local inflammation and abscesses in and around the joints.

jointing (join'ting), n. Joints collectively, as in geology.

joint-pin (joint'pin), *n.* A pintle; the pin which is rove through the eyes of a hinge to connect the two parts.

joint-pine (joint'pīn), *n.* See ★*pine*[1].

joint-plane (joint'plān), *n.* The surface of rock exposed on one side of a joint; also, the assumed plane followed by a joint in development. The latter use is figurative, since the surface is never a mathematical plane.

Messrs. Cole and Lamplugh then show that the caves depend for their form on the *joint-planes* in the massive limestone, and that they were excavated by solution in pre-Glacial times. *Nature*, Dec. 24, 1903, p. 189.

joint-rule (joint'rōl), *n.* 1. A rod with the joints of brickwork or stonework marked on it, to guide a mason in laying up material; a ruler or straight-edge so used.—2. Same as *jointing-rule*.

joint-runner (joint'run"èr), *n.* In *plumbing*, a short piece of rope saturated with wet clay and fastened round a cast-iron pipe just at the joint where two pipes are to be calked with lead. It serves as a guide and dam for the hot lead which is poured into the bell of the pipe to make the joint. Joint-runners are also made of asbestos.

joint-rust (joint'rust), *n.* A disease of grass-stems due to the fungus *Epichloë typhina*. See ★*Epichloë*.

joint-sensation (joint'sen-sā"shon), *n.* In *psychol.*, an articular sensation; a sensation proceeding from the sense-organs distributed over the articular surfaces.

The *joint-sensations* of the fingers are less fine than those of the elbow. *E. C. Sanford*, Exper. Psychol., p. 32.

joint-sense (joint'sens), *n.* In *psychol.*, the sense whose end-organs (possibly Pacinian corpuscles) are distributed over the articular surfaces, and whose adequate stimulus is the friction of one articular surface against the other; the articular sensibility.

This group of [kinesthetic and static] senses . . . includes some senses whose existence or efficiency is disputed (innervation sense and muscle sense), and others whose independence has only of late been generally recognized (*joint-sense* and tendon sense).
E. C. Sanford, Exper. Psychol., p. 25.

joint-vetch (joint'vech), *n.* Any plant of the genus *Æschynomene*.

joint-water (joint'wâ"tèr), *n.* Any clear fluid contained in a joint.

joisting (jois'ting), *n.* [*joist* + *-ing*[1].] The system of joists supporting a floor, etc.

joker, *n.* 3. Figuratively, something concealed that wins the game; a trick under an innocent guise: as, a *joker* in a legislative bill.

jökul (yö'kul), *n.* [Icel. *jökull*: see *ickle*[1].] In Iceland, a snow-covered mountain; also, a glacier.

jollify (jol'i-fī), *v.*; pret. and pp. *jollified*, ppr. *jollifying*. [*jolly* + *-fy*.] I. *trans.* To make jolly; intoxicate to a slight degree; make 'happy.'

II. *intrans.* To become 'jolly'; be exhilarated by drink.

jolly[1], *a.* 6. Slightly exhilarated by drink.—7. Fine; pretty; great; big: used vaguely, often ironically: as, that's a *jolly* way of doing things; what a *jolly* fool he looked! a *jolly* shame. [Colloq.]

II. *n.* 1. Good-natured bantering talk intended to cheer a person or to induce him to comply with the wishes of the speaker.—2. A cheer; a hurrah.

On a suggestion to give him a *jolly* . . . they cheered the hero loud and long.
Mayhew, Great World of London, p. 46. *N. E. D.*

3. A sham bidder at an auction; a confederate of cheats.—4. A British slang name for a marine: not used with reference to United States marines.

Sez 'e, "I'm a *Jolly*—'Er Majesty's *Jolly*—soldier an' sailor too!"
. . . . . .
'E isn't one o' the reg'lar Line, nor 'e isn't one o' the crew.
R. Kipling, Seven Seas, p. 152.

Royal jolly, a royal marine.—**Tame jolly,** a militiaman. [Eng.]

jolly[1], *v. i.* 2. To make a false offer or bid at an auction.

II. *trans.* 1. To ridicule; make fun of: chaff.—2. To be jolly or good natured to (a person), with the idea of cheering him up or of getting something out of him; flatter. [Slang, in both uses.]

jolly[2] (jol'i), *n.* [*jolly*[1], *a.* It is a kind of synonym of *jigger*, as a 'lively, quick-moving thing.'] In *ceram.*, a machine used for making plates; a variety of the jigger. See the extract.

A "*jolly*" is a somewhat similar contrivance, consisting of a revolving disk or wheel on which the mould is placed. This is used principally for making plates, saucers, and articles termed "flat ware," its speed being regulated by a lever pressed by the foot of the workman.
E. A. Barber, Pottery and Porcelain of the U. S., p. 7.

jolly[3] (jol'i), *n.* [Short for *jolly-boat*.] A jolly-boat.

jolly-jumper (jol"i-jum'pèr), *n.* *Naut.*, a name for the fancy light sails which, according to tradition, were carried on very lofty ships, and were set above the moon-sails and sky-scrapers.

jollytail (jol'i-tāl), *n.* A fish, *Galaxias attenuatus*, in Maori called *inanga*, found in fresh waters of New Zealand and Tasmania. It spawns in the sea. The young form the *whitebait* of New Zealand.

jolter (jōl'tèr), *v.* I. *trans.* To jolt; transport with jolts.

II. *intrans.* To be transported with jolts.

jolter-headed (jōl'tèr-hed"ed), *a.* [*jolterhead* + *-ed*[2].] Having a stupid head; stupid; doltish.

Joly steam-calorimeter. See ★*calorimeter*.

Jonah, *n.* 2. In games of chance, a player who can never win anything; a very unlucky person.

Jonah (jō′nä), *v. t.* To play the part of a Jonah to; spoil the luck of; bring ill luck to.

Jonah-crab (jō′nä-krab), *n.* A large crab, *Cancer borealis*, found off the Atlantic coast of North America.

Jonathanization (jon″a-than-i-zā′shon), *n.* The process of making (John Bull) similar to Brother Jonathan; Americanization. [Nonce-word.]

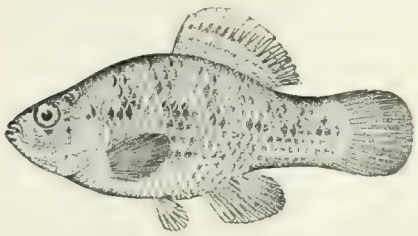
John Bull interests you at home, and is all your subject. Come and see the *Jonathanization* of John.
Emerson, in Corres. of Carlyle and Emerson, II. 235.

jonkheer (yongk′hār), *n.* [D., the original form of *jonker*, whence E. *younker*, q. v.] In South Africa, a young gentleman; a country squire; specifically, a member of the Volksraad.

jonquil, *n.* **4.** A light-yellow color much favored in the French mural decoration of the eighteenth century.

joran (zhō-roṅ′), *n.* [Swiss F., < *Jorat* (G. *Jurten*), name of a mountain-chain adjacent to Lake Geneva.] The descending mountain-wind blowing toward Lake Geneva during the night, but rarely reaching the surface of the lake. Analogous winds are experienced on the shores of the deep-lying finger-lakes of New York State.

Jordanella (jôr-da-nel′ä), *n.* [NL., named for David S. *Jordan*, an American ichthyologist.]



Jordanella floridæ.
(From Bulletin 47, U. S. Nat. Museum.)

A genus of fishes of the family *Pœciliidæ*, found in fresh waters of Florida.

Jordania (jôr-dā′ni-ä), *n.* [NL., named after David S. *Jordan*, an American ichthyologist.] A genus of cottoid fishes found on the northwestern coast of the United States.

Jordaniinæ (jôr-dā-ni-ī′nē), *n. pl.* [NL., < *Jordania* + *-inæ*.] A subfamily of cottoid fishes found on the northwestern coast of the United States.

Jörden beds. See ★*bed*[1].

jorobado (hō-rō-bä′dō), *n.* [Sp. 'humpbacked,' < *jorobo*, humpback.] A common name applied to both *Vomer setipinnis* and *Selene vomer*, fishes of the family *Carangidæ*.

joseite (hō-sā′īt), *n.* [Sp. Pg. *José* (see def.) + *-ite*[2].] A bismuth telluride related to tetradymite. It is found near San José, Minas Geraes, Brazil.

Josephia (jō-sē′fi-ä), *n.* [NL. (Robert Brown, 1809), named in honor of Sir *Joseph* Banks (1743–1820), a distinguished patron of botany.] A genus of dicotyledonous shrubs belonging to the family *Proteaceæ*. See *Dryandra*.

Josephine (jō′ze-fin), *a.* Pertaining to Joseph II. of Austria, or to the ecclesiastical reforms which he introduced. See ★*Josephinism*.

Josephinism (jō′ze-fin-izm), *n.* [*Josephine* + *-ism*.] The policy of ecclesiastical reform introduced into Austria by Emperor Joseph II. (1780–90). It aimed at the establishment of a national church in immediate connection with the centralized state government and independence of Rome.

josephinite (jō′ze-fin-īt), *n.* [*Josephine* (see def.) + *-ite*[2].] An iron-nickel alloy (Fe_2Ni_5), similar to awaruite, which forms the metallic portion of pebbles found in placer gravel in Josephine and Jackson counties, Oregon.

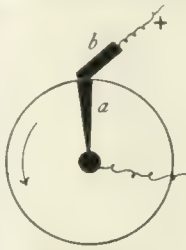
josh (josh), *v. t.* [Prob. in allusion to *Josh* for *Joshua*, regarded as a homely name.] To chaff; make fun of.

josser (jos′ėr), *n.* [Origin obscure.] A booby. See the extract.

"That 'something must be daring, startling, essentially histrionic, and calculated to make the Parisian 'badaud' —read 'booby,' unless the more up-to-date '*josser*' be preferred—show his teeth."
Westminster Gazette, Dec. 1, 1898, p. 2.

Joturus (jō-tū′rus), *n.* [NL., < W. Ind. Sp. *joturo*, also *hoturo*, the name of this fish at Havana.] A genus of fishes of the family *Mugilidæ*, living in streams of tropical America.

Joubert disk, a device for the study, by the step-by-step method, of alternating currents and of similar periodic phenomena. It consists of a disk or collar of insulating material with a narrow radial sector of metal. The disk is mounted upon the shaft of the machine or generator for which the type of the wave-form of current is to be determined, or in some cases it is driven synchronously with the machine by means of a separate motor. An adjustable brush, *b*, makes contact with the metallic sector, *a*, once in every revolution, and the instantaneous electromotive force for the portion of the cycle corresponding to the position of the brush is measured by means of a condenser and ballistic galvanometer, or by means of some other suitable instrument placed in circuit with the wires . and . By shifting the brush successively to different points on the periphery a series of measurements is obtained from which a curve representing the cyclic fluctuations in the current generated by the machine may be drawn. This method, which is known as the *step-by-step* (or *point-to-point*) method, is applicable only to cases in which the form of the curve is constant and the wave-form repeats itself over and over without sudden changes.



Joubert Disk.

Joubert's process. See ★*process*.

jough (jôch), *n.* [Manx *jough* = Gael. Ir. *deoch*, Olr. *deug*, a drink.] Drink.

The tragical purpose usually lasted him over the short mile and a half . . . [to] the 'Three Legs of Man,' and then it went down with some other troubles and a long pint of Manx *jough*. *Hall Caine*, The Deemster, xv.

joulad (jō′lad), *n.* [*joule* + *-ad*[2].] Same as ★*joule*, 2. [Rare.]

joule, *n.* **2.** A practical unit of work or energy equal to 107 ergs, 0.10197+ kilogram-meters, 0.2388+ calories, or 0.7376+ foot-pounds. It was formally adopted as a unit by the International Congress in Chicago (1893) and was legalized in the United States in 1894.

joulean (jou′lē-an), *a.* Relating to the ratio of the units of heat and of work known as a joule.

Joule effect, Joule-Thomson effect. See ★*effect*.

jour. An abbreviation (*a*) of *journal*; (*b*) of *journey*; (*c*) of *journeyman*.

journal, *n.*—**Yellow journal,** a newspaper which is devoted to sensationalism; specifically, one which seeks to increase its circulation by appealing to the tastes, morals, and morbid curiosity of the lowest or least intelligent portion of the community.

journal, *v. t.* **2.** To enter in a journal.

journalese (jėr-na-lēs′), *n.* [*journal* + *-ese*.] A style of writing fit only for rapid newspaper work; a style abounding in pretentious words and sudden colloquialisms and making crude bids for popularity.

An unknown hand threw in a copy of a Kansas paper containing some sort of an interview with Harvey. . . . The joyful *journalese* revealed that it was beyond question their boy, and it soothed Mrs. Cheyne.
R. Kipling, Captains Courageous, ix.

journalistics (jėr-na-lis′tiks), *n.* The things pertaining to journalism; the profession of journalism.

journeyman, *n.* **3.** In *astron.*, a secondary clock in an observatory: used, generally, as an intermediary in the comparison of standard clocks: more fully, *journeyman clock*. *N. E. D.*

journey-worker (jėr′ni-wėr″kėr), *n.* A journeyman.

journey-workman (jėr′ni-wėrk″man), *n.* Same as ★*journey-worker*.

Jovellana (jō-ve-lā′nä), *n.* [NL. (Ruiz and Pavon, 1798), named in honor of the Spanish statesman and patron of botany, Gaspar Melchor de *Jovellanos* (1744–1811).] A genus of dicotyledonous plants of the family *Scrophulariaceæ*.

Jovellania (jō-ve-lā′ni-ä), *n.* [NL.] A genus of Paleozoic nautiloid cephalopods having curved shells with subtrigonal cross-section.

Jove's-beard (jōvz′bērd), *n.* Same as *Jupiter's-beard*, especially the fungus *Hydnum Barba-Jovis*.

joviology (jō″vi-ol′ō-ji), *n.* [L. *Jovis*, gen., + *-ology*.] The study of the planet Jupiter; zenography. *L. F. Ward*, Pure Sociol., p. 69.

jowar (jou-ār′), *n.* [Anglo-Ind., < Hind. *jawar*.] The Indian millet, *Andropogon Sorghum*. Also called *juar*.

jowaree, jowari (jou-ä′rē), *n.* [Anglo-Ind., < Hind. *jowari*.] Same as ★*jowar*.

jower (jou′ėr), *v. i.* [Also *jour, jowr*; vaguely imitative.] **1.** To scold grumblingly; growl. —**2.** To speak in a muttering dialect.

jowering (jou′ėr-ing), *n.* [*jower* + *-ing*[1].] A scolding; a vituperative quarrel.

jowk, *v. i.* See *jouk*[1], *v. i.*

joy, *n.* **5.** In *astrol.*, an inferior fortitude, as when a planet is in the dignities of another planet congenial to him.

joyancy (joi′an-si), *n.* Same as *joyance*.

joyant (joi′ant), *a.* Joyous.

joy-fire (joi′fīr), *n.* [Tr. F. *feu de joie*.] A bonfire to celebrate some joyful day or occurrence.

J. Prob. An abbreviation of *Judge of Probate*.

jua (zhō′ä), *n.* [Brazilian.] A small Brazilian tree of the buckthorn family, *Zizyphus Joazeiro*. Its fruit is edible and forms an important fodder for cattle in times of drought, and its root-bark is used medicinally.

juar (jō-är′), *n.* [Hind.] Same as ★*jowar*.

jubilancy (jō′bi-lan-si), *n.* Same as *jubilance*.

jubilarian (jō-bi-lā′ri-an), *n.* [As *jubilary* + *-an*.] One who celebrates his jubilee or fiftieth year in some state of life or profession; specifically, a priest, a monk, or a nun who has passed fifty years in the sacerdotal office or the monastic life.

jubilated (jō′bi-lā-ted), *a.* In the *Rom. Cath. Ch.*, having celebrated a jubilee or fiftieth year in the religious life.

jubilatory (jō′bi-lā-tō-ri), *a.* [*jubilate* + *-ory*.] Jubilant.

jubilean (jō-bi-lē′an), *a.* [L. *jubilæus*, jubilee, + *-an*.] Relating to a jubilee; resembling the celebrations of a jubilee.

jubilee, *n.*—**Diamond jubilee,** the celebration of the sixtieth year; specifically, in *Eng. hist.*, the celebration in 1897 of the sixtieth year of the reign of Queen Victoria. —**Silver jubilee,** the celebration of the twenty-fifth anniversary of an event, especially of a wedding.

jubilize (jō′bi-līz), *v. i.*; pret. and pp. *jubilized*, ppr. *jubilizing*. [L. *jubilum*, shout, or E. *jubilee*, + *-ize*.] To rejoice; exult; celebrate a jubilee.

jud. An abbreviation of *judicial*.

Judas-color (jō′das-kul″or), *n.* Red or yellowish red: a name derived from the early belief that Judas Iscariot had red hair. See *Judas-colored*.

There was a little pragmatical exciseman, with a hungry face, sharp nose, red eyes, and thin, coarse, straggling hair of a yellow cast (what was formerly called *Judas-colour*), whom he pronounced to have been a ferret in his last stage. *Southey*, Doctor, cxxvii.

Judeo-German (jō-dē″ō-jėr′man), *a.* and *n.* German with Jewish elements. See *Yiddish*.

The great majority of Jews are unacquainted with Hebrew, which is a dead language; they speak, according to the country they inhabit, particular kinds of jargon, the most common of which is the *Judeo-German*.
Deniker, Races of Man, p. 424.

judex (jō′deks), *n.* [L., a judge: see *judge*, *n.*] A judge (in various phases); specifically, (*a*) a civil judge; (*b*) an ecclesiastical judge; (*c*) a juror.—**Judex ordinarius,** in *civil law*, a judge who has jurisdiction in his own right and not by appointment of another.—**Judex pedaneus,** in *civil law*, an inferior judge or magistrate appointed to hear small causes or such particular suits as might be assigned to him.—**Judex quæstionis,** in *civil law*, a judge or magistrate having criminal jurisdiction under the direct supervision of the pretor.—**Judex selectus,** in *Rom. law*, the judge selected by the pretor to try criminal cases.

Judg. An abbreviation of *Judges*.

judge, *n.* **9.** In *angling*, the name of an artificial fly.—**Judge's certificate.** See ★*certificate*.

judge, *v. t.* **6.** To govern or regulate by right of authority, as the judges of Israel who held office between Joshua and the kings.

Now Deborah, a prophetess, the wife of Lapidoth, she *judged* Israel at that time. *Judges* iv. 4.

judge-martial (juj′mär′shal), *n.* A judge who presides over a court-martial.

judgmatic (juj-mat′ik), *a.* Same as *judgmatical*.

judgmatically (juj-mat′i-kal-i), *adv.* With a judicious manner; in the manner of a judge. [Colloq.]

judgment, *n.*—**Foreign judgment,** in *law*, the judgment of a court of a different and independent jurisdiction, whether in the same country or territory, or not.—**Free judgment,** in *exper. psychol.*, judgment by absolute impression, without the intervention of a process of comparison.

Both introspection and the numerical results in our work point to the form of discrimination which we may term *free judgments* (as opposed to 'bound'), — the kind commonly given in ordinary life, when we speak of 'a heavy book' or 'a tall man,' etc.
Amer. Jour. Psychol., XII. 69.

Judgment book, in *law*, a book, required to be kept by the clerk of a court, which contains an index of the judgments filed in the court.—**Judgment nisi,** in *law*, a judgment entered upon the record of a suit which is to become absolute unless some condition required by law be complied with, or unless an order to the contrary be made by the court within a specified time. **Judgment**

of ouster, in *law*, a judgment in quo warranto proceedings which determines a right to a public office and puts out an incumbent who holds the office without right.—**Judgment recovered,** in *law*, a plea in bar of an action that a former judgment has been entered in which the plaintiff's rights have been once judicially determined.—**Last judgment,** in *theol.*, the judgment expected at the last day (doomsday), when all mankind shall appear at the judgment-seat of God, the good be chosen, and the evil be condemned to punishment.—**Perceptual judgment,** the judgment that a present percept has a perceived character.—**Reliability of judgment,** in Stumpf's *psychophys.*, the degree of confidence that may be placed by others in the truth or accuracy of a judgment as expressed. Objective reliability is identical, according to the form of the judgment, either with degree of probability or with degree of accuracy, that is, of approximation to truth. It is conditioned upon two general factors: sensitivity, the degree in which sensation corresponds to exciting stimulus; and subjective reliability, or the reliability of judgment in the apprehension of sensations as such, without regard to their correct reference to external objects. *E. B. Titchener*, Exper. Psychol., II. ii. p. clxi.—**To perfect judgment,** to record or enter judgment and docket the record.

judication (jö′di-kā′shon), *n.* [L. *judicatio(n-)*, ⟨ *judicare*, judge.] The action of judging; judgment.

judicator (jö′di-kā-tor), *n.* [NL. *judicator*, ⟨ L. *judicare*, judge.] One who judges; a judge.

judicatores terrarum (jö″di-kā-tō′rēz te-rā′rum). [L., 'judges of lands.'] In *Eng. law*, certain tenants who, by a custom in Chester, held their tenures by performing judicial duties. From their judgment a writ of error could be obtained from the Court of Chancery, and in case of error an order from the latter court was given for its correction. The judicatores terrarum then had one month in which to reconsider the matter, and if during that time they failed to reform the judgment, the matter came by writ of error to the King's Bench. If the King's Bench held the judgment erroneous, the judicatores terrarum forfeited £100 to the king, according to the custom.

judicatorial (jö″di-kā-tō′ri-al), *a.* [LL. *judicatorius*, judicatory, + *-al*[1].] Pertaining to a judicator.

Judicial documents. See ★*document*.

judiciality (jö-dish-i-al′i-ti), *n.* [*judicial* + *-ity*.] Judicial character.

judicialize (jö-dish′al-īz), *v. t.*; pret. and pp. *judicialized*, ppr. *judicializing*. [*judicial* + *-ize*.] To arrive at a correct judgment upon; treat in a judicial manner.

judicio sisti (jö-dish′i-ō sis′tī). [L., 'to appear for trial': see ★*judicium* and *sist*.] In *Scots law*, an undertaking, or security, in which the surety becomes responsible that the principal will abide within the jurisdiction of the court and appear for trial (*judicio sisti*) when required. In the usual form the principal was bound to appear and answer any suit that should be brought within six months.

judicium (jö-dish′i-um), *n.* [L., a trial or sentence by a judge, a judgment, ⟨ *judex*, a judge: see *judicial*.] In *Rom. law*, a proceeding to obtain the decision of a judge upon an issue of law.—**Judicium capitale,** in *Eng. law*, sentence of death. **Judicium Dei.** Same as *judgment of God* (which see, under *judgment*).—**Judicium parium** (judgment of one's peers), in *Eng. law*, trial by jury.—**Judicium vitæ amissionis.** Same as ★*judicium capitale*.

Judy-cow (jö′di-kou″), *n.* A ladybird. [Local, Eng.]

juey (hö′ā-ē), *n.* A large land-crab, *Cardisoma guanhumi*. [Porto Rico.]

jug[1], *n.* **A. R. jug,** a salt-glazed stoneware vessel, bearing the letters A. R. (*Anna Regina*) in a medallion on the front, made in England and Germany during the reign of Queen Anne.—**C. R. jug,** a salt-glazed stoneware vessel, bearing the letters C. R. (*Carolus Rex*) in a medallion on the front, made in England during the reign of Charles II.—**Ellsworth jug,** a pitcher made in Trenton, New Jersey, in 1861, with relief decorations illustrating the shooting of Colonel E. E. Ellsworth at Alexandria, Virginia, at the commencement of the Civil War.—**G. R. jug,** a salt-glazed stoneware vessel, bearing the letters G. R. (*Georgius Rex*), usually accompanied by a crown, made in England and Germany during the reigns of George I. and George II.—**Hound-handle jug** a pitcher or jug of Rockingham or brown-glazed pottery, with hunting-scenes in relief and a handle in the form of a dog with forefeet resting on the top: first made at the Jersey City Pottery from a model by Daniel Greatbach, and later reproduced at several other American potteries. Also called *hunting-jug* (which see).—**John Gilpin jug,** a jug, produced about 1835 in England, with embossed designs illustrating Cowper's ballad of John Gilpin.—**Tam o' Shanter jug,** a pitcher or jug with relief designs illustrating Burns's poem "Tam o' Shanter," first produced at Hanley, England, in 1835. They were made in various sizes and in at least two colors, gray and light blue.—**W. R. jug,** a salt-glazed stoneware vessel bearing the letters W. R. (*Wilhelmus Rex*), in a medallion on the front, made in England, Holland, and Germany during the reigns of William III. and William IV.

Hound-handle jug, of about 1850.
(From Bennington, Vermont.)
In the Pennsylvania Museum, Philadelphia.

jug[4] (jug), *n.* [Hind. *jag*, a religious ceremony, the world, also *jagat*, ⟨ Skt. *jagata*, the world.] An act of worship by a Brahman supposed to give him preternatural power.

jugal. **I.** *a.* **Jugal bar.** Same as *zygoma*.—**Jugal cup.** See ★*cup*.

II. *n.* **2.** Same as *suborbital* (*b*). *Starks*, Synonymy of the Fish Skeleton, p. 520.

jugale (jö-gā′lē), *n.* [NL.: see *jugal*.] **1.** Same as *jugal point* (which see, under *craniometry*).—**2.** In *ichth.*, a dermal bone situated in front of the eye and connected with the suborbitals; a preorbital.

Jugatæ (jö-gā′tē), *n. pl.* [NL., fem. pl. of *jugatus*, yoked: see *jugate*, *a.*] A suborder of lepidopterous insects proposed by Comstock to include the families *Hepialidæ* and *Micropterygidæ*, which have the fore and hind wings connected by a jugum or yoke.

jugate, *a.* **II.** *n.* One of the *Jugatæ*.—**Little-winged jugate,** any member of the lepidopterous family *Micropterygidæ* of Comstock's suborder *Jugatæ*.

jugate (jö′gāt), *v. t.*; pret. and pp. *jugated*, ppr. *jugating*. [L. *jugare*, yoke: see *jugate*, *a.*] To join or yoke together; couple together. *Bailey*, 1721.

juge d'instruction (zhüzh dañ-strük-syoñ′). ['Judge of instruction,' that is, a magistrate who collects and formulates the preliminary information.] In *French law*, an officer appointed to receive the complaints of parties injured by criminal offenses, and thereupon to summon and examine witnesses and draw up the forms of accusation.

jug-fish (jug′fish), *n.* A fish, *Lagocephalus pachycephalus*, belonging to the family *Tetraodontidæ*, found from the West Indies to Brazil.

Juggernaut (jug′ėr-nât), *v. t.* To crush as if by Juggernaut.

juggins (jug′inz), *n.* [A homely use of a homely English surname.] A dull fellow; a chump.

jugglement (jug′l-ment), *n.* [*juggle*[1] + *-ment*.] Jugglery; a particular instance of jugglery.

jug-handled (jug′han″dld), *a.* Placed, like the handle of a jug, on one side; hence, one-sided. [Slang.]

French writers realize that the alliance with Russia is a *jug-handled* arrangement by which France holds the handle and Russia obtains all the outpouring.
The Forum, Jan.–March, 1904, p. 342.

juglandaceous (jö-glan-dā′shius), *a.* Belonging to the walnut family, *Juglandaceæ*.

Juglandales (jö-glan-dā′lēz), *n. pl.* [NL. (Engler, 1892), ⟨ *Juglans* (*Jugland-*) + *-ales*.] An order of dicotyledonous plants containing the single family *Juglandaceæ* (which see).

juglandic (jö-glan′dik), *a.* Noting an acid, same as ★*juglone*.

juglandine (jö-glan′din), *n.* [L. *juglans* (*jugland-*), walnut, + *-ine*[2].] A compound, supposedly an alkaloid, contained in the green shell or leaves of the walnut-tree. It rapidly turns brown on exposure to the air and consequently is used as a hair-dye. It is also employed in medicine for certain cutaneous and scrofulous diseases.

2. A name sometimes given to juglone.

juglolidine (jö-glol′i-din), *n.* [L. *jugl*(*ans*), walnut, + *-ol* + *-id* + *-ine*[2].] A colorless crystalline compound, $C_6H_3\left\langle\begin{matrix}CH_2CH_2CH_2\\ CH_2CH_2CH_2\end{matrix}\right\rangle N$, prepared by the action of aniline on 1,3-chlorbrompropane. It melts at 40° C., boils and partly decomposes at 280° C., and is unstable. The vapor causes sneezing.

juglone (jö′glōn), *n.* [L. *jugl*(*ans*), walnut, + *-one*.] A yellowish- or brownish-red compound, $HOC_{10}H_5O_2$, prepared by the oxidation of *a*-hydrojuglone from the green parts of the walnut-tree; *a*-hydroxynaphthoquinone, nucin, or regianin. It crystallizes in needles or prisms and melts at 151–154° C.

juglonic (jö-glon′ik), *a.* [*juglone* + *-ic*.] Noting an acid, a yellow crystalline compound, $HOC_6H(NO_2)_2(COOH)_2$, formed by the action of nitric acid on juglone. Also called *dinitrohydroxyphthalic acid*.

jugomaxillary (jö-gō-mak′si-lā-ri), *a.* [L. *jugum*, yoke, + *maxilla*, maxilla, + *-ary*.] Same as *malaromaxillary*. *Syd. Soc. Lex.*

jugonasal (jö-gō-nā′zal), *a.* [L. *jugum*, yoke, + *nasus*, nose, + *-al*[1].] In *anthrop.*, relating to the jugal points and the nose. **Jugonasal arc, jugonasal cord,** the arc and cord passing over the nose from one jugal point to the other.

jugulate, *v. t.* **2.** To arrest suddenly, as the progress of a disease, by therapeutic measures.

jugum, *n.* **3.** In the *Brachiopoda*, such as *Spirifer*, *Cyrtina*, etc., a part of the shelly internal supporting skeleton which joins the bases of the two spirally coiled ribbons or spiralia.—**4.** A small lobe projecting backward from the basal inner margin of the fore wing in the *Jugatæ*, which extends under the costal margin of the hind wing, holding the pair together.

juice-canal (jös′ka-nal″), *n.* See ★*canal*[1].

juice-root (jös′rūt), *n.* Same as *Spanish juice* (which see, under *juice*).

juice-wood (jös′wūd), *n.* Same as ★*juice-root*.

juicy, *a.* **2.** In *oil-painting*, a word used to express a brilliant liquid quality of technic. [Slang.]

They are painted on smooth grounds, with a thick *juicy* impasto, detail being indicated rather more freely than in his second manner.
C. J. Holmes, in Burlington Mag., IV. 73.

juju (jö′jö), *n.* [West African; perhaps not native, but a repetition of the Pg. *deus*, God (cf. *joss*).] Anything supernatural or mysterious, and an object of religious fear or veneration; a charm; a fetish; also, an observance of mysterious significance like the taboo: used in relation to the religious ideas of the negroes of West Africa.

juju-house (jö′jö-hous), *n.* A fetish-house.

Their ideas are considerably more advanced than those of the West Coast of Africa generally. There are no *juju-houses* on the plateau [Nyassa-Tanganyika plateau], no juju ceremonies, no priests nor medicine-men. *Geog. Jour.* (R. G. S.), XIII. 588.

jujuism (jö′jö-izm), *n.* [*juju* + *-ism*.] The system of beliefs and practices relating to the juju.

jujuist (jö′jö-ist), *n.* [*juju* + *-ist*.] An adherent of jujuism.

juke-neckit (jök′nek″it), *n.* [A Sc. form of 'duck-necked.'] In *golf*, a modern club with a neck shaped like that of a duck. *W. Park*, Game of Golf, p. 39.

Jul. An abbreviation of *July*.

Julian, *a.* **2.** In *geol.*, noting a group of the pelagic Triassic system in Europe and Asia, forming the middle part of the Carinthian stage preceded by the Cordevolian group and followed by the Tuvalian. In the Mediterranean Triassic province it is represented by the Raibl beds.

II. *n.* The Julian group.

Julidæ (jö′li-dē), *n. pl.* [NL., ⟨ *Julus* + *-idæ*.] A family of myriapods of the order *Diplopoda*, having from 30 to 70 or more rings. The body is more or less cylindrical and smooth, with a glistening surface. The legs are numerous and short. The members of this family are sluggish in movement, and when disturbed or at rest coil the body in a spiral. They feed largely upon earthworms, snails, and other small creatures, and sometimes damage garden and field crops. Their eggs are deposited in the ground. They are known also as *cutworms* or *gally-worms*. Sometimes written *Iulidæ*.

Jul. Per. An abbreviation of *Julian period*.

Julus (jö′lus), *n.* [NL. (Linnæus, 1748), prop. *Iulus* (cf. L. *iulus*, catkin), ⟨ Gr. *ἰουλος*, down.] An old genus of myriapods, typical of the family *Julidæ*, containing many of the forms known as wireworms. See *wireworm*, 2.

jumble-sale (jum′bl-sāl), *n.* A sale of second-hand articles of every description for the benefit of the poor; a rummage sale.

jumbo[1], *n.* **2.** Any large, cumbersome machine; in particular, a home-made windmill built for lifting water for irrigation on the Great Plains.

jumbo[2] (jum′bō), *n.* [Also *jumby*; short for *mumbo-jumbo*.] In the West Indies, same as *mumbo-jumbo*. In the form *jumby* it is used in various compounds.

jumboism (jum′bō-izm), *n.* [*jumbo*[1] + *-ism*.] Admiration of bigness, or for things or enterprises remarkable only for their size. [Colloq.]

jumbuck (jum′buk), *n.* [A native Australian name, thus explained: "The word 'jumbuck' for sheep appears originally as *jimba*, *jombock*, *dombock*, and *dumbog*. In each case it meant

the white mist preceding a shower, to which a flock of sheep bore a strong resemblance. It seemed the only thing the aboriginal mind could compare it to." *Mr. Meston*, in the Sydney Bulletin, April 18, 1896 (quoted in E. E. Morris, Austral English).] A sheep. [Colloq., Australia.]

jumby (jum'bi), *n.* Same as ★*jumbo*[2].

Jumby beans. See ★*bean*[1].

jumby-bead (jum'bi-bēd), *n.* See ★*jumbo*[2].] 1. In the West Indies, a seed of the bead-, necklace-, or jumby-tree, *Ormosia monosperma*. These seeds are nearly globular, half an inch in diameter, very hard, and in color a brilliant scarlet with a large black spot. They are the largest of the various kinds of coral beans often brought by travelers from the West Indies.—2. Same as *jumble-bead*.

jumby-tree (jum'bi-trē), *n.* [See ★*jumbo*[2].] The bead- or necklace-tree, *Ormosia monosperma*, of the West Indies, which yields red and black seeds called *jumby-beads*. See ★*jumby-bead* and *coral bean*, under *bean*[1].

jumentous (jö-men'tus), *a.* [L. *jumentum*, a beast of burden, + *-ous*.] Relating to or characteristic of a beast of burden: applied to urine having a peculiar odor.

jump[1], *v.* **I.** *intrans.* **To jump to a conclusion,** to arrive at a conclusion illogically and without consideration; frequently, to arrive at an erroneous conclusion.

II. *trans.* **9.** To estimate in the gross, as weight.—**10.** To get on or off (a train or boat in motion) by jumping: as, he *jumped* the express as it left the station. *N. E. D.*—**11.** In *quarrying*, to drill by means of a jumper or hand-drill. **To jump a ship,** to desert from a vessel. **To jump on** or **upon,** to attack violently, suddenly, or with vituperation. [Slang.] **To jump the masts,** of a vessel, to lose its spars, as in a heavy sea, or upon striking the bottom with great force.

jump[1], *n.* **6.** *pl.* Nervous twitching of the body; delirium tremens.—**To make a pier-head jump,** to desert a ship as soon as it hauls alongside a dock.

jump-drill (jump'dril), *n.* A form of drill for boring into rock of which the bar is lifted by two men and then forced downward, so that it has a jumping motion. The bar is often made more massive by a lump or enlargement of section above where it is expected to enter the ground: used in rough work, or where straight holes are not essential.

jumper[1], *n.*, **5.** (*f*) In *telephony*, a piece of wire or other conductor used to make temporary connection between points on the switchboard of an exchange. (*g*) In *elect.*, a temporary shunt or short-circuit put around a source, lamp, or receptive device on a series-connected circuit, to enable it to be readily removed or repaired. *Houston*, Elect. Dict.

8. One who is registered and votes fraudulently in several places. [Polit. slang.]

There are more *'jumpers'* than there were two years ago. These *'jumpers'* vote in widely separated parts of the city. *N. Y. Tribune*, Oct. 27, 1903.

9. One who is affected with the jumping-disease.—**Ranking jumper,** a wood-shod sled upon which tan-bark is hauled.

jumper-stays (jum'pèr-stāz), *n. pl.* Extra stays leading from the lower mastheads to the sides of a vessel, where they are set up with tackles. Also known as *preventer stays*.

jumping (jum'ping), *n.* In *ceram.*, the staining of the glaze on the under parts of pieces of ceramic ware: a potters' term. This effect is sometimes noticed on pieces decorated with flow-blue color.

jumping-beetle (jum'ping-bē″tl), *n.* The flea-beetle; specifically, the turnip flea-beetle of England, *Phyllotreta nemorum*.

jumping-disease (jum'ping-di-zēz″), *n.* A nervous affection occasionally observed, especially in woodsmen in Maine, sufferers from which involuntarily jump, regardless of where they are or where they may land, as in response to a sharp command.

jumping-hare, *n.*—**Cape jumping-hare.** Same as *jumping-hare*, *Pedetes caffer*.

jumping-jack (jum'ping-jak), *n.* A toy consisting of a human figure which is caused to jump, dance, or go through various contortions, by pulling a string attached to its limbs.

jumping-Johnny (jum'ping-jon″i), *n.* A machine for cutting rolled metal bars or plates into equal lengths. It has an automatic stop which comes back to its place quickly after being displaced to allow a piece to be taken from the machine. [Eng.]

jumping-net (jum'ping-net), *n.* A stout net usually about 12 feet in diameter, having a heavy cord or rope around its edge: used for catching people who fall or jump from burning buildings.

The *Jumping Net* is made of stout tarred hemp rope, and is about 10 to 12 feet in diameter. It is essential that it be held firmly and fearlessly by a sufficient number of strong men. Firemen are drilled in its use.
Encyc. Brit., XXVIII. 405.

jumping-up (jum'ping-up″), *n.* The process of upsetting or thickening the end of a rod by hammering it in the direction of its length when it is heated.

jumping-weevil (jum'ping-wē″vl), *n.* Any curculionid beetle of the genus *Orchestes*.

jump-jointed (jump'join″ted), *a.* Flush-jointed: said of a carvel-built vessel.

jump-spark (jump'spärk), *n.* An electric spark which jumps a gap in a previously open circuit: frequently used for igniting the charge in an internal-combustion engine.

jump-stroke (jump'strōk), *n.* **1.** A stroke in billiards by which the ball is caused to jump or rebound. There are two ways of accomplishing this: one is by thrusting the cue-tip under the ball, which in effect is lifted rather than bounced at the outset, though it will jump later; the other is by a downward blow of the cue, held obliquely, which drives the ball against the bed, whence it rebounds once or oftener. Indention of the cloth is a probable penalty. The stroke is now seldom used.

2. In *croquet*, a stroke, played in sending a ball through a wicket at an oblique angle, by which the ball is made to strike the further wire of the hoop.

junc. An abbreviation of *junction*.

juncite (jung'sīt), *n.* [*Juncus* + *-ite*[2].] A fossil plant supposed to belong to the rush, *Juncus*, or closely resembling it.

junco[1], *n.* **1.** Several species of these little birds are now recognized, in place of the so-called varieties.—**Pink-sided junco,** *Junco annectens*, a species which has pinkish sides: from the mountains of Colorado, Idaho, etc.—**White-winged junco,** *Junco aikeni*, a rather large species from Colorado, having the wings marked with broad, white bars.

junco[2] (hön'kō), *n.* [Mex. Sp. use of Sp. *junco*, a rush: see *junk*[1].] A thorny shrub or small tree, *Koeberlinia spinosa*, of southwestern Texas and northern Mexico, with numerous almost leafless branches, the branchlets ending in spines.—**Junco family,** the plant family *Kœberliniaceæ*. See ★*Koeberliniaceæ*.

Juncoides (jung-koi'dēz), *n.* [NL. (Adanson, 1763), < *Juncus* + *-oides*, having a resemblance to the genus *Juncus*.] A genus of monocotyledonous plants of the family *Juncaceæ*. See *Luzula*.

junction, *n.*—**Interlamellar junction,** in the gills of bivalve mollusks, one of the vertical bars of tissue which extend between the two lamellæ and divide the intervening space into distinct compartments called the water-tubes, and which also cause the appearance of vertical striation.

junction-box, *n.* **2.** In *elect.*, the appliance used to connect underground or concealed electric conductors.

junction-plane (jungk'shon-plān), *n.* A surface produced by the contact of contrasted geological formations.

The Scottish thrust-planes are eroded like ordinary *junction-planes* between strata.
Geikie, Text-book of Geology, p. 1370.

junction-valve (jungk'shon-valv), *n.* An ordinary steam- or water-valve which joins two pipes.

juncture, *n.* **4.** In *geom.*, either the instantaneous union of a collection of objects which are just moving in coincidence of place, thereafter to be for some lapse of time one object, or the instantaneous loss of one or more dimensions by the gradual shrinkage of a body, this smaller dimensionality lasting through a period of time.—**Degenerative juncture,** that mode of juncture which consists in the diminution of the dimensionality of a moving object, as when a filament shrinks to a particle and remains such.—**Ordinary juncture,** that mode of juncture which consists in the arrival at a common place of two or more objects.

June-beetle, *n.* Same as *June-bug*.

June-bug, *n.* **Western green June-bug,** *Allorhina mutabilis*, a species resembling the southeastern June-bug, *A. nitida*, and occurring in the southwestern United States where it sometimes does considerable damage to ripe peaches.

June-flower (jön'flou″ėr), *n.* The Canada violet, *Viola Canadensis*, which blooms in June.

June-grass, *n.*—**Prairie June-grass,** a bunch-grass, *Kœleria cristata*, which ranges from Pennsylvania to Texas and California, and is also found in the Old World. It is of some value for grazing, especially on account of its earliness, and on irrigated ground it makes excellent hay. See *Koeleria*.

Jungermanniales (jung-gėr-man-i-ā'lēz), *n. pl.* [NL. (Engler, 1892), < *Jungermannia* + *-ales*.] An order of cryptogamic plants of the class *Hepaticæ*, coextensive with the family *Jungermanniaceæ*, and therefore including both the anacrogynous and the acrogynous scale-mosses. It embraces 134 genera, of which 18 belong to the ★*Anacrogynæ* and 116 to the ★*Acrogynæ* (see these terms). In Schiffner's revision, adopted by Engler, the genus *Jungermannia* is no longer recognized, being divided up among a large number of genera belonging to different tribes, but especially to the tribes *Lejeuneæ* and *Frullanieæ*.

jungle-cat, *n.* **Ornate jungle-cat,** a small East Indian species having a short tail and very even spots.

jungle-fowl, *n.*—**Gray jungle-fowl, Sonnerat's jungle-fowl,** *Gallus sonnerati*, a species which has the neck-hackles black, edged with gray, each with a spot at the end resembling a spot of yellow sealing-wax: found

Sonnerat's Jungle-fowl (*Gallus sonnerati*).

in western, southern, and central India.—**Javan jungle-fowl,** *G. varius*, a very dark species, with the edge of the comb entire and a single wattle on the under side of the throat.—**Sonnerat's jungle-fowl.** See *gray* ★*jungle-fowl*.

jungle-hen (jung'gl-hen), *n.* Same as *jungle-fowl*, 2.

jungle-rice (jung'gl-rīs), *n.* See ★*rice*[1].

jungle-wood (jung'gl-wud), *n.* [East Indian name.] Same as *saj*.

Junimist (yö'ni-mist), *n.* [Rum. *Junimea*, name of a literary society, + *-ist*.] In recent Rumanian history, a member of the party of young conservatives, moderately liberal in views and an offshoot from the old conservatives. The name is derived from Junimea, a literary association.

Another party [in Rumania] which now attracted considerable attention was that of the *Junimists*, or Young Conservatives. The name was taken from a literary society formed in Jassy in 1874 by Messrs P. Carp, Rosetti, and Maiorescu, and transformed into a political association in 1881. Their programme for home affairs involved the amelioration of the position of the peasantry and working classes, whose progress they considered had been overlooked, the irremovability of the magistracy, and a revision of the communal law in the sense of decentralization. *Encyc. Brit.*, XXXII. 324.

juniorate (jö'nyo-rāt), *n.* [ML. *junioratus*, the status or benefice of a junior cleric, < L. *junior*, a junior: see *junior* and *-ate*[3].] The status of a junior; specifically, in the Society of Jesus, a two years' course devoted to the review of classical studies preparatory to entering upon the course of philosophy; also, the house where such a course is given.

juniper, *n.* **2.** The American larch, *Larix laricina*.—**3.** The black spruce, *Picea Mariana*.—**Alligator-juniper** or **checkered-bark juniper,** the thick-barked juniper, *Juniperus pachyphlæa*, found in high altitudes from Texas to Arizona and Mexico. The names allude to the checkered bark, which is sometimes nearly four inches thick.—**California juniper,** *Juniperus Californica*, of California and Nevada.—**Checkered-bark juniper.** Same as *alligator*-★*juniper*.—**Creeping juniper.** (*a*) The savin or shrubby red cedar, *Juniperus Sabina*. (*b*) The ground-hemlock, *Taxus Canadensis*.—**Drooping juniper,** *Juniperus flaccida*, of southwestern Texas and northeastern Mexico, which has long, slender, drooping branches.—**Juniper bay.** See ★*bay*[2].—**Juniper swamp.** See ★*juniper-swamp*.—**Native juniper.** Same as ★*palberry*.—**Red juniper,** the red cedar, *Juniperus Virginiana*.—**Western juniper,** *Juniperus occidentalis*, the common juniper of the western United States, especially of mountainous districts and foot-hills, attaining its maximum development in the Sierra Nevadas at from 6,000 to 10,000 feet altitude.

juniperin (jö'ni-pèr-in), *n.* [*juniper* + *-in*[2].] A black resinous compound obtained from juniper berries.

juniper-pug (jö'ni-pèr-pug), *n.* A British collectors' name for a European geometrid moth, *Tephroclystia sobrinata*.

juniper-swamp (jö'ni-pèr-swomp), *n.* In the southeastern United States, a swamp, or more commonly an area in a large swamp, in which the white cedar, *Chamæcyparis thyoides*, there called juniper, is the dominant tree. In the Dismal Swamp these areas are distinguished from the ★gum-swamps. See *juniper*.

juniper-water (jö'ni pêr-wâ tẽr), *n.* An aromatic cordial flavored with juniper-berries.

juniper-worm (jö'ni-pêr-wêrm), *n.* The larva of an American geometrid moth, *Syssaura infensata*, which feeds on the foliage of the juniper.

junk-board (jungk'bôrd), *n.* A heavy and close-textured kind of millboard.

Owing to the weight of the *junk-board*, and the extreme irregularity of form of certain discs, it is better to let the disc rotate in the horizontal plane.
E. B. Titchener, Expt. Psychol., I. ii. 330.

Junker calorimeter. See ★*calorimeter.*

junket[2], *n.* **1.** (*b*) Milk artificially coagulated with rennet.

junk-hook (jungk'hůk), *n.* A hook used for extracting the junk from the head of a whale.

junk-wind (jungk'wind), *n.* A south or southwest monsoon wind of Siam, China, and Japan, favorable for sailing junks.

Junonia (jö-nō'ni-ą), *n.* [NL. (Huebner, 1816?), < L. *Juno*: see *Juno.*] A genus of butterflies of the family *Nymphalidæ*, of wide geographic distribution, occurring in India, Africa, China, the West Indies, and North and South America. The commonest species in the United States is *J. cœnia*, which occurs also in Central America.

junr. An abbreviation of *junior.*

jupe, *n.* **2.** A skirt: generally used in fashion notes.

juramentado (hö″rä-mąn-tä'dō), *n.*; pl. *juramentados* (-dos). [Sp., ppr. of *juramentar*, make oath, < *juramento*, < L. *juramentum*, an oath: see ★*juramentum.*] One who has taken an oath; specifically, a Mohammedan Malay or Moro who has sworn to die in killing as many persons, especially Christians or enemies, as he can. *Jour. Amer. Folk-lore*, July-Sept., 1902, p. 147.

juramento (hö″rä-mān'tō), *n.* [Sp., < L. *juramentum*, an oath: see ★*juramentum.*] An oath or declaration under oath.

juramentum (jö-rą-men'tum), *n.* [L., < *jurare*, swear: see *jurat*[1], *jury.*] In *civil law*, an oath.

Juramentum calumniæ [oath of calumny], in *civil* and *canon law*, an oath required of parties to an action, and of the attorneys of the parties, that in prosecuting or defending the action they are not influenced by malice, but believe in the justice of their cause.

jurata (jö-rā'tą), *n.* [ML.: see *jury.*] In *old Eng. law*, a jury.

juratorial (jö-rą-tō'ri-ąl), *a.* [As *juratory* + -*al*[1].] Pertaining to a jury: as, *juratorial* privileges.

Jura-Trias (jö'rą-trī″as), *n.* In *geol.*, a rock series which is regarded as representing, in part or whole, deposits of both Triassic and Jurassic time (as in the case of the Red or Newark sandstones of the Connecticut valley, New Jersey, Pennsylvania, and southward), or in which the distinction of age is obscure (as in the Burrum and Ipswich formations of Queensland).

jure (jör), *v. t.* [A back-formation from *juror.*] A mocking word in the passage quoted, conveying a vague threat.

You are Grand Jurors, are ye? We'll *jure* ye, i' faith.
Shak., 1. Hen. IV, ii. 2.

jurisp. An abbreviation of *jurisprudence.*

jurnal, jurnalism, jurnalist. Simplified spellings of *journal, journalism, journalist.*

jurney, *n.* and *v. i.* A simplified spelling of *journey.*

jurubeba (zhö-rö-bā'bą), *n.* [Braz.] *Solanum paniculatum*, a medicinal plant of the nightshade family, much used in Brazil, especially for affections of the liver and spleen.

jury, *n.* **Common jury.** See *trial jury*, under *jury.* **Hung jury,** in *law*, one that fails to agree upon a verdict.—**Jury of the vicinage,** a jury drawn from the county where the trial is to be held. In former English law it meant a jury drawn from the immediate neighborhood, hence its name. **To poll a jury,** to call upon each juror individually to know if the verdict given by the foreman is the verdict of each one.

jury-coat (jö'ri-kōt), *n.* A substituted coat, or one used for the occasion. See *jury-mast, jury-rudder.*

The skipper winked his Western eye, and swore by a China storm:—
'They ha' rigged him a Joseph's *jury-coat* to keep his honour warm.'
R. Kipling, The Three Captains, in Barrack-room Ballads, [p. 154.

jury-mast, *n.* **2.** In *surg.*, a metal rod attached to a plaster jacket and supporting a sling in which the head rests by the chin and occiput: employed to relieve the spine of the weight of the head in caries of the cervical or upper dorsal vertebræ.

jury-sail (jö'ri-sāl), *n.* A temporary sail which fills the place of one that has been blown away or damaged; a sail that best suits certain conditions that are out of the ordinary.

jury-wheel (jö'ri-hwēl), *n.* A circular revolving box in which the names of persons subject to be drawn to serve as jurors are placed to be mingled and then drawn out by lot.

jus[2], *n.* **Juris et de jure,** in *law*, of right and by right. A presumption *juris et de jure* is a conclusive presumption of law or fact.—**Jus abutendi** ['right of using up'], in *Rom. law*, the right of absolute dominion over property. **Jus actus** ['right of driving'], in *Rom. law*, a servitude by which a right of passage for carriages or cattle over the servient estate was given.—**Jus ad rem,** in *civil law*, the right to a thing. It exists only relatively, and can be exercised only through another, as distinguished from *jus in re*, in which dominion over the thing is such that the right can be absolutely exercised without reference to another.—**Jus Ælianum,** a body of laws, published about 200 B.C. by Sextus Ælius, consisting of three parts; the first two related to the law of the twelve tables and their interpretation and the third was a description of forms of procedure. **Jus æquum,** in *Rom. law*, equitable law, as distinguished from the *jus strictum.* **Jus anglorum,** in *Eng. law*, the laws and customs of the West Saxons during the time of the heptarchy.—**Jus aquæductus,** in *civil law*, a servitude or easement by which the owner of the dominant estate had the right to receive water over the land of the servient estate.—**Jus aquæhaustus,** in *Rom. law*, a servitude by which was given the right to water cattle on another's land or to draw water from another's well.—**Jus bellum dicendi,** in *international law*, the right of declaring war.—**Jus civile,** in *Rom. law*: (*b*) The local law of Rome. (*c*) Private as distinguished from public or international law.—**Jus civitatis,** in *Rom. law*: (*a*) Full citizenship with all its prerogatives and privileges. (*b*) The law of a particular state as distinguished from the *jus gentium*, or law of nations.—**Jus cloacæ,** in *civil law*, a servitude or easement by which the owner of the dominant estate has a right to have the waters which fall upon it conducted over the land of the servient estate.—**Jus deliberandi,** in *law*, right of deliberation; a time given to an heir in which to determine whether or not he will accept an inheritance.—**Jus devolutum,** in *old Scots eccles. law*, the right of the presbytery to present a minister to a vacant parish or benefice provided the patron did not exercise his right to fill the vacancy within the time prescribed by law.—**Jus disponendi,** in *law*, right of disposing of a thing: in general, it means the right of alienation. The term is used specifically with reference to—(*a*) the right of a married woman to dispose of her separate property; (*b*) the right of a vendor in a conditional sale where possession is given to the vendee but title is reserved as security for payment.—**Jus distrahendi,** in *law*, right to sell pledged goods in case they are not redeemed.—**Jus dividendi,** in *law*, the right to dispose of real estate by will.—**Jus fideiciarum,** in *civil law*, the right of a fideicommissary to that which was held in trust for him.—**Jus Flavianum,** in *Rom. law*, a publication of the law of procedure by Cneius Flavius, 305 B.C.—**Jus fodiendi,** in *civil law*, a servitude by which the right to dig upon the land of the servient estate was given.—**Jus itineris,** in *Rom. law*, a servitude by which a right to ride or walk over the servient estate is given.—**Jus mariti,** (*a*) In *Scots law*, the right of a husband to administer his wife's goods and the rents of her heritage during coverture. (*b*) In *common law*, the rights of a husband.—**Jus Papirianum,** a collection of royal laws said to have been in force in early Roman times during the reigns of Romulus, Numa, and other ancient kings.—**Jus protegendi,** in *civil law*, a servitude or easement by which a part of the roof or structure of one house was made to extend over that of another.—**Jus quiritium,** in *Rom. law*, the right of a Roman citizen to own property.—**Jus relictæ,** in *Scots law*, a wife's right, upon her husband's death, to one third of his personalty if he has issue and to one half if he has none. Compare ★*jus relicti.*—**Jus relicti,** in *Scots law*, a husband's right, upon his wife's death, to one third of her personalty if she has issue and to one half if she has none. **Jus singulare** a law applicable to an individual case or class of cases. It is an exception to the ordinary law, and when beneficial to particular classes of persons is called a privilege. If it confers a particular right upon a particular person, it is called a special law.—**Jus utendi,** in *law*, the right of using the property of another without materially altering or destroying it, as distinguished from ★*jus abutendi.*

jusi (hö'sē), *n.* Same as ★*husi.*

juslik (yöz'lik), *n.* [Turk. **yuzliq*, < *yuz*, one hundred, + -*liq*, an adj. suffix.] A Turkish coin: (*a*) the *white juslik*, of the value of 100 paras; (*b*) the *yellow juslik* or 100-piaster gold piece; the lira Turca.

Jus. P. An abbreviation of *Justice of the Peace.*

jussion (jush'ọn), *n.* [L. *jussio*(*n*-), order, < *jubere* (pp. *jussus*), order, command.] Ordering; commanding; command.—**Letters of jussion,** letters sent by the king of France ordering the Parliament to register ordinances.

Just. An abbreviation (*a*) of *Justice;* (*b*) of *Justinian.*

justice, *n.*—**Distributive justice,** in *law*, that which governs the distribution of rewards and punishments, assigning to every man the reward his merit deserves or proper punishment for his crimes: in contradistinction to commutative justice, or justice in barter and exchange generally.—**Justice of oyer and terminer,** a justice of the court of oyer and terminer. See *court of oyer and terminer*, under *oyer.*—**Justices of the pavilion,** in *Eng. law*, justices of a certain piepowder court established by the Bishop of Winchester at the fair of St. Giles Hills during the reign of Edward IV.—**Preventive justice,** in *law*, justice administered with a view to preventing a wrong or crime, as by injunctive relief, putting under bonds to keep the peace, etc.

justiceman (jus'tis-mąn), *n.* In *mining*, a check weighman acting on behalf of the miners. *Barrowman*, Glossary. [Scotch.]

justice-weed (jus'tis-wēd), *n.* Either of two American species of *Eupatorium*, *E. leucolepis* and *E. hyssopifolium.*

justifier, *n.* **2.** In *printing:* (*c*) The wooden wedge once used in old forms of hand-press to keep together parts about to separate.

justify, *v. t.*—**Justifying velocity.** See ★*velocity.*

justo (zhös'tō), *n.* [Pg.] A gold coin of John II. of Portugal (1481-95), apparently equal to from 540 to 600 reis. The name was suggested by the reverse legend "Et justus ut palma florebit."

justo-major (jus'tō-mā″jọr), *a.* [Short for NL. *pelvis æquabiliter justo-major*, 'a pelvis uniformly larger than normal.'] In *obstet.*, a term employed to denote a pelvis of normal shape, but the diameters of which are greater than normal.

justo-minor (jus'tō-mī″nọr), *a.* [Short for *pelvis æquabiliter justo-minor*, 'a pelvis uniformly smaller than normal.'] In *obstet.*, a term employed to denote a pelvis of normal shape but unusually small.

jute[2], *n.*—**China jute,** the fiber of *Abutilon Abutilon*, cultivated in China. See *American jute*, under *jute*[2].

Juvavian (jö-vā'vi-ąn), *a.* and *n.* [G. *Juvavisch*, < ML. *Juvavum* or *Juvavia*, name of Salzburg.] Taking name from the old Juvavum. See the etymology.—**Juvavian province,** in *geol.*, a province of the Alpine Trias occupying the northeast slopes of the Alps and extending into Hungary. It is characterized by its extensive ammonoid cephalopod fauna, comprising species of many genera.—**Juvavian stage,** in *geol.*, a stage of the upper pelagic Triassic system in Europe and Asia, preceded by the Carinthian and followed by the Rhætic stage, and forming the earlier part of the Bajuvarian series. It is represented in Europe by the Juvavian Halstatt limestone and the Dachstein limestone, and in India by the zones of *Clydonautilus griesbachi* and *Steinmannites undulostriatus* and the beds with *Spiriferina griesbachi.*

juvenilia (jö-ve-nil'i-ą), *n. pl.* [NL. prop. neut. pl. of *juvenilis*, juvenile.] Things done (especially written) in youth; juvenile writings or works of art. *Athenæum*, June 24, 1905, p. 776.

juxta-articular (juks″tą-är-tik'ū-lär), *a.* In the immediate neighborhood of a joint.

juxtabasal (juks-tą-bā'sąl), *a.* Near or next to the basal parts.

Juxtaposed twin. Same as *contact-twin.* See *twin*[1], 3.

juxtapositive (juks-tą-poz'i-tiv), *a.* and *n.* In *gram.*, noting a syntactic case expressing position by the side of an object. *A. S. Gatschet*, Gram. of the Klamath Lang., p. 470.

juxtapositer (juks-tą-poz'i-tẽr), *n.* An attachment to the spectrophotometer, designed by Milne, for bringing together, along parallel paths, the two beams of light the spectra of which are to be compared.

juxtaspinal (juks-tą-spī'nąl), *a.* Alongside the spinal column or a spinous process anywhere.

juxtaterrestrial (juks″tą-te-res'tri-ąl), *a.* Near the land: said of the ocean-bottom.

Under the most favorable conditions, therefore, the organic remains actually preserved will usually represent little more than a mere fraction of the whole assemblage of life in these *juxta-terrestrial* parts of the ocean.
Geikie, Text-book of Geol. (4th ed.), p. 828.

J. V. D. Same as *J. U. D.*

3. As an abbreviation: (*d*) In *elect.*, of *kathode* (*cathode*, which see) and *kathodic* (*cathodic*).—**4.** In *math.*: (*b*) [*cap.*] The Lemoine point in geometry.—**6.** In *mineral.*, the middle letter of the general symbol *hkl*, given to the face of a crystal in the system of Miller. See ★*symbol*[1]. **7.**—**7.** In *phys.*: (*a*) The symbol usually employed for *moment of inertia*. The letter K is used by some writers as a symbol of *electrostatic capacity*, but C is now almost universally adopted for this quantity. (*b*) A symbol usually employed to designate *magnetic susceptibility*. (*c*) A symbol for *absolute temperature*.

K. A. An abbreviation of *Knight of St. Andrew* (Russia).

kabaya, *n.* See *cabaya*.

kabiki (kä-bē'kē), *n.* [Philippine name.] In the Philippine Islands, *Mimusops Elengi*, a tree having sweet-scented flowers, which retain their odor when dried and from which a scent is prepared by distillation. The wood is hard and heavy and of a pinkish-red color, and the bark is bitter and is used medicinally. The berries are sometimes eaten by the natives, and the seeds yield an oil which in India is used for cooking. See *Mimusops*.

kabuto (kä-bö-tō') *n.* [Jap., a helmet.] The pot-helmet of old Japanese armor.

kachina (kä-chē'nä), *n.* Same as ★*katcina*.

kackle (kak'l), *v. t.*; pret. and pp. *kackled*, ppr. *kackling*. [Origin unknown.] To secure (rigging) against chafing by making fast one end of a rope, then hitching alternately right and left.

kæmpferid (kemp'fē-rid), *n.* [*Kæmpferia* + *-id*[1].] A sulphur-colored bitter principle, $C_{16}H_{12}O_6.H_2O$, contained in galangal-root, radix galangæ. It crystallizes in flat needles, melts at 221–222° C., and sublimes with some decomposition.

kaffeeklatsch (kä'fā-kläch), *n.* [G., < *kaffee*, coffee, + *klatsch*, < *klatschen*, chat, chatter.] An afternoon party in Germany at which coffee or tea is drunk; an 'afternoon tea' in Germany.

German married women are fond of meeting in knots of three or four in the afternoon at each other's houses for the purpose of enjoying a social cup of coffee. To these innocent gatherings their unfeeling liege lords have given the name of *kaffeeklatsch*.
J. M. Hart, German Universities, p. 162.

Kafir. I. *n.* **5.** *pl.* The stock-exchange term for South African mine shares. [Eng.]

II. *a.*—**Kafir butter.** See ★*butter*[1]. **Kafir chestnut.** Same as *wild chestnut*, under *chestnut*.—**Kafir cotton.** See ★*cotton*[1].—**Kafir piano.** Same as *zanze*.

Kafir-corn, *n.* See *Indian millet*, under *millet*, and *sorghum*, 2. In the semi-arid regions of western Kansas and in other places Kafir-corn has become of great agricultural importance on account of its ability to resist drought. Some varieties—for example, red Kafir-corn—are adapted to use as forage; others, particularly that known as *Jerusalem corn*, furnish grain.

Kafir-plum (kaf'ėr-plum), *n.* Either of two spiny South African shrubs of the family *Flacourtiaceæ*, *Dovyalis rhamnoides* and *D. rotundifolia*, yielding edible, pulpy fruits which make good preserves.

Kafir-thorn (kaf'ėr-thôrn), *n.* The African tea-tree, *Lycium Afrum*. See *Lycium*.

kaguan (kä-gwän'), *n.* [Native name.] The native name of the flying-lemur or colugo, *Galeopithecus*, adopted as a book-name.

kagura (kä'gö-rä or käng'ö-rä), *n.* [Jap.] One of the oldest dances of Japan, which is still to be seen in certain temples. The dancers wear curious gowns and masks. The step is solemn, dignified, and slow, and set to sweet music. It is supposed to be the dance by which the sun-goddess was lured from the cave in which she had secluded herself. *C. M. Solwey*, Fans of Japan, p. 71.

kagurazame (kä-gö-rä-zä'me), *n.* [Jap., < *kagura*, a dance, + *same*, a shark.] The frill-shark, *Chlamydoselachus anguineus*, of the family *Chlamydoselachidæ*. Also called *rabuka*.

kagyos (käg'yōs), *n.* [Tagalog *kagyos*.] In the Philippine Islands, the pigeon-pea, *Cajan Cajan*.

kahau (kä'hou), *n.* [Malay *kāhau*, so called from its cry. Compare Dyak *kahau*, call, *kahio*, the orang-utan. See 'Journal of the Amer. Oriental Soc.,' 1897, vol. xviii., p. 63.] The proboscis-monkey, *Nasalis larvatus*: adopted as a book-name.

kahawai (kä'hä-wī), *n.* [Maori.] A fish, *Arripis salar*, the salmon of Australia and New Zealand.

kahikatoa (kä-hē-kä'tō-ä), *n.* [Maori name.] The New Zealand tea-tree, *Leptospermum scoparium*, a large, heath-like shrub or small tree belonging to the myrtle family. See *tea-tree*, 2.

kahikomako (kä-hē-kō'mä-kō), *n.* [Maori.] A small New Zealand tree, *Pennantia corymbosa*, of the family *Olacaceæ*. It has simple, alternate, leathery leaves and fragrant white flowers. The wood is used by the Maoris for kindling fires by friction.

kahuna (kä-hö'nä), *n.* [Hawaiian.] A priest or medicine-man.

kai (kī), *n.* [Maori.] Food. [Australia and New Zealand.] *E. E. Morris*, Austral English.

kaid (kä-ēd'), *n.* [Ar. *qāid*: see *alcaid*.] In northern Africa, the head or chief of a tribe, or the governor of a town or local district.

kaik (kä'ik), *n.* [Maori *kaika* (southern dialect), *kainga* (northern dialect), a place of abode, a village, = Tongan *kaiaga*, a place where food has been eaten, a table, a manger; connected with Maori and Tongan *kai*, food: see ★*kai*.] A Maori village. [New Zealand.]

kaikai (kä'i-kä'i), *n.* [A repetition of Maori *kai*, food.] Feasting. [Colloq., Australia and New Zealand.]

kaimeh (kä'i-me), *n.* [Turk. *qāimeh*, < *qāim*, upright, firm.] Turkish paper money; notes of the Ottoman Bank.

kainga (kä'in-gä), *n.* Same as ★*kaik*. *E. E. Morris*, Austral English.

kainosite, *n.* See ★*cenosite*.

kaique, *n.* See *caique*[1].

kai-ri (kī-rē'), *n.* [Jap., < *kai*, sea, + *ri*, mile.] The Japanese name for the nautical mile (6,080 English feet).

kairocoll (kī'rō-kol), *n.* [Gr. καιρός, the right time, + κόλλα, glue.] A colorless compound, $C_{11}H_{11}NO_2$, prepared by the action of tetrahydroxyquinoline on chloracetic acid. It crystallizes in long, slender needles and melts at 66° C.

kairolin (kī'rō-lin), *n.* A colorless liquid, $C_9H_{10}NCH_3$, prepared by the action of methyl iodide on tetrahydroquinoline; methyltetrahydroquinoline. It boils at 242–244° C. under 720 millimeters pressure, and is used in medicine as a febrifuge.

kaisergelb (kī'zėr-gelp), *n.* [G., 'imperial yellow.'] One of the modern coal-tar products used as a yellow dye on cloth and to a larger extent on leather. It is the sodium or ammonium salt of hexanitrodiphenylamine. Also known as *aurantia*. *Thorpe*, Dict. Applied Chem., II. 377.

kaiserroth (kī'zėr-rōt), *n.* [G., 'imperial red.'] A coal-tar derivative used in dyeing red. It belongs to the class of phthaleins, and is the sodium salt of dinitro-dibromfluorescein. Also known as *eosin scarlet* and *safrosin*.

kaiserschwarz (kī'zėr-shvärts), *n.* [G., 'imperial black.'] A black dyestuff consisting of logwood extract oxidized by boiling with salts of copper, iron, or chromium, and oxalic acid. There are several preparations sold under this name, varying in detail as to the process used in making them. Also known as *indigo substitute* and *noir impérial*.

kaiserzinn (kī'zėr-tsin), *n.* [G., 'imperial tin.'] A pewter-like material that takes a high polish. It is used for making utensils, dishes, and ornaments.

kaitaka (kä-i-tä'kä), *n.* [Maori.] A mat of fine texture made by New Zealanders and often worn by them as a cloak. *E. E. Morris*, Austral English.

kaivel (kä'vel), *n.* [Variant of *cavel*[2], *kevel*[2].] A lot. See *cavel*[2], and the extract.

The fishermen of northeast Scotland, when they return after a successful haul, divide the spoil into as many shares as there are men in the boat, with one share more for the boat. Each man then procures a piece of wood or stone, on which he puts a private mark. These lots are put in a heap, and an outsider is called in who throws one lot or *kaivel* upon each heap of fish. Each fisherman then finds his *kaivel*, and the heap on which it lies is his. This system of "casting *kaivels*," as it is called, is certainly of great antiquity. *Encyc. Brit.*, XXXIII. 899.

kaiwhiria (kä-i-whē'ri-ä), *n.* [Maori name.] In New Zealand, an evergreen shrub or small tree, *Hedycarya arborea*, belonging to the family *Monimiaceæ*, with opposite leaves, axillary panicles of diœcious flowers, and fruit in the form of red drupes. The wood is finely marked and is suitable for veneering.

kaka-bill (kä'kä-bil), *n.* Same as *parrotbeak*. See ★*kowhai*.

kakaguate (kä-kä-gwä'tā), *n.* In Guam, same as ★*cacahuate*.

kakahuete (kä-kä-hwā'tā), *n.* In the Philippine Islands, same as ★*cacahuate*.

kakalaioa (kä-kä-lī-ō'ä), *n.* [Hawaiian, lit. 'thorny.'] A native name in Hawaii for the nicker-tree, *Guilandina Crista*. See ★*bayag-kambing*.

kakariki (kä-kä'rē-kē), *n.* A Maori name, adopted to some extent for a small green parrot of the genus *Platycercus*. *P. novæhollandiæ* is the more common species.

kakawahie (kä-kä-wä-hē'ä), *n.* [Hawaiian.] One of the honey-suckers, *Oreomyza flammea*, peculiar to the Sandwich Islands, which inhabits the island of Molokai.

kakerlak, *n.* See ★*kakkerlak*.

kakistocrat (ka-kis'tō-krat), *n.* [*kakistocracy* (*-crat-*).] One of the governors in a state ruled by a kakistocracy.

Kakiyemon (kä'kē-yä-mōn), *n.* The name of a Japanese artist, Sakaida Kakiyemon, of Arita, about the middle of the seventeenth century: applied to a characteristic style of decoration on Japanese porcelain, consisting of a few simple motives, such as flowers, twigs of trees, and a couple of small birds, scattered sparingly on the white ground, and painted in enamel colors, usually red, green, and blue. This style was later employed at Chantilly, Chelsea, Bow, Worcester, and elsewhere.

kakke (käk'kā), *n.* [Jap.] Same as *beriberi*.

kakkerlak (kä'kėr-lak), *n.* [Also *kakerlak*, *kakerlac*; < D. *kakkerlak*, G. *kakerlak* (F. *kakerla*, *cancrelat*, cockroach, *kakerlaque*, *chacrelas*, albino), said to be of S. Amer. origin, but perhaps representing a perversion of the original of Sp. *cucaracha*, E. *cockroach*. The sense 'albino' seems to be an allusion to the cockroach's shrinking from the light.] **1.** A cockroach. *Cassell*, Nat. Hist., VI. 132. *N. E. D.* —**2.** An albino.

kakkerlakism (kä'kėr-lak-izm), *n.* [*kakkerlak* + *-ism*.] Same as *albinism*. *Buck*, Med. Handbook, I. 165.

kala-azar (kä'lä-ä'zär), *n.* [Hind. *kālā-āzār*, < *kālā*, black, + *āzār*, sickness.] 'The black sickness'; a fever of India marked by an intermittent or remittent stage and a stage of continued fever, with progressive anemia, prostration, and dropsy.

Kala-azar has for a number of years been one of the riddles of tropical medicine. There have probably been few diseases so frequently investigated during so short a

period in which such varying conclusions have been arrived at by those who have been occupied with the work of investigation. *Jour. Trop. Med.*, Jan. 1, 1903, p. 8.

kalaite, *n.* See *calaite.*

kalamalo (kä-lä-mä′lō), *n.* [Hawaiian *kalamalo.*] A Hawaiian grass. Same as ★*emoloa.*

kalamansanai (kä-lä̤-män-sä-nī′), *n.* [Also *calamansanai;* ⟨ Tagalog *calamansanay.*] A name in the Philippine Islands of several valuable timber-trees, especially of *Terminalia Calamansanay,* of the family *Combretaceæ,* with simple pointed leaves clustered at the ends of the branches, spikes of inconspicuous flowers, and winged, nut-like fruit. The wood is close-grained, hard and brittle, and of a color varying from light pink to dark red, often variegated in shades of red. It is susceptible of high polish and is valued for floors by the natives, who, as a rule, take great pride in having fine polished floors in their houses. Though common in several provinces, it is not often found in the markets of Manila.

kalamein (kal-ạ-mē′in), *n.* [*calam(ine)* (G. *kalmei*) + *-e-in.*] A compound of tin, antimony, bismuth, lead, and nickel used in the manufacture of a particular form of galvanized iron.

kalamias (kä-lä-mē′äs), *n.* [Tagalog name.] Same as ★*kamias.*

kalamismis (kä-lä-mēs′mēs), *n.* [Tagalog *kalamismis.*] A twining, herbaceous, trifoliate bean, *Botor tetragonolobu,* having a tuberous root and legumes with four longitudinal ruffled wings. The tender, green, succulent pods are cooked as a vegetable in the Philippine Islands and the island of Guam. In India they are pickled and the seeds are also eaten. Also called *sequidillas.*

kalantas (kä-län-täs′), *n.* [Also *calantas;* ⟨ Tagalog *calantas.*] In the Philippine Islands, *Toona Toona,* a valuable timber-tree with fragrant red wood often called *cedar* on account of its color and odor. The wood is soft and easily worked, and resembles mahogany in texture, though much lighter in weight. It is very durable, is not subject to the attacks of termites, and is chiefly used for cigar-boxes, chests, and fine interior woodwork, and sometimes by the natives in the construction of canoes. See *toon*[3].

kalapia (kä-lä̤-pē′ä), *n.* [Also *calapia;* a Philippine name; cf. Tagalog *calap,* the name of a tree.] A name in Mindanao of several trees of the family *Sapotaceæ,* especially of *Payena Leerii* and *Palaquium Celebicum,* which yield a milky latex from which gutta-percha is made. See *gutta-putih.*

kalchoid (kal′koid), *n.* [An erroneous form for ★*chalcoid,* ⟨ Gr. *χαλκοειδής,* like copper, ⟨ *χαλκός,* copper, + *εἶδος,* form.] An alloy of copper, zinc, and tin, intermediate between brass and bronze.

kale, *n.*—**Thousand-headed kale** or **cabbage,** a much-

The Thousand-headed Kale. Much reduced.

branched and leafy form of cabbage with many subvarieties, valued in Europe for feeding stock.

kalekah (kä-lē′kä), *n.* [Skt. *ka,* the letter K, the first letter of the Sanskrit alphabet, + *lekha,* stroke, line, written document.] A name for the Sanskrit alphabet.

kale-time (kāl′tīm), *n.* The hour for dinner. [Scotch.]

Kaleyard school, a recent school of fiction which comprises works describing, with a sufficient use of dialect, the lives of the homely people of Scotland. The name alludes to the Scottish song, "There grows a bonnie brier-bush in our *kailyard,*" from which John Watson ("Ian Maclaren") took the title of a series of short stories ("Beside the Bonnie Brier Bush"), in 1894.

kaleyarder (kāl′yär-dėr), *n.* One of the writers of the ★kaleyard school (which see).

kalgoorlite (kal-gōr′lit), *n.* [*Kalgoorlie* (see def.) + *-ite*[2].] A supposed telluride of gold, silver, and mercury from Kalgoorlie, West Australia. The homogeneity of the mineral has been questioned.

kaliblödite (kal-i-blėd′īt), *n.* [*kalium* + *blödite*.] Same as ★*leonite.*

kaliborite (kal-i-bō′rīt), *n.* [*kalium* + *boron* + *-ite*[2].] A massive borate of magnesium and potassium: probably identical with ★*heintzite.*

kalios (kä′lē-ōs), *n.* [Also *calios;* a native name.] In the Philippine Islands, *Streblus asper,* a small tree of the nettle family, widely distributed in the eastern tropics. It has a milky latex, rough, alternate, coriaceous leaves (sometimes used in place of sandpaper for polishing), and small edible yellow fruit. In the Philippine Islands it is of no economic importance, but in Siam it is one of the principal paper-yielding trees. See *Streblus* and *paper-tree,* 4.

kallaite (kal′ạ̄-īt), *n.* [*callai(s)* + *-ite*[2].] Same as *turquoise.*

kallilite (kal′i-lit), *n.* [Gr. *καλλι-,* beautiful, + *λίθος,* stone. A translation of G. *Schönstein:* see the definition.] A sulphobismuthid of nickel, NiBiS, which occurs in bluish-gray metallic masses at the Friedrich mine near Schönstein, Germany.

kalo (kä′lō), *n.* [Hawaiian *kalo* = Samoan *talo* = Maori *taro* = Fiji *dalo,* etc.] Same as *taro*[1].

kalog (kä′log), *n.* [Prob. native Alaskan.] A sculpin, *Myoxocephalus polyacanthocephalus,* of the North Pacific.

Kalosanthes (kal-ọ̄-san′thēz), *n.* [NL. (Haworth, 1821), ⟨ Gr. *καλός,* beautiful, + *ἄνθος,* blossom.] A genus of dicotyledonous plants of the family *Crassulaceæ.* See *Rochea.*

kalotrope (kal′ọ̄-trōp), *n.* [Gr. *καλός,* beautiful, + *τρόπος,* a turning.] A form of thaumatrope for the projection of various effects due to persistence of vision.

kalumban (kä-lùm′bän), *n.* [Tagalog name.] Same as ★*balokanag.*

kalumpang (kä-lùm′päng), *n.* [Philippine Sp. *calompang, calumpang, calumpan,* ⟨ Tagalog ★*calumpang* = Bisaya *calompang.*] In the Philippine Islands, *Sterculia fœtida,* a tree with horizontal whorls of branches and digitate leaves. It obtained its specific name from the disgusting odor of its flowers. These are followed by scarlet pods, or follicles, usually radiating in fives from a common center and split open on one side so as to show the black seeds, which are very oily. They are sometimes eaten when green, and when ripe are roasted and eaten like chestnuts. The wood is soft and easily carved. It is sometimes used in construction, but is not durable. See *stavewood,* 2, and *Sterculia* 1.

kalumpit (kä-lùm-pēt′), *n.* [Also *calumpit;* Philippine Sp., from a native name.] In the Philippine Islands, *Terminalia Bellerica,* a tree belonging to the *Combretaceæ,* and yielding edible almond-like nuts. See *belleric, ink-nut,* and *myrobalan.*

Kama (kä′mä̤), *n.* [Skt. *Kāma.*] In the Hindu Puranas, the god of love; in later Hindu writings, sensual desire.

kamachiles (kä-mä-chē′lās), *n.* [Mex. Sp. *guamuchil,* a name of the species in Mexico.] In Guam and the Philippines, *Pithecolobium dulce,* a Mexican tree introduced into those islands for the sake of its edible pods and of its bark, which yields 25 per cent. of tannin. Also *camanchile.* See ★*guamuchil.*

kamagon (kä-mä-gōn′), *n.* [Also *camagon,* Bisaya *camagong.*] In the Philippines, *Diospyros discolor,* a valuable timber-tree the heart-wood of which resembles ebony in hardness and texture. It is found in the markets in the form of logs 9 feet and upward in length and 12 inches in diameter. The wood is black with yellow streaks, dense and brittle, taking a fine polish, and is highly prized for cabinet work. The tree has simple alternate leaves, small 5-parted flowers, and large hairy fruit, usually containing 8 oval compressed hard seeds.

kamalayka (kä-mä-lä′i-kä), *n.* [Alaskan.] A waterproof shirt made of intestines of seal or walrus. [Arctic Alaska.] *Jour. Amer. Folklore,* Jan.–March, 1903, p. 26.

kamalin (kam′ạ-lin), *n.* [Formation not obvious.] A resinous substance found in the rhizome of the male fern; one of the active principles to which the vermifuge action of the raw product is supposedly due.

kamangsi (kä-mäng-sē′), *n.* [Philippine Sp. *camansi, camangsi,* ⟨ Bisaya *camansi.*] A form of the breadfruit, *Artocarpus communis,* growing in the Philippine Islands. It has lobed leaves two feet long and heads of fruit larger than a man's head, containing numerous edible, chestnut-like seeds. The tree yields a milky latex which is used medicinally as an application to ulcers; also for economic purposes. From the fleshy, club-like male inflorescence sweetmeats and preserves are made.

kamanja (kä-män′jä), *n.* [Ar. *kamanja.*] A rude viol common in Mohammedan countries. It has a small body made of a halved cocoanut-shell covered with snake-skin, a long turned wooden neck with an ornamented head, a slender metal foot, and two or three strings. It is usually rested on the ground and played from a sitting position. The kamanja and the rebab are sometimes confused, since one form of the latter resembles the former.

Kamanja and bow.

kamarezite (kam′ạ-re-zīt), *n.* [*Kamareza* in Greece, + *-ite*[2].] A hydrous copper sulphate allied to langite: found near Laurium, Greece.

kamau (kä′mou), *n.* [Appar. Hawaiian.] *Phæornis myadestina,* one of the shrikes peculiar to the Sandwich Islands.

kamazite (kam′ạ-zīt), *n.* Same as *kamacite.*

Kamchatka salmon-trout. See *salmon-trout.*

Kame moraine, terrace. See ★*moraine,* ★*terrace.*

kamias (kä-mē-äs′), *n.* [Tagalog *kamias.*] In the Philippine Islands, the bilimbi, *Averrhoa Bilimbi,* a small tree belonging to the sorrel family, having pinnately compound, sensitive leaves, clusters of crimson flowers, and pleasantly acid fruit, with the flavor of sorrel, which is eaten in the form of preserves. Also called *kalamias.* See *bilimbi* and *Averrhoa.*

kami-dana (kä″mē-dä′nä), *n.* [Jap. *kami,* god, + *tana,* shelf.] In Japan, in the Shinto cult, a 'shelf' of white unpainted and unvarnished wood attached to a wall as a sort of a household shrine. It contains several strips of paper, each inscribed with the name of a god, including one with the name of Amaterasu, the sun-goddess, the principal deity of the Shintoists. Among Buddhists the corresponding 'shelf' is called Butsu-dana or Buddha-shelf.

Next to the uji-gami comes the *kami-dana* or shrine in which are worshipped the Penates. Every Japanese, with the exception of the more bigoted members of the Buddhist sects called Nichiren-shiu and Ikkō-shiu, possesses such a shrine in his house.

Trans. Asiatic Soc. Japan, III. App. i., p. 92.

kamik (kä′mik), *n.* [Eskimo *kamik.*] Eskimo boots of sealskin or caribou-skin reaching up to the knee or to near the hip.

Kamloops trout. See ★*trout*[1].

kammatograph (kam′ạ-tọ̄-gräf), *n.* [Irreg. formed from the name of the inventor L. *Kamm* + Gr. *γράφειν,* write.] In *photog.,* a form of cinematograph in which the negatives, numbering about 600, are taken on a revolving circular glass plate 12 inches in diameter. A transparent positive from this enables the operator to project the pictures.

The photographs are taken at intervals, varying according to the rapidity of the movements of the plants during several days and sometimes weeks; they are then shown on the screen in the *kammatograph,* which is a kind of kinematograph, and thus the movements of many days can be followed in a few seconds.

Lancet, June 25, 1904, p. 1815

kämmererite (kem′ẹ̄-rėr-īt), *n.* See *penninite*

Kampecaris (kam-pek′ạ-ris), *n.* [NL., ⟨ Gr. *κάμπη,* a caterpillar, + *καρίς,* a shrimp.] A genus of large myriapods occurring in the Old Red Sandstone of Scotland. Their body-segments possess two dorsal and two ventral plates, with two pairs of legs.

kampherol (kam′fẹ̄-rol), *n.* [G. *kampher, kampfer,* camphor, + *-ol.*] A yellow coloring matter,

$$(\overset{1}{H}\overset{3}{O})_2C_6H_2 < \begin{matrix} \overset{5}{O}.\overset{1'}{C}C_6H_4\overset{4'}{O}H \\ \| \\ \underset{6}{C}OCOH \end{matrix},$$

contained in Java indigo. It can be made synthetically, and is also called 1, 3, 4′-*trihydroxyflavonol.*

kampilan, *n.* See ★*campilan.*

kamptoderm (kamp′tọ̄-dėrm), *n.* [Gr. *καμπτός,* flexible, + *δέρμα,* skin.] Same as *tentacular sheath* (which see, under *tentacular*).

kamuning (kä-mö′ning), *n.* [Philippine Sp. *camuning;* given as a Tagalog name.] In the Philippine Islands, *Chalcas paniculata,* a shrub or small tree belonging to the *Rutaceæ,* with clusters of fragrant white flowers and odd pinnate leaves. Its wood is close-grained, hard, and of an ocher-yellow color, with undulating lines and gray streaks. It is very highly prized by the Moros, who use it for making handles for their krisses and bolos. See ★*Chalcas.*

kan[1] (kän), *n.* [D. *kan,* a can, etc.: see *can*[2], *n.*] **1.** In Holland, the name given to the

liter when used as a measure of capacity for liquids.—2. In Java, a measure of capacity equal to 0.35 of a United States gallon.

K. A. N. An abbreviation of *Knight of St. Alexander Nevski.* [Russia.]

kanäe (ka-nä′e), *n.* [Maori *kanae* = Mangarevan *kanae*, name of a fish, Tahitian and Hawaiian *anae*, the mullet.] A fish, *Mugil cephalus*, of the family *Mugilidæ*, found in New Zealand waters; also, less frequently, *Mugil perusii* and *Agnostoma forsteri*.

kanaff (kän′äf), *n.* [Native name in Caucasus.] See *Dekhan* ★*hemp*.

kanaut[2] (kä-nät′), *n.* [Pers. *kānāt*, pl. of *kan*, a mine, a quarry (a tunnel).] The name applied to the Persian artificial subterranean channels formed by tunneling in water-bearing gravel or drift, for the purpose of intercepting and securing water for water-supply or irrigation.

It is on the gravel slopes that the principal trade-routes run, and it is in them that are tunnelled the "*kanauts*" or "karezes," the artificial subterreanean channels from which the water-supply for towns and for irrigation is largely derived. *Nature*, Aug. 28, 1902, p. 420.

kangaroo, *n.* **3.** An early form of 'safety' bicycle which had a large wheel in front and a small one in the rear, the forks being connected by a curved backbone, as in the ordinary 'high' bicycle, but with the saddle back of the large wheel. It was propelled by treadles connected to cranks on the front axle by connecting-rods. This allowed the weight of the rider to be kept always back of the center of the front wheel.

4. *pl.* In stock-exchange slang, West Australian mining shares.—**Antilopine kangaroo,** a book-name of *Macropus antilopinus*, one of the larger kangaroos. Also known in books as the *osphranter*.—**Dorca** or **Dorcas kangaroo,** any kangaroo of the genus *Dorcopsis*, a group characterized by having the hair on the nape directed forward. They are of moderate size, have various anatomical peculiarities, and are found in New Guinea. See cut under *Dorcopsis*.—**Forest-kangaroo,** the great kangaroo, *Macropus major*. Also known as *forester*.

kangaroo (kang-gạ-rö′), *v.* [*kangaroo, n.*] **I.** *intrans.* **1.** To leap as a kangaroo, either literally or figuratively.—**2.** To hunt the kangaroo. *E. E. Morris*, Austral English.

II. *trans.* To whip with a kangaroo-skin whip-lash.

kangarooer (kang-gạ-rö′ėr), *n.* One who hunts kangaroos.

kangaroo-fly (kang-gạ-rö′flī), *n.* A name given in Australia to a small biting fly said to belong to the genus *Cabarus*.

kangaroo-grass, *n.* **2.** Any one of several species of Australian grasses belonging to the genus *Themeda*, especially *T. triandra*, a tall perennial grass, valued for fodder.

kangaroo-hop (kang-gạ-rö′hop), *n.* An affected gait. [Australian slang.]

The young lady that affects waterfalls, the Grecian bend, or the *kangaroo hop*.
Spectator (Melbourne), May 22, 1875, quoted in E. E. [Morris, Austral English.

kangarooing (kang-gạ-rö′ing), *n.* The chase of the kangaroo.

In chasing kangaroos, or, as it is technically termed, *kangarooing*, large powerful dogs are used.
Mrs. Meredith.

kangaroo-net (kang-gạ-rö′net), *n.* A net made by Australian aborigines to catch the kangaroo. *E. E. Morris*, Austral English.

Kan., Kans. Abbreviations of *Kansas*.

kannume (kä-nö′me), *n.* [Ar.] A fish, *Mormyrus kannume*, of the family *Mormyridæ*, found in the Nile. It was an object of veneration to the ancient Egyptians.

kanoon, *n.* See *kanun*.

Kansan (kan′zan), *a.* and *n.* **I.** *a.* **1.** Of or pertaining to the State of Kansas.—**2.** In *geol.*, noting an epoch or subdivision of the glacial period of which the deposits are found in Kansas.

II. *n.* A native or inhabitant of the State of Kansas.

Kantem, *n.* See ★*cantem*.

kapa (kä′pä), *n.* [Hawaiian *kapa*, = *Marquesan*, etc., *tapa*.] **1.** Same as *tapa* (which see).—**2.** In Hawaii, cloth of any kind; clothes generally.

Kapellmeister music, music written according to rule, but without originality or genius.

Kapenaar (kä-pe-när′), *n.* [Cape D., < *kaap*, cape.] In South Africa, among the Dutch, a white person dwelling in Capetown; in the Netherlands, a white person dwelling in Cape Colony.

Kaph[2] (käf), *n.* [Heb. *kaph*, *kaf*, orig. *kap*.] The eleventh letter (כ) of the Hebrew alphabet, corresponding to the Greek *kappa* and English *k* or *c*. Its numerical value is XX.

kapp (kap), *n.* [From Gisbert *Kapp*, a designer of electrical machines.] In *elect.*, an obsolete practical unit for magnetic flux, equal to 6,000 maxwells or c. g. s. units.

kappa (kap′ä), *n.* [Gr. κάππα, < Phen. (Heb.) *kap*: see *K*, and ★*kaph*[2].] The Greek letter κ: represented in English by *k*, and sometimes by *c*.

kapparah (ka-pä′rä), *n.*; pl. *kapparoth* (ka-pä′rōt). [Heb. (Yiddish *kappore*), < *kappar*, forgive, cover over, atone. The phrase is *kapparoth* (Yiddish *kappores*) *schlagen* (G. *schlagen*, beat), lit. 'beating the atonement.'] A Jewish custom by which, on the eve of the Day of Atonement, a fowl (a cock for a man and a hen for a woman), after several passages from the Scriptures treating of atonement, confession, and prayer have been repeated, is moved around the head three times. The following declaration is then repeated: "This is my substitute, this is my commutation, this is my atonement. This cock goeth to death, but I shall be gathered in and walk into a long and happy life and into peace." The fowl is then killed. This custom is discarded by the reformed Jews, but is still in vogue among the strictly orthodox members of the synagogue.

kapta (kap′tä), *n.* [Lappish?] A shirt of reindeer-skin worn by the Laplanders.

kapu (kä′pö), *n.* [Maori *kapu*, the hollow of the hand, a curved adz.] An adz used in New Zealand.

Karaitism (kā′rạ-īt-izm), *n.* Same as *Karaism*.

karaka (kä-rä′kä), *n.* [Maori *karaka*, = Mangaian *karaka*, Fiji *qalaka*, names of trees.] A New Zealand tree, *Corynocarpus lævigata*, of the cashew family, yielding orange-colored berries two or three inches long. The pulp of the berry is eaten raw, but the kernel is poisonous unless cooked for several days. Thus prepared it forms an important article of native food. Called also *cow-tree*.

karakin (kar′ạ-kin), *n.* [*karaka* + *-in*[2].] A colorless glucoside contained in the kernels of karaka-tree berries. It forms pearly lustrous crystals, melting at 90° C.

karamu (kä-rä-mö′), *n.* [Maori.] Any one of several species of Australasian trees and shrubs belonging to the genus *Coprosma*, especially *C. lucida*. See *orangeleaf*, ★*coffee-bush*, and ★*Coprosma*.—**Bush karamu,** the orangeleaf or looking-glass bush, *Coprosma lucida*.

karamushi (kä″rä-mö′shi), *n.* [Jap.] Same as *ramie*.

karanja (kä-rän′jä), *n.* [Bengali, < Skt. *kuranja*.] Same as ★*kurung*.

Karatsu pottery. See ★*pottery*.

karbi (kär′bi), *n.* [Native Australian.] A small stingless bee, probably *Melipona carbonaria*, about $\frac{3}{16}$ of an inch in length, which builds its comb in the shape of a spiral staircase. It fights desperately with its mandibles and is apparently of a very fierce disposition. *Cambridge Nat. Hist.*, VI. 63.

kareau (kä-rā-ou′), *n.* [Maori *kareao*, < *kare*, a whip-lash, + *au*, cord.] In New Zealand, *Ripogonum scandens*, a climbing shrub of the smilax family, the slender wiry stems of which form interwoven thickets in the forest. The long underground rootstocks of this plant have been used as sarsaparilla by the settlers, and the stems as cord and for weaving baskets. Also called *pirita*.

Karelian (ka-rē′li-ạn), *a.* and *n.* [NL. **Karelia* (G. *Karalier*, *n. pl.*), < Finn. *Karjaläiset* (*karja*, flock, herd).] **I.** *a.* Of or relating to the Karelians.

II. *n.* **1.** One of the eastern divisions of the Baltic Finns.—**2.** The language of these eastern Finns.

Karian, *a.* and *n.* Same as *Carian*.

karimata (kä-ri-mä′tä), *n.* [Jap.] In old Japanese armor, a bifurcated arrow, sometimes combined with an apparatus for giving the weapon a whistling sound in the air.

kariskis (kä-ris′kis), *n.* [A Philippine name, prob. < Tagalog and Bisaya *caliskis*, a scale, to scale off. The small leaflets fold together in an imbricating manner when asleep.] In the Philippine Islands, the silk-tree, or pink siris, *Albizzia Julibrissin*, the bark of which is sometimes used by the natives to produce a dark dye: the wood is used for furniture. See *silk-tree* and *siris*.

Karoo beds. Same as *Karoo series* (which see, under *karoo*).

Karoomys (kä-rö′mis), *n.* [NL., viciously formed < E. *karoo* + Gr. μῦς, a mouse.] A genus of small fossil mammals from the Karoo beds of South Africa, believed to represent the oldest known mammalian. The only species is *K. browni*.

karoro (kä′rō-rō), *n.* [Maori.] One of the smaller black-backed gulls, *Larus antipodum*, which occurs on the coast of New Zealand.

karri (kä′rē), *n.* [Aboriginal Australian.] In Western Australia, a gigantic tree, *Eucalyptus diversicolor*. It attains an average height of 200 feet, and several feet from the ground a diameter of 4 feet. The wood is red, hard, heavy, strong, tough and wavy in the grain, which makes it difficult to work, but it is much used for paving blocks, and the tall, straight trunks make good masts. See *karri wood*, under *wood*.

karst (kärst), *n.* [Cf. Lith. *karsti*, Lett. *kārst*, grow old: Pol. *karślak*, a stunted tree.] A region whose surface features are produced by the solvent action of water on limestone. Also used attributively.

The author [Dr. Cvijic], who is well known for his useful monograph on the phenomena of the "*Karst*."
Geog. Jour. (R. G. S.), XIII. 427.

The character of the country around these parts of the lake [Prespa] resembles that of the Dalmatian islands, while the lake itself is of the nature of a "*Karst*" lake.
Geog. Jour. (R. G. S.), XV. 174.

kartel (kär′tel), *n.* [Cape D., prob. < Pg. *catel*, *catle*, *catre*, little bed, said to be < Tamil *kattil*, a bedstead.] A wooden hammock used in an ox-wagon. [South Africa.]

karunda (kä-run′dä), *n.* [Hindi.] A low, spiny bush of the dogbane family, *Arduina Carandas*, much cultivated in India for its edible fruits. These are pale-green when young, white and pink when approaching maturity, and nearly black when ripe. The unripe fruit is astringent and is then only made into pickles, while when ripe it has a pleasant acid taste and is always eaten uncooked.

karyapsis (kar-i-ap′sis), *n.* [Gr. κάρυον, a nut, a nucleus, + ἁψίς, a joining.] The fusion of the nuclei of conjugating cells, viewed as marking a stage in the process of sexual conjugation. Karyapsis comes between plasmapsis and mitapsis. *Cook and Swingle.*

karyaster (kar-i-as′tėr), *n.* [Gr. κάρυον, nut, kernel, + ἀστήρ, star: see *aster*[1].] In *cytol.*, the star-shaped cluster of chromosomes in the karyokinetic spindle: opposed to ★*cytaster*. See ★*aster*[1], 7, with cut.

karyenchyma (kar-i-eng′ki-mä), *n.* [NL., < Gr. κάρυον, nut, kernel, + ἔγχυμα, an infusion: see ★*enchyma*.] Same as ★*karyolymph*.

karyobasis (kar-i-ob′ạ-sis), *n.* [NL., < Gr. κάρυον, nut, nucleus, + βάσις, basis.] Same as ★*karyomitoplasm*.

karyochrome (kar′i-ō-krōm), *n.* [Gr. κάρυον, nut, + χρῶμα, color.] In *neurol.*, a name given by Nissl to certain nerve-cells in which the cell-body is very small but in which the nucleus is as large as in ordinary nerve-cells or at any rate larger than that of a neuroglia cell. See ★*caryochrome*.

karyogamy (kar-i-og′ạ-mi), *n.* [Gr. κάρυον, nut, nucleus, + γάμος, marriage.] In *embryol.*, the union of two nuclei, as during the fertilization of the egg by the spermatozoön.

karyohyaloplasm (kar″i-ō-hī′ạ-lō-plazm), *n.* [Gr. κάρυον, nut, nucleus, + ὕαλος, glass, + πλάσμα, anything formed.] Same as ★*karyolymph* or ★*karyenchyma*.

karyolyma (kar-i-ō-lī′mä), *n.*; pl. *karyolymata* (-mä-tä). [NL., < Gr. κάρυον, nut, nucleus, + (appar.) λῦμα, a pledge (a thing to be released), taken in sense of λύσις, loosening.] The karyokinetic or mitotic figure in cell-division. *Auerbach*, 1876.

karyolymph (kar′i-ō-limf), *n.* [Gr. κάρυον, nut, kernel, + L. *lympha*, water: see *lymph*.] The liquid contents of the cell-nucleus, as distinguished from the less liquid or more stable linin reticulum, chromosomes, and nucleoli. Also called *karyenchyma*.

karyolysis, *n.* Same as ★*caryolysis*.

karyomerite (kar-i-om′ẹ-rīt), *n.* [Gr. κάρυον, nut, kernel, + μέρος, a part, + *-ite*[2].] A plasmic nucleolus which serves as a temporary repository for a chromosome in the eggs of some animals.

karyomicrosoma (kar″i-ō-mī-krō-sō′mä), *n.*; pl. *karyomicrosomata* (-ma-tä). [NL., < Gr. κάρυον, a nut, kernel, + μικρός, small, + σῶμα, body.] Same as ★*karyomicrosome*.

karyomicrosome (kar″i-ō-mī′krō-sōm), *n.* [Gr. κάρυον, nut, nucleus, + μικρός, small, + σῶμα,

body.] One of the minute granules or microsomes supposed to constitute the karyoplasm of the cell, as the cytomicrosomes are supposed to make up the cytoplasm.

karyomite (kar'i-ō-mīt), *n.* [Gr. κάρυον, nut, nucleus, + μίτος, thread.] One of the threads which constitute the reticulum of the cell-nucleus.

karyomitome (kar-i-om'i-tōm), *n.* [Gr. κάρυον, nut, nucleus, + μίτος, thread: see ★*mitome.*] In *cytol.*, the fibrillar net or reticulum which extends through the nucleus of the cell in the resting-stage.

karyomiton (kar-i-om'i-ton), *n.* [Gr. κάρυον, nut, nucleus, + μίτος, thread.] Same as ★*karyomitome.*

karyomitoplasm (kar″i-ō-mī'tō-plazm), *n.* Gr. κάρυον, nut, nucleus, + μίτος, thread, + πλάσμα, anything formed.] In *cytol.*, the substance of which the karyomitome, or nuclear reticulum, consists: opposed to ★*karyolymph* or ★*karyenchyma.*

karyomitotic (kar″i-ō-mī-tot'ik), *a.* Of or pertaining to karyomitosis.

karyon (kar'i-on), *n.* [NL., also ★*caryon* (*caryo-*), < Gr. κάρυον, a nut, kernel, nucleus.] The cell-nucleus.

karyophan (kar'i-ō-fan), *n.* One of the nucleus-like granules in the microsomes of the strand of contractile substance in the stalk of *Vorticella* and other related infusorians.

karyoplasmic (kar″i-ō-plaz'mik), *a.* Of or pertaining to the karyoplasm, or nuclear plasm of the cell.

karyorhexis, karyorrhexis, *n.* See ★*caryorrhexis.*

karyosoma (kar-i-o-so'mä), *n.*; pl. *karyosomata* (ma-tä). [NL.] Same as ★*karyosome.*

karyosome (kar'i-ō-sōm), *n.* [NL. *karyosoma*, < Gr. κάρυον, nut, nucleus, + σῶμα, body.] 1. A nucleolus-like mass of chromatin in the cell-nucleus: distinguished from the *plasmosome*, or true nucleolus.—2. A chromosome.—3. A micronucleus of the *Infusoria.*

karyostenosis (kar″i-ō-stē-nō'sis), *n.* [NL., < Gr. κάρυον, nut, nucleus, + στένωσις, narrowing: see *stenosis.*] Amitosis, akinesis, or direct cell-division, as distinguished from mitosis or karyokinesis: so called because the nucleus divides by simple constriction without forming a spindle. See ★*amitosis*, with cut.

karyostenotic (kar″i-ō-stē-not'ik), *a.* Of or pertaining to karyostenosis, or amitotic cell-division.

karyota (kar-i-ō'tä), *n. pl.* [Gr. καρυωτός, having nuts (as a tree or a cup), < κάρυον, a nut, nucleus.] A general term for nucleated cells, as opposed to *akaryota*, or non-nucleated cells. *Flemming*, 1882.

karyotheca (kar″i-ō-thē'kä), *n.* See ★*caryotheca.*

kaseelee (ka-sē'lē), *n.* [E. Indian.] The black-bellied darter, or snake-bird, *Plotus melanogaster*, found on the coast of southern Asia and also in the Philippine Islands.

kaselle (ka-sel'), *n.* [NGr. κασέλλα, a box, case, trunk, compartment, < It. *casella*, a small room, closet, compartment, dim. of *casa*, a house: see *casemate*[1] and *casula.*] A compartment or cell beneath the floor: used in reference to stone receptacles or cists which were found in the Minoan palace at Cnosus in Crete and probably were used for treasure. *Nature*, Aug. 21, 1902, p. 392.

kashern (kä'shèrn), *v. t.* [Yiddish *kashern*, *koshern*, with G. inf. ending, < Heb. *kashar.* Compare *kosher.*] To make fit or clean according to the precepts of the rabbis. For example, to prepare meat and cleanse it from blood, blood being strictly forbidden to the Jew (Lev. xix. 26 et passim). To *kashern* utensils, tables, etc., before Passover festival is to scrub and wash them with boiling water if they have been used during the year with hamets or leavened food. Also *koshern.*

Kashmiri (kash-mē'ri), *n.* [Hind. and Kashmir *Kashmīri*, from *Kashmīr*, Kashmir, Cashmere.] The principal Indian (Aryan) dialect spoken in Kashmir.

kashya (käsh'yä), *n.* [Aram. Heb. *kasha*, hard, difficult, severe, etc.] A word which occurs frequently in the Talmud, when a point under discussion cannot be solved, or when there is an objection to a proposition. The word in modern Jewish usage signifies 'question.' Thus the four questions a child asks his father at the seder service on Passover eve are called *kashyas.*

kasidah (ka-sē'dä), *n.* [Pers. Ar. *qasīdah*, an ode.] A form of Persian poetry composed in distichs. *Burton.*

Kaskaskia group. See ★*group*[1].

kasoi (kä-so'i), *n.* [See *cashew.*] In the Philippine Islands and Guam, the cashew, *Anacardium occidentale.* See *kaju-apple*, *cashew*, 1, *cashew-nut* (with cut), and *Anacardium* (with cut).

kassaba (kä'sä-bä), *n.* [Ar. *qasaba*, a reed, a standard of measure.] A measure of length used in northern Africa and in Arabia. In Egypt it is equal to 11.65 feet.

kasube (kä'sū-bä), *n.* A ray or skate, *Raja kenojei*, of the family *Rajidæ*, common in Japan.

kat[2] (kät), *n.* [Ar. *khat.*] Same as *kafta.* See *Catha.*

kata-. The increased use of this spelling, instead of *cata-*, in scientific terms is due in great part to the mechanical copying of German forms. Uniformity requires *cata-* in the English forms.

katabolite (ka-tab'ō-līt), *n.* [Better *catabolite*, < *catabol-ic* + *-ite*[2].] A resultant of catabolic processes.

katacrotic, *a.* Same as *catacrotic.*

katadicrotic (kat-a-dī-krot'ik), *a.* Same as *catacrotic.*

kataforite, *n.* See ★*cataphorite.*

katalase (kat'a-lās), *n.* [*katal(ysis)*, *catal(ysis)*, + *-ase.*] An intracellular oxidizing ferment. **Blood katalase.** Same as ★*hemase.*

katamorphism (kat-a-môr'fizm), *n.* [Gr. κατά, down, + μορφή, form, + *-ism.*] In *geol.*, any change in the texture of rocks produced by fracturing and granulation, with recrystallization, whereby rocks become finer-grained and foliated, as the production of gneisses and schists from granites. *Chamberlin and Salisbury*, 1904. According to Van Hise, katamorphism is that phase of metamorphism in which simpler compounds result from the alteration of more complex ones. He includes under such changes weathering and cementation, accompanying oxidation, hydration, and carbonation, chiefly of silicate minerals. The reverse process of metamorphism is called *anamorphism.* **Zone of katamorphism,** the outer zone in the solid earth "in which the alterations of rocks result in the production of simple compounds from more complex ones. It is subdivided into an outer belt of weathering and an inner belt of cementation." *Van Hise*, U. S. Geol. Surv. Monographs, XLVII. 43.

katana (kä'tä-nä), *n.* [Jap.] A Japanese sword which, in its modern form, has a single edge and is slightly curved toward the point.

katapetasma, *n.* See ★*catapetasma.*

kataphoresis, *n.* Same as ★*cataphoresis.*

kataphoria, *n.* Same as ★*cataphoria.*

kataphorite, *n.* Same as ★*cataphorite.*

kataplexy, *n.* Same as *cataplexy.*

katapositive (kat-a-poz'i-tiv), *n.* [*kata-* + *positive.*] In *photog.*, a positive on an opaque base, in contradistinction to a transparency or *diapositive.* *Wall*, Dict. of Photog., p. 424.

katatonic (kat-a-ton'ik), *a.* Pertaining to or affected with katatonia; profoundly melancholic. *G. S. Hall*, Adolescence, I. 301.

katatrepsis (kat-a-trep'sis), *n.* [NL., < Gr. κατά, down, + τρέψις, < τρέπειν, turn.] The movement of certain insect embryos which brings them to the ventral surface of the yolk after they have left this to develop for a time within the yolk or on its dorsal surface. *Wheeler*, 1893.

katatype, *n.* Same as ★*catatype.*

katcina (kä-chē'nä), *n.* [An official spelling, in the method used by the Bureau of American Ethnology, of what would be more properly ★*katchina* or ★*katshina*; a Hopi (Moki) word.] 1. Among the Hopi, a supernatural being regarded as a clan ancestor, and impersonated in certain ceremonials by masked men wearing totemic designs characteristic of the clan.

Inasmuch as these tihus represent *Katcinas* and as these *Katcinas* play a very important part in the religious life of the Hopi the importance of a collection of this magnitude, carefully arranged and labelled, can not be overestimated. Even more difficult than these tihus to obtain are the masks which are worn by the Hopi as they personate deities in the *Katcina* dances.
Science, Feb. 8, 1901, p. 222.

2. A masked man who impersonates the clan ancestor.—3. A figure or image made in imitation of one of the masked impersonators.

kath (kath), *n.* [Hindi *katha.*] In northern India, a gray, crystalline substance prepared from a concentrated decoction of the wood of *Acacia Catechu*, by placing in it a few twigs and allowing the decoction to cool. The twigs are removed and the crystalline substance collected. It is a refined form of catechu, consisting of almost pure catechin, and is eaten by the natives in their pan, imparting with the lime the red color to the teeth and lips. Compare *catechu*, ★*khirsal*, and *pan*[5].

kathembryo (ka-them'bri-ō), *n.* [Gr. κατά, down, + ἔμβρυον, embryo.] A stage in the embryonic polyzoan characterized by a complicated degenerative metamorphosis and leading from the typembryo to the phylembryo stage. *Cumings*, 1904.

kathembryonic (ka-them-bri-on'ik), *a.* [*kathembryon* + *-ic.*] Of or pertaining to a kathembryo. *Amer. Jour. Sci.*, Jan., 1904, p. 55.

Kathetostoma (kath-e-tos'tō-ma), *n.* [NL., < Gr. κάθετος, lit. down, perpendicular, + στόμα, mouth.] A genus of fishes belonging to the family *Uranoscopidæ*, found in Australian waters and on both coasts of America.

Kathetostomatinæ (kath-e-tos″tō-ma-tī'nē), *n. pl.* [NL., < *Kathetostoma(t-)* + *-inæ.*] A sub-family of uranoscopid fishes.

kathodic, *a.* 2. Same as ★*cathodic*, 2.

kati (kä'tē), *n.* [Malay *kati.*] Same as *catty.*

katipunan (kä-ti-pö-nän'), *n.* [Also *catipunan.* Tagalog *catipunan*, *catipunan.*] Among the Filipinos, a secret society: sometimes one formed for a political purpose.

A secret organization known as the *Katipunan* was therefore started to secure reforms by force of arms. Each member enrolled was bound by the ancient "blood compact." *Encyc. Brit.*, XXXI. 669.

katmon (kät-mōn'), *n.* [Also *catmon*; < Bisaya *catmon.*] A handsome evergreen tree, *Dillenia Philippensis*, with large, coriaceous, sharply serrate leaves, and fine large flowers composed of an imbricating calyx, five white petals, and numerous yellow stamens arranged in two series so as to form two cup-shaped masses. The carpels cohere at the axis and are inclosed when ripe by the enlarged and thickened sepals which overlap, forming a large globose fruit. This is pleasantly acid and is used by the natives for seasoning in place of lemons or vinegar. The wood is used for cabinet-work.

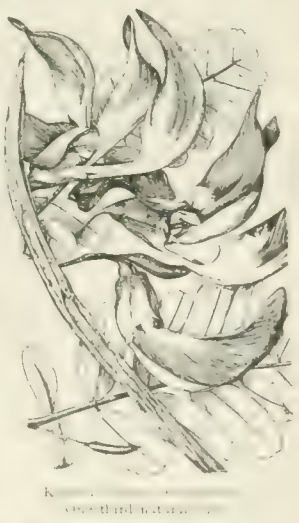
katoikogenic (kat″oi-kō-jen'ik), *a.* [Gr. κατά, down, + οἶκος, house, + -γενής, -producing.] Of or pertaining to eggs which have little food-yolk and complete their development in the follicle in which they were formed. [Rare.]

There are two types of development among scorpions which Laurie describes as apoikogenic and *katoikogenic.* *Natural Science*, Oct., 1896, p. 232.

katun (kä-tōn'), *n.* [Maya.] In the ancient calendar of the Maya Indians, a period of twenty years.

Moreover, in A 3 we find the *Katun* sign with the number 1, which may be a declaration that the date is in a first *Katun* or beginning *Katun*, for I see no reason why the beginning Cycle, *Katun*, Tun, Uinal, and Kin should not have been called the first.
G. E. Gordon, in Amer. Anthropologist, Jan.-March, 1902, [p. 135.

katurai (kä-tō'rī), *n.* [Also *caturai*, *katudai*; a Philippine name.] In Guam and the Philippine Islands, *Agati grandiflora*, a small tree of the bean family, of East Indian origin, having pinnate leaves, large papilionaceous flowers, and long, slender, sickle-shaped pods. The flowers, tender young leaves, and green pods are eaten as pot-herbs and salad, but are laxative if partaken of too freely. The leaves are used for fodder, and in India the astringent bark is used as a remedy in smallpox and other eruptive fevers. See *pandrea*, 2.



katydid, *n.* 2. Same as ★*logging-wheels.*—**Cranberry katydid,** an American locustid, *Scudderia texensis*, especially abundant in the cranberry-bogs of New Jersey, where it eats into the berries and devours the seed.

katzev (kat'zef), *n.* [Yiddish.] A butcher. See ★*shohet.*

kau-karo (kou-kä'rō), *n.* [Fijian *kau*, tree, + *karo*, itch.] See ★*itchwood-tree.*

Kaulfussia (koul-fös′i-ạ), *n.* [NL. (Nees von Esenbeck, 1820), named in honor of G. F. *Kaulfuss* (died 1830), a German botanist.] **1.** An untenable name for *Charieis*, a genus of plants of the family *Asteraceæ*.—**2.** [*l. c.*] A hardy annual, *Charieis heterophylla*, considerably grown in flower-gardens for its many blue, red, or purple heads. It is native to South Africa. In catalogues the plant is known as *Kaulfussia amelloides*, with Latin-named varieties.

kaulosterin (kâ-los′te̤-rin), *n.* [Gr. *καυλός*, stalk, + E. (*chole*)*sterin*.] A variety of cholesterin found in plants.

Kaunitz (kou′nits), *n.* 'The bureau à cylindre,' or roll-top desk, supposed to have been invented by Prince Wenzel Anton von Kaunitz, minister of Maria Theresa to France about 1750, and frequently called by his name.

kauon (kä′ō-ōn), *n.* [Bisaya *caong*.] In the Philippine Islands, the sago-palm, *Saguerus pinnatus*, which yields toddy and a fiber. Also called *pugahan*. See *areng* (with cut), *ejoo*, *gomuti*, 1, and ★*cabo-negro*.

kavain (kä′vạ-in), *n.* [In G. spellings *kawain*, *kawahin*; < *kava* + *-in*[2].] A colorless compound,

$$CH_2\langle{}^{\overset{3}{O}}_{\underset{4}{O}}\rangle C_6H_3\overset{1}{C}H:CHCH:CHCOCH_2COOCH_3,$$

contained in kava root, *Piper methysticum*. It crystallizes in small, silky needles and melts at 137° C. Also called *methysticin* or *methyl methysticinate*.

kava-ring (kä′vạ-ring), *n.* A ceremonial feast at which kava is drunk.

kawaka (kä′wä-kạ), *n.* [Maori.] The New Zealand or cypress-cedar, *Libocedrus Doniana*. See *New Zealand* ★*cedar*.

kawamutsu (kä-wä-möt′sụ), *n.* [Jap. *kawamutsz*, < *kawa*, river, + *mutsz*, name of a fish.] A shiner or minnow, *Zacco temmincki*, of the family *Cyprinidæ*, found in the waters of Japan.

kawata (kä-wä′tä), *n.* [Jap., < *ka*, plant, + *wata*, lint, = lint-plant.] The cotton-plant.

kawauke, *n.* See ★*wauke*.

kawika (kä-wē′kạ), *n.* [Fijian.] The native name for the Malay apple, *Caryophyllus Malaccensis*. See ★*ahia* and *Malay apple*, under *Malay*.

kayak (ka′yak), *v. i.* [*kayak*, *n.*] To hunt or travel in a kayak.

> Eskimo *kayaking* near Amadjuak Bay, Baffinland.
> *Geog. Jour.* (R. G. S.), XVIII. 42.

kaziasker (kä-zē-äs′kėr), *n.* [Turk. *qāzī-'asker*, lit. 'judge of the army': *qāzī*, judge (see *kadi*), + *'asker*, army (see *lascar*).] One of the two chief officers of the Turkish ulema who have equal jurisdiction, one in Europe, one in Asia.

K. B. An abbreviation (*c*) of *Knight Bachelor*.

K. B. E. An abbreviation of *Knight of the Black Eagle* (Prussia).

K. C. An abbreviation (*a*) of *King's College*; (*b*) of *King's Counsel*; (*c*) of *Knight of the Crescent* (Turkey).

K. C. H. An abbreviation of *Knight Commander of* (the Order of) *Hanover*.

K. C. I. E. An abbreviation of *Knight Commander of* (the Order of) *the Indian Empire*.

K. C. M. G. An abbreviation of *Knight Commander of St. Michael and St. George* (Ionian Islands).

K. C. S. An abbreviation of *Knight of Charles III. of Spain*.

K. C. S. I. An abbreviation of *Knight Commander of* (the Order of) *the Star of India*.

K. C. T. An abbreviation of *kathodal closure tonic*. *Dunglison*.

K. C. V. O. An abbreviation of *Knight Commander of the* (*Royal*) *Victorian Order*.

K. D. An abbreviation of *Knight of the Dannebrog* (Denmark).

K. D. G. An abbreviation of *King's Dragoon Guards*.

K. D. T. An abbreviation of *kathodal duration tetanus*.

K. E. An abbreviation (*a*) of *Knight of the Eagle* (Prussia); (*b*) of *Knight of the Elephant* (Denmark).

Keb. An abbreviation of *Keble College*, Oxford.

kebob, *v. t.* Same as *cabob*.

ked[2] (ked), *n.* [A variant of *cade*[1].] A sheep-tick, *Melophagus ovinus*; a sheep-louse.

keddah (ked′ạ), *n.* Same as ★*kheda*.

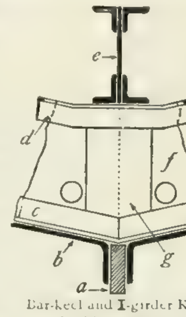
kedjeree, *n.* **3.** Cold flaked fish treated and served with a sauce, and rice cooked in highly seasoned stock.

kedlock (ked′lok), *n.* **1.** The charlock, *Brassica arvensis*.—**2.** The white mustard, *Sinapis alba*.

keek, *n.* **2.** One who keeks or peeks; in the clothing trade, one who spies out the newest designs from rival dealers and reports them to his employer.

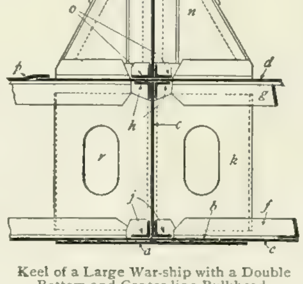
keekwilee-house (kẹ̄k′wi-lē-hous″), *n.* [Chinook jargon, *keekwilee*, *keekwillie*, low, below, < Chinook proper *gegwalih*, below.] An underground house of the Indians of the interior of British Columbia and of Washington. *Rep. Brit. Ass'n Advancement of Sci.*, 1900, p. 485.

keel[1], *n.* **2.** In *iron ship-building*, owing to the facility with which the plates and bars can be combined in a variety of shapes, the forms of keels are very numerous. There are two principal classes, the *bar-keel* (also called *hanging keel*), which projects below the bottom, and the *flat-plate keel*, which forms part of the bottom surface. The ordinary bar-keel is formed of lengths of heavy iron or steel bars scarfed together at the ends. The garboard-plates are flanged down against the sides of the keel-bar and the whole is riveted together. (See cut.) The *side-bar keel* consists of a central vertical keel-plate extending up to the top of the frame-floors, which are secured to the keel-plate by short angle-bars on each side. Below the bottom of the frame, on each side of the vertical keel, are heavy iron *side-bars*, and flanged down against them are the garboard-plates as in the ordinary single bar-keel. In modern war-ships and large merchant steamers the flat-plate keel is used almost exclusively. (See cut.) The keel consists of an outer flat keel-plate, an inner flat keel-plate, a vertical keel-plate, upper keel angle-bars, uniting the vertical keel to the flat keelson-plate, and lower keel angle-bars, uniting the vertical keel to the flat keel-plates. The vertical keel-plate in war-ships is frequently lightened with large holes. In medium-sized merchant vessels there is but a single flat keel-plate instead of an inner and outer plate, but the general construction is otherwise the same. In some ships there is a comparatively narrow flat plate attached to the outside of the flat keel-plate, called a *rubbing-plate* or *rubbing-strip*, to prevent chafing when the vessel touches the ground. A *slab-keel* is a heavy flat bar with the flat side horizontal, attached to the outside of the flat-plate keel for the same purpose. In the earlier iron vessels other types of keel were used. See ★*box-keel*. A *dish-keel* is one in which the horizontal keel-plate has a U- or trough-shaped cross-section. A *bilge-keel* may be made of a projecting bulb-plate secured to the outside plating by angle-bars, or in large ships, particularly war-ships, it is of V-shaped cross-section formed of plates riveted together at their outer edges and secured at their inner edges to the outside plating by angle-bars, the interior of the V-shaped space being filled with wood. See also ★*docking-keel*.



Bar-keel and I-girder Keelson.

a, keel-bar; *b*, flanged garboard-plate; *c*, frame-bar; *d*, reverse frame-bar; *e*, keelson composed of a vertical plate with double angle-bars at top and bottom; *f*, floor-plate; *g*, butt-strap uniting floor-plates.


Keel of a Large War-ship with a Double Bottom and Center-line Bulkhead.

a, outer flat keel-plate; *b*, inner flat keel-plate; *c*, vertical keel-plate; *d*, flat keelson-plate; *e*, garboard-plate; *f*, frame-bar; *g*, reverse frame-bar; *h*, upper keel angle-bars; *j*, lower keel angle-bars; *k*, flanged bracket floor-plate; *l*, center-line bulkhead plate; *m*, stiffener of center-line bulkhead; *n*, bracket-plate on stiffener; *o*, lower angle-bars on center-line bulkhead; *p*, inner bottom plate; *r*, lightening-hole in bracket floor-plate.

8. In *arch.*, the projecting arris of an edge-molding.—**Inner keel**, in *iron ship-building*, same as *flat-plate keelson* (which see, under ★*keelson*, 2).

keel-band (kēl′band), *n.* A strip of iron, used principally on rowboats, which extends from the top of the stem to a short distance back on the keel, to prevent the stem from chafing and to give additional strength.

keel-bill (kēl′bil), *n.* The large West Indian ani, *Crotophaga ani*, one of a peculiar group of cuckoos having a very high, sharp-edged bill. See *ani*.

keel-boat (kēl′bōt), *n.* **1.** A cargo-lighter built with a keel and decked over; a flat-bottomed freight-vessel with no power of propulsion.—**2.** Same as *keel*[1], **6.**—**3.** Any boat built with a keel, as distinguished from a center-board boat.

keel-line (kēl′līn), *n.* **1.** The line of a vessel's keel.—**2.** The lacing which secures a bonnet to the foot of a sail.

keelman, *n.* **2.** The skipper of a keel-boat or barge used around Newcastle, England.

keel-piece (kēl′pēs), *n.* One of the timbers or sections which compose the keel of a boat.

keel-plate (kēl′plāt), *n.* See ★*keel*[1], 2.

keel-rabbet (kēl′rab″et), *n.* A groove cut in each side of the keel of a vessel for the purpose of receiving the edges of the garboard-strakes, or lowest lines of planking.

keel-riveter (kēl′riv″e-tėr), *n.* A hydraulic or pneumatic machine for riveting together the various parts of an iron or steel keel.

keel-rope (kēl′rōp), *n.* A rope or small chain rove through the limber-holes to clear the latter of dirt, being pulled back and forth, and thus to allow the bilge-water to circulate along the keel.

keelson, *n.* **2.** In *iron ship-building*, a longitudinal reinforcement of plates and bars in the interior of the vessel above the framing in the bottom. The *center-line keelson*, or *center-keelson*, is immediately over the keel, and is frequently built in combination with it. The simplest form is a girder entirely on top of the frames riveted to the reverse bars. The girder is formed of various combinations of plates, bulb-plates, and angle-bars. A *box-keelson* is one in which the plates and angle-bars are combined in a form of rectangular cross-section. A *flat-plate keelson* is formed by a flat plate laid on top of the frames and riveted to them and to the vertical keel-plate. There may be additional reinforcements of bars above the flat-plate keelson, or there may be a center-line bulkhead above it. (See cut at ★*keel*1, 2.) An *intercostal keelson* is one built up of a series of intercostal plates between the frames, the upper edges of which project above the reverse frame-bar and are riveted to a line of continuous plates and bars above the frame. A *side-keelson* is one in the bottom on either side between the center-line and the turn of the bilge. A *bilge-keelson* is one just below the turn of the bilge near the heads of the floors.—**Middle-line keelson**, the longitudinal girder in the bottom of a vessel, fitted in the line of the keel.

keelson-capping (kēl′sọn-kap″ing), *n.* The timber bolted on top of the main keelson: generally referred to as a *rider*.

keel-staple (kēl′stā″pl), *n.* A large staple used to fasten the false to the main keel.

keen[1], *a.* **II.** *n.* The angle to which the wire tooth of card-clothing is bent between the foundation material and the point.

keep, *v.* **I.** *trans.* **22.** In *printing*, to save (composed type) from distribution; also, to follow rigidly the capitals or other peculiarities of (manuscript copy).—**To keep away** (*naut.*), to put the helm up; to alter the course of (the ship) so as to avoid another vessel or some danger.—**To keep cases**, in *faro*, to keep account of the cards as they come from the dealing-box, so that it shall be known when any card is a case. When this record is kept on a sheet of paper it is called 'keeping tab on the game.' See ★*case*2, 19, and *faro*.—**To keep her own**, said of a vessel when her speed against a current is equal to the velocity of the stream; to maintain position.—**To keep her own way**, to maintain her way through the water after her propelling force, of either sail or steam, has been withdrawn: said of a ship.—**To keep in.** (*d*) In *printing*, to space (words) thinly, so as to keep the composed type within prescribed limits.—**To keep the sea**, to hold mastery over the sea; to control the navigation of the sea.

II. *intrans.* **6.** In *cricket*, to act as stumper or wicket-keeper. [Colloq.]—**To keep off**, to direct a vessel's head more away from the wind.

keep, *n.* **10.** In *mech.*: (*a*) A cover to protect a part of a machine from injury. (*b*) A chock; a stop; a block to prevent a piece from moving. (*c*) On a locomotive, a part of the axle-bearing which is fitted below the journal of the axle and serves to hold an oiled pad against it to furnish constant lubrication.

keeper, *n.* **6.** (*k*) A keep; a cover; a protector. See ★*keep*, 10 (*a*). (*l*) A pawl; a stop; a catch.
7. In *cricket*, a wicket-keeper or stumper. [Colloq.]—**Keeper of the exchange and mint.** Same as *master of the mint* (which see, under *mint*1).

keep-ring (kēp′ring), *n.* A ring for holding something in place; specifically, a ring which serves to keep a locomotive- or car-journal from getting out of the box, and also holds an oil-pad against the journal.

keer-drag (kēr′drag), *n.* A drag-net in which the meshes of the bag are very small: used for collecting small fishes. [Prov. Eng.]

keeving (kē′ving), *n.* In *mining*, the process of preparing fine ore-slime in a keeve.

Keewatin (kē-wä′tin), *n.* A name proposed in 1886 by A. C. Lawson for a series of pre-Cambrian schists near the Lake of the Woods, Ontario. *An. Rep. Geol. and Nat. Hist. Surv. Canada*, 1885, I. 5cc.

kef (kaf), *n.* [Ar. *kef*, a variant pronunciation of *kaif* (kīf).] Same as *kaif*.

kefir (kef′ėr), *n.* [Also *kefyr*, *kephir*: of Caucasian origin.] An effervescent drink prepared from the fermented milk of cows: used by the natives of the northern Caucasus region, and now extensively used elsewhere as a food for invalids. It contains from 1 to 2 per cent. of free lactic acid and from 1 to 3 per cent. of alcohol. The original ferment used is a particular fungus called ★*kefir grains* (which see).

Small pebble-like or seed-like masses, occurring in the Caucasus region, . . . used for the fermentation of milk into a substance called *kefir*, the equivalent of koumyss. *Buck*, Med. Handbook, V. 302.

Kefir grains or **granules**, the name, in the dried state, of a fungus-like growth found on the branches of bushes below the snow-line in the Caucasus, used as the original ferment in making kumiss. It is a mixture of several micro-organisms—a kind of yeast capable of producing alcoholic fermentation, a bacterium producing lactic acid fermentation, and another body which acts on casein so as to render it imperfectly coagulable. When dried the whole mass forms yellowish grains about as large as peas: these are soaked in water before adding them to the milk to be fermented.—**Water kefir**, kefir made from water and sugar instead of milk: a popular hygienic tonic and appetizing drink for soldiers. The kefir is not a good germ culture medium, and is therefore more healthful than the water from which it is made. The formula is two liters of water to one liter of kefir grains and fifty grams of brown sugar. It is stirred in an open pitcher, and after three days stirred again and bottled, the corks being fastened as in champagne bottles. After being bottled for three days it is drinkable. The kefir grains can be used again and again, and if well dried can be put away to keep for months. *Army and Navy Jour.*, May 6, 1899, p. 859.

keg-lard (keg′lärd), *n.* Lard put up in kegs for sale: usually understood, in a commercial sense, to be a more fusible material than bladder-lard and of an inferior quality. See ★*bladder-lard*, 2.

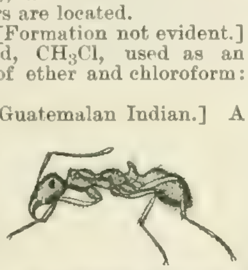
keg-spring (keg′spring), *n.* A wire spring so coiled as to be full in the center like a keg.

kehoeite (kē′hō-īt), *n.* [Named (1893) after Mr. Henry *Kehoe*, who first observed it.] A hydrous phosphate of aluminium and zinc found in South Dakota. It occurs in white, massive, amorphous forms with galena.

keir-house (kēr′hous), *n.* The house or building in which the keirs are located.

kelene (kē′lēn), *n.* [Formation not evident.] Pure methyl chlorid, CH_3Cl, used as an anesthetic in place of ether and chloroform: a trade-name.

kelep (kel′ep), *n.* [Guatemalan Indian.] A carnivorous ant, *Ectatomma tuberculatum*, which preys on the cotton-boll weevil and other insects and which has been imported into Texas.



Kelep (*Ectatomma tuberculatum*). About twice natural size.

kelleg (kel′eg), *n.* Same as *killock*, 2. *R. Kipling*, Captains Courageous, iii. [New Eng.]

kellup-weed (kel′up-wēd), *n.* The oxeye-daisy, *Chrysanthemum Leucanthemum*.

kelp[2], *n.* **2.** The ash left from the burning of seaweed, which up to the close of the eighteenth century formed the chief source of supply of carbonate of soda in western Europe, is now valuable almost solely as a source of iodine. The word 'kelp' applies to this material as prepared on the Atlantic coast of Scotland and Ireland. *Varec* is the same product from the coast of Brittany, and *barilla* the same from the Spanish coast.

kelp-crab (kelp′krab), *n.* A spider-crab, *Epialtus productus*, found along the coast of California.

kelper (kel′pėr), *n.* Same as *kelpie*.

kelp-fish, *n.* **3.** A name applied to a number of other, unrelated fishes living among the kelp, as *rock-fish* is applied to those living in rocky places. In Australasia: (*a*) The butter-fish, *Coridodax pullus*, of the family *Labridæ*. (*b*) The ground-mullet, *Odax balteatus*, of the family *Labridæ*. (*c*) *Chironemus marmoratus*, of the family *Cirrhitidæ*. (*d*) The spotty, *Pseudolabrus bothryocosmus*.

kelp-hen (kelp′hen), *n.* The weka rail, *Ocydromus troglodytes*, of New Zealand: named from frequenting the sea beach in search of food. See *Ocydromus*, 1.

kelp-shore (kelp′shōr), *n.* Same as *shore*[1], 2.

kelpware (kelp′wār), *n.* The bladder-wrack or black tang, *Fucus vesiculosus*.

Keltologist, etc. See ★*Celtologist*, etc.

kelvin (kel′vin), *n.* A name proposed, in honor of Lord Kelvin, for the kilowatt-hour which is the British Board of Trade unit of work.

Kelvin's law. See ★*law*[1].

kemangeh (kẹ-män′gẹ), *n.* See ★*kamanja*.

kemp[2], *n.* **Flat kemp**, a wool-fiber that is partly kemp.

kempy (kem′pi), *a.* [*kemp*[2] + *-y*[1].] Having a solid, non-cellular structure, as some fibers of wool or cotton. *Hannan*, Textile Fibres of Commerce, p. 87.

ken[1], *v. i.*—**To ken to the terce**, in *Scots law*, to assign dower to a widow; to fix the precise lands to which a widow was entitled, consisting of the terce or third of the husband's estate.

ken[8] (ken), *n.* [Jap.] The straight two-edged Japanese sword.

Ken. An abbreviation of *Kentucky*.

kena (ka′nä), *n.* [Also *quena*; Aymará and Quichua of Bolivia and Peru.] A small flute of reed or cane, blown from the end: a common musical instrument of the Indians.

Kendal cotton. See ★*cotton*[1].

Kendal green (ken′dal-grēn′). A green dye obtained by mixing woad with the yellow dye obtained from the flowers of the dyer's-broom, *Genista tinctoria*.

kendir (ken′dēr), *n.* [Kirghiz name in Turkestan.] A plant of the dogbane family, *Apocynum venetum*, which yields a strong fiber, used by the natives of Turkestan for fishing-lines, rope, and twine.

kennebecker (ken-e-bek′ėr), *n.* [*Kennebec*(*k*) + *-er*. See ★*kennebunker*.] Same as ★*kennebunker*.

kennebunker (ken-e-bungk′ėr), *n.* A valise for clothes which Maine lumbermen take with them into the wood ('up the Kennebunk' and other rivers). A variant form, *Kennebecker*, assumes an origin in the Kennebec river. *Jour. Amer. Folk-lore*, Oct.–Dec., 1902, p. 245.

kennel[1], *n.* **4.** A head-dress worn by women in the reign of Henry VIII.

kennel-book (ken′el-bu̇k), *n.* A publication in which is given the pedigree and record of dogs. Compare *herd-book* and *stud-book*.

kenner (ken′ėr), *n.* One who knows or kens.

kennet[3] (ken′et), *n.* [Late ME. *kannette*; prob. < OF. **canette*, **kenette*, in central OF. *chenette*, dim., < L. *canus*, gray.] An old fabric of coarse texture; a kind of gray cloth.

kennick (ken′ik), *n.* [Given as a Gipsy term.] The jargon of Gipsy tinkers. *C. G. Leland*.

kenning[3] (ken′ing), *n.* [Icel. *kenning*, a distinctive poetical name; also a mark of recognition, a doctrine, a teaching, < *kenna*, know, recognize, call, name: see *ken*[1], *v.*, and *kenning*[1].] In Old Norse, Anglo-Saxon, and other old Teutonic poetry, a distinctive poetical name, usually periphrastic in form, used in addition to, or substituted for, the usual name of a thing or person. Such terms form a usual ornament of Anglo-Saxon verse, as in 'Beowulf,' 'Exodus,' etc. Examples are 'whale-road,' and 'gannet's bath' for 'the sea,' 'ward of the bone-house' (that is 'keeper of the breast'), for 'heart' or 'mind.'

kenning-glass (ken′ing-glȧs), *n.* An old name for a spy-glass.

kenogenic (ken-ọ̄-jen′ik), *a.* [Also *cenogenic*; < Gr. καινός, recent, + -γενης, -producing.] Of or pertaining to the recent or individual history of an organism, as distinguished from its past or ancestral history; kenogenetic. [Rare.]—**Kenogenic variation.** See ★*variation*.

kenoticism (ke-not′i-sizm), *n.* [*kenotic* + *-ism*.] The doctrine of the kenosis of Christ, that is, of the limitations implied in the incarnation. See *kenosis*.

kenotism (ke-nō′tizm), *n.* [*kenot*(*ic*) + *-ism*.] Same as ★*kenoticism*.

kenotist (ke-nō′tist), *n.* [*kenot*(*ic*) + *-ist*.] Same as *kenoticist*.

kenrei (ken-rā′), *n.* [Jap., < *ken* (Chin. *hien*, prefecture), + *rei* (Chin. *ling*, direct, lead).] The governor of the administrative division of Japan known as a ken. See *ken*[6].

Kensington stitch. See ★*stitch*.

kentallenite (ken-tal′en-īt), *n.* [*Kentallen*, Scotland, + *-ite*[2].] In *petrog.*, a phanerocrystalline rock composed of orthoclase and lime-soda-feldspar in nearly equal proportions, together with augite, biotite, and olivin; an olivin-monzonite. *Hill and Kynaston*, 1900.

Kenticism (ken′ti-sizm), *n.* An expression characteristic of the Kentish dialect. *Pegge*.

Kentish cousins, distant cousins or relatives.

kentledge, *n.* **2.** In the British service, condemned shot, shell, and similar unserviceable articles.—**Kentledge goods**, such heavy parts of a ship's cargo as may be used for ballast.

kentrogon (ken′trọ̄-gon), *n.* [Gr. κέντρον, a point, + γόνος, generation.] In rhizocephalous crustaceans, a larval stage in which the parasite attaches itself to the host by an antenna, throws off its whole trunk, leaving only its head, and undergoes other modifications including the formation of a hollow arrow-like process or borer through which the parasite enters the body-cavity of the host.

kent-tackle (kent′tak″l), *n.* Same as *cant-fall*.

kenyte (ken′īt), *n.* [Mt. *Kenya*, East Africa, + *-ite*[2], spelled perversely *-yte*.] In *petrog.*, a volcanic rock resembling pantellerite but more basic. It is porphyritic, with phenocrysts of soda-microcline; ground-mass glassy or hyalopilitic; subordinate minerals ægirite, augite, and olivin. *Gregory*, 1900.

Keokuk group. See ★*group*[1].

kephalin, *n.* Same as ★*cephalin*.

ker-. An unstressed introductory syllable, perhaps better written *ka-* or *ke-*, used in some dialectal words, without meaning in itself but serving to introduce an emphatic stress, as in *kerslap*, *kerchunk*, *kerplunk*, *kerwhack*, etc. It probably originated in the involuntary utterance which often precedes a sudden physical effort, as in striking with an ax or hammer or paving-rammer.

keracele (ker′ạ-sēl), *n.* Same as ★*keraphyllocele*.

keraphyllocele (ker-ạ-fil′ọ̄-sēl), *n.* [Gr. κέρας, horn, + φύλλον, leaf, + κήλη, tumor.] A sharply defined horn tumor projecting from the inner surface of the wall of a horse's hoof and appearing at the plantar surface as a semi-circular thickening of the white line.

kerasin (ker′ạ-sin), *n.* Same as ★*cerasin*[2].

keratectomy (ker-ạ-tek′tọ̄-mi), *n.* Same as ★*ceratectomy*.

keratiasis (ker-ạ-tī′ạ-sis), *n.* Same as ★*ceratiasis*.

keratin (ker′ạ-tin), *n.* Same as *ceratin*.

keratinization (ker″ạ-tin-i-zā′shọn), *n.* Same as ★*ceratinization*.

keratinize (ke-rat′i-nīz), *v. i.* Same as ★*ceratinize*.

keratinoid (ke-rat′i-noid), *n.* Same as ★*ceratinoid*.

keratinose (ke-rat′i-nōs), *n.* Same as ★*ceratinose*.

keratitis (ker-ạ-tī′tis), *n.* Same as *ceratitis*.

kerato-angioma (ker″ạ-tọ̄-an-ji-ō′mä), *n.* Same as ★*angioceratoma*.

keratoconus (ker″ạ-tọ̄-kō′nus), *n.* Same as ★*ceratoconus*.

keratode (ker′ạ-tōd), *n.* Same as *ceratode*.

keratoderma, keratodermia (ker″ạ-tọ̄-dėr′mä, -mi-ä), *n.* Same as ★*ceratoderma*.

keratohyalin (ker″ạ-tọ̄-hī′ạ-lin), *n.* Same as ★*ceratohyalin*.

keratohyaline (ker″ạ-tō-hī′ạ-lin), *a.* Same as ★*ceratohyaline*.

keratoid (ker′ạ-toid), *a.* Same as *ceratoid*.

keratoiditis (ker-ạ-toi-dī′tis), *n.* Same as *ceratitis*.

kerato-iridocyclitis (ker″ạ-tọ̄-ir″i-dọ̄-si-klī′tis), *n.* Same as ★*cerato-iridocyclitis*.

kerato-iritis (ker″ạ-tọ̄-ī-rī′tis), *n.* Same as ★*cerato-iritis*.

keratolysis (ker-ạ-tol′i-sis), *n.* Same as ★*ceratolysis*.

keratoma (ker-ạ-tō′mä), *n.* Same as ★*ceratoma*.

keratomalacia (ker″ạ-tọ̄-ma-lā′si-ä), *n.* Same as ★*ceratomalacia*.

keratome (ker′ạ-tōm), *n.* Same as *ceratome*.

keratometer (ker-ạ-tom′e-tėr), *n.* Same as ★*ceratometer*.

keratomycosis (ker″ạ-tọ̄-mī-kō′sis), *n.* Same as ★*ceratomycosis*.

keratophyre (ker′ạ-tō-fīr), *n.* [Gr. κέρας (κερατ-), horn, + E. (*por*)*phyr*(*y*).] In *petrog.*, dense, compact porphyry, composed of alkali-feldspars and diopside. A variety containing quartz is called *quartz-keratophyre*. *Gümbel*, 1874.

keratoplasty (ker′ạ-tọ̄-plas-ti), *n.* Same as *ceratoplasty*.

keratoscope (ker′ạ-tọ̄-skōp), *n.* [Also *ceratoscope*; < Gr. κέρας (κερατ-), horn, + σκοπεῖν, view.] A device for determining the presence of irregularities in the anterior surface of the cornea.

Keratosis folliculorum, a disease marked by papules containing plugs of horny epithelial cells.

keraunograph (ke-râ′nọ̄-grȧf), *n.* Same as ★*ceraunograph*.

keraunoid (ker′â-noid), *a.* [Gr. κεραυνός, thunderbolt, + *-oid*.] In *petrog.*, noting bifurcate microlitic crystals of augite, feldspar, or other minerals. *Washington*, 1896.

keraunophobia (ke-râ-nō-fō'bi-ä), *n.* Same as ★*ceraunophobia*.

keraunoscopeion (ke-râ-nō-skō-pē'on), *n.* Same as *ceraunoscope*.

keraunoscopy (ke-râ-nos'kō-pi), *n.* Same as ★*ceraunoscopy*.

Kerberos (kėr'be-ros), *n.* [Gr. Κέρβερος.] Same as *Cerberus*.

kerchief-plot (kėr'chif-plot), *n.* A garden-plot no bigger than a handkerchief.

> Gentle breezes bring
> News of winter's vanishing,
> And the children build their bowers,
> Sticking *kerchief-plots* of mould
> All about with full-blown flowers.
>
> *Wordsworth*, To the Same Flower (Small Celandine), st. 3.

kerchunk (kėr-chungk'), *adv.* [*ker-* + *chunk*[1].] With a sudden heavy blow or thump. [Slang or colloq., U. S.]

kerf[2] (kėrf), *v. t.* [*kerf*[2], *n.*] To cut (a strip or bar of wood) with one or more kerfs for the purpose of bending it.

kerflummux (kėr-flum'uks), *v. t.* and *i.* [*ker-* + *flummux*.] To 'flummux' completely. [Slang or colloq., U. S.]

Kermanji (kėr-män'jē), *n.* The language of the Kurds; Kurdish.

kermes, *n.* **3.** Short for *kermes-mineral*, or, more properly, *mineral kermes*.

kernbut (kėrn'but), *n.* [*Kern*, a river in California, + *but*(*tress*).] A name suggested by A. C. Lawson for a peculiar topographic form in the Kern River valley, California,—a buttress projecting from one side of a cañon and crowding the river against the opposite wall.

> From the fact of their being buttresses of a peculiar type recognized for the first time in Kern Cañon, the feature is called a *kernbut*.
>
> *Bulletin Geol. Dept. Univ. of California*, 1904, III. 332.

kern-curve (kėrn'kėrv), *n.* In *projective geom.*, the conic of reference whose every tangent is dual to its own contact-point.

kerned (kėrnd), *a.* [*kern*[1] + *-ed*[2].] Said of a printing-type that has a small projection beyond its body, as the knobs at the ends of f and j.

kernel[1], *n.* **4.** (*b*) An enlarged lymphatic gland.—**6.** In *metal.*, a nucleus of a double sulphid of copper and iron obtained in roasting cupriferous iron pyrites. The kernels are separated by hand from the lumps of pyrites and are melted for copper. *Phillips and Bauerman*, Elements of Metallurgy, p. 485. — **Waxing kernels.** (*b*) Swollen tonsils.

kernel-roasting (kėr'nel-rōs''ting), *n.* The process of roasting cupriferous iron pyrites for the extraction of copper. See ★*kernel*[1], 6. *Phillips and Bauerman*, Elements of Metallurgy, p. 485.

kern-soap (kėrn'sōp), *n.* Soap separated from the original solution by the addition of salt or a strong brine: same as *curd soap* (which see, under *soap*). *Sci. Amer. Sup.*, May 20, 1899.

kern-stone (kėrn'stōn), *n.* A coarse-grained sandstone.

Kerosene emulsion. See ★*emulsion*.

kerosene-engine (ker'ō-sēn-en''jin), *n.* An engine using kerosene as a fuel; strictly, an internal-combustion engine using kerosene-oil as a source of hydrocarbon fuel.

kerosolene (ker'ō-sō-lēn), *n.* [*keros*(*ene*) + *-ol* + *-ene*.] A trade-name for petroleum ether which at one time was proposed for use as an anesthetic.

kerplunk (kėr-plungk'), *adv.* [*ker-* + *plunk*.] With a sudden 'plunk' or plunge. [Slang or colloq., U. S.]

Kerr effect, Kerr's constant. See ★*effect*, ★*constant*.

Kerry[2] (ker'i), *n.* A breed of small, active, black cattle having its origin in the southwest of Ireland: of considerable value for dairy purposes.

kerseymere-twill (kėr'zi-mēr-twil''), *n.* A four-harness twill-weave: same as ★*cassimere-twill*.

kershaw, *n.* Same as ★*cushaw*.

kerslap (kėr-slap'), *adv.* [*ker-* + *slap*[1].] With a sudden slap or loud slapping blow. [Slang or colloq., U. S.]

kerslop (kėr-slop'), *adv.* [Var. of *kerslap*.] Same as ★*kerslap*.

kerwallop (kėr-wol'op), *adv.* [*ker-* + *wallop*[1] and *wallop*[2].] With a sudden wallop or onrush. [Slang or colloq.]

kerygma (ke-rig'mä), *n.* [Gr. κήρυγμα, ⟨ κηρύσσειν, herald, proclaim: see *caduceus*.] A proclamation; preaching; specifically, Christian preaching.

keryktics (ke-rik'tiks), *n.* [A bad form (with a worse one, *kerystics*) for what would be reg. **kerykics*, or rather **ceryeics*, pl. of **ceryeic*, ⟨ Gr. κηρυκικός, adj., ⟨ κῆρυξ (κήρυκ-), a herald.] That department of practical theology which treats of the science of preaching. It includes missionary preaching and preaching to believers, as differentiated from homiletics, which deals only with the latter. *Baldwin, Dict. of Philos. and Psychol.*, I. 160.

kerystic (ke-ris'tik), *a.* [A bad form, intended to be formed from Gr. κηρύσσειν, proclaim, herald, ⟨ κῆρυξ, a herald.] Of or pertaining to preaching.

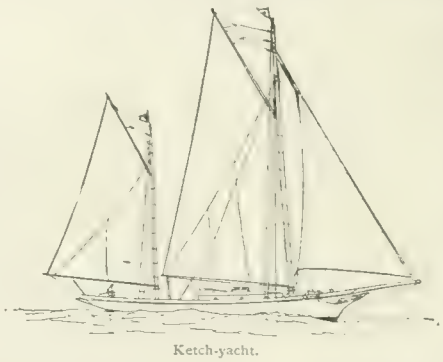
kestrel, *n.*—**Nankeen kestrel**, the Australian sparrow-hawk, *Tinnunculus cenchroides*; so named on account of its yellowish color, which suggests that of nankeen.

keta (kē'tä), *n.* A vernacular name in Kamchatka of the dog-salmon, *Oncorhynchus keta*. The fish is one of the smaller of the Pacific salmon and is found from San Francisco to Kamchatka, ascending all streams in the fall and spawning at no great distance from the sea.

ketate (kē'tāt), *n.* [*ket*(*one*) + *-ate*[1].] The name of a class of organic compounds containing the complex $\frac{X}{Y} > C < \frac{OR}{OR}$. They are also called *ketone ethers*.

ketazin (ke-taz'in), *n.* [*ket*(*one*) + *az*(*ote*) + *-in*[2].] The name of a class of organic compounds containing the complex $\frac{R}{R'} > C{:}NN{:}C > \frac{R''}{R''}$. They are crystalline and stable and are prepared by the action of hydrazine on ketones.

ketch-yacht (kech'yot), *n.* A small pleasure-vessel with two masts and three fore-and-aft



Ketch-yacht.

sails, the mainsail being smaller than the foresail, and the one head-sail (the jib) setting on a short bowsprit.

ketine (kē'tin), *n.* [*ket*(*one*) + *-ine*[2].] **1.** The name of a class of organic compounds containing the complex

$$N < \begin{matrix} CH.CH \\ CH:CH \end{matrix} > N.$$

They are prepared by the reduction of nitroso-ketones, closely resemble the pyridine bases in general properties, and are also called *pyrazins* and *aldines*. See ★*aldine*[2]. **2.** A colorless, crystalline, basic compound,

$$N < \begin{matrix} C(CH_3).CH \\ CH:C(CH_3) \end{matrix} > N,$$

found in commercial fusel-oil and prepared by the action of ammonia on glycerol. It crystallizes in lustrous plates or rhombohedra, melts at 15° C., and boils at 155° C. Also called *2,5-dimethylpyrazin*, *dimethyldiazin*, *glycoline*, and *dimethylaldine*.

ketipic (kē-tip'ik), *a.* Noting an acid, a colorless amorphous compound, $HOCOCH_2CO\text{-}COCH_2COOH$, prepared by the action of diethyl oxalate on two equivalents of ethyl dichloracetate. It decomposes at 150° C., without melting, into carbon dioxid and diacetyl. Also called *diacetyl-dicarboxylic acid*.

keto-. A combining form used in organic chemistry to indicate the presence of the ketone group $\frac{R'}{R} > CO$.

keto-aldehyde (kē-tō-al'dē-hīd), *n.* An organic compound which contains both an aldehyde (COH) and a ketone (CO) group, as in the osons. $CH_2(OH)[CH(OH)]_3\underline{CO.COH}$.

ketohexose (kē-tō-hek'sōs), *n.* [*keto*(*ne*) + Gr. ἕξ, six, + *-ose*.] A ketone-alcohol containing 6 atoms of carbon, a member of one class of the glucoses. Fruit-sugar or levulose is the most familiar example of such a substance.

ketol (kē'tol), *n.* [*ket*(*one*) + *-ol*.] The name of a class of organic compounds containing the group

$$\frac{R}{R'} > COC(OH) < \frac{R'}{R''}.$$

They are also called *ketone alcohols*.

ketole (kē'tōl), *n.* Same as *indol*.

ketone, *n.* **Ketone blue.** See ★*blue*.—**Pimelic ketone.** Same as ★*cyclohexanone*.

ketose (kē'tōs), *n.* [*ket*(*one*) + *-ose*.] A class-name applied in organic chemistry to sugars, such as fructose, containing a ketone group.

ketoxime (kē-tok'sim), *n.* [*ket*(*one*) + *oxime*.] A class-name applied in organic chemistry to compounds of ketones and hydroxylamine, containing the group $\frac{R}{R'} > C{:}NOH$.

kettle-boiler (ket'l-boi''lėr), *n.* An obsolete type of steam-boiler the general form of which was spherical like that of a kettle, with a flat bottom over the fire.

kettle-bottom (ket'l-bot''um), *n.* **1.** *Naut.*, a vessel having a flat floor.—**2.** A hill the outline of which suggests an upturned kettle. [Rare.]

kettle-broth (ket'l-brôth), *n.* See the quotation.

> '*Kettle-broth*' . . . consists of pieces of stale bread liberally moistened with boiling water, and besprinkled with salt and pepper.
>
> *Eleanor G. O'Reilly*, Sussex Tales, II. 187. *N. E. D.*

kettled (ket'ld), *a.* In *geol.*, worn into potholes or 'giant-kettles.'

kettledrum (ket'l-drum), *v. i.*; pret. and pp. *kettledrummed*, ppr. *kettledrumming*. To drum (on the kettledrum); sound like a kettledrum.

kettle-maw (ket'l-mâ), *n.* Same as *angler*, 2.

kettle-net (ket'l-net), *n.* *Naut.*, a net for catching mackerel.

Ketton-stone (ket'on-stōn), *n.* In *petrog.*, an oölitic limestone found at Ketton, England.

ketuba (ke'tō-bä), *n.* [Heb., ⟨ *katab*, write.] Among the Jews, a written marriage contract. The phraseology of the document follows a set form, the particulars relating to dowry and marriage settlement varying in individual cases. The language is always Aramaic. After the date, the names of the contracting couple and those of their parents are fully given thus: "N, son of N, of the city of N, said to the virgin, N, daughter of N, 'Be thou my spouse according to the law of Moses and Israel, and I will labor, honor, nourish, and support thee according to the custom of Jewish men who labor, esteem, nourish, and support their wives truthfully.'" Then follow the particulars of amount, etc. (200 sus to a virgin and 100 sus to a widow), the husband binding himself to pay that amount in full "from the best part of his possessions, . . . even from the garment upon his shoulders." The document is signed by the bridegroom and two witnesses, and is then read by the rabbi, in the presence of all concerned, at the marriage ceremony.

Keupermergel (koi'pėr-mėr-gl), *n.* [G., 'Keupermarl.'] In *geol.*, a subdivision of the Triassic system in Germany which attains a thickness of 1,000 feet. It is underlain by the Lettenkohle and overlain by the Rhætic, and is the middle division of the Keuper.

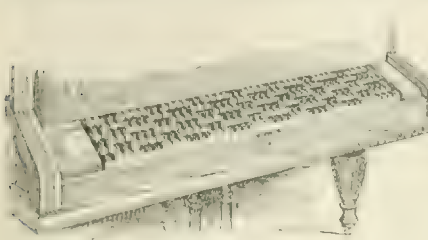
kevel[4] (kev'el), *n.* [Also *keval*, *kevil*; origin obscure.] A local name in Derbyshire, England, for the calcareous gangue of lead ore (galena).

keweenawite (kē'wē-nâ-īt), *n.* [*Keweenaw* + *-ite*[2].] An arsenide of copper and nickel, $(Cu,Ni)_2As$, found in Keweenaw county, Michigan.

key[1], *n.* **3.** (*k*) In *printing*, the circular ratchet that closes or uncloses patent quoins of iron. —**11.** A wooden pin for fastening hides together while they are being limed. *Modern Amer. Tanning*, p. 207.—**Cross keys**, in *her.*, keys borne crosswise as in the papal arms: a frequent sign in Europe.—**Gold key**, the office of groom of the stole.—**Key of the sea**, the pelican's-foot shell, *Aporrhais pespelecani*. See cut under *Aporrhais*. **Keys of the weather**, the twelve days of Yuletide (December 25–January 5), popularly considered as the keys to the weather of the coming year, month by month.—**Reverse keys**, wedges or keys used for driving apart or separating two pieces of a machine. They are made of two steel plates, one of which has a projection on one side and the other a recess in one edge of the same length as the projection on the first key. They are frequently used for forcing tapered rods out of their sockets.—**Ringing-key**, in *telephony*, a key by which an operator makes the necessary connections to send calling-current and operate the bell of any subscriber: frequently combined with a listening-key, in which case the device is called a *listening-and-ringing key*.—**St. Peter's keys**, the emblem of the papal authority and of the spiritual power of binding and loosing; the cross keys in the papal crown. See *power of the keys*, under *key*[1]. **Secondary key**, in *music*. Same as *relative* or *parallel key*. **Split key**, a split pin; a pin made of half-round wire which has a loop for a head and the ends of which can be easily spread apart to prevent its falling out.—**Stepped key**, a key which has separate and movable bits: used with permutation locks.

key[1], *v. t.* **To key up**, to drive in the keys (in the sense of wedges) so as to change the shape of the structure. Thus, *to key up an arch* is to drive in the last stone (compare *keystone*), so that the whole arch will hold itself off the centering, which may then be struck and removed.

keyboard, *n.* **1.** Pedal keyboards in the organ are called *radiating* when the keys are made to converge somewhat below the player's seat, like the ribs of a fan, and *concave* when the general level of the inner keys is lower than that of the outer ones. In the best organs the pedal keyboard is both *concave* and *radiating*.
2. The set of keys for operating the letters of a type-writing or type-setting machine. **Jankó keyboard**, a form of pianoforte keyboard, invented in 1882 by Jankó, then of Berlin. It consists of six rows, or three double rows, of peculiarly rounded keys, closely



Jankó Keyboard.

terraced so that the player may pass readily from one to another or use two rows at once. The three double rows are duplicates of each other, and are connected with the same levers; they are provided simply to give the maximum ease of shifting and combining. Each double row is arranged thus:

C♯ D♯ F G A B
C D E F♯ G♯ A♯

The keys corresponding to the black keys of the ordinary keyboard are distinguished by black bands. The utility of the invention lies (*a*) in its compactness, an octave being about equal to a sixth in the ordinary keyboard, so that intervals longer than an octave may be spanned; (*b*) in its adaptability to the hand, so that by shifting from row to row the shorter fingers can be favored; (*c*) in the fact that the fingering for every tonality is the same, thus facilitating transposition and the playing of pieces in 'remote' keys; and (*d*) in facilitating special effects, like the glissando.—**Universal keyboard**, a particular arrangement of letters on the keyboard of a type-writer, adopted by most of the manufacturers in the United States, so that any operator may use any machine without special practice. Another arrangement is called the 'ideal keyboard.'

key-center (kē'sen″tėr), *n.* In the keyboard of a pianoforte or organ, the center of a key or digital: used as a point of reference in measurements.

key-chuck (kē'chuk), *n.* A jaw-chuck the screws of which are actuated by a key-wrench.

key-clog (kē'klog), *n.* A wooden clog, or a metal strip or plate, attached to a key to prevent it from being overlooked or lost.

key-coupler (kē'kup″lėr), *n.* In *organ-building*, a coupler between two keyboards or between octaves on the same keyboard, when the coupled keys actually move. See *coupler* (*a*).

key-frame (kē'frām), *n.* In the organ and the pianoforte, the board underneath and supporting the keys. See cut under *pianoforte*.

key-gage (kē'gāj), *n.* A plate-gage, either male or female, used for checking the width of keys and key-seats, the female or receiving gage being notched the exact width of the key and its mate being the exact width required for the keyway.

key-hammer (kē'ham″ėr), *n.* A hand-hammer used for driving keys or wedges.

Keyhole nebula. See ★*nebula*.

keyhole-urchin (kē'hōl-ėr″chin), *n.* Any flat sea-urchin having keyhole-like openings through the test, as *Scutella* and *Mellita*.

Keyhole-urchin [illegible] from the apical [illegible] (From Lang's 'Comparative Anatomy.')

key-horizon (kē'hō-rī″zon), *n.* An easily recognized geological surface which serves as a plane of reference from which measurements can be made.

By connecting the points of equal elevation a contour map of the *key horizon* was constructed.
Contrib. to Econ. Geol., U. S. Geol. Surv., 1902, p. 339.

key-lead (kē'led), *n.* In the organ and the pianoforte, a small piece of lead let into a key-tail to insure the prompt rise of the key when it is released. See cut under *pianoforte*.

keyless (kē'les), *a.* [*key*[1] + *-less*.] Having no key (in any sense).

key-loader (kē'lō″dėr), *n.* In the making of pianofortes or organs, a workman who inserts the key-leads.

key-log (kē'log), *n.* In *lumbering*, a log which is so caught or wedged that a jam is formed and held by it.

key-model (kē'mod″el), *n.* The model of a vessel cut from a block composed of various layers of wood fastened together by wooden keys.

key-money (kē'mun″i), *n.* Money exacted from a coming tenant before the keys of the house are delivered to him. [Eng.]

key-move (kē'möv), *n.* The first move in the solution of a chess problem or end-game study, as intended by its author. Another such move, not intended by the author, is called a *cook*.

key-plan (kē'plan), *n.* A diagrammatic or abridged plan giving simply the emplacement of the chief points of interest. It may be a key or index to more elaborate plans.

key-plate, *n.*—**Drop key-plate**, a key-plate having a pivoted cover or guard over the keyhole.

key-recorder (kē'rē-kôr″dėr), *n.* A clock combined with a time-registering mechanism operated by pressing numbered keys. *Engin. Mag.*, July, 1904, p. 618.

key-seater (kē'sē″tėr), *n.* A machine for cutting a keyway or slot for a spline. Portable machines designed to cut a keyway in a piece of shafting, while in position, are essentially small milling-machines operated by hand or by a motor, or by means of flexible shafting, and having narrow-face cutters for milling out the slot. Larger machines are modifications of the slotting machine or draw stroke shapers. Also called *key-way cutter*.

key-seating (kē'sē″ting), *n.* **1.** A key-seat; a keyway.—**2.** The process of cutting a key-seat.

Keyser cup. See ★*cup*.

key-stringed (kē'stringd), *a.* Of musical instruments, having strings and played by means of a keyboard.

key-tube (kē'tūb), *n.* **1.** A tube in a lock designed to support the key.—**2.** The hollow shank or stem of a pipe-key.

K. F. An abbreviation of *Knight of Ferdinand* (Spain).

kg. An abbreviation (*a*) of *keg*; (*b*) of *kilogram*.

K. G. C. An abbreviation of *Knight of the Golden Circle* (United States).

K. G. C. B. An abbreviation of *Knight of the Grand Cross of the Bath*.

K. G. H. An abbreviation of *Knight of the Guelfs of Hanover*.

kgm. An abbreviation of *kilogrammeter*, the gravitational unit of work.

K. G. V. An abbreviation of *Knight of Gustavus Vasa* (Sweden).

K. H. An abbreviation of *Knight of* (*the Order of*) *Hanover*.

khaki. **I.** *a.* **2.** Made of the cloth known as khaki (without direct reference to color).

He descended in a new *khaki* suit of a delicate olive-green. *R. Kipling*, Arrest of Lieut. Golightly, in Plain [Tales from the Hills, p. 124.

II. *n.* **1.** On account of its neutral color and other conveniences, khaki is now used extensively for uniforms in the British and United States armies, especially while they are engaged in active operations in the field. It was originally a cotton twill, but it is now also made of wool and of various colors.
2. A soldier clad in khaki. Hence—**3.** The cause and the policy represented by the khaki-clad military forces operating in South Africa in 1899–1902, and support of the British government in its war policy at that time: as, to vote *khaki*, that is, to support the government and its measures in carrying on the Boer war.—**4.** The bonds issued by the British government in raising money to continue the Boer war.

The market does not know whether the new war loan, *Khakis*, will be offered at 97, 98, 99, or 100.
Westminster Gazette, March 9, 1900. *N. E. D.*

khakied (kä'kid), *a.* Clothed in khaki. *Daily Express* (London), June 26, 1900.

khal (käl), *n.* [Hindustani *khālá*, a creek, inlet, rivulet, watercourse.] A creek, pool, or tank.

This is steeped in the big *khal* at Ishapur, and during the fermenting stage mosquitoes are generated very plentifully. *Jour. Tropical Med.*, June 15, 1903, p. 200.

khalifa, khalifah (kä-lē'fä), *n.* [Ar. *khalīfa*.] Same as *calif*.

khalil (kä-lēl'), *n.* Same as *chalil*.

Khamitic (ka-mit'ik), *a.* Same as *Hamitic*.

khandjar, khanjar (kan'jär), *n.* Same as *handjar*.

khat (kät), *n.* See *kafta*.

khatri (kat'ri), *n.* [Hind. *khatrī*, < Skt. *kshatriya*.] A member of the second or military caste among the Hindus. *N. E. D.*

kheda (ke'dä), *n.* [Also *keddah*, < Hind. *khedā*, < Skt. *ākheta*, hunting.] In India, a snare, in the form of an inclosure, in which adult wild elephants are captured.

The custom in Bengal is to construct a strong enclosure (called a *keddah*) in the heart of the forest.
Sir J. E. Tennent, Ceylon, II. 342.

khediviate (ke-dē'vi-āt), *n.* [*khedive* + *-i-* + *-ate*[3].] The office, dignity, or government of the khedive; the dominions of the khedive.

An account is given of the reforms instituted during the *Khediviate* of Ismail Pasha.
Encyc. Brit., XXVII. 703.

khersal, *n.* See ★*khirsal*.

khirsal (kėr'sal), *n.* [Also *khersal*, *khairsal*; E. Indian: cf. Hind. *khair*, the tree *Acacia Catechu*.] Nearly pure catechin found in pockets of the wood of *Acacia Catechu*, the East Indian tree yielding catechu, and used by the natives in betel-chewing.

Khlisti, *n.* Same as *Khlistu*.

khoja (kō'jä), *n.* [Also *khodja*, *khodgea*, *cojah*, *hoja*, *hojah*, *hodja*, etc., < Turk. *khawāja*, pron. *kōhja*, *khāja*, = Hind. *khuājah*, in popular pronunciation *khajā*, < Pers. *khawaja*, pron. *khajah*, a rich merchant, a gentleman, a man of distinction, in Turk. also specifically a teacher, a scribe.] **1.** In Persia, a gentleman; a man of distinction.—**2.** In Turkey, specifically, a teacher in a school attached to a mosque.

khubber (kub'ėr), *n.* [Also *khuber*, *khabbar*, *khabar*; < Hind. Pers. Ar. *khabar*.] Information; intelligence; report.

Khussak beds. See ★*bed*[1].

Ki. An abbreviation of *Kings*.

kiang[2], *n.* See ★*kyang*.

kibble[2] (kib'l), *v. i.*; pret. and pp. *kibbled*, ppr. *kibbling*. [*kibble*[2], *n.*] To hoist ore or refuse in a mine-bucket or kibble.

kibosh (ki-bosh' or kī-bosh'), *n.* [Also *kybosh*, *kye-bosh*; origin obscure, but prob. a spontaneous emphatic word of purposely indefinite character, < *ki-*, *ka-*, *ker-*, a vague introductory syllable (see ★*ker-*), + **bosh*, an emphatic syllable (prob. sometimes associated with the historical word *bosh*, nothing, stuff, nonsense, a word of Turkish origin which came into English use at about the same time). As the word never had a definite meaning, it served as a convenient substitutionary word where emphasis was to be conveyed or precise words were lacking at the moment. Compare the similar vague substitutionary uses of *thing*, *jig*, *bob*, *thingumbob*, *stuff*, etc.] **1.** Something indefinite; a thing of any kind not definitely conceived or intended: as, I'll give him the *kibosh*. [Slang.] *N. and Q.*, 9th ser., VII. 277.—**2.** The thing in question; the stuff: as, that's the proper *kibosh*. [Slang.] Hence, specifically—**3.** The stuff used in filling cracks or giving finish or shadow to architectural sculptures, namely, Portland cement.

"Where's the *kybosh*?" . . . is a query . . . constantly overheard where architectural sculptors are at work.
N. and Q., 9th ser., VII. 277.

4. Wages; money. *Eng. Dial. Dict.* (s. v. *kybosh*). [Cornwall.]—**5.** Affectation; display; pretense. *Eng. Dial. Dict.* (s. v. *kybosh*). [Cornwall.]—**6.** Stuff; nonsense; rubbish; bosh. [Slang.]—**To put the kibosh on.** (*a*) To subject to the thing vaguely threatened, that is, to put an extinguisher on; finish off; do for (a person); put to silence. [Slang.]

"Hoo-roar," ejaculates a pot-boy in parenthesis, "*put the kye-bosk* [read *kye-bosh*] *on* her, Mary!"
Dickens, Sketches by Boz, Seven Dials.

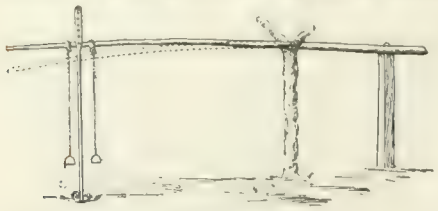
It was attending one of these affairs which finally *put the 'kibosh' on* me. *C. Roberts*, Adrift in America, i.

(*b*) To put the finishing touches on; perfect (one) in his trade. *N. and Q.*, 9th ser., VII. 277. (*c*) Intransitively, to do one's best. [Slang.]

kibosh (ki-bosh' or kī-bosh'), *v. t.* [*kibosh*, *n.*] **1.** To finish off; knock out; squash completely; end. *Eng. Dial. Dict.* [Slang.]—**2.** To throw kibosh, or Portland cement, upon (carved stonework) with a blowpipe and a brush, so as to enhance the shadows. *N. and Q.*, 9th ser., VII. 277.

kick, *v.* **I.** *trans.* **6.** In *cricket*, to cause (the ball) after pitching to rise higher than usual: said of the bowler, and also of the ground or the wicket.—**To kick down**, to bore (a well) by a drill worked as follows: A wooden casing is sunk in

the ground or rock for a few feet and the boring-tool works inside of and is guided by this casing. The tool



Kick-down.

is suspended from the free end of a horizontal hickory pole which is supported only at one end. One or more stirrups are suspended by ropes from the pole near the drill, and each operator places a foot in a stirrup. The tool is moved or kicked down by the pressure of the operators' feet and rises by the spring of the hickory pole. The tool is rotated somewhat at each stroke by the operators.

II. *intrans.* **6.** In *cricket*, to rise after being bowled higher than usual from the pitch; bump: said of the ball.

kick, *n.* **11.** In *archery*, the unsteady motion of an arrow at the beginning of its flight caused by the faulty drawing or loosing of the bow.—**12.** In *elect.*, a high-voltage current or discharge of short duration appearing in inductive electric circuits when the conditions of the circuit are changed, especially when it is opened.—**Free kick,** in *foot-ball*, a kick made when the opponents are restrained by rule from advancing upon the kicker.—**Kick of the rudder** (*naut.*), the jerk of the rudder. **Kick of the thunder-cloud,** in *meteor.*, the sudden outward, and therefore also downward, push due to the hypothetical sudden expansion of the rapidly ascending air within a thunder-cloud. To this 'kick' the sudden temporary rise of pressure recorded on barograms is attributed, as is also the outblowing squall-wind.—**Kick of the wheel** (*naut.*), the jerk of the wheel due to a sharp movement of the rudder-head caused by the action of the sea on the rudder.—**Place kick.** Usually, in a place kick, a player lies at full length on the ground, holding the ball and pointing it as directed by the kicker, who gives a signal for it to be placed on the ground and immediately kicks it before the opponents can advance to block the kick. Ordinarily a try at goal, after a touch-down, is made by a place kick.

kick-ball (kik'bâl), *n.* A name for foot-ball.

kick-down (kik'doun), *n.* The apparatus used in kicking down. See *to* ★*kick down.*

kicker, *n.* **3.** *Naut.*, the propeller of a small launch.—**4.** In *cricket*, a ball which kicks or bumps, that is, which rises higher than usual after pitching.—**5.** In *poker*, a card held up with a pair, usually an ace or king.—**6.** The reversing gear of some direct-acting steam and hydraulic pumps.

kicking-coil (kik'ing-koil), *n.* In *elect.*, a reactive coil.

kicking-colt (kik'ing-kōlt), *n.* The spotted touch-me-not or jewel-weed, *Impatiens biflora.* Also called *kicking-horses.*

kicking-horses (kik'ing-hôr″sez), *n.* Same as ★*kicking-colt.*

kicking-jacket (kik'ing-jak″et), *n.* A device to prevent a horse from kicking. It consists of two wide straps which pass over the horse's rump, one at the crupper, the other at the loin, connected at the ends by straps secured to rings at the ends of the main straps, to which are also attached two looped straps at each end. The loop-straps buckle around the shafts.

kick-out (kik'out), *n.* In *foot-ball*, a drop kick, punt, or place kick made by a player of that side which has made a safety or a touch-back: it is the method of again putting the ball in play.

kick-plate (kik'plāt), *n.* A broad metal plate placed at the bottom of a door to protect it against injury.

kick-wheel (kik'hwēl), *n.* A primitive form of the potters' wheel operated by the foot of the workman.

In 1863 a great demand sprang up [in the Southern States] for earthen jars, pitchers, cups and saucers, and the fire-brick works were partially transformed into a manufactory of such wares, which were produced in large quantities by negro men and boys, who employed the old-fashioned "*kick-wheel*" in their manufacture.
E. A. Barber, Pottery and Porcelain of the U. S., p. 250.

kid[1], *n.* **7.** *pl.* In *astron.*, a pair of small stars in the constellation Auriga, represented as kids held in the hand of the charioteer.—**Undressed kid,** light goatskin finished on the flesh side, usually intended for gloves.

kid-brush (kid'brush), *n.* A soft brush used for brushing the grain of goatskins during the process of finishing. *C. T. Davis*, Manuf. of Leather, p. 367.

kidder[2] (kid'ėr), *n.* A fence of stakes in a river used as an obstruction to vessels; also, a series of stakes placed across a river for entangling fish.

kidder-net (kid'ėr-net), *n.* A fish-net stretched between stakes in a river.

kiddly-benders (kid'li-ben″dėrz), *n.* Same as *kittly-benders.* Also *tiddly-benders* and *tids.*

kiddush (kid'ösh), *n.* [Heb., < *kadash*, sanctify.] In Jewish use, a form of sanctification of the Jewish sabbaths and festivals. At the end of the evening prayer on Friday, the hazzan, or reader of the synagogue, 'makes kiddush,' that is, he says a blessing over a cup of wine. The same ceremony is performed at home by the master of the house, who recites the last two words of verse 31 of the first chapter of Genesis and the following three verses (Gen. ii. 1–3). He then says a blessing, sips a little of the wine, and passes the cup to the other members of the family.

kid-finished (kid'fin″isht), *a.* Dressed and finished so as to be soft and pliable.

kid-kill (kid'kil), *n.* Same as ★*kill-kid.*

kidney, *n.* **5.** In *min.*, a concretion shaped like a kidney.

The coal has been intensely crushed and affected, probably by a shearing movement of the inclosing sandstone, so that the bed is not well defined, but the coal was found in lenses and *kidneys* often as large as 8 feet thick and 13 feet long.
Contrib. to Econ. Geol., U. S. Geol. Surv., 1902, p. 278.

Amyloid kidney, a kidney which is undergoing lardaceous or waxy degeneration.—**Hind kidney,** the posterior portion of the vertebrate kidney; in amniote vertebrates, the metanephros, or true kidney.—**Wandering kidney.** Same as *floating kidney* (which see, under *kidney*).—**Waxy kidney.** Same as *amyloid* ★*kidney.*

kidney-paved (kid'ni-pāvd), *a.* Paved with cobblestones. [Eng.]

kidney-piece (kid'ni-pēs), *n.* A cam having an outline somewhat resembling that of a kidney.

kidney-table (kid'ni-tā″bl), *n.* A table, usually a writing-table, the top of which is kidney-shaped or is imagined to be so.

kidney-worm (kid'ni-wėrm), *n.* Any parasitic worm which infests the kidneys of man or lower animals, as *Eustrongylus gigas*, the giant strongyle or giant kidney-worm found in the horse, and *Sclerostoma pinguicolum*, which infests the kidney, lungs, and other parts of the hog, and is called *lard-worm* when found in leaf-lard.

kies (kēs), *n.* [G., gravel, etc.; see *chesil.*] A German term for the sulphid ores, especially those involving iron and copper: now adopted into English. *J. F. Kemp*, Handbook of Rocks, p. 196 (1904).

kieye, *n.* [Amer. Ind.] A fish, *Argyrosomus hoyi*, of the family *Salmonidæ*, found in the deep waters of Lake Michigan.

kifussa (ki-fö'sä), *n.* [W. African.] A disease of the natives of West Africa, probably the sleeping-sickness.

kiku (kē'kö), *n.* [Jap. *kiku.*] The chrysanthemum, extensively used as a decorative motive in Japanese art. In conventionalized form it constitutes the imperial crest of Japan. See *kikumon.*

kil, *v.* and *n.* A simplified spelling of *kill.*

kilampere (kil'am-pār″), *n.* Same as ★*kilo-ampere.*

kileh (kē'le), *n.* [Turk. *kīleh.*] A Turkish measure of capacity equal to 0.912 of an imperial bushel.

kilem (kī'lem), *n.* The term proposed in 1860 by G. J. Stoney, as an English equivalent of the French *kilometre.*

kiley (kī'li), *n.* [Also *kylie;* aboriginal Australian.] A boomerang. [West Australia.]

kilim, khilim (kil'im), *n.* [Turk. *kilīm*, a Turkish carpet (of various kinds); Pers. *kilim*, a carpet.] An Oriental rug, made in Turkish Kurdistan and the neighboring territory. It is woven with a flat stitch and is made alike on both sides.

kill[1], *v. t.* **6.** In *leather-manuf.*, to remove the natural grease from (the skin) in making furs or robes from hair skins. *C. T. Davis*, Manuf. of Leather, p. 496.—**7.** In *tennis*, to strike (the ball) with such force as to make it impossible for the opponent to return it.—**Killed spirits of salts.** See ★*salt*[1]. **To kill the sea** (*naut.*), to reduce the violence of the sea: said of a heavy rain, which sometimes acts upon the surface of the water in such a way as to keep it from breaking.—**To kill the wind** (*naut.*), to cause the wind to die away: said of a heavy shower.

kill[1], *n.* **2.** An animal that has been killed, as by a beast of prey or by a sportsman; a bag of game.

killcrop (kil'krop), *n.* [G. *kielkropf.* Origin uncertain.] In popular tradition, a child born with an insatiable hunger; one who can eat and eat and is never the fatter: supposed to be a fairy changeling.

kill-devil, *n.* **3.** Among sailors, etc., alcoholic spirits of bad quality; a strong raw liquor. See the quotation under *rumbullion.*

killer, *n.* **4.** A contrivance for killing large ferocious animals. It consists of an elastic strip of hard material, which is coiled up, tied together with sinew, and inclosed in a bait. When swallowed the sinew is digested, and the coil unwraps and tears the intestines of the animal. It is used by Eskimos and Chukchees for killing wolves, and by the Samoans for killing sharks.
Amer. Anthropologist, April–June, 1901, p. 391.
5. The technical name among house-painters for anything used to prevent resin, locally present in woodwork, from exuding and making visible spots on the painted surface; also, in a more general sense, any substance used to remove spots on such surfaces.

killing, *n.* **2.** In the manufacture of steel, the practice of stopping or preventing the evolution of gas in the steel. Steel is most commonly killed with silicon or aluminium. *Phillips and Bauerman*, Elements of Metallurgy, p. 348.

killing-circle (kil'ing-sėr″kl), *n.* See *pattern*, 10.

kill-kid (kil'kid), *n.* The lambkill, *Kalmia angustifolia.*

kill-time (kil'tīm), *n.* and *a.* **I.** *n.* Something, as a social amusement or a more serious occupation, entered into to kill time or the sense of time; a pastime.

That which as an occasional pastime he might have thought harmless and even wholesome, seemed to him something worse than folly when it was made a *kill-time*, —the serious occupation for which people were brought together. *Southey*, Doctor, lxv.

II. *a.* Capable of killing time: as, a *kill-time* sport; a *kill-time* novel.

kill-wart (kil'wârt), *n.* The celandine, *Chelidonium majus.* Also called *wartweed.*

kiln, *n.*—**Annular kiln.** Same as ★*ring-kiln.*—**Beehive kiln,** a round, up-draft kiln used by potters for burning common ware.—**Calcining kiln.** See ★*calcine.*—**Continuous kiln,** a brick-kiln so constructed that the heat which passes away from the already burnt brick is utilized to heat the green brick entering the kiln. See *railway* ★*kiln, Hoffman* ★*kiln,* and ★*ring-kiln.*—**Dietsch kiln,** a vertical cement-kiln, similar to the lime-kiln, having certain conveniences for exposing the material at different stages of the burning, so that the burner can have access to it: used chiefly in Germany.—**Down-draft kiln,** a brick- or pottery-kiln in which, by a peculiar construction, the draft is deflected downward. See the extract.

The most rational kilns, then, are those working on what is known as the "*down draught*" principle. In these the gases rise from the fire-places to the crown against which they strike and are compelled to descend between the bungs of saggars or of ware to the flues under the floor which lead to a center tunnel connected with the stack. The striking against the crown of the kiln, the horizontal movement under the same, with the mixture effected by the impeding tops of the bungs of the ware and the downward movement, most effectually breaks up any tendency of the gases to move in separate channels. *Langenbeck*, Chem. of Pottery, p. 183.

Dueberg kiln, a variety of the Hoffman kiln in which the fire travels around a continuous circuit. Cars are loaded with green brick, which remain at rest during the process of firing and are drawn out after the kiln has sufficiently cooled.—**Dunnachie kiln,** a variety of regenerative kiln for burning fire-bricks, invented by James Dunnachie of Lanark, Scotland.—**Dutch kiln,** an open brick-kiln having a temporary roof which is removed when the kiln becomes sufficiently heated.—**Gerstenhöfer kiln,** a form of pyrites-burner used in the manufacture of sulphuric acid by the lead-chamber process. A vertical shaft of fire-brick has arranged in it a number of fire-clay bars in successive tiers, from one to another of which the pyrites, crushed to a moderately fine powder, drops in the midst of an ascending current of hot air, the sulphur becoming converted into sulphur-dioxid gas, which is drawn off through a flue at the top, while the oxid of iron formed is removed at the bottom of the shaft.—**Hoffman kiln,** a kiln of the ordinary type of continuous-burning kilns, devised by Frederick Hoffman of Berlin: one of the most valuable inventions in ceramic art. See the extract.

The burning chamber of the *Hoffman kiln* consists of an endless tunnel of an annular shape, either circular, or elliptic, or oblong in plan. This endless tunnel is successively filled with green brick, and after the fire has passed through, leaving the burned brick behind, they are successively taken out when sufficiently cooled down; soon afterward they are replaced by green brick.
C. T. Davis, Manuf. of Bricks, p. 266.

Mendheim kiln, a variety of continuous brick-kiln. See the extract.

The *Mendheim kiln* consists of a combination of a series of arched burning chambers, connected with each other by flues, so as to form a complete circuit. These kilns are fired by gas and the fire proceeds from one chamber to another, passing through the flues, thus travelling around similarly as in the Hoffman kiln.
C. T. Davis, Manuf. of Bricks, p. 272

Railway kiln, a continuous kiln in which the bricks are slowly moved on cars, by means of a screw, during the process of burning. The green bricks are loaded at one end of a long, straight tunnel in the middle of which the fire is burning. As they near the other end they are gradually cooled by a current of air which flows in the opposite direction, passes through the fire, and escapes through a chimney where the green bricks are introduced.

—**Regenerative kiln,** a brick-kiln of peculiar construction. See the extract.

The objects of all late improvements in the *regenerative kilns* are to thoroughly mix the air and gas burned in such kilns and to effect a better diffusion, regulation, and equalization of the heat obtained from their combustion.
C. T. Davis, Manuf. of Bricks, p. 272.

Ring kiln. See ★*ring-kiln.* **Rotary kiln,** an apparatus devised for the burning or calcination of cement. It consists of a cylinder slightly inclined, supported by rollers, and revolving slowly about once a minute. The material is fed in at the upper end and works gradually downward, falling out at the lower end.—**Running kiln,** a lime-kiln that is fed from above and delivers continuously below.—**Up-draft kiln,** a kiln in which the draft and burning gases are introduced at the bottom, pass through the ware, and escape at the top.

kiln-dry (kil′drī), *v. t.* To dry in a kiln, as lumber, fruit, etc.

kilnman (kil′man), *n.*; pl. *kilnmen* (-men). A workman who tends a kiln or oven in a pottery; an ovenman.

kilo-. [F. *kilo-*, a definitely phonetic spelling of *chilo-* (with *ch* = *k*), this standing for *chilio-*, ⟨ Gr. χίλιοι, a thousand: see *chiliasm*, etc.] In the nomenclature of the metric system, a prefix meaning 'thousand,' as in *kilogram*, *kilometer*, etc.

kilo-ampere (kil′ō-am-pār″), *n.* One thousand amperes or one hundred c. g. s. units: a practical unit of current.

kilocalory (kil′o-kal′ō-ri), *n.*; pl. *kilocalories* (-riz). [Also *kilocalorie*; *kilo-* + *calory.*] The quantity of heat required to raise one kilogram of water from 0° C. to 1° C. or, sometimes, from 15° C. to 16° C.; one thousand gram-calories or lesser calories; a greater calory.

kilo-erg (kil′ō-ėrg), *n.* [*kilo-* + *erg.*] A practical unit of energy equal to 1000 ergs.

kilogauss (kil′ō-gous), *n.* [*kilo-* + *gauss.*] A flux-density of 1000 lines per square centimeter: a practical unit of magnetic flux-density or magnetic induction.

Kilogram calory. See ★*calory.* **Kilogram-centigrade heat-unit.** See ★*heat-unit.* **Paris kilogram,** a name by which the international standard of weight or prototype preserved in the Archives of Paris is sometimes designated.

kilogram-molecule (kil′ō-gram-mol″e-kūl), *n.* A quantity of an element or compound whose weight in kilograms is numerically equal to its molecular weight; one thousand gram-molecules.

kilojoule (kil′ō-joul), *n.* [*kilo-* + *joule.*] A practical unit of energy equal to 1000 joules or to 1×10^{10} ergs.

kilom. An abbreviation of *kilometer.*

kilomaxwell (kil′ō-maks″wel), *n.* [*kilo-* + *maxwell.*] A unit of magnetic flux equal to one thousand maxwells.

kilometric (kil-ō-met′rik), *a.* Of or pertaining to a kilometer; measured in kilometers.

kilometrical (kil-ō-met′ri-kal), *a.* Same as ★*kilometric.*

kilovolt (kil′ō-vōlt), *n.* [*kilo-* + *volt*[2].] A practical unit of electromotive force equal to 1000 volts or 1×10^{11} c. g. s. units.

kilovolt-ampere (kil′ō-vōlt-am-pār″), *n.* In *elect.*, a practical unit of power; a kilowatt.

kilowatt-hour (kil′ō-wot-our), *n.* The energy developed in one hour by a kilowatt of power or activity: a practical unit of energy.

kilowatt-meter (kil′ō-wot-mē′tèr), *n.* An instrument for the measurement of electrical power so graduated as to read in kilowatts.

kilowatt-minute (kil′ō-wot-min″it), *n.* A practical unit of work; the work done in one minute by a machine developing one kilowatt of power; 60,000 joules.

kilowatt-second (kil′ō-wot-sek″und), *n.* A practical unit of work; the work done in one second by a machine developing one kilowatt of power; 1000 joules.

kilt[1], *v.* **II.** *intrans.* To step lightly and nimbly, as if with the skirts kilted out of the way.

kilter, *n.* **2.** In *poker*, a hand with no card above a nine, no pair, and no chance to make either flush or straight.

Kiltorcan beds. See ★*bed*[1].

kilty (kil′ti), *n.*; pl. *kilties* (-tiz). [*kilt*[1] + *-y*[2].] In the British army, a nickname for a Highland soldier. *J. Ralph*, An American with Lord Roberts, p. 55.

kimberlite (kim′bèr-līt), *n.* [*Kimberley* + *-ite*[2].] In *petrog.*, a dense porphyritic peridotite, occurring at Kimberley, South Africa, partly serpentinized with phenocrysts of olivin and with a few of biotite, bronzite, ilmenite, perovskite, and pyrope. In places it has a spherulitic texture resembling chondri. It is partly brecciated and carries diamonds and fragments of carbonaceous shales. *Cargill Lewis*, 1887.

kimisa (ki-mē′sä), *n.* [Indian adoption of Sp. *camisa*: see *camise, chemise.*] In British Guiana, a coarse cotton garment worn by the semicivilized Indian women and sometimes by the negresses. It is made like a petticoat, but is drawn up and fastened over one shoulder, the other being left bare.

kin[5] (kin), *n.* Same as ★*kine*[3].

kina (kē′nä), *n.* Same as *quina.*

kinæsthesiometer (kin-es-thē-si-om′e-tèr), *n.* [*kinæsthesia* + Gr. μέτρον, measure.] An instrument for determining the degree of muscular sense or kinæsthesia.

Kinah (kē′nä), *n.*; pl. *Kinoth* (kē′nōt). [Heb. *qīnāh.*] In Jewish use, lamentation: the name of the liturgy for the fast, on the 9th of Ab, commemorating the destruction of the temple. It contains dirges and the book of Lamentations.

kinaki (kē-nä′kē), *n.* [Maori.] Anything eaten with other food for the sake of variety or as a relish.

kina-kina (kē″nä-kē′nä), *n.* Same as *kin-kina* and *quinaquina.*

kinase (kin′ās), *n.* [Gr. κιν(εῖν), move, + *-ase.*] A ferment-like body which is capable of rendering physiologically active another ferment and thus produces chemical changes in a third body while in itself it is apparently inert. Enterokinase, which occurs in the intestinal juice, renders the pancreatic trypsin active and thus brings about the digestion of albumins. Kinases probably occur widely distributed both in the animal and the vegetable world.

kinch[3] (kinch), *n.* [A variant of *kink*[1].] A slip-knot; figuratively, a hold; an advantage.

kinch[3] (kinch), *v. t.* [A variant of *kink*[1].] To twist a cord about, as about the tongue or nose of a horse.

kind[2], *n.*—**Consciousness of kind.** See ★*consciousness.* **Course of kind.** See ★*course*[1].—**Out of kind,** out of the original or natural breed or variety.

Their stubbornness is but a strong hope malignified, or, as we say, grown wild and *out of kind.*
T. Jackson, Eternal Truth of Scripture.

Kinderhook group. See ★*group*[1].

kindle[1], *v. i.* **2.** To be with young: an English fanciers' term applied to rabbits. *N. E. D.*

kindling[1], *n.* **2.** The bringing forth of young: applied by English fanciers to rabbits. *N. E. D.*

kine[3] (kīn), *n.* [Also *kin*; ⟨ Gr. κίνησις), motion. Compare *dyne*, ⟨ Gr. δύν(αμις), power.] In *phys.*, the c. g. s. unit of velocity. Since in the c. g. s. system the units of distance and time are the centimeter and second, respectively, the kine is a velocity of one centimeter per second.

Kinematic curve, geometry. See ★*curve*, ★*geometry.* **Kinematic method.** See *altitude of a* ★*cloud.*

kinematograph (kin-ē-mat′ō-gräf), *n.* Same as ★*cinematograph.*

kinematographic, kinematographical, *a.* Same as ★*cinematographic*, ★*cinematographical.*

kinemometer (kin-ē-mom′e-tèr), *n.* An instrument for determining the speed of vehicles.

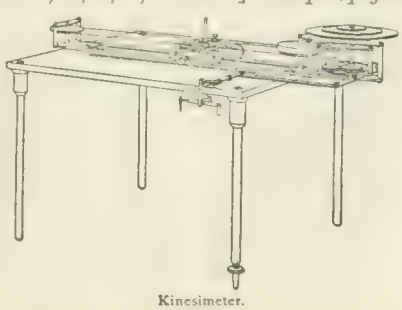
kinenegative (kin-ē-neg′a-tiv), *n.* [Gr. κίνη(σις), motion, + E. *negative.*] In *photog.*, the negative of a film, ribbon, or other support from which pictures are taken for projection in a cinematograph.

kinesalgia (kin-ē-sal′ji-ä), *n.* [NL., ⟨ Gr. κίνησις, motion, + ἄλγος, pain.] Pain excited by movement.

kinesiatrics (ki-nē-si-at′riks), *n.* [Gr. κίνησις, motion, + ἰατρικός, of healing.] Same as *kinesitherapy.*

kinesigraph (ki-nē′si-gräf), *n.* [Gr. κίνησις, motion, + γράφειν, write.] In *photog.*, a form of kinetograph.

kinesimeter (kin-ē-sim′e-tèr), *n.* [Gr. κίνησις, motion, + μέτρον, measure.] In *exper. psychol.*, an instrument devised by G. S. Hall, and described in 1885 by H. H. Donaldson, for the exploration of the cutaneous surface. The kinesimeter consists essentially of a metal table, the top of which is furnished with slit and grooves for the reception of a traveling car. The car is connected by belting to a set of friction-gears turned by an electric motor. On its under surface, the car carries a swinging point of hard rubber or metal, so counterpoised as to move without friction or acceleration over the surface of the skin. The skin may thus be examined for sensations of pressure and temperature, or for the limits of the perception of movement.



Kinesimeter.

kinesiology (ki-nē-si-ol′ō-ji), *n.* [Gr. κίνησις, motion, + -λογια, ⟨ λέγειν, speak.] The science of exercise, especially as a hygienic or therapeutic agent.

kinesiometer (ki-nē-si-om′e-tèr), *n.* Same as ★*kinesimeter.*

kinesipath (ki-nes′i-path), *n.* Same as *kinesipathist.*

kinesis (ki-nē′sis), *n.* [Gr. κίνησις, motion, movement, ⟨ κινεῖν, move.] **1.** Any manifestation of dynamic energy.—**2.** In *cytol.*, a short expression for *karyokinesis.*

Before the formation of the protetrads the thread prepared for the first maturation division undergoes a first longitudinal division, which effaces itself. At the first metaphase there is a second division (? longitudinal) which appears preparatory to the second *kinesis* and does not efface itself, but is useless, since it separates two demi-dyads which will pass into the same spermatid.
Jour. Roy. Micros. Soc., Oct., 1898, p. 529.

kinesiscope (ki-nē′si-skōp), *n.* [Gr. κίνησις, motion, + σκοπεῖν, view.] An instrument designed to rest on the sea-bottom and detect electrically the approach of steamships.

kinesthetic, *a.*—**Principle of kinesthetic equivalents.** See ★*equivalent.* **Kinesthetic memory.** See ★*memory.*

Kinetic center, stability. See ★*center*[1], ★*stability.*

kinetically (ki-net′i-kal-i), *adv.* In a kinetical manner.

kinetocamera (ki-nē-tō-kam′e-rä), *n.* A camera so arranged as to photograph successive phases of a movement; a cinematograph. *Scripture*, Exper. Phonet., p. 30.

kinetogenetic (ki-nē″tō-jē-net′ik), *a.* [Gr. κινητός, movable, + γένεσις, origination (see *genetic*).] Developing or bringing about movement.

Its action is so constant an accompaniment of development that the forces of the latter may be divided into the *kinetogenetic*, or those that develop movement, and the statogenetic, or those that develop rest or equilibria amongst the parts of the germ.
J. A. Ryder, Biol. Lectures, 1895, p. 46.

kinetogram (ki-nē′tō-gram), *n.* [Gr. κινητός, movable, + γράμμα, anything written.] In *photog.*, a picture for projection by the cinematograph.

kinetograph (ki-nē′tō-gräf), *n.* [Gr. κινητός, movable, + γράφειν, write.] A device for taking a series of photographs of a moving object.

kinetographer (kin-ē-tog′ra-fèr), *n.* One who takes pictures for or uses a kinetograph.

kinetographic (ki-nē-tō-graf′ik), *a.* Of or pertaining to the kinetograph; obtained or made by means of the kinetograph.

kinetography (kin-ē-tog′ra-fi), *n.* [Gr. κινητός, movable, + -γραφια, ⟨ γράφειν, write.] In *photog.*: (*a*) The art or practice of taking pictures of moving objects for projection by the kinetograph or cinematograph. (*b*) The projection of such pictures on a screen.

kinetophonograph (ki-nē-tō-fō′nō-gräf), *n.* A combined phonograph and kinetograph. By the use of these instruments a scene enacted may be reproduced at any other time and place, the voices of the actors being heard while their performance is witnessed.

kinetoscope, *n.* **3.** An apparatus invented by Edison for exhibiting photographic pictures of objects in motion. Its essential parts are a ribbon containing the pictures, a mechanical device for causing the pictures to pass rapidly in succession under a lens or sight-piece, a lamp for illuminating the pictures, and a mechanical device for causing a circular revolving screen to move rapidly before them. A slot is cut in this screen, and its revolutions are so timed that the slot passes before each picture just as it is in line with the eyepiece. The effect is to give a view of each picture in succession, and to cut off the view as the picture is moved forward. The apparent result to the eye is a continuous picture in which the objects photographed appear to be in motion.

kinetoscopic (ki-nē-tō-skop′ik), *a.* Pertaining to or having the nature of a kinetoscope.

This method has been so simplified that little books of *cinetoscopic* views are sold, from which the moving effect

is obtained by simply letting the leaves escape rapidly from the thumb as the book is bent backwards.
Encyc. Brit., XXVII. 95.

kin-fun (kin-fŭng′), *n.* [Jap. *kin-pun*, pron. *kim-pun* (kim-pung′), from *kin*, gold, + *fun*, powder.] A powdered gold lacquer.

king[1], *n.* 6. The male of a termite or white ant.

Virgin queens show marked preference or dislike toward certain *kings*; queens having once mated permit no close approach of an alien *king*, and do not respond to the attentions of *kings* of their own lineage; they may drop their wings without assistance from workers; light and warmth appear to be required for the stimulation of the *king* and queen to mating.
Jour. Roy. Micros. Soc., Feb., 1903, p. 35.

7. The perfect female bee. The queen bee was formerly known by this name. Also *king bee*.

Bees served me for a simile before
And bees again — "Bees that have lost their *king*,
Would seem a repetition and a bore.
J. H. Frere, Monks and Giants, iv. 22 (1817).

King Arthur, a game played by British man-of-war's-men in the tropics. One of the crew is chosen by lot to represent the 'king,' and allows buckets of sea-water to be thrown over him until one of his fellows is detected laughing at his absurd efforts to dodge the deluge: the one so detected then takes the king's place.—**King bird of paradise,** *Cicinnurus regius*, a small species, which occurs in New Guinea and several other islands. The male is of a brilliant red color.—**King of the herrings.** (*c*) In Australia, the elephant fish.—**King of the mackerels,** *Ranzania truncata*, a fish of the family *Molidæ*: regarded by the Hawaiian Islanders as the king of the mackerels and tunnies.—**King of the mullets.** (*b*) *Apogon imberbis*; a fish of the family *Cheilodipteridæ*, found in the Mediterranean Sea.—**King's bargain** (*naut.*), a meritorious sailor on a British naval vessel.—**King's bencher** (*naut.*), a sea-lawyer; a trouble-making member of the crew of an English man-of-war. [Eng.]—**King's blue.** See ★*blue*.—**King's gambit declined.** See ★*gambit*.—**King's Knight's defense.** Same as *Berlin* ★*defense*.—**King's Knight's gambit, opening.** See ★*gambit*, ★*opening*.—**King's-letter man,** formerly, in the British service, an officer of the rank of midshipman who held the sovereign's word that a letter of recommendation from his captain, after a certain period of experience, would secure for him a lieutenant's commission.—**King's own,** any article, issued from the British royal storehouses for naval or army use, which is distinguished by the mark or brand of a broad arrow.—**King's regulations.** See ★*regulation*.—**King's Rook's Pawn's gambit.** See ★*gambit*.—**King's side,** in *chess*, that side of the board on which the King stands, embracing the King's, King's Bishop's, King's Knight's, and King's Rook's files.—**King's widow,** in *feudal law*, a widow of a principal tenant or vassal of the king, who was compelled to take an oath in Chancery that she would not marry again without the king's consent.

king-ball (king′bâl), *n.* In *bagatelle* and similar games, the object-ball.

king-bolt, *n.* 3. An iron rod in a roof- or bridge-truss, used in place of a king-post to prevent the inclined members from allowing an increase of the distance between the tie and the compression pieces.

king-conch (king-kongk), *n.* A helmet-shell, *Cassis madagascariensis*, from the West Indies, used in cameo-cutting.

kingcup, *n.* 2. The marsh-marigold, *Caltha palustris*.

kingdom, *n.*—**The Flowery Kingdom,** the Chinese empire: a partial translation of Chinese *Chung hwa kwoh*, 'Middle flowery kingdom.' The usual term is *Chung kwoh*, 'Middle kingdom,' a geographical expression. 'Flowery' is a rhetorical addition.—**The Middle Kingdom,** China.

King-conch (*Cassis madagascariensis*)

king-eagle (king′ē″gl), *n.* The imperial eagle. See *eagle*, 1.

Kingena (king-ē′nä), *n.* [NL.] A genus of fossil brachiopods of the family *Terebratulidæ*. They have round or oval shells with a large foramen and a loop the descending and ascending lamellæ of which are wholly or partly coalesced with the median septum.

king-fluke (king′flök), *n.* Same as *turbot*, 1.

kinglessness (king′les-nes), *n.* The state of having no king: used by Carlyle to denote a state of anarchy.

And everywhere the people, or the populace, take their own government upon themselves; and open '*kinglessness*,' what we call anarchy, . . . is everywhere the order of the day. Such was the history, . . . from end to end of Europe, in those March days of 1848.
Carlyle, Latterday Pamphlets, No. 1.

king-lory (king′lō-ri), *n.* Same as ★*king-parrot*.

king-monkey (king′mung′ki), *n.* One of the African horse-tailed monkeys, *Colobus polycomus*, related to the guereza. Its general color is black, but a mark on the forehead, a fringe on the throat and chest, and the tuft on the end of the tail are white.

king-of-the-meadow (king′ov-thē-med′ō), *n.* The joe-pye-weed, *Eupatorium purpureum*. Also *queen-of-the-meadow*.

king-parrakeet (king′par″ä-kēt), *n.* Same as ★*king-parrot*.

king-parrot (king′par″ot), *n.* A name of somewhat vague application, but generally given to an Australian lory, *Aprosmictus scapulatus*, which has a brilliant red head and neck, green back and wings, and dark blue tail. Also known as *king-parrakeet* and *kinglory*. The female, of a dull green, with dull blue tail, is known as the *queen-parrot*.

king-pot (king′pot), *n.* The central and largest crucible used in the manufacture of bronze. *Phillips and Bauerman*, Elements of Metallurgy, p. 503.

king-row (king′rō), *n.* In *draughts* or *checkers*, the last row of squares on each side on which the pieces which are to be crowned or made king are placed or which they must reach.

king's-crown (kingz′kroun), *n.* Same as *king's-clover*.

king's-cure (kingz′kūr), *n.* The pipsissewa or prince's-pine, *Chimaphila umbellata*; also, the spotted wintergreen, *C. maculata*.

king-spoke (king′spōk), *n.* *Naut.*, a spoke of the steering-wheel, usually distinguished by a mark of some kind, which is directly over the barrel-hub when the rudder is amidships.

king's-rod (kingz′rod), *n.* A hardy, herbaceous perennial of the lily family, *Asphodelus ramosus*, a native of southern Europe, bearing large white flowers having a reddish-brown line in the middle of each perianth segment and arranged in very long, dense racemes.

kingston (king′stun), *n.* [Also *kingstone*, *kinson*; origin conjectural.] The angel-fish or monk-fish, *Squatina vulgaris*, one of the elasmobranchiate fishes found on the coasts of Great Britain.

king's-tree (kingz′trē), *n.* A medium-sized tree of the family *Loganiaceæ*, *Strychnos Atherstonei*, native to South Africa, the twigs of which are used by the Kafirs for preparing ceremonial staffs.

kinit (kin′it), *n.* [*kine*[3] + (*un*)*it*.] Same as *poundal*.

kin-kan (kēn′kän′), *n.* [Jap.] A Japanese name for the little orange-like fruit more commonly known as *cumquat*. It is a dwarf species, *Citrus Japonica*, now grown to some extent in the southern United States.

kinko (kēn′kō), *n.* The trepang or bêche-de-mer.

kinnor (kin′ōr), *n.* [Heb.] An ancient Hebrew instrument, probably of the zither or lyre class, but possibly a harp: translated 'harp' in the English Bible.

kinocentrum (kin-ō-sen′trum), *n.*; pl. *kinocentra* (-trä). [NL., irreg. < Gr. κινεῖν, move, + κέντρον, center.] The centrosome regarded as a motor center of the kinoplasm. The movement of cilia and of the tail of the spermatozoa is supposed by some cytologists to have its origin in the centrosome. Opposed to ★*chemocentrum* (the nucleus of the cell).

kinodrome (kin′ō-drōm), *n.* [Gr. κίν(ησις), motion, + -δρομος, < δραμεῖν, run.] An instrument for exhibiting moving pictures. *Kansas City Daily Times*, Oct. 14, 1903.

kinoic (ki-nō′ik), *a.* [*kino*[1] + *-ic*.] Of or pertaining to kino.

kinoin (kē′nō-in), *n.* [*kino*[1] + *-in*[2].] A colorless crystalline substance, $C_{14}H_{12}O_6$, obtainable in small quantity from kino. It does not precipitate a solution of gelatin, but is converted by heating into kino-red.

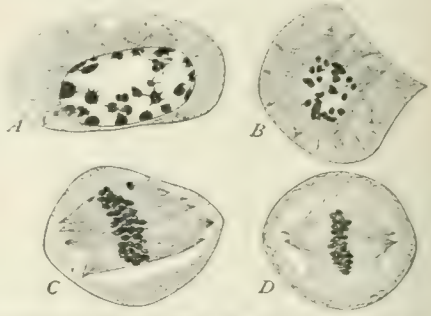
kinoplasm (kin′ō-plazm), *n.* [NL. *kinoplasma*, irreg. < Gr. κινεῖν, move, + πλάσμα, anything formed.] In *cytol.*, a general term for the more active portion of the cell-cytoplasm. The kinoplasm is regarded as having fibrillar structure and as giving rise to motile structures like cilia and flagella. Opposed to ★*trophoplasm* (nutritive plasma).

Strassburger also regards protoplasm as composed of two portions: a motile *kinoplasm* which is fibrillar, and a nutritive trophoplasm which is alveolar, in structure.
Encyc. Brit., XXXII. 42.

kinoplasma (kin-ō-plaz′mä), *n.* [NL.] Same as ★*kinoplasm*.

kinoplasmic (kin-ō-plaz′mik), *a.* [*kinoplasm* + *-ic*.] Of or pertaining to kinoplasm.

The first indication of a spindle in these cells is the formation of a felted zone of *kinoplasmic* fibers surrounding the nucleus.
Bot. Gazette, Aug., 1903, p. 81.



[illegible] spindle which finally condenses into a bipolar one. Highly magnified. (From Wilson's "The Cell.")

kinoplastic (kin-ō-plas′tik), *a.* [Gr. κινεῖν, move, + πλαστός, < πλάσσειν, form.] Same as ★*kinoplasmic*.

kino-red (kē′nō-red″), *n.* A red substance of a somewhat resinous character forming a constituent of kino and producible artifically from kinoin. It precipitates a solution of gelatin.

Kinorhyncha (ki-nō-ring′kä), *n. pl.* [NL., irreg. < Gr. κινεῖν, move, + ῥύγχος, snout.] A class and order consisting of the single genus *Echinoderes*. *Dujardin*.

kinosthenic (kin-os-then′ik), *a.* [Irreg. < Gr. κινεῖν, move, + σθένος, force, + *-ic*.] Entering into a mathematical expression only through a fluxion: applied to a coördinate as entering into an expression for a Lagrangian function.

kinotannic (kē-nō-tan′ik), *a.* [*kino*[1] + *tannic*.] Noting an astringent acid contained in kino.

kinovin (ki-nō′vin), *n.* [Also *chinovin*, *quinovin*; < *kina* (= *china*[2], *quina*) + L. *ovum*, egg (white), + *-in*[2].] An organic substance of neutral character, found in cinchona-bark, which on boiling with dilute acid yields kinovic acid and a sugar-like substance called *kinovite*. It appears to exist in two isomeric forms, the one occurring in true cinchona-bark, the other in cuprea-bark. Also called *kinova bitter*.

kinsen (kin-sen′), *n.* [Jap., < *kin*, gold, + *sen*, thread.] In Japan, gold wire, used for cloisons in enamel.

kinspeople (kinz′pē-pl), *n. pl.* Kinsfolk.

kinzigite (kint′sig-īt), *n.* [Named from *Kinzig* valley, Black Forest, + *-ite*[2].] In *petrog.*, a gneissic rock composed of oligoclase, biotite, garnet, and sometimes graphite. *Fischer*, 1860.

kioea (kē-ō-ā′ä), *n.* [Maori.] The Sandwich Island curlew. *Numenius tahitiensis*.

Kionoceras (kī-ō-nos′e-ras), *n.* [NL., < Gr. κίων, a pillar, + κέρας, horn.] A genus of fossil nautiloid cephalopods characterized by its surface-sculpture, which consists of longitudinal ridges in the earlier stages, after which inconspicuous annuli appear which become obsolete before the ephebic stage. It ranges from the Silurian to the Carboniferous.

kip[4], *n.* 2. A lodging-house; a bed in a lodging-house; hence, a bed in general. *N. E. D.*

kip-leather (kip′leтн″ėr), *n.* Bark-tanned side-leather finished on the flesh side with a wax finish.

kipper[3] (kip′ėr), *n.* [Queensland Australian dialect.] A young man who has been initiated and is classed with the men of his tribe. See ★*bora*[2]. [Australia.]

kipperer (kip′ėr-ėr), *n.* One who kippers or cures fish. *Nature*, Sept. 4, 1902, p. 435.

Kipp's apparatus. See ★*apparatus*.

kiri (kē′ri), *n.* [Jap.] A large tree, *Paulownia tomentosa*, of the family *Scrophulariaceæ*, cultivated in Japan for its extremely light wood. It is never found in groves or in forests, but occurs scattered in more open places, growing like fruit-trees. Its grayish wood, in comparison with most other woods of light weight, is remarkably strong and does not warp or split easily. On account of its lightness and softness it is used in many ways, especially for the manufacture of small, light boxes, wooden shoes, lacquer ware, and toys. From its seeds an oil is obtained which in Japan is used for waterproofing paper. See *Paulownia* and *kirimon*.

kirin (kē-rēn′), *n.* [Jap. *kirin*, Chinese *kilin*, a fabulous animal said not to tramp on live insects or to eat live grass.] Same as *kilin*.

kirk[2] (kėrk), *v. t.* Same as *kirre*.

The constrained attitudes which coal miners are compelled to assume while "*kirking*" or undercutting the coal seams result in nystagmus.
Buck, Med. Handbook, VI. 523.

kirkify (kėr′ki-fī), *v. t.*; pret. and pp. *kirkified*, ppr. *kirkifying*. [*kirk*[1] + *-i-fy*.] To make like the Scottish kirk in principles or like a kirk in architecture. *N. E. D.*

kirkward (kėrk′wärd), *a.* and *adv.* [*kirk*[1] + *-ward*.] Churchward; toward the church.

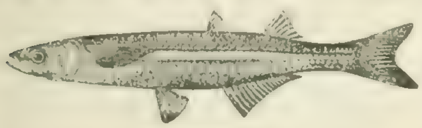
kirn[2], *v. t.* **2.** In *mining*, to bore with a hand-jumper or kirner. [Scotch.]

kirner (kėr′nėr), *n.* [See ★*kirn*, *v. t.*, 2.] In *mining*, a hand jumper; a churn-drill. [Scotch.]

kiroumbo (ki-röm′bō), *n.* [*Malagasy*.] A common name for the two species of peculiar birds included in the genus *Leptosoma*, found in Madagascar.

kirri (kir′i), *n.* [Also *keerie*, *kerrie*, S. African D. *kieri*; from the Kafir name.] A short, heavy stick or club with a knob on one end, used as both a striking and throwing weapon by the Bushmen and other natives of South Africa. Also called *knobkerrie*.

Kirtlandia (kėrt-lan′di-ä), *n.* [NL., named after Jared P. *Kirtland*, an American ichthyol-



Kirtlandia [illegible]
From Bulletin U. S. Nat. Museum.

ogist.] A genus of fishes, belonging to the family *Atherinidæ*, found on the coasts of North and Central America.

kirwanite (kėr′wan-īt), *n.* [Named (1833) after R. *Kirwan*, an Irish mineralogist.] A mineral, related to the chlorites, occurring in green fibrous forms in the basalt of Ireland.

kischtimite (kēsh′ti-mīt), *n.* [Named orig. in G. *Kischtim-parisit*, 'parisite of *Kyshtymsk*' (G. *Kischtim*), in the Ural, in Russia.] A fluocarbonate of the cerium metals, related to parisite.

kisher, kishr (kish′ėr, kish′r), *n.* [Ar. *qishr*, rind, peel, shell, husk.] A favorite drink of the Arabians, especially in Yemen, made of an infusion of the husks or pods of the coffee-berry. *Ratzel* (trans.), Hist. of Mankind, III. 210.

Kishiu pottery. See ★*pottery*.

kishlak (kēsh′läk), *n.* [Also *kishlag*; < Turk. *kishlagh*, *kishlāq*, *kishlā*, < Turki *qish-lāq*, lit. 'winter place,' < *qish*, winter, + *-laq*, a suffix forming nouns of locality (as also in *yai-lāq*, 'summer place,' mountain pasture).] In Turkestan, a place inhabited during the winter; winter quarters; also, any settlement or village.

Right opposite the Indich Bashur, on the right side of the Shakh-Dara, there is a small *kishlaq*, abandoned.
Geog. Jour. (R. G. S.), XVI. 674.

kism (kizm), *n.* A subdivision of an Egyptian province.

kiss, *n.* **4.** A very slight, glancing touch.—**5.** A small drop of sealing-wax accidentally let fall upon a letter near the seal.—**Electrical kiss**, an early experiment with the Leyden jar in which one person, standing on an insulating support, held the outer coating of a charged jar, while a second person touched the knob or wire connected with the inner coating. The jar was then discharged by bringing together the lips of the two operators.

We encrease the force of the *electrical kiss* vastly.
Franklin, Experiments and Observations on Electricity, p. 10.

Kisses out and kisses in, in *billiards*, extra contacts that (sometimes foreseen without being meant, or feared without being guarded against) either prevent a count or cause one. As affecting position merely, 'kiss out' and 'kiss in' may be either designed or accidental.

kiss, *v. t.* **To kiss the book**, to take an oath by kissing the Bible.

kissable (kis′a-bl), *a.* [*kiss* + *-able*.] That can be kissed; attractive, so as to invite a kiss.

kissably (kis′ạ-bli), *adv.* In a manner to suggest kissing.

kissage (kis′ạ̄j), *n.* Kissing. [Nonce-word for the sake of a rime.]

Ere they hewed the Sphinx's visage
Favouritism governed *kissage*
Even as it does in this age.
R. Kipling, Departmental Ditties, Gen. Summary, st. 3.

kissing-bug (kis′ing-bug), *n.* Any one of several species of predatory bugs of the family *Reduviidæ*. Applied notably to *Opsicoetes personatus*, *Melanolestes picipes*, *Rasahus biguttatus*, and *Conorhinus sanguisugus*. The name *kissing-bug* originated in the newspapers in June, 1899, many persons being bitten that summer and often on the lip.

Kissing-bug
(Howard, U. S. D. A.)

kissing-gate (kis′ing-gāt), *n.* A narrow gate, not wide enough for two to pass as strangers.

kiss-me-quick (kis′mē-kwik″), *n.* A name given to various things of a presumably coquettish or attractive nature: a small becoming bonnet fashionable about the middle of the nineteenth century; a lady's cap with ribbons that tied under the chin on one side with 'kissing-strings'; a short lock of hair curled in front of each ear, etc. The name is also given to the wild pansy. See *kiss-me*.

kissybion (ki-sib′i-on), *n.*; pl. *kissybia* (-ä). [Gr. κισσύβιον.] In *Gr. antiq.*, a drinking-cup made of ivy-wood or decorated with ivy-leaves. It is mentioned several times in the Odyssey. It probably had a single long handle like the cyathus.

kisu (kē′sö), *n.* [Jap. *kisz*.] Same as ★*okigisu*.

kisutch (kē′such), *n.* [Also *keezitch*; a native name.] The vernacular name in Alaska and Kamchatka, and also the technical specific name, of a kind of salmon.

kit[1], *n.* **5.** An English fanciers' term for a small flock of pigeons, particularly tumblers.

kit[8] (kit), *n.* [Maori *kete*, Samoan and Tahitian *ete*, a basket, = Hawaiian *eke*, a bag.] A bag or basket woven of native flax, used by the Maoris. [Australia.]

kitamakura (kē-tä-mä′kö-rä), *n.* [Jap. *kitamakura*, implying 'one who sleeps with the head to the north,' < *kita*, north, + *makura*, pillow.] A Japanese name of a gymnodont fish, *Eumycterias rivulatus*. Also known as *yokobuku* and *akamebuku*.

kitar, kittar (ki-tär′), *n.* [Ar. *kitār*: see *guitar*.] An Arab guitar or lute, commonly with four pairs of strings.

kit-bag (kit′bag), *n.* A bag to hold a soldier's or sailor's kit.

We're bearded and we're dirty,
As well as broken down:
So why the dickens don't they send
Our *kit-bags* from Capetown?
Grumbles from the Ranks, st. 5, in War's Brighter Side, [p. 280.

kitchen, *n.* **3.** In *metal.*, the space between the fire and flue-bridges of a reverberatory furnace in which the work is performed. Also called the *laboratory*.

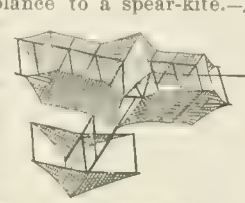
kitchen-court (kich′en-kōrt), *n.* In a large house, the court upon which the kitchen and its dependencies open by doors or windows, or both. The arrangement may be such that only one opening from the service part of the house communicates with the grounds.

kit-dressing (kit′dres″ing), *n.* A rustic festival in which girls carry on their heads kits decorated with willow.

kite[1], *n.* **7.** A variety of tumbler, black, with the inner webs of the primaries red or yellow. —**8.** Something thrown out as a suggestion to see 'how the wind blows'—what the condition of public opinion is on a certain subject, or what conclusions may inferentially be drawn.

A few suggestions have been thrown out by various students which must be regarded more as trial hypotheses than as definite conclusions, indeed they should be looked upon rather as "*kites*."
Nature, Aug. 14, 1902, p. 380.

9. In *geom.*, a deltoid: so called by Sylvester from its resemblance to a spear-kite.—**Aëro-curve kite**, a cellular kite invented by C. H. Lamson. In this kite the forward supporting surfaces are curved like the wings of a bird, while the rear cell is flat and smaller in size, forming a tail-like rudder. The framework which holds the cloth covering slides on two sup-



Aëro-curve Kite.

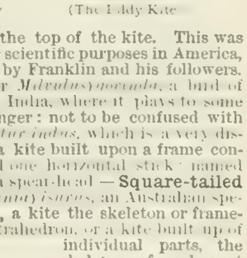
porting rib-like cross-braces, thus permitting the kite to be folded when not in use. **Auxiliary kite**, a kite attached by a clamp or safety-catch and a short line to the main kite-line of the highest or main kite, for the purpose of supporting the line and relieving the main kite of unnecessary strain. **Box kite**, a form of cellular kite in which the front and rear cells are rectangular parallelepipeds. The different types of this kite in use are (1) The *Hargrave box kite*, the framework of which consists of a backbone of wood or other rigid material, with diagonal struts or braces which may be collapsed when desired for folding or packing. (2) The *Blue Hill box kite*, designed by H. H. Clayton, the essential principle of construction being corner-posts extending from end to end of the kite, with the girder form of bracing. This form of construction is now almost universally used in kites designed for scientific purposes. (3) The *Weather Bureau kite*, designed by C. F. Marvin. It embodies the essential features of the Blue Hill box kite, with the added novelty of a collapsible frame and a supplementary surface in the front cell. **Boys'** or **uniplane kite**, a single-plane kite, usually formed by two sticks crossing each other at an angle and tied so as to form a support for a surface of cloth or paper. In some forms a third stick is used. The surface of this form of kite is flat, and a tail is required in order to maintain equilibrium in the air. The best-known forms are the *bow kite*, the *diamond kite*, the *hexagonal kite*, and the *star kite*. **Brahminy kite.** See *brahminy*.—**Cellular** or **multiplane kite**, a kite the first forms of which were invented by Lawrence Hargrave about 1892. He made a variety of forms, the essential principle of construction being an open cell of circular, triangular, rectangular, or other shape, joined by a rigid rod or backbone to another cell. The flying line is attached near the inner edge of one cell, which thus becomes the front cell. The wind blowing through the cells exerts a lifting effect on the upper and lower surfaces, while the side surfaces give great stability. The cells are usually formed of a framework of sticks covered with cloth. The scientific principle involved is the combination of a superposed plane and a following plane. See cut at ★*bridle*, 10.

The *cellular* or *multiplane kites* are also far steadier than single-plane kites, and we believe they are better adapted than the latter to maintain their equilibrium under great variations of wind force.
C. F. Marvin, Kite Exper. at the Weather Bureau, p. 27.

Chinese kite, a kite (made in China) resembling a bird, a man, a dragon, or other object, formed of light paper or cloth stretched on a framework of bamboo or wood. They are extensively flown in China, Japan, and the Malay Peninsula.

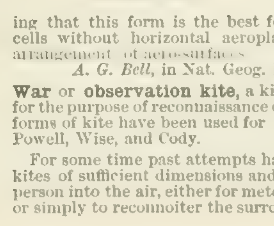
The most curious style of *Chinese kite* is the dragon kite. It consists of a series of small elliptic, very light disks formed of a bamboo frame covered with India paper. These disks are connected by two cords which keep them equidistant.
O. Chanute, Progress in Flying Machines, p. 194.

Collapsible kite, a kite that can be folded up for convenience in transportation. **Hargrave kite.** See *cellular* ★*kite*.—**Malay kite**, a form of kite used in the Malay Peninsula. The framework consists of two sticks crossing each other at right angles, one of which is made so elastic that it bends in the wind and forms a bow; or else the stick is tied with a cord so as to retain the form of a bow. This bow, when properly placed, balances in the wind, so that the kite flies without a tail. The best-known type of this kite in the United States is the *Eddy kite*, in which the bowed cross-stick is placed at a point distant 18 per cent. of the length of the vertical stick from the top of the kite. This was the first kite to be used for scientific purposes in America, except the boys' kite used by Franklin and his followers.



Malay Kite
(The Eddy Kite)

—**Pariah kite**, *Milvus* (or *Milvulus*) *govinda*, a bird of prey common in southern India, where it plays to some extent the part of a scavenger: not to be confused with the brahminy kite, *Haliastur indus*, which is a very distinct bird.—**Spear-kite**, a kite built upon a frame consisting of one vertical and one horizontal stick: named from its resemblance to a spear-head.—**Square-tailed kite**, *Milvus* (or *Lophoictinia*) *isurus*, an Australian species.—**Tetrahedral kite**, a kite the skeleton or framework of which forms a tetrahedron, or a kite built up of individual parts, the skeleton of each part forming a tetrahedron. This kite is an invention of Alexander Graham Bell. In its developed forms it involves the principle of the cellular kite of superposed planes and following surfaces.



Tetrahedral Kite.

Tetrahedral kites combine in a marked degree the qualities of strength, lightness, and steady flight; but further experiments are required before deciding that this form is the best for a kite, or that winged cells without horizontal aeroplanes constitute the best arrangement of aero-surfaces.
A. G. Bell, in Nat. Geog. Mag., June, 1903, p. 229.

War or **observation kite**, a kite used to elevate men for the purpose of reconnaissance or observation. Several forms of kite have been used for this purpose by Baden-Powell, Wise, and Cody.

For some time past attempts have been made to devise kites of sufficient dimensions and lifting power to carry a person into the air, either for meteorological observations, or simply to reconnoiter the surrounding country, the lat-

ter object naturally constituting for the most part an acquisition to a military equipment. Major Baden Powell of the British army has devised a kite which will lift a man into the air, but its scope, as frequent experiments have shown, is somewhat limited. Mr. Samuel Franklin Cody, however, has devised an *observation kite* which has been submitted to several exacting tests in England, and has proved practical and successful for general observation and meteorological experiments.
Sci. Amer. Sup., April 11, 1903, p. 22804.

Whistling kite, *Haliastur sphenurus*, an Australian bird of prey related to the brahminy kite of India. Its general color is ashy brown above, rufous on the head, and dull yellowish with dark markings below.

kite[1], *v. i.* **3.** To fly a bird-shaped kite over a grouse moor: an English sporting-term. The birds, taking this for a hawk, lie close, until the dogs are near.

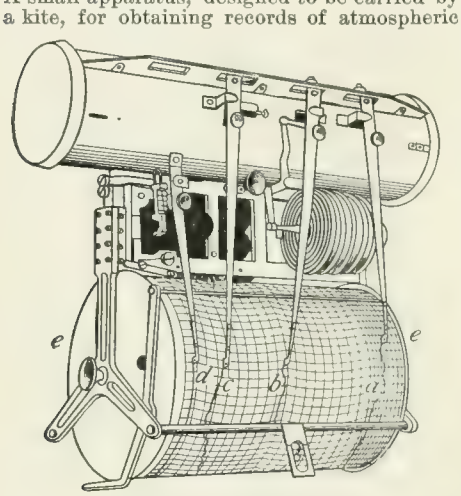
kite-balloon (kīt′ba-lön″), *n.* A captive balloon so constructed as to act partially as a kite. Archibald's kite-balloon was an ordinary balloon fitted with a cone-shaped structure to support it. Parseval's kite-balloon, used by the Germans for scientific and also for military purposes, consists of an elongated balloon held rigid by an air-sack inflated by the wind, the sack being a part of the rear end of the balloon.

kite-boat (kīt′bōt), *n.* A boat propelled by the pulling force of a kite.

A few weeks ago S. F. Cody, in thirteen hours, safely crossed the English Channel between Dover and Calais in a "*kite-boat*," described as a miniature submarine boat weighing four tons, and propelled by a modified box-kite.
Amer. Inventor, Dec. 15, 1903, p. 276.

kite-fish (kīt′fish), *n.* A gurnard, *Trigla cuculus*, found in the Mediterranean and off the western coasts of Europe.

kite-meteorograph (kīt′mē″tē-ō-rō-gräf), *n.* A small apparatus, designed to be carried by a kite, for obtaining records of atmospheric



Marvin's Kite-meteorograph.

a, record of the pressure; *b*, record of the temperature of the air; *c*, record of the temperature of the wet-bulb thermometer; *d*, record of the velocity of the wind; *e*, *e*, revolving drum.

conditions at considerable altitudes: made in various forms devised by Fergusson, Richard, and Marvin.

kite-photograph (kīt′fō″tō-gräf), *n.* A photograph taken by means of a camera attached to a kite.

kittel[2] (kit′el), *n.* [Yiddish *kittel*, < G. *kittel*, MHG. *kittel*, *kitel*, a frock, blouse, shirt-waist; origin unknown.] A Yiddish name for an ample linen or cotton robe which orthodox Jews wear on three solemn occasions, namely, at nuptial ceremonies (by the bridegroom); at the seder service, on the first two evenings of Passover (by the master of ceremonies); and on the Day of Atonement. Pious Jews are also buried dressed in a kittel.

kittereen (kit-ę-rēn′), *n.* [Also *kittareen*, *kitterine*, *kittering*; origin unknown. It has been referred, without proof, to *Kettering*, a local name, and *Kit Treen*, a man's name.] **1†.** A kind of omnibus. [Western England.]—**2.** A one-horse, two-wheel chaise or buggy, with or without a movable top. [Jamaica.]

kittle[1], *v. t.* **2.** To confuse with questions or statements.

kitty-witch (kit′i-wich), *n.* A small swimming-crab, *Porcellana platycheles*, found in the North Sea and the Mediterranean.

kiva (kē′vä), *n.* [Also spelled *kib-va*. Moki.] A sacred chamber, wholly or partly underground, in which many of the religious ceremonials of the Pueblo Indians are performed. Also *estufa*.

A pueblo of the size of Awatobi, with so many evidences of long occupancy, would no doubt have several ceremonial chambers or *kivas*, but as yet no one has definitely indicated their positions.
Rep. Bur. Amer. Ethnol., 1895–96, p. 611.

kiver[1], *n.* **2.** A sunfish or pumpkin-seed. See *pumpkin-seed*, 2. Also *kivy*. [Local, U. S.]

kivu (kē′vō), *n.* [African.] A native name for one of the tsetse-flies which communicate the nagana or sleeping-sickness in Africa.

kl. An abbreviation of *kiloliter*.

K. L. An abbreviation of *Knights of Labor*.

K. L., K. L. A. Abbreviations of *Knight of Leopold of Austria*.

klafter (kläf′tèr), *n.* [G. *klafter*, MHG. *klāfter*, OHG. *clafdra*, the stretch of the arms, a fathom.] The German fathom, a measure containing 6 local feet. The square klafter contained 36 square feet and the cubic klafter 216 cubic feet. The equivalent value in English measure varies with the length of the local foot which was the basis of the klafter. The Austrian klafter was about 74⅔ English inches, that of Hamburg about 66⅔ inches.

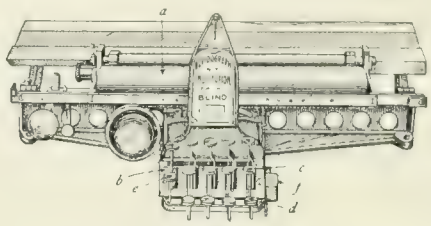
klahowya (klä-hou′yä), *n.* [Connected with Chinook jargon *klahowya*, *klahowyam*, poor, wretched, pitiable, < Chinook *tlakauyam*, its poverty.] Good-by. [Washington and British Columbia.]

klaprothium (klap-rō′thi-um), *n.* [NL., < M. H. *Klaproth* (1743–1817), a German mineralogist.] An early name for the metal cadmium.

klaprotholite (klap′rōth-ō-līt), *n.* [Named after M. H. *Klaproth* (1743–1817), a German mineralogist.] A sulphobismuthite of copper, $Cu_6Bi_4S_9$, occurring in steel-gray orthorhombic crystals.

Klebs-Loeffler bacillus. See ★*bacillus*.

kleidograph (klī′dō-gräf), *n.* [Gr. κλείς (κλειδ-), key, + γράφειν, write.] A form of typewriter for embossing paper by the New York point system of writing for the blind. It consists essentially of a carriage for the paper, a small keyboard, and embossing mechanism operated by the keys. The keyboard contains fourteen keys and a space-key. The keys are arranged in three ranks of four each, with two keys for capitals placed at the left, and with a space-key at the right. The two upper ranks are for the points used in forming small letters, and are numbered, the first rank being numbered 1357 and the second rank 2468, these numbers corresponding to the numbers of the fourth base of the New York point system. The third or lowest rank



Kleidograph.

a, carriage; *b*, keyboard; *c*, small-letter keys; *d*, compound keys; *e*, capital-letter keys; *f*, space-key.

consists of compound keys for making two impressions at one stroke, called first, second, third, and fourth compound key. The blind operator uses the left hand in handling the keys and moving the carriage, the right hand being free to read any form of tangible print or writing by touch. The characters are formed by combinations of the eight keys, each stroke or pressure on a key indenting the paper with one dot: a large percentage of all the letters are formed by touching two keys in succession and all can be formed by four motions. The keys of the lower rank make two indentations for one stroke at a great gain in the speed of the work. The machine automatically spaces the letters and the space key is used to separate the words and sentences. See ★*typewriter*, 1, and ★*point*[1], 31.

Kleinian (klī′ni-an), *a.* Of or pertaining to Felix Klein (1849–), the German geometer.—**Kleinian function, group.** See ★*function*, ★*group*[1].

Klein solution. See *heavy solution*, under *solution*.

klementite (klem′en-tīt), *n.* [Named after Dr. C. *Klement* of Brussels.] A silicate of aluminium and iron, related to the chlorites and occurring in dark olive-green scales at Vielsalm, Belgium.

kleptic, kleptocracy, kleptophobia. See ★*cleptic*, etc.

K. L. H. An abbreviation of *Knight of the Legion of Honor*.

K-light (kā′līt), *n.* In *spectroscopy*, the light of the K-line of the spectrum, due to the incandescence of calcium vapor. This line, which lies in the extreme violet of the spectrum, is of high actinic power. Its presence in the light from the sun's atmosphere is utilized in the photography of the solar prominences and in similar work.

klinker, *n.* See *clinker*.

klinocephalic, klinocephalism, klinocephalus, klinocephaly. See ★*clinocephalic*, etc.

klinostat, *n.* See *clinostat*.

kliphok (klip′hok), *n.* [D. *klip*, cliff, + *hok*, pen or dungeon.] In South Africa, a ruined native stone hut.

klon, *n.* See ★*clon*.

klonal, *a.* See ★*clonal*.

klootch (klöch), *n.* [A back-formation from *klootchman*.] Same as ★*klootchman*.

klootchman (klöch′man), *n.* [Chinook jargon *klootchman*, < Nootka *tlotsma*, woman.] A woman, particularly an Indian woman. [Washington and British Columbia.]

klop (klop), *n.* [Also *clop*; imitative.] A sound made by the fall or regular beat of a solid on a hard surface, as a horse's hoofs on a pavement. Also repeated, *klop-klop*.

klumene (klö′mēn), *n.* [Appar. Gr. κλύμενος, famous: see *Clymenia*, ★*clymene*.] In *chem.*, the name first given to acetylene by its discoverer, E. Davy, who obtained it as a product of the action of water on crude potassium carbide formed in the preparation of metallic potassium.

knacker[2], *n.* **4.** A man who dismantles and sells the materials of old houses, ships, etc.

knackery (nak′e-ri), *n.*; pl. *knackeries* (-riz). [*knacker*[2] + -*y*[3].] A yard for slaughtering worn-out horses; a knacker's yard.

knacky (nak′i), *a.* [*knack* + -*y*[1].] Adroit; clever; adaptable; having a knack.

Knapsack sprayer. See ★*sprayer*.

knee, *n.* **3.** (*e*) In *mech.*, the middle joint or elbow in a toggle-joint. (*f*) In *anat.*, a knee-shaped part. See *genu* (*b*).

5. In *graphics*, a break or abrupt change in a plotted curve.

On the rising curve there is seen to be a more or less well defined "*knee*" where the relation of stress to strain undergoes a marked change.
Physical Rev., Aug., 1904, p. 114.

6. A natural prominence; a rock, hill, or part of a hill.—**Capped knee.** See ★*capped*. **Knee of the head,** in *ship-building*, the large flat timber which is fayed edgewise upon the fore part of the stem.—**Sprung knee,** a forward bowing of the knee of the horse, mule, or ass, caused by the shortening of the flexor tendons behind as a result of inflammation.

knee, *v. i.*—**To knee out,** to break out at a right angle and return to the original direction.

knee-ball (nē′bâl), *n.* Same as ★*molula*.

knee-board (nē′bōrd), *n.* A drag or tension-board on a cotton-yarn winding-machine. *R. Marsden*, Cotton Weaving, p. 257.

knee-boot (nē′böt), *n.* **1.** A compressed leather shield for covering the side of a horse's knee. The wrapper is of soft leather or felt. —**2.** A boot which comes to the knee.

knee-hole (nē′hōl), *n.* The space under a desk occupied by the knees of one seated at the desk. [Local, Eng.]

knee-ill (nē′il), *n.* Same as *navel-ill*. Also *joint-ill*.

kneeing (nē′ing), *n.* An angular bending or knee-shaped projection. *Buck*, Med. Handbook, III. 624.

knee-knapt (nē′napt), *a.* Same as *knock-kneed*. [Prov. Eng.]

kneelet (nē′let), *n.* [*knee* + -*let*.] A knee-piece in medieval armor, sometimes carrying a spike.

knee-lyre (nē′līr), *n.* Same as *lira da gamba* (which see, under *lira*[2].)

knee-movement (nē′möv″ment), *n.* A device for operating a toggle-joint.

kneepan, *n.* **2.** In *entom.*, the femoral concavity into which the tibia is inserted. *Kirby and Spence*.

knee-pipe (nē′pīp), *n.* An elbow; a bent pipe.

knee-plate, *n.* **3.** In *ship-building*, a small triangular plate fitted at the point of connection of the beam and frame to strengthen it.

knee-protector (nē′prō-tek″tor), *n.* A pad used to protect the knee in roller-polo, football, and similar games.

knee-punch (nē′punch), *n.* A punch which is bent to allow its being used through a narrow opening.

knee-stake (nē′stāk), *v. t.*; pret. and pp. *knee-staked*, ppr. *knee-staking*. In *leather-manuf.*, to stake or soften by aid of the knee. *Flemming*, Practical Tanning, p. 51.

knee-viol (nē′vī″ol), *n.* Same as *viola da gamba* (*a*) (which see, under *viola*[1]).

Kneiffia (knī′fi-ä), *n.* [NL. (Spach, 1835), named in honor of F. G. *Kneiff* (-1832), an apothecary and botanist of Strasburg.] A genus of plants of the family *Onagraceæ*. They

differ from *Œnothera* in their diurnal flowers, unequal stamens, and usually club-shaped and often winged capsules. There are about 12 species, belonging chiefly to the eastern United States, commonly known as *sundrops*.

kneip (knīp), *v. i.* [G. *kneipen*, carouse, tipple, booze, fuddle, < *kneipe*, a pot-house, beer-shop: see ★*kneipe*.] In German universities, to drink and be convivial at a 'kneipe,' according to the German 'beer-code.'

In whatever other respects the German student may be irregular, he always *kneips* according to rule.
J. M. Hart, German Universities, p. 139.

kneipe (knī'pe), *n.*; pl. *kneipen* (-pen). [G. *kneipe*, a pot-house, beer-shop, bar-room, students' club.] In German universities: (*a*) A room, or sometimes a house, where beer-drinking is carried on. (*b*) A beer-drinking; a carousing; a booze; especially, a semiprofessional carouse of students according to a complicated set of more or less humorous rules, which are somewhat strictly observed.

knel, *v.* and *n.* A simplified spelling of *knell.*

knez (knez), *n.* [Serv. Slov. *knez*, Bohem. *kněz* (*knez*), Russ. *knyazĭ* (*kniaz*) (Albanian *knez*), MGr. *κνέζης*, etc., a prince; connected with OHG. *chuning*, etc., AS. *cyning*, E. *king*.] Prince: a Slavic title of nobility equivalent to prince or duke, and sometimes implying sovereignty.

knickers (nik'ėrz), *n. pl.* A contraction of *knickerbockers.* Also used adjectively, in the form *knicker:* as, a *knicker* suit.

knife, *n.* **Barlow knife,** a pocket-knife having the name 'Barlow' on the handle. These knives were extensively used for many years, since they had excellent steel blades and were inexpensive. Also called *Billy Barlow knife.*—**Graefe knife,** a slender knife used in the operation of linear extraction of cataract.—**Recording knife,** the sapphire cutting-point of the phonograph. *Scripture*, Exper. Phonetics, p. 35.

knife-bar, *n.* 2. A metal bar with an acute edge employed on different machines with different functions.

knife-box, *n.* 2. Same as ★*griffe*[1], 3.

knife-bracelet (nīf'brās″let), *n.* A narrow bracelet of iron, with a sharp edge which is usually covered with a strip of hide. The edge may be uncovered and the bracelet used to inflict wounds by a blow. Such knife-bracelets are worn by the Irenga and other tribes of the upper Nile. In other parts of Africa bracelets or arm-rings with attached knives or spikes are worn.

To guard themselves from capture, they [Reshiats or Darsonichs] wear a very sharp *knife bracelet*, and when fighting they remove the sheath.
Geog. Jour. (R. G. S.), XI. 383.

knife-fish (nīf'fish), *n.* A cyprinoid fish, *Pelecus cultratus*, found in eastern Europe.

knife-man (nīf'man), *n.* A special workman employed in the more delicate and important part of archæological excavations in which it is necessary to substitute a knife for a spade.

The patience of the few picked "*knife-men*" who lay or crouched in the trenches cutting through the compost of bones and pottery inch by inch, was sometimes rewarded with unexpected treasures.
R. C. Bosanquet, in An. Brit. School at Athens, VIII. 294.

knife-roller (nīf'rō″lėr), *n.* A roller with blades or knives, arranged spirally or otherwise, as on the knife-roller cotton-gin. *Taggart*, Cotton Spinning, I. 28.

knife-switch (nīf'swich), *n.* In *elect.*, a form of switch in which the circuit is closed by the insertion of a metallic strip pivoted, like a knife-blade, between metallic clips or springs.

knife-worm (nīf'wėrm), *n.* Any cutworm.

Knight of the brush, a painter.—**Knight of the pestle,** an apothecary.—**Knight of the quill,** a writer; an author.—**Knights of Pythias,** a secret fraternal order founded at Washington in 1864. It has an insurance or beneficial branch.—**Two Knights' defense.** See *opening*, 9.

knight-cross (nīt'krôs), *n.* The scarlet lychnis or cross of Jerusalem, *Lychnis Chalcedonica.*

knight-fish (nīt'fish), *n.* A common name applied to *Monocentris gloræ-maris*, a berycoid fish found in Australia. Also called *pine-cone fish.*

knismogenic (nis-mō-jen'ik), *a.* [Gr. *κνισμός*, tickling, + *-γενης*, -producing.] Productive or provocative of tickling: as, *knismogenic* sensations. *G. S. Hall*, Adolescence, II. 95.

knitting-bur (nit'ing-bėr), *n.* In a knitting-machine, a wheel with blades for carrying the yarn to the needles and clearing it from them while the web is forming.

knob, *n.* (*i*) A small flock, less than 30, of ducks: an English sporting-term.

knobble (nob'l), *n.* [Dim. of *knob.*] A small knob or lump.

knobbling-fire (nob'ling-fīr), *n.* A bloomery for refining cast-iron.

knob-fly (nob'flī), *n.* A natural fly used in angling; also, an artificial fly. Also called *knop-fly.*

knob-grass (nob'gras), *n.* Same as ★*knob-root.*

knobkerrie, knobkerry (nob'ker-i), *n.* [Cape D. *knopkieri;* as *knob* + *kerrie, kirri.*] See ★*kirri.*

knob-root (nob'röt), *n.* The horse-balm, *Collinsonia Canadensis.*

knobstones (nob'stōnz), *n. pl.* The local name in Kentucky for the silicious group. *Amer. Jour. Sci.*, 1866, p. 105, cited in Dialect Notes, II. vi.

knock, *v.* I. *trans.* 3. To speak ill of one. [College slang.] **To be knocked off** (*naut.*), to be turned to leeward: said of a vessel when, by reason of the sea hitting her on the weather bow, her head is sent to leeward of the point toward which she had been looking.

To knock down. (*c*) To take to pieces (as a machine or a barrel), for storage or for purposes of transportation; as, for barrels *knocked down*—so much. (*d*) See the extract.

A system known as "*knocking down* one's cheque" prevails all over the unsettled parts of Australia. That is to say, a man with a cheque, or a sum of money in his possession, hands it over to the publican, and calls for drinks for himself and his friends, until the publican tells him he has drunk out his cheque.
H. Finch-Hatton, Advance Australia, p. 222, quoted in [E. E. Morris, Austral English.

To knock up. (*e*) In *cricket*, to score runs by hitting. [Colloq.]

II. *intrans.* 4. To keep up a system of annoying attacks; to keep striking or hitting until the other side capitulates or buys the 'knocker' off. [Political slang, New York.]

There are several ways of getting into Tammany Hall. One is to be born there; and another is to work your way up in; a third is to lower yourself down in. The fourth, and a very successful way, is what the Tammany men call "*knockin'*." This is to fight Tammany Hall until the organization opens and receives you, paying in return almost anything within reason.
N. Y. Com. Advertiser, May 11, 1901.

knockabout (nok'a-bout), *a.* and *n.* I. *a.* 1. Noting something which knocks (other things) about; rough; buffeting; boisterous: as, a *knockabout* game of foot-ball.—2. Accustomed to knock about or to be knocked about: as, a *knockabout* globe-trotter; suitable to be knocked about in: as, a *knockabout* coat.—3. Noisy; full of horse-play: as, a *knockabout* entertainment; *knockabout* business. [Theat. slang.]—4. In Australia, applied to a jack of all trades on a station.

II. *n.* 1. A traveler; one who has knocked about.—2. A performer in a knockabout play or sketch; the sketch itself. [Theat. slang.]—3. In Australia, a hand on a station who does a little of everything.—4. A small sailing-yacht of light construction and simple sail rig, the latter consisting of a mainsail and

Knockabout.

a jib bent on a stay that is set up on the stem of the boat. These boats, as a rule, are flat-bottomed, with a fin-keel, and can be handled very quickly, going from one tack to another without apparently losing speed. Some knockabouts are provided with a center-board instead of a fin, for use in shallow waters.—5. A small launch.

knocker, *n.* 5. One who keeps up a system of 'knocking' or persistent attack, with ulterior motives. See ★*knock, v. i.*, 4.—6†. A sort of pendant to a wig.—**Newgate knocker,** a lock of hair worn by thieves and others in such a manner as to be supposed to resemble the knocker on the prisoners' door at Newgate.

knocker-up (nok'ėr-up), *n.* A person employed, especially in mill towns, to go about and waken those whose work requires them to be up early.

knocking, *n.* 5. The practice of persistent attack with ulterior motives. See ★*knock, v. i.*, 4. [Political slang, New York.]

knock-off, *n.* 2. In *mech.*, a releasing device; a tappet or cam for releasing some part of a mechanism. It is used in some forms of engine valve-gears to operate the admission-valves.

knock-out, *a.*—**Knock-out attachment,** an attachment to a sheet-metal press used to knock the finished ware off the dies; a form of ejector. It is automatic and is made in several forms.—**Knock-out drops.** See ★*drop.*

II. *n.* 1. In *pugilism*, the act of rendering insensible; a blow which produces insensibility.—2. A knock-off; a release; specifically, a device for allowing a valve in a spring-testing machine to open when the ram encounters a resistance.

knop, *n.* 6. A loop or tuft in two- (or more) ply yarn produced in doubling for ornamental purposes.

knop-fly (nop'flī), *n.* Same as ★*knob-fly.*

knopite (knop'it), *n.* [G. *knopit* (1894), named after Professor A. *Knop* of Karlsruhe.] A titanate of calcium and cerium occurring in lead-gray isometric crystals. It is intermediate in composition between perovskite and dysanalyte.

Knorria (nor'i-ä), *n.* [NL. (Sternberg, 1820), named after Georg Wolfgang *Knorr*, a German paleontologist.] A supposed genus of Paleozoic fossil plants consisting of trunks whose surfaces present inclined overlapping ridges. They are now known to be, for the most part at least, decorticated trunks of *Lepidodendron* in which the whole bark has been stripped off, the course of the leaf-trace bundles through the middle cortex being represented by these ridges, and presenting an appearance wholly different from that of the real surface of the trunk.

knot[1], *n.* 3. (*u*) In musical instruments of the lute, viol, and similar classes, same as *rose*[1], 15.—**Double overhand knot,** a common landsman's knot made by uniting two pieces of string or rope. It is decried by sailors because it will slip when a strain is put upon it. See the illustration.—**Hangman's knot,** a knot formed

Double Overhand Knot.

by laying back the bight of a rope near the end, then winding seven turns around it from left to right, and passing the end back under all the turns. This makes a slip-noose and a long cylindrical knot through which the hauling part of the rope travels freely.—**Loop-knot,** any knot which forms a loop, such as a bowline.—**Old-granny knot.** Same as *granny's-knot.*—**Stopper knot.** See *stopper-knot.*—**Vital knot,** the 'nœud vital' of Flourens; a small area of the oblongata, destruction of which means instant death, and which has therefore been regarded as preëminently the vital center.

The *vital knot* of Flourens is the vital center and must also be the center of pleasure and pain, which are merely alterations in the functions of organic life.
G. Sergi, quoted in Ribot (trans.), Psychol. of Emotions, p. 28.

Hangman's Knot.

knot-grass, *n.* 3. (*c*) The joint-grass, *Paspalum distichum.* See *Paspalum.*—**Knot-grass moth.** See ★*grass-moth.*

knot-hole (not'hōl), *n.* A hole in a board or plank formed by the falling out of the piece of a knot, node, or knur left when the plank was sawed.

knot-horn (not'hôrn), *n.* A collectors' name for any phycitid moth: so called because the males of this family frequently have a swollen basal antennal joint. *Cambridge Nat. Hist.*, VI. 424.

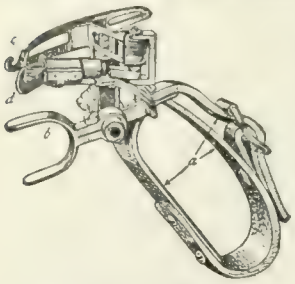
knotless (not'les), *a.* [*knot* + *-less.*] Without a knot, in any sense of the word; with the knots removed or untied.

knot-maul (not'mâl), *n.* A maul which has a head made from a knot or other tough piece of wood.

knot-pound (not'pound), *n.* A unit in terms of which the weight of copper and, indirectly, the electrical conductivity of a submarine or underground cable are expressed; one pound per nautical mile or knot.

knot-root (not'röt), *n.* Same as ★*knob-root.*

knotter, *n.* **2.** In *textile-manuf.*, a hand-device for mechanically tying together two ends of yarn or thread. **—3.** The mechanism in a harvester and binder which ties the knots in the binding-cord.



Barber Knotter.
a, strap for fastening on the hand; *b*, thumb-piece; *c*, knotter and cutter; *d*, thread-guide.

knotty-horn (not'i-hôrn), *n.* An American cerambycid beetle (the cloaked knotty-horn), *Desmocerus palliatus*, dark-blue in color, with the basal part of the elytra orange. Its larvæ bore into the stems of elder. *Comstock*, Manual of Insects, p. 570.

knotty-pated (not'i-pā ted), *a.* A doubtful term, either genuine and meaning 'having a knotty or lumpy pate,' or, simply, 'having a hard (wooden) pate,' or a mistake for *not-pated* (which is also used by Shakspere).

Why, thou . . . *knotty-pated* fool, thou . . . obscene, greasy, tallow-catch.
Shak., 1 Hen. IV., ii. 4.

Knotty-horn
(*Desmocerus palliatus.*)
Enlarged one third.

knotwork, *n.* **2.** A kind of fancy-work made of thread, yarn, etc., by tying knots. It is usually finished with a crocheted edge.

knot-writing (not'rī'ting), *n.* A mnemonic device consisting of strings in which a number of knots are made, the number and order of knots serving the end of recalling certain objects or events: used by many primitive tribes unfamiliar with the art of writing—for instance, by the Australians, the California Indians, and also by the Peruvians. See *quipu.* *Ratzel* (trans.), Hist. of Mankind, I. 344.

knowability (nō-ạ-bil'i-ti), *n.* The quality or condition of being (easily) recognized, known, or comprehended.

One of the few advantages that India has over England is a great *knowability.* . . . At the end of twenty years [a man] . . . knows, or knows something about, every Englishman in the Empire.
R. Kipling, Indian Tales, p. 489. *N. E. D.*

knowledge, *n.*—**Dynamic knowledge,** knowledge that effects changes, especially in conduct and social relations. *Ward*, Dynamic Sociol., II. 509.

Knox beds, dolomite. See ★*bed*[1], ★*dolomite.*

Knoxville beds. See ★*bed*[1].

knoxvillite (noks'vil-īt), *n.* [*Knoxville* (see def.) + *-ite*[2].] A hydrated sulphate of ferric iron, chromium, and aluminium occurring in greenish-yellow rhombic plates: found at the Redington mercury-mine, Knoxville, California.

K. N. S. An abbreviation of *Knight of the North Star* (Sweden).

knuckle, *n.* **8.** A sharply bent loop, as of intestine, especially when imprisoned, as in a hernia.

When a small *knuckle* of intestine has slipped into a narrowing there is no strangulation at once and fecal matter enters the *knuckle* through its upper entrance.
Med. Record, Feb. 28, 1903, p. 350.

9. In *mech.*, the swinging leaf or hook used for the coupling device in certain automatic car-couplings, particularly in the Janney or M. C. B. (master car-builders') type. A hole is usually provided in the knuckle so that the common link-coupling may be used with it.

knuckle, *v. i.*—**To knuckle to.** (*a*) To acknowledge one's self convinced, in the wrong, or beaten. (*b*) To apply one's self earnestly.

knuckle-bone (nuk'l-bōn), *n.* **1.** A bone in a knuckle-joint, especially of a sheep: used in the game of knuckle-bones. See *dib*[3].—**2.** *pl.* The game played with dibs or knuckle-bones.

He became one of the leading players at *knuckle-bones*, which all jhampanis and many saises play while they are waiting outside . . . of nights.
R. Kipling, Indian Tales, p. 34.

knuckle-kneed (nuk'l-nēd), *a.* Having very prominent knees.

knuckle-post (nuk'l-pōst), *n.* One of the two cross-arms in a knuckle-joint; specifically, the vertical post carrying the stub-axle in the steering-knuckle of an automobile.

knuckle-thread (nuk'l-thred), *n.* A screw-thread which has a large round at the top and bottom.

knuckling (nuk'ling), *n.* A deformity of the fetlock-joint, caused by a shortening of the tendons behind, which results in throwing the joint upward and forward, making the foot more upright than is normal. *U. S. Dept. Agr.*, *Rep. on Diseases of the Horse*, 1903, p. 346.

knurl, *n.* **3.** In *photog.*, a milled-edge roller used for dotting and softening outrunning lines and making dark spaces lighter.

knurled, *a.* **3.** Milled: said of the serrated edge of a coin. Also called *knarled.* See *mill*[1], 4.

ko[2] (kō), *n.* [Chinese *ko*, prop. the culm of the bamboo, hence a stick, piece, thing, as a conventional term of enumeration.] A Chinese unit of customary enumeration, in connection with certain classes of things: as, yi *ko* jin, a man or 'one man' (usually rendered in pidgin-English 'one *piecey* man').

koae (kō-ä'ā), *n.* [Hawaiian.] The white-tailed tropic-bird, *Phaëthon leucurus*, which is found in the Sandwich Islands.

koali (kō-ä'lē), *n.* [Hawaiian *koali*, < *koali*, *koai*, creep around.] In Hawaii, a name for several vines belonging to the genus *Ipomœa.*—**Koali-ai** (edible convolvulus), *Ipomœa tuberculata*, a stout twiner with a tuberous root which was formerly used by the natives as food in times of scarcity. The stems are strong and durable and are used by the Hawaiians as cordage. The plant is distributed over tropical Asia and parts of South America.—**Koali-awahia** (bitter convolvulus), *Ipomœa congesta*, a stout twiner, the root of which is a powerful cathartic, much used in native medicine. It occurs in the Hawaiian, Tongan, and Fijian islands, the Ladrones, Norfolk Island, and on the east coast of Australia.

kobbera, *n.* See ★*cobbra.*

Kobell's test. See ★*test*[1].

kobong (kō'bong), *n.* [Aboriginal Australian.] In West Australia, the totem animal of a clan.

kobu (kō'bō), *n.* [Jap.] An important broad-fronded, edible seaweed, *Laminaria saccharis* (which see, under *Laminaria*), found on the coasts of Japan, and especially of Yezo, the most northerly of the four large islands, where it is known as ★*kombu* (which see).

kobza (kob'zä), *n.* [Russ., Little Russ., Pol. *kobza*, Turk. *kopuz*, a pandora.] A rude lute used in Little Russia.

K. O. C. An abbreviation of *kathodic opening contraction.*

kochelite (kō-ke-līt'), *n.* [G. *kochelit* (1868), named from *Kochel*wiese, in Silesia.] A mineral closely related to fergusonite: found in the granite of the Kochelwiese, Silesia.

Koch's comma bacillus, Koch-Weeks bacillus. See ★*bacillus.*

kodak (kō'dak), *n.* [An arbitrary word invented as a trade-mark.] A hand-camera, of a special make, designed for taking instantaneous photographs; hence, any similar camera.

kodak (kō'dak), *v.* [*kodak*, *n.*] **I.** *trans.* To photograph with a kodak.

II. *intrans.* To take photographs with a kodak; use a kodak.

kodaker (kō'dak-ėr), *n.* One who uses a kodak.

Kœberlinia (kėb-ėr-lin'i-ạ), *n.* [NL. (Zuccarini, 1832), named after C. L. *Koeberlin*, a Bavarian botanist.] A genus of dicotyledonous shrubs or small trees, the type and only genus of the family *Kœberliniaceæ.* The only species, *K. spinosa*, is a native of western Texas and northern Mexico. It is characterized by the stiff green branches ending in firm thorns, scale-like caducous leaves, and small white flowers in lateral racemes near the ends of the branchlets. See ★*junco*[2].

Kœberliniaceæ (kėb-ėr-lin-i-ā'sē-ē), *n. pl.* [NL. (Engler, 1895), < *Kœberlinia* + *-aceæ.*] A family of American shrubs or small trees of the order *Hypericales*, the junco family, consisting of the single monotypic genus *Kœberlinia.* See ★*Kœberlinia.*

Kœllia (kėl'i-ạ), *n.* [NL. (Moench, 1794), named in honor of Johann Ludwig Christian *Koelle* (1763–97), a German physician and botanist.] A genus of dicotyledonous plants belonging to the family *Menthaceæ.* See *Pycnanthemum.*

koenenite (kėn'e-nīt), *n.* [Named after Dr. A. von *Koenen.*] A hydrated oxychlorid of aluminium and magnesium occurring in red cleavable masses.

koettigite (kėt'ig-īt), *n.* [Named (1850) after Otto *Koettig*, who first analyzed it.] A hydrous arseniate of zinc, cobalt, and nickel, related to vivianite in form and composition.

Koheleth (kō'hā-let), *n.* [Heb. *qōhēleth*, a word of uncertain meaning, but appar. connected with *qahal*, congregate, and hence translated in the Septuagint version of *Ecclesiastes* 'member of an assembly,' but understood by Jerome and later authors as 'Preacher.'] **1.** The book of Ecclesiastes, traditionally ascribed to King Solomon.—**2.** One of the six traditional surnames of King Solomon: said to have been applied to him because his words were spoken in public gatherings. The other five were *Jedidiah*, *Agur*, *Jakah*, *Lemuel*, and *Itiel.*

Kohlrausch's law. See ★*law*[1].

kohua (kō'hö-ä), *n.* [Maori.] **1.** A native Maori oven. This consisted of a hole in the ground, containing heated stones, in which the food was placed in baskets. Water was then poured on the stones, and the whole covered up to keep in the steam till the food was properly cooked. See ★*umu.*

2. A three-legged iron pot or kettle; a 'go-shore' or 'go-ashore.' [New Zealand.]

koi (kō'ē), *n.* [Jap.] The common carp, *Cyprinus carpio*, found in the rivers of Japan.

koilonychia (koi-lō-nik'i-ä), *n.* [Gr. κοῖλος, hollow, + ὄνυξ (ὀνυχ-), finger-nail.] A spoon-shaped finger-nail with surface concave instead of convex.

koilorachic (koi-lō-rak'ik), *a.* [Gr. κοῖλος, hollow, + ῥάχις, the spine.] Having a spinal column with a lumbar curve concave forward, or with a lumbovertebral index of more than 102. *Turner.*

koji (kō'jē), *n.* [Jap. *kōji.*] A ferment used by the Japanese in making sake or rice-wine. It is produced by leaving steamed rice exposed to the air at ordinary temperature until a fungus growth makes its appearance. Used as an infusion, it acts upon starch, converting it into maltose and dextrine, and ultimately into glucose susceptible of alcoholic fermentation.

kokam (kō'käm), *n.* [Hindi.] Same as ★*corcopali.*

kokio (kō-kē'ō), *n.* [Hawaiian, prop. a shrub or tree.] A name in Hawaii of several species of malvaceous shrubs or trees belonging to the genus *Hibiscus.*—**Kokio-keokeo** ['white kokio'], *Hibiscus Arnottianus*, with white flowers: same as ★*hauhele.*

koklass (kōk'las), *n.* A native name of pheasants of the genus *Pucrasia*, which are distinguished by the long crests and ear-tufts of the males. These pheasants are found through the Himalayas from Afghanistan to Manchuria.

Common Koklass.
(*Pucrasia macrolopha.*)

koko[1] (kō'kō), *n.* [W. African.] Same as *cocco.*

koko[2] (kō'kō), *n.* [Hawaiian *koko*, a particular use of *koko*, blood (sap). These plants yield an abundance of milky sap or latex.] A name in Hawaii of several shrubs and small trees belonging to the genus *Euphorbia*, and particularly of *E. lorifolia.* This is a tree 12 feet high, found at high elevations, and is much used as fire-wood.

kokong (kō-kông'), *n.* [Also *kokoon*, *cocoon*; < Sechuana *khokong* or *kgokoñ.*] The brindled gnu, *Catoblepas taurina.*

kokoon (kō-kön'), *n.* Same as *cocoon*[2] and ★*kokong.*

kokopu (kō'kō-pö), *n.* [Maori.] A fish, *Galaxias fasciatus*, of the family *Galaxidæ*, found in Australian waters. See ★*cockabully*. Also sometimes applied to other fishes of the same family.

kokowai (kō'kō-wī), *n.* [Maori.] Red ocher. [New Zealand.]

koku (kō'kö), *n.* [Jap.] A liquid and dry measure used in Japan. As a liquid measure it is equivalent to 47.6 United States gallons; as a dry measure, to 5.11 United States bushels.

kola, kolanine, kola-nut, kola-red. See ★*cola*², ★*colanine*, *cola-nut*, ★*cola-red*.

kolea (ko-lā'ä), *n.* [Hawaiian.] The Pacific golden plover, *Charadrius dominicus fulvus*, which makes a wonderful trip from Alaska to the Sandwich Islands.

kolkol (kol'kol), *n.* [Southern Maidu (California).] Shell money of the Californian Indians, made of *Olivella biplicata*. The word was in use in central California.

kolloxyline, *n.* **2.** A substance closely related to celloidin, and used like it in histological technic: said to be more readily soluble.

kol nidre (kōl nid'rā). [Heb., 'all vows.'] The opening words of the most solemn prayer of the Jewish ritual for the eve of the atonement fast. It is chanted three times by three pious members, including the hazzan, or cantor. The reformed communities of America and Europe have discarded it, owing to the fact that it seems to release the supplicants from all vows from one Day of Atonement until the next, according to one of its declarations.

kolokolo (kō-lō-kō'lō), *n.* [Hawaiian, a creeper, < *kolo*, creep.] A name applied by the natives in Hawaii to a number of plants with a creeping or prostrate habit.—**Kolokolo kuahiwi** ('mountain creeper,') *Lysimachia Hillebrandi*, a species of loosestrife with dark-purple sweet-scented flowers, found on the highlands of Kauai.

kolpohysterectomy, *n.* See ★*colpohysterectomy*.

komatik (ko-mä'tik), *n.* [Labrador.] A sledge used by the people of Labrador.

kombe (kom'bā), *n.* [Native African name.] A rambling or climbing shrub of the dogbane family, *Strophanthus Kombe*, native of East Africa. It furnishes a part of the officinal *Strophanthus* seeds used in medicine. See *Strophanthus*.

Kombe (*Strophanthus Kombe*). *a*, branch with leaves and flowers, one third natural size; *b*, corolla, laid open, the attenuate lobes removed, one third natural size; *c*, stamen, front and side view, natural size; *d*, pistil, natural size; *e*, portion of follicle, one sixth natural size.

kombic (kom'bik), *a.* Noting an acid, a little-known compound of uncertain properties and composition, found in *Strophanthus* seeds.

kombo (kom'bō), *n.* [African.] A ceremonial form of greeting, employed by chiefs in many parts of Africa.

kombu (kom'bö), *n.* [Jap.; Chin. *k'un-pu*.] A Japanese coarse, edible seaweed, also called ★*kobu* (which see), great quantities of which are gathered on the coasts of Yezo and elsewhere and prepared for use as pickles, seasoners, relishes, vegetables, sweetmeats, and, in powdered form, as tea. See the extract.

Kombu is one of the staple foods of the country [Japan], entering into the dietary of almost every family and being eaten alone as a vegetable or as a seasoning for meats, fish, stews, etc. *Nat. Geog. Mag.*, May, 1905, p. 218.

Kome beds. See ★*bed*¹.

komenic, *a.* Incorrect form for ★*comenic*.

kommers (ko-märs'), *n.* [G. *kommers*, also *kommersch*, a particular pronunciation, among students, of *kommerz*, *commerz*, commerce, trade, intercourse, society, drinking-club, etc.; < L. *commercium*, commerce: see *commerce*.] A social gathering of German university students at some place of entertainment.

Come in; Come in. You shall see some sport. A Fox [Freshman] *commerce* is on foot and a Regular Beer-Scandal. *Longfellow*, Hyperion, iv.

kommos, *n.* See *commos*.

kona (kō'nä), *n.* [Hawaiian *kona*.] The southwest wind that sometimes occurs in the Hawaiian Islands, interrupting the northeast trade-winds and usually bringing rain.

konarite, *n.* An incorrect spelling of ★*connarite*.

Kongo colors. Same as *direct cotton* ★*colors*.

Koniéprusian (kō-ni-ā-prö'si-an), *n.* [*Koniéprus* + *-ian*.] In *geol.*, a term adopted by French geologists for the lowest division of the Devonian formation when expressed as a pelagic fauna in limestone facies. It is represented by the Koniéprus limestone of the Bohemian basin, and is essentially equivalent to the Hercynian stage and limestone of the German geologists.

koninckinid (kō-ning'kin-id), *n.* One of the *Koninckinidæ*, or a brachiopod related thereto.

koninckinoid (kō-ning'ki-noid), *a.* Pertaining to or having the characters of the *Koninckinidæ*.

konini (kō'nē-nē), *n.* [Maori.] In New Zealand, the fruit of the kotukutuku or native fuchsia, *Fuchsia excorticata*. It is an ovoid, fleshy, four-celled, pendulous black or purple berry, which is edible and pleasant and forms the principal food of the wood-pigeon.

koniology (kō-ni-ol'ō-ji), *n.* [Gr. κόνις, dust, + -λογία, < λέγειν, speak.] The science which treats of dust and its components, especially of the dust floating in the atmosphere.

koniscope, *n.* See ★*coniscope*.

konje (kon'je), *n.* [Native African name.] A valuable fiber-plant, *Cordyline Guineensis*, yielding African bowstring hemp. See *Sanseveria*.

konnarite, *n.* See ★*connarite*.

konzi (kon'zi), *n.* [African.] Lichtenstein's hartbeest, *Bubalis lichtensteini*, a large African antelope which inhabits the Zambesi region. It has rather small ringed horns that bend upward and outward, then inward, and, finally, backward.

koobery (kö'be-ri), *n.* [Also *kooberry*; from an aboriginal Australian name.] A fish, *Therapon richardsonii*, of the family *Hæmulidæ*, found in Australia.

koodoo, *n.* **2.** One of the bushbucks, *Tragelaphus selousi*, which inhabits the swampy regions of central and eastern Africa.—**Greater koodoo**, *Strepsiceros kudu*, rapidly being exterminated in most parts of its range.—**Lesser koodoo**, *Strepsiceros imberbis*, a species smaller than the common koodoo, lacking the fringe of hair beneath the throat, and having horns more closely twisted. It appears to be confined to Somaliland and the region about Kilimanjaro.

kookaburra (kö-ka-bur'ä), *n.* [Also *gogobera*, *goburra*, *gobera*; an aboriginal Australian name.] The native name adopted as a common name for the laughing-jackass, *Dacelo gigas*, a large species of kingfisher. The name is extensively used about Sydney and is given by E. P. Ramsay in his "Catalogue of Australian Birds." See cut under *Dacelo*.

koolaman, kooliman (köl'a-man, -i-man), *n.* Same as ★*coolamin*.

koontee, koonti, *n.* See *coontie*.

koosin (kö'sin), *n.* Same as ★*kosin*.

kootchar (kö'chär), *n.* [Aboriginal Australian.] An Australian stingless bee probably belonging to the genus *Melipona*. *Cambridge Nat. Hist.*, VI. 63.

kop¹ (kop), *n.* [D. *kop* = E. *cop*¹. Compare ★*kopje*.] A small hill. [South Africa.]

The three field batteries then came into action against a high tableland *kop* which formed the right of the held position, the advance remaining checked the while. *L. James*, in War's Brighter Side, p. 347.

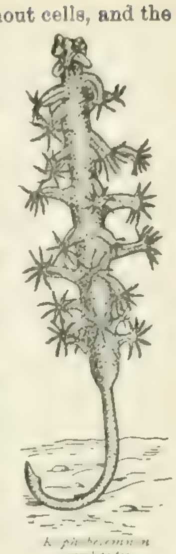
kop² (kop), *n.* [D. *kop* = E. *cop*³, cup.] In Holland, the name given to the liter when used as a dry measure.

kopang (kō'päng), *n.* [Malay *kopang*, *kupang*; cf. *cobang*, *kobang*.] An old money of account at Penang, equal to a tenth of a United States dollar.

koph (kōp, kōf), *n.* [Also *qoph*; Heb. *qōp*, *qoph*, Phen. **qōp*, whence Gr. ϙόππα, κόππα.] The nineteenth letter (ק) of the Hebrew alphabet, corresponding to the Roman *q*. Its numerical value is C.

Kophobelemnon (kō-fō-bē-lem'non), *n.* [NL., < Gr. κωφός, dull, dumb, + βέλεμνον, dart.] A widely distributed genus of sea-pens, typical of the family *Kophobelemnonidæ*. *Asbjörnsen*, 1856.

Kophobelemnonidæ (kō-fō-bē-lem-non'i-dē), *n. pl.* [NL., < *Kophobelemnon* + *-idæ*.] A family of pennatulacean alcyonarians having the polyps on both sides of the elongate cylindrical rachis in a single series or in indistinct rows, large and without cells, and the ventral streak of the rachis without polyps. It includes the genera *Kophobelemnon*, *Sclerobelemnon*, and *Bathyptilum*.



Kophobelemnon ...

kopiopia (kō-pi-ō'pi-ä), *n.* [NL., irreg. < Gr. κοπιᾶν, be tired (κόπος, tiredness, fatigue), + ὤψ (ὠπ-), eye.] A condition in which the eyes quickly tire.

kopje (kop'i), *n.* [D. *kopje* (pron. kop'ye, in Cape D. kop'i), orig. **kopken*, dim. of *kop*, a hill: see ★*kop*¹ and *cop*¹.] A small hill. [South Africa.]

Kopjes, short, thick, volcanic-looking hills, often with a squared-off summit or a crater-like bowl on the top, such as Majuba has. They are . . . hills made of rock so that the surface is a fretwork of the outermost boulders. *J. Ralph*, An American with Lord Roberts, p. 4.

koprosterin (ko-pros'te-rin), *n.* [As *koproster(ol)* + *-in*².] Same as ★*koprosterol*.

koprosterol (ko-pros'te-rol), *n.* [Gr. κόπρος, dung, + (*chole*)*sterol*.] A colorless dextrorotatory compound, $C_{25}H_{44}O$, found in human feces. It is a derivative of cholesterol, which it resembles in general properties, and is possibly identical with stercorin. It forms long, slender, pliable needles melting at 95–96° C. Also called *koprosterin*.

Kopt, *n.* See *Copt*².

Koptic, *a.* and *n.* See *Coptic*.

koradji (kō-rä'ji), *n.* [Also *coradgee*, *karáji*, etc.; native Australian.] A shaman or medicine-man of the Australian aborigines.

Korahite (kō'ra-īt), *n.* [*Korah* + *-ite*².] In *Jewish hist.*, a descendant of Korah (1 Chron. vi. 22, etc.), the great-grandson of Levi. The Korahites ("sons of Korah") distinguished themselves in the Levitical services as singers in the temple. Certain Psalms (xlii., xliv., xlv., etc.) are superscribed as "for the sons of Korah."

korakora (kō-rä-kō'rä), *n.* [Also *coracora*, *korocora*, etc.; < Malay *kōra-kōra*: see ★*caracoa*.] A Malayan boat, formerly in use, having a high curved stem and stern.

koranolatry (kō-ran-ol'a-tri), *n.* Worship of or reverence for the Koran.

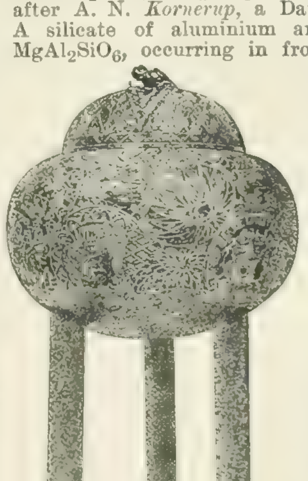
From Lully down Mohammedans have been the hardest to convert. Heresy and apostasy from *koranolatry* is here treason. *G. S. Hall*, Adolescence, II. 729.

korigum, korrigum (kor'i-gum), *n.* [African.] The Senegal hartbeest, *Bubalis senegalensis*, a species with rather short, heavy, lyrate horns, which inhabits Central Africa from Senegal to Somaliland.

korimako (kō-ri-mä'kō), *n.* [Maori.] A Maori name for the New Zealand bell-bird, *Anthornis melanura*.

korin (kō'rin), *n.* [W. African.] A species of gazel, *Gazella rufifrons*, found in Senegal, Africa.

kornerupine (kôr-ne-rö'pin), *n.* [Named (1885) after A. N. *Kornerup*, a Danish geologist.] A silicate of aluminium and magnesium, $MgAl_2SiO_6$, occurring in from colorless to white fibrous or columnar aggregates: found at Fiskernäs, Greenland. Prismatine, from Waldheim, Saxony, is a similar mineral.



Japanese Koro. Iron, inlaid with gold. (In the Pennsylvania Museum, Philadelphia.)

koro² (kō'rō), *n.* [Jap. *kōrō*.] A Japanese incense-burner or censer, usually of bronze, iron, or pottery.

korora (kō'rō-rä), *n.* [Maori.] A Maori name, to some extent adopted as a common name, for the little penguin, *Eudyptula minor*, the smallest member of the group.

korrel (kor'el), *n.* [D., a grain, a decigram, a particle, crumb; = E. *kernel.*] In Holland, the name given to the decigram.

korroboree, *n.* and *v.* See *corroboree.*

korumburra (kor'um-bur-ä), *n.* [Aboriginal Australian.] A brown-and-yellow flesh-fly. *E. E. Morris,* Austral English.

kosher (kō'shèr), *v. t.* To make 'kosher,' or ceremonially correct.

kosin (kō'sin), *n.* [*koso* (*kosso, kusso*) + *-in*[2].] A sulphur-yellow tasteless compound, $C_{23}H_{30}O_7$, obtained from cusso. It does not preëxist in the drug, but is a decomposition-product of kosotoxin. It is physiologically inactive. Also *kussin, koussin, kosein, kussein,* and *tæniin.*

kosmochlore, *n.* See ★*cosmochlore.*

kosmochromite (kos″mō-krō'mit), *n.* [Gr. κόσμος, ornament, + χρῶμα, color, + *-ite*[2].] Same as ★*cosmochlore.*

kosotoxin (kō-sō-tok'sin), *n.* [*koso,* otherwise *cusso,* + *toxin.*] A yellowish, amorphous compound, $C_{26}H_{34}O_{10}$, obtained from cusso, the pistillate flowers of the Abyssinian tree *Brayera anthelmintica.* It is anthelmintic.

koswite (kos'wīt), *n.* [*Kosw(insky),* a locality in Perm, northern Ural, + *-ite*[2].] In *petrog.,* a variety of pyroxenite composed of diopside-diallage, with small amounts of olivin, hornblende, magnetite, and chrome-spinel. The characteristic feature is the texture produced by the magnetite, which is about 16 per cent. of the rock and forms a matrix for the other constituents.

kotal (kō'tal), *n.* [Pushto *kōtal.*] In Afghanistan, a mountain pass; the summit of a pass.

We . . . reached the *kotal* in an hour.
Lord Roberts, Forty-one Years in India, II. 147.

Kotari (kō-tä'rē), *n.* One of the minor Dravidian languages of India spoken by the Kotars.

kotschubeite (kot-shö'be-īt), *n.* [Named after a Russian count, P. A. von *Kotschubei.*] A rose-red variety of clinochlore containing several per cent. of chromium oxid.

köttigite, *n.* See ★*koettigite.*

kotuku (kō'tö-kö), *n.* [Maori.] The New Zealand white heron, *Ardea timoriensis:* like other herons miscalled a crane.

kotukutuku (kō-tö-kö-tö'kö), *n.* [Maori.] In New Zealand, a small ornamental tree, *Fuchsia excorticata,* which belongs to the evening-primrose family. Its trunk is covered with ragged, papery bark, and its wood, which is soft and useless, contains much tannic and gallic acids. It bears red-purple flowers about an inch long and a pleasant, edible fleshy berry called by the natives *konini.* The name is more commonly shortened to *tookytook,* a corruption of the aboriginal name. Also called *native fuchsia.*

kotwalee (kot-wä'lē), *n.* [Also *kotwallee, cutwallee,* < *kotwol, cutwal,* a police officer: see *cutwal.*] A police station. [Anglo-Indian.]

kou (kō'ō), *n.* [Hawaiian.] In the Hawaiian Islands, a name of *Cordia subcordata,* a tree belonging to the borage family, from which the natives make wooden bowls, or calabashes, for holding their poi.

koueme (kō-ā'me), *n.* [Native name in East Africa.] A tall, climbing plant of the gourd family, *Ampelosycios scandens,* with stems from 50 to 100 feet long and bearing large, fleshy fruits which sometimes reach 60 pounds in weight. It is a native of eastern tropical Africa and is much cultivated by the natives there and in the Mascarene Islands for its large oily seeds, which are boiled and used for food.

kourgan, kourgane, *n.* Same as ★*kurgan.*

kouse (kous), *n.* [Also *cous, cows,* and *cowish,* of Amerindian origin: see *cowish*[2].] A native name for *Lomatium Cous* and other species of the same genus, umbelliferous food-plants of the Columbia River region.

The Sioux Indians beat dried wild cherries with buffalo meat to form their winter stock of pemmican. In Oregon and Washington an immense amount of food was gathered from the camass root, and also from the *kouse* root.
Yearbook U. S. Dept. Agr., 1899, p. 308.

koussein, koussin, *n.* Same as ★*kosin.*

kowdie (kou'di), *n.* An imperfect rendering of *kauri,* a New Zealand tree. See *kauri-pine.*

kowhai (kō'hwī), *n.* [Maori.] In New Zealand, either of two trees of the bean family, *Sophora tetraptera* and *Clianthus puniceus.* The first has yellow flowers, and is further distinguished as *yellow kowhai* or locust-tree, while the second, with red flowers, is called *scarlet kowhai, parrot's-bill,* or *kaka-bill.* See *Clianthus* and ★*goai.*

kowl (koul), *n.* [Also *cowl, cowle;* < Hind. Ar. *qaul,* speech, word, saying, vow.] A written engagement. [Anglo-Indian.]

Things for which we need a *kowl*
R. Kipling, in Pearson's Mag., Dec., 1897, p. 622.

koyan (kō'yan), *n.* [Malay *kōyan.*] A Malayan measure used in stating heavy weights, as of cargoes. It varies from 30 to 40 piculs. In the Straits Settlements it is equal to 40 piculs or 5,333.333 pounds avoirdupois; in Penang it is equal to 5,705.143 pounds.

kozo (kō'zō), *n.* [Jap. *kōzo.*] The paper-mulberry, *Papyrius papyrifera.* See *Broussonetia.*

K. P. An abbreviation (*a*) of *Knight of St. Patrick;* (*b*) of *Knights of Pythias.*

Kr. **1.** The chemical symbol for the element *krypton.* — **2.** [*l. c.*] An abbreviation of *kreutzer.*

K. R. An abbreviation of *Knight of the Redeemer* (Greece).

kra (krä), *n.* [Malay *krā.*] A Malayan name of the crab-eating macaque, *Macacus cynomulgus,* widely adopted as a book-name.

kraal (kräl or kräl), *v. t.;* pret. and pp. *kraaled,* ppr. *kraaling.* [*kraal, n.* Compare *corral, v.*] To place (cattle or sheep) in a kraal or shed for shelter or safe-keeping. See *kraal, n.*

If goats are to produce the best fleeces they are capable of they must be maintained in uninterrupted good condition. They must have a variety of food, principally shrubs and aromatic plants, and lead an active life; they must, if possible, have running water to drink, and be kept free from dust; they must not be *kraaled* (or shedded) except when absolutely necessary; they must have clean sleeping places, and must not be crowded together.
Yearbook U. S. Dept. Agr., 1901, p. 278.

krach (kräsh), *n.* [F., < E. *crash, n.*] A 'crash' in finance.

It must suffice to say that in the following May the great Vienna "*Krach*" occurred, and the colossal bubble of speculation burst, bringing with it all the ruin foretold by Lasker and Bamberger. *Encyc. Brit.,* XXV. 472.

krait (krīt), *n.* [Also *karait, korait;* < Hind. *karait.*] A small snake, *Bungarus cœruleus* or *B. candidus,* extremely venomous, and common throughout the greater part of the Indian subregion. It is all the more dangerous on account of its small size, and is believed to be responsible for a large share of the 20,000 deaths caused by wild animals that occur annually in India.

At the end of an hour he died as they die who are bitten by the little *karait.*
Kipling, The Recrudescence of Imray.

Krakowiak (krä-kō'vi-äk), *n.* Same as *Cracovienne.*

kral (kräl), *n.* [Bulg. Sorbian *kral,* Serv. *kralj,* Bohem. *král,* Pol. *krol,* Russ. *korolĭ,* Albanian *kralj,* Turk. *kral, keral,* MGr. κράλης, Lith. *karalius,* Lett. *kralīts,* a king; < OHG. *Karl, Karal,* ML. *Carolus,* the name of Karl the Great, Charlemagne the emperor of Germany: see *carl.* Compare *cæsar,* Russ. *tsar,* emperor, etc., from the name of Julius Cæsar.] The title of the kings of southern Slavonic countries.

Brought Sisvan the *Kral* of Bulgaria to his knees.
Poole, Turkey, p. 42.

krameric (krā-mer'ik), *a.* [*Krameria* + *-ic.*] Derived from ratany.—**Krameric acid,** a crystalline astringent compound contained in the root of ratany, *Krameria triandria:* used in medicine.

krameroform (krā-mer'ō-fôrm), *n.* A product similar to tannoform, made with kramero- or ratanhia-tannic acid.

kran (krän), *n.* The monetary unit of Persia and a current coin, valued at $7\frac{8}{10}$ United States cents or one tenth of a toman.

krans (kräns), *n.* [D. *krans,* wreath, rim, cornice, in S. Africa the overhang of a cliff: see *crants.*] The overhang of a cliff; a precipitous wall of rock which surrounds a valley. Also *krantz.* [South Africa.]

Behind the boulders, a narrow belt of trees in full dark-green foliage; and above, hemming in the view, the grim rusty-brown or purple *krantzes* and alternating slopes, clad at the dry seasons with faded scrub and trees, rising grandly up to the even edge of the plateau.
Geog. Jour. (R. G. S.), Feb., 1908, p. 140.

Kraunhia (krou'ni-ä), *n.* [NL. (Rafinesque, 1808), probably from a personal name.] A genus of climbing leguminous plants commonly known as *Wistaria* (which see).

Krause's corpuscle or **end-bulb.** See ★*corpuscle.*

kraut-cutter (krout'kut″èr), *n.* A hand-machine for slicing and shredding cabbages in making sauer-kraut. One type employs a revolving disk having radial knives.

krautweed (krout'wēd), *n.* Either of two cruciferous plants, *Brassica arvensis,* the charlock, also called *crowdweed,* and *Raphanus Raphanistrum,* the wild radish, sometimes called *white charlock.*

K. R. C. An abbreviation of *Knight of the Red Cross.*

K. R. E. An abbreviation of *Knight of the Red Eagle* (Prussia).

kreatinic, kreatoxicon, kreatoxin. See ★*creatinic,* ★*creatoxicon,* ★*creatoxin.*

krebspest (krebs'pest), *n.* [G., < *krebs,* crawfish, + *pest,* disease.] A bacterial disease of crawfish, prevalent on the continent of Europe.

The crayfish disease, '*Krebspest,*' for years past widespread and destructive in Europe, but here unknown. The author and his assistant have made a special research on this subject and have described as the cause of the disease Bacterium pestis astaci.
Science, July 1, 1904, p. 15.

kreoform, *n.* See ★*creoform.*

kreolin, kreophagism, kreosol, kreotoxism, kresol. See ★*creolin,* ★*creophagism, creosol,* ★*creotoxism, cresol.*

Kressenberg beds. See ★*bed*[1].

kriegspiel (krēg'spēl), *n.* [G. *krieg,* war, + *spiel,* game.] A game designed to teach the principles of strategy and tactics. Two opposing combatant forces are represented by blocks made to the scale of the map upon which the game is played. These blocks represent the tactical units of each arm. The game is played by the commander of each force, and is supervised by an umpire. Until the forces are actually in sight of each other they are so screened that neither commander sees the operations of the other. Each move or change of position corresponds to a given interval of time. As chance is an element of warfare, it is represented in the game by the throwing of dice and reading the consequences in a table of possibilities.

krinin, krinogenic. See ★*crinin,* ★*crinogenic.*

Krishnaism (krish'na-izm), *n.* [*Krishna* + *-ism.*] The worship of Krishna (which see). Krishnaism is of comparatively recent origin. A mass of absurd and licentious rites and practices, it enjoys a corresponding popularity throughout a great part of India.

Krishnaist (krish'na-ist), *n.* One who worships the Hindu deity Krishna. See *Krishna* and ★*Krishnaism.*

kriss, *n.* Same as *creese.*

Krohn's gland. See ★*gland.*

kromskop (krōm'skōp), *n.* A trade-name of the ★chromascope (which see).

krone, *n.* **3.** A current silver coin of Austria and the Austrian dependencies, equal to 100 heller or $20\frac{3}{100}$ United States cents.

Kronocentric (kron-ō-sen'trik), *a.* [Gr. Κρόνος, Saturn, + κέντρον, center, + *-ic.*] Relating to the planet Saturn as a center, or to the center of Saturn. *Science,* Jan. 29, 1904, p. 163.

kroumatic (krō-mat'ik), *a.* [Prop. (in Latinized form) **crumatic;* < Gr. κρουματικός, < κροῦμα(τ-), a stroke, a beat, < κρούειν, strike, beat.] Sounded or produced by striking: said of musical instruments or tones. Hence—**Kroumatic music,** instrumental music in general.

Krupped (krupt), *a.* Hardened by the Krupp process; Kruppized.

One calibre of Harveyed steel, or ⅞ calibre of *Krupped* armour. *Encyc. Brit.,* XXXI. 355.

Kruppize (krup'īz), *v. t.;* pret. and pp. *Kruppized,* ppr. *Kruppizing.* [*Krupp* (see def.) + *-ize.*] To subject a steel armor-plate to the Krupp process of manufacture, by which the face is made very hard to a considerable depth, while the body of the plate remains softer.

Owing to the great severity of the ballistic tests, which necessitates the employment of a *Kruppized* process, it is impossible . . . to furnish the armor at the prices stipulated by Congress as the maximum that can be paid.
Army and Navy Register, June 3, 1899.

kruzhka (krözh'kä), *n.* [Spelled erroneously, in G. and F. style, *kruschka, kruchka,* etc., < Russ. *kruzhka,* a jug, tankard, cup, also a liquid measure; dim. of Pol. *kruzh,* Polabian *kreuz,* a jug, etc.: cf. MHG. *krūse,* G. *krause;* E. *cruse.*] A Russian liquid measure equivalent to 0.32 of a United States gallon. Also *krouchka.*

kryofine (krī'ō-fin), *n.* [Gr. κρύος, frost, + (*paraf*)*fine.*] A colorless, crystalline compound formed by heating paraphenetidin and methyl-glycolic acid together: it is antipyretic and analgesic.

kryogen, kryokonite, kryoscopy. See *cryogen, cryoconite,* ★*cryoscopy.*

krypteon (krip'tē-on), *n.* [Gr. κρυπτός, hidden, + *-eon,* as in *accordeon.*] In *exper. psychol.,* an exposure apparatus of simple construction, introduced by E. C. Sanford in 1896. The krypteon consists of a board set obliquely

upon a base, and having a flap of cardboard hinged along its lower edge. The flap can be turned up and down for successive exposures of visual stimuli.

kryptol (krip'tol), *n.* [Gr. κρυπτός, hidden, + *-ol.*] A trade-name for a loose, granular material, a mixture of graphite, carborundum, and fire-clay, having a high electrical resistance. It is used in electric stoves and furnaces, particularly those for scientific purposes, as a means of producing high and easily regulated temperatures by the passage through it of an electric current. *Amer. Jour. Psychol.*, XII. 302.

krypton (krip'ton), *n.* [NL. *krypton*, prop. **crypton*, < Gr. κρυπτόν, neut. of κρυπτός, hidden, secret: see *crypt.*] A chemical element, one of the five recently discovered gaseous constituents of the atmosphere, first obtained by Ramsay and Travers in 1898. It is colorless, transparent, without observable taste or smell, of density 40.88 as compared with hydrogen, liquefiable at −151.7° C. under atmospheric pressure, and occurs in the atmosphere to the extent of but 1 volume in 20,000,000 volumes of air.

On June 6, 1898, the discovery of yet another element was announced, in a communication made by Prof. Ramsay, of London, to the Academy of Sciences, of Paris. The communication was read to the Academy by M. Berthelot. This new element is a gas, and makes a fifth constituent of the atmosphere; it is, however, present in very minute quantities, viz., one part in ten thousand of its volume. *Krypton* belongs not to the argon, but the helium group; its density is greater than that of nitrogen, being, according to the corrected measurement, 22.47.
Sci. Amer., July 9, 1898, p. 26.

krystic, *a.* See ★*crystic.*

K. S. An abbreviation (*a*) of *King's Scholar;* (*b*) of *Knight of the Sword* (Sweden).

K. S. A. An abbreviation of *Knight of St. Anne* (Russia).

K. S. G. An abbreviation of *Knight of St. George* (Russia).

K. S. P. An abbreviation of *Knight of St. Stanislaus of Poland.*

kt. An abbreviation of *knight.*

K. T. An abbreviation (*a*) of *Knight Templar;* (*b*) of *Knight of the Thistle* (Scotland).

Kt. Bach. An abbreviation of *Knight Bachelor.*

ktypteite (tip'tē-īt), *n.* [Appar. irreg. < Gr. κτύπος, a loud noise, + *-t-* + *-e-* + *-ite*[2].] Calcium carbonate occurring in pisolitic form at Karlsbad, Bohemia, and elsewhere: it is probably a kind of aragonite, and is converted into calcite by heat.

kuan-liao (kwän-lē-ou'), *n.* [Chinese *kuan*, of the state, official, + *liao*, flux of glass, colored glass.] Imperial glass made at Peking, China.

kubong (kö-bong'), *n.* [Malay *kūbong.*] The flying-lemur. See ★*colugo.*

kudu, *n.* See *koodoo.*

kuh (kö), *n.* [Achinese?] A tin coin of Achin, Sumatra, equal to one four hundredth of a peso or dollar.

Kuhlia (kö'li-ä), *n.* [NL., named after Heinrich *Kuhl*, a naturalist who discovered the typical species in the streams of Java.] A genus of fishes, belonging to the family *Kuhliidæ*, found in the tropical Pacific.

Kuhliidæ (kö-lī'i-dē), *n.* [NL., < *Kuhlia* + *-idæ.*] A family of fishes of the tropical Pacific.

kujawiak (kö-yä'vi-äk), *n.* [Pol., < *Kujaw*, G. Kujau, a town in Silesia.] A Polish dance resembling the mazurka; also, the music for such a dance.

kuku (kö'kö), *n.* A large and handsome fruit-pigeon, *Carpophaga novæ-zelandiæ*, found in New Zealand.

kukui (kö-kö'ē), *n.* [Hawaiian *Kukui* (= Tahitian *tutui*), < *kui* = Tahitian, Tongan, Marquesan, etc., *tui*, pierce or thread upon a skewer, = Maori *tuitui*, sew.] In Hawaii, the candlenut-tree, *Aleurites Moluccana*, which is easily recognized among the trees of the forest by its silvery foliage. The leaves are either undivided or lobed, and are usually cordate at the base, with a pair of glands at the junction of the blade and the petiole. Throughout Polynesia the oily nuts are roasted and strung upon a reed or the rib of a cocoanut-leaflet, and used by the natives for illuminating their houses. These nuts also furnish the lampblack used for painting and tattooing. In Hawaii the roasted kernels are chopped fine, mixed with certain seaweeds and salt, and used as a relish at native feasts. The oil derived from the kernels is amber-colored, odorless, and very fluid; it acts as a mild cathartic. See *Aleurites.*

kulaite (kū'la-īt), *n.* [*Kula*, in Lydia, Asia Minor, + *-ite*[2].] A group of basalts from the Kula basin, Asia Minor, containing more hornblende than augite, and differing in the kinds of feldspathic constituents. One variety contains orthoclase and bytownite in nearly equal proportions with nephelite; another contains andesin, with leucite and nephelite. *Washington*, 1894.

kuliat (kö-lẹ-ät'), *n.* [Also *culiat;* said to be Tagalog.] A name applied in the Philippines to *Gnetum scandens*, a climbing shrub with opposite leaves and catkin-like infloresence. The seeds are roasted and eaten by the natives, and the stem yields a fiber which is used for cordage and, in the Andaman islands, for making fishing-nets. Also called *mala-itmo* (false betel-pepper) and *itmong-ouak* (crow's betel-pepper.) Also *culiat*. See *Gnetum.*

kulp (kulp), *n.* [Origin obscure.] A species of shark or dogfish, *Squalus spinax niger.*

kulturkampf (kûl-tör'kämpf″), *n.* [G., < *kultur*, culture, civilization, + *kampf*, fight.] A struggle for civilization: a name given to the conflict between the imperial government of Germany and the Roman Church, which lasted from 1872 till 1886. The name was first given to it by Virchow, in one of his electoral manifestos, to imply that it was a struggle of principle between the teaching of the Roman Church and that of modern civilization.

In Germany, when the Pontificate of Leo XIII. began, a disastrous conflict between the Imperial Government and the Church was in progress. It was called the *Kulturkampf*, as professing to be undertaken on behalf of civilization and culture; but it had originated in the belief, instilled into the Government by interested persons, that the Vatican Decrees on Infallibility were issued for a political purpose. *Encyc. Brit.*, XXXII. 271.

kumara (kö'mä-rä), *n.* [Maori. Also *kumera*, *kumarrah;* < *kumara* = Samoan *umala*, = Tahitian *umara*, etc.] The aboriginal name in New Zealand for the sweet potato.

kumascope (kö'ma-skōp), *n.* [Irreg. < Gr. κῦμα, wave, + σκοπεῖν, view.] An instrument for detecting electric waves; a receiver or coherer: used in wireless telegraphy.

Dr. Fleming said that the time had arrived to introduce a new word into the art of wireless telegraphy. The whole apparatus by which the messages were translated was called a receiver, which was too wide a word to be considered as a definition. The arrangement by which the electric impulses in the receiving aerial were utilized was called a "coherer"; but since that word had been introduced, contrivances for the purpose had been devised which did not cohere, and therefore the word was too limited in its application. He had therefore ventured to coin a fresh word, which was "*kumascope*," derived from the Greek word κῦμα, a wave; it was similar to electroscope and many others of a like kind.
Sci. Amer. Sup., July 18, 1903, p. 23033.

Contact kumascope, a receiving instrument, in wireless telegraphy, which depends for its action upon changes in contact-resistance under the action of electric waves, that is, upon coherer action.—**Magnetic kumascope**, a receiving instrument, in wireless telegraphy, which depends for its action upon the magnetizing or demagnetizing effect of electric waves.

kumascopic (kö-ma-skop'ik), *a.* Of or pertaining to the kumascope.

Kumassi (kö-mas'i), *n.* [W. African; also spelled *Coomassie.*] The name of a town in West Africa, used as a label for several colors. See ★*black*, ★*blue*, etc.

kumatologist (kö-ma-tol'ọ-jist), *n.* [*kumatolog-y* + *-ist.*] A student of kumatology; one who makes a special study of oceanic and atmospheric waves and of their influence on geologic and geographic phenomena.

kumatology (kö-ma-tol'ọ-ji), *n.* [Irreg. < Gr. κυμα(τ), wave, + -λογία, < λέγειν, speak.] The science of the forms and characteristics of waves. See the extract.

I [Vaughan Cornish] think the time has come when it will be for the advantage of our science that there should be a distinctive word for the study of the waves and wave-structures of the Earth as a special branch of geography. Κῦμα, genitive Κύματος, is Greek for 'a wave.' I propose that the word '*kumatology*' be added to the vocabulary of our science, to designate that department of geography which deals with the waves and wave-structures of the Earth. *Geog. Jour.* (R. G. S.), XIII. 624.

kumera, *n.* See ★*kumara.*

kummeter (kö'me-tėr), *n.* [Irreg. < Gr. κῦμα, wave, + μέτρον, measure.] A form of cymometer for measuring the lengths of the waves used in wireless telegraphy. *J. A. Fleming*, in Trans. Internat. Elect. Congress, 1st ser., 1904, III. 616.

kumquat, *n.* **Native kumquat**, in Australia, a small tree of the rue family, *Atalantia glauca*, bearing round, acid fruits about one half inch in diameter, from which an agreeable beverage or preserves can be made. Its wood is of a bright yellow color with brown streaks or veins. Called also *desert lemon*. See *cumquat.*

Kundt's constant, law. See ★*constant*, ★*law*[1].

kungu (köng'gö), *n.* [Also *nkungu;* a native name near Lake Nyassa.] A winged aquatic insect supposed to belong to the culicid genus *Corethra*. It arises in swarms from Lake Nyassa.—**Kungu cake**, a cake made of the dipterous insect kungu and eaten by the natives near Lake Nyassa, who gather the insects in large numbers for this purpose.

Kunkel's phosphorus. See ★*phosphorus.*

kunzite (könts'īt), *n.* [Named after George F. *Kunz*, a New York mineralogist.] A transparent pink-and-purple lilac variety of spodumene. It is found in crystals near Pala, San Diego county, California, and affords gems weighing from 1 to 200 carats each. Described by Baskerville in "Science" for August, 1904. It is very phosphorescent when exposed to radium rays, the Röntgen rays, etc.

kupang (kö'päng), *n.* [Philippine Sp. *cupang*, prob. connected with Bisaya *copang*, a skein of cotton or silk.] In the Philippine Islands, *Parkia Roxburghii*, a tree belonging to the mimosa family, with bipinnate leaves having minute leaflets and one or two glands on the petiole. The flowers are borne in dense heads at the end of long peduncles, and the pods are about a foot long bearing numerous seeds surrounded by a sweet pulp. The tree is said to yield a resin used for illuminating. Also written *cupang* and *copang.*

kupfernickel (kûp'fėr-nik″ẹl), *n.* [G.: see *copper* and *nickel.*] The common German name of the mineral niccolite: so called because, though an ore of nickel, it has a coppery-red color.

kura (kö'rä), *n.* [Jap. a storehouse.] In Japan, a building without large windows and unfit for residence, arranged as a thoroughly fire-proof storehouse for valuables. It forms a separate place of storage, where the proprietor's works of art and other treasures are kept. Compare *godown.*

kurakkan (kö-ra-kän'), *n.* [Cingalese.] In Ceylon, same as *raggee*. See *Eleusine.*

kurbash, *n.* See *koorbash.*

kurdaitcha (kör-dī'chä), *n.* [Also *coordaitcha*, *goditcha* (def. 2); aboriginal Australian.] **1.** Among the tribes of central Australia, a man chosen to avenge the death of one who has died, every death being supposed to be due to the magic influence of some enemy.—**2.** A kind of shoe, made of emu-feathers matted together with human blood, worn by the kurdaitcha when on his errand. See def. 1. *E. E. Morris*, Austral English.

kurgan (kör-gän'), *n.* [Russ. *kurganŭ*, Pol. *kurhan*, = Pers. *kurkhāne*, a mound, tumulus, < North Turk. *kurgan*, a fortified place.] One of the prehistoric burial-mounds in Russia, found from the Carpathians eastward into Siberia. Most of the kurgans belong to the stone age and contain remains of a dolichocephalic type which preceded the present brachycephalic type of Russia. They were, however, used as late as the tenth century of our era.

To the British barrows, of which there are two types, the older long and the later round-shaped, correspond the *Kurgans* of the Russian steppe lands, and the already described mounds of North America. Both the *Kurgans* and the mounds reach far into the historic period, and the *Kurgans* were still used as burial-places in the 10th and 11th centuries of the new era. *Keane*, Ethnology, p. 126.

kurhaus (kör'hous), *n.* [G., < *kur*, cure, + *haus*, house.] The principal building at a watering-place; a house arranged for the convenience of persons who resort to mineral springs and the like.

Kurlbaum's process. See ★*process.*

kuromatsu (kö″rō-mät'sọ̈), *n.* [Jap. *kuromatsu*, *kuro matsz*, < *kuro*, black, + *matsu*, *matsz*, pine.] A valuable timber-tree, *Pinus Thunbergii*, yielding a durable wood, used for bridge-construction and engineering-work, particularly below ground.

kuromoji (kö'rō-mō″ji), *n.* [Jap. **kuromoji* < *kuro*, black, + *moji*, cotton gauze.] Any one of several species of shrubs or small trees belonging to the laurel family, especially *Benzoin sericeum*, *B. umbellatum*, *B. citriodorum*, and *Litsea glauca*. Several of the species, particularly the first named, yield a grayish-white, silky, fragrant wood which is used for the manufacture of toothpicks. From the foliage of several species a volatile oil is obtained.

kurrajong (kur'a-jông), *n.* Same as *currajong:* the name is also applied to a number of other malvaceous and sterculiaceous trees or shrubs yielding strong bast-fibers from which the natives make cordage, nets, or matting. See the phrases below.—**Black kurrajong**, any one of several species of trees belonging to the genus *Sterculia*, especially *S. diversifolia*, and another sterculiaceous tree, *Rulingia pannosa.*—**Brown kurrajong**, a small tree of the family *Sterculiaceæ*, *Commersonia echinata*, having soft, light, white wood.—**Green kurrajong**, a tall malvaceous shrub, *Hibiscus heterophyllus*. Called also *Queensland sorrel.*—**Tasmanian kurrajong**, *Plagianthus sidoides*. See *currajong.*

kurtorachic (kėr-tọ-rā'kik), *a.* [For **cyrtorhachic;* < Gr. κυρτός, curved, + ῥάχις, spine.] Having a spinal column with a lumbar curve convex forward, or a lumbo-vertebral index of less than 98. *Turner.*

kuruma (kö′rö-mä), *n.* [Jap.] A Japanese cart; a vehicle of any kind, including the jinrikisha.

The . . . charm of Japan . . . began for me with my first *kuruma*-ride out of the European quarter of Yokohama into the Japanese town. . . . The jinrikisha, or *kuruma*, is the most cozy little vehicle imaginable.
L. Hearn, Glimpses of Unfamiliar Japan, I. 1, 2.

kurung (kû-rûng′), *n.* See ★*kurunj.*

kurunj (kû-rûnj′), *n.* [Also *kurung*; ⟨ Marathi *kurunj*, Hindi *kurung*, ⟨ Skt. *kurunja.*] A tall, erect leguminous tree or climber, *Pongam pinnata*, of the family *Leguminosæ*. See *Pongam* (*Pongamia*).

kurunj-oil (kû-rûnj′oil), *n.* A fixed oil expressed from the seeds of the East Indian tree *Pongam pinnata:* used in medicine. Also called *poola-oil.*

kurvey (kėr-vā′), *v. i.* [A back-formation from *kurveyor.*] To conduct a transport by bullock-wagon. [South Africa.]

The journey to De Kaap by bullock-waggon occupied about six weeks. "*Kurveying*" (the conducting of transport by bullock-waggon) in itself constituted a great industry. *Encyc. Brit.*, XXXI. 81.

kurveyor (kėr-vā′ọr), *n.* [An accommodated form (after *conveyor*) of D. *karweier*, ⟨ *karwei*, a job, MD. *corweie*, ⟨ OF. *corvee*, forced labor: see *corrée.*] In South Africa, a traveling carrier or trader who carries the goods of others from one point to another in his heavy ox-wagon, and who also peddles his own wares.

Kushite, kusso. See *Cushite, cusso.*

kusimanse (kö-si-män′se), *n.* [W. African.] A small West African civet-cat, *Crossarchus obscurus.*

kusum (kûs′ûm), *n.* [Hind. *kusum*, also *kasum*, *kasūm*, *kusumbh*, *kusumbha*, ⟨ Skt. *kusumbha.*] The safflower, *Carthamus tinctorius.* See *Carthamus.*

Kutorgina (kū-tôr-jī′nä), *n.* [NL.] A genus of Cambrian protrematous brachiopods with incipient cardinal area, great delthyrium, and very rudimentary processes and deltidium.

kv-amp. An abbreviation for *kilovolt-ampere.*

k. w. In *elect.*, an abbreviation of *kilowatt.*

kwan[1] (kwän), *n.* [Also *quan;* Annamese.] A silver coin of Annam and Cambodia, equivalent to a string of 600 cash or to 4 francs.

kwan[2] (kwän), *n.* [Jap.] A Japanese unit of weight, equal to 1,000 momme or 8.28 pounds avoirdupois. *C. Hering*, Conversion Tables, p. 61.

kwazoku (kwä-zō′kö), *n.* [Jap.] One of the two classes of modern Japanese nobility, corresponding to the old territorial nobility.

K. W. E. An abbreviation of *Knight of the White Eagle* (Poland).

kw-h. An abbreviation of *kilowatt-hour.*

Ky. An abbreviation of *Kentucky.*

kyang (kyäng), *n.* [Also *kiang*, ⟨ Tibetan *kyang.*] The wild ass of Tibet, *Equus hemionus.* It is over four feet high at the shoulder, of a dark-reddish color, with a narrow stripe along the back.

It is, perhaps, worth while for me to say that this animal, the *kyang*, is a decided ass, and not a horse.
Geog. Jour. (R. G. S.), XV. 397.

kyanism (kī′an-izm), *n.* [Named after J. H. *Kyan*, the inventor of the process.] Impregnation (of wood) with a solution of corrosive sublimate to prevent decay.

kyanopsia (kī-an-op′si-ä), *n.* [NL., ⟨ Gr. *κύανος*, blue, + *ὄψις*, vision.] Blue vision; a pathological condition in which all objects appear of a blue color. Also, and more commonly, written *cyanopsia* or *cyanopia.*

kyar (kī′är), *n.* Same as *coir.*

kybosh, *n.* and *v.* See ★*kibosh.*

kychtymite (kich′ti-mīt), *n.* [*Kychtym*, in Russia, + *-ite*[2].] Same as ★*kischtimite.* *Morozewicz*, 1897.

kyesamechania (kī-ē″sa-mē-kā′ni-ä), *n.* [NL., ⟨ Gr. *κίησις*, conception, + *ἀμηχανία*, helplessness, incapacity, ⟨ *ἀμήχανος*, without means, helpless, ⟨ *ἀ-* priv. + *μηχανή*, an instrument, machine, contrivance, means: see *machine, mechanic.*] In *biol.*, a hindrance to impregnation; the inability of a certain group of individuals to impregnate others than themselves, due to morphological or physiological changes in the seed or ovum, or both, or to a change in the time of maturity of the seeds or ova. *Eimer*, 1895.

kylie, *n.* See ★*kiley.*

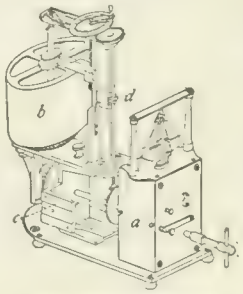
kylin, *n.* See *kilin*, ★*kirin.*

kylindrite, *n.* See ★*cylindrite.*

kyllosis (ki-lō′sis), *n.* [NL., ⟨ Gr. *κύλωσις*, crooking, crippling, ⟨ *κυλλοῦν*, crook, cripple, ⟨ *κυλλός*, crooked, crippled, as a leg bent outward.] Same as *club-foot.*

kymatologist, kymatology. Same as ★*kumatologist*, ★*kumatology.*

kymograph, *n.*—**Ludwig-Baltzar kymograph**, a perfected form of the physiological kymograph of C. Ludwig, built by the mechanician G. Baltzar: it is remarkable for its extreme accuracy and wide range of utility. The instrument is now supplied by practically all dealers in physiological and psychological apparatus.



Ludwig-Baltzar Kymograph.
a, clock-work; *b*, kymograph-drum; *c*, face-stage for horizontal position of drum; *d*, mechanism for automatic lowering of drum during rotation. The instrument is also furnished with a device for the taking of records upon an "endless-paper" strip, which is not shown in the figure.

kymographion (kī-mọ̄-graf′i-ọn), *n.* Same as *kymograph.*

kynanthropy (kī-nan′thrọ̄-pi), *n.* Same as *cynanthropy.*

kynite (kī′nīt), *n.* A dynamite containing about 25 per cent. of nitroglycerin.

kynophobia (kin-ọ̄-fō′bi-ä), *n.* Same as ★*cynophobia*, 2.

kynurenic (kin-ū-ren′ik), *a.* Same as ★*cynurenic.*

kynurine (kin′ū-rin), *n.* Same as ★*cynurine.*

kyphos (kī′fos), *n.*; pl. *kyphoi* (-foi). [Gr. *κύφος*, a hump, hunch.] The hump or bend of the spine in kyphosis.

kyphoscoliosis (kī″fō-skol-i-ō′sis), *n.* [NL., ⟨ Gr. *κυφός*, humped, + *σκολίωσις*, crookedness.] Combined lateral and posterior curvature of the spine.

Kyphosidæ (kī-fos′i-dē), *n. pl.* [NL., ⟨ *Kyphosus* + *-idæ.*] A family of fishes inhabiting chiefly the Mediterranean Sea and the Pacific Ocean.

Kyphosinæ (kī-fọ-sī′nē), *n. pl.* [NL., ⟨ *Kyphosus* + *-inæ.*] A subfamily of fishes belonging to the family *Kyphosidæ.*

Kyphosus (kī-fō′sus), *n.* [NL., ⟨ Gr. *κυφός*, humpbacked, + L. *-osus*, E. *-ous.*] A genus of fishes belonging to the family *Kyphosidæ*, inhabiting the Pacific Ocean, some of them American, but most East Indian.

kyphotic (kī-fot′ik), *a.* [*kyphosis* (*-ot-*) + *-ic.*] Relating to or affected with kyphosis.—**Kyphotic pelvis.** See ★*pelvis.*

kypoo (kī′pö), *n.* An astringent solid extract similar to gambier or catechu, made in Ceylon.

Kyrielle (kir-i-el′), *n.* [F. *kyrielle*, dim. of *kyrie:* see *Kyrie eleison.*] 1†. Same as *Kyrie eleison.*—2. [*l. c.*] A verse form in French poetry, divided into equal couplets ending with the same word, which serves as a refrain. *N. E. D.*

The *kyrielle*, of which we have three specimens, . . . ought to have been discarded.
Saturday Rev., Dec. 3, 1887, p. 770.

kyrin (kī′rin), *n.* [Appar. ⟨ Gr. *κῦρος*, supreme power (?), + *-in*[2].] An end-product of proteolytic digestion, of the type of a polypeptide, as glutokyrin.

kytomitome (kī-tom′i-tōm), *n.* Same as ★*cytomitome.*

2. A symbol: (*a*) (2) In *chem.*, l- before certain compounds has reference to their levorotation, as distinguished from *dextrorotation* (d-) or *inaction* (i-). (*c*) In *mineral.*, the final letter of the general symbol *hkl*, given to the face of a crystal in the system of Miller. See ★*symbol*, 7. (*d*) In *elect.*, the symbol for ★*inductance* (which see). (*e*) In *phys.*, for *length*: used in formulæ.— **3.** An abbreviation (*l*) of *Lady*; (*m*) of *Lake*; (*n*) [*l. c.*] of *lane*; (*o*) of *Latitude*; (*p*) [*l. c.*] of *law*; (*q*) [*l. c.*] of *league* or *leagues*; (*r*) [*l. c.*] of *leave*; (*s*) [*l. c.*] in a ship's log-book, of *length*; (*t*) of *Liberal*; (*u*) [*l. c.*] of the Latin *libra*, a pound in weight; (*v*) [*l. c.*] of *link* or *links*; (*w*) [*l. c.*] of *liter*; (*x*) of *London*; (*y*) [*l. c.*] of *long*; (*z*) of *Lord*; (*aa*) [*l. c.*] of *low*.

L[3] (el), *n.* Used colloquially for *el.*, an abbreviation of *elevated*, shortened from *elevated railway*.

l. 1 e., l. 2 e., etc. Abbreviations of *left first entrance*, *left second entrance*, etc.

La. 2. A contraction of *Louisiana*.

L. A. An abbreviation of *Literate in Arts*.

laager, *v.* **II.** *intrans.* To halt and form a laager; encamp in a laager: as, we *laagered* five miles farther on.

laap (läp), *n.* Same as ★*laarp*, *larp*. [Australia.]

laap-insect (läp'in-sekt), *n.* Same as ★*larp-insect*.

laarp (lärp), *n.* Same as *larp*. [Australia.]

laavenite, *n.* Same as ★*lavenite*.

Lab. An abbreviation (*a*) of *Labrador*; (*b*) [*l. c.*] of *laboratory*.

labarri (lä-bär'rē), *n.* [Also *labaria*: from a native name.] A very deadly snake, *Trigonocephalus atrox*, of Guiana and eastern Brazil. It is grayish brown with darker markings, the coloration harmonizing with the dead leaves and fallen branches.

The *Labarri* is usually found coiled on the stump of a tree, or in some other place where it can hardly be distinguished from the object on which it is lying. It is mortally poisonous when adult. It may be described as rainbow-colored in life, but its brightness fades soon after death. It is said that specimens eight feet long have been killed. *Sci. Amer.*, March 7, 1903, p. 176.

labba (lab'ä), *n.* [Arawak *lappa* (Martius, 1863, p. 311).] In British Guiana, a name applied to the paca, *Cœlogenys paca*. It seems formerly to have been also used for the agouti, as the name occurs in books of West Indian travel, and the paca was never a resident of the West Indies.

Labechia (la-besh'i-ä), *n.* [NL.] A genus of *Stromatoporidæ* of the Silurian period, characterized by the plate-like expanded cœnosteum, the surface of which is covered with wart-like prominences which are the ends of solid vertical pillars. Between these develop irregular laminæ.

labefact† (lab'ē-fakt), *v. t.* [L. *labefacere*, pp. *labefactus*, cause to totter: see *labefaction*.] Same as *labefy*.

labefact (lab'ē-fakt), *a.* [L. *labefactus*, *pp.*] Weakened: tottering; giving way.

label-card (lā'bel-kärd), *n.* A card with name of owner, destination, or other particulars attached to something for identification or direction; a label.—**Label-card slide**, a slide of metal containing a label-card, usually applied to such a slide on a mail-pouch.

labellate (lā-bel'āt), *a.* [NL. **labellatus*, < *labellum*, a little lip: see *labellum*.] Long-lipped. *J. D. Dana*.

label-stop (lā'bel-stop), *n.* In *arch.*, the termination of a label or dripstone: usually a decorated boss or corbel.

Labial cartilage, one of several cartilages, occurring in pairs, attached to the anterior part of the cranium or to the cartilages bounding the mouth; typically present in sharks.

labialate† (lā'bi-ạ-lāt), *a.* and *n.* [*labial* + *-ate*[1].] Same as *labiate*.

labiality (lā-bi-al'i-ti), *n.* [*labial* + *-ity*.] The character of being labial, especially in phonetics and music.

labiatifloral (lā-bi-ā-ti-flō'rạl), *a.* Same as *labiateflorous*.

labichorea (lā″bi-kō-rē'ä), *n.* [NL., < L. *labium*, lip, + NL. *chorea*.] A form of dyslalia or speech defect, due to a spasmodic closing of the lips in the enunciation of the labials, so that the latter are separated by an interval from the succeeding vowels. Also called *labichoreic stuttering*.

labichoreic (lā″bi-kō-rē'ik), *a.* Pertaining to or affected with labichorea.

Labidesthes (lab-i-des'thēz), *n.* [NL., irreg. < Gr. λαβίς (λαβιδ-), forceps, + ἐσθίειν, eat.] A genus of fishes of the family *Atherinidæ*, found in the Great Lakes and the lakes of the upper Mississippi valley.

labile, *a.* **2.** In *med.*, noting a mode of application of electricity in which the active electrode is passed back and forth over the nerve or muscle to be acted upon: opposed in this sense to ★*stabile*.—**Labile equilibrium.** See ★*equilibrium*.

lability, *n.* **2.** Instability, as, in *chem.*, the quality of being easily broken down to form simpler chemical compounds or even elements.

By combining these two methods there is induced a "nuclear *lability*," which renders these eggs susceptible to the influence of carbon dioxide as a provocative of cleavage. *Jour. Roy. Micros. Soc.*, April, 1904, p. 188.

labilize (lab'i-līz), *v. t.*; pret. and pp. *labilized*, ppr. *labilizing*. [*labile* + *-ize*.] In *chem.*, to make labile or more readily susceptible of change; make unstable.

The rôle of the oxygen must have been that of a *labilizing* agent, directly producing the condition for explosive decomposition in the active biogens. *Nature*, Feb. 26, 1903, p. 385.

labiobidental (lā″bi-ō-bī-den'tạl), *a.* and *n.* Pronounced with the lips and two teeth: a phase of *labiodental*. *Stud. Yale Psychol. Lab.*, X. 104.

labioglossolaryngeal (lā″bi-ō-glos″ō-lạ-rin'jē-ạl), *a.* [L. *labium*, lip, + Gr. γλῶσσα, tongue, + λάρυγξ, larynx, + *-e-al*[1].] Relating to the lips, tongue, and larynx. Bulbar paralysis, affecting these parts, is sometimes so designated.

labiograph (lā'bi-ō-gráf), *n.* [L. *labium*, lip, + γράφειν, write.] In *physiol.* and *psychophys.*, an instrument for recording the voluntary (in speaking) or involuntary movements of the lips.

labioguttural (lā″bi-ō-gut'u-ral), *a.* [L. *labium*, lip, + *guttur*, throat, + *-al*[1].] In *phonetics*, sounded in the throat and shaped by the lips.

labiomancy (lā'bi-ō-man″si), *n.* [L. *labium*, lip, + Gr. μαντεία, divination.] Divination or interpretation by means of the motions of the lips; specifically, lip-reading.

labiomental (lā″bi-ō-men'tal), *a.* [L. *labium*, lip, + *mentum*, chin, + *-al*[1].] Relating to the lips and the chin.

labionasal (lā″bi-ō-nā'zạl), *a.* and *n.* [L. *labium*, lip, + *nasus*, nose, + *-al*[1].] **I.** *a.* Formed or pronounced by the coöperation of the lips and the nose.

II. *n.* An articulate sound produced by the coöperation of the lips and the nose, or the letter or character representing such sound, namely, *m*. In pronouncing *m*, the lips are closed and nasal passages are open.

labiopalatine (lā″bi-ō-pal'ä-tin), *a.* [L. *labium*, lip, + *palatum*, palate, + *-ine*[1].] Relating to the lips and the palate.

labioplasty (lā'bi-ō-plas″ti), *n.* [L. *labium*, lip, + Gr. πλαστός, formed, + *-y*[3].] A plastic operation to replace the whole or a part of a lip which has been lost.

labipalp, *n.* (*b*) In lamellibranchs, an extension of the margin on each side of the mouth into a more or less elongated structure having a grooved and ciliated surface and serving to collect food-particles and conduct them to the mouth.

labization (lā-bi-zā'shọn), *n.* Same as *bebization*.

labor[1], *n.*—**Bureau of Labor.** See ★*bureau*.—**Dry labor**, childbirth attended with little or no discharge of liquor amnii.—**Federation of Labor.** See ★*federation*.—**Induced labor**, labor in which the uterus is incited to contract by artificial means. **Labor party**, any political party formed of working-men, or professing to represent the interests of labor, that is, of working-men.—**Missed labor**, a condition in which the fetus is retained in the womb beyond the normal period of gestation.—**Postponed labor**, labor occurring after the term of normal gestation is past.—**Socialist Labor party**, a political and socialist party in the United States. It was formed in New Jersey, in 1877, out of an earlier organization (the Social Democratic Working-men's party, formed in Philadelphia in 1874), and since 1888 has figured in National and State politics with a ticket of its own.—**United Labor party**, a political party organized in the interests of labor, which, in 1888, nominated a candidate for President.

laborage (lā'bọr-āj), *n.* [*labor*[1] + *-age*.] **1**†. Plowing; plowed land.—**2**†. Labor; work.—**3.** Payment for labor.

laboratorial (lab″ọ-rā-tō'ri-ạl), *a.* [*laboratory* + *-ial*.] Relating or belonging to a laboratory.

laboratorian (lab″ọ-rā-tō'ri-ạn), *a.* and *n.* [*laboratory* + *-an*.] **I.** *a.* Of or pertaining to a laboratory.

II. *n.* One who conducts scientific investigations in a laboratory.

laboratory, *n.* **3.** The space between the fire and the flue-bridges of a reverberatory furnace in which the work is performed.—**Laboratory milk.** See ★*milk*.—**Marine laboratory**, a laboratory or observatory situated upon the ocean or its shore, and equipped with appliances for collecting, observing, and experimenting upon marine animals and plants; a marine zoological station.

labor-day (lā'bọr-dā), *n.* In some of the States, a legal holiday, commonly the first Monday in September, established for the benefit of the laboring classes.

laborist (lā'bọr-ist), *n.* and *a.* **I.** *n.* A member of a labor party or one who is an advocate of the interests of labor.

II. *a.* Pertaining to labor and its interests.

laborite (lā'bọr-īt), *n.* In *British politics*, a member of the Labor party.

The heavy vote given to the Liberals in England by the Labor Party, the "*Laborites*," as they are there called, does not at all mean that the issue of protection is not the main one. *N. Y. Times*, Jan. 16, 1905.

Laboulbenia (la-böl-bē'ni-ạ), *n.* [NL. (Montagne and Robin, 1853), named after Alexandre *Laboulbène*, a French entomologist.] A genus of minute ascomycetous fungi containing numerous species parasitic upon insects, especially beetles. The perithecium is borne on a stalk-like receptacle with appendages and one or more antheridia at one side. The reproduction is sexual and resembles that of the red seaweeds. The asci are 4-spored. *L. elongata* is a cosmopolitan species found on beetles of the genera *Platynus*, *Colpodes*, etc.

Laboulbeniaceæ (la-böl-bē-ni-ā'sē-ē), *n. pl.* [NL., < *Laboulbenia* + *-aceæ*.] A large family of peculiar ascomycetous fungi named from the genus *Laboulbenia*.

Laboulbeniales (la-böl-bē-ni-ā'lēz), *n. pl.* [NL., < *Laboulbenia* + *-ales*.] An order of ascomycetous fungi containing the single family *Laboulbeniaceæ*. Also called *Laboulbeniineæ*.

Laboulbeniineæ (la-böl-bē-ni-ī'nē-ē), *n. pl.* [NL.] Same as ★*Laboulbeniales*.

labradophyric (lab″rạ-dō-fir'ik), *a.* [*labrador(ite)* + *(por)phyr(it)ic*.] Noting porphyritic igneous rocks whose phenocrysts are labradorite. *Dana*, Manual of Geol. (4th ed.), p. 77.

Labradorean (lab-rạ-dō'rē-ạn), *a.* and *n.* Same as ★*Labradorian*.

Labradorian (lab-ra̤-dō′ri-a̤n), *a.* and *n.* [*Labrador* + *-ian.*] **I.** *a.* Of or pertaining to Labrador.

II. *n.* In *geol.*, a subdivision of the Archæan rocks of New Hampshire: proposed by Hitchcock for a group below the Huronian. *Dana*, Manual of Geol. (4th ed.), p. 446.

labrador-rock (lab′ra-dôr-rok″), *n.* A rock composed almost wholly of labradorite. Same as ★*anorthosite.*

labrador-stone (lab′ra̤-dôr-stōn″), *n.* Same as *labradorite.*

labrosaurid (lab-rō-sâ′rid), *n.* and *a.* **I.** *n.* One of the *Labrosauridæ.*

II. *a.* Of or pertaining to the *Labrosauridæ.*

labrosauroid (lab-rō-sâ′roid), *a.* Related to or having the characters of the genus *Labrosaurus.*

Labrosomus (lab-rō-sō′mus), *n.* [NL. *Labrosomus* (Gill) for earlier *Labrisomus* (Swainson, 1839), < NL. *Labrus* + Gr. σῶμα, body.] A genus of blennioid fishes, found in the Atlantic from the West Indies to Brazil.

labrum[2] (lā′brum), *n.*; pl. *labra* (-brä). [L. *labrum*, contraction of *lavabrum*, < *lavare*, wash: see *lave*[2] and compare *lavatory*, *laver*[1].] In *Rom. archæol.*, a bath-tub, especially one of those of hard, fine material more or less richly sculptured, rather common in the museums of Italy. Also called *lavabrum.*

labrys (lab′ris), *n.* [Gr. λάβρυς (given as a Lydian word), same as πέλεκυς, an ax.] See ★*double ax.*

This discovery in the Palace of a shrine of the Double Axe, and its associated divinities, derives a special interest from the connection already established on philological grounds between *labrys*, the Carian term for the sacred Double Axe, and the name Labyrinth.
A. J. Evans, in Jour. Roy. Inst. of Brit. Architects, X. [103.

laburnic (lā̤-bèr′nik), *a.* [*laburnum* + *-ic.*] Pertaining to or derived from laburnum.—**Laburnic acid**, a substance contained in the seeds and bark of laburnum, *Laburnum Laburnum.* It is probably a mixture of organic and inorganic acids.

laburnum, *n.*—**Native laburnum.** Same as ★*clover-tree.*—**Sea-coast laburnum**, in Australia, a cosmopolitan shrub or small tree of the warmer regions, *Sophora tomentosa.* See *Sophora.*

labyrinth-beetle (lab′i-rinth-bē″tl), *n.* Any beetle of the family *Bostrychidæ* (which see). *Kirby and Spence.*

labyrinthitis (lab″i-rin-thī′tis), *n.* [NL., < Gr. λαβύρινθος, labyrinth, + *-itis.*] Inflammation of the labyrinth of the internal ear.

labyrinthodontoid (lab-i-rin-thō-don′toid), *a.* and *n.* [*labyrinthodont* + *-oid.*] **I.** *a.* Pertaining to or having the characters of the genus *Labyrinthodon.*

II. *n.* A stegocephalous amphibian related to the genus *Labyrinthodon.*

labyrinthous (lab-i-rin′thus), *a.* [*labyrinth* + *-ous*]. Having a labyrinthine or meandering arrangement, as the tubes in the interior of certain extinct sponges.

lac[2], *n.*—**Arizona lac**, the product of an insect, *Carteria Larreæ*, belonging to the *Coccidæ*, which infests the creosote-bush, *Covillea tridentata.* It resembles the gum-lac of commerce and yields a red coloring matter showing the reactions of cochineal. The substance is found as an incrustation on the twigs of the bush and contains dead bodies of the insects by which it was secreted. The Indians use it to cement their arrow-heads to the shafts, and for various medicinal purposes. This lac is also found on the twigs of a leguminous shrub, *Acacia Greggii*, growing in the arid regions of Arizona.—**Bleached lac**, the decolorized resin obtained by dissolving seed-lac in a boiling alkaline lye and passing chlorin gas through the liquid until the lac is precipitated.—**Mexican lac**, the resinous exudation from a species of *Croton.*—**Sonora lac**, the product of *Carteria Mexicana*, an insect infesting a leguminous shrub (*Coursetia glandulosa*) which grows in northwestern Mexico. The crude substance, which occurs on the twigs in the form of a brick-red incrustation, is collected by the Indians of Sonora and sold in the markets. It resembles grain-lac, but is less vividly red and has the taste of succinic acid. The natives use it in making cement and as a remedy for affections of the lungs, for fevers, and for other maladies. It consists in part of a substance similar to the shellac of commerce and yields a fine red coloring matter.

Laccadivian (lak-a̤-div′i-a̤n), *a.* Of or pertaining to the Laccadive Islands.

laccaic (la-kā′ik), *a.* [*lacca* + *-ic.*] Same as ★*laccic*, 2.

laccase (lak′ās), *n.* [*lacca* + *-ase.*] An oxidizing ferment which is concerned in the production of the black Japanese lacquer. It is obtained from the Japanese lac-tree, *Rhus vernicifera*, and from various fungi.

laccate, *a.* **II.** *n.* The general name of salts of laccic acid.

laccic, *a.* **2.** Noting an acid, a brownish-red compound, $C_{16}H_{12}O_8$(?), obtained from lac-dye by the action of dilute hydrochloric acid. It crystallizes in minute plates, decomposes without melting at about 180° C., and resembles carminic acid.

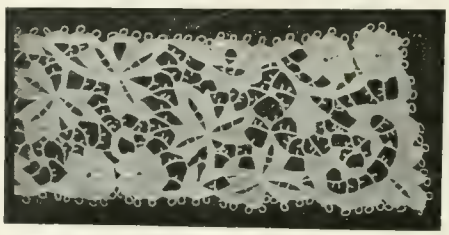
lac-cochineal (lak′koch″i-nēl), *n.* Same as *lac-insect.*

laccol (lak′ol), *n.* [*lacca* + *-ol.*] A compound contained in the juice of the lac-tree, *Rhus vernicifera.* It is probably an aromatic polybasic phenol. Under the influence of laccase it absorbs oxygen from the air and yields a black substance.

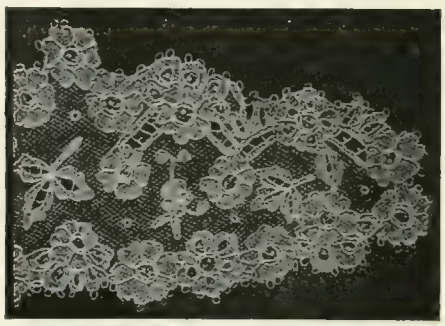
laccolite (lak′ō-līt), *n.* Same as *laccolith.*

The ontogeny of the volcano may be viewed in the light of the phylogeny traced through its fossil remains—lava sheets, tuff beds, *laccolites*, volcanic necks like those of the Mount Taylor plateau, and other products of organic action during the ages past. *Pop. Sci. Mo.*, July, 1902, p. 279.

lace, *n.*—**All-over lace**, lace of any kind which is 18 or more inches in width and in which a pattern is repeated.—**Antique lace**, a hand-made pillow-lace of heavy linen thread in a large, open, rectangular mesh: used mostly for curtains, bed-spreads, and draperies.—**Arabe lace**, a kind of coarse bobbin-lace with a large cable-edged pattern, made in Arabia and also in France and Belgium.—**Arabian lace.** Same as *Arabe* ★*lace.*—**Battenberg lace**, a kind of fine linen-thread lace in which are worked rings, picots, cords, etc., with connecting bars or brides.—**Binche lace**, a fine pillow-lace without a raised edge, the ground of which resembles a spider-web with small dots: named after Binche, Belgium.—**Bourdon lace**, a machine lace of silk and cotton with scroll-like patterns cable-edged on a regular mesh.—**Bretonne lace**, a cheap narrow pillow-lace, used for edging, etc.—**Carrickmacross lace**, an Irish lace made in both guipure and appliqué.—

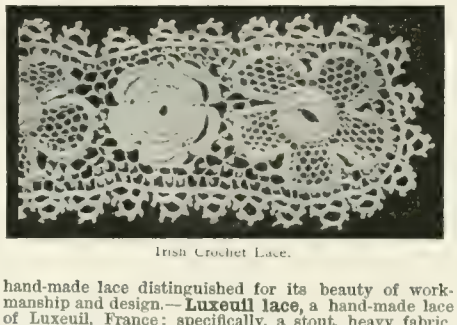


Carrickmacross Guipure Lace.



Carrickmacross Appliqué Lace.

Craponne lace, a kind of inferior, stout thread guipure lace for furniture, etc.—**Cut lace.** Same as *punto tagliato* ★*lace.*—**Escurial lace**, a silk lace made in imitation of rose-point, with its patterns outlined with lustrous cord.—**Fayal lace**, a delicate and beautiful lace made by the peasant women of Fayal (one of the Azores) from the fibers of the American aloe, *Agave americana.*—**Filet lace**, any lace made with a square mesh.—**Gimp lace**, a coarse lace made by winding threads of silk, worsted, or cotton around a foundation of wire or twine, more or less open in design: chiefly employed in upholstery, though sometimes used for trimming wearing-apparel.—**Hand-embroidered lace**, point-lace embroidered with floral or fancy designs.—**Irish crochet lace**, an Irish linen



Irish Crochet Lace.

hand-made lace distinguished for its beauty of workmanship and design.—**Luxeuil lace**, a hand-made lace of Luxeuil, France; specifically, a stout, heavy fabric.—**Maltese lace.** (*a*) A hand-made lace made in the island of Malta. (*b*) A machine-made lace of coarse cotton thread. (*c*) A pillow-lace with geometric designs.—**Medici lace**, a variety of torchon lace, like ordinary insertion, with one edge scalloped.—**Mélange lace**, a heavy, black, hand-made silk pillow-lace, characterized by a blending of Spanish patterns with ordinary Chantilly effects. The edge is usually plain and straight, but is sometimes ornamented with a fine silk fringe.—**Net-lace.** Same as *punto a reticello* ★*lace.*—**Normandy lace.** Same as *Valenciennes lace.*—**Nottingham lace**, a bobbin-net lace, chiefly for curtains, originally made at Nottingham, England.—**Open lace.** Same as *punto in aria* ★*lace.*—**Oriental lace**, a kind of lace made on an embroidering-machine in which the needle and shuttle act in combination, producing both simple and complex designs.—**Point de Gêne lace**, a machine-made lace imitating point de Venise.—**Point de neige lace**, a form of lace into the border of which patterns are worked with a

Maltese Lace.

flat thread or tape.—**Point de Venise.** Same as *rose point* (which see, under *point*[1]).—**Punto a reticello lace**, lace in which the groundwork of linen is first prepared by pulling out vertical and horizontal threads until an open network is formed. This is then filled in with patterns in various stitches. Also called *net-lace.*—**Punto di Venezia lace**, Venice point. This is essentially a punto in aria lace of great richness of design. Venice point appeared at about the beginning of the seventeenth century. The manufacture was introduced by Colbert into France and the style called *French point.* **Punto in aria lace**, lace in which the design is first drawn on a piece of paper and the outlines laid down in coarse thread. This thread is covered with buttonhole stitch and the pattern within the outline worked out with various stitches. Also called *open lace.*—**Punto tagliato lace**, the simplest of all needle-made laces. The pattern is transferred to linen and worked out with various stitches, the linen being afterwards cut away from the finished work. Also called *cut lace* and *point coupé.*—**Repoussé lace**, a variety of lace in which the designs or patterns are so worked or formed as to give a cup effect.—**Rococo lace**, an Italian lace with rococo designs.—**Seville lace**, a pillow-lace resembling torchon.—**Swiss lace**, imitation Brussels lace made in Switzerland.—**Wood-fiber lace**, artificial silk lace made from wood cellulose.—**Youghal lace**, an Irish needle-point lace of coarse thread, made in Munster county, Ireland.

lace-bowl (lās′bōl), *n.* A bowl of Oriental porcelain delicately ornamented with pierced designs of intricate lace-like pattern which are filled in with translucent glaze in the rice-grain style.

lace-bug (lās′bug), *n.* Any member of the family *Tingitidæ* (which see). *L. O. Howard*, Insect Book, p. 299.—**Hawthorn lace-bug**, an American tingitid, *Corythuca arcuata*, which lives upon leaves of the hawthorn.

lace-button (lās′but″n), *n.* The daisy-fleabane or sweet scabious, *Erigeron annuus.*

lace-flower (lās′flou″ėr), *n.* The wild carrot, *Daucus Carota.*

lace-glass (lās′glâs), *n.* Venetian glass with lace-like designs.

lace-grass (lās′grâs), *n.* See ★*grass.*

lace-pod (lās′pod), *n.* See *Thysanocarpus.*

laceration, *n.* **4.** In *Actinozoa*, the formation of a new polyp by the separation of a portion of the basal expansion by contraction of the body.

lacertofulvin (lā-sèr′tō-ful-vin), *n.* [L. *lacertus*, lizard, + *fulvus*, yellow, + *-in*[2].] A yellow pigment, probably a lipochrome, found in the skin of certain reptiles.

lacery (lās′ę-ri), *n.* [*lace* + *-ery.*] **1.** Laces collectively.—**2.** Lace-like work or embroidery.—**3.** An enlacement; an interlacement.

lacet (lā′set), *n.* [*lace* + *-et*[1].] In *needle-work*, a trimming made of a braid known as *lacet braid* fashioned into various designs with lace stitches.

lace-wing (lās′wing), *n.* Same as *lace-winged fly.*

Lace-winged insects. See ★*insect.*

lacewood (lās′wud), *n.* Same as *lacebark*, 3.

Lachenalia (lak-e-nā′li-ä), *n.* [NL. (Jacquin, 1787), named in honor of Werner de *Lachenal* (1736–1800), professor of botany in Basel.] A genus of bulbous plants of the family *Liliaceæ.* The leaves are few and radical, the flowers are several to many on a short scape, either drooping or erect, in color ranging from white through blue, red, and yellow; and the perianth is usually very irregular, the outer segments often sepal-like. There are about 30 species, natives of

South Africa, several of which are cultivated as cool greenhouse subjects. A form of *L. tricolor* is probably best known among gardeners under the horticultural name *L. Nelsoni*. The species of *Lachenalia* are sometimes called *Cape cowslip*, and a spotted form of *L. pendula* is known as *leopard-lily*.

Lachnolæmus (lak-nọ-lē′mus), *n.* A corrected spelling of ★*Lachnolaimus*.

Lachnolaimus (lak-nọ-lī′mus), *n.* [NL.] A genus of labroid fishes found in the West Indies.

Lachnum (lak′num), *n.* [NL. (Retzius, 1779), ‹ Gr. λάχνη, down, hair, fur.] A genus of ascomycetous fungi of the family *Pezizaceæ*, having more or less hairy sessile or short-stipitate apothecia and hyaline ellipsoid or spindle-shaped spores. About 130 species have been described. They are widely distributed and occur on dead sticks and stems.

lacing, *n.* **10.** In structural work, particularly bridge work, the system of slender, diagonal members which connect the two opposite parallel members or flanges of a structural iron or steel beam, column, or strut. In lacing the several members form a single, continuous zigzag line, but do not cross one another as in latticing.

lacing-bar (lā′sing-bär), *n.* See ★*lattice-bar*.

lacing-eye (lā′sing-ī), *n.* In marine hardware, a ring or eye of metal secured to the edge of a sail and used to retain the lacing which holds the sail to the boom.

lacing-machine (lā′sing-ma-shēn″), *n.* An apparatus for automatically lacing into a continuous chain the pattern-cards of a Jacquard loom.

Laciniaria (lạ-sin-i-ā′ri-ạ̈), *n.* [NL. (Hill, 1768), ‹ *lacinia* (which see) + *-aria* (see *-ary*[1]), in reference to the lacerate or laciniate involucral bracts of some of the species.] A genus of plants of the family *Asteraceæ*. There are 40 or more species, all natives of eastern and central North America. *L. squarrosa* and other species are called *blazing-star* on account of their handsome rose-colored flowers. Several species have been in popular use as medicinal plants under the names *button-snakeroot, rattlesnake-master, backache-root*, and *colic-root*. See *Liatris*.

Laciniata (lạ-sin-i-ā′tạ̈), *n. pl.* [NL., neuter pl. of **laciniatus*: see *laciniate*.] A suborder of *Lepidoptera* proposed by Packard to include only the aberrant family *Eriocephalidæ*, in which the mouth-parts differ greatly from the normal lepidopterous type. The mandibles are fairly well developed, and the maxillæ do not form a proboscis, having each two separate rather short lobes and a long five-jointed flexible palpus.

laciniation (lạ-sin-i-ā′shọn), *n.* **1.** The state of being laciniate.—**2.** A laciniate projection or lobe.

lacinule (lạ-sin′ūl), *n.* Same as *lacinula*.

lacinulose (lạ-sin′ụ-lōs), *a.* [*lacinula* + *-ose*.] Same as *lacinulate*.

lacistemaceous (las″i-stē-mā′shius), *a.* Belonging to or having the characters of the *Lacistemaceæ*.

lackage (lak′ạj), *n.* [*lack*[1] + *-age*.] Shortage or deficiency in weight; lightness when compared with the standard of weight: said of coins.

lacken† (lak′ẹn), *v. t.* [*lack*[1] + *-en*[1].] **1.** To belittle; disparage; depreciate.—**2.** To lack; to be without.

"It is certain," the Italian historian continues, "that the Portuguese of the fifteenth century entirely *lackened* knowledge of any land to the south-west." *Geog. Jour.* (R. G. S.), IX. 189.

lackey-caterpillar (lak′i-kat″ėr-pil-ạ̈r), *n.* The larva of the lackey-moth.

lackland (lak′land), *n.* and *a.* [*lack*[1], *v.*, + *land*[1].] **I.** *n.* One who lacks land or landed possessions; one who, like a younger son, inherits no territory: as, John *Lackland*, King of England.

II. *a.* Having no land.

lackmoid, *n.* Same as *lacmoid*.

lackmus, *n.* Same as *lacmus*.

La Couyère slates. See ★*slate*[2].

lacquer, *n.* **Ke-uchi lacquer**, lacquer which has been allowed to stand several months to become thick. It is used for drawing fine lines in the decorations without danger of spreading.—**Ki-seshime lacquer.** See *seshime lacquer*, under *lacquer*.—**Ki-urushi lacquer** [Jap. *ki*, tree, + *urushi*, lacquer], crude lacquer, the sap of the *Rhus vernicifera* of Japan.—**Kuma-urushi lacquer** [Jap. *kuma*, border, + *urushi*, lacquer], lacquer colored with lampblack, used for drawing fine lines in the shading of feathers, hair, etc., on gold lacquer.—**Muranashiji lacquer** [Jap. *mura*, clustered, + *nashi*, a pear], a variety of Japanese lacquer with small gold flakes in irregular clusters. See *nashiji* ★*lacquer*. **Nakanuri lacquer** [Jap. *naka*, middle, + *nuri*, lacquer, varnish], a pure lacquer freed from water, exposed to the light, and stirred till it becomes black: used as a basis, or under-coating, on which the finishing lacquer is afterward placed.—**Nashiji lacquer** [Jap. *nashi*, a pear], a variety of Japanese lacquer sprinkled with gold, in imitation of the skin of a pear. Also called *aventurin lacquer*. **Nuritate lacquer** [Jap. *nuri*, lacquer, + *tate*, stir], a pure lacquer to which has been added water which had been used with a whetstone and contains fine particles of the stone in suspension: used on cheap ware.—**Roiro lacquer** [Jap. *ro-iro*, greenish black], a variety of Japanese lacquer of a pure black or greenish-black color.—**Ro-urushi lacquer** [Jap. *ro*, dark green, + *urushi*, lacquer], a dark-green varnish made by adding to branch-lacquer a small proportion of tooth-dye, which is prepared by boiling rice-vinegar in which iron filings have been placed, and by afterward exposing it to the rays of the sun for several days.—**Shunkei lacquer** [Jap. *Shun-Kei*, name of the inventor], a variety of Japanese lacquer produced by mixing oil with the sap of the lacquer-tree (*Rhus vernicifera*). It is of a yellowish color and needs no polishing. When applied to furniture, being transparent, it shows the natural grain of the wood beneath.—**Shunuri lacquer** [Jap. *shu*, vermilion, + *nuri*, varnish], a Japanese lacquer of a pure red color: same as *coral* or *vermilion lacquer* (which see, under *coral*).—**Shu-urushi lacquer** [Jap. *shu*, vermilion, red, + *urushi*, lacquer], a red lacquer which requires no final polishing. See *shunuri* ★*lacquer*. **Su-chau lacquer** [named from a city in China], a red cinnabar lacquer with carved decoration, made in China.—**Tsugaru lacquer** [Jap. *Tsugaru*, name of a district in the province of Mutsu], a variety of Japanese lacquer with marbled or veined effects in various colors.—**Tsui-koku lacquer.** See *Tsui-shu lacquer*, under *lacquer*. **Yeda-urushi lacquer** [Jap. *yeda*, branch], varnish obtained from the branches of the lacquer-tree; branch-lacquer. See *seshime lacquer*, under *lacquer*.

lacrymal. **I.** *a.*—**Lacrymal bay**, the recess at the internal angle of the eye.—**Lacrymal groove.** See ★*groove*. **Lacrymal passages**, all the parts traversed by the tears from the lacrymal gland to the opening of the duct in each nasal fossa.

II. *n.* **4.** In *ichth.*: (*a*) A bone lateral to the ethmoid in fishes, the prefrontal: not homologous with the bone called 'lacrymal' by Parker. *Starks*, Synonymy of the Fish Skeleton, p. 509. (*b*) A bone in front of the eye in fishes, part of the suborbital ring; the preorbital: not homologous with the bone called 'lacrymal' by Geoffroy. *Starks*, Synonymy of the Fish Skeleton, p. 520.

lacrymist, lachrymist (lak′ri-mist), *n.* [L. *lacryma*, tear, + *-ist*.] One who weeps easily or constantly.

lacrymomalar, lachrymomalar (lak″ri-mō-mā′lạ̈r), *a.* Relating to the lacrymal and malar bones: as, the *lacrymomalar* articulation. *Proc. Zool. Soc. London*, 1901, I. 139.

Lacrymonasal pillar or **process**, a slender splint of bone projecting forward and downward from the lacrymal into the nasal vacuity in the skull of the *Rhea*.—**Lacrymonasal vacuity.** See ★*vacuity*.

lacrymosal, lachrymosal (lak-ri-mō′sạl), *a.* Same as *lacrymose*.

lacrymosity, lachrymosity (lak-ri-mos′ị-ti), *n.* [*lacrymose* + *-ity*.] The condition of tearfulness; the quality of causing tears.

lacrymous, lachrymous (lak′ri-mus), *n.* Same as *lacrymose*.

lac sulphuris (lak sul′fụ-ris). [NL., 'milk of sulphur.'] In *chem.*, an old name for sulphur precipitated at common temperature by an acid from the solution in water of an alkaline or calcic sulphid: a white, not yellow, powder.

lactacidine (lak-tas′i-din), *n.* [*lact-ic* + *acid* + *-ine*[2].] The trade-name for a mixture of lactic and salicylic acids used as a food-preservative.

lactagogue (lak′tạ-gog), *n.* [L. *lac* (*lact-*), milk, + Gr. ἀγωγός, ‹ ἄγειν, lead.] Same as *galactagogue*.

lactalbumin (lak-tal-bū′min), *n.* [L. *lac* (*lact-*), milk, + E. *albumin*.] An albuminous substance resembling serum albumin which is found in milk.

lactam (lak′tam), *n.* [L. *lac* (*lact-*), milk, + E. *am*(*monia*).] The name of a class of organic compounds containing the group

$$\overline{HNCH_2CH_2CH_2CO}$$

or $$\overline{HNCH_2CH_2CH_2CH_2CO}.$$

They are formed by the elimination of water from γ- or δ-amino acids respectively, the reaction being characteristic of these two classes of compounds. They are simple cyclic-acid amides.

lactamic (lak-tam′ik), *a.* [*lactam* + *-ic*.] Noting an acid, a-aminopropionic acid, $CH_3.CHNH_2.COOH$, or alanin.

Lactaria (lak-tā′ri-ạ̈), *n.* [NL. (Persoon, 1797), ‹ fem. of L. *lactarius*, milky: see *lactary*.] A genus of fungi of the family *Agaricaceæ*. They have the hymenophore continuous with the stem, and the pileus usually depressed at the center. When broken the gills and flesh exude a variously colored milky juice, whence the name. The species are numerous and some are edible. Also written *Lactarius*.

lactaric (lak-tar′ik), *a.* [*Lactar*(*ius*) + *-ic*.] Noting an acid, a colorless compound, $C_{15}H_{30}O_2$, contained in the mushroom *Lactarius piperatus*. It crystallizes in small needles and melts at 69.5–70° C.

lactarium (lak-tā′ri-um), *n.*; pl. *Lactaria* (-ạ̈). [NL., neut. of L. *lactarius*, *a.*] Same as *lactary*.

lactase (lak′tās), *n.* [L. *lac* (*lact-*), milk, + *-ase*.] A ferment which inverts lactose to dextrose and galactose.

lactatic (lak-tat′ik), *a.* and *n.* [*lactate* + *-ic*.] **I.** *a.* Promoting the secretion of milk in the breast.

II. *n.* A galactagogue.

lactational (lak-tā′shọn-ạl), *a.* [*lactation* + *-al*[1].] Relating to the period of lactation. *Med. Record*, Feb. 28, 1903, p. 337.

lactescency (lak-tes′ẹn-si), *n.* Same as *lactescence*.

lactification (lak-ti-fi-kā′shọn), *n.* [L. *lac* (*lact-*), milk, + *-ficatio*(*n-*), ‹ *-ficare*, ‹ *facere*, make.] The production of lactic acid in milk and other fluids by the lactic-acid bacteria.

lactifluous (lak-tif′lọ̈-us), *a.* [L. *lac* (*lact-*), milk, + *fluere*, flow, + *-ous*.] Yielding a thick milky juice; flowing with milk.

lactiform† (lak′ti-fôrm), *a.* [L. *lac* (*lact-*), milk, + *forma*, form.] Like milk.

lactigenous (lak-tij′e-nus), *a.* [L. *lac* (*lact-*), milk, + *-genus*, -producing.] Having the properties of a galactagogue.

lactim (lak′tim), *n.* [*lact*(*am*) + *-im*.] The name of a class of organic compounds containing the group $-C(OH):N-$. It is a tautomeric and, occasionally, isomeric form of the lactam radical.

lactimide (lak-tī′mid), *n.* [*lact-ic* + *imide*.] A colorless neutral compound, $CH_3CH\langle{}^{CO-NH}_{NH-CO}\rangle CHCH_3$, prepared by heating a-aminopropionic acid in a current of hydrochloric-acid gas. It crystallizes in needles or plates, melts at 275° C., and sublimes.

lactite (lak′tīt), *n.* [L. *lac* (*lact-*), milk, + *-ite*[2].] The trade-name of a substitute for bone or celluloid, prepared by gelatinizing casein with borax solution and treating the product with acetic acid and lead acetate and drying it under pressure.

lactivorous (lak-tiv′ọ̄-rus), *a.* [L. *lac* (*lact-*), milk, + *vorare*, feed upon.] Feeding on milk.

lactoalbumin (lak″tọ̄-al-bū′min), *n.* Same as ★*lactalbumin*.

lactobutyrometer, *n.*—**Marchand's lactobutyrometer**, an instrument for determining the quantity of butter-fat in milk. It depends upon the solubility of the fat in ether and the formation of a layer of liquid fat at 40° C. when the ether is shaken with alcohol of 86–90 per cent. The volume of the layer of fat is measured by a scale, and the percentage of the same in the milk is obtained by a simple calculation.

lactocaramel (lak-tọ̄-kar′ạ-mel), *n.* [*lact-ic* + *caramel*.] Caramelized lactose.

lactocholine (lak-tọ̄-kol′in), *n.* [*lact-ic* + *choline*.] A compound of choline and ethylidene lactic acid.

lactochrome (lak′tọ̄-krōm), *n.* [L. *lac* (*lact-*), milk, + Gr. χρῶμα, color.] In *chem.*, a name given by Blyth to a nitrogenous substance of an orange color, obtained in very small quantity from the whey of milk after casein and albumin had been removed, and believed by him to be the source of the yellow color of milk and of butter.

lactoglobulin (lak-tọ̄-glob′ụ̄-lin), *n.* [L. *lac* (*lact-*), milk, + E. *globulin*.] A globulin found in milk.

lactol (lak′tol), *n.* [*lact-ic* + *-ol*.] A colorless, tasteless compound, the lactic-acid ester of β-naphthol: an intestinal antiseptic.

lactolase (lak′tọ̄-lās), *n.* [*lactol* + *-ase*.] A ferment of vegetable origin which supposedly causes the formation of lactic acid during anaërobic fermentation.

lactometric (lak-tọ̄-met′rik), *a.* Of or pertaining to a lactometer or to the measurements and tests of a lactometer. *Sadtler*, Handbook of Indust. Chem., p. 265.

lactonic (lak-ton′ik), *a.* [*lactone* + *-ic*.] Pertaining to a lactone.—**Lactonic acid.** Same as ★*galactonic acid*.

lactopepsin (lak-tọ̄-pep′sin), *n.* [*lacto*(*se*) + *pepsin*.] A solution containing various digestive ferments and lactose: a commercial preparation.

lactophen (lak′tō-fen), *n.* [*lact(ic)* + *phen(yl)*.] Same as ★*lactophenine*.

lactophenine (lak-tō-fen′in), *n.* [*lactophen* + *-ine*[2].] A colorless crystalline compound, $C_2H_5OC_6H_4NHCOCHOHCH_3$, used in medicine as a febrifuge and soporific.

Lactophrys (lak′tō-fris), *n.* [NL., < ✱*lact(oria)*, a milk-cow (< L. *lac* (*lact-*), milk), + Gr. ὀφρύς, eyebrow. The allusion is to the projecting horns of *L. tricornis*.] A subgenus of fishes of the family *Ostraciidæ*, most of them found in American waters.

lactopicrin (lak-tō-pik′rin), *n.* [L. *lact(uca)*, lettuce, + E. *picrin*.] An amorphous, bitter substance, one of the active principles of Canadian lettuce, *Lactuca Canadensis*.

lactoproteid (lak-tō-prō′tē-id), *n.* [*lact-ic* + *proteid*.] Any one of the albumins which occur in milk.

lactoprotein (lak-tō-prō′tē-in), *n.* Same as ★*lactoproteid*.

Lactoridaceæ (lak′tō-ri-dā′sē-ē), *n. pl.* [NL. (Engler, 1887), < *Lactoris* (*Lactorid-*) + *-aceæ*.] A family of dicotyledonous archichlamydeous plants of the order *Rancales*, containing the single monotypic genus ★*Lactoris* (which see).

lactoridaceous (lak′tō-ri-dā′shius), *a.* Belonging to the plant-family *Lactoridaceæ*.

Lactoris (lak-tō′ris), *n.* [NL. (Philippi, 1865), < L. *lactoris*, the Latin name of some unidentified plant.] A genus of plants constituting the family *Lactoridaceæ*. It consists of a single species, *L. Fernandeziana*, from the island of Juan Fernandez, a low, diffusely branching shrub with smooth, obovate, entire, stipulate leaves, the short-pedicelled, inconspicuous flowers borne singly in the axils of the leaves or in small leafy axillary racemes. The perianth segments are three, calyx-like; the stamens six, in two series; the carpels three, only slightly united with each other.

lactosazone (lak-tōs-az′ōn), *n.* [*lact(ose)* + *azo-* + *-one*.] A yellow compound, $C_{24}H_{32}O_9N_4$, prepared by the action of phenylhydrazine on lactose. It crystallizes in needles and melts at 200° C. Also called *lactose-osazone*.

lactoscope, *n.*—**Feser's lactoscope**, an apparatus for determining the quality of milk. A known volume of milk is diluted with a measured volume of water until the graduations on a central white staff become visible. The extent of dilution determines the value of the milk.

lactose-osazone (lak′tōs-ōs-az″ōn), *n.* Same as ★*lactosazone*.

lactoserum (lak-tō-sē′rum), *n.*; pl. *lactosera* (-rä). [L. *lac* (*lact-*), milk, + NL. *serum*.] A serum, obtained by immunization with milk, which contains precipitins (coagulins) corresponding to all the albumins of the milk and some related albumins of the body of the animal.

lactosin (lak′tō-sin), *n.* [*lactose* + *-in*[2].] A colorless, dextrorotatory, non-reducing compound, $C_{36}H_{62}O_{31}.H_2O$, found in the root of *Silenaceæ*. It forms small lustrous crystals which give off water at 110° C.

lactothermometer (lak″tō-thêr-mom′e-tèr), *n.* [L. *lac* (*lact-*), milk, + E. *thermometer*.] A small thermometer inclosed in a glass tube and used in testing milk.

lactotoxin (lak-tō-tok′sin), *n.* [L. *lac* (*lact-*), milk, + Gr. τοξ(ικόν), poison, + *-in*[2].] A ptomaïne found in milk: supposedly the same as the tyrotoxicon of cheese.

lactoviscometer (lak″tō-vis-kom′e-tèr), *n.* [L. *lac* (*lact-*), milk, + *viscus*, viscus, + *metrum*, measure.] An instrument for indicating the quality and composition of milk by its rate of flow through a capillary tube. *Sci. Amer. Sup.*, Nov. 7, 1903, p. 23285.

lactucerin (lak-tū′se-rin), *n.* [L. *lactuca*, lettuce, + *-er* + *-in*[2].] **1.** The dried milky juice of the European lettuce, *Lactuca virosa*. It consists of a mixture of α- and β-lactucerol acetates and has the formula $C_{20}H_{32}O_2$.—**2.** A colorless dextrorotatory compound, $C_{28}H_{44}O_2$ (?), contained in the juice of the European lettuce. It crystallizes in microscopic needles and melts at 210° C. Also called *lactucon*.

lactucerol (lak-tū′se-rol), *n.* [*lactucer-in* + *-ol*.] A bitter, colorless, dextrorotatory compound, $(C_{18}H_{30}O.H_2O)_2$, obtained from the dried juice of the European lettuce, *Lactuca virosa*. It exists in two modifications termed α- and β-*lactucerol*. The former crystallizes in long, silky, lustrous needles, melts at 166–181° C., and may be distilled in an atmosphere of carbon dioxid; the latter crystallizes from ether in long needles with a silvery luster, from alcohol as a gelatinous mass.

Lactucic acid. (*a*) A bitter, acrid, brownish-green, amorphous compound obtained from the juice of *Lactuca Canadensis*. (*b*) A light-yellow crystalline compound, $C_{40}H_{58}O_{11}$ (?), formed by the action of dilute sulphuric acid on lactucarium. It gives a wine-red color with alkalis.

lactucin (lak-tū′sin), *n.* [L. *lactuca*, lettuce, + *-in*[2].] A colorless compound, $C_{40}H_{48}O_{13}$ or $C_{22}H_{26}O_7$ or $C_{22}H_{28}O_8$, obtained from the dried juice of the common lettuce, *Lactuca sativa* and *L. sagittata*. It crystallizes in pearly scales.

lactucol (lak-tū′kol), *n.* [L. *lactuca*, lettuce, + *-ol*.] A colorless dextrorotatory compound, $C_{13}H_{20}O$, prepared by fusing lactucerin with potassium hydroxid. It crystallizes in needles melting at 162° C.

lactucon (lak-tū′kon), *n.* Same as ★*lactucerin*.

lactucone (lak-tū′kōn), *n.* Incorrect for ★*lactucon*.

lactucopicrin (lak-tū-kō-pik′rin), *n.* [L. *lactuca*, lettuce, + E. *picrin*.] An amorphous bitter principle, not well known, said to be contained in lactucarium.

lactumen (lak-tū′men), *n.* [NL., < L. *lac* (*lact-*), milk.] Same as *milk-blotch*.

lacturamic (lak-tū-ram′ik), *a.* [*lact-ic* + *ur-ea* + *am(ine)* + *-ic*.] Derived from lactic acid and urea.—**Lacturamic acid**, a colorless compound, $NH_2CONHCH(CH_3)COOH$, prepared by boiling lactyl urea with barium-hydroxid solution; urein-2-propanoic acid. It crystallizes in small rhombic prisms and melts at 155° C.

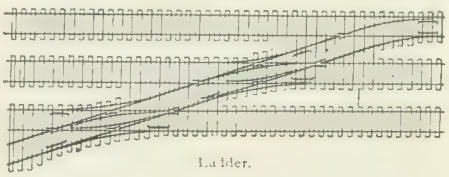
lactyl (lak′til), *n.* [L. *lac* (*lact-*), milk, + *-yl*.] A lactic-acid radical: as, *lactyl* chlorid, $CH_3.CHCl.CO.Cl$.

lacunary, *a.* **2.** Consisting of lacunes, as, for the most part, the circulatory system in *Mollusca*.

lacuscular (lā-kus′kū-lär), *a.* [L. *lacusculus*, a small lake (dim. of *lacus*, lake, pool), + *-ar*[3].] Relating to or inhabiting small pools.

Lacustrine age or **period.** See ★*age*[1].

ladder, *n.* **3.** A series of buckets for dredging and filling which are carried up and down an incline; a bucket-conveyer.—**4.** In *railroads*, a track which connects by switches the ends of a series of parallel tracks and is used in sorting cars in a drill-yard. See ★*drill-yard*.



Ladder.

—**Adjustable ladder**, a ladder used in gymnasiums for exercising, so swung on supports that it may be placed in an upright, horizontal, or slanting position, and may hang against the wall when not in use.—**Indian ladder**, a ladder having a single pole with steps or footholds on the sides; a tree-ladder: so called because, as used by the Indians of the southwestern United States, it is formed from a tree-stem by lopping off the branches a few inches from the stem. A firemen's scaling-ladder is essentially an Indian or tree-ladder. See *ladder*, 1.—**Pneumatic extension ladder.** Same as *aërial* ★*truck*.—**Rope ladder.** See *rope*[1], *n.*—**Telescopic aërial ladder.** Same as *aërial* ★*truck*.

ladder-back (lad′èr-bak), *n.* A chair-back which is made of horizontal slats passing from one side to the other.

ladder-beetle (lad′èr-bē″tl), *n.* An American chrysomelid beetle, *Calligrapha scalaris*, which feeds on elm, alder, and willow. It is yellowish-white in color, with ladder-shaped dark markings. Also *linden leaf-beetle*.

ladder-cell (lad′èr-sel), *n.* A scalariform cell. See *scalariform*, 1 (*b*), and *scalariform vessels*, under *scalariform*.

ladder-hook (lad′èr-hūk), *n.* A double hook, with a set-screw, used to hold a ladder in place on a roof or against a building.

laddering (lad′èr-ing), *n.* [*ladder* + *-ing*[1].] A narrow insertion of lace or muslin used in dressmaking, consisting of alternate bars and open spaces, somewhat resembling a ladder. Ribbons may be run in and out through these for ornament. Also called *beading*.

ladder-point (lad′èr-point), *n.* A kind of stitch resembling ladder-stitch.

ladder-tape (lad′èr-tāp), *n.* A woven tape consisting of two long pieces connected by short ones, something like the crosspieces of a ladder: used for making Venetian blinds.

ladder-track (lad′èr-trak), *n.* See ★*drill-yard*.

ladia (lä-di-ä′), *n.* [Also *lodia*, *lodja*, etc.; < Russ. *ladiyá*, *ladïyá*, also *lodiyá*, *lodïyá*, a decked boat with a mast.] Same as ★*lodja*.

la-di-da (lä-di-dä′), *a.* and *n.* [Also extended ✱*ladidady*, spelled *lardy-dardy*: syllables suggestive of a languid or mincing speech or manner.] **I.** *a.* Languidly genteel in speech or manner; foppishly affected.

II. *n.* A languidly genteel person; an affected fop or 'swell.' [Colloq.]

la-di-da (lä-di-dä′), *v. i.* [Also extended *lardy-dardy*; < *la-di-da*, *a.*] To act in a languidly genteel manner; pose as a 'swell.'

> I like to *la-di-da* with the ladies,
> For that is the style that suits
> The noble name and glorious fame
> Of Captain de Wellington Boots.
>
> *Stirling Coyne*, The Widow Hunt, quoted in N. & Q., 9th ser., VIII. 19.

Ladinian stage. See ★*stage*.

ladle, *n.* **5.** A burghal duty charged on grain, meal, and flour brought to market for sale; the proceeds obtained from that duty: from the dish or vessel used to measure the grain or meal. *Jamieson*, Scottish Dict., Sup. [Scotch.]—**Safety-ladle**, a foundry-ladle which is tipped by means of a worm, thus facilitating the steady and safe pouring of the metal. Only large ladles are thus equipped.

ladling (lā′dling), *n.* Same as *lading*, *n.*, 3.

ladling-hole (lā′dling-hōl), *n.* Same as *lading-hole*.

Lad'p. A contraction of *Ladyship*.

ladrone, *n.* **2.** In the Philippine Islands, among American soldiers, a hostile Filipino soldier or 'insurgent.'

> Thus we not only get *ladrone* as a substitute for "insurgent," which in turn is a substitute for "the enemy," or "the Filipino forces," but "ladronism" appears in the news dispatches as a harmless equivalent for resistance to an armed invader.
>
> *Springfield Republican*, quoted in N. Y. Evening Post, April 4, 1903.

ladronism (la-drōn′izm), *n.* [*ladrone* + *-ism*.] The character or conduct of a ladrone or robber. See extract under ★*ladrone*, 2.

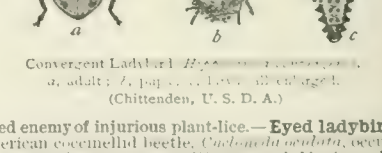
> *Ladronism* reached its maximum early last spring, when a dozen provinces, some of them near Manila, were infested with them. . . . At present there are scarcely any ladrones left, only a few in Albay Province, in southern Luzon, where they have not been pursued with as much vigor as elsewhere, but recent advices indicate that the constabulary have since destroyed their bands.
>
> *Nat. Geog. Mag.*, March, 1904, p. 111.

lady, *n.* **10.** In *astrol.*, a term designating the planet Venus when in the circumstances under which, if a masculine planet, she would be termed *lord*: as, *lady* of the ascendant.—**Lady altar**, the altar in a Lady chapel dedicated to the Virgin Mary.—**Lady in waiting**, a lady who is in attendance upon a queen. See *maid of honor* (*a*).—**Lady's cloth.** See ★*cloth*.—**Lady's friend.** See ★*friend*.—**Lady's looking-glass.** Same as *Venus's looking-glass* (which see, under *Venus*).

ladybird, *n.*—**Ashy-gray ladybird**, a coccinellid beetle, *Cycloneda abdominalis*, of ashy-gray color, ornamented with seven black spots on the thorax and eight on each wing-cover. It is often found in abundance upon orange-trees, where its larvæ prey upon plant-lice and young scale-insects.—**Bean ladybird.** Same as ★*bean-beetle* (which see).—**Blood-red ladybird**, an American coccinellid beetle, *Cycloneda sanguinea*, with blood-red elytra and a black thorax spotted with orange.—**Boreal ladybird**, an American coccinellid beetle, *Epilachna borealis*, of phytophagous habits. It feeds upon the leaves of cucumber, melon, and other cucurbitaceous plants.—**Cactus ladybird**, an American coccinellid beetle, *Chilocorus cacti*, occurring commonly in the southwestern United States, where it feeds on scale-insects.—**Comely**

Cactus Ladybird [illegible]
a, beetle; *b*, pupa; *c*, larva. [illegible]

ladybird, an American coccinellid beetle, *Coccinella renusta*, pink in color and marked with 10 large black spots.—**Convergent ladybird**, an American coccinellid beetle, *Hippodamia convergens*, of wide distribution; a

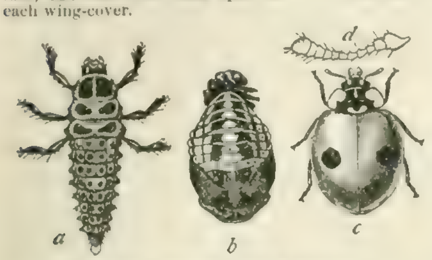


Convergent Ladybird [illegible]
a, adult; *b*, pupa; *c*, larva. [illegible]
(Chittenden, U. S. D. A.)

noted enemy of injurious plant-lice.—**Eyed ladybird**, an American coccinellid beetle, *Cycloneda ocellata*, occurring in the Southern States, California, and Mexico.—**Five-spotted ladybird**, an American coccinellid beetle, *Coccinella quinquenotata*.—**Herbivorous ladybird**, any species of the coccinellid genus *Epilachna*, all of which, in both larval and adult stages, are phytophagous and not carnivorous; specifically, in the eastern United States, the

squash ★*ladybird* (which see).—**Nine-spotted ladybird,** *Coccinella novemnotata*, a brick-red species with 9 black spots.—**Painted ladybird,** *Harmonia picta*, straw-yellow marked with black.—**Plain ladybird,** *Cycloneda sanguinea*, light red without elytral markings.—**Squash ladybird,** *Epilachna borealis*, a phytophagous species whose larvæ feed on the leaves of squash and other cucurbits.—**Thirteen-spotted ladybird,** *Hippodamia tredecimpunctata*, brick-red with 13 black spots.—**Twice-stabbed ladybird,** *Chilocorus bivulnerus*, black with two red spots.—**Two-spotted ladybird,** *Adalia bipunctata*, red with one black spot on each wing-cover.

Nine-spotted Ladybird (*Coccinella novemnotata*). Two and a half times natural size.



Two-spotted Ladybird (*Adalia bipunctata*).
a, larva; *b*, pupa; *c*, adult; [illegible] of same; all enlarged.
(Marlatt, U. S. D. A.)

ladybug, *n.*—**Australian ladybug,** specifically, in California, *Vedalia (Novius) cardinalis*, an Australian

Australian Ladybug (*Vedalia (Novius) cardinalis*).
a, ladybug larvæ feeding on female and egg-sac of fluted scale; *b*, pupa; *c*, adult ladybug; *d*, orange twigs showing scale and ladybugs. *a*, *b*, *c*, enlarged; *d*, natural size.
(Marlatt, U. S. D. A.)

coccinellid beetle brought by the United States Department of Agriculture to kill off the white or fluted scale (*Icerya purchasi*). See ★*Icerya*, with cut.

lady-by-the-gate (lā″di-bī-ᴛʜe-gāt′), *n.* The soapwort or bouncing-bet, *Saponaria officinalis*.

lady-crab, *n.* 2. (*a*) See *crab*[1], 1. (*b*) In the Channel Islands, *Portunus puber*.

ladyfish, *n.* 4. A trachinoid fish, *Sillago domina*, found in the Bay of Bengal and generally throughout the East Indian archipelago.—5. The ten-pounder.—6. A mermaid. [Humorous.]

> "A judge of mermaids, he will find
> Our *ladyfish* of every kind
> Inspection will repay."
> *W. S. Gilbert*, 'Bab Ballads,' Captain and the Mermaids.

ladyish (lā′di-ish), *a.* Somewhat like a lady; having the airs of a fashionable lady. *N. E. D.*

ladyism (lā′di-izm), *n.* The condition and manners of an affected "fine lady." *N. E. D.*

ladykind (lā′di-kīnd), *n.* The women of a family or party. Compare *womankind*. *Scott.*

lady-laurel (lā′di-lâ″rel), *n.* See ★*laurel*.

Lady-mass (lā′di-màs), *n.* A mass said specifically in honor of the Virgin Mary.

lady-pea (lā′di-pē), *n.* See ★*pea*[1].

Lady-quarter (lā′di-kwâr″tėr), *n.* In England, the quarter of the year in which Lady-day occurs.

lady's-laces (lā′diz-lā″sez), *n.* The ribbon-grass, *Phalaris arundinacea*. Also called *bride's-laces*.

lady's-lint (lā′diz-lint), *n.* The greater stitchwort, *Alsine Holostea*.

lady's-milk (lā′diz-milk), *n.* The milk-thistle, *Mariana Mariana*. Also called *Virgin Mary's thistle*.

lady's-needlework (lā′diz-nē″dl-wėrk), *n.* The hedge-parsley, *Torilis Anthriscus*.

lady's-nightcap (lā′diz-nīt″kap), *n.* The hedge-bindweed, *Convolvulus sepium*.

lady's-paintbrush (lā′diz-pānt″brush), *n.* See ★*Emilia*.

lady's-pocket (lā′diz-pok″et), *n.* The spotted touch-me-not, *Impatiens biflora*: so called from the saccate sepal of the flower.

lady's-purse (lā′diz-pėrs), *n.* The shepherd's-purse, *Bursa Bursa-pastoris*.

lady's-shoes-and-stockings (lā′diz-shöz″and-stok″ingz), *n.* The bird's-foot trefoil, *Lotus corniculatus*. Also called *shoes-and-stockings*.

lady's-thimble (lā′diz-thim″bl), *n.* The harebell or bluebell, *Campanula rotundifolia*. The name is also applied to the foxglove.

Laekenian sands. See ★*sand*[1].

Læliorchis (lē-li-ôr′kis), *n.* [NL. (Wight, 1905), < *Lælia*, an untenable name for the genus, + *Orchis*.] A genus of monocotyledonous plants of the family *Orchidaceæ*. See *Lælia*.

læmoparalysis (lē″mō-pa-ral′i-sis), *n.* [NL., < Gr. λαιμός, throat, + παράλυσις, paralysis.] Paralysis of the pharynx or esophagus.

læmoscirrhus (lē-mō-sir′us), *n.* [NL., < Gr. λαιμός, throat, + σκίρρος, a tumor.] Cancer of the gullet.

læmostenosis (lē″mō-stē-nō′sis), *n.* [NL., Gr. λαιμός, throat, + στένωσις, narrowing.] Temporary or permanent constriction of the esophagus.

Laënnec's cirrhosis. See ★*cirrhosis*.

læotropism (lē-ot′rō-pizm), *n.* [*læotrop-ic* + *-ism*.] The state of being læotropic.

læsio enormis (lē′sio ē-nôr′mis). [L., 'excessive injury.'] In *civil law*, the injury sustained by one party to a contract who has suffered a loss of more than one half the value of the contract by reason of the fraud or overreaching conduct of the other party.

Læstadia (lē-stā′di-ä), *n.* [NL., named for Lars Levi *Laestadius*, a clergyman and botanist of Lapland.] An untenable generic name for *Guignardia*, still much used.

lætic (lē′tik), *a.* [LL. *læticus*, < *lætus*, a foreign bondman, appar. from the OTeut. term represented by AS. *læt*, in a similar sense.] Pertaining to the læti, foreign cultivators of the soil during the later Roman Empire, who paid tribute for their land.

lætificant, *a.* See ★*letificant*.

Lafayette group. See ★*group*[1].

lag[1], *n.* 6. A term of hard labor or transportation. [Australia.]—7. In *elect.*, the displacement of phase of an electric wave back, or behind (in time), to another electric wave: used mainly with regard to alternating-current circuits.—8. See *lagging of the tides*, under *lagging*.—**Angle of lag.** (*a*) In *elect.*, the angular displacement by which an alternating current follows the electromotive force. This lag occurs in alternating-current electrical circuits when there is inductance at any point in the line. (*b*) The angle corresponding to the lag of the tides; the hour-angle between the lunar transit and the flood-tide; the shifting of the earth's magnetic system from a symmetrical distribution about the noon meridian into the observed eccentric position.—**Lag of brushes,** in *elect.*, the backward shift of brushes on the commutator of an electric machine.—**Magnetic lag.** See *magnetic* ★*hysteresis*.

lag-angle (lag′ang″gl), *n.* See *angle of* ★*lag*.

Laganidæ (la-gan′i-dē), *n. pl.* [NL., < *Laganum* + *-idæ*.] A family of irregular echinoids, of the order *Gnathostomata*, typified by the genus *Laganum*.

Laganium (la-gā′ni-um), *n.* Same as ★*Laganum*.

Laganum (lag′a-num), *n.* [NL. (Gray, 1855), < Gr. λάγανον, a broad cake of meal and oil.] The typical and only genus of the family *Laganidæ*. Also *Laganium*.

lagarto, *n.* 2. A common name of two different fishes belonging to the family *Synodontidæ*, both of the Atlantic.

lag-barrel (lag′bar″el), *n.* An octagonal barrel, or bar, having an intermittent rotary motion for the pattern-chain of a dobby-loom.

lag-bolt (lag′bōlt), *n.* Same as *lag-screw*, 1 and 2.

laggardism (lag′ard-izm), *n.* [*laggard* + *-ism*.] Sluggishness; the characteristic of hanging back; lagging.

laggardly (lag′ard-li), *adv.* Loiteringly; lazily; sluggishly.

lagger[1], *n.* 2. Same as *lag*[1], *n.*, 5.

lagger[3] (lag′ėr), *n.* A sailor.

lagging, *n.* 4. (*b*) A covering for the face of a pulley, designed to increase its effective diameter or to augment the adhesion of the belt.—5. Same as ★*lag*[1], *n.*, 7.—6. *Naut.*, the part of a barrel-stave beyond the head. Also spelled *laggin*.

lag-last (lag′làst), *n.* and *a.* **I.** *n.* One who hangs back; a loiterer; one who falls behind.
II. *a.* Lingering; hanging back; lagging.

lagna (läg′nä), *n.* [Skt. *lagna*, Hind. *lagan*, point of intersection, point where the sun and the planets rise, pp. of √*lag*, adhere to, pierce, touch, etc.] The point on the ecliptic which is rising at any given moment. *Geog. Jour.* (R. G. S.), XVI. 703.

Lagoa, *n.* 2. [*l. c.*] A moth of this genus.—**Waved lagoa,** an American megalopygid moth, *Lagoa crispata*, yellowish in color, with wavy lines running from near the base to the tips of the wings. Its larvæ feed on the plum, apple, blackberry, and other trees and plants.

Lagochila (lag-ō-kī′lä), *n.* [NL., < Gr. λαγώς, hare, + χεῖλος, lip.] A genus of fishes belonging to the family *Catostomidæ*, the suckers, found in the Mississippi valley.

lagomorph (lag′ō-môrf), *n.* Any member of the *Lagomorpha*, a superfamily of rodents containing the hares and pikas.

> No sufficiently primitive stages of the teeth of either the Histricomorphs or the *Lagomorphs* have to my knowledge as yet been found. *Amer. Jour. Sci.*, Nov. 1903, p. 367.

lagomorphous (lag-ō-môr′fus), *a.* Of or pertaining to the *Lagomorpha*: same as *lagomorphic*.

lagophthalmy† (lag-of-thal′mi), *n.* Same as *lagophthalmia*.

lagopous (la-gō′pus), *a.* [Gr. λαγώπους, hare-footed (< λαγώς, hare, + πούς, foot), + *-ous*.] In *bot.*, soft and hairy like a hare's foot.

Lagrange beds. See *Lafayette* ★*group*.—**Lagrange disk.** Same as *interfusion* ★*disk*. **Lagrange's map-projection.** See *map-projection*, under *projection*.

lag-ship (lag′ship), *n.* A transport used for taking convicts to New South Wales, or one used as a prison. [Cant, Eng.]

lag-spike (lag′spīk), *n.* A form of spike in which the part that enters the wood has a thread like that of a wood-screw or lag-screw: used for holding railway-rails to the ties or other substructure. The spike may be driven into the wood by a maul or sledge, but it can be taken out only by unscrewing. The thread has a ratchet-tooth section, with the long slope on the advancing side, and the straight radial helix opposed to motion toward the end where the head is. Also called *screw lag-spike*.

laguana (lä-gwä-nä′), *n.* [Sp. *la guanábana*, the soursop (the fruit), < *guanábano*, the sour-sop tree, of Carib origin.] In Guam, the sour-sop, *Anona muricata*. See *Anona*.

lag-wood (lag′wůd), *n.* In *ship-building*, the wood obtained from large branches of the oak near the head of the tree.

L. A. H. An abbreviation of *Licentiate of the Apothecaries' Hall*.

laid, *p. a.* 3. In *embroidery*, stitched upon a ground. Gold and silver thread, and silk cords, are frequently treated in this way.

> On the satin Stuart bindings we find a prevailing use of fine coloured floss silks, . . . and in later times an extensive use of '*laid*' silver thread backgrounds, metal cords, wires and metal threads of numberless patterns.
> *C. Davenport*, in Burlington Mag., March, 1904, p. 268.

Laid and set, in *plastering*, finished ready for painting or papering: said of plaster-work on lath as distinguished from that done on solid masonry.—**Laid down,** an expression used with reference to British war-vessels in connection with the date of placing the first keel-plates on the blocks: as, the battleship was *laid down* June 10th, 1905.

Laille shales. See ★*shale*[2].

laiose (lī′ōs), *n.* [Gr. λαιός, left, + *-ose*.] Same as *Leo's* ★*sugar*.

lair[1] (lãr), *v.* [*lair*[1], *n.*] **I.** *trans.* 1. To put or have put in a lair or den.—2. To shelter; hold as in a lair.

> A mountain seems
> To dwellers round its bases but a heap
> Of barren obstacle that *lairs* the storm
> And the avalanche's silent bolt holds back
> Leashed with a hair.
> *Lowell*, The Cathedral, p. 42.

II. *intrans.* 1. To lie (on); rest inactively.—2. To enter a lair; lie down (in); lurk.

lairage (lãr′āj), *n.* Space where cattle may lie down and rest. *N. E. D.*

laissez-aller (lā-sā-zä-lā′), *n.* [F., impv. of *laisser*, let; *aller*, go.] A letting go; unrestraint: implying sometimes a little too much unconventionality. Also *laisser-aller*.

laitance (lā-toṅs′), *n.* [F., < *lait*, milk.] The milky washings from the surface of concrete which has recently been laid under water.

lake[1], *n.*—**Capillary lake.** See ★*capillary*.—**Glacial lake,** a lake formed by the damming of the natural drainage of a region by a glacier, which thus hinders the dis-

charge of the water.—**Karst lake.** See ★*karst.*—**Lake country,** a country abounding in lakes; specifically, a district in England comprising parts of Lancashire, Cumberland, and Westmoreland. See *Lake School,* under *lake*[1].—**Lake poet.** See *Lake School.* **Ox-bow lake,** a crescentic or nearly circular lake, occupying a meander that has been deserted by the river that formed it.—**Relict lake,** a lake remaining on a land-surface from which the sea has withdrawn.—**Soda lake,** a saline lake in which the salinity is due to sodium carbonate.—**Walled lake,** a lake provided with a wall of gravel and boulders which nearly or quite encircles it and which is heaped up at the upper edge of the strand by the expansion of the ice when freezing in the winter. Walled lakes are not uncommon in Wisconsin and Minnesota.

lake[3], *n.* **Carmine lake.** See ★*carmine.*

lake[3] (lāk), *v.* [*lake*[3], *n.*] **I.** *intrans.* To become laky, or like a lake (pigment) in color. See ★*laky*[2].

In a case of leukæmia, *laking* was almost complete in a short time. *Med. Record,* June 13, 1903, p. 953.

II. *trans.* To cause to resemble a lake (pigment) in color; specifically, discharge (the hemoglobin) rapidly from the erythrocytes into the blood-plasma.

For the preparation of hæmoglobin the blood was collected in ammonium oxalate, washed, *laked* with distilled water, centrifugalized to get rid of the stroma, treated with 25 per cent. absolute alcohol, upon the addition of which the crystals of oxyhæmoglobin are deposited at 0° Centigrade. *Science,* March 6, 1903, p. 369.

lake-basin (lāk'bā″sn), *n.* **1.** The area occupied by a lake.—**2.** The area from which the waters of a lake are collected.

lake-bass (lāk'bȧs), *n.* The large-mouthed black-bass, *Micropterus salmoides.*—**White lake-bass,** *Roccus chrysops,* a serranoid fish found in the Great Lakes and southward in the Mississippi valley.

lake-carp (lāk'kärp), *n.* The carp-sucker of the Great Lakes, *Carpiodes thompsoni.*

lake-land (lāk'land), *n.* Same as ★*lake country.*

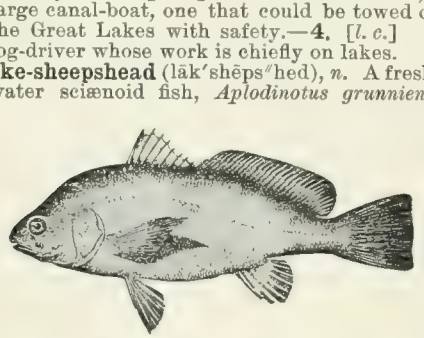
lakelander (lāk'lan-dẽr), *n.* One who lives in the lake-land or lake country of England.

lake-ore (lāk'ōr), *n.* A peculiar type of brown hematite which is deposited in certain Swedish lakes and possesses a concretionary oölitic or pisolitic texture. After being dredged or dug the layer is renewed in 25 or 30 years. *J. F. Kemp,* Ore Deposits of the U. S. (4th ed.), p. 92.

lake-pitch (lāk'pich), *n.* A commercial name of the softer, less altered, and more valuable kind of asphalt obtained from the pitch lake in the island of Trinidad. Compare ★*land-pitch.*

Laker[1], *n.* **3.** [*l. c.*] On the Erie Canal, a large canal-boat, one that could be towed on the Great Lakes with safety.—**4.** [*l. c.*] A log-driver whose work is chiefly on lakes.

lake-sheepshead (lāk'shēps″hed), *n.* A fresh-water sciænoid fish, *Aplodinotus grunniens,*



Lake-sheepshead (*Aplodinotus grunniens*).
(From Bulletin 47, U. S. Nat. Museum.)

found in the Great Lakes and southward to Texas. Also known as *drum* or *thunder-pumper.*

lake-trout, *n.* **3.** A fish, *Galaxias auratus,* of the family *Galaxidæ,* found in Tasmania.

lakism (lāk'izm), *n.* [*lake*[1] + *-ism.*] Imitation of the style of the Lake poets. See *Lake School,* under *lake*[1].

lakmoid, *n.* Same as *lacmoid.*

lakmus, *n.* Same as *lacmus.*

laky[2] (lā'ki), *a.* [*lake*[3] + *-y*[1].] Resembling a lake (pigment) in color; laked: specifically, noting the change of color of the blood caused by a sudden discharge of hemoglobin into the blood-plasma in consequence of destruction of the erythrocytes.

la-la (lä-lä'), *a.* [Syllables suggestive of languor or weakness: compare ★*la-di-da.* There is an allusion to *tra-la-la, tra-la,* meaningless syllables used in singing.] So-so; poor; languid. [Colloq.]

lall[2] (lal), *v. i.* [Imitative, like Gr. λαλεῖν, speak, etc.: see *lallation.*] To speak unintelligibly; speak childishly. See *lallation.*

lalling (lal'ing), *n.* Same as *lallation.*

laloneurosis (lal″ō-nū-rō'sis), *n.* [Gr. λάλος, talkative, + νεῦρον, nerve, + *-osis.*] A neurosis which affects articulation.

lalophobia (lal-o-fo'bi-ä), *n.* [Gr. λάλος, talkative, + *-φοβία,* < φοβεῖν, fear.] A morbid dread of speaking.

laloplegia (lal-ō-plē'ji-ä), *n.* [NL., Gr. < λάλος, talkative, + πληγή, stroke.] Paralysis of the muscles which take part in articulation.

Lam. An abbreviation of *Lamentations.*

lama[4] (lä'mä), *n.* [Samoan *lama* = Tahitian, Maori, etc., *rama,* a torch, a light.] In Samoa, the candlenut-tree (*Aleurites Moluccana*) or its nut. See ★*kukui.*

lama-deity (lä'mä-dē″i-ti), *n.* The deity represented by the lama.

Gratitude to the *lama-deity* for life and safety.
Geog. Jour. (R. G. S.), XV. 621.

Lamaitic (lä-mä-it'ik), *a.* Same as *Lamaistic.*

Lamanism (lä'man-izm), *n.* [F. *lamanisme.*] Same as *Lamaism.*

Lamanite (lā'man-īt), *n.* According to the Book of Mormon, a descendant of Laman, the son of Lehi, a righteous Jew of the tribe of Joseph, who fled with his sons from the destruction of Jerusalem to America. Because of their wickedness the Lamanites lost their fair skin, sank into barbarism, and became the red Indians.

Lamarckian, *a.* **II.** *n.* One who holds the Lamarckian theory. See *Lamarckism.*

Lamarckism, *n.* **2.** The doctrine that the generation of an organism from an egg is epigenesis or new formation. [Rare.]—**New Lamarckism.** Same as ★*Neo-Lamarckism.*

Lamarckite (la-mär'kīt), *n.* One who holds the Lamarckian theory; a Lamarckian. See *Lamarckism.*

lamb, *v. i.*—**To lamb down,** to lose or spend money; be cleaned out. [Australian.]

II. *trans.*—**To lamb down,** to knock down [spend] a check or a sum of money in a spree. *E. E. Morris,* Austral English. [Australian slang.]

lambardar, lumberdar (lum-bär-där'), *n.* [Hind. *lambar,* number, < E. *number,* + Pers. *-dār,* suffix of agent.] A village head man of northern India who is registered by a number in the collectors' roll and receives and pays over the government dues.

lambda, *n.* **3.** A British collectors' name for a common Old World noctuid moth, *Plusia gamma,* occurring in Europe, China, Japan, and India, and also, probably by introduction, in South America.

Lambdoid ridge or **crest.** See ★*ridge.*

lambdoidean (lam-doi'dē-an), *a.* Same as *lambdoid.*

lamber (lam'ẽr), *n.* [*lamb* + *-er*[1].] **1.** A shepherd whose business it is to take care of the young lambs and ewes at lambing-time.—**2.** A ewe when lambing.

Lambert's law of cosines. See ★*cosine.*—**Lambert's method.** See *altitude of a* ★*cloud.*

Lambeth degree, delf. See ★*degree,* ★*delf*[2].

lambiness (lam'i-nes), *n.* The conventional characteristics of lambs.

I confess I have always abominated the lamb, and nourished a romantic feeling for the wolf. O, be done with *lambiness!* Let us see there is a prince, for I am weary of the distaff. *R. L. Stevenson,* Prince Otto, ii. 4.

lambitive (lam'bi-tiv), *a.* and *n.* Same as *lambative.*

lamb-lily (lam'lil″i), *n.* The Scotch asphodel, *Tofieldia palustris.*

lamb-mint (lam'mint), *n.* Either peppermint or spearmint.

lamb's-cress (lamz'kres), *n.* The hairy bitter cress, *Cardamine hirsuta,* an Old World plant common, and perhaps native, in the eastern United States.

lamb's-foot (lamz'fût), *n.* The common plantain, *Plantago major;* also, occasionally, the lady's-mantle, *Alchemilla vulgaris.*

lamb's-tail (lamz'tāl), *n.* The common club-moss or running-pine, *Lycopodium clavatum.*

lamb's-tongue, *n.* **3.** See *Scolopendrium.*

Lamb's-wool sky. See ★*sky*[1].

lamdan (lam-dän'), *n.*; pl. *lamdanim* (-dä'nēm). [Yiddish, < Heb. *lamad,* learn.] A Talmudical scholar.

lamed (lä'med), *n.* [Heb. *lāmed.*] The twelfth letter (ל) of the Hebrew alphabet, corresponding to the Syriac *lomad,* the Arabic *lām,* the Greek *lambda,* and the English *L.* Its numerical value is XXX.

lamella, *n.* **2.** *pl.* The British pharmacopœial name for medicated gelatin disks used in ophthalmic practice.—**Appunn's lamella,** in *psychophys.,* a strip or band of soft steel, held in a wooden vise and vibrating (according to its position in the vise) between the limits 4 and 24 in the second: used to determine the lower limit of tonal hearing.—**Ovigerous lamella,** in cirripeds, one of the sheets or plates of ova.—**Pleurapophysial lamella,** the thin plate of bone which bounds externally the vertebrarterial canal on either side of the neck in birds. *Mivart.*—**Supporting lamella,** in hydroid polyps, the delicate, transparent, non-cellular film or membrane lying between the ectoderm and the endoderm: same as *mesoglœa.*—**Vascular lamella.** See ★*cathammal,* 2.

Lamellar cataract. Same as *zonular cataract* (which see, under *zonular*).

Lamellaria (lam-e-lā'ri-ä), *n.* [NL., < L. *lamella,* a thin plate, + *-aria.*] The typical genus of the family *Lamellariidæ.* *Oken.*

Lamellariidæ (lam-e-lā-rī'i-dē), *n. pl.* [NL., < *Lamellaria* + *-idæ.*] A family of tænioglossate gastropods, having a mantle which covers the shell more or less completely, no operculum, and dorsally fused jaws. It includes the genera *Lamellaria, Marsenina, Velutina,* and *Onchidiopsis.* They are carnivorous, living on hydrozoans, alcyonarians, and colonial ascidians. With the exception of the first genus, they are boreal forms.

lamellation (lam-e-lā'shon), *n.* The character or state of being lamellated; specifically, in *geol.,* an arrangement of the minerals of a metamorphic rock in parallel lamellæ or folia. 'Lamellation' and 'foliation' are employed in preference to 'bedding' or 'stratification,' because the structure may have no connection with sedimentation, but be the result of crushing and shearing. *Geikie,* Text-book of Geol., p. 789.

Lamellicorn leaf-chafer. See ★*leaf-chafer.*—**Lamellicorn scavenger.** See ★*scavenger* and *Laparosticta.*

lamellicornous (lā-mel-i-kôr'nus), *a.* [*lamellicorn* + *-ous.*] Same as *lamellicorn.*

lamelligerous (lā-me-lij'e-rus), *a.* [L. *lamella,* a thin plate, + *gerere,* bear, + *-ous.*] Bearing lamellæ or ridges: as, the *lamelligerous* lobe in *Nautilus.*

lamelloid (lā-mel'oid), *a.* [*lamel(la)* + *-oid.*] Having the character of a thin plate or lamella.

Now as we proceed up the neck to the head, these transverse processes project less and less from the bodies of the vertebræ, and become less robust and angular, at the same time that they are antero-posteriorly elongated; and possess regular *lamelloid* walls, so as to form rather canals than simple foramina for the artery.
Amer. Nat., Jan., 1904, p. 31.

lamellose-stellate (lam″e-lōs-stel'āt), *a.* With lamellæ or plates arranged radially or in star-shaped groups or clusters.

lamellous (lā-mel'us), *a.* [*lamella* + *-ous.*] Same as *lamellose.*

lamellule (lā-mel'ūl), *n.* [NL. *lamellula,* dim. of L. *lamella,* a thin plate: see *lamella.*] A small lamella.

lamentational (lam-en-tā'shon-al), *a.* [*lamentation* + *-al*[1].] Pertaining to or of the nature of lamentation.

lamiid (lā-mī'id), *n.* and *a.* **I.** *n.* A beetle of the coleopterous family *Lamiidæ.*

II. *a.* Resembling or belonging to the family *Lamiidæ.*

lamin (lam'in), *n.* [L. *lamina:* see *lamina.*] **1.** Same as *lamina.*—**2.** A thin plate (of metal) used as a charm, or in old astrological work. *N. E. D.*

lamina, *n.*—**Dental lamina,** an ingrowth of ectoderm from the edge of the jaw, from which in turn are given off the cells which form the enamel-organ of the developing teeth; the dental ridge.—**Dorsal lamina.** (*b*) In ascidians, a prominent median longitudinal ridge running along the middle of the dorsal surface of the pharynx to the opening of the esophagus.—**Lamina chorioidea,** an irregular fold of connective tissue and blood-vessels invaginated into the third ventricle of the reptilian brain, between the lamina terminalis and the paraphysis. It is prolonged laterally through the foramen of Monro into the lateral ventricle, where it is known as the *choroid plexus.*—**Lamina commissuralis mesencephali,** a wide commissure of white fibers in the roof of the mesencephalon, limited in front by the posterior commissure and behind by the decussation of the fourth nerves.—**Lamina papyracea,** that portion of the ethmoid bone which appears in the orbit, partaking in the formation of its inner wall; the os planum.—**Sutural lamina,** in the polyplacophorous mollusks or chitons, one of the double projections on the anterior margin of each valve, except the first. These projections are processes of the articulamentum or inner layer of the test.

laminal (lam'i-nal), *a.* [*lamina* + *-al*[1].] Pertaining to or of the nature of a lamina; disposed in laminæ.

laminariaceous (lam-i-nā-ri-ā'shius), *a.* Belonging to the family of seaweeds *Laminariaceæ.*

laminarite (lam'i-nā-rīt), *n.* [*Laminaria* + *-ite*[2].] A fossil seaweed resembling *Laminaria.* See *Laminarites.*

Laminated spring. See ★*spring.*

lamination, *n.* **2.** In *elect.,* the constructing of the iron part of a magnetic circuit of thin

laminæ or sheets of iron or steel, for the purpose of eliminating, in an alternating or rotating magnetic field, the induction of currents in the iron and the loss of power resulting therefrom. The lamination for this purpose must be at right angles to the direction in which an induced current would flow, but parallel to the direction of the magnetic flux. **Oblique** or **transverse lamination**, in *geol.*, false bedding.

laminectomy (lam-i-nek'tō-mi), *n.* [L. *lamina*, lamina, + Gr. ἐκτομή, excision.] In *surg.*, exsection of the laminæ of one or more of the vertebræ to relieve pressure upon the spinal cord.

In a recent case in which there was anterior dislocation of the fourth cervical vertebra, *laminectomy* was done for pachymeningitis. *Med. Record*, July 11, 1903, p. 78.

laminous (lam'i-nus), *a.* [NL. *laminosus:* see *laminose.*] Same as *laminose*.

lamp[1], *n.*—**Alcohol lamp.** Same as *spirit-lamp.*—**Alembical lamp.** See ★*alembical.*—**Alformant lamp,** an apparatus, invented by Schering, in which paraform is converted into formaldehyde-gas by the heat from an alcohol lamp.—**Annealing-lamp,** an alcohol lamp for heating dentists' foil. **Automatic lamp,** a heating-lamp which extinguishes itself when the object to be warmed reaches a certain temperature. A lamp of this kind is commonly used by dentists in heating vulcanizers and in other work of this nature.—**Berzelius's lamp,** an Argand lamp for burning alcohol, much used in chemical laboratories before coal-gas became generally available for heating purposes. It was brought into use by the Swedish chemist Berzelius early in the nineteenth century.—**Blow-through lamp,** a form of flash-light apparatus used in photography in which the material used to produce the flash is blown through the flame of a lamp.—**Brehmer lamp.** See *electric* ★*arc.* **Cooper-Hewitt lamp,** a form of mercury arc-lamp. See ★*mercury lamp* and *electric* ★*arc.* **Dibdin's pentane Argand lamp,** a form of standard lamp which burns a mixture of air and pentane. A screen on the metal chimney of the Argand steatite burner may be moved to 2.15 inches (54.6 millimeters) above the steatite ring, thus affording a source of light of ten candle-power. **Duboscq lamp,** a self-regulating electric arc-lamp especially adapted to lantern projection and lighthouse illumination.—**Finsen lamp,** an electric lamp of peculiar construction used for the administration of the Finsen light treatment. See *Finsen* ★*light treatment* and *Finsen's* ★*apparatus.*—**Fluorescent lamp,** a lamp consisting of a glass bulb coated interiorly with calcium tungstate or some other substance which fluoresces under the influence of an electric discharge.—**Focus-lamp,** an incandescent electric lamp with closely coiled filament: designed for use in projection-lanterns and for other optical purposes.

When incandescent lamps are used for optical purposes it is necessary to compress the filament into a small space, so as to bring it into the focus of a lens or mirror. The filament is then coiled or crumpled up into a spiral or zigzag form. Such lamps are called *focus lamps.* *Encyc. Brit.*, XXVIII. 88.

Formaldehyde lamp, a flameless lamp in which methyl (wood) alcohol, as a liquid or a vapor, is brought, with air, into contact with platinized asbestos wicks or perforated sheets. Formaldehyde results from the incomplete oxidation of the alcohol. It is used in disinfecting. See ★*formaldehyde-generator.*—**Girard's lamp,** a lamp for burning illuminating-oil, so constructed as to maintain the supply of oil at a constant level.—**Harcourt lamp.** See ★*light standard.* **Hefner lamp.** See ★*light standard.* **Hero's lamp,** a form of lamp devised by Hero 200 B. C. The raising of the oil is effected by the pressure of a liquid of greater specific gravity acting through a column of air. A solution of brine in a chamber, *c*, flowing through a tap drives the air from a vessel, *d*, through a pipe, *e*, into an oil-reservoir, *a*. Oil is thus forced from the reservoir, *a*, into the bird's beak, whence it drops into a receptacle, *b*, supplying a wick burning at the tail.—**Incandescent lamp.** See *incandescent light*, under *electric light.* **Keats's lamp,** a moderator lamp burning sperm-oil, used as a standard of illumination: devised by Keats in 1869. It was first adjusted to give a light of ten candle-power, but was afterward so modified by Sugg as to give a light of sixteen candle-power, burning oil at the rate of 925 grains per hour.—**Lamp battery.** See ★*battery.*—**Lummer lamp,** a form of mercury arc-lamp designed with special reference to spectroscopic work. See ★*mercury lamp.*—**Magnetite lamp.** See *electric* ★*arc.*—**Mercury-vapor lamp,** an electric lamp in which the source of light is an arc formed in mercury vapor at very low pressures within a vacuum-tube. See ★*mercury lamp.*—**Nernst lamp,** an incandescent electric lamp the filament of which consists of a cylindrical rod made from a mixture of metallic oxids. This lamp, which was invented by Professor Nernst of Göttingen, depends upon the fact that many oxids such as CaO and MgO, and also the oxids of the rare earths, in particular thorium oxid, which have very high specific resistance when cold, begin to conduct the electric current when heated. The filament or so-called *glower* is made from a mixture of the rare earths powdered, mixed with a binder, and pressed through a die so as to form a cylindrical thread, which is then baked. The diameter of the glower is about .63 millimeters and its length depends upon the voltage of the lamp. The terminals are of platinum wire joined to the ends of the glower by fusion in the electric arc. The glower when cold is an insulator, but when heated it becomes an electrolytic conductor. When traversed by a direct current the heat generated appears chiefly at the positive pole and platinum-black is deposited at the negative pole. When alternating currents are used the distribution of heat is uniform and the life of the lamp is greatly increased. Since the resistance of the filament, as shown in the curve in Fig. 1, falls rapidly with rising temperature, the lamp when placed in a constant-potential circuit tends to take increasing current as the filament becomes hotter. It is therefore necessary for purposes of regulation to place in series with the filament a metallic resistance called the *ballast.* This consists of a very fine iron wire mounted in a glass tube and surrounded with hydrogen. Its resistance increases with rise of temperature and thus counterbalances the loss of resistance in the filament. Upon starting the lamp it is necessary to bring the filament to a temperature such that it begins to carry a current sufficient to keep itself hot. The device used for this purpose in Nernst lamps of the American type is called the *heater.* It consists of a porcelain tube, about 30 millimeters long, around which a fine platinum wire is spirally wound. The coil is kept in place by a paste or enamel. Two or more such heaters are placed horizontally above the glower, and heat the latter by radiation to the temperature necessary to start the lamp. The glower begins to take current at about 700° C. The electrical connections are shown in Fig. 2. The heater, *h*, is in multiple circuit with the glower, *g*. So long as the latter is cold the entire current between the lamp terminals flows through the heater. In series with these are the lamp-ballast, *b*, and the cut-out, *c*. The cut-out is a small electromagnet which tends to attract the contact-spring, *s*, thus opening the glower circuit. When the heater begins to take sufficient current to maintain its temperature the current of the coil in the cut-out magnet becomes strong enough to break the circuit, after which the entire current flows through the glower. The electrical efficiency of the Nernst lamp is about the same as that of the ordinary incandescent lamp (when used with an opal shade about 3.47 watts per mean spherical hefner). The radiant efficiency of the Nernst filament, obtained by integration of the energy curve by Coblentz, was found to be .033 as against .04 for the acetylene flame. The temperature of the filament is somewhat lower than that of the ordinary incandescent lamp—from 1,400 to 1,700° C. The candle-power, however, is high on account of the large diameter of the filament, and the form of the lamp is well adapted for lighting from overhead, since no shadows are cast downward. The color of the light of the Nernst lamp differs but little from that emitted by carbon at the same temperature. It is somewhat stronger in the red than the light from the acetylene flame, and is free from the marked selective radiation characteristic of the Welsbach mantle.—**Open-arc lamp.** See *electric* ★*arc.*—**Osmium lamp,** an incandescent electric lamp having a filament of metallic osmium instead of carbon. Devised by Auer von Welsbach.—**Phase-lamp,** in *elect.*, an incandescent lamp used to indicate the phase relation between alternating-current generators.—**Pilot-lamp.** (*a*) An electric lamp upon a switchboard, used to indicate the position of switches. (*b*) In *telephony*, an auxiliary signaling-lamp placed in front of the switchboard and serving to indicate to the chief operator delay in responding to any one of a group of call-signals.—**Platinum lamp.** (*a*) A lamp having a platinum filament which is made incandescent by an electric current. (*b*) A lamp having a spiral of platinum placed above the wick. The vapor from the alcohol (ethyl or methyl) drawn up by the wick unites with the air through the agency of the platinum, which is thus made to glow.—**Pyro-electrolytic lamp.** Same as *Nernst* ★*lamp.*—**Quartz lamp,** a mercury lamp in which the arc is formed within a vacuum-tube of fused quartz. See ★*mercury lamp.*—**Reichsanstalt lamp,** a modified form of the Hefner lamp. See ★*light standard* and ★*illumination*, 1.—**Rose lamp,** a modified form of the Berzelius alcohol lamp for use in chemical laboratories: mounted upon an upright metallic rod so as to admit of adjustment as to height. Named after the German chemist, H. Rose.—**Synchronizing lamp.** Same as *phase-*★*lamp.*—**Tantalum lamp,** an incandescent electric lamp of which the filament is a wire of metallic tantalum, .05 millimeters in diameter, instead of carbon. On account of relatively high conductivity the tantalum filament for a 110-volt lamp has to be about 650 mm. long, and is supported by being stretched in zigzag fashion up and down between the ends of the radial arms of two star-shaped supports. It gives a clear, white light of 25 normal candle-power with an expenditure of electrical energy only about half that for a carbon lamp, but the cost of the lamp itself is (at any rate at present) higher, and the illuminating power is not as generally acceptable as the 16 candle-power in general use. The resistance of the tantalum filament increases with rise of temperature, the durability is as great as that of carbon, and the liability to injury by mechanical shocks or accidental increase of voltage is, it is claimed, less.

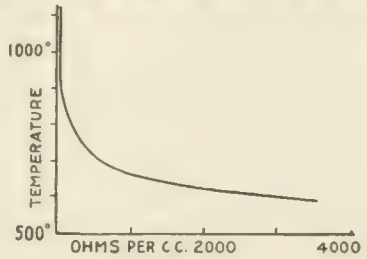


Figure 1.

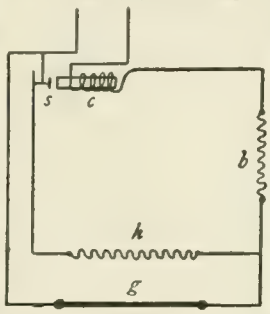
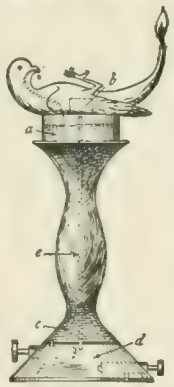


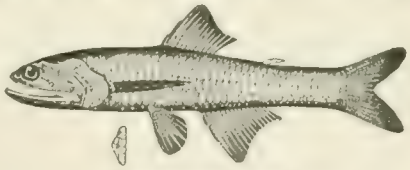
Figure 2.



Hero's Lamp.
(Drawn from Graves and Thorp's "Chemical Technology.")

Lampadena (lam-pa-dē'nä), *n.* [NL., < Gr. λαμπή, a torch, + ἀδήν, a gland.] A genus of deep-sea fishes found in the Gulf Stream.

Lampanyctus (lam-pa-nik'tus), *n.* [NL., irreg. < Gr. λαμπή, a torch, + νύξ (νυκτ-), night.]


Lampanyctus crocodilus.
(From Bulletin 47, U. S. Nat. Museum.)

A genus of deep-sea fishes commonly known as *lantern-fishes:* widely distributed.

lamp-ballast (lamp'bal'ast), *n.* In *elect.*, a resistance placed, for purposes of regulation, in series with the filament of an electric lamp. In the case of the Nernst lamp the ballast consists of a very fine iron wire in an atmosphere of hydrogen within a sealed glass tube.

lamp-bank (lamp'bangk), *n.* A number of incandescent lamps mounted in rows upon a frame and connected together either in multiple circuit or in multiple series. Also called a *bank of lamps.* *Trans. Amer. Inst. Elect. Engin.*, 1900, p. 171.

lamp-bend (lamp'bend), *n.* A bent or curved pipe-elbow, used to connect two pipes which meet at an angle greater than a right angle.

lamp-changer (lamp'chān″jèr), *n.* A device with a long handle for removing incandescent electric lamps from, or placing them in, their sockets when the latter are difficult of access.

lamperina (läm-pe-rē'nä), *n.* [Amer. Sp.] A common name of *Polistotrema stouti*, one of the eel-like lower vertebrates found on the California coast and north to Cape Flattery.

Lampeter Brethren. A small sect established in 1846 among some students of Lampeter College at Lampeter, Cardiganshire, Wales, by Henry James Prince, one of the extreme evangelical school. His fanaticism led him to declare his doctrines to be the new dispensation of the Holy Ghost, superseding the dispensation of Christ. He and those who believed him lived in an abode called the *Agapemone*, or 'abode of love.' Also *Princeites.*

lamp-fish (lamp'fish), *n.* A deep-sea fish, *Scopelus resplendens*, of the family *Myctophidæ*, having luminous spots, or photophores, on the head and body.

lamp-foot (lamp'fůt), *n.*; pl. *lamp-feet* (-fēt). A unit sometimes employed in computing the wiring of an installation of electric lights. The product of the number of lamps by the feet of wire necessary to supply them gives the number of lamp-feet.

lamp-hour (lamp'our), *n.* The energy required to maintain one electric lamp in normal operation for one hour: a practical unit sometimes employed in electric lighting.

lampic (lam'pik), *a.* [*lamp*[1] + *-ic.* The acid was first obtained by burning ether in a lamp.] Derived from a lamp: applied specifically to an acid, a mixture of acetic acid and aldehyde, formed by the oxidation of alcohol.

lamp-indicator (lamp'in″di-kā-tor), *n.* A device consisting of a Wheatstone bridge one arm of which contains an incandescent lamp. The adjustment is such that when the electromotive force of the circuit to which the indicator is applied reaches proper value the bridge is balanced.

lampistry (lam'pis-tri), *n.* [*lampist* + *-ry.*] The art of making and decorating lamps; the work of a lampist.

lamp-post (lamp'pōst), *n.* A post or pillar, usually of iron, designed to support a street-lamp or other outdoor lamp.

lamprey, *n.*—**Brook-lamprey,** a small lamprey which inhabits the brooks of Europe and North America. Five or six species are known.—**Silvery lamprey,** small **black lamprey,** common names of the lampreys.

lamprey-eel (lam'pri-ēl″), *n.* A lamprey.

lamprite (lam'prīt), *n.* See ★*meteorite.*

lamp-room (lamp'röm), *n.* A room or compartment, as on a vessel, especially fitted for filling and trimming lamps and storing them when not in use.

lamprophyllite (lam-prō-fil′it), *n.* [Gr. λαμπρός, shining, + φύλλον, leaf, + *-ite*[2].] A mineral from the nephelite-syenite of Kola, Russian Lapland, related to astrophyllite in form, cleavage, and probably in composition.

Lamprops (lam′props), *n.* [NL., < Gr. λαμπρός, shining, + ὤψ (ὠπ-), eye.] The typical genus of the family *Lampropsidæ*. *L. quadriplicata* is found off the northeastern coast of America. *Sars*, 1863.

Lampropsidæ (lam-prop′si-dē), *n. pl.* [NL., < *Lamprops* + *-idæ*.] A family of cumacean crustaceans in which the first antennæ have both flagella well developed and nearly equal, the male has three pairs of pleopods or none, and the telson is distinct, with three or more terminal spines. It includes the genera *Lamprops*, *Hemilamprops*, *Paralamprops*, *Platyaspis*, and *Chalarostylis*.

lamp-station (lamp′stā″shon), *n.* In *coal-mining*, an underground cabin where safety-lamps may be opened and trimmed: a place beyond which no naked lamps must be taken.

lampyrid (lam′pi-rid), *n.* and *a.* **I.** *n.* A member of the coleopterous family *Lampyridæ*.

II. *a.* Having the characters of or belonging to the family *Lampyridæ*.

län (lān), *n.* [Sw., a fief, a fee, an administrative district, = AS. *læn*, a grant, fief: see *læn*.] An administrative division of Sweden; a government at the head of which is a prefect nominated by the king.

Lana philosophica, an early chemical name for the light, woolly flakes of white zinc oxid, produced by burning vapor of zinc which is allowed to escape into the air.

lanacyl (lan′a-sil), *n.* A trade-name of several acid coal-tar colors.—**Lanacyl violet.** See ★*violet*[1].

lanai (lä-nä′i), *n.* [Hawaiian.] In Hawaii, a bower, piazza, or porch.

Lancashire boiler. See ★*boiler*.

Lancaster yellow. See ★*yellow*.

lance[1], *n.* **9.** A pointed stick of light timber used for the erection of a temporary telegraph- or telephone-line: used especially in military operations.

The second truck is loaded with four or five hundred *lances* of well-seasoned cypress or spruce, each a trifle over fourteen feet in length.
Sci. Amer., Dec. 27, 1902, p. 459.

Sable lance, a fish, *Mellonus villosus*, of the family *Argentinidæ*, found in the northern parts of the Atlantic and Pacific.

lanceated (lan′sē-ā-ted), *a.* [L. *lanceatus* (< *lancea*, lance) + *-ed*[2].] Shaped like a lance; pointed and long.

lance-fish (lāns′fish), *n.* A fish of the genus *Ammodytes*, which includes small carnivorous fishes inhabiting sandy shores of cold regions.

lance-head, *n.* **2.** *Lachesis mutus*, a venomous snake of South America. See *bushmaster*.

lancelet, *n.*—**Bahama lancelet**, a lancelet, *Asymmetron lucayanum*, found in the Bahamas.—**California lancelet**, *Branchiostoma californiense*, found from San Diego Bay southward.—**West Indian lancelet**, *Branchiostoma caribæum*, found in shallow waters, buried in the sand, from Beaufort, North Carolina, to the mouth of the La Plata.

Lanceola (lan-sē-ō′lä), *n.* [NL., < LL. *lanceola*, dim. of L. *lancea*, lance.] The typical genus of the family *Lanceolidæ*. *Say*, 1818.

Lanceolidæ (lan-sē-ol′i-dē), *n. pl.* [NL., < *Lanceola* + *-idæ*.] A family of amphipod crustaceans, of the tribe *Hyperidea*, having the first antenna straight and the first joint of the flagella swollen. It is typified by the genus *Lanceola*.

lance-ovate (lāns′ō″vāt), *a.* In *bot.*, very narrowly ovate.

lancet, *n.* **4.** In *entom.*, one of the lower pair of piercing organs in the dipterous mouth; the scalpella: supposed by Kirby and Spence to represent the maxillæ of the haustellate mouth.

lanceted (län′set-ed), *a.* Having a lancet-window or a lancet-arch.

lancet-headed (län′set-hed″ed), *a.* Having a pointed head like a lancet: said of windows. See cut of *lancet-window*.

lancet-plate (län′set-plāt), *n.* In the structure of the *Blastoidea*, a long narrow plate, pointed at both ends, which extends along the center of each ambulacrum. Its proximal end is inserted between the deltoids and takes part in the lip around the summit opening. The upper surface is excavated along the median line, and this groove probably served to conduct food to the mouth. The plate has an interior axial canal which communicates by means of the ambulacral opening with an oval ring belonging to the water-vascular system. In some cases there is a smaller plate beneath which is called the *under lancet-plate*.

lancet-tooth (län′set-töth), *n.* A fleam-tooth.

lancewood, *n.*—**Cape lancewood**, a tough wood obtained from *Curtisia faginea* of South Africa. It is used for spokes, shafts, spears, and turnery. See *assagai-wood*.

lancha (län′chä), *n.* [Philippine Sp., Pg. *lancha*, sometimes derived from the Malay *lancha*, but this is in turn referred by others to the Pg. or Sp., which, in that case, is perhaps referable to the Eng. *launch*, *lanch*. But the history is not clear. Prob. E. *lanch*, a boat, has nothing to do with *launch*, verb.] A launch or barge; a medium-sized boat used in the Philippine Islands for the transportation of merchandise and native products.

Lancs. An abbreviation of *Lancashire*.

land[1], *n.* **9.** One of the strips into which a field is divided in plowing: same as *ridge*, 3. See quotation under ★*cut*, 24. Compare *dead* ★*furrow*.—**Dun land**, in Devonshire, England, a soil which has resulted from the decomposition of the schistose rock of the district.—**Height of land**, a line or belt of land between the opposite slopes of two river systems; a divide; a water-parting. *Encyc. Brit.*, XXXI. 332.—**Indemnity lands**, in *United States law* (in the construction of land-grants made in aid of railroads), those lands which are selected in place of parcels lost by previous disposition or reservation for other purposes, the title to which does not accrue until the time of their selection.—**Judge Jeffrey's land.** See *king's* ★*land*.—**King's land**, a child's outdoor game in which the king stands within certain boundaries until he succeeds in touching one of the other intending players, who then becomes king. The game, with variations, is known by various other names, as *Van Diemen's land*, *Dixie's land*, *golden pavement*, *Judge Jeffrey's land*, *Tom Tiddler's ground*, etc.—**Land hemisphere.** See ★*hemisphere*.—**Land in severalty.** See *severalty*.—**Land of Promise.** See *promise*.—**No man's land.** (*b*) *Naut.*, an article or space left uncleaned or uncared for on account of its not falling within the limits of the work assigned to individuals of the crew.—**Nook of land.** See *nook*.—**Poison land**, in western Australia, land so covered with a growth of plants poisonous to sheep and cattle that it cannot be used for pasture.—**Running with the land**, being of force by association with the land affected: a phrase applied to covenants in deeds of real property. See *covenants which run with the land*, under *covenant*. A personal covenant is binding on the covenantor only. A real covenant—one running with the land—is created where the maker binds himself and his heirs, executors, or administrators.—**Scab land**, in Washington and Oregon, land originally covered with fine volcanic dust which has been blown away by the wind, leaving on the surface only a mass of sharp fragments of stone.—**Seated lands**, in *U. S. law*, lands occupied or cultivated; public lands of which actual possession has been taken by private persons under proper authority of law.—**Staple of land.** See *staple*[2].—**The land of nod.** See *nod*.—**To hold the land** (*naut.*), to keep a vessel within sight of the coast.—**To hug the land.** See ★*hug*.—**To make free with the land** (*naut.*), to sail close to the shore.—**Torrens land system**, a system of governmental registration and guarantee of land titles, named from Sir Robert Richard Torrens who established it in South Australia in 1857. It has been adopted by most of the Australian colonies, by New Zealand, British Columbia, California, and a few other western States.—**To see how the land lies**, to find out the exact state of things.—**To settle the land.** See *settle*[1], *v.*—**Unseated lands.** (*a*) Land once seated, but abandoned. (*b*) Uncultivated land subject to taxation. [Pennsylvania.]—**Van Diemen's land.** See *king's* ★*land*.

land-agent (land′ā″jent), *n.* A real-estate agent; in England, also a steward or manager of an estate or landed property.

landamann (län′da-män), *n.* The chief magistrate of a Swiss canton; also the chief officer in some of the smaller districts.

landau, *n.*—**Canoe landau**, a landau in which the lower lines of the body have a continuous sweep. The term is used to distinguish this form from the angular quarter and drop-center types.—**Five-glass landau**, a landau with a leather top over the rear seat. The front section has large glasses in frames which can be dropped down in the body. The supports of the top are hinged to fall down upon the boot, and leave the front seat uncovered. There are three windows in the front section and two in the doors: hence the name.

landboc (land′bōk), *n.* [OE. *landbok*, < *land*, + *boc*, book.] In *old Eng. law*, a deed or grant of land, usually Saxon. Such deeds had little weight against the king's claims.

land-breast (land′brest), *n.* The frontage or face of the wall which forms a bridge-seating or abutment and acts as a retaining wall to the bank behind it. It includes both the abutment-pier proper and the wing-walls at each side of it.

land-chain (land′chān), *n.* Same as *Gunter's chain* (which see, under *chain*).

land-crab, *n.* **2.** A burrowing crayfish, *Engæus fossor*, of Tasmania and Victoria (Australia), which forms crab-holes.

landdrost (land′drōst), *n.* [D., < *land*, land, + *drost*, bailiff, steward.] In South Africa, a magistrate.

Landenian (lan-dē′ni-an), *a.* and *n.* [*Landen*, a town in Belgium, + *-ian*.] **I.** *a.* In *geol.*, pertaining to the basal deposits of the Lower Eocene in France and Belgium, corresponding to the Woolwich and Reading beds of England. The lower deposits are fluvio-marine, while the upper beds contain only marine fossils.

II. *n.* The Landenian deposits.

landfall, *n.*—**To make a good landfall** (*naut.*), to sight a certain point of land at the time calculated.

land-form (land′fôrm), *n.* An area of land having certain topographic features which distinguish it from neighboring areas. *W. M. Davis.*

landgraveship (land′grāv-ship), *n.* The office, territory, or authority of a landgrave. *N. E. D.*

landgravess (land′grāv-es), *n.* Same as *landgravine*. *N. E. D.*

landing, *n.* **9.** In *lumbering*: (*b*) A place to which logs are hauled or skidded preparatory to transportation by water or rail. (*c*) A platform, usually at the foot of a skid-road, where logs are collected and loaded on cars. A *lightning landing* is one having such an incline that the logs may roll upon the cars without assistance.—**To break a landing**, to roll a pile of logs from a landing or bank into the water.

landing-box (lan′ding-boks), *n.* In *mining*, the box into which the mine-pump delivers water.

landing-party (lan′ding-pär″ti), *n.* An armed boat's crew sent on shore for offensive or defensive operations, such as engaging an enemy, or for protecting life and property.

land-junker (land′yöng″kėr), *n.* [G., < *land*, land, + *junker*, junker.] In Germany, one who owns lands or estates; a squire.

land-lane (land′lān), *n.* An open water-passage in the ice of the polar oceans leading toward land.

We discovered new islands in the west as far as our range of vision admitted, and, to judge by the large open *land-lane* which ran in that direction, one might suppose that the land there was of considerable extent.
Geog. Jour. (R. G. S.), IX. 482.

land-law (land′lâ), *n.* **1.** The law of a land or country; the 'law of the land.'—**2.** Law, or a law, relating to land considered as property.

land-lead (land′lēd), *n.* Same as ★*land-lane*. See the extract.

This open water must rather be regarded as a *land-lead*, which, like all other *land-leads*, is formed and opened by a land-breeze, and is closed again by the wind blowing in shore. *Geog. Jour.* (R. G. S.), IX. 485.

land-line (land′līn), *n.* **1.** An overland telegraph-line, as distinguished from a marine cable.—**2.** In *fishing*, a line passing from the end of a seine to the shore. *Knight*, Dict. Mech. Sup., 1884.

land-lobster (land′lob″stėr), *n.* A land-crab or robber-crab.

land-lock (land′lok), *n.* **1†.** The state of being shut in, or almost shut in, by land.—**2.** A landlocked place, as a harbor or valley.

landlordly (land′lôrd-li), *a.* [*landlord* + *-ly*[1].] Like a landlord or pertaining to a landlord.

landlordship (land′lôrd-ship), *n.* The position or duties of a landlord.

land-marker, *n.* **2.** [*cap.*] One of the sect called *Landmark* ★*Baptists* (which see).

land-marshal (land′mär″shal), *n.* **1.** A provincial marshal in Prussia and some other parts of the German Empire.—**2.** The speaker or presiding officer of the first Chamber of the Swedish Diet.

land-mere (land′mēr), *n.* A boundary of a parish, county, etc.

landocracy (lan-dok′ra-si), *n.* [*land*[1] + Gr. *-κρατια*, < κρατεῖν, rule.] A class which rules or controls by virtue of its ownership of landed property. [Humorous.]

landocrat (lan′dō-krat), *n.* One who belongs to the landocracy.

land-office, *n.*—**A land-office business**, a 'rushing' business; a boom. The allusion is to the brisk work of the local government land-offices in the western United States when they are besieged by applicants for land patents on the occasion of opening new lands to settlement. [Slang.]

It [the Santiago mill] is owned by the Union Mill and Mining Company, which once did *a land-office business* in ore crushing.
Rep. to House of Representatives, Precious Metals, 1881. [p. 153.

land-packet (land′pak″et), *n.* A name formerly given jocosely, in the newly settled parts of the western United States, to any vehicle undertaking a passage across the plains: later it had some specific applications.

land-pitch (land′pich), *n.* A commercial name for the harder, more altered by exposure to the

air, and less valuable kind of asphalt obtained from the pitch lake in the island of Trinidad. Compare ★*lake-pitch*.

land-rail, *n.* **2.** A general name for any member of the rail family that, like the New Zealand weka rail, frequents uplands instead of marshes.

Two of the most interesting birds are *land rails* of the genus *Cabalus*. *Yearbook U. S. Dept. Agr.*, 1898, p. 90.

land-relief (land′rē-lēf″), *n.* Surface form; topography.

The relation of rain, wind and *land-relief* was, in fact, strikingly illustrated by our experiences. *Geog. Jour.* (R. G. S.), XV. 463.

land-sale (land′sāl), *n.* In *mining*, a sale of coal at the pit, as distinguished from disposal by sea.

landscape, *n.*—**Classic landscape,** a term used to describe the landscapes painted in the seventeenth and eighteenth centuries, especially in Italy, which were based on a feeling for architectonic arrangement of lines and masses rather than for the effects and qualities of nature.—**Landscape-architect,** an architect skilled in the arrangement of parks and gardens, and especially of their architectonic features, such as fountains, terraces, etc. **Landscape architecture,** a term introduced to denote the treatment of landscape in a formal way, with especial attention to the exact disposition of paths, lawns, groups of trees, flights of steps, vases, statues, etc. It implies a more formal style of work than *landscape-gardening*. It may also include the harmonious arrangement of buildings in groups.

landscape-marble (land′skāp-mär″bl), *n.* A dense limestone in which, along cracks or cleavage-planes, there has been deposited oxid of manganese in dendritic forms.

land-scot † (land′skot), *n.* A tax on land for the support of the church, formerly levied in some parishes. [Eng.]

land-sculpture (land′skulp″tūr), *n.* The production of the forms of the land by the various processes of erosion; earth-sculpture.

land-service (land′sér″vis), *n.* **1.** The service of the army on land, as opposed to that of the navy on the sea.—**2.** The army; that branch of the armed forces of a country which serves on land.

landshard (land′shärd), *n.* A strip of grass or unplowed land between two plowed pieces. [Prov. Eng.]

land-side, *n.* **2.** The side of the land facing the water; the shore.—**3.** The side (of an object) which faces the land rather than the water.

Land-slip terrace, an irregular bench on a slope, resulting from a land-slip.

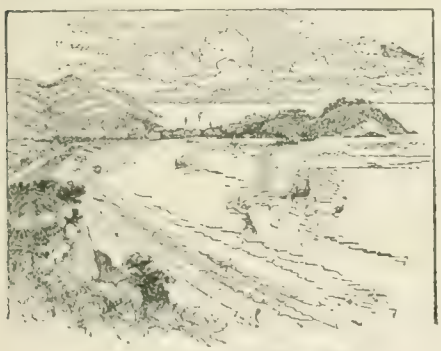
landslipped (land′slipt), *a.* Marked or damaged by land-slides or -slips.

landslippy (land′slip″i), *a.* Liable to land-slides or -slips. *N. E. D.*

land-take (land′tāk), *n.* See the extract.

Until a Parliament for Iceland was established in 930 these chieftains were the rulers of the island, each in his district or *land-take* (land-nám), as it was called. *Smithsonian Rep.*, 1906, p. 287.

land-tied (land′tīd), *a.* Said of coast forms which have been joined to the mainland or to



A Land-tied Island near Genoa, Italy.

each other by the growth of reefs or sand-spits. *W. M. Davis*, Elem. Phys. Geog., p. 314.

Landward climate. See ★*climate*.

landward-bred (land′wärd-bred), *a.* Country-bred; rustic. *Scott*, Old Mortality, xiv. [Scotch.]

landwardness (land′wärd-nes), *n.* Country-breeding; rusticity. *Stevenson*, Fam. Stud., 61. [Scotch.]

land-water (land′wâ″tèr), *n.* **1.** Fresh water flowing over the land; flood water; the water of lakes, rivers, springs, etc., as opposed to sea-water.—**2.** Open water between the ice of a frozen sea and a coast.

Fortunately a south-westerly gale sprang up, which opened up the ice, and on September 7 let us through into the *land-water*. *Geog. Jour.* (R. G. S.), XI. 115.

lane[1], *n.* **4.** In sprint-races, the space between cords, strung about 18 inches apart, which mark the straight courses of the competitors. The cords are held by iron stakes, about two feet in height, driven into the ground.

Lane's law. See ★*law*[1].

lane-snapper (lān′snap″èr), *n.* A common name of *Lutianus synagris*, a lutianoid fish found from the Florida keys to Brazil.

Lang. An abbreviation (*a*) of *Languedoc*; (*b*) [*l. c.*] of *language*.

langbeinite (lang′bīn-īt), *n.* [Named after A. *Langbein*.] A potassium-magnesium sulphate ($K_2Mg_2(SO_4)_3$) occurring in colorless isometric crystals. It is found with rock-salt at various localities in Germany.

Lange-James theory. See ★*James-Lange theory*.

Langen's apparatus. See ★*apparatus*.

Langerhans's island. Same as *Langerhans's cell*. See also ★*island*.

Langhian (läng′gē-an), *a.* and *n.* [*Langhe*, in Italy, + *-ian*.] **I.** *a.* In *geol.*, pertaining to the lowest division of the Miocene Tertiary in France. The formation is also known as the *Burdigalian*. Its deposits are of fluviatile origin and contain a great abundance of terrestrial mammalian remains.

II. *n.* The Langhian division.

langka (läng-kä′), *n.* [Ilocano name.] Same as ★*nangka*, 2.

Langobardic (lang-gō-bär′dik), *a.* See *Longobardian*.

langoor, langour[2], *n.* Variants of ★*langur*, a name applied to several large monkeys of the genus *Presbytis*.

langosta (län-gōs′tä), *n.* [Sp., a locust: see *locust*[1].] Any injurious locust or grasshopper: so called in Spanish America and, to some extent, in the southwestern United States.

langoti (lun-gō′ti), *n.* [Also *langoty*, *langotée*, *lungoti*, < Hind. *langōṭī*.] In India, a narrow strip of cloth passed between the legs and fastened before and behind to a string around the waist: worn by men and boys.

Langton's forester. See ★*forester*.

language[1], *n.* **Drum language,** a method of communication by means of drum-signals, employed particularly by the negroes of West Africa.—**Logistic language,** language represented by characters which express quantitative values, such as the plus, minus, and root signs, with many others, in mathematics. Music is written in logistic language. The sciences of astronomy and chemistry have developed elaborate languages of this kind and the other branches of science less complicated ones. Tables of measures are all examples of logistic speech.

The essential characteristic of *logistic language* is that its sematology is universal, so that the meaning of any character depends on the meaning assigned to it by the user—it is the special language of reasoning and avoids all ambiguities of other languages due to the multifarious meanings of single words. *J. W. Powell*, in An. Rep. Bur. Amer. Ethnol., 1898–99, p. clxix.

Negrito languages, dialects spoken by Negritos, Papuans, or Melanesians.—**Sign language,** a means of communication in which signs made with the hand and other gestures take the place of articulate speech. Sign language is used by deaf-mutes, but also by many primitive tribes. It is highly developed among the Indians of the Great Plains of North America.—**Whistle language,** communication between individuals by means of whistling with the mouth, the sound being varied and used to convey definite ideas: practised on the Canary Islands and among the Berbers in Tunis.—**Zone of language,** the area of the brain in which are located the centers of sight, hearing, vocal speech, and the muscular movements necessary in writing.

language[2], *n.* **2.** Same as *languet* (*a*).

langue de bœuf (läng dè bèf′). [F. 'ox-tongue.'] **1.** A kind of spear or pike used in the middle ages, which had a rather broad, double-edged, pointed head.—**2.** A sword or knife having a large, flat, double-edged blade, broad at the base and tapering toward the point.

languidus (lang′gwi-dus), *n.* [L. *languidus*, '(he is) sick': see *languid*[1].] In *law*, a sheriff's return to a process, that the person it requires him to take into custody is too dangerously ill to be moved.

langur (lang-gör′), *n.* [Hind. *laṅgūr*, < Skt. *go-laṅgūla*, a kind of monkey.] A native name for several large Indian monkeys of the genus *Presbytis*, or *Semnopithecus*, the two best known being the hanuman or entellus, *P. entellus*, the sacred monkey of India, and the black Nilgiri langur, *P. johnii*.

Lang yao glaze. See ★*glaze*.

laniatorial (lan″i-a-tō′ri-al), *a.* [*Laniator-es* + *-al*[1].] Belonging to or resembling the *Laniatores*.

lanific (lā-nif′ik), *a.* [L. *lanificus*, < *lana*, wool, + *facere*, make.] **1.** Producing or bearing wool.—**2.** Spinning wool.

laniflorous (lā-nif′lō-rus), *a.* [L. *lana*, wool, + *flos* (*flor-*), flower, + *-ous*.] In *bot.*, having woolly flowers.

lanoform (lan′ō-fôrm), *n.* [*lan*(*ol*) + *form*(*aldehyde*).] Lanolin which contains 1 per cent. of formaldehyde.

lanoresin (lan-ō-rez′in), *n.* [L. *lana*, wool, + *resina*, resin.] A dark-colored resin contained in the waste liquors from wool-washing.

lanosity (lā-nos′i-ti), *n.* [*lanose* + *-ity*.] Woolliness.

lansdowne (lanz′doun), *n.* [Named from a marquis of *Lansdowne*.] A light-weight fabric of silk and wool for women's wear.

lanson (lān-sōn′), *n.* Same as *lansa*. [Philippine Islands.]

lant[3], *n.* **2.** Specifically, *Ammodytes americanus*. See *sand-eel*, 1.

lantaca (lān-tä′kä), *n.* [Bisaya.] Among natives of the Philippine Islands, a piece of artillery.

lantado (lān-tä′dō), *n.* Short for *adelantado*.

lantalic (lan-tal′ik), *a.* [(*al*)*lant*(*uric*) + *-al*[3] + *-ic*.] Same as *allanturic*.

lantanine (lan′ta-nin), *n.* [*Lantana* (see def.) + *-ine*[2].] An alkaloid found in *Lantana Brasiliensis*. It is used in medicine as a substitute for quinine.

lantanuric (lan-ta-nū′rik), *a.* [(*al*)*lant*(*uric*) + *-an* + *-uric*.] Same as *allanturic*.

lantern, *n.* **9.** The misshapen proboscis (formerly supposed to be luminous) of many tropical *Fulgoridæ* or so-called 'lantern-flies.'—**Ardois lantern,** one of the electric lanterns in an Ardois signaling apparatus. See ★*signal*.—**Ballarat lantern,** a rough-and-ready lantern formed by knocking off the bottom of a bottle and sticking a candle in the neck. [Local, Australia.]—**Navy lantern,** a heavy lantern, well protected against injury by contact with ropes, etc., hung in a ship's rigging as an anchor-light.—**Position-lantern,** a light exhibited from a gaff-end or other conspicuous place, for the purpose of defining a vessel's position at night; a light shown to demonstrate the position of a vessel or other object afloat or ashore.—**Projecting-lantern,** an instrument for throwing upon a screen an enlarged image of a diagram, picture, or object, or of exhibiting by such projection to observers at a distance the progress of a scientific experiment or demonstration. The projecting-lantern is the development of the magic lantern invented by Kircher in 1646 (which see, under *lantern*). The modern form of this instrument as designed for the projection of lantern-slides is known as the *stereopticon* (see *stereopticon*). To adapt the lantern to the general purposes of scientific demonstration,

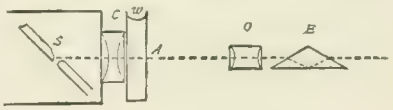


Fig. 1.

the form of the instrument is so modified as to admit of the introduction of apparatus in front of the condensing-lenses. The essential parts of such a lantern are shown in Fig. 1, in which *S* is the source of light, *C* a pair of condensing-lenses, *O* the object-lens, and *A* the field in which the object to be projected is placed. The light employed is usually that of the electric arc; but the lime-light is frequently used, and in some cases other and less powerful sources of light, such as a bank of acetylene burners with reflector, a Nernst lamp, a glow-lamp with coiled carbon filament, or even a gas or oil flame, may be employed. To secure the best possible illumination from the electric arc, the carbons are commonly set at an oblique angle, as shown in Fig. 2, thus exposing the crater, *C*, of the positive carbon to view; or a lamp is used in which the positive carbon is horizontal, as shown in Fig. 3. Arc-lamps for use in lantern work are either provided with an automatic focusing-feed which holds the arc in a constant position as the carbons burn away, or are regulated by hand. The heat from a powerful source of light such as the electric arc is very great, and to prevent damage to lantern-slides, or to pieces of apparatus placed in the field, a glass cell filled with water (*w*, Fig. 1) is often placed between the condensing-lenses and the object. The real image thrown upon the screen by means of the object-lens is inverted. In the case of transparencies or lantern-slides, the object is therefore placed in the field in an inverted position, thus giving an erect image upon the screen. Where apparatus is to be projected, however, and an erect image is desired, a reflecting-prism (*E*, Fig. 1), known as the erecting-prism, is placed between the object-lens and the screen. Many phenomena, such as capillary action as exhibited with floating needles, cannot be projected upon a screen by means of the ordinary form of lantern. For such experiments the 'vertical attachment' is used,

Fig. 2.

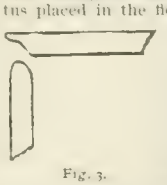


Fig. 3.

an arrangement in which the front condensing-lens is removed, and a mirror (*M*, Fig. 4) is mounted in front of the inner condenser so as to throw the light vertically upward. The other condensing-lens is mounted above this mirror, and the apparatus or object the image of which it is desired to project is placed in the path of the vertical ray at *A*. The object-lens, *O*, is placed in the path of the vertical beam at the proper distance and the rays after emerging from it are reflected to a screen by a second mirror or reflecting-prism, *P*. In the forms of lantern already described transmitted light is used, but it is likewise possible by the use of reflected light from the surface of opaque objects to project images of these upon the screen. Various devices for the projection of opaque objects have been employed, and reflecting-lanterns are known under various names, such as the *megascope*, an early form, the *reflectoscope*, and the *epidiascope*. The last-named instrument, in which the difficulties of projection by reflected light have been as completely overcome as in any of the lanterns of this type, will serve to illustrate the features essential to them all. In the epidiascope, Fig. 5, the illuminating arc, *S*, is placed in the focus of a parabolic reflector, *R*, the parallel rays from which pass through a large water-cell or cooling chamber, *W*, and are reflected obliquely downward by a plane mirror, *I*, upon the object at *A*, which is placed in a horizontal position. The principal difficulty in the projection of objects by reflection is that arising from lack of sufficient light, and this is obviated by the use of a powerful arc-lamp requiring from 30 to 50 amperes of current, such as is employed in search-lights and by the use of larger mirrors and prisms than those commonly employed in projecting-lanterns. The greater size of the apparatus makes it possible, moreover, to show upon the screen objects having a diameter of 22 centimeters, whereas in ordinary lanterns the diameter of the field is 10 or 12 centimeters. When transmitted light is to be used, mirror *I*, which is hinged at the top, is swung upward out of the path of the rays, which then fall on mirror *II* and are reflected downward to a third mirror, *III*, at the base of the instrument. From the surface of this mirror the rays pass vertically upward through the condensing-lens and the object, and finally through the object-lens, *O*, to the erecting mirror, *E*, as before. For the projection of microscopic objects by means of a lantern, the ordinary object-lens is removed and a microscope objective is mounted at a suitable distance from the condensing-lenses in the axis of the rays. The real image of the object instead of being formed in the eyepiece of the microscope, which in this case is usually removed entirely, is focused directly upon the screen. For the demonstration by projection of the phenomena of polarized light, polarizing- and analyzing-prisms, which should be of large size, are similarly mounted in the path of the rays in front of the condensing-lens and between it and the objective. For the projection of spectra a vertical slit is mounted in place of the slide-holder and a dispersing-prism is placed in front of the object-lens.—**Projection-lantern.** See *projecting-*★*lantern.*—**Tornado-lantern,** a lantern in which the flame is so protected that it will not be blown out in a heavy wind or tornado.

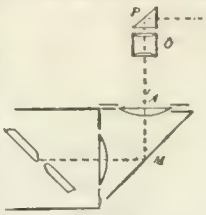


Fig. 4

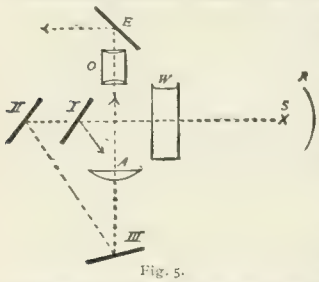


Fig. 5.

lantern-brace (lan'tėrn-brās), *n.* *Naut.*, the metal fixture which secures a lantern in its place.

lantern-brass (lan'tėrn-brās), *n.* A skeleton casing placed in the stuffing-box of a steam-engine cylinder and supplied with steam to prevent air from leaking into the cylinder.

lantern-fish, *n.* **2.** Any fish belonging to the family *Myctophidæ*: most of them are of the deep seas, and have luminous spots or photophores.

lantern-gear (lan'tėrn-gēr), *n.* Same as *lantern-wheel.*

lanternist (lan'tėr-nist), *n.* [*lantern* + *-ist.*] One who uses pictures projected on a screen by a magic lantern, in illustration of a lecture, or the like.

lantern-man (lan'tėrn-man), *n.* **1.** One who carries a lantern.—**2†.** One who empties privies by lantern-light; a night-man. *N. E. D.* —**3.** One who operates a projection or magic lantern.

lanternoscope (lan'tėr-nō-skōp), *n.* [*lantern* + Gr. σκοπεῖν, view.] In *photog.*, a contrivance for viewing lantern-slides.

lantern-service (lan'tėrn-sėr″vis), *n.* A religious service in which pictures thrown by a magic lantern are used to illustrate the subject of the address. *N. E. D.* [Eng.]

lantern-slide (lan'tėrn-slīd), *n.* A plate prepared for use in a stereopticon.

lanthana (lan'tha-nä), *n.* [NL., < *lanthanum.*] In *chem.*, one of the rare earths, lanthanum oxid.

lanthanate (lan'tha-nāt), *n.* [*lanthanum* + *-ate*[1].] In *chem.*, a compound of oxid of lanthanum with the oxid of a more electropositive metal, as sodium lanthanate ($NaLaO_2$).

lanthanin (lan'tha-nin) *n.* [Gr. λανθάνειν, escape notice, + *-in*[2].] Same as ★*oxychromatin.* *Heidenhain*, 1892.

lanthopine (lan'thō-pin), *n.* [Gr. λανθ(άνειν), escape notice, + ὄπιον, opium, + *-ine*[2].] A colorless alkaloid, $C_{23}H_{25}O_4N$, contained in opium. It crystallizes in microscopic prisms, melting at about 200° C.

lanugic (lā-nū'jik), *a.* [L. *lanugo*, woolliness, down, + *-ic.*] Derived from wool: noting an acid, a colorless compound, said to be formed by the action of barium hydroxid on wool. It precipitates substantive dyes.

lanzarotte (lan-za-rot'), *n.* [Sp. *Lanzarote*, name of one of the Canary Islands.] A breed of large domesticated pigeons, almost as large as the runt, but having more of the reddish color of the archangel.

laodah (lou'dä″), *n.* [Chin. *lao*, old, venerable, + *ta*, great.] In *Anglo-Chinese*, a chief boatman; a skipper. Also *lowdah.*

lap[3], *v. t.*—**To lap out,** to grind out or enlarge with a lap; hence to grind with anything resembling a lap.

lap[3], *n.* **10.** The tops of trees left in the woods in logging. Also *lapwood.*—**11.** The act of winding or being wound round a drum; the length of rope necessary to go round it once; also, the length of silk, tape, wire, or the like, necessary to go round anything once.—**Lap service,** in the *postal service*, a postal route on a railroad where several mail services pass on the same line for different destinations.—**Negative inside lap,** in a steam-engine: (*a*) The failure of the valve, when in mid-position, to cut off the exhaust from either end of the cylinder. (*b*) The distance by which the valve, when in mid-position, fails to cut off the exhaust, or the distance the valve would have to travel from mid-position before the exhaust would be closed.—**Steam lap,** in a steam-engine: (*a*) A projection on the valve reaching beyond the outside edge of the steam-port when the valve is in its mid-position. It is designed to close the port before the end of the stroke of the piston, thus utilizing the expansive force of the steam. (*b*) Same as *outside lap.* See *lap*[3], 3.

lapacho (lä-pä'chō), *n.* [Native name.] The name, in Argentina and Paraguay, of several trees belonging to the genus *Tecoma*, of the *Bignonia* family, and particularly of *T. Lapacho*, a tree 50 to 70 feet high, yielding a bark used in tanning and a valuable heavy wood, much sought for building and naval construction.

lapachoic (lap-a-chō'ik), *a.* [*lapacho* + *-ic.*] Pertaining to lapachol.—**Lapachoic acid.** Same as ★*lapachol.*

lapachol (lap'a-chol), *n.* [*lapacho* + *-ol.*] A yellow compound, $C_6H_4 < \begin{matrix} COCCH_2CH:C(CH_3)_2 \\ \| \\ COCOH \end{matrix}$, found in lapacho wood from South America, and greenheart wood, *Ocotea Rodiæi*, from Surinam. It crystallizes in monoclinic prisms and melts at 140° C. Also called *hydroxyamylene-naphthalene-quinone.*

lapactic (la-pak'tik), *a.* and *n.* [Gr. λαπακτικός, < λαπάσσειν, empty, evacuate.] **I.** *a.* Causing evacuations; laxative.

II. *n.* A laxative.

Lapageria (lap-a-jē'ri-ä), *n.* [NL. (Ruiz and Pavon, 1802), named in honor of the Empress Josephine, Marie Josèphe Rose Tascher de *la Pagerie* (1763–1814), the first wife of Napoleon.] **1.** A monotypic genus of the family *Liliaceæ*, comprising a brilliant-flowered and graceful twining plant, *L. rosea*, a native of Chile. The flowers are lily-like in form, hanging singly from the upper leaf-axils. There is also a white-flowered form in cultivation. Lapagerias are considered to require much skill in the growing, although they thrive well if a cool greenhouse is given them and they become well established. In the southern United States they may be grown in the open.

2. [*l. c.*] A plant of the genus *Lapageria.*

laparocolpotomy (lap″a-rō-kol-pot'ō-mi), *n.* [Gr. λαπάρα, the flank, + κόλπος, womb (vagina), + τομή, a cutting.] In *surg.*, the operation of opening into the vagina, after the abdominal section, in order to remove a child which cannot be born through the natural channel: a substitute for Cæsarean section in which the uterus is incised.

laparocystidotomy (lap″a-rō-sis-ti-dot'ō-mi), *n.* [Gr. λαπάρα, the flank, + κύστις, bladder, + τομή, a cutting.] In *surg.*, the operation of opening into the bladder through an incision in the abdominal wall just above the pubes.

laparo-elytrotomy (lap″a-rō-el-i-trot'ō-mi), *n.* [Gr. λαπάρα, the flank, + ἔλυτρον, sheath (vagina), + τομή, a cutting.] Same as ★*laparocolpotomy.*

Dr. Thomas was a bold and skilful operator. In obstetrics he was an advocate of *laparo-elytrotomy* as a substitute for cæsarean section.

Med. Record, March 7, 1903, p. 383.

laparohysteropexy (lap″a-rō-his-te-rop'ek-si), *n.* [Gr. λαπάρα, the flank, + ὑστέρα, womb, + πήξις, fastening.] Operative fixation of the fundus of the uterus to the anterior abdominal wall for the relief of falling of the womb.

laparoscopy (lap-a-ros'kō-pi), *n.* [Gr. λαπάρα, the flank, + -σκοπια, < σκοπεῖν, view.] Inspection of the abdomen.

laparotome (lap'a-rō-tōm), *n.* [Gr. λαπάρα, the flank, + -τομος, < ταμεῖν, cut.] A form of scalpel employed in laparotomy.

lap-bobbin (lap'bob″in), *n.* A spool or bobbin upon which something is wound or lapped, as the fleecy web or lap on a cotton-combing machine.

lap-drum (lap'drum), *n.* A cylinder upon which a lap or web is wound, or which gives motion to a spool or bobbin upon which a lap or web is wound, as on some machines in a textile-mill. *Thornley*, Cotton Combing Machines, p. 17.

lap-end (lap'end), *n.* That end of a cotton-picker or scutching-machine at which the cotton emerges in the form of a web, ribbon, or lap.

lap-game (lap'gām), *n.* Any game in which the scores made on one hand are carried to the next game if more than enough to win the first game; a variation of *railroad euchre.* See *euchre*, 1.

lap-guide (lap'gīd), *n.* A device, in a cotton-combing machine, to guide the unwinding of the laps or webs of cotton.

Lapham or **Laphamite markings.** See ★*marking.*

lap-head (lap'hed), *n.* That end of a scutching- or picking-machine where the cotton lap is formed into a roll.

lapidicolous (lap-i-dik'ō-lus), *a.* [L. *lapis* (*lapid-*), a stone, + *colere*, inhabit, + *-ous.*] Living under stones: a term applicable to many insects, and especially to certain blind ground-beetles so accustomed to this life that they have assumed the characteristics of true cave species.

lapillo (lä-pēl'lō), *n.* [It. *lapillo*, < L. *lapillus*, a stone: see *lapilli.*] Matter ejected from a volcano in the form of lapilli.

lapis[1], *n.*—**Lapis Lacedæmonius,** the name given by the ancients to a basalt found in the Peloponnesus, much used for gem-cutting. *A. J. Evans*, in Jour. of Hellenic Studies, XIII. 220.—**Lapis specularis,** an old name of the mineral selenite, or hydrated calcium sulphate ($CaSO_4.2H_2O$), in distinct crystals, the surfaces of which reflect light regularly as from a mirror.

lapis[2] (lä'pis), *n.* [Tagalog.] A large boat of small draught used for carrying merchandise. [Philippine Is.]

lap-knee (lap'nē), *n.* Same as ★*bosom-knee.*

Laplace's theory of capillarity. See ★*capillarity.*

Laplacian, *a.* **II.** *n.* A Laplace's coefficient; a form P_m (cos γ), where γ stands for the angle between r and the radius vector r_1 of some fixed point.

lap-love (lap'luv), *n.* The small bindweed, *Convolvulus arvensis.*

lap-machine (lap'ma-shēn″), *n.* A machine for preparing cotton in the form of laps for combing.—**Sliver lap-machine,** a machine for consolidating, attenuating, and forming into laps a number of slivers of cotton in the preparatory processes of combing.

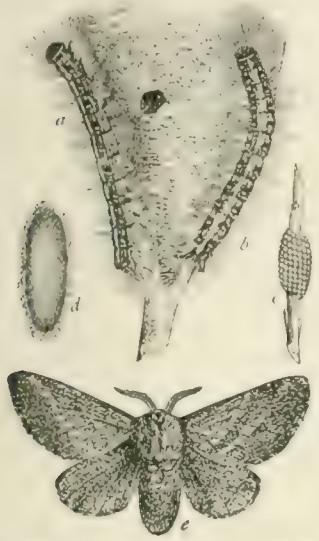
lapon (lä-pōn'), *n.* A common name of one of the scorpænoid fishes, *Scorpæna mystes*, of the Pacific coast of Mexico and Central America.

Lapp. An abbreviation of *Lappish.*

lappaconitin (lap-a-kon'i-tin), *n.* [L. *lappa*, a bur, + E. *aconitin.*] A crystalline alkaloid, $C_{34}H_{48}O_8N_2$, contained in the tubers of *Aconitum septentrionale.*

lappet, *n.* **4.** In *biol.*, a small lobe-shaped organ, such as the lappets of certain nemertean larvæ, etc.—**5.** Same as *tegula.*—**6.** In *paleon.*, an ear-like crest formed in some nautiloid cephalopods, as *Lituites* and *Ophidioceras*, by an extension of the lateral margins of the aperture of the shell.—**American lappet,** a lasiocampid moth, *Malacosoma americana*, common in the Atlantic United States, where its larvæ feed on the foliage of apple, cherry, oak, birch, maple, and ash.—**Esopha-**

geal lappet, in actinozoans, as the sea-anemone, a lobe projecting from the lower, free edge of the gullet at each end of its long diameter. **Marginal lappet,** in *Scyphozoa*, as the common jellyfish, one of the delicate



American Lappet (*Malacosoma americana*).
a, b, larva on section of nest; *c*, egg mass on twig; *d*, cocoon; *e*, female moth (*a–d*, reduced one third; *e*, slightly enlarged).

marginal processes, a pair of which is located in each of eight notches occurring at equal intervals around the edge of the umbrella. In each notch a sense-organ is lodged and is protected by the lappets.

lappet-caterpillar (lap′et-kat″ėr-pil-ăr), *n.* The larva of a lappet-moth.

lappet-loom (lap′et-lōm), *n.* A loom for lappet-weaving, in which needle-frames are carried in front of the reed for producing the figured effects.

lappet-moth, *n.* **Velleda lappet-moth,** an American lasiocampid moth, *Tolype velleda*, found throughout the United States. Its larvæ live on apple, pear, poplar, and other trees.

lappet-muslin (lap′et-muz″lin), *n.* A muslin in which figures have been woven on the lappet-loom.

lappet-shedding (lap′et-shed″ing), *n.* A system of dividing the warp-threads in a loom to allow certain other warp-threads to move transversely to form a figure by means of gaging-needles.

lappet-wheel (lap′et-hwēl), *n.* A part of a lappet-loom for weaving lappet figures.

lappin (lap′in), *n.* A crystalline substance of glucosidal nature, said to be obtained from burdock fruit.

lapping-machine, *n.* **2.** In *barrel-making*, a machine for cutting, pointing, and cutting the lap in barrel-hoops, preparatory to placing them in the coiling-machine.

Lapponic (la-pon′ik), *a.* [NL. *Lapponicus*, ⟨ *Lapponia*, Lapland.] Same as *Lappish*.

lap-rivet (lap′riv″et), *v. t.* To lap and rivet; to fasten with rivets, as two parts or edges which are lapped one over the other.

lap-riveting (lap′riv″et-ing), *n.* A method of riveting in which two parts are lapped and riveted together. See ★*butt-riveting*.

lap-robe (lap′rōb), *n.* A fur robe or a blanket used to cover one's lap and feet when riding in a carriage or sleigh. [U. S.]

laps, *n.* and *v.* A simplified spelling of *lapse*.

lapse, *v. t.* **2.** To be found lapsing or erring. [Rare.]

> Only myself stood out;
> For which, if I be *lapsed* in this place,
> I shall pay dear.
>
> *Shak.*, T. N., iii. 3.

lap-valve (lap′valv), *n.* A slide-valve with lap, used in an engine or pump.

lap-wheel (lap′hwel), *n.* Same as *lap*³, 5.

lap-winding (lap′win′ding), *n.* See ★*winding*¹.

lapwing, *n.* **Wattled lapwing.** Same as *wattled plover* (which see, under *wattled*).

lapwood (lap′wŭd), *n.* Same as ★*lap*³, 10.

laquearian (lak-wē-ā′ri-ăn), *a.* [L. *laquearius* + *-an*.] Same as ★*laqueary*², *a.*

laqueary¹ (lak′we-ar-i), *n.* Same as *laquear*.

laqueary² (lak′we-ā-ri), *a.* [L. *laquearius*, ⟨ *laqueus*, a noose.] Armed with a noose, as a gladiator.

laqueche (lä-kāsh′), *n.* [A Canadian F. form of an Indian name.] A name of *Hiodon alosoides*, a clupeoid fish of the family *Hiodontidæ*, found in the upper Mississippi valley.

Laramide (lar′ą-mid), *a.* A descriptive term used by Dana for those mountain-ranges or other rock-foldings which involve the Laramie beds of the Cretaceous as their uppermost member.

> This mountain system of North America, which stands as the Mesozoic time boundary, is the *Laramide* system.
> *Dana*, Manual of Geol. (4th ed.), p. 874.

larbolines, *n. pl.* See *larboulines*.

larcenic (lär-sen′ik), *a.* Same as *larcenous*.

larch, *n.* **2.** A commercial name for the lumber of the noble fir, *Abies nobilis*. See *noble* ★*fir*. —**Larch blister, canker, saw-fly.** See ★*blister*, etc.

larch-scale (lärch′skāl), *n.* A scale-insect found on larch, probably *Aspidiotus abietis*.

Larcoidea (lär-koi′dē-ą), *n. pl.* [NL., ⟨ Gr. λάρκος, a charcoal-basket, + εἶδος, form.] A family of spumellarian radiolarians having the skeleton irregularly lenticular or discoid.

Lard butter, compound. See ★*butter*¹, ★*compound*¹. —**Neutral lard,** a product obtained from the leaf-lard of the hog, by treatment similar to that by which oleo oil is made from beef fat, except that no stearin is extracted: used in making the kind of imitation of butter known as *butterine*. **Rough lard,** lard from the smaller portions of adipose tissue cut away in butchering the hog.

larder³ (lär′dėr), *n.* One who lards, as meat.

larder-fly (lär′dėr-fli), *n.* Same as *larder-beetle*.

lardiform (lär′di-fôrm), *a.* [L. *lardum*, lard, + *forma*, form.] Same as *lardaceous*.

lardine (lär′din), *n.* [*lard* + *-ine*².] An imitation of lard, consisting chiefly of the more solid portion of cotton-seed oil.

larding-money (lär′ding-mun″i), *n.* In *Eng. law*, a small sum paid by the tenants, according to the custom of the manor of Bradford, for the privilege of feeding hogs with acorns in the lord's woods.

lard-insect (lärd′in″sekt), *n.* Same as *bacon-beetle*.

lardite (lär′dīt), *n.* [*lard* + *-ite*².] An occasional synonym of steatite, and also of pagodite.

Lardizabala (lär-di-zab′ą-lä), *n.* [NL. (Ruiz and Pavon, proposed in 1794, established in 1798), named in honor of Michael *Lardizabal* y Uribe, a Spanish patron of botany.] A genus of plants, type of the family *Lardizabalaceæ*. They are twining shrubs with alternate, once to thrice ternately compound leaves, and diœcious flowers, the pistillate ones borne singly on axillary axes, the staminate in axillary racemes. There are two species, natives of Chile, one of which, *L. biternata*, is cultivated out of doors in southern California and the warmer parts of Europe.

Lardizabalaceæ (lär″di-zab-ą-lā′sē-ē), *n. pl.* [NL. (Lindley, 1847), ⟨ *Lardizabala* + *-aceæ*.] A family of dicotyledonous choripetalous plants of the order *Ranales*, based on the genus *Lardizabala*. It has been included by some authors in the *Berberidaceæ*, from which, however, it differs in its many-seeded fruit, extrorse anthers, and diclinous flowers. It contains 7 genera and about 18 species, chiefly Asiatic, but *Lardizabala* and one other genus are Chilean. They are mostly woody climbers, with palmate or pinnate leaves. See *Akebia*.

lardizabalaceous (lär″di-zab-ą-lā′shius), *a.* Belonging to the plant family *Lardizabalaceæ*.

lard-worm (lärd′wėrm), *n.* See ★*kidney-worm*.

lardy-dardy (lär″di-där′di), *n.* and *a.* [Another form of **ladidady*, ⟨ *la-di-da*: see ★*la-di-da*.]

I. *n.* A swell; a dandy; a fop. The word first appeared in or about the early sixties in the theaters, and later in London music-halls. *N. and Q.*, 9th ser., VIII. 19.

II. *a.* Fashionable; dandified; 'killing.' [Slang.]

> With our *lardy-dardy* garments we were really "on the spot,"
> And Charlie Vain came out so grand in a tall white Chimney-pot.
>
> *A. C. Hilton*, in The May Exam., quoted in N. and Q., 9th ser., VIII. 270.

lardy-dardy (lär″di-där′di), *v. i.*; pret. and pp. *lardy-dardied*, ppr. *lardy-dardying*. To linger or dangle about in an affected, 'lardy-dardy' way.

larentiid (la-ren′ti-id), *n.* and *a.* **I.** *n.* A member of the lepidopterous family *Larentiidæ*.

II. *a.* Having the characters of or belonging to the family *Larentiidæ*.

large, *n.*—**Statutes at large.** See ★*statute*.

largemouth (lärj′mouth), *n.* Same as *large-mouthed black-bass*. See *black-bass*.

largish (lär′jish), *a.* [*large* + *-ish*¹.] Rather large.

largitional (lär-jish′ǫn-ąl), *a.* [LL. *largitionalis*, ⟨ L. *largitio*(*n-*), bounty: see *largition*.] Of the nature of largess; bountiful

lariat (lar′i-at), *v. t.* [*lariat*, *n.*] To catch or fasten with a lariat; lasso.

laricic (lā-ris′ik), *a.* [L. *larix* (*laric-*), larch, + *-ic*.] Derived from the larch.—**Laricic acid,** a colorless compound, $C_{10}H_{10}O_5$, found in the bark of the smaller branches of larch-trees which are not more than from 20 to 30 years old. It is volatile with steam and sublimes at 93° C., forming lustrous monoclinic crystals which melt at 153° C.

Larimus (la-rī′mus), *n.* [NL., ⟨ Gr. λάριμος, a different reading of λάρυνο, some sea-fish.] A genus of fishes belonging to the family *Sciænidæ*, the croakers, found on both coasts of America.

larinoid (lar′i-noid), *a.* [Gr. λαρινός, fat, + εἶδος, form.] Same as *lardaceous*.

laris (lā′ris), *n.* The Atlas cedar, *Cedrus Atlantica*. See *cedar*, 1.

larixinic (lā-rik-sin′ik), *a.* Same as ★*laricic*.

lark¹, *n.* **Brown song-lark,** *Cinclloramphus cruralis*.

lark-heel (lärk′hēl), *n.* A long projecting heel.

> Neither the colour nor the hair are regarded as important ethnical tests, and the length of the heel alone [Negro "*lark-heel*"] is held to be an undoubted proof of Negro origin. *Keane*, Ethnology, p. 390.

lark-heeled, *a.* **2.** Having a long, projecting heel. See ★*lark-heel*.

larking (lär′king), *a.* Larky; frolicsome; of the nature of a lark.

> I have learned to leap, . . . which is a *larking* thing for a don. *J. H. Newman*, Letters, I. 182. *N. E. D.*

larking-glass (lär′king-glȧs″), *n.* A device with mirrors, used to attract larks to the net.

> At that place [Dunstaple], persons go out with what is called a *larking glass*, which is, . . . a machine made somewhat in the shape of a cucumber.
> *S. R. Jackson*, in Hone, Every-day Book, II. 118.

larkish (lär′kish), *a.* [*lark*² + *-ish*¹.] Rather larky; inclined to be larky.

larkishness (lär′kish-nes), *n.* The quality or condition of being larkish.

lark's-claw (lärks′klȧ), *n.* See *lark-spur*.

lark's-head (lärks′hed), *n.* A knot made by doubling the bight of a rope, passing it around a spar, or through a ring or hook, and then bending it down, spreading it out, and slipping a toggle through the four parts (across the two outer and under the two inner). It is finished by a half-hitch around the standing part with the loose end so that it will not slip when a strain is put upon it.

Lark's-head.

larksome (lärk′sum), *a.* [*lark*² + *-some*.] Disposed to be larky; frolicsome.

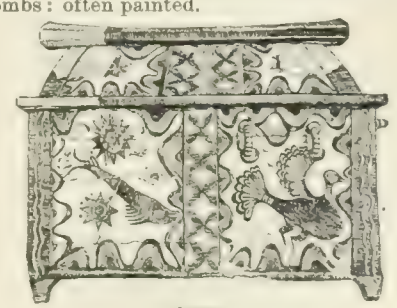
larkspur, *n.*—**Azure** or **blue larkspur.** Same as *Carolina* ★*larkspur*.—**Carolina larkspur,** *Delphinium Carolinianum*, a blue-flowered species of the southern United States.—**Dwarf larkspur,** *Delphinium tricorne*, a low but stout species ranging from Pennsylvania to Georgia and west to Minnesota and Arkansas. The flowers are deep blue, but sometimes vary to nearly white.—**Nelson's larkspur,** *Delphinium Nelsoni*, a blue-flowered species of the Great Plains.—**Prairie-larkspur,** *Delphinium albescens*, a species with white flowers slightly tinged with blue and bluish spots on the sepals, found in prairie regions from Illinois to Manitoba and south to Kansas and Arkansas. It was formerly regarded as a white-flowered form of the Carolina larkspur.—**Tall larkspur,** *Delphinium urceolatum*, a tall species with purple or blue flowers, ranging from Pennsylvania to Alabama and west to Minnesota and Nebraska.

larkspurred (lärk′spėrd), *a.* Said of sheep. See the extract.

> The old shepherds had a comical notion, that sheep blind in the summer were *larkspurred*; that the sheep having trod upon a lark's nest, the old one . . . had spurred the intruder in the eye.
> *J. Lawrence*, Cattle, p. 531 (ed. 1809). *N. E. D.*

larmoyant (lär-mwo-yoṅ′), *a.* [F., pp. ppr. of *larmoyer*, be tearful.] Tearful; exhibiting a tearful sentimentality.

larnax (lär′naks), *n.*; pl. *larnakes* (-na-kēz). [Gr. λάρναξ, a box, chest, ark, coffin.] In *Gr. antiq.*, a chest or box; a box-like receptacle of terra-cotta, found in early Greek or Mycenæan tombs: often painted.



Larnax.
Terra-cotta, from Palaikastro, Crete.
(From "Annual of the British School at Athens.")

> Nearer the city two tombs of the same period were discovered; the one, a square chamber with adromos, yielded parts of two painted *larnakes*, thoroughly Mycenæan in design, a gold ring, a crystal sphere, parts of a silver vase, and a quantity of iron swords.
> *Rep. Brit. Ass. n Advancement of Sci.*, 1901, pp. 444, 445.

larrid (lar'id), *n.* and *a.* **I.** *n.* A member of the hymenopterous family *Larridæ.*

II. *a.* Having the characters of or belonging to the family *Larridæ.*

larrigan (lar'i-gạn), *n.* [Origin unknown.] A boot of undressed leather, worn principally by lumbermen. *Cleveland Plain Dealer*, Dec. 21, 1902.

larrikinalian (lar″i-ki-nā'li-ạn), *a.* [*larrikin* + *-alian* as in *bacchanalian.*] Larrikin; characteristic of a larrikin.

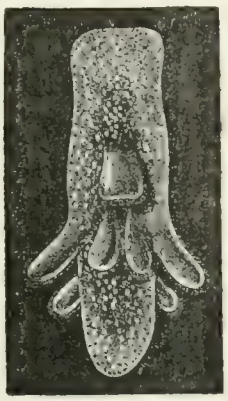
In the *larrikinalian* din which prevailed from start to finish.
Evening Standard, July 5, 1893, p. 4, quoted in E. E. [Morris, Austral English.

larry[2] (lar'i), *n.* [Origin obscure.] 1. Confusion; tumult.—2. A scolding; a lecture. [Prov. Eng.]

larry[3] (lar'i), *a.* and *n.* [Origin obscure.] **I.** *a.* Misty: applied in the Teign valley, England, to a land-fog coming down the estuary, as distinguished from a sea-fog running up the river. *Eng. Dial. Dict.*

II. *n.* The fog itself. *Nature*, quoted in *N. E. D.*

larva, *n.*—**Desor's larva,** a type of larva occurring among *Nemertinea.* It resembles a pilidium, but lacks the free-swimming phase.—**Mitraria larva,** in chætopodous annelids, a larva having long provisional setæ which are later replaced by permanent structures.—**Müller's larva,** in some polyclad turbellarians, as *Yungia,* a larva having finger-shaped ciliated lobes, which becomes transformed into the young polyclad by the gradual diminution of the lobes.—**Phantom larva,** the aquatic larva of a non-biting mosquito of the genus *Corethra,* which possesses no hemoglobin and is so nearly transparent that, resting below the surface of a pool of clear water, it can hardly be distinguished.—**Queen larva,** the larva of a queen-bee, a queen-ant, or a queen-termite.



Müller's larva of *Yungia,* seen from the oral surface. (From Lankester's "Zoölogy," after Lang, from v. Graff.)

larvaceous (lär-vā'-shius), *a.* [*larva* + *-aceous.*] 1. Resembling a mask: said of extensive cutaneous diseases of the face.—2. Same as ★*larval,* 2.

larval, *a.* 2. In *pathol.,* masked; not clearly defined: said of a disease of which the symptoms are indeterminate.—**Larval eye.** See ★*eye*[1].

larvalian (lär-vā'li-ạn), *a.* and *n.* Of or pertaining to the *Larvalia;* one of the *Larvalia.*

larvicidal (lär'vi-sī-dal), *a.* [*larvicide* + *-al*[1].] Pertaining to the killing of larvæ or having the property of killing them.

We are practically reduced to the use of oils in this *larvicidal* work. *L. O. Howard*, Mosquitoes, p. 197.

larvicide (lär'vi-sīd), *n.* [NL. *larva* + L. *-cida,* ⟨ *cædere,* kill.] One who or that which kills larvæ; specifically, any substance used for the destruction of the larvæ of mosquitos.

The same authorities [Celli and Casagrandi] recommend [for killing mosquitoes] a powder composed of *larvicide* (an aniline substance), chrysanthemum flowers, and valerian root, to be burnt in bedrooms. *Encyc. Brit.*, XXX. 485.

larvicolous (lär-vik'ō-lus), *a.* [NL. *larva* + L. *colere,* inhabit.] Living within insect larvæ: said of many hymenopterous and dipterous parasites.

larvigerous, *a.* 2. Giving birth to living larvæ, as certain flesh-flies.

larvule (lär'vūl), *n.* [NL. *larvula,* dim. of *larva,* larva.] One of the early stages of certain ephemerid larvæ in which there is no circulatory system and no apparent nervous system.

Laryngeal chorea, crisis, vertigo. See ★*chorea,* etc. **Laryngeal mirror.** See ★*mirror.*

laryngitis, *n.*—**Membranous laryngitis,** croup.—**Phlegmonous laryngitis,** severe inflammation of the submucous connective tissue as well as of the mucous membrane of the larynx.

laryngograph (lā-ring'gō-gräf), *n.* [Gr. *λάρυγξ,* larynx, + *γράφειν,* write.] In *physiol.* and *psychophys.,* an instrument for recording the movements of the larynx, voluntary (in speaking) or involuntary.

laryngometry (lar-ing-gom'e-tri), *n.* [Gr. *λάρυγξ,* larynx, + *-μετρια,* ⟨ *μέτρον,* measure.] Measurement of the larynx.

laryngopharyngeal (lā-ring″gō-fā-rin'jē-ạl), *a.* Relating to both larynx and pharynx.

laryngopharyngitis (lā-ring″gō-far-in-jī'tis), *n.* [NL., ⟨ Gr. *λάρυγξ,* larynx, + *φάρυγξ,* pharynx, + *-itis.*] Inflammation of both larynx and pharynx.

laryngoplegia (lā-ring-gō-plē'ji-ạ), *n.* [NL., ⟨ Gr. *λάρυγξ,* larynx, + *πληγή,* stroke.] Paralysis of the laryngeal muscles.

laryngorrhagia (lā-ring-gō-rā'ji-ạ), *n.* [NL., ⟨ Gr. *λάρυγξ,* larynx, + *-ραγια,* ⟨ *ῥηγνύναι,* break.] Hemorrhage from the larynx.

laryngospasm, *n.* 2. Same as *laryngismus.*

laryngostasis (lar-ing-gos'tạ-sis), *n.* [NL., ⟨ Gr. *λάρυγξ,* larynx, + *στάσις,* standing.] Contraction of the vocal cords in spasmodic croup.

laryngostroboscope (lā-ring-gō-strob'ō-skōp), *n.* [Gr. *λάρυγξ,* larynx, + *στρόβος,* a twisting or whirling, + *σκοπεῖν,* view.] A form of stroboscope used in observation of the vibration of the vocal cords. *Scripture*, Exper. Phonet., p. 250.

laryngostroboscopy (lā-ring″gō-strō-bos'kō-pi), *n.* [*laryngostroboscope* + *-y*[3].] Inspection by means of the laryngostroboscope of the vocal cords in action or while vibrating.

laryngotracheitis (lā-ring″gō-trā-kē-ī'tis), *n.* [NL., ⟨ Gr. *λάρυγξ,* larynx, + *τραχεῖα,* trachea, + *-itis.*] Inflammation of the larynx and the trachea.

laryngotyphoid (lā-ring-gō-tī'foid), *n.* [Gr. *λάρυγξ,* larynx, + E. *typhoid.*] Typhoid fever with marked laryngeal complications.

L. A. S. An abbreviation of *Lord Advocate of Scotland.*

lascar, *n.* 3. An artilleryman of an inferior class; a gun-lascar. *N. E. D.*

lascaree, *n.* 2. An East Indian sailor. See *lascar,* 2.

laserpitin (la-sér'pi-tin), *n.* [*Laserpitium* + *-ine*[2].] A colorless compound, $C_{24}H_{36}O_7$, found in the root of *Laserpitium latifolium.* It crystallizes in rhombic prisms, melts at 114° C., and sublimes without decomposition.

lash-cell (lash'sel), *n.* A cell provided with cilia or flagella. *L. F. Ward*, Dynamic Sociol., I. 343.

lashing, *n.* 4. *pl.* In *mining,* planks spiked on the inside of shaft-timbering to hold the frames in place. [Eng.]

lashkar (lash'kär), *n.* [Pers. *lashkar,* a camp, an army: see *lascar.*] 1†. A camp of the native Indian regiments.—2. A body of Afridi soldiers: so used in English newspaper accounts of the Afridi campaign, 1897. *N. E. D.*

lash-pole (lash'pōl), *n.* A cross-pole which holds logs together in a raft.

lasianthous (lā-si-an'thus), *a.* [Gr. *λάσιος,* hairy, woolly, + *ἄνθος,* flower, + *-ous.*] In *bot.,* same as ★*laniflorous.*

Lasianthus (lā-si-an'thus), *n.* [NL. (Adanson, 1763). The allusion is to the silky hairs of the calyx; ⟨ Gr. *λάσιος,* hairy, woolly, + *ἄνθος,* flower.] A genus of dicotyledonous trees or shrubs of the family *Theaceæ.* See *Gordonia.*

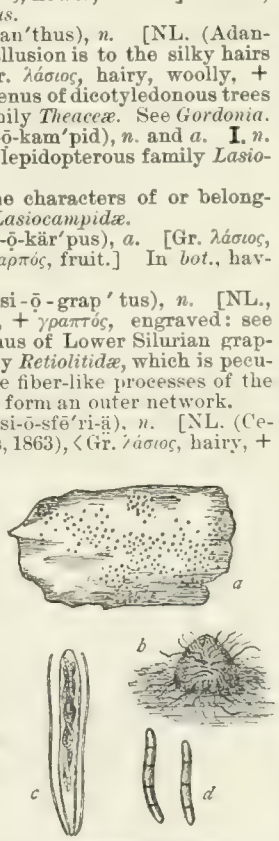
lasiocampid (lā″si-ō-kam'pid), *n.* and *a.* **I.** *n.* A member of the lepidopterous family *Lasiocampidæ.*

II. *a.* Having the characters of or belonging to the family *Lasiocampidæ.*

lasiocarpous (lā″si-ō-kär'pus), *a.* [Gr. *λάσιος,* hairy, woolly, + *καρπός,* fruit.] In *bot.,* having woolly fruit.

Lasiograptus (lā″si-ō-grap'tus), *n.* [NL., ⟨ Gr. *λάσιος,* hairy, + *γραπτός,* engraved: see *graptolite.*] A genus of Lower Silurian graptolites of the family *Retiolitidæ,* which is peculiar in so far as the fiber-like processes of the apertures unite to form an outer network.

Lasiosphæria (lā″si-ō-sfē'ri-ạ), *n.* [NL. (Cesati and De Notaris, 1863), ⟨ Gr. *λάσιος,* hairy, + *σφαῖρα,* sphere.] A large genus of pyrenomycetous fungi of the family *Sphæriaceæ,* having separate superficial perithecia clothed with brown hairs. The spores are cylindrical, hyaline or brownish, and several-septate. About 40 species have been described, occurring mostly on decaying wood. *L. hirsuta* is a common species in Europe and America.



Lasiosphæria hirsuta.

a, habit of the fungus; *b,* perithecium, enlarged; *c,* ascus with immature spores and paraphyses, magnified; *d,* ascospores, more highly magnified. (From Engler and Prantl's "Pflanzenfamilien.")

lassitudinous (las-i-tū'di-nus), *a.* [L. *lassitudo* (*-din-*), weariness, + *-ous.*] Languid; apt to be languid; showing the effects of languor.

lasso-harness (las'ō-här″nes), *n.* A working-tackle, consisting of a girth with a long rope attached, used especially to enable a cavalry-horse to assist draft-horses in moving field- or siege-guns, etc.

lasting-machine (lās'ting-ma-shēn″), *n.* In *shoe-manuf.,* a machine for drawing, stretching, and bending the upper of a shoe over the last and preparing it to fit and join the sole and heel. It repeats, essentially, the operations performed by hand with a laster, and inserts and drives tacks into the edge of the upper, to hold it in place while the shoe is sewed, wired, or nailed.

lata (lä'tä), *n.* [Jav. *lata,* Malay *lātah.*] A form of "hysteria" or nervous disturbance common among the people of Java and other parts of Malaysia, in which they echo or imitate in a silly manner the words or actions of other persons and chatter absurdly.

The nervous affliction called *lâtah,* to which many Malays are subject, is also a curious trait of the people. The victims of this affliction lose for the time all self-control and all sense of their own identity, imitating the actions of any person who chances to rivet their attention. *Encyc. Brit.*, XXX. 496.

latch[2] (lach), *n.* A tanners' pit, sunk below the general level of the ground, in which ooze is prepared from tan-bark or other similar material by leaching it with water. A contraction of *latch-* or *leach-pit.*

latch-bolt (lach'bōlt), *n.* Any latch or door-bolt, controlled by a spring and having a beveled head which, when the door is closed, is pressed back by meeting the strike and is thrown out again when the door is shut: the common form of self-locking bolt.

latchet[2] (lach'et), *n.* [Also *latchett;* origin obscure.] A fish, *Trigla cuculus,* of the family *Triglidæ,* found on the west coast of Europe and in the Mediterranean Sea.

latching-key (lach'ing-kē), *n.* *Naut.,* the center lasket which prevents the others from unreaving.

latch-needle (lach'nē″dl), *n.* A knitting-machine needle with a hinged latch or catch so arranged as readily to take on and throw off the yarn-loop in the process of knitting: invented by Matthew Townsend, Leicester, England, in 1849.

Latch-needle.
a, latch, *b,* cheek; *c,* throat; *d,* stem; *e,* butt; *f,* shank; *g,* hinge; *h,* hook.

latch-pin (lach'pin), *n.* 1. A pin for raising the latch of a door.—2. A pin which catches some part of a mechanism and holds it loosely; a catch-pin.

late[1], *a.* 8. Slow or backward in bearing crops, because heavy, clayey, cold, sour, or unfavorably situated as regards the sun, or the like: as, *late* land.

The superfluous water which tended to make the land cold, sour, and "*late*" is removed, thus making the soil warmer and earlier; and by the admission of air the acidity is slowly overcome. *Yearbook U. S. Dept. Agr.*, 1901, p. 436.

Latebrus (lat'e-brus), *n.* [NL., ⟨ L. *latebra,* a hiding-place, ⟨ *latere,* hide.] A subgenus of fishes, belonging to the *Cheilodipteridæ,* found in the West Indies.

laten[2] (lā'ten), *v. i.* and *t.* [*late*[1] + *-en.*] To grow late, or to cause to grow late.

Latent light, motions. See ★*light*[1], ★*motion.*

latentize (lā'ten-tīz), *v. t.*; pret. *latentized,* ppr. *latentizing.* To render latent. *G. S. Hall*, Adolescence, I. 266.

Lateolabrax (lā″tē-ō-lā'braks), *n.* [NL., appar. ⟨ L. *latere,* hide, + Gr. *λάβραξ,* a sea-fish.] A genus of serranoid fishes found on the coasts of China and Japan.

lateral. **I.** *a.*—**Lateral aberration.** See ★*aberration.* **Lateral chain.** Same as ★*receptor.* See also ★*immunity,* 5.—**Lateral masses of the sacrum, lateral organ.** See ★*sacrum,* ★*organ*[1]. **Lateral process.** Same as *parapophysis.*—**Lateral secretion, septum, sinus.** See ★*secretion,* etc.

II. *n.* 3. A small ditch or distributary from a main or principal irrigation ditch.

The location of the *laterals* furnishes an opportunity for the irrigator to show his skill. While the land is new, spreading water over it will be a difficult matter. It may be impossible to properly locate the main *laterals* at first, and supplemental *laterals* and dikes may have to be constructed. *Yearbook U. S. Dept. Agr.*, 1900, p. 505.

4. *pl.* In the pelecypod mollusks, the lateral hinge-teeth, those lying at the sides or ends of the hinge-plate, anterior or posterior to the median or cardinal teeth.—**Farm lateral,** a small distributing-ditch leading to or across the farms to be irrigated.

lateralia (lat-ē-rā'li-ạ), *n. pl.* [NL., neut. pl. of L. *lateralis,* of the side: see *lateral.*] In

the capitulum or head of a barnacle, the lateral plates. These take on various shapes and are usually distinctly designated. Thus in the acorn-barnacles, or *Balanidæ*, there are rostrolateralia and carinolateralia, according to their position near the rostral and carinal plates.

Lateralis accessorius. See ★*accessorius*.

lateralize (lat′ē-ral-īz), *v. t.*; pret. and pp. *lateralized*, ppr. *lateralizing*. [*lateral* + *-ize*.] To turn to the side; place on one side; make lateral. *Therapeutic Gazette*, Feb. 15, 1903, p. 74. **Lateralized operation.** See *lateral operation* (under *lateral*) and *lithotomy*.

lateralizer (lat′ē-ral-ī-zẽr), *n.* A muscle whose action serves to move the jaw sidewise, or laterally. [Rare.]

There can be no doubt that in animals which chew the cud the internal pterygoid acts as a powerful *lateraliser* of the jaw. *Proc. Zool. Soc. London*, 1901, II. 165.

laterifloral (lat″ē-ri-flō′ral), *a.* [L. *latus* (*later-*), side, + *flos* (*flor-*), flower, + *-al*[1].] In *bot.*, having lateral flowers. Also *lateriflorous*.

lateriflorous (lat-ē-rif′lō-rus), *a.* Same as ★*laterifloral*.

lateripulsion, lateriversion. See ★*lateropulsion*, *lateroversion*.

laterization (lat″ē-ri-zā′shon), *n.* In *geol.*, the process of subaërial decay in certain rocks which yields laterite. *Geikie*, Text-book of Geol., p. 169.

lateromedial (lat″ē-rō-mē′di-al), *a.* Toward the middle of the side.

lateroposition (lat″ē-rō-pō-zish′on), *n.* [L. *latus* (*later-*), side, + *positio*(*n-*), position.] Displacement to one or the other side.

lateropulsion (lat″ē-rō-pul′shon), *n.* [Also *lateripulsion*: < *latus* (*later-*), side, + *pulsio*(*n-*), driving.] A constant tendency to lateral movement.

laterotemporal (lat″ē-rō-tem′pō-ral), *a.* [L. *latus* (*later-*), side, + E. *temporal*[2].] Pertaining to the lower or outer part of the temporal region, according as the skull is compressed or depressed.

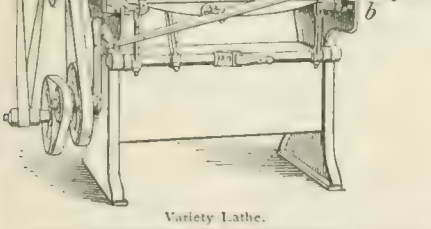
In contrast to the Synapsida the cranium is short; the temporal region is primitively fenestrated by two distinct openings, the supra- and *latero-temporal* fenestræ, bounded by the supra- and *latero-temporal* arches, one or both of which may secondarily disappear. *Amer. Nat.*, Feb., 1904, p. 105.

Laterotemporal arch, the lower of the two bony arches found in such a cranium as that of *Hatteria*.—**Laterotemporal vacuity** or **fenestra.** See ★*vacuity*.

lateroventral (lat ē-rō-ven′tral), *a.* [L. *latus* (*later-*), side, + E. *ventral*.] Situated low down on the side; toward the belly. *Amer. Anthropologist*, Oct.–Dec., 1903, p. 634.

lath[1], *n.* 3. In *mining*, one of the sharpened planks driven in advance of the excavation in sinking shafts in loose ground. See ★*forepale*, 2.

lathe[1], *n.*—**Back-geared lathe,** a lathe in which the work held between the centers is driven by a reducing train of gears from the cone-pulley, so that a high speed of belt is made to give a powerful turning effect against the cutting-tool. The cone-pulley carries a small gear which drives a large pinion on a shaft at the back of the head-stock, and a second small pinion on this back-gear shaft drives a larger gear on the spindle. The back-gear reduces speed and increases power.—**Ball-turning lathe,** a form of turning-lathe fitted with a special arrangement of its tool-holder for turning spherical surfaces. **Barrel-turning and -smoothing** (or **-sanding**) **lathe.** See ★*sanding-machine*.—**Hat-finishing lathe,** a machine for brushing, ironing, smoothing, and otherwise finishing a hat.—**Jewelers' lathe,** a small precision-lathe for use on a bench: much used by watch-makers and jewelers. **Lathe test-indicator.** See ★*test-indicator*.—**Necking- and bulging-lathe,** a spinning-lathe which has special attachments for forming the necks of spun-ware vessels and bending them into shapes having a bulge or swell at some point on the sides.—**Slide-rest lathe,** a lathe equipped with a slide-rest, an attachment used principally for turning to exact dimensions and reduplicating sizes. See *duplex lathe*, under *lathe*[1].—**Spherical lathe,** a lathe which has an attachment for turning balls or spheres.—**Variety lathe,** a high-speed wood-working lathe adapted to a variety of work, such as turning wood



Variety Lathe.

a, work in place between live- and dead-centers; *b*, table with lateral traverse to bring work to cutters; *c*, revolving forming-cutters, under dust-hood.

in intricate forms, as in making ornamental chair-legs, balusters, piano-stool posts, etc. The stock to be turned is placed between centers and is rotated as in any lathe, and by means of a sliding-table is made to approach a long horizontal cutter-head, parallel to it, which carries a series of cutters. This cutter-head revolves at a high speed, and when the revolving stock is brought to the cutters it is rapidly turned to a form corresponding to the shape of the blades of the cutters. The cutters take the place of the chisels or other tools of the ordinary turning-lathe. Since the cutters admit of many changes, the machine is capable of doing a great variety of work. Capacity, 3,000 pieces in a day.—**V's of a lathe,** the V-shaped ways on a lathe-bed on which the tool-carriage and tail-stock slide.

lathe-bed (lāтн′bed), *n.* The upper or main part of the framework of a lathe, on which rest the head- and tail-stock and the tool-carriage.

latheman (lāтн′man), *n.*; pl. *lathemen* (-men). A brass-finisher who is employed solely in turning at the lathe and not in fitting at the bench or vise. *Labour Commission*, Glossary. *N. E. D.*

lathe-race (lāтн′rās), *n.* In *weaving*, the track in which a shuttle runs.

lather-fungus (laтн′ėr-fung″gus), *n.* Any of the basidiomycetous fungi belonging to the genus *Clathrus*.

lathery (laтн′ėr-i), *a.* [*lather*[1] + *-y*[1].] 1. Covered with soapy lather.—2. Covered with sweaty foam, as a horse.—3. Resembling lather; figuratively, unsubstantial, like foam.

lathe-standard (lāтн′stan″därd), *n.* A leg or A-frame used as a support for a lathe-bed. See cut under *lathe*[1].

lathing-saw (lāth′ing-sâ), *n.* A saw for cutting metal laths.

lathing-staff (lāth′ing-stȧf), *n.* A lathing-hatchet; a hammer having a cutting-edge for trimming laths.

lath-rending (lāth′ren″ding), *n.* The process of making laths by splitting.

lathyric (la-thir′ik), *a.* [*Lathyrus* + *-ic*.] Producing lathyrism (which see).

lathyrin (lath′i-rin), *n.* [*Lathyrus* + *-in*[2].] A yellowish compound found in the seeds of *Lathyrus sylvestris*.

latifundian (lat-i-fun′di-an), *a.* [L. *latifundium*, a great estate, + *-an*.] Pertaining to or possessed of great estates or a great estate. See *latifundium*.

latigo (lä′tē-gō), *n.* [Sp. *látigo*.] A strap for tightening a saddle-girth.

latilamina (lat-i-lam′i-nä), *n.*; pl. *latilaminæ* (-nē). [L. *latus*, broad, + *lamina*, a thin plate.] In *paleon.*, a term denoting one of the thick concentric strata of the hydrocoralline *Stromatoporoidea*, in distinction from the thinner laminæ which are formed out of processes given off horizontally by radial pillars.

latimeandroid (lat″i-mē-an′droid), *n.* [*Latimeandra* + *-oid*.] A coral of the genus *Latimeandra*, of the family *Thamasteriidæ* and group *Madreporaria fungida*.

Latin. I. *a.*—**Latin school.** See ★*school*[1].—**Latin square, Latin square problem.** See ★*square*[1].—**Latin union.** See *Latin*. By the treaty (1865), gold coins and a silver coin based upon the five-franc piece, of uniform weight and fineness, were authorized, and it was provided that such coins should be of unlimited legal tender in the countries issuing them, and that these coins issued by any one of the states should be receivable in payment of public dues in all of the signatory states. It was provided that the minor silver coins should be of a uniform fineness of .835, that they should not be issued by any state in excess of six francs per capita of the population, and that they should be legal tender to the extent of fifty francs in any one payment in the issuing state. Each state agreed to accept, in payment of public dues, such coins issued by the other states in payments not exceeding one hundred francs, while the issuing states were required to receive these coins in any amounts. By an agreement of 1874, renewed in 1875 and 1876, the quantities of silver to be coined in the several states were limited. In 1877 the coinage of the five-franc piece practically ceased, and gold became the monetary standard, although the silver five-franc pieces still retain their legal-tender quality.

II. *n.*—**False Latin,** Latin not academically correct; hence, any blunder, as an error in good breeding.

Our captain . . . answered that he would not [put on his hat before the king], that they should not cause him to commit that *false Latine*.
G. Havers, tr. of P. della Valle, Travels in E. India, p. 186. *N. E. D.*

Latin-American (lat′in-a-mer″i-kan), *a.* and *n.* I. *a.* Of or pertaining to those peoples of America that speak Romance languages: particularly applied to the nations that speak Spanish or Portuguese.

II. *n.* A native of a Latin-American nation.

Latinic (la-tin′ik), *a.* [*Latin* + *-ic*.] 1. Latin in a political sense; of or pertaining to the Latin nations, whether ancient or modern.—2. Latin in a large sense; largely Latin: as, "the prevalent *Latinic* character of the vocabulary," *J. A. H. Murray*, in N. E. D.

Latinity, *n.* 2. The condition of being a Roman citizen.

Latinizer (lat′i-nī-zẽr), *n.* 1. One who translates into Latin; one who makes conformable to the Latin Church; one who habitually uses Latin forms or idioms.—2. A Latin scholar; a Latinist.

latiplantar (lat-i-plan′tär), *a.* [L. *latus*, broad, + *planta*, sole, + *-ar*[3].] In *ornith.*, having the tarsus rounded behind: contrasted with the *laminiplantar* tarsus of most birds. [Rare.]

latisellate (lat-i-sel′āt), *a.* [L. *latus*, broad, + *sella*, saddle, + *-ate*[1].] Having a broad saddle: used of the first or earliest suture in ammonoid cephalopods, and contrasted with ★*asellate* and ★*angustisellate*. The latisellate condition is not a primitive but a secondary stage in the phylogeny of the ammonoids, and does not appear in the earliest representatives of the group.

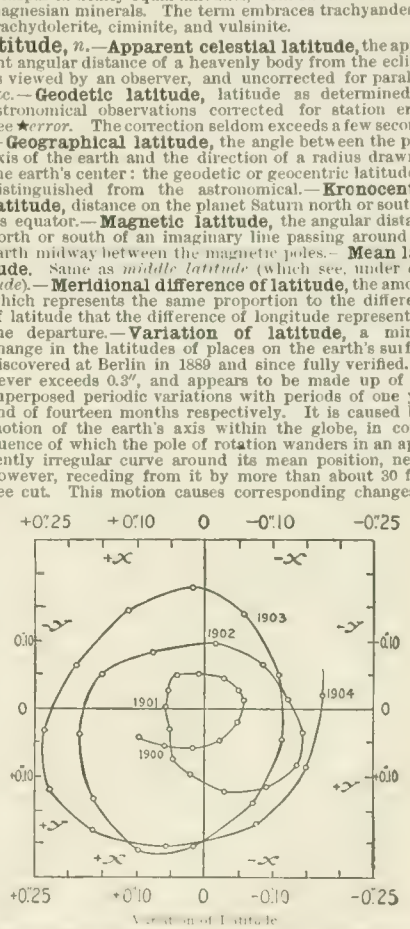
latisept (lat′i-sept), *a.* [L. *latus*, broad, + *sæptum*, *septum*, partition.] Same as ★*latiseptate*.

latiseptal (lat-i-sep′tal), *a.* [*latisept* + *-al*[1].] Same as ★*latiseptate*.

latiseptate (lat-i-sep′tāt), *a.* [*latisept* + *-ate*[1].] In *bot.*, having broad partitions, as in the silicles of many cruciferous plants.

latite (lā′tīt), *n.* [*Latium*, an ancient province of Italy, + *-ite*[2].] In *petrog.*, a name given by Ransome (1898) to volcanic rocks intermediate in composition between trachyte and andesite: the lava equivalent of monzonite. They are characterized by the presence of orthoclase and lime-soda feldspar in nearly equal amounts, with subordinate ferromagnesian minerals. The term embraces trachyandesite, trachydolerite, ciminite, and vulsinite.

latitude, *n.*—**Apparent celestial latitude,** the apparent angular distance of a heavenly body from the ecliptic as viewed by an observer, and uncorrected for parallax, etc.—**Geodetic latitude,** latitude as determined by astronomical observations corrected for station error. See ★*error*. The correction seldom exceeds a few seconds.—**Geographical latitude,** the angle between the polar axis of the earth and the direction of a radius drawn to the earth's center: the geodetic or geocentric latitude, as distinguished from the astronomical.—**Kronocentric latitude,** distance on the planet Saturn north or south of its equator.—**Magnetic latitude,** the angular distance north or south of an imaginary line passing around the earth midway between the magnetic poles.—**Mean latitude.** Same as *middle latitude* (which see, under *latitude*).—**Meridional difference of latitude,** the amount which represents the same proportion to the difference of latitude that the difference of longitude represents to the departure.—**Variation of latitude,** a minute change in the latitudes of places on the earth's surface, discovered at Berlin in 1889 and since fully verified. It never exceeds 0.3″, and appears to be made up of two superposed periodic variations with periods of one year and of fourteen months respectively. It is caused by a motion of the earth's axis within the globe, in consequence of which the pole of rotation wanders in an apparently irregular curve around its mean position, never, however, receding from it by more than about 30 feet. See cut. This motion causes corresponding changes of



Variation of Latitude

Course of the pole of the earth from 1900 to 1904. (Albrecht.)

longitude as well as of latitude. It is supposed to be mainly the result of periodical changes in the distribution of matter on the earth's surface, due to the seasons and other causes; but the exact explanation is still obscure.

latitudinary (lat-i-tū′di-nā-ri), *a.* [NL. *latitudinarius*, < L. *latitudo*, latitude.] Same as *latitudinarian*.

latomy (lat′ō-mi), *n.* [Gr. λατομία, a stone-quarry, < λατομος, a stone-cutter, < λας, stone, + -τομος, < ταμεῖν, cut.] A stone-quarry: applied especially to one of those of ancient Syracuse.

latreutic (la-trō′tik), *a.* Same as *latreutical*.

latron† (lā′tron), *n.* [L. *latro*(*n-*), a robber. Compare *ladrone*.] A brigand; a robber.

latronage† (lā'tron-āj), *n.* [*latron* + *-age.*] Brigandage, robbery.

latruncular (la-trung'kū̱-lär), *a.* [L. *latrunculus*, a pawn at a game resembling chess, + *-ar*³.] Relating to or like the pawns in a game resembling chess.

latten, *n.* 3. A sheet-iron plate prepared for tinning, and ranging in thickness from .020 to .016 of an inch. *Phillips and Bauerman*, Elements of Metallurgy, p. 340. **White latten**, thin sheet-metal of the bronze class, usually in rolled plates, made of an alloy of copper, tin, and zinc: distinguished from black latten, which is a true brass of copper and zinc.

lattermost (lat'ėr-mōst), *a.* Last; latest.

lattice, *n.* 4. In *textile-manuf.*, an apron or a conveyer made of laths or slats, and designed to carry material into a machine or from one machine to another.—5. In *math.*, a net made of straight lines, vertical and horizontal, and inclosing rectangular compartments.

lattice-apron (lat'is-ā″prun), *n.* A flexible feed-table constructed of narrow slats, employed on textile-machinery to carry the raw material into the machine; a lattice.

lattice-bar (lat'is-bär), *n.* In structural work, particularly bridge work, one of the slender diagonal members which connect the two opposite parallel members or flanges of a structural iron or steel beam, column, or strut, and which are arranged in two or more distinct, continuous, zigzag lines, the bars of one line crossing those of the other: in distinction from *lacing-bars*, which form a single, continuous, zigzag line, no two members of which cross one another.

lattice-beam (lat'is-bēm), *n.* A beam, generally of structural iron or steel, composed of a top and a bottom flange, commonly of channel-irons, united on each side by diagonal latticing. See ★*lattice-bar*.

lattice-frame (lat'is-frām), *n.* A frame, resembling a deep and narrow lattice-girder, composed of two parallel members, frequently T-irons, united by a system of diagonal latticing.

lattice-girder, *n.*—**Half-lattice girder**, a girder or truss in which the tension-bars run only one way across the panels. They are symmetrical about the center, as in a Warren truss, and there is a perpendicular compression-member at the end of each panel.

lattice-stitch (lat'is-stich), *n.* In *needlework*, an embroidery stitch formed of straight lines crossing and recrossing.

latticing (lat'is-ing), *n.* In structural work, particularly bridge work, the system of slender diagonal members which connect the two opposite parallel members or flanges of a structural iron or steel beam, column, or strut, and which are arranged in two or more distinct, continuous, zigzag lines, the bars of one line crossing those of the other: in distinction from *lacing*, in which the adjacent bars form a single consecutive, zigzag line, no two bars crossing one another.

latus¹, *n.*—**Latus rectum.** (*c*) The chord through the focus of a conic perpendicular to the transverse axis.

latus² (lā'tus), *n.* [ML. *latus*, Gr. λάτος.] A serranoid fish, *Lates niloticus*, found in the Nile. It attains a large size and is used for food.

laudanidine (lâ-dan'i-din), *n.* [*laudan-um* + *-id*˙+ *-ine*².] A colorless alkaloid, $C_{20}H_{25}O_4N$, contained in opium. It forms crystals melting at 177° C.

laudanine (lâ'da̤-nin), *n.* [*laudan-um* + *-ine*².] A colorless alkaloid, $HOC_{17}H_{15}N(OCH_3)_3$, contained in opium. It crystallizes in small trimetric prisms melting at 166° C.

laudanosine (lâ-dan'ọ̄-sin), *n.* [*laudan-um* + *-ose* + *-ine*².] A colorless, slightly bitter dextrorotatory alkaloid, $C_{17}H_{15}N(OCH_3)_4$, contained in opium. It crystallizes in needles melting at 89° C.

laudatio (lâ-dā'shiō), *n.* [L.: see *laudation.*] In *law*, evidence tending to prove the good character of one accused.

laudator, *n.* 2†. In *old law:* (*b*) A witness to the good character of an accused person.

Laudianism (lâ'di-a̤n-izm), *n.* Same as ★*Laudism*.

laudification (lâ″di-fi-kā'sho̤n), *n.* [NL. **laudificatio(n-)*, < *laudificare*, praise, < *laus* (*laud-*), praise, + *facere*, make.] The act of praising or extolling with praise.

Laudism (lâ'dizm), *n.* The policy of William Laud, Archbishop of Canterbury in the reign of Charles I. of England. He sought to restore the Church of England to what he regarded as its primitive doctrine and worship, and to this end vigorously persecuted dissenters and nonconformists.

laudist¹ (lâ'dist), *n.* [*laud* + *-ist.*] One who writes lauds or ascriptions of praise.

Laudist² (lâ'dist), *n.* [*Laud* (see def.) + *-ist.*] One who supported the policy of Archbishop Laud. See *Laudian* and ★*Laudism*.

Laugerian (lō-jē'ri-an), *a.* [*Laugerie* (see def.) + *-an.*] Of Laugerie-Basse, in France, or of a prehistoric race represented by one skeleton of a man and two skulls of women there found belonging to the later paleolithic (Magdalenian) period, and characterized by thick, dolichocephalic skulls.

After tracing the steps in the industrial evolution of the Paleolithic period, the authors [Gabriel and Adrien de Mortillet] pass in review all the discoveries of fossil human bones supposed to belong to the same period. The existence of two races is recognized—an earlier, referred to the first three epochs of the Paleolithic period and called Neanderthal, and a later, referred to the last three epochs of the same period and named *Laugerian*, or race of Laugerie-Basse. The *Laugerian* race is derived from the Neanderthal without intermixture from any foreign source. The transition may be traced in the human remains from Arcy, Eguisheim, Marcilly and Brechamps. *Science*, March 1, 1901, p. 344.

Laugerie-Chancelade race. See ★*race*³.

laughful (läf'fu̇l), *a.* [*laugh* + *-ful.*] Full of laughter or merriment.

laughing-falcon (lä'fing-fâ″kn), *n.* See ★*falcon*.

laughsome (läf'sum), *a.* [*laugh* + *-some.*] Ready to laugh; fitted to excite laughter.

laughy (lä'fi), *a.* [*laugh* + *-y*¹.] Feeling like laughing. [Nonce-word.]

Why need there be a reason for laughing? Let us laugh when we are *laughy*, as we sleep when we are sleepy.
Thackeray, Ravenswing, i.

lauia (lä-ọ̈-ē'ä), *n.* [Hawaiian.] A native Hawaiian name for several species of the genus *Scarus;* a parrot-fish.

launch, *n.*—**Naphtha-fuel launch**, a launch which generates steam in its boiler for motive power and uses naphtha for firing.

launching-cleat (län'ching-klēt), *n.* A wooden cleat, used either in dry-dock or in the launching of a vessel, secured to the ship in such a manner that it will catch the head of the shore.

launching-planks (län'ching-plangks), *n. pl.* A set of planks forming the platform on each side of the ship on which the bilgeways slide in the launching of the vessel.

launching-ribband (län'ching-rib″band), *n.* See *launching-ways*.

launder, *n.*—**Spinning launder**, a launder which revolves; a device composed of one or more troughs, arranged to be revolved. *Phillips and Bauerman*, Elements of Metallurgy, p. 854.

laundry-net (län'dri-net), *n.* A net used to hold fabrics while they are cleaned by boiling.

laundrywoman (län'dri-wu̇m″a̤n), *n.* A woman employed in a laundry; a laundress.

laurdalite (lâr'da̤-līt), *n.* [*Laurdal*, Norway, + *-ite*².] A coarse-grained rock composed of soda-orthoclase or soda-microcline, or cryptoperthite, with nephelite, a small amount of lepidomelane, and augite, rarely olivin. *Brögger*, 1894.

laureate, *n.* 3. In some educational institutions in the United States, a degree given to women instead of 'Bachelor' and 'Master': as, *Laureate* of Science, etc.—4. In *numis.*, same as *laurel*, 5.

laurel, *n.* 3. (*b*) In Porto Rico, Mexico, and Central America, a name applied to many species of *Ocotea*, *Damburneya*, and allied genera of *Lauraceæ;* especially, in Porto Rico, to *Ocotea fœniculacea*, *O. floribunda*, *Damburneya Sintenisii* (*Nectandra Sintenisii* of Mez), *D. Krugii* (*Nectandra Krugii* of Mez), and *D. coriacea* (*Nectandra coriacea* of Grisebach).

Alexandrian laurel, *Calophyllum Inophyllum.* See *domba*, *tamanu* and ★*bitanhol*. **Black laurel**, the loblolly-bay, *Lasianthus Lasianthus.*—**Camphor-laurel**, the camphor-tree, *Cinnamomum Camphora.* **Deer-laurel**, the great laurel or rose-bay, *Rhododendron maximum.*—**Diamond-leaf laurel**, an evergreen Australian tree, *Pittosporum rhombifolium.* See *Pittosporum.*—**Dodder laurel.** See ★*dodder-laurel* and ★*devil's-guts*, 3.—**Dog-laurel.** Same as ★*dog-hobble.*—**Dwarf laurel**, the sheep-laurel, *Kalmia angustifolia.*—**Florida laurel**, the sweetleaf, *Symplocos tinctoria.*—**Hairy laurel**, *Kalmia hirsuta*, a shrub with villous-hirsute leaves and rose-purple flowers, found in moist pine-barrens from Virginia to Florida.—**Hedge-laurel.** See *hedge-laurel* and *Pittosporum.* **Horse-laurel**, the great laurel.—**Lady-laurel**, the spurge-laurel.—**Mexican laurel**, *Litsea glaucescens* and *L. parvifolia*, aromatic shrubs belonging to the *Lauraceæ* and called *laurél* by the Mexicans. The leaves are used as a flavoring for certain dishes and are taken as a tea, sweetened with brown sugar, for medicinal purposes and as a beverage. They are always found for sale in the markets of the larger cities of Mexico.—**Moreton Bay laurel**, *Cryptocarya australis*, a tree of the laurel family. Also called *gray sassafras.*—**Native laurel**, in Australia: (*a*) The Victorian laurel, *Pittosporum undulatum.* Also called *mock-orange.* (*b*) A tree of the ginseng family, *Polyscias elegans*, yielding a light, soft wood. Also called *white sycamore.* **New Zealand laurel**, *Laurelia Novæ-Zelandiæ*, a large tree of the family *Monimiaceæ*, having soft, yellowish wood, which is used for boat-building.—**Rose-laurel.** (*a*) The great laurel. (*b*) The American laurel. (*c*) The oleander.—**Sassafras-laurel**, the California laurel, *Umbellularia Californica.*—**Small laurel.** (*a*) The American laurel. (*b*) The laurel-magnolia, *Magnolia Virginiana.*—**Sweet laurel**, the poison-bay, *Illicium Floridanum.*—**To repose** or **rest on one's laurels**, to cease striving for a while and enjoy the honors won.—**To retire on one's laurels**, to cease and be satisfied with the honors won, retiring voluntarily.—**Victorian laurel**, *Pittosporum undulatum.* Also called *native laurel.* See *Pittosporum* and ★*mock-orange*, 3.—**White laurel**, *Cryptocarya glaucescens*, one of the trees called *beech* in Australia. See ★*beech*¹, 2, and *black* ★*sassafras.* **Winter laurel**, the Carolina cherry-laurel, *Prunus Caroliniana.*

laurel (lâ'rel), *v. t.*; pret. and pp. *laureled*, *laurelled*, ppr. *laureling*, *laurelling.* [*laurel*, *n.*] To crown with, or as with, laurel as a distinction.

Laureled by some exclusive society of select spirits.
Science, Feb. 5, 1904, p. 232.

laurel-butter (lâ'rel-but″ėr), *n.* Same as *bay-oil*.

laurel-camphor (lâ'rel-kam″fo̤r), *n.* Same as ★*laurinol*.

laurelic (lâ-rel'ik), *a.* [*laurel* + *-ic.*] Noting an acid, a compound said to occur in bayberries, the fruit of *Laurus nobilis*.

laurel-ivy (lâ'rel-ī″vi), *n.* Same as *big-leaved* ★*ivy*.

laurel-magnolia (lâ'rel-mag-nō″li-ạ̈), *n.* See *Magnolia*.

laurene (lâ'rēn), *n.* A mixture of hydrocarbons, chiefly ethyl xylenes, $C_2H_5C_6H_3(CH_3)_2$, formed by the distillation of Japan camphor with zinc chlorid.

Laurentia (lâ-ren'shiạ̈), *n.* [See *Laurentian.*] The land area of Archæan rocks around whose shores the Paleozoic sediments were deposited. See *Laurentian*. *Amer. Geol.*, Sept., 1903, p. 148.

Laurentide glacier. See ★*glacier*.

Laurer's canal. See ★*canal*¹.

laurestinus (lâ-res-tī'nus), *n.* Same as *laurustinus*.

lauretin (lâ're-tin), *n.* [L. *laurus*, laurel, + *-et-* + *-in*².] A compound said to occur in bayberries, the fruit of *Laurus nobilis*.

Lauretta whitefish. See ★*whitefish*.

lauric (lâ'rik), *a.* [L. *laurus*, laurel, + *-ic.*] Noting an acid, a colorless compound, $C_{11}H_{23}COOH$, homologous with acetic acid. It is found, in combination with glycerol, in bayberries, the fruit of *Laurus nobilis*, in Pichurim beans, in croton-oil, in spermaceti, and in cocoanut-oil. It crystallizes in tufts of silky needles, melts at 43.6° C., and boils at 225° C. under 100 millimeters pressure. Also called *dodecatoic acid.*—**Lauricester.** See ★*ester*.

laurinol (lâ'ri-nol), *n.* [L. *laurus*, laurel, + *-in* + *-ol.*] A colorless, odorless, indifferent compound, $C_{22}H_{30}O_3$, obtained from the wood of the bay-tree, *Laurus nobilis*. It crystallizes in prisms. Also called *laurel-camphor*.

lauristic (lâ-ris'tik), *a.* [L. *laurus*, laurel, + *-ist-ic.*] Same as ★*lauric*.

laurolene (lâ'rọ̄-lēn), *n.* [L. *laurus*, laurel, + *-ol* + *-ene.*] A hydrocarbon, C_8H_{14}, formed by the distillation of camphanic acid. It is probably a 1, 1-*dimethylcyclohexene*.

laurone (lâ'rōn), *n.* [L. *laurus*, laurel, + *-one.*] A colorless ketone, $(C_{11}H_{23})_2CO$, prepared by the distillation of calcium laurate. It is a homologue of acetone, crystallizes in plates, and melts at 69° C.

lauronolic (lâ-rọ̄-nol'ik), *a.* [L. *laurus*, laurel, + *-one* + *-ol* + *-ic.*] Noting an acid, a colorless liquid, $\mathrm{HOCOC(CH_3)} < \begin{array}{l} \overline{\qquad\qquad\qquad}| \\ \mathrm{CH\,CH:CH.C(CH_3)_2} \end{array}$, prepared by the repeated distillation of camphanic acid. It boils at 233–235° C. Also called *trimethyl-cyclopentene-carboxylic acid*.

laurostearin (lâ-rọ̄-stē'a̤-rin), *n.* [L. *laurus*, laurel, + Gr. στέαρ, tallow, + *-in*².] A colorless compound, $C_3H_5(C_{12}H_{23}O_2)_3$, contained in laurel- or bay-leaves (*Laurus nobilis*) and in cocoanut-oil. It crystallizes in needles and melts at 45° C. Also called *trilaurin* and *trilauric glyceride*.

lauroxylic (lâr-ok-sil'ik), *a.* [L. *laurus*, laurel, + *ox(ygen)* + *-yl* + *-ic.*] Noting an acid, a colorless compound, $C_9H_{10}O_2$, prepared by the oxidation of laurene with nitric acid. It forms warty crystals melting at 155° C.

laurvikite (lâr'vik-īt), *n.* [*Laurvik*, Norway, + *-ite*².] A coarse-grained syenite composed of flattened feldspars with a somewhat rhombic cross-section which are microperthite or soda-microcline. There are, besides, small amounts of sodalite and nephelite in some varieties, and variable amounts of ferromagnesian minerals—pyroxene, lepidomelane, and barkevikite hornblende. *Brögger*, 1894.

laurylene (lâ'ri-lēn), *n.* [L. *laurus*, laurel, + *-yl* + *-ene*.] A colorless levorotatory terpene, $C_{10}H_{16}$, contained in bay-oil. It boils at 164° C.

lautarite (lâ'ta-rīt), *n.* [The Oficina *Lautaro*, owner of the deposits, + *-ite*².] Calcium iodate, $Ca(IO_3)_2$, occurring in from colorless to yellow monoclinic crystals: found in the sodium-nitrate deposits of Atacama, Chile.

lautite (lou'tit), *n.* [*Lauta* (see def.) + *-ite*².] A metallic mineral containing copper, arsenic, and sulphur, but of doubtful homogeneity: found at Lauta, near Marienberg, Saxony.

lautverschiebung (lout'fer-shē-bông), *n.* [G., < *laut*, sound, + *verschiebung*, shifting.] In *philol.*, 'shifting of sounds': applied to the changes which a series of regular Indo-European mute consonants of the same class underwent in the Teutonic languages, as if each consonant were shifted forward one degree in its class. See *Grimm's law*, under *law*¹. A later shifting, sometimes called the *second lautverschiebung*, appears in the Old High German.

lauwine, *n.* See ★*lawine*. *Byron.*

Lauzon (lō-zon'), *n.* [*Lauzon*, Quebec.] In *geol.*, a term introduced by Logan for a division of the rocks near Quebec, in the Quebec group, the age of which has been shown to extend from the Cambrian to the close of the Lower Silurian.

lava, *n.*—**Block lava**, in *geol.*, a structure sometimes observed in lava-streams, where the surface zone of the flow has been shattered by explosive escape of gases from the cooling rock.—**Ropy lava**, lava with a fluted or corrugated surface due to flowing while viscous and thick.

lavabo, *n.* **4.** The psalm in the mass service which the priest recites at the washing of his hands.

lavabo-dish (lā-vā'bō-dish), *n.* A shallow basin used for the ablution of the priest's hands in the mass service.

lavabrum (lā-vā'brum), *n.* [L.] Same as ★*labrum*².

lava-caldron (lä'vä-kâl'dron), *n.* An open, pit-like crater which contains molten lava. *Geikie*, Text-book of Geol., p. 329.

lava-cone (lä'vä-kōn), *n.* In *geol.*, a volcanic cone built up of successive flows of lava rather than of the fragmental products of explosive outbreaks. Opposed to *tuff-cone*.

Lava-cones, that is, volcanos with a slight angle of inclination, and built up entirely of lava.
Geog. Jour. (R. G. S.), XIII. 504.

lavacret, *n.* [L. *lavacrum*, < *lavare*, wash.] In phrases referring to baptism, a font; a bath: as, the *lavacre* of spiritual regeneration.

lavadero (lä-vä-dā'rō), *n.* [Sp., < *lavar*, < L. *lavare*, wash.] Apparatus for washing silver amalgam from ore. *Phillips and Bauerman*, Elements of Metallurgy, p. 744. [Mexico.]

lava-field (lä'vä-fēld), *n.* A consolidated lava-flow covering a considerable area.

The most extensive *lava-field* in the island.
Geog. Jour. (R. G. S.), XIII. 501.

lava-lake (lä'vä-lāk), *n.* An expanse of molten lava, in a crater, so extensive as to be called a lake. The Hawaiian volcanoes afford the best examples. *Nature*, Sept. 4, 1902, p. 441.

lavallière (lä-val-yär'), *n.* [F., from a personal name.] A pendent ornament consisting of or set with one, two, or three gems, generally attached to a thin chain.

lava-streak (lä'vä-strēk), *n.* A dike of lava which is contrasted in appearance with its inclosing walls.

lava-stream (lä'vä-strēm), *n.* A flow of lava while it is still molten; also, congealed and cold lava which originally flowed in a stream.

These *lava-streams*, which the Icelanders call apalhraun, are relatively narrow with high edges, looking, when viewed from a distance, like fences or ridges on flat land. *Geog. Jour.* (R. G. S.), XIII. 507.

lava-terrace (lä'vä-ter'äs), *n.* One of the escarpments of lava-sheets which surround the pits of molten lava in some volcanic craters, such as those of the Hawaiian Islands. *Geikie*, Text-book of Geol., p. 329.

lavational (lā-vā'shon-al), *a.* [*lavation* + *-al*¹.] Pertaining to or of the nature of washing or lavation.

lavatorial (lav-a-tō'ri-al), *a.* [L. *lavatorium*, a lavatory, + *-al*¹.] Pertaining to a lavatory or to washing. [Recent.]

lava-torrent (lä'vä-tor'ent), *n.* A torrential flow of lava, whether molten or congealed.

Large quantities of salt, especially sal ammoniac, are often deposited on the *lava-torrents* during eruptions in Iceland. *Geog. Jour.* (R. G. S.), XIII. 510.

lavatory, *n.* **4.** The ceremonial washing of the hands of the priest in the celebration of the holy communion.—**5.** In *plumbing*, a permanent wash-bowl of marble, enameled iron, or porcelain, fitted with hot- and cold-water pipes, a waste-pipe, and other conveniences and fixtures. It may be affixed to a wall or stand upon the floor.—**6.** A room, especially in a hotel or public building, provided with means for washing the hands and face, and often including a water-closet.

lava-waste (lä'vä-wāst), *n.* A barren area composed of lava.

Notwithstanding the plenteous fall of rain and snow, there is scarcely any water to be found in the *lava-wastes*. *Geog. Jour.* (R. G. S.), XIII. 508.

lave² (lāv), *n.* [*lave*², *v.*] **1.** The act of washing or laving.—**2.** The sea.

lavender², *n.* **Compound tincture of lavender**, a red, aromatic, hydro-alcoholic tincture of cinnamon, cloves, nutmeg, and red saunders, which contains small quantities of oils of lavender flowers and rosemary. It is carminative in its action.—**Native lavender**, in Tasmania, *Styphelia australis*, a tall, bushy shrub or small tree of the family *Epacridaceæ*. The whole plant when drying smells like new-made hay.

lavendol (lav'en-dol), *n.* [*lavend(er)* + *-ol*.] A colorless liquid, $C_{10}H_{18}O$, contained in lavender-oil. It boils at 197° C.

lavendulan (la-ven'dū-lan), *n.* [ML. *lavendula*, lavender, + *-an*.] A hydrated arseniate of copper, cobalt, and nickel occurring in lavender-blue amorphous masses: found with cobalt ores in Saxony and elsewhere.

lavendulite (la-ven'dū-līt), *n.* [ML. *lavendula*, lavender, + *-ite*².] Same as ★*lavendulan*.

låvenite (lä'ven-īt), *n.* [Also *laavenite*, *lovenite*; named after the island of *Låven*, in southern Norway.] A silicate and zirconate of manganese, iron, calcium, sodium, and other elements occurring in from yellow to brown monoclinic crystals. It is related to pyroxene and, more closely, to woehlerite.

laver¹, *n.* **3.** Figuratively, the baptismal font; the spiritual regeneration of baptism; any cleansing of the spirit.

Laverania (la-vē-rā'ni-ä), *n.* [NL.] A genus of sporozoans of the order *Hæmosporidia*, one species of which, *L. malariæ*, is parasitic in the red corpuscles of human blood and is the cause of pernicious malaria. Also *Hæmamœba*. See ★*Hæmamœba* and ★*malaria*. *Grassi et Feletti*, 1890.—**Laverania danilewsky**, a protozoan blood-parasite of pigeons and certain other birds.—**Laverania ranarum**, a protozoan blood-parasite of the frog.

laverick (lav'e-rik), *n.* [Origin obscure.] In the western United States, a contemptuous term for a greenhorn or stranger; a tenderfoot.

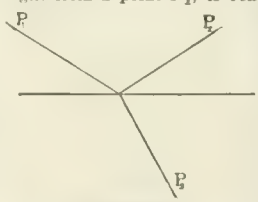
lavinia (la-vin'i-ä), *n.* [NL.] **1.** An American nymphalid butterfly, *Victorina steneles*, formerly known as *V. lavinia*. It occurs in Florida and South America.—**2.** [*cap.*] A genus of minnows inhabiting the coast streams of California.

lavoisium (la-voi'zi-um), *n.* [NL., named after *Lavoisier*, a French chemist.] A supposed new chemical element announced by Prat in 1877 as occurring in pyrite. There is no confirmation of its existence.

lavrovite (lav'rō-vīt), *n.* [G. *lawrowit* (1867), named after N. von *Lavrov*, a Russian.] A variety of pyroxene colored green by vanadium: found near Lake Baikal in Siberia.

law¹, *n.* **Albite law.** See ★*albite*.—**Antitrust laws**, a name given to statutes enacted for the purpose of regulating trusts or vast combinations of capital.—**Arago's law of polarization.** See ★*polarization*.—**Baer's law.** (*b*) The rule that rivers flowing northward or southward form deposits and sand-banks most frequently on the right-hand side of the stream owing to the influence of the rotation of the earth on the moving water: a rule deduced by K. E. von Baer, in 1860, for the rivers of Russia, and rather hastily generalized for the whole northern hemisphere. **Balmer's law**, in *spectroscopy*, the law that the bright lines in the spectra of metals occur in series, the frequencies of vibration being in simple numerical relation to one another. The wave-lengths of lines of the visible spectrum of hydrogen, for example, may be computed by multiplying a constant ($h = 3645.6$) by the series of coefficients, $\frac{9}{5}$, $\frac{16}{12}$, $\frac{25}{21}$, $\frac{36}{32}$.—**Baric law of the wind.** See ★*wind*².—**Baveno law.** See *Karlsbad twin*, under *twin*¹.—**Biogenetic law**, the doctrine or opinion that the ancestral history of organisms is recapitulated in their development in individuals. See ★*recapitulation*.

Biot-Savart law, the law established by Biot and Savart (1820) for the magnetic force due to an electric current flowing through a straight linear conductor of infinite length. It is given by the formula $H = \frac{2I}{r}$, in which I is the current, *r* the distance from the conductor, and H the force.—**Brazil law.** See ★*twin*¹, 3.—**Brewster's law**, in *optics*, the law that the tangent of the angle of complete polarization for a substance is equal to the index of refraction of that substance.—**Broun's law.** Same as *Broun's rule*. See ★*rule*¹.—**Buchan's law.** Same as *Buchan's rule*. See ★*rule*¹.—**Buys Ballot's law**, in *meteor.*, the law announced by Buys Ballot, in 1860, that "if on my meeting there is a difference between the barometrical readings at any two stations, a wind will blow on that day in the neighborhood of the line joining those stations which will be inclined to that line at an angle of 90° or thereabouts and will have the station where the reading is lowest on its left hand side." See *Buchan's* ★*rule*.—**Carlsbad law.** See *Carlsbad twin*, under *twin*¹.—**Carrington's law of solar rotation**, the law of the 'equatorial acceleration,' the explanation of which is still uncertain. It is generally supposed from the researches of Sampson and Wilsing to be a slowly dying survival from past conditions, but Ebert considers that he has shown it to be a necessary consequence of the sun's radiation of heat.—**Constitutional law.** See ★*constitutional*.—**Cosine law.** See *Lambert's law of* ★*cosines*.—**CR law.** Same as *Kelvin's* ★*law*.—**Coulomb's law**, in *elect.*, the law that the force with which two electrostatic charges attract (or repel) each other is inversely proportional to the square of the distance between them and directly proportional to the product of the two quantities of electricity. The corresponding law for magnetic poles, namely, that two poles of strength m_1 and m_2 respectively attract (or repel) each other with a force directly proportional to their product $m_1 m_2$, and inversely proportional to the distance between them is also known as *Coulomb's law*.—**Donders's law**, in *physiol. optics*, the law, formulated by the Dutch oculist F. C. Donders, that the orientation of the eye for any position of the line of vision is constant, no matter by what path the line of vision may have been brought to this position.—**Dove's law of the rotation of winds.** See ★*wind*².—**Draper's law**, the law that all bodies begin to become visibly incandescent at the same temperature—the temperature of initial visibility, stated by Draper to be 525° C., but really dependent upon the condition of the eye. The first visual sensation received is now known to be a sense of brightness, which precedes all color-sensation, instead of the sensation of red as described by him. The first color-sensation, as the body observed increases in temperature, is that of the region of maximum luminosity in the spectrum—a yellow-green.—**Engel's law**, in *polit. econ.*, the principle that with the increase in the income of a family the percentage of expenditure for food decreases; the percentage for clothing remains approximately the same; the percentage for rent, fuel, and light does not vary; and the percentage for education and other higher needs increases: named from Dr. Ernst Engel, who established this principle by means of a detailed study of family budgets.—**Fermat's law**, in *optics*, the law that when light from a point P_1, is reflected to a point P_2, or refracted to a point P_3, the path of the ray is that which can be traversed in a minimum of time. Also called the *principle of least time*.—**Ferrel's law**, in *meteor.*, a law, announced by William Ferrel in 1854, in accordance with which a body moving in any direction along the surface of the rotating earth experiences a deflecting force pushing it toward the right in the northern hemisphere and toward the left in the southern by an amount that varies directly as the velocity of the body and as the sine of the latitude. From this law Ferrel, in 1856, deduced his theory of the general circulation of the atmosphere and the ocean, and the rotation of the winds in storms. Ferrel's law had also been recognized by Poisson in 1827 as applicable to cannon-balls, but its importance to meteorology was first perceived by Ferrel.—**Fourier's law.** (*a*) In *math.*, a law stating that any periodic function of a single variable period *p*, which does not become infinite at any phase, can be expanded in the form of a series consisting of a constant term together with a double series of terms, one set involving cosines and the other sines of multiples of the phase. Thus, if $\phi(x)$ is a periodic function of the variable *x* having a period *p*, then



Fermat's Law.

$$\phi(x) = \sum_1^\infty i\ A_i \cos\frac{2i\pi x}{p} + \sum_1^\infty i\ B_i \sin\frac{2i\pi x}{p}.$$

(*b*) In *acoustics*, the law that "any vibrational motion of the air in the entrance to the ear, corresponding to a musical tone, may be always, and for each case only in a single way, exhibited as the sum of a number of simple vibrational motions, corresponding to the partials of this musical tone." *H. von Helmholtz* (trans.), Sensations of Tone, p. 34.—**Fourier's law of conduction**, the law that the quantity of heat *w*, passing across a given area, q, within a conducting substance is $w = qk\frac{dx}{dt}$, where k is the conductivity of the substance and $\frac{dx}{dt}$ is the temperature gradient.—**Fresnel-Arago law**, the law that rays polarized at right angles to each other do not interfere when brought into the same plane of polarization, provided that they come from an unpolarized ray. Such rays, if they come from a polarized ray, interfere when brought to the same plane of polarization.—**Fres-**

nel's law, the law that in crystals the velocities of the two light-waves are proportional to the largest and smallest radii vectors of the oval section of the wave-surface, made by a plane through the center of the surface and parallel to the wave-front. **Froude's law,** in *naval arch.*, a particular case of the general mathematical law of geometrical and dynamic similitude, but independently derived by W. Froude from the study of resistance of ship-models towed in an experimental model basin. In the statement of this law, considering a model and a vessel of identical form but of different dimensions, the corresponding speeds of the model and the vessel are in the same ratio as the square roots of the homologous dimensions (as the lengths). At corresponding speeds, the wave-systems set up in the water are of the same form and, by Froude's law, the wave making resistances of the model and of the vessel are in the same ratio as the cubes of the linear dimensions, or as the displacements. The frictional resistance of the model and of the vessel are determined by appropriate calculations at the corresponding speeds. From the total measured resistances of the model towed in the experimental basin at various speeds, the curve of resistance (which see, under ★*curve*) of the full-sized ship at corresponding speeds can thus be determined and from it the effective horse-power required to drive the ship at any given speed can be obtained. Also called the *law of comparison.*—**Galton-Pearson law of ancestral heredity.** See *ancestral* ★*inheritance* (*a*) and (*b*). **Galton's anticyclonic law,** the law that in regions where barometric pressure is above the average, the wind is blowing outward and around in the direction of the movement of the hands of a watch and opposite to the cyclonic circulation. The law was announced by Galton in 1863 from the study of synoptic weather-charts.—**Galton's law of ancestral inheritance.** See *ancestral* ★*inheritance* (*a*). **General public laws.** Same as ★*statutes at large.*—**Gompertz's law of mortality,** a law of mortality based upon the assumption that there is with increasing age "an increasing inability to withstand destruction," the force of mortality therefore increasing in geometrical progression. This is expressed by the formula $\mu_x = Bc^x$, in which μ_x represents the force of mortality, B the basic constant number, and c the constant number involved in the geometrical increment, x being the age and indicating the power to which c is raised. See *mortality.*—**Graham's law,** the law that the rate of efflux of a gas is inversely proportional to the square root of its density.—**Grassmann's law,** a fact stated by Hermann Grassmann in 1863, to the effect that where in an Indo-European word there were two aspirates in the same or successive syllables the first of these aspirates was in Sanskrit changed into the corresponding media, and in Greek into the corresponding tenuis. An example is Greek τθριχος (gen. of θρ ξ, hair), changed to τριχος.—**Haeckel's law.** Same as *biogenetic* ★*law.*—**Hann's law,** an expression for the diminution of moisture with altitude in the atmosphere according to the law that the vapor-tension is an exponential function of the altitude above sea-level, quite analogous to the ordinary atmospheric pressure.—**Henry's law,** in *phys. chem.*, the law that a given volume of any solvent at constant temperature will dissolve quantities by weight of a gas in contact with it which are proportional to the pressures of the gas: thus, water at 15° will dissolve five times as much carbon dioxid having a pressure of five atmospheres as of carbon dioxid having a pressure of one atmosphere.—**Hess's law,** in *phys. chem.*, the law that the amount of heat developed in a chemical process is the same whether it takes place in one step or in several steps. It is a special case of the law of the conservation of energy, and was discovered before the latter law was formulated: it is the foundation of thermochemistry.—**Hinrichs's law,** the law of distribution of large and small rainfalls in accordance with the law of chance.—**Hooke's law,** the law that in elastic bodies the ratio of stress to strain is constant. Hooke's law is rigorously true only for very slight deformations of a body.—**Interstate commerce law,** an act of the United States Congress, passed February 4, 1887, and since amended, by which the Interstate Commerce Commission was created. (See *interstate.*) Its principal objects were to prohibit discrimination in freight-charges and the pooling of freights by competing railroads, and to secure the arbitration of differences between corporations and employees.—**Jacobi's law,** in *elect.*, the law that the power of a motor reaches its maximum when the counter electromotive force is one half the impressed electromotive force, or when the speed of the motor is such that the current through the armature is one half that which would flow if the motor were at rest.—**Jevonian law,** the economic law of marginal utility (see ★*utility*), formulated by W. Stanley Jevons (but also by others before and after him), that the satisfaction afforded by successive increments of a commodity, when consumed, diminishes toward zero, or, passing through zero, becomes a negative utility or pain. The descending curve is usually assumed to be hyperbolic in form.—**Judge-made law,** judiciary law. The term is frequently used with some degree of opprobrium to indicate the overriding of the intent of legislatures by judicial construction of statutes.—**Kelvin's law,** in *elect.*, the law that the time-constant which expresses the speed of signaling through cables is proportional to the capacity of the line multiplied by its resistance. Also called the *KR* (or *CR*) *law.*—**Kirchhoff's law.** See *laws of* ★*radiation.*—**Kirkwood's law** or **analogy,** a supposed law, published in 1849, connecting the distances of the planets from the sun with their masses and axial rotations. It is discredited by later and more accurate data.—**Koch's law,** a rule for establishing the specificity of a pathogenic micro-organism: namely, it must be present in every case of the disease; inoculation of a susceptible animal with a pure culture of it must cause the disease; and it must be discoverable in the animal suffering from the disease so acquired.—**Kohlrausch's law,** in *phys. chem.*, the proposition that the molecular conductivity of an electrolyte at infinite dilution is the sum of two numbers, one of which depends solely on the cation and the other of which depends solely on the anion; or, that the velocity with which a given ion travels is constant for a given solvent and a given electromotive force, and does not depend upon the nature of the other ions which are present in the solution.—**KR** (or **CR**) **law.** Same as *Kelvin's* ★*law.*—**Kundt's law,** the law that, in anomalous dispersion, the index of refraction is abnormally increased as we approach an absorption-band from the infra side or side of greater wave-lengths and abnormally diminished as we approach the band from the ultra side.—**Lane's law,** the apparently paradoxical law that a gaseous sphere contracting under its own central gravity on account of the radiation of heat to outer space will rise in temperature as long as it remains purely gaseous, that is, so long as it does not become partially liquid or solid, or so dense that the laws of Boyle and Charles no longer hold good.—**Law of adaptation.** See ★*adaptation.* **Law of aggregation.** See ★*aggregation.*—**Law of ancestral heredity.** See *ancestral* ★*inheritance.*—**Law of comparison.** Same as *Froude's* ★*law.*—**Law of constant heat sums.** See ★*heat.*—**Law of constant proportion,** in *chem.*, the general fact that any particular compound substance in a pure state consists invariably of the same constituents united in the same proportion by weight.—**Law of Delaroche and Berard,** in *phys. chem.*, the law that for all elementary diatomic gases approximately in the perfect state, and for all gaseous compounds formed without condensation and approximately in the perfect state, the product of the molecular weight and the specific heat at constant pressure has the same value.—**Law of differentiation.** See ★*differentiation.* **Law of diffusion.** See ★*diffusion.* **Law of discrimination.** Same as *Weber's law* (which see, under *law*[1]). **Law of equilibration.** See ★*equilibration.*—**Law of frequency.** See *probability curve,* under *probability,* 2.—**Law of Gladstone and Dale,** a law for the relation between the index of refraction of liquids and their density. The law is expressed by the formula

$$\frac{n-1}{d} = \text{const.};$$

where n is the index of refraction and d the density of the liquid.—**Law of greatest gain.** See ★*gain*[1].—**Law of great numbers,** the law that if a great number of elements, each independently varying according to almost any law, are added, their sum will in general vary according to the ordinary law of error.—**Law of Guldberg and Waage.** Same as ★*law of mass action.*—**Law of integration,** the law that a social population tends to increase by excess of births over deaths, by excess of immigration over emigration, or by annexation of neighboring peoples, according to some relation of its culture and standard of living to its surplus energy. *Giddings,* Prin. of Sociol., p. 370.—**Law of interest,** in *psychol.*, the law or principle that those elements of a past experience are the most effective for recall which at the time of the experience received the greatest share of attention or aroused the highest degree of interest.

The influence of emotional states must be stated as a principal, but not an exclusive cause. It is summed up in what Shadworth Hodgson has called the *Law of Interest.* *Ribot* (trans.), Psychol. of Emotions, p. 174.

Law of inverse squares, the law governing the relation between the intensity of an effect, which emanates from a center and is transmitted equally in all directions, and the distance from the source. The intensity in such cases is inversely proportional to the square of the distance. The intensity of sound, of light, and of every form of radiation, when transmitted in isotropic media, is determined by the *law of inverse squares.* The gravitational attraction of two masses, the electric attraction or repulsion of two charged bodies, and the attraction or repulsion of two magnetic poles follow the same law.—**Law of least action.** Same as *principle of least action* (which see, under *action*).—**Law of least path.** Same as *Fermat's* ★*law.*—**Law of likeness,** in *psychol.*, the principle of association by similarity.

This . . . discussion . . . has led to the classification of the associations of memory, and two laws have been formulated: the one called the *law of likeness,* and the other the law of contiguity.

J. W. Powell, Truth and Error, p. 303.

Law of Malus, in *optics,* the law that when a beam of light, polarized by reflection, falls upon a second surface at the polarizing angle the intensity of the beam after the second reflection is proportional to the square of the cosine of the angle between the two planes of reflection. The law that "an orthotomic system of rays remains orthotomic after any number of reflections and refractions" (Drude's "Theory of Optics," p. 12) is also sometimes termed the *law of Malus.*—**Law of mass action.** See ★*action.* Also called *law of Guldberg and Waage.*—**Law of mental growth.** See ★*mental*[1].—**Law of migration.** See ★*migration.*—**Law of octaves,** in *chem.*, the generalized fact pointed out by Newlands in 1864 that if the elements are arranged in the order of their atomic weights, each member of the list presents a close analogy in properties with the eighth preceding and the eighth succeeding it. This a few years later in the hands of Mendelejeff and Lothar Meyer was developed into the now generally recognized periodic law.—**Law of parallelism,** a varying degree of probability that similar stages of human culture, or like institutions, in different parts of the world have sprung from like conditions rather than from any historic intercourse of now separated communities.—**Law of parsimony.** (*b*) The law that conscious beings try to attain a maximum of satisfaction with a minimum of effort or pain.

But the fundamental law of everything psychic, and especially of everything that is affected by intelligence, is the *law of parsimony.* *Ward,* Pure Sociol., p. 341.

Law of periodicity, the universal law of rhythm (Herbert Spencer, "First Principles") in its organic and social manifestations.—**Law of possession,** in *psychol.*, the principle that what is already in consciousness tends to remain. *Psychol. Rev. Mon. Sup.,* xiv. 85.—**Law of preference.** (*a*) The law of the relative influence of the ideals of force, pleasure, austerity, and self-realization in determining social choice. In populations as they are the lower ideals dominate, but in normal social evolution the higher ideals become increasingly influential. *Giddings,* Elements of Sociol., p. 168. (*b*) In the psychology of association, same as ★*law of interest.*—**Law of priorities,** the body of laws, decisions, and customs giving the distribution of water for irrigation in accordance with the order of first use. This law exists in various forms in most of the western arid States and protects the first users of water for irrigation against subsequent appropriators of it.—**Law of priority,** the principle that in the formal, or Latin, nomenclature of taxonomic or systematic biology the first name published for any group is to be taken as the valid, tenable, or correct name of that group. Any name subsequently applied to the same group is rejected, and is termed a *synonym.* In botany, formal nomenclature is treated as beginning with the general application of binary, or binominal, names to plants in Linnæus's "Species Plantarum" (1753). The law of priority is applied to the names of genera, species, and subspecies, and by some writers to the names of families, but not to the higher groups. A name dates not from the time when it was first used in a public lecture, or in manuscript, or as a garden or herbarium label, or even from its mere occurrence in a printed book, but from the time when it was established by publication in the nomenclatural sense of that word. A corollary of the law of priority is the principle of the rejection of homonyms. See ★*establish,* 8, ★*publication,* 5, and ★*homonym,* 3. **Law of progression.** See ★*progression.* **Law of psychical contrasts.** See ★*contrast.*

Law of psychical relations, in *Wundt's psychol.*, one of the three psychological laws of relation. Its essential content is "the principle that every single psychical content receives its significance from the relations in which it stands to other psychical contents," and its most complete expression is to be found in the processes of apperceptive analysis and the simple relating and comparing functions upon which this is based. See *law of psychical* ★*contrasts* and ★*law of psychical resultants.* *W. Wundt* (trans.), Outlines of Psychol., p. 323.—**Law of psychical resultants,** in Wundt's psychology, one of the three psychological laws of relation. It finds its expression in the fact that every psychical compound shows attributes which may indeed be understood from the attributes of its elements after these elements have once been presented, but which are by no means to be looked upon as the mere sum of the attributes of these elements. *W. Wundt* (trans.), Outlines of Psychol., p. 321.—**Law of psychophysical correlation,** in *psychol.*, the principle that "consciousness is inseparably bound up with the brain-process, and cannot take place in its absence." *C. A. Strong,* Why the Mind has a Body, p. 38.—**Law of rational indexes,** in *crystal.*, the fundamental law which states that the numbers expressing the ratios between the intercepts on the crystallographic axes of a crystal face must be rational: this law holds true for axes taken parallel to any three edges of the crystal.—**Law of recapitulation.** See ★*recapitulation,* 3.—**Law of reciprocal action,** in *sociol.*, the assumption that "social groups exhibit reciprocal effects that are fundamentally the same always and everywhere," and that groups behave toward each other otherwise than individuals normally do. *Gumplowicz.*—**Law of regularity,** the tendency of normal progress toward regularity of developmental change to follow a course mathematically expressed by a smooth curve.—**Law of relativity,** in *psychol.*, same as *the doctrine of the relativity of knowledge* (c). The doctrine of relativity goes back to the formula of Hobbes: "sentire semper idem et non sentire ad idem recidunt" (to think always the same thing and not to think at all amount to the same thing). Stumpf, in his "Tonpsychologie," distinguishes and criticizes five forms of the 'law' which plays a considerable part in certain psychological systems, for example in those of Wundt, Lipps, and Höffding.

We may now subsume all these phenomena—tonal intervals, light contrast, the geometrical increase of stimulus-intensity for equally noticeable sensation-differences—under one general law: the *law of relativity.* . . . We shall expect to find that the *law of relativity* is not restricted to the sphere of sensation, but is applicable in every case where the intensity of a mental process is quantitatively apprehended and compared with that of others.

W. Wundt (trans.), Human and Animal Psychol., p. 119.

Law of repetition, in *psychol.*, the principle of association by contiguity.

The law of association by contiguity would hold that letters or words occurring in relatively close succession, or simultaneously, . . . tend to fuse or coalesce. This is called also the *law of repetition.*

Psychol. Rev. Mon. Sup., xiv. 71.

Law of restraint, the law of the normal restraint of impulsive social action. Impulsive social action varies inversely with the habit of attaining ends by indirect and complex means.—**Law of retaliation.** Same as *lex talionis* (which see, under *lex*).—**Law of segregation.** (*a*) The tendency of like units to collect in one place, group, or arrangement, under the common action of incident forces. (*b*) The numerical law to which the descendants of Mendelian hybrids conform. See *ancestral* ★*inheritance.*—**Law of sensation-intensities,** in *psychophys.*, Weber's law. *W. Wundt* (trans.), Human and Animal Psychol., p. 33.—**Law of slip,** in *phys.*, the law that, at low pressures, the movement of a gas along a solid surface is the same as though the solid were withdrawn to a distance equal to twice the mean free path of the particles and were replaced by a layer of gas at rest.—**Law of storms** (*naut.*). See ★*hurricane distance.* **Law of substitution,** in *polit. econ.*, the law according to which producers who are not using the most economical methods are impelled to substitute those methods for the more costly ones which they are using; also, the law according to which society substitutes the more efficient employers of labor and capital for the less efficient. *Alfred Marshall,* Prin. of Economics (4th ed.), p. 420.—**Law of sympathy,** the law that "the degree of sympathy decreases as the generality of resemblance increases," *Giddings,* Elements of Sociol., p. 67.—**Law of the circle.** See ★*circle.*—**Law of the Medes and Persians,** something impossible to alter: referring to Dan. vi. 12.—**Law of zones,** a law relating to the appearance of sun-spots on certain zones, at certain times in the period of spot-frequency: often referred to as *Spoerer's law.*—**Laws of imitation,** the laws (formulated by Tarde) of the causes and progress of imitation and of the relation of imitations to one another: especially the laws (1) that in the absence of interference imitations spread in a geometrical progression, and (2) that imitations are refracted by their media, so that the copy never exactly reproduces the original, whence arise

variations and inventions among all social forms and products. **Laws of liberty,** the laws of the social causes determining the amount of liberty enjoyed in any given population; especially the laws (Giddings, "Elements of Sociology") (1) that liberty is proportional to the predominance of rational over sympathetic and dogmatic like-mindedness, and (2) that coercion diminishes with the decrease of ethnic and moral diversity and of inequality. **Laws of radiation.** See ★*radiation.* **Laws of twinning.** See *twin*[1]; also, ★*twin*[1].—**Le Chatelier's law of radiation,** the empirical law that the intensity of radiation of red light is

$$I = 10^{6.7} \cdot T^{-\frac{3210}{T}},$$

where I is the intensity and T is the absolute temperature of the radiating body. **Listing's law,** in *physiol. optics,* a law of eye movement, first suggested by J. B. Listing, and phrased by Helmholtz as follows: "If the line of regard travel from the primary to any other position, the torsion of the eyeball in this second position is the same as if the eye had turned about a fixed axis at right angles to the first and second directions of the line of regard." *E. B. Titchener,* Exper. Psychol., I. ii. 244. See *Donders's* ★*law.*—**Makeham's law of mortality,** a modification of Gompertz's law, expressed by the formula, $\mu_x = A + Bcx$, in which A represents chance, or the constant element in the force of mortality.—**Manebach law.** See ★*twin*[1], 3.—**Maxwell-Boltzmann law of the distribution of velocities,** the law, due to Maxwell and, in more general form, to Boltzmann, that the final distribution of the velocities of the molecules of a gas in equilibrium is of the same mathematical form as the distribution of errors of observation as determined by the theory of errors.—**Maxwell's law of partition,** in the kinetic theory of gases, the law that in a mixture of gases the average kinetic energies of the different sets of molecules tend to approach a common value, and that when the mixture is in equilibrium the kinetic energies of the various kinds of molecules are the same. **Maxwell's law of viscosities,** the law that the viscosity of a gas is independent of its pressure.—**Mendeléjeff's law.** Same as *periodic law.* **Mendel's law of ancestral inheritance.** See *ancestral* ★*inheritance.*—**Mitscherlich's law.** See the extract.

Already the researches just alluded to have afforded a final and irrefragable proof of the accuracy of Haüy's original conception that to every definite chemical substance there appertains a distinct and characteristic crystalline form, and have reconciled this with Mitscherlich's discoveries in isomorphism by revealing an exquisitely beautiful relationship, connecting very small angular differences which are found to occur between the crystals of the various members of isomorphous series with the atomic weight of the interchangeable elements composing them. This generalisation not only defines the real meaning, extent, and scope of *Mitscherlich's law,* but also proves that the supposed exceptions are not such, and, therefore, the absolute truth of the rule that difference of chemical composition does in all cases involve difference of crystalline form. *Nature,* April 4, 1907, p. 529.

Moses's law, a piratical term for the laying on of thirty-nine lashes on the naked back. The order was, "Lay on forty, less one."—**Müllerian law.** See the extract.

A very interesting set of phenomena are connected with the acanthin skeletons (of Acantharia) where the spicules are not deposited in the calymma, but are formed at the centre of the central capsule, growing out centrifugally into the extra-capsular plasm and resulting in a skeleton of radiating spines. With a few exceptions these spines are twenty in number, and are arranged in a certain geometrical order which has been characterized as the *Müllerian law.* The points of the spines fall in five circles parallel to the equator, and there are four spines to each circle. The spines are named, according to this scheme, polar, tropical, equatorial, sub-tropical, and sub-polar. *Calkins,* Protozoa, p. 77.

Müller's law. Same as *Müllerian* ★*law.*—**Nysten's law,** the rule that rigor mortis appears first in the facial muscles and passes downward, involving the muscles of the lower extremities last.—**Ostwald's dilution law.** See ★*dilution.*—**Oswald's law,** in *Eng. law,* a law, named from Oswald, Bishop of Worcester, passed about 964, which caused the ejection of married priests and the introduction of monks into the churches.—**Pamphlet laws.** Same as ★*statutes at large.*—**Pascal's law,** in *hydros.,* the law that in a fluid at rest the pressure is the same in all directions and that, aside from the differences of pressure produced by the action of gravity, the pressure within the fluid is everywhere the same.—**Paschen's law.** See *laws of* ★*radiation.*—**Pearson's law of ancestral inheritance.** See *ancestral* ★*inheritance.*—**Pericline law.** See *pericline twin,* under *twin*[1]. **Personal-liberty laws.** See *personal.*—**Pflüger's law,** the law that stimulation of a nerve occurs with the disappearance of anelectrotonus and the appearance of catelectrotonus.—**Phonetic law,** a law supposed to govern phonetic changes. The phrase has been taken much too seriously by some writers, who treat it with a reverence not deserved by a figure of speech. The phrase properly expresses the fact that certain changes affect or appear to affect all members of the same class, in the same period of the same language, or universally, and the fact that all phonetic changes and sequences are restricted by physiologic conditions within a certain range of variation. What appear to be exceptions to an ascertained or accepted law are explained by the interference of other laws or facts. In this way there is a basis for the frequent statement that phonetic laws are invariable. The law is often only a general tendency, liable to be checked by any accident of speech or time. Thus, the law that Indo-European *t* shall be Teutonic *th* (as in Latin *tenuis* = E. *thin*) is nullified by the law that an Indo-European *t* after *s* is thereby preserved (Indo-European *sta-,* E. *sta-nd,* etc.).

The word law has been ill chosen for use in this connexion. In *phonetic laws* there is no element which can be identified as coming under the definition of a law as propounded by a jurist like John Austin. *Encyc. Brit.,* XXXI. 674.

Poiseuille's law, the law that the quantity of liquid which will flow through a capillary tube varies directly as the pressure and the square of the cross-section of the tube, and inversely as the length of the tube and the coefficient of viscosity.—**Pole's law,** in *photom.,* an empirical law or rule for the variation in the light from a gas-burner, with the supply of gas. It is given by the formula $L_n = L_0 + A(c - q)$ where L_n is the intensity when the supply of gas is normal and equal to c, L_0 is the intensity when the supply is q and A is a constant depending on the quality of the gas.—**Poynting's law,** in *elect.,* the law that when a conductor carrying current is in an electrostatic field (as in the case of a wire connecting the plates of a charged condenser, or in the case of a cable), the transfer of energy takes place through the dielectric along paths which are the intersections of the equipotential surfaces of the electrostatic field with the equipotential surfaces of the electromagnetic field due to the current.—**Prevost's law,** the law of the exchange of radiation between neighboring bodies by virtue of which a body approaches the temperature of its surroundings and tends to maintain that temperature indefinitely. The radiation received when that condition is reached must then always equal that emitted. See ★*radiation.*—**Public laws.** Same as ★*statutes at large.*—**Purkinje's law,** in *physiological optics,* the law that of two surfaces, differing in color but equally bright when moderately illuminated, the one which sends light of greater wave-lengths to the eye will appear relatively brighter under intense illumination and darker under feeble illumination than the other.—**Quételet's law,** in *phenology,* the law that a given stage of growth requires a given definite preceding climatic condition.—**Raines law,** a law (named from Senator John Raines, its chief promoter), enacted in 1896 and amended in 1897, governing the sale and taxation of liquors in the State of New York. Among its provisions are the abolition of the existing excise boards, the appointment of commissioners of excise, high taxation of the liquor-traffic, local option of towns, etc.—**Raoult's law,** in *phys. chem.,* the important empirical law that if the same number of molecules of different substances be dissolved in a given number of molecules of the solvent the depressions of the freezing-points of the solutions are equal. A similar law is that in the conditions specified the diminutions of the vapor-pressure of the solutions are equal. The importance of these laws consists in the fact that they put us in possession of methods of determining the molecular weights of substances whose vapor densities cannot be measured.—**Religious association** or **corporation law.** See ★*religious.*—**Richter's law of neutralization,** in *chem.,* the general fact pointed out by Richter at the close of the eighteenth century, that when any two neutral salts undergo 'double decomposition' by interchange of their acid and basic constituents the two new salts resulting from such interaction are also neutral in character. **Rudolphi's dilution law, van t'Hoff's dilution law.** See *Ostwald's* ★*dilution law.* **Session laws.** Same as ★*statutes at large.*—**Siemens's law,** in *elect.,* the law that the efficiency of a motor approaches unity as the ratio of the counter-electromotive force to the impressed electromotive force increases; or, expressed mathematically, that $\frac{w}{W} = \frac{e}{E}$, where $\frac{w}{W}$ is the efficiency, e the counter-electromotive force, and E the impressed electromotive force.—**Sine law,** in the theory of lenses, the law which defines the conditions under which a system of lenses will produce images free from aberration. The law is that the sines of the angles of inclination of any two conjugate rays passing through a point in the object and the corresponding point in its image must have a constant ratio. Lens systems for which the sine law is fulfilled are said to be *aplanatic.*—**Snell's law,** in *optics,* the law that in the refraction of light the sines of the angles of incidence and refraction bear a constant ratio to each other; the law of refraction.—**Spinel law.** See *spinel twin,* under *twin*[1].—**Spoerer's law.** Same as ★*law of zones.*—**Stefan-Boltzmann law.** Same as *Stefan's* ★*law.*—**Stefan's law,** the empirical law, established by Stefan, that the total radiation from a body varies directly as the fourth power of the absolute temperature of the body. See *laws of* ★*radiation.*—**Stokes's law,** the law that the wave-length of the light emitted by a fluorescent body always exceeds that of the exciting light. See ★*luminescence.*—**Talbot's law, Talbot-Plateau law,** in *psychol. optics,* the principle that the color and brightness of the uniform field produced by a rapid succession of variously colored and variously bright stimuli are the same as they would have been had the reflected light been, from the first, uniformly distributed over the field; and that increase of rapidity of succession, beyond the point required for fusion, produces no change in the result. The law was formulated by Talbot in 1834 and verified by Plateau in the following year. *E. C. Sanford,* Exper. Psychol., p. 146.—**The great law,** a name given to the first code of laws of Pennsylvania. It was established in 1682 and is celebrated for the provisions it contained for liberty of conscience.—**Thomsen's law,** in *phys. chem.,* the supposed rule that the electromotive force of a galvanic cell, in volts, is equal to the chemical energy of the reactions going on in the cell, measured in calories, divided by a constant. The rule holds good when the electromotive force of the cell does not change with change of temperature. Since this is approximately the case with the Daniell cell, which was first studied, the rule obtained a certain recognition.—**To go to law,** to seek legal redress or relief in a court of law. **Torricelli's law,** in *hydraul.,* the law that the velocity (v) of efflux of a liquid flowing out of a vessel under a constant head *h* is $v = \sqrt{2gh}$, where *g* is the acceleration due to gravity. It follows from this law that the velocity of efflux is that which the liquid would acquire by falling freely under the action of gravity from the level of the surface of the liquid in the vessel to the orifice; also, that for a given head the velocity of efflux is independent of the density of the liquid and for a given pressure at the orifice is inversely proportional to the square root of the density.—**Van der Kolk's law,** in *neurol.,* the law that the motor fibers in any nerve are distributed to the muscles which move the part to which the sensory fibers of the same nerve pass.—**Von Baer's law.** See *Baer's* ★*law* (*b*).—**Watt's law,** the law that the vapor pressure in two connecting vessels, differing in temperature but containing the same liquid, is that determined by the lower temperature.—**Weber-Fechner law,** in *psychophysics,* the Fechnerian statement or formulation of Weber's law, that sensation increases as the logarithm of stimulus.

Fechner gave this law a precise phrasing and a mathematical formulation, and . . . put it to elaborate experimental test. Although his modesty led him to name it after Weber, we might more correctly term it Fechner's Law or the *Weber-Fechner Law.* *E. B. Titchener,* Exper. Psychol., II. i. 29.

Wien's law, the law of the variation of radiation with temperature expressed by the equation

$$I_\lambda = C_1 \lambda^{-5} e^{-\frac{C_2}{\lambda T}},$$

where I_λ is the intensity of the wave-length λ in the spectrum of a glowing body, e is the logarithmic base, T the absolute temperature of the body, and C_1, C_2 are constants. See *laws of* ★*radiation.*—**Wundt-Lamansky law,** in *physiol. optics,* the law that the line of vision, in traversing a vertical plane parallel to the frontal plane, follows straight lines in the vertical and horizontal directions, but takes curved paths for all intermediate movements. The law was formulated by Wundt in 1862 and by Lamansky in 1869.

L. A. W. An abbreviation of *League of American Wheelmen.*

law-hand (lâ′hand), *n.* The form of handwriting customarily used in legal documents.

lawine (lä′win, G. lä-vē′nę), *n.* [G. *lawine* (lawíne), *lauwine* (lauwíne), *lauine, loewin,* ⟨ Sw. dial. *lawine* (láwine), *lauine* (laüine), *lauwin, lauwi, laui,* in Appenzell *läuena, läuela,* older *lewe,* in Tyrol *lau, läne,* in the Bavarian Alps *læuen, læun, læunen, læn, læuen,* etc., an avalanche; OHG. *lewinna,* a torrent, MHG. *lēne,* an avalanche, *liune,* a thaw; appar. ⟨ ML. *lavina, lavine,* an avalanche, ⟨ L. *labi,* fall: see *lapse.* But the forms in part seem to depend on G. *lau,* tepid: see *lew*[2], *a.*] An avalanche.

law-lordship (lâ′lôrd ship), *n.* The official position of a law-lord.

lawman, *n.* **3.** A lawyer.

law-merchant (lâ′mêr′chant), *n.* See *law*[1].

lawn-grass (lân′gras), *n.* A grass suited to forming lawns and used for this purpose.

A good lawn-grass must make a close and permanent turf and must therefore be a perennial creeping by rootstocks or otherwise; it must be of a pleasing color, a deep rich emerald green (lasting through the season) being the most desirable; and it must be soft in texture, this depending partly on width of leaf and partly on flexibility. The principal lawn-grasses of the United States are Kentucky blue-grass (with which white clover may be mixed), creeping bent, and Rhode Island bent; but where these cannot be grown substitutes are employed, as Bermuda grass in the South, and St. Augustine grass on the South Atlantic and Gulf coasts.—**Charleston lawn-grass.** Same as *St. Augustine* ★*grass.*—**Japanese** or **Korean lawn-grass,** a creeping grass, *Zoysia pungens,* native on the shores of tropical and eastern Asia, Australia, and New Zealand. It is both a good sandbinder and a good grazing-plant, and, though of harsh texture, an excellent lawn-grass for sandy soils: specially prized in the far East for tennis-courts.—**Mexican lawn-grass,** *Opizia stolonifera,* an extensively creeping diœcious grass, similar in habit to Bermuda grass but more delicate. It forms a thick sod over all exposed surfaces, and is suitable for use in public squares, etc., while it is also liked by cattle and is useful for pasturage.

lawn-hockey (lân′hok″i), *n.* A lawn-game, a modification of field-hockey.

lawn-party (lân′pär″ti), *n.* An outdoor party.

lawsonite (lâ′son-īt), *n.* [Named after Prof. A. C. *Lawson* of the University of California.] A silicate of aluminium and calcium occurring in grayish-blue orthorhombic crystals in crystalline schists in California and elsewhere.

lawyer, *n.* **3.** (*b*) Same as *gray snapper.* See *snapper.*—**Bush lawyer.** See *bush-lawyer.*—**Penang lawyer.** See *penang-lawyer.* In England the name is often misapplied to the Malacca cane.

lawyer-cane (lâ′yêr-kān), *n.* Same as ★*lawyer-palm.*

lawyer-palm (lâ′yêr-päm), *n.* In Australia, *Calamus australis,* a strong, climbing palm, with stems several hundred feet long and less than an inch in thickness. Its long leaves and tendrils are covered with sharp, recurved spines and make it a serious obstacle to travelers.

lawyer-vine (lâ′yêr-vīn), *n.* In Australia, any one of several spiny, trailing or climbing vines, as the bush-lawyer, *Rubus australis,* the lawyer-palm, *Calamus australis,* and *Flagellaria Indica.* See *Flagellaria.*

lax-fisher (laks′fish″êr), *n.* One who catches salmon at the time of their ascent of rivers in the spawning season.

laxifoliate (lak-si-fō′li-āt), *a.* Same as *laxifolious.*

laxism (lak′sizm), *n.* The principles or interpretations of the laxists.

laxitude (lak′si-tūd), *n.* [L. **laxitudo* for *laxitas,* ⟨ *laxus,* lax.] Laxity. [Rare.]

Laxmannia (laks-man'i-ä), *n.* [NL. (Forster, 1776), named in honor of Eric *Laxmann* (1737–96), a Finnish priest who made extensive botanical collections in Siberia.] A genus of plants of the family *Asteraceæ*. See *Petrobium*.

lay[1], *v.* **I.** *trans.* **20.** To aim or point, as a cannon.

At the moment of firing [coast-defense guns], their positions of course become defined; but the difficulty of locating them sufficiently for accurate *laying* on board ship may nevertheless be considerable.
Encyc. Brit., XXVIII. 452.

To lay away. (*c*) In *tanning*, to spread (hides) in vats with bark between the layers, tan liquor being added. *C. T. Davis*, Manuf. of Leather, p. 179. **To lay down.** (*a*) In *oyster culture*, to plant, as an oyster bed.—**To lay in.** (*b*) In oil-printing, to place the first masses of color on a canvas. (*c*) To eat (something) voraciously; tuck in a large amount of: as, he *laid in* dinner enough for two days. [Colloq.]—**To lay on.** (*d*) In *printing*, to place, as paper to be printed, upon the feed-board; also, to place (a chase of type) upon the bed of the printing-press. (*e*) To acquire, as flesh or weight: said of cattle which are being fattened, etc.—**To lay under,** to put or place in a condition specified or indicated by a following complementary word or clause: as, *to lay* (one) *under* the necessity of doing some particular thing; *to lay* (one) *under* obligation (to somebody); etc.

II. *intrans.*—**Lay aft** (*naut.*), an order to the crew to proceed toward the stern of the ship.—**Lay in** (*naut.*), an order to the men on the yards to gather in toward the mast; a command to leave the yard-arms and 'lay in' toward the slings.—**To lay forward** (*naut.*), an order to the crew to go toward the head of the ship.—**To lay in.** (*b*) To shut down or stop work: said of coal-mines.—**To lay out on one's oars** (*naut.*), to pull a more powerful stroke and drive the boat faster through the water.

lay[1], *n.* **9.** Terms or conditions, as of a bargain. [U. S.]

Lay, terms or conditions of a bargain; price. Ex. I bought the articles at a good *lay*; he bought his goods on the same *lay* that I did mine. *Pickering*, Vocabulary.

Lang's lay, a method of laying the strands, in making a rope, in which they are twisted in the same direction as the individual wires or fibers instead of in the opposite direction.—**Lay of a cable,** the distance, measured along the axis, within which the helically wound strands of a cable make one complete turn around the axis.

lay-away (lā'a-wā'), *n.* [*lay away*: see *lay*[1], *v.*] The vat in which hides are laid for tanning; also, the liquor in which they are steeped. *C. T. Davis*, Manuf. of Leather, p. 383.

lay-band (lā'band), *n.* A band or string for tying a skein or lea of thread or yarn.

lay-boat (lā'bōt), *n.* A boat at anchor.

lay-by (lā'bī), *n.* **1.** A sluggish place in a river, or still water artificially inclosed, in which barges can be laid by when out of commission.—**2.** Something laid by or saved, especially money. *N. E. D.*

lay-day, *n.* **2.** *pl.* Same as ★*lie-days.*

lay-down (lā'doun), *a.* Said of a collar which is laid or folded over on itself; not standing; lay-over. Also used substantively.

layer, *n.* **7.** In *oyster culture*, an artificial oyster-bed.—**8.** In *cattle-raising*, a field or yard in which cattle ready for shipment are kept.—**9.** In *phytogeog.*, one of several strata of plants of different vegetation forms met with in some formations, especially in forests. Thus in a forest, beneath the facies, or primary layer consisting of large trees, there may be successively a layer of small trees and shrubs, one of bushes, then upper, middle, and lower herbaceous layers, and finally a ground-layer of mosses, lichens, etc. F. E. Clements regards these layers as vertical zones. See ★*zone*, 6. *Pound and Clements.*—**Baillarger's layer.** Same as *Baillarger's* ★*line.*—**Bowman's layer,** a layer of connective tissue between the cornea and the conjunctiva. Also called *Bowman's membrane.*—**Crookes's layer,** the layer of vapor underlying a liquid in the spheroidal state and insulating it from a hotter surface beneath; also, the dark space at the cathode of a vacuum-tube, usually known as *Crookes's space.*—**Huxley's layer.** Same as *Huxley's* ★*membrane.*—**Langhans's layer,** the epithelial layer of the villi of the chorion.—**Myophan layer,** in certain ciliates, as *Stentor* and *Vorticella*, the fibrillated ectoplasmic or cortical portion of the body or of the contractile stalk. Also *myophane layer.*—**Prismatic layer,** in mollusk-shells, the middle layer, consisting of minute prisms of calcium carbonate separated by thin fibers of conchiolin. It lies between the periostracum and the nacre.—**Rauber's layer,** the outermost of the three cell-layers which form the very

Rauber's Layer.

A vertical section across the embryonal area of the blastodermic vesicle of a rabbit at the end of the fifth day, highly magnified. After Kölliker. *a*, outer layer of cells of the embryonal area, or Rauber's layer; *b*, epiblast; *c*, hypoblast.
(From Marshall's "Vertebrate Embryology.")

young mammalian blastodisc. This external layer, which later disappears completely, covers the ectoderm.—**Skeletogenous layer,** in *embryol.*, the layer of condensed mesoderm cells immediately surrounding the notochord of the vertebrate embryo and giving rise to the axial skeleton.—**Sluggish layer,** the portion of the blood-stream, in the smallest vessels, in which the white corpuscles are seen slowly rolling along the wall of the vessel, while in the center of the stream the red corpuscles are propelled rapidly. **Still layer.** Same as *sluggish* ★*layer.* **Subcallosal layer,** a layer of nerve-fibers on the ventral or lower side of the callosum.

layerage (lā'ėr-aj), *n.* In *hort.*, the subject of making layers: the process of layering and all that is connected with it. *L. H. Bailey.*

layer-cake (lā'er-kāk), *n.* A cake made in layers, generally with a filling between the layers and an icing over the top.

layered (lā'ėrd), *a.* Arranged in layers; consisting of a specified number of layers; covered with something: as, *layered* with mud.—**Layered formation.** See ★*formation.*

layer-stool (lā'ėr-stōl), *n.* A root from which layers are produced. *N. E. D.*

laying-away (lā'ing-a-wā'), *n.* The process of tanning hides for sole-leather by spreading them in vats with alternate layers of bark. *C. T. Davis*, Manuf. of Leather, p. 179.

laying-house (lā'ing-hous), *n.* In *rope-manuf.*, the building in which the laying of the strands for the completed rope is done.

laying-tool (lā'ing-tōl), *n.* A rectangular flat trowel used by plasterers in laying and smoothing plaster.

laying-trowel (lā'ing-trou″el), *n.* Same as ★*laying-tool.*

laying-walk (lā'ing-wâk), *n.* A ropewalk; a long building where ropes are laid.

layka (lä'i-kä), *n.* [Aymará and Quichua.] A society of shamans, among the mountain Indians of Bolivia and Peru, who are diviners by means of coca-leaves, spiders, and other things. They also are shamans of the hunt, and rain-makers.

lay-over (lā'ō″vèr), *n.* **1.** In *railroading*, a train, particularly a freight- or local passenger-train, which is detained on a siding to allow an express-train to pass. [Colloq., U. S.]—**2.** Same as ★*lay-down.*

lay-race (lā'rās), *n.* That part of the loom-lay or lathe upon which the shuttle travels as it is thrown from one side of the lay to the other.

lay-shaft (lā'shâft), *n.* An independent shaft; a shaft which turns independently of the adjacent machinery. Such a shaft, driven by an independent engine, has been used to some extent for operating the valves of marine engines to secure constant speed; hence the term has come to be used for any shaft that operates the valves of an engine, as, for instance, the cam-shaft of a gas-engine.

The one *lay-shaft* paralleling the cylinders operates, through cams, all of the valve movements of the engine.
Elect. Rev., Sept. 17, 1904, p. 456.

lazar, *n.* **II.** *a.* Having a loathsome disease; leprous.

Lazaret fever. Same as *typhus fever.*

lazera (laz'e-rä), *n.* A catfish, *Clarias lazera*, found in African rivers.

lazuli-bunting (laz'ū-lī-bun″ting), *n.* Same as *lazuli-finch.*

lazuline (laz'ū-lin), *a.* [*lazuli* + *-ine*[1].] Of the color of lapis lazuli; bluish.

lazulitic (laz-ū-lit'ik), *a.* [*lazulite* + *-ic.*] Pertaining to, resembling, or containing lazulite.

lazurite (laz'ū-rīt), *n.* [ML. *lazur* (*azure lapis lazuli*) + *-ite*[2].] The sodium-aluminium silicate which forms the essential part of the ornamental stone lapis lazuli.

Lazy brand, in *stock-raising*, a cattle-brand so placed on the animal that its longer axis is horizontal, as ⊣, <, etc.

lazy-bar (lā'zi-bär), *n.* A portable iron bar placed across the opening of the fire-door of a furnace to serve as a rest for the fire-tools when they are in use in cleaning the fire.

lazy-jack, *n.* **2.** *Naut.*, a length of rope rove through a thimble, seized on to the boom-topping lift, and made fast to the boom. When the sail is lowered the jacks prevent the folds of canvas from falling on the deck.

lazy-scissors (lā'zi-siz″ȯrz), *n.* *sing.* and *pl.* Same as *lazy-tongs.*

L. B. An abbreviation (*b*) of the Latin *Legum Baccalaureus*, Bachelor of Laws.

L-bar (el'bär), *n.* A bar of metal, which has a cross section resembling the capital letter L; an angle-bar; an angle-beam. Also called *L-beam.*

L-beam (el'bēm), *n.* Same as ★*L-bar.*

l. b. w. In *cricket*, an abbreviation of *leg before wicket.* A batsman is out leg before wicket if with any part of his person he stops a ball which, in the opinion of the umpire at the bowler's wicket, has been pitched in a straight line from it to the striker's wicket and would have hit it. *Hutchinson*, Cricket, p. 63.

L. C. An abbreviation (*a*) of *Lord Chamberlain*; (*b*) of *Lord Chancellor*; (*c*) of *Lower Canada.*

l/c. An abbreviation of *letter of credit.*

L. C. B. An abbreviation of *Lord Chief Baron.*

L. C. C. An abbreviation of *London County Council.*

L. Ch. An abbreviation of the Latin *Licentiatus Chirurgiæ*, Licentiate in Surgery.

L. C. J. An abbreviation of *Lord Chief Justice.*

l. c. m. An abbreviation of *least common multiple.*

L. C. P. An abbreviation of *Licentiate of the College of Preceptors.*

Ld. An abbreviation of *Lord.*

L. D. An abbreviation (*a*) of *Lady-day*; (*b*) of *Light Dragoons*; (*c*) of *Low Dutch*; (*d*) [*l. c.*] of the Latin *litera dominicalis*, dominical letter; (*e*) same as *L. H. D.*

L. Div. An abbreviation of *Licentiate in Divinity.*

Ldp. Lp. Contractions (*a*) of *Ladyship*; (*b*) of *Lordship.*

L. D. S. An abbreviation (*a*) of *Latter-day Saints*; (*b*) of *Licentiate of Dental Surgery.*

leach[2], *v. t.* **3.** To extract metal from (an ore) by subjecting it to chemical reagents which take the metal into solution.

The experiments in the concentration and in the *leaching* of the ore have taken shape in the erection of a small metallurgical plant.
R. D. Salisbury, in Geol. Surv. of New Jersey, 1900, [p. xxvii.

leach[2], *n.* **4.** A tank in which hot water is passed through ground bark to obtain tannin. *Mod. Amer. Tanning*, p. 27. Also *latch.*—**Leach brine.** See ★*brine*[1].

leach-hole (lēch'hōl), *n.* A tubular cavity dissolved out of rocks by circulating waters.

leaching (lē'ching), *n.* **1.** Same as *lixiviation.*—**2.** The process of obtaining tannin from bark. *C. T. Davis*, Manuf. of Leather, p. 48.

leach-tank (lēch'tangk), *n.* A tank in which metallic ores are separated by subjecting them to chemical reagents and subsequently washing and draining.

lead[1], *v. i.*—**To lead through,** in *whist* and *bridge*, to make it difficult for the second player on a trick to know what to do: as, *to lead through* a singly guarded king in the dummy, the position of the ace not being known.—**To lead up to.** (*b*) In *card-playing*, to make a player fourth hand in any trick, as, in *bridge* for the pone to lead up to the dummy's weakness in a suit.

lead[1], *n.* **3.** (*c*) In Australia, an old or 'dead' river-bed in which gold is found.

7. In *elect.*: (*c*) The advance of phase of one electric wave over another: a term used mainly in alternating-current circuits.—**10.** In *forestry*, a snatch-block with a hook or loop for fastening it to convenient stationary objects: used for guiding the cable by which logs are dragged.—**11.** A flock of flying wild-fowl.

After the sportsmen were in the hole and everything was ready, Stewart called "Here comes a *lead* from the west." *Forest and Stream*, Jan. 24, 1903, p. 68.

Albany lead, in *whist*, an opening to show four trumps and three of each plain suit: so named because made popular by the Albany Whist Club.—**American leads,** in *whist*, leads that show the number of cards in the suit led. They are never used in bridge.—**Angle of lead,** in *elect.*, the angular displacement by which an alternating current leads the electromotive force: the opposite of ★*lag* in an alternating-current circuit.—**Angular lead,** in describing a valve-motion operated by an eccentric, or in adjusting it, an angular displacement of the center line of the eccentric ahead of its normal relation to the center line of the crank, which is given so that the opening of the port may precede or lead the beginning of the piston-stroke by a determined amount.—**Blue lead,** a blue-stained stratum of gold-bearing gravel. [California.]—**Deep lead,** in *Australian gold-mining*, an ancient river-course, which is now only disclosed by deep-mining operations.—**Forward lead** in *elect.*, a rotation of the brushes of a generator or motor from the neutral position in the direction of rotation of the commutator.—**Hysteretic lead,** in *elect.*, the difference of phase between the magnetic flux and the magnetomotive force in an alternating circuit containing iron.

Due to the *hysteretic lead a*, the lag of the current is less . . .
Steinmetz, Elements of Elect. Engineering, p. 50.

Irregular lead, in *whist* and *bridge*, a lead which is a departure from the usual custom, such as the 8 led from 10, 8, 6, and 4.—**Linear lead,** in a steam-engine, the linear distance by which the port is open when the piston begins its stroke.—**Negative lead,** in a steam-engine: (*a*) The angle through which the crank has turned from the dead-center when the valve opens to admit steam. (*b*) The linear distance which the valve has to travel, after the crank has passed the dead-center, before the valve opens.—**On the lead,** held by a chain or leather thong, as a dog.—**Original lead,** in *bridge* and *whist*, the suit first opened.—**Stringer lead,** a small veinlet, which is followed in the hope that it will conduct to larger bodies of ore.

lead², *n.*—**Chemical lead**, lead which is free from alloy of other metals, notably zinc and antimony: used in the assay processes and where the presence of other metals would unfit the lead for the required purpose. **Corroding lead**, refined lead suitable for the production of white lead by the corroding process. **Flintshire process of lead-smelting.** The reverberatory furnace employed in this process is provided with a bottom of gray slag and a low roof with a hopper for charging. The fire-bridge is always air-cooled, and there are three working-doors on each side. The cast-iron well in which the metal collects before tapping is placed in front of the middle door at the front of the furnace, and the cast-iron pot into which the metal is tapped is usually heated by a separate fireplace. The ore is roasted for about three hours, and is then reduced, and after being thickened with lime the charge undergoes a second calcination and is finally reduced and tapped. This sequence of operations is varied in accordance with the richness of the ores treated.—**Hard lead**, impure lead as it comes from the smelting-furnace.—**Lead chamber.** See ★*chamber.*—**Lead-chamber crystals, process.** See ★*crystal*, ★*process.*—**Lead chlorid**, $PbCl_2$, a white crystalline substance, soluble in hot water and to a small extent in cold water.—**Lead dioxid**, a heavy dark-brown powder, having the composition PbO_2, obtained by the action of nitric acid on red lead: used in the manufacture of friction-matches and in some forms of storage galvanic batteries. Also called *plumbic dioxid.*—**Lead fume**, the dust which is mechanically carried away with the gaseous products of combustion from a lead-smelting furnace. It consists chiefly of sulphate and oxid of lead, with small quantities of oxidized zinc, arsenic, and antimony, and the ash of the fuel. It is collected by deposition in flues, often of great length, and resmelted to recover the lead.—**Lead iodide.** See ★*iodide.*—**Lead peroxid**, the brown or puce oxid of lead, PbO_2: used in the manufacture of lucifer matches and in some storage batteries for the production of the electric current.—**Lead white.** Same as *white lead* (which see, under *lead²*).—**Oleate of lead**, a substance, commonly made by boiling together water, olive-oil, and litharge, which when melted and spread in a thin layer upon cotton cloth forms the lead-plaster or diachylon of the surgeon, valuable on account of its strongly adhesive character.—**Pattinson's white lead**, the trade-name of a white pigment, hydroxy-chlorid of lead (Pb(HO)Cl), made by precipitating a hot solution of lead chlorid with calcium hydroxid.—**Radioactive lead**, a substance formed by the disintegration of radium and the fourth of the series of radioactive disintegration-products following the emanation, for which reason it is known as *radium D.* It has not been found to emit a radiation, but slowly changes into other products, radium E, radium F, and radium G (polonium), which are always present unless the radiolead has been freshly prepared and are the source of both α- and β-rays. See ★*radio-lead.*—**Silver lead.** See ★*silver-lead.*—**Slag-lead**, an inferior lead obtained from smelting rich lead slag in a slag hearth.—**Spongy lead**, metallic lead separated from a solution of one of its salts in a loosely connected, imperfectly coherent mass, as in the working of some forms of storage galvanic batteries.—**Sublimed white lead**, the trade-name for a white pigment which consists of lead sulphate, made by roasting galena in the air under proper conditions, and collecting and purifying the fume given off. It is sometimes sold with an admixture of lead carbonate and zinc oxid.

leadage (lē′dāj), *n.* [*lead¹* + *-age.*] The distance from a coal-mine to the point where the coal is shipped.

lead-bar (led′bär), *n.* The swingletree or equalizing-bar used for the leading horses of a four-in-hand team. See *swingletree.*

leaden (led′n), *v. t.* [*leaden, a.*, or *lead²* + *-en¹* (3).] 1†. To fasten or cover with lead.—2. To weigh down with or as with lead, as one's spirits.

leader¹, *n.* 5. (*k*) In marine hardware, an eye, ring, or pulley used as a guide for a rope or chain. It may be a simple casting having an eye and designed to be bound to a wire rope; or an eye in a screw-plate, as the tiller-rope *leader* of a boat; or an eye swiveled to a deck-plate, as a jib-*leader*; or a simple half-ring screwed to the deck, as a sheet-*leader*, a bell chain *leader*, a cross-tree *leader*.

10. The first player on any trick in a game of cards; the player who sits on the dealer's left.

leader-block (lē′dėr-blok), *n.* In marine hardware, a deck-block used to guide or lead a rope from the sail to the cleat, as the jib-sheet *leader-block* of a small yacht where the sheets are led aft to the cockpit.

leaderette (lē-dėr-et′), *n.* A short leader in a newspaper. [Eng.]

lead-flat (led′flat), *n.* A nearly flat roof covered with sheet-lead. A similar roofing, in which tin plates are used instead of lead, is called in the United States a *deck.* [Eng.]

leading¹, *p. a.* 4. In *naval arch.*, said of the edge or end of a surface or blade, as a propeller-blade, which is in advance when moving through water: opposed to ★*following.*

In the case of a plate set obliquely to its line of motion through water, it has been explained that the centre of pressure is nearer the *leading* edge than the after edge (see p. 420). *White*, Manual of Naval Arch., p. 489.

Leading part (*naut.*), the part of a tackle that is hauled upon.

leading-beam (lē′ding-bēm), *n.* One of two or more beams adjusted in position to serve as guides for placing the other beams of the series.

leading-pile (lē′ding-pīl), *n.* One of two or more piles driven into position to serve as guides for driving the other intermediate piles of the series.

leading-staff, *n.* 2. A staff with a hook in one end, used to lead a bull by putting the hook through a ring in his nose.

leading-strings, *n. pl.* 3. *Naut.*, an old name for yoke-lines.

leading-truck (lē′ding-truk), *n.* A fair-lead or guide for leading a rope or cable to a windlass; a leading-block or pulley-block used to lead a rope to a capstan or so that it can be easily hauled.

lead-light (led′līt), *n.* 1. A single piece of glass prepared for a window, to be put in a lead sash, as of a decorative window.—2. The whole of a piece of sash with lead bars prepared to fill a light, that is, a separate window-space.

lead-line¹, *n.* 3. In *pathol.*, a bluish mark at the edge of the gums occurring in cases of lead-poisoning.

lead-line² (lēd′līn), *n.* In *lumbering*, a wire rope, with an eye at each end, used to anchor the snatch-block in setting a lead.

lead-off (lēd′ôf), *n.* In *exper. physiol.*, the passage of a constant current through a nerve, while the latter is connected with a galvanometer, by means of two electrodes placed either both along the course of the nerve, or one along its course and the other at its transverse section. *Philos. Trans. Roy. Soc.* (London), 1897, ser. B, p. 7.—**Longitudinal lead-off**, the passage of a constant current through a nerve which has been arranged upon two electrodes so connected with a galvanometer that neither is in contact with a transverse section of the nerve, both touching the nerve along its course.—**Transverse lead-off**, the passage of a constant current through a nerve which has been arranged upon two electrodes so connected with a galvanometer that the transverse section of the nerve lies upon one and its body upon the other.

lead-paper (led′pā″pėr), *n.* White paper which has been dipped into a solution of a colorless salt of lead and dried. It serves as a test for sulphureted hydrogen or for soluble hydrosulphid, being blackened by exposure to these substances.

lead-reeve (lēd′rēv), *n.* In *mining*, an official with whom aggrieved miners lodge complaints. [Prov. Eng.]

lead-reins (lēd′rānz), *n. pl.* In a four-in-hand harness, the reins used to guide the leaders.

lead-riveting (led′riv″et-ing), *n.* In *mining*, a method of locking a safety-lamp by fastening it with a lead rivet which receives an impression and acts as a seal, so that any tampering with the lamp may be detected.

lead-spar, *n.* 2. Anglesite or other similar lead compound.—**Red lead-spar**, crocoite.

lead-tree, *n.* 2. Arbor Saturni, or tree of Saturn: an old name for the arborescent growth of metallic lead, in thin crystalline leaflets, which forms on a strip of sheet-zinc placed in a solution of a lead salt, as lead acetate or nitrate.

lead-wash (led′wosh), *n.* Same as *lead-water.*

lead-work (led′wėrk), *n.* In *building*, work other than ordinary plumbing, in which lead is used, as in gutters, roofing, etc. [Rare in U. S., but common in Great Britain.]

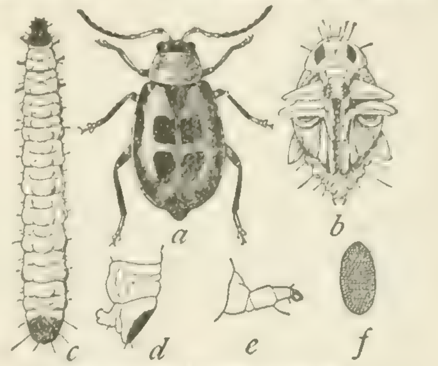
leaf, *n.* 2. (*l*) The frame or shaft which holds the complement of heddles for weaving; the harness.—**Coppery leaves.** See ★*copperu.*—**Cornute leaf**, a leaf in which the midrib is projected in the form of a horn or spine, sometimes in a different plane. **Floral leaf**, one of the divisions of the perianth; a petal or sepal; also, less properly, a bract or leaf which subtends a flower.—**French leaf**, a hard yellow-brass leaf, used in overlaying with brass.—**Indian leaves.** See ★*malabathrum.*—**Sibylline leaves.** See *sibylline.*—**Soap leaves.** See ★*soap.*—**Standing leaf**, that leaf of a hinge which is secured to a stationary object, as a door-post.

leaf-areole (lēf′ar ē-ōl), *n.* Same as ★*leaf-scar.*

leaf-bar (lēf′bär), *n.* A transverse slat or grid, in different parts of the scutching- or picking-machinery in a cotton-mill, for the arrest, and separation from the cotton, of leaves and other foreign matter.

leaf-base (lēf′bās), *n.* That part of a leaf, or rather of its stalk or petiole, which remains within the trunk or stem after the leaf has fallen: used chiefly of fossil trunks, as of *Lepidodendron*, *Cycadeoidea*, etc.

leaf-beetle, *n.* Particular leaf-beetles (and so with leaf-cutters, root-borers, etc.) are known by some distinctive adjective or attribute prefixed, as *bean leaf-beetle* ('leaf-beetle of the bean'). All such three-word names may be taken also as *bean-leaf beetle* ('beetle of the bean-leaf'), etc.—**Bean leaf-beetle**, a chrysomelid beetle, *Cerotoma trifurcata*, which feeds on the foliage of the bean and pea in the United States, from Maryland and



Bean Leaf-beetle (*Cerotoma trifurcata*).

a, beetle; *b*, pupa; *c*, larva; *d*, anal segment of larva; *e*, leg of same; *f*, egg; *a*, *b*, *c*, enlarged about five times; *d*, *e*, *f*, more enlarged. (Chittenden, U. S. D. A.)

Illinois southward; also, *Cerotoma caminea.*—**Cherry leaf-beetle**, an American chrysomelid beetle, *Galerucella cavicollis*, which feeds on the foliage of the cherry.—**Clover leaf-beetle.** Same as *clover-weevil.*—**Cottonwood leaf-beetle.** Same as *poplar* ★*leaf-beetle.*—**Elm leaf-beetle**, a European chrysomelid beetle, *Galerucella luteola*, first introduced into the United States near Baltimore about 1840. It has spread north and south, and is

Elm Leaf-beetle (*Galerucella luteola*).

a, eggs; *b*, larvæ; *c*, adult; *e*, eggs (enlarged); *f*, sculpture of egg; *g*, larva; *h*, side view of greatly enlarged segment of larva; *i*, dorsal view of larva; *j*, pupa; *k*, adult; *l*, portion of elytron of beetle (enlarged). (Riley, U. S. D. A.)

the principal enemy to the elms grown as shade-trees in most eastern cities. It is commonly known as the imported elm leaf-beetle, and is frequently referred to in literature as *Galeruca xanthomelæna* and *Galerucella xanthomelæna.*—**Four-marked leaf-beetle**, *Cryptocephalus quadrimaculatus.*—**Larger sugar-beet leaf-beetle**, *Monoxia puncticollis.*—**Linden leaf-beetle.** Same as ★*ladder-beetle.*—**Locust leaf-beetle**, *Odontota dorsalis.*—**Long-horned leaf-beetle**, any member of the genus *Donacia.*—**Orange leaf-beetle.** See ★*leaf-notcher.*—**Peach leaf-beetle.** Same as *plum* ★*leaf-beetle.*—**Plum leaf-beetle**, an American chrysomelid beetle, *Nodonota tristis*, which feeds on the foliage of the pear and the plum.—**Poplar leaf-beetle**, a chrysomelid beetle, *Lina scripta*, which defoliates poplars in the United States. Also called *cottonwood leaf-beetle.*—**Rose leaf-beetle**, *Nodonota puncticollis.*—**Southern corn leaf-beetle.** See ★*corn¹.*—**Spotted strawberry leaf-beetle.** Same as *spotted* ★*paria.*—**Strawberry leaf-beetle**, *Typophorus canellus.*—**Willow leaf-beetle**, an American chrysomelid beetle, *Lina scripta.*

leaf-blight, *n.* A few of the hosts, with their specific leaf-blights, are as follows: buckwheat, *Ramularia rufomaculans*; cabbage, *Macrosporium Brassicæ*; celery, *Cercospora Apii*; cotton, *Cercospora gossypina*; pear, *Entomosporium maculatum*; tobacco, *Cercospora Nicotianæ.*—**Leaf-blight of almond**, a fungous disease of the almond caused by *Cercospora circumscissa.*—**Leaf-blight of corn**, a disease which affects the leaves of corn, causing them to turn yellow and die. It is caused by the fungus *Helminthosporium inconspicuum.*—**Leaf-blight of grape**, a disease of grape-leaves caused by the fungus *Cercospora viticola.*—**Leaf-blight of mignonette**, a disease of the cultivated mignonette, especially when grown under glass, due to the fungus *Cercospora Resedæ*, which causes brownish spots on the leaves.—**Red leaf-blight**, a disease of cotton, due to the impoverished condition of the soil, which produces an autumn-like coloration in the leaves.—**Yellow leaf-blight.** Same as *mosaic* ★*disease.*

leaf-blotch (lēf′bloch), *n.* A blotch on the leaves of plants caused by the attacks of certain fungi.—**Leaf-blotch of rose**, a fungous disease attacking the leaves of roses, caused by *Actinonema Rosæ*, which produces dark blotches on the leaves and soon causes them to drop off. See ★*Actinonema.*—**Leaf-blotch of strawberry**, a fungous disease of the strawberry, due to *Ascochyta Fragariæ*, which attacks the leaves, producing dead spots.

leaf-brass (lēf′brås), *n.* Very thin sheet-brass.

leaf-bug, *n.*—**Four-lined leaf-bug**, an American capsid, *Pœcilocapsus lineatus*, wide-spread in the United States. It damages gooseberry-bushes, currant-bushes, and many garden plants, puncturing leaves and small twigs and sucking sap. The eggs are inserted in slits cut lengthwise into the stems of plants. Also called the

black-lined plant-bug. — **Pear leaf-bug.** Same as *tarnished plant-bug* (which see, under *plant-bug*).

leaf-cast (lēf'kȧst), *n.* A disease of young pine-trees and seedlings which causes the leaves to fall: due to the fungus *Lophodermium Pinastri.* See ★*Lophodermium*, ★*needle-cast*, and ★*casting*, 11.

leaf-caterpillar (lēf'kat″ėr-pil-är), *n.* The cotton-caterpillar, the larva of *Alabama argillacea.* See ★*Alabama.* [Southern U. S.]

leaf-chafer (lēf'chā″fėr), *n.* Any leaf-eating scarabæid beetle. — **Lamellicorn leaf-chafer,** any scarabæid beetle which feeds on leaves; specifically, any member of the subfamily *Melolonthinæ*, which includes the May-beetles, and of the subfamily *Pleurosticta* of Horn. See *pleurostict.* — **Margined leaf-chafer,** a rather small American scarabæid beetle, *Anomala marginata*, which attacks the foliage of fruit-trees and grape-vines in the southern United States. — **Pear leaf-chafer,** an American scarabæid beetle, *Serica iricolor*, which often defoliates pear-trees, especially in the eastern United States. **Shining leaf-chafer,** the goldsmith-beetle.

Pear Leaf-chafer (*Serica iricolor*). Enlarged.

leaf-climber (lēf'klī″mėr), *n.* A liana in which the petiole or blade of the otherwise unmodified leaf is the irritable supporting organ. Thus *Clematis Vitalba* and other species are petiole-climbers, varieties of *Fumaria officinales* are leaf-blade climbers, and *Flagellaria Indica* is a leaf-tip climber. See ★*tendril-climber.*

leaf-cover (lēf'kuv″ėr), *n.* Same as ★*litter*, 8, and *duff*[1], 3.

leaf-cure (lēf'kūr), *v. t.* To cure (tobacco) after removing the stalks. See extract under ★*stalk-cure.*

leaf-curl (lēf'kėrl), *n.* A disease of the cherry, peach, and plum, due to various species of *Exoascus.* — **Potato leaf-curl.** Same as *potato early* ★*blight.*

leaf-cushion (lēf'kush″on), *n.* See ★*cushion.*

leaf-cutter, *n.* **1.** (*b*) A leaf-cutting ant; one of the tropical or subtropical ants which defoliate trees, as *Atta fervens.* — **Maple leaf-cutter,** an American tineid moth, *Incurvaria acerifoliella*, whose larva perforates the leaves of the maple with elliptical holes, using the removed leaf-substance as a case.

leaf-door (lēf'dōr), *n.* A folding door.

leafery (lē'fėr-i), *n.* [*leaf* + *-ery.*] Leafage; foliage.

leaf-fall (lēf'fâl), *n.* The fall of the year; the autumn.

leaf-fat (lēf'fat), *n.* The fat which occurs in folds or leaves in the body-cavity of an animal such as the ox or hog.

leaf-fiber (lēf'fī″bėr), *n.* The fiber of leaves. — **Leaf-fiber machine.** See ★*fiber*[1].

leaf-filter (lēf'fil″tėr), *n.* See ★*filter*[1].

leaf-flea (lēf'flē), *n.* A flea-beetle or any homopterous insect of the family *Psyllidæ*; a flea-louse.

leaf-folder, *n.* — **Lesser apple leaf-folder,** a tortricid moth, *Alceris minuta*, whose larva folds the young leaves of the apple and skeletonizes them. It is common throughout the southern Atlantic United States.

Leaf-foot bug. Same as *leaf-footed* ★*plant-bug.*

leaf-frog (lēf'frog), *n.* A small tree-frog of the genus *Hylodes*, peculiar to tropical America. The most common species, *H. martinicensis*, is noteworthy from the fact that it was the first known instance of a frog the metamorphosis of which took place within the egg.

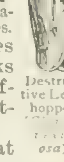
leaf-gall (lēf'gâl), *n.* A gall of leaves. — **Trumpet leaf-gall.** Same as *trumpet-gall.*

leaf-gneiss (lēf'nīs), *n.* Gneiss composed of quartz and feldspar, in which the quartz is disposed in little parallel leaves among the grains of feldspar.

leaf-gold, *n.* **2.** Native gold in thin, leaf-like forms.

leaf-green (lēf'grēn), *n.* Chlorophyl.

leaf-hopper, *n.* — **Brown leaf-hopper,** *Agallia sanguinolenta.* — **Destructive leaf-hopper,** an American leaf-hopper of the family *Jassidæ, Cicadula exitiosa*, which sometimes seriously damages winter wheat in the southern United States. — **Grain leaf-hopper,** *Deltocephalus flaviceps.* — **Rose leaf-hopper,** *Empoa rosæ*, frequently swarming on the leaves of the rose. **Saddle-backed leaf-hopper,** *Thamnotettix clitellarius*, which occasionally damages the plum and other fruit-trees.



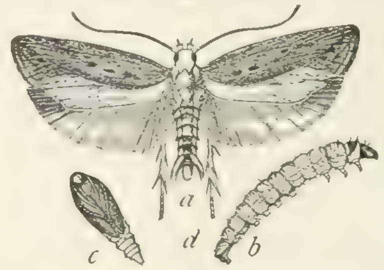
Destructive Leaf-hopper (*Cicadula exitiosa*).

leaflet, *n.* **4.** (*c*) One of the thin plates or leaves contained in the lung-books of certain spiders. (*d*) One of the leaf-like branchiæ of certain aquatic insect-larvæ.

leaf-midge (lēf'mij), *n.* A midge that infests leaves. — **Clover leaf-midge,** a cecidomyiid fly, *Cecidomyia trifolii*, common to Europe and the United States, whose larvæ live in the folded leaves of white clover, *Trifolium repens.*

leaf-mildew (lēf'mil dū), *n.* A mildew of leaves. **Cherry leaf-mildew.** Same as *cherry-blight.*

leaf-miner, *n.* — **Apple leaf-miner,** a tineid moth, *Tischeria malifoliella*, whose larva mines the leaves of the apple, blackberry, raspberry, and other rosaceous plants in the eastern United States, forming its pupa within the folded leaf. **Beet leaf-miner,** the larva of a fly, *Pegomyia vicina*, of the family *Anthomyiidæ.* — **Cabbage leaf-miner.** (*a*) An American drosophilid fly, *Scaptomyza adusta*, whose larva mines the leaves of cabbage and other cruciferous plants in the southern United States. (*b*) *S. graminum*, a congeneric European insect, also occurring in the United States. It is also called *imported cabbage leaf-miner.* — **Clover leaf-miner.** See ★*Agromyza*, with cut. — **Oak leaf-miner,** any one of several species of tineine moths whose larvæ mine the leaves of oak. More than fifty European species have this habit. *Lithocolletis hamadryadella* and *L. fitchella* are two of the commonest North American examples. — **Palmetto leaf-miner,** the larva of an American tineid moth, *Homaledra sabalella.* It feeds on the upper surface of the leaf of the saw-palmetto in Florida, destroying the skin as well as the fleshy part of the leaf. — **Parsnip leaf-miner,** the larva of a trypetid fly, *Acidia fratria.* — **Pear leaf-miner,** the larva of an American tineid moth, *Ornix quadripunctella.* — **Pine leaf-miner,** the larva of an American gelechiid moth, *Paralechia pinifoliella.* It is very small and eats the interior of the needles or leaves of pitch-pine and other stout-leaved species of *Pinus*, causing the needles to turn white. — **Tobacco leaf-miner,** the larva of a gelechiid moth, *Phthorimæa operculella*, common to the southern United States and Europe. It makes blotches in the leaves of tobacco and other solanaceous plants. It is known to Southern tobacco-planters as the *split-worm.* — **White-blotch oak leaf-miner,** the larva of an American tineid moth, *Lithocolletis hamadryadella.* It mines between the two surfaces of the leaves of several species of oak, making white blotches, which are often so abundant as perceptibly to whiten the foliage of a large tree.



Tobacco Leaf-miner (*Phthorimæa operculella*). *a*, moth; *b*, larva; *c*, pupa: all enlarged. (Howard, U. S. D. A.)

leaf-mite (lēf'mīt), *n.* **1.** Any mite of the family *Tetranychidæ*; a red spider. — **2.** Any blister-mite, rust-mite, or gall-mite of the family *Eriophyidæ* (formerly *Phytoptidæ*).

leaf-mold, *n.* **2.** Any one of various fungi which turn brown the leaves of carnations, cotton, grapes, melons, and other plants. Also called *white mold*, because of the white patches produced on the under side of the discolored leaves. Some of the hosts, with their specific leaf-molds, are as follows: carnation, *Heterosporium echinulatum*; cotton, *Ramularia areola*; grape, *Septosporium heterosporum*; horse-radish, *Macrosporium herculeum.*

leaf-mosaic (lēf'mō-zā″ik), *n.* Same as *mosaic* ★*disease.*

leaf-notcher (lēf'noch″ėr), *n.* An American curculionid beetle, *Artipus floridanus*, greenish blue or copper brown in color and covered with white scales. It eats jagged notches in the leaves of the orange. Also called *orange leaf-notcher* and *orange leaf-beetle.*

leaf-red (lēf'red), *n.* A red pigment found in leaves; erythrophyl.

leaf-roller, *n.* — **Basswood leaf-roller,** an American pyralid moth, *Pantographa limata*, whose larvæ roll the leaves of basswood into tubes, within which they live. The moth is straw-colored, with olive markings and a purplish iridescence, and occurs in North, Central, and South America. — **Box-elder leaf-roller,** the larva of *Archips semiferana.* — **Fruit-tree leaf-roller,** a moth, *Archips argyrospila*, whose larvæ injure the foliage and fruit of the apple, pear, and strawberry. — **Grape-vine leaf-roller,** a pyralid moth, *Desmia funeralis*, whose larvæ live in folded grape-leaves. — **Neat strawberry leaf-roller,** the larva of *Exartema permundanum.* — **Oblique-banded leaf-roller,** a tortricid moth, *Archips rosaceana*, inhabiting the northern United States from Colorado eastward, where its larvæ roll the leaves of various rosaceous plants, including many important fruit-trees. The adult is brown in color, with its fore wings banded with contrasting shades of the same color. — **Orange leaf-roller,** the larva of *Platynota rostrana.* — **Peach leaf-roller,** the larva of *Archips persicana.* — **Raspberry leaf-roller.** Same as *neat strawberry* ★*leaf-roller.* — **Red-banded leaf-roller,** the larva of *Eulia triferana*, infesting clover.

leaf-rust, *n.* — **Orange leaf-rust,** a disease of wheat and similar grasses, due to *Uredo rubigo-vera.* **Pine leaf-rust,** a fungous disease of pine-leaves, caused by *Coleosporium Pini.*

leaf-scar (lēf'skär), *n.* The scar left on a trunk after the fall of the leaf. In fossil trunks these are of high diagnostic importance, and the term is chiefly used by paleobotanists. See *scar*[1], 4, and compare *leaf-*★*cushion* and ★*leaf-base.*

> One [specimen] represents an upper portion of the stem with *leaf-scars* and remains of petioles; another a lower portion, with aërial roots.
> *Dawson*, Geol. Hist. of Plants, p. 94.

leaf-scorch (lēf'skôrch), *n.* A fungous disease of the leaves of the cherry, causing a scorched and withered appearance. It is most destructive in Europe and is attributed to *Gnomonia erythrostoma.* See ★*Gnomonia*, with cut.

leaf-sewer (lēf'sō″ėr), *n.* Same as *leaf-roller.* — **Chapin's apple leaf-sewer,** an American tortricid moth, *Ancylis nubeculana*, whose larva sews together the leaves of the apple.

leaf-spot, *n.* **2.** The common name given to a large number of fungi which produce spots upon the leaves of plants. A few of the hosts, with their specific leaf-spots, are as follows: alfalfa, *Pseudopeziza Medicaginis*; apple, *Phyllosticta pirina*; blackberry, *Septoria Rubi*; egg-plant, *Phyllosticta hortorum*; lettuce, *Septoria consimilis*; maple, *Phyllosticta acericola.* — **Angular leaf-spot,** a bacterial disease of cotton leaves characterized by the formation of watery angular spots bounded by the veinlets of the leaf. — **Black leaf-spot,** the fungous disease of maples produced by *Rhytisma acerinum.* — **Cherry leaf-spot,** a fungous disease of the cherry due to *Cylindrosporium Padi* or *Cercospora cerasella.* — **Clover leaf-spot,** a disease of clover due to the fungus *Phyllachora Trifolii.* — **Leaf-spot of pea,** a fungous disease due to *Ascochyta Pisi*, occurring upon the leaves and vines of the pea. See ★*Ascochyta.* — **Leaf-spot of violet,** a fungous disease of the violet caused by either *Phyllosticta Violæ* or *Alternaria Violæ.* See *spot-*★*disease.* — **Quince leaf-spot,** a fungous disease of quince-leaves caused by *Entomosporium maculatum.* — **Rose leaf-spot,** a fungous disease of rose-leaves caused by *Mycosphærella rosigena.* — **Strawberry leaf-spot,** a fungous disease of strawberry-leaves caused by *Mycosphærella Fragariæ.*

Strawberry Leaf-spot (*Mycosphærella Fragariæ*).

a, diseased leaf (one fourth natural size); *b*, tuft of conidiophores and conidia which have broken through the upper epidermis (enlarged); *c*, section of perithecium, showing asci within (enlarged); *d*, four asci containing ascospores (much enlarged); *e*, ascospores (still further enlarged). (U. S. D. A.)

leaf-table (lēf'tā″bl), *n.* A table with a leaf or flap which can be turned up or down; also, an extension-table, that is, one with leaves which can be slipped in or out to vary its size.

leaf-tier, *n.* — **Green apple leaf-tier.** Same as *lesser apple* ★*leaf-folder.* — **Greenhouse leaf-tier,** the larva of a pyralid moth, *Phlyctænia rubigalis*, common to Europe, Asia, and the United States. It feeds on the leaves of various plants, especially in greenhouses, and ties the leaves together.

leaf-wasp (lēf'wosp), *n.* Any saw-fly.

leaf-worm (lēf'wėrm), *n.* Same as ★*leaf-caterpillar.*

leag, *n.* and *v.* A simplified spelling of *league.*

league-hut (lēg'hut), *n.* A rude shelter for ejected tenants provided by the Land League in Ireland. See *Land League*, under *league*[1].

leaguer[4] (lē'gėr), *n.* [Also *leager, legar*; prob. ‹ D. *ligger*, G. *leger*, also *legger*, a large cask; cognate with E. *ligger, lier*[1].] A large cask; a tun; specifically (*naut.*), a cask for water holding 159 imperial gallons, carried on vessels before the introduction of water-tanks.

Leaia (lē-ā'yạ̈), *n.* [NL., named after Isaac *Lea.*] A genus of fossil phyllopodous crustaceans of the family *Limnadiidæ*, characterized by a bivalved carapace, each valve of which is marked by two diagonal ridges radiating from the anterior end of the dorsal margin. Forms of this genus are very numerous in certain Carboniferous beds of Europe and North America.

leak, *n.* — **Electric leak,** escape of current from a conductor through its insulation.

leakage, *n.* — **Magnetic leakage,** in *elect.*, that part of the magnetic flux of a magnetic circuit which does not traverse the desired path, as in dynamo-electric machines; the magnetism which strays from field-pole to field-pole without passing through the armature; in alternating-current apparatus, the self-inductive flux.

leakance (lē'kans), *n.* [*leak* + *-ance.*] In *elect.*, conductance due to leakage through a dielectric or insulator.

> It follows that any ordinary telegraph circuit may be made approximately distortionless by adding a certain amount of *leakance*, or leakage conductance.
> *Encyc. Brit.*, XXXIII. 215.

leak-stopper (lēk'stop″ėr), *n.* *Naut.*, a device for temporarily covering a hole in the bottom or side of a vessel below water while it is afloat, thus stopping the flow of water into the interior.

The ship must sink: unless the power of her pumps is sufficient to overcome the leak; or some means is devised for checking the inflow, by employing a sail, or a mat, or some other *leak-stopper*.
White, Manual of Naval Arch., p. 24.

leal[1] (lēl), *adv.* [*leal*[1], *a.*] **1.** Loyally.—**2.** Thoroughly; exactly.—**3.** Lawfully.

leal[2] (lā-äl'), *n.* [Pg., orig. 'legal': see *leal*[1], *a.*] **1.** A former silver coin of Portugal, worth 15 cents.—**2.** A colonial Portuguese copper coin, worth 16 cents, struck at Goa.

leam[3] (lem), *v.* [Also *leem*, *leme*, *limb*; perhaps ult. identical with *limb*[1], *v.*; cf. Norw. *lema*, *lemma*, *lima*, Icel. *lima*, dismember.] **I.** *trans.* To separate or remove the shell or husk from (nuts); shell; husk.

II. *intrans.* To become separated from the shell, as nuts; to separate easily from the shell or husk. [Prov. Eng.]

leam[3] (lem), *n.* [Also *lemb*; appar. a variant of *lomb*[1], with a form and sense depending on the verb *leam*[3].] The shell or husk of a nut. [Prov. Eng.]

leam[4] (lēm), *n.* [Origin obscure.] A drain; a cut; in the fen district, a watercourse. [Eng.]

leaning-stock (lē'ning-stok), *n.* In *organ-building*, a horizontal bar or brace against which the pipes of a stop lean so as to be kept firmly in place: sometimes it is indented to fit the pipes.

leap-day (lēp'dā), *n.* An intercalary day, especially the 29th of February in leap-year.

leaper, *n.* **4.** *Naut.*, a sea that breaks on board a vessel; a wave that leaps over the rail.

leaping (lē'ping), *p. a.* [ME. *lepynge*.] That leaps; jumping. **Leaping cucumber.** Same as *spirting cucumber* (which see, under *cucumber*).

leapingly (lē'ping-li), *adv.* By leaps and bounds.

leaping-pole (lē'ping-pol), *n.* A pole used to aid a jumper to increase the length or height of his jump.

leaping-spider (lē'ping-spī″dėr), *n.* Any saltigrade spider; a jumping-spider.

leap-work (lēp'wėrk), *n.* Any mechanical device for producing intermittent motion.

Learic (lēr'ik), *n.* [*Lear* (see def.) + *-ic*; in punning allusion to *lyric*.] A name given to a five-line nonsense-verse of the kind used by Edward Lear in his "Book of Nonsense": now called a ★*limerick* (which see).

The Academy (29 July, 1899) and Truth put the word in circulation by proposing competitions on the model of my 'Irish Literary *Learics*,' which they named expressly.
M. Russell, in N. and Q., 9th ser., XII. 8.

lea-rig (lē'rig), *n.* A grassy ridge left unplowed at the end of a plowed field. *N. E. D.* [Eng. dial.]

lease[2], *n.* **4.** In *Australian mining*, a mining leasehold; a piece of ground leased for the purpose of mining.—**Reversionary lease**, one which is to become effective at some time in the future.

lease-band (lēs'band), *n.* One of the bands or rods which alternately separate the warp-threads in a loom; a lease-rod.

lease-pin (lēs'pin), *n.* A warping-pin; a pin on a warping-beam for holding the yarn.

leash, *n.* **4.** In *physiol.*, an aggregation of similar cord-like structures, such as fibers, nerves, blood-vessels, etc.

A man for many years had chronic ulcers, small *leashes* of vessels running across the cornea to the ulcers.
Lancet, May 30, 1903, p. 1516.

leashing (lē'shing), *n.* **1.** The forming of a leash (or lease) in the warp-threads in a loom between the warp-beam and the heddles.—**2.** Same as ★*short-leashing*.

leasing[4] (lē'sing), *n.* An erroneous form of ★*leashing* (in weaving).

leather, *n.* **5.** In *cricket*, the ball. [Colloq.]—**6.** *pl.* (*a*) Wearing-apparel made of leather, as breeches, leggings, etc. (*b*) One who wears 'leathers.'

"All the coaches are full with the men going down," Spavin said. . . . "Get into my yellow; I'll drop you at Mudford . . . Come along; jump in, old boy—go it, *leathers*!"
Thackeray, Pendennis, xx.

Acid leather, leather which retains an appreciable quantity of sulphuric or other mineral acid used to plump or raise the hide in preparation for tanning. Such leather is objectionable for military purposes, as it corrodes soldiers' socks and causes their accoutrements to rust. **Bastard leather**, a skin used in binding books. It is as strong as goatskin in resisting tearing, but the surface is tender and shows many imperfections. **Leather-finishing machine**, a machine for glazing, rolling, or pebbling leather. **Leather-measuring machine**, a machine for ascertaining the number of square feet in a hide or skin. **Oil-tanned leather**, leather made, chiefly from the skin of the sheep, calf, or deer, by partly removing or roughening the grain side of the skin, lining, thoroughly saturating with fish- or seal-oil forced in by beating, exposing to heated air until much of the oil has become oxidized, and removing the surplus unaltered oil by expression or by washing with an alkaline solution. The product is very soft and pliant, and is extensively used for lining cases for silverware, etc., for gloves, for lining articles of clothing, and in various other ways. **Satin leather**, in *shoe-manuf.*, black leather for uppers, made from hide finished on the flesh side. *Modern Amer. Tanning*, p. 11. **Spanish leather.** (*b*) Decorated leather made in Spain, where the art of stamping and working leather was brought to a high state of perfection.

leather-awl (leтн'ėr-âl), *n.* A tool for piercing holes in leather.

leather-bark (leтн'ėr-bärk), *n.* Same as *leather-wood*, 1. [Rare.]

leather-brown, *n.* **2.** Same as *Bismarck* or *phenylene brown*.—**3.** A basic coal-tar color of the disazo type, prepared by combining two molecules of diazotized para-acetanilide with one molecule of meta-phenylene diamine: particularly suited for the coloring of leather and jute.—**4.** A name occasionally applied to ★phosphene.

leather-buffer (leтн'ėr-buf″ėr), *n.* A machine for grinding or fleshing hides or skins.

leather-bush (leтн'ėr-bůsh), *n.* Same as *leather-wood*, 1.

leather-ear (leтн'ėr-ēr), *n.* One of the sunfishes, *Lepomis megalotis*, having a long dermal

Leather-ear (*Lepomis megalotis*).
(From Bulletin 47, U. S. Nat. Museum.)

opercular flap, found in the fresh waters of the eastern United States.

leather-fish (leтн'ėr-fish), *n.* The file-fish, *Monacanthus hispidus*.

leather-hunting (leтн'ėr-hun″ting), *n.* In *cricket*, fielding, especially fielding while a large number of runs are made by the opposing side. [Slang.]

leather-jack, *n.* **2.** Any species of the genus *Oligoplites*, fishes of the family *Carangidæ*.

leather-jacket, *n.* **2.** In *bot.*: (*b*) In Australia, any one of several other trees, so called from the toughness of their bark; especially the cooper's-wood, *Alphitonia excelsa*, the coach-wood, *Ceratopetalum apetalum*, *Cryptocarya Meissneri* of the laurel family, and *Weinmannia rubifolia* of the family *Cunoniaceæ*.—**3.** The larva of any one of several species of crane-flies of the family *Tipulidæ*. It lives underground in pasture-lands and has an especially tough skin.

This will kill slugs and *leather-jackets*.
Massee, Plant Diseases, p. 45.

4. In Australia, a thin pancake made of flour and water.

leatherneck (leтн'ėr-nek), *n.* A marine. [Eng. naval slang.]

When we played ship's theatricals of Vigo, Glass 'ere played Dick Deadeye to the moral, though the lower deck wasn't pleased to see a *leatherneck* interpretin' a strictly maritime part.
R. Kipling, The Bonds of Discipline, in Traffics and Discoveries, p. 47.

leather-paste (leтн'ėr-pāst), *n.* Paste used in attaching leather to the surface of other materials, as in bookbinding.

leather-powder (leтн'ėr-pou″dėr), *n.* Scrap leather ground to powder, for use as a manure. The nitrogen which alone gives it value as such is not readily given up in a condition available for plants.

leather-presser (leтн'ėr-pres″ėr), *n.* In *leather-manuf.*, a press used to remove the grease from skins which are to be used for fancy stock.

leatherwood, *n.* **2.** (*b*) The Tasmanian pink-wood, *Eucryphia Billardieri*. See ★*pinkwood*, 2.—**3.** In the southeastern United States, *Cyrilla racemiflora*, a bush or small, wide-spreading tree of bottom-lands, with a hard wood and, at the base of the trunk, a spongy pliable bark, recommended for a styptic.

Leatherwood.
(From Sargent's "Manual of the Trees of North America.")

More often called *ironwood* and sometimes *he-huckleberry*, *burnwood*, or *burnwood-bark*, and *red* or *white titi*. Sometimes called *Southern leatherwood*. See *Cyrillaceæ*.

leav, *v.* and *n.* A simplified spelling of *leave*.

leave[1], *v. t.* **To leave over**, to leave for future use, consideration, or decision.

leawill (lē'a-wil), *n.* [Also *leeawell*; ⟨ aboriginal Australian *leäwil*, *le-ow-el*, forms of the aboriginal word otherwise represented by ★*lecangle*, q. v.] Same as ★*lecangle*.

Leber's plexus. See ★*plexus*.

lebes (lē'bēz), *n.* [Gr. λέβης.] In *Gr. antiq.*, a metal caldron, usually of bronze, but sometimes of gold and silver, often offered as a prize.

lebis (leb'is), *n.* [Ar. *libis*.] A cyprinoid fish, *Labeo niloticus*, inhabiting the Nile.

Lebistes (le-bis'tēz), *n.* [NL., said to be based on Gr. λεβίας, L. *lebias*, a kind of fish.] A genus of fishes of the family *Pœciliidæ*, found off the island of Barbados.

lebrancho (le-brän'chō), *n.* [Cuban Sp.] A cuban name of *Mugil brasiliensis*, one of the mullets, found in the West Indies and south to Patagonia.

Lecanactidaceæ (lē-ka-nak-ti-dā'sē-ē), *n. pl.* [NL., ⟨ *Lecanactis* (*Lecanactid-*) + *-aceæ*.] A family of gymnocarpous lichens named from the genus *Lecanactis*.

Lecanactis (lē-ka-nak'tis), *n.* [NL. (Eschweiler, 1824), ⟨ Gr. λεκάνη, a dish, disk, + ἀκτίς, a ray. The name alludes to the form and appearance of the apothecia.] A genus of simple crustaceous gymnocarpous lichens having disciform scattered or gregarious apothecia and hyaline, spindle-shaped, 2- to 16-celled spores. About 50 species are known. They occur on rocks and tree-trunks.

Lecanitida (lek-a-nit'i-dä), *n. pl.* [NL., ⟨ Gr. λεκάνη, a dish, + *-ites* + *-ida*.] A subdivision of the ammonoid cephalopods of the suborder *Discocampyli*. It comprises genera with compressed discoidal and involute shells. The primitive representatives have entire sutures with broad, rounded saddles and narrow lobes, while the more complicated have prolonged lateral suture-lines and an indefinite number of inflections of the saddles.

Lecanium, *n.* **2.** [*l. c.*] A scale-insect of the genus *Lecanium* or of an allied genus.—**Peach lecanium**, *Eulecanium persicæ*, which occurs in Europe, Australia, Nova Scotia, and the United States.—**Plum lecanium**, *Eulecanium prunastri*, a cosmopolitan species which occurs in Europe, Japan, and the United States. **Tulip-tree lecanium**, *Eulecanium tulipiferæ*, an American species which occurs on the tulip-tree, magnolia, and rarely on clover. It forms large masses on the twigs of infested trees and secretes a large amount of honeydew.

Lecanocrinus (lek-a-nok'ri-nus), *n.* [NL., ⟨ Gr. λεκάνη, a dish, + κρίνον, a lily (see *crinoid*).] A crinoid genus belonging to the family *Ichthyocrinidæ*, which, like *Ichthyocrinus*, appears as a solid body when the arms are closed, except that the posterior rays of the six brachials are not in contact, but are separated by anal plates. The genus occurs in the Silurian of North America.

Lecanoraceæ (lek″a-nō-rā'sē-ē), *n. pl.* [NL., ⟨ *Lecanora* + *-aceæ*.] The proper form of the name of the lichen family, based on the genus *Lecanora*. See *Lecanoreæ*.

Le Chatelier's law of radiation. See ★*law*[1].

leche[2], *n.* Same as ★*lechi*[2].

Lecher system. See ★*system*.

lechosa (lā-chō'sä), *n.* [Sp. *lechosa*, milky, ⟨ *leche*, milk.] In Porto Rico, the papaya, or

papaw, *Carica Papaya*, a tree with milky juice and melon-shaped fruit. See *papaw*, 1, and *Carica*.

lechriodont (lek′ri-ō-dont), *a.* [Gr. λίχριος, slanting, + ὀδούς (ὀδοντ-), tooth.] Having the vomerine teeth in transverse or posteriorly converging rows: contrasted with ★*mesodont*.

Lechriodonta (lek″ri-ō-don′tä), *n. pl.* [NL.: see ★*lechriodont*.] A division of tailed amphibians in which the palatal teeth are restricted to the posterior portion of the vomers and form transverse or posteriorly converging rows.

lechuguilla (lā-chö-gēl′yä), *n.* [Sp. *lechuguilla*, dim. of *lechuga*, lettuce, < L. *lactuca*, lettuce: see *lettuce*.] The name of several species of *Agave*, especially of *A. Lecheguilla*, which yield a valuable fiber and a saponaceous substance of various forms called *amole*. They are characterized by comparatively narrow, rigid leaves from 10 to 30 inches long which have along their margin a continuous toothed horny border. The flower-stalk, rising to a height of from 5 to 8 feet, bears a comparatively slender spike of flowers. Generally speaking, these plants grow on the high table-land of northern central Mexico, western Texas, and Arizona. Their fiber is often called *istle*, or *Tampico fiber*. **Jaumave lechugilla**, *Agave lophantha*, the source of Jaumave istle.

lecimicroönin (les-i-mī-krō′ō-nin), *n.* [Gr. λέκι(θος), the yolk of an egg, + μικρός, small, + ᾠόν, egg, + *-in*[2].] A substance obtained by Béchamp from the yolk of hens' eggs. It is insoluble in water, but may be dissolved by a weak solution of sodium carbonate, and precipitated from this solution by acetic acid.

lecimicrozymase (les-i-mī-krō-zī′mās), *n.* [Gr. λέκι(θος), yolk of an egg, + μικρός, small, + ζύμη, ferment, + *-ase*.] A substance obtained by Béchamp from the yolk of hens' eggs. It is precipitated by alcohol from the acetic-acid filtrate from lecimicroönin, and acts as an enzym, liquefying starch paste.

lecithal (les′i-thal), *a.* [*lecith-in* + *-al*[1].] Of or pertaining to lecithin.

lecithalbumin (les″i-thal-bū′min), *n.* [*lecith-in* + *albumin*.] A compound of lecithin with an albumin: widely distributed in the animal world, but individually little known.

lecithoblast (les′i-thō-blast), *n.* [Gr. λέκιθος, yolk, + βλαστός, germ.] A name given to the yolk-cells when they constitute a discrete layer in the embryo: same as *endoderm* in many animals.

lecithoönin (les-i-thō′ō-nin), *n.* [Gr. λέκιθος, yolk, + ᾠόν, egg, + *-in*[2].] A substance obtained by Béchamp from the yolk of hens' eggs. It is soluble in water, but is coagulated by alcohol.

lecithoproteid (les″i-thō-prō′tē-id), *n.* [Gr. λέκιθος, yolk, + E. *proteid*.] Same as ★*lecith-albumin*.

lecithoprotein (les-i-thō-prō′tē-in), *n.* [Gr. λέκιθος, yolk, + E. *protein*.] A compound albumin which results from the union of lecithin with a protein radical.

lecithozymase (les″i-thō-zī′mās), *n.* [Gr. λέκιθος, yolk, + ζύμη, ferment, + *-ase*.] A substance obtained by Béchamp from the yolk of hens' eggs. It is precipitated by alcohol from an aqueous solution, but is not rendered permanently insoluble in water, and acts as an enzym, liquefying starch paste.

leck-stone (lek′stōn), *n.* [*leck*, dial. form of *leak*, + *stone*.] A granular variety of trap-rock found in Scotland and used for the bottom of ovens.

Leclaire limestone. See ★*limestone*.

lec-lex (lek′leks), *n.* [Prob. southwestern American Indian.] An American tenebrionid beetle, *Asida sordida*, found on the alkaline plains of the southwestern United States. *Smithsonian Rep.* (*Nat. Mus.*), 1892, p. 568.

lectica (lek-tī′kä), *n.*; pl. *lecticæ* (-kē). [L. *lectica*, < *lectus*, a couch, bed.] In *Rom. antiq.*, a litter, closed or open, borne by slaves.

lectotype (lek′tō-tīp), *n.* [Gr. λεκτός, chosen, + τύπος, type.] In the nomenclature of types in natural history, a syntype selected subsequently to the original description, to take the place which in other cases is occupied by a holotype.

lecythidaceous (les″i-thi-dā′shius), *a.* Belonging to the plant-family *Lecythidaceæ*.

Ledbury shales. See ★*shale*[2].

leden, *a.* A simplified spelling of *leaden*.

ledger[1] (lej′ėr), *v. i.* In *angling*, to fish with ledger-bait.

Ledger bark. See ★*bark*[2].

ledgering (lej′ėr-ing), *n.* [*ledger(-bait)* + *-ing*[2].] In *angling*, fishing with ledger-bait.

ledger-line (lej′ėr-līn), *n.* In *angling*, an arrangement of fishing-tackle in which the lead rests on the bottom.

ledge-rock (lej′rok), *n.* Rock in place as distinguished from loose fragments.

ledger-stone (lej′ėr-stōn), *n.* A slab covering an altar-tomb.

ledger-wall (lej′ėr-wâl), *n.* In *mining*, the wall underneath a vein.

ledgit (lej′it), *n.* [Appar. < *ledge*[1] + dim. *-it* for *-et*.] 1. The top of the inner half of a window. *Banffshire Glossary*. [Scotch.]—2. A slip of paper or parchment projecting from the edge of a leaf in a book, upon which notes or memoranda may be written. [Scotch.]

leditannic (lē-di-tan′ik), *a.* [*Ledum* (see def.) + *tannic*.] Noting an acid, a tannin, $C_{15}H_{20}O_8$(?), obtained from wild rosemary, *Ledum palustre*. It is possibly identical with esculotannic acid.

ledixanthin (lē-dik-san′thin), *n.* [*ledi(tannic)* + *xanthin*.] A compound, $C_{30}H_{34}O_{13}$(?), prepared by the action of dilute acids on leditannic acid or on esculotannic acid.

ledouxite (le-dö′īt), *n.* [Dr. A. R. *Ledoux*, of New York City, + *-ite*[2].] A copper arsenide, Cu_4As, containing cobalt and nickel in small amount: found in the Lake Superior copper region.

Ledum camphor. See ★*camphor*.

lee[1]. **I.** *n.* **3.** In *geol.*, the side of a ledge of rocks which is turned away from the approach of an eroding agent, such as a glacier. The other side is the *stoss* or *shock side*.

II. *a.*—**Lee anchor,** the anchor on the lee bow of a vessel when it is under way: when the ship is at anchor, the lee anchor is the one that is not dropped.—**On the lee beam,** bearing to leeward (of a vessel) at or nearly at right angles to the line of the keel.

leeangle (lē′ang-gl), *n.* [Also *leangle*, *liangle*, *langeel*, *leonile*; < Australian *langeel*, *leanguel*; also in other forms, represented by ★*leawill*, q. v.] A club of the native Australians, bent at the striking end: similar to a pickax with a single pick. *E. E. Morris*, Austral English.

leech[2], *n.*—**Skate leech,** a large, spinose, greenish leech, *Pontobdella muricata*, parasitic upon skates and sharks.

Skate Leech (*Pontobdella muricata*). One half natural size (after Bourne). (From "Cambridge Natural History.")

leechery (lē′chėr-i), *n.* [*leech*[1] + *-ery*.] The healing art.

leech-extract (lēch′eks″trakt), *n.* An extract prepared from leeches: it has hemolytic properties.

leech-glass (lēch′glâs), *n.* A glass tube in which a leech is placed, the open end being applied to the part where it is desired to make the leech take hold.

Leech-line block (*naut.*), a block, secured to the yard, through which the leech-line is reeved.—**Mizzen leech-lines,** the leech-lines which lead from the leeches of the square sails to their respective yards on the mizzen, and thence to the decks, and are used for gathering the sides (leeches) of the sails toward the yards and masts in furling.

leechwort (lēch′wėrt), *n.* The ribwort or ribgrass, *Plantago lanceolata*.

Leeds ware. See ★*ware*[2].

leefang, *n.* (*b*) A deck-horse. See *horse*[1], 8 (*d*).

leek, *n.* **2.** *Polytelis barrabandi*, a small parrot, green with a scarlet breast. Also called *green-leek*. [Local, Australia.]—**Native leek,** in Australia, *Bulbine bulbosa*, a plant of the lily family, bearing bright-yellow flowers. It is very poisonous to horses and cattle. Called also *native onion* and, in Tasmania, *yellow lily*.

leelite (lē′līt), *n.* [Named (1818) after J. F. *Lee*.] A variety of orthoclase feldspar, from Sweden, having a flesh-red color and waxy luster.

leering (lēr′ing), *n.* [*leer*[7] + *-ing*[1].] In *glass-manuf.*, subjection to the action of an annealing-oven or leer.

leeringly (lēr′ing-li), *adv.* In a sly, immodest, leering way; with a leer.

"How do you do, Mr. Gagin?" said the old hag *leeringly*. "Eat a bit o' currie-bhaut,"—and she thrust the dish towards me. *Thackeray*, Major Gahagan, i.

leery[2] (lēr′i), *a.* Empty, in any sense: as, a *leery* cart; to be *leery* and tired.

'I 've been strolling in the Walks and church-yard, father, till I feel quite *leery*.' . . .

'I won't have you talk like that!' he thundered. '"*Leery*," indeed. One would think you worked upon a farm!' *T. Hardy*, Mayor of Casterbridge, xx.

Leeway indicator, a metal segment of a circle marked with the points of the compass and placed on the taffrail of sailing vessels. Its zero-line agrees with the keel line of the ship, and the bearing of the axis of the wake from this zero point shows the leeway, which is reckoned in points and quarter-points.

leg, *n.* **2.** (*b*) In *telephony*, a wire used for connecting a subscriber's line directly with the main switchboard.—**8.** Same as *water-leg*.—**9.** In *mach.*: (*a*) The movable case which contains the bucket-belt or -conveyer of a grain-elevator. (*b*) The tube in which the grain is lifted into an elevator.—**10.** In *mining*, a peculiar form of quartz-reef, forming a nearly vertical prolongation of the saddle. *E. E. Morris*, Austral English.—**11.** A tongue-like portion of some geologic formation which projects from the main mass or intrudes others. The term is a local one used in England for such relationship in different drift deposits. *J. Geikie*, The Great Ice Age, p. 362.—**12.** A play in which 'leg-business' is a prominent feature. [Theat. slang.]—**Deep square leg,** in *cricket*: (*a*) A fielder at right angles with the batsman's wicket and at a distance from it on the legside. (*b*) His position in the field. *Hutchinson*, Cricket, p. 65. **Good leg** (*naut.*), a satisfactory course.—**Lawn-tennis leg,** rupture of some of the fibers of the muscles of the calf by overstrain in playing lawn-tennis.—**Leg along** (*naut.*), the leading out of a rope that is to be hauled on. [Eng.]—**Legs and wings** (*naut.*), said of a ship when its masts are of extraordinary height and its yards very wide, that is, an oversparred and oversailed vessel. **Leg ball.** See ★*ball*[1].—**Leg-before-wicket,** in *cricket*. A batsman is out *leg-before-wicket* if with any part of his person he stops the ball which, in the opinion of the umpire at the bowler's wicket, has been pitched in a straight line from it to the striker's wicket and would have hit it.

The law of *leg-before-wicket* has also been much discussed, owing to the general objection to the growing habit of deliberately putting the body or legs in front of a breaking ball instead of playing it with the bat. *Encyc. Brit.*, XXVII. 277.

Leg-of-mutton sail. Same as *shoulder-of-mutton sail* (which see, under *sail*[1]).—**Legs of the martinets** (*naut.*), an old name for the two ropes fastened to the leech-rope of a course and spliced together.—**Off the left leg,** in *golf*, that stance assumed by a player by which the ball is played on a line with the left foot.—**Off the right leg,** in *golf*, that stance assumed by a player by which the ball is played relatively near to the right foot, with the right leg advanced.—**Scissors legs.** Same as ★*scissor-leg*.—**Shear legs,** the spars which form a pair of shears.—**To keep one's legs.** Same as *to keep one's feet* (which see, under *keep*).—**To make a leg.** (*b*) *Naut.*, to sail on a tack.—**To pull a person's leg,** to fool or humbug him; to 'do' or obtain money from a person by imposing on his credulity. [Slang.]

leg. An abbreviation (*b*) of *legislative* or *legislature*; (*c*) of *legal*; (*d*) of *legate*; (*e*) of the Latin *legit*, he reads; (*f*) of *legunt*, they read.

legacy, *n.*—**Absolute legacy,** a legacy, without condition, which vests immediately upon the death of the testator.—**Alternate legacy,** a legacy in which one of two or more things is bequeathed without designating which.—**Conditional legacy,** a legacy which will vest only upon the fulfilment of some condition precedent or subsequent.—**Indefinite legacy,** a legacy in which things not enumerated or ascertained as to amounts, quantities, etc., are bequeathed, as a bequest of unenumerated chattels, or all shares in a certain company, or a fund that may be on deposit in a certain bank, etc. A residuary legacy is usually of this class.—**Lapsed legacy,** a legacy which, by the death of the legatee before the testator dies or before some certain event, can never vest.—**Legacy by damnation†,** in *civil law*, a legacy in which the testator charged his heir to give a certain thing to a certain legatee. It afforded the legatee a claim against the heir, but prior to delivery no right of property in the thing bequeathed.—**Modal legacy,** a legacy in which the will directs a particular method of applying the legacy for the benefit of the legatee, as a certain sum to be used for educating a certain person, etc.—**Substitutive legacy,** a gift by will or codicil intended to take the place of one already made in either.—**Universal legacy,** in *civil law*, a single bequest by which a testator disposes of his entire estate.

legacy (leg′ä-si), *v. t.*; pret. and pp. *legacied*, ppr. *legacying*. [*legacy*, *n.*] **1.** To bequeath; assign as a legacy.—**2.** To leave a legacy to.

legalistic (lē-gal-is′tik), *a.* [*legalist* + *-ic*.] Pertaining to legalism or to legalists.

It [book of Jubilees] is really an Haggadic commentary on Genesis, and is practically the sole monument of *legalistic* Pharisaism belonging to the latter half of the 2nd century B.C., and is a characteristic example of that form of religion against which the Pauline dialectic was directed. It has a secret apologetic aim. It defends and justifies the assumption of the high priesthood by the Maccabees. *Encyc. Brit.*, XXV. 487.

legality, *n.* **3.** A gambling game. [Slang.]

Le Gascon style of bookbinding. See ★*style*[1].

legatary, *n.* **II.** *a.* Pertaining to or of the nature of a legacy.

legate (lē-gāt′), *v. t.*; pret. and pp. *legated*, ppr. *legating*. [L. *legare*, pp. *legatus*, send, appoint, bequeath: see *legate*, *n.*] To bequeath; give by will; give and bequeath.

legatee, *n.*—**Residuary legatee.** See *residuary devisee*, under *residuary*.

legationary (lē-gā′shon-ä-ri), *a.* [*legation* + *-ary*[1].] Pertaining to a legation.

legative (leg′ä-tiv), *a.* and *n.* [ML. *legativus*, < L. *legare*, send, depute, appoint: see *legate*, *n.* and *v.*] **I.** *a.* **1.** Possessing power to confer the authority of a legate upon: as, a *legative*

bull; a *legative* commission.—2. Same as *legatine*, 1 and 2.

II†. *n.* A legate. [Once, in a figurative use.] *N. E. D.*

Legato touch, a style of playing, especially on the pianoforte or organ, that produces a smooth, legato effect: opposed to *staccato touch*.

legatorial (leg-ạ-to′ri-ạl), *a.* [*legator* + *-ial.*] Of or pertaining to one who leaves a legacy; pertaining to a legacy.

legatory†, *n.* An obsolete form of *legatary*.

leg-break (leg′brak), *n.* In *cricket*, a ball which breaks from the leg, that is, a ball which, after it has pitched, alters its course, or twists (as viewed by the bowler), from right to left. *R. H. Lyttelton*, Cricket and Golf, p. 100.

legendarian (lej-en-, or lē-jen-dā′ri-ạn), *n.* [*legendary* + *-an.*] 1. The writer of a legendary; a chronicler of the saints.—2. One who regards early history, especially gospel history, as legendary.

legendry (lej′en-, or lē′jen-dri), *n.* [*legend* + *-ry.*] The realm of legend; legends collectively; mystic inscriptions or symbols.

leg-gland (leg′gland), *n.* A gland in the basal joint of the leg of *Branchippus*, and in the terminal joint of the leg in many insects.

legicide (lej′i-sīd), *n.* [L. *lex* (*leg-*), law, + *-cida*, < *cædere*, kill.] An abolisher or destroyer of law or the laws.

legific (lē-jif′ik), *a.* [L. *lex* (*leg-*), law, + *-ficus*, < *facere*, make.] Law-making.

legiformal† (lej′i-fôr-mạl), *a.* [L. *lex* (*leg-*), law, + *forma*, form, + *-al*[1].] Of a legal form or character. *N. E. D.*

leg-ill (leg′il), *n.* An inflammation of the interdigital space of the feet of sheep, followed by swelling, erosions, and severe lameness.

legionry (lē′jọn-ri), *n.* [*legion* + *-ry.*] Gathered legions; legions collectively.

legislation, *n.*—**Attractive legislation**, legislation which puts a premium on socially useful conduct: opposed to *negative* or *repressive legislation*, which enacts penalties for socially harmful conduct; especially, legislation which fosters education and enlightenment. *L. F. Ward*, Dynamic Sociol., II. 235.

legislational (lej-is-lā′shọn-ạl), *a.* Pertaining to, resulting from, or of the nature of legislation.

legitimate, *a.* **II.** *n.* 1. By ellipsis, legitimate drama (which see, under *legitimate*).—**2†.** An emigrant to Australia who had 'legal reasons' for emigrating. [Slang.]—**3.** A legitimate child.—**4†.** Something to which one has a legal right. *Milton*, Eikon., 31. *N. E. D.*

legitimature (lē-jit′i-mā-tūr), *n.* [*legitimate*, *v.*, + *-ure.*] An office or dignity to which one has a legitimate title. *Carlyle*, Fred. the Great, VI. 144. *N. E. D.*

legitime, *n.* **II.** *a.* 1. Legitimate.—2. Genuine, as opposed to *adulterated* or *spurious*.—3. Orderly; conforming to legal usage.

legitimistic (lē-jit-i-mis′tik), *a.* [*legitimist* + + *-ic.*] Maintaining or inclined to the principles of the Legitimists.

legitimity (lej-i-tim′i-ti), *n.* [F. *légitimité*; as *legitime* + *-ity.*] Legitimacy. *Landor*, Imag. Con., III. 457. *N. E. D.*

legoa (lā′gō-ä), *n.* The Portuguese form of *league*[3].

legplek (lāg′plek), *n.* [Cape D., < *leggen*, lie, + *plek*, a place.] A pen or inclosure for cattle. [South African Dutch.]

leg-rope (leg′rōp), *v. t.* In Australia, to rope or lasso by the leg with a noosed rope.

leg-ropes (leg′rōps), *n.* Same as ★*Bauera*, 2.

leg-stump (leg′stump), *n.* See *stump*, 5.

leguan† (le-gwän′), *n.* [D. *leguaan*, < F. *l'iguane* or *le guane*: *le*, the, *iguana*, *guane*, iguana: see *iguana* and *guana*[1].] The iguana.

legumelin (lē-gū′me-lin), *n.* [*legume* + *-el* + *-in*[2].] A proteid which is said to be present in the pea and other leguminous seeds: it is probably a mixture consisting chiefly of nucleo-albumins.

leg-vise (leg′vīs), *n.* In *mech.*, a bench-vise which is partly supported by a leg reaching to the floor.

leg-worm (leg′wèrm), *n.* A guinea-worm, the female of which lives coiled up in the subcutaneous tissues, usually of the legs, and gives rise to painful tumors.

lehal (le-häl′), *n.* [N. Amer. Indian.] A guessing game of the Indians of Oregon, Washington, and British Columbia, played with two small bones one of which is marked. The bones are hidden in the hands of the players, and the object of the game is to guess in which hand the marked bone is.

lehm (lām), *n* [G.] Loam: sometimes used technically for untransported fragmental products of the superficial decay of rocks which resemble loess.

The true loess is distinguished from another, *lehm*, which Falsan recognizes as the product of atmospheric action, formed, in fact, in place from the disintegration and decomposition of the subjacent rocks.
Smithsonian Rep., 1880, p. 227.

lehua (lā-hō′ä), *n.* [Hawaiian.] A native name for a myrtaceous tree, *Metrosideros polymorpha*, found in the Hawaiian, Marquesas, Society, Samoan, Fiji, and Kermadec islands. It bears beautiful red flowers, which are much prized by the natives. The wood is very hard, furnishes the best fuel, and is also used for building purposes. Many of the old idols were made of it. Also called *ohia-lehua*. See ★*ohia*.

lei (lā′ē), *n.* [Hawaiian.] Any ornamental dress for the head or neck, especially a necklace or a wreath of leaves and flowers.

leibzoll (līp′tsōl), *n.* [G., < *leib*, body (see *life*), + *zoll*, tax (see *toll*[1]).] A personal tax formerly imposed in Germany upon a Jew whenever he crossed the boundary of a city or petty state. It was removed in Prussia in 1790 and in other German states in 1803.

He [Joseph II.] abolished the *Leibzoll*, night-notices, passport regulations, and gave the Jews permission to learn trades, art, science, and, under certain restrictions, agriculture. *Encyc. Brit.*, XIII. 685.

Leicester (les′tèr), *n.* The name of a shire in England: applied distinctively (*a*) to a breed of sheep having a long, tapering head, deep chest, round body, thin skin, and fine white wool; and (*b*) to a breed of cattle, practically the same as the longhorn. This breed, as also the Leicester sheep, was brought into prominence by Robert Bakewell, a noted breeder of the eighteenth century.

Leichhardt's bean. Same as *Queensland* ★*bean*.—**Leichhardt's tree.** See ★*tree*.

leidyite (lī′di-īt), *n.* [Named after Dr. Joseph *Leidy* (1823–91) of Philadelphia.] A hydrous silicate of aluminium, ferrous iron, magnesium, and calcium, occurring in green incrustations consisting of fine silky scales: found in Pennsylvania.

Leimacopsidæ (lī-ma-kop′si-dē), *n. pl.* [NL., < *Leimacopsis* + *-idæ.*] A family of terrestrial triclad turbellarians, having the dorsal face very convex and the mouth in the anterior part of the body. It contains the genus *Leimacopsis*.

Leimacopsis (lī-ma-kop′sis), *n.* [NL. (Diesing, 1862), < Gr. λεῖμαξ, a snail, + ὄψις, appearance.] The typical genus of the family *Leimacopsidæ*.

leimtype (līm′tīp), *n.* [G. ★*leimtyp*, *leimtypie*, < *leim*, glue, gelatin, + *typ*, type.] In *photog.*, a process in which gelatin prints in high relief are used for direct printing in the ordinary letter printing-press. *Woodbury*, Encyc. Dict. of Photog., p. 259.

leiocome (lī′ō-kōm), *n.* [Gr. λεῖος, smooth, + κόμμι, gum.] Dextrine or starch-gum: made by heating starch cautiously until it becomes entirely soluble in water, furnishing a thick mucilaginous solution.

Leiocottus (lī-ō-kot′us), *n.* [NL., < Gr. λεῖος, smooth, + NL. *Cottus*.] A genus of Pacific shore-fishes belonging to the family *Cottidæ*.

leiodermia, *n.* See ★*liodermia*.

Leio gum. See ★*gum*[1].

leiomyoma, *n.* See *liomyoma*.

Leiopathes (lī-op′ạ-thēz), *n.* [NL. (Gray, 1840), < Gr. λεῖος, smooth, + πάθος, condition, quality.] The typical genus of the family *Leiopathidæ*.

Leiopathidæ (lī-ō-path′i-dē), *n. pl.* [NL., < *Leiopathes* + *-idæ.*] A family of zoantharians, of the order *Antipathidea*, in which 12 mesenteries are present in the oral cone. It contains the genus *Leiopathes*.

leiophyllous (lī-of′i-lus), *a.* [Gr. λεῖος, smooth, + φύλλον, leaf, + *-ous.*] Having smooth leaves.

leiopus, *n.* See ★*liopus*.

Leiostomus (lī-os′tọ-mus), *n.* [NL., < Gr. λεῖος, smooth, + στόμα, mouth.] A genus of sciænoid fishes found on the South Atlantic and Gulf coasts of the United States.

Leiostomus xanthurus.
(From Bulletin 47, U. S. Nat. Museum.)

leiphamic (lī-fam′ik), *a.* [NL. *leiph*(*æmum*) + *amicus*) + *-ic.*] Derived from the lichen *Hæmatomma leiphæmum*. **Leiphamic acid**, a bitter compound, $C_{22}H_{40}O_5$, contained in the lichen *Hæmatomma leiphæmum*.

Leishman-Donovan body. See ★*body*.

Leiter's coil. See ★*coil*[1].

Leithakalk (lī′t ạ-kälk), *n.* [G., 'Leitha limestone.' The river *Leitha* is a tributary of the Danube.] In *geol.*, a subdivision or phase of sedimentation of the Miocene series in Austria. The rock is a reef limestone largely composed of corals, calcareous algæ, and bryozoans, with great numbers of mollusks, sea-urchins, and other reef-inhabiting animals. At the edges of the Vienna basin, in which it lies, the rock becomes sandy and conglomeritic (*Leitha-conglomerate*).

leitmotiv (līt′mō-tēf″), *n.* [Also *leitmotif*, *leitmotive*; < G. *leitmotiv*, < *leiten*, lead, + *motiv*, motive.] In *music*, a leading motive (which see, under *leading*[1]).

leitneriaceous (līt″nē-ri-ā′shius), *a.* Belonging to the plant family *Leitneriaceæ*.

Leitneriales (līt-nē-ri-ā′lēz), *n. pl.* [NL. (Engler, 1897), < *Leitneria* + *-ales.*] An order of dicotyledonous archichlamydeous plants embracing only the family *Leitneriaceæ*.

lek (lek), *n.* [*lek*, *v. i.*] An assemblage of black cocks, *Tetrao tetrix*, during the pairing season, when the birds select their mates.

As many as forty or fifty or even more birds congregate at the *leks*; and the same place is often frequented during successive years. *Darwin*, Descent of Man, p. 460.

lekane (le-kä′nā), *n.* [Gr. λεκάνη, a dish.] In *Gr. archæol.*, a covered pottery vessel in the form of a tureen, with two handles, sometimes used as a basket or box.

L. E. L. An abbreviation of *Laureate in English Literature*.

lembergite (lem′bèrg-īt), *n.* [*Lemberg* (see def.) + *-ite*[2].] An artificial mineral, a hydrous silicate of aluminium and sodium, $5NaAlSiO_4 + 2H_2O$, first described by J. F. Lemberg as nephelin hydrate.

lemmanee (lem-ạ-nē′), *n.* [Also *lemone*; from an East Indian source.] A fine cotton material made in India. *Yule and Burnell*, Hobson-Jobson (s. v. *piece-goods*).

"*Lemone* Handkerchiefs" were advertised in the Boston Gazette (in 1755). These were of the India cotton material *lemmanee*.
A. M. Earle, Costume of Colonial Times, p. 124.

lemming, *n.* The North American lemmings, 8 or 10 species of which are now recognized, have been divided into two genera, *Lemmus* and *Dicrostonyx*, and the species once familiar as *Myodes obensis* is now *Lemmus alascensis*. The black-footed lemming, *L. nigripes*, is peculiar to St. George Island, Bering Sea. The common northeastern species is *D. hudsonius*.

lemming-mouse (lem′ing-mous), *n.* One of the small, short-tailed mice of the genus *Synaptomys*, the best known and most widely distributed being *S. cooperi*. Nine species are now recognized, five of which are included in the subgenus *Mictomys*.—**Cooper's lemming-mouse**, *Synaptomys cooperi*, a small mouse resembling the deer-mouse in general appearance, but having a shorter tail. It is common in the eastern United States, and is found from Massachusetts west to Minnesota and south to Georgia.

lemnaceous (lem-nā′shius), *a.* Belonging to the plant family *Lemnaceæ*.

lemniscate, *n.* (*e*) The locus of the point in which the straight through the center and the projection of a point of a circle on a fixed tangent are cut by the perpendicular from this point to the diameter from the contact point. This is the lemniscate of Gerono, a curve of the form of an 8, whose equation in simplest form is $y^4 = y^2 - x^2$.—**Lemniscate of Bernoulli.** See *lemniscate*, *n.* (*a*).

lemniscoid (lem-nis′koid), *n.* [*lemniscus* + *-oid.*] A curve resembling the lemniscate, that is, shaped like a figure eight. *Amer. Jour. Sci.*, July, 1903, p. 55.

lemniscoidal (lem-nis′koi-dạl), *a.* [*lemniscoid* + *-al*[1].] Resembling a ★*lemniscoid* (which see). *Amer. Jour. Sci.*, July, 1903, p. 58.

lemniscus, *n.* **4.** A kind of reference-mark such as the modern asterisk, obelisk, etc., consisting of a straight line drawn between two points or dots (—), formerly used by textual critics in their annotations.

Lemoine circles, parallels, point, straight. See ★*circle*, etc.

lemon, *n.* **Desert-lemon.** Same as *native* ★*kumquat*.—**Syrup of lemon**, a cane-sugar syrup of lemon-juice flavored with lemon peel. It is used as a vehicle in pharmacy. **Wild lemon**, in Australia, *Pleetrona latifolia*, a small tree of the madder family, yielding a hard, close-grained, streaked, pinkish wood.

lemoncito (lā-mōn-sē′tō), *n.* Same as ★*limoncito.*

lemonet†, *n.* See ★*lemmanee.*

lemoniid (le-mō′ni-id), *n.* and *a.* **I.** *n.* A member of the lepidopterous family *Lemoniidæ.*

II. *a.* Having the character of or belonging to the family *Lemoniidæ.*

lemon-kali, *n.* **2.** A mixture of bicarbonate of potash with citric acid (originally obtained from lemon- or lime-juice), both in powder and flavored with a little oil of lemon. On addition of water it effervesces from escape of carbon-dioxid gas and produces a drink of mildly laxative effect. See *lemon-kali,* 1.

lemon-lily (lem′ǫn-lil″i), *n.* See ★*lily.*

lemon-lobelia (lem′ǫn-lō-bē″liä), *n.* Same as *lemon-balm.*

lemon-monarda (lem′ǫn-mō-när″dä), *n.* A plant, *Monarda citriodora,* of the dry plains of the western United States. It has somewhat the odor of lemons.

lemon-rob (lem′ǫn-rob), *n.* Lemon-juice that has been thickened or concentrated by evaporation. [Eng.]

lemon-scab (lem′ǫn-skab), *n.* See ★*scab.*

lemon-sole, *n.* **3.** In New South Wales, *Paraplagusia unicolor,* of the family *Pleuronectidæ* or flatfishes; also, in New Zealand, the New Zealand turbot. *E. E. Morris,* Austral English.

lemonweed, *n.* **2.** In the southwestern United States, *Pectis filipes, P. papposa,* and *P. longipes,* small yellow-flowered lemon-scented composites with linear leaves dotted with oil-glands. These plants are used medicinally by the Indians and the white settlers, in the form of a decoction. See ★*limoncillo,* 2.

lemon-wood (lem′ǫn-wud), *n.* **1.** See *lemon wood,* under *wood*[1].—**2.** In New Zealand, the hedge-laurel or tarata, *Pittosporum eugenioides.* Also called *mapau* and *New Zealand oak.* See ★*mapau* and ★*tarata.*

lemony (lem′ǫn-i), *a.* [*lemon* + *-y*[1].] Like lemon in taste or smell.

lemoparalysis, *n.* Same as ★*læmoparalysis.*

lemuravid (lem-ū-rav′id), *n.* One of the *Lemuravidæ.*

lemuravoid (lem-ū-rav′oid), *a.* Related to or having the characters of *Lemuravus.*

lemurian[2] (lē-mū′ri-ǫn), *a.* Resembling or characteristic of a lemur; lemurine: correlated with *cebian, pithecian,* etc.

Frontal sinuses well marked, cheek and jaw bones very large, orbits large and distant, an unsymmetrical face, the nasal overture of a pheleiform type, and *lemurian* attachment of the under jaw. *Smithsonian Rep.,* 1890, p. 621.

lemuriform (lē-mū′ri-fôrm), *a.* Resembling a lemur: having the characteristics of a lemur.

lenad (len′ad), *n.* [*le(ucite)* + *n(ephelite)* + *-ad.*] In *petrog.,* in the quantitative system of igneous rocks (see ★*rock*[1]), a standard feldspathoid mineral—leucite, nephelite, or a sodalite.

Lenæa (lē-nē′ä), *n. pl.* See *Lenaia.*

Lenard effect, ray, tube, window. See ★*effect,* etc.

lending-house (len′ding-hous), *n.* A charitable institution for lending money to the poor at a very low rate or gratis.

lendofelic (len-dō-fel′ik), *a.* [*len(ad)* + *do-(minant)* + *fel(dspar)* + *-ic.*] In *petrog.,* in the quantitative classification of igneous rocks (see ★*rock*[1]), noting a division in which the normative feldspars are dominant over the normative lenads (leucite, nephelite, sodalite) within the limits $\langle \frac{7}{1} \rangle \frac{5}{3}$.

lenfelic (len-fel′ik), *a.* [*len(ad)* + *fel(dspar)* + *-ic.*] In *petrog.,* in the quantitative classification of igneous rocks (see ★*rock*[1]), a division in which the normative feldspars and lenads are in equal, or nearly equal, proportions, that is, are within the limits $\langle \frac{5}{3} \rangle \frac{3}{5}$.

lengenbachite (leng′en-bäch-īt), *n.* [G. *Lengenbach,* a small stream in the Binnenthal, Switzerland.] A sulpharsenite of lead with antimony, silver, and copper in small amount; it occurs in thin-bladed crystals, probably triclinic, of steel-gray color and metallic luster: found in the dolomite of the Binnenthal, Switzerland.

length, *n.* **9.** (*a*) In the brachiopod shell, the distance from the apex of the more projecting valve axially to the anterior margin. (*b*) In the pelecypod shell, commonly the greatest distance across the shell fore and aft, but more correctly the distance from the beak obliquely along the crescence-line, or line of most rapid growth.—**10.** In *cricket:* (*a*) The distance between the bowler's wicket and the spot where the ball pitches: said of a ball bowled. (*b*) The proper distance at which a ball bowled should pitch; a good pitch. [Colloq.]—**At arm's length.** See ★*arm*[1].—**Basal length,** in *craniom.,* the distance from the basion to the gnathion. **Basilar length,** in *craniom.,* the length from the basion to the henselion.—**Clear length.** See ★*clear.*—**Dental length,** in *craniom.,* the combined lengths of the crowns of the premolar and molar teeth. **Fundamental length,** in *thermom.,* the distance between the fiducial points of a thermometer after correcting these to what they would have been under the standard atmospheric pressure.—**Length ball.** See ★*ball*[1].—**Length bowling.** See ★*bowling*[2].—**Length of an arc.** See ★*arc*[1].—**Measure of length.** See ★*measure.*—**Merchantable length,** in *forestry,* the total length of that portion of the stem of a tree which can be used under given conditions.—**Mesial length,** in *anat.,* the distance between the frontal and occipital points. *Hrdlička,* in Amer. Anthropologist, 1901, p. 491.—**Optical length of a ray,** the product of the distance traversed and the index of refraction.—**Palatal length,** in *craniom.,* the distance from the medial point on the inner side of the alveolar arch to the posterior medial point of the palatal bones, excluding the posterior nasal spine.—**Possible merchantable length.** See *merchantable* ★*length.*—**Prince's lengths,** in *archery,* the ranges of 100, 80, and 60 yards: so named from the Prince of Wales, afterward George IV.—**Rupture length,** a constant used to express the strength of paper. The breaking stress of a sample is measured by stretching, and the length of a strip of the same paper, equal in width to the sample and having a weight equal to the breaking load, is computed. This length, in kilometers, is the *rupture length.*

length-height (length′hīt), *n.* Same as *altitudinal* ★*index.*

Lenham beds. See ★*bed*[1].

lenic (len′ik), *a.* [*le(ucite)* + *n(ephelite)* + *-ic.*] In *petrog.,* in the quantitative classification of igneous rocks (see ★*rock*[1]), having the character of or belonging to the group of lenads (leucite, nephelite, and the sodalites), equivalent to the feldspathoid minerals.

lenigallol (len-i-gal′ol), *n.* [L. *lenis,* smooth, + E. *gallol.*] The trade-name for pyrogallol triacetate, $C_6H_3(\overset{1}{C_2}H_3\overset{2}{O_2})\overset{3}{O_2})_3$, prepared by the action of acetyl chlorid on pyrogallol. It forms a colorless crystalline powder and slowly liberates pyrogallol in contact with inflamed skin, hence it is used as a remedy for eczema and similar diseases.

lenirobin (len-i-rō′bin), *n.* [L. *lenis,* smooth, + E. (*chrysa*)*robin.*] The trade-name for chrysarobin triacetate, $C_{30}H_{23}O_4(OCOCH_3)_3$. It is used instead of chrysarobin in the milder forms of various skin diseases.

lennilite (len′i-līt), *n.* [*Lenni* (see def.) + Gr. λίθος, stone.] A greenish orthoclase from Lenni, Pennsylvania.

leno-weaving (lē′nō-wē″ving), *n.* Same as ★*gauze-weaving.*

lens, *n.* **5.** [*cap.*] [NL. (Stickman, 1754).] A genus of dicotyledonous plants of the family *Mimosaceæ.* There are about 14 species, of which the best-known is *L. phaseoloides,* the match-box bean or similar-pod. See *Entada,* ★*gogo, sea-bean,* 1, and *similar-pod.*—**6.** In *entom.:* (*a*) The crystalline lens or cone. (*b*) One of the facets of the compound eye.—**7.** In *geol.,* a body of ore having a lenticular shape. This type is specially common in metamorphic rocks, such as schists or slates, and is very frequent with magnetic and specular iron ores, pyrites, and some gold-quartz veins. Lenses of magnetite or pyrites often overlap like shingles.

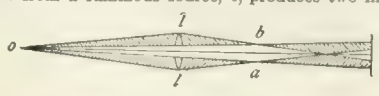
They have revealed valuable ore bodies of two great types, those which occur as *lenses,* roughly parallel to the bedding, and those which occur in fracture or fissure zones. *U. S. Geol. Surv.,* Contrib. to Econ. Geol., 1902, p. 113.

8. A surface-condenser made of two round, dished plates bolted together, resembling in form a double-convex lens. [Local, U. S.]

There are no coils in the stills, but the steam is conducted into what are termed "*lenses,*" which resemble a double-convex lens. *Sci. Amer.,* Sept. 5, 1903, p. 165.

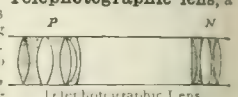
Bifocal lens, a lens the upper part of which is ground for the correction of distant vision, the lower part for that of near vision in reading, writing, etc. The several parts are either cemented or fused together.—**Billet's split lens,** an instrument for producing interference-fringes, and showing the effect of a plate interposed in the path of one of the interfering pencils in displacing the fringes. It consists of a lens, *l, l′,* cut in halves, which can be separated or brought close together at will by means of a micrometer-screw. Light from a luminous source, *o,* produces two images,

Bifocal Lens.
a and *b,* separate parts; *c,* parts joined together.

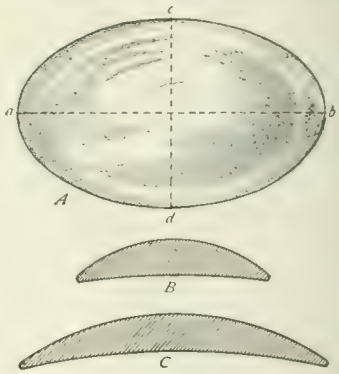


Billet's Split Lens.
(From Preston's "Theory of Light.")

a and *b,* close together. The light diverging from these images produces fringes on a screen placed anywhere in their common path, and it is easy to interpose plates of any transparent substance in the path of either or of both simultaneously.—**Bull's-eye lens,** a very convex lens used in the bull's-eye lantern.—**Convergent lens,** one which so refracts rays of light that they converge toward a single point.—**Convertible lens,** in *photog.,* a type of objective consisting of three separate systems, each of which can be used alone, each being corrected for spherical and chromatic aberration and for astigmatism.—**Coquille lens,** a lens of uniform thickness, convex on one side and equally concave on the other: used merely as a shield to the eye.—**Dispersion lens,** a diverging lens; any lens having greater thickness in the axis than at the edge.—**Equivalent lens,** a single lens which is equivalent to a given lens system in that the image formed by it is of the same size as that formed by the entire system.—**Field of a lens,** in *photog.,* the illuminated space on a screen produced by any lens working with full aperture. *Woodbury.*—**Midangle lens,** a lens having a focal length greater than that of a wide-angle lens and less than that of a long-focus lens.—**Minus lens,** a negative, concave, or diverging lens.—**Narrow-angle lens,** a photographic lens having an angle of view of from 40° to 50°: opposed to *wide-angle lens.*—**Oil-immersion lens,** a microscope objective of high power which when used is immersed, in focusing, in a drop of oil placed on the cover-glass of the slide.—**Planar lens,** in *photog.,* a special anastigmatic objective. When of short focal length it is well adapted for instantaneous photography, for enlarging and reducing pictures, and for projection apparatus; when of greater focal length it serves for photomechanical reproduction processes.—**Polyscopic lens,** a multiplying lens.—**R. R. lens,** in *photog.,* an abbreviation for *rapid rectilinear lens. Woodbury,* Encyc. Dict. of Photog., p. 433. **Steinheil's periscopic lens,** in *photog.,* a non-achromatized symmetrical doublet introduced by Steinheil in 1865. The lens included an angle of 90°, but neither lens of the combination was corrected for chromatic aberration.—**Telephoto lens.** Same as *telephotographic* ★*lens.*—**Telephotographic lens,** a lens, or more strictly a lens system, for photographing distant objects in detail. Such a system consists of two parts, a positive element (*P*), which may be any ordinary photographic objective, and a negative element (*N*), which increases the effective focal length of the system, giving a greatly magnified image but a correspondingly smaller angle. The figure shows a combination designed by Dallmeyer. Also called *telephoto lens.*—**Telescopic lens,** a lens adapted for use in a telescope.—**Toric lens,** a lens in which the difference of refraction of the two principal meridians is



Telephotographic Lens



Toric Lens.
A, front; *B,* section on *c, d*; *C,* section on *a, b.*

ground on one surface, the other surface being ground concave. A periscopic spherocylindric lens is thus produced which is much superior to the universal grindings.

lens-board (lenz′bôrd), *n.* In *photog.,* the board which forms the front of the camera and carries the lens.

The focusing arrangement should be by rack and pinion at the side of the *lensboard,* instead of by a release at the back of the camera, or under the lens and shutter. *Photo-Miniature,* Sept., 1901, p. 243.

lensed (lenzd), *a.* [*lens* + *-ed*[2].] Fitted with a lens or lenses.

lens-hood (lenz′hud), *n.* Same as ★*lens-screen.*

lens-screen (lenz′skrēn), *n.* In *photog.,* a contrivance fitted to the front of the lens to screen off side-light in making exposure. It may be of cardboard.

lens-star (lenz′stär), *n.* A star-shaped figure formed by radiating fibers of the crystalline lens of the eye.

-lent. [L. *-lentus* (sometimes *-lens*), usually with the vowel of a preceding stem *-u-lentus, -o-lentus,* sometimes *-i-lentus,* a compound composed of *-l(o)-* or *-l(i)-,* + *-entus, -ento-,* a suffix connected with the participial suffix *-ens* (*-ent-*): see *-ent.*] A suffix in some adjectives of Latin origin, as *flatulent, pestilent, pulverulent, turbulent, vinolent, violent, virulent,* etc. It is not used in new English formations.

lentamente (len-tä-men′tā), *adv.* [It., < *lento,* < L. *lentus,* slow.] In *music,* slowly; with deliberation.

lentelliptical (lent-e-lip'ti-kal), *a.* [L. *lens* (*lent-*), lentil, + E. *elliptical.*] Lenticular and elliptical.

Lenten kail, or pie, broth or pie made without meat. [Scotch.]

lenten-tide (len'ten-tīd), *n.* The season of Lent.

lenticle (len'ti-kl), *n.* [L. *lenticula*, dim. of *lens*, a lentil: see *lentil.*] In *geol.*: (*a*) A stratum of sedimentary rock which from its central point of maximum thickness tapers to a thin edge in every direction; a common form of limestone in shales. (*b*) A mass of eruptive rock squeezed and sheared into a shape like the typical sedimentary lenticle.

Lenticles or eyes of uncrushed diorite may be traced, round which the more crushed parts have moved and have assumed the schistose condition.
Encyc. Brit., XXVIII. 654.

lenticula, *n.* **4.** The lenticular nucleus in the brain.

lenticular, *a.* **3.** Of or pertaining to lenses generally.

The lenses revolve at a given speed so proportioned to the diameter of the illuminant, and the *lenticular* apparatus, that the light is made to show continually.
Sci. Amer., Feb. 7, 1903, p. 98.

Lenticular bed, a stratum of sedimentary rock in the form of a broad, thin lens, as in the case (frequently) of limestones in shales: more commonly called *lentil-bed*. See ★*lenticle* (*a*). — **Lenticular loop, ore.** See ★*loop*[1], ★*ore*[1]. — **Lenticular rose spots.** See ★*spot.*

lenticularis (len-tik-ū-lā'ris), *a.* [NL.: see *lenticular.*] In *meteor.*, a term adopted by the International Conference at Innsbruck, September, 1905, for clouds having an ovoid form with sharp edges: as, cumulus *lenticularis*, cumulo-stratus *lenticularis*. Such clouds occur especially in connection with sirocco, mistral and foehn winds, and frequently show rainbow colors.

lenticulate (len-tik'ū-lāt), *a.* [NL. **lenticulatus*, < *lenticula*, lentil.] Same as *lenticular.*

lenticuliform (len-tik'ū-li-fôrm), *a.* [< L. *lenticula*, lentil, + *forma*, form.] Lentiform; lenticular.

lenticulo-optic (len-tik″ū-lō-op'tik), *a.* Having reference to the lenticular nucleus.

lenticulothalamic (len-tik″ū-lō-thal'a-mik), *a.* Having reference to the lenticular nucleus and the optic thalamus.

lenticulus (len-tik'ū-lus), *n.* [NL., < L. *lenticula*, lentil.] Same as *os orbiculare.*

lentil, *n.* **4.** A body or mass having the general form of a double-convex lens; a lenticular body or mass; a lenticle.

In the southwestern belt there is a line of Devonian limestone *lentils* which may be traced with many interruptions for over 100 miles.
Amer. Jour. Sci., May, 1903, p. 344.

Lentil-bed. See ★*lenticular bed.*

Lentilla (len-til'ä), *n.* [NL. (Wight, 1906), a diminutive of *lens* (*lent-*), the lentil.] A genus of leguminous plants. It contains about 6 species, one of which is the lentil. See *lens*, 4, and *lentil*, 1.

lentil-powder (len'til-pou″dėr), *n.* Finely powdered seeds of the common lentil.

Lentinus (len-tī'nus), *n.* [NL. (Fries, 1825), < L. *lentus*, tough, lasting.] A genus of agaricaceous fungi having a tough, leathery pileus and decurrent gills. The species occur on decaying wood. *L. lepideus* is a common species.

lentisco (len-tis'kō), *n.* An extract of the leaves of the mastic-tree, *Pistacia Lentiscus*: said to be used as a substitute or adulterant for sumac.

lentitis (len-tī'tis), *n.* [NL., < *lens* (*lent-*), lens, + *-itis.*] Same as *phacitis.*

leonina (lā-ō-nē'nä), *n.* [It., < *Leone*, Leo.] A gold coin of 2 scudi, struck by Leo XII., 1823–29.

leonine, *n.* **2.** *pl.* Leonine verse.

The Speculum is not . . . written either in classical metre or in *leonines.*
Saturday Rev., Sept. 21, 1861, p. 306. *N. E. D.*

leonite (lē'ō-nīt), *n.* [*Leo*(*pold*) (see def.) + *-n-* + *-ite*[2].] A hydrated sulphate of potassium and magnesium, $K_2SO_4.MgSO_4 + 4H_2O$, analogous to blödite in formula, and hence also called *kaliblödite*. It occurs in massive form, rarely in monoclinic crystals, in the salt regions of Leopoldshall and Westeregeln, Germany.

leontiasic (lē-on-tī'a-sik), *a.* [*leontiasis* + *-ic.*] Marked by or affected with leontiasis.

leontiasis (lē-on-tī'a-sis), *n.* [ML., < Gr. λεοντίασις, < λέων (λεοντ-), lion.] The bloating or enlargement of the head, especially of the face, due to tubercular leprosy: from the fancied leonine aspect produced by it.—**Leontiasis ossea,** nodular enlargement of the bones of the head and face.

leopard, *n.*—**Clouded leopard.** Same as *clouded tiger* (which see, under *tiger*).

leopardite (lep'ärd-īt), *n.* [*leopard* + *-ite*[2].] In *petrog.*, a fine-grained feldspathic quartzite, or quartz-porphyry, spotted with oxid of manganese, occurring in North Carolina.

leopard-lizard (lep'ärd-liz″ärd), *n.* A large, spotted species of lizard, *Crotaphytus wislizenii*, common on the dry plains of the western United States from Nevada to Texas.

leopard-mackerel (lep'ärd-mak″e-rel), *n.* A scombroid fish, *Cybium guttatum*, of East Indian seas.

leopard-marmot (lep'ärd-mär″mot), *n.* A book-name for the 13-lined spermophile, *Spermophilus tridecemlineatus.*

leopard-plant (lep'ärd-plant), *n.* See ★*Erythrochæte.*

leopard-rock (lep'ärd-rok), *n.* A metamorphosed augite-syenite, characterized by oval spots of granular feldspar encircled by dark-green augite: associated with apatite veins of Ontario.

leopard-shark (lep'ärd-shärk), *n.* A shark, *Scylliorhinus canicula*, a small species abundant in the Mediterranean and vicinity: so named from the spots. See *cat-shark.*

leopard-tree (lep'ärd-trē), *n.* The spotted-tree, *Flindersia maculosa.* See *Flindersia.*

leopold (lē'o-pōld), *n.* **1.** The gold ducat of Lorraine, under Duke Leopold (1690–97).—**2.** A Belgian gold coin with an issue-value of 25 francs.

leopoldino (lā ō-pōl-dē'nō), *n.* [It.] A Tuscan silver coin of the value of 5 paoli.

Leotia (lē-ō'shi-ä), *n.* [NL. (Hill, 1751), < Gr. λεῖος, smooth (λειότης, smoothness).] A genus of ascomycetous fungi having stalked gelatinous, more or less irregular-shaped ascocarps, and hyaline elongate spores. *L. lubrica* is a common species, of a greenish-yellow color.

lepachys (le-pak'is), *n.* [From *Lepachys*, an untenable genus name, < Gr. λεπίς, a scale, + παχύς, thick; in allusion to the thickened apex of the receptacular bracts.] Any species of *Ratibida*, a genus of plants of the family *Asteraceæ*, especially *R. columnaris.* See ★*Ratibida.*

Lepadocrinus (lep-a-dok'ri-nus), *n.* [NL., < Gr. λεπάς, limpet, + κρίνον, a lily (see *crinoid*).] A very peculiar genus of cystids, of the family *Callocystidæ*, with oval or pyriform calyx, consisting of 20 plates (arranged in five rows) and a column which consists of two parts, thereby differing from all other associated genera. The genus occurs in the Upper Silurian of North America.

lepamine (lep'a-min), *n.* [*lep*(*idine*) + *amine.*] A colorless liquid, $C_{20}H_{32}N_2$, prepared from isoamyl iodide and lepidine. It boils at 275° C.

lepard, *n.* A simplified spelling of *leopard.*

lepargylic (lep-är-jil'ik), *a.* [Gr. λεπ(ίς), scale, + ἄργυ(ρος), silver, + *-l-* + *-ic.* The acid crystallizes in white leaflets.] Same as ★*azelaic* (acid).

Lepargyrea (lep-är-jī-rē'ä), *n.* [NL. (Rafinesque, 1818), < Gr. λεπίς, scale, + ἀργύρεος, silvery. The name alludes to the character of the leaf-surface in the type species, *L. argentea.*] A genus of dicotyledonous plants belonging to the family *Elæagnaceæ.* See *Shepherdia.*

leper[1] (lep'ėr), *v. t.* [*leper*[1], *n.*] To strike with leprosy; leperize; taint with leprosy.

Leperditia (lep-ėr-dit'i-ä), *n.* [NL., from a proper name, *Leperdit.*] A genus of fossil ostracode crustaceans, of the family *Leperditidæ*, characterized by oblong unequal valves with straight dorsal edge and rounded ventral outline, overlapping ventral edge of the right valve, eye-tubercle, and subcentral interior muscular imprint. The genus extends from the Lower Silurian to the Carboniferous.

Leperiza (lep-e-rī'zä), *n.* [NL. (Herbert, 1821), < Gr. λεπίς, scale, + ῥίζα, root.] A genus of monocotyledonous plants of the family *Amaryllidaceæ.* See *Urceolina.*

Lepeta (lep'ē-tä), *n.* [NL. (Gray, 1847).] The typical genus of the family *Lepetidæ.*

Lepetidæ (le-pet'i-dē), *n. pl.* [NL., < *Lepeta* + *-idæ.*] A family of docoglossate gastropods in which the ctenidia, pallial branchiæ, and eyes are absent. It contains the genus *Lepeta.*

Lepidaster (lep-i-das'tėr), *n.* [NL., < Gr. λεπίς, scale, + ἀστήρ, star.] A Silurian genus of the asteroid *Echinodermata*, belonging to the order *Cryptozonia.* It has a rather large disk and 13 arms, and its lower side is covered by imbricating plates which run in two series alongside the ambulacral furrows.

Lepidechinus (lep″i-de-kī'nus), *n.* [NL., < Gr. λεπίς (λεπιδ-), scale, + ἐχῖνος, sea-urchin.] A genus of fossil echinoids or sea-urchins which belong to the family *Archæocidaridæ.* It possesses narrow ambulacra, consisting of two series of imbricating plates and broad interambulacra. The genus is found in the Devonian and Carboniferous of North America.

Lepidesthes (lep-i-des'thēz), *n.* [NL., < Gr. λεπίς (λεπιδ-), scale, + ἐσθής, dress.] A genus of echinoids or sea-urchins of the family *Melonitidæ*, characterized by having a large test and broad ambulacra consisting of eight to eighteen columns of small imbricating plates. The genus is found in the Subcarboniferous rocks of North America.

lepidine[1] (lep'i-din), *n.* [?L. *lepidus*, fine, neat, + *-ine*[2].] A colorless compound,

$$C_6H_4 < \begin{matrix} \overline{\qquad\qquad\quad}| \\ N:CH.CH:CCH_3 \end{matrix},$$

obtained by the distillation of cinchonine with potassium hydroxid; py-4-methylquinoline. It has an odor of quinoline, melts below 0° C., and boils at 261–263° C. Also called *quinolepidine.*

lepidine[2] (lep'i-din), *a.* [Gr. λεπίς (-ιδ-), scale, + *-ine*[1].] Scaly.

Lepidion (le-pid'i-on), *n.* [NL., < Gr. λεπίδιον, dim. of λεπίς (λεπιδ-), scale.] A genus of fishes related to the codfish, found in deep water in both the Atlantic and the Pacific Ocean.

Lepidocentrus (lep″i-dō-sen'trus), *n.* [NL., < Gr. λεπίς (λεπιδ-), scale, + κέντρον, center.] A genus of Devonian echinoids or sea-urchins which belong to the family *Archæocidaridæ*, characterized by 5 to 11 columns of interambulacral plates and very narrow ambulacra which continue beyond the peristomial margin to the true mouth.

Lepidocoleus (lep″i-dō-kō'lē-us), *n.* [Gr. λεπίς (λεπιδ-), scale, + κολεός, sheath.] A very primitive Paleozoic genus of cirriped crustaceans belonging to the family *Lepidocoleidæ.* It is characterized by the elongate, blade-shaped form of the shell, which is composed of two series of plates interlocking on the dorsal edge but only in apposition on the ventral edge.

Lepidodendraceæ (lep″i-do-den-drā'sē-ē), *n. pl.* [NL. (Engler, 1892), < *Lepidodendron* + *-aceæ.*] A family of Paleozoic fossil plants of the order *Lycopodiales*, typified by the genus *Lepidodendron* (which see). Several other genera have been described, as *Knorria*, *Halonia*, *Ulodendron*, etc., which, however, are now believed to represent so many parts or aspects of *Lepidodendron*; but *Lepidophloios* seems to be a distinct genus. The roots belong to *Stigmaria*, but do not constitute all that is included under that name. See all the above terms.

lepidodendrid (lep″i-dō-den'drid), *n.* Same as ★*lepidophyte.*

Lepidogobius (lep″i-dō-gō'bi-us), *n.* [Gr. λεπίς (λεπιδ-), scale, + NL. *Gobius.*] A genus of fishes of the family *Gobiidæ*, found on the west coast of North America.

Lepidomeda (lep-i-dom'e-dä), *n.* [NL., < Gr. λεπίς (λεπιδ-), scale, + NL. *Meda.*] A genus of minnows found in Arizona.

lepidophyte (lep'i-dō-fīt), *n.* [Gr. λεπίς (λεπιδ-), scale, + φυτόν, plant.] Any fossil plant of the great group supposed to represent the ancestors of the modern order *Lycopodiales*, including the families *Lepidodendraceæ*, *Sigillariaceæ*, *Bothrodendraceæ*, etc., or Paleozoic scale-trees.

lepidophytic (lep″i-dō-fit'ik), *a.* Belonging or relating to the lepidophytes.

lepidoporphyrin (lep″i-dō-pôr'fi-rin), *n.* [*lepido*(*tic*) + Gr. πορφύρα, purple, + *-in*[2].] A purple product which results from the yellow pigment in the wings and excrement of butterflies (lepidotic acid) on warming with dilute sulphuric acid.

Lepidopsetta (lep″i-dop-set'ä), *n.* [NL., < Gr. λεπίς (λεπιδ-), scale, + ψῆττα, flounder.] A genus of flounders found on the Pacific coast of the United States. See *Pleuronectidæ*, with cut.

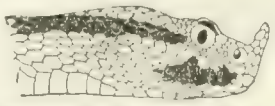
lepidopteric (lep″i-dop-ter'ik), *a.* [*Lepidoptera* + *-ic.*] Pertaining to or derived from *Lepidoptera.*—**Lepidopteric acid,** a derivative of uric acid which forms the green pigment found in several lepidopterous insects. It is converted into uric acid by prolonged boiling in hydrochloric acid.

lepidopterological (lep-i-dop″tẹ-rō-loj′i-kal), *a.* Of or pertaining to lepidopterology.

lepidopterologist (lep-i-dop-tẹ-rol′ọ-jist), *n.* Same as *lepidopterist.*

lepidopterology (lep-i-dop-tẹ-rol′ọ-ji), *n.* [NL. *Lepidoptera* + Gr. *-λογία*, < *λέγειν*, speak.] That branch of entomology which treats of the *Lepidoptera*, or butterflies and moths.

lepidosis, *n.* 2. A scaly outgrowth; specifically, the 'horn' on the nose of the sand-viper, *Vipera ammodytes.*



Side view of head of sand viper (*Vipera ammodytes*), showing the nasal horn, or lepidosis.

Lepidospermæ (lep″i-dọ-spẽr′-mē), *n. pl.* [NL. (Ward, 1904), < Gr. *λεπίς* (*λεπιδ-*), scale, + *σπέρμα*, seed.] A class of fossil plants of the phylum *Pteridospermaphyta* (*Cycadofilices*). They have the external aspect of lepidophytes, but heal seeds instead of macrospores. The genus *Lyginodendron*, which is now known to have borne the seeds called *Lagenostoma*, seems to belong to this class.

Lepidosternidæ (lep″i-dō-stẽr′ni-dē), *n. pl.* [NL., < *Lepidosternon* + *-idæ.*] A division of the *Amphisbænidæ*, or footless lizards, formed by Gray for the reception of the genus *Lepidosternon* and its relatives.

lepidosternoid (lep″i-dō-stẽr′noid), *a.* [*Lepidosternon* + *-oid.*] Relating to or having the characters of *Lepidosternon*, a genus of *Amphisbænidæ.*

lepidotic (lep-i-dot′ik), *a.* [*lepido(p)t(er)ic.*] Noting an acid, similar to uric acid, said to be present in the pigments of many species of *Lepidoptera.*

lepidotrichium (lep″i-dō-trik′i-um), *n.*; pl. *lepidotrichia* (-ä). [NL., < Gr. *λεπίς* (*λεπιδ-*), scale, + *θρίξ* (*τριχ-*), hair.] One of the rays that form the fins of the bony fishes.

In Teleostomi (bony fishes and ganoids), on the other hand, we find small unjointed, horny rays (actinotrichia) on the edges of the fins, which are probably remnants of the ceratotrichia, and, in addition, branched, bony *lepidotrichia*, developed externally to the actinotrichia, and in primitive forms closely resembling the body-scales.
Nature, May 5, 1904, p. 13.

Lepidotus (lep-i-dō′tus), *n.* [NL., < Gr. *λεπιδωτός*, scaled, scaly, < *λεπίς* (*λεπιδ-*), scale.] A genus of fossil ganoid fishes of the family *Semionotidæ*, characterized by thick, deeply imbricating scales with more or less produced overlapping edges, and numerous hemispherical successional teeth which make a revolution of 180° in passing from the incipient to the mature condition. The genus ranges from the Keuper to the Lower Cretaceous, and is widespread in Europe, India, Siberia, and Brazil.

Lepiota (lep-i-ō′tä), *n.* [NL. (Fries, 1821), irreg. < Gr. *λεπίς*, a scale, + *οὖς* (*ὠτ-*), ear. The name refers to the scales on the pileus.] A large genus of agaricaceous fungi having a fleshy pileus, white spores, and an annulate stipe. Over 250 species, distributed throughout the world, have been described. *L. procera*, the parasol mushroom, is a large and beautiful edible species which has a movable annulus.

Parasol Mushroom (*Lepiota procera*). One fourth natural size.

lepismatid (le-pis′ma-tid), *n.* and *a.* I. *n.* An insect of the thysanurous family *Lepismatidæ.*
II. *a.* Having the characters of or belonging to the family *Lepismatidæ.* Also *lepismid.*

lepismid (le-pis′mid), *a.* and *n.* Same as ★*lepismatid.*

Lepisosteidæ (lep″i-sos-tē′i-dē), *n. pl.* [NL., < *Lepisosteus* + *-idæ.*] A family of freshwater ganoid fishes commonly known as the garpikes, which are found in North America and China.

Lepisosteus (lep-i-sos′tē-us), *n.* [NL., irreg. < Gr. *λεπίς*, scale, + *ὀστέον*, bone.] A genus of ganoid fishes which inhabit fresh waters of North America and China, and are commonly known as garpikes.

lepocytode (lep-ō-sī′tōd), *n.* [Gr. *λέπος*, scale, + *κύτος*, a hollow (a cell), + *εἶδος*, form.] Same as *lepocyte.* *De Bary.*

lepolite (lep′ọ-līt), *n.* [Gr. *λέπος*, scale, + *λίθος*, stone.] A gray to pink variety of anorthite from Finland which occurs in complex crystals. Lindsayite (lindesite, or linseite) is a somewhat altered variety.

Lepominæ (lep-ō-mī′nē), *n. pl.* [NL., < *Lepomis* + *-inæ.*] A subfamily of sunfishes.

Lepophidium (lep-ō-fid′i-um), *n.* [NL., < Gr. *λέπος*, scale, + *ὀφίδιον*, dim. of *ὄφις*, serpent.] A genus of fishes of the family *Ophidiidæ*; the cusk-eels: found in deep water on both coasts of America.

Leporidæ, *n. pl.* Somewhat over 150 species and subspecies of this family have been described, just about one half the number being from North America, where the geographic and climatic conditions are favorable for the production of local races. They have been divided, by Dr. Lyon, into 10 genera: *Lepus, Oryctolagus, Sylvilagus, Lemnolagus, Brachylagus, Pronolagus, Romerolagus, Nesolagus, Caprolagus*, and *Pentalagus.* The most remarkable of these are *Romerolagus*, which has long clavicles and resembles the pikas somewhat, and the heavily built *Pentalagus* from the Loochoo Islands.

leporine, *a.* II. *n.* Same as *leporide.*

lepospondylous (lep-ō-spon′di-lus), *a.* [Gr. *λέπος*, a husk, scale, + *σπόνδυλος*, vertebra.] Having vertebræ consisting of a thin shell of bone surrounding the notochord, a type found in some extinct batrachians.

leprarin (lep′ra-rin), *n.* [*Lepraria* + *in*2.] A colorless bitter compound, $C_{21}H_{20}O_{10}$, contained in the lichen *Lepraria latebratum.* It crystallizes in small lustrous plates or prisms which melt at 155° C.

leprolin (lep′rō-lin), *n.* [*lepra* + *-ol-* + *-in*2.] A toxin which is obtained from cultures of the leprosy bacillus.

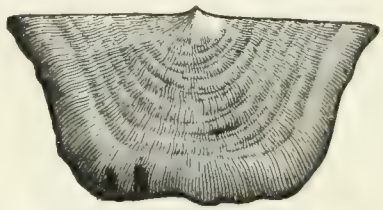
leprologist (lep-rol′ọ-jist), *n.* [*leprolog-y* + *-ist.*] One who devotes special attention to the study of the nature and origin of leprosy and to its treatment.

leprology (lep-rol′ọ-ji), *n.* [Gr. *λέπρα*, leprosy, + *-λογία*, < *λέγειν*, speak.] The pathological study of leprosy.

leproma (le-prō′mä), *n.*; pl. *lepromata* (-ma-tä). [NL., < *lepra* + *-oma.*] One of the tubercles which occur in leprosy.

leprosy, *n.*—**Anesthetic leprosy.** Same as *lepra nervorum* (which see, under *lepra*, 1).—**Leprosy bacillus.** See ★*bacillus.*—**Lombardian leprosy.** Same as *pellagra.*—**Tubercular leprosy.** Same as *lepra tuberculosa* (which see, under *lepra*, 1).

Leptæna (lep-tē′nä), *n.* [NL., < Gr. *λεπτός*, thin, + *-αινα*, a fem. suffix.] A genus of extinct brachiopods of the family *Strophomenidæ*,



Leptæna rhomboidalis Wilckens. Silurian. (From Nicholson and Lydekker's "Palæontology.")

characterized by convexo-concave shells, the flatter portions of which are covered with corrugations and wrinkles. It ranges from the Silurian to the Carboniferous, and is very common in certain formations.

leptænoid (lep-tē′noid), *a.* [*Leptæna* + *-oid.*] Resembling or related to the brachiopod *Leptæna.*

Leptagonus (lep-tag′ō-nus), *n.* [NL., < Gr. *λεπτός*, thin, small, + NL. *Agonus.*] A genus of agonoid fishes of the North Pacific Ocean.

Leptamnium (lep-tam′ni-um), *n.* [NL. (Rafinesque, 1818), < Gr. *λεπτός*, small, + *ἀμνίον*, a bowl for sacrificial blood. The calyx resembles a cup.] A genus of dicotyledonous plants belonging to the family *Orobanchaceæ.* See *Epiphegus.*

Leptictidæ (lep-tik′ti-dē), *n. pl.* [NL., < *Leptictis* + *-idæ.*] A family of small, extinct insectivorous mammals, having trituberculate molars: found from the Eocene to the Oligocene of North America. *Gill*, 1872.

Leptictis (lep-tik′tis), *n.* [NL., < Gr. *λεπτός*, small, + *ἰκτίς*, weasel.] A genus of small *Insectivores* from the Oligocene (White River) of North America.

Leptilon (lep′ti-lon), *n.* [NL. (Rafinesque, 1818), < Gr. *λεπτός*, small, delicate.] A genus of plants of the family *Asteraceæ.* It is closely related to *Erigeron*, but has very small panicled heads, with ray-flowers not longer than the diameter of the disk. There are about 20 species, natives of America and Asia. The name was originally applied to *Leptilon divaricatum*, the dwarf fleabane of the eastern United States. *L. Canadense*, the horseweed or Canada fleabane, is the best-known species. See *horseweed.*

Leptocampyli (lep-tō-kam′pi-lī), *n. pl.* [NL., < Gr. *λεπτός*, thin, + *καμπύλος*, curved.] A suborder of Jurassic or Cretaceous ammonoid cephalopods, characterized by peculiar crenulated ornamentation, discoidal shells, and extremely complex sutures with much reduced saddles and excessively developed lobes.

leptocephalia (lep″tō-se-fā′li-ä), *n.* [NL.] Same as *leptocephaly.*

leptocephalid (lep-tō-sef′ạ-lid), *n.* and *a.* I. *n.* A member of the family *Leptocephalidæ.*
II. *a.* Of or pertaining to the *Leptocephalidæ.*

leptocephalous (lep-tō-sef′ạ-lus), *a.* Same as *leptocephalic.*

leptocerid (lep-tos′ẹ-rid), *n.* and *a.* I. *n.* An insect of the trichopterous family *Leptoceridæ.*
II. *a.* Pertaining to or having the characters of the family *Leptoceridæ.*

leptochlorite (lep-tō-klō′rīt), *n.* [Gr. *λεπτός*, thin, + *χλωρός*, green, + *-ite.*] A name proposed by Tschermak for those members of the chlorite group which commonly occur in fine scales or indistinctly fibrous forms. See also ★*orthochlorite.*

leptoclase (lep′tō-klās), *n.* [Gr. *λεπτός*, thin, + *κλάσις*, fracture.] A name proposed by A. Daubrée for the smallest fractures or cracks in rocks. *Geikie*, Text-book of Geol. (4th ed.), p. 658.

Leptoclinus (lep-tok′li-nus), *n.* [NL., < Gr. *λεπτός*, thin, + NL. *Clinus.*] A genus of blennioid fishes found in arctic seas.

Leptocœlia (lep-tō-sē′li-ä), *n.* [NL., < Gr. *λεπτός*, thin, + *κοῖλος*, hollow.] A genus of extinct *Brachiopoda* with plicated shallow valves and an internal spiralium. The genus is widespread throughout the world in the faunas of the early Devonian.

Leptoconger (lep-tō-kong′gẽr), *n.* [NL., < Gr. *λεπτός*, thin, + L. *conger.*] A genus of eels of the family *Murænesocidæ*, found in West Indian waters.

Leptocottus (lep-tō-kot′us), *n.* [NL., < Gr. *λεπτός*, thin, + NL. *Cottus.*] A genus of cottoid fishes found on the Pacific coast of North America.

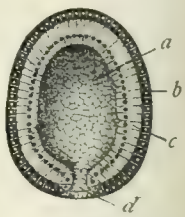
Leptodera intestinalis or **stercoralis,** synonyms for the more common term *Strongyloides intestinalis*, an intestinal parasite occasionally found in man.

leptodermia (lep-tō-dẽr′mi-ä), *n.* [NL., < Gr. *λεπτός*, thin, fine, + *δέρμα*, skin.] Fineness or delicacy of the skin.

leptodermic (lep-tō-dẽr′mik), *a.* Having a thin skin; relating to leptodermia.

leptodermous (lep-tō-dẽr′mus), *a.* Leptodermic: specifically, in *bot.*, thin-coated: applied especially to the capsules of mosses.

leptogastrula (lep-tō-gas′-trō-lä), *n.*; pl. *leptogastrulæ* (-lē). [NL., < Gr. *λεπτός*, thin, small, + NL. *gastrula.*] In *embryol.*, a gastrula, like that of *Amphioxus*, which has no food-yolk in the gastrocele and in which the entoderm consists of a simple layer of cells.



Leptogastrula.

The fully formed gastrula of *Amphioxus* bisected horizontally: the ventral half is represented as seen from above. Magnified. (After Hatschek.) *a*, gastrocele; *b*, ectoderm; *c*, entoderm; *d*, blastopore. (From Marshall's "Vertebrate Embryology.")

leptoid (lep′toid), *n.* [Gr. *λεπτός*, thin, + *-oid.*] A cell of an alga which is differentiated in some way from the surrounding cells.

leptom (lep′tom), *n.* [See *leptome.*] A specialized conducting tissue in marine algæ, whose function it is to transmit organic nitrogenous substances.

The tissue developed to meet the demands for conduction in such cases always shows some of the characters described. It is known as *leptom*, each constituent cell being a leptoid. *Encyc. Brit.*, XXV. 409.

leptomatic (lep-tō-mat′ik), *a.* [NL. ★*leptoma* (*l-*) + *-ic.* See *leptome.*] Of, pertaining to, or of the value of leptome.

The primary leptome is no longer visible, but three secondary *leptomatic* strands have become developed outside each of the primary and secondary rays of hadrome. *Amer. Jour. Sci.*, Sept., 1907, p. 246.

leptomeningeal (lep″tō-mē-nin′jē-al), *a.* [Gr. λεπτός, thin, + μήνιγξ, membrane, + *-al*[1].] Relating to the pia mater and the arachnoid membrane.

leptomeninx (lep-tō-mē′ningks), *n.* The singular of *leptomeninges.*

leptomere (lep′tō-mēr), *n.* [Gr. λεπτός, thin, small, + μέρος, part.] One of the innumerable minute particles of which Asclepiades supposed the body to be composed.

Leptomeria, *n.* 2. [*l. c.*] A delicacy of bodily structure.

Leptomitaceæ (lep″tō-mi-tā′sē-ē), *n. pl.* [NL., ⟨ *Leptomitus* + *-aceæ.*] A family of fungi of the order *Saprolegniales:* named from the genus *Leptomitus.*

Leptomitus (lep-tom′i-tus), *n.* [NL. (Agardh, 1824), ⟨ Gr. λεπτόμιτος, of fine threads, ⟨ λεπτός, thin, + μίτος, thread (filament).] A genus of aquatic fungi, typical of the family *Leptomitaceæ,* containing the single species *L. lacteus,* which occurs on the bottoms of watercourses and on submerged branches, etc.

Leptonacea (lep-tō-nā′sē-ä), *n. pl.* [NL., ⟨ Gr. λεπτον, the small intestine, neut. of λεπτός, thin, small.] A superfamily of teleodesmaceous pelecypods which is characterized by having the incurrent and excurrent openings between the mantle-lobes at opposite ends of the body. It comprises Tertiary and recent species, and numerous commensal and parasitic forms.

leptonacean (lep-tō-nā′shiąn), *a.* and *n.* **I.** *a.* Of or pertaining to the *Leptonacea.*

II. *n.* A mollusk of the superfamily *Leptonacea.*

leptopellic (lep-tō-pel′ik), *a.* [Gr. λεπτός, thin, + πέλλα, bowl (pelvis), + *-ic.*] Relating to or characterized by narrowness of the pelvis; dolichopelvic. *Brinton,* Races and Peoples, p. 49.

Leptophidium (lep-tō-fid′i-um), *n.* [NL., ⟨ Gr. λεπτός, thin, small, + ὄφιδιον, dim. of ὄφις, serpent.] A genus of fishes of the family *Ophidiidæ,* found in deep water on both coasts of North America.

leptophonia (lep-tō-fō′ni-ä), *n.* [NL., ⟨ Gr. λεπτός, thin, + φωνή, sound, voice.] Weakness or thinness of voice.

leptophonic (lep-tō-fon′ik), *a.* [*leptophonia* + *-ic.*] Having a voice of small volume or carrying power; pertaining to leptophonia.

leptophyllous (lep-tō-fil′us), *a.* [Gr. λεπτός, slender, + φύλλον, leaf, + *-ous.*] In *bot.,* having slender leaves.

leptoprosope, *n.* 2. A leptoprosopic skull or individual.

leptoprosopous (lep-tō-pros′ō-pus), *a.* [Gr. λεπτός, thin, small, + πρόσωπον, face, + *-ous.*] In *anthrop.,* having a skull with a facial index of 90 and over. [German anthropologists.] See *leptoprosopic.*

leptoprosopy (lep-tō-pros′ō-pi), *n.* [*leptoprosop-ous* + *-y*[3].] The quality or condition of being leptoprosopous. *W. R. Macdonell,* in Biometrika, March–July, 1904, p. 214.

leptopterous (lep-top′te-rus), *a.* Having small, fine, delicate wings. *Encyc. Dict.*

Leptopuccinia (lep″tō-puk-sin′i-ä), *n.* [NL., ⟨ Gr. λεπτός, thin, + NL. *Puccinia.*] A division of the genus *Puccinia,* proposed by Schroeter to include those species which form only teleutospores.

leptorrhinian, *a.* **II.** *n.* A person or race having narrow nasal bones. *Deniker,* Races of Man, p. 63.

Leptosphæria (lep-tō-sfē′ri-ä), *n.* [NL. (Cesati and De Notaris, 1863), ⟨ Gr. λεπτός, thin, small, + σφαῖρα, sphere.] A large genus of pyrenomycetous fungi of the family *Pleosporaceæ.* The perithecia are small at first and embedded in the host, but finally become more or less superficial. The spores are elongate, three or more septate, and colored. Nearly 500 species have been described. *L. Doliolum* and many other species are found on dead herbaceous stems. *L. Tritici* and a few other species are regarded as the cause of certain plant-diseases.

Leptospondyli (lep-tō-spon′di-lī), *n. pl.* [NL., ⟨ Gr. λεπτός, thin, + σπόνδυλος, vertebra.] A subgenus of the stegocephalous *Amphibia* having a persistent notochord inclosed in constricted bony cylinders and simple conical hollow teeth. The group includes chiefly small lizards from the Carboniferous and Permian formations.

leptospondylous (lep-tō-spon′di-lus), *a.* [*Leptospondyl-us* + *-ous.*] Having the notochordal characters of the genus *Leptospondylus.*

leptosporangium (lep″tō-spō-ran′ji-um), *n.*; pl. *leptosporangia* (-ä). [NL., ⟨ Gr. λεπτός, slender, + NL. *sporangium.*] A sporangium of the leptosporangiate ferns, that is, one derived from a single epidermal cell.

leptostaphyline (lep-tō-staf′i-lin), *a.* [Gr. λεπτός, thin, small, + σταφυλή, the uvula.] In *anthrop.,* having a skull with a narrow palate the width of which is 80 per cent. or less of its length.

leptostaphylinic (lep″tō-staf-i-lin′ik), *a.* Same as ★*leptostaphyline. Jour. Anthrop. Inst.,* 1901, p. 258.

leptostaphyly (lep-tō-staf′i-li), *n.* [*leptostaphyl-ine* + *-y*[3].] The quality or condition of being leptostaphyline. *W. R. Macdonell,* in Biometrika, March–July, 1904, p. 237.

leptostracous (lep-tos′trą-kus), *a.* [Gr. λεπτός, thin, + ὄστρακον, shell.] Having a thin shell, as *Nebalia.*

Leptostroma (lep-tō-strō′mä), *n.* [NL. (Fries, 1815), ⟨ Gr. λεπτός, thin, + στρῶμα, layer (see *stroma*).] A genus of fungi, typical of the family *Leptostromataceæ,* having dimidiate pycnidia which suggest a thin stroma, whence the name. The pycnidia open by a more or less elongate slit. The spores are hyaline and one-celled. The species occur chiefly on dead leaves and stems. *L. punctiforme* is regarded as a parasite on leaves of the willow, rose, etc.

Leptostromataceæ (lep″tō-strō-mą-tā′sē-ē), *n. pl.* [NL., ⟨ *Leptostroma* (*Leptostromat-*) + *-aceæ.*] A family of *Fungi Imperfecti* of the order *Sphæropsidales,* characterized by the dimidiate or shield-shaped pycnidia.

Leptostrophia (lep-tō-strō′fi-ä), *n.* [NL., ⟨ Gr. λεπτός, thin, + στροφή, a turning, ⟨ στρέφειν, turn, twist.] A genus of Devonian *Brachiopoda* of the family *Strophomenidæ,* remarkable for its large plano-convex or flat shells. It has two pustulose diverging ridges in the pedicel-valve which bound the sides of the muscular area, and broad and flabellate cardinal scars.

Leptothyrium (lep-tō-thī′ri-um), *n.* [NL. (Kunze, 1823), ⟨ Gr. λεπτός, thin, + θυρεός, an oblong shield.] A genus of *Fungi Imperfecti* of the family *Leptostromataceæ,* closely related to *Leptostroma,* from which it differs chiefly in the irregular manner in which the pycnidia rupture. About 100 species have been described, mostly found on leaves. *L. acerinum* occurs on maple leaves in Europe.

leptynite (lep′ti-nīt), *n.* [F. *leptynite* (Haüy, 1822), irreg. ⟨ Gr. λεπτύνειν, grow thin, + *-ite*[2].] In *petrog.,* same as *granulite.*

leren, *n.* See ★*lleren.*

lern, lernd, lerning. Simplified spellings of *learn, learned, learning.*

lerpamylum (lêr-pam′i-lum), *n.* [*lerp* + Gr. ἄμυλον, fine flour.] A compound resembling manna, said to be present in lerp, the sweet exudation of the leaves of the Australian mallee, *Eucalyptus dumosa.*

lerp-insect (lêrp′in″sekt), *n.* Any one of a number of Australian homopterous insects of the family *Psyllidæ* whose larval cases are composed of a secretion known as 'lerp' or 'laap' and are eaten by the natives. The genera *Spondyliaspis* and *Cardiaspis* are especially noted.

lerret (ler′it), *n.* [Also *lerrett, lerrit;* etym. unknown.] A boat of great strength, built for the heavy seas: used about the Isle of Portland.

> The trip in the stern of the *lerret* had quite refreshed her. *T. Hardy,* Trumpet-Major, xxxiv.

leshalom (le-shä-lōm′), *n.* [Heb. (Yiddish, l'shō′lem): *le,* prep. to, unto, + *shalōm,* lit. peace.] A toast among the Jews. The one who treats says (in Yiddish), "*lehayim.*" The reply is, "*lesholem,*" "unto peace," equivalent to "your welfare." Sometimes both terms are used: as, "*lehayim u-lesholem,*" "to your life and peace."

lesion, *n.*—**Trophic lesion,** a morbid change due to alteration in the blood supply of the part, which causes a disturbance of nutrition.

Lesquerella (les-kę-rel′ä), *n.* [NL. (Watson, 1888), named in honor of Leo *Lesquereux,* an American botanist of Swiss birth.] A genus of plants of the family *Brassicaceæ.* See *Vesicaria* and *bladder-pod,* 2.

lessive (le-sēv′), *n.* [F. *lessive,* ⟨ L. *lixiva,* lye.] An adopted French name for lye: used mainly for an alkaline lye with soap, employed in washing.

lesson-piece (les′n-pēs), *n.* A piece of material on which to practice needlework. *N. E. D.*

leste (lās′tā), *n.* [Pg. *leste,* east wind: *l',* the, *este,* east: see *east.*] The dry, hot, and dusty east wind of the Madeira Islands in the winter season.

lestiwarite (les-ti-wä′rīt), *n.* [*Lestiware,* Finland, + *-ite*[2].] In *petrog.,* a phanerocrystalline granular syenite composed of microperthite, with very subordinate amounts of pyroxene or amphibole. These rocks have also been called syenite-haplites, and are associated with nephelite-syenite in Norway and Finland. *Rosenbusch,* 1896.

Lestrigon (les-trī′gon), *n.*; pl. *Lestrigones* (les-trig′ō-nēz). [An early modern E. spelling of ★*Lestrygon,* ⟨ L. *Læstrȳgon, Lestrȳgon,* ⟨ Gr. Λαιστρυγών, pl. Λαιστρυγόνες, a legendary people.] In *Gr. legend,* one of a race of cannibal giants mentioned in Homer's Odyssey; hence, any inhuman monster.

Lestrigonian† (les-tri-gō′ni ąn), *a.* and *n.* [L. *Læstrygonius,* ⟨ Gr. Λαιστρυγόνιος, ⟨ Λαιστρυγόνες: see ★*Lestrigon.*] **I.** *a.* Of or pertaining to the Lestrigones.

II. *n.* Same as ★*Lestrigon.*

Lesueuria (les-ū-ū′ri-ä), *n.* [NL., ⟨ *Lesueur,* a French naturalist.] The typical genus of the family *Lesueuridæ. Milne-Edwards.*

Lesueuridæ (les-ū-ū′ri-dē), *n. pl.* [NL., ⟨ *Lesueuria* + *-idæ.*] A family of lobate ctenophorans having the lobes and the lobe-windings of the vessels rudimentary, and the auricles long and ribbon-shaped. It contains the genus *Lesueuria.*

let[1], *v. t.* **To let draw** (*naut.*), to slack away the sheets of the head-sails when tacking ship, so as to let the clues travel across the deck ready to be sheeted down again to leeward when on the new tack.—**To let go and haul** (*naut.*), when tacking a square-rigged vessel, to let go the fore-bowline and lee-head braces, and to haul around the head-yards.—**To let go by the run** (*naut.*). Same as *to let run* (which see, under *run*[1]).—**To let go under foot** (*naut.*), to let go (the anchor) so that it drops and remains directly beneath the hawse-pipe.—**To let in.** (*c*) To fit, as one timber or plank into another.—**To let into.** (*b*) To pitch into; 'go for.' [Slang.]—**To let off.** (*c*) To lease in portions; let. [Eng.] (*d*) In *cricket,* to miss a chance of catching (a batsman) out.—**To let** (one) **down gently,** to let one know something derogatory to himself (letting him down to a lower plane of self-esteem) without damaging his self-respect; spare.—**To let one's self go,** to abandon self-restraint; allow imagination, animal spirits, or emotion full course. [Colloq.]

> He fretted under the severe drudgery of copying plaster casts, and yearned "*to let himself go*" in a cold way, . . . and so, . . . he set himself to painting that which his fancy dictated.
> *J. C. Van Dyke,* Modern French Masters, p. 133.

let[2], *n.* 2. In *lawn-tennis, hand-tennis,* and other games played with a net, a service-ball which strikes the top of the net and then goes into the proper court; also, any unforeseen or accidental hindrance of a like nature which the umpire may on appeal so designate.

Let., Lett. Abbreviations of *Lettish.*

let-down (let′doun), *n.* A blow to one's self-esteem; a 'come-down'; a circumstance calculated to let one down, or to act as a drawback. [Colloq.]

Lethal chamber, a chamber filled with noxious gases in which animals are put to death painlessly.—**Lethal coefficient.** See ★*coefficient.*

lethality, *n.* 2. Mortality.

lethalize (lē′thąl-īz), *v. t.*; pret. and pp. *lethalized,* ppr. *lethalizing.* [*lethal* + *-ize.*] To put to death by placing in a lethal chamber.

Letharchus (lē-thär′kus), *n.* [NL., ⟨ Gr. λήθεσθαι, λανθάνειν, escape notice, + ἀρχός, rectum. The anal fin is wanting.] A genus of ophichthyoid eels found in rather deep water on the Florida coast.

letheomania (lē″thē-ō-mā′ni-ä), *n.* [Gr. λήθη, forgetfulness, + μανία, madness.] Addiction to a narcotic drug.

lether[2], **lethern.** Simplified spellings of *leather, leathern.*

lethiferal (lē-thif′e-ral), *a.* [L. *lethum,* prop. *letum,* death, + *ferre,* bear, + *-al*[1].] Death-bringing; deadly; fatal.

> A singular loadstone for theologians, also, is the Beast of the Apocalypse, whereof, in the course of my studies, I have noted two hundred and three several interpretations, each *lethiferal* to all the rest.
> *J. R. Lowell,* Biglow Papers, 1st ser., vii.

lethomania, *n.* See ★*letheomania.*

Lethostole (le-thos′tō-lē), *n.* [NL., ⟨ Gr. λήθεσθαι, escape notice, + στολή, stole.] A genus of atherinoid fishes found in fresh waters of Mexico.

Lethotremus (le-thot′rē-mus), *n.* [NL., ⟨ Gr. λήθεσθαι, escape notice, + τρῆμα, aperture.] A

Lethotremus muticus.
(From Bulletin 47, U. S. Nat. Museum.)

genus of fishes of the family *Cyclopteridæ*, found on the north Pacific coast of North America.

letificant (lē-tif′i-kant), *a.* [L. *lætificans* (*-ant-*), ppr. of *lætificare*, make glad: see *letificate*.] Tending to stimulate or make cheerful: said of a medicine.

let-off, *n.* **3.** A festive occasion; a let-off of youthful spirits.—**4.** Part of a property which is leased or let off. [Eng.]—**5.** A failure to utilize some manifest advantage in a game; for example, in *cricket*, the failure on the part of a fielder to get the batsman out when he has the opportunity. *N. E. D.*

Lett, *n.* **2.** The Lettish language; Lettic. See *Lettish*.

letten (let′en), *p. a.* Let; rented; leased. [Rare.]

Lettenkohle (let′en-kō″lę), *n.* [G., ⟨ *letten*, loam, + *kohle*, coal.] In *geol.*, a division of the Keuper in the Triassic system in Germany. The name, though usually applied to the formation otherwise termed the *Kohlenkeuper*, has special reference to the thin seams of earthy coal which this formation contains.

letter[3], *n.*—**Before the letter** or **before letters.** See *proof before letter*, under *proof*.—**Chromatic letter.** Same as *chromatic type*.—**Letter of absolution,** in *eccles. law*, a writing whereby formerly an abbot dismissed a monk to another religious order.—**Letter of indication.** See ★*indication*.—**Letter of recall,** an official notice from one government to another, that an ambassador or other diplomatic representative sent by the former to the latter has been recalled.—**Letter of recredentials,** an official communication in reply to a ★*letter of recall* (which see). It is delivered to the recalled representative by the government to which he is accredited and addressed to the executive of the representative's country.—**Letters of safe-conduct,** in *law*, passports issued under the great seal of England to citizens of a country at war with her, whereby the bearers and their merchandise were free from molestation. English ambassadors can now issue passports having equal value.—**Letters of supplement.** See *supplement*.—**Letters requisitory.** Same as *letters rogatory* (which see). [Rare.]—**To affect the letter†,** to devote oneself to alliteration.

I will something *affect the letter*, for it argues facility.
Shak., L. L. L., iv. 2.

letter-ballot (let′ėr-bal″ot), *n.* See ★*ballot*[1].

letter-board, *n.* **3.** The board or part of a vessel which carries its name and hailing-port.

letter-bound (let′ėr-bound), *a.* Bound by the letter and not the spirit of a law, a text, etc.

letter-card (let′ėr-kärd), *n.* A card (not a postal card) which can be closed, stamped, and sent as a letter.

letter-head, *n.* **3.** A postage-stamp. [Dialect, Eng.]

letter-high (let′ėr-hī), *a.* In *printing*, descriptive of an engraving in relief, properly mounted, as high as the type about it.

lettering, *n.* **3.** Specifically, in *bookbinding*, the act or process of affixing the alphabetical letters to the notched front margin of an indexed book; also, the addition of the name of the book on its back.

lettering-block (let′ėr-ing-blok), *n.* The stamp, usually of engraved brass, which contains the letters stamped on the cover of a book.

lettering-book (let′ėr-ing-bůk), *n.* A draftsman's, card-writer's, or sign-painter's sample-book, showing styles and varieties of letters used in lettering and (sometimes) also the conventional signs used in map-making, surveys, etc.

lettering-pen (let′ėr-ing-pen), *n.* A steel or quill pen adapted to making letters for signs or on cards and maps.

lettering-templet (let′ėr-ing-tem″plet), *n.* A guide used in making letters on cards, signs, or maps with a pen or pencil. It is marked with the letters that can be formed with each of the angles in which the guide is cut.

lettering-triangle (let′ėr-ing-trī″ang-gl), *n.* A form of lettering-templet.

lettiga (le-tē′gä), *n.* [It. *lettiga*, *lettica*, ⟨ L. *lectica*, a litter, sedan: see *litter*, *n.*] A kind of sedan-chair, for two persons, who sit facing each other: carried on long poles by two mules. *W. Irving*, in Life and Letters, I. 114.

Lettonian (le-tō′ni-ąn), *a.* and *n.* Same as *Lettish*.

lettuce, *n.*—**American lettuce.** Same as *wild lettuce* (*b*).—**Arrow-leaved lettuce,** *Lactuca sagittifolia*, of eastern North America, the lanceolate-acuminate stem-leaves of which are sessile with a sagittate clasping base. **Canada** or **Canadian lettuce.** Same as *wild lettuce* (*b*).—**Canker-lettuce,** the round-leaved wintergreen, *Pyrola rotundifolia*.—**Florida lettuce,** *Lactuca Floridana*, of the eastern and southern United States, with blue flowers and lyrate-pinnatifid leaves.—**Hairy lettuce.** Same as *red wood* ★*lettuce*.—**Indian lettuce.** (*b*) Same as *miner's* ★*lettuce*.—**Liverwort-lettuce.** Same as *canker*-★*lettuce*.—**Miner's lettuce,** *Claytonia perfoliata*, an annual American plant, ranging from British Columbia to Mexico and now established at one locality in Ohio. It is remarkable for the pair of large, connate upper leaves forming a cup out of which the panicle rises. It is used by the Indians as a salad plant and has long been grown in England for this use.—**Red wood lettuce,** *Lactuca hirsuta* of the eastern and southern United States, having reddish-yellow flowers, more or less hairy stems, and sinuate pinnatifid leaves. The involucre is often red or purple.—**Spanish lettuce.** Same as *miner's* ★*lettuce*.—**Tall lettuce.** Same as *wild lettuce* (*b*).—**Tall blue lettuce,** *Lactuca spicata* of eastern North America, a tall, blue-flowered species with large, deeply pinnatifid or lobed leaves.—**Western lettuce,** *Lactuca Ludoviciana*, of the prairies and plains of the western United States. It is a biennial plant with spinulose-denticulate leaves and showy yellow heads, the rays reflexed.

Miner's Lettuce
(*Claytonia perfoliata*).
One third natural size.

lettuce-shark (let′is-shärk), *n.* See *shark-moth*.

lettuce-water (let′is-wâ″tėr), *n.* A decoction of crushed lettuce-leaves.

leubra, *n.* Same as ★*lubra*.

Leucæthiop, *n.* See ★*Leucethiop*.

leucæthiopia, *n.* See ★*leucethiopia*.

leucæthiopic, *a.* See ★*leucethiopic*.

leucaniid (lū-kā′ni-id), *n.* and *a.* **I.** *n.* A member of the lepidopterous family *Leucaniidæ*.

II. *a.* Having the characters of or belonging to the family *Leucaniidæ*.

Leucascidæ (lū-kas′i-dē), *n. pl.* [NL., ⟨ *Leucascus* + *-idæ*.] A family of heterocœlous calcareous sponges having the flagellated chambers branched and opening into the exhalant canals which converge toward the oscula, the outer ends being covered over by a dermal poriferous membrane, and the skeleton being composed of irregular radiate spicules. It includes the genus *Leucascus*.

Leucascus (lū-kas′kus), *n.* [NL. (Dendy, 1892), ⟨ Gr. λευκός, white, + ἀσκός, a bag.] The typical genus of the family *Leucascidæ*.

leucaurin (lū-kâ′rin), *n.* A colorless compound, $CH(C_6H_4OH)_3$, prepared by the reduction of aurin by means of zinc dust and sodium hydroxid. It crystallizes in prisms and is readily reconverted into aurin. Also called *triphenylolmethane*.

leucein (lū′sē-in), *n.* [Gr. λευκός, white, + *-ein*.] One of a group of substances related to the leucins, but differing from them in having two atoms of hydrogen less: they are possibly amido-acrylic acids.

Leucethiop (lū-sē′thi-op), *n.* [L. *Leucæthiopes*, otherwise *Leucoæthiopes*, and *Leucæ Æthiopes*, 'white Ethiops,' ⟨ Gr. λευκός, white, + Αἰθίοπες, Ethiopians: see *Ethiop*.] **1.** One of a people located by Pliny south of the Mauritanian Getulians: identified by some authors as the nanistic people of the northern Sahara.—**2.** [*l. c.*] An albino negro; also, more generally, an albino.

leucethiopia (lū-sē-thi-ō′pi-ä), *n.* [NL. *leucæthiopia*, ⟨ *leucothiop*, *n.*, 2.] Albinism occurring in negroes.

leucethiopic (lū-sē-thi-ō′pik), *a.* [*leucæthiop* + *-ic*.] Characterized, as a negro, by leucethiopia or albinism.

leucic (lū′sik), *a.* [Gr. λευκός, white, + *-ic*.] Pertaining to leucin or leucic acid.—**Leucic acid,** a colorless compound, $CH_3(CH_2)_3CH(OH)COOH$, prepared by the action of nitrous acid on leucin. It crystallizes in needles, melts at 73° C., and sublimes at 100° C. Also called *2-hexanoic acid*.

leucinic (lū-sin′ik), *a.* [*leucin* + *-ic*.] Derived from leucin: as, *leucinic* acid.

leucinosis (lū-si-nō′sis), *n.* [NL., ⟨ *leucin* + *-osis*.] Acute yellow atrophy of the liver, in which there is an excessive production of leucin.

leucite, *n.* **1.** This mineral has been shown by C. Klein (1903) to be an essential constituent of the meteoric stone which fell at Schafstädt, in Saxony, in June, 1861. It is associated with anorthite and augite in a brown, glassy ground-mass, and this type has been named *leucituranolite*. Leucite probably also occurs in the Pavlovka meteoric stone (1882).

2. A small yellowish body found in the cotyledons of a germinating plant that has not been exposed to sunlight.

leucitis (lū-sī′tis), *n.* [NL., ⟨ Gr. λευκός, white, + *-itis*.] Same as *sclerotitis*.

leucitophyric (lū″si-tō-fir′ik), *a.* [*leucite* + (*por*)*phyr*(*itic*) + *-ic*.] Noting a porphyritic rock whose phenocrysts are leucite. *Dana*, Manual of Geol. (4th ed.), p. 77.

leucituranolite (lū″sit-ū-ran′ō-līt), *n.* [Gr. λευκός, white, + *-ιτης*, E. *-ite*[2], + οὐρανός, heaven, + λίθος, stone.] A rock type represented in the meteoric stone of Schafstädt, Saxony (1861). See ★*leucite*, 1, and ★*meteorite*.

Leuckartia (lū-kär′ti-ä), *n.* [NL., named after Prof. *Leuckart* of Leipzig.] The typical genus of the family *Leuckartiidæ*. *Moniez*, 1878.

Leuckartiidæ (lū-kär-tī′i-dē), *n. pl.* [NL., ⟨ *Leuckartia* + *-idæ*.] A family of dibothridiate cestoid worms, of the order *Pseudophyllidea*, lacking evident bothria. It includes the genera *Leuckartia* and *Blanchardella*, parasitic in fishes.

leuco-agglutinin (lū″kō-a-glō′ti-nin), *n.* An agglutinin directed against the leucocytes.

leucobase (lū′kō-bās), *n.* A colorless base which gives a dye on oxidation and which is formed by the reduction of the dye.

leucoblastic (lū-kō-blas′tik), *a.* Relating to a leucoblast. *Buck*, Med. Handbock, II. 23.

leuco-body (lū′kō-bod″i), *n.* Same as ★*leuco-compound*.

leucochalcite (lū-kō-kal′sīt), *n.* [Gr. λευκός, white, + χαλκός, copper, + *-ite*[2].] A basic copper arseniate which occurs in white silky acicular crystals.

leucochroi (lū-kok′rō-ī), *n. pl.* [NL. pl., ⟨ Gr. λευκόχροος, of white complexion, ⟨ λευκός, white, + χρόα, color, complexion.] In *anthrop.*, persons of a white skin.

In this essay ["Geographical Distribution of Mankind"] Mr. Dallas proposes *Leucochroi*, Mesochroi and Æthochroi as substitutes for White, Yellow and Black respectively. *Keane*, Ethnology, p. 234, note.

leucochroic (lū-kō-krō′ik), *a.* [As *leucochroi* + *-ic*.] **1.** In *anthrop.*, having a light-colored skin: contrasted with ★*mesochroic* and *æthochroic* ('black-colored').—**2.** Abnormally light in color; albinotic: contrasted with *melanochroic*.

leucocidic (lū-kō-sid′ik), *a.* [*leuco*(*cyte*) + L. *-cida*, ⟨ *cædere*, kill. + *-ic*.] Causing the destruction of leucocytes.

leucocidin (lū-kō-sid′in), *n.* [*leucocid-ic* + *-in*[2].] A bacterial cytotoxin which causes the destruction of leucocytes.

leuco-compound (lū-kō-kom′pound), *n.* A colorless organic compound formed by the reduction of a dye and giving the dye again by oxidation.

leucocratic (lū-kō-krat′ik), *a.* [Gr. λευκός, white, + κρατεῖν, dominate, + *-ic*.] In *petrog.*, a term proposed by Brögger (1896) to designate igneous rocks characterized by a preponderance of light-colored minerals, or rather of minerals that are normally light-colored (chiefly feldspar and feldspathic minerals, and quartz), as contrasted with those (*melanocratic*) in which there is a preponderance of dark-colored minerals.

leucocyclite (lū-kō-sik′līt), *n.* [Gr. λευκός, white, + κύκλος, circle, + *-ite*[2].] A variety of apophyllite. See ★*chromocyclite*.

leucocytal (lū′kō-sī-tąl), *a.* [*leucocyte* + *-al*[1].] Same as *leucocytic*.

leucocythemic, leucocythæmic (lū″kō-sī-thē′mik), *a.* Same as *leucemic*.

Leucocytic crystals. See ★*crystal*.

leucocytiform (lū-kō-sit′i-fôrm), *a.* [*leucocyte* + L. *forma*, form.] In *histol.*, shaped like a leucocyte, as the cells found in the reticular tissue of the phagocytic organs of the *Gryllidæ* and certain *Locustidæ*.

leucocytolysis (lū″kō-sī-tol′i-sis), *n.* [*leucocyte* + Gr. λύσις, dissolution.] The destruction of leucocytes by specific leucocytotoxins.

leucocytolytic (lū-kō-sī-tō-lit′ik), *a.* [*leucocytolysis* (*-lyt-*) + *-ic.*] Having reference to the action of leucocytotoxins.

leucocytopenia (lū″kō-sī-tō-pē′ni-ä), *n.* [NL., < *leucocyte* + Gr. πενία, poverty.] Same as ★*leucopenia.*

leucocytopenic (lū″kō-sī-tō-pen′ik), *a.* [*leucocytopenia* + *-ic.*] In *pathol.*, of or relating to a decreased number of leucocytes, or colorless blood-corpuscles.

leucocytosis, *n.* 2. The number, actual or relative, of white corpuscles in a given specimen of blood, an excess being designated *hyperleucocytosis*, and a number below the normal *hypoleucocytosis* or *leucopenia.*

The highest leucocyte count observed in this case was 22,000, and occurred on January 10; the average had been 17,000, and at present the *leucocytosis* was 16,600.
Med. Record, Jan. 24, 1903, p. 159.

leucocytotic (lū-kō-sī-tot′ik), *a.* [*leucocytosis* (*-ot-*) + *-ic.*] Of or pertaining to leucocytosis, or the production of leucocytes.

leucocyturia (lū″kō-sī-tū′ri-ä), *n.* [NL., < *leucocyte* + Gr. οὖρον, urine.] The presence of leucocytes in the urine.

leucoderivative (lū″kō-dē-riv′a-tiv), *n.* Same as ★*leuco-compound.*

leucodermatous (lū-kō-dêr′ma-tus), *a.* [Gr. λευκόν, white, + δέρματ- (δέρμα), skin, + *-ous.*] Marked by deficient pigment in the skin.

leucodrin (lū′kō-drin), *n.* [*Leucod(endron)* + *-in*2.] A colorless, very bitter, levorotatory compound, $C_{18}H_{20}O_9$, contained in the leaves of *Protea concinna* (*Leucodendron concinnum* of Robert Brown). It crystallizes in prisms and melts at 212° C.

leucoencephalitis (lū″kō-en-sef-a-lī′tis), *n.* [NL., < Gr. λευκός, white, + ἐγκέφαλος, brain, + *-itis.*] Same as ★*forage-poisoning.*

leucogallol (lū-kō-gal′ol), *n.* [Gr. λευκός, white, + E. *gallol.*] A colorless compound, $C_{18}H_8O_{12}Cl_{12}.2H_2O$, prepared by the action of chlorin on pyrogallol. It crystallizes in small needles which melt at 104° C.

leucolinic (lū-kō-lin′ik), *a.* [*leucoline* + *-ic.*] Pertaining to leucoline or leucol.—**Leucolinic acid**, a colorless compound, $C_9H_9NO_3$, prepared by the oxidation of quinoline from coal-tar (leucoline). It crystallizes in needles which melt at 162° C.

leucolysin (lū-kol′i-sin), *n.* [*leucolys-is* + *-in*2.] A substance that produces leucolysis.

leucolysis (lū-kol′i-sis), *n.* [*leuco(cyte)* + Gr. λύσις, dissolution.] The destruction of leucocytes by means of specific leucotoxins or leucolysins. **Venom leucolysis**, the destruction of leucocytes by means of snake-poison.

leucolytic (lū-kō-lit′ik), *a.* [*leucolysis* (*-lyt-*) + *-ic.*] Causing the destruction of leucocytes.

leucomaine, *n.*—**Toxic leucomaine**, a leucomaine having toxic properties.

leucomelanic (lū-kō-me-lan′ik), *a.* Same as *leucomelanous.*

leucomyelitis (lū″kō-mī-e-lī′tis), *n.* [NL., < Gr. λευκός, white, + μυελός, marrow, + *-itis.*] Inflammation of the spinal cord confined wholly or chiefly to the white matter.

Leucon (lū′kon), *n.* [NL. (Kröyer, 1846), < Gr. λευκός, white.] 1. The typical genus of the family *Leuconidæ.*—2. [*l. c.*] Any sponge belonging to the group *Leuconaria.*

leuconecrosis (lū″kō-ne-krō′sis), *n.* [NL., < Gr. λευκός, white, + NL. *necrosis.*] A form of dry gangrene in which the dead tissue is white instead of black.

leuconic (lū-kon′ik), *a.* [Gr. λευκός, white, + *-n-* + *-ic.*] Noting an acid, a colorless sweet compound, $C_5H_8O_9$, prepared by the action of chlorin or nitric acid on an alkali croconate. It crystallizes, with $1H_2O$, in small needles which become anhydrous at 100° C.

Leuconidæ (lū-kon′i-dē), *n. pl.* [NL., < *Leucon* + *-idæ.*] A family of cumacean crustaceans which have an elongated body and no telson. It contains the genera *Leucon*, *Eudorella*, and *Eudorellopsis.*

leuconoid (lū′kō-noid), *a.* [*leucon* + *-oid.*] Pertaining to or resembling a leucon: as, the *leuconoid* type of canal system in sponges. Contrasted with ★*syconoid.*

Leuconostoc (lū-kō-nos′tok), *n.* [NL. (Van Tieghem, 1878), < Gr. λευκός, white, + E. *nostoc.*] A genus of bacteria. The cells are spherical and united in chains which are inclosed in a slimy envelop. *L. mesenterioides* occurs in beet-juice and syrups, forming gelatinous masses.

leuconuclein (lū-kō-nū′klē-in), *n.* [Gr. λευκός, white, + NL. *nucleus* + *-in*2.] A decomposition-product of nucleohiston.

leuconychia (lū-kō-nik′i-ä), *n.* [NL., < Gr. λευκός, white, + ὄνυξ (ὀνυχ-), nail.] The condition of having white lines or patches beneath the nails.

leucopenia (lū-kō-pē′ni-ä), *n.* [*leuco(cyte)* + Gr. πενία, poverty.] A diminution in the number of white corpuscles in the blood. Also called *hypoleucocytosis.*

The *leucopenia* is of diagnostic value, especially in children, in whom most febrile affections produce a leucocytosis. Mor data are needed to determine the priority of appearance of a "positive" serum reaction or a *leucopenia.* *Med. Record*, July 11, 1903, p. 66.

leucopenic (lū-kō-pen′ik), *a.* [*leucopenia* + *-ic.*] Relating to or characterized by leucopenia or paucity of the white corpuscles of the blood.

leucophanite (lū-kof′a-nīt), *n.* [*leucophane* + *-ite*2.] Same as *leucophane.*

leucophlegmasia (lū″kō-fleg-mā′si-ä), *n.* [NL., prop. *leucophlegmatia*: see *leucophlegmacy.*] Same as *leucophlegmacy.*

leucophœnicite (lū-kō-fen′i-sīt), *n.* [Gr. λευκός, white, + φοῖνιξ (φοινικ-), purple, + *-ite*2.] A basic orthosilicate of manganese chiefly, also zinc and calcium, related to humite in formula. It occurs in crystalline masses of a raspberry-red color at Franklin Furnace, New Jersey.

leucophyllous (lū-kō-fil′us), *a.* [Gr. λευκόφυλλος, white-leaved (< λευκός, white, + φύλλον, leaf), + *-ous.*] In *bot.*, having white leaves.

leucophyre (lū′kō-fīr), *n.* [Gr. λευκός, white, + (*por*)*phyr*(*y*).] In *petrog.*, a name given by Gümbel (1874) to certain light-colored altered diabases, with saussuritized feldspars, pale-green augite, and much chlorite. The name having fallen into disuse it has been proposed in the quantitative system of classification of igneous rocks (1902) to apply it, in the classification for field use, to any light-colored porphyry, in distinction to a dark-colored porphyry (*melaphyre*).

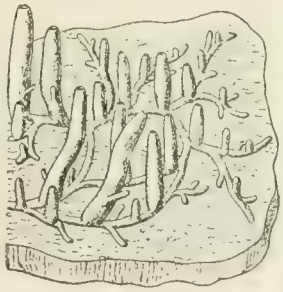
leucorrhagia (lū-kō-rā′ji-ä), *n.* [NL., < Gr. λευκός, white, + *-ραγια*, < ῥηγνύναι, break.] Profuse leucorrhea.

leucoryx (lū′kō-riks), *n.* [NL., < Gr. λευκός, white, + ὄρυξ, an antelope.] The specific name of the saber-horned antelope, *Oryx leucoryx*, adopted as a common name.

leucosin (lū′kō-sin), *n.* [Gr. λευκός, white, + *-ose* + *-in*2.] An albuminous substance found in various cereals.

leucosism (lö′kō-sizm), *n.* [Gr. λεύκωσις, a whitening, a white spot, < λευκοῦν, whiten, < λευκός, white.] The presence of white coloring in parts of the bodies of animals in which the normal coloring is not white; partial albinism.

Leucosolenia (lū″kō-sō-lē′ni-ä), *n.* [NL., < Gr. λευκός, white, + σωλήν, pipe.] The typical genus of the family *Leucosoleniidæ.* *Bowerbank*, 1862.



Creeping colony of *Leucosolenia variabilis*. H, with numerous erect, and for the most part simple, oscular tubes, arising from a basal creeping stolon. About four times natural size. (From Lankester's "Zoology.")

Leucosoleniidæ (lū-kō-sō-lē-nī′i-dē), *n. pl.* [NL., < *Leucosolenia* + *-idæ.*] A family of homocœlous, calcareous sponges having an erect form, with monaxon spicules always present, the triradiate, if present, alate, the collar-cells with an apical nucleus, and the larva an amphiblastula. It contains the genera *Leucosolenia* and *Ascyssa.*

leucosphenite (lū-kō-sfen′īt), *n.* [Gr. λευκός, white, + σφήν, wedge, + *-ite*2.] A titanosilicate of barium and sodium, which occurs in wedge-shaped monoclinic crystals, white to grayish blue in color, with vitreous to pearly luster: obtained from southern Greenland.

leucosphere (lū′kō-sfēr), *n.* [Gr. λευκός, white, + σφαῖρα, sphere.] A name coined by Lockyer for the inner portion of the sun's corona: so called because of its whiteness, in contrast with the scarlet chromosphere.

leucospheric (lū-kō-sfer′ik), *a.* [*leucosphere* + *-ic.*] Of or pertaining to the leucosphere.

leucotephrite (lū-kō-tef′rit), *n.* [*leucite* + *tephrite.*] Same as *leucite-tephrite.* See *tephrite.* *Nature*, March 24, 1904, p. 492.

leucotin (lū′kō-tin), *n.* [Gr. λευκός, white, + E. *coto* + *-in*2.] In *chem.*, a crystalline substance which forms the chief constituent of the extract of paracoto bark. See *Coto bark.*

leucotoxic (lū-kō-tok′sik), *a.* [*leucotox-in* + *-ic.*] Same as ★*leucolytic.*

leucotoxin (lū-kō-tok′sin), *n.* [Gr. λευκός, white, + E. (*cyto*)*toxin.*] A cytotoxin specifically directed against leucocytes.

leucotrichia (lū-kō-trik′i-ä), *n.* [NL., < Gr. λευκός, white, + θρίξ (τριχ-), hair.] Marked diminution or absence of pigment in the hair.

leucoturic (lū-kō-tū′rik), *a.* [Gr. λευκός, white, + (?) L. *tus* (*tur-*), incense, + *-ic.*] Noting an acid, a colorless crystalline compound, $C_6H_6O_6N_4$, prepared by the reduction of parabanic acid in acid solution.

leukemia, leukæmia (lū-kē′mi-ä), *n.* Same as *leucemia.*

leukopenia, *n.* Same as ★*leucopenia.*

Leuresthes (lū-res′thēz), *n.* [NL., said to allude to the toothless jaws, irreg. < Gr. λευρός, smooth, + ἐσθίειν, eat.] A genus of atherinoid fishes found on the coast of California.

Leuroglossus (lū-rō-glos′us), *n.* [NL., < Gr. λευρός, smooth, + γλῶσσα, tongue.] A genus

Leuroglossus stilbius.
(From Bulletin 47, U. S. Nat. Museum.)

of fishes of the family *Argentinidæ*, found in rather deep water off the coast of California.

leva (lā′vä), *n.* [Bulg.] A current silver coin of Bulgaria, of the value of 20 cents. One hundred stotinki equal one leva.

levancy (lev′an-si), *n.* [See *levant*1.] The act or state of rising up. See *levant and couchant*, under *couchant.*

It may be measured, like a manorial right, by *levancy* and couchancy, or it may be limited to a fixed number of animals. *Encyc. Brit.*, XXVII. 168.

levant2, *n.* 4. In *leather-manuf.*, artificial blood used instead of real blood for obtaining a perfect black. *Mod. Amer. Tanning*, p. 109.

Levantine stage. See ★*stage.*

levator, *n.*—**Levatores capitis**, in *entom.*, the extensor muscles of the head. There are two pairs: one arises from the middle of the pronotum, diverges, and is inserted on the anterior upper margin of the occipital foramen; the other arises from the prophragma and is inserted near the middle of the upper margin of the occipital foramen. This applies to the European May-beetle, *Melolontha vulgaris*, and doubtless to many other *Coleoptera.*

levee1, *n.* 3. In *irrigation*, one of the small continuous ridges of earth surrounding the fields, or compartments, of land that is to be irrigated. The levees are usually from three to five feet wide at the bottom, and a foot or more in height, being broad and low, so that wheeled agricultural implements can pass over them without injury.

levee-check (le-vē′chek), *n.* Same as ★*check*1, 20.

level1, *n.* 1. (*b*) The correction for level of an astronomical instrument; the deviation of its axis from exact horizontality. *Science*, Jan. 4, 1901, p. 13.—4. (*b*) In *landscape-gardening*, one of the horizontal surfaces in which an irregular piece of land may be arranged. By the use of different levels the designer may place various features of his design above or below the eye.—**Level of no strain**, a neutral surface, within the crust of the earth, in which the strains due to temperature and the action of gravity neutralize each other.—**Piezometric level**, the relative level or altitude of two layers of air measured in standard barometric pressures, as distinguished from *orometric levels*, which are measured in linear units; or *thermometric levels*, which are measured in temperature units; or *pycnometric levels*, which are measured in density units.

level1, *v. t.*—**To level out** (*naut.*), to continue a horizontal line from a given base or point.

levelage (lev′el-äj), *n.* [*level*1 + *-age.*] In *mining*, leveling.

level-constant (lev′el-kon″stant), *n.* The deviation from exact horizontality of the axis of an astronomical instrument. It should be sensibly constant if the instrument is well made and firmly mounted. *Science*, Jan. 4, 1901, p. 13.

level-course (lev'el-kōrs), *a.* In *mining*, in the direction of the strike; at right angles to the line of dip or rise.

leveler, *n.* 3. [*cap.*] (*b*) One of a secret society of rebels in Ireland in the latter half of the eighteenth century: named from their principles and the leveling of park palings and walls, practised by them.—**6.** In *currying*, a composition used to eradicate the grease before leather is dyed. *Mod. Amer. Tanning*, p. 151.—**7.** In *golf*, a hole of such length that no player can reach the green in one stroke and any player can reach it in two strokes.—**8.** A person who uses an engineer's level; a member of an engineering or surveying party.

level-error (lev'el-er″or), *n.* In work with astronomical and geodetic instruments, the small error in a quantitative observation made with a transit instrument due to the fact that the horizontal axis is not truly level.

level-free (lev'el-frē), *a.* In *mining*, drained by a water-level.

leveling, *n.*—**Geodetic leveling,** the method of determining the difference of level or elevation between two distant points on the earth's surface, by observing at one point the angle of elevation or depression of the other and calculating therefrom the vertical lineal distance of one point above the other after correcting for refraction and for curvature of the earth.

leveling-machine (lev'el-ing-ma-shēn″), *n.* In *shoe-manuf.*, a machine for pressing down the sole of a shoe while on the last, to give the shoe its correct form. Some machines employ a roll that passes over the sole of the shoe under heavy pressure. In others, direct pressure is used. Also called *beating-out machine.*

leveling-stand (lev'el-ing-stand), *n.* An instrument for supporting glass plates or vessels in a horizontal position.

level-line (lev'el-līn), *n.* In *naval arch.*, the curved line cut by a horizontal plane on the surface of the hull. A series of such lines cut by equidistant horizontal water-planes is used to define the form of the vessel in the half breadth plan of the sheer-draft. Also called *water-line.*

levelman (lev'el-man), *n.* Same as ★*leveler*, 8.

level-point (lev'el-point), *n.* **1.** Any fixed point, as a bench-mark, stake, point of rock, or point on any permanent material or structure, whose elevation above a given datum, as the sea-level, is determined and referred to in comparisons of elevations.—**2.** One of two or more points having the same elevation above sea-level.

level-stone (lev'el-stōn), *n.* In *mining*, one of the stones on the surface marking the direction of levels underground.

lever[1], *n.*—**Change-speed lever.** See ★*change-speed.* **Compensating-lever,** a beam or lever with equal or unequal arms, used to obtain a mean effect of two equal or unequal efforts. In the locomotive the weight of the frame is applied at the fulcrum of such a lever, and the ends of the lever are attached to the springs which transmit the load on each to the axle-bearing. Any unequal reaction of the track is followed by a descent of one or the other end of the lever, and hence the load on each spring is always the same, no matter how the track-surface varies. This compensating-lever is usually called the *equalizing-lever*, and it not only mitigates shocks by dividing them between the two springs but also delivers to each wheel its share of the weight for adhesion, and slipping is lessened. The whiffletree of a two-horse wagon is a compensating-lever. The arms may be unequal, if the loads are unequal. —**Dead lever.** See *lice lever*, under *lice* 2.—**Equalizing-lever.** See *compensating*-★*lever.*—**Locking-lever,** a lever connected with the faller of a spinning-mule, which locks the faller in position at the beginning of the winding of the yarn on the cop or bobbin.—**Mendoza lever,** a hinged lever on a cotton-spinning mule connected with the backing-off motion of the spindle-carriage.—**Optical lever,** a device for the measurement of angles by means of a beam of light reflected from a mirror, the amount of deflection being shown on a scale over which the light travels. Such a lever is used in the tangent galvanometer.

lever-fly (lev'ėr-flī), *n.* A machine for punching or shearing metal plates, in which a constantly running fly-wheel is temporarily connected to the punch or shear by moving a lever; a power-punch.

lever-motion (lev'ėr-mō″shon), *n.* A motion transmitted by one or more levers; a motion taken from a moving lever.

leverrierite (le-ver'i-ėr-īt), *n.* [Named for *Le Verrier*, a French mining engineer.] A hydrated silicate of aluminium, allied to kaolinite: it occurs at several localities in France.

lever-scales (lev'ėr-skālz), *n. pl.* Same as *steelyard*[2].

lever-shears (lev'ėr-shērz), *n. sing.* and *pl.* Hand- or power-shears, for cutting metal, in which the necessary force is obtained by the use of levers.

leviathanic (lē-vī-a-than'ik), *a.* Like a leviathan; vast or monstrous.

levir (lē'vėr), *n.* [L. *levir*, brother-in-law.] A brother-in-law; a male relative of a man who, after the latter's death, has the right, and the duty, to marry his widow.

levirate, *n.* **II.** *a.* Of or pertaining to the levirate: as, *levirate* marriage; *levirate* law.

Levit. An abbreviation of *Leviticus.*

levitant (lev'i-tant), *n.* [*levit-ate* + *-ant.*] One who exhibits or professes to exhibit the spiritualistic phenomena of levitation.

levitative (lev'i-tā-tiv), *a.* [*levitate* + *-ive.*] Having the power of using or causing other things to rise in the air; having the alleged power of levitation.

Leviticism (lē-vit'i-sizm), *n.* [*Levitic* + *-ism.*] Same as *Levitism.*

levocamphene, lævocamphene (lē″vō-kam-fēn'), *n.* See ★*camphene*, 1.

levo-compound, lævo-compound (lē'vō-kom″-pound), *n.* In *chem.*, that isomeric form of a substance which produces left-handed rotation of the plane of polarization of light.

levogyral, lævogyral (lē-vō-jī'ral), *a.* Same as *levogyrate.*

levolactic, lævolactic (lē-vō-lak'tik), *a.* [L. *lævus*, left, + E. *lactic.*] Noting an acid, the variety of lactic acid which rotates the plane of a ray of polarized light to the left.

levoracemate, lævoracemate (lē″vō-ras'ē-māt), *n.* [L. *lævus*, left, + E. *racemate* + *-ate*[1].] A salt of levotartaric acid.

levorotation, lævorotation (lē″vō-rō-tā'-shon), *n.* [L. *lævus*, left, + E. *rotation.*] The rotation of the plane of polarization of light toward the left.

A minute difference in the *lævorotation* of two fractions seems insufficient evidence for the assumption that aromadendral exists in the oil of E. corymbosa.
Nature, April 2, 1903, p. 525.

levosin, lævosin (lev'ō-sin), *n.* [? L. *lævis*, smooth, + *-ose* + *-in*[2].] A colorless amorphous compound, $(C_6H_{10}O_5.H_2O)_4$, obtained from grain. It becomes anhydrous at 110° C., and melts at about 160° C.

levotartaric, lævotartaric (lē″vō-tär-tar'ik), *a.* [L. *lævus*, left, + E. *tartaric.*] Noting an acid, a form of tartaric acid which turns the plane of polarized light to the left.

levotartrate, lævotartrate (lē-vō-tär'trāt), *n.* [*lævotart(a)r(ic)* + *-ate*[1].] A salt of levotartaric acid.

levulan, lævulan (lev'ū-lan), *n.* [*levul(ose)* + *-an.*] A colorless, amorphous, levorotatory carbohydrate, $C_6H_{10}O_5$, found in beet-sugar molasses. It is quantitatively converted into levulose by boiling with dilute acids, and melts at about 250° C.

levulosan, lævulosan (lev-ū-lō'san), *n.* [*levulose* + *-an.*] A colorless syrup, $C_6H_{10}O_5$, prepared by rapidly heating cane-sugar at 160° C. It is optically inactive, and is converted into levulose by boiling with water.

levulosuria, lævulosuria (lev″ū-lō-sū'ri-ä), *n.* [*levulose* + Gr. οὖρον, urine.] Presence of levulose in the urine when voided.

levynite (lev'i-nīt), *n.* [*levyne* + *-ite*[2].] Same as *levyne.*

Lewisian (lū-is'i-an), *a.* Noting the oldest rocks in Great Britain: so named by Murchison from the island of Lewis where they are exposed. They consist chiefly of gneisses similar to the Laurentian types of North America. See *Lewisian* ★*group.*

These lines of movement traverse the *Lewisian* plateau in various directions, producing planes of disruption, molecular rearrangement of the minerals and the development of foliation.
Rep. Brit. Ass'n Advancement of Sci., 1901, p. 617.

lewisite (lū'is-īt), *n.* [Named for Professor W. J. *Lewis* of Cambridge.] A titano-antimonate of calcium occurring in minute yellow to brown octahedrons: found in the gravels of Tripuhy, Minas Geraes, Brazil.

Lewis's counter-gambit. See ★*counter-gambit.*

lewisson (lū'i-son), *n.* Same as *lewis*, 1.

lex, *n.* **2.** In *numis.*, the money standard fixed by imperial or other constituted authority. *W. C. Hazlitt.*

Lexell's circle. See ★*circle.*

lexiarchus (lek-si-är'kus), *n.*; pl. *lexiarchi* (-kī). [Gr. ληξίαρχος, < ληξις, assignment by lot, + ἀρχειν, rule.] One of a board of six officers at Athens who attended to the registration of citizens, assigned the young men to their place on the list of the deme, and were stationed at the entrance to the Pnyx, to prevent the intrusion of those who were not citizens. They were assisted by thirty armed officers. *Jour. Hellenic Studies*, VIII. 107.

lexic (lek'sik), *a.* [Gr. λεξικός, of or for words, < λέξις, a saying, speech, phrase, word, a particular word, < λέγειν, say, speak: see *lexicon*, etc.] Of or pertaining to words, as to the vocabulary of a language; consisting of words; lexical.

Primitive languages are essentially structural or morphologic, only incidentally *lexic*. . . . With the attainment of writing, the function of linguistic association largely disappears, and speech becomes essentially *lexic*, only incidentally morphologic.
Rep. Bur. Amer. Ethnol., 1897–98, p. 832.

lexicalic (lek-si-kal'ik), *a.* Same as *lexical.* *G. P. Marsh*, Lect. Eng. Lang., p. 141.

lexicog. An abbreviation (*a*) of *lexicographer*; (*b*) of *lexicography.*

lexicografer, lexicografy. Amended spellings of *lexicographer, lexicography.*

lexigraphically (lek-si-graf'i-kal-i), *adv.* In such a manner that each character represents a word.

ley[2], *n.* *Ley* in this spelling (see *leal*) is used specifically of a plantation of grasses or other plants grown for their herbage (clovers, etc.), to serve either as meadow or as pasture. Leys are planned for one or a few years or for permanency, their composition being governed accordingly. [Great Britain.]

The extended duration of the *ley* justifies the addition of timothy and an increase of cocksfoot.
M. H. Sutton, Permanent and Temporary Pastures, [p. 125.

Leyden's crystals. Same as *Charcot's crystals* (which see, under *crystal*).

L. F. P. S. An abbreviation of *Licentiate of the Faculty of Physicians and Surgeons.*

L. G. An abbreviation (*a*) of *Life Guards*; (*b*) of *Low German* (often *LG.*).

L. Gr. An abbreviation of *Late Greek* (often *LGr.*).

L. H. A. An abbreviation of *Lord High Admiral.*

L. H. C. An abbreviation of *Lord High Chancellor.*

lhiamba (lē-äm'bä), *n.* [Native African name.] Indian hemp, *Cannabis Indica.* See *bhang*, ★*dagga*, *Cannabis* and *hashish.*

The imported gin keeps the African . . . from his worse intoxicant, *lhiamba* (Cannabis Indica).
Mary Kingsley, West African Studies, p. 667.

L. H. T. An abbreviation of *Lord High Treasurer.*

L. I. An abbreviation (*a*) of *Light Infantry*; (*b*) of *Licentiate of Instruction*; (*c*) of *Long Island.*

liana, *n.* In *phytogeog.*, a liana is a plant which roots in the ground and, by means of long stems with long internodes and the assistance of various devices, climbs over other plants and, more rarely, over rocks. The name was formerly given only to woody plants; but its use has been broadened to include herbaceous annuals and perennials, thus becoming synonymous with *climber.* See ★*leaf-climber*, ★*root-climber*, ★*scrambler*, 2, *twiner* (*b*), and phrases under ★*tendril-climber.*

liangle, *n.* Same as ★*leeangle.*

Liassian (lī-as'i-an), *n.* [F. *liassien*: as *Lias* + *-ian.*] In *geol.*, a term applied by d'Orbigny and other French geologists to the middle division of the Lias in France.

Liassic, *a.*—**Upper Liassic clay,** the upper member of the Lias, which is itself the lowest division of the Jurassic.

With the aid of other shallow wells in the Lincolnshire Limestone, this rock is shown to have a decided dip to the west down the face of the escarpment, as though it had settled down upon the eroded surface of the *Upper Liassic Clay.* *Nature*, Nov. 27, 1902, p. 95.

lib. An abbreviation (*b*) of *librarian*; (*c*) of *library*; (*d*) of the Latin *libra*, pound.

libaniferous (lib-a-nif'e-rus), *a.* [LL. *libanus*, frankincense, + *-fer*, < *ferre*, bear, + *-ous.*] Same as *libanotophorous.*

libanophorous (lib-a-nof'ō-rus), *a.* [Gr. λίβανος, frankincense, + -φορος, < φέρειν, bear, + *-ous.*] Same as *libanotophorous.*

libate, *v. i.* **2.** To take a drink. [Slang.]

Gents, this is shorely the sociablest crowd I've crossed up with as yet. Let's *libate*! *A. H. Lewis*, Sunset Trail, xi.

libational (lī-bā'shon-al), *a.* [*libation* + *-al*[1].] Pertaining to libations; of the nature of a libation.

libation-table (lī-bā'shon-tā"bl), *n.* A peculiar form of altar connected with the tree-and-pillar cult of Mycenæan civilization. It has four legs surrounding a sacred pillar or bætylus.

[illegible]

libel, *n.* 7. In *law*, a petition for a decree in divorce.— **Mutation of libel,** in *admiralty* and *eccles. law*, an amendment allowed which changes the substance of a libel, so that a new cause of action is introduced, or another remedy demanded.

libelee, libellee (lī-be-lē'), *n.* In *law*, the defendant in actions or suits in which the complaint or first pleading is libel. See *libel*, 2.

libella, *n.* 5. A Roman brass coin, the as of diminished weight.

Libellatic (li-be-lat'ik), *n.* [L. *libellatici*, pl., < L. *libellus*, a paper, a certificate: see *libel*.] One of the class of Christian apostates who, during the Decian and Valerian persecutions, secured from the magistrates by bribery a false certificate (libellus) testifying that they had satisfied the requirement of sacrificing to the heathen gods.

liberal. I. *a.* **Liberal-Republican party.** See *Republican*. **Liberal science.** See *science*.

II. *n.* 3. One who holds liberal views in theology. [U. S.]

In Boston a minister is called a *liberal* when he rejects the Andover creed, and, perhaps, the Apostles' creed
The Beacon (Boston), Jan. 8, 1887. *N. E. D.*

liberal-legal (lib"e-ral-lē'gal), *a.* Noting a stage of civilization marked by freedom of thought and criticism, liberty of personal action, freedom of contract, and the establishment of constitutional law and government. Compare ★*religious-military*. *Giddings*, Prin. of Sociol., p. 309.

liberative (lib'e-rā-tiv), *a.* [*liberate* + *-ive*.] Same as *liberatory*.

liberticidal (lib'ėr-ti-sī"dal), *a.* [*liberticide* + *-al*[1].] That destroys liberty.

liberticide[1], *n.* II. *a.* That destroys liberty; liberticidal.

libertin, *n.* and *a.* A simplified spelling of *libertine*.

libertine, *n.* 8. At Aberdeen University, a free scholar; one who has no bursary. See *bursary*, 2. *N. E. D.*

liberty, *n.*—**Laws of liberty.** See ★*law*[1].

liberty-day (lib'ėr-ti-dā), *n.* *Naut.*, a day on which liberty is granted.

liberty-liquor (lib'ėr-ti-lik"or), *n.* Formerly, a certain limited amount of liquor (rum) which a member of the crew of an English man-of-war was permitted to purchase from the purser for the purpose of entertaining a visitor.

liberty-party (lib'ėr-ti-pär"ti), *n.* Members of a ship's company to whom leave to go ashore has been granted.

liberty-ticket (lib'ėr-ti-tik"et), *n.* A written or printed paper given to a man-of-war's-man, on which is specified the date and period of his liberty. The possession of it insures him against arrest as a deserter.

liberty-tree (lib'ėr-ti-trē), *n.* See *Tree of Liberty*, under *tree*.

Libonia (li-bō'ni-ä), *n.* [NL. (C. Koch, 1863), named in honor of *Libon*, a traveler in Brazil.] An untenable generic name still frequently used by florists for certain species of *Jacobinia*, a genus of plants of the family *Acanthaceæ*. They are half-shrubby greenhouse subjects bearing a profusion of slender, tubular, irregular red or orange flowers. The commonest species is *Jacobinia pauciflora*, often known by florists as *Libonia floribunda*, a native of Brazil. It is a very floriferous plant, with small, and entire, elliptic-oblong leaves and drooping, or declined, scarlet, yellow-tipped flowers an inch long. The plant known to florists as *Libonia Penrhosiensis* is a hybrid between *Jacobinia pauciflora* and *J. Ghiesbreghtiana*, with still more showy flowers.

libra, *n.* 4. A money of account at Alicante in Spain; the peso, worth 10 reals.—5. A new gold coin of Peru, struck under a decree of January 10, 1898, and of the same standard and weight as the pound sterling.

library, *n.*—**Traveling library,** a selected set of books sent from a central source to a club or school in some place where there is no public library. The books are returned when read and another collection is sent to take its place.

librational (lī-brā'shon-al), *a.* [*libration* + *-al*[1].] Pertaining to or of the nature of a libration; in *astron.*, pertaining to the librations of the moon or of the planets Mercury and Venus.

libroplast (lī'brō-plast), *n.* [L. *liber*, free, + Gr. πλαστός, formed.] A stabiloplast which lies free from the chromatophore along the middle line of some diatom cells.

Libyo-Teutonic (lib"iō-tū-ton'ik), *a.* Libyan as related (in theory) to Teutonic peoples: applied to the blond type of man in Morocco and Algiers in its supposed physical relationship with the blond Teutonic type of northern Europe. *Brinton*, Races and Peoples, p. 106.

licarene (lik'a-rēn), *n.* A colorless cyclic, optically active hydrocarbon, $C_{10}H_{16}$, prepared by the dehydration of licareol. It is a limonene.

licareol (li-kar'i-ol), *n.* Same as ★*linalool*.

Licea (lī'sē-ä), *n.* [NL. (Schrader, 1797), < L. *licium*, thrum, thread.] A genus of slime-molds which have sessile sporangia containing brownish or reddish spores and no capillitium. Nine species have been described.

Liceaceæ (lī-sē-ā'sē-ē), *n. pl.* [NL., < *Licea* + *-aceæ*.] A family of slime-molds named from the genus *Licea*.

license, *n.* 1. (*f*) *Naut.*, a certificate issued to a merchant-marine officer showing him to be qualified for the position named on the paper; also, a certificate issued to a vessel testifying that it has been inspected by government officials and pronounced seaworthy in hull, boilers, machinery, and equipment.—**License system,** a term used to denote the laws governing the conditions under which the sale of alcoholic or intoxicating beverages may, or may not, be carried on.—**Steamship license,** a document granted to a steam-vessel, specifying the waters on which she is permitted to sail, the pressure of steam allowed, etc.

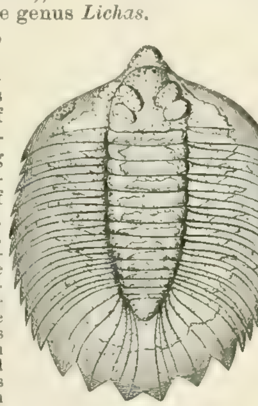
lichadid (lī'ka-did), *n.* and *a.* I. *n.* A member of the family *Lichadidæ*.

II. *a.* Pertaining to or resembling the *Lichadidæ*.

Lichadidæ (lī-kad'i-dē), *n. pl.* [*Lichas* (*Lichad-*) + *-idæ*.] A family of trilobites typified by the genus *Lichas*.

lichadoid (lī'ka-doid), *a.* Allied to or resembling the trilobite genus *Lichas*.

Lichas (lī'kas), *n.* [NL., < Gr. Λίχας, a personal name.] A genus of trilobites of the family *Lichadidæ*, including some of the largest known of these organisms. All are thin-shelled, and so loosely articulated that entire specimens are extremely rare. The anterior lobe of the glabella dominates the other lobes, which are reniform and small. The genus occurs in the Silurian and Devonian of Europe and North America.



Lichas [illegible]. Hall
One fourth natural size

Lichen planus, in *pathol.*, a form of lichen, occurring on the forearm and on parts of the body which are constricted by the clothing, in which the papules are flattened and smooth and are the seat of much itching.

lichen (lī'ken), *v. t.* [*lichen*, *n.*] To lichenize.

lichenal (lī'ken-al), *a.* Of or pertaining to the *Lichenales* or lichens. *Lindley*.—**Lichenal alliance,** the name proposed by Lindley for the *Lichenales* or lichens.

Lichenales (lī-ke-nā'lēz), *n. pl.* [NL., < *lichen* + *-ales*.] Same as *Lichenes*.

Lichenalia (lī-ke-nā'li-ä), *n.* [NL., < Gr. λειχήν, a lichen, + *-alia*.] A genus of cyclostomatous bryozoans of the family *Fistuliporidæ*. They possess massive or ramose zoaria, the zoœcia of which have ovoid or pyriform apertures, thin walls, and complete horizontal diaphragms. The genus extends from the Silurian to the Permian. Also *Fistulipora*.

lichenate (lī'ken-āt), *n.* [*lichen-ic* + *-ate*[1].] A salt of lichenic acid.

lichen-fungus (lī'ken-fung"gus), *n.* Any fungus which enters into combination with an alga to form a lichen.

lichenification (lī-ken-i-fi-kā'shon), *n.* [NL. *lichen*, lichen, + *-ficatio(n)*, < *-ficare*, make.] Conversion of a portion of the skin, usually about the flexures of the joints, into a condition resembling lichen planus.

In some cases the lesions had flattened and left a state of marked *lichenification*. *Lancet*, July 18, 1903, p. 165.

lichenivorous (lī-ke-niv'ō-rus), *a.* [L. *lichen*, lichen, + *vorare*, eat, + *-ous*.] Feeding on lichens, as reindeer.

lichenize (lī'ken-īz), *v. t.*; pret. and pp. *lichenized*, ppr. *lichenizing*. [*lichen* + *-ize*.] To cover with lichens.

lichenologic (lī"ken-ō-loj'ik), *a.* Same as *lichenological*.

Lichenopora (lī-ke-nop'ō-rä), *n.* [NL. (Defrance), < Gr. λειχήν, lichen, + πόρος, pore.] The typical genus of the family *Lichenoporidæ*.

Lichenoporidæ (lī"ke-nō-por'i-dē), *n. pl.* [NL., < *Lichenopora* + *-idæ*.] A family of cyclostomatous ectoproctous polyzoans. The zoarium is discoid, simple or composite, adnate or partially free and stipitate; the zoœcia are tubular, erect or nearly so, arranged in more or less distinct series radiating from a free central area; and the intermediate surface is cancellate or porous. It contains the genera *Lichenopora* and *Domopora*.

lichi[2] (lē'chi), *n.* [Also *leche*; S. African.] *Kobus lichi* (*leche*), one of the larger antelopes of South Central Africa: related to the waterbuck, but with shorter, more recurved horns. See *kob*.

Lichnophora (lik-nof'ō-rä), *n.* [NL., < Gr. λίχνος, a glutton, + *-φορος*, < φέρειν, bear.] The typical and only genus of the family *Lichnophoridæ*. It occurs as an ectoparasite on various marine animals, as arthropods, medusæ, snails, and worms. *Claparède*, 1867.

Lichnophoridæ (lik-nō-for'i-dē), *n. pl.* [NL., < *Lichnophora* + *-idæ*.] A family of peritrichous, ciliate infusorians. They have a secondary circlet of cilia around the opposite end in addition to the adoral zone, which is a left-wound spiral, and the hinder end of the body forms a sucker for attachment. The family contains the genus *Lichnophora*.

Lichnophorina (lik"nō-fō-rī'nä), *n. pl.* [NL., < *Lichnophora* + *-ina*[2].] Same as ★*Lichnophoridæ*.

licht-coal (licht'kōl), *n.* Cannel-coal; gas-coal. [Scotch.]

Lichtenberg's alloy, an alloy of cadmium, bismuth, tin, and lead which has a low melting-point.

lick, *v. i.* 2. To tear along; ride at full gallop. [Colloq.]

lick, *n.* 7. An aberration of the appetite, with a morbid desire to eat foreign substances having no food value, which attacks nearly all the domestic animals. In the ox it is called *pica*, in the sheep *wool-eating*, etc.

lickety-whittle (lik'e-ti-hwit'l), *adv.* Recklessly fast. *Dialect Notes*, II. vi. [Vulgar.]

lick-fingers (lik'fing"gėrz), *n.* 1. A greedy fellow; a glutton.—2. A cook: often used by the Elizabethan dramatists as the personal name of a cook.

licking, *n.* 3. The adhesion of textile fibers (cotton) to any surface in the process of manufacture.

lick-ladle (lik'lā"dl), *n.* A parasite; a lick-platter.

Lic. Med. An abbreviation of *Licentiate in Medicine*.

licorice, *n.*—**Wild licorice.** (*e*) In the West Indies and British Guiana, any one of several species of trees belonging to the genus *Cassia*, having fruits which contain a sweet pulp tasting somewhat like licorice; especially *C. fistula* and *C. grandis*.

licorice-juice (lik'ō-ris-jös), *n.* The extract of Spanish or Russian licorice-root, *Glycyrrhiza glabra*.

licorice-powder (lik'ō-ris-pou"dėr), *n.* Finely ground licorice-root: used as a mild laxative.

licorice-sugar (lik'ō-ris-shůg"är), *n.* Glycyrrhizine-ammonia, the sweet principle of licorice and monesia bark. *Sci. Amer. Sup.*, Jan. 18, 1908, p. 43.

lid (lid), *v. t.*; pret. and pp. *lidded*, ppr. *lidding*. [*lid*, *n.*] To put a lid on (something); put a cover on; hide.

lie[1], *v. i.*—**To lie to the dogs** or **to the gun**, to permit the near approach of a dog or a sportsman before flying: said of game-birds.

lie[1], *n.* 4. In *golf*: (*a*) The angle which the shaft of a club makes with the head. A club has a *flat lie* when the angle is very obtuse, and an *upright lie* when it is less obtuse. (*b*) The position of a ball at rest on the course.—**Hanging lie,** in *golf*, the position of a ball when it rests on a slope downward in the direction of play.

liebenerite (lē'ben-ėr-īt), *n.* [Named after L. *Liebener*.] An alteration-product, probably of nephelite, allied to gieseckite.—**Liebenerite-porphyry,** a nephelite-porphyry which occurs near Predazzo in Tyrol, and in which the nephelite has been altered to a dense aggregate called liebenerite, approaching muscovite in composition.

lie-days (lī'dāz), *n. pl.* See ★*lie-time*.

liefly (lēf'li), *adv.* [*lief* + *-ly*².] Willingly; gladly. [Archaic.]

And *liedu*, mine own vassal folk
Do yield their fealty.
M. J. Preston, Cartoons, Bishop's Ban, st. 7.

lie-key (lī'kē), *n.* In *well-boring*, a tool on which boring-rods are hung when being raised or lowered. [Scotch.]

lien², *n.* **Tax lien**, a charge or encumbrance upon property which attaches by reason of failure to pay taxes duly assessed thereon; the claim of the state upon property to the amount of unpaid taxes and interest thereon. It has precedence over all other encumbrances on the property. The property may be sold by the state to satisfy the claim.

lienitis (li-e-nī'tis), *n.* [NL., < L. *lien*, spleen, + *-itis*.] Inflammation of the spleen.

lienogastric (lī″e-nō-gas'trik), *a.* [L. *lien*, spleen, + Gr. γαστήρ (γαστρ-), stomach, + *-ic*.] Same as *gastrosplenic;* specifically, in *ichth.*, noting an artery which supplies the stomach, spleen, and part of the pancreas of sharks and other fishes.

lienomyelogenous (lī″e-nō-mī-e-loj'e-nus), *a.* [L. *lien*, spleen, + Gr. μυελός, marrow, + -γενής, -producing.] Originating in the spleen and bone-marrow: said of a form of leucocythemia. *Buck*, Med. Handbook, II. 69.

lie-time (lī'tīm), *n.* In *mining*, the time for making up accounts, payment for which has to lie over till the following pay-day. Also *lying-time*. [Scotch.]

Lieut.-Col. An abbreviation of *Lieutenant-Colonel* as a title.

lieutenancy, *n.* **4.** In *archery*, a rank or prize at a shooting-match: usually awarded to the archer who makes the second greatest number of hits without regard to score, or who first hits the second or next to the innermost circle of the target.

lieutenant, *n.* **3.** In *archery*, the winner of a lieutenancy in a shooting-match. **Additional second lieutenant,** a supernumerary second lieutenant in the United States army: a grade created by Congress, and filled only when the number of graduates in any class of the United States Military Academy exceeds the number of vacancies in the grade of second lieutenant in the army.

lieutenant-at-arms (lū-ten'ant-at-ärmz'), *n.* An old English term for the junior lieutenant, on a man-of-war, whose duty it was to drill the crew in musket and broadsword exercise.

Lieut.-Gen. An abbreviation of *Lieutenant-General* as a title.

Lieut.-Gov. An abbreviation of *Lieutenant-Governor* as a title.

life, *n.* **17.** In *base-ball*, an opportunity given to the batsman or base-runner, through an error of the opponents, of continuing without being put out; in sports in general, an unexpected or undeserved opportunity.—**Good life,** in *ins.*, an insurable risk; one who, according to his present age and condition of health, can secure ordinary life-insurance.—**Joint lives,** in *law*, the duration of an estate limited upon the natural lives of two or more persons.—**Life zone.** See ★*zone*.—**Natural life,** in *law*, life the duration of which is determined by actual rather than civil death.

life-buoy, *n.*—**Luminous life-buoy,** a buoy which is self-lighting when thrown into the sea, or one which is coated with a phosphorescent paint and shows against the water.

life-class (līf'klàs), *n.* A class in an art school or academy for which the living model, usually nude, is posed.

life-form (līf'fôrm), *n.* In *phytogeog.*, same as ★*vegetation-form*.

Œcological Plant Geography, which considers the *life-forms* of species, their associations, and their relations to the life conditions. *R. Smith*, Nat. Science, XIV. 110.

life-guard, *n.* **3.** A man employed on a bathing-beach to guard against accidents to bathers. [U. S.]

life-holder (līf'hōl″dèr), *n.* One who holds property for a life or lives.

life-horizon (līf'hō-rī″zon), *n.* In *geol.*, a stratum characterized by one or more fossils which in their range are restricted to it.

life-kite (līf'kīt), *n.* *Naut.*, a kite flown from a vessel wrecked on a lee shore, for the purpose of sending a line to the beach, when, owing to the severity of the wind, a line cannot be shot to the ship.

life-line, *n.* **2.** A line used by firemen to lower people from a burning building.—**Life-line gun.** See ★*gun*¹.

life-net (līf'net), *n.* A large net, attached by steel springs to a stiff ring, held by firemen at the height of their shoulders, into which persons may jump from a burning building.

life-of-man (līf'ov-man″), *n.* The name of several plants: (*a*) The live-forever, *Sedum Telephium*. (*b*) The American mountain-ash, *Sorbus Americana*. (*c*) The American spikenard, *Aralia racemosa*. (*d*) The bush-honeysuckle, *Diervilla Diervilla*.

life-plasma (līf'plas″mä), *n.* The fundamental plasma or substance in which life or vital force resides.

It is possible that the first *life-plasma* was stationary.
L. H. Bailey, Survival of the Unlike, p. 17.

life-ring (līf'ring), *n.* *Naut.*, the ring to which the under part of a breeches-buoy is attached.

life-safe (līf'sāf), *n.* A safe-conduct.

The Advocate . . . has wrung your *life-safe* out of Simon and the Duke. *R. L. Stevenson*, Catriona, ix.

life-saver (līf'sā″vèr), *n.* A man employed in the life-saving service.

Life-saving station. See *station*.

life-school (līf'sköl), *n.* See ★*life-class*.

life-slide (līf'slīd), *n.* A shallow glass cell used to retain minute living organisms while they are under microscopic examination.

lifesomely (līf'sum-li), *adv.* In a lively way; with abounding animal life.

life-zone (līf'zōn), *n.* See ★*zone*.

lift², *v. t.* **10.** In *cricket*, to hit (the ball) high into the air.—**11.** In *archery*, to shoot at an elevation, or with a high trajectory, in order to cover the required distance: said of an arrow.—**12.** In *forestry*, to pry up (seedlings in a seed-bed), so that they may be pulled up by hand for transplanting.—**13.** To pay off; take off (a mortgage). [U. S.]

So then the spectral mortgage could never be *lifted*.
F. R. Stockton, the Spectral Mortgage.

14. To bring (a constellation) above the horizon in sailing, etc. *N. E. D.* [Colloq.]

It's the Barralong, to Australia. She'll *lift* the Southern Cross in a week,—lucky old tub!
R. Kipling, Light that Failed, vii.

15. To drive (sheep or cattle) to market. [Australia.]

Well, Masther John, . . . I won't deny that I have n't *lifted* a finer mob this season.
Rolf Boldrewood, Squatter's Dream, iv.

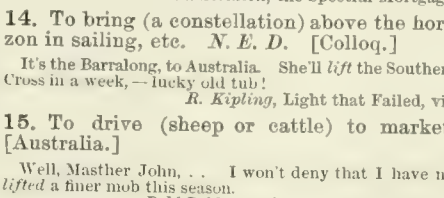
Lifting magnet. See ★*magnet*.

lift², *n.* **7.** (*c*) In *coal-mining*, a slice or cut taken off a pillar in stoping. [Scotch.]—**9.** In *textile-manuf.*, the extent of the traverse of a guide-eye or bobbin, as on a spinning-frame.—**10.** In *lawn-tennis*, a little added power at the end of the stroke.—**Hydraulic lift,** a hydraulic elevator; an elevator or lift worked by hydraulic pressure on a piston or plunger. [Eng.]—**Main lifts,** *naut.*, the lifts of the yards on the mainmast; the supports for the yards: specifically, the lifts of the main yard.—**Mizzen lifts,** *naut.*, the lifts of the yards on the mizzenmast; the supports for the yards.

lift-battery (lift'bat″èr-i), *n.* A coast-defense disappearing battery in which the guns and their carriages are placed on platforms which are raised and lowered like those of piston elevators.

The first 12-in. guns to be installed were the two in the *lift battery*, which was finished in 1895. In this each gun, with its carriage, is mounted on a platform which can be raised and lowered by a direct-acting hydraulic ram.
Encyc. Brit., XXVIII. 454.

lift-bridge, *n.*—**Rolling lift-bridge,** a form of lift-bridge which carries a highway or railway over a naviga-



Rolling Lift-bridge.

a, foundation of concrete resting on piles; *b*, *b*, spans of bridge, closed and forming a cantilever arch; *c*, track on which span rolls in rising to open position; *d*, curved face or tread that rolls on track; *e*, *e*, counterweights; *f*, house for motor and control; *g*-*g*, fender-piles. Dotted lines show spans rolling backward and upward and half open.

ble channel or other passage to be temporarily opened, in which one end of the lift-bridge remains on the abutment and the other lifts or revolves vertically about the stationary end, which is curved like a hoop and rolls backward along a track on the abutment. Frequently the bridge is divided at the center into two half-bridges, each half revolving vertically about the end of the abutment.

lifter¹, *n.* **2.** (*b*) In *founding:* (1) A tool used by molders for lifting loose sand from the bottoms of flange-and rib-molds. (2) One of the hooks suspended from the bars of a molding-box into the mold to support the sand.

lifting-arms (lif'ting-ärmz), *n. pl.* **1.** A pair of arms in a locomotive valve-gear for lifting the links.—**2.** Arms for raising valves which are opened by the action of cams, as in some internal-combustion motors.

lifting-cam (lif'ting-kam), *n.* A cam or lobe on a revolving or rocking shaft which imparts a lifting movement to valves or other mechanism.

lifting-cog (lif'ting-kog), *n.* A curved lever or cam-shaped arm for lifting a poppet-valve in an engine.

lifting-crane (lif'ting-krān), *n.* **1.** A crane for lifting weights.—**2.** A swing-crane or derrick in which the arm moves up and down to raise and lower the load, the hook being attached directly to the arm without the interposition of a hoisting-device.

lifting-jet (lif'ting-jet), *n.* The steam-jet which lifts and forces the water in an ejector or injector.

lifting-nozle (lif'ting-noz″l), *n.* The combining or forcing nozle in an injector or inspirator.

lifting-pallet (lif'ting-pal″et), *n.* A pawl or projection on a lever or other part of a mechanism used for lifting.

lifting-poker (lif'ting-pō″kèr), *n.* Same as ★*poker*¹ (*d*).

lifting-sail (lif'ting-sāl), *n.* A head-sail the tendency of which is to lift or raise a vessel's bows out of water.

lifting-shaft (lif'ting-shàft), *n.* The shaft in a locomotive valve-gear which carries the arms for raising and lowering the links or link-blocks.

lifting-toe (lif'ting-tō), *n.* The revolving arm of the rock-shaft of a valve-gear. It takes against the toe on the lifting-rod and transmits motion.

lifting-valve (lif'ting-valv), *n.* See *valve*, 2.

lift-jigger (lift'jig″èr), *n.* A double and a single block-tackle made fast to the hauling part of a lift to multiply its purchase.

liftman (lift'man), *n.*; pl. *liftmen* (-men). An elevator attendant. [Eng.]

lift-smoke (lift'smōk), *n.* A game of cards played by from four to six persons, with the full pack. The cards are dealt one at a time, six to four players, five to five, and four to six. The last card that comes to the dealer is the trump. The play is as at whist. The winner of each trick draws the top card from the stock and leads again. As soon as a player's cards are exhausted he withdraws from the game. The one who outlasts the others, having a card when his adversary has none, wins the pool.

lig (lig), *n.* *Naut.*, a combination fish-hook and sinker.

ligament, *n.*—**Cervical ligaments,** two ligaments, the anterior of which connects the basilar fissure of the occipital bone with the bodies of the first few cervical vertebræ, and the posterior of which is the same as the ligamentum nuchæ.—**Douglas's ligament.** See *Douglas's* ★*fold*.—**Gastropancreatic ligament, gastrophrenic ligament.** See ★*gastropancreatic*, ★*gastrophrenic*.—**Hepatic ligaments,** folds of peritoneum, passing from the liver to adjacent parts, which serve to prevent displacement of the organ.—**Hepatocolic ligament,** a peritoneal fold passing between the liver and the colon.—**Hepatorenal ligament,** a peritoneal fold stretching from the liver to the right kidney.—**Iliopubic ligament.** Same as *Poupart's ligament* (which see, under *ligament*).—**Interossicular ligament,** a ligament connected with the Weberian ossicles of certain fishes.—**Ligament of Bertin,** the iliofemoral ligament.—**Ligament of Henle,** the internal portion of the rectus abdominis muscle.—**Ligaments of Cooper,** fibers passing between the skin and the mammary gland; that part of the fascia of the transversalis which passes from the ileopectineal eminence to the spine of the pubes: fibers passing, on the inner side of the elbow, from the coronoid process to the olecranon.—**Metacarpal ligament,** a ligament connecting the lower ends of the last four metacarpal bones.—**Pancreaticosplenic ligament,** a fold of peritoneum passing between the tail of the pancreas and the spleen.—**Rhomboid ligament.** (*b*) A ligament passing from the lower end of the radius to the unciform and cuneiform bones.

ligation, *n.*—**Distal ligation,** the tying of an artery, for the cure of aneurism, on the side of the dilatation farthest from the heart.—**Immediate ligation,** the tying of an artery by a ligature passed around the isolated vessel which takes in none of the surrounding tissue.—**Mediate ligation,** the tying of an artery by a ligature which includes also some of the surrounding tissues.—**Proximal ligation,** the tying of an artery, for the cure of aneurism, by a ligature around the vessel between the heart and the dilated portion of the artery.

Ligature forceps, needle. See ★*forceps*, ★*needle*.—**Ligatures of Stannius,** two ligatures, one of which is placed between the sinus venosus of a frog's heart and the auricles, causing both auricles and ventricle to cease beating while the veins and the remains of the venous sinus continue, and the second of which is then placed between the auricles and ventricle, causing the latter to begin to beat again while the auricles remain quiescent.—**Pro-**

visional ligature, a broad ligature passed around a large artery and tied during an operation, but removed when this is completed. **Soluble ligature,** a ligature, made of catgut or other animal material, which is absorbed after remaining a time in the tissues.

Ligerian (lī-jē'ri-an), *n.* [L. *Liger* (F. *Loire*) + *-ian.*] In *geol.*, a substage of the Cretaceous system on the continent of Europe taking its name from the Loire river. It constitutes the lower division of the Turonian stage, and lies immediately above the Cenomanian beds. Also used attributively.

light[1], *n.* **15.** In *mech.*, an opening; a space clear of obstructions.—**16.** In an acrostic puzzle, each of the words which are to be guessed, their initials (or initials and finals) forming the word or words in which the answer to the puzzle consists. *N. E. D.*—**Actinic light,** light capable of affecting a photographic film or of producing other chemical effects. This property belongs chiefly, but not exclusively, to the violet and ultra-violet regions of the spectrum. The longer wave-lengths, such as those transmitted by ruby glass, are chemically so inactive as to be commonly termed *non-actinic.* **Ashen light,** a translation of *lumière cendrée*, a French term for the earth-shine seen on the moon when it is a narrow crescent.—**Astral light.** See ★*astral.* **Auer light,** an Auer or Welsbach burner. **Borrowed light.** See ★*borrowed.* **Combination light,** a lantern for a launch which shows a bow-light in front and red and green side-lights. **Cone of light.** Same as ★*light-spot.* **Costen lights** (*naut.*), colored fireworks of special design used for signaling at sea. They are named from their inventor. Also called *Costen signals.*—**Efficiency of a source of light.** See ★*efficiency.*—**Electro-ethereal theory of light.** See ★*electro-ethereal.*—**Feast or Festival of Lights.** See ★*Hanukah.* **Finsen light treatment,** the treatment of diseases of the skin by exposure to the violet and ultra-violet rays of the spectrum, a method devised by Dr. Niels Finsen of Copenhagen. Either sunlight or the electric arc-light may be used, but the latter is usually preferred. See ★*apparatus.*—**Holme's light,** a device used, in practice, to show the movements of a locomotive torpedo. It is an arrow-headed canister pierced with several holes and filled with phosphide of calcium. The contact of water with this chemical produces bubbles which burst into flame on reaching the surface and also emit dense smoke having the odor of garlic.—**Latent light,** in *photog.*, the light or actinic influence (sufficiently powerful to affect a photographically sensitive surface even after the lapse of several months) which is found to be stored up in paper that has been saturated with uranium nitrate exposed to sunlight, and inclosed in an opaque tube.—**Light-contrast.** Same as *brightness-contrast.* See ★*contrast*, 5. **Light induction** (*simultaneous* and *successive*). See ★*induction.* **Light-sensation,** in *psychol.*: (*a*) A visual sensation, whether of color or of brightness. (*b*) A brightness-sensation; a member of the achromatic (black-gray-white) series of visual sensations.—**Light standard,** a source of light used as a standard of intensity in the photometry of the various flames and other sources employed for artificial illumination. The properties essential to a light standard are constancy of illuminating power and a quality of light as nearly as possible identical with that of the light sources with which the standard is to be compared. It is also important that a light standard be reproducible. Aside from the standard candle (see ★*candle*), which has been abandoned in practice on account of its unreliability, although it is still the legal British and American unit, the earliest well-known light standard is the *Carcel lamp*, a modified form of Argand burner with a central draft. Colza-oil is supplied to the wick by means of a pump driven by clockwork. The character of the wick, the diameter of the wick-tube and air-duct, and the dimensions of the chimney are specified exactly in order to secure the greatest attainable constancy of performance. The behavior of the Carcel lamp depends upon a multitude of factors, and it has been found a difficult standard to manage except in expert and experienced hands. The brightness of the flame is approximately 8 candle-power. According to Mounier, the British standard candle is equal to 0.120 carcels. Various types of petroleum flame have likewise been used as photometric standards, and an Argand burner—supplied with ordinary illuminating-gas and provided with a screen (S S, Fig. 1) having an opening (*a*) of such size as to permit the passage of an amount of light from the center of the flame sufficient to give an intensity approximately equal to twice the light from a standard candle—has been widely employed in gas-photometry. This device is known as the *Methven screen.* On account of the variable character of the fuel employed, it affords results but little better than those obtained with the standard candle or with ordinary oil or gas flames, all of which are deficient in constancy. It is now universally recognized that in order to obtain a flame suitable for a light standard it is necessary to use a fuel of definite chemical composition in a lamp of accurately specified construction. The only light standard thus far produced which fulfils these conditions is that obtained by the use of the lamp invented by the late Von Hefner Alteneck and known as the *Hefner lamp.* The fuel employed is amyl acetate ($C_5H_{11}C_2H_3O_2$), a volatile organic liquid which burns with a luminous flame similar in color to the flame of petroleum and gas, but of slightly greater relative intensity in the red than the latter. The *Hefner lamp* (Fig. 2) is of simple construction. It has a wick-tube (*w*) of German silver, the length, diameter, and thickness of wall of which are carefully specified, since the brightness of the flame depends upon these details. The flame (*f*), which burns in free air, is similar in size and shape to a candle flame, and its height, which under normal conditions should be precisely 40 millimeters, is controlled by turning the wick up and down and is measured by means of a flame-gage (*g*). (See ★*flame-gage.*) The principal variation in the brightness of the flame of this standard is that due to atmospheric moisture, the intensity in dry air being about 10 per cent. greater than in air containing 20 liters of moisture to the cubic meter. The effect of the temperature and pressure of the air and of the amount of carbon dioxid present are scarcely appreciable under working conditions. It has been found that Hefner lamps constructed in accordance with the mechanical specifications give light-values which when corrected for the humidity of the atmosphere agree with each other within 2 per cent., and since this is the best result obtained with any primary light standard, this lamp has been adopted as the reference standard in photometry. To reduce measurements made with the Hefner lamp to British standard candle-power, the relation 1 hefner = 0.88 British standard candles is used. This ratio has been obtained by averaging many thousands of comparisons of the two sources. The *Harcourt pentane-lamp*, extensively used in gas-photometry in England and in a modified form in the United States, has a flame of pentane-vapor burning within a metal chimney. An aperture in the chimney is so adjusted as to give light of either 1 or 10 candle-power. The pentane-lamp is not reproducible with accuracy, and is usually calibrated by means of some other standard, such as the Hefner lamp. *Violle's platinum standard* was proposed by Violle to avoid the uncertainties to which all flame standards are necessarily subject. The primary standard of light is the light emitted from a square centimeter of surface of a mass of platinum at its temperature of solidification. The brightness of this standard, which is called the *violle*, is approximately 20 candle-power. The *bougie décimale* or *par*, which was intended to supplant various standard candles as a unit, was defined by the Geneva Congress in 1896 as one twentieth of a violle. It was, however, found impracticable to determine this unit accurately by means of the platinum standard, and the bougie décimale was accordingly provisionally defined as equal to one hefner. The light from the crater of the electric arc issuing through an aperture of one square millimeter has likewise been proposed as a standard of photometric intensity, but the use of this as a standard has been found to be impracticable. Incandescent glow-lamps supplied with steady current afford the most convenient and reliable standards for secondary use. Such lamps can be brought into perfect agreement with one another, and when one such standard lamp has been carefully compared with a primary standard it can be copied or reproduced indefinitely.—**Magnesium light,** the intensely white light obtained by burning metallic magnesium. The source of this light is the combined incandescence and luminescence of the solid magnesium oxid formed by the combustion of the metal, and has, therefore, a continuous spectrum. The magnesium light is of extraordinary actinic power because of the great intensity of the violet and ultra-violet regions of its spectrum. It is the only known light having a continuous spectrum of greater energy in these regions than in the regions of less refrangibility.—**Masthead light** (*naut.*), the white light carried in front of the foremast by steamships when under way. It shows over an unbroken arc of the compass from right ahead to two points abaft the beam on either side.—**Mechanical equivalent of light.** See ★*equivalent.*—**New Lights.** Specifically—(*a*) The Campbellites. See *Campbellite*, 1. (*b*) The Socinian party in the west of Scotland during the last part of the eighteenth century. See *Socinianism.* (*c*) The Fifth Monarchy Men in England. See *fifth.* (*d*) The Freewill Baptists, an American sect. See *baptist*, 2. (*e*) The Separates, a sect of Calvinistic Methodists in America (1750). See *Separate*, 2. (*f*) The Edwardsians. See ★*Edwardsian.* (*g*) The champions of the revival in New England and other Eastern States in the middle of the eighteenth century.—**Non-actinic light.** See *actinic* ★*light.*—**Patent light,** a light or window for pavements or vaults, consisting of thick translucent glass fixed in a metal frame so as to resist weights and blows, while transmitting light. A pavement or vault-light.—**Platinum standard light.** See ★*light standard.*—**Pyramid of light.** Same as ★*light-spot.*—**Sodium light,** the light emitted by sodium vapor in a state of incandescence. It is yellow in color and nearly monochromatic. Its source is the pair of bright lines, in the spectrum of the metal, of wave-lengths .5896 μ and .5890 μ. It is produced by volatilizing a salt of sodium or the metal itself in the flame of the Bunsen burner or in the electric arc.—**Strontium light,** the intense red light emitted by glowing vapor of strontium. It is by no means monochromatic, there being many bright lines in the spectrum of the vapor. It owes its color chiefly, however, to the lines of wave-length .6550 μ, .6408 μ, and .6386 μ, lying in the red of the spectrum. **Thallium light,** the monochromatic light emitted by the green line, of the wave-length .5350μ in the spectrum of the metal thallium.—**Ultra-violet light,** radiations of a wave-length shorter than that of visible light, but still of sufficiently great wave-length to be reflected and refracted. Many substances, as glass, are opaque for ultra-violet light. Ultra-violet light acts on the photographic plate and produces powerful fluorescence.—**Velocity of light,** the velocity of progression of the wave-motion to which luminous sensations are due. The first estimations of the velocity of light were made by Römer (1676) from observations upon the eclipses of the moons of Jupiter. The observed times when the satellites of Jupiter disappear behind the disks of the planet and reappear again are several minutes earlier when Jupiter and the earth are in conjunction than when they are in opposition. From such observations Romer found the time required for a wave of light to cross the earth's orbit to be 16½ minutes. The diameter of the earth's orbit being known, the velocity of light could then be computed. The velocity as thus determined was 302,300,000 meters per second, a value now known to be too large. Another astronomical method of computation (*Bradley's method*) is based upon aberration, a phenomenon consisting in the apparent displacement of a star due to the motion of the earth in its orbit. This displacement depends upon the velocity of light, which, computed from such observations, is found to be 299,300,000 meters. The first direct measurements of the velocity of light by a method independent of the motion of the earth in its orbit, was made by Fizeau (*Fizeau's method*), who introduced into the path of a beam of light a rapidly revolving toothed wheel. Light passing between two adjacent teeth of this wheel is reflected back upon its path by means of a distant mirror, and when the wheel is driven at a certain speed the returning light is intercepted by the adjacent tooth. To an observer looking through the teeth of the wheel toward the mirror the light coming from the mirror to the eye will be extinguished when the proper speed has been attained. The arrangement of the essential features of the apparatus is shown in Fig. 1, in which S is the source of light, G an unsilvered glass plate reflecting the light in a horizontal direction, W the revolving wheel, so placed that the apertures between its teeth lie in the focus of the lens L_1. This lens renders the beam of light parallel, and L_2 focuses it upon a concave mirror M. This mirror returns the light through the lenses L_2 and L_1, and a portion is transmitted through the glass plate G to the eye at E. At the proper speed, as mentioned above, the returning light is intercepted by the wheel. In 1850 Foucault devised another method of determination (*Foucault's method*). He employed a revolving mirror driven at a high rate of speed by means of an air-turbine. The essential features of this method are indicated in Fig. 2. A beam of light from S, thrown upon the revolving mirror R, is reflected to a distant mirror M, thence back to the revolving mirror, and thence to the glass plate G, from the surface of which a portion is reflected to the scale *ss*. If in the interval occupied by the beam of light in traveling from the revolving mirror to the fixed mirror M and back again the revolving mirror moves through an appreciable angle, the portion of the scale reached by the returning ray will not coincide with that which it would have reached had the revolving mirror been at rest. From the deflection of this beam of light along the scale, the angular velocity of the mirror, and the distance between the revolving mirror and the fixed mirror, the velocity of light is computed. In 1874 Cornu made a determination of the velocity of light by a refinement of Fizeau's method, and obtained the value 300,400,000 meters per second in vacuo. In 1879 Michelson repeated Foucault's measurements with a greatly improved apparatus set up upon a sea-wall at the Naval Academy in Annapolis. The speed of the revolving mirror was 256 revolutions per second, and this was determined with great accuracy by comparison with the period of a standard tuning-fork. The distance between the revolving mirror and the fixed mirror was very great (about 500 meters) and the deflection of the returning ray was 133 millimeters. Michelson's result for the velocity of light was 299,944,000 meters per second. These experiments were afterward repeated by Newcomb. That the velocity of light in vacuo and in air is nearly the same, whatever be the wave-length of the light, is well established. Any considerable difference of velocity would show itself in Michelson's observations by dispersion of the different colors of the spectrum of the returning ray, but no such effect was observed. That the different wave-lengths reaching the eye from the stars travel at the same rate is shown by the fact that no momentary color effects are produced in the occultation of the stars by the moon or in the eclipse of Jupiter's satellites. In refracting media such as glass, however, the velocity varies with the wave-length, the shorter wave-lengths being more retarded than the longer, a fact which gives rise to the phenomenon of dispersion.—**Zircon light,** the light produced by the incandescence of a disk or cylinder of zirconium oxid heated in the oxyhydrogen flame. The light is very similar in color and intensity to the calcium light or lime-light, but zircon is much less rapidly disintegrated by the action of the flame, and does not slake, like lime, on exposure to moist air.

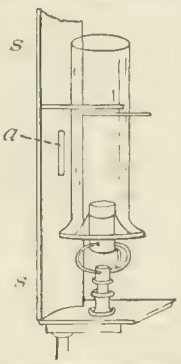


Fig. 1. Methven Screen.

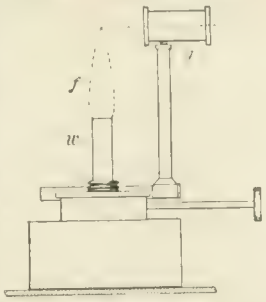


Fig. 2. Hefner Lamp.

light[3], *v. i.*—**To light in,** to run lightly or easily: applied to the inward traverse of the spindle-carriage of a spinning-mule.

lightage (lī'tāj), *n.* [*light*[1] + *-age.*] **1†.** A toll paid by a ship coming to a port where there is a lighthouse. *N. E. D.*—**2.** A system

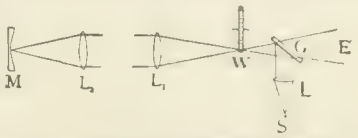


Fig. 1. Velocity of Light: Fizeau's method.

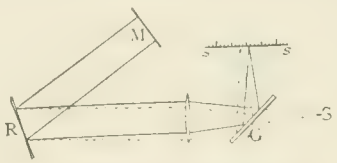


Fig. 2. Velocity of Light: Foucault's method.

of lighting; the supply of gas, electricity, or other illuminant used for lighting.

light-buoy (līt'boi), *n.* A life-buoy which automatically ignites a flare upon striking the water, or a channel buoy which carries a light from sunset to sunrise.

light-contrast (līt'kon″trȧst), *n.* Same as *brightness-contrast.* See ★*contrast*, 5.

lightening-hole (līt'ning-hōl), *n.* In *iron ship-building*, a hole cut in a plate which forms a part of a vessel's structure, to reduce its weight without reducing its strength for the purpose intended. See cut at ★*keel*[1], 2.

light-equation, *n.*—**Constant of light-equation.** See ★*constant.*

light-filter (līt'fil″tėr), *n.* In *photog.*, a screen which transmits light selectively and is used to control the composition of the radiation which falls upon the sensitized plate.

light-horseman, *n.* 2. A fish, *Chætodipterus faber*, of the family *Ephippidæ*: found from Cape Cod to Rio de Janeiro. See *Chætodipterus*, with cut.

lighting-station (lī'ting-stā″shon), *n.* An establishment for the generation of electric current to be used in lighting.

light-line (līt'līn), *n.* *Naut.*, the water-line at which a vessel floats when at light displacement. See ★*displacement*, 3. *White*, Manual of Naval Arch., p. 47.

light-liquor (līt'lik″or), *n.* The liquid obtained in the manufacture of glucose or starch-sugar by sufficiently boiling starch with dilute sulphuric acid, neutralizing the acid with calcium carbonate, and separating the calcium sulphate by subsidence, before filtration and the concentration which produces 'heavy-liquor.'

light-mill (līt'mil), *n.* Same as *radiometer*, 2. *Encyc. Brit.*, XXXII. 128.

lightning[1], *n.*—**Dark lightning,** dark lines which sometimes appear on photographs of lightning. They are sometimes due to the excessive actinic intensity of the light from the flash which causes a reversal, giving a positive or bright line on the negative plate and a black line on the positive.

lightning-beetle (līt'ning-bē″tl), *n.* Same as *lightning-bug.*

lightning-bone (līt'ning-bōn), *n.* Same as *fulgurite.*

lightning-gap (līt'ning-gap), *n.* The air-gap of a lightning-guard placed in an electric circuit.

lightning-hopper (līt'ning-hop″ėr), *n.* A homopterous American insect of the family *Fulgoridæ*. See *Fulgora.*—**Frosted lightning-hopper,** a lightning-hopper, *Ormenis pruinosa*, of a pale green or lead color, covered with a whitish powder which makes it seem frosted.

lightning-pains (līt'ning-pānz), *n. pl.* Sharp darting pains of brief duration experienced in locomotor ataxia.

lightning-recorder (līt'ning-rē-kôr″dėr), *n.* A modification of the Marconi apparatus for wireless telegraphy which serves to record automatically the occurrence of distant lightning or weaker electric discharges. The natural electric discharge produces an induced current in a local receiving radioconductor or circuit of wire including some form of coherer, tapper, and relay. The latter actuates the recording apparatus proper. Various forms of the lightning-recorder are in use.

lightning-stone (līt'ning-stōn), *n.* Same as *fulgurite.*

lightning-tree (līt'ning-trē), *n.* In the Bahamas, the West Indian coral-tree, *Erythrina Corallodendron.* Its leaves are deciduous and at certain seasons the bright scarlet flowers cover the tree before the new leaves have appeared. See *coral-tree* and *Erythrina.*

light-port (līt'pōrt), *n.* *Naut.*, a port-hole; an opening in the side of a vessel for admitting light into a cabin, state-room, or other compartment.

light-pressure (līt'presh″ūr), *n.* The mechanical pressure due to the impact of light-waves upon a body placed in their path. See *pressure*, 2 (*b*).

light-sensation (līt′sen-sā″shon), *n.* See ★*light*[1].

lightskirts (līt'skėrtz), *n.* A woman of lax behavior. [Rare.]

> Hath not Shor's wife although a *light skirts* she,
> Given him a chast long lasting memory?
>
> *Return from Parnassus*, II. i. 2.

light-spot (līt'spot), *n.* 1. See the extract.

> In view of the recent work of Haberlandt on the light sense-organs of leaves, it may be of interest to record the discovery of similar organs in xerophilous stems. Certain of the epidermal cells of the young stems of the Ephedreæ have on their external wall conical structures of the nature of papillæ, the core of the papilla being mucilaginous. This structure acts as a collecting lens focussing the incident rays of light, and a definite area of the cytoplasm of the back wall of the cell is thereby illuminated. Fig. 1, which is a photomicrograph taken in diffuse light of a mounted preparation of epidermis, shows the appearance of these *light-spots* as seen under ⅙ objective. Of any object held in the path of the incident rays an image is formed by each of these light sense-organs.
>
> *R. J. D. Graham*, in Nature, April 4, 1907, p. 535.

2. A cone-shaped area of reflected light on the drum-membrane. Also called *cone of light* and *pyramid of light.*

light-stuff (līt'stuf), *n.* A trade-name for a volatile liquid obtained in rectifying commercial coal-tar benzine in aniline-dye works: used to some extent as a solvent for india-rubber.

light-telephony (līt'tel″ē-fō-ni), *n.* See ★*telephony.*

light-vector (līt'vek″tor), *n.* A vector or line which indicates by its length and direction the magnitude and character of the disturbance of the ether (the so-called *light-disturbance*) at any point in a region traversed by polarized light. The light-disturbance s is defined by the equation

$$s = A \sin\left(2\pi \frac{t}{T} + \vartheta\right),$$

where A is the amplitude, t the time, T the period of the disturbance, and ϑ the constant of phase

light-year (līt'yēr), *n.* The distance traversed by light in one year; the unit usually employed in expressing the distances of the fixed stars: for example, the distance of *α* Centauri is $4\frac{3}{10}$ light-years. In terms of the smaller astronomical unit (the mean distance of the earth from the sun), it is found by dividing the number of seconds in a sidereal year by the number of seconds occupied by light in coming from the sun to the earth. According to our best present determinations, it is 62,243 astronomical units. It bears to the smaller astronomical unit very nearly the ratio of the mile to the inch.

Ligia, *n.* 3. A genus of plants of the family *Daphnaceæ.* See *Thymelæa.*

lignicolous (lig-nik'ō-lus), *a.* [L. *lignum*, wood, + *colere*, inhabit.] Living in wood: applied to certain bivalve mollusks, as *Teredo*, the ship-worm.

lignilite (lig'ni-līt), *n.* A columnar or cylindrical structure in limestone. It occurs across the bedding and is due to pressure. Same as *stylolite.* *Geikie*, Text-book of Geology, p. 420.

Lignin dynamite. See ★*dynamite.*

ligniriose (lig-nir'i-ōs), *n.* A term applied to a substance said to be a variety of lignin.

lignite, *n.*—**Bovey Tracey lignites,** a deposit of sands and clays containing lignite, of Oligocene age, occurring at Bovey Tracey in Devonshire. These beds are from 200 to 300 feet thick, and are isolated, lying on a granite base, the deposits having been formed in an old lake-basin. The organic remains are chiefly of terrestrial plants, on the basis of which the age of the beds was inferred by Heer to be equivalent to that of the Molasse of Switzerland.—**Hötting lignites,** lignitic beds in the Inn valley, near Innsbruck in the Tyrol, which overlie ancient moraine stuff and are surmounted by scattered erratic blocks. They are thought to represent an interglacial period. They contain plant remains of species still growing in the surrounding country.—**Utznach lignites,** beds of the Pleistocene or glacial series in Switzerland (St. Gall) which are intercalated in moraine deposits and represent an interglacial period. The lignites contain pines, firs, larch, yew, oak, sycamore, and other trees, and bones of *Elephas*, *Rhinoceros etruscus*, *Bos taurus* (var. *primigenius*), and other mammals.

lignocellulose (lig″nō-sel'ū-lōs), *n.* [L. *lignum*, wood, + E. *cellulose.*] The material of which woody tissue principally consists. It is commonly associated with more or less cellulose proper, but is distinguishable from it by several reactions, among others by being stained yellow or brown by iodine. Also called *bastose.*

lignoceric (lig-nō-sē'rik), *a.* [L. *lignum*, wood, + *cera*, wax, + *-ic.*] Noting an acid, a colorless compound, $C_{24}H_{48}O_2$, contained in beech-wood tar and in the saponification-products of earthnut-oil. It crystallizes in needles and melts at 80.5° C.

ligno-eosin (lig-nō-ē'ō-sin), *n.* A trade-name for a product said to be the sodium salt of lignone-sulphonic acid. It is obtained from the waste digester-liquor of the sulphite process for making wood-pulp, and has been proposed for use as a reducing agent in chrome-mordanting wool for dyeing.

lignoin (lig'nō-in), *n.* [L. *lignum* (*ligno-*), wood, + *-in*[2].] A brown compound, $C_{20}H_{23}O_8N$, prepared from old Huanaco cinchona bark.

lignone (lig'nōn), *n.* [L. *lignum*, wood, + *-in*[2].] Same as *lignin.*

lignose, *n.* 2. [L. *lignum*, wood, + *-ose.*] A colorless compound, $C_{18}H_{26}O_{11}$, prepared by the action of dilute acids on glucolignose.

lignosity (lig-nos'i-ti), *n.* [*lignos(e)* + *-ity.*] The character or condition of being ligneous or woody.

lignosulphite (lig-nō-sul'fīt), *n.* [L. *lignum*, wood, + *sulph(ur)* + *-ite*[2].] A brown liquid obtained as a by-product in the manufacture of cellulose. It consists of sulphur dioxid and aromatic compounds which are probably derived from the fir. It is used for inhalation in cases of tuberculosis, the air of the room in which the patient remains being saturated with a 10-per-cent. solution of the sulphite.

lignosulphuric (lig″nō-sul-fū'rik), *a.* Pertaining to lignin and sulphuric acid, or to sulpholignic acid.—**Lignosulphuric acid,** a syrupy compound formed by treating cellulose with concentrated sulphuric acid.

lignum[1], *n.* 2. A contraction for *lignum-vitæ*: applied in Australia to several species of trees because of their tough and hard wood. See the Australian species mentioned under *lignum-vitæ.*

lignum[2] (lig'num), *n.* [An abbreviated pronunciation of *polygonum.*] Any species of the wiry plants of the genus *Polygonum.* [Australia.]

ligulate-flowered (lig'ū-lāt-flou″ėrd), *a.* Same as *liguliflorous.*

liguloid (lig'ū-loid), *a.* [L. *ligula*, a var. of *lingula*, a little tongue, + *-oid.*] Having the form of a ligula or little tongue; tongue-shaped.

Ligurian. I. *a.* 2. Pertaining to a division of the Oligocene Tertiary in the southern Alps and the Rigi. These beds lie at the base of the series, consist of marls and limestones with marine fossils, and form a part of the great series of deposits termed *Molasse* or *Flysch.* Included in the division are the Glarus shales, celebrated for their abundant fish fauna.

II. *n.* 2. The Ligurian division. Also known as the *Rigi beds.*

Ligurianize (li-gū'ri-an-īz), *v. t.*; pret. and pp. *Ligurianized*, ppr. *Ligurianizing.* [*Ligurian* + *-ize.*] To render Ligurian; specifically, make (an apiary or a colony of bees) Ligurian by introducing Ligurian queen bees.

ligustrone (li-gus'trōn), *n.* [*Ligustrum* (see def.) + *-one.*] A colorless bitter compound contained in the bark of *Ligustrum vulgare.* It crystallizes in needles, melts a little above 100° C., and boils at 260–280° C.

lija (lē'hä), *n.* [Sp., a dogfish, etc., orig. a fish whose dried skin was used for polishing wood, < *lijar*, polish, make smooth.] Any one of several fishes of the genus *Monacanthus.* See *leather-jacket*, 1 (*b*).—**Lija barbuda,** *Alutera monoceros*, a fish widely distributed in tropical seas.—**Lija colorada,** *Cantherines pullus*, a fish found from the West Indies to Brazil.—**Lija trompa,** *Alutera scripta*, a fish found in tropical waters along both coasts of America and in the East Indies.

likari (lē-kā'rē), *n.* A native name of the Cayenne cedar.—**Essence de likari.** See *linaloa-*★*oil.*

like[2], *n.* 2. In *golf*, a stroke which equalizes the number played by the other side.

like[2], *adv.* 5. As well as; as also.

> I can counterfeit the deep tragedian; . . .
> Tremble and start at wagging of a straw,
> . . . ghastly looks
> Are at my service, *like* enforced smiles.
>
> *Shak.*, Rich. III., iii. 5.

Like a lamplighter, with long, rapid strides. *Dialect Notes*, II. vi. [Colloq.]—**Like all possessed,** as if bewitched. *Dialect Notes*, II. vi. [Colloq.]—**Like anything, like everything,** with such rapidity and intensity of effort as to preclude comparison. [Colloq.]

> The Walrus and the Carpenter
> Were walking close at hand:
> They wept *like anything* to see
> Such quantities of sand.
>
> *Lewis Carroll*, Through the Looking Glass, Walrus and Carpenter, st. 4.

Like Sam Hill. Same as ★*like sin.*—**Like sin,** intensely; very hard: as, to work *like sin.* [Slang.]—**Like smoke.** See *smoke.*

likeness, *n.*—**Law of likeness.** See ★*law*[1].

lil, lill (lil), *n.* [Said to be Romany.] 1. In Gipsy language, a book; a pocket-book.—2. A five-pound note. *Farmer.* [Slang.]—3. A bad bill. *Farmer.* [Slang.]

lilac, *n.* 3. A fanciers' name for a peculiar bluish-gray color shown in the coats of some domesticated mice.—**California lilac,** the blue myrtle, *Ceanothus thyrsiflorus.*—**Cape lilac,** in Australia, a variety of *Melia Azedarach*, the tree called *white cedar* by the colonists. See *Melia.*—**Native lilac,** in Tasmania, *Prostanthera rotundifolia*, a strong-smelling bush of the mint family, bearing quantities of deep-lilac-colored flowers.—**Summer lilac,** the dame's-rocket, *Hesperis matronalis.* See cut under *rocket*[2], 2.

lilial (lil'i-al), *a.* [NL. **lilialis*, < L. *lilium*, lily.] Designating plants of the lily kind or related to the lily: as, the *lilial* alliance. *Lindley.*

Liliales (lil-i-ā'lēz), *n. pl.* [NL. (Lindley, 1833), < *Lilium* + *-ales.*] A large order of monocotyledonous plants. It includes the lily

family and 11 others, the most important being the *Juncaceæ* (rushes), *Convallariaceæ* (lilies-of-the-valley), *Smilacaceæ*, *Amaryllidaceæ*, *Dioscoreaceæ* (yams), and *Iridaceæ*. The lilial alliance of Lindley embraced only the *Liliaceæ*, and the *Pontederiaceæ*, the latter of which is now referred to the order *Xyridales*.

liliated† (lil'i-ā-ted), *a.* [L. *lilium*, lily, + *-ate*[1] + *-ed*[2].] Ornamented with lilies, especially with the lilies of France.

Lille pottery. See ★*pottery*.

lillianite (lil'i-an-īt), *n.* [*Lillian*, name of a mining company in Colorado, + *-ite*[2].] A lead sulphobismutite, $Pb_3Bi_2S_6$, which occurs in steel-gray crystalline masses: found in Sweden and in Colorado.

Lillienthal coefficients. See ★*coefficient*.

lillikin (lil'i-kin), *n.* [Also *lellicins*, *lellokans*; origin obscure.] A special size of pin the name for which began to be common in New England about 1775.

Harriet Paine . . . had "corkins, middlings, short whites, *lillikins*, and lace pins."
A. M. Earle, Costume of Colonial Times, p. 186.

lilliputianize (lil-i-pu'shan-īz), *v. t.*; pret. and pp. *lilliputianized*, ppr. *lilliputianizing*. To make like the Lilliputians in size; dwarf.

lilt, *v. i.* **3.** To sway up and down, as a bird on a spray.

Young . . . of a reddish face — with blue eyes, and he *lilted* a little on his feet when he was pleased, and cracked his finger-joints. . . . He went to England, and he became a young man, and back he came, *lilting* a little in his walk.
R. Kipling, A Sahibs' War, in Traffics and Discoveries, p. 73.

lily. *n.* **Asa Gray's lily**, *Lilium Grayi*, a delicate plant with oblong-lanceolate leaves and long-peduncled red flowers tinged at the base and spotted within; found on the Peaks of Otter and on high mountain summits of North Carolina. — **Barbados lily**, the common name of *Hippeastrum equestre*, a member of the family *Amaryllidaceæ*. It is a globular bulb 2 inches in diameter, producing offsets, with brown scales and a short neck; the leaves are from 6 to 8 in number and develop fully after the flowers. It is an old garden-plant, and one of the best for winter and spring blooming. The varieties *splendens*, *fulgidum*, and *aulescens* are some of the more common forms of this species. The Barbados lily is found in the region extending between Mexico, Chile, and Brazil. **Beaver-lily**, the yellow pond-lily, *Nymphæa advena*. Also called *beaver-root*. **Bermuda lily**, the Easter lily, a cultural form of *Lilium longiflorum*: so named because it is extensively grown in Bermuda. — **Brisbane lily**, *Eurycles Cunninghamii*, a Queensland plant of the amaryllis family. — **Bullhead lily.** Same as *beaver-*★*lily*. — **Canada lily**, *Lilium Canadense*. See *lily*, 1. — **Carolina lily**, *Lilium Carolinianum*, of the southeastern United States, a rather showy species with orange-red flowers nodding on long peduncles, the long, acuminate, recurved perianth-segments purple-spotted below. — **Chamise-lily**, the name on the Pacific coast of America for plants of the genus *Erythronium*. See ★*fawn-lily*. — **Chaparral-lily**, a true lily, *Lilium rubescens*, of the northern half of California in the Coast Range. Its stem sometimes rises 7 feet or more and often bears as many as 25 flowers, these at first pure white dotted with purple, soon pink, and finally of a deep ruby-purple. It is said to be the most fragrant of lilies. Near the coast called *redwood-lily*; inland by this name. Also *ruby lily*. **Clinton's lily**, *Clintonia borealis*, a plant of northeastern North America related to the lily-of-the-valley. See *Clintonia*. — **Corn-lily**, the small bindweed, *Convolvulus arvensis*. — **Cow-lily.** (*a*) Same as *beaver-*★*lily*. (*b*) The marsh-marigold. — **Darling lily**, *Crinum flaccidum*, a handsome white-flowered Australian plant of the amaryllis family. Its bulbs contain starch in such quantity that it is sometimes extracted for food. Also called *Murray lily*. — **Day-lily.** (*b*) See *Funkia*.

Dog lily. See ★*dog-lily*. — **Easter lily.** (*a*) *Lilium longiflorum*, a showy, fragrant lily, native of China and Japan, much cultivated and now exhibiting several varieties. (*b*) *Lilium candidum*, the white or annunciation lily: originally from the Mediterranean region, but long in cultivation. (*c*) The daffodil. (*d*) The atamasco lily, *Atamosco Atamasco*. — **Fairy-lily**, the atamasco lily. — **Field lily.** Same as *Canada* ★*lily*. — **Flame-lily**, the red lily, *Lilium Philadelphicum*. — **Flax lily.** See ★*day-lily*. — **Frog lily.** See ★*tree-lily*. **Giant lily.** (*a*) *Furcræa fœtida*. See ★*cocuiza*, *pita*, 2, and *Furcræa*. (*b*) In Australia, same as *spear-lily*. — **Glade-lily**, the red lily. — **Gordon lily**, *Blandfordia marginata*, a Tasmanian plant of the lily family, bearing long, pendulous racemes of conical, orange-red flowers; also other species of the same genus: so named from George Gordon, Marquis of Blandford. **Great yellow lily**, the American nelumbo or water-chinkapin, *Nelumbo lutea*. — **Guernsey lily**, *Imhofia Sarniensis*. See *Nerine*. — **Gunebo lily**, *Mentzelia decapetala*, of the family *Loasaceæ*, native of the Great Plains. It has very large and showy, mostly solitary, and terminal yellowish-white flowers. — **Harvest-lily**, the hedge-bindweed, *Convolvulus sepium*. — **Hedge-lily.** Same as *harvest-*★*lily*. — **Horse-lily.** Same as *beaver-*★*lily*. — **Huckleberry-lily**, the red lily. — **Jamestown lily**, the jimson-weed, *Datura Stramonium*; also the purple stramonium, *D. Tatula*. — **Lemon-lily**, the day-lily, *Hemerocallis fulva*. — **Liver-lily**, the blue flag or flag-lily, *Iris versicolor*. **Lotus-lily**, any species of *Nelumbo*. **May-lily**, the lily-of-the-valley. **Meadow-lily.** Same as *Canada* ★*lily*. **Mound-lily**, *Yucca gloriosa*. See *Yucca* (with cut). **Murray lily.** Same as *Darling* ★*lily*: so named from the Murray river in Victoria. **Nodding lily**, either the Canada lily or the American Turk's-cap lily. **Northern lily.** Same as *Clinton's* ★*lily*. — **Philadelphia lily**, the red lily, *Lilium Philadelphicum*. **Pine-lily.** See *bear-*★*grass* (*c*). **Prairie-lily.** (*a*) Either of the two species of *Camassia*, *C. Drummondii* and *C. pedunculata*, of the southwestern United States and Mexico. They are bulbous amaryllidaceous plants, with narrow, grass-like leaves, and one-flowered scapes, the large terminal flower having a salver-form, white or pinkish perianth. (*b*) Same as *gunebo* ★*lily*. **Red lily**, *Lilium Philadelphicum*, of the eastern United States, one of the commonest and most attractive of American lilies. The flowers are red or orange-red, the perianth segments reflexed and purple-spotted below. The *southern red lily* is *L. Catesbæi*. — **Redwood-lily.** See *chaparral-*★*lily*. — **Rice-root lily.** Same as ★*mission-bells*. — **Ruby lily.** See *chaparral-*★*lily*. — **Snake-lily**, the blue flag, *Iris versicolor*. **Spear-lily.** See *spear-lily*. — **Spider-lily**, the spiderwort, *Tradescantia Virginiana*. **Spotted lily**, in the West Indies, *Cordyline hyacinthoides*: so named from the spotted leaves. See *Sansevieria*. — **Spring lily**, the white dog-tooth violet or adder's-tongue, *Erythronium albidum*, which flowers in early spring. — **Straw-lily**, the sessile-leaved bellwort, *Uvularia sessilifolia*. — **Trinity lily**, the large-flowered wake-robin, *Trillium grandiflorum*. — **Trout-lily**, the yellow dog-tooth violet or adder's-tongue, *Erythronium Americanum*. — **Yellow lily.** (*b*) In Tasmania, same as *native* ★*leek*.

Red Lily
(*Lilium Philadelphicum*).
(From Britton and Brown's "Illustrated Flora of the Northern States and Canada.")

lily-disease (lil'i-di-zēz'), *n.* See ★*disease*.

lilywort (lil'i-wêrt), *n.* A plant of the lily family.

lim, *n.* and *v. t.* A simplified spelling of *limb*.

limacin (lim'a-sin), *n.* [L. *limax*, snail, + *-in*[2].] An organic substance obtained by Braconnot from the garden-snail (*Limax agrestis*).

limacodid (lim-a-kō'did), *a.* and *n.* **I.** *a.* Having the characters of or belonging to the lepidopterous family *Limacodidæ*.

II. *n.* A member of the family *Limacodidæ*.

lima-lima (lē-mä''lē-mä'), *n.* [Tagalog *lima-lima*, a reduplication of *lima*, five, = Bisaya *lima* = Samoan, etc., *lima*, Maori *rima*, five.] See ★*galamai-amo*.

liman (lē-män'), *n.* [Russ. *limanŭ*, an estuary, = Turk. *liman*, harbor, < NGr. λιμάνι, Gr. λιμήν, harbor.] A marsh, usually salt, at the mouth of a river; especially applied to the delta of the Dnieper river, Russia.

Limanda (li-man'da), *n.* [NL., < L. *limus*, mud.] A genus of flounders found on both coasts of northern North America and in eastern Asia: known as "*dabs*."

Lima oil. See ★*oil*.

Limatula (lī-mat'ū-la), *n.* [NL., dim. of *Lima*.] A genus of Jurassic prionodesmaceous pelecypods, characterized by valves which are medially ribbed, laterally smooth, and without gape.

limb[1], *n.* **6.** In *geol.*, that portion of an anticline or syncline which lies on either side respectively of the arch or trough. Also called *leg* and *flank*. — **Pectoral limb, pelvic limb.** See *pectoral*, *pelvic*.

limb[2], *n.* **4.** In *bot.*: (*b*) The blade or broad part of a leaf.

limbation (lim-bā'shon), *n.* [NL. *limbatio*(*n*-), < L. *limbatus*, edged, bordered, < *limbus*, edge: see *limb*[2].] **1.** The formation of a distinct border or margin. — **2.** A margin or border. *Smithsonian Rep.* (*Nat. Mus.*), 1897, p. 331.

limber-hook (lim'bêr-hůk), *n.* Same as *pintle-hook*.

limber-passage (lim'bêr-pas''āj), *n.* A channel on each side of the keelson of a wooden vessel to permit the bilge-water to flow to the pumps. Same as *limber*[2], 3. See cut under *keel*[1], 2.

limber-plate (lim'bêr-plāt), *n.* Same as *limber-board*.

limbo[1], *n.* — **Limbo of fools** (*limbus fatuorum*), a fools' paradise.

limbo[2] (lim'bō), *n.* [Zulu *ulembu*, web.] A kind of coarse cotton cloth worn by South Africans.

limbous (lim'bus), *a.* [NL. **limbosus*, < L. *limbus*, edge; see *limb*[2].] Having a definite border.

limb-ray (lim'rā), *n.* A comprehensive term for the limb of a vertebrate. [Rare.]

Those [muscles] which extend to the first, second, or to the terminal elements of the *limb ray*.
Encyc. Brit., XXV. 399.

limbus, *n.* **3.** In *conch.*, the circumference of the valves of a bivalve shell from the disk to the border or margin. *Syd. Soc. Lex.*

lime[1], *n.* **3.** In *leather-manuf.*, a vat containing a solution of lime for unhairing skins. *C. T. Davis*, Manuf. of Leather, p. 331. — **Bicarbonate of lime**, calcium acid-carbonate, $CaH_2(CO_3)_2$, assumed by some chemists to exist in water which contains carbonic acid and in consequence has dissolved a quantity of calcium carbonate greater than could be taken up by the water alone. It is very doubtful whether such an acid salt really exists; it has never been obtained in separate form. — **Caustic lime**, calcium hydroxid; also, calcium oxid. **Chlorid of lime.** Same as *bleaching-powder*. It probably has the composition $Ca\begin{cases}OCl\\Cl\end{cases}$; not to be confounded with chlorid of calcium ($CaCl_2$). See *calx chlorata*, under *calx*[1]. **Dead-burnt lime.** See ★*dead-burnt*. — **Dead lime**, a lime that does not slake with water: opposed to *quicklime*. — **Lime cylinder**, lime in the form of a cylinder which is from time to time revolved, and upon which a jet of oxyhydrogen flame is thrown in producing the so-called calcium light. See *calcium light*. — **Lime silicate.** Same as ★*calcium silicate*. — **Lime, sulphur, and salt wash.** See ★*wash*. **Lime uranite.** Same as *autunite*. — **Overburnt lime**, lime made from limestone containing silicious matter, such as clay, and heated so strongly in the kiln that silica and alumina have entered into combination with a part of the lime, causing it to slake slowly and imperfectly. — **Permanganate of lime**, the chief ingredient in the mixture recommended by Crookes for use in purifying the dangerous drinking-water which was encountered by British troops in the Ashanti campaign of 1873–74. The mixture, intended also to clarify the water, consisted of 1 part of lime (or calcium) permanganate, 10 parts of aluminium sulphate, and 30 parts of fine clay. — **Vienna lime**, a mixture of caustic potash and slaked lime used surgically as an escharotic, and also in scouring metals to remove grease. See *Vienna caustic*.

lime[3]. — **Finger-lime**, *Citrus Australasica*, a small tree of eastern Australia, bearing slender thorns, and ellipsoid or almost cylindrical fruits, 2–4 inches long, tasting like lemons. — **Native lime**, in Australia: (*a*) The finger-lime; (*b*) An evergreen tree, *Citrus australis*, which reaches a height of from 30 to 50 feet and bears globular, acid fruits about the size of walnuts. Its beautiful light-yellow wood is hard, close-grained, and takes a high polish. Called also *native orange*. — **Queensland lime**, *Citrus inodora*, bearing sharply acid fruits and inodorous flowers. — **Lime-oil.** See ★*oil*.

lime-berry (lim'ber''i), *n.* In the East Indies, same as ★*lime-myrtle*.

lime-bug (lim'bug), *n.* A scale-insect found on the lime-tree, either *Eulecanium tiliæ* or *Pulvinaria tiliæ*.

lime-coal (lim'kōl), *n.* Small coal used for lime-burning: one of the grades formerly made at collieries in the east of Scotland.

lime-craig (lim'krāg), *n.* Limestone rock in situ: the face of a limestone quarry. [Scotch.]

lime-juicer, *n.* Hence — **2.** A British ship on which the lime-juice law is carried out.

The working of the ship, the life of the men, their trials and amusements are all combined in the story; in fact, the book gives a better idea of the life on a "*lime-juicer*" than any previous work we have seen.
Forest and Stream, Feb. 21, 1903, p. 153.

3. In Australia, a new-comer; one who has made the voyage on a lime-juicer; a greenhorn; a 'new chum.'

lime-liniment (lim'lin''i-ment), *n.* A mixture or emulsion consisting of equal parts of a solution of lime or lime-water and linseed-oil: carron-oil: used for burns.

lime-mud (lim'mud), *n.* Same as ★*lime-sludge*.

lime-myrtle (lim'mêr''tl), *n.* In the West Indies, *Triphasia trifoliata*. See *Triphasia*.

limen (lī'men), *n.*; pl. *limens* (-menz), L. *limina* (lim'i-nä). [L. *limen*, threshold.] **1.** In *exper. psychol.* and *psychophys.*, the threshold; the dividing line between noticeableness and unnoticeableness of stimulus. The limen is defined in physical or physiological terms as that amount of stimulus or degree of excitation (or as that stimulus difference or difference of excitation) which, after complete elimination of all errors, remains just noticeable to an accurate observer; or again as that amount of stimulus (or stimulus difference) which, after elimination of constant errors, remains just noticeable to the observer in one-half of a long series of observations. The term may be applied to any one of the four possible aspects of stimulus and excitation (intensity, quality, duration, extension), and to any stimulus that serves as the condition of mental state or process; so that we may speak of the intensive limen, the temporal limen, the affective limen, the limen of attention, etc. It is clear that the correlate of the limen, upon the mental side, is not a part of real experience, not a state or process that can be ideated and remembered and voluntarily reproduced: liminal values are always ideal values.

The object of these experiments was to determine the *limens* of approach and recession of the fixation-object for various distances.
Amer. Jour. Psychol., April, 1903, p. 173.

The term *limen* (Schwelle, threshold) was introduced into psychology by Herbart in 1811; a liminal stimulus,

or liminal stimulus difference, is that which lifts the sensation or the sense-difference over the threshold of consciousness.

E. B. Titchener, Exper. Psychol., II. i. 37.

2. In *anat.*, the portion of brain-substance situated between the base and the island of Reil. —**Absolute differential limen** or **difference limen.** See ★*absolute* and ★*difference*. **Discriminative limen** or **threshold,** in *psychophys.*, the just noticeable stimulus difference or difference limen.—**Limen nasi,** the line of junction in the nasal cavity between the cartilaginous and the bony portions.—**Limiting limen,** in *psychophys.*, the upper or lower limit of the stimulus limen or differential limen. Thus, in esthesiometric determinations, the upper limiting limen is given with the least separation of the compass-points which invariably evokes the judgment 'two points': while the lower limiting limen is given with that separation below which the observer always reports 'one point,' and above which he always reports 'doubt' or 'two points.' The value of the lower limiting limen may be accurately determined; the determination of the upper appears to be dubious. *E. B. Titchener*, Exper. Psychol., II. ii. 19. **Mixture limen,** in Fechnerian *psychophys.*, a limen which is modified by the addition of a qualitative to a merely quantitative change of stimulus, or by the concurrence of other stimuli (or excitations) with the stimulus or stimuli to be sensed or compared. The mixture limen includes the ordinary homogeneous stimulus limen and differential limen as limiting cases.—**Partial limen,** in *psychophys.*, the positive or negative division of the total limen in Fechner's method of right and wrong cases. **Quotient limen, quotient mixture limen.** See ★*quotient*.

limene (lī′mēn), *n.* [*lime*[3] + *-ene*.] A sesquiterpene, $C_{15}H_{24}$, contained in oil of limes and in bergamot-oil. It boils at 130–140° C. under 17 millimeters pressure.

lime-nitrogen (līm′nī″trō-jen), *n.* See the extract.

Prof. Adolf Frank and Dr. Caro, of Berlin, found that when nitrogen is passed over red-hot calcium carbide it is absorbed with formation of calcium cyanamide. This latter, when treated with water under high pressure, is made to yield ammonia; but it is not necessary to do this, since the crude product, which they have called "*lime-nitrogen*," can serve directly as nitrogenous fertiliser, and is in that respect equivalent to its own weight of ammonium sulphate. *Nature*, April 25, 1907, p. 619.

lime-pot (lim′pot), *n.* A pot for holding lime, which was formerly employed in naval engagements for blinding boarders.

limerick (lim′ę-rik), *n.* [Said to have originated in the words "Will you come up to Limerick," occurring in the chorus of convivial songs of the character described in def. 1. See N. and Q., 9th ser., II. 470 (Dec. 10, 1898).]

1. A nonsense song or verse, one of a series of impromptu productions of a free character, sung at convivial parties in Ireland.

"But come, give us a *Limerick*. Cheer us up now! give us a good *Limerick*. You must know thousands."

"I assure you I do not. I have never been in Ireland."

The Duke burst out into a mirthless laugh. "Well, upon my—What's Ireland got to do with it?"

R. Hichens, The Londoners, xvi.

2. A nonsense verse of a fixed type, more or less amusing, of the pattern of those written by Edward Lear in his "Book of Nonsense." See ★*Learic*. The following is an example:

There was a young lady of Niger,
Who rode, with a smile, on a tiger:
They returned from their ride,
With the lady *inside*,
And the smile on the face of the tiger.

limerickite (lim′ę-rik-īt), *n.* A name given by Meunier to the type of gray chondritic meteorite illustrated by the meteorite which fell in Adare, in the county of Limerick, Ireland, in 1813. See ★*meteorite*.

lime-rock (līm′rok), *n.* Any rock in which calcite is a prominent constituent.—**Vermicular lime-rock,** in *New York geol.*, a name given by A. Eaton to certain impure dolomites appertaining to the Salina formation which are perforated by numerous small irregular cavities produced by the crystallization and removal of salt, gypsum, and celestite.

lime-shells (līm′shelz), *n. pl.* Calcined limestone.

lime-sludge (līm′sluj), *n.* A manufacturers' name for the precipitate of more or less impure calcium carbonate produced in the conversion, by means of lime, of sodium-carbonate liquor into solution of caustic soda. Also called *lime-mud*.

lime-soap (līm′sōp), *n.* Same as *calcium soap*. See *soap*.

limestone, *n.*—**Agoniatite limestone.** See ★*agoniatite*.—**Anseremme limestone,** a division of the Lower Carboniferous formation in Belgium and northern France.—**Augusta limestone,** a name introduced by Keyes to include the Burlington and Keokuk limestones in Iowa as exposed along the Mississippi river from Burlington to the mouth of the Des Moines river. These rocks are of Lower Carboniferous age and equivalent to Osage limestone.—**Austin limestone,** a limestone lying near the middle of the Cretaceous series in Texas.—**Aymestrey limestone,** in the Silurian system of England and Wales, a subdivision of the uppermost or Ludlow group, lying between the Upper and Lower Ludlow rock. It is an argillaceous limestone having a total thickness of 50 feet, but is essentially a lentil in the vicinity of Aymestrey, Herefordshire. It abounds in fossils, but less so than the Wenlock limestone beneath, and in the fauna of these two there is relatively little difference.—**Bachant limestone,** a division of the Lower Carboniferous formation in Belgium and northern France.—**Barnegat limestone,** a name given by the early New York geologists to the limestone which, intercalated in shale, crosses the Hudson river near Newburgh and which was correlated by them with the Calciferous sandstone. It is now known to consist of Cambrian, Beekmantown, and Trenton limestones. Its thickness is probably not less than 500 feet.—**Becraft limestone.** [Name taken from *Becraft* Mountain, near the city of Hudson, New York, where the rock has long been quarried.] A limestone in the New York series of formations, originally called the *Scutella* and *Upper Pentamerus limestones* of the Lower Helderberg group of strata. It belongs to the lowest or Helderbergian division of the Lower Devonian, lying near the top, beneath the Port Ewen beds and above the New Scotland limestone. It abounds in fossil remains, and from its purity is highly esteemed both as a construction stone and as a flux in smelting. **Beekmantown limestone.** [Named from *Beekmantown*, in Clinton county.] A division of the Lower Silurian of New York State and the adjoining regions, originally termed by Eaton the "*Calciferous sandrock*." It is regarded as the lowest member of the Lower Silurian, resting on and graduating by easy changes from the Potsdam sandstone beneath. The rock in northern New York and the Lake Champlain basin is largely a limestone, at times magnesian, and carries a profuse and highly interesting marine fauna. In the Mohawk valley the beds are almost devoid of organic remains, are highly dolomitic, and have been locally designated as the *Little Falls dolomite*.—**Black River limestone,** a division of the Lower Silurian of New York lying below the Trenton and above the Lowville limestone. It is well developed only on the western side of the Adirondacks and typically along the Black river.—**Blacksville limestone,** a subdivision of the Carboniferous system in Pennsylvania. It is regarded by Pennsylvania geologists as equivalent to a part of the Dunkard series (Permocarboniferous).—**Bossardville limestone,** a subdivision of the Upper Silurian in Pennsylvania and New Jersey, regarded by some geologists as equivalent to the Lewistown limestone and to the Lower Helderberg formation, while others place it below the Cobleskill limestone of New York. It attains a thickness of 100 feet and is underlain by the Poxono Island shale and overlain by the Decker Ferry formation. It is barren of fossils.—**Briasse limestone,** a division of the Upper Silurian in northwest France.—**Caprina limestone,** a division of the Cretaceous system in Texas, regarded by Texas geologists as equivalent to a part of the Fredericksburg group. It is underlain by the Comanche Peak chalk and overlain by the Wichita division, and is characterized by an abundance of caprinas, *Ichthyosarcolithes* (*Caprina*) *angulis*, *I. cranifibra*, and *I. planatus*.—**Caprotina limestone,** a subdivision of the Lower Cretaceous rocks of Texas, regarded as the lower part of the Wichita division and characterized by the fossil *Requienia* (*Caprotina*) *texana*.—**Cedarville limestone,** a subdivision of the Upper Silurian formation of Ohio, regarded as equivalent to the Guelph beds of Canada. Its thickness varies from 50 to 200 feet. It is underlain by the Niagara limestone and overlain by the Hillsboro sandstone.—**Chester limestone,** a division of the Lower Carboniferous beds of the Mississippi valley or the Mississippian series, regarded as the uppermost member of the Subcarboniferous and essentially equivalent to the Kaskaskia limestone.—**Choteau limestone,** a local subdivision of the Kinderhook group, the lowest division of the Subcarboniferous formation in the Mississippi valley. It attains a maximum thickness of 100 feet. **Cobleskill limestone,** a stage of the Cayugan group of the Silurian, in New York, characterized by its abundant corals and recurrent Guelph forms. Formerly known as *coralline limestone*.—**Coeymans limestone,** in the geology of New York, the lowest element of the Devonian formation, named by the early geologists the *Lower Pentamerus limestone*.—**Columbus limestone,** a division, of Lower Devonian age, of the Onondaga or Corniferous limestone of Ohio, constituting the lower part of this formation.—**Comanche Peak limestone,** a division of the Cretaceous formations in Texas.—**Coralline limestone,** in the geology of New York, a formation of Upper Silurian age, so named because of the abundance of its corals. Now termed the *Cobleskill limestone*.—**Dayton limestone,** a local bed of compact crystalline limestone in southwestern Ohio, constituting a very valuable building-stone. It is inclosed in the Niagara shales of Upper Silurian age, has a variable thickness, and its fauna is that of the Niagara formation. —**Delthyris limestone.** See ★*Delthyris*.—**Diphya limestone,** a Jurassic limestone in the Alps, Carpathians, and Apennines, which is largely composed of the shells of the brachiopod *Terebratula* (*Pygope*) *diphya*. —**Dun limestone.** Same as *Redesdale* ★*limestone*.—**Echinosphærite limestone,** a subdivision of the Lower Silurian of the Baltic provinces in Russia, regarded by Russian geologists as equivalent to the uppermost orthoceratite limestone of Sweden. It has a thickness of from 20 to 50 feet, and is underlain by the Vaginaten limestone and overlain by the Kuckers shale. It is characterized by the abundance of the fossil cystid *Echinosphærites aurantium*.—**Encrinal limestone,** any limestone in the composition of which a chief element is the comminuted remains of encrinites. In New York the name was originally used for a subdivision of the Hamilton (Devonian) formation lying beneath the Moscow shale; but this is now called the *Tichenor limestone*.—**Encrinite limestone,** a term denoting a rock composed in great part of crystalline joints of encrinites, with *Foraminifera*, corals, and mollusks. It is especially abundant among Paleozoic formations.—**Eolian limestone,** a subdivision of the Silurian rocks in Vermont, taking its name from Mount Eolus. It is regarded as equivalent to the Chazy and Trenton limestones of New York and probably to the Stockbridge limestone of Massachusetts.—**Fetid limestone,** a limestone which gives off a fetid smell (sulphureted-hydrogen gas) when struck with a hammer. Such rocks contain either decomposable sulphids or organic matter.—**Foraminiferal limestone,** a limestone essentially composed of the calcareous exoskeletons or exuviæ of the *Foraminifera*. Such limestones are comparable in origin and mode of formation to the organic deep-sea oozes which cover the floor of the present oceans.—**Fresh-water limestone,** a compact deposit formed in lakes and ponds by the accumulation of the remains of fresh-water algæ, shells, and *Entomostraca*. —**Glenrose limestone,** a subdivision of the Lower Cretaceous beds in Texas constituting the middle part of the Trinity formation, underlain by the Trinity sands and overlain by the Paluxy sands.—**Grenville limestone,** a limestone occurring at Grenville, Canada, the chief member of the Grenville series: Precambrian in age. In it was found the supposed early fossil *Eozoön canadense*.—**Gutenstein limestone,** a subdivision of the Triassic system in the northern Alpine basin in upper and lower Austria, which is underlain by the Reichenhall limestone, overlain by the Reifling limestone, and equivalent to the lower Muschelkalk of Germany.—**Hippurite limestone,** a limestone which contains in abundance the singular pelecypod genus *Hippurites*. Such beds occur at various horizons in the Upper Cretaceous strata and give a distinctive facies to certain developments of these rocks as contrasted with the Chalk facies. The beds with *Hippurites* are highly developed in southern Europe, where they have been rather closely subdivided according to the prevailing species. They also extend into southern Asia, and a hippurite limestone has been determined in the Lower Cretaceous beds of Texas.—**Hollies limestone,** a subdivision of the Upper Silurian in England, consisting of limestone beds composed of shells (mostly the brachiopod *Pentamerus*) and intercalated in the May Hill sandstone (Upper Llandovery).—**Hosselkus limestone,** the uppermost division of the Triassic system in California. It is underlain by the Halobia bed and is referred by American geologists to the Lower Carnian of the Alpine Trias. It abounds in cephalopods, and its upper part contains *Rhabdoceras*, *Trojites*, and *Halorites*.—**Hurlet limestone,** a term applied to a seam of encrinal limestone in the Carboniferous limestone series of Scotland. It attains a thickness of 100 feet, lies near the base of the series, and is underlain by a seam of coal and overlain by shales. It is the great repository of the fossils of the series and consists in some parts of sheets of lithodendron corals.—**Hydraulic limestone,** a limestone which contains 10 per cent. or more of silica, and usually alumina, and, when burnt and mixed with water, forms a cement that hardens under water. See *hydraulic lime*.—**Leclaire limestone,** a division of the Upper Silurian rocks in Iowa, partly equivalent to the Lockport limestone of New York and containing a representation of the Guelph fauna.—**Limestone sink.** Same as *sink-hole*, 3.—**Limont limestone,** a subdivision of the Carboniferous system in France, lying just below the Visé limestone at the top of the lower division or Dinantian. It is the Napoleon marble of Boulonnais and abounds in marine fossils.—**Lockport limestone.** Same as *Niagara limestone*. See *limestone*. —**Lowville limestone,** a division of the Lower Silurian series in the Appalachian region, underlying the Black River limestone and equivalent to the formation designated by Emmons the bird's-eye limestone.—**Main limestone.** Same as *Scaur* ★*limestone*.—**Manlius limestone,** one of the New York series of formations lying at the summit of the Upper Silurian, between the Helderberg or Oriskany above and the Rondout or Cobleskill water-lime below.—**Newland limestone,** a series of strata 2,000 feet thick in the Belt Mountain region of Montana, regarded by Walcott as of Precambrian age.—**Paludina limestone,** any fresh-water limestone containing large numbers of shells of *Paludina*, a fresh-water gastropod. Examples are the paludina limestone of the Upper Purbeck and Wealden of Sussex, England, much used for architectural marble, and the marly limestones, with paludinas, of the Pliocene series of Austria.—**Pentremital limestone,** an old name for the *Pentremites*-bearing limestones of the Chester or Kaskaskia group of the Mississippian series of the North American Carboniferous system. See *Kaskaskia* ★*group*. —**Phrygania limestone,** a series of limestone beds, with associated marls, in the Oligocene series of the Paris basin, which are crowded with the cases of caddis-fly larvæ, *Phrygania*. These beds contain an abundant vertebrate fauna.—**Port Ewen limestone,** a series of argillaceous limestones forming the uppermost member of the Helderbergian series of Lower Devonian age in southeastern New York and northern New Jersey. Its typical occurrence is at Port Ewen, near Kingston, Ulster county, New York, where it is about 150 feet thick. Its fossils are more closely related to those of the underlying Becraft limestones than to those of the superjacent Oriskany beds.—**Redesdale limestone,** a subdivision of the Carboniferous limestone series in Northumberland, England, forming the base of the Lower Calcareous group and resting on the Scremerston coals. It is the same as the Dun limestone.—**Sandusky limestone.** See *Columbus* ★*limestone*.—**Scaur limestone,** in the Carboniferous limestone series in the south and center of England and Ireland, a thick limestone which passes northward into sandstones, shales, and coals. Also termed the main limestone.—**Stockbridge limestone,** a belt of crystalline metamorphic limestone in western Massachusetts, probably largely of Lower Silurian age, though in part Cambrian, but without fossils. It is regarded by Dana as coextensive with the Eolian limestone of Vermont.—**Stringocephalus limestone,** a subdivision of the Middle Devonian formation in the Eifel, characterized by the presence of the brachiopod *Stringocephalus Curtini*.—**Styliola limestone,** a more or less nodular limestone in the Genesee shales of the lower Upper Devonian in western New York, chiefly composed of the exuviæ of the pteropod *Styliola fissurella*, and representing an ancient pteropod ooze. It also carries a pelagic fauna like that of the overlying Portage shales. Also named *Genundewa limestone*.—**Taconic limestone,** a general name for a series of mostly dolomitic limestones intercalated between shales, slates, sandstones, or their metamorphic equivalents, along the line of the Taconic Mountains in eastern New York and western Vermont, Massachusetts, and Connecticut, the lower part of which belong to Emmons's Taconic system. Their ages as determined from their fossil contents range from Lower Cambrian to middle Trenton, but the larger part of them forms the transitional series of Upper Cambrian to Beekmantown age. These limestones outcrop in roughly parallel belts along the line indicated

and various local names have been given them. In places they are of great economic value as marbles. The more important varieties are the Stockbridge limestone of Vermont and Massachusetts, the Eolian limestone of Vermont (which affords the marble beds), the Wappinger limestone of Dutchess county, New York, the Neelytown limestone of Orange county, New York, the Kittatinny limestone of New Jersey and Pennsylvania, and the Dover and Tuckahoe marbles of southeastern New York. —**Torinosu limestone,** a limestone at the base of the Cretaceous system of Japan, containing an abundant marine fauna, apparently of Neocomian age. **Tuscumbia limestone,** a member of the Mississippian series of the Carboniferous system of Alabama. It forms the upper part of the Fort Payne chert and is supposed to be equivalent to the St. Louis limestone of the interior States.—**Twelve-fathom limestone,** a member of the Carboniferous limestone series of Yorkshire and Northumberland, England. **Ute limestone,** a formation in the Wahsatch Mountains regarded as equivalent to the Beekmantown limestone (Lower Silurian) of New York. **Virgloria limestone,** a division of the Triassic system in the southern Alps, lying on the Werfen beds and below the Piezzo limestones: regarded as representing the Muschelkalk in the Carinthian Alps and southern Tyrol. —**Visé limestone,** the uppermost division of the Lower Carboniferous (Culm or Dinantian) series in Belgium, attaining a thickness of about 200 feet.—**Warsaw limestone,** a division of the Lower Carboniferous or Mississippian series of Iowa and adjoining territory, lying above the typical Keokuk beds or the 'geode-bed' of that formation. See *geode*.—**Willow River limestone,** a division of the Lower Silurian in Iowa, of the age of and included in the St. Peter's sandstone group, and regarded as in part equivalent in age to the Chazy limestone of New York.—**Winooski limestone,** a reddish mottled limestone of Lower Cambrian age in eastern Vermont, worked for marble at Swanton and elsewhere. —**Woolhope limestone,** in the geology of England, the lowest division of the Wenlock group of the Upper Silurian, lying beneath the Wenlock shale and resting on the Upper Llandovery rocks. This limestone takes a lenticular form, swelling and decreasing in thickness through its course in the typical Upper Silurian district of Shropshire and adjacent counties.

lime-tower (līm'tou″ėr), *n.* A piece of apparatus used in chemical laboratories for drying gases or absorbing from them acid gases or vapors. It consists of an upright cylinder of glass, with two tubulures, one at the top, the other at one side at the bottom. This being loosely filled with fragments of lime, the gas is brought in at the one tubulure, usually at the bottom, and drawn out at the other, and is thus brought into contact with a large surface of lime, which acts as a drying and purifying agent. The same apparatus is often filled with calcium chlorid instead of lime when desiccation only is desired.

limettic (li-met'ik), *a.* [NL. *limetta* (*Citrus limetta*) + *-ic.*] Noting an acid, a crystalline compound, $C_{11}H_8O_6$, obtained by the oxidation of oil of limes or oil of rosemary. It is crystalline and volatilizes without decomposition.

limettin (li-met'in), *n.* [NL. *limetta* + *-in*².] A colorless compound, $(CH_3O)_2C_6H_2\begin{matrix}O-CO\\ CH=CH\end{matrix}$ contained in the ethereal oil of *Citrus limetta*. It crystallizes in small prisms or needles melting at 147.5° C.

liminal, *a.* Specifically—2. In *psychophys.*, pertaining to the stimulus limen or differential limen. See ★*limen*.

We may also introduce the concept of the limen, defining the just noticeable deviation from indifference as a *liminal* pleasantness or unpleasantness.
O. Kulpe (trans.), Outlines of Psychol., p. 243.

The average *liminal* value obtained in these preliminary series gives us a norm or standard for the later work.
E. B. Titchener, Exper. Psychol., I. i. 85.

liminary (lim'i-nā-ri), *a.* [L. *liminaris*, < *limen*, threshold: see *liminal*.] Being at the threshold; introductory; preliminary.

liming-box (lī'ming-boks), *n.* A vessel for holding a thin solution of lime to be used in the process of bleaching cotton cloth and the like.

liming-machine (lī'ming-ma-shēn″), *n.* In *bleaching*, a machine for washing cotton cloth in a solution (or milk) of lime.

limit, *n.* 7. In *poker*, an amount, agreed upon before play begins, by which any one player may increase his bet over that of another. Sometimes called the *raise*.—**Limit class,** a class or division limited to animals possessing certain qualifications or characters: usually employed with reference to some exhibition or contest in which prizes are given. —**Limit of resolution,** the smallest visual angle which two points may subtend if they are to be separated in the image formed in the eye or by any optical instrument. The actual limit for the eye is about a minute of arc; for a telescope having an objective of 20 centimeters in diameter it is 0.7 seconds of arc.—**Natural limit,** a limit beyond which the series representing a function cannot be continued.—**The limit,** the utmost that is possible; the worst there is; as applied to a person, one so queer or so objectionable as to be almost beyond toleration. [Colloq.]

"What with your spook horses and cats you've got me going, I can tell you. You're *the limit*. You—you—" he sputtered, so furious he could not finish the sentence.
C. S. Pearson, Romance of the Race Course, iv.

Uniform limit, in *math.*, a one-valued limit.

limit, *v. t.*—**Limiting point.** (*b*) See ★*point*¹.

limital (lim'i-tal), *a.* Pertaining to or of the nature of a limit or boundary.

Limited administration, express. See ★*administration*, ★*express*.

limit-line (lim'it-līn), *n.* In the Bolyai geometry, a circle with infinitely great radius. Called by Lobachevski *boundary-line* (*Grenzlinie*) or *oricycle*; by Bolyai, the *L line of S.* See extract under ★*limit-surface*.

limit-man (lim'it-man), *n.* In *athletics*, the man who has the farthest distance to go in a race, or the greatest handicap to overcome; a scratch-man.

limitrophe (lim'i-trōf), *a.* and *n.* [LL. *limitrophus*, prop. *limitotrophus*, applied to lands (*agri.*) set apart for the support of the soldiers on the frontier (*limitanei*), < LGr. λιμιτότροφος, < λιμιτον, < L. *limes* (*limit-*), border, limit, + Gr. -τροφος, < τρέφειν, nourish, feed, support. The modern use is slight, literary, and erroneous.] I. *a.* Situated on the borders; on the frontier line (of another country); bordering.

II. *n*†. A bordering country; a frontier land.

limit-surface (lim'it-sėr″fās), *n.* In the Bolyai geometry, a sphere with infinitely great radius. Called by Lobachevski *boundary-surface* (*Grenzfläche*) or *orisphere*; by Bolyai, the *surface F in S.* The characteristic geometry of the orisphere is Euclidean, with the oricycle as its straight.

When the radius of the circle or sphere becomes infinite all these normals become parallel, but the circle or sphere does not become a straight line or plane. It becomes what Lobatchewsky calls a limit-line or *limit-surface*.
Encyc. Brit., XXVIII. 665.

limivorous (lī-miv'ọ-rus), *a.* [L. *limus*, mud, + *vorare*, eat, + *-ous*.] Feeding on mud in order to get the organisms contained in it, as certain worms.

limnanthaceous (lim-nan-thā'shius), *a.* Belonging to the plant family *Limnanthaceæ*.

Limnatis (lim-nā'tis), *n.* [NL., an error or altered form for **Limnitis*, < Gr. λιμνῆτις, fem. of λιμνήτης, living in marshes, < λίμνη, marsh, lake: see *Limnetis*.] A genus of leeches of the family *Gnathobdellidæ*, found in the Nile. Its members are small in size and if swallowed may become attached to the hinder part of the mouth-cavity and cause various objectionable results, such as spitting of blood and retarded respiration.

limnean, limnæan (lim-nē'an), *a.* [Gr. λιμναῖος, of or from the marsh or standing water (< λίμνη, a marsh, lake, pool), + *-an*.] In *phytogeog.*, same as ★*limnetic*.

These all, with floating stems and leaves, form with Eleocharis interstincta, E. mutata, and E. cellulosa a mingling of the Hydrocharidian and *Limnæan* classes of hydrophytes. *C. Mohr*, Plant Life in Alabama, p. 126.

limnemia, limnæmia (lim-nē'mi-ä), *n.* [NL. *limnæmia*, < Gr. λίμνη, marsh, + αἷμα, blood.] Malarial cachexia.

limnemic, limnæmic (lim-nē'mik), *a.* [*limnemia* + *-ic*.] 1. Relating to or suffering from malarial cachexia.—2. In *biol.*, adapted to live in marshes or marshy places.

Limnerpeton (lim-nėr'pẹ-tọn), *n.* [NL., < Gr. λίμνη, marsh, + ἑρπετόν, reptile.] A genus of branchiosaurian *Amphibia* with naked body and broad frog-like skull, from the Permian rocks of Bohemia.

limnetic (lim-net'ik), *a.* [Gr. λιμνήτης, living in marshes, + *-ic*.] 1. Living in fresh water; pertaining to fresh-water life.

The development of *limnetic* copepods.
Amer. Nat., July, 1903, p. 503.

Specifically—2. Noting the free-floating or free-swimming microscopic organisms found in rivers, lakes, pools, and other bodies of fresh water. Sometimes used synonymously with *pelagic*.

The *limnetic* or pelagic organisms are those that make their home in the open water. They float or swim freely and are drifted about by every current. . . . Then there are organisms that may be said to be facultative *limnetic* forms, that is, they are sedentary or free-swimming at will.
G. C. Whipple, Microscopy of Drinking-water, p. 105.

Limnetic plankton. See ★*plankton*.

limnigraph (lim'ni-gråf), *n.* An erroneous form of ★*limnograph*.

limnimeter (lim-nim'e-tėr), *n.* An erroneous form of ★*limnometer*.

limnimetric, *a.* An erroneous spelling of ★*limnometric*.

limnobatid (lim-nob'a-tid), *n.* and *a.* I. *n.* A member of the heteropterous family *Limnobatidæ*.

II. *a.* Having the characters of or belonging to the family *Limnobatidæ*.

limnobiologic (lim″nọ-bī-ọ-loj'ik), *a.* [*limnobiology* + *-ic*.] Of or pertaining to limnobiology or the scientific study of the animals and plants that live in fresh water. *Smithsonian Rep.*, 1898, p. 510.

limnobiological (lim″nọ-bī-ọ-loj'i-kal), *a.* Same as ★*limnobiologic*.

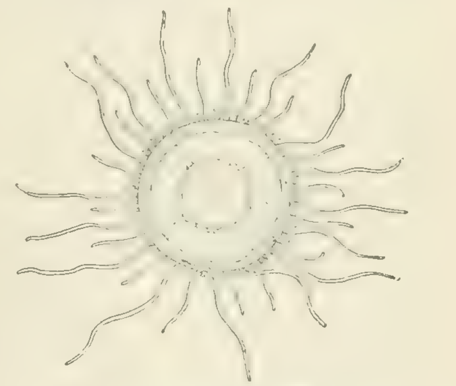
limnobiology (lim-nọ-bī-ol'ọ-ji), *n.* [Gr. λίμνη, marsh, lake, + E. *biology*.] That branch of science which deals with the animals and plants which live in fresh water as contrasted with those of the ocean.

From having been the special study of geologists in its physical aspects, limnology is now rapidly becoming the peculiar study of biologists, and attempts are even being made to limit the meaning of the word to the study of organic life in lakes, which would be denoted more correctly as *limno-biology*. *Encyc. Brit.*, XXX. 272.

limnobios (lim-nọ-bī'os), *n.* [NL., < Gr. λίμνη, marsh, lake, pond, + βίος, life.] The animals and plants of fresh water considered collectively and in contrast with the animals and plants of the ocean and those of the land. *Haeckel* (trans.), Planktonic Studies, in Rep. U. S. Fish Com., 1889–91, p. 580.

limnobious (lim-nō'bi-us), *a.* [Gr. λιμνόβιος, living in a marsh or lake, < λίμνη, a marsh, lake, + βίος, life.] Living in marshes or pools.

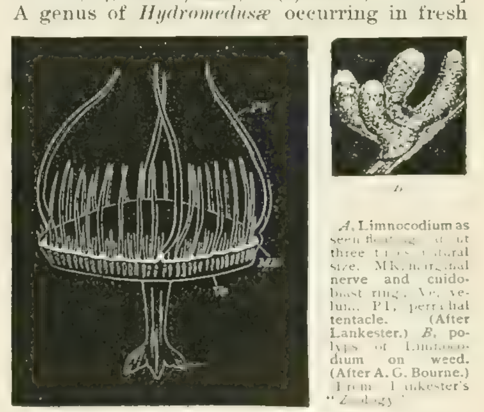
Limnocnida (lim-nok'ni-dä), *n.* [NL., < Gr. λίμνη, marsh, lake, + κνίδη, nettle.] A genus



Limnocnida, from the oral surface (after Gunther). (From Lankester's "Zoology.")

of fresh-water hydromedusans known only from Lake Tanganyika.

Limnocodium (lim-nọ-kō'di-um), *n.* [NL., < Gr. λίμνη, marsh, lake, + (?) κώδιον, a fleece.] A genus of *Hydromedusæ* occurring in fresh



A, Limnocodium as seen floating, at about three times natural size. Mk, marginal nerve and cnidoblast ring. Ve, velum. Pl, perradial tentacle. (After Lankester.) *B*, polyps of Limnocodium on weed. (After A. G. Bourne.) (From Lankester's "Zoology.")

water and found up to the present time only in the *Victoria regia* tank of the Royal Botanical Society of London.

The discovery and description of the Okapi, Cænolestes, Nyctotherus, Rhabdopleura, Cephalodiscus, *Limnocodium*, and Pelagohydra, . . . were the work of British zoologists. *Rep. Brit. Ass'n Advancement of Sci.*, 1903, p. 673.

limnogram (lim'nọ-gram), *n.* [Gr. λίμνη, marsh, lake, + γράμμα, a writing.] The curve of height of water for each moment of time as recorded automatically by a limnograph.

limnograph (lim'nọ-gråf), *n.* [Gr. λίμνη, marsh, lake, + γράφειν, write.] An apparatus for keeping a continuous record of the height of water, especially in a lake. See ★*limnometer*.

In order to study the seiches in Loch Ness, a *limnograph*, constructed in Geneva under the supervision of Dr. Ed. Sarasin, was set up. *Nature*, Jan. 7, 1904, p. 236.

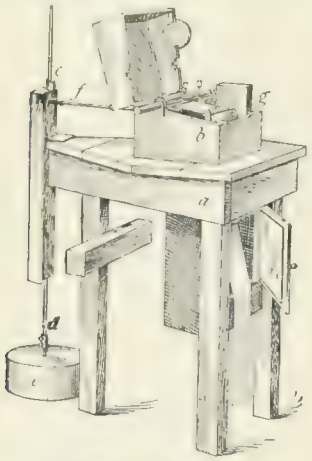
limnologic (lim-nọ-loj'ik), *a.* [*limnolog-y* + *-ic*.] Of or pertaining to limnology. *Smithsonian Rep.*, 1898, p. 506.

limnological (lim-nọ-loj'i-kal), *a.* Same as ★*limnologic*.

limnology (lim-nol'ō-jĭ), *n.* [Gr. λίμνη, marsh, lake, pond, + -λογία, ⟨ λέγειν, speak.] The scientific study of lakes and ponds, with especial reference to the organisms which live in them.

In the last quarter of the 19th century the study of lakes . . . was raised to the rank of a special science, mainly by the exertions of Prof. F. A. Forel, to whom is due the generally accepted name *limnology*. *Limnology* includes the complete study of lakes, geographical, physical, chemical, and biological, so conducted as to throw light on the mutual relations of all the natural conditions affecting them. *Encyc. Brit.*, XXX. 271.

limnometer (lim-nom'e-tẽr), *n.* [Gr. λίμνη, a marsh, lake, + μέτρον, measure.] A form of



Sarasin's Limnometer.

a, table supporting box *b*, containing the self-registering apparatus, whence a rotating rod *f* extends to a pulley-wheel near *c*, around which is wound a flexible copper band attached to the rod *d*, and moving with the float *e* which is surrounded by a large cylinder (not shown in figure), to ward off objectionable waves, ripples and winds. The rotations of *f* are recorded on a long sheet of paper wrapped about the roller *g*, which revolves by clockwork.

tide-gage, first devised by Forel and Sarasin for recording small oscillations in Swiss lakes and applied by Nakamura and Yoshida to tidal oscillations in Japanese harbors; specifically, Sarasin's limnometer of 1901, which is properly a ★*limnograph* (which see).

limnometric (lim-nō-met'rik), *a.* [Also *limnimetric*; ⟨ Gr. λίμνη, marsh, lake, + μέτρον, measure, + *-ic.*] Pertaining to the measurement of bodies of fresh water, such as lakes or ponds.

A Federal hydrographic office has, with the help of some Cantonal governments, spread over the territory of Switzerland a net of *limnimetric* stations, where observations on the slope, depth, discharge, width, and variations of the watercourses are regularly carried on.
Geog. Jour. (R. G. S.), IX. 318.

The following table gives some of the *limnometric* values communicated by the author or obtained provisionally from the material now available.
Geog. Jour. (R. G. S.), XVI. 219.

limnophilid (lim-nof'i-lid), *n.* and *a.* **I.** *n.* A member of the trichopterous family *Limnophilidæ*.

II. *a.* Having the characters of or belonging to the family *Limnophilidæ*.

limnoplankton (lim-nō-plangk'ton), *n.* [NL., ⟨ Gr. λίμνη, marsh, lake, + NL. *plankton.*] The floating and swimming organisms of fresh water, considered collectively and as contrasted with the floating and swimming fauna and flora of the ocean, or haliplankton. See ★*haliplankton*.

The totality of the swimming and floating population of the fresh-water may be called *limnoplankton*, as opposed to the marine haliplankton which we here briefly call plankton.
Haeckel (trans.), Planktonic Studies, in Rep. U. S. Fish Com., 1889–91, p. 580.

limon[2] (lē-mōn'), *n.* [F. *limon*, OF. *limun*, ⟨ ML.**limo(n-)*, ⟨ L. *limus*, mud, slime: see *lime*[1] and *limous.*] A deposit of detritus along the borders of rivers; loess.

At the foot of the Alps, where black schists are largely developed, the loess is dark gray; but west of the secondary chain the same deposit is yellowish and composed almost entirely of silicious materials, with only a very little carbonate of lime. This *limon*, or loess, . . . is generally modified towards the top by the chemical action of rain. *Smithsonian Rep.*, 1890, p. 226.

limoncillo (lē-mōn-thēl'yō), *n.* [Sp. dim. of *limón*, lemon.] **1.** In Porto Rico, any one of several trees of the myrtle family, especially *Pimenta racemosa*, from the leaves of which is distilled the oil used for making bay-rum.— **2.** In the southwestern United States and Mexico, any one of several species of *Pectis*, especially *P. papposa*, *P. diffusa*, and *P. uniaristata*, small, yellow-flowered composites, with linear glandular-dotted leaves, and a strong odor of lemon. In many localities these plants are used for making beverages and are administered in the form of decoctions as a remedy for fever and ague and for other maladies. Also called *lemonweed* and *romerillo*.

limoncito (lē-mōn-thē'tō), *n.* [Sp. *limoncito*, diminutive of *limón*, lemon.] In the Philippine Islands, Guam, and on the west coast of Mexico, the orangeberry, *Triphasia trifoliata*, a shrub with glossy, dark-green, trifoliate leaves, white flowers with the fragrance of hyacinth, and globular berries of an orange-scarlet color filled with a somewhat gummy, bitter-sweet pulp, which has the flavor of curaçao liqueur. The plants send up many shoots from the root and form dense thickets if undisturbed. They are much used for hedges, and from the fruit marmalade and jelly are made, of an orange-like flavor, but having a constipating effect if eaten in any quantity. Also called *limoncito de China* and *lemoncito*.

Dense thicket of *lemoncito* (Triphasia aurantiola) not now in bloom, thorny shrubs with glossy trifoliate leaves, sending up shoots from the roots and consequently well adapted for hedges. Found a few *lemoncito* berries remaining on the bushes, orange-scarlet in color, filled with a somewhat gummy, bitter-sweet pulp, with a flavor like Curaçoa liquor. *Plant World*, Feb., 1903, p. 26.

limonene (lī'mō-nēn), *n.* [NL. *limonum*, lemon, + *-ene.*] A general term applied to certain terpenes, $C_{10}H_{16}$. The dextrorotatory derivative is also called *hesperidene*, *carvene*, and *citrene*. The inactive compound is termed *dipentene*, *cajuputene*, *cinene*, *diisoprene*, *isoterebentene*, etc.

limonillo (lē-mō-nēl'yō), *n.* [Amer. Sp., dim. of Sp. *limón*, lemon: see *lemon.*] A composite plant, *Picradenia odorata*, of the southwestern United States. It exhales the odor of lemons. Also *limonilla*.

limonitization (lī″mō-nī-ti-zā'shon), *n.* [*limonite* + *-ize* + *-ation.*] In *petrog.*, the change of a mineral or rock into limonite.

Limonium (lī-mō'ni-um), *n.* [NL. (Miller, 1759) (L. *limonion*, *lemonion*), ⟨ Gr. λειμώνιον, sea-lavender or snakeweed, prop. neut. of λειμώνιος, adj., ⟨ λειμών, a moist meadow.] A genus of dicotyledonous plants of the family *Plumbaginaceæ*.

Limont limestone. See ★*limestone*.

limophthisis (li-mof'thi-sis), *n.* [NL., ⟨ Gr. λιμός, hunger, + φθίσις, wasting.] Emaciation due to inability to take sufficient nourishment.

limotherapy (lī-mō-ther'a-pi), *n.* [Gr. λιμός, hunger, + θεραπεία, medical treatment.] The treatment of disease by reduced diet.

limousine (lim-ö-zēn'), *n.* [F., fem. of *limousin*, *a.*, of Limousin (or Limoges).] **1.** A cloak of goats' hair or coarse wool worn by peasants and wagon-drivers.— **2.** A type of automobile body, in which the rear seats are inclosed by fixed sides, back, and top. The front seats are commonly separated from the rear part of the body by movable glass windows.

limpet-hammer (lim'pet-ham″ẽr), *n.* In *prehistoric archæol.*, one of the oblong flaking-hammers found in kitchen-middens and believed to have been used to knock limpets off rocks.

limu (lē'mö), *n.* [= Polynesian *limu*, or *rimu*, moss or seaweed, Chamorro and Malay *lumut.*] Throughout Polynesia, a generic name for mosses and seaweeds.— **Limu fuafua**, in Samoa, *Caulerpa clavifera*, an alga with a pepper-like taste similar to that of *Laurencia pinnatifida*: used by the natives for food and said to be much relished by turtles.— **Limu lipoa**, in Hawaii, *Dictyopteris plagiogramma*, the favorite seaweed of the natives, who always have it at their feasts and celebrate it in their songs.

limule (lim'ūl), *n.* [NL., ⟨ *Limulus.*] A king-crab, *Limulus*.

limulid (lim'ū-lid), *n.* One of the *Limulidæ*.

lin[4] (lin), *n.* A provincial pronunciation of *lind*[1].

linage[2] (lī'nāj), *n.* [Also *lineage*; ⟨ *line*[2] + *-age*. Compare *lineage*[1].] **1.** Lining; arrangement in line.— **2.** In *printing*: (*a*) The quantity of matter estimated in lines. (*b*) Payment or rate of payment by the line.

linaloa-oil (lin-a-lō'ä-oil), *n.* See ★*oil*.

linalool (lin-a-lō'ol), *n.* [*linaloa* + *-ol.*] A name of two chemical compounds, differing in their effect on polarized light. The dextrorotatory isomer is identical with coriandrol. The levorotatory derivative, which is also called licareol, is contained in linaloa-oil, from the white cedar of Cayenne, and in the oils of spike, lavender, thyme, sassafras-leaf, and many other plants. It is a colorless liquid, boiling at 190–195° C.

linamarin (li-nam'a-rin), *n.* [L. *linum*, flax, + *amarus*, bitter, + *-in.*] A bitter glucoside contained in *Linum usitatissimum*. It crystallizes in needles, melts at 134° C., and yields hydrocyanic acid when hydrolyzed.

Linc., Lincs. Abbreviations of *Lincolnshire*.

linch[3] (linch), *v. t.* [*linch(-pin)*, *n.*] To fasten with a linch-pin.

lincrusta (lin-krus'tä), *n.* [*lin(seed-oil)* + L. *crusta*, crust.] A trade-name for a kind of linoleum or oil-cloth, embossed and colored in various designs, intended as a covering for the surface of walls and ceilings. It is made with wood-fiber, oxidized linseed-oil, resinous matter, and pigment. In full, *lincrusta Walton*.

lindackerite (lin-dak'e-rīt), *n.* [G. *Lindacker*, name of the first analyzer, + *-ite*[2].] A hydrous arseniate and sulphate of copper and nickel, occurring in green tabular crystals and reniform masses: from Joachimsthal, Bohemia.

Linden inchworm. See ★*inchworm*. **Linden leaf-beetle.** Same as ★*ladder-beetle*. **Southern linden**, *Tilia pubescens*, a small tree of the eastern United States, chiefly southward, but ranging from Long Island to Florida and Texas. It has small leaves, often not heart-shaped, and sometimes densely woolly beneath.— **White linden**, the white basswood, *Tilia heterophylla*, a large tree of the Appalachian region, having large leaves which are white beneath and have a fine downy pubescence.

linden-borer (lin'den-bôr'ẽr), *n.* An American cerambycid beetle, *Saperda vestita*, whose larvæ bore into the trunks and branches of the basswood or linden.

Linden-borer (*Saperda vestita*). Enlarged one-half.

linden-worm (lin'den-wẽrm), *n.* Any one of several lepidopterous larvæ which feed on the foliage of the linden, notably the larva of the lime-tree winter-moth (which see, under *winter*[1]), the larva of the notodontid *Datana ministra*, and that of the pyralid *Pantographa limata*.

Lindernia (lin-dẽr'ni-ä), *n.* [NL. (Allioni, 1755), named in honor of F. B. von *Lindern* (1682–1755), a German botanist and physician.] A genus of plants of the family *Scrophulariaceæ*. See *Vandellia*, *bitter-blain*, and ★*haimarada*.

lindesite (lin'dēz-īt), *n.* Same as ★*lindsayite*.

Lindia (lin'di-ä), *n.* [NL.] A genus of fresh-water rotifers, of the family *Notommatidæ*. The body is elongated and cylindrical, with a projecting tail, but not annulose, the corona is obliquely truncated, the head bears auricles, and the trophi are virgate. Also *Notommata*.

lindiform (lin'di-fôrm), *a.* [*Lindia* + L. *forma*, form.] In *entom.*, having the shape of the genus of rotifers *Lindia*: said of certain insect larvæ.

Lindleyan (lind'li-an), *a.* Relating to John Lindley, professor of botany at the University of London, 1829–60, and author of a "Natural System of Botany," which was published in several editions, the first in 1830. The system was based on that of De Candolle. It was characterized by the use of a new style of nomenclature, with uniform suffixes, from which corresponding English terms were formed.

The discovery of the exogenous structure in many Carboniferous Pteridophytes (Calamites, Stigmaria, Sigillaria, even Lepidodendron) overthrew the old *Lindleyan* classification into endogens and exogens, which was supposed to be fundamental. *Science*, July 1, 1904, p. 26.

lindoite (lin'dō-īt), *n.* [*Lindö*, an island near Christiania, Norway, + *-ite*[2].] In *petrog.*, a name given by Brögger to certain fine-grained syenites, sometimes having a trachytic texture, composed chiefly of alkali-feldspar, with little or no ferromagnesian constituents. They are in part highly feldspathic facies of sölvsbergite. Rosenbusch classes them with bostonites.

Lindsæa (lind-zē'ä), *n.* [NL. (Dryander, 1793), named after John *Lindsay*, a surgeon in Jamaica.] A genus of small polypodiaceous ferns of the tribe *Davallieæ*, with mostly pinnate or bipinnate fronds, having oblong or lunate, unilateral pinnæ or pinnules with linear marginal sori borne in a continuous or interrupted line at the summit of the radiat-

ing forked veins, and uniting two or more of them. There are about 30 species, mainly tropical, in appearance closely resembling *Adiantum* of the tribe *Pteridew*, but readily distinguished by the presence of a special indusium attached on the interior side, forming with the plane margin a bilabiate furrow within which the sori are borne.

lindsayite (lind′zā-īt), *n.* [From a proper name, *Lindsay*, + *-ite*[2].] See ★*lepolite*.

line[2], *n.* **4.** Specifically—(*b*) *pl.* In *naval arch.*, the form of a vessel as shown by the lines formed by the intersections of its surface with three sets of parallel planes. The intersections with the transverse vertical planes give the square stations or frame-lines corresponding to the frames shown in their true form in the body-plan; the intersections with the horizontal planes give the water-lines or level-lines shown on the half-breadth plan; and the intersections of the vertical longitudinal planes give the bow- and buttock-lines shown on the sheer-plan. Besides these three sets of planes, diagonal planes are used to assist in defining the form by the diagonal lines (which see, under ★*diagonal*). See cut showing the lines of the forward half of a vessel, under *forebody*.

18. In *elect.*: (*a*) Short for *line of magnetic force*. See *magnetic* ★*circuit* and *magnetic force*, under *magnetic*.

This machine has a flux of 2,100,000 *lines*. At this flux the density in the pole piece will be 2,100,000 divided by 47½ equals 44,210. *Practical Electricity*, p. 68.

(*b*) That part of an electric circuit which connects generating and receiving stations or apparatus. It may be overhead and consist of electric conductors supported by insulators on poles and brackets, or it may be underground and consist of insulated cables.

19. In *fencing*, that part of the body directly opposite to the enemy, in which the central part of the right side, the right arm, and the sword ought always to be found, and in which are also to be placed the feet, at the distance of 18 inches from each other. In this sense, a fencer is said to be in his *line*, to go out of his *line*, etc. *Chambers*.—**20.** In *printing*, a straight row of type or of print as it appears in the page of a book or the column of a newspaper. With letters or characters it is a *line of print*, without them it is a *white line*; if partly print and partly blank it is a *broken line*.

21. In *boat-* or *yacht-racing*, an imaginary line extending between two fixed points and marking the beginning or end of the course, or both.—**22.** In *art*, the conventional representation of the theoretical limits of surfaces or of their elements. It is usually a mark made by a dark substance upon a light one; but the reverse may be true. It may represent the contour of an object, in which case it is called *outline*, or the direction of action, or be simply decorative. A series of lines may give the impression of light and shade, as in engraving or etching.

At the present time all criticism of art is determined by the "*line*." All caprices and whims of the "*line*" are now ridden as much to death, and with the same enthusiasm, as were formerly those of "light."
Encyc. Brit., XXXII. 448.

All along the line. (*a*) *Milit.*, from one end to the other of the line in a military formation. Hence—(*b*) At every point.—**Baillarger's line**, a band of nerve-fibers in the cortex of the brain. Also called *Baillarger's layer*. *Encyc. Brit.*, XXXI. 544.—**Basal lines.** Same as *basal* ★*straights*.—**Blackiston's Line**, an imaginary line passing through Tsugaru Strait, between the main island of Japan (Hondo) and the island of Hokkaido (formerly called Yezo), separating the temperate and semitropical fauna of southern Japan from its subarctic fauna. This line marks the northern limit of monkeys, pheasants, catfishes, and numerous other forms of life of warm regions. —**Black line.** See ★*black*.—**Blood line, blue line.** See ★*blood*, ★*blue*.—**Bottom-set line.** Same as ★*bottom-line*. **Break line.** See ★*full line* (*b*).—**Brocard line.** Same as *Brocard* ★*straight*.—**By line**, with perfect accuracy.

Yes, sir, to carry quarrels,
As gallants do; to manage them *by line*.
B. Jonson, The Alchemist, ii, 1.

Center-line. (*a*) See ★*center-line*. (*b*) In *ship-building*, the central fore-and-aft line of a vessel at any level: loosely used for the central vertical longitudinal plane. —**Conjugate lines on a surface**, in *geom.*, lines whose directions at any point are those of the conjugate diameters of the indicatrix at that point.—**Dimension lines**, the lines on a mechanical drawing which indicate the points or planes whose distance apart is expressed by a given dimension. These lines are drawn very lightly, or with colored ink, to distinguish them from the outlines of the figure. **Douglas's line.** See *Douglas's* ★*fold*.—**Dressed line**, hackled flax, consisting of the long fibers.

Nearly all of the best grade of long fiber, "*dressed line*," is used for making twines, yacht cordage, etc.; cheaper grades are made into binder twine.
Yearbook U. S. Dept. Agr., 1901, p. 542.

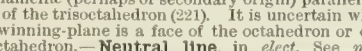
Enhanced line, a line which is made more conspicuous relatively to other lines in the same spectrum by substituting a strong electric spark for the electric arc in producing the spectrum. It has been very generally assumed that the spark is hotter than the arc and that the enhancement is due to the increase in temperature, but this is not true in all cases.—**Euler's line.** Same as *Euler's* ★*straight*.—**Farre's line**, a whitish mark on the ovary indicating the line of attachment of the mesovarium.—**Fast line**, in *surv.*, a line determined in position and measured.—**Frégier line.** Same as *Frégier* ★*straight*.—**Halleyan line**, an imaginary line which passes through all points on the earth's surface that have the same magnetic declination; an isogonic line.—**Influence line**, in *engin.*, a line or curve having as abscissæ the distances of a load, from one end of a girder and as ordinates the bending moment or shear due to the load. **In line**, in *stock-breeding*, from a particular or definite family: as, to breed *in line*.

Seek your stock bull with little regard to whether he is bred strictly "*in line*" or not. Don't be afraid of any good outcross.
Rep. Kan. State Board Agr., 1901-02, p. 56.

Isopiestic line, in *thermodynam*, a curve showing the relation between volume and temperature in a body or system the pressure of which remains constant; an isobar. **Lemoine line.** Same as *Lemoine* ★*straight*. **Light water-line.** See *water-line*. —**Line-complex.** See ★*complex*. —**Line-of-battle ship.** Same as *ship of the line* (which see, under *ship*).—**Line of departure**, in *gunnery*, the line in which a projectile is moving when it leaves the muzzle of the gun.—**Line of march**, the route followed, as by a column of troops or other body of people. **Line of regard**, in *optics*, the line of vision or line of sight.—**Line of slope**, on a surface, the line of least inclination to the horizontal plane.—**Line of syzygies**, in *astron.*, in an orbit, the diameter containing the syzygies. —**Line of Vicq d'Azyr**, a continuation, near the calcarine fissure, of the line of Baillarger. Also called *Vicq d'Azyr's band*. —**Line of weakness**, in *geol.*, a line of disturbance on the earth's surface, so called because along it relief has been afforded for internal strains. Lines of weakness are marked by upheavals (as of mountains), faults, and volcanoes.—**Line with intervals**, a line of forts, redouts, or other disconnected field-works.—**Loaded line**, in *elect.*, a telephone-line or cable in which distributed inductance is made to counteract distributed capacity, thus improving the conditions for the transmission of speech.

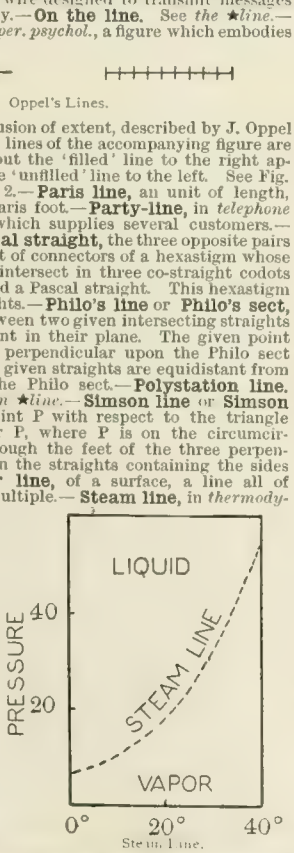
To the electrical engineer there is no such word as "fail," and the "*loaded line*" in which objectionable inductance is made to counterbalance and neutralize equally destructive capacity, has produced a circuit whereby even trans-oceanic telephony seems within grasp.
Elect. World and Engin., March 5, 1904, p. 447.

Load water-line. See *water-line*.—**Mammary line.** Same as *mammillary* ★*line*.—**Mammillary line**, an imaginary vertical line bisecting the nipple.—**Median line.** See ★*median*.—**Meridian line.** (*a*) See *meridian*, *a*. (*b*) A north-and-south line.—**Moment of two straight lines**, the product of the sine of their angle and the length of their common perpendicular. **Multistation line**, in *telephony*, a line which connects several stations; a party-line. Also called a *polystation line*. *Abbott*, Telephony, v. 395.—**Nasal line**, a line running on each side from the point of junction of the ala nasi and the cheek downward, encircling the corner of the mouth: noted prominently in intra-abdominal disease.—**Nasolabial line**, the furrow marking the boundary between the lip and the cheek on each side, extending from the ala nasi to the angle of the mouth.—**Nebular line**, a bright line in the spectrum of a nebula.—**Neumann lines.** These lines are due to the presence of fine twinning lamellæ (perhaps of secondary origin) parallel to the faces of the trisoctahedron (221). It is uncertain whether the twinning-plane is a face of the octahedron or of this trisoctahedron.—**Neutral line**, in *elect.* See *neutral points*, under *point*[1]. —**One-way line**, in *telephone practice*, a line or trunk wire designed to transmit messages in one direction only.—**On the line.** See *the* ★*line*.—**Oppel's lines**, in *exper. psychol.*, a figure which embodies



Oppel's Lines.

a variable optical illusion of extent, described by J. Oppel in 1856–57. The two lines of the accompanying figure are objectively equal; but the 'filled' line to the right appears longer than the 'unfilled' line to the left. See Fig. 3, under ★*illusion*, 2.—**Paris line**, an unit of length, equal to $\frac{1}{144}$ of a Paris foot.—**Party-line**, in *telephone practice*, a circuit which supplies several customers.—**Pascal line** or **Pascal straight**, the three opposite pairs in every complete set of connectors of a hexastigm whose dots are in a conic intersect in three co-straight codots whose bearer is called a Pascal straight. This hexastigm has 60 Pascal straights.—**Philo's line** or **Philo's sect**, the smallest sect between two given intersecting straights through a given point in their plane. The given point and the foot of the perpendicular upon the Philo sect from the cross of the given straights are equidistant from the mid-point of the Philo sect.—**Polystation line.** Same as *multistation* ★*line*.—**Simson line** or **Simson straight**, of the point P with respect to the triangle ABC or of ABC for P, where P is on the circumcircle, the straight through the feet of the three perpendiculars from P upon the straights containing the sides of ABC.—**Singular line**, of a surface, a line all of whose points are multiple.—**Steam line**, in *thermodynam.*, a curve which indicates the pressure corresponding to any temperature at which a liquid and its vapor are in equilibrium and at which consequently both phases may be in contact without change of proportion. —**Telluric line**, any line in a solar or stellar spectrum that is produced by selective absorption in the earth's atmosphere. —**The line.** (*b*) In art-exhibitions, a line opposite the spectator's eye where objects may best be seen and where the best pictures, etc., are usually placed.—**To bring into line.** (*a*) *Milit.*, to aline. (*b*) Figuratively, to bring into accord; cause (a number of persons) to agree. **Tonal line**, in *psychol.*, the continuous series of tonal sensations, bounded by the highest and lowest audible tones. See *Drobisch's* ★*spiral*.



Music has selected at option from this continuity single sensations separated by considerable intervals, thus substituting a tonal scale for the tonal line.
W. Wundt (trans.), Outlines of Psychol., p. 51.

To ride the line. See *line-riding*. —**Vicq d'Azyr's line.** See ★*line of Vicq d'Azyr*. **Wollaston line.** Same as *Fraunhofer line*. See *spectrum*.

line[2], *v.* **I.** *trans.*—**To line out**, to transplant (seedlings) from the seed-bed to rows in the forest nursery.

II. *intrans.* **2.** To form in a line: usually with *up*.

line[3], *v. t.* **6.** In *bookbinding*, to cover the inner sides of (a book-cover) with paper; support the back of the folded sections of a book with thin lawn or linen in the process of binding.

linea, *n.*—**Linea aspera.** (*b*) A line which marks the separation of the dorsal surface of the optic thalamus from the adjoining surface of the tænia and caudate nucleus. **Linea semicircularis.** Same as *temporal* ★*crest*. **Linea thalassinica**, a groove or crack which runs lengthwise on each side of the cephalothoracic carapace in certain crustaceans of the tribe *Thalassinidea*.—**Lineæ albicantes**, white lines in the skin after stretching, as in the skin of the abdomen after pregnancy.

lineage[2] (līn′āj), *n.* Same as ★*linage*[2].

lineal, *a.* **5.** Of or pertaining to the line or officers of the line in the army or navy.

There is a growing belief that the most effective solution of the engineering problem lies in the formation of a corps of line officers for engineering duty exclusively, or one of engineer officers having positive rank and *lineal* titles, either corps to be recruited yearly by Annapolis graduates in sufficient numbers to maintain it at full strength.
Cassier's Mag., quoted in Army and Navy Jour., Nov. 18, [1905, p. 315.

lineamentation (lin″ē-a-men-tā′-shon), *n.* [*lineament* + *-ation*.] The grouping and forms of lineaments.

Linear acceleration. See ★*acceleration*.—**Linear capacity**, in *elect.*, the electrostatic capacity per unit of length of a linear condenser, such as a cable or a line or wire.—**Linear projection**, in *crystal.* See ★*projection*.—**Linear set.** See ★*set*[1]. —**Linear space.** (*b*) See ★*space*.

linearifolious (lin″i-ar-i-fō′li-us), *a.* In *bot.*, having linear leaves.

linearize (lin′ē-a-rīz), *v. t.*; pret. and pp. *linearized*, ppr. *linearizing*. [*linear* + *-ize*.] To represent by means of lines; transform from pictographic to linear characters.

Finally, in 1900, his [Dr. Evans's] discovery of the clay archives in the prehistoric Palace of Cnossus had supplied conclusive evidence of the existence of both a semi-pictorial and a *linearized* system of writing of a highly developed kind. The relations of the two scripts, however, had remained obscure. *Athenæum*, Dec. 5, 1903, p. 757.

linearoid (lin′ē-a-roid), *a.* [*linear* + *-oid*.] In group theory, quasi-linear.

On differential equations belonging to a ternary *linearoid* group. *Science*, April 24, 1903, p. 666.

lineature† (lin′ē-a-tūr), *n.* [*lineate* + *-ure*.] Outline.

line-ball (līn′bâl), *n.* In *billiards*, a ball with its base on a line.

line-bar (līn′bär), *n.* In the customary printing of hymn-tunes and similar music, a heavy bar to mark the end of a line of the words and of the corresponding musical phrase or strain. Its place may often be in the midst of a measure, but if it falls at the end of a measure it then takes the place of the ordinary bar (see *bar*[1], 11). When a line-bar needs to be distinguished from the usual bar the latter is called a *measure-bar*.

line-boat (līn′bōt), *n.* A boat used for hand-line fishing in the sea.

line-breeding (līn′brē″ding), *n.* Another name for *in-and-in breeding*.

line-car (līn′kär), *n.* A freight-car owned by a fast-freight company, or by an association of railways, and designed to be used on several different roads or through-freight routes. A line-car is thus often a foreign car. See *foreign* ★*car*.

line-cod (līn′kod), *n.* See *line-fish*.

line-cut (līn′kut), *n.* A photomechanical reproduction on metal, for relief-printing purposes, of an illustration drawn in outline, showing the object in its relation to white and black only.

line-cutting (līn′kut″ing), *n.* The cutting of lines of magnetic flux by the conductors of the electric circuit of a generator, considered, in accordance with the conceptions of Faraday, as the source of the induced electromotive force. *Encyc. Brit.*, XXVII. 574.

line-displacement (līn′dis-plās″ment), *n.* Displacement of the lines in the spectrum of a star, due, generally, to motion of the star in

the line of sight. Displacements may also occur from intense pressures in stellar atmospheres, but in that case different lines are not affected alike.

The *line-displacements* of the bright star acquaint us merely with its rate of motion as projected upon the visual plane; they correspond to a mean orbital radius of 620,000 miles, the real path being perhaps six or eight times wider than that spectroscopically indicated, while the companion-ellipse traversed by the dark satellite may be of any imaginable size.
A. M. Clerke, Problems in Astrophysics, p. 321.

line-firing (līn′ fīr″ing), *n.* In *vet. surg.*, a method of treating chronic inflammations, consisting in burning parallel lines in the skin, over the seat of inflammation, with a feather-edge firing-iron or thermocautery: used principally in cases of chronic tendinitis, spavin, etc., of the horse. *U. S. Dept. Agri.*, Rep. on Diseases of the Horse, 1903, p. 331.

line-hunter (līn′hun″tėr), *n.* A hound which trails the game by scent alone.

line-hunting (līn′hun″ting), *a.* Trailing game by the scent alone, as distinguished from hunting by sight.

The old slow *line-hunting* staghound.
Saturday Rev., Feb. 1, 1890, p. 135.

line-knife (līn′nīf), *n.* In *whaling*, a knife used for cutting the harpoon-line when it is foul.

lineless (līn′les), *a.* [*line*[2] + *-less.*] Having no lines; without lines.

line-linkage (līn′ling″kāj), *n.* See ★*linkage.*

linen-drapery (lin′en-drā″pėr-i), *n.* The establishment, occupation, or goods of a linen-draper.

linenette (lin-en-et′), *n.* [*linen* + *-ette.*] A cotton fabric made in imitation of linen.

linen-tester (lin′en-tes″tėr), *n.* Same as *linen-prover.*

lineocircular (lin″ē-ō-sėr′kū-lär), *a.* [L. *linea*, line, + *circularis*, circular.] A term used by Sylvester as descriptive of the Peaucellier adjustment or linkage for converting circular into rectilinear motion, or vice versa.

line-officer (līn′of″i-sėr), *n.* See *line*[2], 14.

lineoid (lin′ē-oid), *n.* [L. *linea*, line, + *-oid.*] In *math.*, the assemblage of points of an ordinary (linear) 3-space (space of three dimensions) of point 4-space.

lineole (lin′ē-ōl), *n.* A lineola.

line-pair (līn′pār), *n.* **1.** A degenerate form of a conic, consisting of two straight lines which together form a locus of the second degree.

Of sections of the cone, he [Kepler] says, there are five species from the "recta linea" or *line-pair* to the circle.
Encyc. Brit., XXVIII. 658.

2. A curve of the second order which breaks up into two straight lines.

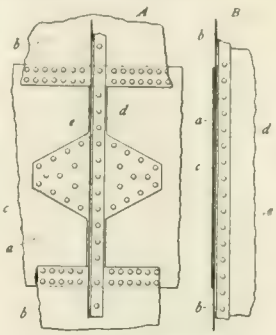
line-pusher (līn′push″ėr), *n.* The appliance in the monotype type-setting and -casting machine that pushes the finished lines from the type-channel to the galley.

For "leading" matter automatically there is a receptacle — which the operator can easily keep supplied with leads — out of which, by the action of a small lever, a lead can be delivered behind each line as the *line-pusher* carries it into the galley.
Census Bulletin 216, June 28, 1902, p. 61.

liner[1], *n.* **6.** A fine-pointed red sable brush, with a metal ferrule and wooden handle.—**7.** A vessel engaged in line-fishing at sea.—**8.** One who writes items for the press, which are paid for by the line; a penny-a-liner.—**9.** A picture hung 'on the line,' at an exhibition. [Colloq.] *N. E. D.*—**10.** In *law*, one whose legal domicile must be determined by some specific legislative or judicial act, by reason of the fact that his place of residence is situated upon a boundary line between different jurisdictions.

That J... M. N..., a *liner* between the counties of Chambers and Lee, is declared to be a citizen of Lee County.
Laws of Alabama, 1866–67, p. 175.

liner[2], *n.* **3.** In *mach.*: (*b*) A cylinder or vessel placed inside another cylinder or vessel as a lining: frequently used in engines or pumps to protect the main cylinder from wear and injury and to facilitate making repairs. —**5.** In *iron ship-building*, a piece of plate used to fill up a narrow space between a plate and a bar or in the seam of two plates so that they can be riveted solidly together in places where, owing to the arrangement of the parts, the adjoining surfaces cannot be brought into close contact. A *frame-liner* is one whose width is that of the flange of the frame-bar, extending between the edges of adjacent sunken strakes of outside plating and filling the space between the frame-bar and the raised strake of outside plating. A *wide liner* or *water-tight bulkhead-liner* is one fitted in the space between the bounding-bar of a water-tight bulkhead and the raised strake of outside plating. It is much wider than the flange of the bar to compensate for the weakness in the outside plating due to the close spacing of rivets necessary for water-tightness. See cut. A *taper liner* is one having a wedge shape to fill up a triangular space.



Water-tight Bulkhead-liner.
A, elevation; B, section; *a*, raised or outer strake of outside plating; *b*, *b*, sunken or inner strakes of outside plating; *c*, liner; *d*, bulkhead bounding-bar, *e*, water-tight bulkhead plate.

line-scale (līn′-skāl), *n.* In *printing*, a measure, similar to a foot-rule, used to show the length of a line.

A line of matter is progressively perforated and charged until, as the end is approached, the *line-scale* shows that the next word or syllable can not go into that line.
Census Bulletin 216, June 28, 1902, p. 58.

line-screen (līn′skrēn), *n.* In *photog.*, a screen upon which fine lines are ruled, used in photo-engraving for the manufacture of half-tone blocks. The lines are ruled with a diamond, and are filled in with black pigment. Two sheets of such ruled glass are cemented together, face to face, with the lines crossing at right angles, to form the screen.

line-shaft (līn′ shâft), *n.* A main shaft: (*a*) A long shaft, in a factory or shop, which furnishes power to the countershafts for the various machines. It may be driven directly by the engine, by a belt from the engine, or by a motor. (*b*) In *marine engin.*, the part of the propeller-shaft which reaches from the thrust-shaft to the tail-shaft.

line-shafting (līn′ shâf″ ting), *n.* Same as ★*line-shaft.*

linesman, *n.* **2.** In *Amer. foot-ball*, one of the forwards; also, the man who has charge of the measurements of the distance gained and assists the umpire in various ways.—**3.** A workman engaged in the erection or maintenance of the line-wires of a telegraphic or telephonic system, or of electric circuits of any sort.

line-spectrum (līn′spek″trum), *n.* A spectrum consisting of bright lines, as distinguished from a band-spectrum or continuous spectrum. A continuous spectrum, like that of the sun, crossed by the dark lines of Fraunhofer is also sometimes referred to as a *line-spectrum.* See *spectrum.*

line-sphere (līn′ sfēr), *a.* Pertaining to or connecting the straight line and the sphere.

line-switch (līn′swich), *n.* In *elect.*, a switch for opening and closing the main line of an electric circuit.

line-up (līn′up), *n.* In athletic games such as base-ball and foot-ball, the order in which the players take their positions.

linework (līn′wėrk), *n.* In *art*, drawing executed with a pen or pencil, as opposed to 'wash.'

ling[1], *n.* **6.** Same as ★*beardy*, 3.—**Ling-liver oil.** See ★*oil.*

ling[2], *n.*—**Draw-ling, pull-ling.** Same as *hare's-tail*, 1.—**Wire-ling,** the crowberry.

lingasarira (ling″gä-sä-rē′rä), *n.* [Skt. *lingaçarīra*, the imagined typical or subtle body, ⟨ *linga*, mark, token, image, in the Vedanta philosophy the typical or subtle body (the supposed indestructible original of the gross visible body), + *çarīra*, body.] The Sanskrit name for the supposed astral body.

ling-gowan (ling′gou″an), *n.* See ★*gowan.*

lingo[3] (ling′gō), *n.* [Cf. Pg. *linga*, a strap by which anything is suspended. See *lingo*[1].] The weight attached to the heddle-cord in a Jacquard loom. *R. Marsden*, Cotton Weaving, p. 149.

linguale, *n.* **2.** In *craniom.*, the upper terminal point of the symphysis of the lower jaw on its lingual surface. *Von Török.*

lingualize (ling′gwa-līz), *v. t.*; pret. and pp. *lingualized*, ppr. *lingualizing.* [*lingual* + *-ize.*] To make lingual.

The final i or u of a preposition or other like prefix ordinarily *lingualizes* the initial s of the root to which it is prefixed. *Whitney*, Sansk. Gram., p. 185.

linguist, *n.* **4.** An interpreter. *N. E. D.*

linguistic, *a.* **II.** *n.* Same as *linguistics.*

linguistical (ling-gwis′ti-kal), *a.* Same as *linguistic.*

Lingula flags. See ★*flag*[4].

Lingulella (ling-gū-lel′ä), *n.* [NL., ⟨ *Lingula*, 2, + dim. *-ella.*] A genus of atrematous brachiopods having a linguloid form and characterized by a more or less elevated ventral cardinal area which is bisected medially by a narrow pedicel-furrow. It occurs in the Cambrian of North America and Europe.

Lingulepis (ling-gū′le-pis), *n.* [NL., *Lingula*, 2, + Gr. λεπίς, a scale.] A genus of atrematous linguloid brachiopods characterized by having the pedicel-valve much produced at the beak with no distinct cardinal area. It occurs in the Cambrian of North America.

linguliform (ling-gū′li-fôrm), *a.* [L. *lingula*, lingula + *forma*, form.] Resembling a lingula.

linguolabial (ling-gwō-lā′bi-al), *a.* and *n.* [Prop. **linguilabial*, ⟨ L. *lingua*, tongue, + *labium*, lip, + *-al*[1].] **I.** *a.* Of, pertaining to, or formed by the tongue and lips, as a sound or letter. *Stud. Yale Psychol. Lab.*, X. 113.

II. *n.* A letter or articulation produced by the tongue and lips.

linguonasal (ling-gwō-nā′zal), *a.* and *n.* [Prop. **linguinasal*, ⟨ L. *lingua*, tongue, + *nasus*, nose, + *-al*[1].] **I.** *a.* Of, pertaining to, or formed by the tongue and the nose, as a sound or letter.

II. *n.* A sound or letter formed by the tongue and nose.

linguopalatal (ling-gwō-pal′ ā-tal), *a.* and *n.* [Prop. **linguipalatal*, ⟨ L. *lingua*, tongue, + *palatum*, palate, + *-al*[1].] **I.** *a.* Of, pertaining to, or formed by both tongue and palate: said of various sounds or letters.

II. *n.* A sound or letter produced by the tongue and palate. *Keane*, Man Past and Present, p. 124.

linie (lin′i-ē), *n.* [G., MHG. *linea*, OHG. *linea*, ⟨ L. *linea*, line: see *line*[2].] The twelfth part of the zoll or inch; a line. *C. Hering*, Conversion Tables, p. 33.

linin, *n.* **2.** The substance which forms the reticulum of the nucleus and incloses the chromatin.

lining-cloth (lī′ning-klôth), *n.* Extra pieces of canvas sewed on the back of square sails to take the chafe.

lininoplast (lī′nin-ō-plast), *n.* [*linin* + Gr. πλαστός, ⟨ πλάσσειν, form.] The plasmosome or true nucleolus. *G. Eisen*, 1899.

linity (lin′i-ti), *n.* [*line*[2], *n.*, + *-ity.*] See the extract.

The theory of the "*linity*," analogous to the linear vector function in quaternions or to the matrix in algebra, is developed in considerable detail.
Nature, April 25, 1907, p. 623.

link[1], *n.* **8.** In *math.*: (*a*) A piece of a straight line joining two given points. (*b*) A double tangent.—**9.** In *music*, a connecting passage of one or more measures, intervening between two well-defined sections or phrases.—**Link polygon.** Same as *funicular polygon.*—**Open link,** a chain-link having an opening in one side, the ends lapping but not in contact; a chain-link in which the ends are brought together and butted against each other, but not fastened; an open ring.—**Stephenson link,** a slotted link or bar in an engine valve-gear, each end of which is connected to an eccentric by a rod. A slider or sliding-block on the link is connected to the valve-stem and may be shifted so that it is moved by either of the two eccentrics, one of which makes the engine revolve in one direction and the other in the opposite direction: so called from its inventor, George Stephenson. See *Stephenson* ★*link-motion.*

link[1], *v. t.*—**To link up.** (*a*) In an engine fitted with Stephenson link-motion, to shorten the cut-off (of the engine) by shifting the link-blocks nearer to the middle of the links, thereby increasing the expansion of the steam. (*b*) To join or connect with other parts of the same or similar systems: as, in topography, to connect two isolated surveys or systems of points and geometrical lines, with one another, by joining one point in each of the two systems by a line of measured length and direction. *Geog. Jour.* (R. G. S.), IX. 364.

link[2], *n.* **3.** *pl.* The ground on which golf is played.

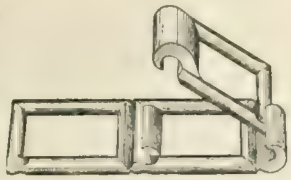
linkage, *n.* **3.** In *chem.*, the hypothetical connection between two atoms. Same as *bond*[1], 11.—**4.** In *elect.*, the product obtained by multiplying the magnetic flux through a coil by the number of turns which the coil contains. —**Hart's linkage.** Same as *Hart's* ★*cell.*—**Line linkage,** in *elect.*, the linkage of the lines of force of the magnetic circuit of a generator, motor, transformer, or other apparatus, with the electric circuit in which current is induced.

We may, with Faraday, make the transition from *line-linkage* to the precisely equivalent conception of "line-cutting" as the source of E. M. F. *Encyc. Brit.*, XXVII. 574.

Peaucellier's linkage. Same as *Peaucellier cell* (which see, under *cell*).

link-belt (lingk'-belt), *n.* Same as ★*link-belting.*

link-belting (lingk'bel″-ting), *n.* A belt for the transmission of power, composed of a series of detachable links.



Link belt.

link-carrier (lingk'kar″i-ėr), *n.* A metal piece which carries the link in a locomotive valve-gear; a stirrup.

link-form (lingk'fôrm), *n.* A transitional form between two races or groups of organisms.

Some stress was laid on Haeckel's discovery of Ctenaria as a possible *link-form* between Hydromedusæ and Ctenophora. *Encyc. Brit.*, XXVII. 301.

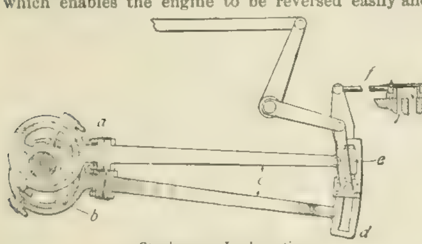
link-grate (lingk'grāt), *n.* An endless grate made up of links so that it can be run like a belt over sheaves or pulleys. The coal is put on the grate at one end or over one sheave, and is burned while traveling to the end where the ashes are dumped off. *Elect. World and Engin.*, May 7, 1904, p. 863.

link-hanger (lingk'hang ėr), *n.* In a locomotive, the suspension-rod fastened to the link-saddle in a Stephenson link-motion valve-gear by which the weight of the link and of the eccentric-rods is borne, and by which the link itself is raised and lowered.

Linkia (ling'ki-ä), *n.* [NL. (Cavanilles, 1797), named after Heinrich Friedrich *Link* (1767–1851), professor of botany at Berlin.] A genus of dicotyledonous shrubs of the family *Proteaceæ.* See *Persoonia* and ★*geebung.*

linking-up (ling'king-up), *n.* The act or process of altering the position of the links or link-blocks in a reversing and cut-off engine fitted with Stephenson links, to produce an earlier cut-off and greater expansion; hence, the making of the cut-off earlier in any engine. Also called *hooking-up.*

link-motion, *n.*—**Allan's link-motion,** a form of valve-gear for steam-engines in which the link is raised as in Stephenson's and the valve-rod lowered as in Gooch's, to reverse and produce cut-off; but since the link and slider-block are both moved, each need only be moved half as far as in either of the other forms. The link is straight and not a part of a circular arc, and is more easily manufactured.—**Gooch's link-motion,** a form of link-motion, derived from Stephenson's, in which the slot-link was not lifted and lowered, as in Stephenson's, but the rod to the valve was so adjusted in the slot of the link. The valve-rod had to be long enough to be jointed, but no variation in lead occurred, because the eccentric-straps were not swung around the shaft in adjusting the position of the sliding-block. The radius of the link was that of the length of the first section of the valve-rod.—**Stephenson link-motion,** a form of valve-gear for steam-engines which enables the engine to be reversed easily and to



Stephenson Link-motion.

operate with a variable cut-off. It was first designed by Howe and was used by Stephenson in early English locomotives. The elements consist of (*a*) one eccentric set at the proper angle ahead of the engine-crank for forward movement; (*b*) another set for backward motion; (*c*) two eccentric-rods or -blades from these two eccentrics to the top and bottom respectively of (*d*) the link or slot-link; and (*e*) the sliding-block in the slot of this link which carries the pin to which the valve-stem (*f*) is fitted, either directly or through a rocker-shaft and arms. When the link is lowered, the forward eccentric (*a*) drives (*f*); when the link is raised, the backward eccentric (*b*) drives (*f*). In intermediate positions the block (*e*) is actuated partly by both (*a*) and (*b*), and, as these are in opposite phase or nearly so, the motion of (*f*) becomes less, and the port is opened during a smaller portion of the piston-stroke, and an earlier cut-off results. Stephenson's is differentiated from other link-motions by having the link raised and lowered, and with it the eccentric-blades or -rods, to vary cut-off and reverse; hence, the slot-link has a curvature formed by an arc struck with the center of the engine-shaft as a center. The swing of the eccentric-straps and -blades around the eccentrics in the cutting-off and reversing adjustments of the link makes the lead of the valve increase, as the cut-off in forward gear is made earlier.

link-saddle (lingk'sad″l), *n.* The plate or bar bolted to the side of the link and to which the link-hanger is attached on a locomotive or other engine fitted with the Stephenson valve-gear.

link-slot (lingk'slot), *n.* In a steam-engine, the slot or opening in the curved member of a Stephenson link-motion for a locomotive or other reversing-engine. This member is called the *link,* and in the opening or slot slides the link-block by which the valve is operated as the two eccentrics operate the link itself. See *Stephenson* ★*link-motion.*

link-slotter (lingk'slot″ėr), *n.* A machine or attachment for slotting or finishing the curved links for steam-engine valve-gears.

link-staff (lingk'stȧf), *n.* A slender staff or rod graduated into feet or links, used in surveying: employed both as a visible object to sight to when held vertically over a given point, and also as a rough linear measuring-scale for short distances such as offsets from a given line or point; a flag-staff or flag-pole.

link-vine (lingk'vīn), *n.* In the Bahamas, *Vanilla articulata,* a tall, leafless climber of the orchid family, growing over trees and shrubs: so called from its stems, the joints of which are smooth, fleshy, and from 8 to 10 inches long.

linkwork, *n.* **2.** A mechanism or device in which motion or power is transmitted by rods and levers, instead of by gearing or by pulleys and belts; a linkage; a link-motion.

link-worming (lingk'wėr'ming), *n.* *Naut.,* the operation of worming rope-cables with chain, as a protection against cutting on a rocky bottom.

linky (ling'ki), *a.* [*link*[2] + *-y*[1].] Link-like; having the character or appearance of links. See *link*[2].

Steering by this . . . we made our way across country, and won forth at last upon the *linky,* boggy muirland that they call the Figgate Whins. *R. L. Stevenson,* Catriona, xii.

linn[2], *n.* Same as ★*lin*[4].—**Black linn, yellow linn,** the cucumber-tree, *Magnolia acuminata.*

Linn. An abbreviation (*a*) of *Linnæus;* (*b*) of *Linnæan.*

linography (li-nog'ra-fi), *n.* [L. *linum,* flax (see *linen*), + Gr. γράφειν, write.] The process of photographing the outlines of a picture on linen or cotton cloth, as a basis for painting it in oil. *Jour. Soc. Chem. Industry,* VII. 588.

linolenic (lin-ọ-len'ik), *a.* [L. *linum,* flax, + *oleum,* oil, + *-ene* + *-ic.*] Noting an acid, a colorless liquid, $C_{18}H_{30}O_2$, obtained from various oils, such as linseed and cotton-seed. It has an odor of blubber and combines with six atoms of bromine.

Linophryne (lin-ọ-frī'nē), *n.* [NL., < Gr. λίνον, a net, + φρύνη, a toad.] A genus of fishes of the family *Ceratiidæ,* found in the mid-Atlantic.

Linopteris (lī-nop'tẹ-ris), *n.* [NL. (Presl, 1838), < Gr. λίνον, net, + πτέρις, fern.] A genus of fossil ferns with bipinnate fronds, the pinnæ oblong and multijugate, and the pinnules subfalcate, obtuse at the summit and cordate at the base, with a reticulate nervation. It was called *Dictyopteris* by Gutbier in 1835, but that name was preoccupied. See *Dictyopteris,* with cut, and ★*Dictyopteris,* 2.

linotype (lī'nọ-tīp or lin'ọ-tīp), *n.* and *a.* **I.** *n.* A machine in which stereotyped lines (of words) are produced, for use in printing. See cut in next column.

II. *a.* Composed with the linotype machine.

linotype (lī'nọ-tīp or lin'ọ-tīp), *v. t.*; pret. and pp. *linotyped,* ppr. *linotyping.* [*linotype, n.*] To set with a linotype machine.

linotyper (lī'nọ-tī-pėr or lin'ọ-tī-pėr), *n.* One who uses the linotype machine.

Among the trades in which the workers are exposed to the danger of plumbism are the following: lead miners, painters, potters, calico printers, compositors, pressmen, stereotypers, *linotypers,* printers. *Buck,* Med. Handbook, VI. 325.

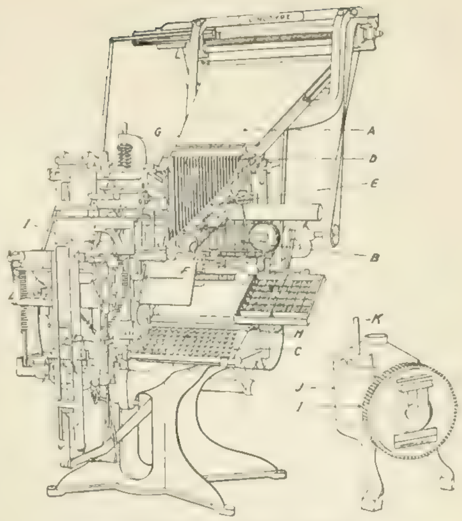
linoxyn (lin-ok'sin), *n.* [L. *linum,* flax, + *ox(ygen)* + *-in*[2].] The name given by Mulder to the amorphous, tough, and elastic material, somewhat resembling india-rubber, which is left as the product of the 'drying' of linseed-oil which has been exposed to the air, from which it absorbs oxygen. He found it to be a chemically neutral substance which on analysis gave figures leading to the formula $C_{32}H_{54}O_{11}$, but later researches have made it doubtful whether it is a single, definite substance.

linseed-tea (lin'sēd-tē″), *n.* An infusion of linseed; flaxseed-tea. It contains mucilage, and is therefore demulcent.

lint[1], *n.*—**Fairy lint, Laverock's lint,** the mountain-flax or purging-flax, *Linum catharticum.*—**Lint cotton.** See ★*cotton*[1].—**Patent lint.** Same as ★*sheet-lint.*

lint-bells (lint'belz), *n.* The flax plant, *Linum usitatissimum.*

lint-box (lint'boks), *n.* That part of a cotton-baling press in which the lint (ginned cotton) is packed.



Mergenthaler Linotype Machine.

A, matrix magazine; *B,* rods from finger-keys to matrix-releasing device; *C,* keyboard; *D,* matrix [illegible]; *E,* traveling belt to convey matrices to *F*; *F,* assembler [illegible] for matrices; *G,* [illegible] containing spaces; *H,* space [illegible] bar; *I,* [illegible] wheel; *J,* melting-pot; *K,* pump plunger for forcing metal into mold; *L,* receiving galley for finished lines.

linter[1], *n.* **2.** Same as *lint-doctor.*—**3.** *pl.* The short fibers of cotton which are removed by a second ginning process, from cotton-seed which has been once ginned. Also called *regins.*

Linters, or delint, as the short fiber is also called, find extensive application in the arts. *L. L. Lamborn,* Cottonseed Products, p. 34.

lintonite (lin'tọn-īt), *n.* [Named after Miss L. A. *Linton,* who analyzed it.] A variety of thomsonite, occurring in green spherical forms, derived from the amygdaloid of Grand Marais, Lake Superior.

linty (lin'ti), *a.* [*lint*[1] + *-y*[1].] **1.** Like lint or flax; soft.—**2.** Covered with or full of lint.

linusic (li-nū'sik), *a.* Noting an acid, a colorless compound, $C_{17}H_{29}(OH)_6COOH$, prepared by the oxidation of linoleic acid with potassium permanganate. It crystallizes in rhombic plates or needles and melts at 203° C. Also called *hexahydroxystearic acid.*

Liocetus (lī-ọ-sē'tus), *n.* [Gr. λεῖος, smooth, + κῆτος, a large sea-animal.] A genus of deep-sea fishes of the family *Ceratiidæ.*

liodermia, leiodermia (lī-ọ-dėr'mi-ä), *n.* Glossiness of the skin.

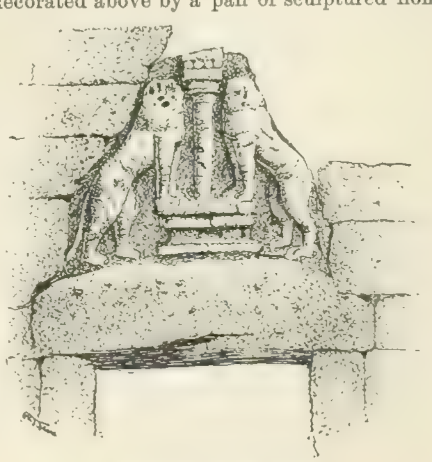
Lioglossina (lī″ọ-glo-sī'nä), *n.* [NL., < Gr. λεῖος, smooth, + γλῶσσα, tongue, + *-ina.*] A genus of flounders known only from the Gulf of California.

Liognathus (lī-og'nạ-thus), *n.* [NL., < Gr. λεῖος, smooth, + γνάθος, jaw.] Same as *Coccosteus.*

lion, *n.* **5.** (*c*) A silver and a gold coin of the Belgian provinces, struck in 1790. The value of the gold lion was about $6.50.—**Essex lion,** a calf.—**Order of the Golden Lion,** an order for civil and military merit in Luxemburg: founded in 1858.

lion-fish (lī'ọn-fish), *n.* A name applied to *Pterois lunatus, Scorpæna grandicornis,* and other stinging fishes of the family *Scorpænidæ,* from their mane-like spines.

lion-gate (lī'ọn-gāt), *n.* An entrance portal decorated above by a pair of sculptured lions



Lion-Gate at Mycenæ, Greece.

facing each other. The motive appears in early Hellenic or Mycenæan decoration and is especially common in early Phrygian art. The most important example is at Mycenæ in the Peloponnesus.

lionization (lī″ŏn-i-zā′shŏn), *n.* The act of lionizing or making a 'lion' of some one.

The *lionization* of the German marines by the Russians at Vladivostock some time ago.
The Forum, Jan. March, 1904, p. 470.

lion-monkey, *n.* 2. The wanderoo, *Silenus veter*: so called on account of its tufted tail and neck-ruff. — 3. *Macacus leoninus* of India, which is of a yellowish cast.

Liopistha (lī-ŏ-pis′thiä), *n.* [NL., < Gr. λεῖος, smooth, + ὄπισθε, behind.] A genus of Cretaceous anomalodesmaceous pelecypods characterized by equivalve, oval, thin shells which are gaping in front and compressed behind and are held together by a hinge with a nymph and projecting process on each side.

Liopleurodon (lī-ŏ-plō′rŏ-don), *n.* [NL., < Gr. λεῖος, smooth, + πλευρόν, rib, + ὀδοὺς (ὀδοντ-), a tooth.] Same as *Pliosaurus*.

Liopropoma (lī-ŏ-prop′ō-mäˌä), *n.* [NL., < Gr. λεῖος, smooth, + πρό, before (pre-), + πῶμα, lid (operculum).] A genus of Serranoid fishes found only on the coast of Cuba.

Liopsetta (lī-op-set′ä), *n.* [NL., < Gr. λεῖος, smooth, + ψῆττα, flounder.] A genus of flounders found on both sides of the Arctic Pacific.

liopus, leiopus (lī′ŏ-pus), *n.* [NL., < Gr. λεῖος, smooth, + πούς, foot.] One who has flat feet.

liotheid (lī-oth′ē-id), *n.* and *a.* **I.** *n.* A member of the mallophagous family *Liotheidæ*.

II. *a.* Having the characters of or belonging to the family *Liotheidæ*.

liotrichan, leiotrichan (lī-ot′ri-kan), *a.* and *n.* [*liotrich-ous* + *-an*.] **I.** *a.* Same as *liotrichous*.

II. *n.* A liotrichous person. See *Liotrichi*.

liotrichian, leiotrichian (lī-ŏ-trik′i-an), *a.* Same as *liotrichous*.

lip, *n.* 6. In *zoöl.*: (*b*) In the *Blastoidea*, one of the distal ends of the radial sinuses. (*c*) In the *Gastropoda*, the outer or thickened inner margin of the aperture of the shell. — 12. In *metal.*, the part of a ladle or forehearth over which the metal flows. *Phillips and Bauerman*, Elements of Metallurgy, p. 673. — **Baelz's disease of the lip**, an infiltration and ulceration of the mucous glands of the lips. *Buck*, Med. Handbook, I. 722.

lip, *v.* **I.** *trans.* 4. In *mach.*, to flange; turn over a lip on (a piece of sheet-metal).

The oil box covers are *lipped* and hinged, and fitted with springs that keep the lids tightly closed or hold them open as desired.
Elect. World and Engin., March 28, 1903, p. 533.

5. To lap; touch the edge of (anything) with a slight rippling sound.

We left the dying ebb that faintly *lipp'd*
The flat red granite. Tennyson, Audley Court, 11.

The dory heeled until the water *lipped* the rail.
J. C. Lincoln, Partners of the Tide, xviii.

II. *intrans.* 2. To project in the form of a broad tab or lip. — 3. To have an irregularity of the surface caused by overlapping of molds: said of a casting.

lipacidæmia (lip″as-i-dē′mi-ä), *n.* [NL., < Gr. λίπος, fat, + NL. *acidum*, acid, + Gr. αἷμα, blood.] The presence of fatty acids in the blood.

lipaciduria (lip″as-i-dū′ri-ä), *n.* [NL., < Gr. λίπος, fat, + NL. *acidum*, acid, + Gr. οὖρον, urine.] The elimination of fatty acids in the urine.

lipanin (lip′a-nin), *n.* [Gr. λίπος, fat, + *-an* + *-in*[2].] A mixture of 94 parts of olive-oil and 6 parts of oleic acid, used as substitute for cod-liver oil.

liparid (lip′a-rid), *n.* and *a.* **I.** *n.* A member of the lepidopterous family *Liparidæ*.

II. *a.* Having the characters of or belonging to the family *Liparidæ*.

liparoid (lip′a-roid), *a.* [Gr. λιπαρός, fatty, + εἶδος, form.] Fatty.

Liparops (lip′a-rops), *n.* [NL., < Gr. λιπαρός, fatty, + ὤψ, eye, face.] A genus of fishes belonging to the family *Cyclopteridæ*; it is found in Kamchatka.

liparous (lip′a-rus), *a.* [Gr. λιπαρός, fatty, + *-ous*.] Same as ★*liparoid*.

lipase (lī′pās), *n.* [Gr. λίπος, fat, + *-ase*.] A widely distributed ferment occurring in both the animal and the vegetable world, which splits fats into fatty acids and glycerin, is also capable of bringing about the synthesis of fats, and is thus reversible in its action. The synthetic activity of this ferment was first demonstrated by Kastle and Loevenhart, and Hanriot.

Since the discovery of diastase, in 1814, a large number of enzymes have been recognized, and what is of still greater interest and physiological significance, a large number of them, such as diastase, *lipase*, trypsin, etc., have been found in both the vegetable and the animal organism, and, for that matter, in nearly every living cell.
Science, May 17, 1901, p. 767.

lip-brace (lip′brās), *n.* A brace or stay having a lip or flange to provide means for fastening: used in a steam-boiler or tank.

lip-bulb (lip′bulb), *n.* In *phonetics*, a rubber bulb placed between the lips and connected with a recording apparatus: used to teach the lip-pressure proper for a certain articulation. *Scripture*, Exper. Phonetics, p. 398.

lipemia, *n.* See *lipæmia*.

lip-fern, *n.* — **Hairy lip-fern**, *Cheilanthes lanosa*, a species of the eastern United States which has its segments more or less closely covered with rusty hairs.

lipic (lip′ik), *a.* [Gr. λίπος, fat, + *-ic*.] Noting an acid, a colorless compound, probably identical with succinic acid, said to be formed by the oxidation of oleic acid.

lip-key (lip′kē), *n.* In *psychophys.*, a form of key used in the reaction-experiment, in which an electric circuit is made or broken by a movement of the lips. *Amer. Jour. Psychol.*, XIII. 257.

liplap (lip′lap), *n.* A half-caste, the offspring of a native of the Dutch East Indies and a Dutchman.

The question is, therefore, not as to the acclimatisation of the Dutch race, whose numbers apart from the officials and military, are insignificant, but as to that of *liplaps*, signos, and mannas, as the Dutch half-castes are variously called. *Academy*, Feb. 11, 1893, p. 122.

lipochrin (lī′pŏ-krin), *n.* [Gr. λίπος, fat, + ὠχρός, yellow, + *-in*[2].] A yellowish-green pigment found in the fat-droplets which occur in the retinal epithelial cells of some of the lower animals: for example, the frog.

lipochrome (lī′pŏ-krōm), *n.* [Gr. λίπος, fat, + χρῶμα, color.] A pigment found in fatty tissue, commonly of a yellow or red color. Such products occur widely distributed both in the animal and the vegetable world. The yellow color of the blood-serum, of the corpora lutea, and of the yoke of birds' eggs, and the reddish pigment of carrots and tomatoes belong to this order. Their composition is for the most part unknown.

lipochromic (lī-pŏ-krō′mik), *a.* [*lipochrome* + *-ic*.] Of the nature of a lipochrome.

lipochromogen (lī-pŏ-krō′mŏ-jen), *n.* [*lipochrome* + *-gen*, -producing.] A substance which gives rise to the formation of a lipochrome.

lipochromoid (lī-pŏ-krō′moid), *n.* [*lipochrome* + *-oid*.] A pigment of the order of, or resembling, the lipochromes.

lipocyanine (lī-pŏ-sī′a-nin), *n.* [Gr. λίπος, fat, + κυανος, blue, + *-ine*[2].] A blue lipochrome.

lipodystrophy (lī-pŏ-dis′trŏ-fi), *n.* [Gr. λίπος, fat, + E. *dystrophy*.] In *pathol.*, a disturbance of the metabolism of fat.

A new clinical entity — intestinal *lipodystrophy*.
Med. Record, Nov. 16, 1907, p. 821.

lipogastrism (lī-pŏ-gas′trizm), *n.* [NL., < Gr. λίπος, fat, + γαστήρ (γαστρ-), stomach, + *-ism*.] Lipogastrosis.

lipogastry (lī′pŏ-gas-tri), *n.* [Gr. λίπος, fat, + γαστήρ (γαστρ-), stomach, + *-y*[3].] In sponges, the temporary obliteration of the gastral cavity by the contraction of the surrounding walls. See ★*lipostomy*, 2.

In the first place, any sponge, whether of simple or complex form, may under certain conditions contract itself and close up its pores and osculum. In extreme cases even the gastral cavity becomes obliterated. Such changes of form are of course only of temporary duration and are of no morphological or classificatory value. Sooner or later the sponge expands again. . . . Nevertheless, sponges in a state of contraction have . . . been described . . . as a distinct species, genus or family; while the temporary obliteration of the osculum or gastral cavity has been dignified by the coinage of the terms *lipostomy* and *lipogastry* respectively. *Lankester*, Zoology, II. 4.

lipogenic (lī-pŏ-jen′ik), *a.* [Gr. λίπος, fat, + *-γενης*, -producing, + *-ic*.] Forming or tending to form fat; relating to lipogenesis.

Lipogenyidæ (lī″pŏ-jē-nī′i-dē), *n. pl.* [NL. < *Lipogenys* + *-idæ*.] A family of fishes known only from a single specimen taken in the Gulf Stream in the deep sea.

Lipogenys (lī-poj′e-nis), *n.* [NL., < Gr. λίπος, fat, + γένυς, under jaw.] A genus of deep-sea

Lipogenys gillii.
(From Bulletin 47, U. S. Nat. Museum.)

fishes of the family *Lipogenyidæ*, found only in the Gulf Stream.

lipography (lī-pog′ra-fi), *n.* [Gr. λείπειν, λιπεῖν, leave out, + γράφειν, write, + *-y*[3].] Same as *dittography*.

lipohæmia (lī-pŏ-hē′mi-ä), *n.* Same as *lipæmia*.

lipoid (lip′oid), *a.* and *n.* [Gr. λίπος, fat, + εἶδος, form.] **I.** *a.* Having the appearance of fat.

II. *n.* The fat of the nerve-cells. It consists chiefly of cholesterol and lecithin.

lipolysis (lī-pol′i-sis), *n.* [NL., < Gr. λίπος, fat, + λύσις, dissolution.] The cleavage of fats into fatty acids and glycerin.

Since the bile salts are known to increase *lipolysis*, the effects of the sodium salts of cholic, glycocholic and taurocholic acids in *n*/500 solutions were tested on lipolytic hemolysis. *Science*, Sept. 27, 1907, p. 413.

lipolytic (lip-ŏ-lit′ik), *a.* [Gr. λίπος, fat, + λύσις, dissolution, + *-ic*.] Capable of causing the cleavage of fats into fatty acids and glycerin; for example, lipase.

lipomatoid (li-pom′a-toid), *a.* [*lipoma*(*t-*) + *-oid*.] Resembling a lipoma.

lipomorph (lī′pŏ-môrph), *n.* [Gr. λείπειν, λιπεῖν, leave out, + μορφή, form.] An organism which characterizes a district by its absence from it. See the extract.

In many cases the absence of certain forms of animal life in countries where they might be naturally expected to occur is a marked feature of certain parts of the world's surface. For example, bears (Ursus) and deer (Cervus) are altogether absent from the Æthiopian regions, and cats (Felis) from Australia, though these forms are widely distributed over other lands. It is proposed to designate such forms as "*lipomorphs*" (λείπω, deficio, and μορφή, forma) as regards the particular areas in which they are not found.
P. L. Sclater, in Geog. Jour. (R. G. S.), IX. 673.

liporhodin (li-pŏ-rō′din), *n.* [Gr. λίπος, fat, + ῥόδον, rose, + *-in*[2].] A red lipochrome.

lipostomism (lī-pos′tŏ-mizm), *n.* [*lipostom-y* + *-ism*.] Lipostomosis.

lipostomy, *n.* 2. In sponges, the temporary obliteration of the osculum by the contraction of the walls. Compare ★*lipogastry*.

lipothymial (lī-pŏ-thī′mi-al), *a.* Relating to lipothymy; syncopal.

lipotropic (lī-pŏ-trop′ik), *a.* [*lipotrop-y* + *-ic*.] Promoting an increase of fat.

lipotropy (lī-pot′rŏ-pi), *n.* [Gr. λίπος, fat, + -τροπια, < τρέπειν, turn.] The increase of fat in the body.

Lipowitz's alloy. See ★*alloy*.

lipoxanthin (lī-pŏ-zan′thin), *n.* [Gr. λίπος, fat, + ξανθός, yellow, + *-in*[2].] A yellow lipochrome.

lipperings (lip′er-ingz), *n. pl.* The mixture of oil, water, and blood that drains from the blubber when cutting in a whale, and the pieces of blubber used to wipe up the deck. See *lipper*[2], 1.

After the solid matter has been disposed of, both the deck *lipperings* and blubber-room *lipperings* are usually deposited in barrels or tubs and there scalded with hot oil. *Sci. Amer. Sup.*, March 5, 1904, p. 23552.

lip-speaking (lip′spē″king), *n.* Speaking to a deaf person, with a somewhat emphasized movement of the lips, in the course of instruction known as lip-reading.

lip-stop (lip′stop), *n.* In *organ-building*, same as *flue-stop*. See *stop*[1], 6.

lip-turner (lip′tèr″nèr), *n.* In *shoe-manuf.*, a machine for cutting and turning back a lip on the in-sole of a shoe, to form a shoulder against which the sewing-machine sews the upper and the welt.

lipuria (lī-pū′ri-ä), *n.* [NL., < Gr. λίπος, fat, + οὖρον, urine.] The elimination of fat in the urine: a pathological event.

lip-worship (lip′wèr″ship), *n.* Insincere worship, coming from the lips and not from the heart.

lip-worshiper (lip′wèr″ship-èr), *n.* One who worships with the lips only; an insincere worshiper.

liq. An abbreviation (*a*) of *liquid*; (*b*) of *liquor*.

liquation, *n.* 4. In mixtures of fluids, a sepa-

ration by differences of specific gravity. The lightest rises to the top and the heaviest goes to the bottom.

liquefaction, *n.* **1.** Of the gases, chlorin, ammonia, and others were first liquefied by Faraday. The experiment of Andrews with carbon dioxid led to the conclusion that for every gas there is a certain temperature such that if the temperature of the gas is above it, no increase in pressure, however great, will produce visible liquefaction. This is called the *critical temperature*. If the gas has this temperature a certain pressure, the *critical pressure*, will produce liquefaction, and the volume per unit mass at this instant is the *critical volume*. If the temperature of the gas is below the critical value compression produces gradual increase in pressure until (the temperature being kept constant) liquefaction begins at a definite pressure. Further decrease in volume produces very slight increase in pressure until all the gas is liquefied, after which a slight decrease in volume necessitates a large increase in pressure, liquids being, in general, almost incompressible. From these experiments it was predicted that all the so-called permanent gases could be liquefied if they could be cooled below their critical temperatures, and in fact, this has been accomplished (including helium, which was first liquefied in 1908). The critical constants of some of the most important gases are as follows:

	Crit. Temp. °C.	°F.	Boiling Point. °C.	°F.	Crit Pressure. Atmosphere.
H	—234	—389	—246	—411	20
O	—119	—182	—181	—295	51
N	—146	—231	—194	—317	35
Air	—140	—220	—191	—312	39
CO_2	+ 31	+ 88	— 80	—112	77
Argon	—121	—186	—187	—305	50.6

For the liquefaction of gases having only moderately low critical temperatures, freezing mixtures produce sufficient cold. Gases thus liquefied, if allowed to evaporate under low pressure, produce still greater cold, which can be used in the liquefaction of other gases; or, the gas to be liquefied can be compressed, cooled as much as possible, and allowed suddenly to expand. In many cases this sudden expansion will cool the gas sufficiently to produce partial liquefaction and even solidification. By such methods Pictet and Cailletet succeeded in 1877 in liquefying oxygen, nitrogen, and hydrogen. More recently Wroblewski, Dewar, and Olzewski produced these liquids in quantities large enough to permit their critical constants to be studied. In the process later perfected by Linde, Dewar, Hampson, and others, and applied most notably to the liquefaction of air, the gas to be liquefied is compressed to a pressure of from 1,200 to 3,000 pounds per square inch, cooled to the ordinary atmospheric temperature, and then led through a long coil of pipe and allowed to escape through a small orifice. The escaped gas, cooled by expansion, is led back around the coil of pipe, cooling the compressed gas on its way to the orifice. This cooled compressed gas therefore after expansion becomes colder than the gas preceding it, and upon flowing back around the pipe produces still greater cooling of the incoming gas; hence the temperature of the escaped gas will gradually diminish until equilibrium is reached either by gain of heat from the surroundings or by liquefaction of part of the gas. If there is sufficient protection from influx of heat from the outside the liquid will accumulate and can be drawn off, in some machines at the rate of several gallons an hour. If air thus liquefied be exposed to the atmosphere the nitrogen, having the lowest boiling-point, boils away first, leaving nearly pure liquid oxygen, which boils away with sufficient rapidity to keep itself at a temperature of —181° C., its boiling-point at atmospheric pressure. Liquid air will probably find its greatest commercial application in various refrigerative processes and in operative surgery. It cannot be a source of power, for a theoretically perfect process of liquefaction would require the expenditure of more energy than could be obtained by the evaporation of the liquid product, and practical methods are necessarily even less efficient.

liquefier, *n.* Specifically—**2.** An apparatus for the liquefaction of gases, especially of air. See *Hampson's liquid-★air apparatus*, and ★*liquefaction*, 1.

liquesce (li-kwes′), *v. i.*; pret. and pp. *liquesced*, ppr. *liquescing*. [L. *liquescere*, become liquid: see *liquescent*.] To become liquid; liquefy.

liqueur (li-kėr′), *v. t.* To flavor or treat (wine) with a liqueur.

liquid. I. *a.*—**Liquid assets or liquid securities,** property instantly convertible into cash, as stocks, bonds, or other securities upon which banking institutions will at once advance loans.—**Liquid crystal.** See ★*crystal*.

II. *n.*—**Crystalline liquid.** See *liquid* ★*crystal*.—**Elasticity of liquids.** See ★*elasticity*.—**Fuming liquid** or **spirit of Libavius.** Same as *libavius*.—**Grison liquid,** a fungicide preparation designed for application (by spraying) to plants in treating them for mildew. One of the recipes for making it calls for 3 pounds of flowers of sulphur, 3 pounds of quicklime, and 6 gallons of water, to be boiled together until reduced to 2 gallons. The yellow solution so obtained is allowed to settle, and the clear part preserved in well-stoppered bottles: one part of the solution is to be diluted with 100 parts of water when required for use.

liquidate, *v. t.*—**Liquidating partner.** See ★*partner*.

Liquidator of vessels, one of a number of officials belonging to the New York Custom-house.

liquidogenous (lik-wi-doj′e-nus), *a.* [L. *liquidus*, liquid, + *-genus*, -producing.] Of or pertaining to the liquid phase of matter: opposed to ★*gasogenous*.

Liquidus curve. See ★*curve*.

liquiform (lik′wi-fôrm), *a.* [For **liquidiform*, < L. *liquidus*, liquid, + *forma*, form.] Resembling a liquid.

liquor, *n.*—**Caustic liquor.** See ★*caustic*.—**Heavy liquor,** in the manufacture of glucose or grape-sugar from starch, the solution which has been neutralized and once filtered through animal charcoal and concentrated in a vacuum-pan to a density of 28 or 30° Baume, preparatory to a second filtration and final concentration.—**Liquor adhæsivus,** a solution of nitrated cellulose in acetone containing a small amount of a fatty oil: a vehicle for the application of external remedies. It forms a film like collodion.—**Liquor arsenicalis,** the liquor potassii arsenitis of the United States Pharmacopœia, containing 1 per cent. arsenious acid; *Fowler's solution* (which see, under solution).—**Liquor epipasticus,** a 50 per cent. acetic ether tincture of cantharides: used for making blistering collodion; a blistering liquid.—**Liquor folliculi,** the liquid which fills the ovarian or Graafian follicle of the mammal, especially in man.—**Liquor opii sedativus.** Same as *Battley's* ★*solution*.—**Liquor picis alkalinus,** an alkaline aqueous liquid consisting of pine-tar 2 parts, potassium hydroxid 1 part, and water 5 parts: used in dilute solution externally for eczema.—**Red liquor.** (*b*) In the manufacture of carbonate of soda from common salt by the Leblanc process, the mother liquor from evaporation in open pans of the first crude solution obtained by leaching 'black ash,' and removal of 'black salt'; the red color is due to the presence of iron and organic matter as impurities.—**Sulphite liquor,** the waste liquor from the digesters in which the process of making wood-pulp for paper is carried out. This liquor, produced upon a very large scale, and as a rule disposed of by discharge into neighboring streams, has caused trouble on account of the yellowish-brown color it gives to the water. It is not, however, a very seriously polluting material, being discharged at a boiling temperature, so that it is sterile; and being almost destitute of nitrogen, it is not a good culture medium for the more dangerous bacteria. Various attempts have been made to utilize the organic matter of this liquor and it is said that the liquor itself may be advantageously used in dry weather for watering roads or streets.—**Tower-liquor,** the liquor obtained from the washing of roasting-furnace gases in a tower: used in the lixiviation of copper. It is a dilute sulphuric acid in composition. Also called *weak liquor*.—**White liquor,** in *sugar-manuf.*, a concentrated solution of sugar in water. It is added to the sugar in a centrifugal to wash it out and assist the process of throwing out the water held in the sugar. Sometimes called *clairce*.—**Wilson's liquor.** See ★*aluminium hypochlorite*.

liquor-log (lik′ȯr-log), *n.* In *tanning*, a hollow log used for conveying liquor from one vat to another.

liquorous[2] (lik′ėr-us), *a.* [*liquor* + *-ous*.] Liquid; like liquor.

lira[1], *n.*—**Lira Dalmata,** the lira current at Zara, Cattaro, and throughout Servia and the adjacent regions, worth about one third less than the Venetian.

lira[3] (lī′rä), *n.*; pl. *liræ* (-rē). [L., a ridge, also a furrow. Compare *delirium*.] One of the grooves or furrows on a shell.

Three out of the four examples examined have a number of fine *liræ* within the outer lip, a feature not present in the 'Challenger' shell.
Annals and Mag. Nat. Hist., June, 1904, p. 459.

lirate (lī′rāt), *a.* [NL. **liratus*, < L. *lira*, a furrow: see ★*lira*[3].] Bearing liræ; marked by liræ, as a shell.

A very delicate species, vitreous, 10-whorled, delicately spirally *lirate*; the liræ distant, few, and conspicuously once acutely keeled at the centre of each whorl.
Proc. Zool. Soc. London, 1901, II. 357.

liration (lī-rā′shon), *n.* [NL. **liratio*(*n*-), < **liratus*: see ★*lirate*.] A system or collection of liræ on a shell.

This *liration* bears small tubercles connected by short cross-ridges with the dentations of the keel.
Annals and Mag. Nat. Hist., June, 1904, p. 459.

lirazza (lē-rät′zä), *n.* [It. dial., pejorative of *lira*: see *lira*[1].] A Venetian base silver coin (1762–97), equal to 30 soldi, and worth about 1s. 3d. or 10 gazzettas.

lirellous (li-rel′us), *a.* [*lirella* + *-ous*.] Same as *lirellate*.

L-iron (el′ī″ėrn), *n.* A piece of structural iron or steel which has an L-shaped cross-section.

lirone (lē-rō′ne), *n.* [It., aug. of *lira*, a lyre: see *lira*[2].] The largest size of the viol, having sometimes as many as 24 strings.

lis[2], *n.* **2.** A gold piece of Raymond IV., Prince of Orange (1340–93).—**3.** A silver coin of France in 1655; also, a gold coin of the same period with two angels on the reverse, supporting the shield.

lis[3] (lis), *n.* [Also *liss*: < Ir. *lios*, OIr. *liss*, *less*, W. *llŷs*, a hall, palace, court, = Bret. *lez*, *les*, also *lis*, *leis*, a court; recorded in OCeltic as a place-name, L. *Lissus*, Gr. Λίσσος, a city in Illyricum, now *Lisso* or *Lješ*.] In *Irish antiq.*, a round inclosure walled with earth, sometimes used as a fort.

lisa (lē′sä), *n.* [Also *liza*: < Sp. *lisa*, *liza*, a mullet.] The Spanish (and American Spanish) name of several species of mullet.

lisena (li-sē′nä), *n.* [NL. *lisena*, G. *lisene*, *laschene*, a pilaster-strip.] A pilaster with very slight projections.

lisita (lē-sē′tä), *n.* [Mex. Sp., dim. of Sp. *lisa*: see ★*lisa*.] A name, in Mexico, of *Mugil hospes*, a mullet found on the Pacific coast of Mexico and Central America.

lispound (lis′pound), *n.* [Also *lispund*, *lispond*, *lesh pund*; < D. and LG. *lispund*, a contraction of *Liesch pund* (ML. *Livonicum talentum*, 'Livonian pound'): see *Livonian*.] A unit of weight used around the Baltic, varying at different times and places: in Denmark, 17.4 pounds avoirdupois; in Sweden, 18.7 pounds; at Riga, 18.4 pounds. In the Shetland Isles and the Orkneys it was used especially for butter and other provisions, and gradually increased from 12 pounds avoirdupois to 30 pounds, and even more.

lissactinic (lis-ak-tin′ik), *a.* See ★*lysactinic*.

lissamphibian (lis-am-fib′i-an), *n.* A member of the *Lissamphibia*, a division of the *Amphibia* which contains those species which are covered with a smooth skin.

lisse, *n.* **2.** A fine, sheer fabric of either silk or cotton, used for women's neckwear and for ruching.

lissoneoid (li-son′ē-oid), *n.* [Appar. based on Gr. λισσός, smooth (?).] The stream-line curve of least resistance.

lissotrichi (li-sot′ri-kī), *n. pl.* [NL., pl. of *lissotrichus*, < Gr. λισσός, smooth, + θρίξ (τριχ-), hair.] In *anthrop.*, races of man with smooth hair; lissotrichous races of man.

lissotrichian (lis-ō-trik′i-an), *a.* [*lissotrichous* + *-i-an*.] Same as *lissotrichous*.

list[4], *n.* **11.** A division or lock of the hair or beard.

And lissome Vivien . . .
. . . letting her left hand
Droop from his mighty shoulder as a leaf,
Made with her right a comb of pearl to part
The *lists* of such a beard as youth gone out
Had left in ashes. *Tennyson*, Vivien, l. 94.

listen, *v. t.*—**To listen in,** in *telephony*, to restore (circuits) after connection with subscribers to a condition for subsequent use.

The removal of the operator's plug end of line, or her "*listening in*," restores the circuits to their proper condition for subsequent use.
Elect. World and Engin., May 7, 1904, p. 875.

listening (lis′n-ing), *n.* The act of one who listens.

listening-cam (lis′n-ing-kam), *n.* In *telephony*, a form of ★listening-key (which see).

listening-key (lis′n-ing-kē), *n.* In *telephony*, a key used by the operator to make the connections necessary to enable him to listen to a subscriber.

listerine (lis′tėr-in), *n.* [Named from Sir Joseph *Lister*, an English surgeon, the founder of antiseptic surgery.] An antiseptic preparation consisting of a solution of benzoic acid, boric acid, thymol, etc.

listing-machine (lis′ting-ma-shēn″), *n.* A computing-machine which prints a list of numerical items, and indicates their sum. *Engin. Mag.*, July, 1904, p. 607.

Listing's law. See ★*law*[1].

listrium (lis′tri-um), *n.*; pl. *listria* (-ä). [Gr. λίστριον, a little shovel, dim. of λίστρον, a shovel.] A chitinous plate which closes the progressive track of the pedicel opening in some neotrematous brachiopods, posterior to the apex of the ventral valve: especially characteristic of the *Discinidæ*.

listvanite (list′van-īt), *n.* [Appar. G. **listwänit*, < Russ. *listvenuiĭ*, leafy, + *-it*, E. *-ite*[2].] In *petrog.*, a granular schistose rock, green or yellow, resembling talc-schist, and rich in quartz and dolomite: found in Ural mines.

lit. An abbreviation (*b*) of *liter*.

litaneutical (lit-a-nū′ti-kal), *a.* [Gr. λιτανευτικός, for supplication, < λιτανεύειν, supplicate, < λιτανεία, litany.] Having the form or character of a litany.

litany, *n.*—**Greater litany,** in the *Rom. Cath. Ch.*, the Litany of the Saints, as chanted on the feast of St. Mark, April 25.

Lit. B., Litt. B. Abbreviations of the New Latin *Litterarum Baccalaureus*, Bachelor of Letters or Literature.

litchfieldite (lich′fēld-īt), *n.* [*Litchfield*, Maine, + *-ite*[2].] In *petrog.*, a name proposed by Bayley (1892) for nephelite-syenite occurring at Litchfield, Maine. It is composed of albite and nephelite, with lepidomelane, and has variable amounts of orthoclase, cancrinite, and sodalite.

liter[2], *n.*—**Mohr liter,** the volume of 1,000 grams of distilled water at the temperature of 17.5° C., as weighed with brass weights without correction for displaced air. It really contains, at that temperature, 1,002.3 cubic centimeters, instead of 1,000. Flasks graduated according to this measure have been much used by chemists in volumetric analysis, owing to a fancied advantage in having the weight contained equal to a round number, rather than having the volume a round number.

literal. **I.** *a.* **6.** Affecting or relating to a letter: as, *literal* errors, *literal* rhymes.

The manuscript miscellanies of the time of James I. and Charles I. contain several copies of *literal* rhymes not very unlike "A, B, C, tumble down D."
Halliwell, Nursery Rhymes, p. 135.

Literal agraphia. See ★*agraphia.*

II. *n.* **2.** In *printing*, a literal error; that is, a wrongly placed letter; a misprint.

literalistic (lit″e-ral-is′tik), *a.* [*literalist* + *-ic.*] Having the characteristics of a literalist or of literalism.

literate, *n.* **3.** One who can read and write: opposed to *illiterate.*

literatesque (lit″e-rā-tesk′), *a.* [*literate* + *-esque.*] Having a literary quality; fit to be considered literature. [Rare.]

literator, *n.* **3.** One who concerns himself with verbal and textual criticism. [Rare.] *N. E. D.*

literature, *n.* Specifically.—**5.** In scientific usage, the body of monographs, original papers, etc., dealing with a particular topic: as, the *literature* of the scale-insects and mealy bugs; the *literature* of the reaction experiment.—**6.** Printed matter of any kind intended for circulation, as the circulars and pamphlets of a political party, of an insurance company, or of a quack advertiser. [Colloq.]

Lith. An abbreviation (*a*) of *Lithuanian;* (*b*) [*l. c.*] of *lithograph* and *lithography.*

litham (lē′tăm?), *n.* [Tuareg?] A cloth wound twice around the head and face, so as to leave exposed only the eyes and nose: used by the Tuaregs of the Sahara.

The Touareg always keeps his face covered with a *litham*, a sort of mask; he lives in it, he sleeps in it, and when eating or drinking merely pulls it away from the lower part of his face and passes the food or cup up to his mouth from beneath it. The *litham* was undoubtedly originally intended as a protection against the sun and the scorching winds, and according to Sir Frederick Lugard, especially against the impalpable dust of the Sahara, but the original use of this garment has been so forgotten through the abuse of custom that the Touareg now considers it immodest to show his face even to members of his own family. *Jour. Franklin Inst.*, May, 1904, p. 326.

lithanthracic (lith-an-thras′ik), *a.* [*lithanthrax* (*-ac-*) + *-ic.*] Of lithanthrax; noting an extract formed of those portions of coal-tar which are soluble in benzol and ether.

lithatic (li-thā′tik), *a.* [*lithate* + *-ic.*] Pertaining to or consisting of a lithate.

Lithia water, mineral water containing a considerable portion of lithia salts, found in natural springs in the United States. The name is also applied to artificial mineral waters of similar constitution.

lithic[1]. **I.** *a.*—**Lithic age,** the stone age. See *archæological ages,* under *age*[1].

II. *n.* A remedy supposed to cause the solution of stone in the bladder or kidney.

lithical (lith′i-kal), *a.* [*lithic*[1] + *-al*[1].] In *petrog.*, a term proposed by Fletcher (1895), for the texture of rocks, including the size, shape, and arrangement of the component minerals; textural.

lithify (lith′i-fī), *v.*; pret. and pp. *lithified,* ppr. *lithifying.* [Gr. λίθος, stone, + *-fy.*] **I.** *trans.* To convert into stone: more commonly *petrify.*

Both the sedimentaries and the eruptives undergo a further change, which to a greater or less extent obscures their origin, for the original formations are metamorphosed, that is, recrystallized and *lithified;* so that the planes of sedimentation are partly or largely obscured and the beds of lacolites, intrusive sheets, coulées, dikes, chimneys, and tuffs have a new structure imposed upon them, and are then known as metamorphic rocks.
Powell, Truth and Error, p. 49.

II. *intrans.* To become converted into stone.

lithionite (lith′i-ō-nīt), *n.* [Gr. λίθιον, dim. of λίθος, stone, + *-ite*[2].] In *mineral.*, a lithia mica; lepidolite. Lithionite is used as a prefix before the names of rocks characterized by it: as, *lithionite*-granite.

lithiophorite (lith-i-of′ō-rīt), *n.* [NL. *lithium* + Gr. *-φορος*, -bearing, + *-ite*[2].] An impure hydrated manganese ore related to psilomelane, but peculiar in yielding lithium.

lithite (lith′īt), *n.* [Gr. λίθος, stone, + *-ite*[2].] In *zoöl.*, a calcareous particle contained in a sac, as an otolith, especially of medusæ. *Parker and Haswell*, Textbook of Zool., I. p. 125.

lithobiid (li-thō′bi-id), *n.* and *a.* **I.** *n.* A member of the myriapodous family *Lithobiidæ.*

II. *a.* Having the characteristics of or belonging to the family *Lithobiidæ.*

lithobilic (lith-ō-bil′ik), *a.* [Gr. λίθος, stone, + L. *bilis,* bile, + *-ic.*] Noting an acid, a colorless compound, $C_{30}H_{58}O_6$, contained, together with lithofellic acid, in oriental bezoars, the gall-stones of an antelope. It forms microscopic crystals, melts at 199° C., and gives an intense red-violet color with hydrochloric acid.

lithobolia (lith-ō-bō′li-ä), *n.* [Gr. λιθοβολία, < λιθοβόλος, throwing stones, < λίθος, stone, + βάλλειν, throw.] Stone-throwing, as a superstitious ceremony or traditional custom. This custom was common in ancient Greece, but was especially associated with the Damia and Auxesia at Trœzen, in which the women pelted each other with stones. There seems to have been also a lithobolia at the Eleusinia. The custom appears in the Roman festivals of the Nonæ Caprotinæ and Lupercalia. It has been found in Poland and other countries.

lithocarbon (lith-ō-kär′bon), *n.* [Gr. λίθος, stone, + E. *carbon.*] An asphalt-like material which is extracted from a bituminous limestone occurring in Uvalde county, Texas: used in making varnish and in insulating electric conductors.

lithochromography (lith″ō-krō-mog′ra-fi), *n.* [Gr. λίθος, stone, + χρῶμα, color, + *-γραφια*, < γράφειν, write.] Same as *chromolithography.*

lithochromy (lith′ō-krō-mi), *n.* [Gr. λίθος, stone, + χρῶμα, color.] Same as *chromolithography.* Also *lithochrome.*

lithoclase (lith′ō-klāz), *n.* [Gr. λίθος, stone, + κλάσις, breaking.] A fracture in a rock. See ★*diaclase.*

The occurrence in many areas of similarly regular networks of streams in which the elements are essentially straight lines in parallel series over considerable distances has now long been known, and has been given an adequate explanation by Daubrée as conditioned by the system of fractures (*lithoclases*) of the region, in part by the faults (paraclases) and in part by the joints (diaclases).
W. H. Hobbs, in Jour. of Geol., Nov.–Dec., 1902, p. 886.

lithoclasty (lith′ō-klas-ti), *n.* [Gr. λίθος, stone, + κλαστός, broken, < κλᾶν, break.] The crushing of a stone in the bladder; lithotrity.

lithocolla (lith-ō-kol′ä), *n.* [Gr. λίθος, stone, + κόλλα, glue.] A trade-name for a cement used to unite broken pieces of marble or other stone.

lithoculture (lith′ō-kul-tūr), *n.* [Gr. λίθος, stone, + L. *cultura,* culture.] In *anthrop.*, that type of culture in which stone is used as the most important material for making implements.

The Seri Indians of the Gulf of California as typical of the beginnings of *lithoculture.*
Amer. Anthropologist, 1902, p. 561.

lithodesma (lith-ō-des′mä), *n.*; pl. *lithodesmata* (-ma-tä). [Gr. λίθος, stone, + δέσμα, a bond.] In certain pelecypod mollusks, a deposit of lime in the form of an accessory shelly piece which serves for the reinforcement of the resilium. Also called *ossiculum.* *W. H. Dall.*

lithodialysis (lith″ō-dī-al′i-sis), *n.* [NL., < Gr. λίθος, stone, + διάλυσις, separation.] The solution or reduction to a pulverulent condition of a biliary or vesical calculus.

lithofellic (lith-ō-fel′ik), *a.* [Gr. λίθος, stone, + L. *fel* (*fell-*), gall, + *-ic.*] Pertaining to gall-stones.—**Lithofellic acid,** a colorless compound, $C_{20}H_{36}O_4.H_2O$, contained, together with lithobilic acid, in oriental bezoars, the gall-stones of an antelope. It forms microscopic hexagonal crystals, melts at 204° C., and gives an intense red-violet color with hydrochloric acid.

lithog. An abbreviation of *lithograph* or *lithography.*

lithogenesis (lith-ō-jen′e-sis), *n.* [Gr. λίθος, stone, + γένεσις, origin.] **1.** The production or origin of minerals or rocks; lithogenesy.—**2.** In *pathol.*, the formation of concretions in the body.

lithogenetic (lith″ō-jē-net′ik), *a.* [*lithogenesis* (*-et-*) + *-ic.*] Of or pertaining to lithogenesis.

lithografy, lithografer, etc. Amended spellings of *lithography, lithographer,* etc.

lithograph, *n.*—**Scraped lithograph,** a lithographic impression in which the design is worked out in white on black instead of black on white. The entire stone is first covered with lithographic ink and the lights are scraped or picked out. *Singer and Strang*, Etching, Engraving, etc., p. 124.

Lithographic slates. See ★*slate*[2].

lithoidite (lith′oi-dīt), *n.* [*lithoid* + *-ite*[2].] In *petrog.*, a rhyolite having a lithoidal groundmass, that is, one like fine porcelain, aphanitic, and not vitreous.

lithol. An abbreviation of *lithology.*

Lithologic individual, an important geological formation in a given district, consisting of one kind of rock.

A map whose cartographic units were discriminated solely on the lithologic characters of the so-called '*lithologic individuals*' was not entitled to be called a geologic map. It was really a lithologic map.
Science, Feb. 28, 1902, p. 351.

Lithological heterogeneity. See ★*heterogeneity.*

litholysis (li-thol′i-sis), *n.* [Gr. λίθος, stone, + λύσις, dissolution.] Same as ★*lithodialysis.*

lithometer (li-thom′e-tèr), *n.* [Gr. λίθος, stone, + μέτρον, measure.] An instrument for determining the size of a stone in the bladder.

lithometra (li-thom′e-trä), *n.* [NL., < Gr. λίθος, stone, + μήτρα, uterus.] A condition in which there are more or less extensive calcareous or osseous concretions in the wall of the uterus.

lithonephritis (lith″ō-nef-rī′tis), *n.* [NL., < Gr. λίθος, stone, + νεφρίτις, inflammation of the kidney.] Inflammation of the kidney caused by the irritation of calculi.

lithonephrotomy (lith″ō-nef-rot′ō-mi), *n.* [Gr. λίθος, stone, + νεφρός, kidney.] In *surg.*, incision into the kidney for the purpose of removing a stone.

lithopædion, lithopedion (lith-ō-pē′di-on), *n.* Same as *lithopædium.*

lithophany (li-thof′a-ni), *n.* [G. *lithophanie;* as *lithophane* + *-y*[3].] The art of making porcelain transparencies for lamp-shades or windows, by intaglio and relief modeling: invented at the Berlin Royal Porcelain Manufactory. See *lithophane.*

lithophil, lithophile (lith′ō-fil), *a.* [G. *lithophil,* < Gr. λίθος, stone, + φιλεῖν, love.] Lithophilous.

lithophilous (li-thof′i-lus), *a.* [Gr. λίθος, stone, + φιλεῖν, love.] Living among, under, or upon stones: said of certain insects and plants.

lithophin (lith′ō-fin), *n.* [Formation not obvious.] A trade-name for a solution of asphalt in benzin, used in the transfer of a design to the surface of a plate of zinc or aluminium from which impressions are afterwards to be printed. *Elect. World and Engin.*, Sept. 12, 1903, p. 442.

lithophone (lith′ō-fōn), *n.* [Gr. λίθος, stone, + φωνή, sound.] A surgical instrument which gives forth a plainly audible sound when it touches a calculus in the bladder.

lithophotogravure (lith″ō-fō-tō-grā-vūr′), *n.* [Gr. λίθος, stone, + E. *photogravure.*] A photomechanical printing-process in which a lithographic stone is uniformly etched with fine lines; a photographic transfer is then applied, and the stone etched a second time, and a print is taken as in ordinary lithography.

lithophyte, *n.* **2.** In *phytogeog.*, any plant which grows upon the surface of rocks or stones, aërial or submerged, with or without the presence of humus: sometimes opposed to ★*chasmophyte* (which see).

lithosiderite (lith-ō-sid′e-rīt), *n.* [Gr. λίθος, stone, + σίδηρος, iron, + *-ite*[2].] A meteorite intermediate in character between the stones (aërolites) and the irons (siderites), characterized by nickeliferous iron which forms a coherent mass even in sections, the silicates present appearing as separate grains: many authors included under the broader term *siderolite* (which see). See also ★*meteorite.*

lithosis (li-thō′sis), *n.* [NL., < Gr. λίθος, stone, + *-osis.*] Same as *pneumonoconiosis.* *Encyc. Brit.*, XXXI., Fig. 16, opposite p. 513.

lithosperm (lith′ō-spèrm), *n.* A plant of the genus *Lithospermum.*

Lithotomy forceps. See ★*forceps.*

lithotype, *n.* **3.** (*a*) The art of reproducing type-writing print on lithographic stone or aluminium plate. (*b*) An apparatus or machine that combines these operations. (*c*) The print so produced.

Lit. Hum. An abbreviation of the Latin *Litteræ Humaniores,* humane letters.

lithuresis (lith-ū-rē′sis), *n.* [NL., < Gr. λίθος, stone, + οὔρησις, urination.] In *pathol.*, the passage of calculi in the urine.

lithuric (li-thū′rik), *a.* [*lithuria* + *-ic.*] Pertaining to or affected with lithuria.—**Lithuric acid,** an organic acid of the composition $C_{15}H_{19}O_9N$, which has been found in the urine of oxen.

lithywale (lith′i-wāl), *n.* Same as ★*littlewale.*

Lit. M., Litt. M. An abbreviation of the Latin *Litterarum Magister,* Master of Letters (or Literature).

Litmus-milk, in *bacteriol.*, a medium used for detecting acid-producing organisms.

Litopterna (lit-op-tèr′nä), *n. pl.* [NL., so named in allusion to the character of the calcaneum; < Gr. λιτός, smooth, plain, + πτέρνα, heel.] A suborder of extinct ungulate mam-

mals from the Miocene and Pleistocene of South America of which *Macrauchenia* is a typical example. The canines are small or wanting, ends of cervicals flattened, femur with a third trochanter, bones of carpus and tarsus not interlocking or alternating. In general build the members of the group resembled horses or llamas. *Ameghino*, 1889.

Lit-par-lit (lē′pär-lē′) **injection or saturation.** See ★*injection*.

litron (le-trôn′), *n.* [F., < *litre*, liter.] A dry measure formerly used in France, equal to about ⅕ of a liter. *C. Hering*, Conversion Tables, p. 55.

Litt. An abbreviation of the French *littérateur*, a literary man.

litter, *n.* **8.** In *forestry*, the rubbish of dead leaves and twigs scattered upon the floor of the forest.

litteratrice (lit-ę-ra-trēs′), *n.* [F. *littératrice*, < NL. **litteratrix*, fem. of *litterator*: see *literator*.] A woman engaged in literary work; a woman whose profession is literature.

little-good (lit′l-gud), *n.* **1.** See *little-gude*.— **2.** The sun-spurge or wart-spurge, *Euphorbia Helioscopia*.

little-peach (lit′l-pēch), *n.* See ★*peach*[1].

littlewale (lit′l-wāl), *n.* The gromwell, *Lithospermum officinale*. Also *lithywale*.

Littoral benthos. See ★*benthos*.— **Littoral race.** See ★*Atlanto-Mediterranean*.

Lituaria (lit-ū-ā′ri-ą), *n.* [NL. (Valenciennes, 1850), < L. *lituus*, a crooked staff, a curved trumpet: see *lituus*.] The typical genus of the family *Lituaridæ*.

Lituaridæ (lit-ū-ā′ri-dē), *n. pl.* [NL., < *Lituaria* + *-idæ*.] A family of sea-pens with short spicules. It contains the genera *Lituaria*, *Veretillum*, *Pennatula*, and *Clavella*, found mostly in the Atlantic and Indian Oceans.

lituitoid (li-tū′it-oid), *a.* [*Lituites* + *-oid*.] Resembling or related to the genus *Lituites*.

Liturg. An abbreviation of *liturgics*.

liturgician (lit-ėr-jish′ąn), *n.* [*liturgic* + *-ian*.] A student of liturgies or liturgics.

liturgiological (li-tėr″ji-ō-loj′i-kąl), *a.* [*liturgiolog-y* + *-ical*.] Of or pertaining to liturgiology.

liturgistical (lit-ėr-jis′ti-kąl), *a.* [*liturgist* + *-ic-al*.] Of or pertaining to liturgists.

liturgize (lit′ėr-jīz), *v. i.*; pret. and pp. *liturgized*, ppr. *liturgizing*. [*liturg-y* + *-ize*.] To perform a liturgical act; celebrate liturgically. [Rare.] *N. E. D.*

Litvak (lit′väk), *n.* [Yiddish, < Pol. *Litwak*, a Lithuanian.] A name given to Jews of the Lithuanian provinces, by their coreligionists of the Polish government. The former, in turn, call the latter *Pollacks* or *Pollackim*. See ★*Pollack*. There is a marked difference in the Yiddish jargon as well as in the mannerisms of the two classes.

liv A simplified spelling of *live*.

liv. An abbreviation (*a*) of the French *livre*, book; (*b*) of the French *livre*, pound (weight or coin).

live[1], *v. i.*—**To live with hounds,** in *hunting*, to keep up with the hounds; live the pace.

The check . . was most welcome to the contingent who still *lived with hounds*.
St. James's Gazette, Nov. 15, 1898. *N. E. D.*

live[2], *a.* **7.** In *mach.*, having motion, as distinguished from *fixed* or *stationary*: as, a *live* axle.

Of course, this construction carried with it the *live* rear axle, a large majority of the cars shown being equipped with these, which has led to a close fight for supremacy between the spur and bevel differential gear, the spur, however, being still in the lead.
Sci. Amer., Feb. 7, 1903, p. 91.

8. In *elect.*, connected directly or indirectly with a source of electric power, whether carrying current or not: said of a circuit.—**Live load,** a moving load; a load which is not fixed in position, but may move: as, the load on a bridge when a vehicle passes over it, as distinguished from the load due to the weight of the bridge itself, called the *dead load*.

It is designed that these stiffening trusses shall carry their own weight, neither more or less—the *live load*, that is the elevated cars, trolley cars, etc., and the load of the floor system, being carried by the main cables.
Sci. Amer., Jan. 16, 1904, p. 38.

Live primer (*naut.*), a loaded primer; one that has been filled and not used or discharged.—**Live rock.** See ★*rock*[1].—**Live roller,** a roller which moves along a path or track as it turns, instead of merely rotating on a spindle: used for roller-bearings, etc.

live-car (līv′kär), *n.* Same as *live-box*.

livedo (li-vē′dō), *n.* [L. *livedo*, < *livere*, be bluish or livid: see *livid*.] Cyanosis.

liveingite (liv′ing-īt), *n.* [Named after G. D. *Liveing*, an English chemist.] A lead sulpharsenite, $Pb_4As_6S_{13}$, which occurs in monoclinic crystals in the dolomite of the Binnenthal, Switzerland.

lively, *a.* **7.** In *golf*, *base-ball*, and similar games, elastic: applied to a ball possessing special elasticity.

lively-ardent (liv′li-är′dent), *a.* In *psychol.*, noting a mixed type of character. See the extract.

Perez has proposed a classification of characters, based solely on an objective phenomenon,—viz., the movements, their rapidity and energy. He distinguishes, in the first place, the lively, the slow, and the eager; further, as mixed types, the *lively-ardent* (*vifs-ardents*), the slow-ardent, and the deliberate (*pondérés*).
Ribot (trans.), Psychol. of Emotions, p. 384.

liven, *v.* **II.** *intrans.* To become lively or more lively; generally with *up*: as, he *livened up* a bit after dinner.

liveness (līv′nes), *n.* [*live*[2], *a.*, + *-ness*.] The quality of being alive; energetic; alert.

The '*liveness*' of the New Scholarship. *N. E. D.*
Saturday Rev., March 22, 1890, p. 357.

live-oak, *n.*—**Cañon live-oak,** *Quercus chrysolepis*, an evergreen oak of the Pacific coast, which ranges from southern Oregon to Lower California, New Mexico, Arizona, and Sonora, but attains its maximum development in central California, both in the Coast Ranges and the Sierras. It is a very valuable tree, its wood being extensively used in the manufacture of agricultural implements and wagons. The under surface of the leaves is fulvous with a thick tomentum of stellate hairs. Also called *golden oak*, *maul-oak*, and *Valparaiso oak*.

liver[2], *n.* **3.** Temper, or irritation, as a result of a disorder of the liver. [Slang.]

The Colonel . . . carries a power av *liver* undher his right arrum whin the days are warm an' the nights chill. . . . 'Tis he sez so. 'I'm all *liver* to-day,' sez he; an' wid that he ordhers me ten days.
R. Kipling, The God from the Machine, in Soldiers Three, p. 11.

Aberrant duct of the liver. See ★*aberrant*.— **Brimstone liver,** a condition observed in certain cases of congenital syphilis in which the liver is enlarged and is of a deep-yellow color.— **Gin-drinkers' liver,** cirrhosis of the liver.— **Iced liver.** See ★*iced*.— **Liver loaf.** See ★*loaf*[1].— **Livers of antimony.** See ★*tho-antimonite*.— **Nutmeg liver,** a liver which on section presents a mottled appearance, the result of cirrhosis.— **Sago liver,** a liver which is the seat of amyloid degeneration, the changed acini resembling boiled sago.— **Wandering liver.** Same as *floating liver*.

liver-berry (liv′ėr-ber″i), *n.* Any plant of the genus *Streptopus*. See *Streptopus*.

liver-cylinder (liv′ėr-sil″in-dėr), *n.* In *embryol.*, one of the originally solid cords of cells proliferated from the walls of the liver diverticulum in the embryos of higher vertebrates.

liver-fluke, *n.*—**Asiatic liver-fluke,** *Opisthorchis sinensis* (Cobbold, 1875), a trematoid worm 10 to 20 millimeters long, found in the liver, spleen, and intestine of man and of cats, in Asia, and producing a serious incurable disease known as *opisthorchiasis*.

liverish (liv′ėr-ish), *a.* [*liver*[2] + *-ish*[1].] **1.** Like liver in consistency or color.— **2.** Having symptoms of a disordered liver; bilious. [Colloq.] Hence— **3.** Bad-tempered; irritable, as if having a disordered liver. [Colloq.]

liver-lily (liv′ėr-lil″i), *n.* See ★*lily*.

liver-pancreas (liv′ėr-pan″krē-as), *n.* A hepatopancreas.

liverpool (liv′ėr-pōl), *n.* [Named in reference to the 'Liverpool Grand National' steeplechase, run at Aintree near Liverpool, since 1839.] In *steeple-chasing*, a jump constructed (according to the rules of the National Steeplechase and Hunt Association) of a ditch five feet wide and two feet deep, guarded on the taking-off side by a single rail, and having on the landing side a fence of not less than four feet and six inches in perpendicular height.

Liverpudlian (liv-ėr-pud′li-ąn), *a.* and *n.* [*Liver(pool)* + *puddle* (humorously substituted for *pool* in allusion to the city's muddy waters) + *-ian*.] **I.** *a.* Of or pertaining to Liverpool. **II.** *n.* An inhabitant of Liverpool.

liver-rock (liv′ėr-rok), *n.* Homogeneous sandstone devoid of planes of stratification. [Scotch.]

liver-shark (liv′ėr-shärk), *n.* Same as *basking-shark*.

liver-starch (liv′ėr-stärch), *n.* Same as *glycogen*.

liverwort-lettuce (liv′ėr-wėrt-let″is), *n.* See ★*lettuce*.

livery[2], *n.*—**Court of Wards and Liveries.** See ★*court*.

livery-fine (liv′ėr-i-fīn), *n.* The fine paid on entering one of the livery companies in London: the entrance fee. *N. E. D.*

live-trap (līv′trap), *n.* Same as *live-box*, 2.

living-wage (liv′ing-wāj), *n.* A wage on which it is possible for a wage-earner to live.

livlong, *a.* and *n.* A simplified spelling of *live-long*.

livor, *n.* **3.** Lividity; the mark of a blow.

livyere (liv′yēr), *n.* [Also *liveyere*; lit., one of those who 'live here.'] In Labrador, and hence in Newfoundland and elsewhere, a native or a permanent resident of that country: a term universally used between themselves and others. [Local.]

Even tea and molasses, usually found amongst the "*livyeres*" (live-heres) of the coast, were lacking.
Dillon Wallace, The Long Labrador Trail, xxiii.

liza, *n.* See ★*lisa*.

lizard, *n.*—**Bearded lizard.** See ★*jew-lizard*.— **Bowline-lizard** (*naut.*), a short pendant with a thimble spliced in each end: a part of the bowline-bridle on the leeches of square sails.— **Buntline-lizard,** a piece of rope having two legs, with thimbles spliced into the ends, through which the buntlines reeve.— **Greaved lizard,** an American lizard of the family *Teiidæ*, a group characterized by the absence of a bony roof to the temporal fossæ, and by the shields of the head being completely free from the underlying bones; while there are no bony plates on the body.

The *greaved lizards* comprise over one hundred species, arranged in thirty-five genera.
R. Lydekker, Nat. Hist., p. 153.

Horned lizard, a book-name for the *horned toad*, coined with the idea of correcting the wrong impression that might be conveyed by the commonly used name. **Knob-nosed lizard,** *Lyriocephalus scutatus*, a Ceylonese species.— **Pine-tree lizard,** *Sceloporus undulatus*: more commonly known as *fence-lizard* (which see). **Ring-necked lizard,** *Crotaphytus collaris*, a common and beautiful species of the southwestern United States, which has a conspicuous black mark just above the front legs.— **Rough-tailed lizard.** Same as *starred* ★*lizard* (*a*).— **Sail-tailed lizard,** *Lophurus amboinensis*, a large species from Java, Celebes, and the Moluccas, having a high crest on the front half of the tail.— **Scale-footed lizard,** any one of the family *Pygopidæ* in which the fore limbs are wanting and the hind legs are represented externally by rounded, scaled flaps.— **Spiny lizard,** *Moloch horridus*, a curious little Australian species. Also called *mountain devil*.— **Starred lizard.** (*a*) *Agama stellio*, of southeastern Europe and northern Africa. Also known as the *rough-tailed lizard*. (*b*) The thorn-tailed lizard, *Uromastix acanthinurus*.

lizard-canary (liz′ärd-ką-nā″ri), *n.* A breed of canary-birds having the top of the head marked with a well-defined cap of clear gray or yellow. The body feathers have dark centers, and are almost black at the tips; they are edged with the color of the cap and their overlapping gives the bird a spangled appearance.

lizard-catcher (liz′ärd-kach″ėr), *n.* One of the larger American cuckoos, *Saurothera dominicensis*, found in Hayti: a near relative of the rain-bird, of Cuba, *S. vetula*.

L. J.; pl. *L. JJ.* An abbreviation of *Lord Justice*.

L. L. An abbreviation of *limiting limen*.

LL., L. L., L. Lat. Abbreviations (*a*) of *Late Latin*; (*b*) of *Law Latin*; (*c*) of *Low Latin*.

L. L. A. An abbreviation of *Lady Literate in Arts*. See the extract.

The St. Andrews diploma of *L. L. A.*—which means 'lady literate in arts'!—has been given this year on examination to 101 candidates. *Science*, Aug. 9, 1904, p. 256.

llama-twill (lä′mą-twil), *n.* A three-harness twill. Also called *drilling-*, *regatta-*, *jean-*, *jeanette-* (etc.) *twill*.

Llanberis (thlan-ber′is), *n.* [W., a local name.] In *geol.*, the lowest sedimentary division of the Lower Cambrian in Wales. It rests on volcanic rocks.

llanchama (lyän-chä′mä), *n.* [Native name.] On the upper waters of the Marañon river in Peru, *Couratari Tauari*, a forest-tree belonging to the family *Lecythidaceæ*, widely spread in tropical South America. It yields an excellent bast-fiber, and the inner bark is used by the Indians for blankets, sleeping-mats, and clothing, after having been prepared by soaking, washing, and pounding, somewhat in the same manner as tapa is prepared from the bark of the paper-mulberry by the Polynesians. Articles of clothing and ornament made of llanchama bark exhibited at the World's Columbian Exhibition, are now in the collection of the United States National Museum. Also called *tahuari* and *tauari*.

Llanvirn (thlan-vērn′), *n.* [W., a local name.] In *geol.*, a term introduced by Hicks to include certain Lower Siluric strata in Wales, which comprise the upper part of the Arenig and the lower part of the Llandeilo, about 2,000 feet in all.

Llb. An abbreviation of the Latin *libræ*, pounds.

lleren (lyā-rān′), *n.* [Native name.] In Porto Rico, *Calathea allouia*, a plant about three feet high, belonging to the *Marantaceæ*. It bears numerous crisp, egg-shaped, edible tubers having an agreeable nutty flavor. Also written *leren*.

L. L. I. An abbreviation of *Lord Lieutenant of Ireland*.

LL. M. An abbreviation of the Latin *Legum Magister*, Master of Laws.

Lloyd's numbers. Same as ★*Lloyd's numerals.*

Lloyd's numerals, in *ship-building*, numbers used in determining the scantlings of all parts of a merchant ship of any given size and type according to Lloyd's rules (see ★*Lloyd's rules*). The *first, transverse,* or *framing numeral* is the number obtained by adding together the depth, half-breadth, and half-girth of the vessel measured in feet; by entering the tables in the rules with this number, the sizes of all transverse parts such as frames, floors, and bulkheads may be found. The *second, longitudinal,* or *plating numeral* is the product of the *first numeral* by the length of the vessel in feet; this number is used in a similar manner to determine the sizes of longitudinal parts such as outside plating, keel, keelsons, etc. Also called *Lloyd's numbers.* **Lloyd's Rules,** a book issued by Lloyd's Register containing detailed rules and regulations for the building and classification of merchant vessels. In this book the sizes of all parts of the various types of vessels are specified in detail and requirements as to the qualities of material used and methods of inspection and classification are given. Separate sets of rules are published for iron vessels, for steel vessels, for wooden vessels, and for yachts.

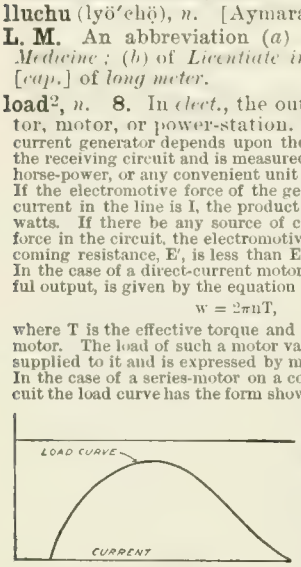
lluchu (lyö′chö), *n.* [Aymará.] See ★*chullu.*

L. M. An abbreviation (*a*) of *Licentiate in Medicine;* (*b*) of *Licentiate in Midwifery;* (*c*) [*cap.*] of *long meter.*

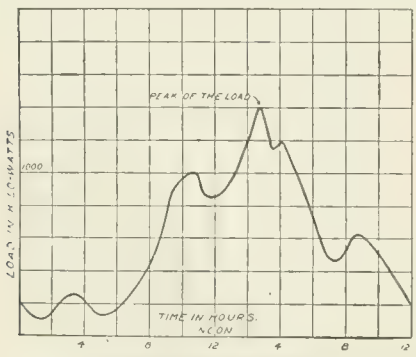
load[2], *n.* **8.** In *elect.*, the output of a generator, motor, or power-station. The load of a direct-current generator depends upon the ohmic resistance of the receiving circuit and is measured in watts, kilowatts, horse-power, or any convenient unit of activity or power. If the electromotive force of the generator is E and the current in the line is I, the product EI gives the load in watts. If there be any source of counter-electromotive force in the circuit, the electromotive force used in overcoming resistance, E′, is less than E and the load is E′ I. In the case of a direct-current motor the load, w, or useful output, is given by the equation

$$w = 2\pi nT,$$

where T is the effective torque and n is the speed of the motor. The load of such a motor varies with the current supplied to it and is expressed by means of a *load curve.* In the case of a series-motor on a constant-potential circuit the load curve has the form shown in Fig. 1. It rises to a maximum for a certain value of the current and then falls gradually to zero as the current is further increased. Such a curve is sometimes called the *load characteristic.* The term *load curve* is also applied to any curve indicating the load of a machine, as a function of its speed, electromotive force, field excitation, or of any factor upon which in operation it may depend. In the case of an alternating-current machine, as a generator or transformer, the energy consumed in the receiving circuit, which measures the load of the machine, depends on the impedance of the circuit, the difference of phase between the electromotive force and current, and the wave form. We have therefore to distinguish, in such cases, between the *inductive load* of a circuit having inductance as well as resistance and the *non-inductive load* of a circuit whose impedance is solely that due to resistance. The load of a power-station or lighting-station, which varies with the time of day, is likewise represented by a load curve. The maximum of this curve, which indicates the time when the demand for power is greatest, is called the *peak of the load.* The area inclosed by the curve affords a measure of the total energy supplied from the station.



Load Curve of a Series-motor.



Load Curve of a Power-station.

—**Curve of loads.** See ★*curves of ship calculations.* —**Dead load.** (*a*) A load which stays in the position in which it is placed; a stationary load; a fixed load. (*b*) In a bridge or other structure, the fixed weight of the structure due to the material of which it is made, and which is not removable, or affected by movable weights on the floor or roof. (*c*) In railway service, the weight of cars, trucks, engine, and tender, which must be hauled in order to carry the *paying load* of freight or passengers. **Inductive load,** in *elect.*, load due to the inductance in the receiving circuit of a generator. See ★*load*[2], *n.* **Lighting-load,** that portion of the load of a generating station which is used for the supply of electric lamps. **Load characteristic,** in *elect.*, a curve showing the power output or load of an alternating-current machine, generator, or motor, as a function of the current. See ★*load*[2], *n.* **Load current,** the current in the receiving circuit of an electric generator. See ★*load*[2], *n.*—**Load curve.** See ★*curve* and ★*load*[2], *n.*—**Load-diagram of a station,** a curve which represents the output of a station for a given time, say for the twenty-four hours of the day. *Houston,* Elect. Dict.—**Load factor.** See ★*factor.*—**Load of a dynamo,** the current delivered by a dynamo. **Motor load,** that portion of the load of an electric generating station which is used in operating motors.—**Non-inductive load,** in *elect.*, load due to the ohmic resistance of the receiving circuit of a generator. See ★*load*[2], *n.* **Paying load,** in railway service, the net weight of freight or passengers which is productive of income. See *dead* ★*load* (*c*). **Peak load.** See ★*peak-load.* **Rolling load,** a weight on a bridge or other structure borne upon the wheels of a train or wagon which passes over it. Also called the *moving load.*—**Tidal load,** the pressure, weight, or load imposed on any portion of the earth's crust by the inflow of an oceanic tidal wave; also the increase of pressure, either upward or downward, due to the tidal stress produced by the action of the sun and moon on the rotating crust of the earth.—**Top load,** in *lumbering*, a load of logs piled more than one tier high, as distinguished from a ★*bunk-load.*

load[2], *v. t.* **8.** To add to (the net amount of the premium fixed as the actual cost of issuing a policy of insurance) such an amount as will cover the office expense of carrying the policy.

loaded[2], *p. a.* **3.** Filled with extraneous substances, especially for the purpose of fraudulently increasing the weight.

To compare the difference between a pure and *loaded* sponge, take a 2 ounce sponge of each grade, wetting them both up, and it will be found that the pure article will measure about nineteen inches in circumference, or thereabout. The *loaded* article in comparison will only measure about sixteen inches in circumference and less.
Sci. Amer. Sup., Feb. 14, 1903, p. 22670.

4. Coated or furred: noting a condition of the tongue.—**Loaded line.** See ★*loading,* 7.—**Loaded nucleus.** See ★*nucleus.*

loader, *n.*—**Top loader,** in *lumbering*, that member of a loading-crew who stands on the top of a load and places logs as they are sent up.

load-factor (lōd′fak″tor), *n.* The ratio of the average to the maximum demand for power from an engine, motor, or power-plant. See ★*factor.*

The *load-factor* of most public hydraulic power supplies is considerably under 30 per cent.
Encyc. Brit., XXXI. 894.

load-governor (lōd′guv″ėr-nor), *n.* A governor which operates when the load on the engine changes: it does not keep the speed of the engine very uniform.

loading, *n.* **6.** The process of filling silk with metallic compounds, for which it has a great attraction when in solution, in order to increase its weight.—**7.** In *elect.*, a method invented by M. J. Pupin, of reducing the attenuation of telephonic currents in underground cables and long-distance lines (and therefore improving the operation). It consists in inserting into the telephone-line at certain definite intervals self-induction coils, which neutralize the deleterious effect of the electrostatic capacity of the line.—**8.** The exorbitant profit exacted from workmen under the truck system (which see, under *truck*[1]). [Trade-union slang.]

Notwithstanding a nominal uniformity of rate, both labor, cost and real wages will vary according to the extent of the truck business in each firm, the economy and ability with which this subsidiary store-keeping is managed, and the profit or "*loading*" which each employer chooses to exact, the latter amounting, in effect, to a fraud upon the workman.
Webb, Industrial Democracy, I. 318.

loading-berth (lō′ding-bėrth), *n.* *Naut.*, a wharf or other place where a vessel takes in her cargo; a place convenient for a vessel to ship her freight.

loading-chain (lō′ding-chān), *n.* In *lumbering*, a long chain used in loading or piling logs with horses. Also called *decking-chain.*

loading-jack (lō′ding-jak), *n.* A platformed framework upon which logs are hoisted from the water for loading upon cars.

load-panel (lōd′pan″el), *n.* In *elect.*, the panel of a central-station switchboard provided with apparatus for indicating the total station-load. *Houston,* Elect. Dict.

load-spring (lōd′spring), *n.* A spring on an engine-governor by compressing which a greater load can be put on the governor, thus changing the speed at which it allows the engine to run.

loaf[1], *n.* —**Chicken-loaf,** chicken prepared somewhat like veal-loaf, but without ham, and with slices of hard-boiled egg in the bottom of the mold, so that they appear imbedded in the loaf when the mold is taken off.—**Cottage loaf.** See ★*cottage.*—**Liver-loaf,** a preparation somewhat like a *paté de foie gras*, but with flour panada and butter mixed in it: served cold, in slices.—**Mushroom-loaf,** a loaf of bread hollowed out and filled with a preparation of mushrooms, with seasoning.—**Oyster-loaf,** an article of food made like mushroom-loaf with oysters in place of the mushrooms.—**Veal-loaf,** minced veal with ham and various spices, made into the form of a loaf and baked: eaten sliced and cold.

loam-casting (lōm′kàs″ting), *n.* A casting made by the use of a loam-mold.

loaming (lo′ming), *n.* In *mining*, a method of prospecting for gold-veins the outcrop of which is covered and concealed, by washing numerous samples of earth and thus tracing the gold to its source. [Australia.]

loam-mill (lōm′mil), *n.* A mixing and pulverizing mill used to mix loam for foundry molds.

Loan for use. Same as *commodate.* **Maritime loan,** a loan of money upon the security of a vessel or its contents. The contract provides that if the security is unavoidably lost the loss shall fall upon the lender, unless a part is saved equaling the value of the loan. Such a loan is exempt from usury laws.

Loanda thimbles. See ★*thimble.*

loan-form (lōn′fôrm), *n.* In *philol.*, a form that is borrowed from another language. Compare *loan-word.*

Wechkawo selijil (obviative) is a Passamaquoddy *loan-form;* in Passamaquoddy wechkoyalijil.
Amer. Anthropologist, Jan.-March, 1902, p. 31.

loan-god (lōn′god), *n.* An alien god adopted in the worship of a particular tribe or people.

The reply to me takes the form of ignoring, or disabling the evidence, or of asserting that these superior beings are '*loan-gods,*' borrowed by savages from Europeans or Islamites. *A. Lang,* Magic and Religion, ii.

loan-myth (lōn′mith), *n.* An alien myth adopted by a people.

Their mythologies . . . resembled each other in some points . . . but the inference that many Greek myths are "*loan-myths,*" as certain Homeric words are "loan-words," from Phoenicia, must not be too hastily drawn.
A. Lang, Myth, Ritual, and Religion, I. 322, note.

loathsum, *a.* A simplified spelling of *loathsome.*

lob[1], *n.*—**Dealer in lobs,** in *cricket*, an underhand bowler.

lob[1], *v. t.* **3.** In *mining*, to break (ore, etc.) into pieces with a hammer for sorting.

Lobachevskian (lō-bä-chef′skē-an), *a.* Pertaining to or created by the Russian geometer Nicolai Ivanovich Lobachevski (1793–1856).—**Lobachevskian geometry, space.** See ★*geometry,* ★*space.*

lobal (lō′bal), *a.* [*lobe* + *-al*[1].] Having lobes; lobed: said of wheels or cams.

lobaric (lō-bar′ik), *a.* [NL. *Lobaria* + *-ic.*] Noting an acid, a colorless compound, $C_{17}H_{16}O_5$, contained in the lichen *Lobaria adusta.* It forms warty aggregates.

lobbyism (lob′i-izm), *n.* The practices of a lobbyist; the system of lobbying. [U. S.]

lobe, *n.* (*e*) In the septate cephalopods like *Nautilus* and the ammonites, any division of the septal suture which makes a convex curve toward the apex: contrasted with *saddle*, which is a curvature toward the aperture. (*f*) In the trilobites, one of the divisions of the glabella; a glabellar lobe. (*g*) In *geol.*, a projection from a glacier, like a peninsula: especially used of the continental ice-sheet of the glacial epoch. See ★*ice-lobe.*—**Adipose lobe.** Seee ★*adipose.*—**Antennal lobe,** in *entom.*, one of two hemispherical lobes forming a part of the brain. They are connected with a medullary mass and also in part attached to the optic ganglia. Also called *olfactory lobe.*—**Columellar lobe.** See ★*columellar.*—**Electric lobe,** a lobe of the medulla oblongata of the electric ray, from which originate nerves running to the electric apparatus.—**Esophageal lobes,** the tritocerebrum of an insect's brain; two lobes situated far apart in front of the mouth and connected by a bundle of fibers passing behind the esophagus. From them the labrum and viscera are innervated.—**External lobe,** in the ammonoid cephalopods, the sutural lobe formed on the outer or ventral side of the septum and divided by the mesal plane.—**Olfactory lobe.** (*b*) Same as *antennal* ★*lobe.*—**Oral lobes,** in lamellibranchs, the labial palps.—**Palpebral lobe,** in the trilobites, that portion of the cranidium which projects into the ocular curve of the free cheeks; usually, the depressed curved area behind and within the crest of the eye. In primitive Cambrian types (*Paradoxides*) it is long and crescentic; in secondary derived types (*Bronteus* and *Phacops*) it is short and semicircular; in certain highly specialized types (*Encrinurus* and *Acidaspis*) it is elevated to form the inner side of a peduncle upon the raised summit of which is the visual surface of the eye.—**Paranal lobes,** in *entom.*, two subtriangular plates placed on either side of the anus in the cockroach and other insects, and in the nymphs of the dragon-flies.—**Pedal lobe,** in *Peromedusæ*, one of a series of lobes on the marginal region or crown adjacent to the cone.—**Prefrontal lobe,** the portion of the frontal lobe of the brain anterior to the ascending convolution.—**Procerebral lobes,** a region of the optic segment of the brain of an insect giving origin to the nerves of the ocelli.—**Pyriform lobe.** Same as ★*lobus pyriformis.* —**Riedel's lobe,** a portion of liver substance occasionally found covering the gall-bladder in cases of gall-stone disease.—**Siphonal lobe,** in the ammonoid cephalopods, an azygous sutural lobe on the siphonal side or venter of the shell: same as *ventral* ★*lobe.* **Ventral lobe,** in the septate tetrabranchiate *Cephalopoda*, the sutural lobe at the venter or on the periphery. It is a single unpaired lobe, sometimes termed the siphonal lobe. It is not a primitive character in any cephalopods, but appears very early in the ontogeny of derived forms and persists to maturity only in the simpler forms of the goniatites.

lobe-angle (lōb'ang'gl), *n.* The angle at the center of a shaft occupied by a cam or by a lobe on a wheel attached to the shaft; the angle through which the shaft turns while the cam or lobe is acting.

lobelacrin (lō-be-lak'rin), *n.* [*Lobel(ia)* + *acr(id)* + *-in*[2].] Said to be the acrid lobelic-acid salt of the alkaloid lobeline, contained in *Lobelia inflata.*

Lobelia, *n.*—**Bladder-pod lobelia,** the official lobelia, *Rapuntium inflatum.*—**Blue lobelia,** *Rapuntium siphilitieum.* Also called *great lobelia* and *blue cardinal-flower.*—**California lobelia,** *Lobelia pulchella,* a low-spreading annual plant of the Sacramento Valley, Nevada, and Oregon, closely related to *Rapuntium.* It has intensely azure-blue flowers with a large whitish or yellow center.

lobelianin (lō-bē'li-ạ-nin), *n.* [*Lobelia* + *-an* + *-in*[2].] A volatile oil contained in commercial lobelia from Indian tobacco, *Lobelia inflata.* It is crystalline and melts at 71° C.

lobelic (lō-bē'lik), *a.* [*Lobelia* + *-ic.*] Pertaining to lobeline.—**Lobelic acid,** a colorless compound, present in combination with lobeline in Indian tobacco, *Lobelia inflata.* It forms non-volatile acicular crystals.

Lobites (lō-bī'tēz), *n.* [NL., ⟨ Gr. λοβός, a lobe, + λίθος, a rock.] A genus of ammonoid cephalopods from the Alpine Trias, constituting the family *Lobitidæ.* It is an isolated group with a phylogerontic construction of the living-chamber like the *Anarcestidæ* and sutures like the *Prolecanitidæ;* with entire saddles, but bifid lateral lobes in the young.

loblolly-wood (lob'lol-i-wůd), *n.* See ★*guara*[3].

lobola (lō'bō-lä), *n.* [Zulu?] A present, usually of cattle, given by the bridegroom to the father of the bride, as is customary among the Zulus and other tribes of South Africa; also, the custom itself. *Rep. Brit. Ass'n Advancement of Sci.,* 1900, p. 905.

lobous (lō'bus), *a.* Same as *lobose.*

lobscouser (lob'skou-sêr), *n.* One who eats lobscouse; a sailor.

lobster[1], *n.* **6.** A dull fellow, who is easily imposed upon; an irritating blockhead; a foolish bore; a chump: a vague term for contempt. [Slang.]—**Unboiled lobster,** in England, a policeman, so called from his blue coat: in distinction from a *boiled lobster,* or red-coated British soldier. See def. 5. [Slang.]

lobster[2] (lob'stêr), *n.* [*lob*[1], *v.,* + *-ster;* in humorous allusion to *lobster*[1], *n.,* 5 or 6.] In *cricket,* a bowler of lobs or underhand balls. See *lob*[1], 8.

lobster-basket (lob'stêr-bâs″ket), *n.* A basket-trap for catching lobsters.

lobster-boat (lob'stêr-bōt), *n.* A boat used in lobster-fishing.

The *lobster boats* may be conveniently divided into two classes; first, the smaller boats, with or without sails, . . . used by the fishermen in tending their pots, and, secondly, the smacks acting as carriers to the different markets. *Fisheries of the U. S.,* Sec. 5, II. 669.

lobster-caterpillar (lob'stêr-kat″êr-pil-ạr), *n.* The larva of the lobster-moth.

lobster-crab (lob'stêr-krab), *n.* A porcelain-crab.

lobster-flower (lob'stêr-flou″êr), *n.* The Christmas flower, or *flor de Pascua,* of Mexico and Central America, *Poinsettia pulcherrima:* so called on account of its conspicuous bright floral bracts. See *Poinsettia,* 2.

lobsterling (lob'stêr-ling), *n.* [*lobster* + *-ling*[1].] A young, undeveloped lobster at about the fifth molt, at which time it more nearly resembles the adult in shape and habits than at earlier stages.

After one failure 5,000 larvæ were successfully hatched; but of these, despite every care, very few attained the "*lobsterling*" stage. *Nature,* Jan. 12, 1905, p. 255.

lobster-net (lob'stêr-net), *n.* **1.** A hoop-net for catching lobsters.—**2.** A lobster-pot of netting supported upon a framework of hoops.

lobster-toad (lob'stêr-tōd), *n.* A species of crab.

lobule, *n.* **2.** A terminal bronchus, with the air-cells, vessels, and nerves related to it.—**3.** In *bot.,* same as ★*disculus.*—**Hippocampal lobule.** See ★*lobus pyriformis.*—**Petrosal lobule,** the floccular appendage of the cerebellum; the flocculus. *Trans. Linnean Soc. London,* Zool., Feb., 1903, p. 333.

lobulet, lobulette (lob'ū-let, lob-ū-let'), *n.* [*lobule* + dim. *-et*[1].] An ultimate bronchial twig, with the air-cells in relation with it. *Buck,* Med. Handbook, V. 580.

lobulization (lob″ū-li-zā'shon), *n.* [*lobule* + *-ize* + *-ation.*] Same as *lobulation.*

lobulose (lob'ū-lōs), *a.* [*lobule* + *-ose.*] Having lobules.

lobulous (lob'ū-lus), *a.* [*lobule* + *-ous.*] Same as ★*lobulose.*

Lobulus appendicularis. Same as ★*lobus flocculi.*

lobus, *n.*—**Lobi inferiores,** small lobes or diverticula in the brain of fishes, which arise from the floor of the mesencephalon and lie just behind the infundibulum.

In fishes the so-called *lobi inferiores* appear behind the infundibulum. *Buck,* Medical Handbook, II., 271.

Lobus anticus, the anterior azygous lobe of the cerebellum. *Trans. Linnean Soc. London,* Zool., Jan., 1899, p. 365.—**Lobus flocculi,** a lateral appendage of the cerebellum in mammals supposed to correspond with the flocculus in the human brain. Also known as *lobulus appendicularis. Trans. Linnean Soc. London,* Zool., Jan., 1899, p. 362.—**Lobus posticus,** the posterior azygous lobe of the cerebellum. *Trans. Linnean Soc. London,* Zool., Jan., 1899, p. 365.—**Lobus pyriformis.** (*a*) The base of the hemisphere of the mammalian brain, which is of a pyriform shape, broadest at the posterior end and tapering to the olfactory bulb. By some the term is restricted to the posterior area which has been variously known as *nuciform eminence* and *hippocampal lobule.* (*b*) A small elevation near the middle of the inferior vermiform process of the cerebellum, between the biventral lobes.—**Lobus pyriformis anticus,** the tapering portion of the pyriform lobe anterior to the vallecula Sylvii.—**Lobus pyriformis posticus,** the expanded portion of the pyriform lobe posterior to the vallecula Sylvii. Also known as *nuciform eminence, hippocampal lobule.*

local. I. *a.*—**Complex, simple local sign, local death, local express, local stamp.** See ★*sign,* ★*death,* ★*express,* ★*stamp.*

II. *n.* **3.** A local train; an accommodation train which stops at all stations.—**4.** A local examination: as, the university *locals.*

local (lō'kạl), *v. t.*; pret. and pp. *localed, localled,* ppr. *localing, localling.* [*local, a.*] In *Scots law:* (*a*) To apportion (an increase of the stipend of a minister of the established church) among the different heritors or landholders. *Jamieson.* (*b*) To lay the charge of such a stipend on or upon (a landholder or his land). *N. E. D.*

localist (lō'kạl-ist), *n.* [*local* + *-ist.*] One who has much regard for local conditions; one who studies what is local, or is inclined to treat things from a local viewpoint; specifically, in *med.,* one who regards every disease as having a local origin.

locality, *n.* **5.** In *phytogeog.,* the approximate geographic position of an individual specimen: less definite than *station. F. V. Coville.*—**Bump of locality,** a phrase borrowed humorously from phrenology, to denote the power of finding one's way easily and certainly amid novel surroundings: as, I have absolutely no *bump of locality.*—**Sense of locality.** (*a*) In general, the power of finding one's way easily and certainly amid novel surroundings, as in a city visited for the first time. (*b*) In *psychol.,* a phrase loosely formed on the analogy of 'sense of space,' 'sense of time,' etc., to denote the power of cutaneous localization, that is, of referring a cutaneous stimulus to the area of the skin to which it is applied.—**Type locality,** in *zoöl.,* the place where an animal which was described as a new species was taken; the locality where a type specimen was obtained.

Canis latrans Say [Coyote]. *Type locality.*—Vicinity of Council Bluffs, Pottawattamie County, Iowa. *Proc. Bost. Soc. Nat. Hist.,* Dec., 1901, p. 208.

localization, *n.*—**Germinal localization.** See ★*germinal.*

localize, *v. t.*—**Localized capacity,** electrostatic capacity introduced at given points in an electric circuit by means of condensers, as distinguished from the distributed capacity of the circuit itself.—**Localized inductance,** inductance introduced into an electric circuit by means of properly wound coils, as distinguished from the distributed inductance of the circuit itself.

locate, *v.* **I.** *trans.* **3.** In the *Meth. Ch.,* to appoint to a fixed charge or station.

II. *intrans.* **2.** In the *Meth. Ch.,* to settle as a permanent preacher; cease to be itinerant.

location, *n.* **6.** An intuitive perception of distance and direction.

These birds [penguins] must have a wonderful power of *location,* as the male dived when about 600 yards from the vessel, reappearing close by the floe where his mate was seated, the intervening space being covered with ice-floes. *Geog. Jour.* (R. G. S.), XVI. 382.

locational (lō-kā'shon-ạl), *a.* [*location* + *-al*[1].] Of or pertaining to location; locative.

locative, *a.* **3.** Serving to indicate the location of anything: as, a *locative* object in the neighborhood.

lochage (lōk'ạj), *n.* [Gr. λοχαγός, λοχηγός, ⟨ λόχος, lochus, + ἄγειν, lead.] In *Gr. antiq.,* the commander of a lochus. See ★*lochus.*

lochiorrhagia (lō″ki-ō-rā'ji-ạ), *n.* [NL., ⟨ Gr. λόχια, lochia, + *-ραγια,* ⟨ ῥηγνύναι, break, burst.] An excessive lochial flow.

lochioschesis (lō-ki-os'kē-sis), *n.* [NL., ⟨ Gr. λόχια, lochia, + σχέσις, retention.] Arrest of the lochial flow.

lochometritis (lō″kō-mē-trī'tis), *n.* [NL., ⟨ Gr. λόχος, childbirth, + μήτρα, uterus, + *-itis.*] Metritis following childbirth.

lochoperitonitis (lō″kō-per-i-tō-nī'tis), *n.* [NL., ⟨ Gr. λόχος, childbirth, + NL. *peritonitis.*] Puerperal peritonitis.

lochopyra (lō-kō-pī'rä), *n.* [NL., ⟨ Gr. λόχος, childbirth, + πυρ(ετός), fever.] Puerperal fever.

lochus (lō'kus), *n.*; pl. *lochi* (-kī). [NL., also *lochos;* ⟨ Gr. λόχος, a company of men, an ambush.] In *Gr. antiq.,* a body of infantry; in Sparta, one of the larger divisions in which able-bodied men capable of bearing arms were grouped.

lock[1], *n.* **10.** A receiver of stolen goods; also, the house in which such a 'fence' receives stolen goods. [Thieves' slang.]—**11.** A transposition or duplication of pages on the printed sheet of a book. **Builders' lock,** the general name of a class of house- and store-locks. **Chubb lock,** a lock of a special type made by an English inventor of that name. **Cuvelier lock,** a lock for safety-lamps, consisting of a curved tubular catch which can be opened by hydraulic pressure which expands the tube and springs it open. **Duplex lock,** a lock of the cylinder type, having two keyways and requiring two keys to open it, one of which is a master-key opening all of a series, and the other is adapted to its particular lock and no other. See ★*guard-lock,* 2. **Magnetic lock,** in *mining,* a lock for safety-lamps which can only be opened by the application of a powerful magnet.—**Pasquil lock,** a roll-top desk lock having two long bolts that engage the sides of the desk, the lock itself being in the center of the roll-top, at the middle of the desk.—**Vacuum lock,** a locking device operated by a vacuum; a device for utilizing the pressure of the atmosphere to hold a movable piece in position.

lock[2], *n.*—**In the lock,** with the tufts unopened, as wool. Also *in the fleece.*—**Palate lock,** a lock of hair over the frontal fontanelle, tied up firmly by negroes of the Southern States in cases of sore throat, because it is believed to draw up the palate and thus to give more breathing-space.

lock-bedder (lok'bed″êr), *n.* A machine or tool for making a recess in a gun-stock for the lock and tangs.

lock-culvert (lok'kul″vêrt), *n.* A culvert or conduit below the floor of a hydraulic lock, connecting the lock-chamber with the sections of the canal or basin both above and below the lock. The flow of water to or from the lock-chamber is regulated by two wickets placed in the culvert, one on each side of the outlet or connection from the culvert to the lock-chamber.

lock-gate, *n.* There are various forms of lock-gates, the more common of which are the miter gate and the sliding gate. In the former, the gate at each end of the lock is composed of two leaves, each turning about a vertical axis at the side wall of the lock, when open standing parallel with the side wall, and when closed abutting together at an obtuse angle, the surface of contact between the two gates forming a miter. A sliding lock-gate is one which, when the lock is to be opened, slides horizontally into a recess in the masonry.

locking (lok'ing), *n.* A split pin. *Barrowman,* Glossary.

locking-bar (lok'ing-bär), *n.* **1.** A bar or rod used to lock a door or mechanism.—**2.** In *railroading,* same as ★*detector-bar.*

locking-bolt (lok'ing-bōlt), *n.* Same as ★*locking-pin.*

locking-pin (lok'ing-pin), *n.* A pin that locks one piece of a mechanism to another; specifically, *naut.,* a pin used to lock the forward rudder of a double-ended ferry-boat in a line with the keel. Also *locking-bolt.*

lockless (lok'les), *a.* [*lock*[1] + *-less.*] Without a lock or locks.

lock-lug (lock'lug), *n.* The raised portion on the upper surface of a gun to which the lock is secured.

lock-net (lok'net), *n.* A large cylindrical hoop-net used to catch crawfish.

lock-seat (lok'sēt), *n.* **1.** The excavation, pit, or foundation for a hydraulic lock.—**2.** The general location or place intended or suitable for a hydraulic lock. Also *lock-site.*

lock-site (lok'sīt), *n.* Same as ★*lock-seat,* 2.

lock-turbine (lok'têr″bin), *n.* A hydraulic turbine placed in or near the walls of a hydraulic lock, driven by water flowing from the upper to the lower level of the basin, used for the purpose of furnishing power with which to operate the wickets and gates of a lock and to draw boats into or out of a lock.

lock-wicket (lok'wik'et), *n.* A wicket, gate, or valve placed in a lock-gate or in a lock-culvert, for the purpose of regulating the flow of water into or out of a hydraulic lock.

loco[1], *n.* **II.** *a.* Derived from loco-weed.—**Loco acid,** a compound isolated from loco-weed, to which the poisonous properties of the plant are attributed.

loco[1], *v. t.* Hence—**2.** To make crazy or in any way eccentric: as, he's plumb *locoed.* [Slang, western U. S.]

loco[2] (lō′kō), *n.* An abbreviated form of *locomotive.* [Little used in the United States.]

Locofocoism (lō-ko-fo′kō-izm), *n.* [*locofoco* + *-ism.*] The principles of the Locofoco party.

locoism (lo′kō-izm), *n.* A disease of cattle in the semi-arid region of the western United States, due to eating certain weeds known as loco-weeds, and characterized by peculiar nervous symptoms which are followed by paralysis, emaciation, and finally death.

locomarine (lo kō-ma-rēn′), *a.* [*loco(motive)* + *marine.*] Of a locomotive type, but used in a ship: as, a *locomarine* boiler.

locomobile (lō-ko-mō′bil), *a.* and *n.* [L. *locus*, place, + *mobilis*, movable.] **I.** *a.* Having the power to change its place by its own motor, or without the aid of power or apparatus outside of itself.

II. *n.* A commercial name for a form of motor-car.

locomobility (lō″kō-mō-bil′i-ti), *n.* [*locomobile* + *-ity.*] The character of being locomobile; the capacity or power to move from one place to another.

locomote (lō′kō-mōt), *v. i.*; pret. and pp. *locomoted*, ppr. *locomoting.* [A back-formation from *locomotor.*] **1.** To move from one place to another. [Humorous.]—**2.** In *biol.*, to effect a change of place: as, a medusa which *locomotes* toward the light.

locomotility (lō″kō-mō-til′i-ti), *n.* [L. *locus*, place, + E. *motility.*] Same as *locomotivity.*

locomotive. **I.** *a.* – **Locomotive chair.** See ★*chair.* —**Locomotive crane.** See *railway-crane* (*b*), under ★*crane*[2]. **Locomotive-rod boring-machine.** See ★*boring-machine.*

II. *n.*—**Camel-back locomotive.** Same as ★*camel-back*, 2.—**Fairlie locomotive,** a double-ended locomotive having four cylinders, two boilers with a double fire-box between them, and a swiveling arrangement for the trucks to allow it to run around curves: designed for use on narrow-gage roads where high tractive power is called for with small diameter of boiler.—**Forney locomotive,** a locomotive in which the tank and coal-bunker are carried on an extension of the engine-frame, back of the fire-box, supported by a swiveling-truck. These locomotives were used in suburban traffic and on the elevated railways in New York city before the introduction of electricity.—**Mason locomotive.** Same as *double-truck tank-locomotive* (which see, under *locomotive*).—**Rack-rail locomotive,** a locomotive for use on a rack-railroad; one having a pinion, driven by engines, to engage with a stationary rack on the road-bed instead of depending on the adhesion of smooth wheels to rails: used on roads which have excessive grades, as on mountain ascents.—**Single-driver locomotive,** one having only one pair of driving-wheels, and intended for high speed with low tractive power. It avoids the use of side- or coupling-rods.—**Strong locomotive,** a locomotive (named for its inventor), which had gridiron slide-valves, separate exhaust- and steam-valves, and a valve-gear by which it could be run either forward or backward, with only one eccentric for each side. It also had a cylindrical fire-box, arranged to form a twin furnace, corrugated to resist collapse, and with a combustion-chamber to secure complete combustion before the gases entered the tubes.

locomotive-balance, *n.* **2.** A weight placed in the driving-wheel of a locomotive to balance, as much as possible, the inertia of the reciprocating parts.

locomutation (lō″kō-mū-tā′shon), *n.* [L. *locus*, place, + *mutatio*(*n-*), change.] Change of place; moving from place to place. [Nonce-word.]

I should be glad to speculate also on the effect of the tendency of population towards great cities; no new thing, but intensified as never before by increased and increasing ease of *locomutation.*

Lowell, Latest Lit. Essays and Addresses, p. 184.

locor (lō′kor), *n.* [L. *loc*(*us*), place, + E. (*vect*)*or.*] A vector which has definite position, but does not indicate rotation or any rotative function.

In the review of Prof. Henrici's "Vectors and *Rotors*" in NATURE of October 29 (p. 617), it was mentioned that Prof. A. Lodge had suggested the use of the word "*locor*" to indicate a vector which has definite position, but does not indicate rotation or any rotative function. Prof. R. H. Smith writes to say that the word "*locor*" is used in this way throughout his book "Graphics," published by Messrs. Longmans in 1888, "*rotor*" being used for rotative quantities. *Nature*, Nov. 19, 1903, p. 64.

locoto (lō-kō′tō), *n.* [Sp. corruption of Aymará *locoti*, Quichua *roccoto*, erroneously described by Tschudi as green pepper.] A variety of the ají or red pepper, botanically known as *Capsicum pubescens* (Raimondi), growing in the warmer valleys of Peru and Bolivia. It is plum-shaped and has but one large seed.

loculamentous (lok″ū-la-men′tus), *a.* Full of loculaments, or little cells.

loculus, *n.* **1.** In *zoöl.*: (*c*) Same as ★*air-chamber*, 4.

locum (lō′kum), *n.* [*locum*(*-tenens*).] **1.** A locum-tenens (in medical practice). *The Lancet*, June 6, 1903 (advt.).—**2.** The temporary place occupied by a locum-tenens. *The Lancet*, June 6, 1903 (advt.).

locum-tenent (lō″kum-tē′nent), *n.* Same as *locum tenens* (which see).

I met with a serious accident . . . in consequence of which I had to engage a *locum-tenent*, as I was obliged to leave home for a complete rest.

Lancet, Aug. 19, 1899, p. 547.

locupletative† (lok-ū-plē′ta-tiv), *a.* [L. *locupletatus*, pp. of *locupletare*, make rich, < *locuples*, rich: see ★*locuplete.*] Tending to make rich.

locuplete† (lok′ū-plēt), *a.* [L. *locuples* (*-plet-*), rich in lands, rich, opulent, < *locus*, a place, + √*ple-* in **plere*, fill, *plenus*, full.] Rich; wealthy; well stored. *Blount.*

locus[1], *n.* **6.** The words and figures, in the signature to a quotation or in a reference to a passage, which designate the particular place or division of the work (book, chapter, page, section, verse, line, etc.) where the passage in question occurs. The locus properly follows the title of the work or piece cited, and the title follows the name of the author.—**7.** In *geom.*, the place of all the points, and of only those points, which satisfy a given condition.

All points in a plane which satisfy a single geometric condition make up often a single straight or a single circle, in rare cases more than one. Neglecting these rare cases, we may call such straight or circle the *locus* (place) of the points satisfying the given condition.

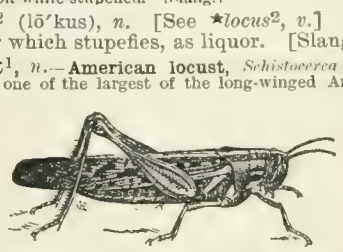
G. B. Halsted, Rational Geometry, p. 269.

Cusp-locus. Same as *cuspidal locus.*—**Lexell's locus.** Same as *Lexell's* ★*circle.*—**Locus communis,** a commonplace.

locus[2] (lō′kus), *v. t.*; pret. and pp. *locused* or *locussed*, ppr. *locusing* or *locussing.* [Appar. adapted from *loco*[1], *v.*, associated with *hocus*, *v.*] To stupefy with drink.—**To locus away,** to carry off while stupefied. [Slang.]

locus[2] (lō′kus), *n.* [See ★*locus*[2], *v.*] Something which stupefies, as liquor. [Slang.]

locust[1], *n.*—**American locust,** *Schistocerca americana*, one of the largest of the long-winged American

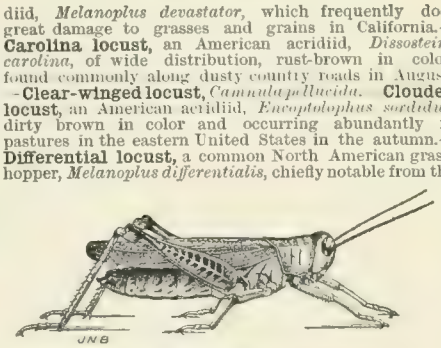


American Locust (*Schistocerca americana*). Reduced.

grasshoppers, allied to several of the most destructive migratory locusts in other parts of the world.—**California devastating locust,** a western American acri-

California Devastating Locust. (*Melanoplus devastator*).

diid, *Melanoplus devastator*, which frequently does great damage to grasses and grains in California.—**Carolina locust,** an American acridiid, *Dissosteira carolina*, of wide distribution, rust-brown in color, found commonly along dusty country roads in August. —**Clear-winged locust,** *Camnula pellucida.* **Clouded locust,** an American acridiid, *Encoptolophus sordidus*, dirty brown in color and occurring abundantly in pastures in the eastern United States in the autumn.—**Differential locust,** a common North American grasshopper, *Melanoplus differentialis*, chiefly notable from the



Differential Locust (*Melanoplus differentialis*). (Sanderson, U. S. D. A.)

great damage it occasionally does to cotton-plants in certain of the southern United States.—**Dog-day locust,** an American cicadid insect, *Tibicen pruinosa.* Also called *harvest-fly* and *lyreman.*—**Dudley locust,** a local name in England for the Dudley trilobite (which see, under *trilobite*).—**Green-faced locust,** an American acridiid grasshopper or locust, *Chortophaga viridifasciata*, common in meadows and pasture-lands in many of the United States.—**Hooded locust,** a curious locustid of the genus *Typhoptera*, inhabiting the Malay Peninsula, which has a bladder-like membrane between head and thorax, which when alarmed it can throw out into a hood-like organ over the head.—**Leather-colored locust,** *Schistocerca alutacea.*—**Lesser migratory locust,** an American acridiid, *Melanoplus atlanis*, occasionally injurious to crops, especially in a restricted region in southern New Hampshire.—**Migratory locust.** See *Rocky Mountain locust*, under *locust*[1].—**Red-legged locust,** *Melanoplus femur-rubrum.* See *red-thighed locust*, under *locust*[1].—**Sprinkled locust,** *Chloealtis conspersa.*—**Two-striped locust,** *Melanoplus bivittatus.*

locust†[2], *n.*—**Locust leaf-beetle.** See ★*leaf-beetle.*—**Locust saw-fly.** See ★*saw-fly.*—**River-locust,** *Amorpha fruticosa*, a North American leguminous shrub with spike-like racemes of violet-purple flowers. Better known as *bastard* or *false indigo.*—**Sweet locust, thorn-locust,** the honey-locust.

locustal (lō-kus′tal), *a.* Of or pertaining to locusts.

locust-beetle (lō′kust-bē″tl), *n.* An American cerambycid beetle, *Cyllene robiniæ*, whose larva bores in the trunks and branches of locust-trees.

locust-bird, *n.* **2.** In South Africa, applied to several very different birds, specifically to one of the grackles, *Creatophora carunculata.*—**Great locust-bird,** the stork, *Ciconia alba.*—**Little locust-bird,** *Glareola nordmanni*, a pratincole, or member

Little Locust-bird (*Glareola nordmanni*).

of the plover family, which has something the appearance of a long-legged swallow.

locustid (lō-kus′tid), *n.* and *a.* **I.** *n.* A member of the orthopterous family *Locustidæ.*

II. *a.* Having the characters of or belonging to the family *Locustidæ.*

locust-lobster (lō′kust-lob″stèr), *n.* A crustacean belonging to the family *Scyllaridæ.*

locust-mite (lō′kust-mīt), *n.* A red mite, *Trombidium locustarum*, which destroys grasshopper eggs in the United States.

locust-moth (lō′kust-môth), *n.* An American tineid moth, *Depressaria robiniella*, whose small, green, black-headed larva defoliates locust-trees in June.

locust-tree, *n.* **2.** In New Zealand, *Sophora tetraptera.* See ★*kowhai.*—**African locust-tree,** *Parkia Africana.* Also called *nitta-tree.* See *Parkia.*

locutory, *n.* **II.** *a.* Pertaining to or producing speech.

lode[1], *n.*—**Comstock lode,** a very noted mineral lode formerly worked on a large scale at Virginia City, Nevada. It is a great fissure-vein, four miles long, through igneous rocks of Tertiary age, on the western flank of Mount Davidson. This lode has produced more than $325,000,000 in gold and silver.—**Live lode,** a lode containing ore which it is profitable to work.—**Peachy lode,** a lode which has a bluish-green color that, in some lights, presents a deep pink color.—**Right-running lode,** a lode which runs parallel, or nearly so, to the axis of elevation of the district.

lode-light (lōd′līt), *n.* See the extract.

Appearances of flame above mineral veins are said to have been seen, and at all events are sufficiently well established to have received a special name '*lode lights*' in Cornwall. *C. Le N. Foster*, Ore and Stone Mining, p. 107.

lode-mining (lōd′mī″ning), *n.* The taking out of ore which occurs in lodes or veins.

lodge, *n.* **8.** In Cambridge, England, the residence of the head of a college.—**9.** In *mining*, a cabin at the pit-head for workmen. *Barrowman*, Glossary.—**Cavate lodge,** a dwelling cut out of soft rock. Such dwellings are found, for instance, in the cañons of the southwestern United States. See ★*cavate.*

Cavate lodges comprise a type of structures closely related to cliff houses and cave dwellings. The term is a comparatively new one, and the structures themselves are not widely known. They differ from the cliff houses and cave dwellings principally in the fact that the rooms are hollowed out of cliffs and hills by human agency, being cut out of soft rock, while the former habitations are simple, ordinary structures built for various reasons within a cove or on a bench in the cliffs or within a cave. The difference is principally if not wholly the result of a different physical environment, i. e., *cavate lodges* and cave dwellings are only different phases of the same thing; but for the present at least, the name will be used and the *cavate lodges* will be treated as a separate class.

Smithsonian Rep., 1892, p. 217.

lodge-moraine (loj′mō-rān″), *n.* See ★*moraine.*

lodge-pole (loj′pōl), *n.* A pole used in the framework of a lodge.

Lodge wave. See ★*wave*[1].

lodging-money (loj'ing-mun'i), *n.* In the British service, a money allowance in lieu of quarters. Called *commutation of quarters* in the United States.

lodgment, *n.* **5.** In *mining*, same as *lodge*, 7. [Scotch.]

lodgment-level (loj'ment-lev″el), *n.* Same as ★*lodgement*, 5, and *lodge*, 7.

lodhranite, lodranite (lōd'ra-nīt), *n.* [Formation not ascertained.] A type of meteoric stone or aërolite. See ★*meteorite*.

lodja (lōd-yä'), *n.* [Also *lodia*, *ladia* (see ★*ladia*); < Russ. *lodiyá*, *lodyá*, also *ladiyá*, *ladiyá*, = Pol. *lodzia* (barred *l*) = Bohem. *lodí* = Serv. *ladya* = Bulg. *ladya* = OBulg. *ladiya*, *alŭdiya* = Lith. *eldiya*, *aldiya*, a ship.] A Russian boat, long, flat-bottomed, and propelled by oars, but in some forms provided with a deck and a mast.

Thursday at 6 of the clocke in the morning there came aboord of us one of the Russe *Lodiues*, rowing with twentie oares, and there were foure and twentie men in her. *Steven Burrowe*, in Hakluyt, Voyages, I. 276.

loess, *n.* **Remodified loess,** loess which has been redeposited after its first formation.

All that we know of the loess and its fossils compels us to include this accumulation as a product of the Pleistocene period. It is not of post-glacial age, even much of what one may call the "*remodified loess*" being of Late Glacial or Pleistocene age.
Smithsonian Rep., 1890, p. 227.

loessial (lès'i-al), *a.* [*loess* + *-ial.*] In *geol.*, belonging to or derived from loess.

loessic (lès'ik), *a.* [*loess* + *-ic.*] Same as ★*loessial*.

loeweite (lē'vē-īt), *n.* [G. *löweit* (1847), named after A. *Loewe* of the Austrian mint.] A hydrated sulphate of magnesium and sodium, found at the Ischl salt-mine, Austria.

loewigite (lē'vig-īt), *n.* [G. *löwigit* (1861), named after K. J. *Loewig*, who first analyzed it.] A hydrated sulphate of aluminium and potassium, occurring in straw-yellow rounded masses.

loft[1], *n.* **5.** (*a*) A pigeon-house. (*b*) The flock of pigeons kept in it.

loft[2] (lôft), *v. t.* [*loft*[1], *n.*] To lift; in *golf*, to play (the ball) into the air in making a stroke. [Scotch.]

loft[2] (lôft), *n.* In *golf*: (*a*) The act of lofting. (*b*) The stroke so made. (*c*) The degree of slope from the vertical of the face of a club.

loft-dried (lôft'drīd), *a.* A trade-term applied to hand-made paper air-dried, usually in lofts or rooms arranged for the purpose.

lofter (lôf'tėr), *n.* A lofting-iron.

lofting, *n.* **2.** In *mining*, lagging or longitudinal timber resting on caps to support the roof of a working. [Eng.]

lofting-iron (lôf'ting-ī″ėrn), *n.* In *golf*, a form of club used in lofting a ball. See cut under *golf-club*.

log[1], *n.* **3.** *pl.* A jail (formerly built of logs). [Slang, Australia.]

'Let's put him in the *logs*,' says Jim. 'My word! just for a lark; turn for turn.' . . .

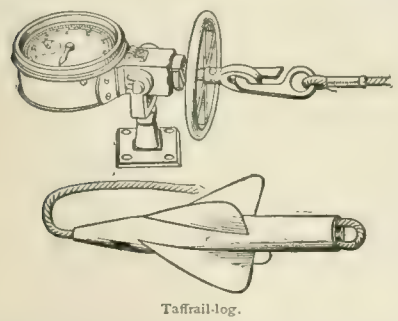
We pushed him into the farthest cell and locked both doors. . . . The lock-up, like most bush ones, was built of heavy logs.
Rolf Boldrewood, Robbery under Arms, xxv.

In the log, before cutting into planks or boards; unhewn.

One connected with lumbering operations at Bangor told me that the largest pine . . . was worth ninety dollars *in the log*. *Thoreau*, Maine Woods, p. 148.

Prize logs, in *lumbering*, logs which come to the sorting-jack without marks denoting ownership.—**To stock logs,** to deliver logs from the stump to the mill or railroad.

log[2], *n.* **1.** The taffrail-log has three main parts, namely, the register or dial, the rotator or propeller, and



Taffrail-log.

the braided line. The rotator is towed astern, and owing to the pitch of its blades it revolves as the vessel moves ahead. These revolutions turn the line which connects with the horizontal bar of the register, which in turn revolves a series of cog-wheels, and these move the hands in the respective circles on the face of the register, on the principle of the gas-meter. Some registers are provided with two, and some with three hands. In the latter case the first hand marks quarters, each division representing one quarter of a mile, or two furlongs; the second marks even miles, recording as high as ten miles; and the third marks ten-mile divisions and is graduated to one hundred miles. When the century point is reached, the three hands all indicate zero. Where the register has only two hands, as shown in the engraving, one of the hands marks either quarter-miles or tenths of a mile, and the other hand marks single miles extending as high as one hundred.

3. In *tailoring*, a document which fixes the time to be credited to journeymen for making a specified kind of garment, the men being paid nominally by the hour. *N. E. D.* Also attributive: as, a *log* shop.—**Boat's log,** an instrument used in surveys for measuring the distance run by a boat. It is a small copy of the taffrail-log employed generally at sea for recording the number of miles logged by a vessel. **Current-log.** Same as *ground-log* (which see, under *log*[2]).—**Harpoon log,** a distance-recorder named from its peculiar shape, which resembles that of a harpoon.—**Patent log,** one of a large variety of patented instruments for recording the speed of and distance run by a vessel.—**Spring log,** a speed-measurer constructed on the principle of a common spring-scale, the strain upon the spring marking the velocity of the vessel through the water. This log has a specially designed chip which is towed astern by a fine silk cord, the other end being hitched to the hook on the spring.—**Submarine log.** Same as *submerged* ★*log*.—**Submerged log,** a log with a propeller and dial in one length, both towed astern: it is necessary to haul in the entire instrument when it is required to read the distance run.—**Taffrail-log.** See ★*log*[2], 1.

log[2], *v. t.* **1.** (*b*) *Naut.*, to enter in a log-book the name of a man, with his offense and the penalty attached to it; hence, to fine.

logagraphia (log-a-graf'i-ä), *n.* Agraphia, or loss of the power to express ideas in writing.

logan[2] (lō'gan), *n.* [Algonkian *pokologan*, etc.: see ★*pokeloken*.] See ★*pokeloken*.

Bogan: A word very much used by guides and others who go into the New Brunswick woods is bogan—a still creek or bay branching from a stream—exactly the same thing the Indians call a pokologan—and I think the former is a corruption of the latter word. Now curiously enough, exactly the same thing is generally called in Maine a *logan*—which must be another form of the same word. These words are in good local use, and occur in articles on sporting, etc.
Jour. Amer. Folk-lore, April–June, 1903, p. 128.

logan-apple (lō'gan-ap″l), *n.* A small Queensland tree of the rue family, *Jambolifera acidula*, bearing acid fruits.

loganberry (lō'gan-ber″i), *n.* [Named for Judge J. H. *Logan*, the originator.] A dewberry-like plant said to be a hybrid between *Rubus vitifolius* (the dewberry of the Western States) and *R. Idæus* (the European raspberry). It originated in California in 1881. The fruit is blackberry-like, very large, dark red in color, and promises well as a garden fruit in some localities.

loganetin (lō-ga-nē'tin), *n.* [*logan(in)* + *-et* + *-in*[2].] A cleavage-product of the glucoside loganin.

loganiaceous (lō-gā-ni-ā'shius), *a.* Pertaining to or having the characteristics of the *Loganiaceæ*.

loganin (lō'gan-in), *n.* [Appar. < *Logan*, a person's name (?), + *-in*[2].] A colorless glucoside, $C_{25}H_{34}O_{14}$, contained in the pulp which embeds the seeds of *Strychnos Nux-vomica*. It crystallizes in prisms and melts at 215° C.

loganite (lō'gan-īt), *n.* [Named after Sir William *Logan* (1798–1875), at one time director of the Geological Survey of Canada.] An altered amphibole from Calumet Falls, Quebec: akin to pennine in composition.

logaphasia (log-a-fā'ziä), *n.* [NL., < Gr. λόγος, word, + NL. *aphasia*.] Loss, through brain-disease, of the power to express ideas by articulate speech.

logarithmetically (log″a-rith-met'i-kal-i), *adv.* An erroneous form for *logarithmically*.

logarithmic, *a.* **2.** Pertaining to the logarithmic curve.—**Logarithmic decrement, differentiation, paper,** etc. See ★*decrement*, etc.

II. *n.* A logarithmic curve.

Log-cabin china. Same as *Columbian star* ★*china*.

log-deck (log'dek), *n.* **1.** In a sawmill, the main floor, where the logs arriving by the log-slide are turned out of the slide by the flipper and assembled ready for sawing. It consists of a sloping floor down which the logs roll on rails to the log-loader, which delivers them one at a time to the saw-carriage. See ★*saw-carriage*, ★*log-slide*, ★*flipper*, 5, and ★*log loader*.

2. The platform on a loading-jack.

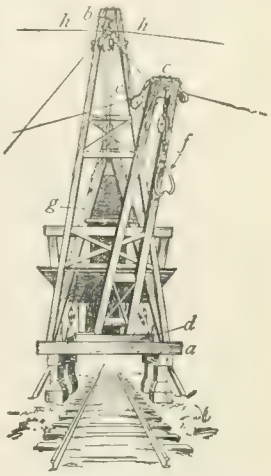
loge[2] (lōzh), *n.* [F.: see *lodge* and *loggia*.] **1.** A booth or stall.—**2.** The French name for a private box in a theater, used in English with the French pronunciation.

logeion (lō-gī'on), *n.*; pl. *logeia* (-ä). [Gr. λογεῖον, speaking-place (L. pulpitum), < λόγος, speaking, speech.] The speaking-place or stage of the ancient Greek theater.

-loger. The ending of some words which denote the person concerned with the indicated science or subject ending in *-logy*. It is equivalent to *-logue*, which represents the original Greek noun, or *-logist*, which is more used than either. It occurs first in *astrologer* (which was probably formed from *astrology* + *-er*[1], after *astronomer*, *astronomer*, rather than directly from L. *astrologus* + E. *-er*[1]), *chronologer*, *geologer*, *philologer* (obsolescent), *theologer*. The suffix is no longer a living formative, being superseded by *-logist*.

log-gatherer (log'gaтн″ėr-ėr), *n.* A hauling-device for collecting logs into piles ready for shipment.

logger[1], *n.* **2.** A machine for gathering freshly cut logs and loading them upon railroad flat-cars. It consists of two derricks having A-frame booms, the larger and taller, called the *hauling-boom*, being fixed to the machine, and the smaller, called the *loading-boom*, standing under it upon a sluing-table. The machine, with its two engines, rests upon a base which is as long as a flat-car and as wide as the whole length of a railroad-tie. Placed upon a flat-car, it can be taken to the logging-camp, where the logs lie upon the ground on each side of the way anywhere within a thousand feet of the track. It is then jacked up and the car removed. Guy-lines are run out on each side of the track to hold the hauling-boom in place, and lines are run out on each side and the logs are hauled over the ground to the track, ready to be lifted and loaded upon flat-cars by the loading-boom, empty cars being added to the train by running them under the loader.



Logger.

a, temporary base or bridge over track; *b*, hauling-boom; *c*, loading-boom; *d*, sluing-table; *e*, hauling-ropes; *f*, lifting- and loading-block, ropes and hook; *g*, engine-house; *h*, guy-ropes. About 35 feet high.

loggerhead, *n.* **4.** (*b*) In the southern United States, the common snapping-turtle, *Chelydra serpentina*.—**6.** Specifically—(*b*) in the British West Indies, a name applied to two large tyrant flycatchers, *Pitangus caudifasciatus*, and *Myiarchus crinitus*.—**10.** The steamer-duck, *Tachyeres cinereus*, a flightless water-fowl of the Falkland Islands and Straits of Magellan.—**11.** A lever or walking-beam which connects the piston-rod of an engine to the pump-plunger.—**12.** A pewter inkstand, circular and very heavy.

Pewter is now chiefly used for office inkstands and public-house or other tankards. The inkstands of this large collection are most varied, and include many of the prototypes of the circular heavy inkstand, still used, and known to many under the old name of "*loggerheads*."
Athenæum, Feb. 27, 1904, p. 280.

13. A large, heavy head, out of proportion to the body.

Why, dear madam, did you not spare your especially? said Mr. Greville. Come, Fenwick, let us retire and lay our two *loggerheads* together, and live over again the past hour, and then hang ourselves.
Richardson, Grandison, I. Letter iv.

logging-car (log'ing-kär), *n.* In *car-building*, a car having two trucks which support an underframe but no floor or car-body. It is used on light- and standard-gage roads for logs and lumber. Another type, for narrow-gage roads, consists of a truck supporting a pivoted bridge for carrying long logs and telegraph-poles, the load being supported between two cars.

logging-wheels (log'ing-hwēlz), *n. pl.* A pair of wheels, usually about 10 feet in diameter, for transporting logs. Also called *big-wheels*, *katydid*, and *timber-wheels*.

loggy (log'i), *a.* [Appar. *log*[1] + *-y*[1]; but perhaps only a variant of *logy*.] **1**†. Of strong growth; rank: said of a crop.—**2.** Heavy; stiff; sluggish: said usually of movement.

They were beat, however, by their oars, and by their slow, *loggy* stroke, and by their cheekiness.
Illus. London News, Aug., 1847, p. 142.

log-haul (log'hâl), *n.* In a sawmill, the conveyer used to lift logs from the water on which they float into and through the mill to the saws. It consists of a V-shaped spout or guideway open at the bottom. In this slot travels an endless conveyer-chain. A log floated into the open end of the conveyer is caught by

points on the chain and drawn upward in the spout until it rests on the chain, when it slides along the spout until it reaches the end of the conveyer; there the chain turns downward, leaving the log free to be rolled off sidewise upon the rails, down which it rolls to the saw-carriage. The capacity of a log haul is about 1,800 logs in a day.

logia, *n.* Plural of ★*logion.*

-logian. An ending occurring in *theologian* and some later words that form nouns of agent going with names of sciences in *-logy.* Examples are *theologian* (the first of the type), *geologian, philologian,* etc. See ★*-loger,* ★*-logist.*

logic, *n.* **Byzantine Logic,** a name given to a development of logic which Dr. Carl Prantl supposes to have taken place in Constantinople, solely on the evidence of one book which he supposes to be written in Byzantine Greek, but which Professor E. A. Sophocles regarded as plainly belonging to a later stage of the language. It is loaded with Latinisms and appears to show plain marks of the influence of Priscian. It was possibly written in Italy after the fall of Constantinople. This work and the Latin *Summulæ Logicales* of Petrus Hispanus are identical; one is a literal translation of the other.

Logical aggregate, sequence. See ★*aggregate,* 4, ★*sequence.*

logie[2] (lō'ji or -zhi), *n.* [D., < F. *loge:* see *lodge, n.*] In British Guiana, a shed or hut open at the sides.

logion (log'i-on), *n.*; pl. *logia* (-ä). [Gr. λόγιον, a saying, < λόγος, a saying, a speech, a word: see *Logos.*] A saying or maxim, as of a teacher, handed down traditionally: specifically used with reference to sayings attributed to Jesus. Collections of such sayings are supposed to have existed in the first century. Fragments of such a collection, ascribed to the third century or earlier, have been discovered in Egypt.

A great store of fragments of literary works, among which occur the now well-known "*Logia*" or "Sayings of Our Lord." *Encyc. Brit.,* XXXI. 441.

-logist. An ending forming nouns of agent used in connection with abstract nouns in *-logy.* The formation is mainly English.

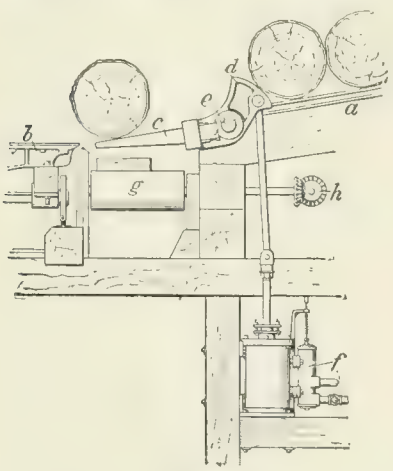
logistic. **I.** *a.* **4.** In *math.*: (*a*) Logarithmic. (*b*) Pertaining to a logarithmic curve.—**Logistic language.** See ★*language*[1].—**Logistic numbers**†, ratios or fractions.

II. *n.* **2.** A logistic curve. See cut under *logistic.*

log-jack (log'jak), *n.* Same as ★*gangway,* 4.

log-kicker (log'kik″ėr), *n.* In a sawmill, an appliance, operated by steam, for throwing the logs out of the log-slide upon the log-deck. It performs, in a different way, the same work as the flipper.

log-loader (log'lō'dėr), *n.* In a sawmill, a device, operated by steam, placed at the bottom



Log-loader.

a, inclined log-deck of sawmill (logs roll down on rails); *b,* saw-mill-carriage; *c,* log-loader delivering log to carriage; *d,* log-stop combined with loader, holding back next log; *e,* pivot on which loader and stop turn; *f,* steam-motor operating combined log-loader and stop through piston-rod and connecting-rod; descent of piston draws stop down, allowing log to roll on loader, ascent of piston lowers arm of loader, allowing log to roll down to carriage and interposing stop to check advance of next log; *g,* roller-conveyer removing planks from saw, plank passing under loader; *h,* gearing operating live roller.

of the log-deck, which selects one log at a time from the mass of logs on the deck and delivers it to the saw-carriage.

logodædalus (log-ō-ded'a-lus), *n.*; pl. *logodædali* (-lī). [Gr. λογοδαίδαλος, < λόγος, speech, + δαίδαλος, skilled.] One who is cunning in words. *N. E. D.*

logogrammatic (log″ō-gra-mat'ik), *a.* [*logogram* + *-atic* (cf. *grammatic*).] Of or relating to logograms.

logograph (log'ō-graf), *v. t.* [*logograph, n.*] To print with logotypes.

logogriphic (log-ō-grif'ik), *a.* Of or relating to logogriphs.

logolatry (lo-gol'a-tri), *n.* [Gr. λόγος, word, + λατρεία, worship.] A blind regard for words or verbal truthfulness.

logolept (log'ō-lept), *n.* [Gr. λόγος, word, + λήπτος, taken.] One who has a mania for using words in extraordinary, striking senses. *N. Y. Independent,* June 8, 1899 (quoted).

logology (lō-gol'ō-ji), *n.* [Gr. λόγος, the Logos, + *-λογία,* < λέγειν, speak.] The doctrine of the Logos.

logomach (log'ō-mak), *n.* A logomachist.

logomachic (log-ō-mak'ik), *a.* [*logomach-y* + *-ic.*] Characterized by logomachy or verbal fencing. *Biometrika,* April, 1903, p. 321.

logomachical (log-ō-mak'i-kal), *a.* Same as ★*logomachic.*

logomachize (lō-gom'a-kīz), *v. i.*; pret. and pp. *logomachized,* ppr. *logomachizing.* To engage in verbal fencing or a war of words.

logomania, *n.* **2.** A form of mental unsoundness characterized by excessive garrulity.

logomaniac (log-ō-mā'ni-ak), *n.* [Gr. λόγος, word, + E. *maniac.*] One who is insanely devoted to words rather than ideas.

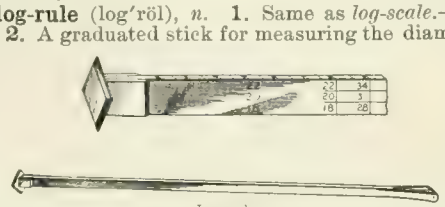
The customs of those *logo-maniacs* or word-worshipers. *H. Green,* Shakspeare and the Emblem Writers, p. 103.

logoneurosis (log″ō-nū-rō'sis), *n.* [NL., < Gr. λόγος, word, + νεῦρον, nerve, + *-osis.*] A nervous disorder which impairs the enunciation of words.

logopathy (lō-gop'a-thi), *n.* [Gr. λόγος, word, + πάθος, disease.] A defect in speech due to cerebral disease. *Baldwin,* Dict. of Philos. and Psychol., II. 30.

logorrhea (log-ō-rē'ä), *n.* [Gr. λόγος, word, + ῥοία, flux.] Morbid loquacity and rapidity of speech. *Baldwin,* Dict. of Philos. and Psychol., II. 30.

log-rule (log'röl), *n.* **1.** Same as *log-scale.*—**2.** A graduated stick for measuring the diam-



Log-rule.

eters of logs. The number of board-feet in logs of given diameters and lengths is shown on the stick.

log-runner (log'run″ėr), *n.* An Australian bird of the genus *Orthonyx,* formerly considered as related to the lyre-bird, but now placed in that heterogeneous group the *Timeliidæ.* There are about half a dozen species, the type of the genus being *O. spinicauda.* They are almost as large as sparrows, and have large feet, straight claws, and a spiny tail, whence the name *spine-tail,* frequently given to them

log-slide (log'slīd), *n.* In a sawmill, a long, narrow wooden channel up which logs are drawn by a chain. It leads from the place where the logs are floating or lying up to the log-deck.

-logue. [Also *-log, -loge;* ME. *-loge* (in *catalogue*); F. *-logue,* < L. *logus,* < Gr. *-λογος, -λογ-ος,* the verb stem (in some cases a separate word, λόγος) in composition.] An element in several words from the Greek, as *analogue, catalogue, decalogue, dialogue, duologue, epilogue, prologue.* It occurs also (instead of *-loger* or *-logist*) in some obsolescent designations of persons, related to abstract nouns in *-logy,* as *Assyriologue, astrologue, philologue, Sinologue, theologue,* etc.

logway (log'wā), *n.* Same as ★*gangway,* 4.

logwood, *n.*—**Cream of logwood,** a concentrated liquor extracted from logwood chips, used for blackening leather. *C. T. Davis,* Manuf. of Leather, p. 559.

loi (lō'ē), *n.* [Hawaiian.] A taro-patch; an artificial pond where taro is cultivated.

Loja bark. Same as *Loxa bark* (which see, under *bark*[2]).

loka (lō'kä), *n.* [Skt. *loka,* an open space, a place, a region, a division of the universe, a world.] In *Hindu philos.,* a division of the universe; a world. The three chief lokas or divisions are heaven, the earth, and the lower regions, of which there are seven; but the term is more particularly applied to seven superior worlds inhabited by different orders of beings, which, beginning with *Bhūr-loka,* the earth, rise in succession one above the other above the lower world, and culminate in *Satya-loka,* or *Brahmā-loka,* the abode of Brahmā and the superior deities. Buddhism adopted a similar classification.

lokaëtin (lō'ka-e-tin), *n.* [*loka(in)* + *-et* + *-in*[2].] A reddish-brown compound, $C_9H_8O_5$, prepared by the action of dilute acids on lokain.

lokain (lō'kä-in), *n.* [*loka(o)* + *-in*[2].] A glucoside, $C_{28}H_{34}O_{17}$, found in lokao, or Chinese green, a lake prepared in China from the buckthorn, *Rhamnus utilis* and *R. chlorophorus.*

lokanic (lō-kan'ik), *n.* [*loka(o)nic.*] Noting an acid, a violet-black pulverulent crystalline compound, $C_{36}H_{36}O_{21}$, prepared by the action of dilute acid on lokaonic acid. It assumes a bronze luster when rubbed.

lokao (lō-kä'ō), *n.* [Chinese *luh kao,* green dye wafers prepared in the province of Chekiang: *luh,* green; *kao,* fat, grease, ointment.] A green dyestuff of Chinese origin, obtained from a decoction of the bark of *Rhamnus chlorophorus* and *R. utilis,* apparently by precipitation as an aluminium lake. It has been used by European dyers, but is now laid aside in favor of the artificial coal-tar colors. Also called *Chinese green* and *green indigo.*

lokaonic (lō-kä-on'ik), *a.* [*lokao* + *-n-* + *-ic.*] Noting an acid, a dark blue-black compound, $C_{42}H_{48}O_{27}$, constituting the coloring-matter of lokao.

lokaose (lō'kä-ōs), *n.* [*loka(o)* + *-ose.*] An optically inactive sugar, $C_6H_{12}O_6$, formed by the action of dilute acids on lokaonic acid. It crystallizes in needles.

Lollardize (lol'är-dīz), *v. i.*; pret. and pp. *Lollardized,* ppr. *Lollardizing.* [*Lollard* + *-ize.*] To think or act with the Lollards.

lolling-bit (lol'ing-bit), *n.* A bit with a device attached at the center of the mouthpiece to prevent the horse's tongue from protruding from his mouth or getting over the bit.

lollop (lol'op), *n.* [*lollop, v.*] A sprawl; a flop.

loll-shraub (lol-shrôb'), *n.* [Englishmen's Hind. *lāl shrāb,* 'red wine': see *shrub*[2].] In India, a name for claret.

loma[2] (lō'mä), *n.* [Sp., a hill, ridge, slope, < *lomo,* loin, back, ridge, < L. *lumbus,* loin: see *loin.*] In Spanish-speaking countries, a minor hill or ridge; a foothill.

The vegetation [of Peru] diminishes and varies as soon as the coast is left behind and the foothills or *lomas* of the Cordillera are reached. *Nat. Geog. Mag.,* Aug., 1904, p. 315.

Lomanotidæ (lō-mā-not'i-dē), *n. pl.* [NL., < *Lomanotus* + *-idæ.*] A family of nudibranchiate gastropods having a slug-like body, the dorsum prominent, undulating or lobed, with one row of small cerata, no tentacles, and the rhinophores much foliated. It contains the single European genus *Lomanotus.*

Lomanotus (lō-mā-nō'tus), *n.* [NL., < Gr. λῶμα, fringe, + νῶτος, back.] The typical and only genus of the family *Lomanotidæ. Vérany,* 1844.

Lomatium (lō-mā'shium), *n.* [NL. (Rafinesque, 1819), in allusion to the wing surrounding the fruit; < Gr. λωμάτιον, dim. of λῶμα, the border of a robe, a fringe.] A genus of dicotyledonous plants belonging to the family *Apiaceæ.* They are nearly or quite acaulescent perennial herbs, with fusiform or tuberous roots, lobed or dissected leaves, and yellow, white, or purple flowers. The genus differs from *Peucedanum,* to which it has sometimes been referred, in its acaulescent habit, usually single umbels, and in the absence of a stylopodium. About 60 species are known, all natives of the drier regions of western North America. The roots of several, called *cous, cowish,* or *biscuit-root,* were eaten by the Indians and early settlers. See *cowish*[2].

Lombardesque (lom-bär-desk'), *a.* [*Lombard* + *-esque.*] Having the characteristics of Lombardic art, especially architecture.

Lombardian (lom-bär'di-an), *a.* Same as *Lombardic.*

Lombardism (lom'bär-dizm), *n.* [*Lombard* + *-ism.*] An idiom characteristic of Lombardy or the Lombardic dialect.

lomentariaceous (lō-men-tā-ri-ā'shius), *a.* Belonging to the family of seaweeds *Lomentariaceæ.*

lomita (lō-mē'tä), *n.* [Sp., dim. of *loma,* a ridge.] In Spanish-American countries, a hillock.

Lon. An abbreviation of *London.*

Lonchiurus (long-ki-ū'rus), *n.* [NL., < Gr. λόγχη, a spear, + οὐρά, tail.] A genus of sciænoid fishes found from the West Indies to Guiana.

Lonchopisthus (long-kō-pis'thus), *n.* [NL., < Gr. λόγχη, spear, + ὀπισθε, at the back.] A genus of fishes of the family *Opisthognathidæ,* known only from Cuba.

Lond. An abbreviation of *London.*

Londinensian (lun-di-nen'si-ạn), *a.* [ML. *Londinensis,* < *Londinium,* London.] Of or characteristic of London..

He feels them big; he thinks them human in their bulk; they are *Londinensian.*
G. Meredith, One of our Conquerors, i.

Londinian (lun-din'i-ạn), *a.* [NL. **Londinianus,* < L. *Londinium,* London.] Of or pertaining to London: in *geol.,* same as ★*Ypresian.*

London-lace (lun'dun-lās), *n.* The reed canary-grass, *Phalaris arundinacea.* Also *lady's-laces, bride's-laces.*

London particular. See ★*particular.*

long[1]. **I.** *a.* **9.** Having a long time to run before maturing: as, a *long* bill; *long* (commercial) paper.—**10.** Well- or over-supplied: as, to be *long* in some commodity or stock. See *long of stock,* under *long*[1]. **Long and short work, long odds, price, train, vacation.** See ★*work,* etc. **Long-distance telephone.** See ★*telephone.*

II. *n.*—**Longs and shorts,** cards trimmed at different lengths, so that in such games as cribbage a sharper can lift off a portion of the pack and leave a known card on the top of the cut; also used in blind hookey, so that the dealer may always get a high card.

longbeak, *n.* **2.** Any butterfly of the family *Lybytheidæ:* so called from their very long, appressed, beak-like palpi.

long-butt (lông'but), *n.* The longest of four cues employed in English billiards. It was also employed in American games until tables were reduced in size from 6 x 12 to 5½ x 11 feet and then to 5 x 10 feet as the standard.

longe[3] (lonj), *n.* An abbreviated form of *maskalonge.*

long-ell (lông'el), *n.* A coarse woolen cloth made in long pieces.

Square acres of Yorkshire lastings and *long-ells,* wrecked cargo spread out to dry. *Geog. Jour.* (R. G. S.), X. 195.

Longevity pay. See ★*pay*[1].

longfin (lông'fin), *n.* A common name given to *Caprodon longimanus,* a serranoid fish found in Australian waters.

longhead (lông'hed), *n.* In *anthrop.,* one who is dolichocephalous.

long-hop (lông'hop), *n.* Same as ★*long-hopper.*

long-hopper (lông'hop ẽr), *n.* In *cricket,* a ball bowled or thrown so that it reaches the batsman or wicket-keeper after a long flight from the pitch.—**Rank long-hopper,** a ball bowled much short of the proper length.

longhorn, *n.* **4.** An English breed of cattle with long, drooping horns. They are large and rather clumsily built, but are good beef cattle and fair milkers. In the United States the name is also applied to the long-horned Texas cattle, now almost entirely replaced by breeds with shorter horns.—**5.** An old inhabitant, shrewd and knowing. [Slang, western U. S.]

There was a big chief on the range, an old *longhorn* called Abraham, and his lil' ole squaw Sarah. They'd a boy in their lodge like me, another woman's kid, not a son, but good enough for them.
N. Y. Times, May 28, 1905.

long-house (lông'hous), *n.* A house of great length, particularly a communal dwelling of the Iroquois and of other North American tribes, or a communal house of the natives of Borneo.

This paper contains a detailed account of the life in a Kayan *long-house* in Sarawak.
Geog. Jour. (R. G. S.), XI. 195.

longicone, *a.* **II.** *n.* A long straight or slightly curved cephalopod shell with a slow rate of growth, as in *Orthoceras.*

longicostate (lon-ji-kos'tāt), *a.* [L. *longus,* long, + *costa,* rib, + *-ate*[1].] Having long ribs, as the wings of insects.

longilabrous (lon-ji-lā'brus), *a.* [L. *longus,* long, + *labrum,* lip, + *-ous.*] In *entom.,* having a long labrum.

longing-mark (lông'ing-märk), *n.* A birthmark; a strawberry-mark.

longipalatal (lon-ji-pal'ạ-tạl), *a.* [L. *longus,* long, + *palatum,* palate, + *-al*[1].] Same as ★*dolichuranic.* *Turner.*

longipalpate (lon-ji-pal'pāt), *a.* [L. *longus,* long, + NL. *palpus* + *-ate*[1].] In *entom.,* having long palpi.

longipedate (lon-ji-ped'āt), *a.* [L. *longipes* (*ped-*), long-footed (applied to insects, and so in effect equivalent to 'long-legged'), < *longus,* long, + *pes* (*ped-*), foot, + *-ate*[1].] In *entom.,* having long legs.

longitarsal (lon-ji-tär'sạl), *a.* In *entom.,* having long tarsi.

longitude, *n.*—**Circle of longitude.** See ★*circle.*—**Longitude rime** (*naut.*), a mnemonic couplet for naming the longitude when working a chronometer sight. It runs as follows:

Greenwich time best [ahead], longitude west;
Greenwich time least [behind], longitude east.

Longitude star, a term used to denote certain bright stars which have been selected for use in determining the longitude by the method of lunar distances—now nearly obsolete. **Mean longitude.** See ★*mean*[3].

longitudinal, *a.*—**Longitudinal aberration, magnetization.** See ★*aberration,* ★*magnetization.*

II. *n.* In *iron ship-building,* one of the fore-and-aft members in the framing of a cellular double bottom, consisting of a plate, an inner angle-bar by which it is connected to the inner bottom, and an outer angle-bar by which it is connected to the outside plating. In warships, the plate and inner bar are usually continuous; in merchant vessels the plate and both bars are more frequently worked intercostally between the frames. Also called *longitudinal frame.* See cuts under *double* ★*bottom.*

long-jack (lông'jak), *n.* The Queensland yellow-wood, *Flindersia Oxleyana.* See *Flindersia* and *yellow-wood.* [Australia.]

longjaw (lông'jâ), *n.* **1.** A fish, the "lake herring," *Argyrosomus prognathus,* found in the Great Lakes.—**2.** A fish of the genus *Tylosurus;* a garfish.

long-jawed (lông'jâd), *a.* Extended; long-drawn: said of a long-winded person or a great talker; also (*naut.*), of a rope that has been stretched out until its lay is lengthened.

long-legged, *a.* **2.** Having a great draft of water: said of a vessel of great length, or long in comparison with its beam.

long-legs, *n.* **2.** The European stilt, *Himantopus candidus.*

Longmyndian (lông-min'di-ạn), *a.* [*Longmynd* (see def.) + *-ian.*] In *Eng. geol.,* noting a series of sedimentary strata, constituting Longmynd ridge in Wales, which are assumed to be of Cambrian age. See *Longmynd group.*

Longobard (long'gọ-bärd), *n.* and *a.* [L. *Longobardus,* in pl. *Longobardi:* see *Lombard*[1].]

I. *n.* A Lombard.

II. *a.* Of the Longobards or Lombards; Longobardian.

Longobardian, *a.* **II.** *n.* In *geol.,* a division of the pelagic Trias in the Mediterranean basin equivalent to the Upper Noric or the Wengen beds and constituting one of the lower elements of the Upper Trias.

Longobardic (long-gọ-bär'dik), *a.* Same as *Lombardic.*

long-pated (lông'pā″ted), *a.* Same as *long-headed.*

Long-range forecast. See ★*forecast.*

longshucks (lông'shuks), *n.* The loblolly-pine, *Pinus Tæda.*

long-sleeves (lông'slēvz), *n.* In Australia, a long, slender drinking-glass; also, the drink contained in such a glass. [Slang.]

long-spoon (lông'spön), *n.* In *golf,* a wooden club with a long, lofted, face and a shaft slightly longer than a baffy-spoon. See cut at ★*baffy-spoon.*

longspur, *n.*—**Painted longspur, Smith's longspur,** *Calcarius pictus,* a bird found in the interior of North America: so named from its black, white, and yellowish markings.

longstone (lông'stōn), *n.* A menhir.

long-timbers (lông'tim″bẽrz), *n. pl.* *Naut.,* timbers in the cant-bodies which reach from the dead-wood to the head of the second futtock.

long-tom (lông'tom), *n.* In Sydney, a name given to *Tylosurus ferox,* a species of garfish which has both jaws prolonged to form a slender beak. *E. E. Morris,* Austral English.

longueur (lông-gẽr'), *n.* [F., < *long,* long.] Something that is long-drawn-out and tedious, as a passage in a book.

Longwy enamel, pottery. See *Cluny* ★*enamel,* ★*pottery.*

lonja (lōn'hä), *n.* [Sp., a shop, warehouse, exchange, orig. a booth or shed, = Pg. *loja* = F. *loge,* E. *lodge,* *n.*] In *Sp. arch.,* a public building nearly corresponding to the English exchange or the French bourse: often an important architectural monument.

Lonsdaleia (lons-dạ-lē'yạ), *n.* [NL., < *Lonsdale,* a local name.] A genus of fossil corals belonging to the family *Cyathophyllidæ.* It consists of composite coralla the corallites of which are characterized by a large columella composed of vertically rolled lamellæ and an interior dissepimental wall. The genus is very characteristic of the Carboniferous rocks.

loo[2], *n.*—**Domino loo,** a game resembling loo, played with dominoes instead of cards.

loofa, loofah (lö'fạ), *n.* The sponge-gourd, *Luffa Luffa.* See *Luffa.*

look[1], *v. t.* **To look out of wind** (*naut.*), the act of sighting several objects with the eye to ascertain if they are in alinement, such as in the lining up of the propeller-shaft. **To look up.** (*a*) Said of a ship when, by the shifting of the wind, it is enabled to point closer to the point of its destination. (*b*) To cheer up; take courage. (*c*) To advance; improve: as, business is *looking up.* [Colloq.]

looker-out (lůk'ẽr-out'), *n.* In faro-banks, the person who sits at the dealer's right hand and sees that all bets are properly taken and paid.

look-in (lůk'in), *n.* **1.** A hasty look or glance; a short stay.—**2.** A chance of success. [Sporting slang.] *Bell's Life.*

Looking-glass bush, the bush kalanna, *Coprosma lucida:* so called from its shining leaves.—**Looking-glass ore.** See ★*ore*[1].

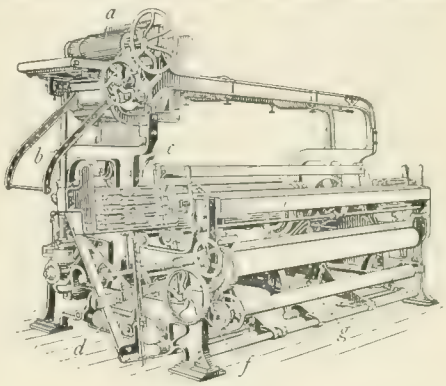
lookout, *n.* **6.** In *car-building,* a glazed clear-story on the roof of a caboose, designed to enable the train-hands to obtain a clear view over the tops of the cars in a train.

lookout-platform (lůk'out-plat″fôrm), *n.* A small platform built high up on the forward side of the foremast for the use of the *lookout;* a crow's-nest.

lookout's-nest (lůk'outs-nest), *n.* Same as *crow's-nest.*

lool (löl), *n.* In *mining,* a receptacle for ore-washings.

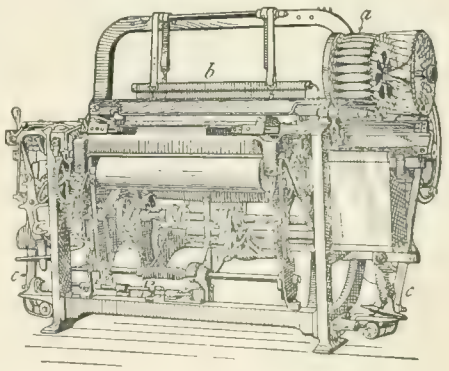
loom[1], *n.*—**Crompton loom,** a power-loom, for weaving fancy designs, having a so-called 'head-motion'



Crompton Knowles Loom.

a, head-motion for operating the harnesses or warp-threads; *b,* rock-bar sustaining the [illegible] shuttle-boxes; *c,* picker-stick; *d,* breast-beam; *f,* take-up [illegible]; both roller.

mechanism for raising and lowering the harnesses at will by means of levers operated upon by a pattern-chain consisting of shifting rollers or pegs: invented by William Crompton in 1837.—**Cross-border Jacquard loom,** a Jacquard loom built to weave handkerchiefs and other bordered fabrics with the least number of cards.—**Northrop loom,** an automatic loom invented



Northrop Loom.

a, hopper with cops of yarn; *b,* harness; *c, c,* picker-sticks.

by James H. Northrop and accepted as a practical success in 1895. Its advent established a new epoch in power-loom weaving. Its principal feature is its mechanism for automatically supplying weft to the running shuttle.—**Pneumatic loom,** a loom in which the beating up of the weft in weaving is effected by compressed air acting on the forward motion of the slay.

loom[1], *v. t.* **2.** To put into or adjust in a loom.—**To loom the warp or web,** to make ready the warp, or web, in a loom for weaving.

loomed (lömd), *p. a.* Made in a loom.

loomer (lö'mẽr), *n.* In *weaving,* one who takes the warp as it comes from the taper and prepares it for the loom.

loom-race (löm'rās), *n.* The raceway or track over which the shuttle is thrown in a loom.

loom-weight (lōm'wāt), *n.* A weight used in primitive looms to stretch the warp; frequently found in excavations.

One small tomb containing only red ware and a discoidal *loom-weight*.
J. L. Myres, in Jour. Hellenic Studies, XVII. 143.

loon[2], *n.* 2. A name used locally for several very different birds: in England, for some of the grebes, including the large *Podiceps cristatus* and the little dabchick, *P. minor*; by sailors often in the form *loom*, for the murre, *Lomvia arra*.

loop[1], *n.* 2. (*j*) In brachiopods: (2) The calcareous support of the brachia which assumes various loop-like forms in the *Terebratulidæ*, a superfamily of the brachiopods. (*b*) The circuit formed by the path in a centrifugal railway or loop-the-loop incline, around part of which the performer or passenger travels with head downward. See *to* ★*loop the loop*. (*l*) In *archery*, the eye of a bowstring, which is slipped over and held by the neck when the bow is strung. (*m*) A recurved sand-spit which, having developed through the form of a hook, again joins the shore in a closed curve. *Chamberlin and Salisbury*, Geol., I. 341.

7. In *phys.*, that region, in a standing wave system, for which the amplitude of vibration is a maximum: opposed to *node*, which is the region of zero amplitude.—**Binocular loop**, an instrument consisting of two loops whose fields of view accurately superpose, giving a magnification of about four diameters: used in the examination of specimens.—**Flemish loop.** Same as *Flemish eye* (which see, under *eye*[1]).—**Henle's loops**, portions of the uriniferous tubules in the kidneys which are turned upon themselves, forming loops.—**Hysteresis loop.** See *magnetic* ★*loop*.—**Lenticular loop**, nerve-fibers which pass between the lemniscus and lenticular nucleus.—**Magnetic loop**, the area inclosed between the ascending and descending arms of the curve of magnetization of a piece of iron or steel. Also called *hysteresis loop*. See *magnetic* ★*hysteresis*.—**Potential loop**, the antinode of a curve showing the fluctuations of electromotive force in an alternating-current circuit.—**Shelly loop**, in brachiopod shells, one of the delicate calcareous ribbons, each in the form of a loop, attached by its two ends to the calcareous process on either side of the base of the latter and forming the brachial skeleton.—**Trail-wheel loop**, the aperture in the trail of a field-carriage into which the wheel enters.

loop[1], *v. t.*—**To loop the loop** [an imitation of the phrase *to shoot the chute*], to pass round the inner side of a circular path or track set vertically: originally in a car on what was known, about 1840, as the *centrifugal railway*, of which such a loop formed a part. The car started at the top of an incline, and its momentum carried it at great speed around the loop. About 1900 the feat was revived, and was performed on a bicycle. In 1904 the upper part of the loop was removed, and the rider leaped the gap of open space. In 1905 this feat was successfully performed by a woman in an automobile. Other variations of the act have followed. See ★*autobolide*.

G. E. Mogridge ('Old Humphrey's Walks in London, . . . 1843') [says]: "First a pail of water, next a hundred-weight piece of metal, and, lastly, a human being . . . passed round the circle. . . . The water was unspilt, the weight unmoved, and the attendant uninjured, though he passed round the upright circle, head over heels, performing a complete summerset, at the rate . . . of a hundred miles an hour." *N. and Q.*, 9th ser., X. 366.

loop-bolt, *n.* 2. *Naut.*, the bolt which passes through the loop and the lugs of the carriage when a howitzer is secured in position.

loop-cut (löp'kut), *n.* The puncturing of a surface followed by a cross-cut so as to excise a piece. Also called *retrosection*.

looper[2] (lö'pèr), *n.* [D. *looper*, lit. runner (see *loper*).] In the plural, buck-shot of large size.

loopful (löp'fùl), *n.* [*loop*[1] + *-ful*.] In *bacteriol.*, the amount of liquid which can be held within the loop of platinum wire used for transferring cultures.

looping (lö'ping), *n.* In *metal.*, the running together or fusing of ore when heated for calcination.

loop-lace (löp'lās), *n.* 1. A lace which has a ground of very fine net.—2. A braided ornament formed of loops.

loop-pin (löp'pin), *n.* The pin that holds the wheel of a howitzer in place.

loop-plug (löp'plug), *n.* In *teleg.*, a device for connecting or disconnecting a loop-circuit; a loop-switch.

loop-stitch (löp'stich), *n.* 1. In *needlework*, an open stitch through which the needle draws the thread and leaves a loop on its way to the next stitch.—2. A stitch with loops; a kind of fastening stitch.

loop-switch (löp'swich), *n.* In *teleg.*, a switch which introduces a loop into the main circuit or disconnects it. See *switch*, 2 (*b*).

loor (lör), *n.* [Also *loore*, *lore*, *lure*, *lower*, etc.; origin and normal form unknown.] Foot-rot. [Prov. Eng.]

Loor, Loo, Lo, sb. Sore on a cow's hoof.
Gloucestershire Glossary, 1890.

loose. I. *a.* 11. In *chem.*, not combined with anything else: as, carbon dioxid *loose* in the blood. The word *free* is more commonly used in this sense.—12. In *geol.*, incoherent, as unconsolidated sands. *Geikie*, Text-book of Geol. (4th ed.), p. 138.—13. In *coal-mining*, free at the ends or sides: applied to a working-place when the coal has been previously mined on both sides: as, *loose* at one end, *loose* at one side, etc. **Loose card**, a card of no value; hence, the best to discard. *Hoyle*.

II. *n.* 5. In *Rugby foot-ball*, that part of the play in which the ball travels freely from player to player, as distinguished from the scrimmage. *N. E. D.*—6. In *mining*, the end of a shift. Also *loosing-time*. When the workmen leave, the pit is said to be 'loosed out.' [Eng.]—7. In *archery*: (*a*) The act of releasing the bow-string and discharging the arrow. (*b*) The mode of performing this act, which differs among different peoples. In the *primary* or *finger-and-thumb loose* the arrow is grasped by the finger and thumb and pulled back against the string to draw the bow. The *secondary* and *tertiary looses* are similar, but the second and third fingers aid in pulling the bowstring. In the *Mediterranean* or *finger-loose*, in use by European archers, the arrow is held between the first and second fingers, and the string is pulled by the fingers, usually three, without the aid of the thumb. In the *Mongolian loose* the string is drawn by the thumb, usually by the aid of a drawing-ring. See ★*drawing-ring*.—**Dull** or **wooden loose**, a sluggish, poorly executed loose.—**Fisher loose**, a finger-loose with the first three fingers placed in a slanting direction on the string. **In the loose**, in bulk; not made up in any particular shape for the trade: as, tobacco *in the loose*.—**Keen loose**, in *archery*, a quick, well-executed loose.—**On the loose**, with no restraint; ready for anything; 'on a spree'; 'on a loose keel.'

loose, *v. t.* 5. In *archery*, to release (the bow-string) after the bow is drawn, thus discharging the arrow.—**To loose for sea**, to loose sails for getting under way; cast off gaskets, etc., and have the sails ready for spreading.

loose-fall (lōs'fâl), *n.* A lost opportunity for harpooning a whale.

loose-shaft (lōs'shâft), *n.* A barbed harpoon-head which fits into a socket of the foreshaft and which becomes detached when it strikes the game.

loosestrife, *n.*—**Bulb-bearing loosestrife**, *Lysimachia terrestris*, of eastern North America, which sometimes bears no flowers, but has peculiar bulblets in the axils of the leaves.—**Creeping loosestrife**, the money-wort, *Lysimachia Nummularia*.—**Fringed loosestrife**, *Steironema ciliatum*, of North America. It is closely related to the true loosestrifes, and has ovate leaves and strongly ciliate petioles.—**Hyssop-loosestrife**, *Lythrum Hyssopifolia*, of the Old World, naturalized in both North and South America. It is sometimes called *grass-poly*.—**Southern loosestrife**, *Steironema tonsum*, of the southeastern United States.—**Spotted loosestrife**, *Lysimachia punctata*, of Europe, adventive in America from Nova Scotia to New Jersey.—**Trailing loosestrife**, *Steironema radicans*, of the southern United States. It has a more or less decumbent habit.—**Whorled loosestrife**, *Lysimachia quadrifolia*. See ★*five-sisters* and cut under *loosestrife*.—**Wing-angled loosestrife**, *Lythrum alatum*, of eastern North America. It has wing-angled stems.

loosing-hand (lö'sing-hand), *n.* In *archery*, the hand which looses the bowstring in discharging the arrow, ordinarily the right hand: opposed to *bow-hand*. Also *drawing-hand*, *shaft-hand*.

loosing-time (lö'sing-tīm), *n.* Same as ★*loose*, 6.

loosish (lōs'ish), *a.* [*loose* + *-ish*[1].] Rather loose; tending toward looseness.

lop[5] (lop), *v. i.*; pret. and pp. *lopped*, ppr. *lopping*. [Vaguely imitative, and associated with *chop*[2]. Hence ★*loppy*[3].] To break in short, 'loppy' waves.

lop[5] (lop), *n.* [*lop*[5], *v.*] A short, 'loppy' sea.

lop-comb (lop'kōm), *n.* In poultry, a comb that turns over to one side. This may be a merit or a defect, according to the breed or sex. The black Leghorn cock has an upright comb, the hen a lop-comb.

lophine (lof'in), *n.* [Appar. < Gr. λόφος, a crest, + *-ine*[2].] A colorless, feebly basic compound,

$$C_6H_5C \left\langle \begin{matrix} NHCC_6H_5 \\ \| \\ N \quad CC_6H_5 \end{matrix} \right. ,$$

prepared by the distillation of hydrobenzamide; triphenylimidazole. It crystallizes in slender needles, melts at 275° C., and boils at a high temperature without decomposition.

lophioderm (lō'fi-ō-dèrm), *n.* [Gr. λόφιον, dim. of λόφος, a crest, + δέρμα, skin.] The fold which forms the beginning of the vertical fins in the development of fishes.

The abdominal region comprises a short stretch of body between atriopore and anus, the termination of the alimentary canal. It is characterized by the presence of a special development of the *lophioderm* or median fin-system, namely the ventral fin. *Encyc. Brit.*, XXV. 386.

lophiodermic (lō fi-ō-dèr'mik), *a.* Of or pertaining to the lophioderm.

The median "*lophiodermic* raphe" of the limbs constitutes a sufficient apparatus of support to admit of the regeneration of the cord. The connective fibrous neural and aortic canals are powerless, with the organs they inclose, to supply the place of the missing cord or to regenerate it. *Jour. Roy. Micros. Soc.*, Feb., 1905, p. 35.

lophiodontous (lō fi-ō-don'tus), *a.* [Gr. λόφιον, crest, mane, bristled back, + ὀδούς (ὀδοντ-), teeth, + *-ous*.] Having hairy or bristly teeth. *Syd. Soc. Lex.*

Lophiomus (lō-fi-ō'mus), *n.* [NL., < Gr. λόφιον, crest, + ὦμος, shoulder.] A genus of fishes of the family *Lophiidæ*, found in rather deep waters of China and Japan and off Panama. It is allied to the goose-fish (*Lophius*), but has fewer vertebræ.

lophocaltrop (lō-fo-kal'trop), *n.* [Gr. λόφος, crest, + E. *caltrop*.] A tetraxon sponge-spicule in which all of the rays are branched. Also *lophotriæne*.

lophocephalic (lō fō-se-fal'ik), *a.* [*lophocephalus* + *-ic*.] In *anthrop.*, having a high head with a sagittal crest; scaphocephalic. *G. Sergi* (trans.), Var. of the Human Species, p. 43.

lophocephalus (lō-fō-sef'a-lus), *n.* [NL., < Gr. λόφος, crest, + κεφαλή, head.] In *anthrop.*, a high head or cranium with a sagittal crest.

lophocercal (lō-fō-sèr'kal), *a.* [Gr. λόφος, crest, + κέρκος, tail, + *-al*[1].] Pertaining to or characterized by lophocercy.

The second stage of development of the median fin system of Ichthyopsida is what I have called *lophocercal*, when it consists of continuous, or exceptionally of discontinuous folds, which do not include permanent rays, but may at about the close of this phase contain the numerous fine embryonic rays.
J. A. Ryder, in Rep. U. S. Fish Com., 1884, p. 987.

lophocercy (lō'fō-sèr-si), *n.* [Gr. λόφος, crest, + κέρκις, tail, + *-y*[3].] A degenerate or embryonic condition of the caudal-fin elements of certain fishes.

lophocome (lō'fō-kōm), *n.* [NL. *lophocomus*.] One of the lophocomi. *Deniker*, Races of Man, p. 41.

lophocomi (lō-fok'ō-mī), *n. pl.* [NL., < Gr. λόφος, crest, tuft, + κόμη, hair.] In *anthrop.*, races of man with tufted hair.

Ulotriches (Woolly-haired): *Lophocomi* (Tufted): Papuans; Hottentots. *Keane*, Ethnology, p. 167.

lophoderm (lō'fō-dèrm), *n.* [Gr. λόφος, crest, + δέρμα, skin.] In *ichth.*, a crested or spiny back.

Lophodermium (lō-fō-dèr'mi-um), *n.* [NL. (Chevallier, 1826), < Gr. λόφος, crest, + δέρμα, skin.] A genus of ascomycetous fungi of the family *Hypodermataceæ*, which resemble *Hypoderma*, but have filiform uniseptate spores. *L. Pinastri* is a species common on pine-needles, causing casting. See ★*casting*, 11, and ★*Hypoderma*, 4.

Lophogaster (lō-fō-gas'tèr), *n.* [NL., < Gr. λόφος, crest, + γαστήρ, belly.] The typical genus of the family *Lophogastridæ*. It contains but one species, *L. typicus*, known only from the North Atlantic and the South Atlantic, but not from intermediate positions. *M. Sars*, 1856.

Lophogastridæ (lō-fō-gas'tri-dē), *n. pl.* [NL., < *Lophogaster* + *-idæ*.] A family of schizopodous crustaceans. They have a large, more or less calcareous carapace, loosely covering the trunk, the first maxillipeds robust, with the exopod small or wanting, and the epipod large, the second maxillipeds with the terminal joint obtuse and the six following pairs of appendages uniform and ambulatory. The branchiæ are large and arborescent. It contains the genera *Lophogaster*, *Ceratolepis*, *Gnathophausia*, and *Chalaraspis*.

Lophogobius (lō-fō-gō'bi-us), *n.* [NL., < Gr. λόφος, crest, + NL. *gobius*, goby.] A genus of gobioid fishes found in West Indian waters, the head having a fleshy crest.

Lophophora (lō-fof'ō-rą), *n.* [NL. (Coulter, 1894), < Gr. λόφος, tuft of hair, + φορός, bearing. A genus of plants of the family *Cactaceæ*. There is but one species, *L. Williamsii*, a native of southwestern Texas and northern Mexico, known to the Mexicans as *peyote*. It has a thick, fleshy subterranean stem, the part above ground appearing as a small, depressed, green, spineless cushion, growing singly or a few in a cluster and bearing pink flowers. The seedling plants bear spines, but the mature plants have none, the areolæ being occupied by tufts of soft, white hairs. The dried tops of the plant are used by several aboriginal tribes as an intoxicant. See ★*mescal-buttons*.

lophophore, *n.* 2. A pheasant of the genus *Lophophorus*; the Impeyan pheasant. See cut under *Impeyan*.

lophophorine (lō-fof'ō-rin), *n.* [NL. *Lophophora* (Coulter), a genus name of cactus, + *-ine*[2].] A colorless, oily, poisonous alkaloid, $C_{13}H_{17}NO_3$, contained in the cactus *Lophophora* (*Anhalonium*) *Lewinii* and other species of *Anhalonium*.

lophophyte (lō'fō-fīt), *n.* [Gr. λόφος, crest, + φυτον, a plant.] In the sponges, a special appliance, such as a bundle or tuft of spicules, which serves for the attachment of the sponge body to extraneous objects.

lophophytic (lō-fō-fit' ik), *a.* [*lophophyte* + *-ic.*] Characterized by or possessing lophophytes.

Lophopsetta (lō-fop-set'ä), *n.* [NL., < Gr. λόφος, crest, + ψῆττα, flounder.] A genus of flounders which inhabit the Atlantic coast of the United States; the window-panes.

Lophoseridæ (lō-fō-ser'i-dē), *n. pl.* [NL., < *Lophoseris* + *-idæ.*] A family of madreporarian corals consisting of simple forms with the wall neither perforated nor echinulated. It contains a score or more of genera, among them *Lophoseris*, *Agaricia*, *Bathyactis*, and *Pachyseris*.

Lophoseris (lō-fō-sē'ris), *n.* [NL. (Edwards and Haime, 1849), < Gr. λόφος, crest, + σῆρες (σηρικά), silks.] The typical genus of the family *Lophoseridæ*.

lophospore (lō'fō-spōr), *n.* [Gr. λόφος, crest, plume, + σπορά, seed.] In *phytogeog.*, a plant whose fruit is provided with a plume, usually the modified style, to assist in dissemination. *F. E. Clements.*

lophotriæne (lō-fō-trī'ēn), *n.* [Gr. λόφος, crest, + τριαινα, trident.] Same as ★*lophocaltrop.*

lophotrichic (lō-fō-trik'ik), *a.* [Gr. λόφος, crest, tuft (cilia), + θρίξ (τριχ-), hair, + *-ic.*] Having polar flagella in tufts of two or more, as in *Spirillum* (which see).

Fischer distinguishes two types of polar flagella, i. e. monotrichic, where they occur singly as in Pseudomonas, and *lophotrichic*, where they occur in tufts of two or more, as in Spirillum.

Chester, Manual of Determinative Bacteriol., p. 6.

lophotrichous (lō-fot'ri-kus), *a.* [*lophotrich-ic* + *-ous.*] Having a tuft of several flagella at one end of the body, as certain bacteria.

Strict reliance cannot be placed on the distinction between the Monotrichous, *Lophotrichous*, and Amphitrichous conditions, since one and the same species may have one, two, or more cilia at one or both poles.

Encyc. Brit., XXVI. 52.

loppy[3] (lop'i), *a.* [*lop*[5] + *-y*[1].] Short; lumpy: said of the sea. See ★*lop*[5].

loq. An abbreviation of the Latin *loquitur*, he (or she) speaks. See ★*loquitur.*

loquat, *n.* — **Native loquat,** in Queensland, *Rhodomyrtus macrocarpa*, a shrub of the myrtle family, bearing fruits about one inch long and yielding a hard, tough wood of a light-gray color.

loque (lōk), *n.* [F. *loque*, a piece of cloth, a rag, tatter, also a disease of bees.] An infectious disease of bees caused by a small bacillus found in the intestines of the diseased insects and in the honey of the hive.

V. Lambotte finds that the Bacillus alvei, described by Watson-Cheyne and Cheshire as the cause of the "*loque*" disease of bees, is merely a variety of the widespread Bacillus mesentericus. The bacillus occurs in healthy hives, being found in the comb and in the intestinal contents of the bees. The characteristic appearance of the disease is brought about by the budding of the bacillus in the tissues of the larva.

Jour. Roy. Micros. Soc., Feb., 1903, p. 77.

loquent (lō'kwent), *a.* [L. *loquens* (*loquent-*), ppr. of *loqui*, speak.] Speaking; that speaks. [Rare.]

loquently (lō'kwent-li), *adv.* By way of speech; in speech. [Rare.]

An imposed secretiveness, . . . which comes of an experience of repeated inefficiency to maintain a case in opposition, on the part of the *loquently* weaker of the pair. *G. Meredith*, One of our Conquerors, xii.

loquitur (lok'wi-tėr). [L., 3d pers. pres. ind. of *loqui*, speak: see ★*loquent*, *locution.*] 'He (she) speaks': in plays, a stage direction indicating that the person named enters and speaks: as, Enter Marlitt, *loquitur*. Abbreviated *loq.*

Loral shield. See ★*shield.*

lorandite (lor'an-dīt), *n.* A rare sulpharsenide of thallium, $TlAsS_2$, which occurs in complex monoclinic crystals of a cochineal-red color: found with realgar at Allchar, Macedonia.

lord, *n.* **8.** In *astrol.*, a planet that exercises dominion: thus, the ruler of the sign or the cusp of the first house in a nativity is termed *lord* of the ascendant or of the geniture. See *lord of the ascendant*, under *ascendant*, 1. — **9.** [A punning use, resting upon Gr. λορδός, bent backward.] A hunchback. [Slang.] — **As a lord** or **like a lord,** in a superlative state of the condition noted: as, to live *like a lord*, to live in luxury; drunk *as a lord*, entirely drunk; to swear *like a lord*, to drink *like a lord*, etc. — **Civil lord.** See ★*civil.* — **Irish lord,** a common name of various species of fish of the genus ★*Hemilepidotus* (which see), especially *H. Jordani.* **Lord ordinary.** See *ordinary.* — **Lord Rector.** See ★*rector.* — **Lords appellant,** the five peers who superseded Richard II. in his government, and whom he superseded after a brief control of the government. *Bouvier*, Law Dict. **Lords in waiting.** See *waiting.* **Lords of creation,** men. — **Naval Lord,** one of the commissioners of the British Admiralty who is also a naval officer. See ★*admiralty*, 1 (*b*). — **Sea Lord.** Same as *Naval* ★*Lord.* See ★*admiralty*, 1 (*b*). **Very lord,** one from whom the tenant takes directly, and to whom he is *very tenant.* The lord paramount is not very lord to the tenants of a mesne lord.

lord-borough (lôrd'bur″ō), *n.* One who has quasi-manorial rights in certain English boroughs. *N. E. D.*

lord-farmer (lôrd'fär″mėr), *n.* One who holds an episcopal manor by a rent paid to the bishop. *N. E. D.*

lordotic (lôr-dot'ik), *a.* [*lordosis* (*-ot-*) + *-ic.*] Pertaining to or affected with lordosis; caused by lordosis: as, *lordotic* curvature.

lord-rectorship (lôrd-rek'tọr-ship), *n.* The office of Lord Rector of a Scottish university. See *Lord* ★*Rector.*

lordship, *n.* **5.** In *mining*, a mineral property.

lorenite (lō're-nīt), *n.* A yellow compound, $HOC_9H_4NI.SO_3H$, prepared by the action of iodine on 5-hydroxyquinoline-8-sulphonic acid. It crystallizes in needles or leaves, and melts and decomposes above 210° C.

lorenzenite (lō-ren'zẹ-nīt), *n.* [Named after J. *Lorenzen*, a mineralogist of Copenhagen.] A rare silicate containing titanium, zirconium, and sodium (perhaps $Na_2(Ti, Zr)_2Si_2O_7$), occurring in violet to brown needle-like orthorhombic crystals: from southern Greenland.

loretine (lor'e-tin), *n.* A yellow, very stable, crystalline compound, $HOC_9H_4NI.SO_3H$, prepared by the action of iodine on 8-hydroxyquinoline-5-sulphonic acid: used as a substitute for iodoform.

lorettism (lō-ret'izm), *n.* [*lorette* + *ism.*] The condition or characteristics of the lorettes.

The brilliant ball given by the aristocracy of the Parisian lorettes — for even *lorettism* has its aristocracy. *Pall Mall Gazette*, Sept. 9, 1865.

lorica, *n.* **4.** An old name for a paste or lute with which vessels were coated in order to protect them when very strongly heated. — **5.** In *bot.*: (*a*) Same as *testa*, 2. [Obsolete.] (*b*) The silicious covering of the frustules of diatoms.

Loricati (lor-i-kā'tī), *n. pl.* [NL.: see *loricate.*] A suborder of fishes characterized by the development of a bony stay from the suborbital bones backward across the cheek: commonly known as the mail-cheeked fishes.

lorilet (lō'ri-let), *n.* [Dim. of *lory.*] Any one of several small parrots of the genus *Cyclopsittacus* and allied genera, found in New Guinea, North Australia, and some of the adjacent islands.

Lorinseria (lō-rin-sē'ri-ä), *n.* [NL. (Presl, 1852), named for Gustav *Lorinser*, a Bohemian physician (1811–1863).] A genus of polypodiaceous ferns allied to *Woodwardia* but well distinguished by its dimorphous fronds and copious areolate venation. There is a single species, *L. areolata* (*Woodwardia angustifolia*), of the eastern and southern United States. It grows 2 feet or less high, and has green-stemmed, deeply pinnatifid, ovate-deltoid, sterile fronds, much resembling those of the sensitive fern, and fertile fronds longer and stiffly erect, with dark castaneous stipe and rachis and much contracted pinnæ. The linear sori are borne as in *Woodwardia.*

loriped (lor'i-ped), *n.* [Also *loripede;* L. *loripes* (*-ped-*), < *lorum*, a strap, thong, + *pes* (*ped-*), foot.] A bivalve mollusk which has a very long, strap-shaped or vermiform foot, as *Lucina.*

loro (lō'rō), *n.* [Sp., a parrot, a parrot-fish. Cf. *lory.*] A Spanish name of different fishes of the genus *Scarus.*

lorry, *n.* **3.** A trolley for carrying coal, ore, etc., upon an overhead railway. Also written *larry.*

lorum, *n.* **2.** In *entom.*, same as *lora*[2] and *lore*[4], 4.

lory, *n.* **2.** In Africa, the white-crested turakoo, *Turacus corythaix* or *T. albo-cristatus*, one of the plantain-eaters: probably so called on account of its green color and high crest, which suggest a parrot.

lose-out (lōz'out), *n.* In *faro*, a card that loses the last time out of the box.

losong, *n.* See ★*lusong.*

losophan (lō'sọ-fan), *n.* The trade-name of a tri-iodometacresol, $HOC_6HI_3CH_3$, formed by the action of iodine on metacresol. It is used in medicine as an antiseptic in certain skin-diseases.

loss, *n.* — **Dead loss,** a loss that cannot be recovered or made good, either directly or indirectly. — **Iron loss,** the loss of energy in the operation of motors, generators, transformers, or other electrical apparatus, due to the existence of hysteresis and of eddy-currents within the iron parts of the machine. — **Utter loss,** in *marine insurance*, an actual total loss, as distinguished from a constructive total loss (which see, under *constructive*).

lossenite (los'e-nīt), *n.* [G. *lossenit* (1894), named after Professor C. A. *Lossen* of Berlin.] A mineral near scorodite in form, but consisting of lead sulphate and ferric arseniate with water: from Laurium, Greece.

lost, *p. a.* **Lost or not lost,** in *marine insurance*, a phrase in a policy signifying that the risk is assumed whether or not the vessel insured is lost at the time the policy is made, provided that neither the insured nor the insurer has at the time any knowledge or information of the fact not equally known or available to the other. **The lost tribes.** See ★*tribe.*

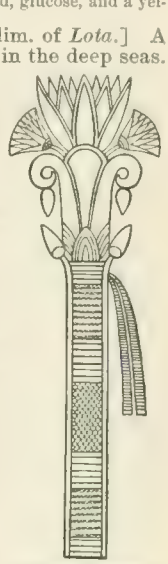
lot, *n.* **10.** An individual person: usually with *bad.* [Colloq.]

I 'm a *bad lot*, I know,—well, an idle *lot* — I don't think I am a *bad lot*. *Mrs. Humphry Ward*, Marcella, iv. 5. 345.

lotase (lō'tās), *n.* [*Lotus* + *-ase.*] A ferment found in the plant *Lotus arabicus.* It decomposes lotusin (a glucoside) into prussic acid, glucose, and a yellow pigment, lotoflavin.

Lotella (lō-tel'ä), *n.* [NL., dim. of *Lota.*] A genus of gadoid fishes found in the deep seas.

lotiform (lō'ti-fôrm), *a.* [L. *lotus*, lotus, + *forma*, form.] Similar to the lotus: noting a large class of decorative motives found in Egyptian and Oriental art.



Egyptian Lotiform Decoration.

lotio (lō'shiō), *n.* [L.] A lotion. — **Lotio flava.** Same as *yellow* ★*lotion.* — **Lotio nigra.** Same as *black* ★*lotion.*

lotion, *n.* **4.** Drink (humorously conceived as a 'wash' or 'remedy'). [Slang.] — **Black lotion.** Same as *black-wash.* — **Yellow lotion.** Same as *yellow wash* (which see, under *wash*).

lotoflavin (lō'tọ-flav-in), *n.* A yellow coloring-matter, $C_{15}H_{10}O_6$, obtained by the hydrolysis of the glucoside lotusin from the leaves of *Lotus arabicus.*

lotophagous (lō-tof'ạ-gus), *a.* [Gr. λωτοφάγος: see *Lotophagi.*] Lotus-eating; pertaining to or characteristic of the Lotophagi.

lotophagously (lō-tof'ạ-gus-li), *adv.* In the manner of lotus-eating or of the lotus-eaters.

lotur (lō'tūr), *n.* Same as *lodh-bark.*

loturidine (lō-tū'ri-din), *n.* [*lotur*, a form equiv. to *lodh*, + *-id* + *-ine*[2].] A yellowish-brown amorphous alkaloid contained in Indian lotur-bark, *Symplocos racemosa.* Its solutions in mineral acids exhibit a strong blue-violet fluorescence.

loturine (lō'tū-rin), *n.* [*lotur* + *-ine*[2].] A colorless alkaloid contained in Indian lotur-bark, *Symplocos racemosa.* It crystallizes in lustrous prisms, melts at 234° C., and sublimes.

lotus, *n.* — **American lotus,** *Nelumbo lutea.* See *Nelumbo.* **Egyptian lotus.** (*b*) The sacred lotus, *Nelumbo Nelumbo.* — **European lotus,** the lotus-tree, *Zizyphus Lotus.* — **Indian Lotus,** the sacred lotus. — **Lotus capital** or **column.** See ★*capital*[3]. — **Sacred lotus.** (*a*) See *sacred* and *lotus*, 1. (*b*) *Nelumbo Nelumbo*, a native of the warmer parts of Asia and of Australia, apparently not of Egypt, though long cultivated there and often called *Egyptian lotus.* It is a superb plant with large, showy pink or sometimes white flowers. It is very common in cultivation, and figures extensively in Indian mythology. — **Lotus ware.** See ★*ware*[2].

lotus-bird (lō'tus-bėrd), *n.* The Australian jacana, *Parra* (*Hydralector*) *gallinacea*, a small water-bird with enormously long toes, related to the rails: so named from being found about the lotus and water-lily. Its long toes enable it to run over the leaves of the water-lilies.

lotusin (lō'tu-sin), *n.* [Irreg. < *lotus* + *-in*[2].] A yellow glucoside, $C_{22}H_{19}O_{10}N$, contained in *Lotus arabicus*, a poisonous leguminous plant indigenous to Egypt. It yields hydrocyanic acid, d-glucose, and lotoflavin when hydrolyzed.

lotus-lily (lō'tus-lil″i), *n.* See ★*lily.*

lou (lö or lou), *n.* [Chin.] In China, a two-story house, or the upper story of such a house; also, a tower, of square or oblong section and one, two, or three stories in height, which surmounts a city gateway or ornaments the angles of a city wall.

Among the later representatives of the t'ai are the towers of the great wall, which are built of stone with arched doors and windows; the Chinese would seem always to have employed the arch in stone architecture; the stoned buildings dominating the gateways and angles of the city walls, often used to store arms, and the observatory of Peking, which is also a square tower mounted upon the city wall. When the tower is planned of oblong section, broader than it is deep, it is technically called a "lou." *S. W. Bushell*, in Smithsonian Rep., 1904, p. 679.

Lou. An abbreviation of *Louisiana.*

loubra, *n.* Same as ★*lubra.*

louche (lösh), *a.* [F. *louche*, OF. *lousche*, < L. *luscu*, fem. of *luscus*, one-eyed.] Squinting; not straightforward; sinister.

There is something *louche* about him, which does not accord with the abandon of careless intimate intercourse. *Lady Morgan*, Autobiography, p. 318. *N. E. D.*

louden (lou'dn), *v.* [*loud* + *-en*[1].] **I.** *intrans.* To become loud or louder: also figuratively.

I can recall, nay, they are present still,
Parts of myself, the perfume of my mind,
Days that seem farther off than Homer's now
Ere yet the child had *loudened* to the boy.
Lowell, The Cathedral, l. 17.

II. *trans.* To make loud or louder: as, to *louden* one's voice.

lougheen (loch'ēn), *n.* [*lough*[1] + *-een*, Ir. *-īn*, dim. suffix.] A small lough.

Louisianian area. Same as *austroriparian* ★*area.*

Louis Philippe porcelain. See ★*porcelain*[1].

loukoum (lö-köm'), *n.* [A French spelling of Turk. *luqūm*, a name for various kinds of small cake and confections, lit. mouthfuls, pl. of *loqma*, a mouthful.] Fig-paste.

lound (lound), *a.* Same as *lown*[2].

loup[3], *n.* **2.** A sort of grapple used in ancient times by the defenders of a fortress to seize and lift a battering-ram and thus prevent its action.

loupe, *n.* **2.** A lens or magnifying-glass. *Optical Jour.*, Sept., 1903, p. 384.

Loup Fork beds. See ★*bed*[1].

loupthu (loup'thö), *n. pl.* [Samoyed?] Stockings made of fawn-skins, worn by the Samoyeds.

As the result of his experience, Mr. Jackson fitted out his party for Franz Josef Land with furs cut in London on the Samoyede pattern. These models have evidently come to stay, for one of the London equipment stores now advertises soviks, malitzas, *loupthu* and pimmies. *Jour. Franklin Inst.*, May, 1904, p. 323.

loutron (lö'tron), *n.*; pl. *loutra* (-trä). [Gr. λουτρόν (also λουτρών), < λούειν, wash, bathe.] In *Gr. antiq.*, a bathing-place; a bath: sometimes a solid structure in masonry, like that discovered at Salamis in Cyprus in 1890; more often a large shallow terra-cotta basin with or without a support.

loutrophoros (lö-trof'ō-ros), *n.*; pl. *loutrophoroi* (-roi). [Gr. λουτροφόρος, bringing water, < λουτρόν, a bath, water for a bath, + *-φορος*, < φέρειν, bear.] In *Gr. antiq.*, a vase used to carry water to a bath, especially the nuptial bath. It is an amphora of a special form, both body and neck being much elongated. The subjects found upon black-figured loutrophoroi are usually funereal; those upon red-figured loutrophoroi have reference to marriage. A loutrophoros, sometimes carved in marble, was frequently placed upon the grave of a young person who died unmarried.

Funerary Loutrophoros. (From "Die Attischen Grabreliefs.")

louver-work (lö'vèr-wèrk), *n.* Same as *louver*, 3.

lovably (luv'a-bli), *adv.* In a lovable way.

He imagined her coming towards him in her radiant majesty, made so *lovably* mortal by her soft hazel eyes. *George Eliot*, Romola, xvii.

lovanenty (luv-a-nen'ti), *interj.* [Also *loveneuty*, *loveanendie*; an extension of *love anend* (see *an-end*, 3), that is, 'almighty love!' 'good gracious!'] An exclamation of surprise. [Scotch.]

Loveneuty me! but she'll hae gi'en ye anither kind o' a kiss than an auld wife like me. *Crockett*, Raiders, xxi.

love[1], *n.* **12.** In Tasmania, the blue-creeper, *Comesperma volubile*. **Lesbian love,** lewd practices between women. **Love all.** See *love*[1], *n.*, 9.

love-entangle, love-entangled (luv'en-tang-gl, -gld), *n.* **1.** The wall-pepper or mossy stonecrop, *Sedum acre.*—**2.** The virgin's-bower, *Clematis Vitalba.*

love-grass, *n.* In the southern United States, one of several species of *Eragrostis* forming part of the natural pasturage. *E. secundiflora* is designated as purple love-grass, *E. Elliottii* as shining love-grass, and *E. glomerata* as many-flowered love-grass.

love-hood (luv'hud), *n.* **1†.** Same as *love*[1], *n.*, 8. It was worn by persons in mourning.

I shall make no more dark things; after three months black silk is worn with *love hood.*
Mrs. Delany, to Mrs. Dewes, in Life, p. 478. *N. E. D.*

2. A light hood made of silk and gauze, worn in colonial days in New York. *A. M. Earle*, Costume of Colonial Times, p. 133.

love-in-a-chain (luv'in-a-chān'), *n.* The reflexed stonecrop, *Sedum reflexum.*

love-in-winter (luv'in-win'tèr), *n.* The pipsissewa or prince's-pine, *Chimaphila umbellata.*

Lovejoy china. Same as *anti-slavery* ★*china.*

lovelihead (luv'li-hed), *n.* Loveliness; the quality of being lovely.

love-me (luv'mē), *n.* The forget-me-not, *Myosotis palustris.*

lovenite (lov'e-nīt), *n.* See ★*lāvenite.*

love-pea (luv'pē), *n.* The Indian licorice or rosary-pea, *Abrus Abrus.*

loverliness (luv'èr-li-nes), *n.* The condition and quality of a lover; loverhood. *G. Meredith*, The Egoist, I. 154.

lover's-pride (luv'èrz-prīd″), *n.* The heart's-ease or lady's-thumb, *Polygonum Persicaria.*

love-shell (luv'shel), *n.* A species of *Cypræa.*

love's-test (luvz'test), *n.* The plantain-leaved everlasting, *Antennaria plantaginifolia.*

love-vine (luv'vīn), *n.* Any species of dodder (*Cuscuta*).

love-worthiness (luv'wèr″ȚHi-nes), *n.* The quality of being worthy of love.

The nobility and *loveworthiness* of human nature. *Daily News* (London), May 27, 1899.

lovey (luv'i), *n.* [*love*[1] + *-y*[2].] Love: a term of affection, used especially to children.

You don't look pretty in it, *lovey*, indeed you don't. *Fielding*, Letter Writers, etc., i. 5.

low[2], *a.* **3.** Specifically, in *phonetics*, of a vowel sound, produced with the tongue, or part of it, in a low position.—**Low and aloft** (*naut.*), under all sail; with full spread of canvas.—**Low glass.** See ★*glass.*

lowan (lō'an), *n.* The Australian brush-turkey or mallee-bird, *Leipoa ocellata*, one of the megapods or mound-birds.

lowbell, *v. t.* **2.** To serenade with noisy, rough music. See *charivari.*

low-doors (lō'dōrz), *n. pl.* In *mining*, the lowest of two or more landings in a shaft. *Barrowman*, Glossary. [Scotch.]

lōweite, *n.* See ★*loeweite.*

Lower Helderberg group. See ★*group*[1].

Lowestoft decoration, porcelain. See ★*decoration, armorial* ★*porcelain.*

lōwigite, *n.* See ★*loewigite.*

Lowitz, arcs of. In *meteor.*, two short oblique bands of rainbow colors attached to the parhelia of the halo of 22° and inclined to the horizontal parhelic circle: due to sunlight passing through ice prisms whose axes are oscillating about a normal vertical position. First observed by Lowitz at St. Petersburg in 1790.

low-pitched (lō'picht), *a.* **1.** Pitched in a low key, as a voice.—**2.** Of a low or degraded nature: as, *low-pitched* desires.—**3.** Having very little angular elevation, as a roof.—**4.** Having a low ceiling, as a room.

lowrie, *n.* Another form of *lory* (which see).

Loxian[2] (lok'si-an), *n.* [Gr. Λοξίας, an epithet of Apollo, commonly supposed (perhaps wrongly) to be connected with λοξός, oblique, ambiguous.] An epithet of Apollo.

The coffer-lid
Is fastened, and the coffer safely hid
Under the *Loxian's* choicest gifts of gold.
Browning, Sordello, i. 80.

loxic (lok'sik), *a.* [Gr. λοξός, slanting, oblique, + *-ic.*] Distorted; drawn to one side.

Loxoceras (lok-sos'e-ras), *n.* [NL., < Gr. λοξός, slanting, + κέρας, horn.] A genus of fossil nautiloid cephalopods of the family *Loxoceratidæ* (suborder *Cyrtochoanites*), including orthoceracones and cyrtoceracones having highly nummuloidal central siphuncles with short and crumpled funnels. It ranges from the Lower Silurian to the Carboniferous.

loxodograph (lok-sod'ō-gräf), *n.* [Gr. λοξός, slanting, oblique, + ὁδός, way, + γράφειν, write.] An apparatus for electrically recording, by the aid of photography and magnetism, the actual course of a ship.

loxodromically (lok-sō-drom'i-kal-i), *adv.* In a loxodromic curve or line; according to loxodromic rules.

Loxomma (lok-som'ä), *n.* [NL., < Gr. λοξός, slanting, oblique, + ὄμμα, eye.] A genus of stegocephalian *Amphibia* from the coal-measures. See ★*Gastrolepidotidæ.*

Loxonema (lok-sō-nē'mä), *n.* [NL., < Gr. λοξός, oblique, + νῆμα, thread.] A genus of extinct platypodous gastropods of the family *Pyramidellidæ*, which have turreted shells with arched whorls bearing sigmoid growth-lines and a long aperture. It ranges from the Silurian to the Trias and is particularly abundant in the Carboniferous.

loxonemoid (lok-sō-nē'moid), *a.* [*Loxonema* + *-oid.*] Resembling or related to *Loxonema.*

loxophthalmus (lok-sof-thal'mus), *n.* [Gr. λοξός, oblique, + ὀφθαλμός, eye.] Same as *squint.*

loxotic (lok-sot'ik), *a.* [Gr. λοξότης, obliquity (< λοξός, oblique), + *-ic.*] Same as ★*loxic.*

loyalist, *n.* **2.** [*cap.*] Specifically, in the American Revolution, a Tory.

lozenge, *n.*—**Spherical lozenge,** in *geom.*, an equilateral spherical quadrilateral.—**Ursine lozenge,** the triangular area of the cerebral cortex between the cruciate and precruciate fissures in certain carnivora, especially the bear.

Lp., Ldp. Contractions (*a*) of *Ladyship*; (*b*) of *Lordship.*

L. P., l. p. An abbreviation of *low-pressure.*

L-piece (el'pēs), *n.* A piece of metal tubing bent to a sharp turn; an elbow.

L. P. M. An abbreviation of *long particular meter.*

L. P. S. An abbreviation of *Lord Privy Seal.*

L. R. An abbreviation of *Lloyd's Register.* See *Lloyd's* and ★*free-board.*

L. R. C. P. An abbreviation of *Licentiate of the Royal College of Physicians.*

L. R. C. P. E. An abbreviation of *Licentiate of the Royal College of Physicians, Edinburgh.*

L. R. C. S. An abbreviation of *Licentiate of the Royal College of Surgeons.*

L-rest (el'rest), *n.* An L-shaped rest for hand-turning, used when the ordinary T-shaped rest would be inconvenient.

L. S. An abbreviation (*b*) of *Linnean Society*; (*c*) [*l. c.*] of *left side.*

L. S. A. An abbreviation of *Licentiate of the Society of Apothecaries.*

L. S. B. An abbreviation of *London School-board.*

L. T. An abbreviation (*a*) of *lira Turca*, the Turkish pound; (*b*) [*l. c.*] of *long ton.*

Lt. Batt. An abbreviation of *light battery.*

Lt.-Col. An abbreviation of *Lieutenant-Colonel.*

Lt.-Gen. An abbreviation of *Lieutenant-General.*

Lt.-Gov. An abbreviation of *Lieutenant-Governor.*

L. Th. An abbreviation of *Licentiate in Theology.*

Lu. The symbol for ★*lutecium.*

L. U. An abbreviation (*a*) of *Liberal Union*; (*b*) of *Liberal-Unionist.*

luau (lö-ä'ö), *n.* [Hawaiian *luau*, boiled herbs (kalo-leaves), the leaf of the kalo, the petal of a plant.] In the Hawaiian Islands, a dish or dinner of boiled herbs with additions.

A *luau* is a square meal with roast pig and poi in it. *Hartford* (Conn.) *Courant*, quoted in [N. Y. Times, April 27, 1905.

Lubber's mark. Same as *lubber-line.*

lubber-fiend (lub'èr-fēnd), *n.* In *folk-lore*, a house-elf or brownie who repays tolerance or kindness by doing the harder part of the housework, in the night, for his benefactors.

lubberland[2] (lub'èr-land), *n.* The place of future existence of lubbers: a kind of nautical purgatory.

lubber-lift (lub'ẽr-lift), *v. t.* In *lumbering*, to raise the end of a log by means of a pry, and by the use of weight instead of strength.

Lubish (lö'bish), *a.* [G. *lübisch*, < *Lübeck.*] Of or pertaining to Lübeck (Lubeck), one of the Hanse towns of North Germany: applied particularly to certain moneys of account in mercantile use there: as, the mark *Lubish;* the shilling *Lubish.*

lubra (lö'brä), *n.* [Also *loubra, leubra;* native Australian, but prob. orig. Tasmanian, from Tasmanian *lou* or *lowa*, woman.] A native Australian woman: originally used in Tasmania, but later adopted in Australia south of the Murray. North of the Murray the term *gin* was in use. Both terms are now used without geographical restriction. *H. Kingsley*, Geoffrey Hamlyn, xxxix. *E. E. Morris.*

lubrication, *n.*—**Forced lubrication,** lubrication in which oil is furnished to the bearings under pressure.—**Splash lubrication,** a method of supplying oil to the bearings of an engine-mechanism, by inclosing the crank and connecting-rod in an oil-tight case filled with oil to such a level that the crank dips into it and spatters the oil upward over the surfaces to be lubricated: much used in small high-speed motors, and especially in engines for motor-cars.

lubricator, *n.*—**Displacement lubricator,** a device for feeding oil in which the difference in specific gravity of the oil and water is utilized to regulate the feed.

Lucan (lū'kan), *a.* [Also *Lukan;* < L. *Lucas*, Luke, + *-an.*] Of or pertaining to Luke the Evangelist.

Lucania (lu-kā'ni-ä), *n.* [NL., a meaningless term.] A genus of fishes of the family *Pœciliidæ*, found in the coastwise swamps of the eastern United States.

lucanid (lū-kan'id), *n.* and *a.* **I.** *n.* A member of the coleopterous family *Lucanidæ.*

II. *a.* Having the characters of or belonging to the family *Lucanidæ.*

Lucasian (lū-kā'zi-an), *a.* Pertaining to or founded by Henry Lucas (d. 1663). See the extract.

The opportunity which gave to the world the 'Philosophiæ Naturalis Principia' was not due to the state subvention of the deputy mastership of the mint, but to the modest provision of a professorship by one Henry Lucas, of whose pious benefaction Cambridge has made such wonderful use in her *Lucasian* professors.
Science, Oct. 16, 1903, p. 490.

lucca (lök'kä), *n.* [Appar. named from *Lucca* in Italy.] A cotton fabric printed in imitation of an East Indian shawl.

lucently (lū'sent-li), *adv.* Clearly; translucently; luminously.

lucerne, *n.*—**Native lucerne,** in Australia, *Sida retusa*, a weed of the mallow family, which yields a fiber somewhat like jute. Also called *paddy-lucerne.* See *Sida*, 1.—**Paddy-lucerne.** Same as *native ★lucerne.*—**Sand-lucerne,** *Medicago media*, a deep-rooted perennial forage-plant, closely related to lucerne, of which it is sometimes regarded as a variety. It is less stiff in habit, its flowers are sometimes yellow, and its pods less coiled. In Michigan it has proved to possess the great advantage of enduring the winters.—**Tree-lucerne,** *Medicago arborea*, a shrubby alfalfa cultivated in the Old World from ancient times, now wild in Greece. It serves for forage and as a bee-plant.—**Yellow lucerne,** *Medicago falcata*, botanically close to alfalfa and sand-lucerne, but valued only on dry and barren soils.

lucerne-dodder (lū-sèrn'dod″ẽr), *n.* See ★*dodder*[1].

Lucianic, Lucianical (lū-shi-an'ik, -i-kal), *a.* Of or pertaining to Lucian, a Greek satirist of the second century, or characteristic of his writings and style.

Lucianist[2] (lū'shian-ist), *n.* An imitator of Lucian, the Greek satirist.

lucible (lū'si-bl), *a.* [LL. *lucibilis*, < *lucere*, be light: see *lucent.*] Emitting light; lucent.

luciferase (lū-sif'e-rās), *n.* [L. *lucifer*, light-bringing, + *-ase.*] One of the two special substances by the reactions of which light is supposed to be produced by fireflies. It is supposed to be of the nature of an enzym and to exist in the form of minute granules only in the luminous organs. The other substance, *luciferine*, exists in the blood, and light is produced as the blood enters the luminous area.

It is affirmed by Dubois that luminescence is due to the reactions of two special substances, *luciferase* and *luciferine.* *Encyc. Brit.*, XXIX. 499.

luciferine (lū-sif'e-rin), *n.* [L. *lucifer*, light-bringing, + *-ine*[2].] See ★*luciferase.*

luciferose (lū-sif'e-rōs), *n.* [L. *lucifer*, light-bringing, + *-ose.*] Same as ★*luciferase.*

Lucifuga (lū-sif'ū-gä), *n.* [NL., fem. of L. *lucifugus*, shunning light: see *lucifugous.*] A genus of blind brotuloid fishes inhabiting cave streams in Cuba. These fishes are not related to the blind cave-fishes of the United States, but are derived from marine types.

lucifugal (lū-sif'ū-gal), *a.* Same as *lucifugous.*

lucigraph (lū'si-gräf), *n.* [L. *lux* (*luc-*), light, + Gr. γράφειν, write.] An apparatus for displaying the letters and numbers of the international maritime code: used in signaling. It consists of a powerful electric light, the rays of which are focused by suitable lenses, and of a series of stencils, manipulated by a keyboard, placed in the path of the rays. The letters and numbers are projected on a screen. *Electricity*, XV. 226.

luciite (lö'si-it), *n.* [G. *luciit* (Chelius, 1892), < *Luci*(*berg*), Hesse, Germany, + *-it*, E. *-ite*[2].] In *petrog.*, a fine-grained phaneric, igneous rock, composed of lime-soda feldspar and hornblende, sometimes with a little quartz. The texture is panidiomorphic to hypidiomorphic granular. Luciite is the same as malchite and orbite, aplitic forms of diorite.

lucimeter, *n.*—**Bellani lucimeter,** a form of actinometer devised by Bellani, consisting of a bright and a blackened glass bulb connected by a glass tube and partly filled with water. The higher temperature of the black bulb causes the liquid within it to evaporate more rapidly than that in the bright bulb, where the surplus is condensed.

lucinoid (lū'si-noid), *a.* [*Lucina*, 2, + *-oid.*] Related to or resembling the pelecypod genus *Lucina.*

Luciocharax (lū-si-ok'a-raks), *n.* [NL., < L. *lucius*, a pike, + Gr. χάραξ, a sea-fish (see *Characinus*).] A genus of fishes of the family *Characinidæ*, found in streams near Panama.

lucium (lū'si-um), *n.* [NL., < L. *lux* (*luc-*), light.] The name given by Barrière to a supposed new chemical element obtained from the yttria of monazite. Its existence has not been confirmed.

lucivee (lū-si-vē'), *n.* [Also *lucifee;* a corruption (simulating *Lucifer*) of *loup-cervier*, q. v.] The Canada lynx, *Lynx canadensis.* See *loup-cervier.*

The *lucifee's* eyes snapped fire, and she advanced right along the log to within fifteen feet of the sitter.
Forest and Stream, Jan. 24, 1903, p. 67.

Lucullan (lū-kul'an), *a.* [L. *Lucullanus*, < *Lucullus* (see def.).] Of or pertaining to L. Licinius Lucullus (110–57 B.C.), a Roman, whose luxurious banquets became proverbial.

Lucullean (lū-kul'ē-an), *a.* [L. *Luculleus*, < *Lucullus.*] Same as ★*Lucullan.* **Lucullean marble** [L. *marmor Luculleum*], fire-marble: same as *lumachelle.*

Lucullian (lū-kul'i-an), *a.* [L. *Lucullianus*, < *Lucullus.*] Same as ★*Lucullan.*

lucullite (lū-kul'it), *n.* [L. *Lucullus* + *-ite*[2].] Same as ★*Lucullean marble* or *lumachelle.*

lucumony (lū'kū-mō-ni), *n.* The domain of a Lucumo, or ancient Etruscan prince. [Modern.]

It [Santa Tarsilla] was a dreary place at the best of times; antiquaries said that the sea had receded nearly a mile since the days when the Etruscan pirates had sailed from that bay, and Etruscan *lucomonies* had had their fortresses and their tombs away yonder where the shoreline grew dusky with thickets of bay and rosemary and the prickly marucca, or holy thorn, so common here.
Ouida, In Maremma, ii.

luderick (lū'de-rik), *n.* [Also *ludrick;* aboriginal Australian (Gippsland in Victoria).] A local variety of the Australian blackfish, *Incisidens simplex. E. E. Morris*, Austral English.

Ludian (lö'di-an), *n.* [Named from *Ludes*, in the Montagne de Rheims, France.] In *geol.*, the upper most division of the Eocene Tertiary in the Paris basin, consisting of gypsum and marls, and containing mammalian remains in great abundance (dormice, opossums, pachyderms, and various carnivora which partly have marsupial characters). Also called *Priabonian* and *Paris gypsum.*

ludibund† (lū'di-bund), *a.* [L. *ludibundus*, < *ludus*, play, sport.] Playful; sportive. *N. E. D.*

ludicrosity (lū-di-kros'i-ti), *n.* Ludicrousness.

Ludisia (lū-dis'i-ä), *n.* [NL. (A. Richard, 1825), of unknown significance.] A genus of monocotyledonous plants of the family *Orchidaceæ.* See *Hæmaria.*

Ludolf number, *n.* Same as *Ludolphian number* (which see, under *number*).

ludrick (lö'drik), *n.* See ★*luderick.*

l. u. e. An abbreviation of *left upper entrance.*

luf, *n.* and *v.* A simplified spelling of *luff.*

luff[2], *n.*—**To hold the luff,** to keep the vessel's sails shivering. **Rigging-luffs,** a tackle used for setting up lower rigging.—**To choke the luff.** See ★*choke*[1].—**To hold a good luff,** to steer so as to keep a vessel's sails trembling along the leeches, or along the luffs.

luff[2], *v.* **I.** *trans.* **2.** To lift (the boom of a derrick).

II. *intrans.*—**To luff and lie,** to luff and remain close to the wind.—**To luff and touch her,** to luff until the sails shake.

luff-cringle (luf'kring″gl), *n.* An iron ring spliced into the bolt-rope of a gaff-sail at the junction of the head and luff.

luffing-match (luf'ing-mach), *n.* In *yacht-racing*, a struggle to get to the windward of a competitor.

lug[1], *n.*—**Standing lug,** a lug-sail that does not require the yard to be lowered and shifted to leeward of the mast in tacking.

lug[2], *n.* **Eccentric lug,** a seat or projection on an eccentric-strap to which the eccentric-rod is attached.

lug-chair (lug'chär), *n.* A high-backed easy-chair with side-pieces for the head.

luge[2] (lö'ge), *n.*; pl. *lugen* (-gen). [Swiss (Grisons).] A Swiss form of coasting-sled of small size, steered by short iron-pointed sticks. Two of these lugen are often combined into a bob-sled with steel frames of tubular construction and fitted with a wheel steering apparatus.

The 'luge' is a small sled peculiar to the Grisons (Switzerland), which recalls the schlittes of the Vosges, and which up to the present has been steered by hand through the intermedium of short, iron-pointed sticks.
Sci. Amer. Sup., April 1, 1905, p. 24188.

luggar, luggur, *n.* Same as *lugger*[2].

lug-hooks (lug'hùks), *n. pl.* In *lumbering*, a pair of tongs, attached to the middle of a short bar, used to carry small logs.

Lug-hooks

lug-pole (lug'pōl), *n.* A pole on which a kettle is hung over a fire.

lujaurite (lö'you-rit), *n.* [*Lujaur* mountain, Kola Peninsula, Finland, + *-ite*[2].] In *petrog.*, a variety of nephelite-syenite composed of tabular alkali-feldspars in parallel arrangement, with nephelite, abundant ægirite in thin needles, and variable amounts of eudialyte. *Ramsay*, 1894.

lul, *v.* and *n.* A simplified spelling of *lull.*

lulab (lö-läb'), *n.* [Syr. *lulaba.*] A green palm-branch. It is intertwined with boughs of myrtle and willow, and carried, together with a perfect and spotless ethrog, during the morning services of the Feast of Tabernacles. See ★*ethrog.*

lullaby, *n.* Hence—**3**†. Good night; good-by.

Duke. You can fool no more money out of me at this throw: if you will let your lady know I am here to speak with her, . . . it may awake my bounty further.

Clo. Marry, sir, *lullaby* to your bounty till I come again. *Shak.*, T. N. v. 1.

lull-bag (lul'bag), *n.* A canvas chute used on whale-ships for guiding the blubber into casks.

Lullianist (lul'yan-ist), *n.* A Lullist.

lulliloo (lul-i-lö'), *v. t.* and *i.* [Imitative; cf. *halloo, hullabaloo*, etc.] To utter a shrill cry, with vibrations made by hitting the mouth with the hand: used in reference to African aborigines.

The women [of a tribe in northwestern Rhodesia], when saluting an important stranger, do so by *lullilooing*, a word coined by Livingstone to express a peculiar shrill scream, the sound being made to vibrate by hitting the mouth with the hand. *Geog. Jour.* (R. G. S.), XVIII. 74.

lulu (lö'lö), *n.* [W. African.] A cyprinoid fish, *Labeo longipinnis*, which reaches a large size: found in the Kongo river.

lumbago, *n.* **2.** Same as ★*chine-gall.*

lumbago (lum-bā'gō), *v. t.*; pret. and pp. *lumbagoed*, ppr. *lumbagoing.* To afflict with lumbago.

lumbang (lum'bäng), *n.* [Tagalog *lumbang*, Bisaya *lombang.*] In the Philippine Islands, the candlenut-tree, *Aleurites Moluccana.* See ★*kukui.*

lumbang-oil (lum'bäng-oil), *n.* Same as ★*candlenut-oil.*

Lumbar index, puncture. See ★*index*, ★*puncture.*

lumber[3] (lum'bẽr), *v. t.* [*lumber*[3], *n.*] To put in pawn; hence, to put in prison. *N. E. D.*

lumberer[2] (lum'bẽr-ẽr), *n.* [*lumber*[1] + *-er*[1].] **1.** One who lumbers clumsily about.—**2.** A swindling tipster. *Barrère and Leland.*

lumberer[3] (lum'bẽr-ẽr), *n.* [*lumber*[3] + *-er*[2].] A pawnbroker.

lumbering[1] (lum'bẽr-ing), *p. a.* **1.** Awkward; cumbrous; heavy in action; encumbering.—**2**†. Rumbling.

lumbering[2] (lum′bèr-ing), *n.* The business of cutting timber in a forest and preparing it for market.

lumberjack (lum′bèr-jak), *n.* One who works in a logging-camp. [Eastern U. S.]

lumber-pie† (lum′bèr-pī), *n.* Same as *lumbard pie.*

lumbersome (lum′bèr-sum), *a.* [*lumber*[1] + *-some.*] Cumbrous; lumbering.

lumboabdominal (lum-bō-ab-dom′i-nal), *a.* [L. *lumbus*, loin, + *abdomen*, abdomen, + *-al*[1].] Relating to both the lumbar and the abdominal regions.

lumbodorsal (lum-bō-dôr′sal), *a.* [L. *lumbus*, loin, + *dorsum*, back, + *-al*[1].] Relating to both the lumbar and the dorsal regions of the spine.

lumbovertebral (lum-bō-vèr′tē-bral), *a.* Relating to the lumbar vertebræ.—**Lumbovertebral index.** See ★*index.*

lumbricaria (lum-bri-kā′ri-ä), *n. pl.* [NL., ⟨ L. *lumbricus*, an earthworm.] In *paleon.*, a name under which are included certain obscure remains from the Jurassic Lithographic slates, which may best be regarded as the excrements of *Annelida.* They occur as irregularly contorted bands or strings, and are usually of considerable length.

Lumbriconereidæ (lum″bri-kō-nē-rē′i-dē), *n. pl.* [NL., ⟨ *Lumbriconereis* + *-idæ.*] A family of phanerocephalous *Polychæta*, without branchiæ or tentacles and with the cirri reduced or wanting. It includes the genera *Lumbriconereis*, *Arabella*, *Drilonereis*, *Notocirrus*, *Laranda*, and *Ophryotracha.*

Lumbriconereis (lum″bri-kō-nē′rē-is), *n.* [NL., ⟨ *Lumbricus* + *Nereis.*] The typical genus of the family *Lumbriconereidæ:* a marine group, though one species has been found in fresh water in Trinidad. *Grube*, 1840.

lumbrous (lum′brus), *a.* [*lumber*[1] + *-ous.*] Lumbering. [Rare.]

Six hours after Hommy-beg had set out on his six-mile journey, a *lumbrous*, jolting sound of heavy wheels came from the road below the Curragh, and soon afterwards the Archdeacon entered the room.

Hall Caine, The Deemster, ii.

lumen, *n.* **3.** The unit of flux of light; the flux of light in a beam subtending unit solid angle where the source has an intensity of one hefner. See ★*illumination*, 1, and *light* ★*flux.*—**4.** The hollow tube of an operating-needle or of a hypodermic syringe.

In all such operations the difficulty is the tendency the paraffin has to solidify in the *lumen* of the needle.

Lancet, Aug. 29, 1903, p. 611.

Lumen philosophicum, an early name for the flame of a jet of hydrogen gas allowed to burn in the air as the hydrogen is generated by the interaction of zinc and dilute sulphuric acid.

lumen-hour (lū′men-our), *n.* A compound unit, one lumen of light flux for one hour. See ★*lumen*, 3.

Lumière process. See *color-* ★*photography.*

luminal (lū′mi-nal), *a.* [L. *lumen* (*lumin-*), a light, air-hole, + *-al*[1].] Relating to the lumen of any tubular organ or cell.

luminance (lū′mi-nans), *n.* [*luminan(t)* + *-ce.*] Luminousness: as, the *luminance* of the stars.

luminarious (lū-mi-nā′ri-us), *a.* Same as *luminous.*

luminative (lū′mi-nā-tiv), *a.* [*luminate* + *-ive.*] Illuminating; illuminative.

Cat fear is more readily understandable [than mouse fear], for in the peculiar formation and *luminative* quality of the cat's eye there is, as in the eye of the tiger, a species of fascination.

N. Y. Com. Advertiser, May 7, 1903, p. 7.

luminator (lū′mi-nā-tor), *n.* [L. *luminator* (cf. OF. *luminier*), an official who kept the accounts of expenditure for the lighting of a church, ⟨ L. *luminare*, lighten: see *luminate.*] In St. Andrews University, a student (one in each class) who was privileged to attend the professor's lectures without payment, and to receive certain dues from the other students, in return for services rendered by him. *N. E. D.*

luminesce (lū-mi-nes′), *v. i.*; pret. and pp. *luminesced*, ppr. *luminescing.* [L. *lumin-are*, shine, + *-esce.*] To emit light other than that due to ordinary incandescence. See ★*luminescence.* *Smithsonian Rep.*, 1899, p. 147.

luminescence (lū-mi-nes′ens), *n.* [*luminescen(t)* + *-ce.*] The emission of light from causes other than that which produces incandescence. Radiation is emitted by all bodies at all temperatures; but below a certain temperature, that of the red heat, the wave-lengths emitted do not affect the eye. At that temperature (about 450° C) wave-lengths of the visible spectrum begin to have sufficient intensity to produce luminous effects. The body is then said to be *incandescent.* The luminous intensity of incandescent bodies increases rapidly with further rise of temperature, the total radiation being proportional to the fourth power of the temperature, and the luminous intensity increasing at an even greater rate. See ★*radiation*, 1. There are numerous cases in which bodies emit light at temperatures below that of incandescence, and in which at higher temperatures the intensity and character of the light emitted differs from that which we should expect from the law of ordinary radiation. All such cases of extraordinary light-emission are included under the term *luminescence*, and the phenomenon is variably described as *photoluminescence*, *thermoluminescence*, *chemiluminescence*, *triboluminescence*, *piezoluminescence*, *lyoluminescence*, *cathodoluminescence*, *X-luminescence*, or *autoluminescence*, according to the exciting cause to which the phenomenon is ascribed. Luminescence produced by the exposure of the substance to light or to ultra-violet rays is called *photoluminescence.* When observed while the substance is still under exposure to light, it is known as *fluorescence*, a name proposed by Stokes (1857), who first systematically studied the luminescence of fluor-spar, whence the name. However, the phenomenon had previously been observed by Herschel and others. When, as is sometimes the case, photoluminescence persists after the removal of the exciting light, the phenomenon is termed *phosphorescence*, on account of an imagined analogy to the power of phosphorus to shine in the dark. The glow of phosphorus is, however, a form of chemiluminescence. Since the luminous energy emitted by a photoluminescent body has its source in the exciting light, it follows that a portion of this light must have been absorbed by the body; and, in fact, it is found that photoluminescence is associated with the presence of an absorption-band in the transmission-spectrum of the substance, and that light of wave-lengths corresponding to this band is chiefly active in producing the luminescence. Luminescent light is not monochromatic, but forms an emission-band in the spectrum having a well-defined maximum the wave-length of which is always greater than the wave-length corresponding to the minimum of the absorption-band to which the luminescence is due. It was thought by Stokes that the shortest wave-length of the fluorescent light always exceeded the longest wave-length of the exciting light (Stokes's law), but subsequent measurements have shown that the absorption-band and the luminescence-band frequently overlap. Photoluminescence is exhibited not only by fluor-spar, but by numerous other solids, of which zinc sulphid and calcium sulphid are perhaps the best-known examples. The phenomenon of fluorescence is more readily observed, however, in the case of the solutions of certain organic dyestuffs, such as eosin, resorcin blue, and naphthalene red. One of these substances has received the name *fluorescein* on account of the extraordinary green fluorescence exhibited by it. The color of the fluorescent light depends upon the position of the absorption-band to which it is due; but it is noteworthy that not all substances the spectra of which show absorption-bands are fluorescent, and that a substance may have several absorption-bands only one of which has the corresponding fluorescence-band. The cause of fluorescence in organic solutions has not been satisfactorily determined, but it is known that the photoluminescence of most, if not all, inorganic solids is due to the admixture in minute quantities of certain impurities, such as the salts of copper, manganese, bismuth, lead, nickel, antimony, zinc, etc., and that each of these metallic salts produces its own characteristic photoluminescence. Many inorganic compounds, when exposed to light or to the action of cathode rays and then heated, emit light far below the temperature of incandescence, or, when red-hot, radiate light other than that due to ordinary incandescence. Such emission of light, in which previously stored energy is set free, is termed *thermoluminescence.* Many specimens of fluorite and of flint and crown-glass exhibit the phenomenon, as do the haloid salts of the alkalis and the sulphates of zinc, calcium, barium, magnesium, etc. Frequently a substance which shows thermoluminescence will emit light when, instead of being heated, it is rubbed (*triboluminescence*), or is subjected to pressure (*piezoluminescence*), or is dissolved in water (*lyoluminescence*). Thus Wiedemann and Schmidt observed all three types in the case of sodium chlorid and potassium chlorid: thermoluminescence and lyoluminescence in the case of lithium chlorid; and thermoluminescence and triboluminescence in the case of potassium bromide. The salts had in all cases been previously exposed to the cathode rays. Many substances, when exposed to the electric discharge within a vacuum-tube, emit light. Such luminescence, which is sometimes spoken of as *electroluminescence*, is, however, due either to the ultra-violet or visible rays from the discharge (in which case it is to be classed as photoluminescence) or to the action of cathode rays (in which case it is cathodoluminescence). Rontgen rays are also capable of exciting luminescence (*X-luminescence*) in many substances, such as calcium tungstate, platinocyanide of barium, and Sidot-blende, from which the screens of fluoroscopes are made. The glow of radium, and other radioactive substances, which appears to be independent of excitation from without, is termed *autoluminescence.* The term *chemiluminescence* is applied to all cases in which chemical changes accompany the emission of light by a luminescent body. When, for example, sodium chlorid is exposed to cathode rays, unstable subchlorids, giving the surface a brown or blue color, are formed. Heating or friction restores the substance to its original color and composition, and the thermoluminescence or triboluminescence, respectively, which accompanies the reaction is classed as *chemiluminescence.* Whether all luminescence is of the nature of chemiluminescence has not, as yet, been definitely determined.

luminist (lū′mi-nist), *n.* [L. *lumen* (*lumin-*), light, + *-ist.*] A painter who affects brilliancy of light in *plein-air* effects.

His [Courbet's] canvases hang more harmoniously on a wall with Rousseau and Diaz than with the high-keyed productions of the *luminists*, impressionists, and other eccentrics of to-day.

J. C. Van Dyke, Mod. French Masters, p. 200.

luminometer (lū-mi-nom′e-tèr), *n.* [L. *lumen* (*lumin-*), light, + Gr. μέτρον, measure.] An instrument for the measurement of the intensity of illumination at any point in a field of light flux. The method employed in most luminometers, of which there are various forms, is to expose a white mat surface to the light the illumination from which is to be measured, and to compare its brightness with that of a similar surface illuminated by a source of known intensity placed at a known distance. Also called *illuminometer.*

Luminous arc. See *electric* ★*arc.*—**Luminous efficiency.** See ★*efficiency.*—**Luminous organ,** an organ for the production of light: often termed *phosphorescent organ.* Luminous organs are present in many groups of animals, those commonly called fireflies being the most familiar.

Lummer-Brodhun body. See ★*spectrophotometer.*

lump[1], *n.* **7.** In *mining*, a coarse fragment of ore, coal, phosphate rock, or any useful mineral, as contrasted with the *fines*, *spalls*, or otherwise designated smaller pieces. *Rep. U. S. Geol. Surv.*, 1897–98, vi. 550.

II. *a.* Noting the coarser grade of bituminous coal which is picked out as it comes from the mine.

lump[1], *v. i.* **2.** To appear larger by aggregation; bulk: as, he *lumped* large in public imagination. [Colloq.]

lunambulism (lū-nam′bū-lizm), *n.* [L. *luna*, moon, + *ambul-are*, walk, + *-ism.*] Somnambulism or sleep-walking supposed to be induced by the influence of the moon. [Rare.] *N.E.D.*

lunar, *a.* **8.** In *Arabic gram.*, a fanciful term applied to the class of consonants before which the *l* of the article *al* is not assimilated in pronunciation: so called because including *q*, the initial of *qamar*, moon. Opposed to *solar.*—**Lunar day, hour.** See ★*day*[1], ★*hour.*

lunarium, *n.* **2.** In *paleon.*, a more or less thickened portion of the posterior wall in many Paleozoic bryozoans which is curved to a shorter radius and usually projects above the plane of the zoœcial aperture.

luncart (lung′kärt), *n.* In *mining*, a lenticular mass, nodule, or ball. Also called *lunker.* [Scotch.]

lundyfoot (lun′di-fût), *n.* [Named after *Lundy Foot*, a tobacconist of Dublin in the last quarter of the eighteenth century.] A kind of snuff.

lüneburgite (lü′ne-bör-gīt), *n.* [G. *lüneburgit* (1870), ⟨ *Lüneburg* + *-it*, E. *-ite*[2].] A hydrated phosphate and borate of magnesium occurring in masses with from crystalline to earthy structure: found at Lüneburg in northern Germany.

lunel[2] (lū-nel′), *n.* [F. *lunel*, ⟨ Sp. *lunel*, ⟨ *luna*, L. *luna*, moon: see *lunel*[1].] In *her.*, a figure formed by four crescents placed point to point, resembling a rose with four leaves.

lunetta (lū-net′ä), *n.* Same as *lunette*, 4.

lunette, *n.* **12.** The circular hole in a guillotine in which the neck of the condemned rests.

Lunéville pottery. See ★*pottery.*

lung, *n.*—**Black lung,** anthracosis.—**Grinders', masons',** or **millers' lung,** pneumonoconiosis.—**Lung suction mask,** a mask-like apparatus, fitting over the mouth and nose, provided with valves by means of which respiration is slightly impeded; this causes a negative air-pressure in the lungs and consequent congestion: used in the application of Bier's hyperemic method to the treatment of pulmonary tuberculosis. *Med. Record*, Nov. 9, 1907, p. 757.—**Miners' lung,** anthracosis.

lung-book (lung′bùk), *n.* Same as *lung*, 2.

lunge[1], *n.* **3.** A long rope used to train a horse; also, the circular track or ring where horses are trained by cantering them around the edge of the ring in one direction with the aid of a lunge.

lungee, *n.* See *loonghee.*

lunger[2] (lung′èr), *n.* One who comes to a climatic resort on account of his lungs; a consumptive. [Slang.]

lung-juice (lung′jös), *n.* Serous fluid obtained from the lung.

lungoti, *n.* Same as ★*langoti.*

lung-plague (lung′plāg), *n.* Contagious pleuropneumonia or lung-sickness. See *pleuropneumonia*, 1. It is a highly fatal, epizoötic disease which affects bovine animals only and is characterized by an extensive inflammation of the lungs and pleura. It was eradicated from the United States in 1892.

lung-sac (lung′sak), *n.* One of the paired respiratory organs of a spider: as, "the *lung-sacs* on the epigastric region," *Proc. Zool. Soc. London*, 1903, I. 49.

lung-sick (lung'sik), *a.* Noting cattle suffering from contagious pleuropneumonia, an extremely contagious and deadly disease of these animals.

lung-sickness (lung'sik-nes), *n.* Contagious pleuropneumonia of cattle. See ★*lung-plague.*

lunicurrent (lū'ni-kur-ent), *a.* Changing periodically with the position of the moon.

luniolatry (lu-ni-ol'a-tri), *n.* [Irreg. < L. *luna*, moon, + Gr. λατρεία, worship.] Moon-worship. *Amer. Jour. Psychol.*, XIII. 314.

lunkah (lung'kä), *n.* [Hindi *lañka*, 'islands,' the local term for the islands of the Godavery delta, where the tobacco is grown (*Yule*, Hobson-Jobson).] A kind of strong cheroot. *N. E. D.*

If you can say . . . that some murder has been done by a man who was smoking an Indian *lunkah*, it obviously narrows your field of search. *Doyle*, Sign of the Four, i.

lunker (lung'kèr), *n.* Same as ★*luncart.*

lunn (lun), *n.* A tea-cake: short for *sally-lunn.*

lunoid (lū'noid), *a.* [L. *luna*, moon, + *-oid.*] Shaped like the new moon; somewhat resembling the new moon; crescentiform.

lunula, *n.* (*a*) In *entom.*, a small depression on the frons of a dipterous insect.—**Lunulæ Hippocratis**, the lunes of Hippocrates.

lunular, *a.* 2. In *conch.*, pertaining to the lunule of pelecypods.

lunule, *n.* (*c*) One of the perforations formed by the union of digitate processes of the test of certain thin forms of echinoids, as *Rotula Augusti.*

Lunule

Rotula Augusti, with posterior digitations and 4 paired anterior lunules. (From Lankester's "Zoology.")

Lunulicardium (lū″nū-li-kär'dium), *n.* [NL., < L. *lunula*, lunule, + NL. *Cardium*, a genus of shells.] A genus of extinct prionodesmaceous pelecypods with triangular shells in which the anterior surface is flattened and carries a very large byssal opening. It occurs in the Silurian and Devonian formations.

lunuliform (lū'nū-li-fôrm), *a.* [L. *lunula*, lunule, + *forma*, form.] Having the form of a lunule.

Lunz sandstones. See ★*sandstone.*

lupamaric (lū-pa-mar'ik), *a.* [*lup(ulus)* + *amaric.*] Noting a white crystalline acid contained in lupulin.

lupanar (lū-pā'när), *n.* [L., < *lupa*, a prostitute, a she-wolf, fem. of *lupus*, a wolf: see *wolf.*] In *Rom. antiq.*, a brothel.

lupanarian (lū-pa-nā'ri-an), *a.* [*Lupanaris*, < *lupanar*, a brothel: see ★*lupanar.*] Of or pertaining to a brothel; fit for the surroundings of a brothel.

lupanine (lū'pa-nin), *n.* [L. *lup(inus)*, lupine, + *-an* + *-ine*[2].] A pale-yellow syrupy alkaloid, $C_{15}H_{24}ON_2$, contained in the seeds of blue lupines, *Lupinus angustifolius.* It has an extremely bitter taste and exhibits a blue fluorescence.

lupeol (lū'pē-ol), *n.* [L. *lup(inus)*, lupine, + *-e-* + *-ol.*] A crystallizable substance, analogous to cholesterol or cholesterin, extracted from the husk of the seed of the yellow lupine, *Lupinus luteus.*

lupeose (lū'pē-ōs), *n.* [L. *lup(inus)*, lupine, + *-ose.*] An amorphous sugar, $C_{12}H_{22}O_{11}$, from the seeds of *Lupinus luteus.* It is not changed by Fehling's solution or by diastase. Dilute acids hydrolyze it to galactose and fructose. Also called *β-galactan.*

lupetazin (lū-pet'a-zin), *n.* [*lup(inus)* + *-et-* + *azu-* + *-in*[2].] A trade-name for dimethylpiperazin, $NH\langle^{CH_2CH(CH_3)}_{CH_2CH(CH_3)}\rangle NH$, a white crystalline powder used in medicine as a substitute for piperazin. Also called *dipropylenediamine* and *dimethyl-diethylene-diamine.*

lupiform (lū'pi-fôrm), *a.* [L. *lupus*, lupus, + *forma*, form.] Resembling lupus.

lupigenin (lū-pij'e-nin), *n.* [*lupi(nin)* + *-gen* + *-in*[2].] A yellow crystalline compound, $C_{17}H_{12}O_6$, formed by the action of dilute mineral acids on the glucoside lupinin.

lupine[2], *n.*—**False lupine**, any plant of the leguminous genus *Thermopsis*; the bush-pea. The plants of this genus are perennial herbs, unlike lupines in having but three leaflets to the leaf. The prairie false lupine, *T. rhombifolia* (known in Montana as *yellow pea*), is often so abundant as to give a yellow hue to large areas during its flowering time. It is suspected of being poisonous to stock. See ★*bush-pea.*

lupinidine (lu-pin'i-din), *n.* [*lupine* + *-id* + *-ine*[2].] A viscid, oily, intensely bitter alkaloid, $C_8H_{15}N$, contained in the yellow lupine. It has an odor of hemlock.

lupinosis (lū-pi-nō'sis), *n.* [*lupine*[2] + *-osis.*] A disease of cattle, supposed to be caused by poisoning with one of the lupines, usually the white lupine. It is probable that the symptoms (fever, weakness, and distention of the abdomen) are due to the poisonous action of a fungus on the plants, rather than to any principle in the lupine itself.

lupoid (lū'poid), *a.* [*lupus*[1] + *-oid.*] Resembling lupus.

The sphere of x-ray treatment should be limited to the treatment of *lupoid* growths.
Med. Record, Feb. 7, 1903, p. 234.

lupoma (lū-pō'mä), *n.*; pl. *lupomata* (-ma-tä). [*lup-us* + *-oma.*] The initial lesion of lupus vulgaris, consisting of a discolored elevation above the surface.

lupous, *a.* 2. Relating to lupus.

lupulic (lū-pū'lik), *a.* [*Lupul-us* + *-ic.*] Same as *lupulinic.*

Lupulinic acid, a bitter crystalline compound, $C_{25}H_{36}O_4$, contained in the bitter principle of hops.

lupus[1], *n.* 3. (*c*) *Lupus exedens*, a form of lupus in which there is ulceration of the affected parts.—**Butterfly lupus**, lupus erythematosus of the skin of the nose and cheeks.—**Lupus verrucosus**, a form of lupus in which the surface is warty instead of smooth. Called also *tuberculosis verrucosa cutis.*

lurch[3], *v. t.* 5. To take (game) with a lurcher. See *lurcher*[1], 2.

lureful (lūr'fūl), *a.* Full of enticement; alluring.

lurefully (lūr'fūl-i), *adv.* In an alluring way.

luresome (lūr'sum), *a.* [*lure*[1] + *-some.*] Enticing; alluring.

lurk, *n.* 2. The act of lurking or prowling.—**On the lurk**, on a swindling or fraudulent prowl. [Slang.]

lurryman (lur'i-man), *n.*; pl. *lurrymen* (-men). In *mining*, one who handles or manages a lurry. See *lurry*[2].

Lusatian (lū-sā'shian), *a.* and *n.* [NL. *Lusatia*, F. *Lusace*, G. *Lausitz.*] **I.** *a.* Of or pertaining to Lusatia (G. Lausitz), a district, or two districts (Upper and Lower Lausitz), in Germany, belonging in part to Prussia and in part to Saxony.

II. *n.* 1. An inhabitant of Lusatia.—2. The native language of Lusatia. Same as *Sorbian*, 2.

lush-crib (lush'krib), *n.* [*lush*[3] + *crib.*] A low public-house or bar-room. [Slang.]

lush-ken (lush'ken), *n.* Same as ★*lush-crib.*

lushy, *a.* 2. Luxuriant; tender; soft. Also used figuratively.

lusingando (lö-sin-gän'dō), *a.* [It., ppr. of *lusingare*, flatter, wheedle, < *lusinga*, flattery, = OF. *losenge*, flattery: see *lozenge.*] Flattering; coaxing; in *music*, noting passages to be rendered in an affectionate or coaxing style. Compare *amoroso.*

lusingato (lö-sin-gä'tō), *a.* [It., pp.: see ★*lusingando.*] Same as ★*lusingando.*

Lusitano-American (lū-si-tā'nō-a-mer'i-kan), *a.* and *n.* **I.** *a.* Of mixed Portuguese and American Indian descent, as the Portuguese-speaking people of Brazil.

II. *n.* A person of mixed Portuguese and American Indian descent; a Brazilian.

The present inhabitants of Central and South America, the immense majority of whom are confessedly mixed peoples—*Lusitano-Americans* with a considerable strain of Negro blood in Brazil. *Keane*, Ethnology, p. 151.

lusive (lū'siv), *a.* [L. *lus(us)*, pp. of *ludere*, play, + *-ive.*] Playful.

lusol (lö'sol), *n.* The trade-name of impure benzene, obtained by distilling coal-tar: used as an illuminant. *Sci. Amer.*, Dec. 29, 1906, p. 484.

lusong (lö-song'), *n.* [Also *losong.* Tagalog and Bisaya *losong.*] A wooden mortar for pounding or husking rice. [Philippine Is.]

The grain is separated from the straw by thrashing, or by use of wind whenever possible, and is finally separated from the husk by pounding two or three times in a wooden mortar, called a '*lusong*,' or by making use of a sort of hand-mill, called 'guilingan.'
Gaz. Philippine Is., 1902, p. 71.

lussatite (lö-sä'tīt), *n.* [F. *lussatite* (1890), < *Lussat*, Puy-de-Dome, France, + *-ite*[2].] A peculiar form of quartz which resembles chalcedony but differs from it in optical character: it has been referred to tridymite.

lust[1], *n.* 5†. Pleasure; delight; a source of pleasure.

The lookers now at me, poore wretch, be mocking,
With mowes and nodds they stand about me flocking:
Let God help him, say they, whom He did trust;
Let God saue him in whom was all his *lust.*
Sir P. Sidney, Psalmes of David, xxii. 5.

luster[2], *n.* 7. A material applied to the surface of something in order to produce a lustrous appearance.—**Brianchon luster**, in *ceram.*, a nacreous luster formed of salts of bismuth mixed with resin and oil of lavender, colored with metallic oxids: patented by J. J. H. Brianchon, a French potter, in 1853. A similar luster is used on Belleek ware. **Copper luster**, in *ceram.*, a coating of copper applied to a red pottery body.—**Gold luster.** (*a*) See *gold.* (*b*) In *ceram.*, a metallic glaze containing gold applied to pottery or porcelain.—**Marbled luster**, a pink-and-white mottled luster often seen on old Sunderland (English) earthenware. The ground is a clouded, lustrous pink, and the white spots are surrounded by heavy outlines of metallic luster.—**Mexican luster**, an iridescent, lustrous glaze, usually of a green color, found on some of the pottery of the native tribes of Mexico.—**Pearl luster**, in *ceram.*, an iridescent luster imparted to the glaze by applying salts of bismuth colored with metallic oxids and firing in the enamel-kiln, as seen in Belleek china and some of the so-called majolica ware made at Phoenixville, Pennsylvania. See *Brianchon* ★*luster* and *madreperla luster*, under *luster*[2].—**Pink luster**, in *ceram.*, a thin wash of gold, of a pink color, on old English cream-colored ware and porcelain. Also called *rose luster*, *Sunderland luster*, and *purple luster.*—**Purple luster**, a metallic glaze of a purplish color, darker than gold luster, on English pottery.—**Rose luster.** Same as *pink* ★*luster.* **Spotted luster.** Same as *marbled* ★*luster.*—**Steel luster.** Same as *platinum luster* (which see, under *luster*[2]).—**Sunderland luster.** See *marbled* ★*luster.*

Marbled Luster.

Candlestick, Sunderland, about 1[illegible]. In the Pennsylvania Museum, Philadelphia.

Lustered ware. See ★*ware*[2].

luster-mottlings (lus'tèr-mot″lings), *n. pl.* The mottling of the cleavage-surface of a mineral produced by numerous inclusions of other minerals: compare *pœcilitic.*

lust-house (lust'hous), *n.* [G. *lusthaus.*] 1. A pleasure-house; a country-house; a summer-house in a garden.—2. A tavern with a beer-garden. *N. E. D.*

lustracellulose (lus-tra-sel'ū-lōs), *n.* [*lustr(ous)* + *cellulose.*] A peculiar derivative of cellulose.

lustrative (lus'tra-tiv), *a.* [*lustrate*[1] + *-ive.*] Pertaining to purification by lustration; pertaining to washing.

lustratory (lus'tra-tō-ri), *a.* [*lustrate*[1] + *-ory.*] Pertaining to lustration; lustral.

lustrify (lus'tri-fī), *v. t.*; pret. and pp. *lustrified*, ppr. *lustrifying.* [*luster*[2] + *-i-fy.*] To give luster to: as, to *lustrify* the complexion.

lutaceous (lū-tā'shius), *a.* [NL. *lutaceus*, < L. *lutum*, mud: see *lute*[2].] Pertaining to or composed of mud.

lutany (lū'ta-ni), *n.* [ML. *lutana*, lute, + *-y*[3].] Lute-music. *N. E. D.*

[Minstrels] without end
Reel your shrill *lutany.*
F. Thompson, New Poems, p. 41.

lute[2], *n.*—**Linseed-meal lute**, linseed-meal made into a paste with water, milk, glue, or lime-water.—**Lute d'âne**, a mixture of recently slaked lime with strong glue and a subsequent addition of white of egg.—**Willis's lute**, a paste made with slaked lime and a solution of two ounces of borax in one pint of water. This paste is applied to earthenware with a brush, and, when dry, is covered with a pasty mixture of slaked lime and linseed-oil.

lutecine (lū'tē-sin), *n.* [L. *luteus*, of mud, + *-c-* + *-ine*[2].] A form of anhydrous silica, SiO_2, which has a fibrous structure and which differs from quartz in lower density and in optical characters. Also called *quartzine.*

lutecite (lū'tē-sīt), *n.* Same as ★*lutecine.*

lutecium (lö-tē'sium), *n.* [L. *Lutetia*, Roman name of Paris.] See the extract.

A New Element, *Lutecium.*—By means of a long series of fractional recrystallizations of the nitrate of Marignac's ytterbium, using nitric acid of density 1·3 as a solvent, G. Urbain has succeeded in separating the material into two distinct substances, one of which gives a characteristic spark spectrum. This new element he calls *lutecium*, Lu, from an ancient name for Paris, and he finds that its atomic weight is not much greater than 174. The other element present he calls neo-ytterbium, Ny, in order that it may not be confused with Marignac's ytterbium. Its atomic weight cannot differ much from 170. Two spec-

trum bands obtained by Lecoq de Boisbaudran's method are probably characteristic of neo-ytterbium, while a third band appears to belong to *lutecium*.
Am. Jour. Sci., Feb., 1908, p. 146.

luteic (lū-tē'ik), *a.* [L. *lute-us*, of mud, + *-ic.*] Noting an acid, a yellow compound, $C_{29}H_{20}O_{12}$ (?), resembling luteoleine, contained in the flowers of *Euphorbia cyparissias*. It crystallizes in slender needles, sublimes at 220° C., and melts at 273–274° C.

lutein (lū'tē-in), *n.* [(corpus) *lute(um)* (see def.) + *-in*[2].] A yellow pigment contained in the yolk of eggs, in the tissue of the corpus luteum, in blood-serum, etc. It forms orange crystals.

luten (lū'ten), *n.* Same as ★*lutein.*

luteocobaltic (lū″tē-ō-kō-bâl'tik), *a.* In *chem.*, containing a cobalt-hexammine constituent: as, a *luteocobaltic* salt.

luteofilin (lū-tē-of'i-lin), *n.* [L. *luteus*, of mud, + *filum*, thread, + *-in*[2].] A compound said to occur in monocotyledons and in *Lobeliaceæ*.

Lutetian, *a.* **II.** *n.* In *geol.*, the Middle Eocene Tertiary of the Paris basin, which takes its name from Lutetia, the Roman name of Paris. This stage is regarded as the probable equivalent of the Lower Bagshot and Bracklesham beds of England.

Luth. An abbreviation of *Lutheran.*

Lutheranic (lū-thêr-an'ik), *a.* Same as *Lutheran.*

Lutheranize (lū'thêr-an-īz), *v.*; pret. and pp. *Lutheranized*, ppr. *Lutheranizing.* **I.** *trans.* To render Lutheran in character; convert to Lutheranism.

II. *intrans.* To become Lutheran; favor Lutheranism.

Lutianidæ (lū-ti-an'i-dē), *n. pl.* [NL., < *Lutianus* + *-idæ.*] A family of fishes related to the percoids and commonly known as snappers.

Lutianus (lū-ti-ā'nus), *n.* [NL., also *Lutjanus*, < *lutjang*, D. spelling of Malay **luchang*: see ★*lutjang.*] A genus of fishes of the family *Lutianidæ.*

lutidine (lū'ti-din), *n.* [L. *lutum*, mud, + *-id*[1] + *-ine*[2].] The collective name of the various isomeric dimethylpyridines, $(CH_3)_2C_5H_3N$. They are present in coal-tar oil and in animal- and bone-oil, and resemble pyridine in general properties.

lutite (lū'tīt), *n.* [L. *lutum*, mud, + *-ite*[2].] In *petrog.*, a term introduced by Grabau (1904) for an indurated rock of any composition or origin.

lutjang (lō'chang), *n.* [A D. spelling of Malay *luchang* in *ikan lutjang* (*luchang*), appar. lit. 'bell-fish.'] A Malayan name (*ikan lutjang*) of the fish *Lutianus lutianus.*

lutrin (lū'trin), *n.* [F.: see *lectern.*] Same as *lectern.*

lutulence (lū'tū-lens), *n.* [*lutulent* + *-ce.*] Muddiness; turbidity.

luv, *v.* and *n.* An amended spelling of *love.*

luvar (lō-vär'), *n.* Same as ★*luvaro.*

luvaro (lō-vä'rō), *n.* [Sp.] A pelagic scomboid fish, *Luvarus imperialis.* See *Luvarus.*

luvly, *a.* and *adv.* An amended spelling of *lovely.*

lux[3], *n.* **2.** The unit of illumination; the illumination received by a surface at a distance of one meter from a light-source the intensity of which is one hefner. See ★*illumination*, 1.

luxograph (luk'sō-gräf), *n.* [A trade-name; irreg. < L. *lux*, light, + Gr. γράφειν, write.] In *photog.*, a large lantern-like device with a tissue-paper front, in which pyrotechnic materials can be burned to give an artificial light for portraiture. *Wall*, Dict. of Photog., p. 456.

luxus (luk'sus), *n.* [L. *luxus*, excess: see *lux*[2].] In *physiol.*, the consumption of more nitrogenous food-material than is necessary to maintain nitrogenous equilibrium, that is, to cover the actual wear and tear of the nitrogenous constituents of the body tissues: in such an event the term 'luxus consumption' is used.

luzonite, *n.* This supposed independent species has been shown to be only a variety of enargite.

lv. A contraction (*a*) of *leave*; (*b*) of *livres.*

LXX. The Roman numeral for 'seventy'; hence, the 'Seventy' (L. *Septuaginta*) who, according to tradition, translated the Hebrew Scriptures into Greek; also the translation — the Septuagint itself. See *Septuagint.*

Lyæan (lī-ē'an), *n.* See ★*Lyæus.*

Lyæus (lī-ē'us), *n.* [L., < Gr. Λυαῖος, appar. < λύειν, release.] The looser or deliverer: an epithet of Bacchus.

lycaconitin (lī-ka-kon'i-tin), *n.* [(*g*)*lyc*(*erol*)(?) + *aconite* + *-in*[2].] An amorphous alkaloid of undetermined composition, obtained from the tuberous roots of *Aconitum lycoctonum* and *A. septentrionale.*

lycænid (lī-sē'nid), *n.* and *a.* **I.** *n.* A member of the dipterous family *Lycænidæ.*

II. *a.* Having the characters of or belonging to the family *Lycænidæ.*

lyceal (lī-sē'al), *a.* [*lyce-um* + *-al*[1].] Pertaining to a lyceum, in any sense.

Marro tabulated the conduct of 3012 boys in gymnasial and *lyceal* classes in Italy from 11 to 18 years of age.
G. S. Hall, Adolescence, I. 345.

Lycenchelys (lī-seng'kē-lis), *n.* [NL., < Gr. λύκος, wolf, + ἐγχελυς, an eel.] A genus of fishes of the family *Zoarcidæ*, found in deep water on both coasts of North America.

Lycengraulis (lī-seng-grâ'lis), *n.* [NL., < Gr. λύκος, wolf, + NL. *Engraulis.*] A genus of fishes of the family *Engraulididæ*, found on both coasts of tropical America.

lycetol (lī'sē-tol), *n.* [(*g*)*lyc*(*erol*) + *-et-* + *-ol.*] The trade-name for dimethylpiperazin tartrate, $NH\langle^{CH_2.CH(CH_3)}_{CH_2.CH(CH_3)}\rangle NH.H_2C_4H_4O_6$, which is prepared from glycerol. It is a white odorless powder and is used in medicine to effect the elimination of uric acid, with which it forms a readily soluble compound.

lyceum, *n.*—**United States Naval Lyceum,** an association organized in 1833, at the Brooklyn navy-yard, by naval and marine officers.

lychnisk (lik'nisk), *n.* [Gr. λυχνίσκος, applied to a kind of fish, dim. of λύχνος, a lamp.] One of the swollen nodes formed at the junction of the rays in the skeletal structure of the dictyonine hexactinellid sponges, especially when these nodes are hollow and inclose an octahedral space.

ly-chow (lī'chou), *n.* [Origin not ascertained.] Roasted potato starch, similar to crommelin and leio gum, used as a thickener in calico-printing. *Georgievics* (trans.), Chem. Technol. of Textile Fibres, p. 251.

Lycian[2] (lis'i-an), *a.* [Gr. λύκειος, of a wolf, < λύκος, wolf. Also taken as *Lycian*[1].] Wolf-slaying: an epithet applied to Apollo.

lycine (lī'sin), *n.* [(*g*)*lyc*(*erol*) + *-ine*[2].] A colorless compound, $HON(CH_3)_3CH_2COOH$, or, in the anhydrous form, $(CH_3)_3N\langle^{O}_{CH_2}\rangle CO$, contained in sugar-beet juice, cotton-seeds, and other vegetable products, and in urine. It forms large crystals which become anhydrous at 100° C. and attract moisture from the air, and is of considerable importance in plant physiology. Also called *betain*, *hydroxyneurine*, or *trimethylglycin.*

Lycocara (lī-kok'a-rä), *n.* [NL., < Gr. λύκος, wolf, + κάρα, head.] A genus of fishes of the family *Zoarcidæ*, found in Baffin Bay.

lycoctonine (lī-kok'tō-nin), *n.* [*Lycoctonum* (see def.) + *-ine*[2].] A substance resembling aconitin, found in *Aconitum Lycoctonum.* It is possibly a mixture, and not a chemical individual.

Lycodalepis (lī-kō-dal'ē-pis), *n.* [NL., < *Lycodes* + Gr. ἀλεπής, without scales.] A genus of fishes of the family *Zoarcidæ*, found in the Arctic Ocean.

Lycodapodidæ (lī-kō-da-pod'i-dē), *n. pl.* [NL., < *Lycodapus* (*-pod-*) + *-idæ.*] A family of deep-sea fishes found in North Pacific waters, which includes one genus and four known species.

Lycodapus (lī-kod'a-pus), *n.* [NL., < *Lycodes* + Gr. ἄτους, footless.] A genus of deep-sea fishes of the family *Lycodapodidæ*, found in the North Pacific.

Lycodontis (lī-kō-don'tis), *n.* [NL., < Gr. λύκος, wolf, + ὀδούς (ὀδοντ-), tooth.] A genus of eels of the family *Muræniidæ*, found in shallow water about rocks and reefs: properly called *Gymnothorax.*

Lycodonus (lī-kod'ō-nus), *n.* [NL., < *Lycodes* + Gr. ὄνος, a kind of fish.] A genus of zoarcoid

Lycodonus mirabilis.
From Bulletin 47, U. S. Nat. Museum.

fishes, found in the deep sea off the New England coast.

Lycodopsis (lī-kō-dop'sis), *n.* [NL., < *Lycodes* + Gr. ὄψις, view, appearance.] A genus of fishes of the family *Zoarcidæ*, found on the Pacific coast of the United States.

Lyconectes (lī-kō-nek'tēz), *n.* [NL., < Gr. λύκος, wolf, + νηκτής, swimmer.] A genus of fishes of the family *Cryptacanthodidæ*, found in rather deep water on the Alaska coast.

Lyconema (lī-kō-nē'mä), *n.* [NL., < Gr. λύκος, wolf (see *Lycodes*), + νῆμα, thread.] A genus of zoarcoid fishes, found in rather deep water on the coast of Alaska.

Lycoperdales (lī″kō-pêr-dā'lēz), *n. pl.* [NL., < *Lycoperdon* + *-ales.*] An order of gasteromycetous fungi, including the single family *Lycoperdaceæ.* See *Lycoperdaceæ.*

lycoperdoid (lī-kō-pêr'doid), *a.* [*Lycoperdon* + *-oid.*] Resembling the fungus *Lycoperdon.*

lycopin (lī'kō-pin), *n.* [*Lycop-us* + *-in*[2].] A colorless amorphous compound obtained from bugleweed, *Lycopus.* It has astringent, styptic, and sedative properties.

Lycopodiales (lī-kō-po-di-ā'lēz), *n. pl.* [NL. (Engler, 1892), < *Lycopodium* + *-ales.*] An order of vascular cryptogamic plants of the phylum *Pteridophyta*, coördinate with the *Filicales* and *Equisetales.* It is divided into two groups, according to the presence or absence of the ligule in the leaves. It contains four families of living and two of fossil or extinct plants. The *Lycopodiaceæ* and *Psilotaceæ* are destitute of the ligule (*Lycopodiales eligulatæ* of Engler). The *Selaginellaceæ* and *Isoëtaceæ* are ligulate (*Lycopodiales ligulatæ* of Engler). The two extinct families, *Lepidodendraceæ* and *Sigillariaceæ*, are placed by Engler in the ligulate group.

lycopodine (lī-kop'ō-din), *n.* [*Lycopod-ium* + *-ine*[2].] A colorless bitter alkaloid, $C_{32}H_{52}O_3N_2$, contained in club-moss, *Lycopodium complanatum.* It crystallizes in long, monoclinic prisms and melts at 114–115° C.

Lycopodium, *n.* **2.** [*l.c.*] A fine powder consisting of the spores of *Lycopodium clavatum* and other species, used in pharmacy as a dusting-powder on the skin and on excoriated surfaces, and in other ways. On the application of a flame, it burns with a flash, and does not become wet in contact with water. It is used in physical experiments, especially with sound.

lycorexia (lī-kō-rek'si-ä), *n.* [NL., < Gr. λύκος, wolf, + ὄρεξις, appetite.] In *pathol.*, a morbid state characterized by a constant, excessive hunger.

lycorine (lik'ō-rin), *n.* [*Lycoris* + *-ine*[2].] A colorless crystalline alkaloid, $C_{32}H_{32}O_8N_2$, contained in *Lycoris radiata* (*Nerine japonica*), melting at 250° C. It affects the central nervous system.

Lycoris (lī-kō'ris), *n.* [NL. (Herbert, 1821), < *Lycoris*, a Roman actress celebrated in Vergil.] A small genus of bulbous plants of Japan and China, of the family *Amaryllidaceæ*, distinguished from *Hippeastrum* by its turgid seeds, few in a compartment. Four species are known in gardens, usually as greenhouse subjects, but in mild climates as border plants. The flowers are lily-like, red, lilac, or orange, in umbels on long scapes, appearing without the leaves. In the United States they bloom in summer or autumn. *L. sanguinea*, *L. radiata*, *L. aurea*, and *L. squamigera* are grown, the last being sometimes known to florists as *Amaryllis Hallii.*

Lycosaurus (lī-kō-sâ'rus), *n.* [NL., < Gr. λύκος, wolf, + σαῦρος, lizard.] A genus of fossil theromorphous reptiles belonging to the family *Galeosauridæ.* Only the skull is known, and this shows, like that of other reptilian genera from the Karoo formation in South Africa, a remarkable similarity to the carnivorous mammals. In this genus the molariform teeth are all in single cones, though more or less compressed and with finely serrated edges.

lycosid (lī-kos'id), *n.* and *a.* **I.** *n.* A member of the araneid family *Lycosidæ.*

II. *a.* Having the characters of or belonging to the family *Lycosidæ.*

lycotropous (lī-kot'rō-pus), *a.* Same as *lycotropal.*

Lycurgan (lī-kêr'gan), *a.* [*Lycurg-us* + *-an.*] Pertaining to or characteristic of Lycurgus, the Spartan lawgiver, or to his laws, which are proverbial for their severity.

lyddite (lid'īt), *n.* [So called from *Lydd*, in Kent, England.] An explosive, consisting of picric acid melted and cast into a shell. It is difficult to detonate.

lydine (lī'din), *n.* A violet compound, prepared by the action of potassium ferricyanide on aniline hydrochlorid. Also called *mauvein.*

lydite (lid'īt), *n.* [L. *Lydia*, < Gr. Λυδία, an ancient country of Asia Minor, + *-ite*[2].] In *petrog.*, Lydian stone, a black or dark-colored compact, hard rock composed of minute grains of quartz with carbonaceous matter. It was used by the ancients as a touchstone for testing gold.

lye[3], *n.* 2. In a general sense, water charged with soluble solid matter by contact with a mixture of solid substances, partly soluble, partly insoluble.—**Concentrated lye,** the trade-name in the United States for caustic soda, sold for scouring. **Solid lye,** a trade-name for a very impure caustic soda (two-thirds common salt), sold for domestic use in scouring, etc.

lye-boil (lī'boil), *n.* The boiling of cotton cloth in a dilute solution of soda-ash, preparatory to bleaching.

Lyellian (lī-el'i-an), *a.* Of or pertaining to Sir Charles Lyell (1797–1875) or to his geological theories and investigations.

The old *Lyellian* theory of the marine origin of the boulder clay thus finds confirmation.
Geog. Jour. (R. G. S.), XV. 173.

Lyellism (lī-el'izm), *n.* [Sir Charles *Lyell,* a distinguished geologist, + *-ism.*] In *geol.,* uniformitarianism (which see) or the general doctrine, advocated by Lyell, that the events of the past are to be explained by the processes of the present, and that the course of nature has been essentially uniform.

Indeed, *Lyellism,* with its essential doctrine of the alternate elevation and subsidence of the land under the agency of local causes, seemed inconsistent with the existence of any general cause governing the geographical evolution of the globe as a whole.
Geog. Jour. (R. G. S.), XIII. 226.

lyer (lī'ėr), *n.* [Cape D. *leier,* a reduction of *leider* = E. *leader.*] In South Africa, the lad who walks before a team of oxen, guiding the leaders with a rope.

lygæid (lī-jē'id), *n.* and *a.* **I.** *n.* A member of the heteropterous family *Lygæidæ.*

II. *a.* Having the characters of or belonging to the family *Lygæidæ.*

Lygeum (lī-jē'um), *n.* [NL. (Linnæus, 1753, adopted from Löfling), ‹ Gr. λυγόειν, bend, tie fast.] A genus of grasses, containing but one species, *L. Spartum,* found on stony soils in the Mediterranean region, particularly in Spain and Algeria. It is often called *esparto* because of confusion with the true esparto, *Stipa tenacissima,* but its proper name is *albardin.* Its tough, slender leaves are used in making baskets and for other coarse textile purposes. See ★*albardin.*

Lygodesmia (lī-gō-des'mi-ä), *n.* [NL. (Don, 1829), ‹ Gr. λυγός, withe, + δέσμη, bundle; in allusion to the fastigiate, naked stems of the type species, *L. juncea.*] A genus of plants of the family *Cichoriaceæ,* perennial or annual herbs with usually rush-like stems, inconspicuous linear or scale-like leaves, and mostly terminal, narrow, erect heads of pink flowers. There are about six species, all North American. The best-known is *L. juncea* (often called *skeleton-weed* and *germ-weed*), a native of the Great Plains, which now occurs as a weed in the cultivated fields of that region.

lygosinate (lī'gō-sin-āt), *n.* [*lygosin* + *-ate*[1].] The trade-name for an antiseptic compound of lygosin.

lygosin (lī'gō-sin), *n.* The trade-name of di-orthocumaketone.

lying-time (lī'ing-tīm), *n.* Same as ★*lie-time.*

lying-wall (lī'ing-wâl), *n.* Same as *foot-wall.*

lymantriid (lī-man'tri-id), *n.* and *a.* **I.** *n.* An insect of the lepidopterous family *Lymantriidæ.*

II. *a.* Having the characteristics of, or belonging to, the *Lymantriidæ.*

Lymantriidæ (lī-man-trī'i-dē), *n. pl.* [NL., ‹ *Lymantria* + *-idæ.*] A family of lepidopterous insects founded on the type genus *Lymantria* and its allies.

lyme-grass, *n.* 2. In *entom.,* a British collectors' name for a noctuid moth, *Tapinostola elymi.*—**Great lyme-grass,** *Elymus robustus,* a coarse species of the interior, without special value.—**Sea lyme-grass,** a stout species, *Elymus arenarius,* found northward on the shores of Europe and on both coasts of North America. It is useful as a sand-binder, especially in conjunction with beach-grass (marram), making fast the sand which the latter arrests. Its seeds yielded food to the Indians of Northwestern America, and, springing up about deserted lodges, it has been called by the settlers *rancheria grass.* Also *upright,* or *upright sea, lyme-grass.* The soft sea lyme-grass is *E. innovatus,* a similar species, downy below the spike, found along the Great Lakes and northward on both American coasts.

lymexylonid (lī-mek-si-lon'id), *n.* and *a.* **I.** *n.* A member of the coleopterous family *Lymexylonidæ.*

II. *a.* Having the characters of or belonging to the family *Lymexylonidæ.*

lymf, lymfatic. Amended spellings of *lymph, lymphatic.*

lymph, *n.* 3. Any antitoxic serum, as vaccine virus.—**Glycerinated lymph.** See ★*glycerinate.* **Glycerinized lymph.** Same as ★*glycerinated lymph.*—**Koch's lymph,** essentially a solution for the metabolic products of the tubercle bacillus grown for from 4 to 6 weeks in nutrient bouillon containing 5–6 per cent. of glycerin. The bacilli are removed by filtration through porcelain filters. Inoculation with this fluid constitutes an attempt at active immunization. The material is extensively utilized in the diagnosis of tuberculosis, and is of great value in the recognition of the disease in cattle. Same as *tuberculin,* 1.—**Plastic lymph,** lymph, exuded during inflammation, which shows a tendency to become organized.

lymphadenia (lim-fa-dē'ni-ä), *n.* [NL., ‹ L. *lympha,* water (lymph), + Gr. ἀδήν, gland.] Enlargement of the lymphatic glands in general: a symptom of Hodgkin's disease.

lymphadenosis (lim-fad-e-nō'sis), *n.* [NL., ‹ L. *lympha,* water (lymph).] Same as ★*lymphadenia.*

lymphagogue (lim'fa-gog), *n.* [L. *lympha,* water (lymph), + Gr. ἀγωγός, leading.] A therapeutic agent which promotes the formation of lymph.

It seems highly probable that the reparative lymph exudation which follows exercise is produced by the agency of chemical substances generated by muscular contraction, just as the digestive lymph flow is caused by exogenous *lymphagogues.* Creatin and lactate of ammonium produce the double curve of arterial pressure induced by exercise and rest.
Nature, May 26, 1904, p. 92.

lymphangiectodes (lim-fan-ji-ek'tō-dēz), *n.* [NL., ‹ L. *lympha,* water (lymph), + *angiect(asia)* + *-odes* (see *-oid*).] Hypertrophy of the skin associated with dilatation of the lymph-spaces.

lymphangiomatous (lim-fan-ji-om'a-tus), *a.* [*lymphangioma(t-)* + *-ous.*] Relating to or affected with lymphangioma. *Buck,* Med. Handbook, I. 227.

lymphangiotomy (lim-fan-ji-ot'ō-mi), *n.* [L. *lympha,* water (lymph), + Gr. ἀγγεῖον, vessel, + τομή, section.] Dissection of the lymphatic vessels.

lymphatic[1], *a.*—**Waldeyer's lymphatic throat-ring.** See ★*throat-ring.*

lymphatism (lim'fa-tizm), *n.* [*lymphat-ic* + *-ism.*] 1. A depressed physical condition, marked by low vitality, associated with the lymphatic temperament. *Buck,* Med. Handbook, VII. 446.—2. Scrofula.

lymphatolysin (lim-fa-tol'i-sin), *n.* [*lymphatic* + *lysin.*] A cytotoxin directed against lymphatic tissue.

lymphatolytic (lim-fa-tō-lit'ik), *a.* [*lymphatolysin* (*-lyt-*) + *-ic.*] Relating to the action of a lymphatolysin.

lymphedema (lim-fē-dē'mä), *n.* [L. *lympha,* water (lymph), + Gr. οἴδημα, swelling.] A dropsical condition of the tissues due to obstruction to the flow of lymph.

lymph-gill (limf'gil), *n.* In certain worms, as the *Capitellidæ* and the *Glyceridæ,* one of the parapodial respiratory processes containing continuations of the body-cavity, and carrying hemolymph: in starfishes, the dermal branchiæ or papulæ.

lymph-gland (limf'gland), *n.* Same as *lymphatic gland.*—**Marrow-lymph glands,** a form of hemolymph glands found in the retroperitoneal adipose tissue near the brim of the pelvis and in relation with the great vessels.

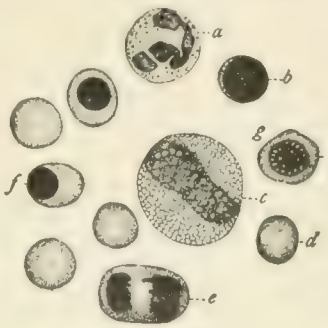
lymph-node (limf'nōd), *n.* One of numerous roundish, somewhat resistant bodies found along the course of the lymphatic vessels and composed of a mass of round cells in a delicate fibrous network.

lymphoblast (lim'fō-blâst), *n.* [L. *lympha,* water (lymph), + Gr. βλαστός, germ.] A leucocyte of lymph-gland origin, which possesses feeble phagocytic properties: distinguished from the ★*myeloblast.*

lymphoblastic (lim-fō-blas'tik), *a.* [*lymphoblast* + *-ic.*] Relating to a lymphoblast; giving origin to lymphocytes. *Jour. Med. Research,* Dec. 1907, p. 261.

lymphocele (lim'fō-sēl), *n.* [L. *lympha,* water (lymph), + Gr. κήλη, tumor.] A cystic tumor containing lymph.

lymphocyte (lim'fō-sīt), *n.* [L. *lympha,* water (lymph), + κύτος, a hollow (a cell).] A type of leucocyte found in the blood of all vertebrate animals. It is colored blue or purple with Ehrlich's triple stain, and occurs, in man, normally in the proportion of about 30 per cent. of the entire number of white blood-cells. There are two varieties, the large (11 to 14



Lymphocyte.

Cover-glass preparation from the bone marrow of a dog, highly magnified (from preparation of H. F. Müller). *a,* mast cell; *b,* lymphocyte; *c,* eosinophil cell; *d,* red blood cell; *e,* erythroblast in process of division; *f,* normoblast; *g,* erythroblast (from Huber's translation of Böhm-Davidoff, "Histology.")

microns in diameter), and the small (7.5 microns in diameter), the latter being the more numerous.

Abscess of some variety was suspected, but later a differential count of the white blood cells showed the *lymphocytes* in a proportion of 93 per cent.; the second case was that of a young woman who had been delivered of a child a short time before, in whom the leucocytes ranged between 200,000 and 400,000, the *lymphocytes* were later found to be in a proportion of 98 per cent.
Med. Record, May 30, 1903, p. 810.

lymphocythemia (lim″fō-sī-thē'mi-ä), *n.* [NL., ‹ L. *lympha,* water (lymph), + Gr. κύτος, a hollow (a cell), + αἷμα, blood.] Same as ★*lymphocytosis.*

lymphocytic (lim-fō-sit'ik), *a.* Pertaining to or of the nature of lymphocytes.

lymphocytosis (lim″fō-sī-tō'sis), *n.* [NL., ‹ L. *lympha,* water (lymph), + Gr. κύτος, a hollow (a cell), + *-osis.*] The formation of lymph-cells; specifically, increase, actual or relative, in the number of lymphocytes in the blood.

There may be an increase in the proportions present in the blood of lymphocytes (*lymphocytosis*).
Encyc. Brit., XXXI. 558.

lymphocytotic (lim'fō-sī-tot'ik), *a.* Relating to lymphocytosis, or the formation of lymph-cells.

lymphocytotoxin (lim-fō-sī-tō-tok'sin), *n.* [*lymphocyte* + *toxin.*] A cytotoxin directed against lymphocytes.

lymphœdema, *n.* [NL.] Same as ★*lymphedema.*

lymphogenic (lim-fō-jen'ik), *a.* [L. *lympha,* water (lymph), + Gr. *-γενής,* -producing.] Producing lymph or lymphocytes.

lymphogenous (lim-foj'e-nus), *a.* Same as ★*lymphogenic.*

lymphogonion (lim-fō-gō'ni-on), *n.*; pl. *lymphogonia* (-ä). [L. *lympha,* water (lymph), + Gr. γόνος, generation.] A more or less hypothetical ancestral cell of the lymphocytes.

Lymphoid tuberculosis. See ★*tuberculosis.*

lymphopenia (lim-fō-pē'ni-ä), *n.* [L. *lympha,* water (lymph), + Gr. πενία, poverty.] A diminution in the number of the lymphocytes of the blood.

lymphorrhagia (lim-fō-rā'ji-ä), *n.* [L. *lympha,* water (lymph), + Gr. *-ραγια,* ‹ ῥηγνύναι, break.] Discharge of lymph from a wounded lymphatic vessel.

lymphorrhea, lymphorrhœa (lim-fō-rē'ä), *n.* [L. *lympha,* water (lymph), + Gr. ῥοία, flow.] Same as ★*lymphorrhagia.*

lymphostasis (lim-fos'ta-sis), *n.* [L. *lympha,* water (lymph), + Gr. στάσις, standing.] Arrest of the flow of lymph.

lymphous (lim'fus), *a.* [*lymph* + *-ous.*] Containing lymph; of or relating to lymph.

lymph-scrotum (limf'skrō″tum), *n.* Elephantiasis of the scrotum.

lymphuria (lim-fū'ri-ä), *n.* [L. *lympha,* water (lymph), + Gr. οὖρον, urine.] The presence of lymph in the urine when voided.

lymph-vascular (limf'vas″kū-lär), *a.* Relating to or containing lymphatic vessels.

Lynceidæ (lin-sē'i-dē), *n. pl.* [NL., ‹ *Lynceus* + *-idæ.*] A family of cladocerous phyllopod crustaceans, having 3-jointed antennal branches and a convoluted intestine. It includes the genera *Lynceus* and *Eurycercus.*

Lynceus, *n.* 2. The typical genus of the family *Lynceidæ.* *Müller,* 1785.

lynch-court (linch'kōrt), *n.* A so-called 'court' hastily but illegally organized by an enraged mob for the trial and summary punishment, according to lynch-law, of some obnoxious person.

lyncher (lin'chêr), *n.* [*lynch*[2], *v.*, + *-er*[1].] One who lynches or takes part in a lynching.

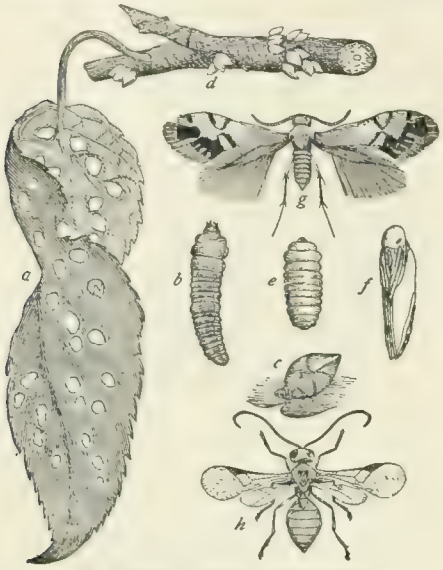
lynching (lin'ching), *n.* [*lynch*[2], *v.*, + *-ing*[1].] The act of executing lynch-law upon a person; the killing of a person by a mob under pretense of summary justice.

Lynton group. See ★*group*[1].

lynx, *n.* **Isabelline** or **Tibet lynx,** *Lynx isabellina*, the Tibet wildcat, of a pale-yellowish color. — **Pardine lynx,** *Felis* (*Lynx*) *pardina*, of southern Europe. It is rufous above, white below, with black spots on the body, limbs, and tail.

lyoluminescence (lī″ō-lū-mi-nes'ens), *n.* [Irreg. < Gr. λύειν, dissolve, + E. *luminescence*.] The emission of light by certain substances when in process of solution. See ★*luminescence*.

Lyonetia, *n.* — **Apple lyonetia,** a tineoid moth of the family *Elachistidæ*, *Coptodisca splendoriferella* (formerly known as *Lyonetia saccatella*), whose larva lives on apple-leaves, forming a sac-like case which it carries about with it. Also formerly referred to as *Aspidisca splendoriferella*.



Apple Lyonetia (*Coptodisca splendoriferella*).

a, work on apple leaf; *b*, summer larva; *c*, larva in case traveling; *d*, cases tied to twig for hibernation; *e*, hibernating larva; *f*, chrysalis; *g*, moth; *h*, parasite: all much enlarged except *a* and *d*, which are slightly reduced. (Comstock, U. S. D. A.)

lyonetiid (lī-ō-net'i-id), *n.* and *a.* **I.** *n.* A member of the lepidopterous family *Lyonetiidæ*.

II. *a.* Having the characters of or belonging to the family *Lyonetiidæ*.

Lyonsia (lī-on'si-ä), *n.* [NL., (Turton, 1822).] The typical genus of the family *Lyonsiidæ*.

Lyonsiidæ (lī-on-si'i-dē), *n. pl.* [NL., < *Lyonsia* + *-idæ*.] A family of anatinacean bivalve mollusks having a cylindrical byssiferous foot and short siphons. It contains the genus *Lyonsia*.

Lyopomi (lī-op'ō-mī), *n. pl.* [NL., irreg. < Gr. λύειν, loosen, + πῶμα, lid (operculum).] An order of deep-sea fishes, containing the single family *Halosauridæ*.

Lyopsetta (lī-op-set'ä), *n.* [NL., < Gr. λύειν, loosen, + ψῆττα, flounder.] A genus of flounders found on the west coast of the United States.

Lyosphæra (lī-ō-sfē'rä), *n.* [NL., irreg. < Gr. λύειν, loosen, + σφαῖρα, ball, sphere.] A genus of fishes of the family *Diodontidæ*, found on the Atlantic coast of the United States.

lypemania (lī-pē-mā'ni-ä), *n.* [NL., irreg. < Gr. λύπη, grief, + μανία, madness.] Insanity marked by an extreme degree of melancholy.

lypothymia (lī-pō-thim'i-ä), *n.* [NL., < Gr. λύπη, grief, + θυμός, spirit, mind.] Extreme depression of spirits.

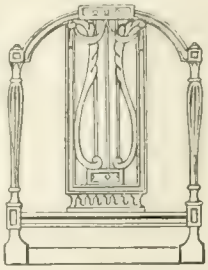
lyr. An abbreviation of *lyric*.

lyrachord (lī'rä-kōrd), *n.* [Irreg. < Gr. λύρα, lyre, + χορδή, string.] A form of pianoforte invented in England about 1850, in which the hammers were directed against the middle point of the strings. Compare ★*cembalo d'amore*, which may have suggested the idea.

lyre[1], *n.* 5. (*c*) In *pianoforte-making*, the lyre-shaped frame to which the pedals are attached and through which the pedal-rods work. — **6.** The posterior portion of the under surface of the fornix of the brain, marked by a number of lines bearing a fancied resemblance to a lyre. Also called *lyre of David* or *lyra Davidis*.

lyre-backed (līr'bakt), *a.* In old English furniture, said of a chair in which the center-piece of the back has the form of a lyre.

lyre-fish (līr'fish), *n.* A gurnard, *Trigla lyra*, of the family *Triglidæ*, found in the Mediterranean and on the coasts of England and France.



A Sheraton Lyre-back

lyre-flower (līr'flou″ėr), *n.* A handsome, hardy perennial plant, *Bikukulla spectabilis*, with rosy-crimson flowers arranged in graceful racemes. See *Dicentra* and *bleeding-heart*, 2.

lyre-tree (līr'trē), *n.* The tulip-tree, *Liriodendron Tulipifera*: so called from a distant resemblance in the shape of the leaves to a lyre.

lyrically (lir'i-kal-i), *adv.* In a lyric manner.

lyricize (lir'i-sīz), *v. i.*; pret. and pp. *lyricized*, ppr. *lyricizing*. [*lyric* + *-ize*.] To write lyrics or write lyrically.

lyrid (lī'rid), *n.* [*Lyra* + *-id*[2].] Same as *lyraid*, and now the more usual form of the name. *Nature*, April 23, 1903, p. 584.

Lyrodesma (lī-rō-des'mä), *n.* [NL., < Gr. λύρα, a lyre, + δέσμα, band, hinge.] A genus of fossil prionodesmaceous pelecypods having an oval shell with narrow cardinal border and a hinge-armature which radiates like a fan from below the umbones. It is restricted to the Silurian of Europe and America.

lyrula (lir'ū-lä), *n.* [NL. dim. of *lyra*, lyre.] In polyzoans, a tooth-like process behind the avicularium. *Annals and Mag. Nat. Hist.*, July, 1903, p. 120.

lysactinic (lis-ak-tin'ik), *a.* [Gr. λύσ(ις), solution, + ἀκτίς (ἀκτιν-), ray, + *-ic*.] In echinoderms, as the starfishes, having the podia limited to the lower surface of the body. Also, erroneously, *lissactinic*. Compare ★*desmactinic*.

lysalbic (li-sal'bik), *a.* [Gr. λύσ(ις), solution, + *alb*(*umen*) + *-ic*.] Noting an acid, a compound prepared by the action of caustic alkali (alkali hydroxid) on egg-albumin. With compounds of the heavy metals it gives precipitates which are soluble in alkali, the metal passing into the colloidal state.

Lysarete (li-sar'e-tē), *n.* [NL., < Gr. Λυσαρέτη, a feminine personal name.] The typical genus of the family *Lysaretidæ*.

Lysaretidæ (lis-a-ret'i-dē), *n. pl.* [NL., < *Lysarete* + *-idæ*.] A family of polychætous annelids having a prestomium with three tentacles and four eyes, the first two segments without appendages, the parapodia uniramous with one set of setæ, and the dorsal cirri foliaceous and branchial. It includes the genera *Lysarete*, *Danymene*, and *Halla*.

lysatine (lis'a-tin), *n.* [*lys*(*in*) + *-ate*[1] + *-ine*[2].] A colorless basic compound, $C_6H_{13}O_2N_3$, obtained, together with lysatinine, by the action of stannous chlorid and hydrochloric acid on albuminous compounds. It is said to yield urea when decomposed, and it may be a mixture of arginin and lysin.

lysatinine (li-sat'i-nin), *n.* [*lysatine* + *-ine*[2].] A colorless basic compound, $C_6H_{11}ON_3$, obtained, together with lysatine, by the action of stannous chlorid and hydrochloric acid on albuminous compounds.

lysidine (lis'i-din), *n.* [*lys*(*in*) + *-id*[1] + *-ine*[2].] A bright red basic compound, $CH_3C{<}^{NHCH_2}_{N-CH_2}$, prepared by the action of ethylenediamine hydrochlorid on sodium acetate. It melts at 105° C., boils at 195–198° C., and is used medicinally in cases of gout to remove uric acid, its salt with which is extremely readily soluble. Also called *ethylene ethenyldiamine* and *α-methylglyoxalidine*.

lysimeter, *n.* **2.** An instrument for determining the quantity of matter held in solution in a liquid.

lysin (lī'sin), *n.* [Gr. λύσ-ις, loosening, solution, dissolution, + *-in*[2].] **1.** In *physiol. chem.*, one of the hexon bases; a diamino acid of the composition $C_6H_{14}N_2O_2$, resulting on decomposition of most albumins, including the protamines. It is the mother-substance of the ptomaïne cadaverin. — **2.** A substance, found in blood serum, which, when injected into the body of an animal, will cause the dissolution or destruction of cellular elements. Such lysins may be produced artificially by immunization with various cells in animals of different species, and are then lytic for the corresponding cells. Such bodies are the hemolysins, the leucolysins, endotheliolysins, etc.

lysine (lī'sin), *n.* [Gr. λύσ-ις, loosening, solution, dissolution, + *-ine*[2].] A colorless compound, $CH_2(NH_2)CH_2CH_2CH_2CH(NH_2)$-COOH, formed by the action of dilute acids or of trypsin on albuminous substances of both vegetable and animal origin. It crystallizes in slender needles and forms salts with both acids and bases. Also called *α-ε-diaminocapric acid*.

lysis, *n.* **3.** The dissolution of various cells by means of lysins.

That complete agglutination has no effect upon subsequent solution (*lysis*) of the corpuscles will be shown when treating of the latter phenomena.
Jour. Exper. Med., March 17, 1902, p. 4.

lysoform (lī'sō-fôrm), *n.* [*lyso*(*l*) + *form*(*aldehyde*).] A clear, yellowish, odorless, soapy liquid containing formaldehyde and lysol: used as an antiseptic.

lysogenesis (lī-sō-jen'e-sis), *n.* [*lys*(*in*) + Gr. γένεσις, production.] The production of a lysin, or the initiation of the process of lysis.

It has been completely established that in this phenomenon of *lysogenesis* there are two substances concerned, one specially developed or developed in excess, and the other present in normal serum.
Encyc. Brit., XXVI. 68.

lysogenetic (lī″sō-jē-net'ik), *a.* [*lysogenesis* (*-et-*) + *-ic*.] Of or pertaining to lysogenesis.

Sera from those bacteria which produce, so far as we know, no soluble poison, are not antitoxic, having no effect upon the toxines already formed in the system in case of disease, but bactericidal acting directly upon the bacteria causing their disintegration and complete solution, to which the term bacteriolysis or *lysogenetic* action has been applied, and to this really marvellous property we have no analogy in the whole domain of chemicals, antiseptics or disinfectants.
Columbus Med. Jour., Jan., 1903, p. 14.

lysogenic (lī-sō-jen'ik), *a.* [*lys*(*in*) + Gr. -γενής, -producing, + *-ic*.] Same as ★*lysogenetic*.

The first of these is the *lysogenic* action, which consists in the production of a change in the corresponding bacterium whereby it becomes granular, swells up, and ultimately may undergo dissolution.
Encyc. Brit., XXVI. 68.

lysol (lī'sol), *n.* [Gr. λύσ-ις, solution, + *-ol*.] A 50 per cent. solution of the cresols of tar-oil in neutral soap: used as an antiseptic, in 0.25 to 2 per cent. aqueous solution, and also in histological work, as a macerating and isolating medium.

lyssi (lis'ī), *n. pl.* [NL., < *lyssa*, q. v.] Little blisters on the tongue, occurring in the early stage of rabies.

lyssic (lis'ik), *a.* Relating to lyssa or rabies; hydrophobic; rabic.

lysulfol (lī-sul'fol), *n.* [*ly*(*sol*) + *sulf*(*ur*), *sulph*(*ur*), + *-ol*.] A thick, black, viscous liquid containing lysol and sulphur. It is miscible with water and is used externally in certain skin diseases.

lysuric (lī-sū'rik), *a.* [*lys-in* + *uric*.] Noting an acid, $C_6H_{12}(COC_6H_5)N_2O_2$, a derivative of lysin.

Lythrulon (lith-rō'lon), *n.* [NL., < Gr. λίθρον, gore, + οὖλον, gum (of the mouth).] A genus of fishes of the family *Hæmulidæ*, found on the Pacific coast of tropical America.

lytic (lit'ik), *a.* [Gr. λυτικός, *adj.*, < λύσις, loosening, λυτός, loosed; see *lysis*.] Relating to lysis or the destruction of the cells of a part; producing lysis.

The factors required for producing solution of cells are similar to those for causing solution of bacteria under like conditions. Only when the *lytic* serum is very fresh will solution be effected; the addition, however, of peritoneal exudate or fresh normal serum to immune serum which has lost the solvent property, suffices to restore it.
Jour. Exper. Med., March 17, 1902, p. 281.

Lyttonia (li-tō'ni-ä), *n.* [NL., from the surname *Lytton*.] A genus of very peculiar brachiopods of the family *Thecidiidæ*, occurring in the Carboniferous formation of China and India. It possessed very large and highly inequivalve, irregular shells, with broad lateral expansion and numerous laterally directed brachial ridges in the ventral valve, with corresponding grooves in the dorsal valve.

lyttonioid (li-tō'ni-oid), *a.* [*Lyttoni*(*a*) + *-oid*.] Related to or resembling the genus *Lyttonia*.

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